MITSUBISHI ELECTRIC

GRAPHIC OPERATION TERMINAL

GOT2000

# GOT2000 Series
# Handy GOT Connection Manual
# For GT Works3 Version1

-Handy GOT

# SAFETY PRECAUTIONS

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product.

In this manual, the safety precautions are ranked as "WARNING" and "CAUTION".

| | |
|---|---|
| ⚠ **WARNING** | **Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.** |
| ⚠ **CAUTION** | **Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.** |

Note that failure to observe ⚠ CAUTION may lead to a serious accident depending on the circumstances.

Make sure to observe both warnings and cautions to ensure personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

# [DESIGN PRECAUTIONS]

## ⚠ WARNING

- Some failures of the GOT or cable may keep the outputs on or off.
  Some failures of a touch panel may cause malfunction of the input objects such as a touch switch.
  An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.
  Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a serious accident.
  An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning.
  Not doing so can cause an accident due to false output or malfunction.
- The GOT backlight failure disables the operation on the touch switch(s).
  When the GOT backlight has a failure, the POWER LED blinks (orange/blue) and the display section dims.
  In such a case, the input by the touch switch(s) is disabled.
- Incorrect operation of the touch switch(s) may lead to a serious accident if the GOT backlight is gone out.
  When the GOT backlight goes out, the POWER LED blinks (blue/orange) and the display section dims, while the input of the touch switch(s) remains active.
  This may confuse an operator in thinking that the GOT is in "screensaver" mode, who then tries to release the GOT from this mode by touching the display section, which may cause a touch switch to operate.
- The display section of the GOT is an analog-resistive type touch panel.
  Simultaneous pressing of two or more areas on the display section may activate the switch between those areas.
  Do not press two or more areas simultaneously on the display section.
  Doing so may cause an accident due to incorrect output or malfunction.
- When programs or parameters of the controller (such as a PLC) that is monitored by the GOT are changed, be sure to shut off the power of the GOT promptly and power on the GOT again.
  Not doing so can cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative.
  A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
  Not doing so can cause an accident due to false output or malfunction.
- To maintain the security (confidentiality, integrity, and availability) of the GOT and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
  Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
  *1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

## [DESIGN PRECAUTIONS]

### ⚠CAUTION

- Do not bundle the control and communication cables with main-circuit, power or other wiring.
  Run the above cables separately from such wiring and keep them a minimum of 100 mm apart.
  Not doing so noise can cause a malfunction.
- Do not press the GOT display section with a pointed material as a pen or driver.
  Doing so can result in a damage or failure of the display section.
- When using the Ethernet interfaces, set an IP address for each interface to access a different network.
- Turn on the controllers and the network devices to be ready for communication before they communicate with the GOT. Failure to do so can cause a communication error on the GOT.
- When the GOT is subject to shock or vibration, or some colors appear on the screen of the GOT, the screen of the GOT might flicker.
- When the GOT is connected to the Ethernet network, the available IP address is restricted according to the system configuration.
  When a GOT2000 series model and a GOT1000 series model are on an Ethernet network, do not set the IP address 192.168.0.18 for the GOTs and the controllers on this network.
  Doing so can cause IP address duplication at the GOT startup, adversely affecting the communication of the device with the IP address 192.168.0.18.
  The operation at the IP address duplication depends on the devices and the system.

## [MOUNTING PRECAUTIONS]

### ⚠WARNING

- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel.
  Not doing so can cause the unit to fail or malfunction.
- Always turn off the power ON/OFF switch on the connector conversion box (GT16H-CNB-42S) before connecting or disconnecting the GOT to it.
  Connecting or disconnecting the GOT with the power being turned on may result in damage to the unit or malfunctions.

## [MOUNTING PRECAUTIONS]

### ⚠CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual.
  Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- Remove the protective film of the GOT.
  When the user continues using the GOT with the protective film, the film may not be removed.
- Do not operate or store the GOT in the environment exposed to direct sunlight, rain, high temperature, dust, humidity, or vibrations.
- Do not use the GOT in an environment with oil or chemicals.
  Doing so may cause failure or malfunction due to the oil or chemical entering into the GOT.
- Do not operate the GOT with its display section frozen.
  The water droplets on the display section may freeze at a low temperature.
  Touch switches and other input objects may malfunction if the display section is frozen.

## [WIRING PRECAUTIONS]

### ⚠WARNING

- Make sure to attach the back cover to the Handy GOT before turning on the power and starting operation after the installation or wiring work. Otherwise, electrical shock may be caused.
- Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage or malfunctions.
- Use a DC power supply for this product.
  The power supply in the specified range must be applied for the power supply, the operation switch, and the emergency stop switch.
  If they are connected to the power supply of the different specification, it may cause a fire or failure.

## [WIRING PRECAUTIONS]

### ⚠CAUTION

- Connect connection cables securely to the specified connectors while the power is turned OFF. Imperfect connection may cause malfunction or failure.
- Please make sure to ground FG terminal of the GOT power supply section by applying 100 Ω or less which is used exclusively for the GOT.
  Not doing so may cause an electric shock or malfunction.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT.
  Not doing so can cause a fire, failure or malfunction.
- Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws in the specified torque range.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction dueto the damage of the screws or unit.

## [TEST OPERATION PRECAUTIONS]

### ⚠WARNING

- Before testing the operation of a user-created screen (such as turning on or off a bit device, changing the current value of a word device, changing the set value or current value of a timer or counter, and changing the current value of a buffer memory), thoroughly read the manual to fully understand the operating procedure.
  During the test operation, never change the data of the devices which are used to perform significant operation for the system.
  False output or malfunction can cause an accident.

## [STARTUP/MAINTENANCE PRECAUTIONS]

### ⚠WARNING

- When power is on, do not touch the terminals.
  Doing so can cause an electric shock or malfunction.
- Connect the battery correctly.
  Do not discharge, disassemble, heat, short, solder or throw the battery into the fire.
  Incorrect handling may cause the battery to generate heat, burst or take fire, resulting in injuries or fires.
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases.
  Not doing so can cause the unit to fail or malfunction.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

## [STARTUP/MAINTENANCE PRECAUTIONS]

### ⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly.
  Doing so can cause a unit malfunction or failure.
- Do not drop or give an impact to the battery mounted to the unit.
  Dispose of the battery without using when it is dropped or given an impact, because it may be damaged.
- The cables connected to the unit must be run in ducts or clamped.
  Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull from the cable portion.
  Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock. A module damage may result.
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc.
  Not doing so can cause the unit to fail or malfunction.
- Replace battery with GT15-BAT by Mitsubishi electric Co. only.
  Use of another battery may present a risk of fire or explosion.
- Dispose of used battery promptly.
  Keep away from children. Do not disassemble and do not dispose of in fire.
- Before cleaning the GOT, be sure to turn off the power.
  Before cleaning, check the following items.
  • Ensure that there are no problems with the installation condition of the GOT to the control panel.
  • Ensure that there are no damages on the environmental protection sheet (not replaceable).
  If the environmental protection sheet peels or the cleaning solution enters between the sheet and the display section during cleaning, stop the cleaning immediately.
  In such a case, do not use the GOT.

## [TOUCH PANEL PRECAUTIONS]

### ⚠CAUTION

- For the analog-resistive film type touch panels, normally the adjustment is not required.
  However, the difference between a touched position and the object position may occur as the period of use elapses.
  When any difference between a touched position and the object position occurs, execute the touch panel calibration.
- When any difference between a touched position and the object position occurs, other object may be activated.
  This may cause an unexpected operation due to incorrect output or malfunction.

## [PRECAUTIONS FOR USING A DATA STORAGE]

### ⚠WARNING

- Do not remove the SD card from drive A while the SD card is being accessed by the GOT, or the GOT may stop processing for about 20 seconds.
  During this stop, you cannot operate the GOT, and the functions running in the background, including the screen refresh, alarm, logging, and script, also stop.
  This stop may affect the system operation, causing an accident.
  Since this interruption makes an impact to the system operation, it might cause failure.
  After inhibiting access to the SD card on the GOT utility screen, check that the SD card access LED is off and remove the SD card.
- Do not remove the data storage from the file server (drive N) that is being accessed by the GOT, or the system operation may be affected.
  Before removing the data storage, check the relevant system signal to make sure that the data storage is not being accessed.

## [PRECAUTIONS FOR USING A DATA STORAGE]

### ⚠CAUTION

- Do not remove the data storage from the GOT while the data storage is being accessed by the GOT, or the data storage and files may be damaged.
  Before removing the data storage, check the SD card access LED, relevant system signal, or others to make sure that the data storage is not being accessed.
- Turning off the GOT while it accesses the SD card results in damage to the SD card and files.
- When removing the SD card from the GOT, make sure to support the SD card by hand as it may pop out.
  Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break.
- When installing a USB memory to the GOT, make sure to install the USB memory to the USB interface firmly.
  Failure to do so may cause a malfunction due to poor contact.
- Before removing the USB device from the GOT, follow the procedure for removal on the utility screen of the GOT.
  After the successful completion dialog is displayed, remove the data storage by hand carefully.
  Not doing so may cause the data storage to drop from the GOT, resulting in a failure or break.

## [PRECAUTIONS FOR USE]

### ⚠CAUTION

- Do not touch the edges of the touch panel (display section) repeatedly.
  Doing so may result in a failure.
- Do not turn off the GOT while data is being written to the storage memory (ROM) or SD card.
  Doing so may corrupt the data, rendering the GOT inoperative.

## [PRECAUTIONS FOR REMOTE CONTROL]

### ⚠WARNING

- Remote control is available through a network by using GOT functions, including theSoftGOT-GOT link function, the remote personal computer operation function, the VNC server function, and the GOT Mobile function.
  If you remotely operate control equipment using such functions, the field operator may not notice the remote operation, leading to an accident.
  In addition, a communication delay or interruption may occur depending on the network environment, and remote control of control equipment cannot be performed normally in some cases.
  Before using the above functions to perform remote control, fully grasp the circumstances of the field site and ensure safety.
- To disconnect a client when operating the server of the GOT Mobile function, be sure to notify the operator of the client before the disconnection.
  Not doing so may cause an accident.

## [PRECAUTIONS FOR EXCLUSIVE AUTHORIZATION CONTROL]

### ⚠WARNING

- Before using the GOT network interaction function to prevent simultaneous operations from multiple pieces of equipment, make sure you understand the function.
  You can enable or disable the exclusive authorization control of the GOT network interaction function for each screen.
  (For all screens, the exclusive authorization control is disabled by default.)
  Properly determine the screens for which the exclusive authorization control is required, and set the control by screen.
  A screen for which the exclusive authorization control is disabled is operable simultaneously from multiple pieces of equipment. Make sure to determine the operation period for each operator, fully grasp the circumstances of the field site, and ensure safety to perform operations.

## [DISPOSAL PRECAUTIONS]

### ⚠CAUTION

- When disposing of this product, treat it as industrial waste.
- When disposing of batteries, separate them from other wastes according to the local regulations.
  (Refer to the GOT2000 Series User's Manual for details of the battery directive in the EU member states.)

## [TRANSPORTATION PRECAUTIONS]

### ⚠ CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to the GOT2000 Series User's Manual (Hardware) for details of the regulated models.)
- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices.
  Failure to do so may cause the unit to fail.
  Check if the unit operates correctly after transportation.
- When fumigants that contain halogen materials such as fluorine, chlorine, bromine, and iodine are used for disinfecting and protecting wooden packaging from insects, they cause malfunction when entering our products.
  Please take necessary precautions to ensure that remaining materials from fumigant do not enter our products, or treat packaging with methods other than fumigation (heat method).
  Additionally, disinfect and protect wood from insects before packing products.
- Before transporting the GOT, turn the GOT power on and check that the battery voltage status is normal on the Time setting & display screen (utilities screen).
  In addition, confirm that the adequate battery life remains on the rating plate.
  Transporting the GOT with the low battery voltage or the battery the reached battery life may unstabilize the backup data unstable during transportation.
- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to the GOT2000 Series User' Manual (Hardware) for details of the regulated models.)

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# INTRODUCTION

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).
Before using the product, read this manual carefully and make sure you understand the functions and performance of the GOT for correct use.
☞ Manuals for GT Works3
☞ Abbreviations, Generic Terms, and Model Icons

# Manuals for GT Works3

The electronic manuals related to this product are installed together with the screen design software.
If you need the printed manuals, consult your local sales office.

## Manuals for GT Designer3 (GOT2000)

**Point**

e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.
e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to the engineering tool.

### ■Screen design software-related manuals

| Manual name | Manual number (Model code) | Format |
|---|---|---|
| GT Works3 Installation Instructions | - | PDF |
| GT Designer3 (GOT2000) Screen Design Manual | SH-081220ENG (1D7ML9) | PDF e-Manual |
| GT Converter2 Version3 Operating Manual for GT Works3 | SH-080862ENG | PDF e-Manual |
| GOT2000 Series MES Interface Function Manual for GT Works3 Version1 | SH-081228ENG | PDF e-Manual |

### ■Connection manuals

| Manual name | Manual number (Model code) | Format |
|---|---|---|
| GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1 | SH-081197ENG (1D7MJ8) | PDF e-Manual |
| GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1 | SH-081198ENG | PDF e-Manual |
| GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1 | SH-081199ENG | PDF e-Manual |
| GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1 | SH-081200ENG | PDF e-Manual |
| GOT2000 Series Handy GOT Connection Manual For GT Works3 Version1 | SH-081867ENG (1D7MS9) | PDF e-Manual |
| GOT2000 Series Connection Manual (α2 Connection) for GT Works3 Version1 | JY997D52301 | PDF e-Manual |

### ■GT SoftGOT2000 manuals

| Manual name | Manual number (Model code) | Format |
|---|---|---|
| GT SoftGOT2000 Version1 Operating Manual | SH-081201ENG | PDF<br>e-Manual |
| MELSOFT GT OPC UA Client Operating Manual | SH-082174ENG | PDF |

### ■GOT2000 series user's manuals

| Manual name | Manual number (Model code) | Format |
|---|---|---|
| GOT2000 Series User's Manual (Hardware) | SH-081194ENG<br>(1D7MJ5) | PDF<br>e-Manual |
| GOT2000 Series User's Manual (Utility) | SH-081195ENG<br>(1D7MJ6) | PDF<br>e-Manual |
| GOT2000 Series User's Manual (Monitor) | SH-081196ENG<br>(1D7MJ7) | PDF<br>e-Manual |

### ■GOT SIMPLE series user's manuals

| Manual name | Manual number | Format |
|---|---|---|
| GOT SIMPLE Series User's Manual | JY997D52901 | PDF<br>e-Manual |

### ■Manuals related to GT Works3 add-on projects

| Manual name | Manual number (Model code) | Format |
|---|---|---|
| GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Fundamentals) | SH-082072ENG<br>(1D7MV1) | PDF<br>e-Manual |
| GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Screen Details) | SH-082074ENG<br>(1D7MV3) | PDF<br>e-Manual |

## Manuals for GT Designer3 (GOT1000)

Refer to the Help and manuals for GT Designer3 (GOT1000).

# Abbreviations, Generic Terms, and Model Icons

The following shows the abbreviations, generic terms, and model icons used in this manual.

## GOT

### ■GOT2000 series

| Abbreviations and generic terms | | | Description | Meaning of icon | |
|---|---|---|---|---|---|
| | | | | Available | Unavailable |
| GT27 | GT27-X | GT2715-X | GT2715-XTBA<br>GT2715-XTBD |  | - |
| | GT27-S | GT2712-S | GT2712-STBA<br>GT2712-STWA<br>GT2712-STBD<br>GT2712-STWD | | |
| | | GT2710-S | GT2710-STBA<br>GT2710-STBD | | |
| | | GT2708-S | GT2708-STBA<br>GT2708-STBD | | |
| | GT27-V | GT2710-V | GT2710-VTBA<br>GT2710-VTWA<br>GT2710-VTBD<br>GT2710-VTWD | | |
| | | GT2708-V | GT2708-VTBA<br>GT2708-VTBD | | |
| | | GT2705-V | GT2705-VTBD | | |
| GT25 | | | All GT25 models |  | - |
| | GT25-W | GT2512-WX | GT2512-WXTBD<br>GT2512-WXTSD |  | - |
| | | GT2510-WX | GT2510-WXTBD<br>GT2510-WXTSD | | |
| | | GT2507-W | GT2507-WTBD<br>GT2507-WTSD | | |
| | | GT2507T-W | GT2507T-WTSD | | |
| | GT25-S | GT2512-S | GT2512-STBA<br>GT2512-STBD | | |
| | | GT2512F-S | GT2512F-STNA<br>GT2512F-STND | | |
| | GT25-V | GT2510-V | GT2510-VTBA<br>GT2510-VTWA<br>GT2510-VTBD<br>GT2510-VTWD | | |
| | | GT2510F-V | GT2510F-VTNA<br>GT2510F-VTND | | |
| | | GT2508-V | GT2508-VTBA<br>GT2508-VTWA<br>GT2508-VTBD<br>GT2508-VTWD | | |
| | | GT2508F-V | GT2508F-VTNA<br>GT2508F-VTND | | |
| | | GT2505-V | GT2505-VTBD | | |
| | GT25HS-V<br>Handy GOT | GT2506HS-V | GT2506HS-VTBD |  | - |
| | | GT2505HS-V | GT2505HS-VTBD |  | - |
| GT23 | GT23-V | GT2310-V | GT2310-VTBA<br>GT2310-VTBD |  | - |
| | | GT2308-V | GT2308-VTBA<br>GT2308-VTBD | | |

| Abbreviations and generic terms | | | Description | Meaning of icon | |
|---|---|---|---|---|---|
| | | | | Available | Unavailable |
| GT21 | | | All GT21 models |  | - |
| | GT21-W | GT2107-W | GT2107-WTBD<br>GT2107-WTSD |  | - |
| | GT21-Q | GT2105-Q | GT2105-QTBDS<br>GT2105-QMBDS |  | - |
| | GT21-R | GT2104-R | GT2104-RTBD |  | - |
| | GT21-P | GT2104-P | GT2104-PMBD |  | - |
| | | | GT2104-PMBDS |  | - |
| | | | GT2104-PMBDS2 |  | - |
| | | | GT2104-PMBLS |  | - |
| | | GT2103-P | GT2103-PMBD |  | - |
| | | | GT2103-PMBDS |  | - |
| | | | GT2103-PMBDS2 |  | - |
| | | | GT2103-PMBLS |  | - |
| GT SoftGOT2000 | | | GT SoftGOT2000 Version1 |  | - |

## ■GOT SIMPLE series

| Abbreviations and generic terms | | Description | Meaning of icon | |
|---|---|---|---|---|
| | | | Available | Unavailable |
| GS25 | | GS2512-WXTBD |  | - |
| GS21 | GS21-W-N | GS2110-WTBD-N<br>GS2107-WTBD-N |  | - |
| | GS21-W | GS2110-WTBD<br>GS2107-WTBD | | |

## ■GOT1000 series, GOT900 series, and GOT800 series

| Abbreviations and generic terms | Description | Meaning of icon | |
|---|---|---|---|
| | | Available | Unavailable |
| GOT1000 Series | GOT1000 Series | - | |
| GOT900 Series | GOT-A900 Series<br>GOT-F900 Series | - | |
| GOT800 Series | GOT-800 Series | - | |

## Communication unit

| Abbreviations and generic terms | Description |
|---|---|
| Bus connection unit | GT15-QBUS<br>GT15-QBUS2<br>GT15-ABUS<br>GT15-ABUS2<br>GT15-75QBUSL<br>GT15-75QBUS2L<br>GT15-75ABUSL<br>GT15-75ABUS2L |
| Serial communication unit | GT15-RS2-9P<br>GT15-RS4-9S<br>GT15-RS4-TE |
| MELSECNET/H communication unit | GT15-J71LP23-25<br>GT15-J71BR13 |
| CC-Link IE TSN communication unit | GT25-J71GN13-T2 |
| CC-Link IE Controller Network communication unit | GT15-J71GP23-SX |
| CC-Link IE Field Network communication unit | GT15-J71GF13-T2 |
| CC-Link communication unit | GT15-J61BT13 |
| Wireless LAN communication unit | GT25-WLAN |
| Serial multi-drop connection unit | GT01-RS4-M |
| Connection conversion adapter | GT10-9PT5S |
| Field network adapter unit | GT25-FNADP |
| Ethernet communication unit | GT25-J71E71-100 |
| RS-232/485 signal conversion adapter | GT14-RS2T4-9P |

## Option unit

| Abbreviations and generic terms | Description |
|---|---|
| Printer unit | GT15-PRN |
| Video input unit | GT27-V4-Z (A set of GT16M-V4-Z and GT27-IF1000) |
| RGB input unit | GT27-R2<br>GT27-R2-Z (A set of GT16M-R2-Z and GT27-IF1000) |
| Video/RGB input unit | GT27-V4R1-Z (A set of GT16M-V4R1-Z and GT27-IF1000) |
| RGB output unit | GT27-ROUT<br>GT27-ROUT-Z (A set of GT16M-ROUT-Z and GT27-IF1000) |
| Digital video output unit | GT27-VHOUT |
| Multimedia unit | GT27-MMR-Z (A set of GT16M-MMR-Z and GT27-IF1000) |
| Video signal conversion unit | GT27-IF1000 |
| External I/O unit | GT15-DIO<br>GT15-DIOR |
| Sound output unit | GT15-SOUT |
| SD card unit | GT21-03SDCD |

## Option

| Abbreviations and generic terms | Description |
|---|---|
| SD card | NZ1MEM-2GBSD<br>NZ1MEM-4GBSD<br>NZ1MEM-8GBSD<br>NZ1MEM-16GBSD<br>L1MEM-2GBSD<br>L1MEM-4GBSD |
| Battery | GT11-50BAT<br>GT15-BAT |
| Protective sheet | GT27-15PSGC<br>GT25-12WPSGC<br>GT25-12PSGC<br>GT25-10WPSGC<br>GT25-10PSGC<br>GT25-08PSGC<br>GT21-07WPSGC<br>GT25T-07WPSVC<br>GT25-05PSGC<br>GT25-05PSGC-2<br>GT21-05PSGC<br>GT21-04RPSGC-UC<br>GT21-03PSGC-UC<br>GT21-04PSGC-UC<br>GT27-15PSCC<br>GT25-12WPSCC<br>GT25-12PSCC<br>GT25-10WPSCC<br>GT25-10PSCC<br>GT25-08PSCC<br>GT25-05PSCC<br>GT25-05PSCC-2<br>GT25-12PSCC-UC<br>GT25-10PSCC-UC<br>GT25-08PSCC-UC<br>GT21-07WPSCC<br>GT21-05PSCC<br>GT21-04RPSCC-UC<br>GT21-04PSCC-UC<br>GT21-03PSCC-UC<br>GT16H-60PSC<br>GT14H-50PSC |
| Antibacterial/antiviral protective sheet | GT25-12PSAC<br>GT25-10PSAC<br>GT25-08PSAC |
| Environmental protection sheet | GT25F-12ESGS<br>GT25F-10ESGS<br>GT25F-08ESGS |
| Protective cover for oil | GT20-15PCO<br>GT20-12PCO<br>GT20-10PCO<br>GT20-08PCO<br>GT21-12WPCO<br>GT21-10WPCO<br>GT21-07WPCO<br>GT25T-07WPCO<br>GT25-05PCO<br>GT25-05PCO-2<br>GT05-50PCO<br>GT21-04RPCO<br>GT10-30PCO<br>GT10-20PCO |
| USB environmental protection cover | GT25-UCOV<br>GT25-05UCOV<br>GT21-WUCOV |

| Abbreviations and generic terms | Description |
|---|---|
| Stand | GT15-90STAND<br>GT15-80STAND<br>GT15-70STAND<br>GT05-50STAND<br>GT25-10WSTAND<br>GT21-07WSTAND<br>GT25T-07WSTAND |
| Attachment | GT15-70ATT-98<br>GT15-70ATT-87<br>GT15-60ATT-97<br>GT15-60ATT-96<br>GT15-60ATT-87<br>GT15-60ATT-77<br>GT21-04RATT-40 |
| Panel-mounted USB port extension | GT14-C10EXUSB-4S<br>GT10-C10EXUSB-5S |
| Connector conversion box | GT16H-CNB-42S<br>GT16H-CNB-37S<br>GT11H-CNB-37S |
| Emergency stop switch guard cover | GT16H-60ESCOV<br>GT14H-50ESCOV |
| Wall-mounting attachment | GT14H-50ATT |

# Software

## ■Software related to GOT

| Abbreviations and generic terms | Description |
|---|---|
| GT Works3 | SW1DND-GTWK3-J, SW1DND-GTWK3-E, SW1DND-GTWK3-C |
| GT Designer3 Version1 | Screen design software GT Designer3 for GOT2000 and GOT1000 series |
| GT Designer3 | Screen design software for GOT2000 series included in GT Works3 |
| GT Designer3 (GOT2000) | |
| GT Designer3 (GOT1000) | Screen design software for GOT1000 series included in GT Works3 |
| Speech synthesis license | GT Works Text to Speech License (SW1DND-GTVO-M) |
| Add-on license | GT Works3 add-on license for GOT2000 enhanced drive control (servo) project data (SW1DND-GTSV-MZ) |
| GENESIS64 Advanced | GENESIS64 server application (GEN64-APP) |
| GENESIS64 Basic SCADA | GENESIS64 server application (GEN64-BASIC) |
| GENESIS64 | Generic term of GENESIS64 Advanced and GENESIS64 Basic SCADA |
| GOT Mobile function license for GT SoftGOT2000 | License required to use the GOT Mobile function with GT SoftGOT2000 (SGT2K-WEBSKEY-□) |
| GT Simulator3 | Screen simulator GT Simulator3 for GOT2000, GOT1000, and GOT900 series |
| GT SoftGOT2000 | GOT2000 compatible HMI software GT SoftGOT2000 |
| GT OPC UA Client | MELSOFT GT OPC UA Client (SW1DNN-GTOUC-MD) |
| GT Converter2 | Data conversion software GT Converter2 for GOT1000 and GOT900 series |
| GT Designer2 Classic | Screen design software GT Designer2 Classic for GOT900 series |
| GT Designer2 | Screen design software GT Designer2 for GOT1000 and GOT900 series |
| DU/WIN | Screen design software FX-PCS-DU/WIN for GOT-F900 series |

## ■Software related to iQ Works

| Abbreviations and generic terms | Description |
|---|---|
| iQ Works | iQ Platform compatible engineering environment MELSOFT iQ Works |
| MELSOFT Navigator | Integrated development environment software included in SW □ DND-IQWK (iQ Platform compatible engineering environment MELSOFT iQ Works) ( □ represents a version.) |
| MELSOFT iQ AppPortal | SW□DND-IQAPL-M type integrated application management software ( □ represents a version.) |

## ■Other software

| Abbreviations and generic terms | | Description |
|---|---|---|
| GX Works3 | | SW □ DND-GXW3-E (-EA, -EAZ) type programmable controller engineering software<br>( □ represents a version.) |
| GX Works2 | | SW □ DNC-GXW2-E (-EA, -EAZ) type programmable controller engineering software<br>( □ represents a version.) |
| Controller simulator | GX Simulator3 | Simulation function of GX Works3 |
| | GX Simulator2 | Simulation function of GX Works2 |
| | GX Simulator | SW □ D5C-LLT-E (-EV) type ladder logic test tool function software package (SW5D5C-LLT (-V) or later versions)<br>( □ represents a version.) |
| GX Developer | | SW □ D5C-GPPW-E (-EV)/SW □ D5F-GPPW (-V) type software package<br>( □ represents a version.) |
| GX LogViewer | | SW □ DNN-VIEWER-E type software package<br>( □ represents a version.) |
| MI Configurator | | Configuration and monitor tool for Mitsubishi Electric industrial computers (SW□DNNMICONF-M)<br>( □ represents a version.) |
| PX Developer | | SW □ D5C-FBDQ-E type FBD software package for process control<br>( □ represents a version.) |
| MT Works2 | | Motion controller engineering environment MELSOFT MT Works2 (SW □ DNDMTW2-E)<br>( □ represents a version.) |
| MT Developer | | SW□RNC-GSV type integrated start-up support software for motion controller Q series<br>( □ represents a version.) |
| CW Configurator | | Setting/monitoring tools for the C Controller module and MELSECWinCPU (SW□DND-RCCPU-E)<br>( □ represents a version.) |
| MR Configurator2 | | SW □ DNC-MRC2-E type servo configuration software<br>( □ represents a version.) |
| MR Configurator | | MRZJW□-SETUP type servo configuration software<br>( □ represents a version.) |
| FR Configurator2 | | Inverter setup software (SW □ DND-FRC2-E)<br>( □ represents a version.) |
| FR Configurator | | Inverter setup software (FR-SW □ -SETUP-WE)<br>( □ represents a version.) |
| NC Configurator2 | | CNC parameter setting support tool (FCSB1221) |
| NC Configurator | | CNC parameter setting support tool |
| FX Configurator-FP | | Parameter setting, monitoring, and testing software package for FX3U-20SSCH (SW □ D5CFXSSCE)<br>( □ represents a version.) |
| FX Configurator-EN-L | | FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-E) |
| FX Configurator-EN | | FX3U-ENET type Ethernet module setting software (SW1D5C-FXENET-E) |
| RT ToolBox2 | | Robot program creation software (3D-11C-WINE) |
| RT ToolBox3 | | Robot program creation software (3F-14C-WINE) |
| MX Component | | MX Component Version □ (SW □ D5C-ACT-E, SW □ D5C-ACT-EA)<br>( □ represents a version.) |
| MX Sheet | | MX Sheet Version □ (SW □ D5C-SHEET-E, SW □ D5C-SHEET-EA)<br>( □ represents a version.) |
| CPU Module Logging Configuration Tool | | CPU module logging configuration tool (SW1DNN-LLUTL-E) |

## License key (for GT SoftGOT2000)

| Abbreviations and generic terms | Description |
|---|---|
| License key | GT27-SGTKEY-U |

## Others

| Abbreviations and generic terms | Description |
|---|---|
| IAI | IAI Corporation |
| AZBIL | Azbil Corporation |
| OMRON | OMRON Corporation |
| KEYENCE | KEYENCE CORPORATION |
| JTEKT ELECTRONICS (formerly KOYO EI) | JTEKT ELECTRONICS CORPORATION (formerly KOYO ELECTRONICS INDUSTRIES CO., LTD.) |
| JTEKT | JTEKT CORPORATION |
| SHARP | Sharp Corporation |
| SHINKO | Shinko Technos Co., Ltd. |
| CHINO | CHINO CORPORATION |
| TOSHIBA | TOSHIBA CORPORATION |
| SHIBAURA MACHINE | SHIBAURA MACHINE CO., LTD. |
| PANASONIC | Panasonic Corporation |
| PANASONIC IDS | Panasonic Industrial Devices SUNX Co., Ltd. |
| HITACHI IES | Hitachi Industrial Equipment Systems Co., Ltd. |
| HITACHI | Hitachi, Ltd. |
| HIRATA | Hirata Corporation |
| FUJI | FUJI ELECTRIC CO., LTD. |
| MURATEC | Muratec products manufactured by Murata Machinery, Ltd. |
| YASKAWA | YASKAWA Electric Corporation |
| YOKOGAWA | Yokogawa Electric Corporation |
| RKC | RKC INSTRUMENT INC. |
| ALLEN-BRADLEY | Allen-Bradley products manufactured by Rockwell Automation, Inc. |
| CLPA | CC-Link Partner Association |
| GE | GE Intelligent Platforms, Inc. |
| HMS | HMS Industrial Networks |
| LS ELECTRIC (formerly LS IS) | LS ELECTRIC Co., Ltd (formerly LS Industrial Systems Co., Ltd.) |
| MITSUBISHI INDIA | Mitsubishi Electric India Pvt. Ltd. |
| ODVA | Open DeviceNet Vendor Association, Inc. |
| SCHNEIDER | Schneider Electric SA |
| SICK | SICK AG |
| SIEMENS | Siemens AG |
| SCHNEIDER EJH | Schneider Electric Japan Holdings Ltd. |
| PLC | Programmable controller manufactured by its respective company |
| Control equipment | Control equipment manufactured by its respective company |
| Temperature controller | Temperature controller manufactured by its respective company |
| Indicating controller | Indicating controller manufactured by its respective company |
| Controller | Controller manufactured by its respective company |
| Industrial switch (for CC-Link IE TSN Class B) | CC-Link IE TSN Class B (Synchronized Realtime Communication) hub certified by CC-Link Partner Association |
| Industrial switch (for CC-Link IE TSN Class A) | CC-Link IE TSN Class A (Realtime Communication) hub certified by CC-Link Partner Association |
| CC-Link IE TSN-equipped module | Generic term for the following CC-Link IE TSN master/local modules and CC-Link IE TSN Plus master/local module<br>• RJ71GN11-T2<br>• RJ71GN11-EIP<br>• FX5-CCLGN-MS |

# MEMO

# PART 1 PREPARATORY PROCEDURES FOR MONITORING

# 1 PREPARATORY PROCEDURES FOR MONITORING


- Page 45 Setting the Communication Interface
- Page 83 Writing the Package Data onto the GOT
- Page 85 Option Devices for the Respective Connection
- Page 87 Connection Cables for the Respective Connection
- Page 90 ID Recognition Function
- Page 91 Verifying GOT Recognizes Connected Equipment
- Page 93 Checking for Normal Monitoring


The following shows the procedures to be taken before monitoring and corresponding reference sections.

***1.*** Setting the communication interface

Determine the connection type and channel No. to be used, and perform the communication setting.


☞ Page 45 Setting the Communication Interface

☞ Each chapter GOT Side Settings


***2.*** Writing the package data

Write the project data, system application onto the GOT.


☞ Page 83 Writing the Package Data onto the GOT


***3.*** Verifying the package data

Verify the project data, system application are properly written onto the GOT.


☞ Page 84 Checking the package data writing on GOT


***4.*** Attaching the communication unit and connecting the cable

Mount the optional equipment and prepare/connect the connection cable according to the connection type.


☞ Page 85 Option Devices for the Respective Connection

☞ Page 87 Connection Cables for the Respective Connection

☞ Each chapter System Configuration

☞ Each chapter Connection Diagram


***5.*** Verifying GOT recognizes connected equipment

Verify the GOT recognizes controllers on [Communication Settings] of the Utility.


☞ Page 91 Verifying GOT Recognizes Connected Equipment


***6.*** Verifying the GOT is monitoring normally

Verify the GOT is monitoring normally using Utility, Developer, etc.


☞ Page 93 Checking for Normal Monitoring

# 1.1 Setting the Communication Interface



Set the communication interface of GOT and the connected equipment.
When using the GOT at the first time, make sure to set the channel of communication interface and the communication driver before writing to GOT.
Set the communication interface of the GOT at [Controller Setting] and [I/F Communication Setting] in GT Designer3.

**Point**

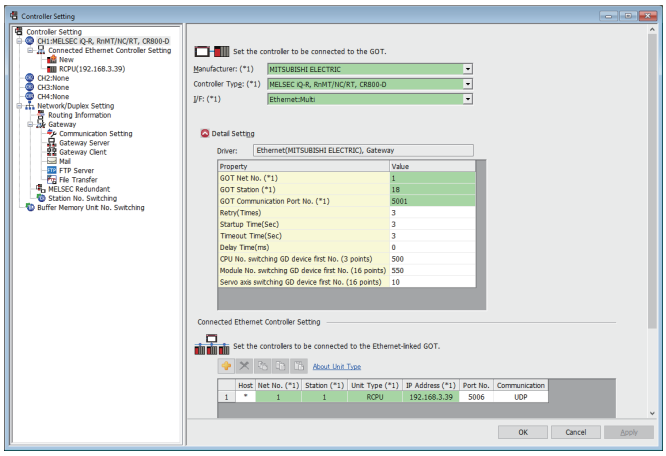
When using the parameter reflection function of MELSOFT Navigator

The system configuration of MELSOFT Navigator can be reflected to the project of GT Designer3 using the parameter function of MELSOFT Navigator.

For details of the parameter functions of MELSOFT Navigator, refer to the following.

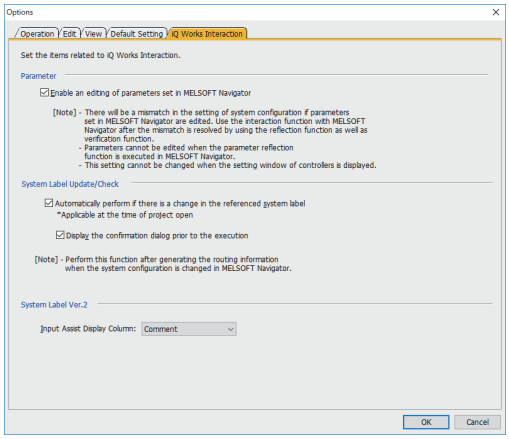
☞ Help of MELSOFT Navigator

- The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator. When changing in GT Designer3, refer to the following (3).




- When setting the communication interface for the connection with the iQ Works untargeted equipment, set [Set by GT Designer3] to the channel connected at [Configuration detailed information input] in MELSOFT Navigator and make the settings at [Controller Setting] in GT Designer3.
- To make the items reflected from MELSOFT Navigator editable on GT Designer3, select the [Option] menu and put a check mark at [Enable an editing of parameters set in MELSOFT Navigator] in the [iQ Works Interaction] tab.

However, when the items set in MELSOFT Navigator are edited in GT Designer3, the interaction function with MELSOFT Navigator is unavailable due to a mismatch with the system configuration of MELSOFT Navigator. Eliminate mismatches using the parameter verification function etc. before using the interaction function of MELSOFT Navigator.

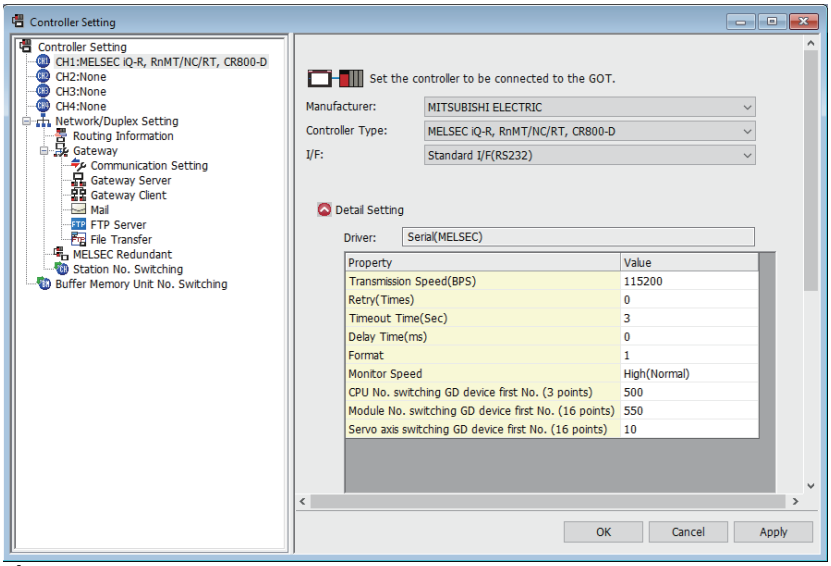


# Setting connected equipment (Channel setting)



Set the channel of the equipment connected to the GOT.

## Setting




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** The Controller Setting dialog box appears.

Select the channel No. to be used from the list menu.

**3.** Refer to the following explanations for the setting.

**Point**

Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function.

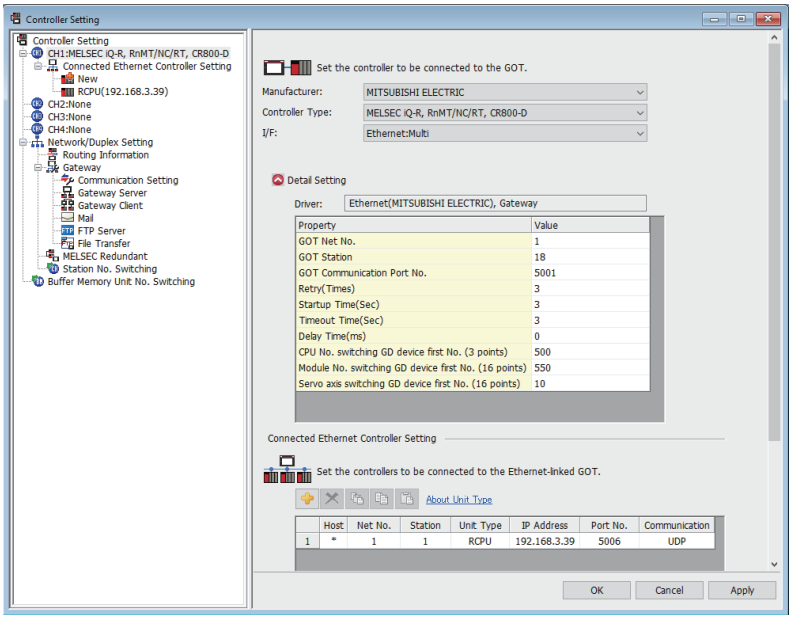
For details of the Multi-channel function, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

## Setting item

This section describes the setting items of the Manufacturer, Controller Type, Driver and I/F.

When using the channel No.2 to No.4, put a check mark at [Use CH*].




| Item | Description |
|---|---|
| Use CH* | Select this item when setting the channel No.2 to No.4. |
| Manufacturer | Select the manufacturer of the equipment to be connected to the GOT. |
| Type | Select the type of the equipment to be connected to the GOT.<br>For the settings, refer to the following.<br>☞ Page 49 Setting [Controller Type] |
| I/F | Select the interface of the GOT to which the equipment is connected.<br>For the settings, refer to the following.<br>☞ Page 77 Setting [I/F] |
| Driver | Select the communication driver to be written to the GOT.<br>For the settings, refer to the following.<br>☞ Page 48 Setting [Driver]<br>When multiple communication drivers can be selected, this item is displayed.<br>When only one communication driver can be selected, the driver name is displayed under [Detail Setting]. |
| Detail Setting | Make settings for the transmission speed and data length of the communication driver.<br>☞ Refer to each chapter of the equipment to be connected to the GOT. |

### ■Setting [Driver]

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F].

When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct.

For the settings, refer to the following.

☞ Setting the communication interface] section in each chapter

## ■Setting [Controller Type]

The type differs depending on the PLC to be used.

For the settings, refer to the following.

| Type | Model name |
|---|---|
| [MELSEC iQ-R, RnMT/NC/RT, CR800-D] | R00CPU<br>R01CPU<br>R02CPU<br>R04CPU<br>R08CPU<br>R16CPU<br>R32CPU<br>R120CPU |
| | R16MTCPU<br>R32MTCPU<br>R64MTCPU |
| | R08PCPU<br>R16PCPU<br>R32PCPU<br>R120PCPU |
| | R04ENCPU<br>R08ENCPU<br>R16ENCPU<br>R32ENCPU<br>R120ENCPU |
| | R08PSFCPU<br>R16PSFCPU<br>R32PSFCPU<br>R120PSFCPU |
| | R08SFCPU<br>R16SFCPU<br>R32SFCPU<br>R120SFCPU |
| | R12CCPU-V |
| | R102WCPU-W |
| | CNC C80<br>(R16NCCPU-S1) |
| | CR800-R(R16RTCPU)<br>CR800-D |
| | MR-J5-□B[*1]<br>MR-J5-□B-RJ[*1]<br>MR-J5W2-□B[*1]<br>MR-J5W3-□B[*1]<br>MR-J5-□G[*4]<br>MR-J5-□G-RJ[*4]<br>MR-J5W2-□G[*4]<br>MR-J5W3-□G[*4]<br>MR-J4-□B[*1]<br>MR-J4-□B-RJ[*1]<br>MR-J4W2-□B[*1]<br>MR-J4W3-□B[*1]<br>MR-J4-□GF[*1]<br>MR-J4-□GF-RJ[*1]<br>MR-JE-*B[*1]<br>MR-JE-*BF[*1] |

| Type | Model name |
|---|---|
| [MELSEC iQ-R, RnMT/NC/RT, CR800-D] | FR-E7□0-NE *3<br>FR-A8□0 *3<br>FR-A8□2 *3<br>FR-A8□6 *3<br>FR-A8□0-E *3<br>FR-A8□2-E *3<br>FR-A8□6-E *3<br>FR-A8□0-GF *3<br>FR-A8□2-GF *3<br>FR-A8□0-GN *3<br>FR-A8□2-GN *3<br>FR-A8□0-CRN *3<br>FR-A8□2-CRN *3<br>FR-A8□0-R2R *3<br>FR-A8□2-R2R *3<br>FR-A8□0-AWH*3<br>FR-A8□0-LC*3<br>FR-A8□0-E-CRN *3<br>FR-A8□2-E-CRN *3<br>FR-A8□0-E-R2R *3<br>FR-A8□2-E-R2R *3<br>FR-A8□0-E-AWH*3<br>FR-A8□0-E-LC*3<br>FR-F8□0 *3<br>FR-F8□2 *3<br>FR-F8□6 *3<br>FR-F8□0-E *3<br>FR-F8□2-E *3<br>FR-E8□0-E *3 |
| [MELSEC iQ-F] | FX5U<br>FX5UC<br>FX5UJ<br>FX5S |
| | MR-J4-*B *1<br>MR-JE-*B *1 |
| [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] | Q00CPU<br>Q01CPU<br>Q02CPU |
| | Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU |
| | Q172CPU<br>Q173CPU<br>Q172CPUN<br>Q173CPUN<br>Q172HCPU<br>Q173HCPU |
| | Q00UJCPU<br>Q00UJCPU-S8 |
| | Q00UCPU |
| | Q01UCPU |
| | Q02UCPU |
| | Q03UDCPU |
| | Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU |

| Type | Model name |
|---|---|
| [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU |
| | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU |
| | Q12DCCPU-V<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS |
| | Q172DCPU<br>Q173DCPU<br>Q172DCPU-S1<br>Q173DCPU-S1 |
| | Q172DSCPU<br>Q173DSCPU<br>Q170MCPU<br>Q170MSCPU<br>Q170MSCPU-S1 |
| | MR-MQ100 |
| | CNC C70<br>(Q173NCCPU) |
| | CRnQ-700(Q172DRCPU)<br>CR750-Q(Q172DRCPU)<br>CR751-Q(Q172DRCPU)<br>CR800-Q(Q172DSRCPU) |
| | CRnD-700<br>CR750-D<br>CR751-D |
| | Q00JCPU |
| | Q00CPU |
| | Q01CPU |
| | Q02CPU |
| | Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU |
| | Q12PRHCPU<br>Q25PRHCPU |
| | QS001CPU |

| Type | Model name |
|---|---|
| [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] | MR-J5-□B[*1]<br>MR-J5-□B-RJ[*1]<br>MR-J5W2-□B[*1]<br>MR-J5W3-□B[*1]<br>MR-J4-□B[*1]<br>MR-J4-□B-RJ[*1]<br>MR-J4W2-□B[*1]<br>MR-J4W3-□B[*1]<br>MR-J4-□GF[*1]<br>MR-J4-□GF-RJ[*1]<br>MR-JE-*B[*1] |
| | FR-E7□0-NE [*3]<br>FR-A8□0 [*3]<br>FR-A8□2 [*3]<br>FR-A8□6 [*3]<br>FR-A8□0-E [*3]<br>FR-A8□2-E [*3]<br>FR-A8□6-E [*3]<br>FR-A8□0-GF [*3]<br>FR-A8□2-GF [*3]<br>FR-A8□0-GN [*3]<br>FR-A8□2-GN [*3]<br>FR-A8□0-CRN [*3]<br>FR-A8□2-CRN [*3]<br>FR-A8□0-R2R [*3]<br>FR-A8□2-R2R [*3]<br>FR-A8□0-AWH[*3]<br>FR-A8□0-LC[*3]<br>FR-A8□0-E-CRN [*3]<br>FR-A8□2-E-CRN [*3]<br>FR-A8□0-E-R2R [*3]<br>FR-A8□2-E-R2R [*3]<br>FR-A8□0-E-AWH[*3]<br>FR-A8□0-E-LC[*3]<br>FR-F8□0 [*3]<br>FR-F8□2 [*3]<br>FR-F8□6 [*3]<br>FR-F8□0-E [*3]<br>FR-F8□2-E [*3]<br>FR-E8□0-E [*3] |
| [MELSEC-QnA, MELDAS C6*] | Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU |
| | Q4ARCPU |
| | Q2ASCPU |
| | Q2ASCPU-S1 |
| | Q2ASHCPU |
| | Q2ASHCPU-S1 |
| | MELDAS C6<br>(FCA C6)<br>MELDAS C64<br>(FCA C64) |
| | M700VS/M70V |
| | M800/M80 |

| Type | Model name |
|---|---|
| [MELSEC-L] | L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L02SCPU<br>L02SCPU-P<br>NZ2GF-ETB |
| | MR-J4-*B[*1]<br>MR-JE-*B[*1]<br>MR-JE-*BF[*1] |
| | FR-E7□0-NE [*3]<br>FR-A8□0 [*3]<br>FR-A8□2 [*3]<br>FR-A8□6 [*3]<br>FR-A8□0-E [*3]<br>FR-A8□2-E [*3]<br>FR-A8□6-E [*3]<br>FR-A8□0-GF [*3]<br>FR-A8□2-GF [*3]<br>FR-A8□0-GN [*3]<br>FR-A8□2-GN [*3]<br>FR-A8□0-CRN [*3]<br>FR-A8□2-CRN [*3]<br>FR-A8□0-R2R [*3]<br>FR-A8□2-R2R [*3]<br>FR-A8□0-AWH[*3]<br>FR-A8□0-LC[*3]<br>FR-A8□0-E-CRN [*3]<br>FR-A8□2-E-CRN [*3]<br>FR-A8□0-E-R2R [*3]<br>FR-A8□2-E-R2R [*3]<br>FR-A8□0-E-AWH[*3]<br>FR-A8□0-E-LC[*3]<br>FR-F8□0 [*3]<br>FR-F8□2 [*3]<br>FR-F8□6 [*3]<br>FR-F8□0-E [*3]<br>FR-F8□2-E [*3]<br>FR-E8□0-E [*3] |
| [MELSEC-A] | A2UCPU |
| | A2UCPU-S1 |
| | A3UCPU |
| | A4UCPU |
| | A2ACPU |
| | A2ACPUP21 |
| | A2ACPUR21 |
| | A2ACPU-S1 |
| | A2ACPUP21-S1 |
| | A2ACPUR21-S1 |
| | A3ACPU |
| | A3ACPUP21 |
| | A3ACPUR21 |
| | A1NCPU |
| | A1NCPUP21 |
| | A1NCPUR21 |
| | A2NCPU |
| | A2NCPUP21 |

| Type | Model name |
|---|---|
| [MELSEC-A] | A2NCPUR21 |
| | A2NCPU-S1 |
| | A2NCPUP21-S1 |
| | A2NCPUR21-S1 |
| | A3NCPU |
| | A3NCPUP21 |
| | A3NCPUR21 |
| | A2USCPU |
| | A2USCPU-S1 |
| | A2USHCPU-S1 |
| | A1SCPU |
| | A1SCPUC24-R2 |
| | A1SHCPU |
| | A2SCPU |
| | A2SHCPU |
| | A1SJCPU |
| | A1SJCPU-S3 |
| | A1SJHCPU |
| | A0J2HCPU |
| | A0J2HCPUP21 |
| | A0J2HCPUR21 |
| | A0J2HCPU-DC24 |
| | A2CCPU |
| | A2CCPUP21 |
| | A2CCPUR21 |
| | A2CCPUC24 |
| | A2CCPUC24-PRF |
| | A2CJCPU-S3 |
| | A1FXCPU |
| | A273UCPU |
| | A273UHCPU |
| | A273UHCPU-S3 |
| | A373UCPU |
| | A373UCPU-S3 |
| | A171SCPU |
| | A171SCPU-S3 |
| | A171SCPU-S3N |
| | A171SHCPU |
| | A171SHCPUN |
| | A172SHCPU |
| | A172SHCPUN |
| | A173UHCPU |
| | A173UHCPU-S1 |

| Type | Model name |
|---|---|
| [MELSEC-FX] | FX0 |
| | FX0S |
| | FX0N |
| | FX1 |
| | FX2 |
| | FX2C |
| | FX1S |
| | FX1N |
| | FX2N |
| | FX1NC |
| | FX2NC |
| | FX3S |
| | FX3G |
| | FX3GC |
| | FX3GE |
| | FX3U |
| | FX3UC |
| [MELSEC-WS] | WS0-CPU0 |
| | WS0-CPU1 |
| | WS0-CPU3 |
| [MELIPC] | MI5122-VW |
| [MELSERVO-J2M-P8A] | MR-J2M-P8A |
| [MELSERVO-J2M-*DU] | MR-J2M-*DU |
| [MELSERVO-J2S-*A] | MR-J2S-*A |
| [MELSERVO-J2S-*CP] | MR-J2S-*CP |
| [MELSERVO-J2S-*CL] | MR-J2S-*CL |
| [MELSERVO-J3-*A] | MR-J3-*A |
| [MELSERVO-J3-*T] | MR-J3-*T |
| [MELSERVO-J4-*A, -JE-*A] | MR-J4-*A<br>MR-JE-*A |
| [MELSERVO-J4-*A-RJ] | MR-J4-*A-RJ |
| [MELSERVO-J5(W)-*G(-RJ), -JET-*G] | MR-J5-G(-RJ)<br>MR-J5W2-G<br>MR-J5W3-G<br>MR-J5D-*G4<br>MR-JET-G |
| [MELSERVO-JE-*C] | MR-JE-*C |

| Type | Model name |
|---|---|
| [FREQROL 500/700/800 Series, SENSORLESS SERVO] | FR-A5□0(L) |
| | FR-F5□0(L) |
| | FR-V5□0(L) |
| | FR-E5□0(C) |
| | FR-E5□0S |
| | FR-E5□0W |
| | FR-S5□0(E)(-R)(-C) |
| | FR-S5□0S(E)(-R) |
| | FR-S5□0W(E)(-R) |
| | FR-F5□0J(F) |
| | FR-D7□0 |
| | FR-D7□0S |
| | FR-D7□0W |
| | FR-F7□0PJ(F) |
| | FR-E7□0 |
| | FR-E7□0S |
| | FR-E7□0W |
| | FR-A7□0 *2 |
| | FR-F7□0 |
| | FR-F7□0P |
| | FR-A8□0 *2 |
| | FR-A8□2 *2 |
| | FR-A8□6 *2 |
| | FR-A8□0-E *2 |
| | FR-A8□2-E *2 |
| | FR-A8□6-E *2 |
| | FR-A8□0-CRN |
| | FR-A8□2-CRN |
| | FR-A8□0-R2R |
| | FR-A8□2-R2R |
| | FR-A8□0-AWH |
| | FR-A8□0-LC |
| | FR-A8□0-E-CRN |
| | FR-A8□2-E-CRN |
| | FR-A8□0-E-R2R |
| | FR-A8□2-E-R2R |
| | FR-A8□0-E-AWH |
| | FR-A8□0-E-LC |
| | FR-F8□0 |
| | FR-F8□2 |
| | FR-F8□6 |
| | FR-F8□0-E |
| | FR-F8□2-E |
| | FR-E8□0 |
| | FR-E7□0EX |
| | MD-CX522-□K(-A0) |

| Type | Model name |
|---|---|
| [FREQROL 800] | FR-A8□0 *2 |
| | FR-A8□2 *2 |
| | FR-A8□6 *2 |
| | FR-A8□0-E *2 |
| | FR-A8□2-E *2 |
| | FR-A8□6-E *2 |
| | FR-A8□0-CRN |
| | FR-A8□2-CRN |
| | FR-A8□0-R2R |
| | FR-A8□2-R2R |
| | FR-A8□0-AWH |
| | FR-A8□0-LC |
| | FR-A8□0-E-CRN |
| | FR-A8□2-E-CRN |
| | FR-A8□0-E-R2R |
| | FR-A8□2-E-R2R |
| | FR-A8□0-E-AWH |
| | FR-A8□0-E-LC |
| | FR-F8□0 |
| | FR-F8□2 |
| | FR-F8□6 |
| | FR-F8□0-E |
| | FR-F8□2-E |
| | FR-E8□0 |
| | FRE8□0-E |
| [FREQROL 800/E700NE (Batch monitor)] | FR-E7□0-NE |
| | FR-A8□0 |
| | FR-A8□2 |
| | FR-A8□6 |
| | FR-A8□0-GF |
| | FR-A8□2-GF |
| | FR-A8□0-E |
| | FR-A8□2-E |
| | FR-A8□6-E |
| | FR-A8□0-CRN |
| | FR-A8□2-CRN |
| | FR-A8□0-R2R |
| | FR-A8□2-R2R |
| | FR-A8□0-AWH |
| | FR-A8□0-LC |
| | FR-A8□0-E-CRN |
| | FR-A8□2-E-CRN |
| | FR-A8□0-E-R2R |
| | FR-A8□2-E-R2R |
| | FR-A8□0-E-AWH |
| | FR-A8□0-E-LC |
| | FR-F8□0 |
| | FR-F8□2 |
| | FR-F8□6 |
| | FR-F8□0-E |
| | FR-F8□2-E |
| | FR-E8□0 |
| | FRE8□0-E |

*1 The models are connected to the GOT through a Motion controller or Simple Motion module.
*2 The GOT supports the FR-B/B3 series which is the explosion proof type of FR-A700 series and FR-A800 series.
*3 It is connected to the GOT through a PLC.
*4 The models are connected to the GOT through a Motion module.

| Type | Model name |
|---|---|
| [IAI X-SEL Controller] | XSEL-J |
| | XSEL-K |
| | XSEL-KE |
| | XSEL-KT |
| | XSEL-KET |
| | XSEL-P |
| | XSEL-Q |
| | XSEL-JX |
| | XSEL-KX |
| | XSEL-KTX |
| | XSEL-PX |
| | XSEL-QX |
| | SSEL |
| | ASEL |
| | PSEL |
| | RSEL |
| [IAI ROBO CYLINDER] | PCON-C |
| | PCON-CG |
| | PCON-CF |
| | PCON-CY |
| | PCON-SE |
| | PCON-PL |
| | PCON-PO |
| | PCON-CA |
| | PCON-CFA |
| | PCON-CB |
| | PCON-CFB |
| | ACON-C |
| | ACON-CG |
| | ACON-CY |
| | ACON-SE |
| | ACON-PL |
| | ACON-PO |
| | ACON-CB |
| | SCON-C |
| | SCON-CA |
| | SCON-CB |
| | ERC2-□-□-□-□-□-NP-□-□ |
| | ERC2-□-□-□-□-□-PN-□-□ |
| | ERC2-□-□-□-□-□-SE-□-□ |
| | RCON-GW(GWG)-CC |
| | RCON-GW(GWG)-CIE |
| | RCON-GW(GWG)-DV |
| | RCON-GW(GWG)-EP |
| | RCON-GW(GWG)-PR |
| | RCON-GW(GWG)-PRT |

| Type | Model name |
|---|---|
| [IAI ROBO CYLINDER] | EC-S3 |
| | EC-S4 |
| | EC-S6 |
| | EC-S7 |
| | EC-S6□R |
| | EC-S7□R |
| | EC-S6□AH |
| | EC-S7□AH |
| | EC-S6□AHR |
| | EC-S7□AHR |
| | EC-R6 |
| | EC-R7 |
| | EC-RP4 |
| | EC-GS4 |
| | EC-GD4 |
| | EC-RR3 |
| | EC-RR4 |
| | EC-RR6 |
| | EC-RR7 |
| | EC-RR6□R |
| | EC-RR7□R |
| | EC-RR6□AH |
| | EC-RR7□AH |
| | EC-RR6□AHR |
| | EC-RR7□AHR |
| | EC-TC4 |
| | EC-TW4 |
| | EC-R6□W |
| | EC-R7□W |
| | EC-RR6□W |
| | EC-RR7□W |
| | EC-B6 |
| | EC-B7 |
| | EC-B6U |
| | EC-B7U |
| | EC-S3R |
| | EC-S4R |
| | EC-RR3R |
| | EC-RR4R |
| | EC-ST15 |
| | EC-RTC9 |
| | EC-RTC12 |
| | EC-S13 |
| | EC-S13X |
| | EC-S15 |
| | EC-S15X |
| | EC-RR6X□AH |
| | EC-RR7X□AH |

| Type | Model name |
|---|---|
| [IAI ROBO CYLINDER] | EC-WS10 |
| | EC-WS12 |
| | EC-GD5 |
| | EC-RP5 |
| | EC-TC5 |
| | EC-TW5 |
| | EC-S6□CR |
| | EC-S7□CR |
| | EC-S6AH□CR |
| | EC-S7AH□CR |
| | EC-S3□CR |
| | EC-S4□CR |
| | EC-GRB8M |
| | EC-GRB10M |
| | EC-GRB13M |
| | EC-GRB13L |
| | EC-S10 |
| | EC-S10X |
| [Azbil SDC/DMC] | DMC10 |
| | SDC15 |
| | SDC25 |
| | SDC26 |
| | SDC35 |
| | SDC36 |
| | SDC20 |
| | SDC21 |
| | SDC30 |
| | SDC31 |
| | SDC40A |
| | SDC40B |
| | SDC40G |
| | SDC45 |
| | SDC46 |
| | CMS |
| | CMF015 |
| | CMF050 |
| | CML |
| | MQV |
| | MPC |
| | MVF |
| | PBC201-VN2 |
| | AUR350C |
| | AUR450C |
| | RX |
| | CMC10B |
| [Azbil DMC50] | DMC50 |
| | AHC2001 |

| Type | Model name |
|---|---|
| [OMRON SYSMAC] | CPM1 |
| | CPM1A |
| | CPM2A |
| | CPM2C |
| | CQM1 |
| | CQM1H |
| | CJ1H |
| | CJ1G |
| | CJ1M |
| | CJ2H |
| | CJ2M |
| | CP1H |
| | CP1L |
| | CP1E |
| | C200HS |
| | C200H |
| | C200HX |
| | C200HG |
| | C200HE |
| | CS1H |
| | CS1G |
| | CS1D |
| | CP2E-E |
| | CP2E-S |
| | CP2E-N |
| | C1000H |
| | C2000H |
| | CV500 |
| | CV1000 |
| | CV2000 |
| | CVM1 |

| Type | Model name |
|---|---|
| [OMRON NJ/NX] | NJ501-1500 |
| | NJ501-1400 |
| | NJ501-1300 |
| | NJ501-1520 |
| | NJ501-1420 |
| | NJ501-1320 |
| | NJ501-1340 |
| | NJ301-1200 |
| | NJ301-1100 |
| | NJ101-1000 |
| | NJ101-9000 |
| | NJ101-1020 |
| | NJ101-9020 |
| | NX1P2-1140DT |
| | NX1P2-1140DT1 |
| | NX1P2-1040DT |
| | NX1P2-1040DT1 |
| | NX1P2-9024DT |
| | NX1P2-9024DT1 |
| | NX701-1700 |
| | NX701-1600 |
| | NX502-1700 |
| | NX502-1600 |
| | NX502-1500 |
| | NX502-1400 |
| | NX502-1300 |
| | NX102-1200 |
| | NX102-1100 |
| | NX102-1000 |
| | NX102-9000 |
| [OMRON THERMAC/INPANEL NEO] | E5AN |
| | E5EN |
| | E5CN |
| | E5GN |
| | E5ZN |

| Type | Model name |
|---|---|
| [OMRON Digital Temperature Controller] | E5AN |
| | E5EN |
| | E5CN |
| | E5GN |
| | E5AN-H |
| | E5CN-H |
| | E5EN-H |
| | E5AN-HT |
| | E5CN-HT |
| | E5EN-HT |
| | E5ZN |
| | E5CC(-T,-B) |
| | E5DC |
| | E5GC |
| | E5EC(-T,-B) |
| | E5AC(-T) |
| | E5CD(-B) |
| | E5ED(-B) |
| | E5AR(-T) |
| | E5ER(-T) |
| [KEYENCE KV-700/1000/3000/5000/7000/8000] | KV-700 |
| | KV-1000 |
| | KV-3000 |
| | KV-5000 |
| | KV-5500 |
| | KV-7300 |
| | KV-7500 |
| | KV-8000 |
| | KV-N14□□ |
| | KV-N24□□ |
| | KV-N40□□ |
| | KV-N60□□ |
| | KV-NC32T |

| Type | Model name |
|---|---|
| [KOYO KOSTAC/DL] | SU-5E |
| | SU-6B |
| | SU-5M |
| | SU-6M |
| | PZ3 |
| | D2-240 |
| | D2-250-1 |
| | D2-260 |
| | D0-05AA |
| | D0-05AD |
| | D0-05AR |
| | D0-05DA |
| | D0-05DD |
| | D0-05DD-D |
| | D0-05DR |
| | D0-05DR-D |
| | D0-06DD1 |
| | D0-06DD2 |
| | D0-06DR |
| | D0-06DA |
| | D0-06AR |
| | D0-06AA |
| | D0-06DD1-D |
| | D0-06DD2-D |
| | D0-06DR-D |
| [JTEKT TOYOPUC-PC] | PC3JG-P-CPU |
| | PC3JG-CPU |
| | PC3JD-CPU |
| | PC3JD-C-CPU |
| | PC3J-CPU |
| | PC3JL-CPU |
| | PC2JC-CPU |
| | PC2J16P-CPU |
| | PC2J16PR-CPU |
| | PC2J-CPU |
| | PC2JS-CPU |
| | PC2JR-CPU |
| | PC10G-CPU |
| [SHARP JW] | JW-21CU |
| | JW-31CUH |
| | JW-50CUH |
| | JW-22CU |
| | JW-32CUH |
| | JW-33CUH |
| | JW-70CUH |
| | JW-100CUH |
| | JW-100CU |
| | Z-512J |

| Type | Model name |
|---|---|
| [Shinko Technos Controller] | ACS-13A□/□,□,C5 |
| | JCS-33A-□/□□,C5 |
| | JCR-33A-□/□□,C5 |
| | JCD-33A-□/□□,C5 |
| | JCM-33A□/□,□C5 |
| | JIR-301-M□,C5 |
| | PCD-33A-□/M,C5 |
| | PC935-□/M,C5 |
| | PC955-□/M,C5 |
| | PC935-□/M,C |
| | PC955-□/M,C |
| | FCD-13A-□/M,C |
| | FCD-15A-□/M,C |
| | FCR-13A-□/M,C |
| | FCR-15A-□/M,C |
| | FCR-23A-□/M,C |
| | FIR-201-M,C |
| | DCL-33A-□/M,□,C5 |
| | ACD-13A-□/M□,C |
| | ACD-13A-□/M□,C5 |
| | ACR-13A-□/M□,C |
| | ACR-13A-□/M□,C5 |
| | BCD2□□□-□□ |
| | BCR2□□□-□□ |
| | BCS2□□□-□□ |
| [CHINO MODBUS device] | LT350 |
| | LT370 |
| | LT450 |
| | LT470 |
| | DZ1000 |
| | DZ2000 |
| | LT230 |
| | LT830 |
| | DB1000 |
| | DB2000 |
| | GT120 |
| [TOSHIBA PROSEC T/V] | T2 (PU224) |
| | T3 |
| | T3H |
| | T2E |
| | T2N |
| | model 2000(S2) |
| | model 2000(S2T) |
| | model 2000(S2E) |
| | model 3000 (S3) |
| [TOSHIBA Unified Controller nv] | PU811 |
| | PUM11 |
| | PUM12 |
| | PUM14 |

| Type | Model name |
|---|---|
| [SHIBAURA MACHINE TCmini] | TC3-01 |
| | TC3-02 |
| | TC5-02 |
| | TC5-03 |
| | TC6-00 |
| | TC8-00 |
| | TS2000 |
| | TS2100 |
| [Panasonic MINAS A4] | MINAS A4 |
| | MINAS A4F |
| | MINAS A4L |
| [Panasonic MINAS A5] | MINAS A5 |
| [Panasonic MEWNET-FP] | FP0-C16CT |
| | FP0-C32CT |
| | FP0R |
| | FP0H |
| | FP1-C24C |
| | FP1-C40C |
| | FP2 |
| | FP2SH |
| | FP3 |
| | FP5 |
| | FP10(S) |
| | FP10SH |
| | FP-M(C20TC) |
| | FP-M(C32TC) |
| | FPΣ |
| | FP-X |
| [Panasonic FP7] | FP7 |
| [HITACHI IES EHV] | EHV-CPU08 |
| | EHV-CPU16 |
| | EHV-CPU32 |
| | EHV-CPU64 |
| | EHV-CPU128 |
| | MVH-A40□□□ |
| | MVH-D40□□□ |
| | MVH-A64□□□ |
| | MVH-D64□□□ |

| Type | Model name |
|---|---|
| [HITACHI IES HIDIC H] | H-302 |
| | H-702 |
| | H-1002 |
| | H-2002 |
| | H-4010 |
| | H-300 |
| | H-700 |
| | H-2000 |
| | H-200 |
| | H-250 |
| | H-252 |
| | H-252B |
| | H-252C |
| | H-20DR |
| | H-28DR |
| | H-40DR |
| | H-64DR |
| | H-20DT |
| | H-28DT |
| | H-40DT |
| | H-64DT |
| | HL-40DR |
| | HL-64DR |
| | EH-CPU104 |
| | EH-CPU208 |
| | EH-CPU308 |
| | EH-CPU316 |
| | EH-CPU516 |
| | EH-CPU548 |
| [HITACHI S10VE] | LQP600 |
| [HITACHI S10mini/S10V] | LQP510 |
| | LQP520 |
| | LQP800 |
| | LQP000 |
| | LQP010 |
| | LQP011 |
| | LQP120 |
| [FUJI Temperature controller/Digital indication controller] | PXF4 |
| | PXF5 |
| | PXF9 |
| | PXR3 |
| | PXR4 |
| | PXR5 |
| | PXR9 |
| | PXG4 |
| | PXG5 |
| | PXG9 |
| | PXH9 |
| | PUMA |
| | PUMB |

| Type | Model name |
|---|---|
| [FUJI MICREX-F Series] | F55 |
| | F70 |
| | F120S |
| | F140S |
| | F15□S |
| [FUJI MICREX-SX SPH] | SPH200 |
| | SPH300 |
| | SPH2000 |
| | SPH3000 |
| [YASKAWA GL/PROGIC8] | PROGIC-8 |
| | GL120 |
| | GL130 |
| | GL60S |
| | GL60H |
| | GL70H |
| [YASKAWA CP-9200 (H)] | CP-9200(H) |
| [YASKAWA CP-9300MS (MC compatible)] | CP-9300MS |
| [YASKAWA MP2000/MP900/CP9200SH Series] | MP2200 |
| | MP2300 |
| | MP2300S |
| | MP920 |
| | MP930 |
| | MP940 |
| | CP-9200SH |
| | CP-312 |
| | CP-317 |
| [YASKAWA MP3000 Series] | MP3200 |
| | MP3300 |
| [YASKAWA Robot Controller] | YRC1000 |
| | YRC1000micro |
| [YOKOGAWA STARDOM/FA500/FA-M3 Series] | FA500 |
| | F3SP05 |
| | F3SP08 |
| | F3SP10 |
| | F3SP20 |
| | F3SP30 |
| | F3FP36 |
| | F3SP21 |
| | F3SP22-0S |
| | F3SP25 |
| | F3SP35 |
| | F3SP28 |
| | F3SP38 |
| | F3SP53 |
| | F3SP58 |
| | F3SP59 |
| | F3SP66 |
| | F3SP67 |
| | F3SP71-4N |
| | F3SP71-4S |
| | F3SP76-7S |
| | NFCP100 |
| | NFJT100 |

| Type | Model name |
|---|---|
| [YOKOGAWA GREEN/UT100/UT2000/UTAdvanced] | UT320 |
| | UT321 |
| | UT350 |
| | UT351 |
| | UT420 |
| | UT450 |
| | UT520 |
| | UT550 |
| | UT551 |
| | UT750 |
| | UP350 |
| | UP351 |
| | UP550 |
| | UP750 |
| | UM330 |
| | UM331 |
| | UM350 |
| | UM351 |
| | US1000 |
| | UT130 |
| | UT150 |
| | UT152 |
| | UT155 |
| | UP150 |
| | UT2400 |
| | UT2800 |
| | UT32A |
| | UT35A |
| | UT52A |
| | UT55A |
| | UT75A |
| | UP32A |
| | UP35A |
| | UP55A |
| | UM33A |

| Type | Model name |
|---|---|
| [RKC SR Mini HG] | H-PCP-J |
| | H-PCP-A |
| | H-PCP-B |
| | Z-TIO |
| | Z-DIO |
| | Z-CT |
| | Z-COM |
| | J-TI-A/B |
| | CB100 |
| | CB400 |
| | CB500 |
| | CB700 |
| | CB900 |
| | FB100 |
| | FB400 |
| | FB900 |
| | RB100 |
| | RB400 |
| | RB500 |
| | RB700 |
| | RB900 |
| | PF900 |
| | PF901 |
| | HA400 |
| | HA401 |
| | HA900 |
| | HA901 |
| | RMC500 |
| | MA900 |
| | MA901 |
| | AG500 |
| | THV-A1 |
| | SA100 |
| | SA200 |
| | X-TIO |
| | SB1 |
| | B400 |
| | FZ110 |
| | FZ400 |
| | FZ900 |
| | RZ100 |
| | RZ400 |
| | PZ400 |
| | PZ900 |
| | GZ400 |
| | GZ900 |

| Type | Model name |
|---|---|
| [AB SLC500] | SLC500-20 |
| | SLC500-30 |
| | SLC500-40 |
| | SLC5/01 |
| | SLC5/02 |
| | SLC5/03 |
| | SLC5/04 |
| | SLC5/05 |
| [AB MicroLogix series] | 1761-L10BWA |
| | 1761-L10BWB |
| | 1761-L16AWA |
| | 1761-L16BWA |
| | 1761-L16BWB |
| | 1761-L16BBB |
| | 1761-L32AWA |
| | 1761-L32BWA |
| | 1761-L32BWB |
| | 1761-L32BBB |
| | 1761-L32AAA |
| | 1761-L20AWA-5A |
| | 1761-L20BWA-5A |
| | 1761-L20BWB-5A |
| | 1763-L16BWA |
| | 1762-L24BWA |
| | 1766-L32AWA |
| | 1764-LSP |
| | 1764-LRP |

| Type | Model name |
|---|---|
| [AB Control/CompactLogix] | 1756-L |
| | 1756-L1M1 |
| | 1756-L1M2 |
| | 1756-L1M3 |
| | 1756-L61 |
| | 1756-L62 |
| | 1756-L63 |
| | 1756-L64 |
| | 1756-L55M12 |
| | 1756-L55M13 |
| | 1756-L55M14 |
| | 1756-L55M16 |
| | 1756-L55M22 |
| | 1756-L55M23 |
| | 1756-L55M24 |
| | 1769-L31 |
| | 1769-L32E |
| | 1769-L32C |
| | 1769-L35E |
| | 1769-L35CR |
| | 1794-L33 |
| | 1794-L34 |
| | 1756-L72S |
| | 1756-L71 |
| | 1756-L72 |
| | 1756-L73 |
| | 1756-L74 |
| | 1756-L75 |
| | 1756-L81E |
| | 1756-L82E |
| | 1756-L83E |
| | 1756-L84E |
| | 1756-L85E |

| Type | Model name |
|---|---|
| [AB Control/CompactLogix (Tag)] | 1756-L |
| | 1756-L1M1 |
| | 1756-L1M2 |
| | 1756-L1M3 |
| | 1756-L61 |
| | 1756-L62 |
| | 1756-L63 |
| | 1756-L64 |
| | 1756-L55M12 |
| | 1756-L55M13 |
| | 1756-L55M14 |
| | 1756-L55M16 |
| | 1756-L55M22 |
| | 1756-L55M23 |
| | 1756-L55M24 |
| | 1769-L32E |
| | 1769-L35E |
| | 1794-L33 |
| | 1794-L34 |
| | 1756-L72S |
| | 1756-L71 |
| | 1756-L72 |
| | 1756-L73 |
| | 1756-L74 |
| | 1756-L75 |
| | 1756-L81E |
| | 1756-L82E |
| | 1756-L83E |
| | 1756-L84E |
| | 1756-L85E |

| Type | Model name |
|---|---|
| [GE Series 90] | IC693CPU311 |
| | IC693CPU313 |
| | IC693CPU323 |
| | IC693CPU350 |
| | IC693CPU360 |
| | IC693CPU363 |
| | IC693CPU366 |
| | IC693CPU367 |
| | IC693CPU374 |
| | IC697CPU731 |
| | IC697CPX772 |
| | IC697CPX782 |
| | IC697CPX928 |
| | IC697CPX935 |
| | IC697CPU780 |
| | IC697CGR772 |
| | IC697CGR935 |
| | IC697CPU788 |
| | IC697CPU789 |
| | IC697CPM790 |
| | IC200UAA003 |
| | IC200UAL004 |
| | IC200UAL005 |
| | IC200UAL006 |
| | IC200UAA007 |
| | IC200UAR028 |
| | IC200UDD110 |
| | IC200UDD120 |
| | IC200UDD212 |
| | IC200UDR005 |
| | IC200UDR006 |
| | IC200UDR010 |
| | IC200UDD064 |
| | IC200UDD164 |
| | IC200UDR164 |
| | IC200UDR064 |
| | IC200UAR014 |
| | IC200UDD104 |
| | IC200UDD112 |
| | IC200UDR001 |
| | IC200UDR002 |
| | IC200UDR003 |
| LS Industrial Systems XGK | XGK-CPUU |
| | XGK-CPUH |
| | XGK-CPUA |
| | XGK-CPUS |
| | XGK-CPUE |
| | XGK-CPUUN |
| | XGK-CPUHN |
| | XGK-CPUSN |

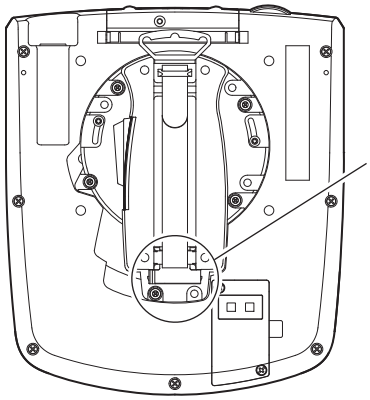
| Type | Model name |
|---|---|
| [LS Industrial Systems MASTER-K] | K7M-D□□□S(/DC) |
| | K7M-D□□□U |
| | K3P-07□S |
| | K4P-15AS |
| [MEI Nexgenie] | NG16DL |
| | NG16ADL |
| | NG14RL |
| | NG16DN |
| | NG16ADN |
| | NG14RN |
| | P2210 |
| | P2211 |
| | P2213A |
| | P2214 |
| [SICK Flexi Soft] | FX3-CPU000000 |
| | FX3-CPU130002 |
| | FX3-CPU320002 |
| [SIEMENS S7-200] | SIMATIC S7-200 |
| [SIEMENS S7-300/400 Series] | SIMATIC S7-300 |
| | SIMATIC S7-400 |
| [SIEMENS S7(Ethernet)] | SIMATIC S7-300 |
| | SIMATIC S7-400 |
| [SIEMENS OP(Ethernet)] | SIMATIC S7-200 |
| | SIMATIC S7-200 SMART |
| | SIMATIC S7-300 |
| | SIMATIC S7-400 |
| | SIMATIC S7-1200 |
| | SIMATIC S7-1500 |

| Type | Connectable device |
|---|---|
| [CC-Link IE Field Network Basic] | CC-Link IE Field Network Basic master stations<br>For the CC-Link IE Field Network Basic master stations validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.<br>📖List of CC-Link IE Field Network Basic-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0149) |
| [SLMP] | SLMP servers<br>For the SLMP-compatible equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.<br>📖List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153) |
| [MODBUS Slave(GOT:Master)] | MODBUS slaves<br>For the MODBUS slave equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.<br>📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170) |
| [MODBUS Master(GOT:Slave)] | MODBUS master equipment<br>For the MODBUS master equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.<br>📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170) |
| [Microcomputer connection] | Personal computer, microcomputer board, PLC, or other devices |

## ■Setting [I/F]

Set the I/F according to the Interface to be used.

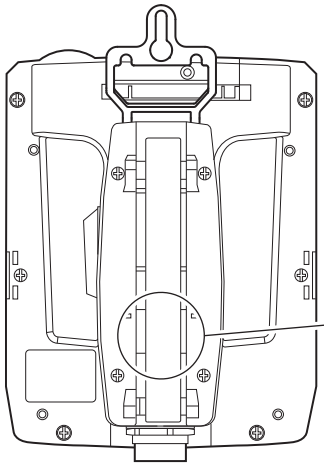
- For GT2506HS-V



Ethernet interface
RS-232 interface
RS-422/485 interface

RS-422/485 interface and RS-232 interface cannot be used at the same time.
Switch the RS-422/485 interface and RS-232 interface with the RS-422/485 ⇔ RS-232 selection connector in the environmental protection back cover.

- For GT2505HS-V



Ethernet interface
RS-232 interface
RS-422 interface

Ethernet interface, RS-422 interface and RS-232 interface cannot be used at the same time.
Switch the Ethernet interface, RS-422 interface and RS-232 interface with the Ethernet interface ⇔ RS-422 ⇔ RS-232 selection connector in the environmental protection back cover.

# GOT Ethernet Setting

The GOT can be connected to a different network by using the following network.

1) GOT IP Address Setting

Set the following communication port setting.

Standard port

Set [GOT IP Address] and [Subnet Mask] in the standard port with a bult-in GOT, or port 1.

2) GOT Ethernet Common Setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

3) IP Filter Setting

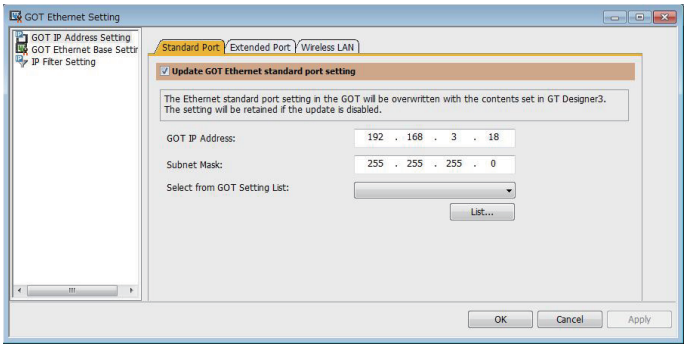
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

## GOT IP Address Setting

Set the GOT IP address.

### ■[Standard Port]

***1.*** Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the [GOT Ethernet Setting] window.



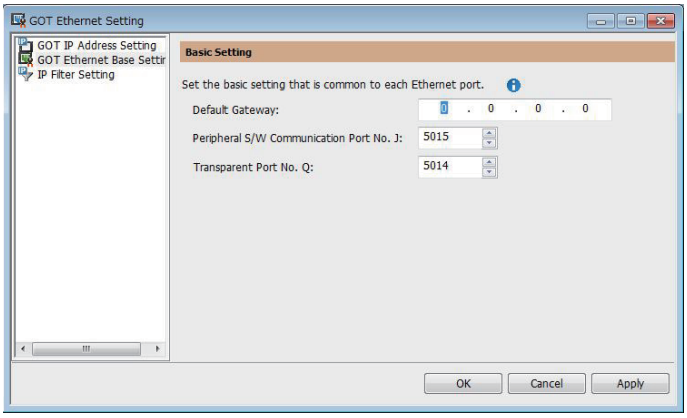

***2.*** On the [Standard Port] tab, configure the following settings.

| Item | Description | Range |
|---|---|---|
| Update GOT Ethernet standard port setting | The GOT Ethernet standard port settings are applied on GOT. | - |
| GOT IP Address | Set the IP address of the GOT IP Address.<br>(Default:192.168.3.18) | 0.0.0.0 to 255.255.255.255 |
| Subnet Mask | Set the subnet mask for the sub network. (Only for connection via router)<br>If the sub network is not used, the default value is set.<br>(Default: 255.255.255.0) | 0.0.0.0 to 255.255.255.255 |
| Select from GOT Setting List. | Select the GOT set in [GOT Setting List] dialog.<br>GT Designer3 (GOT2000) Screen Design Manual | - |

## GOT Ethernet Common Setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

1. Select [Common] → [GOT Ethernet Setting] → [GOT Ethernet Common Setting] from the menu to display the [GOT Ethernet Setting] window.

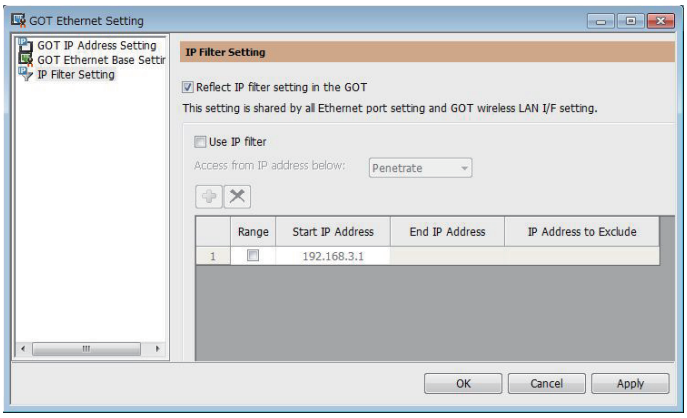



2. Configure the following settings.

| Item | Description | Range |
|---|---|---|
| Default Gateway | Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0) | 0.0.0.0 to 255.255.255.255 |
| Peripheral S/W Communication Port No. | Set the GOT port No. for the communication with the peripheral S/W. (Default: 5015) | 1024 to 65534 (Except for 5011 to 5013, 49153 to 49170) |
| Transparent Port No. | Set the GOT port No. for the transparent function. (Default: 5014) | 1024 to 65534 (Except for 5011 to 5013, 49153 to 49170) |

## IP Filter Setting

1. Select [Common] → [GOT Ethernet Setting] → [IP Filter Setting] from the menu to display the [GOT Ethernet Setting] window.



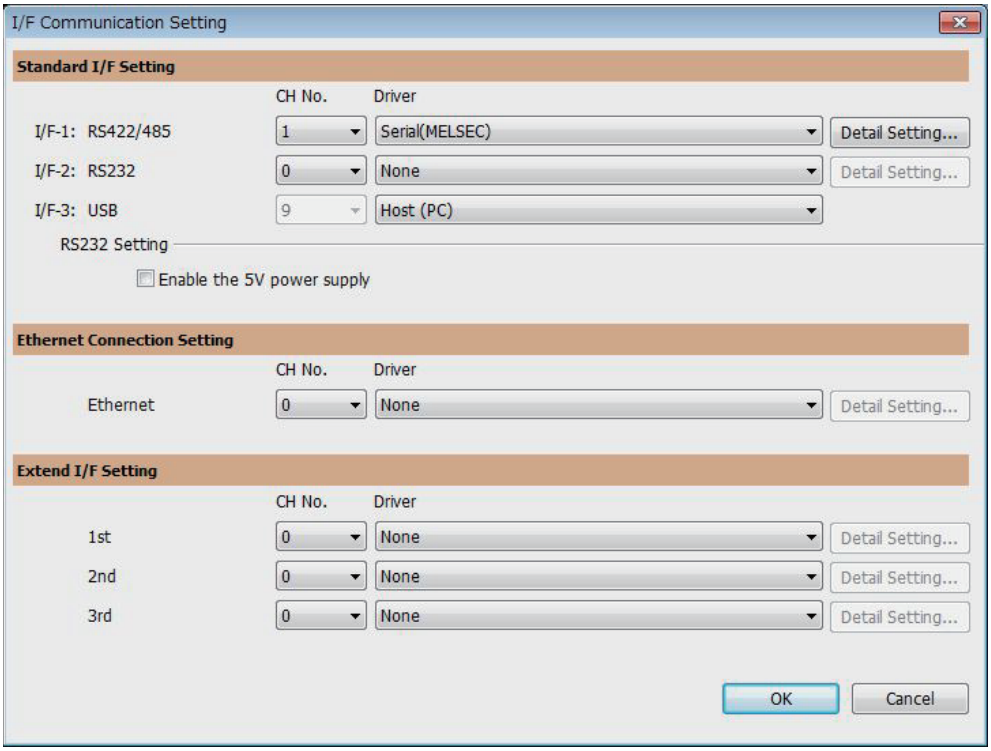

2. For the detailed settings, refer to the following manual.

☞ GT Designer3 (GOT2000) Screen Design Manual

# I/F communication setting

This function displays the list of the GOT communication interfaces.
Set the channel and the communication driver to the interface to be used.

## Setting



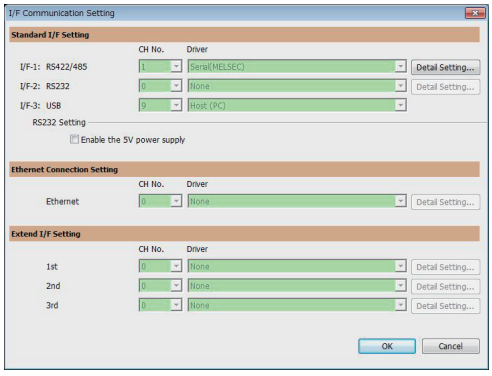

**1.** Select [Common] → [I/F Communication Setting] from the menu.

**2.** The I/F Communication Setting dialog box appears.

Make the settings with reference to the following explanation.

**Point**

When using the parameter reflection function of MELSOFT Navigator.
When setting [Controller Setting] in GT Designer3 using the parameter function of MELSOFT Navigator, all of I/F Communication Setting are grayout and cannot be edited Set these items at [Controller Setting] or [Peripheral Unit Setting].

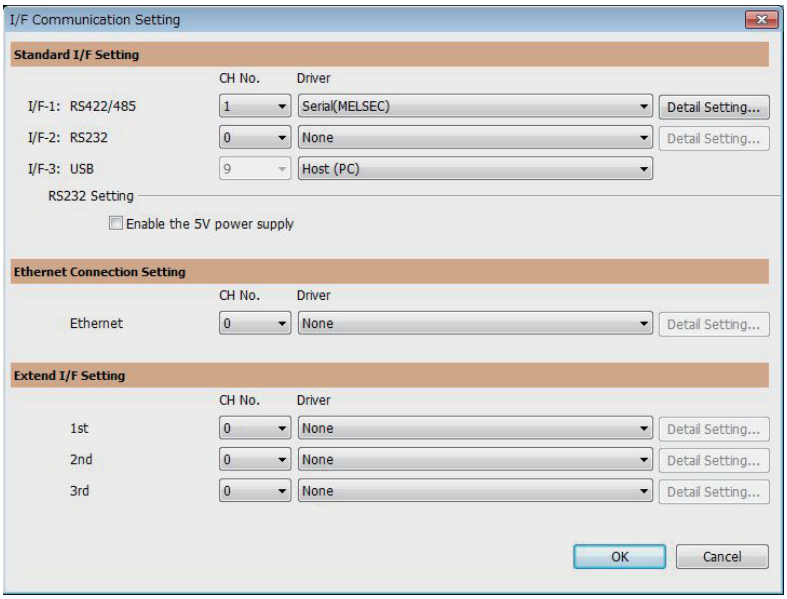


## Setting item

The following describes the setting items for the standard I/F setting and extension I/F setting.

For the detailed explanations, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual




| Item | Description | |
|---|---|---|
| Standard I/F setting | Set channel No. and drivers to the GOT standard interfaces. | |
| | CH No. | Set the CH No. according to the intended purpose.<br>0: Not used<br>1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting) |
| | Driver | Set the driver for the device to be connected.<br>• Each communication driver suitable to the channel numbers<br>• Each communication driver for connected devices |
| | Detail Setting | Set the detailed settings for the communication driver.<br>☞ Refer to each chapter of the equipment to be connected to the GOT. |
| | I/F-1,I/F-2,I/F-3 | The communication type of the GOT standard interface is displayed. |
| | RS232 Setting | To validate the 5V power supply function in RS232, mark the [Enable the 5V power supply] checkbox.<br>The RS232 setting is invalid when the CH No. of [I/F-1: RS232] is [9].<br>This setting is not available to GT2506HS-V and GT2505HS-V. |
| Ethernet connection setting | Set the channel number and the communication driver to the Ethernet interface with a built-in GOT. | |
| | CH No. | Set the CH No. according to the intended purpose.<br>0: Not used<br>1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting)<br>9: Used for connecting Host (PC) or Ethernet download<br>A: Used for the remote personal computer operation function (Ethernet), VNC server function, gateway function, and MES interface function.<br>Multi: Used for multi-channel Ethernet connection |
| | Driver | Set the driver for the device to be connected.<br>• Each communication driver suitable to the channel numbers<br>• Each communication driver for connected devices |
| | Detail Setting | Set the detailed settings for the communication driver.<br>☞ Refer to each chapter of the equipment to be connected to the GOT. |

**Point**

Channel No., drivers, [RS232 Setting]

• Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function.

For details of the Multi-channel function, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

• Drivers

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F].

When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct.

Setting the communication interface] section in each chapter

# Precautions

## When using the multiple CPU system

When using the GOT to monitor the multiple CPU system of other stations, select [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] for the type, regardless of the host PLC CPU type (QCPU, QnACPU, or ACPU).

When other models are selected, the setting of the CPU No. becomes unavailable.

## Precautions for changing model

### ■When devices that cannot be converted are included.

When setting of [Manufacturer] or [Controller Type] is changed, GT Designer3 displays the device that cannot be converted (no corresponding device type, or excessive setting ranges) as [??].

In this case, set the device again.

### ■When the changed Manufacturer or Controller Type does not correspond to the network.

The network will be set to the host station.

### ■When the Manufacturer or Controller Type is changed to [None]

The GT Designer3 displays the device of the changed channel No. as [??].

In this case, set the device again.

Since the channel No. is retained, the objects can be reused in other channel No. in a batch by using the [Device Bach Edit], [CH No. Batch Edit] or [Device List].

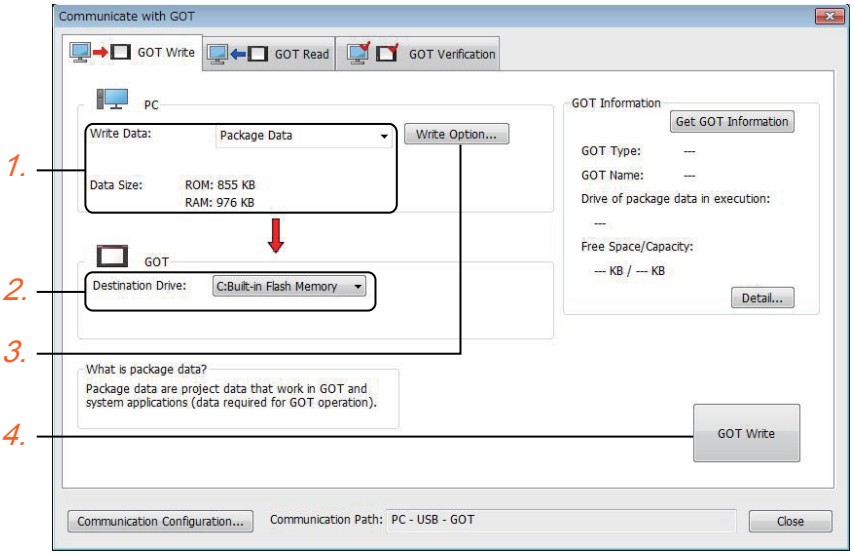
# 1.2 Writing the Package Data onto the GOT

Write the package data onto the GOT.

For details on writing to GOT, refer to the following help.

GT Designer3 (GOT2000) Screen Design Manual

## Writing the Package Data onto the GOT




**1.** Select [Package Data] for [Write Data].

The capacity of the transfer data is displayed in [Data Size].

Check that the destination drive has the sufficient available space.

**2.** Select [Destination Drive].

**3.** When the system application or the special data is required to be added to the package data or deleted, click the [Write Option] button and configure the setting in the [Write Option] dialog.

**4.** Click the [GOT Write] button.

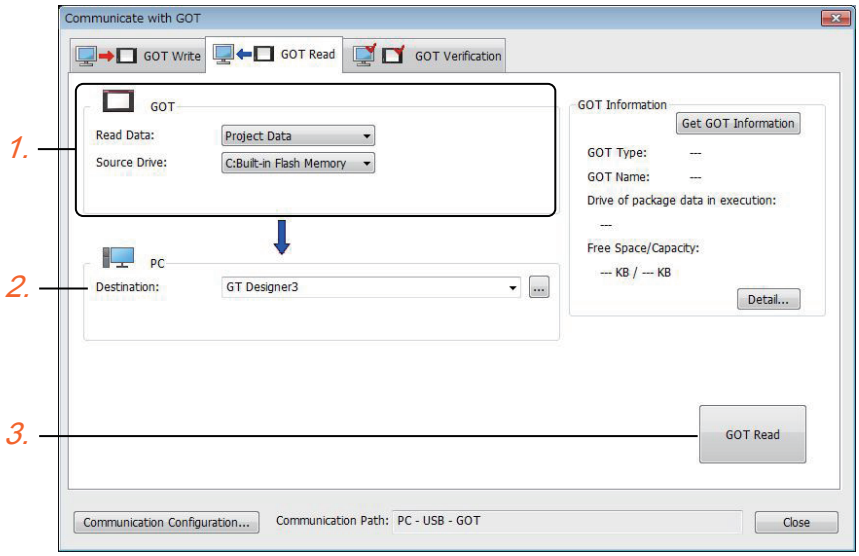
**5.** The package data is written to the GOT.

# Checking the package data writing on GOT

Confirm if the package data is properly written onto the GOT by reading from GOT using GT Designer3.

For reading from the GOT, refer to the following help.

GT Designer3 (GOT2000) Screen Design Manual




**1.** Set [GOT Side] as follows.

- Select [Project Data] or [Package Data] for [Read Data].
- Select the drive where the project data or the package data is stored for [Source Drive].

**2.** Set [PC Side].

Set the reading destination of the project for [Destination].

To read the project data to GT Designer3, select [GT Designer3].

(When [Read Data] is [Package Data], the project data cannot be read to GT Designer3.)

To read the project data as a file, click the [...] button to set the saving format and the saving destination of the file.

**3.** Click the [GOT Read] button.

**4.** The project is read.

**5.** Confirm that the project data is written correctly onto the GOT.

# 1.3 Option Devices for the Respective Connection

The following shows the option devices to connect in the respective connection type.
For the specifications, usage and connecting procedure on option devices, refer to the respective device manual.

## External cable

| Product name | Model name | Contents | GOT | |
|---|---|---|---|---|
| | | | GT2506 HS-V | GT2505 HS-V |
| External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-42S | GT16H-C30-42P | Connector conversion box connection side 42-pin connector, 3m | ○ | - |
| | GT16H-C60-42P | Connector conversion box connection side 42-pin connector, 6m | ○ | - |
| | GT16H-C100-42P | Connector conversion box connection side 42-pin connector, 10m | ○ | - |
| External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-37S | GT16H-C30-37PE | Connector conversion box connection side 37-pin connector, 3m | ○ | - |
| | GT16H-C60-37PE | Connector conversion box connection side 37-pin connector, 6m | ○ | - |
| | GT16H-C100-37PE | Connector conversion box connection side 37-pin connector, 10m | ○ | - |
| External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-42S | GT14H-C30-42P | Connector conversion box connection side 42-pin connector, 3m | - | ○ |
| | GT14H-C60-42P | Connector conversion box connection side 42-pin connector, 6m | - | ○ |
| | GT14H-C100-42P | Connector conversion box connection side 42-pin connector, 10m | - | ○ |
| External cable (For connecting GOT and a connector conversion box) Connector conversion box for connecting GOT and a relay cable: GT11H-CNB-37S GT16H-CNB-37S | GT11H-C30-37P*1 | Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 3m | - | ○ |
| | GT11H-C60-37P*1 | Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 6m | - | ○ |
| | GT11H-C100-37P*1 | Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 10m | - | ○ |
| External cable (for connecting GOT and a relay cable) | GT11H-C30*1 | Relay cable connection side loose wires, 3m | - | ○ |
| | GT11H-C60*1 | Relay cable connection side loose wires, 6m | - | ○ |
| | GT11H-C100*1 | Relay cable connection side loose wires, 10m | - | ○ |

*1 Use a model with version C or later.

## Relay cable

| Product name | Model name | Contents | GOT | |
|---|---|---|---|---|
| | | | GT2506 HS-V | GT2505 HS-V |
| Relay cable (for connecting an external cable and PLC) | GT11H-C15R4-8P*1 | FX CPU (MINI-DIN 8-pin) connection cable, 1.5m | - | ○ |
| | GT11H-C15R4-25P*1 | A/QnA CPU (D-Sub 25-pin) connection cable, 1.5m | - | ○ |
| | GT11H-C15R2-6P*1 | Q CPU (MINI-DIN 6-pin) connection cable, 1.5m | - | ○ |

*1 Use a model with version C or later.

## Connector Conversion Box

| Product name | Model name | Contents | GOT | |
|---|---|---|---|---|
| | | | GT2506 HS-V | GT2505 HS-V |
| Connector Conversion Box | GT16H-CNB-42S | Box for converting 42-pin connectors into terminal block, 9-pin D-Sub connector*1 or Ethernet RJ-45 connector. | ○ | ○ |
| | GT16H-CNB-37S | Box for converting D-Sub 37-pin connectors into terminal blocks or Ethernet RJ-45 connector | ○ | ○ |
| | GT11H-CNB-37S | Box for converting D-Sub 37-pin connectors into terminal blocks or D-Sub 9-pin connectors | - | ○ |

*1 The D-Sub 9-pin connector cannot be used for connection to GT2505HS-V.

## Serial multi-drop connection unit

| Product name | Model name | Contents | GOT | |
|---|---|---|---|---|
| | | | GT2506 HS-V | GT2505 HS-V |
| Serial multi-drop connection unit | GT01-RS4-M | GOT multi-drop connection module<br>GOT2000 Series Connection Manual (Mitsubishi Electric Products)<br>For GT Works3 Version1 | ○ | - |

## Connector conversion adapter

| Product name | Model name | Contents | GOT | |
|---|---|---|---|---|
| | | | GT2506 HS-V | GT2505 HS-V |
| Connector conversion adapter | GT10-9PT5S | Adapter to connect RS-485 unfastened cables to Handy GOT | ○ | - |

# 1.4 Connection Cables for the Respective Connection

To connect the GOT to a device in the respective connection type, connection cables between the GOT and a device are necessary.

For cables needed for each connection, refer to each chapter for connection.

For the dimensions of connection cables and connector shapes, refer to the following.

GOT2000 Series User's Manual (Hardware)

## GOT connector specifications

The following shows the connector specifications of the GOT connector conversion box and external cable.

Refer to the following table when preparing connection cables by the user.

### RS-232 interface

The following connector or equivalent connector is used for the RS-232 interface of the connector conversion box.

For the connector conversion box side of the connectio cable, use a connector and connector cover applicable to the connector conversion box connector.

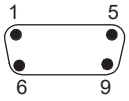
#### ■Connector specifications

| Connector conversion box | Connector type | Connector model | Manufacturer |
|---|---|---|---|
| GT16H-CNB-42S<br>GT11H-CNB-37S | 9-pin D-sub (male)<br>#4-40UNC inch screw thread | JES-9P-2A3A | J.S.T.MFG.CO.,LTD. (JST) |

#### ■Connector pin arrangement

**GT16H-CNB-42S, GT11H-CNB-37S**

When seen from the front side of a connector of the connector conversion box




9-pin D-sub (male)

### RS-422/485 or RS-422 interface

The following connector or equivalent connector is used for the RS-422/485 or RS-422 interface of the connector conversion box.

For the connector conversion box side of the connection cable, use a connector and connector cover applicable to the connector conversion box connector.

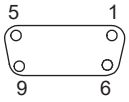
#### ■Connector model

| Connector conversion box | Interface | Connector type | Connector model | Manufacturer |
|---|---|---|---|---|
| GT16H-CNB-42S | RS-422/485 | 9-pin D-Sub (female)<br>M2.6 metric screw thread | JES-9S-2A3B14 | J.S.T.MFG.CO.,LTD. (JST) |
| GT11H-CNB-37S | RS-422 | | | |

#### ■Connector pin arrangement

**GT16H-CNB-42S, GT11H-CNB-37S**

When seen from the front side of a connector of the connector conversion box




9-pin D-sub (female)

## External cable (GT11H-C□□□-37P)

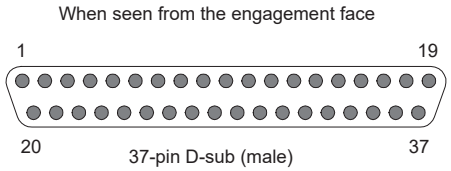
The following relay cable connector or equivalent connector is used for the external connection cable (GT11H-C □□□ -37P). For the connector to be connected to GT11H-C□□□-37P and its cover, use products applicable to the GT11HC□□□-37P connector.

### ■Connector model

| Connector model | Connector type | Manufacturer |
|---|---|---|
| 17JE-23370-02(D8A2)-CG | 37-pin D-sub (male), M2.6 metric screw thread | DDK Ltd. |

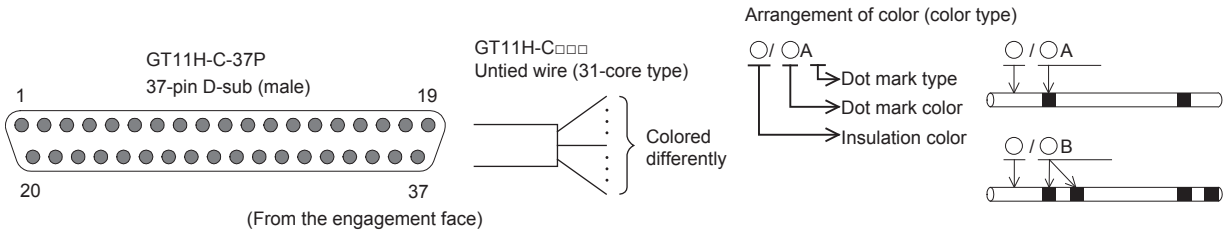
### ■Connector pin arrangement

**External cable (GT11H-C□□□-37P)**




# Pin layout and signal names of the external cable

## GT11H-C□□□-37P (Use C or later version.), GT11H-C□□□ (Use C or later version.)



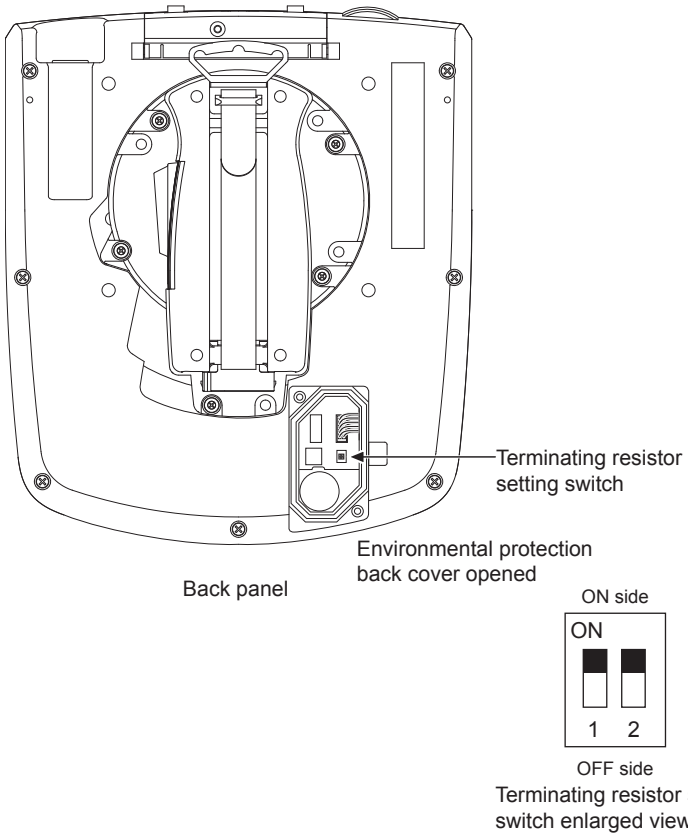

| External cable | | | Communication, power, operation switch signal name | | Application |
|---|---|---|---|---|---|
| GT11H-C□□□-37P | GT11H-C□□□ | | RS-422 | RS-232C | |
| D-SUB pin No. | Wire diameter | Wire color (color type) | | | |
| 1 | - | Shield | FG (Shield) | | Frame ground |
| 2 | AWG28 Twisted pair | W/R (A) | TXD+ (SDA) | TXD (SD) | Signal line for PLC communication |
| 3 | | W/BK (A) | TXD- (SDB) | DTR (ER) | |
| 4 | | GY/R (A) | RTS+ (RSA) | RXD (RD) | |
| 5 | | GY/BK (A) | RTS- (RSB) | DSR (DR) | |
| 6 | | O/R (A) | RXD+ (RDA) | RTS (RS) | |
| 7 | | O/BK (A) | RXD- (RDB) | CTS (CS) | |
| 8 | | Y/R (A) | CTS+ (CSA) | Not used | |
| 9 | | Y/BK (A) | CTS- (CSB) | Not used | |
| 10 | AWG28 | PK/R (A) | SG | | Signal ground |

# Terminating resistors of GOT

The following shows the terminating resistor specifications on the GOT side.
When setting the terminating resistor in each connection type, refer to the following.

## GT2506HS-VTBD

Set the terminating resistor using the terminating resistor setting switch on the back panel of the GOT.




| Terminating resistor*1 | Switch No. | |
|---|---|---|
| | 1 | 2 |
| Enable | ON | ON |
| Disable | OFF | OFF |

*1 The default setting is "Disable".

## GT2505HS-VTBD

The terminating resistor of GT2505HS-VTBD is fixed to 330 Ω.

# 1.5 ID Recognition Function

For the detailed settings, refer to the following manual.

GOT2000 Series User's Manual (Hardware)

# 1.6 Verifying GOT Recognizes Connected Equipment

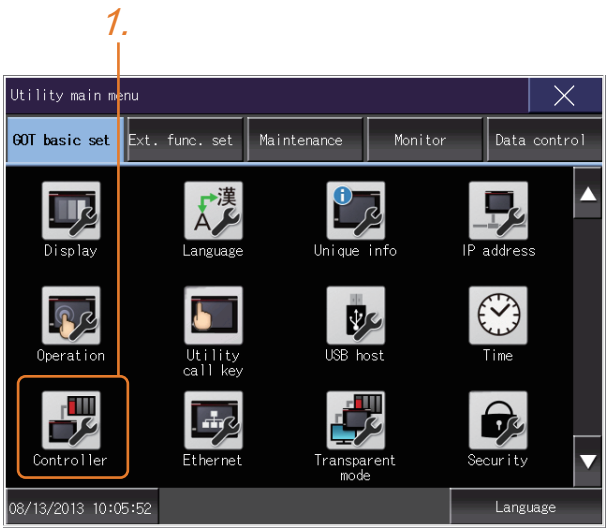
Verify the GOT recognizes controllers on [Communication Settings] of the Utility.

- Channel number of communication interface, communication drivers allocation status
- Communication unit installation status

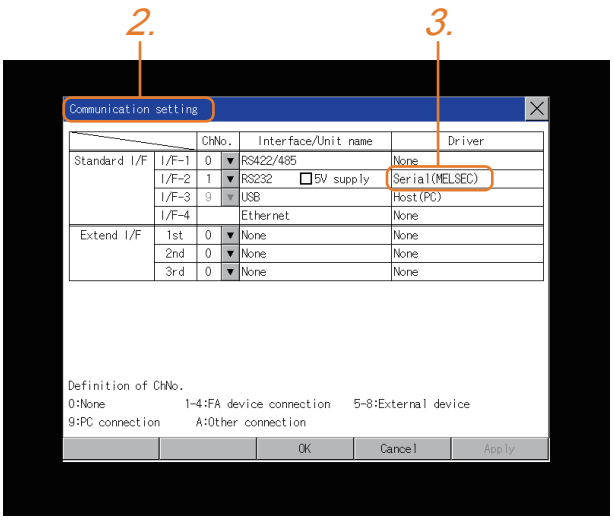
For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

**1.** After powering up the GOT, touch [GOT basic set] → [Controller] from the Utility.




**2.** The [Communication Settings] appears.




**3.** Verify that the communication driver name to be used is displayed in the communication interface box to be used.

**4.** When the communication driver name is not displayed normally, carry out the following procedure again.

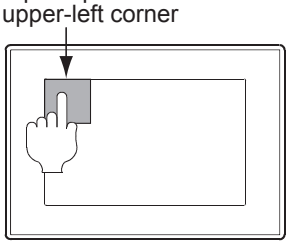
☞ Page 45 Setting the Communication Interface

**Point**

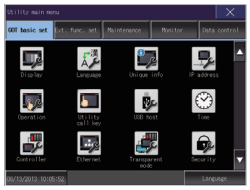
Utility

• How to display Utility (at default)

Utility call key
1-point press on GOT screen
upper-left corner



Utility display



• Utility call

When setting [Pressing time] to other than 0 second on the setting screen of the utility call key, press and hold the utility call key until the buzzer sounds.

For the setting of the utility call key, refer to the following.

GOT2000 Series User's Manual (Utility)

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 1.7 Checking for Normal Monitoring



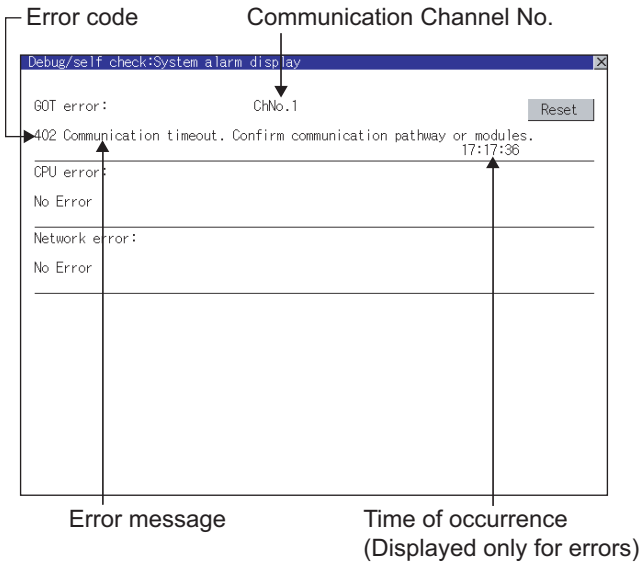
## Check on the GOT

### Check for errors occurring on the GOT

Presetting the system alarm to project data allows you to identify errors occurred on the GOT, PLC CPU, servo amplifier and communications.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)




**Point**

Alarm popup display

With the alarm popup display function, alarms are displayed as a popup display regardless of whether an alarm display object is placed on the screen or not (regardless of the display screen).

Since comments can be flown from right to left, even a long comment can be displayed all.

For details of the alarm popup display, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

## Perform an I/O check

Whether the PLC can communicate with the GOT or not can be checked by the I/O check function.

If this check ends successfully, it means correct communication interface settings and proper cable connection.

Display the I/O check screen by Main Menu.

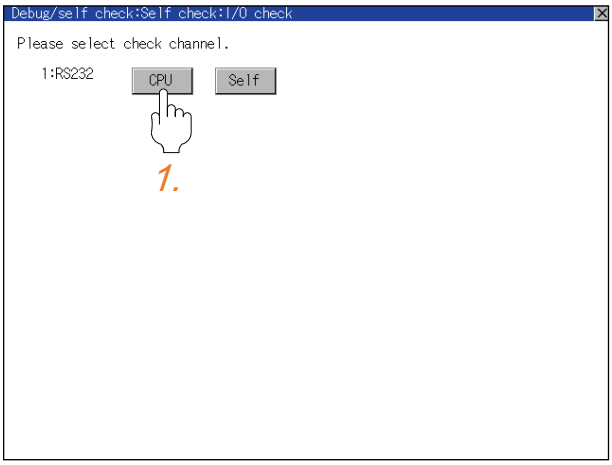
- Display the I/O check screen by [Maintenance] → [I/O check].

For details on the I/O check, refer to the following manual:

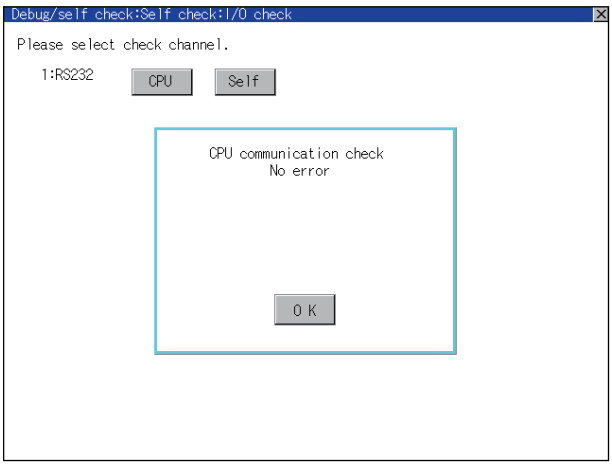
GOT2000 Series User's Manual (Utility)

***1.*** Touch [CPU] on the I/O check screen.

Touching [CPU] executes the communication check with the connected PLC.




***2.*** When the communication screen ends successfully, the screen on the left is displayed.



# Confirming the communication state on the GOT side (For Ethernet connection)



## Confirming the communication state on Windows, GT Designer3

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.18

Reply from 192.168.3.18: bytes=32 time<1ms TTL=64

• At abnormal communication

C:\>Ping 192.168.3.18

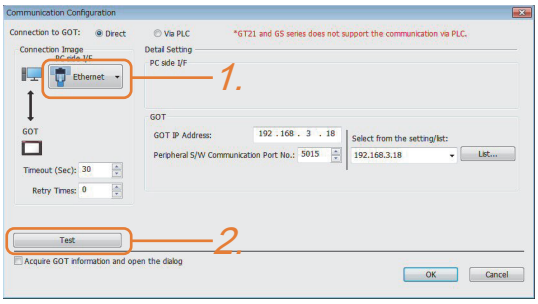
Request timed out.

### ■When using the [Test] of GT Designer3

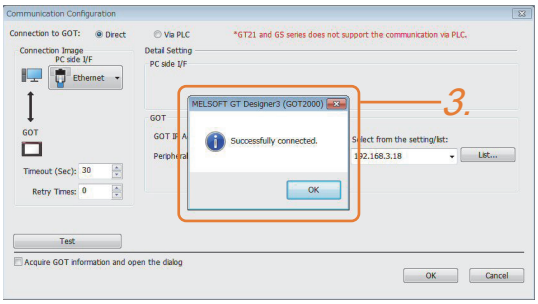
Select [Communication] → [Communication settings] from the menu to display [TEST].

***1.*** Set the [PC side I/F] to the [Ethernet].

***2.*** Specify the [GOT IP Address] of the [Communication Configuration] and click the [Test] button.




***3.*** Check if GT Designer3 has been connected to the GOT.




### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command or [Test] again.

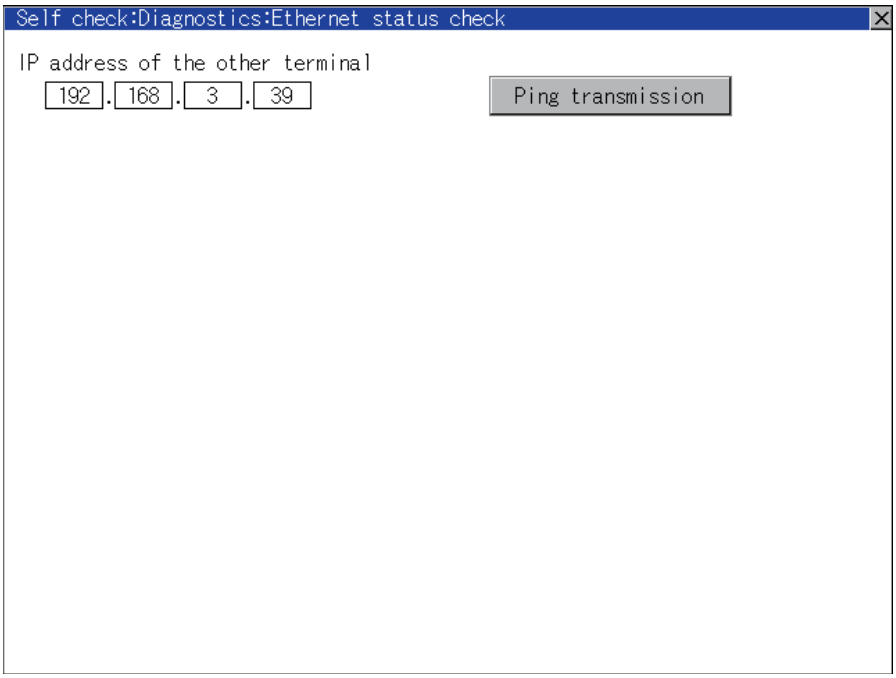
- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of [Communication Settings]
- IP address of GOT specified by Ping command

## Confirming the communication state on the GOT

[PING Test] can be confirmed by the Utility screen of the GOT.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)



# Confirming the communication state to each station (Station monitoring function)



The station monitoring function detects the faults (communication timeout) of the stations monitored by the GOT.
When detecting the abnormal state, it allocates the data for the faulty station to the GOT special register (GS).

## No. of faulty stations

### ■Ethernet connection (Except for Ethernet multiple connection)

Total No. of the faulty CPU is stored.

| Device | b15 to b8 | b7 to b0 |
|---|---|---|
| GS230 | (00H fixed) | No. of faulty stations |

### ■Ethernet multiple connection

Total No. of the faulty connected equipment is stored.

| Channel | Device | b15 to b8 | b7 to b0 |
|---|---|---|---|
| Ch1 | GS280 | (00H fixed) | No. of faulty stations |
| Ch2 | GS300 | (00H fixed) | No. of faulty stations |
| Ch3 | GS320 | (00H fixed) | No. of faulty stations |
| Ch4 | GS340 | (00H fixed) | No. of faulty stations |

**Point**

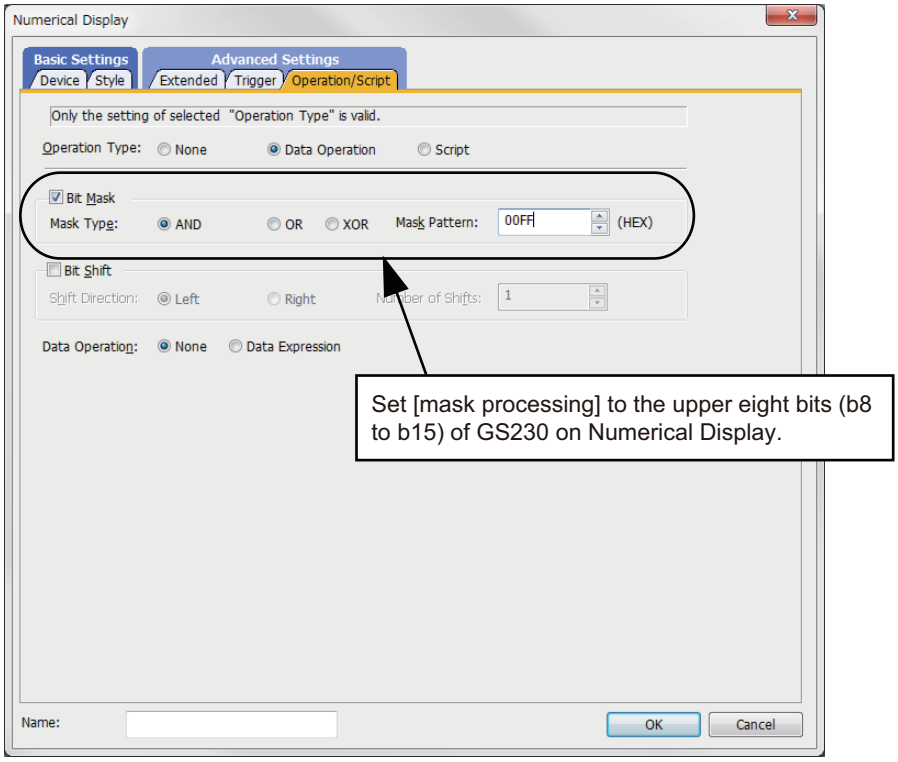
When monitoring GS230 on Numerical Display

When monitoring GS230 on Numerical Display, check [mask processing] with data operation tab as the following.

For the data operation, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

• Numerical Display (Data Operation tab)

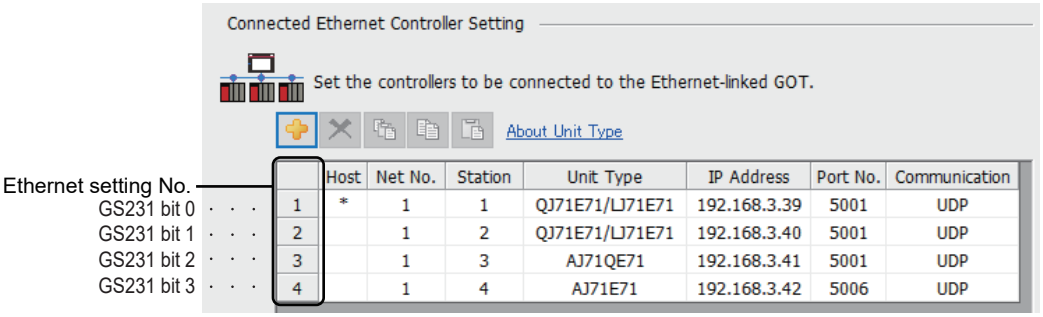


## Faulty station information

The bit corresponding to the faulty station is set. (0: Normal, 1: Abnormal)

The bit is reset after the fault is recovered.

### ■Ethernet connection




| Device | Ethernet setting No. | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| GS231 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| GS232 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| GS233 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| GS234 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| GS235 | 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 |
| GS236 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 |
| GS237 | 112 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 |
| GS238 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 |

The following shows the Ethernet setting numbers for each device in the Ethernet multiple connection.

| Device | | | | Ethernet setting No. | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ch1 | Ch2 | Ch3 | Ch4 | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| GS281 | GS301 | GS321 | GS341 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| GS282 | GS302 | GS322 | GS342 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| GS283 | GS303 | GS323 | GS343 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| GS284 | GS304 | GS324 | GS344 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| GS285 | GS305 | GS325 | GS345 | 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 |
| GS286 | GS306 | GS326 | GS346 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 |
| GS287 | GS307 | GS327 | GS347 | 112 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 |
| GS288 | GS308 | GS328 | GS348 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 |

## ■CC-Link IE TSN connection

| Device | Station number | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| GS1281 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| GS1282 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 |
| GS1283 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 |
| GS1284 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 |
| GS1285 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 |
| GS1286 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |
| GS1287 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 |
| GS1288 | - | - | - | - | - | - | - | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 |

## ■Connection with the temperature controller (AZBIL temperature controller (DMC50))

| Device | | | | Station number-Sub Station | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ch1 | Ch2 | Ch3 | Ch4 | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| GS281 | GS301 | GS321 | GS341 | 1-15 | 1-14 | 1-13 | 1-12 | 1-11 | 1-10 | 1-9 | 1-8 | 1-7 | 1-6 | 1-5 | 1-4 | 1-3 | 1-2 | 1-1 | 1-0 |
| GS282 | GS302 | GS322 | GS342 | 2-15 | 2-14 | 2-13 | 2-12 | 2-11 | 2-10 | 2-9 | 2-8 | 2-7 | 2-6 | 2-5 | 2-4 | 2-3 | 2-2 | 2-1 | 2-0 |
| GS283 | GS303 | GS323 | GS343 | 3-15 | 3-14 | 3-13 | 3-12 | 3-11 | 3-10 | 3-9 | 3-8 | 3-7 | 3-6 | 3-5 | 3-4 | 3-3 | 3-2 | 3-1 | 3-0 |
| GS284 | GS304 | GS324 | GS344 | 4-15 | 4-14 | 4-13 | 4-12 | 4-11 | 4-10 | 4-9 | 4-8 | 4-7 | 4-6 | 4-5 | 4-4 | 4-3 | 4-2 | 4-1 | 4-0 |
| GS285 | GS305 | GS325 | GS345 | 5-15 | 5-14 | 5-13 | 5-12 | 5-11 | 5-10 | 5-9 | 5-8 | 5-7 | 5-6 | 5-5 | 5-4 | 5-3 | 5-2 | 5-1 | 5-0 |
| GS286 | GS306 | GS326 | GS346 | 6-15 | 6-14 | 6-13 | 6-12 | 6-11 | 6-10 | 6-9 | 6-8 | 6-7 | 6-6 | 6-5 | 6-4 | 6-3 | 6-2 | 6-1 | 6-0 |
| GS287 | GS307 | GS327 | GS347 | 7-15 | 7-14 | 7-13 | 7-12 | 7-11 | 7-10 | 7-9 | 7-8 | 7-7 | 7-6 | 7-5 | 7-4 | 7-3 | 7-2 | 7-1 | 7-0 |
| GS288 | GS308 | GS328 | GS348 | 8-15 | 8-14 | 8-13 | 8-12 | 8-11 | 8-10 | 8-9 | 8-8 | 8-7 | 8-6 | 8-5 | 8-4 | 8-3 | 8-2 | 8-1 | 8-0 |

## ■Connection types other than the above

The supported device differs depending on the communication driver to be used.

- Communication drivers supported by the host station only

| Communication driver list | | |
|---|---|---|
| Bus Q | Bus A/QnA | Serial(MELSEC) |
| AJ71QC24, MELDAS C6* | AJ71C24/UC24 | CC-Link(G4) |
| MELSEC-FX | MELSEC-WS | OMRON SYSMAC |
| YASKAWA GL | YASKAWA CP9200 (H) | YASKAWA CP9300MS (MC compatible) |
| YASKAWA MP2000/MP900/CP9200SH | AB Control/CompactLogix | SHARP JW |
| TOSHIBA PROSEC T/V | HITACHI IES HIDIC H | HITACHI IES HIDIC H(Protocol2) |
| PANASONIC MEWNET-FP | PANASONIC MEWTOCOL-7 | SIEMENS S7-200 |
| YOKOGAWA FA500/FA-M3/STARDOM | Serial(KEYENCE) | HITACHI S10mini/S10V |
| FUJI MICREX-SX SPH | SHIBAURA MACHINE TCmini | SICK Flexi Soft |
| IAI X-SEL | PROFIBUS DP | DeviceNet |

The host station uses the 0th bit at the top.

Ch1: GS281.b0

Ch2: GS301.b0

Ch3: GS321.b0

Ch4: GS341.b0

• Communication drivers supported by the other stations

| Communication driver list | | |
|---|---|---|
| CC-Link IE Controller Network | CC-Link IE Field Network | MEI Nexgenie |
| AB SLC500 AB 1:N connection | AB MicroLogix | AB MicroLogix(Extended) |
| SIEMENS S7-300/400 | JTEKT TOYOPUC-PC | FUJI MICREX-F |
| GE(SNP-X) | KOYO KOSTAC/DL | LS Industrial Systems MASTER-K |
| Hirata HNC | IAI robocylinder | Panasonic MINAS A4 |
| Panasonic MINAS A5 | Muratec MPC | MELSERVO-J4,J3,J2S/M,JE |
| FREQROL 500/700/800,SENSORLESS SERVO | FREQROL 800 | FREQROL(Batch monitor) |
| OMRON THERMAC/INPANEL NEO | OMRON Digital Temperature Controller | AZBIL SDC/DMC |
| AZBIL DMC50 | RKC SR Mini HG (MODBUS) | FUJI Temperature Controller/Digital Controller |
| YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced | SHINKO TECHNOS CONTROLLER | CHINO MODBUS device |
| MODBUS/RTU Master | | |

The following shows the supported devices.

| Device | | | | Station number | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ch1 | Ch2 | Ch3 | Ch4 | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| GS281 | GS301 | GS321 | GS341 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0*1 |
| GS282 | GS302 | GS322 | GS342 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 |
| GS283 | GS303 | GS323 | GS343 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 |
| GS284 | GS304 | GS324 | GS344 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 |
| GS285 | GS305 | GS325 | GS345 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 |
| GS286 | GS306 | GS326 | GS346 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |
| GS287 | GS307 | GS327 | GS347 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 |
| GS288 | GS308 | GS328 | GS348 | 127 *1*2 | 126 *1*2 | 125 *1*2 | 124 *1*2 | 123 *1*2 | 122 *1*2 | 121 *1*2 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 |

*1 When CC-Link IE controller network connection is not used.

*2 When CC-Link IE field network connection is not used.

For details on the GS Device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

## Network No., station No. notification

The network No. and station No. of the GOT in Ethernet connection are stored at GOT startup.

If connected by other than Ethernet, 0 is stored.

| Device | | | | Description |
|---|---|---|---|---|
| Ch1 | Ch2 | Ch3 | Ch4 | |
| GS376 | GS378 | GS380 | GS382 | Network No. (1 to 239) |
| GS377 | GS379 | GS381 | GS383 | Station No. (1 to 64) |

# PART 2 MITSUBISHI ELECTRIC PLC CONNECTIONS

When connecting Handy GOT and Mitsubishi Electric PLCs, refer to the following for the device range that can be set, the access range for monitoring and how to monitor redundant systems.

• Device Range that Can Be Set

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 Appendix 1 Settable Device Range

📖GT Designer3 (GOT2000) Screen Design Manual

• Accessible range for monitoring

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 2. ACCESS RANGE FOR MONITORING

• How to monitor redundant system

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 3. HOW TO MONITOR REDUNDANT SYSTEM

2 ETHERNET CONNECTION

3 DIRECT CPU CONNECTION (SERIAL)

4 SERIAL COMMUNICATION CONNECTION

5 CC-Link CONNECTION (Via G4)

# 2 ETHERNET CONNECTION


- Page 102 Connectable Model List
- Page 112 System Configuration
- Page 144 GOT Side Settings
- Page 155 PLC Side Setting
- Page 267 Precautions


## 2.1 Connectable Model List

### PLC/Motion CPU

The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-R Series | R00CPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module<br>☞ Page 135 Connection to Motion module<br>☞ Page 142 Connection through a servo amplifier |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU*2 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| | R16PCPU*2 | | | | |
| | R32PCPU*2 | | | | |
| | R120PCPU*2 | | | | |
| | R04ENCPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module<br>☞ Page 135 Connection to Motion module<br>☞ Page 142 Connection through a servo amplifier |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU*3 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| | R16PSFCPU*3 | | | | |
| | R32PSFCPU*3 | | | | |
| | R120PSFCPU*3 | | | | |
| | R08SFCPU*1 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module<br>☞ Page 135 Connection to Motion module |
| | R16SFCPU*1 | | | | |
| | R32SFCPU*1 | | | | |
| | R120SFCPU*1 | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| C Controller module (MELSEC iQ-R Series) | R12CCPU-V | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module<br>☞ Page 135 Connection to Motion module<br>☞ Page 142 Connection through a servo amplifier |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | × | Ethernet | GT2506HS GT2505HS | ☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module |
| CNC C80 | R16NCCPU-S1 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 127 Connecting to Display I/F |
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| CC-Link IE Filed Network head module | RJ72GF15-T2 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |

*1 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

*2 Mount a redundant function module R6RFM next to the RnPCPU on the base unit when building a redundant system.

*3 Mount the SIL2 function module R6PSFM and redundant function module R6RFM next to the RnPSFCPU on the base unit.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-F Series | FX5U *2 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 131 Connection to CC-Link IE TSN-equipped module<br>☞ Page 135 Connection to Motion module<br>☞ Page 142 Connection through a servo amplifier |
| | FX5UC *2 | | | | |
| | FX5UJ*2 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 142 Connection through a servo amplifier |
| | FX5S | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 142 Connection through a servo amplifier |
| MELSEC-Q (Q mode) | Q00JCPU | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | Q00CPU*1 | | | | |
| | Q01CPU*1 | | | | |
| | Q02CPU*1 | | | | |
| | Q02HCPU*1<br>Q06HCPU*1<br>Q12HCPU*1<br>Q25HCPU*1 | | | | |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | Q12PRHCPU (Main base) | | | | |
| | Q25PRHCPU (Main base) | | | | |
| | Q12PRHCPU (Extension base) | | | | |
| | Q25PRHCPU (Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | Q00UCPU<br>Q01UCPU<br>Q02UCPU<br>Q03UDCPU | | | | |
| | Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | | | | |

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-Q<br>(Q mode) | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 142 Connection through a servo amplifier |

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 When using FX5-ENET or FX5-ENET/IP, use firmware Ver.1.240 or later.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| C Controller module (Q Series) | Q12DCCPU-V *3<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module |
| MELSEC-QS | QS001CPU | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |
| MELSEC-L | L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module<br>☞ Page 112 Connection to Ethernet module<br>☞ Page 142 Connection through a servo amplifier |
| | L02SCPU<br>L02SCPU-P | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |
| MELSEC-Q (A mode) | Q02CPU-A*2<br>Q02HCPU-A*2<br>Q06HCPU-A*2 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |
| MELSEC-QnA (QnACPU) | Q2ACPU*2<br>Q2ACPU-S1*2<br>Q3ACPU*2<br>Q4ACPU*2<br>Q4ARCPU*2 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |
| MELSEC-QnA (QnASCPU) | Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |
| MELSEC-A (AnCPU) | A2UCPU<br>A2UCPU-S1<br>A3UCPU<br>A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1<br>A3ACPU<br>A3ACPUP21<br>A3ACPUR21<br>A1NCPU<br>A1NCPUP21<br>A1NCPUR21<br>A2NCPU<br>A2NCPUP21<br>A2NCPUR21<br>A2NCPU-S1<br>A2NCPUP21-S1<br>A2NCPUR21-S1<br>A3NCPU<br>A3NCPUP21<br>A3NCPUR21 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 112 Connection to Ethernet module |

*1 If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. However, the following devices cannot be monitored.
• Devices added to QnACPU
• Latch relays (L) and step relays (S)
(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)
• File register (R)

*2 Combination with the Ethernet module is restricted.
☞ Page 110 Ethernet module

*3 Use a module with the upper five digits later than 12042.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-A (AnSCPU) | A2USCPU | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | A2USCPU-S1 | | | | |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 | | | | |
| | A1SHCPU | | | | |
| | A2SCPU | | | | |
| | A2SCPU-S1 | | | | |
| | A2SHCPU | | | | |
| | A2SHCPU-S1 | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU | | | | |
| MELSEC-A | A0J2HCPU | × | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | A0J2HCPUP21 | | | | |
| | A0J2HCPUR21 | | | | |
| | A0J2HCPU-DC24 | | | | |
| | A2CCPU | ○ | - | - | - |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | | | | |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | | | | |
| | A1FXCPU | | | | |
| Motion CPU (Q Series) | Q172CPU*1*2 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | Q173CPU*1*2 | | | | |
| | Q172CPUN*1 | | | | |
| | Q173CPUN*1 | | | | |
| | Q172HCPU | | | | |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module<br>☞ Page 130 Connection to PERIPHERAL I/F |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU*3 | | | | |
| | Q170MSCPU*4 | | | | |
| | Q170MSCPU-S1*4 | | | | |
| | MR-MQ100 | | | | |

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*3 When using Ethernet module, only the first step can be used on the extension base unit (Q52B/Q55B).

*4 When using Ethernet module, the extension base unit (Q5□B/Q6□B) can be used.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Motion CPU (A Series) | A273UCPU | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | A273UHCPU | | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | | | | |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |
| | A171SHCPU | | | | |
| | A171SHCPUN | | | | |
| | A172SHCPU | | | | |
| | A172SHCPUN | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |
| MELSEC-WS | WS0-CPU0 | × | - | - | - |
| | WS0-CPU1 | | | | |
| | WS0-CPU3 | | | | |
| MELSECNET/H Remote I/O station | QJ72LP25-25 | × | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | - | - | - |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | CC-Link IE | - | ☞ Page 128 Connection to NZ2GF-ETB |
| | | × | Ethernet | GT 2506 HS GT 2505 HS | |
| CNC C70 | Q173NCCPU | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 127 Connecting to Display I/F |
| Robot controller (Q Series) | CRnQ-700(Q172DRCPU) *2 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | CR750-Q(Q172DRCPU) *2 | | | | |
| | CR751-Q(Q172DRCPU) *2 | | | | |
| | CR800-Q(Q172DSRCPU) *3 | | | | |
| MELSEC-FX | FX0 | × | - | - | - |
| | FX0S | | | | |
| | FX0N | | | | |
| | FX1 | | | | |
| | FX2 | × | | | |
| | FX2C | | | | |
| | FX1S | ○ | | | |
| | FX1N | | | | |
| | FX2N | | | | |
| | FX1NC | | | | |
| | FX2NC | × | | | |
| MELSEC-FX | FX3S*1 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 112 Connection to Ethernet module |
| | FX3G*1 | | | | |
| | FX3GC*1 | | | | |
| | FX3GE | | | | |
| | FX3U*1 | | | | |
| | FX3UC*1 | | | | |

*1 The supported version of the main units varies depending on the Ethernet module to be used as shown below.

| Ethernet module | FX3U(C) | FX3G(C) | FX3S |
|---|---|---|---|
| FX3U-ENET-L | Ver. 2.21 or later | FX3U-ENET-L is not supported. | |
| FX3U-ENET | Ver. 2.21 or later | FX3U-ENET is not supported. | |
| FX3U-ENET-ADP | Ver. 3.10 or later | Ver. 2.00 or later | Ver. 1.00 or later |

*2 The Display I/F of the robot controller cannot be connected.
Ethernet connections can be established via either of the following.
• Ethernet module (QJ71E71)
• Ethernet port built in the PLC CPU

*3 Ethernet connections can be established via the PERIPHERAL I/F of the robot controller or either of the following.
• Ethernet module (QJ71E71)
• Ethernet port built in the PLC CPU

# Ethernet module

| CPU series | Communication module |
|---|---|
| MELSEC iQ-R Series | RJ71EN71 *3<br>RJ71GN11-T2 *4<br>RJ71GN11-EIP*4<br>RD78G4 *4*5, RD78G8 *4*5, RD78G16 *4*5, RD78G32 *4*5, RD78G64 *4*5, RD78GHV *4*5, RD78GHW *4*5 |
| C Controller module (MELSEC iQ-R Series)*10 | RJ71GN11-T2<br>RD78G4, RD78G8, RD78G16, RD78G32, RD78G64, RD78GHV, RD78GHW |
| MELSECWinCPU (MELSEC iQ-R Series) | RJ71GN11-T2 |
| MELSEC iQ-F Series | FX5-ENET *6*7<br>FX5-ENET/IP *6*7<br>FX5-CCLGN-MS*12<br>FX5-40SSC-G*6*11, FX5-80SSC-G*6*11 |
| Motion CPU (MELSEC iQ-R Series)<br>CNC C80 (R16NCCPU-S1)<br>CR800-R(R16RTCPU)<br>CC-Link IE Field Network head module(MELSEC iQ-R Series) | RJ71EN71*3 |
| MELSEC-Q (Q mode)<br>MELSEC-QS<br>Motion CPU (Q Series)<br>CNC C70<br>Robot controller (CRnQ-700)<br>CR800-Q (Q172DSRCPU)<br>C Controller module (Q Series) | QJ71E71-100, QJ71E71-B5, QJ71E71-B2, QJ71E71 |
| MELSEC-QnA (QnACPU) *1<br>MELSEC-QnA (QnASCPU) *1 | AJ71QE71N3-T *2, AJ71QE71N-B5 *2, AJ71QE71N-B2 *2, AJ71QE71N-T *2, AJ71QE71N-B5T *2, AJ71QE71, AJ71QE71-B5<br>A1SJ71QE71N3-T *2*8, A1SJ71QE71N-B5 *2*8, A1SJ71QE71N-B2 *2*8, A1SJ71QE71N-T *2*8, A1SJ71QE71N-B5T *2*8, A1SJ71QE71-B5 *8, A1SJ71QE71-B2 *8 |
| MELSEC-Q (A mode)<br>MELSEC-A (AnCPU)<br>MELSEC-A (AnSCPU)<br>Motion CPU (A Series) | AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3<br>A1SJ71E71N3-T *9, A1SJ71E71N-B5 *9, A1SJ71E71N-B2 *9, A1SJ71E71N-T *9, A1SJ71E71N-B5T *9, A1SJ71E71-B5-S3 *9, A1SJ71E71-B2-S3 *9 |
| MELSEC-FX | FX3U-ENET-L, FX3U-ENET, FX3U-ENET-ADP |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB |
| MELSEC-L | LJ71E71-100 |

*1 If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. However, the following devices cannot be monitored.
• Devices added to QnACPU
• Latch relays (L) and step relays (S)
(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)
• File register (R)

*2 Use B or a later function version of Ethernet module and PLC CPU.

*3 Use firmware version 12 or later when building a redundant system.

*4 The following shows the connectable PLC CPUs and their firmware versions for connection with each module.

| Model | Firmware version | | | |
|---|---|---|---|---|
| | Connecting to RJ71GN11-T2 | Connecting to RJ71GN11-EIP | Connecting to RD78G4, RD78G8, RD78G16, RD78G32, or RD78G64 | Connecting to RD78GHV or RD78GHW |
| R00CPU | 11 or later | 29 or later | 12 or later | 14 or later |
| R01CPU | | | | |
| R02CPU | | | | |
| R04CPU | 43 or later | 62 or later | 44 or later | 46 or later |
| R08CPU | | | | |
| R16CPU | | | | |
| R32CPU | | | | |
| R120CPU | | | | |
| R04ENCPU | | | | |
| R08ENCPU | | | | |
| R16ENCPU | | | | |
| R32ENCPU | | | | |
| R120ENCPU | | | | |
| R08SFCPU | 20 or later | Unavailable | 21 or later | 21 or later |
| R16SFCPU | | | | |
| R32SFCPU | | | | |
| R120SFCPU | | | | |

*5 Use basic system software version 06 or later for the motion module.
For the firmware versions of the PLC CPUs supported by the motion modules and software versions of GX Works3 and Motion Control Setting Function, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Application)

*6 Not available to FX5UJ and FX5S.

*7 For FX5-ENET and FX5-ENET/IP, use firmware Ver.1.100 or later.
For FX5U, FX5UC, and FX5UJ that support FX5-ENET or FX5-ENET/IP, use firmware Ver.1.240 or later.

*8 Only available for MELSEC-QnA (QnASCPU).

*9 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.

*10 When connecting to the CC-Link IE TSN master/local module or Motion module, use the C Controller module (MELSEC iQ-R series) with firmware version 15 or later.

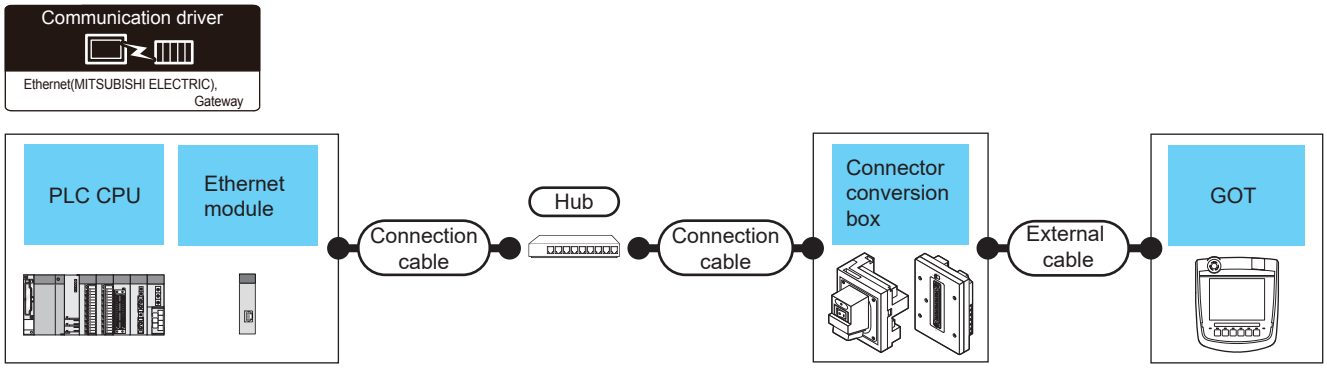
*11 For FX5U and FX5UC that support FX5-40SSC-G or FX5-80SSC-G, use firmware Ver.1.230 or later.

*12 Not available to FX5S.

# 2.2 System Configuration

## Connection to Ethernet module

### When connecting to MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), MELSECQ, QS, QnA, A, Motion CPU (Q series), or MELSEC-L




| PLC | | | Connection cable*1 | Maximum segment length*2 | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module*3*4 | Communication type | Cable model | | | | | GOT*7*9 | Unit*8 | |
| | | | | | | | | | UDP | TCP |
| MELSEC iQ-R Series Motion CPU (MELSEC iQ-R Series) | RJ71EN71 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119 (16 or less recommended) | 119 | 17 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*6] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT[*7*9] | Unit[*8] | |
| | | | | | | | | | UDP | TCP |
| CNC C80 (R16NCCPU-S1)<br>CR800-R(R16RTCPU)<br>CC-Link IE Field Network head module(MELSEC iQ-R Series) | RJ71EN71 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119<br>(16 or less recommended) | 119 | 17 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-Q (Q mode)<br>Motion CPU (Q Series)[*5]<br>Robot controller (CRnQ-700)<br>CR800-Q (Q172DSRCPU) | QJ71E71-100<br>QJ71E71-B5<br>QJ71E71-B2<br>QJ71E71 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63<br>(16 or less recommended) | 63 | 17 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*6] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT[*7*9] | Unit[*8] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-QS | QJ71E71-100<br>QJ71E71-B5<br>QJ71E71-B2<br>QJ71E71 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63<br>(16 or less recommended) | 63 | 17 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-QnA | AJ71QE71N3-T<br>AJ71QE71N-B5<br>AJ71QE71N-B2<br>AJ71QE71N-T<br>AJ71QE71N-B5T<br>AJ71QE71<br>AJ71QE71-B5<br>A1SJ71QE71N3-T<br>A1SJ71QE71N-B5<br>A1SJ71QE71N-B2<br>A1SJ71QE71N-T<br>A1SJ71QE71N-B5T<br>A1SJ71QE71-B5<br>A1SJ71QE71-B2 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63<br>(4 or less recommended) | 8 | - |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*6] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT[*7*9] | Unit[*8] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-A<br>MELSEC-Q (A mode)<br>Motion CPU (A Series) | AJ71E71N3-T<br>AJ71E71N-B5<br>AJ71E71N-B2<br>AJ71E71N-T<br>AJ71E71N-B5T<br>AJ71E71-S3<br>A1SJ71E71N3-T<br>A1SJ71E71N-B5<br>A1SJ71E71N-B2<br>A1SJ71E71N-T<br>A1SJ71E71N-B5T<br>A1SJ71E71-B5-S3<br>A1SJ71E71-B2-S3 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63<br>(4 or less recommended) | 8 | - |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-L | LJ71E71-100 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63<br>(16 or less recommended) | 63 | 17 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
Q Corresponding Ethernet Interface Module User's Manual (Basic)
For QnA Ethernet Interface Module User's Manual
For A Ethernet Interface Module User's Manual

*4 Select one of the following for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
• Ethernet module (MELSEC iQ-R Series): RJ71EN71
• Ethernet module (Q Series): QJ71E71
• Ethernet module (QnA Series): AJ71QE71
• Ethernet module (A Series): AJ71QE71
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*5 When using the peripheral I/F of Q170MCPU, Q17nDCPU-S1 or MR-MQ100, refer to the following.
☞ Page 130 Connection to PERIPHERAL I/F

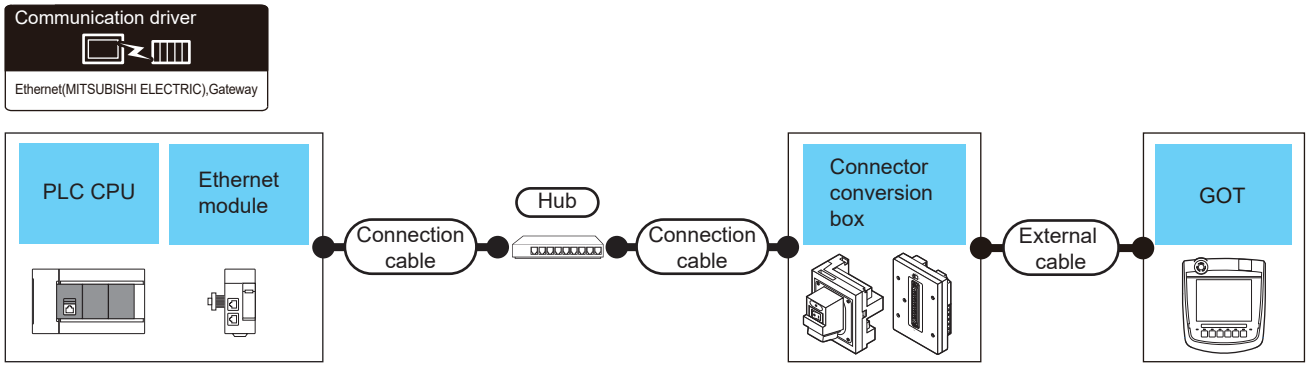
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 The number of GOTs connectable to one Ethernet module is indicated.

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

## When connecting to MELSEC iQ-F series




| PLC | | | Connection cable*1 | Maximum segment length*2 | Connector conversion box | External cable *5 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module*3*4 | Communication type | Cable model | | | | | GOT*6*8 | Unit*7 | |
| | | | | | | | | | UDP | TCP |
| MELSEC iQ-F Series (FX5U, FX5UC, FX5UJ) | FX5-ENET FX5-ENET/IP | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | 32 | 32 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
MELSEC iQ-F FX5-ENET User's Manual
MELSEC iQ-F FX5-ENET/IP User's Manual

*4 Select [FX5-ENET] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

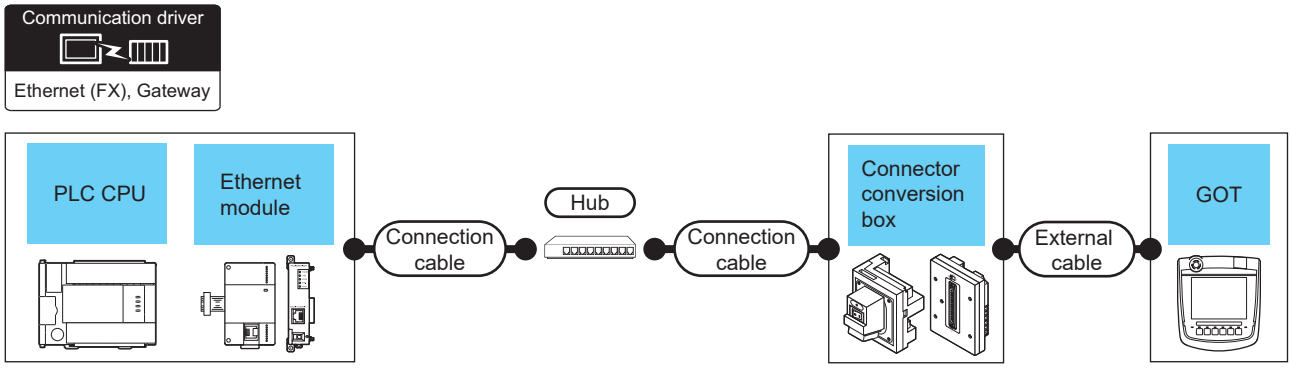
*5 Use C or later version of GT11H-C□□-37P.

*6 The number of connectable controllers per GOT channel is indicated.

*7 The number of GOTs connectable to one Ethernet module is indicated.

*8 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

## When connecting to MELSEC-FX




| PLC | | | Connection cable*1 | Maximum segment length*2 | Connector conversion box | External cable *8 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module*3*4 | Communication type | Cable model | | | | | GOT *9*11 | Unit*10 | |
| | | | | | | | | | UDP | TCP |
| MELSEC-FX (FX3U, FX3G) | FX3U-ENET-L | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 2 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*8] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT [*9*11] | Unit[*10] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-FX (FX3U, FX3G) | FX3U-ENET | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-FX (FX3UC, FX3GC) | FX3UC-1PS-5V, FX2NC-CNV-IF + FX3U-ENET-L[*5] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 2 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*8] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT [*9*11] | Unit[*10] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-FX (FX3UC, FX3GC) | FX3UC-1PS-5V, FX2NC-CNV-IF + FX3U-ENET[*5] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-FX (FX3U, FX3UC-32MT-LT(-2)) | FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-8AV-BD, FX3U-CNV-BD + FX3U-ENET-ADP[*6*7] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*8] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT [*9*11] | Unit[*10] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-FX (FX3UC) | FX3U-ENET-ADP | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-FX (FX3G) | FX3G-CNV-ADP + FX3U-ENET-ADP[*7] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | | Connection cable[*1] | Maximum segment length[*2] | Connector conversion box | External cable [*8] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Ethernet module[*3*4] | Communication type | Cable model | | | | | GOT [*9*11] | Unit[*10] | |
| | | | | | | | | | UDP | TCP |
| MELSEC-FX (FX3GC) | FX3U-ENET-ADP[*7] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-FX (FX3S) | FX3S-CNV-ADP + FX3U-ENET-ADP[*7] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
📖For FX Ethernet Interface Module User's Manual

*4 Select [FX] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*5 When using an Ethernet module with the FX3UC series, FX2NC-CNV-IF or FX3UC-1PS-5V is required.

*6 When using an Ethernet module with the FX3U series, FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-8AV-BD, or FX3U-CNV-BD is required.

*7 FX3U-ENET-ADP occupies one extension communication adapter CH (Max. 2 CHs) of the FX3U(C) or FX3G(C) and one extension communication adapter CH (Max. 1 CH) of the FX3S.
One CPU allows the connection of only one FX3U-ENET-ADP.

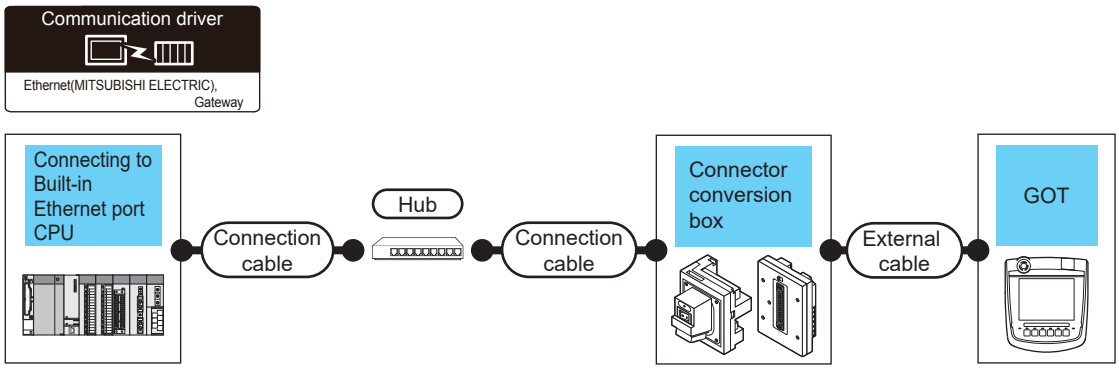
*8 Use C or later version of GT11H-C□□-37P.

*9 The number of connectable controllers per GOT channel is indicated.

*10 The number of GOTs connectable to one Ethernet module is indicated.

*11 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

# Connection to Built-in Ethernet port CPU or C Controller module




| PLC | | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable *7 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | GOT *8*10 | Unit*9 | |
| | | | | | | | | UDP | TCP |
| MELSEC iQ-R Series*4*5*11<br>Robot controller CR800-R(R16RTCPU) | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119 (16 or less recommended) | 119 | 17 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| Motion CPU (MELSEC iQ-R Series)*4*5*11 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119 (16 or less recommended) | 119 | 17 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| C Controller module (MELSEC iQ-R Series)*11 | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119 (16 or less recommended) | 119 | 17 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | Connection cable[*1*2] | Maximum segment length[*3] | Connector conversion box | External cable [*7] | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | GOT [*8*10] | Unit[*9] | |
| | | | | | | | | UDP | TCP |
| MELSECWinCPU (MELSEC iQ-R Series)[*11] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 119 (16 or less recommended) | 119 | 17 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-QnUDE(H)[*4*5]<br>MELSEC-QnUDV[*4*5]<br>CR800-Q(Q172DSRCPU) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | 16 (For UDP and TCP in total) | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-L[*4*5] | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | 16 (For UDP and TCP in total) | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| C Controller module (Q Series) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | *6 | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |
| MELSEC-FX (FX3GE) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

| PLC | | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable *7 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | GOT *8*10 | Unit*9 | |
| | | | | | | | | UDP | TCP |
| MELSEC iQ-F Series*4*5 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (16 or less recommended) | - | 8 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 For the system configuration of the Built-in Ethernet port CPU, refer to the manual of the PLC.

*5 For [Unit Type] to be selected in [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*6 By the controller type of the C Controller module (Q Series) and an operation mode, It's different in number of connectable GOTs.

| Controller Type | Operation mode | Number of connectable GOTs |
|---|---|---|
| Q12DCCPU-V | standard monitor mode | 1 |
| | Expansion mode | 16 |
| Q24DHCCPU-V/VG/LS | - | 16 |

*7 Use C or later version of GT11H-C□□-37P.

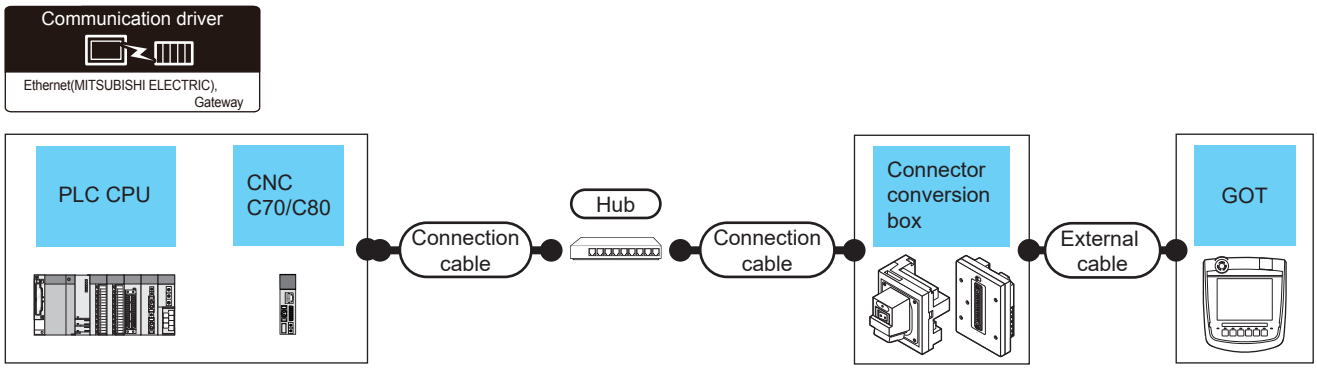
*8 The number of connectable controllers per GOT channel is indicated.

*9 The number of GOTs connectable to one PLC is indicated.

*10 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

*11 For connection to RnENCPU in the multiple CPU system, the firmware version of the RnENCPU must be 14 or later.

# Connecting to Display I/F




| PLC | | Connection cable*1 | Maximum segment length*3 | Connector conversion box | External cable *6 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | |
| CNC C70 (Q173NCCPU)*3*4 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 16 GOTs for 1 network |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CNC C80 (R16NCCPU-S1)*5 | Ethernet | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 8 GOTs for 1 network |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

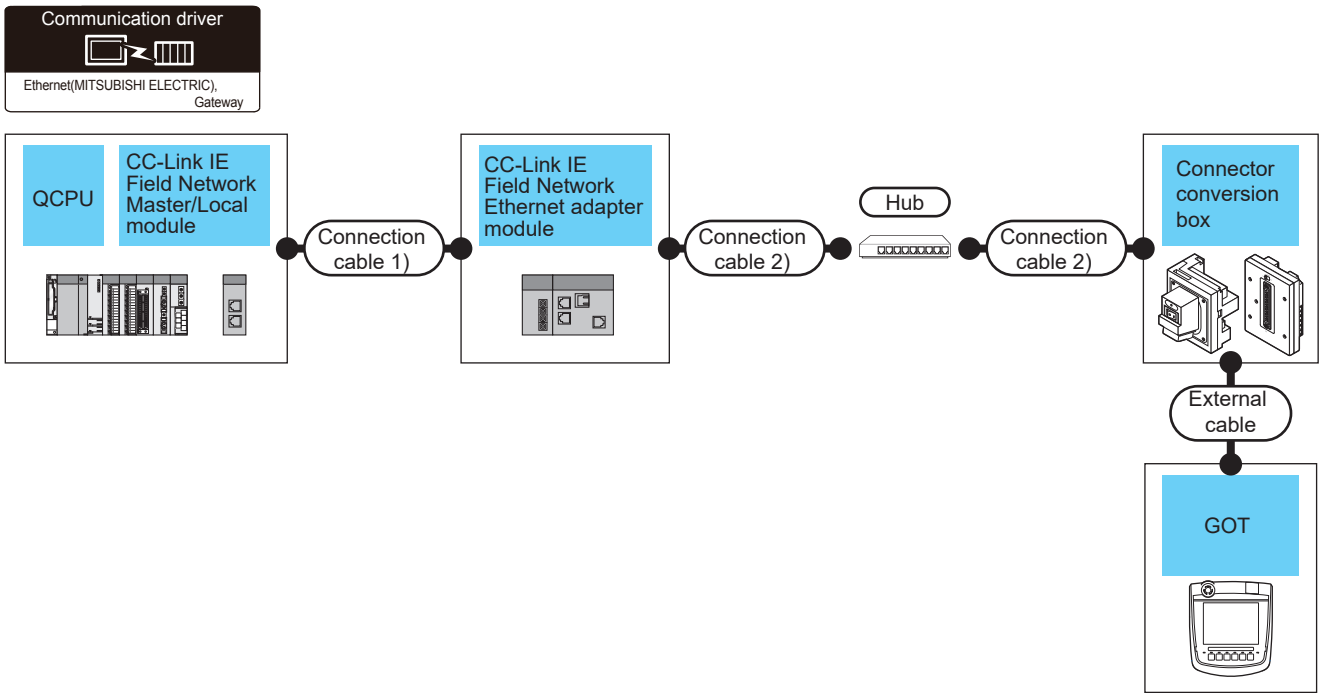
*3 For the system configuration of the CNC C70, refer to the following manual.
C70 Series SET UP MANUAL

*4 Select [Q17nNC] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*5 Select [RnNCCPU] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*6 Use C or later version of GT11H-C□□-37P.

# Connection to NZ2GF-ETB




| PLC | | Connection cable 1)*4 | | CC-Link IEField Network Ethernet adapter module | | | Connection cable 2)*1 | | Connector conversion box | External cable *6 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link IE Field Network Master/ Local module | Cable model | Max. distance | Communication type | Model name | Communication type | Cable model Connection diagram number | Maximum segment length*3 | | | | |
| MELSEC-Q (Q mode) Motion CPU (Q Series) | QJ71GF11-T2*4 | Double-shielded twisted pair cable*3 | 100m | CC-Link IE | NZ2GF-ETB | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 128 GOTs*5 (recommended to 16 units or less) |
| | | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | |
| MELSEC-Q (Q mode) Motion CPU (Q Series) | QJ71GF11-T2*4 | Double-shielded twisted pair cable*3 | 100m | CC-Link IE | NZ2GF-ETB | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | 128 GOTs*5 (recommended to 16 units or less) |
| | | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use cables with the following specifications.

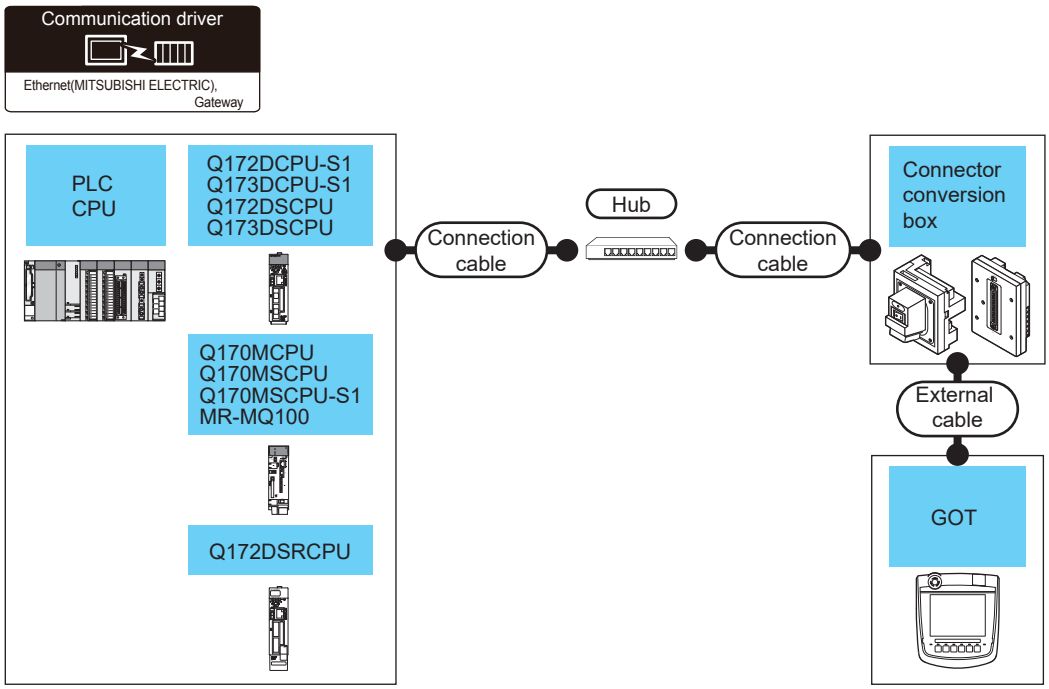
| Connector | Range |
|---|---|
| Category 5e or higher<br>Shielded RJ-45 | Cable that satisfies the following specifications:<br>IEEE802.3 1000BASE-T<br>ANSI/TIA/EIA-568-B(Category 5e) |

*4 For the system configuration on the CC-Link IE Field Network module side, refer to the following manual.
CC-Link IE Field Network Ethernet Adapter Module User's Manual

*5 The number of connectable GOTs for one network is 63 units (at most).

*6 Use C or later version of GT11H-C□□-37P.

# Connection to PERIPHERAL I/F




| PLC | | Connection cable*1 | Maximum segment length*3 | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name*2 | Communication type | | | | | | |
| Motion CPU (Q Series)<br>Q172DCPU-S1<br>Q173DCPU-S1<br>Q172DSCPU<br>Q173DSCPU<br>Q170MCPU<br>Q170MSCPU<br>Q170MSCPU-S1<br>MR-MQ100<br>CR800-Q(Q172DSRCPU) | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 30m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 16 GOTs for 1 network |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 When using the PERIPHERAL I/F, set as shown below.
• Use the GT Designer3 Version1.12N or later.
• Select [QnUDE(H)] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

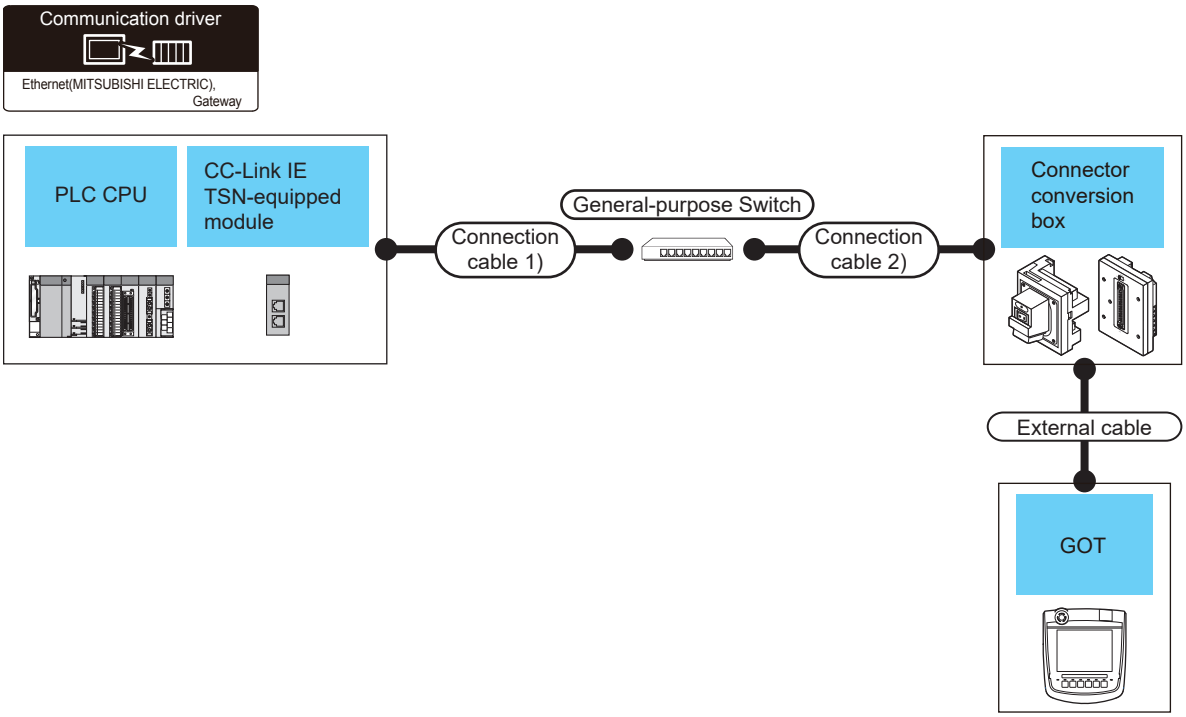
*4 Use C or later version of GT11H-C□□-37P.

**Point**

• Access to other networks

Other networks cannot be accessed through the PERIPHERAL I/F.

# Connection to CC-Link IE TSN-equipped module




| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link IE TSN-equipped module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R series) MELSEC WinCPU (MELSEC iQ-R series) | RJ71GN11-T2 | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link IE TSN-equipped module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R series) MELSEC WinCPU (MELSEC iQ-R series) | RJ71GN11-T2 | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | | | |
| MELSEC iQ-R series (RnCPU, RnENCPU) | RJ71GN11-EIP*10 | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link IE TSN-equipped module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-R series (RnCPU, RnENCPU) | RJ71GN11-EIP*10 | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | | | |
| MELSEC iQ-F series (FX5U, FX5UC, FX5UJ) | FX5-CCLGN-MS | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 63 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link IE TSN-equipped module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-F series (FX5U, FX5UC, FX5UJ) | FX5-CCLGN-MS | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | 63 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | | | |

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)
MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual
MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)

*3 For the system configuration of the CC-Link IE TSN-equipped module side, refer to the following.
MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)
MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual
MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)

*4 Select the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
MELSEC iQ-R series: [RJ71GN11-T2/RD78G(H)]
MELSEC iQ-F Series: [FX5-CCLGN-MS/FX5-nSSC-G]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*5 Length between the General-purpose Switch and node

*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 Number of GOTs connectable to one CC-Link IE TSN-equipped module

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.

*10 Connect the cable to the P1 port of the RJ71GN11-EIP.

# Connection to Motion module

The following methods are available to connect the GOT to a Motion module.

☞ Page 136 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC
☞ Page 138 Connecting the GOT to the built-in Ethernet port of the Motion module

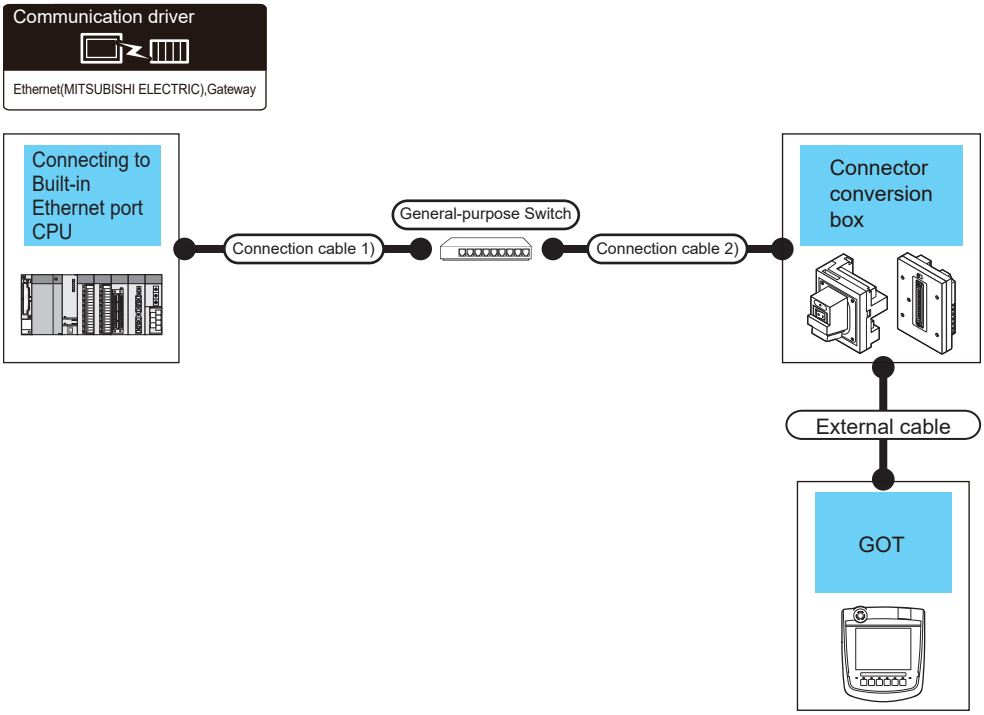


**Point**

To monitor the global labels of the Motion module with the GOT, connect the GOT and Motion module through the built-in Ethernet port of the PLC.
If the GOT is connected to the built-in port of the Motion module, the global labels of the Motion module cannot be monitored.

## Connecting the GOT and Motion module through the built-in Ethernet port of the PLC

The following shows the system configuration for monitoring the global labels of the Motion module with the GOT.




| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *7 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3 | Communication type | Cable model | Maximum segment length *6 | | Cable model | Maximum segment length *6 | | | | |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU)*4*9 C Controller module (MELSEC iQ-R Series) *5 | RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable(STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 1 GOT for 1 Motion module *8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *7 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3 | Communication type | Cable model | Maximum segment length *6 | | Cable model | Maximum segment length *6 | | | | |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU)*4*9 C Controller module (MELSEC iQ-R Series) *5 | RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable(STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | 1 GOT for 1 Motion module *8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m) | | |

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
For usable general-purpose hubs, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*4 Select [RCPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*5 Select [RnCCPU/RnWCPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*6 Length between the General-purpose Switch and node

*7 Use C or later version of GT11H-C□□-37P.

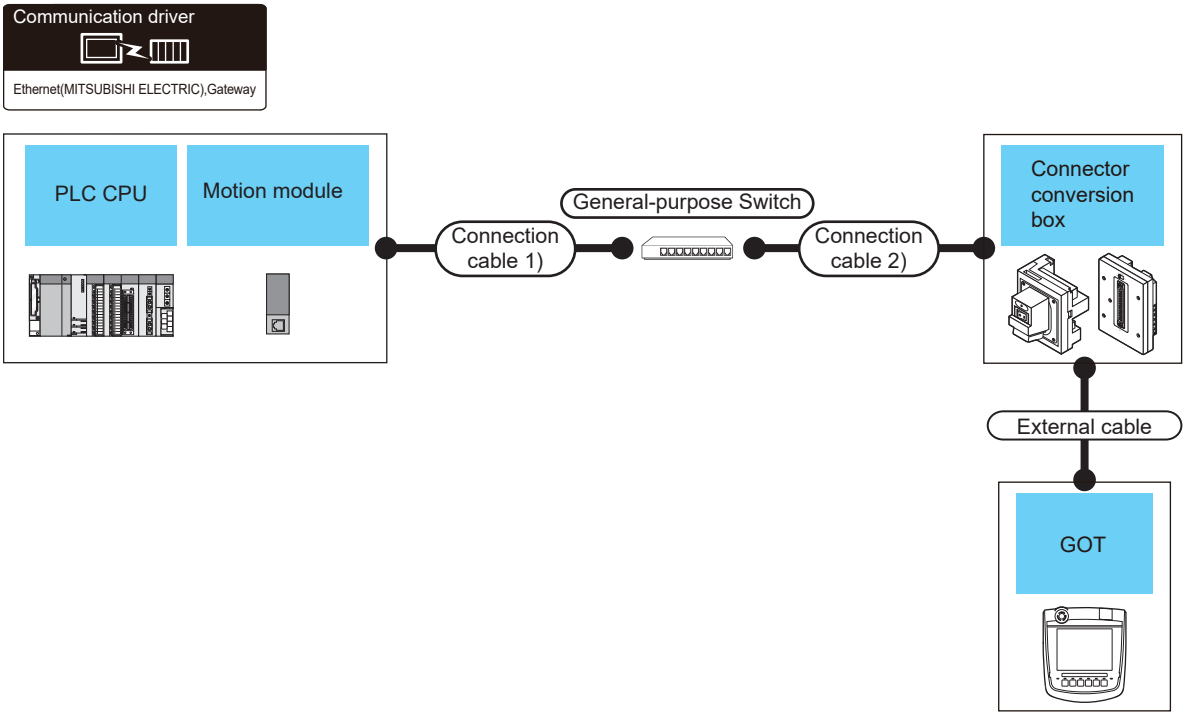
*8 Multiple devices cannot access the Motion module simultaneously.
Before accessing the Motion module monitored by the GOT from another device, exit the monitoring by the GOT.

*9 To use the multiple CPU system when the GOT is connected to RnENCPU, the firmware version of the RnENCPU must be 10 or later.

## Connecting the GOT to the built-in Ethernet port of the Motion module

The following shows the system configuration for monitoring the devices of the PLC CPU with the GOT.

### ■When connecting to MELSEC iQ-R series




| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R Series) | RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R Series) | RD78G4<br>RD78G8<br>RD78G16<br>RD78G32<br>RD78G64<br>RD78GHV<br>RD78GHW | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | 119 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | | | |

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*4 Select [RJ71GN11-T2/RD78G(H)] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*5 Length between the General-purpose Switch and node

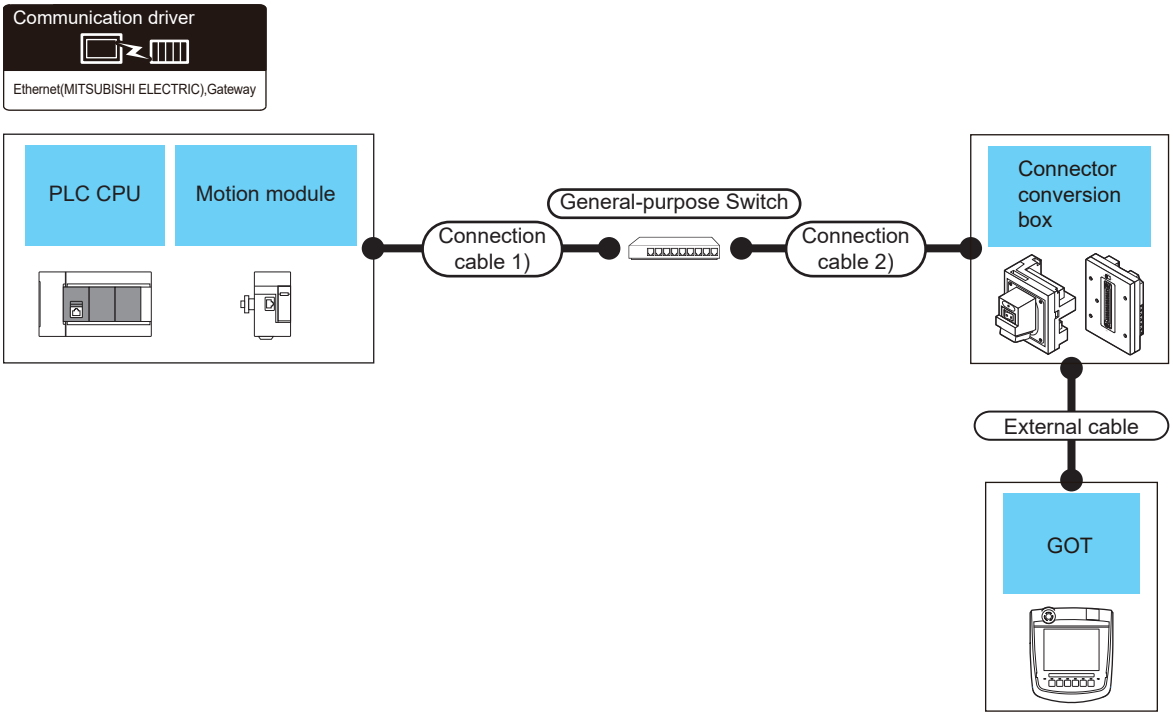
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 Number of GOTs connectable to one Motion module

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.

## ■When connecting to MELSEC iQ-F series




| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit *8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-F series (FX5U, FX5UC) | FX5-40SSC-G<br>FX5-80SSC-G | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch *2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 63 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | |

| PLC | | | Connection cable 1) *1 | | External device | Connection cable 2) *1 | | Connector conversion box | External cable *6 | GOT Model | Max. pieces of equipment connected | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Motion module *3*4 | Communication type | Cable model | Maximum segment length *5 | | Cable model | Maximum segment length *5 | | | | GOT *7*9 | Unit*8 | |
| | | | | | | | | | | | | UDP | TCP |
| MELSEC iQ-F series (FX5U, FX5UC) | FX5-40SSC-G<br>FX5-80SSC-G | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher<br>• 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher | 100m | General-purpose Switch*2 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | 63 (8 or less recommended) | 8 | 8 |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | | | |

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

*4 Select [FX5-CCLGN-MS/FX5-nSSC-G] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 150 Connected Ethernet controller setting

*5 Length between the General-purpose Switch and node

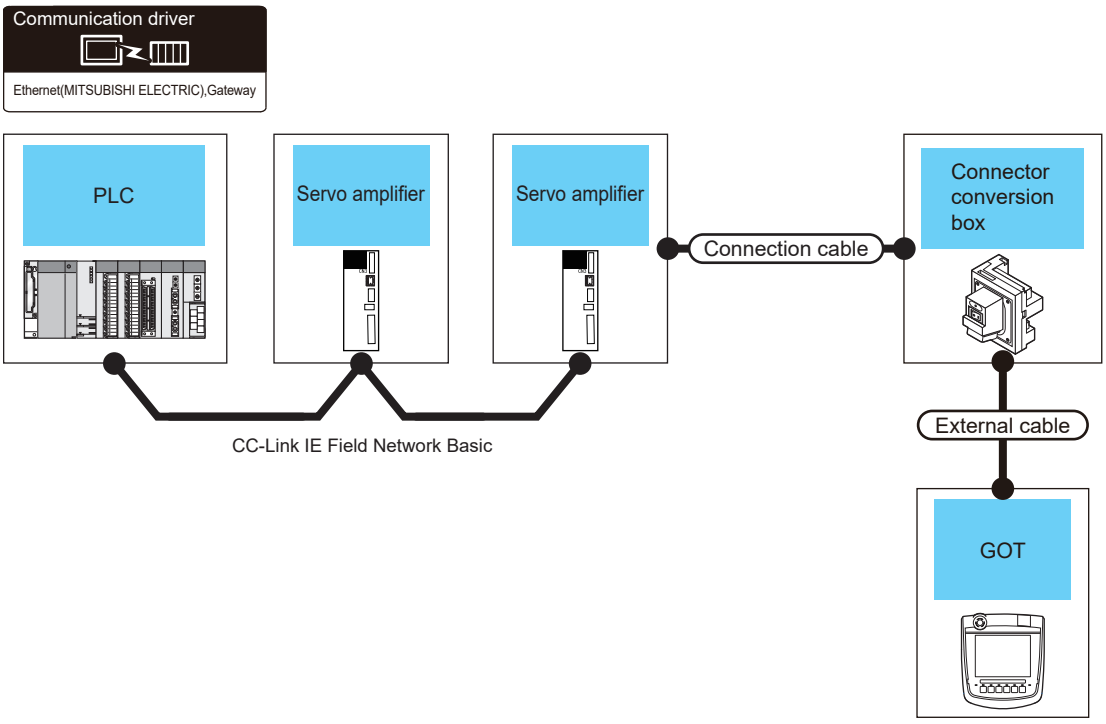
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 Number of GOTs connectable to one Motion module

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.

# Connection through a servo amplifier




| PLC*1 | | Servo amplifier | | Connection cable | Maximum segment length*2 | Connector conversion box | External cable | GOT Model *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | Model name | Communication type | | | | | | |
| MELSEC iQ-R series*4<br>C Controller module (MELSEC iQ-R series)<br>MELSEC iQ-F series*4<br>MELSEC-Q (Q mode)*5<br>MELSEC-L*5 | CC-Link IE Field Network Basic | MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5D1-□G4<br>MR-JET-G | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 GOT for 1 servo amplifier |

*1 For the system configuration of the PLC, refer to the following.
Manual of the PLC

*2 The length between the hub and node.
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 100BASE-TX: Up to 2 pieces using cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit, contact the switching hub manufacturer.

*3 For the settings in GOT, refer to the following.
☞ Page 144 GOT Side Settings

*4 Use a PLC whose firmware version is as shown below.

| Series | Model name | Applicable firmware version |
|---|---|---|
| MELSEC iQ-R series | R00CPU<br>R01CPU<br>R02CPU | From the first version |
| | R04CPU<br>R08CPU<br>R16CPU<br>R32CPU<br>R120CPU | 25 or later |
| | R04ENCPU<br>R08ENCPU<br>R16ENCPU<br>R32ENCPU<br>R120ENCPU | |
| MELSEC iQ-F series | FX5U<br>FX5UC<br>FX5UJ<br>FX5S | 1.040 or later |

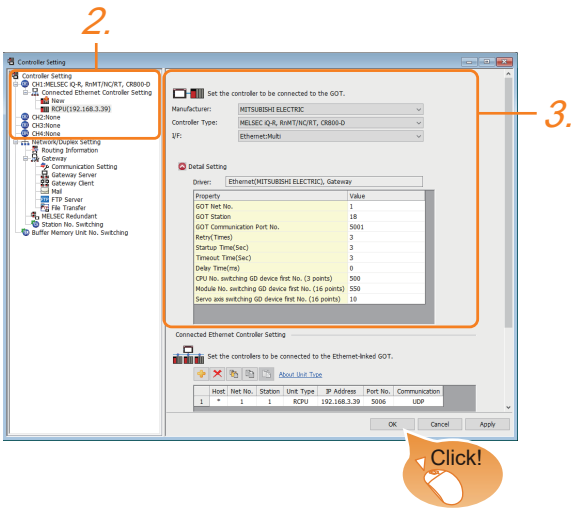
*5 Use a PLC with a serial number starting with a 5-digit number as shown below.

| Series | Model name | Applicable version |
|---|---|---|
| MELSEC-Q (Q mode) | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | PLCs having a serial number starting with 18112 or later |
| MELSEC-L | L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT | PLCs having a serial number starting with 18112 or later |

# 2.3 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 145 Communication detail settings

4. When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5001 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*2 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 120*3 |
| GOT Communication Port No.*4 | Set the GOT port No. for the connection with the Ethernet module.<br>• For Ethernet(MITSUBISHI ELECTRIC), Gateway<br>(Default: 5001 *5)<br>• For Ethernet(FX), Gateway<br>(Default: 5019 *5) | 1024 to 5010, 5014 to 65534<br>(Except for 5011 to 5013 and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time*1 | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(10ms) |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching.<br>(Default: 500)<br>For the details, refer to the following.<br>☞ Page 146 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching.<br>(Default: 550)<br>For the details, refer to the following.<br>☞ Page 147 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 148 Servo axis switching GD device first No. | 0 to 65520 |

*1 To connect the GOT with the Ethernet module (Q Series) in a one-on-one relationship without a hub, set [Timeout Time] to 6 sec. or longer.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 150 Connected Ethernet controller setting

*3 The range is 1 to 64 when [Driver] is set to [Ethernet(FX), Gateway].

*4 When connecting to the QCPU, LCPU, do not set [5009] for the port No. Otherwise, monitoring becomes unavailable.

*5 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

# GOT Ethernet Setting

## GOT IP address setting

Set the following communication port setting.

- Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

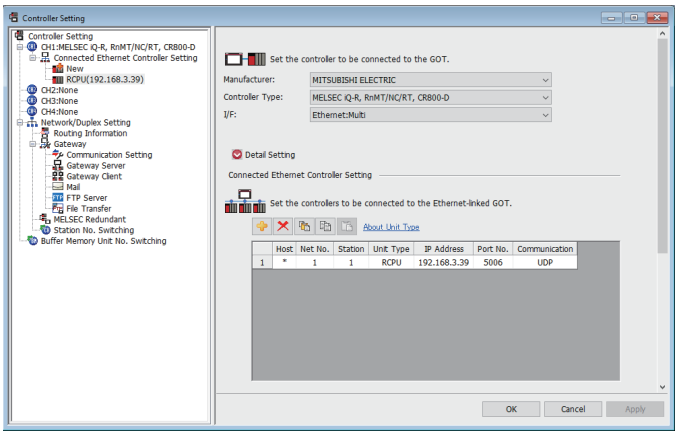
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet controller setting




| Item | Description | Range |
|---|---|---|
| [Host] | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| [Net No.] *5 | Set the network No. of the connected Ethernet module.<br>(Default: 1) | [1] to [239] |
| [Station] *4*5 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | [1] to [64], [1] to [120], or [0] to [120] *6 |
| [Unit Type] *1 | Set the type of the connected Ethernet module.<br>(Default: depending on the [Controller Type] setting) | [RCPU]<br>[RnCCPU/RnWCPU]<br>[RnNCCPU]<br>[FX5CPU]<br>[QnUD(P)V/QnUDE(H)]<br>[Q17nNC]<br>[QnD(H)CCPU]<br>[RJ71GN11-T2/RD78G(H)]<br>[RJ71EN71]<br>[FX5-CCLGN-MS/FX5-nSSC-G]<br>[FX5-ENET]<br>[QJ71E71/LJ71E71]<br>[LCPU]<br>[NZ2GF-ETB]<br>[AJ71QE71]<br>[AJ71E71]<br>[CR800]<br>[CRnD-700]<br>[Q17nDSR]<br>[FX] |
| [IP Address] | Set the IP address of the connected Ethernet module.<br>(Default: depending on the [Controller Type] setting) | [0.0.0.0] to [255.255.255.255] |
| [Port No.] *2*3 | Set the port No. of the connected Ethernet module.<br>(Default: depending on the [Controller Type] setting) | [1024] to [65534] |
| [Communication] *2 | (Default: depending on the [Controller Type] setting) | [UDP], [TCP] |

*1 Select one of the following [Unit Type].

| GOT connection destination | Unit Type |
|---|---|
| RCPU, RnMTCPU | [RCPU] |
| C Controller module (MELSEC iQ-R series)<br>MELSECWinCPU (MELSEC iQ-R Series) | [RnCCPU/RnWCPU] |
| CNC C80(R16NCCPU-S1) | [RnNCCPU] |
| FX5CPU | [FX5CPU] |
| QnUD(P)V, QnUDE(H), QCPU, Q170MCPU, Q170MSCPU(-S1), Q173D(S)CPU(-S1), Q172D(S)CPU(-S1) | [QnUD(P)V/QnUDE(H)] |
| Q17nNCCPU | [Q17nNC] |
| C Controller module (Q series) | [QnD(H)CCPU] |
| CC-Link IE TSN master/local module (MELSEC iQ-R series)<br>CC-Link IE TSN Plus master/local module (MELSEC iQ-R Series)<br>Motion module (MELSEC iQ-R Series) | [RJ71GN11-T2/RD78G(H)] |
| Ethernet module (MELSEC iQ-R Series) | [RJ71EN71] |
| RnENCPU(Port CPU P1) | [RCPU] |
| RnENCPU(Port P1) | [RJ71EN71] |
| RnENCPU(Port P2) | - |
| CC-Link IE TSN master/local module (MELSEC iQ-F series)<br>Motion module (MELSEC iQ-F Series) | [FX5-CCLGN-MS/FX5-nSSC-G] |
| Ethernet module (MELSEC iQ-F Series) | [FX5-ENET] |
| Ethernet module(Q, L series) | [QJ71E71/LJ71E71] |
| LCPU | [LCPU] |
| NZ2GF-ETB | [NZ2GF-ETB] |
| Ethernet module(QnA series) | [AJ71QE71] |
| Ethernet module(A series) | [AJ71E71] |
| CR800-R(R16RTCPU) | [CR800] |
| CRnQ-700, CR750-Q, CR751-Q(Q172DRCPU) | [CRnD-700] |
| CR800-Q(Q172DSRCPU) | [Q17nDSR] |
| Ethernet module(FX series) | [FX] |

For the applicable Ethernet module, refer to the following.

☞ Page 112 System Configuration

*2 The setting range is as follows:

| Type | Port No. | Communication format |
|---|---|---|
| [RCPU] | [5001]<br>(Select this item to enable the network No. and PC No. of the Built-in Ethernet port QCPU.) | [UDP] (fixed) |
| | [5006] | [UDP] (fixed) |
| | [5007] | [TCP] (fixed) |
| [RnCCPU/RnWCPU], [RnNCCPU], [QnD(H)CCPU], [LCPU], [CR800] | [5006] | [UDP] (fixed) |
| | [5007] | [TCP] (fixed) |
| [Q17nNC], [RJ71EN71], [RJ71GN11-T2/RD78G(H)], [QJ71E71/LJ71E71], [NZ2GF-ETB] | [5001] | [UDP] (fixed) |
| | [5002] | [TCP] (fixed) |
| [FX5-CCLGN-MS/FX5-nSSC-G] | [5001] | [UDP] (fixed) |
| | [5554] | [TCP] (fixed) |
| [FX5-ENET] | [5554] | [TCP] (fixed) |
| | [5555] | [UDP] (fixed) |
| [QnUD(P)V/QnUDE(H)] | [5001]<br>(Select this item to enable the network No. and PC No. of the Built-in Ethernet port QCPU.) | [UDP] (fixed) |
| | [5006] | [UDP] (fixed) |
| | [5007] | [TCP] (fixed) |
| [AJ71QE71] | [5001] | [UDP] (fixed) |
| [AJ71E71] | [1024] to [65535] | [UDP] (fixed) |
| [CRnD-700] | [5001] | [UDP] (fixed) |
| [Q17nDSR] | [5001] | [UDP] (fixed) |

| Type | Port No. | Communication format |
|---|---|---|
| [FX5CPU] | [5562] | [TCP] (fixed) |
| [FX] | [5551] (When using FX3U-ENET-L or FX3U-ENET) | [TCP] (fixed) |
| | [5556] (When using FX3U-ENET-ADP) | [TCP] (fixed) |

*3 Match the port number of the CPU and [Port No.] of [Connected Ethernet Controller Setting].

*4 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 145 Communication detail settings

*5 The network No. and PLC No. are unnecessary for Built-in Ethernet port CPU (Port No.: 5006, 5007) and FX5CPU/FXCPU.
Set the numbers of [Network No.] and [Station No.] in the object setting dialog to the numbers of [Net No.] and [Station] in [Connected Ethernet Controller Setting].

*6 The setting range of the station No. differs depending on the [Controller Type] setting.

| Type | Station No. setting range |
|---|---|
| [RCPU]<br>[RnCCPU/RnWCPU]<br>[RnNCCPU]<br>[FX5CPU]<br>[RJ71EN71]<br>[FX5-ENET] | 1 to 120 |
| [QnUD(P)V/QnUDE(H)]<br>[QnD(H)CCPU]<br>[LCPU]<br>[Q17nNC]<br>[QJ71E71/LJ71E71]<br>[AJ71QE71]<br>[AJ71E71]<br>[FX]<br>[NZ2GF-ETB] | 1 to 64 |
| [RJ71GN11-T2/RD78G(H)]<br>[FX5-CCLGN-MS/FX5-nSSC-G] | 0 to 120 |

## When selecting [RCPU] or [QnUD(P)V/QnUDE(H)] for [Controller Type]

When [RCPU] or [QnUD(P)V/QnUDE(H)] is selected for [Controller Type], the port No. setting can be changed.

### ■When [5001] is set for the port No.:

There is the setting for the network No. and PC No. of the built-in Ethernet port CPU (Port No.: 5001).

Set the network No. and station No. for the object setting to match the network No. and PC No. of the built-in Ethernet port CPU.

However, when connecting to the built-in Ethernet port CPU other than [RCPU] or [QnUD(P)V/QnUDE(H)], do not set [5001] for the port No.. *1*2

Otherwise, monitoring becomes unavailable.

*1 Use the RCPU with the following firmware version.
R00CPU, R01CPU, R02CPU: 08 or later
RCPU other than the above: 40 or later

*2 Use the QnUD(P)VCPU with a serial number that contains 17052 or later in the first 5 digits.

### ■When [5006, 5007] is set for the port No.:

There is no setting for the network No. and PC No. of the built-in Ethernet port CPU (Port No.: 5006, 5007).

Set the same values for [Network No.] and [Station No.] in the object setting dialog as that of [Net No.] and [Station] of [Connected Ethernet Controller Setting].

## Connection to the built-in Ethernet port PLC using the communication format “TCP”

When using the FA transparent function during communication with the built-in Ethernet port PLC using the communication format “TCP”, the communication format may be changed from “TCP” to “UDP” and communication with the built-in Ethernet port PLC may start.

In this case, communication with the built-in Ethernet port PLC cannot be executed normally.

Take the following corrective action.

| Phenomenon | Cause | Corrective action |
|---|---|---|
| When using the FA transparent function, communication is failed. | There is no setting of “UDP” in the open setting of the built-in Ethernet port PLC. | Add “UDP” to the open setting at the PLC side. |
| | When using the Ethernet multiple connection, “TCP” and “UDP” are used to the same IP address and the FA transparent function for the channel set to “TCP” is used. | Execute the FA transparent function for the channel set to “UDP”. |

**Point**

• Example of [Ethernet setting]

For examples of [Ethernet setting], refer to the following.

☞ Page 155 PLC Side Setting

• Parameter reflection function of MELSOFT Navigator

The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.

When the settings of N/W No., PLC No., type or IP address are reflected to the parameter from the MELSOFT Navigator, those settings are added.

Items set in advance are not deleted.

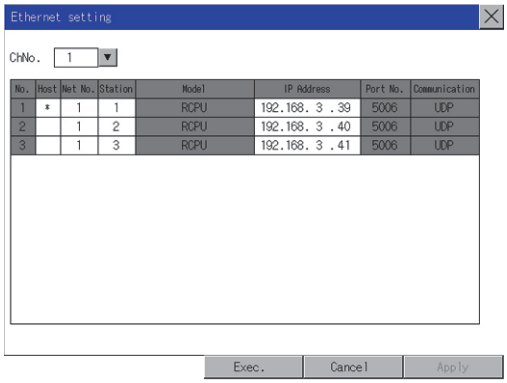
However, if the combination of the N/ W No. and the PLC No. or the IP address overlaps, the item set in advance is overwritten.

• Changing the host on the GOT main unit

The host can be changed by the utility function of the GOT main unit.

For the detailed connection method, refer to the following manual.

GOT2000 Series User's Manual (Utility)

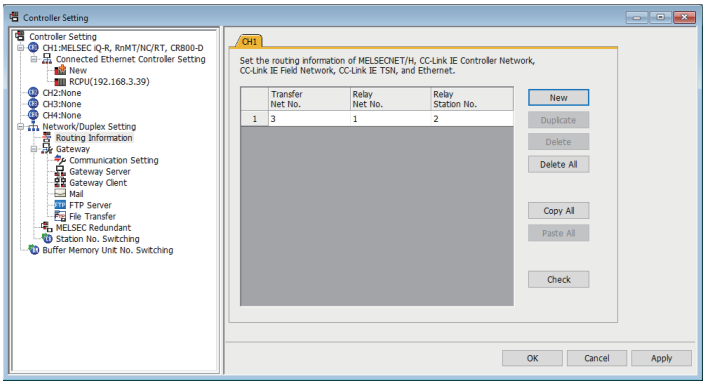


# Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.
However, the same transfer network number cannot be set twice or more (multiple times).
Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

**Point**

Routing parameter setting
When communicating within the host network, routing parameter setting is unnecessary.
For details of routing parameters, refer to the following manual.
MELSEC iQ-R CPU Module User's Manual (Application)
MELSEC-Q/L Ethernet Interface Module User's Manual (Application)




| Item | Range |
|---|---|
| Transfer Network No. | 1 to 239 |
| Relay Network No.*1 | 1 to 239 |
| Relay Station No.*1 | 0 to 64 |

*1 To access a different network via Built-in Ethernet port CPU, set the same numbers as [Net No.] and [Station] set in [Connected Ethernet Controller Setting] on GT Designer3.

**Point**

• Routing parameter setting of relay station
Routing parameter setting may also be necessary for the relay station.
For the setting, refer to the following.
Page 155 PLC Side Setting
• Parameter reflection function of MELSOFT Navigator
The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green.
Set items, which are displayed in green cells, from the MELSOFT Navigator.
When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added.
Items set in advance are not deleted.
However, if the target network No. overlaps, the item set in advance is overwritten.
The routing information is used manually by the user when the data is created.
Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again.
For details of the creation of the routing information, refer to the MELSOFT Navigator help.

# 2.4 PLC Side Setting

| Model | | Reference |
|---|---|---|
| Built-in Ethernet port RCPU | R00CPU<br>R01CPU<br>R02CPU<br>R04CPU<br>R08CPU<br>R16CPU<br>R32CPU<br>R120CPU<br>R16MTCPU<br>R32MTCPU<br>R64MTCPU<br>R08PCPU<br>R16PCPU<br>R32PCPU<br>R120PCPU<br>R04ENCPU<br>R08ENCPU<br>R16ENCPU<br>R32ENCPU<br>R120ENCPU<br>R08PSFCPU<br>R16PSFCPU<br>R32PSFCPU<br>R120PSFCPU<br>R08SFCPU<br>R16SFCPU<br>R32SFCPU<br>R120SFCPU<br>CNC C80(R16NCCPU-S1)<br>CR800-R(R16RTCPU) | ☞ Page 157 Connection to MELSEC iQ-R series Built-in Ethernet port CPU |
| C Controller module (MELSEC iQ-R series) | R12CCPU-V | ☞ Page 179 Connection to C Controller module (MELSEC iQ-R Series) |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | ☞ Page 183 Connection to MELSECWinCPU (MELSEC iQ-R Series) |
| Built-in Ethernet port (MELSEC iQ-F series) | FX5U<br>FX5UC<br>FX5UJ<br>FX5S | ☞ Page 187 Connecting to MELSEC iQ-F Series built-in Ethernet port CPU |
| Built-in Ethernet port QCPU | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU<br>Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU<br>Q172DSCPU<br>Q173DSCPU<br>Q172DCPU-S1<br>Q173DCPU-S1<br>Q170MCPU<br>Q170MSCPU<br>Q170MSCPU-S1<br>CR800-Q(Q172DSRCPU) | ☞ Page 198 Connection to MELSEC-Q/L series Built-in Ethernet port CPU<br>☞ Page 255 Connection to PERIPHERAL I/F |
| C Controller module<br>(Q Series) | Q12DCCPU-V<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | ☞ Page 219 Connecting to C Controller module (Q Series) |

| Model | | Reference |
|---|---|---|
| Built-in Ethernet port LCPU | L02CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L06CPU | ☞ Page 198 Connection to MELSEC-Q/L series Built-in Ethernet port CPU |
| Ethernet module (MELSEC iQ-R Series) | RJ71EN71 | ☞ Page 169 Connecting to Ethernet module (MELSEC iQ-R Series) |
| Ethernet module (MELSEC iQ-F Series) | FX5-ENET<br>FX5-ENET/IP | ☞ Page 191 Connection to Ethernet module (MELSEC iQ-F Series) |
| Ethernet module (Q Series) | QJ71E71-100<br>QJ71E71-B5<br>QJ71E71-B2<br>QJ71E71 | ☞ Page 213 Connecting to Ethernet module (Q/L Series) |
| Ethernet module (L Series) | LJ71E71-100 | |
| Ethernet module (QnA Series) | AJ71QE71N3-T<br>AJ71QE71N-B5<br>AJ71QE71N-B2<br>AJ71QE71N-T<br>AJ71QE71N-B5T<br>AJ71QE71<br>AJ71QE71-B5<br>A1SJ71QE71N3-T<br>A1SJ71QE71N-B5<br>A1SJ71QE71N-B2<br>A1SJ71QE71N-T<br>A1SJ71QE71N-B5T<br>A1SJ71QE71-B5<br>A1SJ71QE71-B2 | ☞ Page 225 Connecting to Ethernet module (QnA Series) |
| Ethernet module (A Series) | AJ71E71N3-T<br>AJ71E71N-B5<br>AJ71E71N-B2<br>AJ71E71N-T<br>AJ71E71N-B5T<br>AJ71E71-S3<br>A1SJ71E71N3-T<br>A1SJ71E71N-B5<br>A1SJ71E71N-B2<br>A1SJ71E71N-T<br>A1SJ71E71N-B5T<br>A1SJ71E71-B5-S3<br>A1SJ71E71-B2-S3 | ☞ Page 230 Connecting to Ethernet module (A Series) |
| Ethernet module<br>(FX Series) | FX3U-ENET-L<br>FX3U-ENET<br>FX3U-ENET-ADP | ☞ Page 236 Connecting to Ethernet module (FX Series) |
| Built-in Ethernet port FXCPU | FX3GE | ☞ Page 244 Connecting to Built-in Ethernet port FXCPU (FX3GE) |
| CNC C70 | Q173NCCPU | ☞ Page 248 Connecting to Display I/F (CNC C70) |
| CC-Link IE Field Network Ethernet Adapter Module | QJ71GF11-T2 | ☞ Page 251 Connection to NZ2GF-ETB |
| CC-Link IE TSN-equipped module | RJ71GN11-T2<br>RJ71GN11-EIP<br>FX5-CCLGN-MS | ☞ Page 260 Connection to CC-Link IE TSN-equipped module |
| Motion module | RD78G4<br>RD78G8<br>RD78G16<br>RD78G32<br>RD78G64<br>RD78GHV<br>RD78GHW | ☞ Page 138 Connection to Motion module<br>☞ Page 136 Connection to Motion module |

# Connection to MELSEC iQ-R series Built-in Ethernet port CPU

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 157 One-on-one connection and the GOT's communication format is UDP
☞ Page 159 One-on-one connection and the GOT's communication format is TCP
☞ Page 163 Multi-connection and the GOT's communication format is UDP
☞ Page 166 Multi-connection and the GOT's communication format is TCP



**Point**

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖Manuals of MELSEC iQ-R Series

📖Manuals of MELSEC iQ-F Series

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

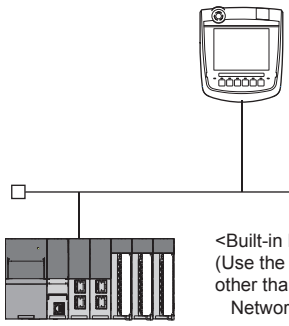
## One-on-one connection and the GOT's communication format is UDP

### ■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU and the GOT.

(MELSEC iQ-R Series)



<GOT>
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. (GOT Net No.)*3 | :1 |
| PLC No. (GOT Station)*3 | :1 |
| IP address | :192.168.3.18 |
| Port No. | :5001 |
| Communication format | :UDP (fixed) |

<Built-in Ethernet port CPU> *1
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. | :1 (virtual)*2 |
| PLC No. (Station)*3 | :2 (virtual)*2 |
| IP address | :192.168.3.39 |
| Port No. | :5006 (fixed) |
| Communication format | :UDP (fixed) |

*1 For the settings when using system devices such as a hub, refer to the following.

☞ Page 205 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 209 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.

☞ Page 158 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port RCPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | RCPU*3 |
| | IP Address | 192.168.3.39 |
| | Port No. | 5006 |
| | Communication | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].
In the case of CR800-R(R16RTCPU), set to [CR800].

### ■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

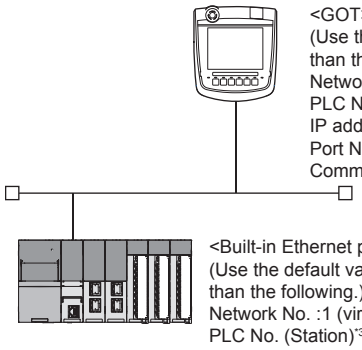
Manuals of MELSEC iQ-R Series

## One-on-one connection and the GOT's communication format is TCP

### ■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*3 :1
PLC No. (GOT Station)*3 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Built-in Ethernet port CPU>*1
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*2
PLC No. (Station)*3 :2 (virtual)*2
IP address :192.168.3.39

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 205 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 209 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

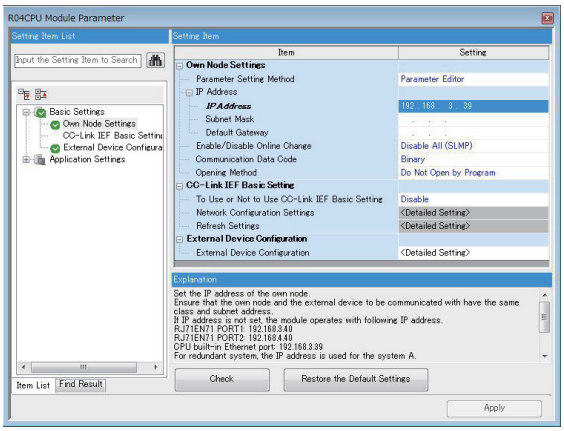
*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 161 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Module parameter] of GX Works3

• Built-in Ethernet port

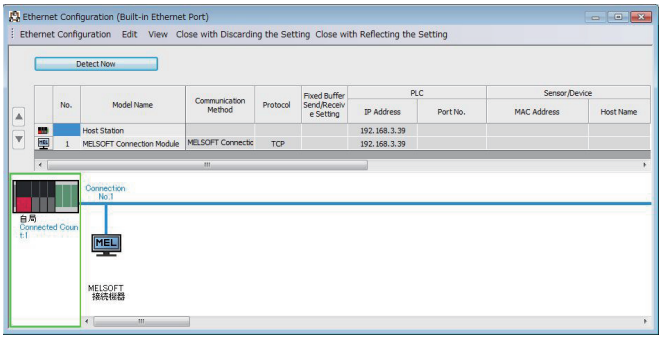



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.39<br>(Use default value) | △ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Communication data code | (Use default value) | △ |
| External Device Configuration | ☞ • External Device Configuration | ○ |

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | (Use default value) |
| Open system | MELSOFT connection |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For how to set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port RCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.



• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | RCPU*3 |
| | IP Address | 192.168.3.39 |
| | Port No. | 5007 |
| | Communication | TCP (fixed) |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

### ■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

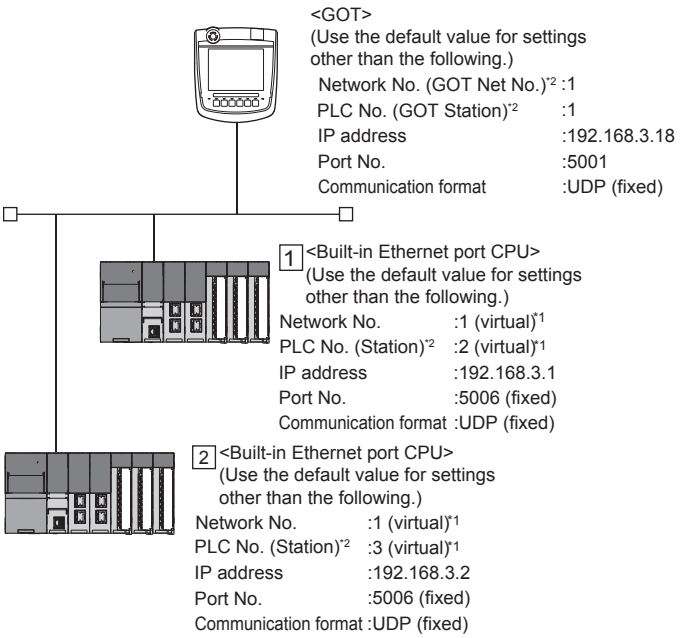
For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

## Multi-connection and the GOT's communication format is UDP

### ■System configuration

(MELSEC iQ-R Series)




*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 164 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

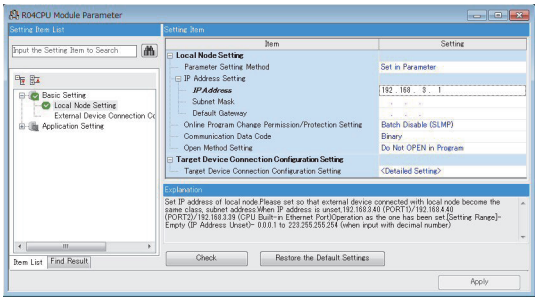
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Module parameter] of GX Works3

• Built-in Ethernet port

(For MELSEC iQ-R Series)




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.1 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Online Program Change Permission/Protection Setting | (Use default value) | △ |
| Communication Data Code | | △ |
| Open Method Setting | | △ |
| Target Device Connection Configuration Setting | - | × |

○: Necessary △: As necessary ×: Not necessary

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | RCPU*3 | RCPU*3 |
| | IP Address | 192.168.3.1 | 192.168.3.2 |
| | Port No. | 5006 | 5006 |
| | Communication | UDP | UDP |

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.
*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

## ■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

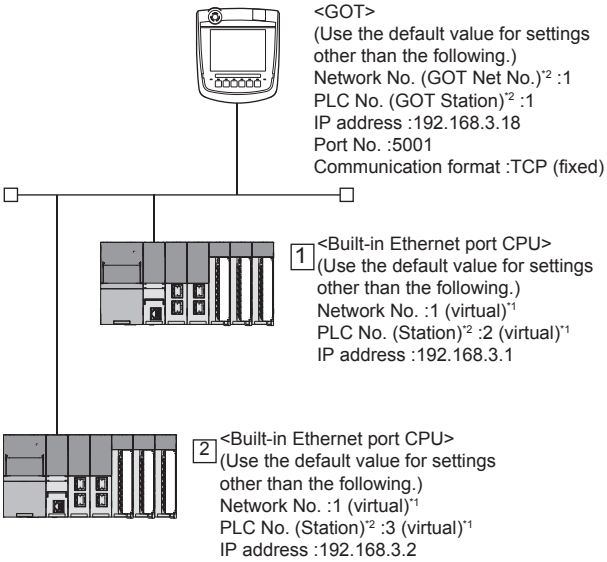
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

## Multi-connection and the GOT's communication format is TCP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

1 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.1

2 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :3 (virtual)*1
IP address :192.168.3.2

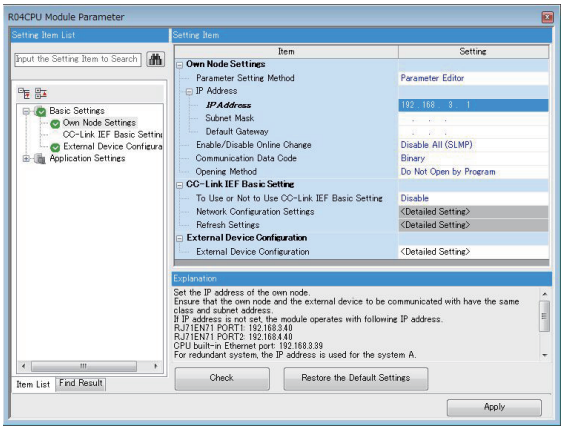
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 167 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

### ■[Module parameter] of GX Works3

• Built-in Ethernet port

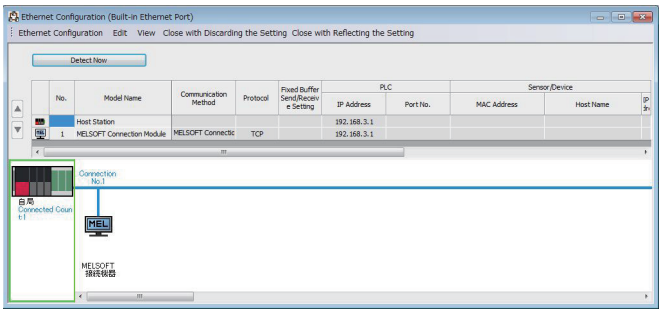



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.1 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Online Program Change Permission/Protection Setting | (Use default value) | △ |
| Communication data code | | △ |
| Open Method Setting | | △ |
| External Device Configuration | ☞ • External Device Configuration | ○ |

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | (Use default value) |
| Open system | MELSOFT connection |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | RCPU*3 | RCPU*3 |
| | IP Address | 192.168.3.1 | 192.168.3.2 |
| | Port No. | 5007 | 5007 |
| | Communication | TCP (fixed) | TCP (fixed) |

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.
*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

## ■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

# Connecting to Ethernet module (MELSEC iQ-R Series)

This section describes the settings of the GOT and Ethernet module (MELSEC iQ-R Series) in the following case of the system configuration.



**Point**

• Ethernet module (MELSEC iQ-R Series)

For details of the Ethernet module (MELSEC iQ-R Series), refer to the following manual.

Manuals of MELSEC iQ-R Series

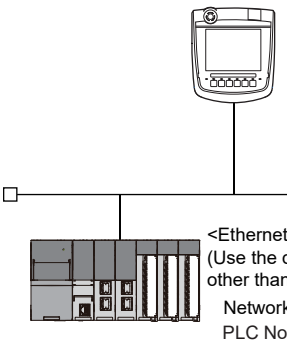
• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 267 Precautions

## When the GOT's communication format is UDP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. (GOT Net No.)*2 | :1 |
| PLC No. (GOT Station)*2 | :1 |
| IP address | :192.168.3.18 |
| Port No. | :5001 |
| Communication format | :UDP (fixed) |

<Ethernet module>*1
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. | :1 |
| PLC No. (Station)*2 | :2 |
| IP address | :192.168.3.19 |
| Port No. | :5001 |
| Communication format | :UDP (fixed) |

*1 The Ethernet module is mounted on the base unit slot 0.
The Start XY No. of the Ethernet module is set to "0".

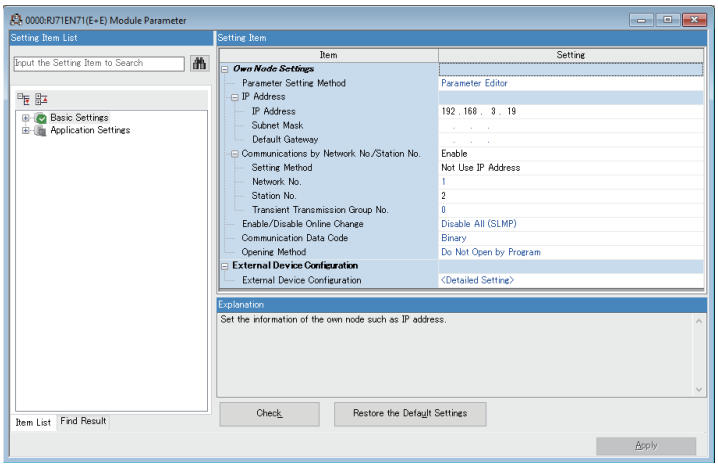
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Module parameter] of GX Works3

- Module parameter of Ethernet module (MELSEC iQ-R Series)*1

*1 Set [Module parameter] of the port under [Module information].




| Item | Set value | Setting necessity at GOT |
|---|---|---|
| IP Address | 192.168.3.19 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Communications by Network No./Station No. | Enable | ○ |
| Setting Method | Not Use IP Address | ○ |
| Network No.*2 | 1 | ○ |
| Station No.*3 | 2 | ○ |
| Transient Transmission Group No. | (Use default value) | × |
| Enable/Disable Online Change | | × |
| Communication Data Code | | × |
| Opening Method | | × |
| External Device Configuration | - | × |

○: Necessary △: As necessary ×: Not necessary

*2 Set the same network No. as that of the GOT.

*3 Do not set the same station No. as that of the GOT.

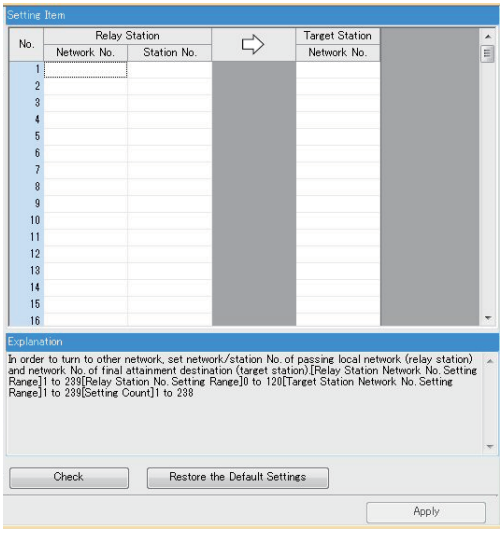
• Routing setting

Up to 238 [Target Station Network No.]s can be set.

However, the same target station network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 238 kinds of [Target Station Network No.]s.






| Item | Range |
|---|---|
| Target Station network No. | 1 to 239 |
| Relay Station network No. | 1 to 239 |
| Relay station No. | 0 to 120 |

**Point**

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 154 Routing parameter setting

• Communication confirmation

The communication status can be checked with the LINK LED on the Ethernet module.

For confirming the communication state, refer to the following.

☞ Page 173 Confirming the communication state of Ethernet module

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port RCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | RJ71EN71 |
| | IP Address | 192.168.3.19 |
| | Port No. | 5001 |
| | Communication | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

## ■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

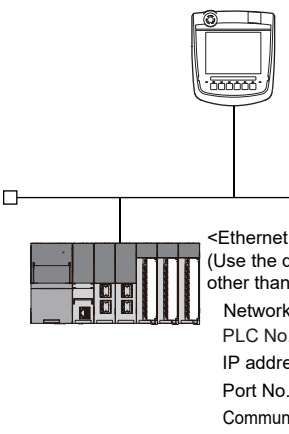
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

## When the GOT's communication format is TCP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Ethernet module>*1
(Use the default value for settings other than the following.)
Network No. :1
PLC No. (Station)*2 :2
IP address :192.168.3.19
Port No. :5002
Communication format :TCP (fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start XY No. of the Ethernet module is set to "0".

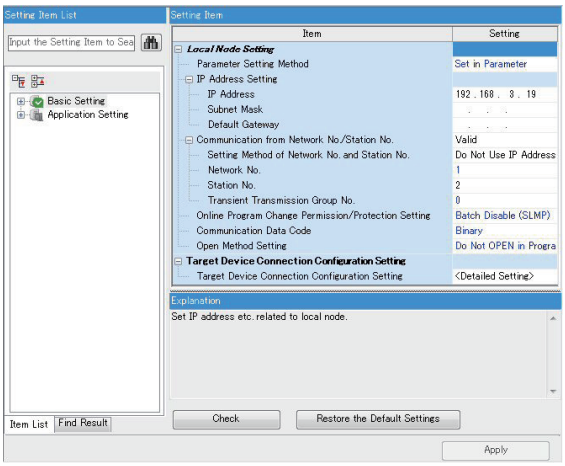
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Module parameter] of GX Works3

• Module parameter of Ethernet module (MELSEC iQ-R Series)*1

*1 Set [Module parameter] of the port under [Module information].



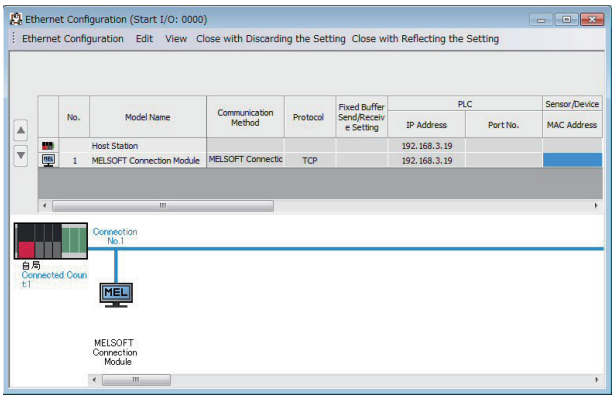

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.19 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Setting Method of Network No. and Station No. | Do Not Use IP Address | × |
| Network No.*2 | 1 | ○ |
| Station No.*3 | 2 | ○ |
| Transient Transmission Group No. | (Use default value) | × |
| Online Program Change Permission/Protection Setting | | × |
| Communication Data Code | | × |
| Open Method Setting | | × |
| Target Device Connection Configuration Setting | ☞ • Target Device connection Configuration Setting | ○ |

○: Necessary △: As necessary ×: Not necessary

*2 Set the same network No. as that of the GOT.

*3 Do not set the same station No. as that of the GOT.

• Target Device connection Configuration Setting




| Item | Set value |
|---|---|
| Protocol | (Use default value) |
| Open system | MELSOFT connection (fixed) |
| Host station port No. | (Use default value) |

**Point**

When changing the module parameter

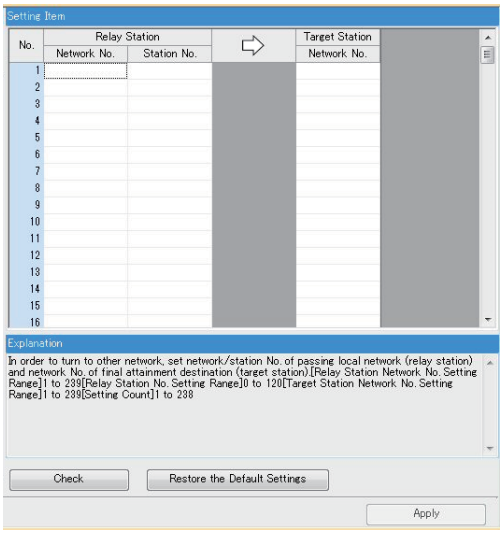
After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Routing setting

Up to 238 [Target Station Network No.]s can be set.

However, the same target station network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 238 kinds of [Target Station Network No.]s.




| Item | Range |
|---|---|
| Target Station network No. | 1 to 239 |
| Relay Station network No. | 1 to 239 |
| Relay station No. | 0 to 120 |

**Point**

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 154 Routing parameter setting

• Communication confirmation

The communication status can be checked with the LINK LED on the Ethernet module.

For confirming the communication state, refer to the following.

☞ Page 178 Confirming the communication state of Ethernet module

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1[*1] |
| | Station | 2[*2] |
| | Unit Type | RJ71EN71 |
| | IP Address | 192.168.3.19 |
| | Port No. | 5001 |
| | Communication | UDP |

## ■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Mounting condition of Ethernet communication unit

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

# Connection to C Controller module (MELSEC iQ-R Series)

This section describes the settings of the GOT and C Controller module (MELSEC iQ-R Series) in the following case of system configuration.

Use CW Configurator for the C Controller module (MELSEC iQ-R Series) communication settings.



**Point**

• C Controller module (MELSEC iQ-R Series)

For details of C Controller module (MELSEC iQ-R Series), refer to the following manual.

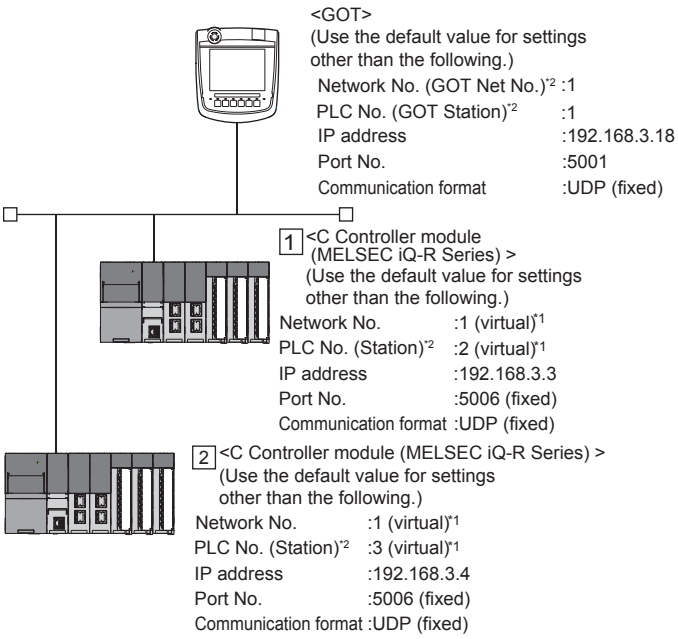
Manuals of C Controller module (MELSEC iQ-R Series)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 267 Precautions

## System configuration



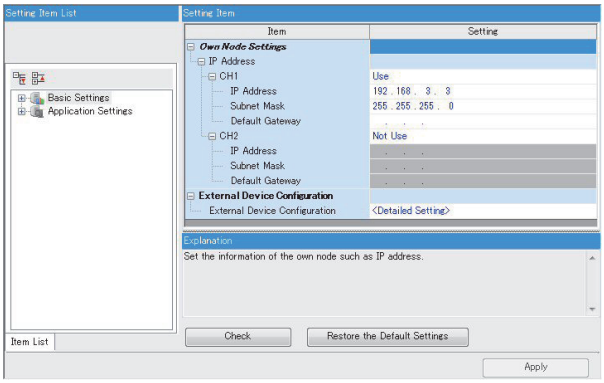

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
Page 181 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## [Module parameter] of CW Configurator

### ■Module parameter




| Item*1 | Set value | Setting necessity at GOT connection |
|---|---|---|
| CH1 | Use | × |
| IP Address | 192.168.3.3 | × |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| CH2 | Not Use | × |
| IP Address | - | × |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| External Device Configuration | - | × |

○: Necessary △: As necessary ×: Not necessary

*1 Set the IP address corresponding to the CH No. to be used to connect to the GOT.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | RnCCPU/RnWCPU | RnCCPU/RnWCPU |
| | IP Address | 192.168.3.13 | 192.168.3.4 |
| | Port No.*3 | 5006 | 5006 |
| | Communication*3 | UDP | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

## Checking communication state of C Controller module (MELSEC iQ-R Series)

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of C Controller module (MELSEC iQ-R Series) specified in the ping command

**Point**

Ethernet diagnostics of CW Configurator

Ethernet diagnostics of CW Configurator is available to a Ping test from the PLC.

For details of Ethernet diagnostics of CW Configurator, refer to the following manual.

Manuals of C Controller module (MELSEC iQ-R Series)

# Connection to MELSECWinCPU (MELSEC iQ-R Series)

This section describes the settings of the GOT and MELSECWinCPU (MELSEC iQ-R Series) in the following system configuration.

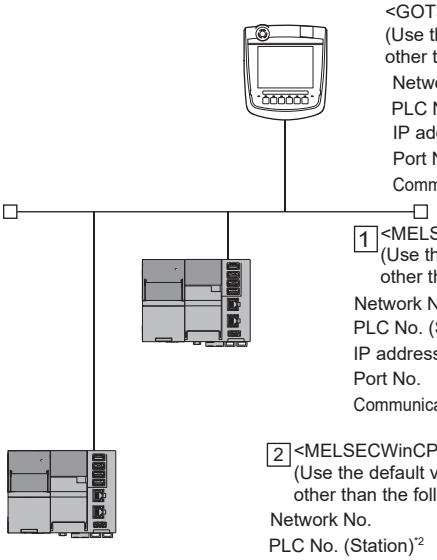
**Point**

For the details of MELSECWinCPU (MELSEC iQ-R Series), refer to the following.

Manuals of MELSECWinCPU (MELSEC iQ-R Series)



## System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

1 <MELSECWinCPU (MELSEC iQ-R Series)>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.3
Port No. :5006 (fixed)
Communication format :UDP (fixed)

2 <MELSECWinCPU (MELSEC iQ-R Series)>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :3 (virtual)*1
IP address :192.168.3.4
Port No. :5006 (fixed)
Communication format :UDP (fixed)

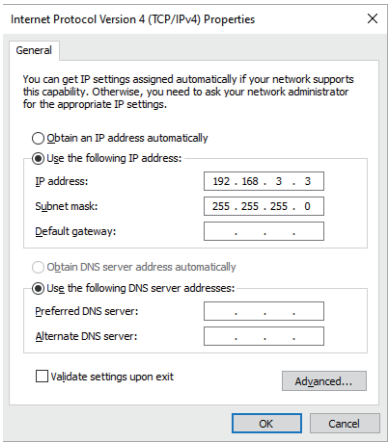
*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 185 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## [Internet Protocol Version 4 (TCP/IPv4) Properties]

Configure communication settings for MELSECWinCPU (MELSEC iQ-R Series) in [Internet Protocol Version 4 (TCP/IPv4) Properties] in Windows installed in MELSECWinCPU (MELSEC iQ-R Series).




| Item*1 | Set value | | Setting necessity at GOT connection |
|---|---|---|---|
| | 1 | 2 | |
| IP address | 192.168.3.3 | 192.168.3.4 | ○ |
| Subnet mask | 255.255.255.0 | 255.255.255.0 | ○ |
| Default gateway | - | - | × |
| Preferred DNS server | - | - | × |
| Alternative DNS server | - | - | × |

○ : Necessary △ : As necessary × : Not necessary

*1 Set the IP address corresponding to the CH No. to be used to connect to the GOT.

## Firewall settings

Firewall settings are required to connect the GOT with MELSECWinCPU (MELSEC iQ-R Series).

For details, refer to the following.

MELSEC iQ-R MELSECWinCPU Module User's Manual

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT NET No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | RnCCPU/RnWCPU | RnCCPU/RnWCPU |
| | IP Address | 192.168.3.3 | 192.168.3.4 |
| | Port No.*3 | 5006 | 5006 |
| | Communication*3 | UDP | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

## Checking the communication status of MELSECWinCPU (MELSEC iQ-R Series)

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of MELSECWinCPU (MELSEC iQ-R Series) specified by a ping command

**Point**

Ethernet diagnostics of CW Configurator is available to a Ping test from the PLC.

For details of Ethernet diagnostics of CW Configurator, refer to the following manual.

MELSEC iQ-R MELSECWinCPU Module User's Manual

# Connecting to MELSEC iQ-F Series built-in Ethernet port CPU

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

**Point**

• Connecting to Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

Manuals of MELSEC iQ-F Series

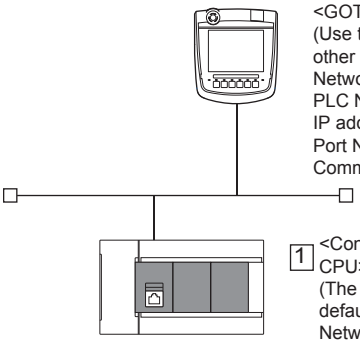
• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions



## System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

1 <Connecting to Built-in Ethernet port CPU>
(The following settings are set to the default)
Network No. : 1 (virtual)*1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.3.250 (default)
Port No. : 5562 (fixed)
Communication format : TCP (fixed)

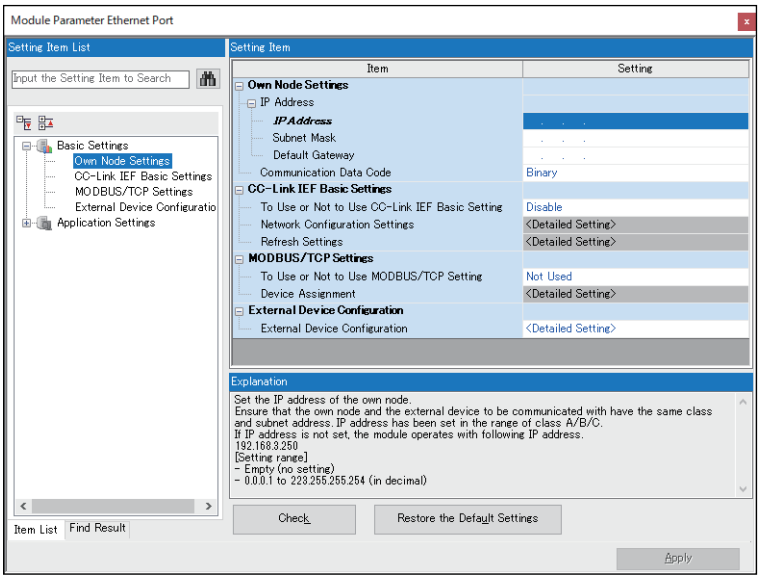
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 189 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## [Module parameter] of GX Works3

### ■Built-in Ethernet port



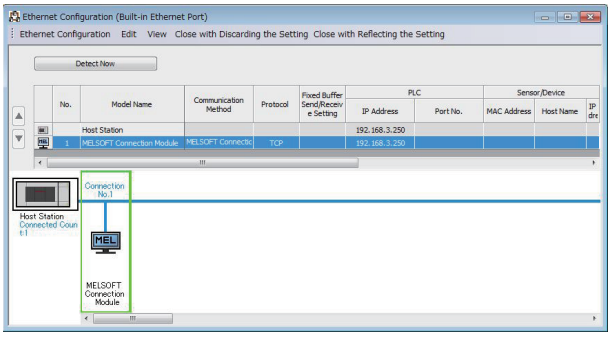

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.250<br>(Use default value) | △ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Communication Data Code | (Use default value) | △ |
| Target Device Connection Configuration Setting | ☞ Page 188 Target Device connection Configuration Setting | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■Target Device connection Configuration Setting

The setting is required for all the connected GOTs*1.

*1 Even if the target device connection configuration setting is not executed, 1 GOT can be connected.
When connecting to the PLC in Ethernet connection with programming tools such as GX Works3, these programming tools and PLC may not be connected.
In this case, the setting is required for all the GOTs.




| Item | Set value |
|---|---|
| Protocol | (Use default value) |
| Open system | MELSOFT connection (fixed) |
| Host station port No. | (Use default value) |

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | FX5CPU |
| | IP Address | 192.168.3.250 |
| | Port No. | 5562 (fixed) |
| | Communication | TCP (fixed) |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

## Checking communication state of Built-in Ethernet port CPU

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.250

Reply from 192.168.3.250:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.250

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the ping command

# Connection to Ethernet module (MELSEC iQ-F Series)

This section describes the settings of the GOT and Ethernet module (MELSEC iQ-F Series) in the following system configurations.



**Point**

• Ethernet module (MELSEC iQ-F Series)

For details of the Ethernet module (MELSEC iQ-F Series), refer to the following manual.

📖Manuals of MELSEC iQ-F Series

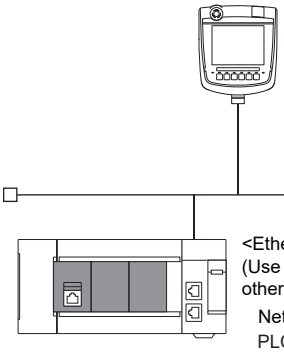
• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## When the GOT's communication format is UDP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. (GOT Net No.)*2 | :1 |
| PLC No. (GOT Station)*2 | :1 |
| IP address | :192.168.3.18 |
| Port No. | :5001 |
| Communication format | :UDP (fixed) |

<Ethernet module>
(Use the default value for settings other than the following.)

| | |
|---|---|
| Network No. | :1 (virtual)*1 |
| PLC No. (Station)*2 | :2 (virtual)*1 |
| IP address | :192.168.3.251 (default) |
| Port No. | :5555 (fixed) |
| Communication format | :UDP (fixed) |

*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 193 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

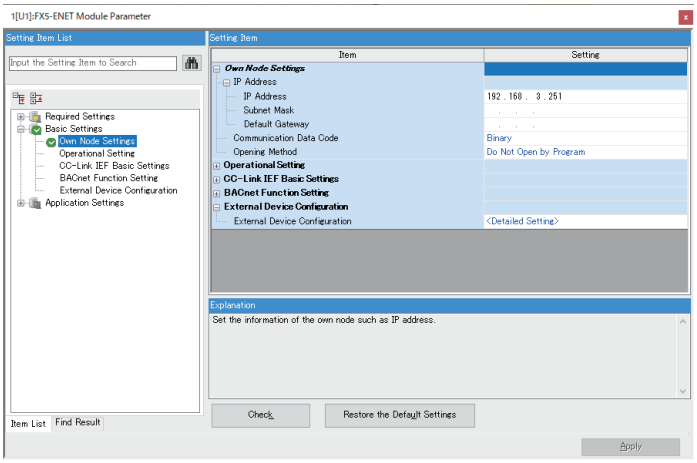
| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[Module parameter] of GX Works3

For the connection with FX5-ENET or FX5-ENET/IP, use GX Works3 version 1.075D or later.

• Module parameter of Ethernet module (MELSEC iQ-F Series)

Set [Module parameter] of the port under [Module information].




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.251 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Communication Data Code | (Use default value) | × |
| Opening Method | (Use default value) | × |
| External Device Configuration | - | × |

○: Necessary △: As necessary ×: Not necessary

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Ethernet module (MELSEC iQ-F Series) is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.



• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 *1 |
| | Station | 2 *2 |
| | Unit Type | FX5-ENET |
| | IP Address | 192.168.3.251 |
| | Port No. | 5555 |
| | Communication | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

## ■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.251

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

**Point**

Ethernet diagnostics of GX Works3

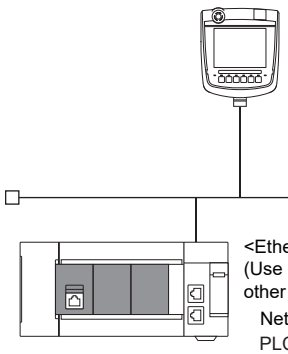
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-F Series

## When the GOT's communication format is TCP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Ethernet module>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.251 (default)
Port No. :5554 (fixed)
Communication format :TCP (fixed)

*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 196 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

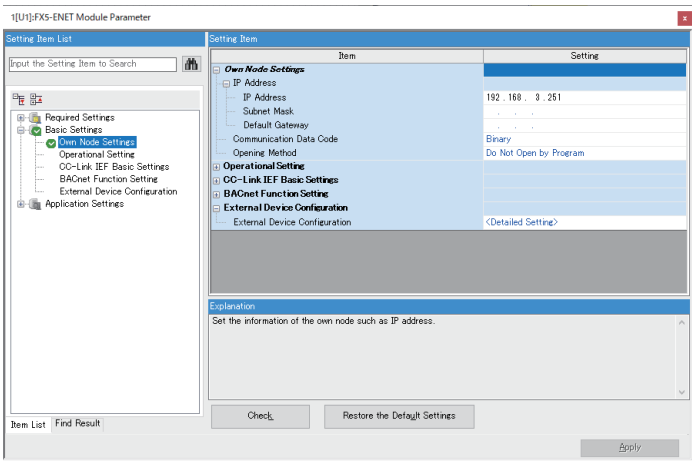
| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

### ■[Module parameter] of GX Works3

For the connection with FX5-ENET or FX5-ENET/IP, use GX Works3 version 1.075D or later.

• Module parameter of Ethernet module (MELSEC iQ-F Series)

Set [Module parameter] of the port under [Module information].

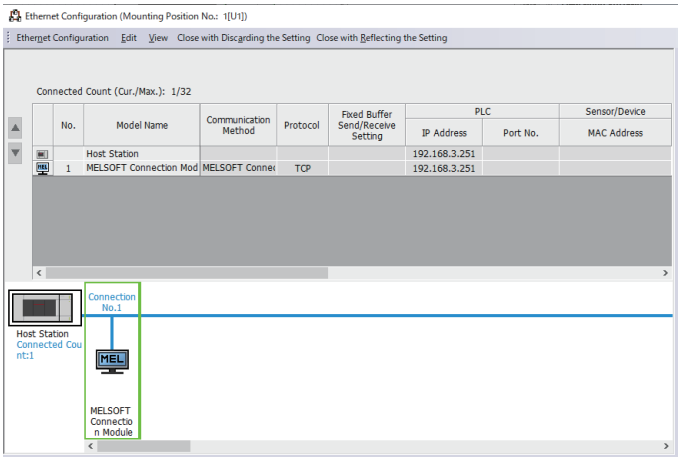



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.251 | ○ |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| Communication Data Code | (Use default value) | × |
| Opening Method | (Use default value) | × |
| External Device Configuration | ☞ • External Device Configuration | ○ |

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Communication Method | MELSOFT connection |
| Protocol | TCP |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Ethernet module (MELSEC iQ-F Series) is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 *1 |
| | Station | 2 *2 |
| | Unit Type | FX5-ENET |
| | IP Address | 192.168.3.251 |
| | Port No. | 5554 |
| | Communication | TCP |

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

## ■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.251

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Mounting condition of Ethernet communication unit

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-F Series

# Connection to MELSEC-Q/L series Built-in Ethernet port CPU

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 198 One-on-one connection and [MELSOFT Connection Extended Setting] is the default value in the PLC
☞ Page 202 One-on-one connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC
☞ Page 205 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 209 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

**Point**

• Connecting to Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

📖MELSEC-L CPU Module User's Manual (Built-In Ethernet Function)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

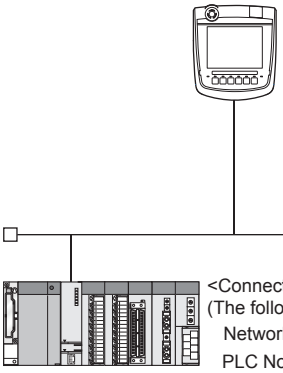
## One-on-one connection and [MELSOFT Connection Extended Setting] is the default value in the PLC

### ■System configuration

For connecting one Built-in Ethernet port QCPU to one GOT, the PLC side settings are not required.

Set [Port No.] to [5006] and [Communication format] to [UDP] to communicate with the PLC.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU>*1
(The following settings are set to the default)
Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.39
Communication format : UDP

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 205 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 209 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 200 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

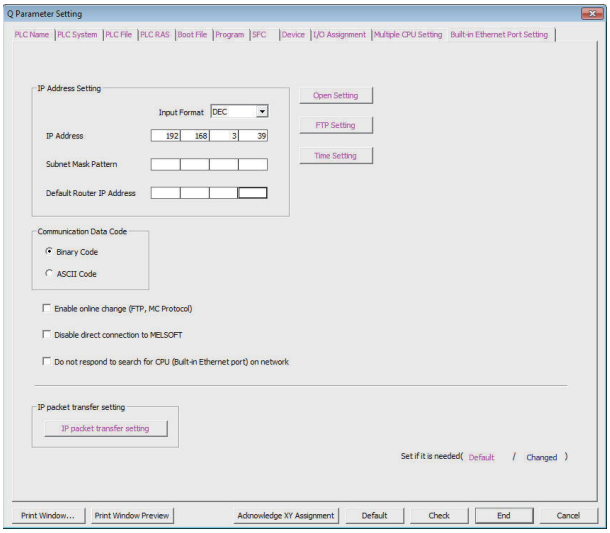
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet

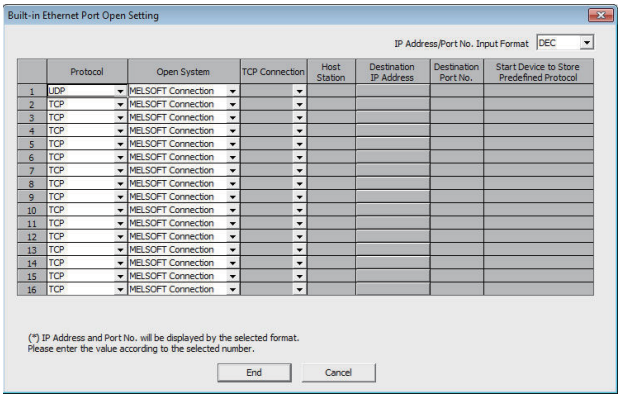



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.39<br>(Use default value) | ○ |
| Subnet mask pattern | - | × |
| Default router IP address | - | × |
| Communication data code | (Use default value) | △ |
| Enable online change (FTP, MC protocol) | | △ |
| Disable direct connection to MELSOFT | | △ |
| Do not respond to search for CPU (Built-in Ethernet port) on network | | △ |
| Open settings | ☞ • Open settings | ○ |
| FTP settings | (Use default value) | △ |
| Time settings | | △ |
| MELSOFT Connection Extended Setting | | △ |

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | UDP, TCP |
| Open system | MELSOFT connection |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port QCPU or LCPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | QnUD(P)V/QnUDE(H), LCPU *4 |
| | IP address | 192.168.3.39 |
| | Port No.*3 | 5006 |
| | Communication*3 | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

*4 For CR800-Q (Q172DSRCPU), set [Q17nDSR].

## ■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

## One-on-one connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

### ■System configuration

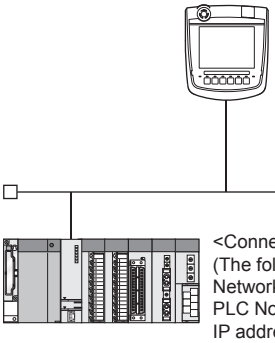
(When the PLC side [MELSOFT Connection Extended Setting] is [Use])

Set [Port No.] to [5001] and [Communication] to [UDP] to communicate with the PLC.

[MELSOFT Connection Extended Setting] is available with QnUDVCPU.

Set [MELSOFT Connection Extended Setting] to [Use], and set the items.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU> *1
(The following settings are set to the default)
Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.39
Communication format : UDP

*1 Use the product whose the first five digits of the serial No. for QnUD(P)VCPU is "17052" or later.

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

### ■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet port

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.39<br>(Use default value) | ○ |
| Subnet mask pattern | - | × |
| Default router IP address | - | × |
| Communication data code | (Use default value) | △ |
| Enable online change (FTP, MC protocol) | | △ |
| Disable direct connection to MELSOFT | | △ |
| Do not respond to search for CPU (Built-in Ethernet port) on network | | △ |
| Open settings | ☞ • Open settings | ○ |
| FTP settings | (Use default value) | △ |
| Time settings | | △ |
| MELSOFT Connection Extended Setting | ☞ • MELSOFT Connection Extended Setting | ○ |

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.

| Item | Set value |
|---|---|
| Protocol | UDP, TCP |
| Open system | MELSOFT connection |

• MELSOFT Connection Extended Setting

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| MELSOFT Connection Extended Setting | Use | ○ |
| Network No. | 1 | ○ |
| Station No. | 2 | ○ |



## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port QCPU or LCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | QnUD(P)V/QnUDE(H) *3 |
| | IP address | 192.168.3.39 |
| | Port No. | 5001 |
| | Communication | UDP (fixed) |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 For CR800-Q (Q172DSRCPU), set [Q17nDSR].

### ■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

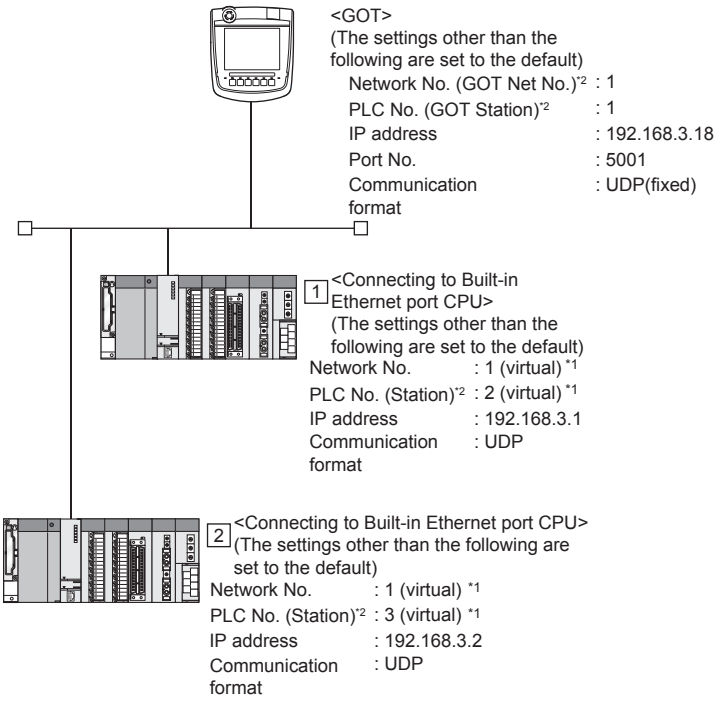
QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

## Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC

### ■System configuration

Set [Port No.] to [5006] and [Communication format] to [UDP] to communicate with the PLC.



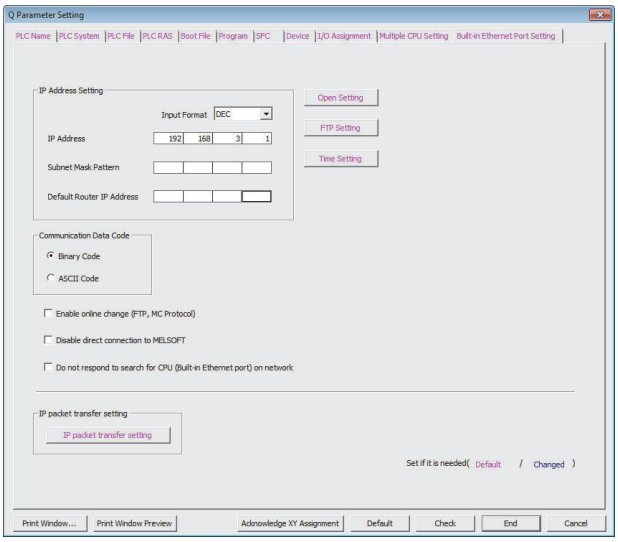

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 207 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[PLC parameter] of GX Works2

• Built-in Ethernet port

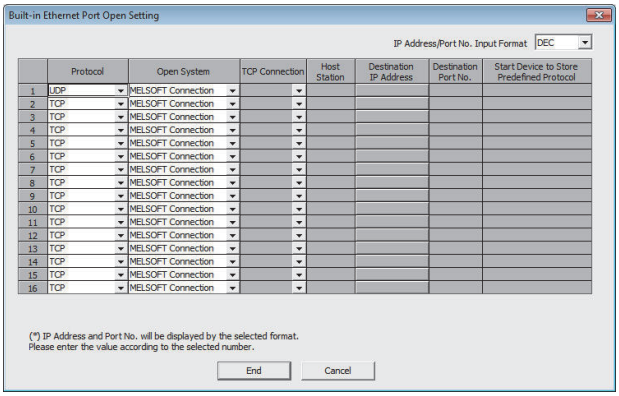



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.1 | ○ |
| Subnet mask pattern | - | × |
| Default router IP address | - | × |
| Communication data code | (Use default value) | △ |
| Enable online change (FTP, MC protocol) | | △ |
| Disable direct connection to MELSOFT | | △ |
| Do not respond to search for CPU (Built-in Ethernet port) on network | | △ |
| Open settings | ☞ • Open settings. | ○ |
| FTP settings | (Use default value) | △ |
| Time settings | | △ |

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | UDP, TCP |
| Open system | MELSOFT connection |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..



• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | QnUD(P)V/QnUDE(H), LCPU | QnUD(P)V/QnUDE(H), LCPU |
| | IP address | 192.168.3.1 | 192.168.3.2 |
| | Port No.*3 | 5006 | 5006 |
| | Communication*3 | UDP | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

### ■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

## Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

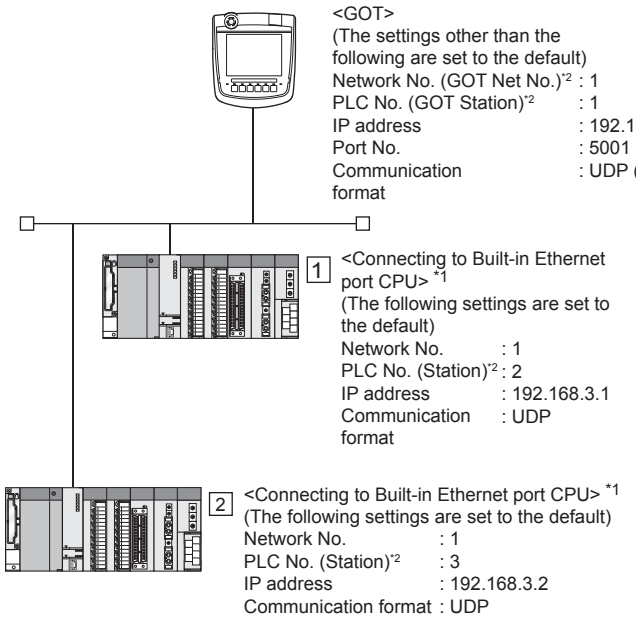
### ■System configuration

Set [Port No.] to [5001] and [Communication] to [UDP] to communicate with the PLC.

[MELSOFT Connection Extended Setting] is available with QnUDVCPU.

Set [MELSOFT Connection Extended Setting] to [Use], and set the items.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.




*1 Use the product whose the first five digits of the serial No. for QnUD(P)VCPU is "17052" or later.

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## ■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.1 | ○ |
| Subnet mask pattern | - | × |
| Default router IP address | - | × |
| Communication data code | (Use default value) | △ |
| Enable online change (FTP, MC protocol) | | △ |
| Disable direct connection to MELSOFT | | △ |
| Do not respond to search for CPU (Built-in Ethernet port) on network | | △ |
| Open settings | ☞ • Open settings | ○ |
| FTP settings | (Use default value) | △ |
| Time settings | | △ |
| MELSOFT Connection Extended Setting | ☞ • MELSOFT Connection Extended Setting | ○ |

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.

| Item | Set value |
|---|---|
| Protocol | UDP, TCP |
| Open system | MELSOFT connection |

• MELSOFT Connection Extended Setting

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| MELSOFT Connection Extended Setting | Use | ○ |
| Network No. | 1 | ○ |
| Station No. | 2 | ○ |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No.



• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0 ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | QnUD(P)V/QnUDE(H) | QnUD(P)V/QnUDE(H) |
| | IP address | 192.168.3.1 | 192.168.3.2 |
| | Port No. | 5001 | 5001 |
| | Communication | UDP (fixed) | UDP (fixed) |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

### ■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

**Point**

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

# Connecting to Ethernet module (Q/L Series)

This section describes the settings of the GOT and Ethernet module (Q Series) in the following case of the system configuration.



**Point**

• Ethernet module (Q/L Series)

For details of the Ethernet module (Q/L Series), refer to the following manual.

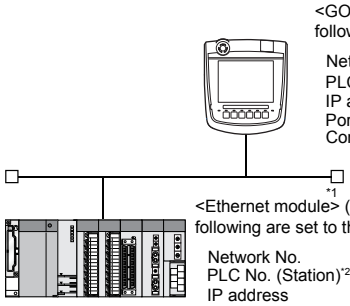
📖Q Corresponding Ethernet Interface Module User's Manual (Basic)
📖MELSEC-L Ethernet Interface Module User's Manual (Basic)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration (for Q series)



<GOT> (The settings other than the following are set to the default)

Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

*1

<Ethernet module> (The settings other than the following are set to the default)

Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

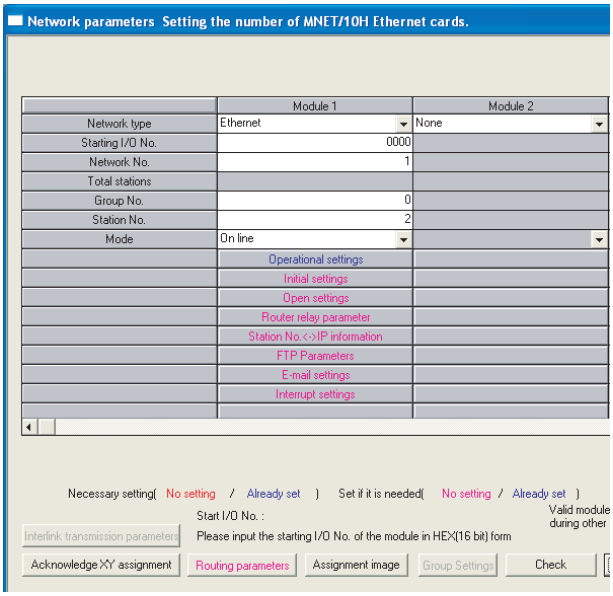
**Point**

When connecting to Q170MCPU

When connected to Q170MCPU, the start I/O No. of the Ethernet module is set to "70".

## [Network parameter] of GX Developer

### ■Network parameter




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Network type | Ethernet (fixed) | ○ |
| Starting I/O No.*1 | 0000H | ○ |
| Network No.*2 | 1 | ○ |
| Group No. | 0 (fixed) | ○ |
| Station No.*3 | 2 | ○ |
| Mode | Online (fixed) | ○ |
| Operation setting | ☞ Page 215 Operation setting | ○ |
| Initial settings | (Use default value) | △ |
| Open settings | | × |
| Router relay parameter | | × |
| Station No.<->IP information | | × |
| FTP Parameters | | × |
| E-mail settings | | × |
| Interrupt settings | | × |
| Redundant settings*4 | | △ |
| Routing Parameters | ☞ Page 216 Routing parameter setting | △ |

○: Necessary △: As necessary ×: Not necessary

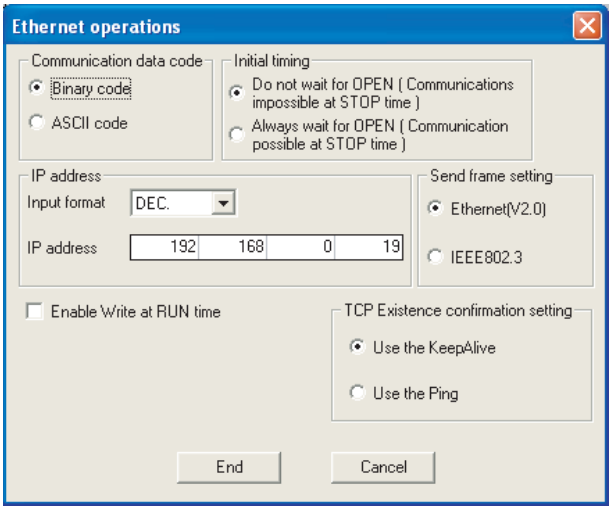
*1 When using Q170MCPU or Q170MSCPU(-S1), set the start I/O No. to 0070H.

*2 Specify the same network No. as that of the GOT.

*3 Do not set the same station No. as that of the GOT.

*4 Set when using Ethernet module in a redundant QnPRHCPU system.

## ■Operation setting




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Communication data code*1 | (Use default value) | × |
| IP address | 192.168.3.19 | ○ |
| Initial timing*1 | (Use default value) | × |
| Send frame setting | | × |
| Enable Write at RUN time*1 | | × |
| TCP Existence confirmation setting | | × |

○: Necessary △: As necessary ×: Not necessary

*1 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
- Communication date code: [Binary code]
- Initial timing: "Always wait for OPEN" (Communication is applicable while stopping the PLC CPU.)
- Enable Write at RUN time: [Enable Write at RUN time] (Writing Data is applicable while running the PLC CPU.)

**Point**

When changing the network parameter

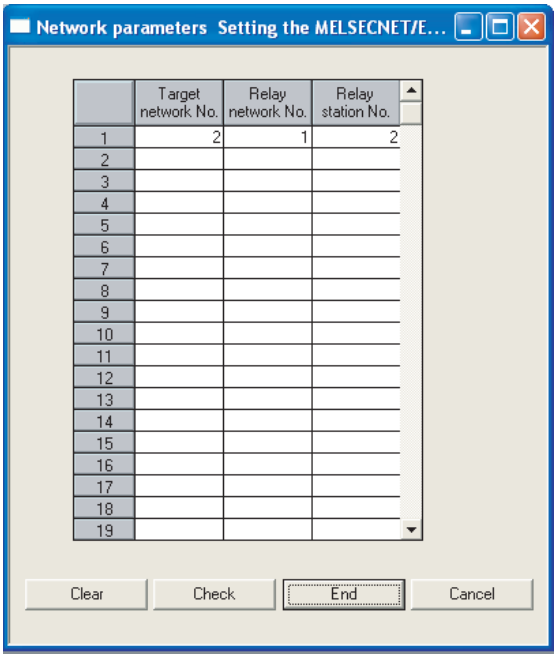
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

## ■Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.




| Item | Range |
|---|---|
| Target network No. | 1 to 239 |
| Relay network No. | 1 to239 |
| Relay station No. | 0 to 64 |

**Point**

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

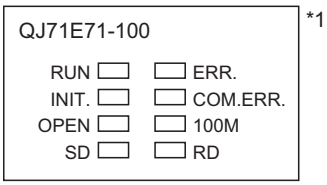
☞ Page 154 Routing parameter setting

## ■Communication confirmation

The INIT. LED on the Ethernet module turns on when the module is ready to communicate.

For confirming the communication state, refer to the following.

☞ Page 218 Confirming the communication state of Ethernet module




*1

*1 The LEDs layout of QJ71E71-100.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | QJ71E71 |
| | IP address | 192.168.3.19 |
| | Port No.*1 | 5001 |
| | Communication*1 | UDP |

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

## Confirming the communication state of Ethernet module

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

**Point**

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.

User's manual of the Ethernet module

# Connecting to C Controller module (Q Series)

This section describes the settings of the GOT and C Controller module (Q Series) in the following case of the system configuration.



**Point**

• C Controller module (Q Series)

For details of C Controller module (Q Series), refer to the following manual.

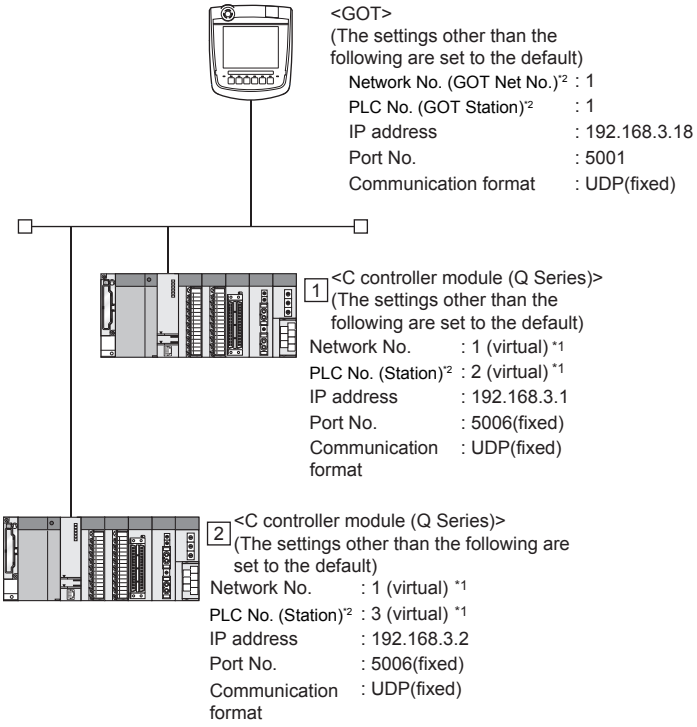
C Controller Module User's Manual (Hardware Design, Function Explanation)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration




*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 223 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

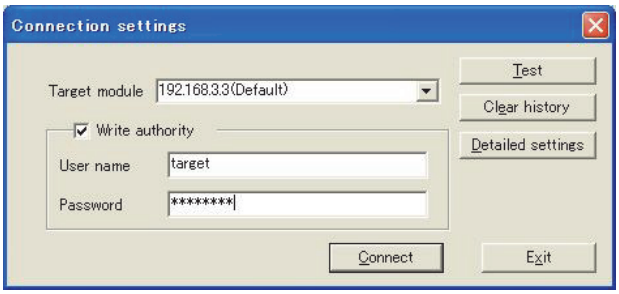
| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## Utility setting for C Controller module (Q Series)

### ■Q12DCCPU-V

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller (Q Series) setting utility.

• Connection settings



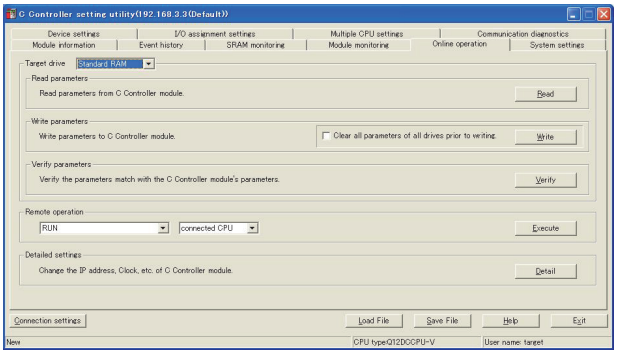

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Target module*1 | 192.168.3.3 (Default) | ○ |
| Write authority | Mark the checkbox | ○ |
| User name*2 | target | ○ |
| Password*2 | password | ○ |
| Detailed settings | - | △ |

○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address or host name.

*2 If the account of the C Controller module (Q Series) has been changed, input the changed user name and password.

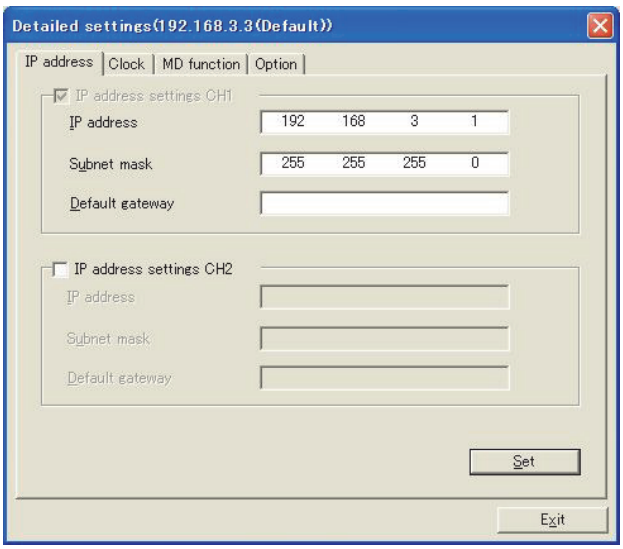
• Online operation




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Detailed settings | ☞ • Detail settings | ○ |

○: Necessary △: As necessary ×: Not necessary

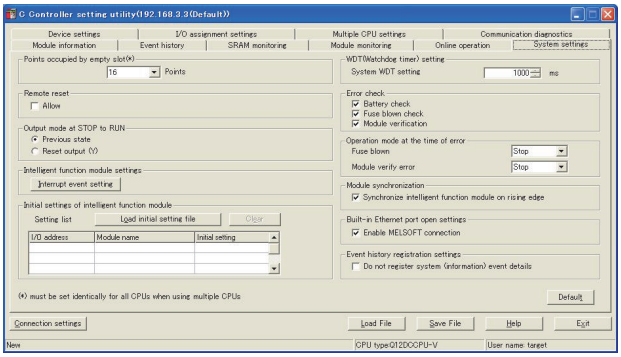
• Detail settings




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.1 | ○ |
| Subnet mask | 255.255.255.0 | ○ |
| Default gateway | - | × |
| IP address settings CH2 | - | × |

○: Necessary △: As necessary ×: Not necessary

• System settings



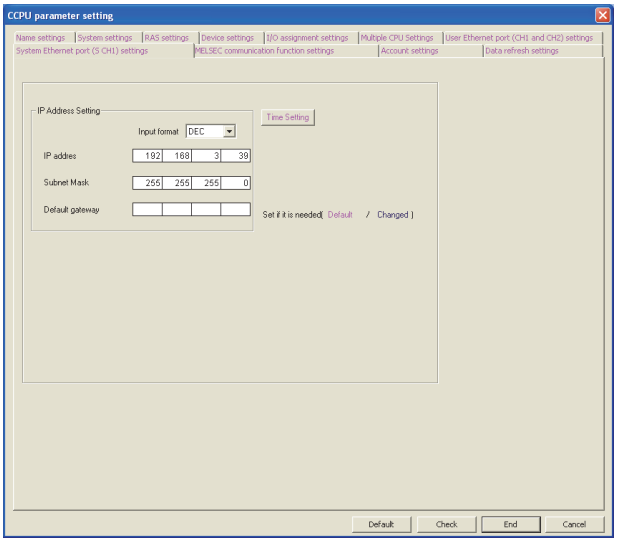

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Points occupied by empty slot | (Use default value) | △ |
| Remote reset | | △ |
| Output mode at STOP to RUN | | △ |
| Intelligent function module settings | | △ |
| Initial settings of intelligent function module | | △ |
| WDT (Watchdog timer) setting | | △ |
| Error check | | △ |
| Operation mode at the time of error | | △ |
| Module synchronization | | △ |
| Built-in Ethernet port open settings | Mark the checkbox | ○ |
| Event history registration settings | (Use default value) | △ |

○: Necessary △: As necessary ×: Not necessary

## ■Q24DHCCPU-V/VG/LS

Use SW4PVC-CCPU-E for the C Controller (Q Series) setting utility.

- Connection settings




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address*1 | 192.168.3.39<br>(Default) | ○ |
| Subnet Mask | 255.255.255.0<br>(Default) | ○ |
| Default Gateway | - | × |

○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



**Point**

[Connected Ethernet Controller Setting] when connecting C Controller module (Q Series) and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No.

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 2*2 | 3*2 |
| | Unit Type | QnD(H)CCPU | QnD(H)CCPU |
| | IP address | 192.168.3.1 | 192.168.3.2 |
| | Port No.*3 | 5006 | 5006 |
| | Communication*3 | UDP | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

## Checking communication state of C Controller module (Q Series)

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of C Controller module (Q Series) specified in the ping command

# Connecting to Ethernet module (QnA Series)

This section describes the settings of the GOT and Ethernet module (QnA Series) in the following case of the system configuration.



**Point**

• Ethernet module (QnA Series)

For details of the Ethernet module (QnA Series), refer to the following manual.

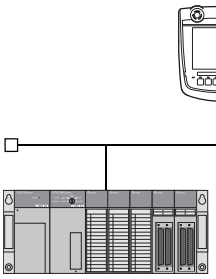
For QnA Ethernet Interface Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 267 Precautions

## System configuration



<GOT>(The settings other than the following are set to the default)

Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP(fixed)

<Ethernet module>*1 (The settings other than the following are set to the default)

Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

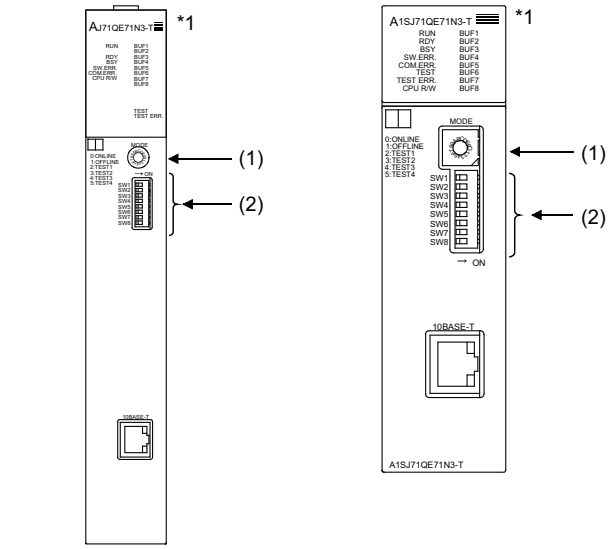
| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## Switch settings of Ethernet module

Set the operation mode setting switch and exchange condition setting switch.

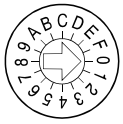
AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5

A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T, A1SJ71QE71-B5, A1SJ71QE71-B2




*1 The figure of AJ71QE71N3-T and A1SJ71QE71N3-T.

### ■Operation mode setting switch

| Operation mode setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
|  | Online | 0<br>(fixed) | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■Exchange condition setting switch

| Exchange condition setting switch | Setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|---|
|  | SW1 | Selection of line processing at TCP timeout error | OFF | △ |
| | SW2 | Data code setting*1 | OFF<br>(fixed) | × |
| | SW3 | Self start mode setting*2 | ON | ○ |
| | SW4 | (Must not to be used) | OFF<br>(fixed) | × |
| | SW5 | | | |
| | SW6 | | | |
| | SW7 | CPU exchange timing setting*1 | OFF<br>(fixed) | × |
| | SW8 | Initial timing setting | OFF | △ |



○: Necessary △: As necessary ×: Not necessary

*1 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
- Data code setting: [Binary code]
- Enable Write at RUN time: [Enable Write at RUN time] (Writing Data is applicable while running the PLC CPU.)

*2 When SW3 is ON, the initial processing is executed regardless of the initial request signal (Y19).
In addition, communication is applicable while stopping the PLC CPU.
For the initial processing by using the initial request signal (Y19), refer to the following manual.
For QnA Ethernet Interface Module User's Manual

**Point**

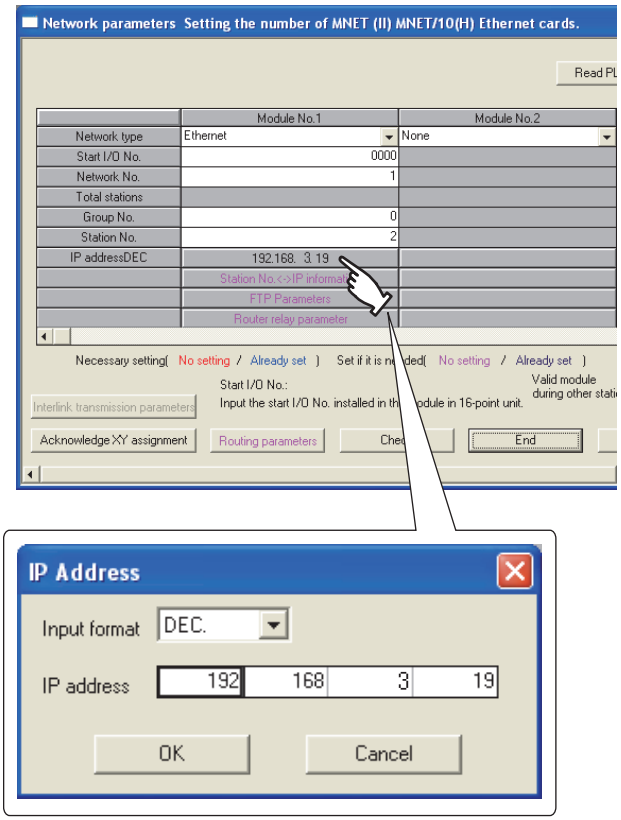
When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.



## [Network parameter] of GX Developer

### ■Network parameter




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Network type | Ethernet (fixed) | ○ |
| Start I/O No. | 0000H | ○ |
| Network No.*1 | 1 | ○ |
| Group No. | 0 (fixed) | ○ |
| Station No.*2 | 2 | ○ |
| IP address | 192.168.0.19 | ○ |
| Station No.<->IP information | (Use default value) | × |
| FTP Parameters | | × |
| Router relay parameter | | × |
| Routing parameters | ☞ Page 228 Routing parameter setting | △ |

○: Necessary △: As necessary ×: Not necessary

*1 Specify the same network No. as that of the GOT.

*2 Do not set the same station No. as that of the GOT.

**Point**

When changing the network parameter

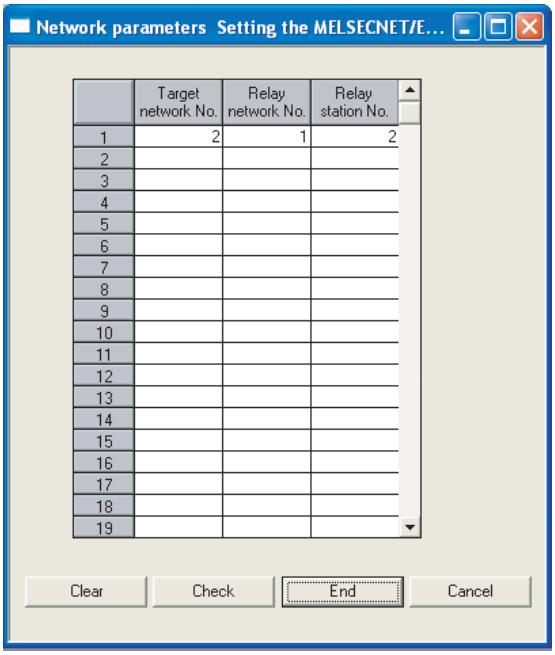
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

## ■Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.




| Item | Range |
|---|---|
| Target network No. | 1 to 239 |
| Relay network No. | 1 to 239 |
| Relay station No. | 0 to 64 |

**Point**

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 154 Routing parameter setting

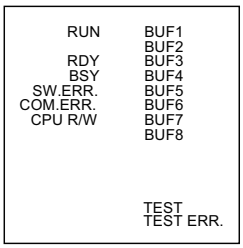
## ■Communication confirmation

The RDY LED on the Ethernet module turn on when the module is ready to communicate.

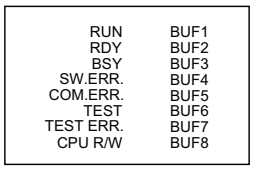
For confirming the communication state, refer to the following.

☞ Page 218 Confirming the communication state of Ethernet module

AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5




A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T,A1SJ71QE71-B5, A1SJ71QE71-B2



## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



### ■Controller Setting

| GOT Net No. | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5002 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting(standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | AJ71QE71 |
| | IP address | 192.168.0.19 |
| | Port No.*1 | 5001 |
| | Communication*1 | UDP |

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

# Connecting to Ethernet module (A Series)

This section describes the settings of the GOT and Ethernet module (A Series) in the following case of the system configuration.

**Point**

• Ethernet module (A Series)

For details of the Ethernet module (A Series), refer to the following manual.

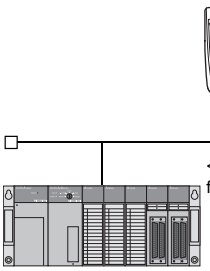
📖For A Ethernet Interface Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration



<GOT> (The settings other than the following are set to the default)

Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Ethernet module>*1 (The settings other than the following are set to the default)

Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 235 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

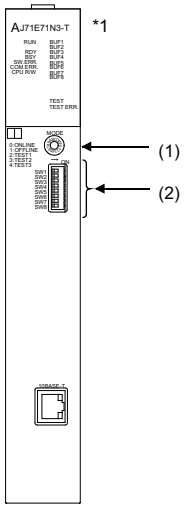
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

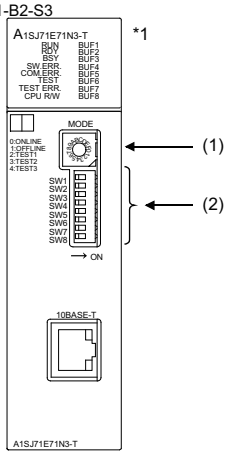
## Switch settings of Ethernet module

Set the operation mode setting switch and exchange condition setting switch.

AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3

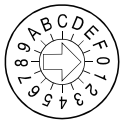



A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B2-S3




*1 The figure of AJ71E71N3-T and A1SJ71E71N3-T.

### ■Operation mode setting switch

| Operation mode setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
|  | Online | 0<br>(fixed) | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■Exchange condition setting switch*1

| Exchange condition setting switch | Setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|---|
|  | SW1 | Selection of line processing at TCP timeout error | OFF | △ |
| | SW2 | Data code setting (binary code) | OFF (fixed) | ○ |
| | SW3 | (Must not to be used) | OFF (fixed) | × |
| | SW4 | | | |
| | SW5 | | | |
| | SW6 | | | |
| | SW7 | CPU exchange timing setting (Enable write at RUN time) | ON (fixed) | ○ |
| | SW8 | Initial timing setting | OFF | △ |

○: Necessary △: As necessary ×: Not necessary

*1 The exchange condition setting switches of A1SJ71E71-B5-S3 and A1SJ71E71-B2-S3 are specified as the below.

| Exchange condition setting switch | Setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|---|
|  | SW1 | Selection of line processing at TCP timeout error | OFF | △ |
| | SW2 | Data code setting (binary code) | OFF (fixed) | ○ |
| | SW3 | CPU exchange timing setting (Enable write at RUN time) | ON (fixed) | ○ |
| | SW4 | Initial timing setting | OFF | △ |

○: Necessary △: As necessary ×: Not necessary

**Point**

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

## Sequence program

The sequence program for initial processing and communication line opening processing are required.

### ■Programming condition

This program performs the initial processing of the Ethernet module and the opening processing of connection No. 1 when the stopping PLC CPU starts running.

- I/O signal of Ethernet module

For A Ethernet Interface Module User's Manual

- Device used by user

| Device | Application |
|---|---|
| M102 | COM.ERR turned off command |
| D100 | IP address of Ethernet module |
| D110 | Application setting |
| D111 | Port No. of Ethernet module |
| D112 to D113 | IP address of GOT |
| D114 | Port No. of GOT |
| D200 | Initial fault code |

- Buffer memory settings used in the present example

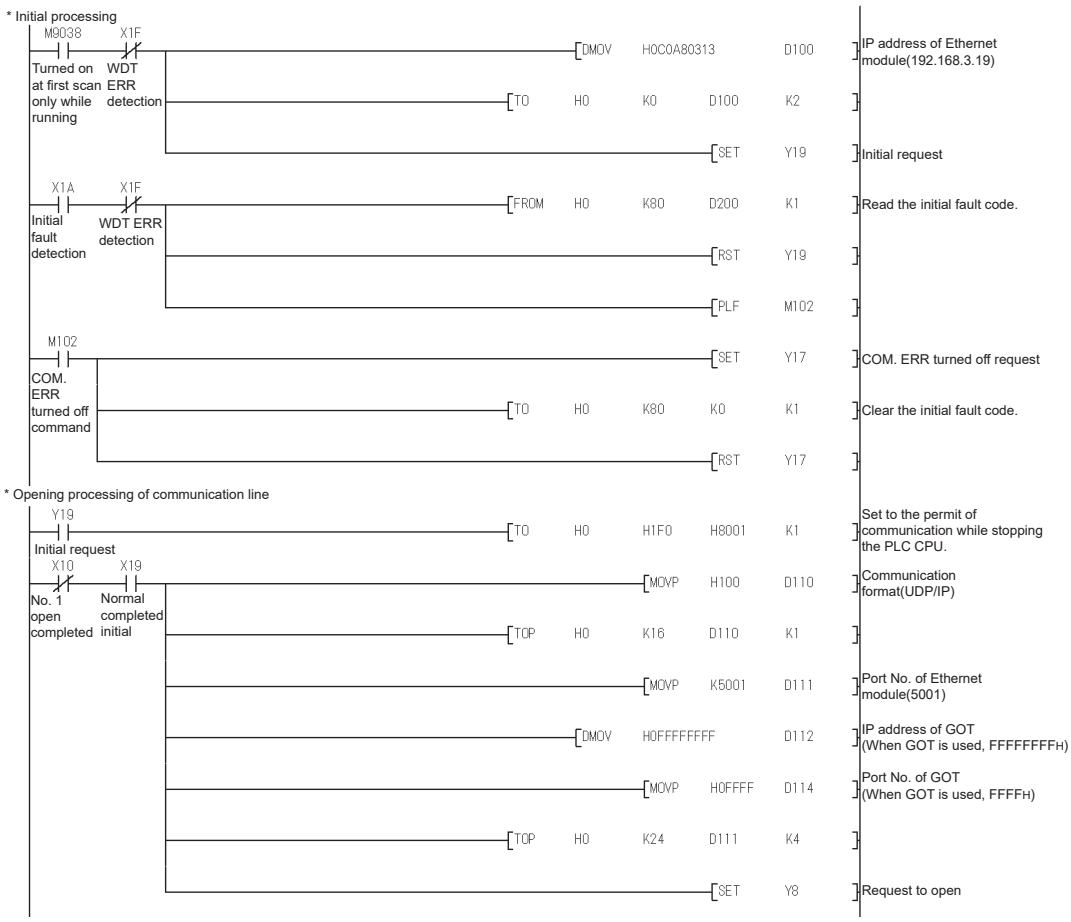
| Buffer memory address<br>Dec (Hex) | Item | Set value |
|---|---|---|
| 0 to 1 (0 to 1H) | IP address of Ethernet module | C0A80313H<br>(192.168.3.19) |
| 16 (10H) | Application setting*1 | 100H |
| 24 (18H) | Port No. of Ethernet module | 5001 |
| 25 to 26<br>(19 to 1AH) | IP address of GOT | FFFFFFFFH |
| 27 (1BH) | Port No. of GOT | FFFFH (fixed) |
| 80 (50H) | Initial fault code | — |

*1 The details of the application setting are shown below.
Settings 1), 2) and 3) can be changed by the user.
4), 5) and 6) are fixed.

| b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6) | | | | | | 5) | 4) | 3) | | | | | | 2) | 1) |

1) Fixed buffer application
0: For sending; no exchange
1: For receiving
2) Existence check
0: No
1: Yes
3) Pairing open
0: No
1: Yes
4) Communication format (Set to "1" (UDP/IP).)
0: TCP/IP
1: UDP/IP
5) Fixed buffer exchange (Set to "0" (With procedure).)
0: With procedure
1: Without procedure
6) Open method (Set to "00" (Active, UDP/IP).
00: Active, UDP/IP
10: Unpassive
11: Fullpassive

## ■Example of sequence program




**Point**

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

## ■Communication confirmation

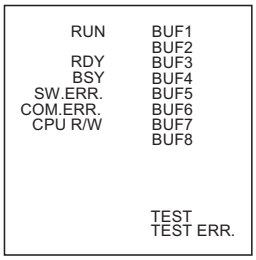
The RDY LED on the Ethernet module turn on when the module is ready to communicate.

For confirming the communication state, refer to the following.

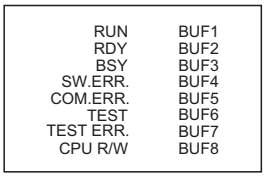
☞ Page 218 Confirming the communication state of Ethernet module

The BUF1 LED turns on when the opening processing of the connection No. 1 is completed in normal at executing of the sequence program example described at (2).

AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3




A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B2-S3



## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5002 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | AJ71E71 |
| | IP address | 192.168.3.19 |
| | Port No. | 5001 |
| | Communication | UDP (fixed) |

# Connecting to Ethernet module (FX Series)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

**Point**

• Ethernet module (FX Series)

For details of the Ethernet module (FX Series), refer to the following manual.

📖FX3U-ENET-L User's manual

📖FX3U-ENET User's manual

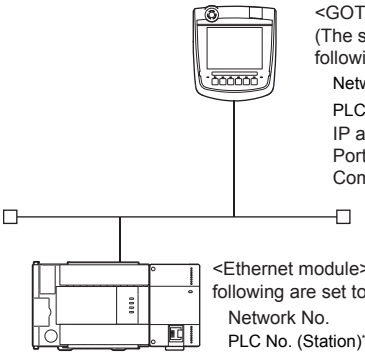
📖FX3U-ENET-ADP User's manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5019
Communication format : TCP (fixed)

<Ethernet module> (The settings other than the following are set to the default)
Network No. : 1 (virtual)*1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.3.19
Port No. : 5556 (fixed)
Communication format : TCP (fixed)

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 242 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## Ethernet parameter settings of FX Configurator-EN-L and FX Configurator-EN

### ■Ethernet settings

Set the Ethernet parameter using FX Configurator-EN-L or FX Configurator-EN.

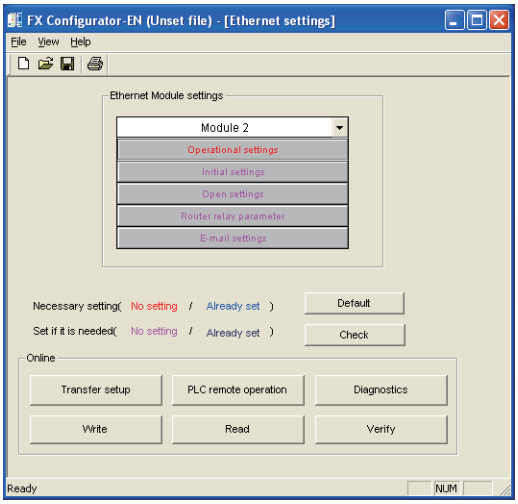
To use FX Configurator-EN-L, GX-Developer Ver.8.88S or later is required.

To use FX Configurator-EN, GX-Developer Ver.8.25B or later is required.

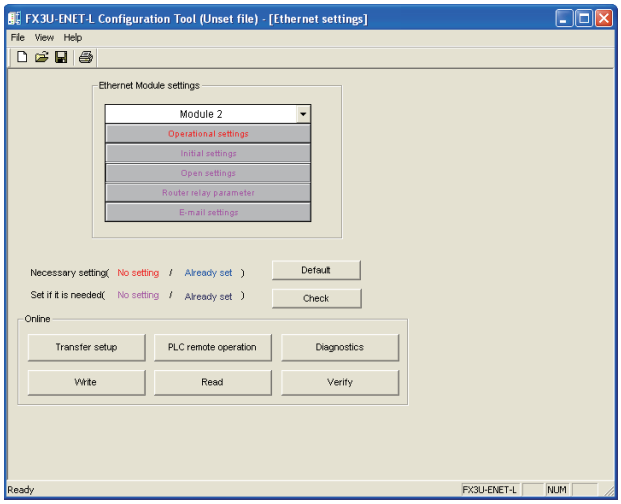
For the details on the engineering tools, refer to the following manuals.

📖FX Configurator-EN-L Operation Manual

📖FX Configurator-EN Operation manual




FX Configurator-EN-L



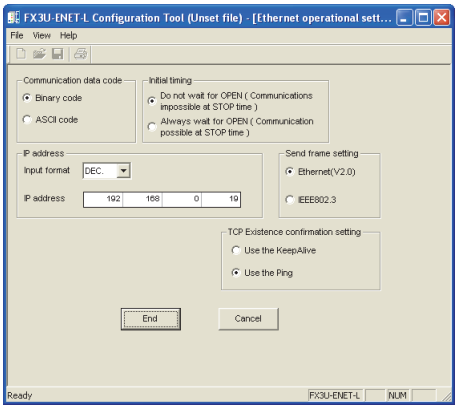

FX Configurator-EN

| Item | Setting | Setting (with GOT connected) |
|---|---|---|
| Module | Module 0*1 | ○ |
| Operational settings | ☞ Page 238 Operational settings | ○ |
| Initial settings | (Use default value.) | × |
| Open settings | ☞ Page 239 Open settings | ○ |
| Router relay parameter | (Use default value.) | × |
| E-mail settings | | × |

○:Required △:Set if necessary ×:Not required

*1 Set the number of the Ethernet module.

## ■Operational settings




| Item | Setting | Setting (with GOT connected) |
|---|---|---|
| Communication date code*1 | (Use default value.) | × |
| IP address | 192.168.3.19 | ○ |
| Initial timing*1 | (Use default value.) | × |
| Send frame setting | | × |
| TCP Existence confirmation setting | | × |

○:Required △:Set if necessary ×:Not required

*1 Because the port No. 5551 is fixed, the GOT operates as follows, regardless of the setting for the item.
- Communication date code : [Binary code]
- Initial timing : [Always wait for OPEN]

(Communications are enabled while the programmable controller CPU stops.)

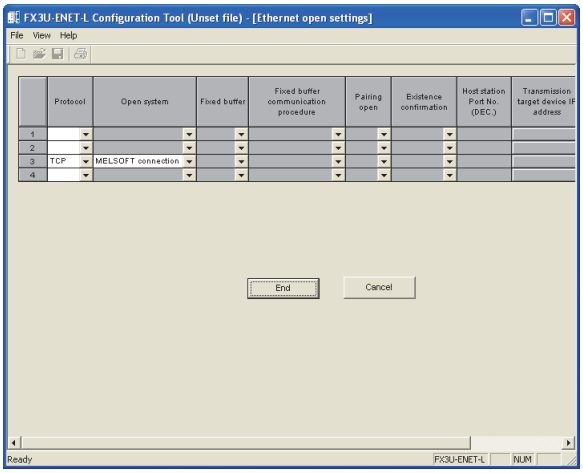
*2 The default value of IP address is 192.168.1.254. Set the IP address corresponding to the system configuration.

**Point**

When changing Ethernet parameter

After writing the Ethernet parameter to the programmable controller CPU, turn off and then on, or reset the programmable controller CPU.

## ■Open settings



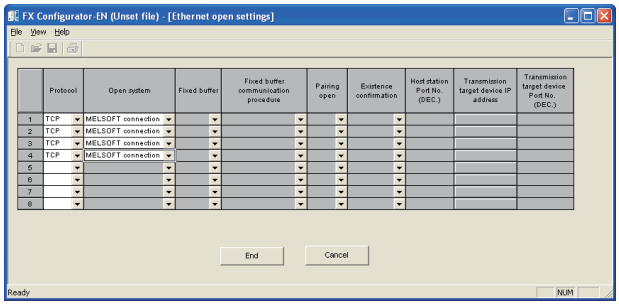

| Item | Setting | Setting (with GOT connected) |
|---|---|---|
| Protocol | TCP | ○ |
| Open system | MELSOFT connection | ○ |
| Fixed buffer | (Use default value.) | × |
| Fixed buffer communication procedure | | × |
| Pairing open | | × |
| Existence confirmation | | × |
| Host station Port No. (DEC.) | | × |
| Transmission target device IP address | | × |
| Transmission target device Port No. (DEC.) | | × |

○:Required △:Set if necessary ×:Not required

**Point**

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.



## Ethernet parameter settings of FX3U-ENET-ADP

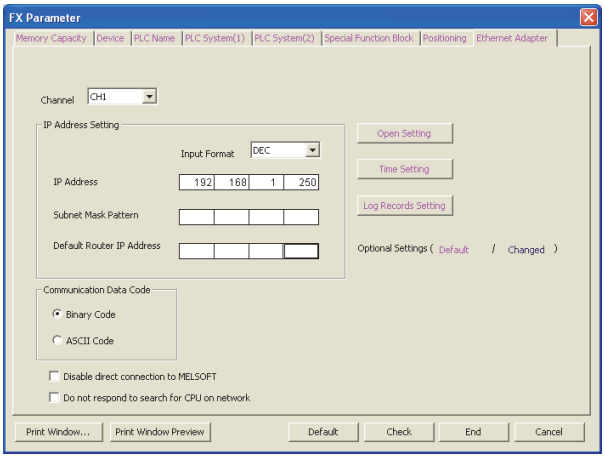
### ■Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3U-ENET-ADP, GX Works2 Ver.1.90U or later is required.

For details on the setting of FX3U-ENET-ADP, refer to the following manual.

FX3U-ENET-ADP User's Manual




| Item | Setting | Setting (with GOT connected) |
|---|---|---|
| Channel | CH1 or CH2*1 | × |
| IP Address | 192.168.3.19*2 | ○ |
| Open Settings | ☞ Page 241 Open settings | ○ |
| Communication Data Code | (Use default value.) | × |
| Disable direct connection to MELSOFT | | × |
| Do not respond to search for CPU on network | | × |

○:Required △:Set if necessary ×:Not required

*1 Set a channel according to the installation position of FX3U-ENET-ADP on the CPU body.

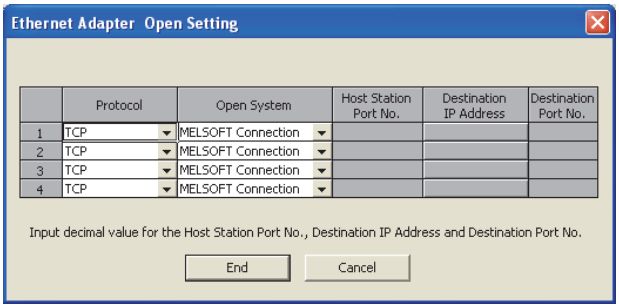
*2 The default value of IP address is 192.168.1.250.
Set the IP address corresponding to the system configuration.

**Point**

When changing Ethernet parameter

After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

## ■Open settings




| Item | Setting | Setting (with GOT connected) |
|---|---|---|
| Protocol | TCP | ○ |
| Open System | MELSOFT connection | ○ |

**Point**

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5019 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | FX (fixed) |
| | IP address | 192.168.3.19*1 |
| | Port No. | 5551 (for FX3U-ENET-L)<br>5556 (for FX3U-ENET-ADP) |
| | Communication | TCP (fixed) |

*1 Set the value according to the IP address of the connected PLC.

## Confirming the communication state of Ethernet module

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

**Point**

Ethernet diagnostics of FX Configurator-EN-L or FX Configurator-EN is available to a Ping test from the PLC. For details of Ethernet diagnostics of the engineering tools, refer to the following manuals.

FX Configurator-EN-L Operation manual

FX Configurator-EN Operation manual

# Connecting to Built-in Ethernet port FXCPU (FX3GE)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

**Point**

• FX3GE

For details of FX3GE, refer to the following manual.

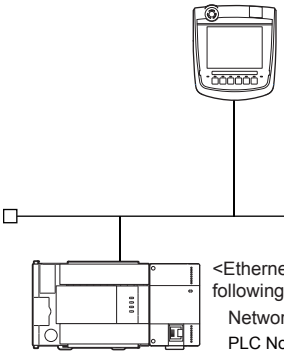
📖FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.0.18
Port No. : 5019
Communication format : TCP (fixed)

<Ethernet module> (The settings other than the following are set to the default)
Network No. : 1 (virtual) *1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.0.19
Port No. : 5556 (fixed)
Communication format : TCP (fixed)

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 246 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## Ethernet parameter settings of FX3GE

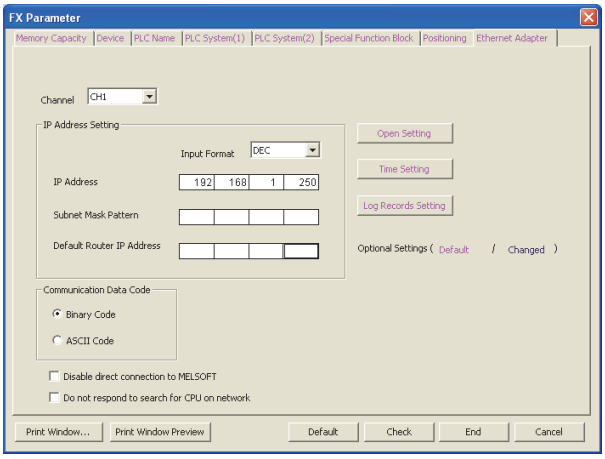
### ■Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3GE, GX Works2 Ver.1.91V or later is required.

For details on the setting of FX3GE, refer to the following manual.

📖FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL




| Item | Set value | Setting (with GOT connected) |
|---|---|---|
| Channel | CH1 | × |
| IP Address | 192.168.1.250*1 | ○ |
| Open Settings | ☞ Page 245 Open settings | ○ |
| Communication Data Code | (Use default value.) | × |
| Disable direct connection to MELSOFT | | × |
| Do not respond to search for CPU on network | | × |

○:Required △:Set if necessary ×:Not required

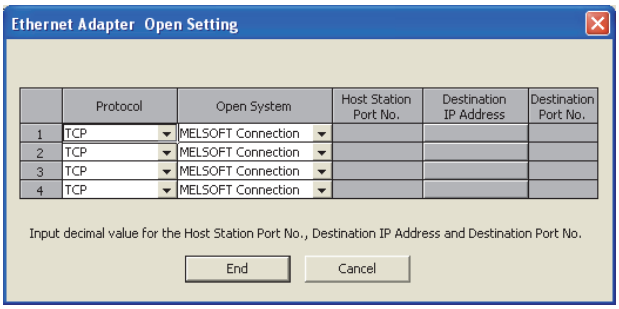
*1 The default value of IP address is 192.168.1.250.
Set the IP address corresponding to the system configuration.

**Point**

When changing Ethernet parameter

After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

### ■Open settings




| Item | Set value | Setting (with GOT connected) |
|---|---|---|
| Protocol | TCP | ○ |
| Open System | MELSOFT connection | ○ |

**Point**

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5019 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | FX (fixed) |
| | IP address | 192.168.0.19*1 |
| | Port No. | 5556*2 |
| | Communication | TCP (fixed) |

*1 Set the value according to the IP address of the connected PLC.

*2 Set the value according to the Port No. of the connected PLC.
For details, refer to the following.
☞ Page 150 Connected Ethernet controller setting

## Confirming the communication state of Ethernet module

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

# Connecting to Display I/F (CNC C70)

This section describes the settings of the GOT and Display I/F (CNC C70) in the following case of the system configuration.

**Point**

• Display I/F (CNC C70)

For details of the Display I/F (CNC C70), refer to the following manual.

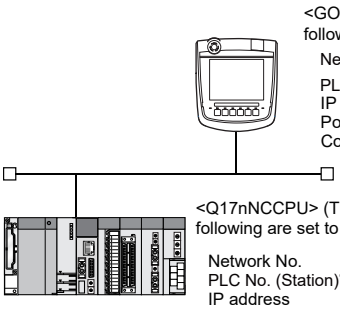
C70 Series SET UP MANUAL

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 267 Precautions

## System configuration



<GOT> (The settings other than the following are set to the default)

| | |
|---|---|
| Network No. (GOT Net No.)*1 | : 239 |
| PLC No. (GOT Station)*1 | : 1 |
| IP address | : 192.168.1.1 |
| Port No. | : 5001 |
| Communication format | : UDP (fixed) |

<Q17nNCCPU> (The settings other than the following are set to the default)

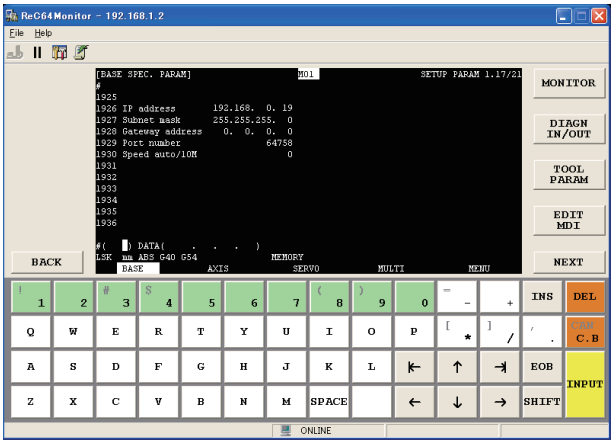
| | |
|---|---|
| Network No. | : 239 |
| PLC No. (Station)*1 | : 2 |
| IP address | : 192.168.1.2 |
| Port No. | : 5001 |
| Communication format | : UDP(fixed) |

*1 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## IP address settings of CNC C70

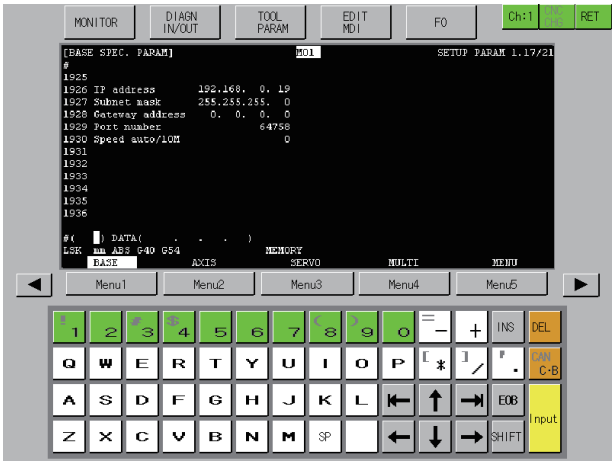
### ■Remote monitor tool




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.1.2 | ○ |
| Subnet mask | 255.255.255.0 | ○ |
| Gateway address | 0.0.0.0 | ○ |
| Port number | 64758 (fixed) | ○ |
| Speed auto/10M | 0 (fixed) | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■CNC monitor




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.1.2 | ○ |
| Subnet mask | 255.255.255.0 | ○ |
| Gateway address | 0.0.0.0 | ○ |
| Port number | 64758 (fixed) | ○ |
| Speed auto/10M | 0 (fixed) | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■Communication check

The CNC C70 can communicate with the GOT when INIT.LED of the CNC C70 is lit.

For confirming the communication state, refer to the following.

☞ Page 250 Checking communication state of CNC C70

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 259 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.1.1 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 239 |
| | Station | 2 |
| | Unit Type | Q17nNC |
| | IP address | 192.168.1.2 |
| | Port No.*1 | 5001 |
| | Communication*1 | UDP |

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

## Checking communication state of CNC C70

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.1.2

Reply from 192.168.1.2:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.1.2

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of CNC C70
- Cable connecting condition
- Switch settings and network parameter settings
- Operation state of PLC CPU (faulty or not)
- IP address of the CNC C70 specified for the Ping command

# Connection to NZ2GF-ETB

This section describes the settings of the GOT, the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB), and the PLC in the following system configuration.



**Point**

• CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB)

For details on the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB), refer to the following.

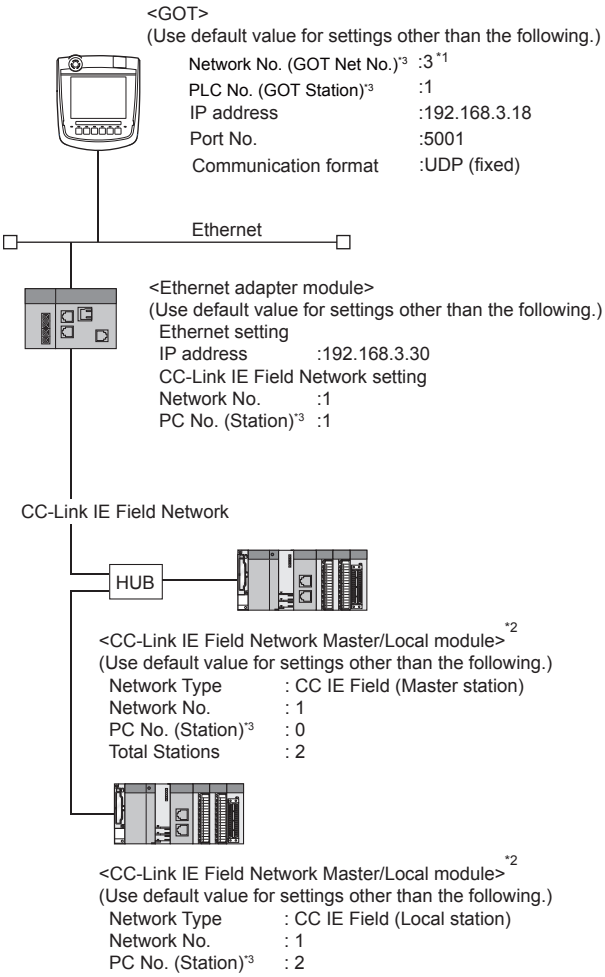
CC-Link IE Field Network Ethernet Adapter Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 267 Precautions

## System configuration




*1 Set the GOT network No. according to the third octet (network No.) of the Ethernet adapter module IP address.

*2 The CC-Link IE Field Network Master/Local module is mounted on slot 0 of the base unit.
The start I/O No. of the CC-Link IE Field Network Master/Local module is set at [0].

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

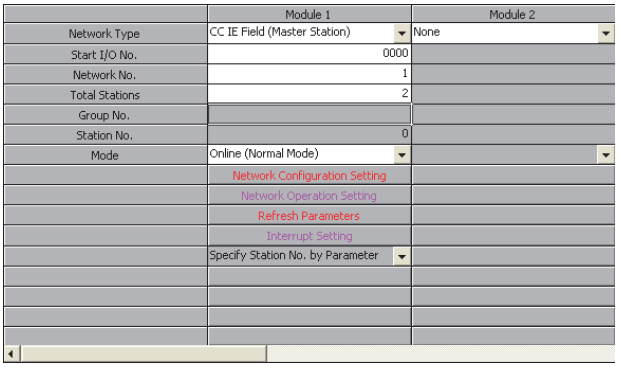
## GX Works2 network parameter Ethernet/CC IE/MELSECNET

For details of the setting contents of PLC side, refer to the following manual.

MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual

### ■Network Type, Network No., Total Stations setting

Example: Master station setting




| Item | Set value | |
|---|---|---|
| | Master station | Local station |
| Network type | CC IE Field<br>(Master station) | CC IE Field<br>(Local station) |
| Network No. | 1 | 1 |
| Total Stations | 2 | - |
| Station No. | 0 (fixed) | 2 |

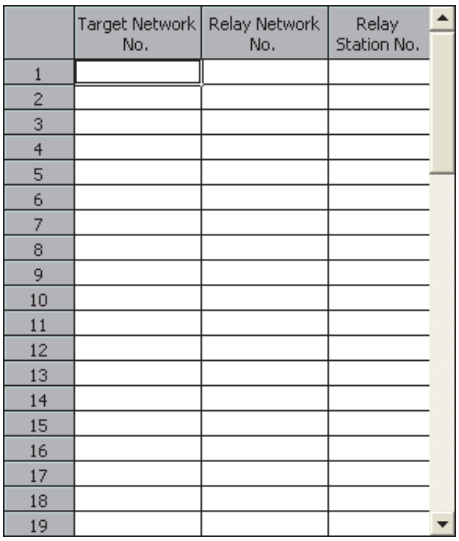
### ■Routing parameter setting

Set the followings as necessary.

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.




| Item | Range |
|---|---|
| Transfer Network No. | 1 to 239 |
| Relay Network No. | 1 to 239 |
| Relay Station No. | 0 to 64 |

## Ethernet Adapter Module setting

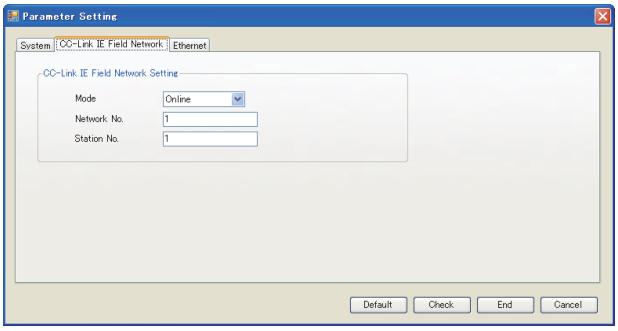
Set the parameter with the Ethernet adapter module setting tool.

For details of the setting method, refer to the following manual.

CC-Link IE Field Network Ethernet Adapter Module User's Manual



### ■CC-Link IE Field Network setting

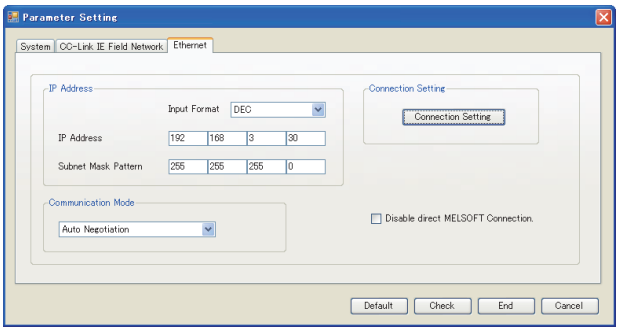



| Item | Set value |
|---|---|
| Network No. | 1*1 |
| Station No. | 1*2 |

*1 Set the same value as the network No. set on the PLC side.

*2 Set a value other than the network No. set on the PLC side.

### ■Ethernet setting




| Item | Set value |
|---|---|
| IP address | 192.168.3.30*1 |

*1 Set the IP address within the following range.

192.168.3.30

Set the fourth octet within the range from 1 to 64.

Set the third octet within the range from 1 to 239.

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 3*1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0ms |

*1 Set the GOT network No. according to the third octet (network No.) of the Ethernet adapter module IP address.

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet Setting No.1 | Host | * |
| | Net No. | 3*1 |
| | Station | 30*2 |
| | Unit Type | NZ2GF-ETB |
| | IP address | 192.168.3.30*3 |
| | Port No.*4 | 5001 |
| | Communication*4 | UDP |

*1 Set according to the third octet (network No.) of the Ethernet adapter module IP address.
*2 Set according to the fourth octet (PC No.) of the Ethernet adapter module IP address.
*3 Set according to the Ethernet adapter module IP address.
*4 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

### ■Routing parameter setting

| Item | Set value |
|---|---|
| Transfer Network No. | 1*1 |
| Relay Network No. | 3*2 |
| Relay Station No. | 30*3 |

*1 Set the same value as the Ethernet adapter module network No.
*2 Set according to the third octet (network No.) of the Ethernet adapter module IP address.
*3 Set according to the fourth octet (PC No.) of the Ethernet adapter module IP address.

# Connection to PERIPHERAL I/F

This section describes the settings of the GOT and Built-in Ethernet port Motion CPU in the following system configuration.

**Point**

• GOT type setting

For details, refer to the following.

☞ Page 49 Setting [Controller Type]

• CPU No. specification of Q170MCPU and Q170MSCPU(-S1)

Set whether to monitor the PLC CPU area or the Motion CPU area of Q170MCPU or Q170MSCPU(-S1) by the CPU No. specification.

For details, refer to the following.

☞ Page 267 Precautions

• PLC type of GX Works2/GX Developer

When creating a program, set the following PLC type:

For Q173D(S)CPU/Q172D(S)CPU

QnUD(E)(H)CPU

For Q170MCPU and Q170MSCPU(-S1) Q03UDCPU

Q03UDCPU

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

User's Manual of Q173D(S)CPU/Q172D(S)CPU, Q170MCPU, and Q170MS(-S1)CPU

• When connecting to multiple GOTs

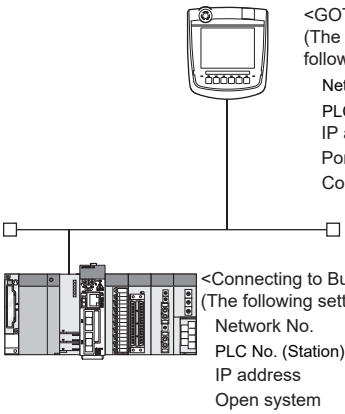
When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 267 Precautions

## System configuration

Leave the Built-in Ethernet port Motion CPU settings as default in the following system configuration.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU> *1
(The following settings are set to the default)
Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.39
Open system : MELSOFT connection (fixed)

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 198 Connection to MELSEC-Q/L series Built-in Ethernet port CPU

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 258 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

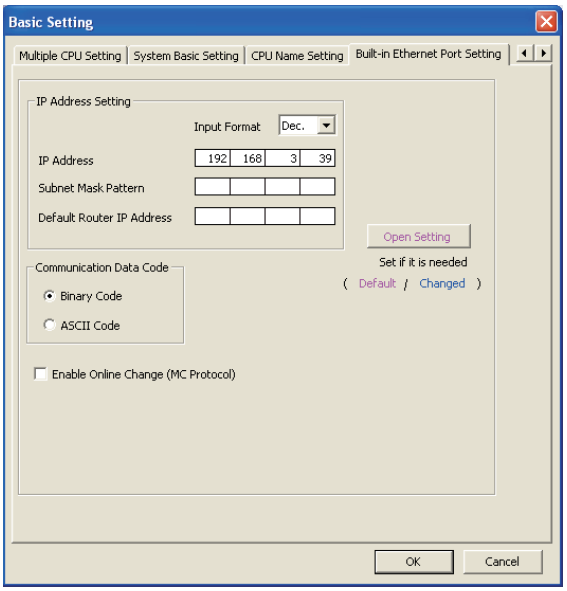
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

## Basic setting of MT Works2

Use the default values of the basic setting for the system configuration above.

### ■Built-in Ethernet port

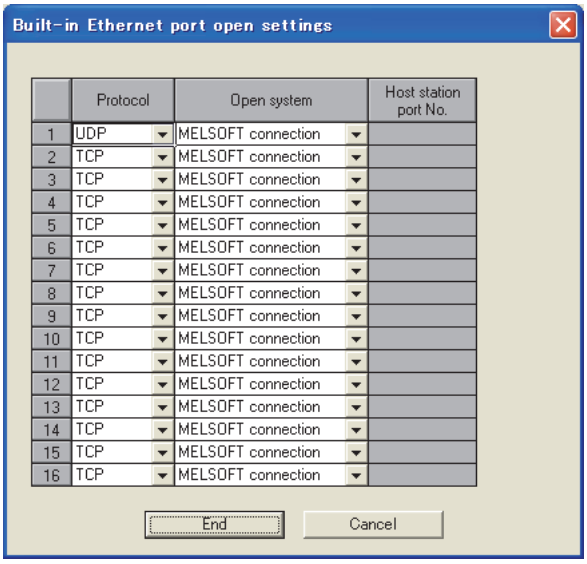



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP address | 192.168.3.39 (Default) | ○ |
| Subnet mask pattern | - | × |
| Default router IP address | - | × |
| Communication data code | (Use default value) | △ |
| Enable online change (MC protocol) | | △ |
| Open settings | ☞ Page 257 Open settings | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■Open settings

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | UDP (fixed) |
| Open system | MELSOFT connection (fixed) |
| Host station port No. | - |

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when connecting a Built-in Ethernet port Motion CPU and the GOT

The setting items for the network No. and station No. do not exist on the motion CPU side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1*1 |
| | Station | 2*2 |
| | Unit Type | QnUD(P)V/QnUDE(H) |
| | IP address | 192.168.3.39*3 |
| | Port No.*4 | 5006 |
| | Communication*4 | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 Set the value to the IP address of the Built-in Ethernet port Motion CPU.

*4 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

## Checking communication state of Connecting to Built-in Ethernet port CPU

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the Ping command

**Point**

Ethernet diagnostics of GX Works2/GX Developer

Ethernet diagnostics of GX Works2/GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2/GX Developer, refer to the following manual.

GX Works2 Version1 Operating Manual (Common)

GX Developer Version8 Operating Manual

# Connection to CC-Link IE TSN-equipped module

This section describes the settings of the GOT and a CC-Link IE TSN-equipped module in the following system configuration.

**Point**

• CC-Link IE TSN-equipped module

For details on the CC-Link IE TSN-equipped module, refer to the following.

MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)

MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual

MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

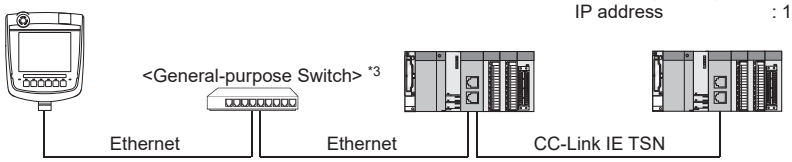
Page 267 Precautions

## System configuration

The following shows a system configuration example for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.) *2 : 1
PLC No. (GOT Station) *2 : 18
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<CC-Link IE TSN master/local module 2> *1
(The settings other than the following are set to the default)
Station type : Master station
Network No. : 1
PLC No. (Station) *2 : 0 (fixed)
IP address : 192.168.3.99




<CC-Link IE TSN master/local module 1> *1
(The settings other than the following are set to the default)
Station type : Local station
Network No. : 1
PLC No. (Station) *2 : 1
IP address : 192.168.3.1

*1 The CC-Link IE TSN master/local module is mounted on slot 0 of the base unit.
The start XY number of the CC-Link IE TSN master/local module is set to "0".

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

*3 A General-purpose Switch is required to connect the GOT and a CC-Link IE TSN master/local module.
For usable General-purpose Switches, refer to the following.
Manual of the CC-Link IE TSN master/local module to be used

## [Module Parameter] of GX Works3

The following shows a parameter setting example for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

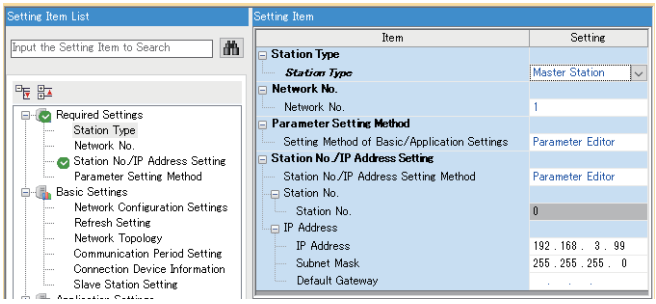
For details on the settings of the PLC, refer to the following manual.

Manual of the CC-Link IE TSN master/local module to be used



### ■[Required Settings]

Example: Setting of the CC-Link IE TSN master/local module 1




| Item | Set value | |
|---|---|---|
| | CC-Link IE TSN master/local module 1 | CC-Link IE TSN master/local module 2 |
| Station type | Local station | Master station |
| Network No. | 1 | 1 |
| Station No. | 1 | 0 (fixed) |
| IP Address | 192.168.3.1 | 192.168.3.99 |

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example of GT Designer3 for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 *1 |
| | Station | 1 *2 |
| | Unit Type *3 | RJ71GN11-T2/RD78G(H) |
| | IP Address | 192.168.3.1 |
| | Port No. *4 | 5001 |
| | Communication *4 | UDP |

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 For the MELSEC iQ-F series, select [FX5-CCLGN-MS/FX5-nSSC-G].
For RJ71GN11-EIP, select [RJ71GN11-T2/RD78G(H)].

*4 The following [Port No.] and [Communication format] can also be set.
• MELSEC iQ-R series
[Port No.]: 5002
[Communication]: TCP
• MELSEC iQ-F series
[Port No.]: 5554
[Communication]: TCP

## Checking the communication status of the CC-Link IE TSN-equipped module

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Connection status of the CC-Link IE TSN-equipped module
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of the CC-Link IE TSN-equipped module specified in the ping command

**Point**

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manual of PLC to be used

# Connection to built-in Ethernet port of Motion module

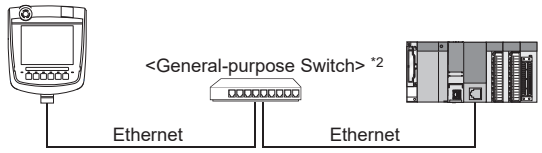
This section describes the settings of the GOT and Motion module in the following system configuration.

**Point**

For details on the Motion module, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

## System Configuration

<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.) *1 : 1
PLC No. (GOT Station) *1 : 18
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP




<Motion module>
(The settings other than the following are set to the default)
Network No. : 1
PLC No. (Station) *1 : 0(fixed)
IP address : 192.168.3.39

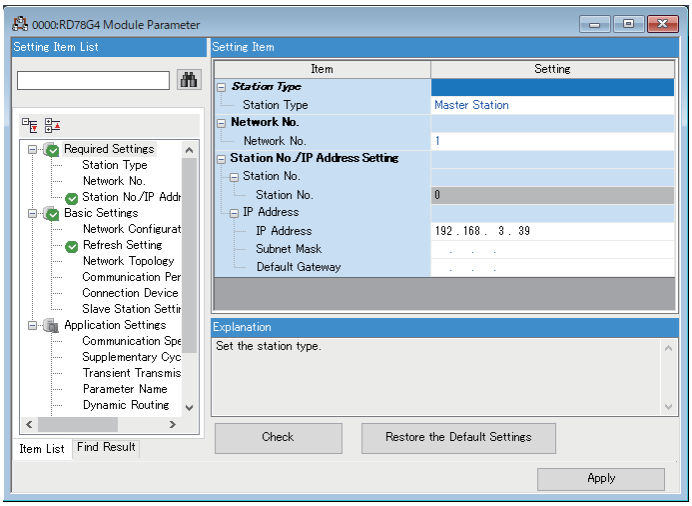
*1 For the following settings, the setting names differ on the PLC side and on the GOT side.

| Contents of setting | Setting names | | |
|---|---|---|---|
| | PLC side | GOT side | |
| | | Controller Setting | Connected Ethernet Controller Setting |
| Network No. | Network No. | GOT Net No. | Net No. |
| PC No. | Station | GOT Station | Station |

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

## [Module Parameter (Network)] of GX Works3

For details on the Motion module side settings, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Network)




| Item | | Set value |
|---|---|---|
| Required Settings | Network No. | 1 |
| | IP Address | 192.168.3.39 |

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 144 Setting communication interface (Controller Setting)



### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 *1 |
| | Station | 0 (fixed) |
| | Unit Type | RJ71GN11-T2/RD78G(H) (fixed) |
| | IP Address | 192.168.3.39 |
| | Port No. | 5001 |
| | Communication *2 | UDP |

*1 Set the same value as GOT Net No.

*2 If you set [Communication] to [TCP], set [Port No.] to [5002].

## Checking the communication status of the Motion module

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- IP address of the Motion module specified by the ping command execution.
- Operation state of PLC CPU (faulty or not)
- Connection status of the Motion module
- Cable connecting condition
- Confirmation of switch and network parameter setting

# Connection to Motion module through Built-in Ethernet port of PLC

## When connecting to MELSEC iQ-R series

For the connection between the GOT and MELSEC iQ-R series Built-in Ethernet port CPU, refer to the following.

☞ Page 157 Connection to MELSEC iQ-R series Built-in Ethernet port CPU

For details on the Motion module, refer to the following.

📖MELSEC iQ-R Motion Module User's Manual (Startup)

## When connecting to MELSEC iQ-F series

For the connection between the GOT and MELSEC iQ-F series Built-in Ethernet port CPU, refer to the following.

☞ Page 187 Connecting to MELSEC iQ-F Series built-in Ethernet port CPU

For details on the Motion module, refer to the following.

📖MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

# 2.5 Precautions



## Connection to QnA (S) CPU type

Use B or a later function version of Ethernet module (QnA Series) and PLC CPU (QnA/QnASCPU type).

## Connection to QSCPU

The GOT can only read device data and sequence programs by the ladder monitor function in the QSCPU.

The GOT cannot write any data to the QSCPU.

## Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to 2 in the device setting to monitor the device of the Motion CPU area (CPU No. 2).

When [CPU No.] is set to 1, the device on the PLC CPU area (CPU No. 1) is monitored.

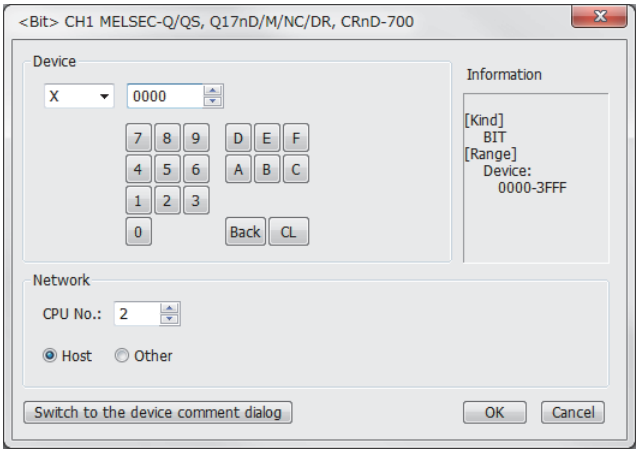
When [CPU No.] is set to 0, the monitoring target differs depending on the GOT connection destination. Refer to the following.

| GOT connection destination | Monitoring target |
|---|---|
| QJ71E71 module | PLC CPU area (CPU No.1) |
| Q170MCPU<br>Q170MSCPU(-S1) | Motion CPU area (CPU No.2) |

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual




## Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), QCPU (Q mode), Motion CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

## Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

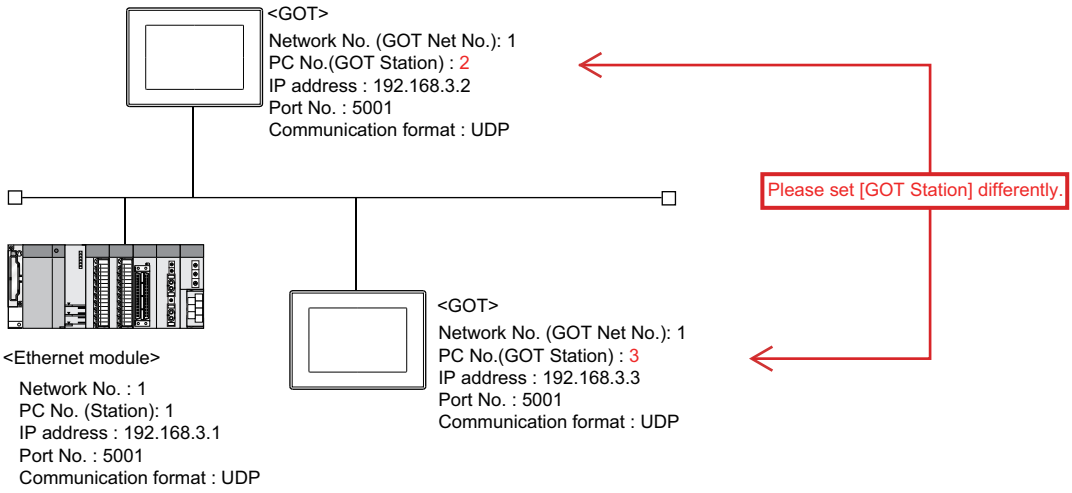
GT Designer3 (GOT2000) Screen Design Manual

## Connecting multiple GOTs

### ■Setting GOT Station

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 144 Setting communication interface (Controller Setting)




### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

### ■Setting for starting up multiple GOTs simultaneously (When connected to Built-in Ethernet port CPU)

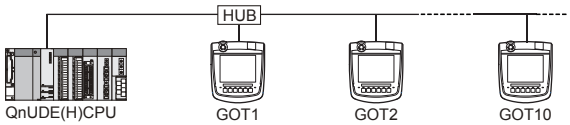
When connecting multiple GOTs to one Built-in Ethernet port CPU, adjust the timing of GOT communication start. When the communication concentrates on the PLC, the communication between GOT and PLC becomes difficult, and the monitoring by GOT may not start.

As a method for adjusting the timing, communicating one GOT alone first, and then communicating the other GOTs is effective.

Set the following items on each GOT.

- [Startup Time] of [Controller Setting], or [Title Display Time] of [GOT Setup].
- [Timeout Time] of [Controller Setting]

The following shows a setting example.




| Item | GOT1 | GOT2 | GOT10 |
|---|---|---|---|
| Startup Time | 3sec (default) | 4sec | 4sec |
| Timeout Time | 3sec (default) | 4sec | 4sec |

## Connecting multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

## Setting an IP address

Do not use "0" and "255" at the end of an IP address.
(Numbers of *.*.*.0 and *.*.*.255 are used by the system)
The GOT may not monitor the controller correctly with the above numbers.
Consult with the administrator of the network before setting an IP address to the GOT and controller.



## Monitoring a PLC on a different network in the same line

When the network No. of the GOT does not match with that of the PLC on the same Ethernet, the PLC cannot be monitored.
When monitoring, set the same network No. as that of the GOT, or connect a Ethernet module to the PLC and set the routing setting to monitor as other network.
When using the multi-channel connection for GT2506HS-V, set a different network No. for each channel.

## Remote password

Do not set a remote password for the following CPUs.
Otherwise, monitoring with the GOT becomes unavailable.
RCPU, FX5UCPU, QCPU (Q mode), LCPU

## Connecting to the built-in Ethernet port of Built-in Ethernet port CPU

Connect to GOT after turning on the network equipment such as Built-in Ethernet port CPU or HUB to enable the communication.
When the communication with Built-in Ethernet port CPU is not available, a communication error may occur on the GOT.

## Number of CPU modules connectable to one GOT

RCPU, FX5UCPU, QCPU, LCPU, ACPU, FXCPU: 128 CPU modules in total can be set for channels No. 1 to No. 4 (16 or fewer CPU modules are recommended.).
The following shows the maximum number of CPU modules that can be set for one channel.
RCPU: 119
FX5UCPU, QCPU, LCPU, ACPU, FXCPU: 63

## Connecting to RnSFCPU

The RnSFCPU takes 10 seconds or more to run.
If the GOT is started before the RnSFCPU runs, a system alarm occurs.
To prevent a system alarm from occurring, adjust the title display time in the [GOT Setup] dialog.
GT Designer3 (GOT2000) Screen Design Manual

## Connecting to PERIPHERAL I/F

### ■Monitoring other stations

The GOT cannot monitor other stations. Routing parameter setting is invalid.

### ■Monitoring servo amplifiers from a robot controller through a simple motion module

When a GOT is connected to the PERIPHERAL I/F of the robot controller, servo amplifiers cannot be monitored through a simple motion module.

### ■Monitoring a CPU module on a different network from CR800-Q (Q172DSRCPU)

When a CPU module number on a different network is specified for PERIPHERAL I/F of CR800-Q (Q172DSRCPU), the specified CPU module number within the host network is monitored.

## Connecting to the built-in Ethernet port of QnUD(P)VCPU using [MELSOFT Connection Extended Setting]

When [Port No.] is set to [5001] in [Connected Ethernet Controller Setting] on GT Designer3, the built-in Ethernet port of QnUD(P)VCPU is accessible using [MELSOFT Connection Extended Setting].

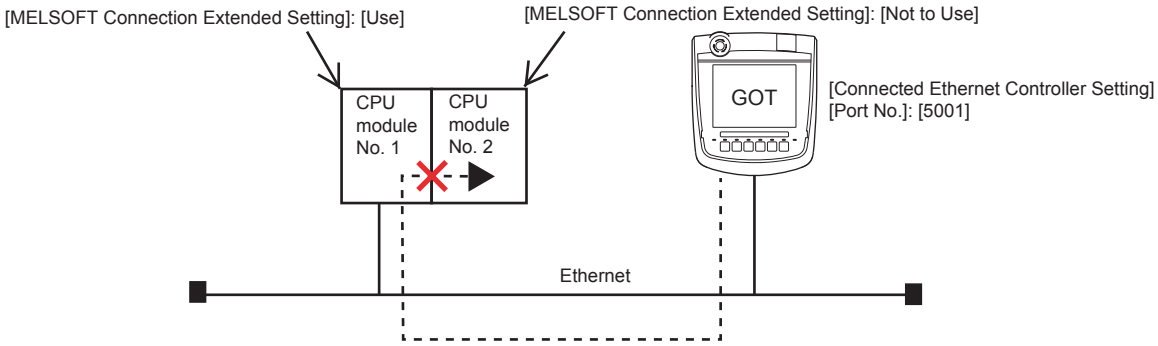
The GOT may not be able to access the PLC depending on the system configuration.

The following shows the examples of system configuration to which the GOT cannot access, and the countermeasures.

### ■Example 1

When connected via a CPU module whose [MELSOFT Connection Extended Setting] is set to [Use], the GOT cannot access another CPU module whose [MELSOFT Connection Extended Setting] is set to [Not to Use], or if that CPU does not support [MELSOFT Connection Extended Setting].

• Figure




1) Countermeasures

Take one of the following countermeasures.

• Change [MELSOFT Connection Extended Setting] on the PLC side.

Set [MELSOFT Connection Extended Setting] to [Use] for CPU module No. 2 that supports [MELSOFT Connection Extended Setting].

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

• Change [Connected Ethernet Controller Setting] on the GOT side.

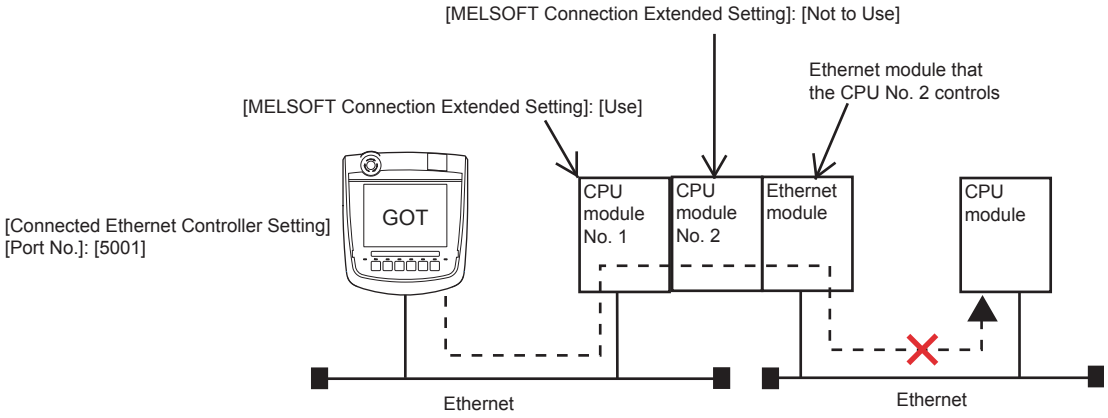
Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 150 Connected Ethernet controller setting

## ■Example 2

In a multiple CPU configuration, when connected via a CPU module whose [MELSOFT Connection Extended Setting] is set to [Use], the GOT cannot access a CPU module on a different network via the network module that controls another CPU module whose [MELSOFT Connection Extended Setting] is set to [Not to Use] or if that CPU module does not support [MELSOFT Connection Extended Setting].

• Figure




1) Countermeasures

Take one of the following countermeasures.

• Change [MELSOFT Connection Extended Setting] on the PLC side.

Set [MELSOFT Connection Extended Setting] to [Use] for CPU module No. 2 that supports [MELSOFT Connection Extended Setting].

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

• Change [Connected Ethernet Controller Setting] on the GOT side.

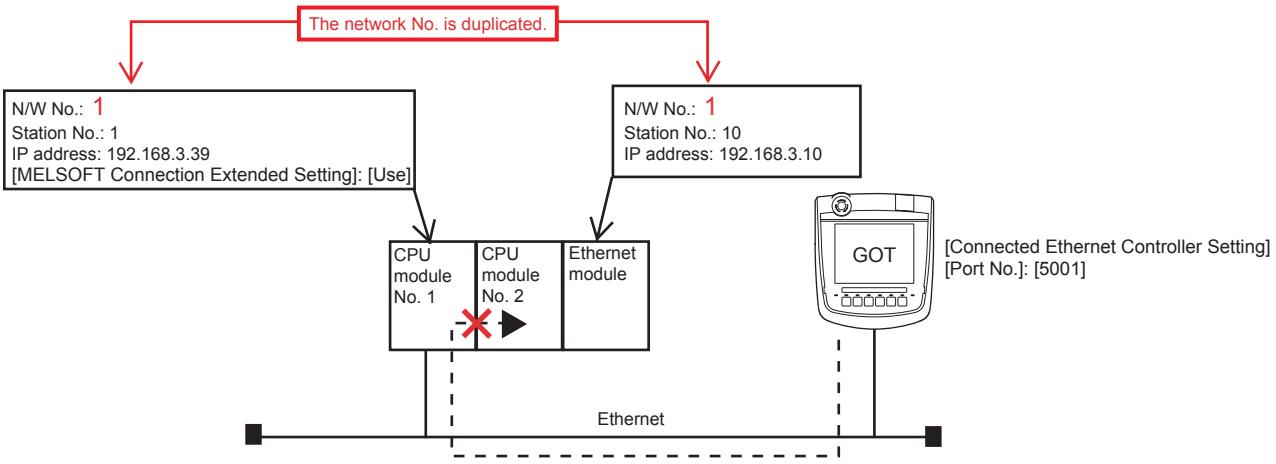
Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 150 Connected Ethernet controller setting

## ■Example 3

• Figure 1

In a multiple CPU configuration, when an Ethernet module is mounted on the CPU base unit, and the same network number is set to Built-in Ethernet port CPU and the Ethernet module, the GOT cannot monitor the other CPUs in the multiple CPU configuration via Built-in Ethernet port CPU whose [MELSOFT Connection Extended Setting] is set to [Use].




1) Countermeasures

Take one of the following countermeasures.

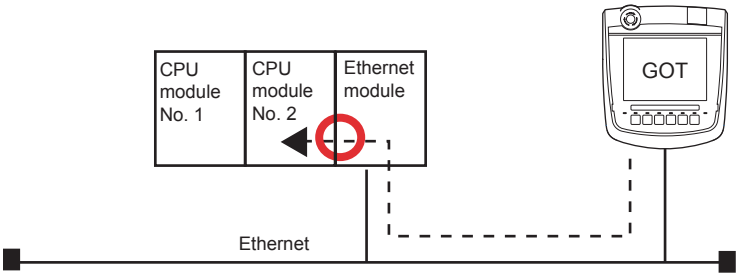
• Change [Connected Ethernet Controller Setting] on the GOT side.

Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 150 Connected Ethernet controller setting

• Change the connection route

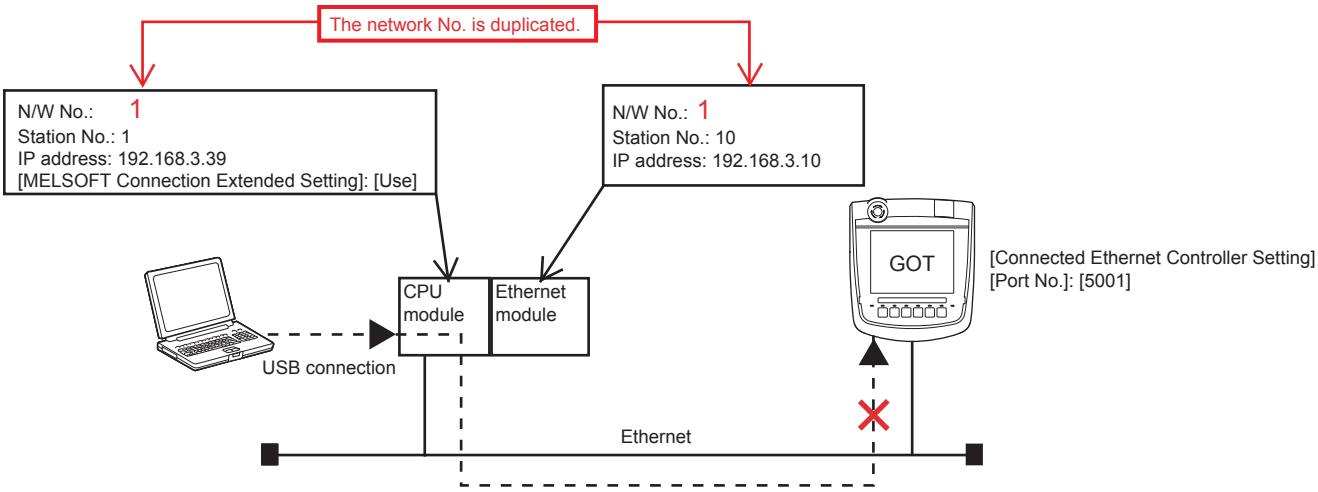
Connect the GOT to CPU module No. 2 via the Ethernet module.



• Figure 2

In the following system configuration, when the same network number is set to Built-in Ethernet port CPU and the Ethernet module, the GOT is inaccessible via Built-in Ethernet port CPU whose [MELSOFT Connection Extended Setting] is set to [Use], using GT Designer3.

| Error code | Description |
|---|---|
| 801fD0A3 | This error occurs when the sending process of the transient transmission is not performed correctly in the CC-Link IE Field Network connection or others.<br>(For example, when the data to be sent to the GOT is actually sent to a different network) |
| 1000000C | This error occurs when the sending process of the transient transmission is not performed correctly in the Ethernet module (QJ71E71-100). |




1) Counter measures

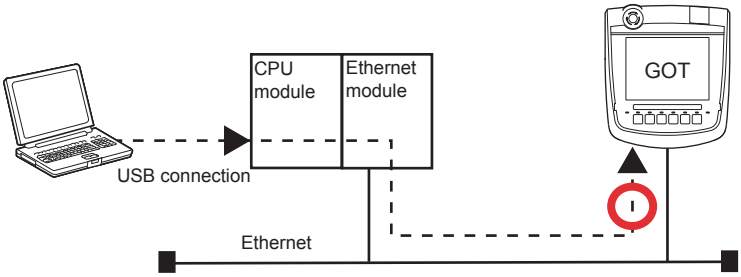
Take one of the following counter measures.

• Change the network No.

Change the network No. avoiding duplication between the Ethernet port built in CPU and the Ethernet module.

• Change the connection route.

Connect the GOT to CPU module No. 2 via the Ethernet module.



# MEMO

# 3 DIRECT CPU CONNECTION (SERIAL)


- Page 275 Connectable Model List
- Page 280 System Configuration
- Page 310 Connection Diagram
- Page 315 GOT Side Settings
- Page 322 PLC Side Setting
- Page 324 Precautions




## 3.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-R Series | R00CPU | ○ | RS-232<br>RS-422 | - | - |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU | | | | |
| | R16PCPU | | | | |
| | R32PCPU | | | | |
| | R120PCPU | | | | |
| | R04ENCPU | | | | |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU | | | | |
| | R16PSFCPU | | | | |
| | R32PSFCPU | | | | |
| | R120PSFCPU | | | | |
| | R08SFCPU | | | | |
| | R16SFCPU | | | | |
| | R32SFCPU | | | | |
| | R120SFCPU | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | RS-232<br>RS-422 | - | - |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |
| C Controller module (MELSEC iQ-R Series) | R12CCPU-V | ○ | RS-232<br>RS-422 | - | - |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | × | RS-232<br>RS-422 | - | - |
| CNC C80 | R16NCCPU-S1 | ○ | RS-232<br>RS-422 | - | - |
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | RS-232<br>RS-422 | - | - |
| CC-Link IE Filed Network head module | RJ72GF15-T2 | × | RS-232<br>RS-422 | - | - |

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-F Series | FX5U | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 285<br>Connecting to MELSEC iQ-F Series |
| | FX5UC | | | | |
| | FX5UJ | | | | |
| | FX5S | | | | |
| MELSEC-Q<br>(Q mode) | Q00JCPU<br>Q00CPU*1<br>Q01CPU*1 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 280<br>Connecting to QCPU |
| | Q02CPU*1<br>Q02HCPU*1<br>Q06HCPU*1<br>Q12HCPU*1<br>Q25HCPU*1 | | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 280<br>Connecting to QCPU |
| | Q12PRHCPU (Main base) | | | | |
| | Q25PRHCPU (Main base) | | | | |
| | Q12PRHCPU (Extension base) | ○ | - | - | - |
| | Q25PRHCPU (Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8<br>Q00UCPU<br>Q01UCPU<br>Q02UCPU<br>Q03UDCPU<br>Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 280<br>Connecting to QCPU |
| | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS<br>*2 | ☞ Page 280<br>Connecting to QCPU |
| | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | | | | |
| C Controller module<br>(Q Series) | Q12DCCPU-V*3<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS<br>*2 | ☞ Page 280<br>Connecting to QCPU |
| MELSEC-QS | QS001CPU | ○ | - | - | - |

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 Access via the (RS-232) in the multiple CPU system.

*3 Use a module with the upper five digits of the serial No. later than 12042.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-L | L02CPU[*1]<br>L06CPU[*1]<br>L26CPU[*1]<br>L26CPU-BT[*1]<br>L02CPU-P[*1]<br>L06CPU-P[*1]<br>L26CPU-P[*1]<br>L26CPU-PBT[*1]<br>L02SCPU<br>L02SCPU-P | ○ | RS-232<br>RS-422 |  | ☞ Page 281<br>Connecting to LCPU |
| MELSEC-Q<br>(A mode) | Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | ○ | RS-232<br>RS-422 |  | ☞ Page 280<br>Connecting to QCPU |
| MELSEC-QnA<br>(QnACPU) | Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU | ○ | RS-422 |  | ☞ Page 283<br>Connecting to QnACPU |
| | Q4ARCPU | ○ | RS-422 |  | ☞ Page 283<br>Connecting to QnACPU |
| MELSEC-QnA<br>(QnASCPU) | Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | ○ | RS-422 |  | ☞ Page 283<br>Connecting to QnACPU |
| MELSEC-A<br>(AnCPU) | A2UCPU<br>A2UCPU-S1<br>A3UCPU<br>A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1<br>A3ACPU<br>A3ACPUP21<br>A3ACPUR21<br>A1NCPU[*2]<br>A1NCPUP21[*2]<br>A1NCPUR21[*2]<br>A2NCPU[*2]<br>A2NCPUP21[*2]<br>A2NCPUR21[*2]<br>A2NCPU-S1[*2]<br>A2NCPUP21-S1[*2]<br>A2NCPUR21-S1[*2]<br>A3NCPU[*2]<br>A3NCPUP21[*2]<br>A3NCPUR21[*2] | ○ | RS-422 |  | ☞ Page 284<br>Connecting to ACPU |
| MELSEC-A<br>(AnSCPU) | A2USCPU | ○ | RS-422 |  | ☞ Page 284<br>Connecting to ACPU |

*1 The adapter L6ADP-R2 or L6ADP-R4 is required for the direct CPU connection (serial).
When using L6ADP-R4, use an LCPU whose upper five digits are "15102" or later.

*2 When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU.
• AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later
• A2SCPU: Version H or later

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-A (AnSCPU) | A2USCPU-S1 | ○ | RS-422 | GT2506HS GT2505HS | ☞ Page 284 Connecting to ACPU |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 | | | | |
| | A1SHCPU | | | | |
| | A2SCPU*1 | | | | |
| | A2SCPU-S1*1 | | | | |
| | A2SHCPU | | | | |
| | A2SHCPU-S1 | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU | | | | |
| MELSEC-A | A0J2HCPU*1 | × | RS-422 | GT2506HS GT2505HS | ☞ Page 284 Connecting to ACPU |
| | A0J2HCPUP21*1 | | | | |
| | A0J2HCPUR21*1 | | | | |
| | A0J2HCPU-DC24*1 | | | | |
| | A2CCPU*1 | ○ | RS-422 | GT2506HS GT2505HS | ☞ Page 284 Connecting to ACPU |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | | | | |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | | | | |
| | A1FXCPU | | | | |
| Motion CPU (Q Series) | Q172CPU*2*3<br>Q173CPU*2*3<br>Q172CPUN*2<br>Q173CPUN*2 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 280 Connecting to QCPU |
| | Q172HCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS *4 | ☞ Page 280 Connecting to QCPU |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | | | | |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 309 Connecting to the motion CPU |
| | Q170MSCPU | | | | |
| | Q170MSCPU-S1 | | | | |
| | MR-MQ100 | ○ | RS-422 | | |

*1 When monitoring A0J2HCPU, A2CCPU or A2SCPU, only the following or later software version is used to write to the CPU.
- A0J2HCPU (with/without link): Version E or later
- A0J2HCPU-DC24: Version B or later
- A2CCPU, A2SCPU: Version H or later

*2 When using SV13, SV22, or SV43, use the motion CPU on which any of the following main OS version is installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*4 Access via QCPU (RS-232) in the multiple CPU system.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Motion CPU (A Series) | A273UCPU | ○ | RS-422 | GT2506HS GT2505HS | ☞ Page 284 Connecting to ACPU |
| | A273UHCPU | | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | | | | |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |
| | A171SHCPU | | | | |
| | A171SHCPUN | | | | |
| | A172SHCPU | | | | |
| | A172SHCPUN | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |
| MELSEC-WS | WS0-CPU0 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 308 Connecting to WSCPU |
| | WS0-CPU1 | | | | |
| | WS0-CPU3 | | | | |
| MELSECNET/H Remote I/O station | QJ72LP25-25 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 280 Connecting to QCPU |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | - | - | - |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | - | - | - |
| CNC C70 | Q173NCCPU | ○ | RS-232 | GT2506HS GT2505HS *1 | ☞ Page 280 Connecting to QCPU |
| Robot controller (Q Series) | CRnQ-700 (Q172DRCPU)<br>CR750-Q (Q172DRCPU)<br>CR751-Q (Q172DRCPU)<br>CR800-Q (Q172DSRCPU) | ○ | RS-232 | GT2506HS GT2505HS *1 | ☞ Page 280 Connecting to QCPU |
| MELSEC-FX | FX0 | × | RS-422 | GT2506HS GT2505HS | ☞ Page 289 Connecting to FXCPU using a connector conversion box<br>☞ Page 296 Connecting to FXCPU using the GT11H-C□□□-37P external cable<br>☞ Page 303 Connecting to FXCPU using the GT11H-C□□□ external cable |
| | FX0S<br>FX0N | × | RS-422 | GT2506HS GT2505HS | |
| | FX1 | × | RS-422 | GT2506HS GT2505HS | |
| | FX2<br>FX2C | ×*2 | RS-422 | GT2506HS GT2505HS | |
| | FX1S<br>FX1N<br>FX2N<br>FX1NC | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | |
| | FX2NC | ×*2 | | | |
| | FX3S<br>FX3G<br>FX3GC<br>FX3GE<br>FX3U<br>FX3UC | ○ | | | |

*1 Access via QCPU (RS-232) in the multiple CPU system.

*2 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

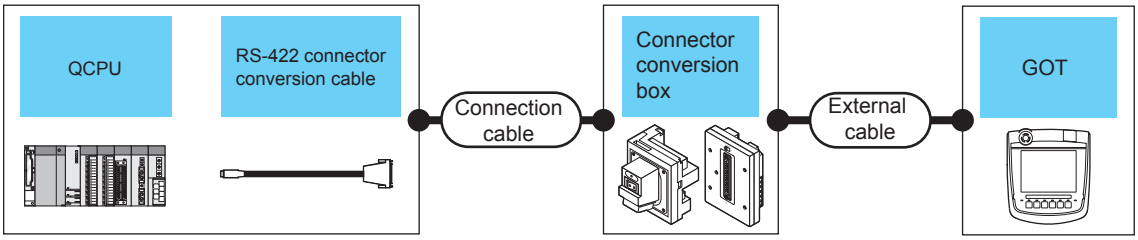
# 3.2 System Configuration

## Connecting to QCPU

Communication driver

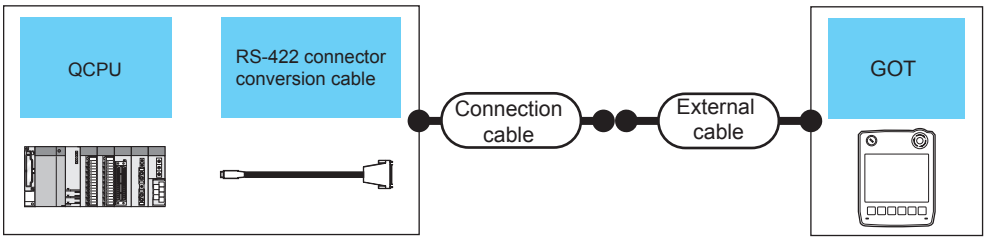
Serial (MELSEC)

### When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-422 connector conversion cable | Communication type | Cable model | | | | | |
| MELSEC-Q | - | RS-232 | GT11H-C30R2-6P(3m) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | FA-CNV2402CBL(0.2m) FA-CNV2405CBL (0.5m) | RS-422 | GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13.5m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |

### When using the external cable (GT11H-C□□□-37P)



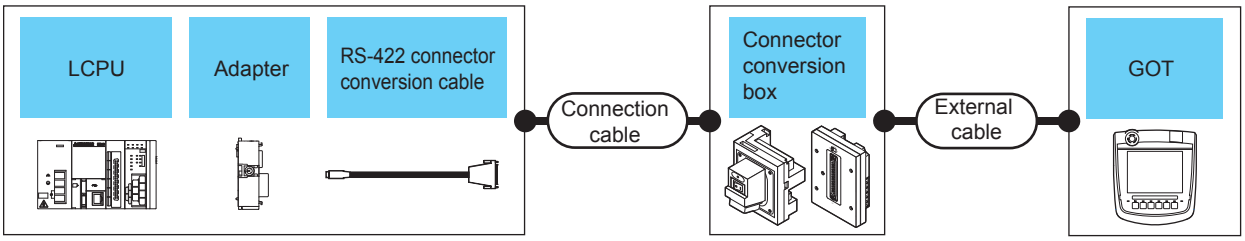

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-422 connector conversion cable | Communication type | Cable model | | | | |
| MELSEC-Q | - | RS-232 | GT11H-C15R2-6P(1.5m) | GT11H-C30-37P(3m) | GT2505HS | 6m | 1 GOT for 1 PLC |
| | FA-CNV2402CBL(0.2m) FA-CNV2405CBL (0.5m) | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | 13.5m | |

# Connecting to LCPU

Communication driver

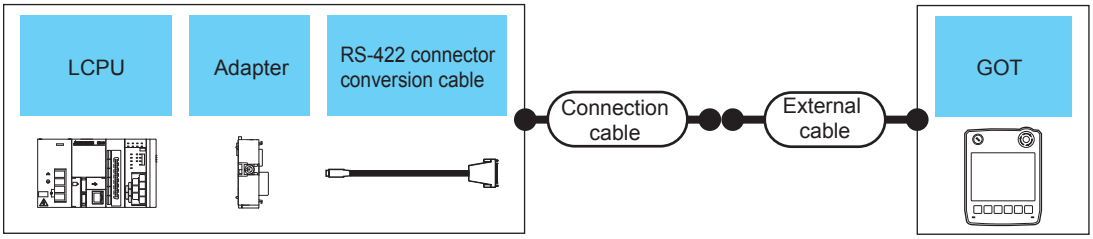
Serial (MELSEC)

## When using the connector conversion box



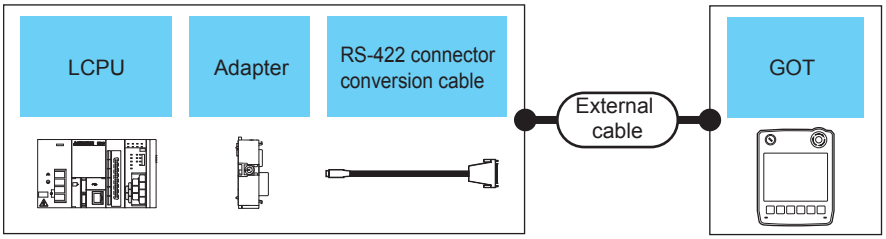

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Adapter | RS-422 connector conversion cable | Communication type | Cable model | | | | | |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT | L6ADP-R2 | - | RS-232 | GT11H-C30R2-6P(3m) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 PLC |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | L6ADP-R2 | FA-CNV2402CBL(0.2m)<br>FA-CNV2405CBL(0.5m) | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | 13.5m | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |
| | L6ADP-R4 | - | RS-422 | User preparing Page 312 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |
| L02SCPU<br>L02SCPU-P | - | - | RS-232 | GT11-C30R2-6P(3m) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | | FA-CNV2402CBL(0.2m)<br>FA-CNV2405CBL(0.5m) | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | 13.5m | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Adapter | RS-422 connector conversion cable | Communication type | Cable model | | | | |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT | L6ADP-R2 | - | RS-232 | GT11H-C15R2-6P(1.5m) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | L6ADP-R2 | FA-CNV2402CBL(0.2m)<br>FA-CNV2405CBL(0.5m) | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13.5m | |
| | L6ADP-R4 | - | RS-422 | User preparing Page 312 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | |
| L02SCPU<br>L02SCPU-P | - | - | RS-232 | GT11H-C15R2-6P(1.5m) | GT11H-C30-37P(3m) | | 6m | |
| | | FA-CNV2402CBL(0.2m)<br>FA-CNV2405CBL(0.5m) | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13.5m | |

## When using the external cable (GT11H-C□□□)



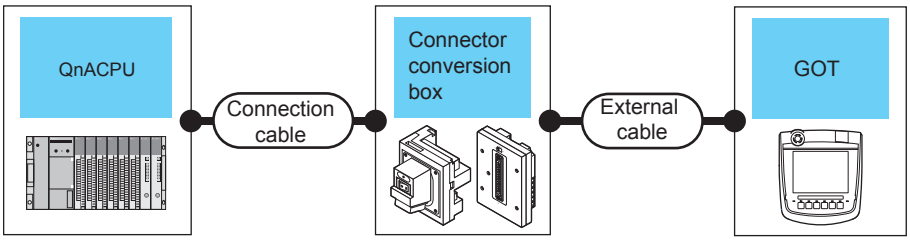

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Adapter | Communication type | | | | |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT | L6ADP-R2 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 312 RS-422 connection diagram 3) | GT 2505HS | 13.5m | 1 GOT for 1 PLC |

# Connecting to QnACPU

Communication driver

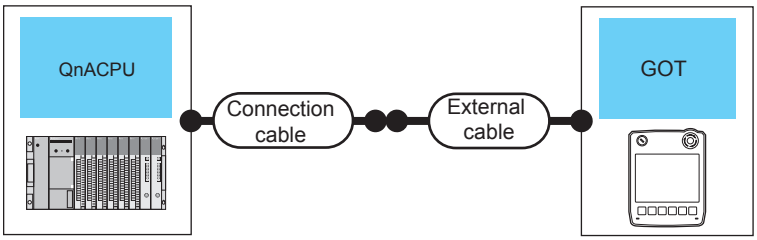
Serial (MELSEC)

## When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| MELSEC-QnA | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)



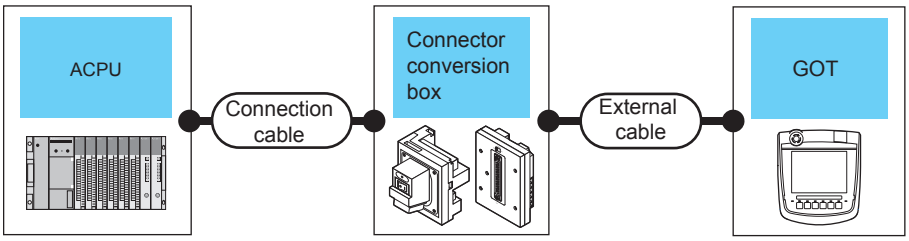

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| MELSEC-QnA | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC |

# Connecting to ACPU

Communication driver

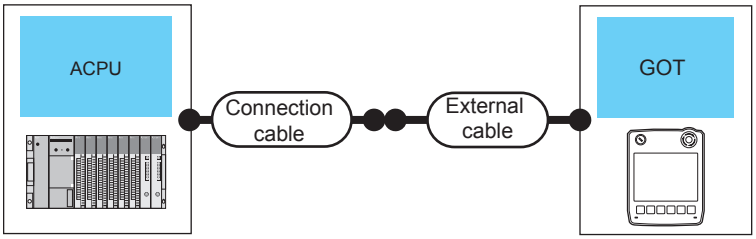
Serial (MELSEC)

## When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| MELSEC-A Motion CPU (A Series) | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)



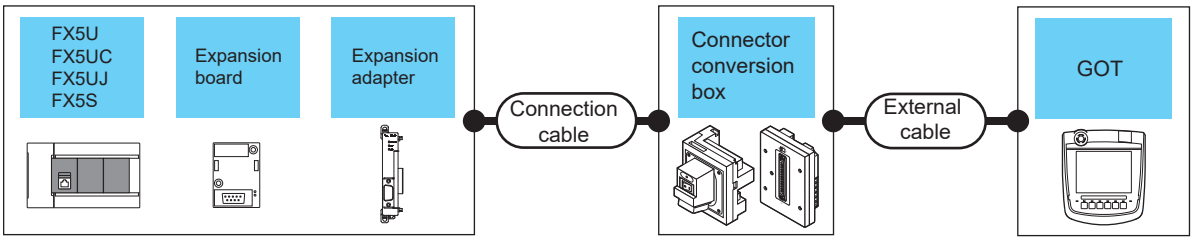

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| MELSEC-A Motion CPU (A Series) | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC |

# Connecting to MELSEC iQ-F Series

Communication driver

Serial (MELSEC)

## When using the connector conversion box




☞ Page 285 When connecting via RS-232 communication
☞ Page 286 When connecting via RS-422 communication

### ■When connecting via RS-232 communication

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | Cable model Connection diagram number | | | | | |
| FX5U FX5UJ FX5S | FX5-232-BD | - | RS-232 | GT01-C30R2-9S(3m) or (User preparing) Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 Expansion board |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FX5U FX5UC FX5UJ FX5S | - | FX5-232ADP | | | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

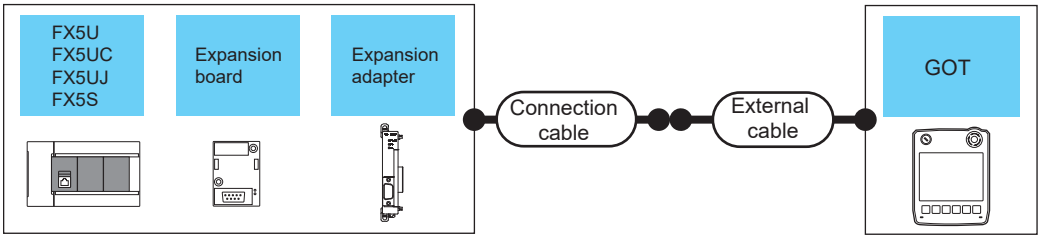
## ■When connecting via RS-422 communication

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | Cable model Connection diagram number | | | | | |
| FX5U<br>FX5UJ<br>FX5S | FX5-422-BD-GOT | - | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 Expansion board |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FX5U<br>FX5UC | - | - | RS-422 *2 | User preparing Page 313 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 1 GOT for 1 PLC built-in port |
| | | | RS-422 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FX5U<br>FX5UJ<br>FX5S | FX5-485-BD | - | RS-422 *2 | User preparing Page 313 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 1 GOT for 1 Expansion board |
| | | | RS-422 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FX5U<br>FX5UC<br>FX5UJ<br>FX5S | - | FX5-485ADP | RS-422 *2 | User preparing Page 313 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | RS-422 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

*2 Use the RS-485 communication terminal block of the PLC to perform RS-422 communications.

## When using the external cable (GT11H-C□□□-37P)




☞ Page 287 When connecting via RS-232 communication
☞ Page 287 When connecting via RS-422 communication

### ■When connecting via RS-232 communication

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | Cable model Connection diagram number | | | | |
| FX5U<br>FX5UJ<br>FX5S | FX5U-232-BD | - | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 Expansion board |
| FX5U<br>FX5UC<br>FX5UJ<br>FX5S | - | FX5U-232ADP | | | GT11H-C30-37P(3m) | | | |

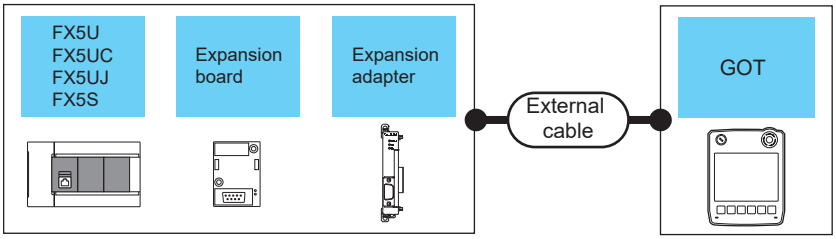
*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

### ■When connecting via RS-422 communication

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | Cable model Connection diagram number | | | | |
| FX5U<br>FX5UC | - | - | RS-422 | User preparing Page 313 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |
| FX5U<br>FX5UJ<br>FX5S | FX5-485-BD | | | | | | | 1 GOT for 1 Expansion board |
| FX5U<br>FX5UC<br>FX5UJ<br>FX5S | - | FX5-485ADP | | | | | | 1 GOT for 1 PLC built-in port |

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

## When using the external cable (GT11H-C□□□)




☞ Page 288 When connecting via RS-232 communication
☞ Page 288 When connecting via RS-422 communication

### ■When connecting via RS-232 communication

| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | | | | |
| FX5U<br>FX5UJ<br>FX5S | FX5U-232-BD | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 Expansion board |
| FX5U<br>FX5UC<br>FX5UJ<br>FX5S | - | FX5U-232ADP | | | | | |

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

### ■When connecting via RS-422 communication

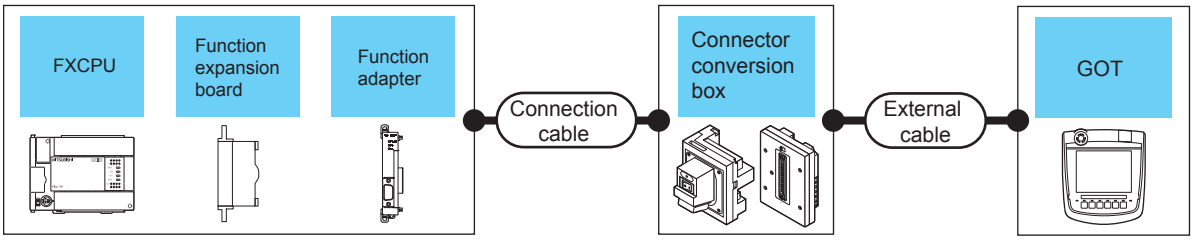
| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment*1 |
|---|---|---|---|---|---|---|---|
| Model name | Expansion board | Expansion adapter | Communication type | | | | |
| FX5U<br>FX5UC | - | - | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 313 RS-422 connection diagram 6) | GT 2505HS | 13.5m | 1 GOT for 1 PLC built-in port |
| FX5U<br>FX5UJ<br>FX5S | FX5-485-BD | - | | | | | 1 GOT for 1 Expansion board |
| FX5U<br>FX5UC<br>FX5UJ<br>FX5S | - | FX5-485ADP | | | | | |

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

# Connecting to FXCPU using a connector conversion box

Communication driver

MELSEC-FX

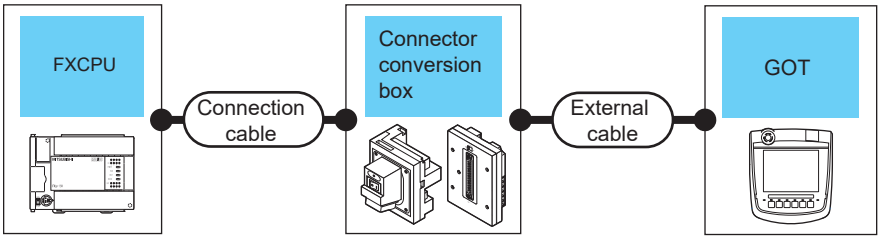



☞ Page 289 When connecting to a PLC directly
☞ Page 291 When using the function extension board
☞ Page 293 When using the function adapter
☞ Page 295 When using the function extension board and function adapter

## When connecting to a PLC directly

Communication driver

MELSEC-FX




☞ Page 289 FX0, FX0S, FX0N, FX1, FX2, FX2C
☞ Page 290 FX1S, FX1N, FX2N, FX1NC, FX2NC
☞ Page 290 FX3G, FX3S, FX3GE
☞ Page 290 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 290 FX3U, FX3UC (FX3UC-□□-LT(-2))
☞ Page 290 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

### ■FX0, FX0S, FX0N, FX1, FX2, FX2C

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX0<br>FX0S<br>FX0N | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| FX1<br>FX2<br>FX2C | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## ■FX1S, FX1N, FX2N, FX1NC, FX2NC

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX1S<br>FX1N<br>FX2N<br>FX1NC<br>FX2NC | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC built-in port |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## ■FX3G, FX3S, FX3GE

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX3G<br>FX3S<br>FX3GE | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC built-in port |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## ■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX3GC-□□/D<br>FX3GC-□□/DSS | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC built-in port |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

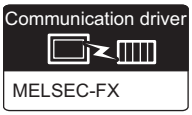
## ■FX3U, FX3UC (FX3UC-□□-LT(-2))

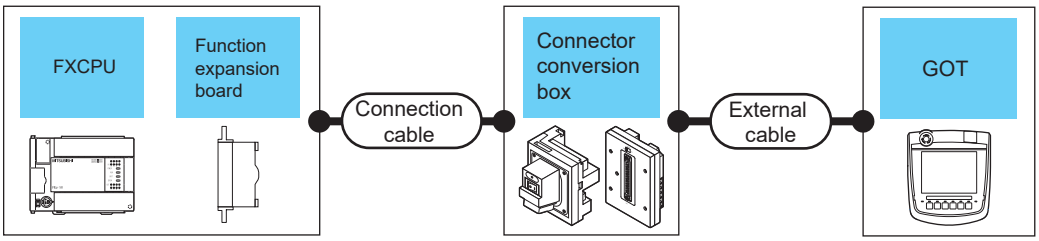
| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC built-in port |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## ■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | | |
| FX3UC-□□/D<br>FX3UC-□□/DS<br>FX3UC-□□/DSS | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC built-in port |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the function extension board




☞ Page 291 FX1S, FX1N, FX2N
☞ Page 292 FX3G, FX3S, FX3GE
☞ Page 292 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *1*2 | Communication type | Cable model | | | | | |
| FX1S<br>FX1N<br>FX2N | FX1N-232-BD<br>FX2N-232-BD | RS-232 | GT01-C30R2-9S(3m)<br>or<br>User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function expansion board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | FX1N-422-BD<br>FX2N-422-BD | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The function expansion board to be used differs according to the type of the FXCPU to be connected.
Use the applicable function expansion board shown in the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| RS-232 communication | FX1N-232-BD | FX2N-232-BD |
| RS-422 communication | FX1N-422-BD | FX2N-422-BD |

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3G, FX3S, FX3GE

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | Cable model | | | | | |
| FX3G<br>FX3S<br>FX3GE | FX3G-232-BD | RS-232 | GT01-C30R2-9S(3m)<br>or<br>User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function expansion board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | FX3G-422-BD | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

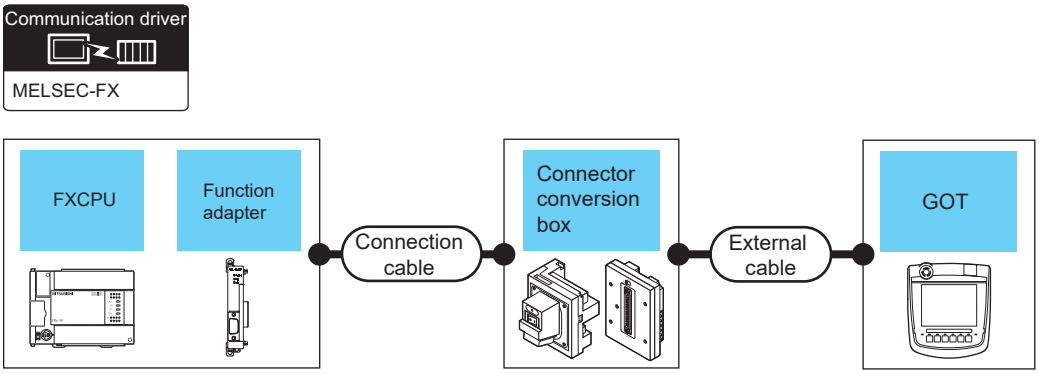
## ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | Cable model | | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | FX3U-232-BD | RS-232 | GT01-C30R2-9S(3m)<br>or<br>User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function expansion board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | FX3U-422-BD | RS-422 | GT01-C10R4-8P(1m)<br>GT01-C30R4-8P(3m)<br>GT01-C100R4-8P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 function expansion board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## When using the function adapter




☞ Page 293 FX1NC, FX2NC
☞ Page 294 FX3G, FX3GE, FX3S
☞ Page 294 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 294 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

### ■FX1NC, FX2NC

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Function adapter *1 | Communication type | Cable model Connection diagram number | | | | | |
| FX1NC FX2NC | FX2NC-232ADP | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 PLC built-in port |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | FX0N-232ADP | | GT01-C30R2-25P(3m) or User preparing Page 311 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3G, FX3GE, FX3S

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | | |
| FX3G | FX3G-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| FX3GE | FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| FX3S | FX3S-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | | |
| FX3GC-□□/D FX3GC-□□/DSS | FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

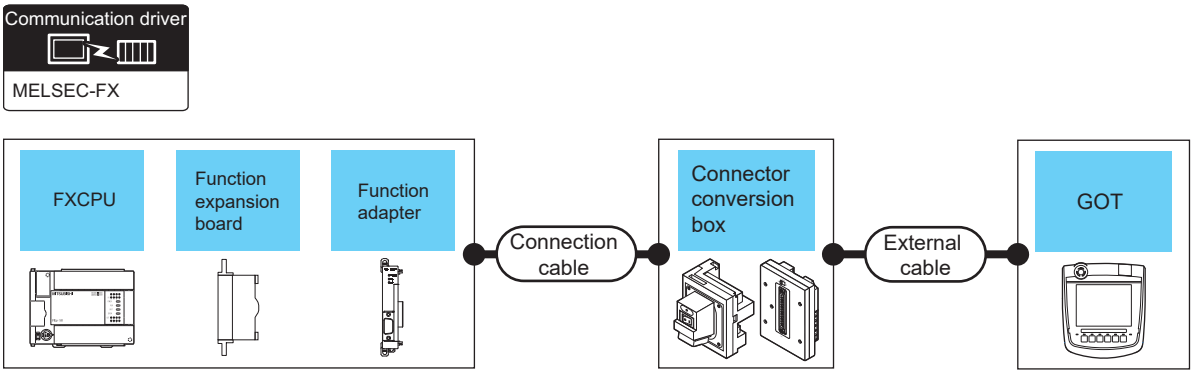
## ■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | | |
| FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS | FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## When using the function extension board and function adapter




☞ Page 295 FX1S, FX1N, FX2N
☞ Page 295 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *2 |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *1 | Function adapter *1 | Communication type | Cable model Connection diagram number | | | | | |
| FX1S FX1N FX2N | FX1N-CNV-BD FX2N-CNV-BD | FX2NC-232ADP | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function expansion board |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | | FX0N-232ADP | | GT01-C30R2-25P(3m) or User preparing Page 311 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| When the function adapter is used | FX1N-CNV-BD | FX2N-CNV-BD |

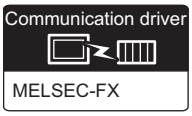
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

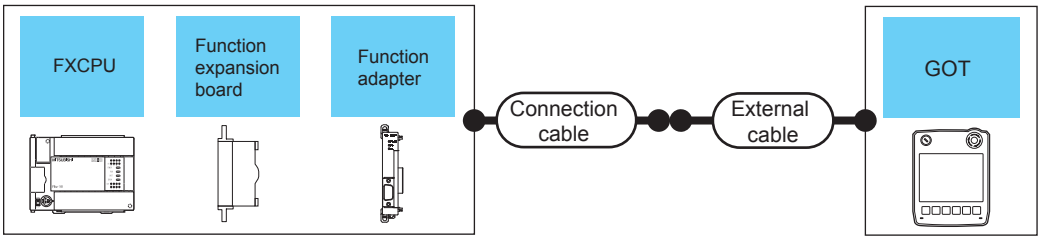
### ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | | |
| FX3U FX3UC (FX3UC-□□-LT(-2)) | FX3U-485-BD FX3U-422-BD FX3U-232-BD FX3U-USB-BD FX3U-8AV-BD FX3U-CNV-BD | FX3U-232ADP FX3U-232ADP-MB | RS-232 | GT01-C30R2-9S(3m) or User preparing Page 310 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 function adapter |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

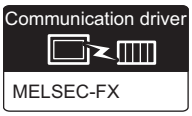
# Connecting to FXCPU using the GT11H-C□□□-37P external cable

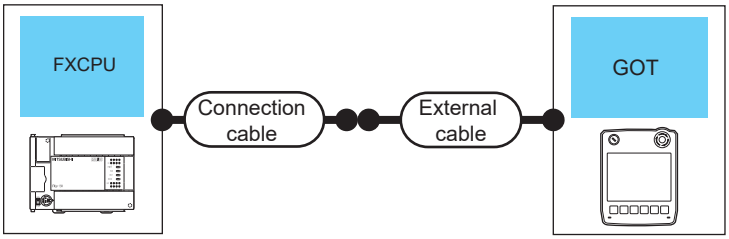



☞ Page 296 When connecting to a PLC directly
☞ Page 298 When using the function extension board
☞ Page 300 When using the function adapter
☞ Page 302 When using the function extension board and function adapter

## When connecting to a PLC directly




☞ Page 296 FX0, FX0S, FX0N
☞ Page 297 FX1S, FX1N, FX2N, FX1NC, FX2NC
☞ Page 297 FX3G, FX3S, FX3GE
☞ Page 297 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 297 FX3U, FX3UC (FX3UC-□□-LT(-2))
☞ Page 297 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

### ■FX0, FX0S, FX0N

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX0<br>FX0S<br>FX0N | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC |
| | | GT11H-C15R4-25P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

### ■FX1S, FX1N, FX2N, FX1NC, FX2NC

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX1S<br>FX1N<br>FX2N<br>FX1NC<br>FX2NC | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |

### ■FX3G, FX3S, FX3GE

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX3G<br>FX3S<br>FX3GE | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |

### ■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX3GC-□□/D<br>FX3GC-□□/DSS | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |

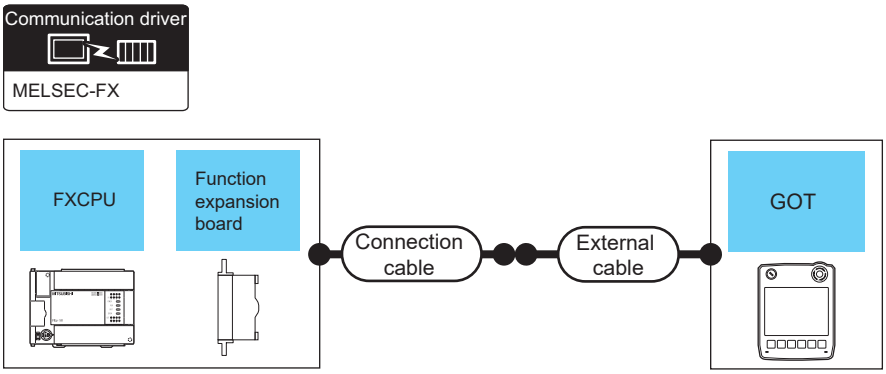
### ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |

### ■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| FX3UC-□□/D<br>FX3UC-□□/DS<br>FX3UC-□□/DSS | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC built-in port |

## When using the function extension board




☞ Page 298 FX1S, FX1N, FX2N
☞ Page 298 FX3G, FX3S, FX3GE
☞ Page 299 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *1*2 | Communication type | Cable model | | | | |
| FX1S<br>FX1N<br>FX2N | FX1N-232-BD<br>FX2N-232-BD | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |
| | FX1N-422-BD<br>FX2N-422-BD | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 function expansion board |

*1 The function expansion board to be used differs according to the type of the FXCPU to be connected.
Use the applicable function expansion board shown in the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| RS-232 communication | FX1N-232-BD | FX2N-232-BD |
| RS-422 communication | FX1N-422-BD | FX2N-422-BD |

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

### ■FX3G, FX3S, FX3GE

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | Cable model | | | | |
| FX3G<br>FX3S<br>FX3GE | FX3G-232-BD | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |
| | FX3G-422-BD | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 function expansion board |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

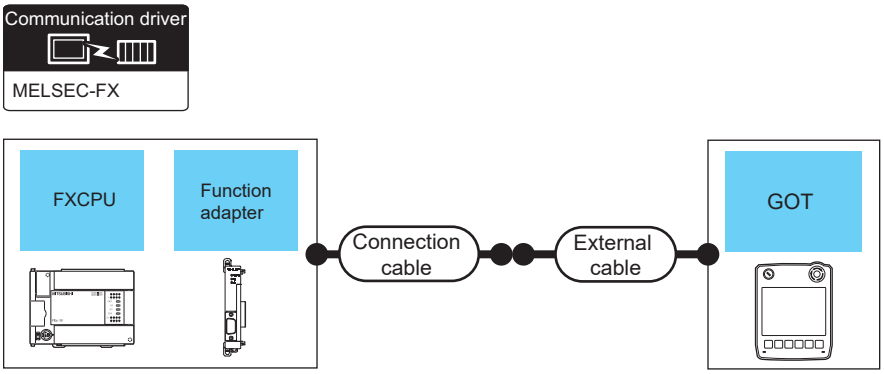
## ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | Cable model | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | FX3U-232-BD | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |
| | FX3U-422-BD | RS-422 | GT11H-C15R4-8P | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 function expansion board |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## When using the function adapter




☞ Page 300 FX1NC, FX2NC
☞ Page 300 FX3G, FX3GE, FX3S
☞ Page 301 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 301 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

### ■FX1NC, FX2NC

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Function adapter *1 | Communication type | Cable model Connection diagram number | | | | |
| FX1NC FX2NC | FX2NC-232ADP | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC built-in port |
| | FX0N-232ADP | RS-232 | User preparing Page 311 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

### ■FX3G, FX3GE, FX3S

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | |
| FX3G | FX3G-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function adapter |
| FX3GE | FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| FX3S | FX3S-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function adapter | Communication type | Cable model Connection diagram number | | | | |
| FX3GC-□□/D FX3GC-□□/DSS | FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

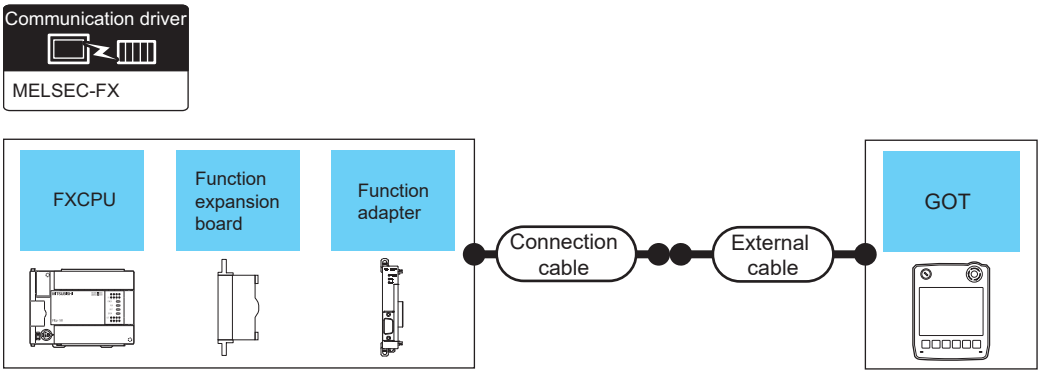
*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

## ■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function adapter | Communication type | Cable model Connection diagram number | | | | |
| FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS | FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

## When using the function extension board and function adapter




☞ Page 302 FX1S, FX1N, FX2N
☞ Page 302 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *1*2 | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | |
| FX1S FX1N FX2N | FX1N-CNV-BD FX2N-CNV-BD | FX2NC-232ADP | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC built-in port |
| | | FX0N-232ADP | RS-232 | User preparing Page 311 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| RS-232 communication | FX1N-232-BD | FX2N-232-BD |
| When the function adapter is used | FX1N-CNV-BD | FX2N-CNV-BD |

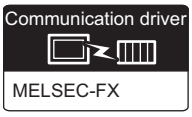
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

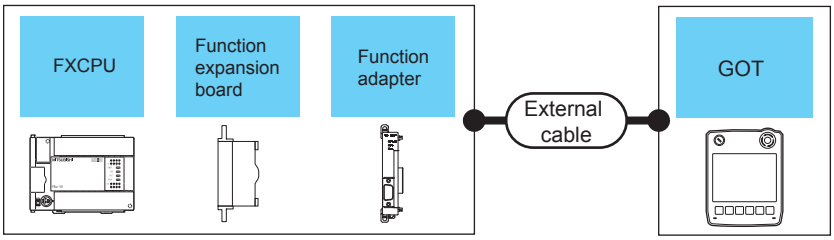
### ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Function adapter *2 | Communication type | Cable model Connection diagram number | | | | |
| FX3U FX3UC (FX3UC-□□-LT(-2)) | FX3U-485-BD FX3U-422-BD FX3U-232-BD FX3U-USB-BD FX3U-8AV-BD FX3U-CNV-BD | FX3U-232ADP FX3U-232ADP-MB | RS-232 | User preparing Page 310 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

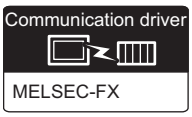
# Connecting to FXCPU using the GT11H-C□□□ external cable

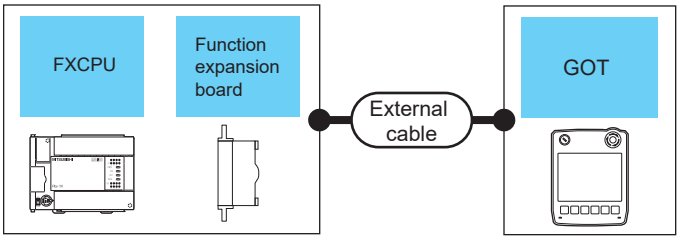



☞ Page 303 When using the function extension board
☞ Page 305 When using the function adapter
☞ Page 307 When using the function extension board and function adapter

## When using the function extension board




☞ Page 303 FX1S, FX1N, FX2N
☞ Page 304 FX3G, FX3S, FX3GE
☞ Page 304 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Function expansion board *1*2 | Communication type | | | | |
| FX1S<br>FX1N<br>FX2N | FX1N-232-BD<br>FX2N-232-BD | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>(User preparing) Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| RS-232 communication | FX1N-232-BD | FX2N-232-BD |

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3G, FX3S, FX3GE

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | | | | |
| FX3G<br>FX3S<br>FX3GE | FX3G-232-BD | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Communication type | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | FX3U-232-BD | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function expansion board |

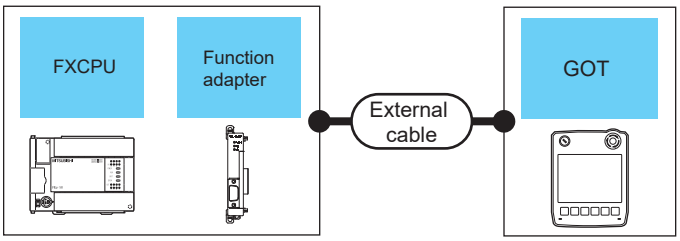
*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## When using the function adapter

Communication driver

MELSEC-FX




☞ Page 305 FX1S, FX1N, FX2N
☞ Page 305 FX3G, FX3GE, FX3S
☞ Page 306 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 306 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

### ■FX1S, FX1N, FX2N

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Function adapter *1 | Communication type | | | | |
| FX1NC<br>FX2NC | FX2NC-232ADP | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC built-in port |
| | FX0N-232ADP | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 311 RS-232 connection diagram 6) | GT 2505HS | 6m | |

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

### ■FX3G, FX3GE, FX3S

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|
| Model name | Function adapter *2 | Communication type | | | | |
| FX3G | FX3G-CNV-ADP<br>+<br>FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function adapter |
| FX3GE | FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | |
| FX3S | FX3S-CNV-ADP<br>+<br>FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | |

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

## ■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|
| Model name | Function adapter | Communication type | | | | |
| FX3GC-□□/D<br>FX3GC-□□/DSS | FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>(User preparing) Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

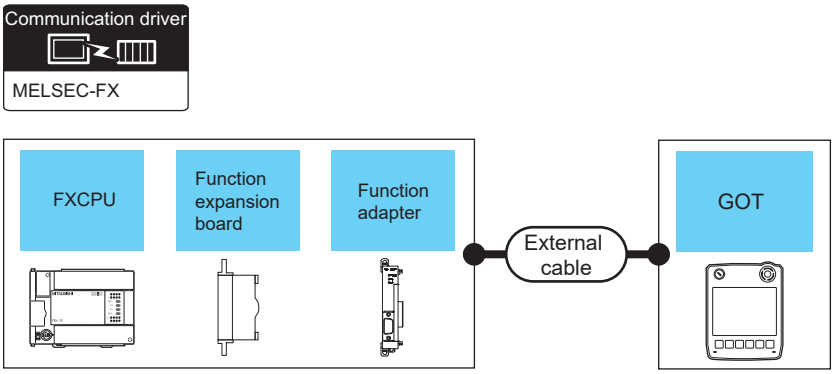
*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

## ■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|
| Model name | Function adapter | Communication type | | | | |
| FX3UC-□□/D<br>FX3UC-□□/DS<br>FX3UC-□□/DSS | FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>(User preparing) Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

## When using the function extension board and function adapter




☞ Page 307 FX1S, FX1N, FX2N
☞ Page 307 FX3U, FX3UC (FX3UC-□□-LT(-2))

### ■FX1S, FX1N, FX2N

| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *1*2 | Function adapter *2 | Communication type | | | | |
| FX1S<br>FX1N<br>FX2N | FX1N-CNV-BD<br>FX2N-CNV-BD | FX2NC-232ADP | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC built-in port |
| | | FX0N-232ADP | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 311 RS-232 connection diagram 6) | GT 2505HS | 6m | |

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

| Item | Function expansion board to be used | |
|---|---|---|
| | When connecting to FX1N or FX1S Series | When connecting to FX2N Series |
| RS-232 communication | FX1N-232-BD | FX2N-232-BD |
| When the function adapter is used | FX1N-CNV-BD | FX2N-CNV-BD |

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

### ■FX3U, FX3UC (FX3UC-□□-LT(-2))

| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment *1 |
|---|---|---|---|---|---|---|---|
| Model name | Function expansion board *2 | Function adapter *2 | Communication type | | | | |
| FX3U<br>FX3UC<br>(FX3UC-□□-LT(-2)) | FX3U-485-BD<br>FX3U-422-BD<br>FX3U-232-BD<br>FX3U-USB-BD<br>FX3U-8AV-BD<br>FX3U-CNV-BD | FX3U-232ADP<br>FX3U-232ADP-MB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 310 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 function adapter |

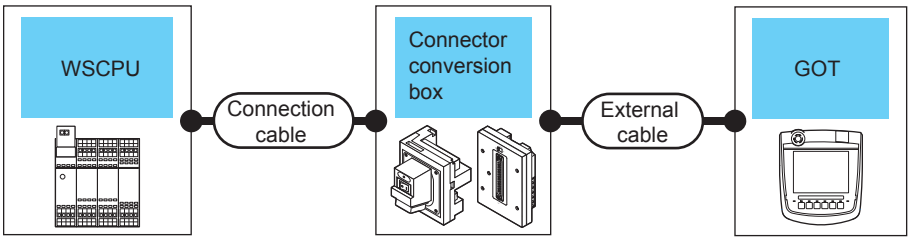
*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 324 Precautions

# Connecting to WSCPU

Communication driver

MELSEC-WS

## When using the connector conversion box



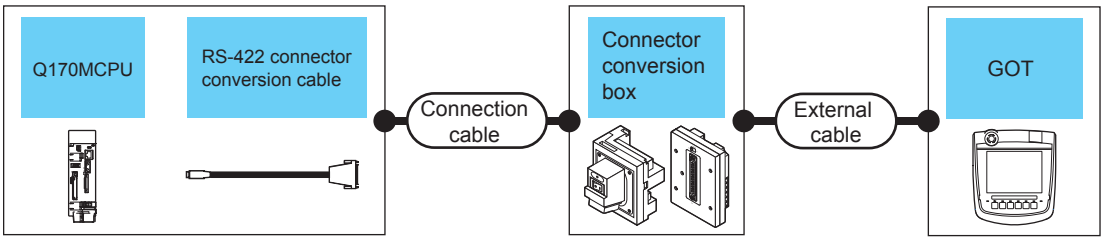

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model Connection diagram number | | | | | |
| MELSEC-WS | RS-232 | WS0-C20R2(2m) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 5m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

# Connecting to the motion CPU

Communication driver

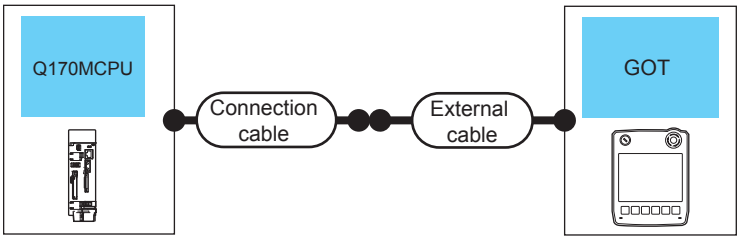
Serial (MELSEC)

## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-422 connector conversion cable | Communication type | Cable model | | | | | |
| Q170MCPU | - | RS-232 | GT11-C30R2-6P(3m) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m) | RS-422 | GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m) | GT 2506HS | 13.5m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| MR-MQ100 | - | | Q170MIOCBL1M-B(1m) + User preparing Page 314 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | | | | |
| Q170MCPU | RS-232 | GT11H-C15R2-6P(1.5m) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

**Point**

When connecting to the motion CPU (Q Series) other than Q170MCPU or Q170MSCPU(-S1)
A motion CPU (Q series) mounted on the multiple CPU system of the QCPU (Q mode) can be monitored.
The system configuration, connection conditions, and system equipment for connecting a GOT to a motion CPU (Q series) are the same as those for connecting to the QCPU.
☞ Page 280 Connecting to QCPU

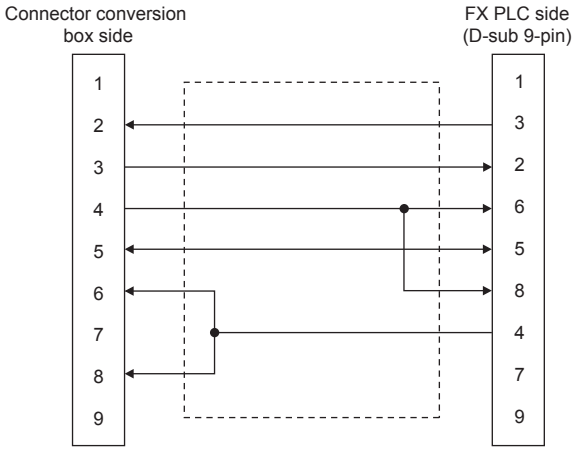
# 3.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

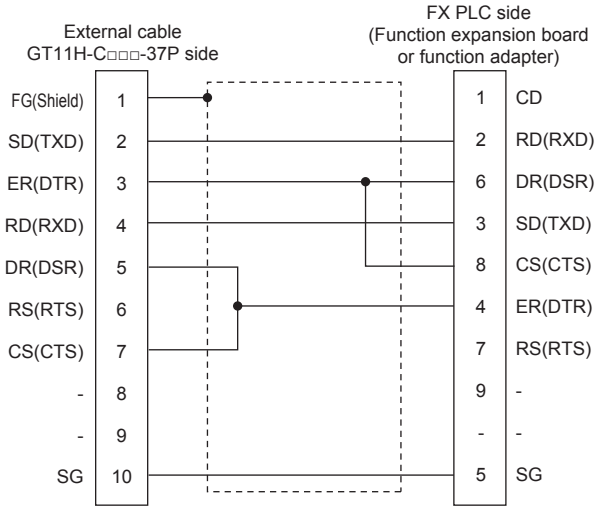
## RS-232 cable

### Connection diagram

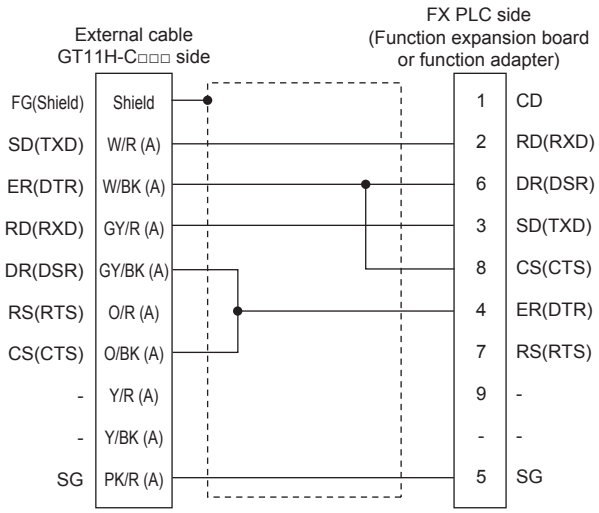
#### ■RS-232 connection diagram 1)



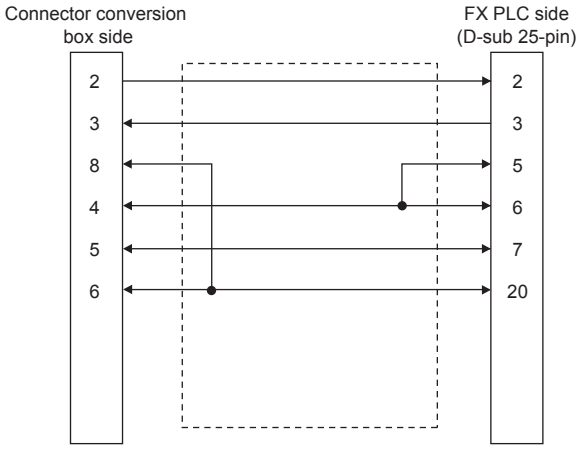

#### ■RS-232 connection diagram 2)



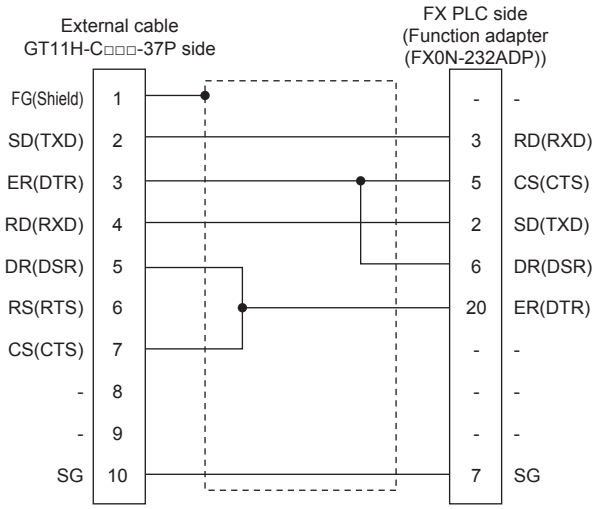

#### ■RS-232 connection diagram 3)



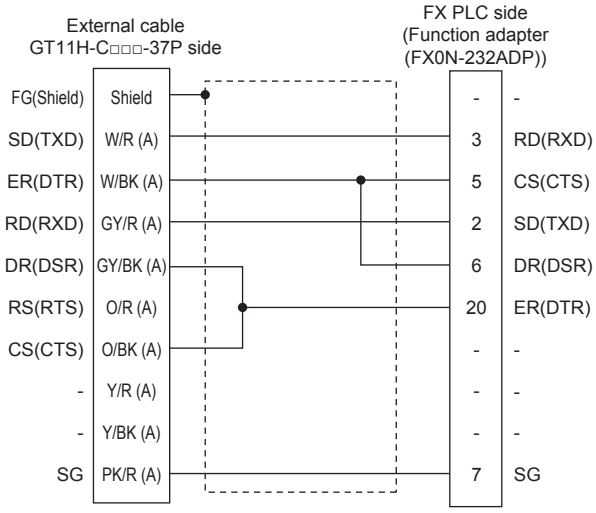
### ■RS-232 connection diagram 4)




### ■RS-232 connection diagram 5)




### ■RS-232 connection diagram 6)




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

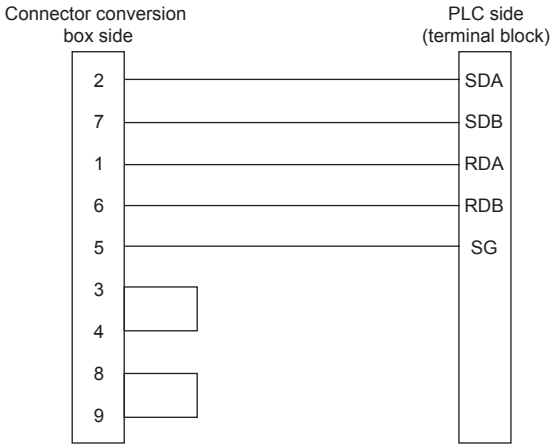
For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

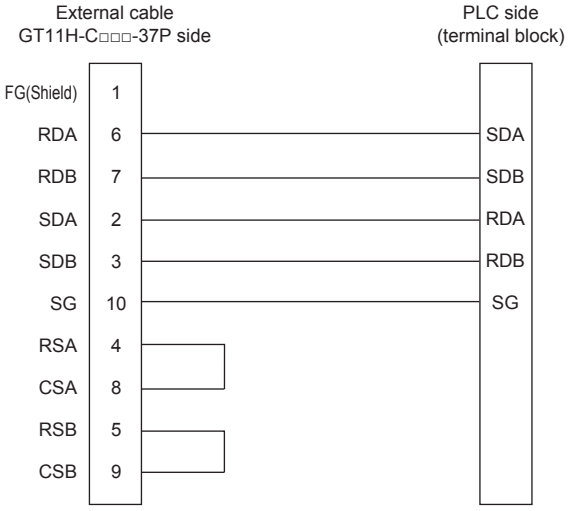
# RS-422 cable

## Connection diagram

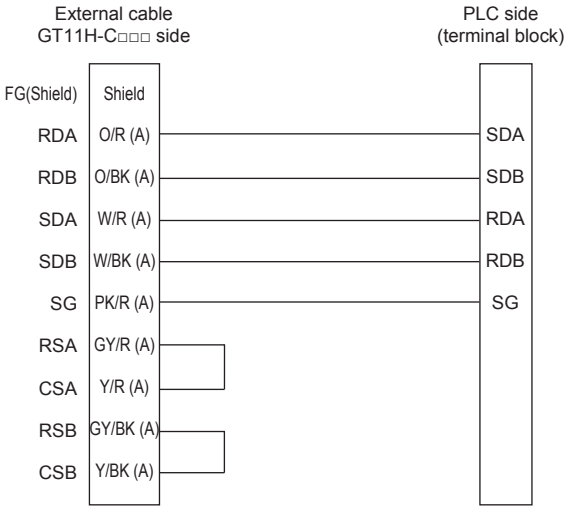
### ■RS-422 connection diagram 1)



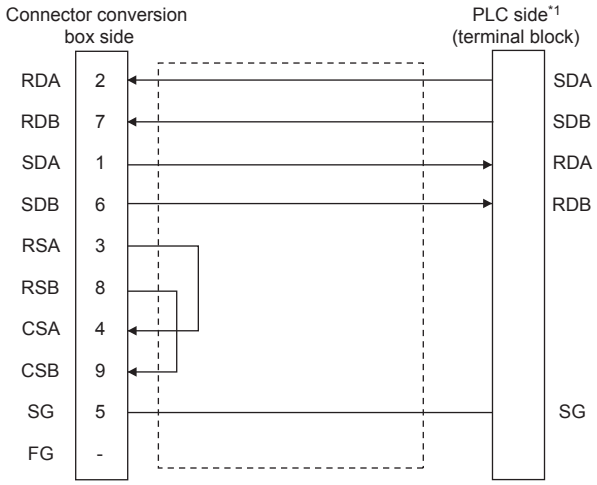

### ■RS-422 connection diagram 2)




### ■RS-422 connection diagram 3)

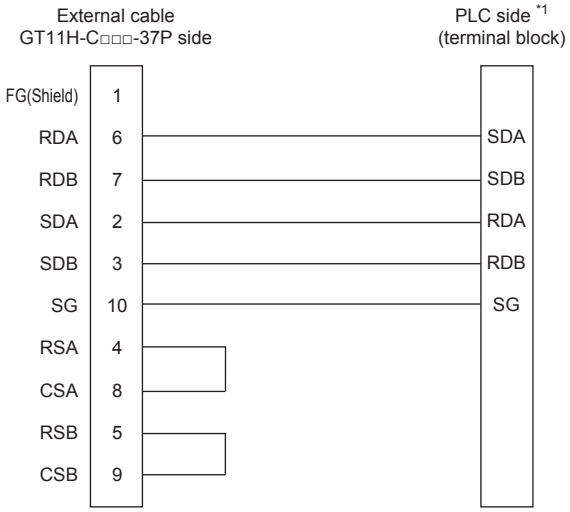


## ■RS-422 connection diagram 4)



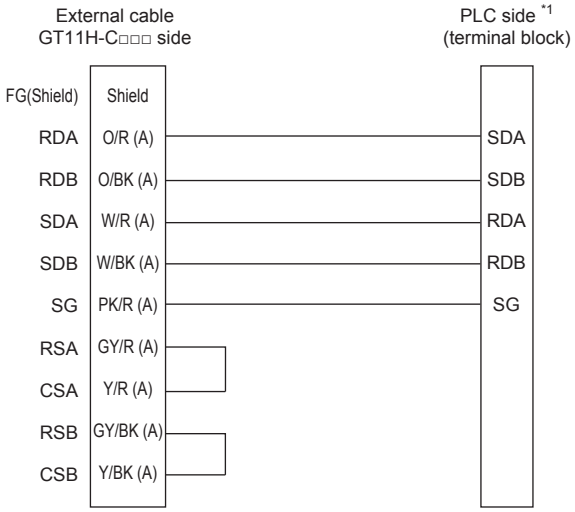

*1 Set the terminating resistor of the PLC side to "330Ω".

## ■RS-422 connection diagram 5)



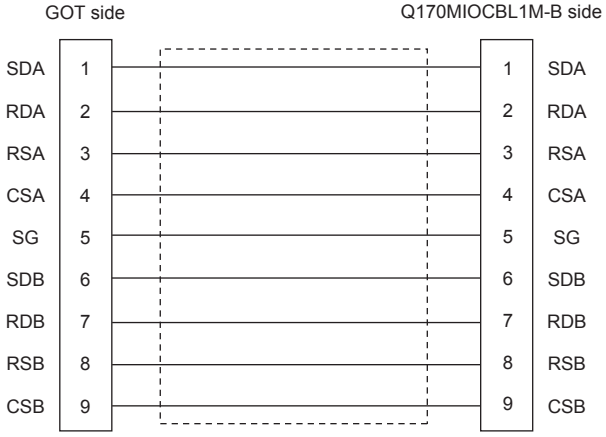

*1 Set the terminating resistor of the PLC side to "330Ω".

## ■RS-422 connection diagram 6)




*1 Set the terminating resistor of the PLC side to "330Ω".

### ■RS-422 connection diagram 7)




## Precautions when preparing a cable

### ■Cable length

The maximum distance (between GOT and controllers) of the RS-422 cable must be the total distance or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## Connecting terminating resistors

### ■GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 3.4 GOT Side Settings

## Setting communication interface (Controller Setting)

**Point**

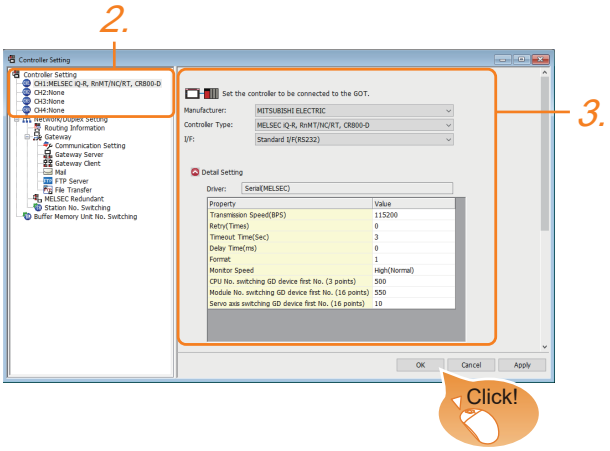
GOT multi-drop connection

When using the serial multi-drop connection unit, refer to the following.

☞ Page 604 GOT MULTI-DROP CONNECTION



Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[Serial(MELSEC)]

[MELSEC-FX]

[MELSEC-WS]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 316 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following:

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## Serial (MELSEC)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Format | 1 |
| Monitor Speed | High(Normal) |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps)<br>When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment. | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |
| Format*3 | Select the communication format.<br>(Default: 1) | 1, 2 |
| Monitor Speed *4 | Set the monitor speed of the GOT.<br>This setting is not valid in all systems.<br>(Default: Normal) | High(Normal)*1<br>Middle<br>Low*2 |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching.<br>(Default: 500)<br>For the details, refer to the following.<br>☞ Page 318 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching.<br>(Default: 550)<br>For the details, refer to the following.<br>☞ Page 319 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 320 Servo axis switching GD device first No. | 0 to 65520 |

*1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.).
However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced.
If you want to avoid the influence on the sequence scan time, do not set [High(Normal)].
(High performance is hardly affected)

*2 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.
However, the monitor speed may be reduced.

*3 The format setting differs depending on the controller.
L6ADP-R4 adapter: [2]
Other than L6ADP-R4 adapter: [1]

*4 When using a global label, set [High(Normal)] or [Middle] for [Monitor Speed] to read or write 235 two-byte characters or more.
If you set [Low] for [Monitor Speed], a system error occurs when the data is read or written.
For the details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

## MELSEC-FX

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps)<br>When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment. | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

## MELSEC-WS

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 5 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps)<br>When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment. | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a motion CPU or simple motion module, a servo axis No. can be indirectly specified with the GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

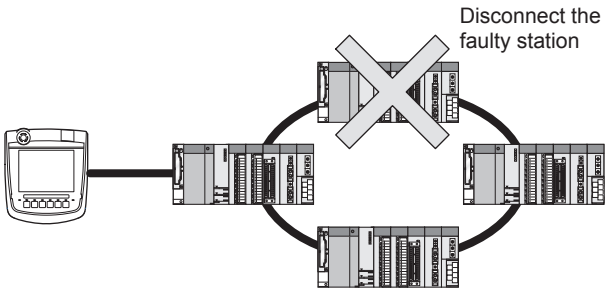
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

**Point**

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.




For details of the setting contents of GOT internal device, refer to the following manual.

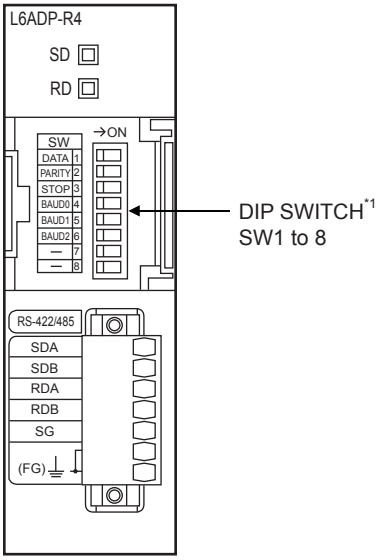
GT Designer3 (GOT2000) Screen Design Manual

# 3.5 PLC Side Setting

When the GOT and a PLC is connected using the direct CPU connection, no setting is required in the PLC.
When connecting the GOT and an LCPU via an L6ADP-R4/L6ADP-R2 adapter, configure the following communication settings.
For the L6ADP-R2 adapter, configure the communication settings in GX Works2 only.

## L6ADP-R4 adapter settings

Set the communication settings by the DIP switches of the L6ADP-R4 adapter.




*1 SW7 and SW8 are not used.

### DIP switches (SW1 to SW3)

Set the data length, parity bit, and stop bit.

| Setting switch | Description | Setting range | |
|---|---|---|---|
| SW1 | Data length*1 | OFF | 7bit |
| | | ON | 8bit |
| SW2 | Parity*1 | OFF | Disable |
| | | ON | Enable |
| SW3 | Stop bit*1 | OFF | 1bit |
| | | ON | 2bit |

*1 Adjust the settings with GOT settings.
☞ Page 316 Communication detail settings

### DIP switches (SW4 to SW6)

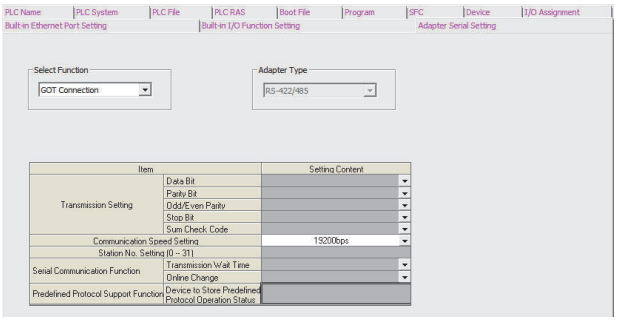
Set the transmission speed.

| Setting switch | Transmission speed*1 | | | | |
|---|---|---|---|---|---|
| | 9600 bps | 19200 bps | 38400 bps | 57600 bps | 115200 bps |
| SW4 | ON | OFF | ON | OFF | ON |
| SW5 | ON | OFF | OFF | ON | ON |
| SW6 | OFF | ON | ON | ON | ON |

*1 Adjust the settings with GOT settings.
☞ Page 316 Communication detail settings

# GX Works2 settings

Set the communication speed in GX Works2.




1. Click [PLC parameter] → [Adapter Serial Setting].
2. Set [RS-422/485] in [Adapter Type].
3. Set [GOT Connection] in [Select Function].
4. Adjust [Communication Speed Setting] with the GOT communication setting.

☞ Page 316 Communication detail settings

**Point**

L6ADP-R4 adapter

For details on the L6ADP-R4 adapter, refer to the following manual.

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

# 3.6 Precautions

## Connection to FXCPU

### ■When connecting to FX3 series

When the keyword of FXCPU (FX3 series) has been set, GOT may not be able to monitoring.Perform an I/O check again.

☞ Page 94 Perform an I/O check

When the result of the I/O check is normal, check the status of keyword registration.

### ■When connecting with function extension board or communication special adapter

When a sequence program and settings that the FXCPU communicates with devices other than the GOT are set with software, including GX Developer, the FXCPU cannot communicate with the GOT.

• Settings with sequence program

Check the sequence program and delete the following.

📖FX SERIES PROGRAMMABLE CONTROLLERS USER'S MANUAL - Data Communication Edition

• No protocol communication (RS instruction)

• Sequence program with the computer link, N:N network, and parallel link

• Parameter setting

• Set the following special registers to 0.

Except FX3U, FX3UC: D8120

FX3U, FX3UC: D8120, D8400, D8420

FX3G, FX3GC, FX3GE: D8120, D8400, D8420, D8370

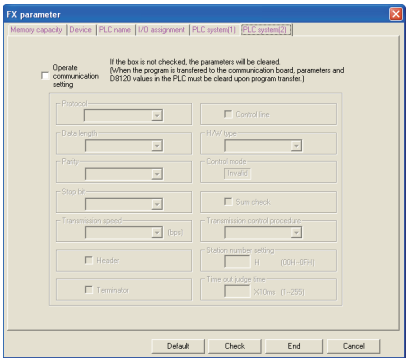
FX3S: D8120, D8400

• Settings with GX Developer

Select [PLC parameter] in [Parameter], and then click the PLC system(2) tab on the FX parameter screen.

Uncheck [Operate communication setting], and then transfer the parameter to the programmable controller.

After the transfer, turn off the programmable controller, and then turn on the programmable controller again.




## Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

• QCPU (Q mode), motion CPU (Q series): 10 seconds or more

• MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.Adjust the opening screen time in the GOT setup so that no system alarm occurs.

📖GT Designer3 (GOT2000) Screen Design Manual

## Connection to LCPU

### ■When a system alarm occurs at GOT startup

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

### ■When the module is L02SCPU or L02SCPU-P

Do not set the serial communication function of L02SCPU or L02SCPU-P.

If it is set, communications may be unavailable.

## Connection to QCPU

Do not set the serial communication function of Q00UJ/Q00U/Q01U/Q02U/Q03UD/Q04UDH/Q06UDH/Q10UDH/Q13UDH/Q20UDH/Q26UDHCPU, Q00/Q01CPU.

If the function is set, the communication may not be performed.

## Connection to Q170MCPU or Q170MSCPU(-S1)

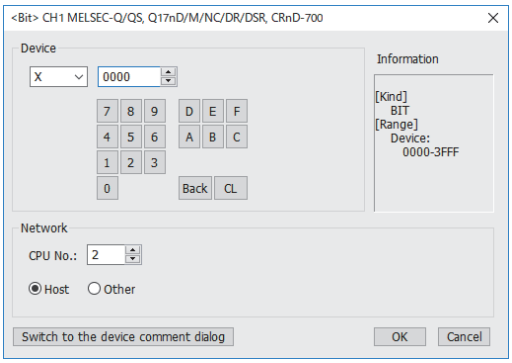
Set [CPU No.] to 2 in the device setting to monitor the device of the motion CPU area (CPU No. 2).

When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual




## Connection to MELSEC iQ-F Series

**Point**

MELSEC iQ-F Series communication settings

For details of MELSEC iQ-F Series communication settings, refer to the following manual.

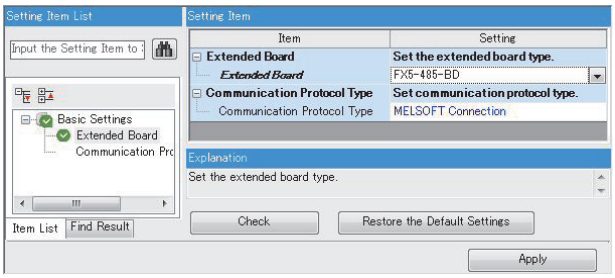
MELSEC iQ-F Series User's Manual

Module parameter settings as a default value (MELSOFT Connection).

If it sets up other than a default value, it becomes impossible to communicate with GOT.

### ■Module parameter setting

(When using FX5-485-BD)




**Point**

When changing the module parameter

After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

## Connection with the motion controller A series

When the following motion controller A series is connected, LINK UNIT ERROR (42) may occur in the SCPU (CPU for PLC control) depending on the contents of the display screen.

- A171SHCPU, A171SHCPUN, A172SHCPU, A172SHCPUN

In this case, reduce the number of monitored devices to less than 128.

The number of monitored devices includes the number of devices of functions running in the background such as alarm, logging, and script in addition to the displayed base screens and window screens.

# 4 SERIAL COMMUNICATION CONNECTION


- Page 327 Connectable Model List
- Page 335 System Configuration
- Page 353 Connection Diagram
- Page 358 GOT Side Settings
- Page 366 PLC Side Setting
- Page 378 Precautions


## 4.1 Connectable Model List



The following table shows the connectable models.

### PLC/Motion CPU

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-R Series | R00CPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU*3 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| | R16PCPU*3 | | | | |
| | R32PCPU*3 | | | | |
| | R120PCPU*3 | | | | |
| | R04ENCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU | ○ | - | - | - |
| | R16PSFCPU | | | | |
| | R32PSFCPU | | | | |
| | R120PSFCPU | | | | |
| | R08SFCPU*2 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| | R16SFCPU*2 | | | | |
| | R32SFCPU*2 | | | | |
| | R120SFCPU*2 | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |
| C Controller module*1 (MELSEC iQ-R Series) | R12CCPU-V | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| MELSECWinCPU (MELSEC iQ-R Series)*1 | R102WCPU-W | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| CNC C80 | R16NCCPU-S1 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 335 Connecting to MELSEC iQ-R series |

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 335 Connecting to MELSEC iQ-R series |

*1 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.

*2 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

*3 Mount a redundant function module R6RFM next to the RnPCPU on the base unit when building a redundant system.

| Series | Model name | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|---|
| CC-Link IE Filed Network head module | RJ72GF15-T2 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 335 Connecting to MELSEC iQ-R series |
| MELSEC iQ-F Series | FX5U | ○ | RS-232<br>RS-422 | - | - |
| | FX5UC | | | | |
| | FX5UJ | | | | |
| | FX5S | | | | |
| MELSEC-Q (Q mode) | Q00JCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | Q00CPU*1 | | | | |
| | Q01CPU*1 | | | | |
| | Q02CPU*1 | | | | |
| | Q02HCPU*1<br>Q06HCPU*1<br>Q12HCPU*1<br>Q25HCPU*1 | | | | |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | Q12PRHCPU<br>(Main base) | ○ | - | - | - |
| | Q25PRHCPU<br>(Main base) | | | | |
| | Q12PRHCPU<br>(Extension base) | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | Q25PRHCPU<br>(Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | Q00UCPU | | | | |
| | Q01UCPU | | | | |
| | Q02UCPU | | | | |
| | Q03UDCPU | | | | |
| | Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | | | | |
| | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU | | | | |
| | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | | | | |

*1 When in multiple CPU system configuration, use CPU function version B or later.

| Series | Model name | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|---|
| C Controller module (Q Series)*2 | Q12DCCPU-V*1<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| MELSEC-QS | QS001CPU | × | - | - | - |
| MELSEC-L | L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L02SCPU<br>L02SCPU-P | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 339 Connecting to LCPU |
| MELSEC-Q (A mode) | Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 341 Connecting to QCPU (A mode) |
| MELSEC-QnA (QnACPU)*3 | Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 343 Connecting to QnACPU (QnACPU type) |
| | Q4ARCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 343 Connecting to QnACPU (QnACPU type) |
| MELSEC-QnA (QnASCPU)*3 | Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 346 Connecting to QnACPU (QnASCPU type) |
| MELSEC-A (AnCPU) | A2UCPU<br>A2UCPU-S1<br>A3UCPU<br>A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1<br>A3ACPU<br>A3ACPUP21<br>A3ACPUR21<br>A1NCPU<br>A1NCPUP21<br>A1NCPUR21<br>A2NCPU<br>A2NCPUP21<br>A2NCPUR21<br>A2NCPU-S1<br>A2NCPUP21-S1<br>A2NCPUR21-S1<br>A3NCPU<br>A3NCPUP21<br>A3NCPUR21 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 349 Connecting to ACPU (AnCPU type) |

*1 Use only modules with the upper five digits of the serial No. later than 12042.

*2 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.

*3 If the A series computer link module is applied to the QnACPU, the GOT can monitor the devices in the same range on AnACPU. However, the following devices cannot be monitored.

- Devices added to QnACPU
- Latch relays (L) and step relays (S)

(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)

- File register (R)

| Series | Model name | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-A (AnSCPU) | A2USCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 351 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU) |
| | A2USCPU-S1 | | | | |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 *2 | | | | |
| | A1SHCPU*1 | | | | |
| | A2SCPU*1 | | | | |
| | A2SCPU-S1*1 | | | | |
| | A2SHCPU*1 | | | | |
| | A2SHCPU-S1*1 | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU*1 | | | | |
| MELSEC-A | A0J2HCPU*1 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 351 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU) |
| | A0J2HCPUP21*1 | | | | |
| | A0J2HCPUR21*1 | | | | |
| | A0J2HCPU-DC24*1 | | | | |
| | A2CCPU | ○ | - | - | - |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 351 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU) |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | ○ | - | - | - |
| | A1FXCPU | | | | |

*1 The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU(P21/R21/-DC24).
In addition, A0J2-C214-S1 (A0J2HCPU-dedicated computer link module) cannot be used.

*2 Use hardware version C or later, software version E or later.

| Series | Model name | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|---|
| Motion CPU (Q Series) | Q172CPU *2*3 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | Q173CPU *2*3 | | | | |
| | Q172CPUN *2 | | | | |
| | Q173CPUN *2 | | | | |
| | Q172HCPU | | | | |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | | | | |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU *4 | | | | |
| | Q170MSCPU *5 | | | | |
| | Q170MSCPU-S1 *5 | | | | |
| Motion CPU (A Series) | A273UCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 349 Connecting to ACPU (AnCPU type) |
| | A273UHCPU | | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 351 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU) |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |
| | A171SHCPU*1 | | | | |
| | A171SHCPUN*1 | | | | |
| | A172SHCPU*1 | | | | |
| | A172SHCPUN*1 | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |

*1 For serial communication connection of A171SHCPU(N) and A172SHCPU(N), use the computer link module whose software version is version U or later.

*2 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*4 Only the first step can be used on the extension base unit (Q52B/Q55B).

*5 The extension base unit (Q5□B/Q6□B) can be used.

| Series | Model name | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-WS | WS0-CPU0 | × | - | - | - |
| | WS0-CPU1 | | | | |
| | WS0-CPU3 | | | | |
| MELSECNET/H Remote I/O station | QJ72LP25-25 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 339 Connecting to LCPU |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | - | - | - |
| CNC C70 | Q173NCCPU | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| Robot controller (Q Series) | CRnQ-700 (Q172DRCPU)<br>CR750-Q (Q172DRCPU)<br>CR751-Q (Q172DRCPU)<br>CR800-Q(Q172DSRCPU) | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 337 Connecting to QCPU (Q mode) |
| MELSEC-FX | FX0 | × | - | - | - |
| | FX0S | | | | |
| | FX0N | | | | |
| | FX1 | | | | |
| | FX2 | × | | | |
| | FX2C | | | | |
| | FX1S | ○ | | | |
| | FX1N | | | | |
| | FX2N | | | | |
| | FX1NC | | | | |
| | FX2NC | × | | | |
| | FX3S | ○ | | | |
| | FX3G | | | | |
| | FX3GC | | | | |
| | FX3GE | | | | |
| | FX3U | | | | |
| | FX3UC | | | | |

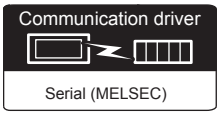
# Serial communication module/Computer link module

| CPU series | Model name[*1] |
|---|---|
| MELSEC iQ-R Series<br>Motion CPU (MELSEC iQ-R Series)<br>C Controller module[*7] (MELSEC iQ-R Series)<br>MELSECWinCPU (MELSEC iQ-R Series)[*7]<br>CNC C80<br>CR800-R(R16RTCPU)<br>CC-Link IE Field Network head module (MELSEC iQ-R Series) | RJ71C24[*9], RJ71C24-R2[*9], RJ71C24-R4[*9] |
| MELSEC-Q (Q mode)<br>Motion CPU (Q Series)<br>MELSECNET/H remote I/O station<br>CNC C70<br>Robot controller (CRnQ-700)<br>CR800-Q (Q172DSRCPU)<br>C Controller module (Q Series) | QJ71C24[*2], QJ71C24-R2[*2] |
| | QJ71C24N, QJ71C24N-R2, QJ71C24N-R4 |
| | QJ71CMO[*3], QJ71CMON[*3] |
| MELSEC-L<br>CC-Link IE Field Network head module (MELSEC iQ-R Series) | LJ71C24, LJ71C24-R2 |
| MELSEC-Q (A mode) | A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF |
| | A1SJ71C24-R2, A1SJ71C24-R4, A1SJ71C24-PRF |
| MELSEC-QnA (QnACPU)<br>MELSEC-QnA (QnASCPU) | AJ71QC24[*4], AJ71QC24-R2[*4], AJ71QC24-R4[*4] |
| | AJ71QC24N[*4], AJ71QC24N-R2[*4], AJ71QC24N-R4[*4] |
| | A1SJ71QC24[*4], A1SJ71QC24-R2[*4] |
| | A1SJ71QC24N[*4], A1SJ71QC24N-R2[*4] |
| | A1SJ71QC24N1[*4], A1SJ71QC24N1-R2[*4] |
| | AJ71UC24[*4*6] |
| | A1SJ71C24-R2[*6], A1SJ71C24-R4[*6], A1SJ71C24-PRF[*6] |
| | A1SJ71UC24-R2[*6], A1SJ71UC24-R4[*6], A1SJ71C24-PRF[*6] |
| MELSEC-A (AnCPU)<br>MELSEC-A (AnSCPU)<br>MELSEC-A<br>Motion CPU (A Series) | AJ71UC24[*4*5] |
| | A1SJ71UC24-R2[*5], A1SJ71UC24-R4[*5], A1SJ71UC24-PRF[*5] |
| | A1SJ71C24-R2[*5], A1SJ71C24-R4[*5], A1SJ71C24-PRF[*5] |
| | A1SCPUC24-R2[*8] |
| | A2CCPUC24[*4], A2CCPUC24-PRF[*4] |

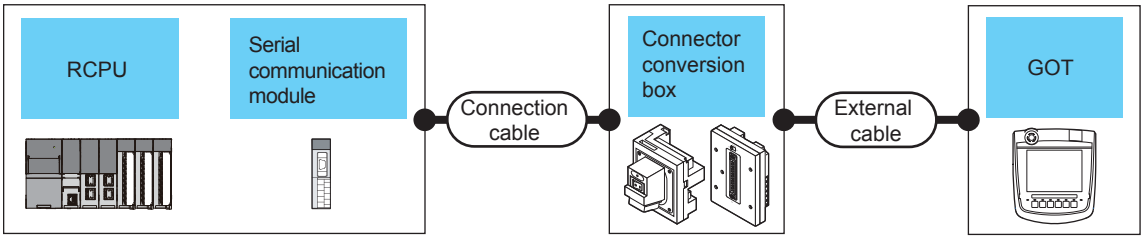
*1 Communication cannot be performed with RS-485.
A0J2-C214-S1 cannot be used.
*2 Either CH1 or CH2 can be used for the function version A.
Both CH1 and CH2 can be used together for the function version B or later.
*3 Only CH2 can be connected.
*4 Either CH1 or CH2 can be used.
*5 The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU.
*6 The module operates in the device range on AnACPU.
*7 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.
*8 Use hardware version C or later, software version E or later.
*9 Use firmware version 07 or higher when building a redundant system.

# 4.2 System Configuration

## Connecting to MELSEC iQ-R series



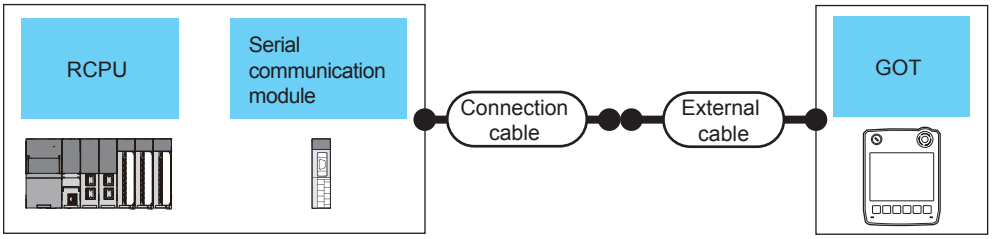

### When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | | |
| MELSEC iQ-R Series Motion CPU (MELSEC iQ-R Series) C Controller module (MELSEC iQ-R Series) MELSECWinCPU (MELSEC iQ-R Series) CNC C80 (R16NCCPU-S1) | RJ71C24 RJ71C24-R2 | RS-232 | GT09-C30R2-9P(3m) or User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 2 GOTs for 1 serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RJ71C24 RJ71C24-R4 | RS-422 | GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

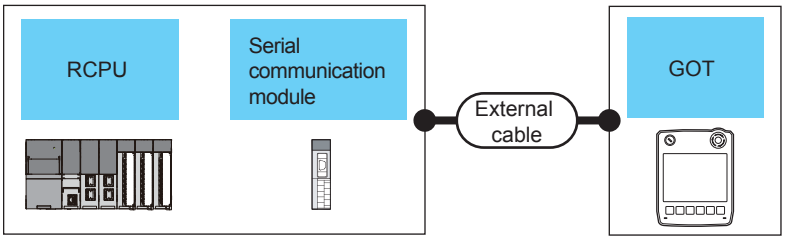
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | |
| MELSEC iQ-R Series | RJ71C24<br>RJ71C24-R2 | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module |
| | RJ71C24<br>RJ71C24-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | | | | |
| MELSEC iQ-R Series | RJ71C24<br>RJ71C24-R2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module |
| | RJ71C24<br>RJ71C24-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

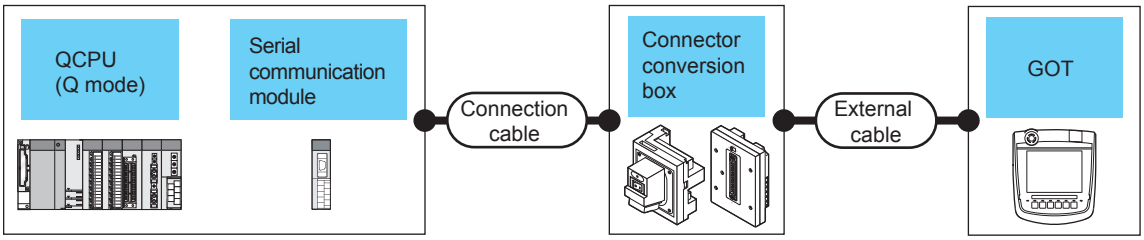
*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

# Connecting to QCPU (Q mode)

Communication driver

Serial (MELSEC)

## When using the connector conversion box

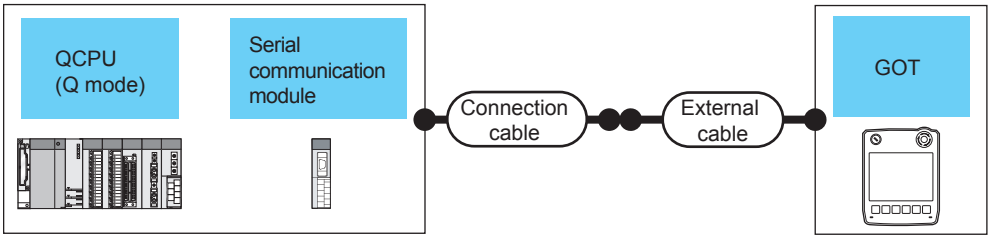



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | | |
| MELSEC-Q (Q mode) | QJ71C24<br>QJ71C24N<br>QJ71C24-R2<br>QJ71C24N-R2<br>QJ71CMO<br>QJ71CMON | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 2 GOTs for 1 serial communication module*2<br>1 GOT for 1 modem interface module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | QJ71C24<br>QJ71C24N<br>QJ71C24N-R4 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

*2 Two GOTs can be connected with the function version B or later of the serial communication module.

## When using the external cable (GT11H-C□□□-37P)

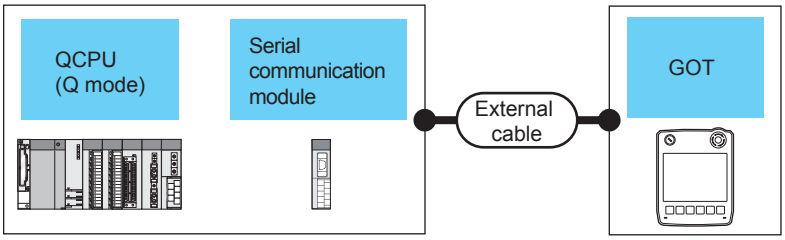



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | |
| MELSEC-Q (Q mode) | QJ71C24<br>QJ71C24N<br>QJ71C24-R2<br>QJ71C24N-R2<br>QJ71CMO<br>QJ71CMON | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module*2<br>1 GOT for 1 modem interface module |
| | QJ71C24<br>QJ71C24N<br>QJ71C24N-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

*2 Two GOTs can be connected with the function version B or later of the serial communication module.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | | | | |
| MELSEC-Q (Q mode) | QJ71C24<br>QJ71C24N<br>QJ71C24-R2<br>QJ71C24N-R2<br>QJ71CMO<br>QJ71CMON | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module*2<br>1 GOT for 1 modem interface module |
| | QJ71C24<br>QJ71C24N<br>QJ71C24N-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

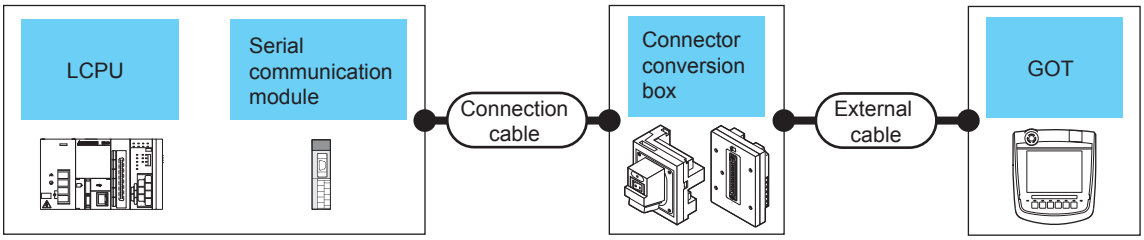
*2 Two GOTs can be connected with the function version B or later of the serial communication module.

# Connecting to LCPU

Communication driver

Serial (MELSEC)

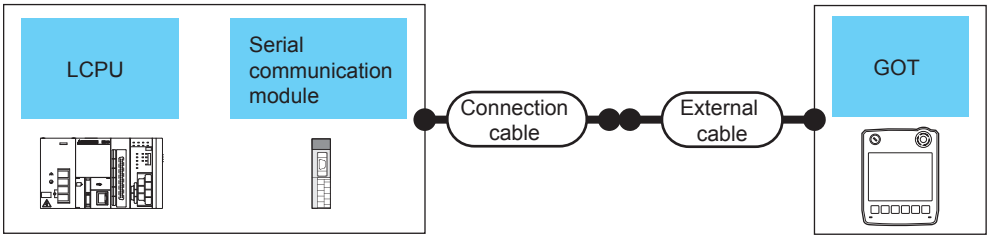
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | | |
| MELSEC-L | LJ71C24<br>LJ71C24-R2 | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 2 GOTs for 1 serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | LJ71C24 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

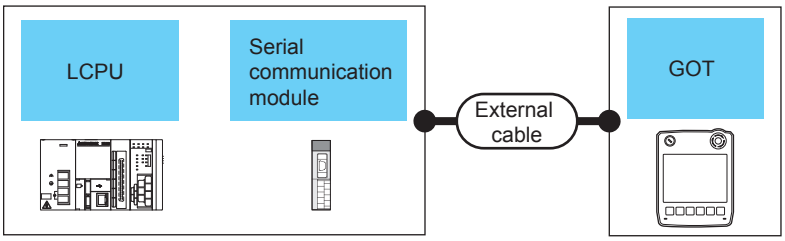
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | Cable model | | | | |
| MELSEC-L | LJ71C24<br>LJ71C24-R2 | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module |
| | LJ71C24 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 | Communication type | | | | |
| MELSEC-L | LJ71C24<br>LJ71C24-R2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 2 GOTs for 1 serial communication module |
| | LJ71C24 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

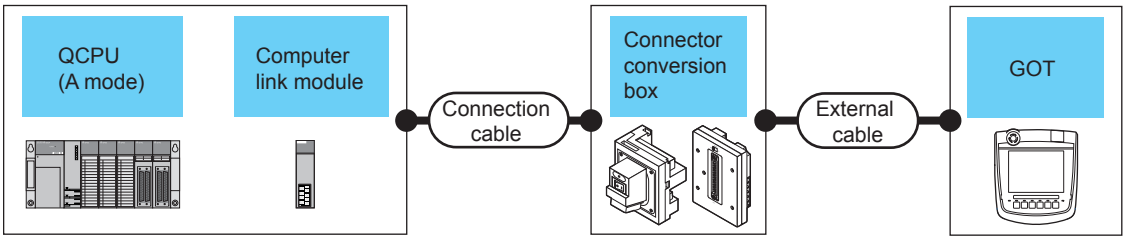
*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

# Connecting to QCPU (A mode)

Communication driver

Serial (MELSEC)

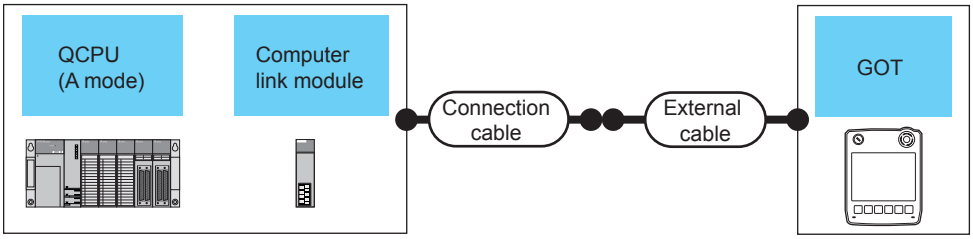
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer link module*1 | Communication type | Cable model | | | | | |
| MELSEC-Q (A mode) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

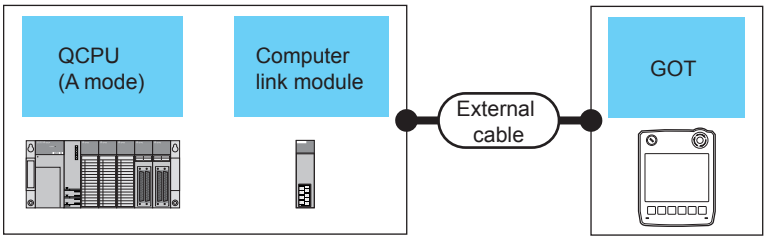
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer link module*1 | Communication type | Cable model | | | | |
| MELSEC-Q (A mode) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

## When using the external cable (GT11H-C□□□)



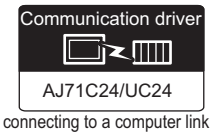

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer link module*1 | Communication type | | | | |
| MELSEC-Q (A mode) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

# Connecting to QnACPU (QnACPU type)

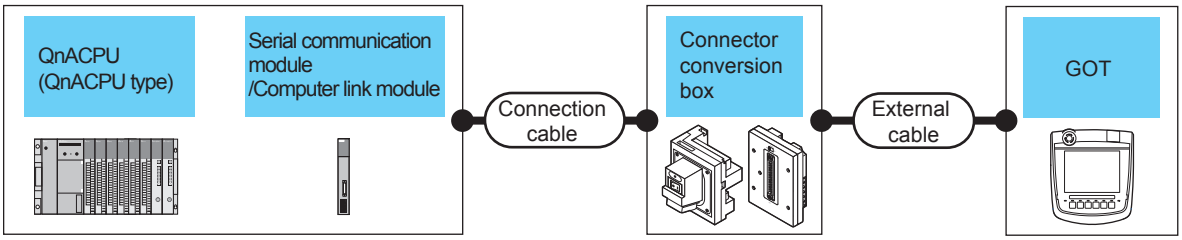


(When connecting to a serial communication module)



(When connecting to a computer link module)

## When using the connector conversion box

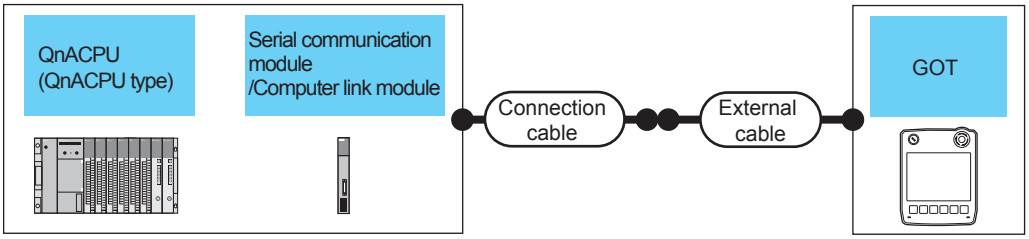



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module *1 Computer link module *2 | Communication type | Cable model | | | | | |
| MELSEC-QnA (QnACPU) | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R2<br>AJ71QC24N-R2 | RS-232 | GT09-C30R2-25P(3m)<br>or<br>Page 354 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | AJ71QC24-R4<br>AJ71QC24N-R4 | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |
| | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R4<br>AJ71QC24N-R4 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |
| MELSEC-QnA (QnACPU) | AJ71UC24 | RS-232 | GT09-C30R2-25P(3m)<br>or<br>Page 354 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 computer link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | AJ71UC24 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT2505HS | | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

## When using the external cable (GT11H-C□□□-37P)

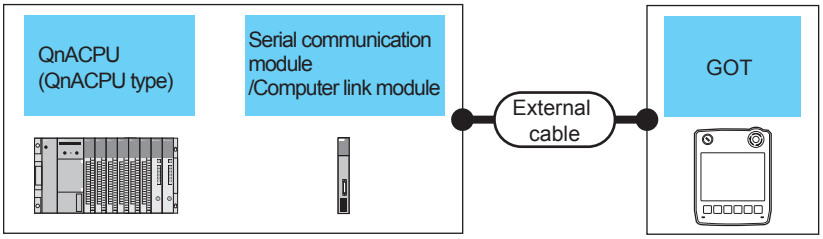



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module *1 Computer link module *2 | Communication type | Cable model | | | | |
| MELSEC-QnA (QnACPU) | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R2<br>AJ71QC24N-R2 | RS-232 | User preparing Page 354 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 serial communication module |
| | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R4<br>AJ71QC24N-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | AJ71UC24 | RS-232 | User preparing Page 354 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | AJ71UC24 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module *1 Computer link module *2 | Communication type | | | | |
| MELSEC-QnA (QnACPU) | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R2<br>AJ71QC24N-R2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 355 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 serial communication module |
| | AJ71QC24<br>AJ71QC24N<br>AJ71QC24-R4<br>AJ71QC24N-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | AJ71UC24 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 355 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | AJ71UC24 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

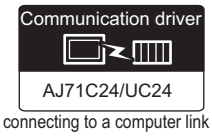
*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

# Connecting to QnACPU (QnASCPU type)

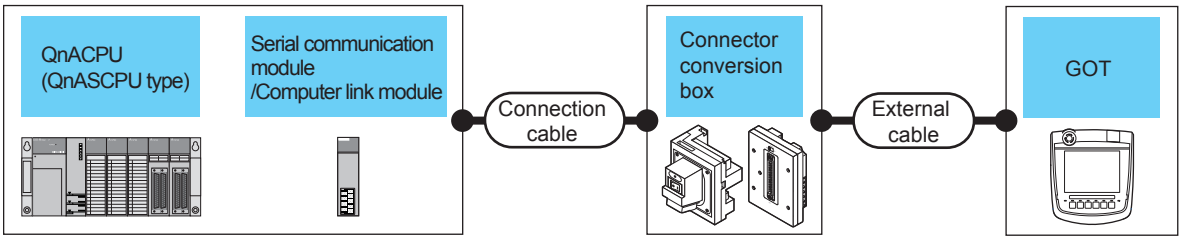


(When connecting to a serial communication module)



(When connecting to a computer link module)

## When using the connector conversion box

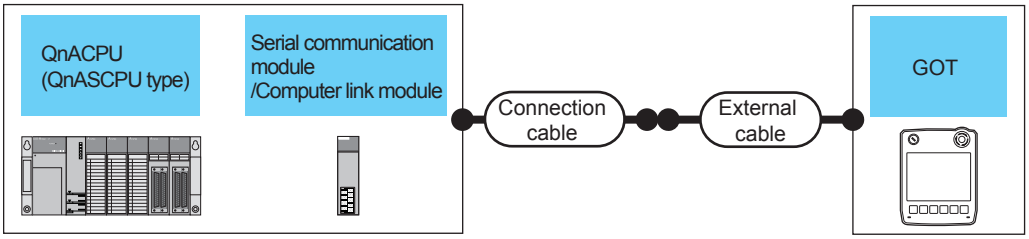



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module *1 /Computer link module *2 | Communication type | Cable model | | | | | |
| MELSEC-QnA (QnASCPU) | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1<br>A1SJ71QC24-R2<br>A1SJ71QC24N-R2<br>A1SJ71QC24N1-R2 | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

## When using the external cable (GT11H-C□□□-37P)

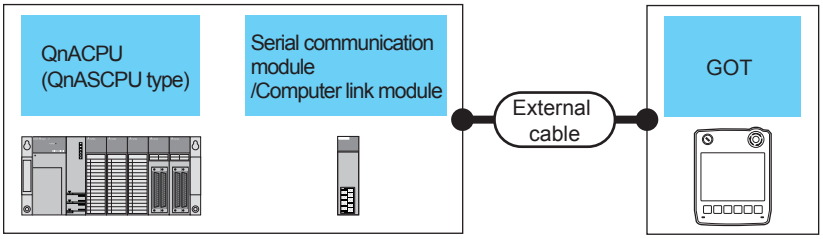



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module *1 /Computer link module *2 | Communication type | Cable model | | | | |
| MELSEC-QnA (QnASCPU) | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1<br>A1SJ71QC24-R2<br>A1SJ71QC24N-R2<br>A1SJ71QC24N1-R2 | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 serial communication module |
| | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module *1<br>Computer link module *2 | Communication type | | | | |
| MELSEC-QnA (QnASCPU) | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1<br>A1SJ71QC24-R2<br>A1SJ71QC24N-R2<br>A1SJ71QC24N1-R2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 serial communication module |
| | A1SJ71QC24<br>A1SJ71QC24N<br>A1SJ71QC24N1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>User preparing Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>User preparing Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

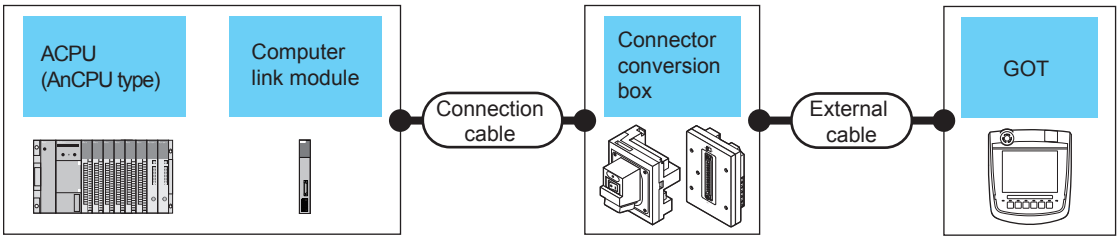
*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

# Connecting to ACPU (AnCPU type)

Communication driver

AJ71C24/UC24

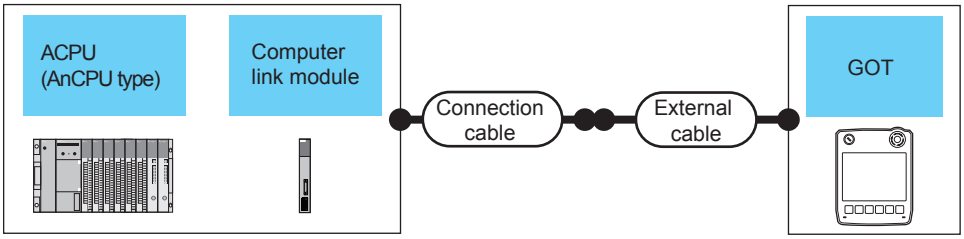
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | Cable model | | | | | |
| MELSEC-A (AnCPU) Motion CPU (A series) | AJ71UC24 | RS-232 | GT09-C30R2-25P(3m) or (User preparing) Page 354 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or (User preparing) Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

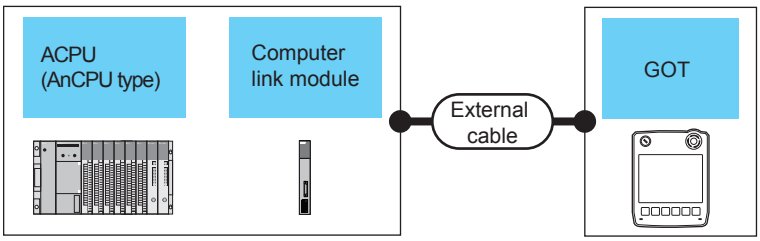
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | Cable model | | | | |
| MELSEC-A (AnCPU) Motion CPU (A series) | AJ71UC24 | RS-232 | User preparing Page 354 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | | | | |
| MELSEC-A (AnCPU) Motion CPU (A series) | AJ71UC24 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing Page 355 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>User preparing Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

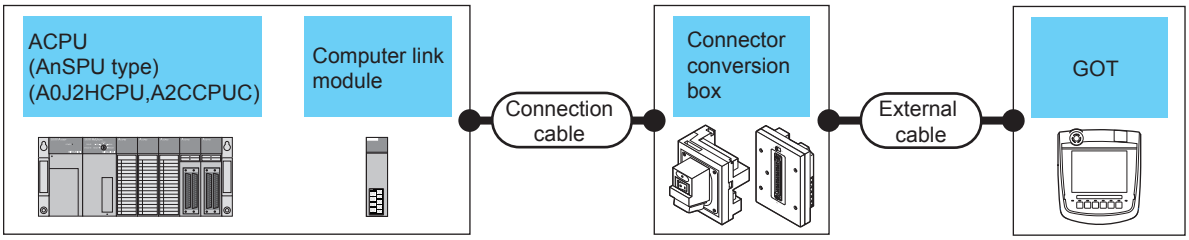
*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

# Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)

Communication driver

AJ71C24/UC24

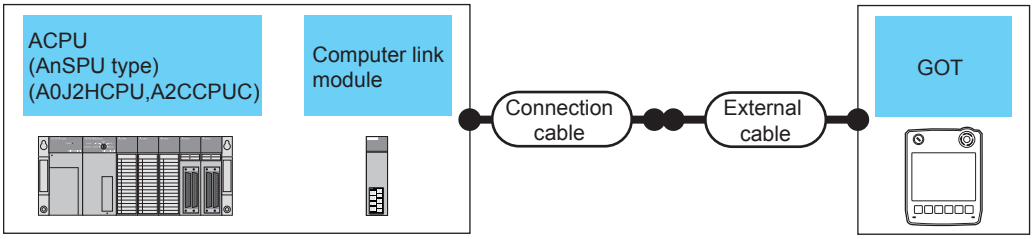
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | Cable model | | | | | |
| MELSEC-A (AnSCPU) (A0J2H) (A2CCPU) Motion CPU (A series) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF<br>A1SCPUC24-R2<br>A2CCPUC24<br>A2CCPUC24-PRF | RS-232 | GT09-C30R2-9P(3m)<br>or<br>User preparing Page 353 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT09-C30R4-6C(3m)<br>GT09-C100R4-6C(10m)<br>or<br>User preparing Page 356 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

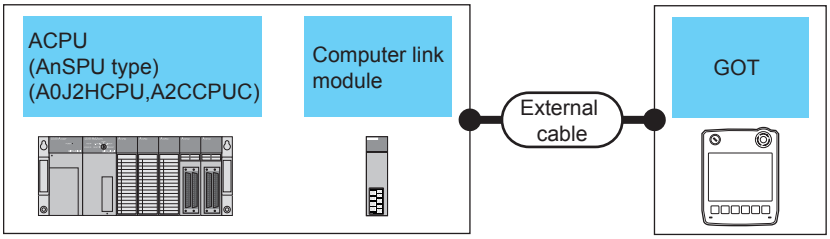
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | Cable model | | | | |
| MELSEC-A (AnSCPU) (A0J2H) (A2CCPUC) Motion CPU (A series) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF<br>A1SCPUC24-R2<br>A2CCPUC24<br>A2CCPUC24-PRF | RS-232 | User preparing Page 353 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | User preparing Page 356 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer link module *1 | Communication type | | | | |
| MELSEC-A (AnSCPU) (A0J2H) (A2CCPUC) Motion CPU (A series) | A1SJ71UC24-R2<br>A1SJ71C24-R2<br>A1SJ71UC24-PRF<br>A1SJ71C24-PRF<br>A1SCPUC24-R2<br>A2CCPUC24<br>A2CCPUC24-PRF | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 354 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 computer link module |
| | A1SJ71UC24-R4<br>A1SJ71C24-R4 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 356 RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

# 4.3 Connection Diagram

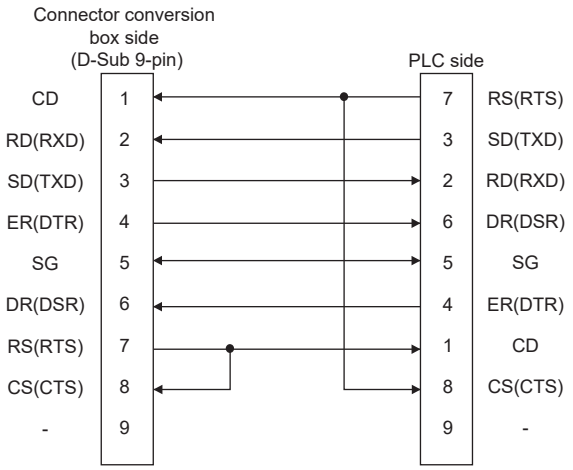
The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

### Connection diagram

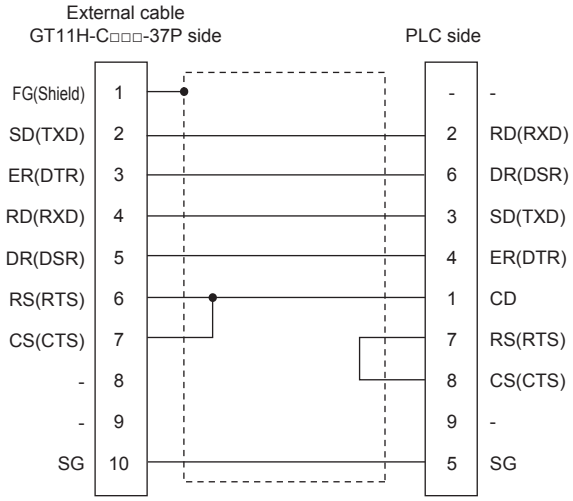
#### ■RS-232 connection diagram 1)

PLC side connector D-sub 9-pin



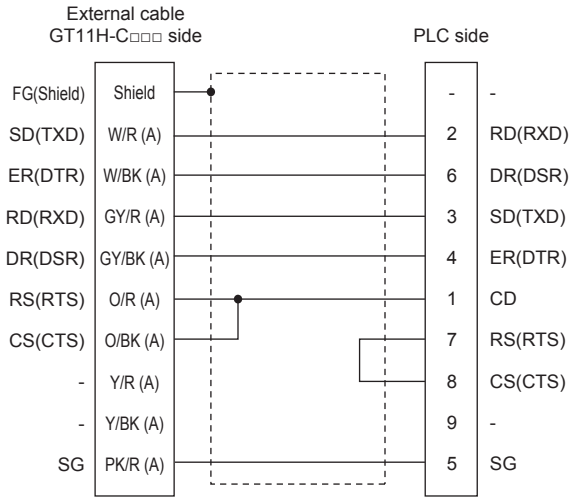

#### ■RS-232 connection diagram 2)

PLC side connector D-sub 9-pin



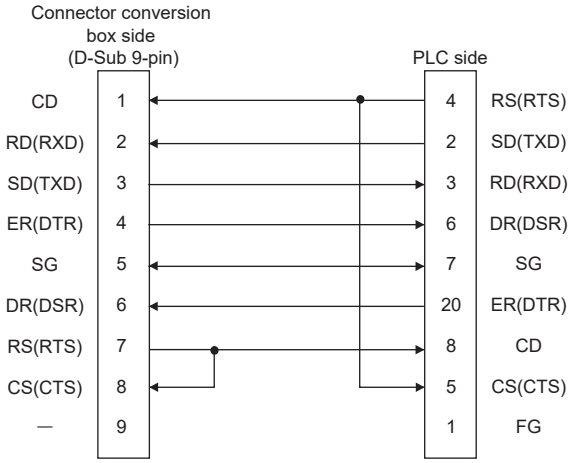
## ■RS-232 connection diagram 3)

PLC side connector D-sub 9-pin



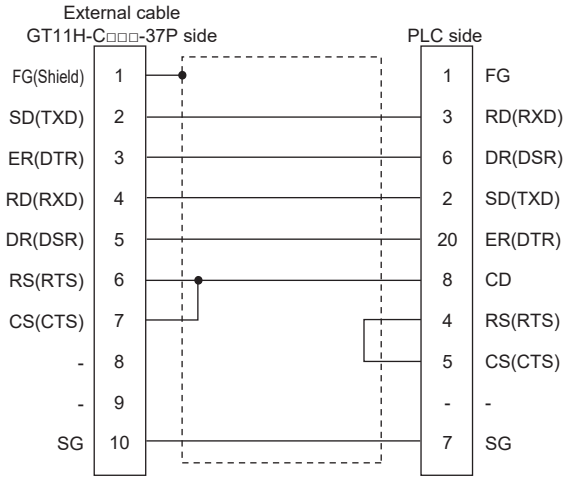

## ■RS-232 connection diagram 4)

PLC side connector D-sub 25-pin



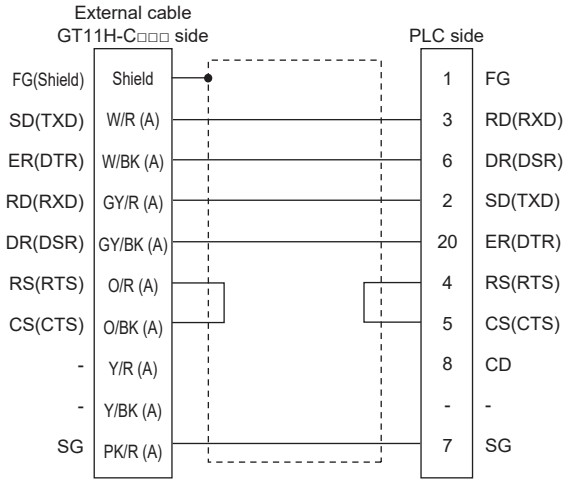

## ■RS-232 connection diagram 5)

PLC side connector D-sub 25-pin



### ■RS-232 connection diagram 6)

PLC side connector D-sub 25-pin




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

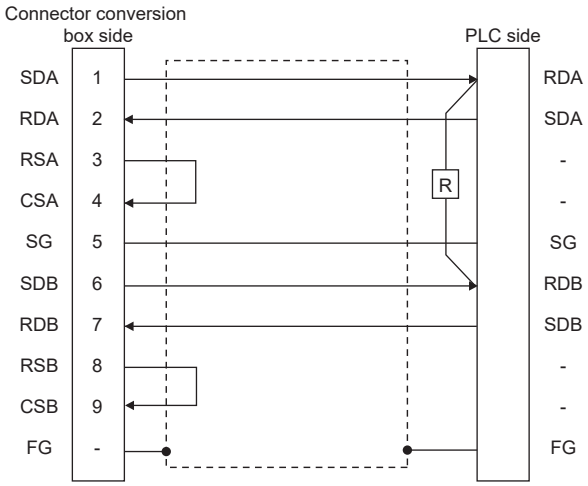
For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

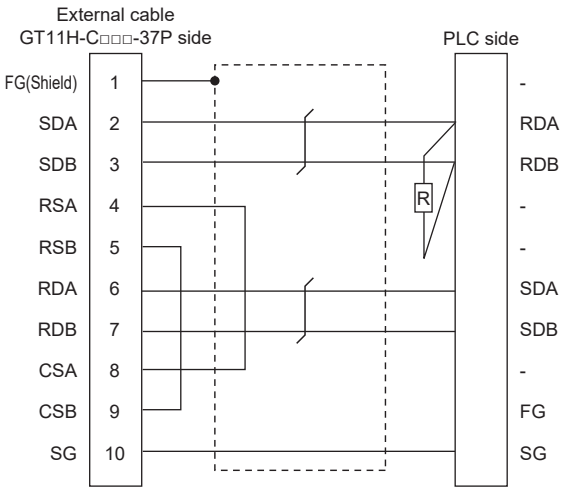
# RS-422 cable

## Connection diagram

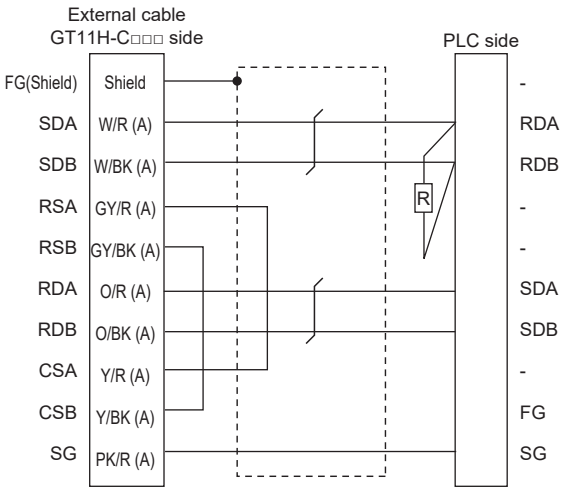
### ■RS-422 connection diagram 1)




### ■RS-422 connection diagram 2)




### ■RS-422 connection diagram 3)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## Connecting terminating resistors

### ■GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■Serial communication module or computer link module side

Connect the terminating resistors (330Ω 1/4W (orange/orange/brown/□) ) on the serial communication module or computer link module side.

For details, refer to the following manual.

📖User's Manual for the serial communication module or computer link module

• Other than A2CCPUC24(-PRF)

Connect the terminating resistors supplied with the module across RDA and RDB.

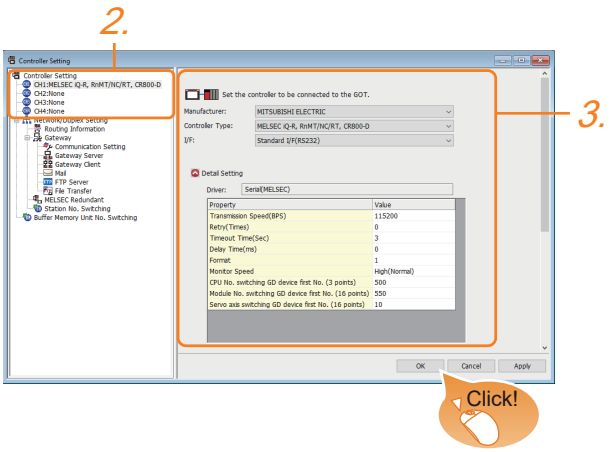
• A2CCPUC24(-PRF)

Set TXD and RXD on the terminating resistor setting pin to "A".

# 4.4 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[Serial(MELSEC)]
[AJ71QC24, MELDAS C6*]
[AJ71C24/UC24]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 359 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## Serial (MELSEC)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Format | 1 |
| Monitor Speed | High(Normal) |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps)<br>When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment. | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |
| Format*3 | Select the communication format.<br>(Default: 1) | 1, 2 |
| Monitor Speed *4 | Set the monitor speed of the GOT.<br>This setting is not valid in all systems.<br>(Default: Normal) | High (Normal)*1<br>Middle<br>Low*2 |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching.<br>(Default: 500)<br>For the details, refer to the following.<br>☞ Page 362 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching.<br>(Default: 550)<br>For the details, refer to the following.<br>☞ Page 363 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 364 Servo axis switching GD device first No. | 0 to 65520 |

*1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.).
However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced.
If you want to avoid the influence on the sequence scan time, do not set [High (Normal)].
(High performance is hardly affected)

*2 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.

*3 Set this item when replacing the F900 series with GOT2000 series.

• To change the communication settings of the serial communication module connected to an F900 model, set as follows.

The baud rate can be changed to 115200bps.

[Intelligent function module switch setting] of PLC

| Switch No. | CH1 side | CH2 side |
|---|---|---|
| Switch 1 | 0000H | - |
| Switch 2 | 0000H | - |
| Switch 3 | - | 0000H |
| Switch 4 | - | 0000H |
| Switch 5 | 0000H | 0000H |

☞ Page 366 PLC Side Setting

GOT communication settings

| Item | Set value |
|---|---|
| Format | 1 |

• To maintain the communication settings of the serial communication module connected to an F900 model, set as follows.

The baud rate remains 38400bps.

GOT communication settings

| Item | Set value |
|---|---|
| Format | 2 |

*4 When using a global label, set [High (Normal)] or [Middle] for [Monitor Speed] to read or write 235 two-byte characters or more.
If you set [Low] for [Monitor Speed], a system error occurs when the data is read or written.
For the details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

## AJ71QC24, MELDAS C6*

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | Odd (fixed) |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

## AJ71C24/UC24

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps, 9600bps, 19200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | Odd (fixed) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

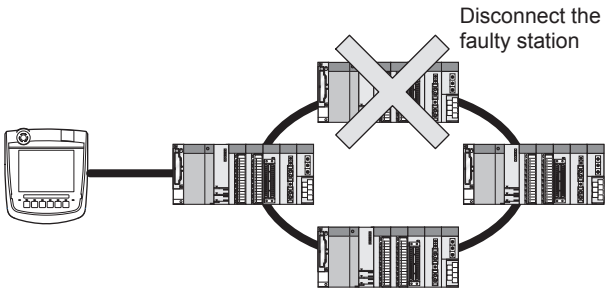
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

**Point**

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.




For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 4.5 PLC Side Setting

The GOT operates under the following transmission specifications when it is connected to a Mitsubishi Electric PLC in the computer link connection.

| Transmission specifications | Setting |
|---|---|
| Data bit | 8bits |
| Parity bit | Yes (Odd) |
| Stop bit | 1bit |
| Sum check | Yes |
| Transmission speed (Baud rate) | Set the same transmission speed on both the GOT and the PLC. |

The PLC side settings (the serial communication module, computer link module) are explained in Section 4.5.2 to Section 4.5.4.

| Model | | Refer to |
|---|---|---|
| Serial communication module (MELSEC iQ-R Series) | RJ71C24, RJ71C24-R2, RJ71C24-R4 | ☞ Page 367 Connecting to MELSEC iQ-R series |
| Serial communication module (Q Series) | QJ71C24N, QJ71C24 | ☞ Page 367 Connecting to MELSEC-Q, L series |
| | QJ71C24N-R2, QJ71C24-R2 | |
| | QJ71C24N-R4 | |
| Modem interface module | QJ71CMO, QJ71CMON | ☞ Page 367 Connecting to MELSEC-Q, L series |
| Serial communication module (L Series) | LJ71C24, LJ71C24-R2 | ☞ Page 367 Connecting to MELSEC-Q, L series |
| Serial communication module (QnA Series) | AJ71QC24N, AJ71QC24 | ☞ Page 370 Connection to MELSEC-QnA series |
| | AJ71QC24N-R2, AJ71QC24-R2 | |
| | AJ71QC24N-R4, AJ71QC24-R4 | |
| | A1SJ71QC24N1, A1SJ71QC24N, A1SJ71QC24 | |
| | A1SJ71QC24N1-R2, A1SJ71QC24N-R2, A1SJ71QC24-R2 | |
| Computer link module | AJ71UC24 | ☞ Page 373 Connecting to MELSEC-A series |
| | A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF | ☞ Page 373 Connecting to MELSEC-A series |
| | A1SJ71UC24-R4, A1SJ71C24-R4 | ☞ Page 373 Connecting to MELSEC-A series |
| | A1SCPUC24-R2 | ☞ Page 373 Connecting to MELSEC-A series |
| | A2CCPUC24, A2CCPUC24-PRF | ☞ Page 373 Connecting to MELSEC-A series |

# Connecting to MELSEC iQ-R series

**Point**

Serial communication module (MELSEC iQ-R Series)

For details of the serial communication module (MELSEC iQ-R Series), refer to the following manual.

Manuals of MELSEC iQ-R Series

## [Module parameter] of GX Works3

The PLC can communicate with the GOT with the default module parameter setting.

**Point**

• When changing the module parameter

After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Connection of multiple GOTs

To some serial communication module models, two GOTs can be connected using both CH1 and CH2.

# Connecting to MELSEC-Q, L series

**Point**

• Serial communication module (MELSEC-Q, L series)

For details on the serial communication module (MELSEC-Q, L series), refer to the following.

Q Corresponding Serial Communication Module User's Manual (Basic)

MELSEC-L Serial Communication Module User's Manual (Basic)

• Modem interface module

For details of the modem interface module, refer to the following manual.

Modem Interface Module User's Manual

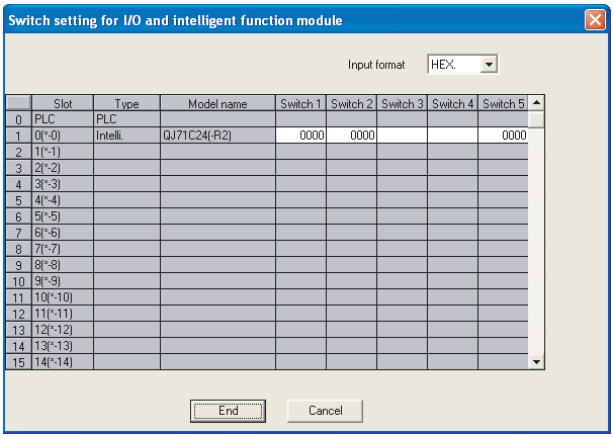
## [Intelligent function module switch setting] on GX Developer

[The intelligent function module switch setting] on GX Developer is not necessary.

(When no [intelligent function module switch setting] is made, the module runs in the GX Developer connection mode.)

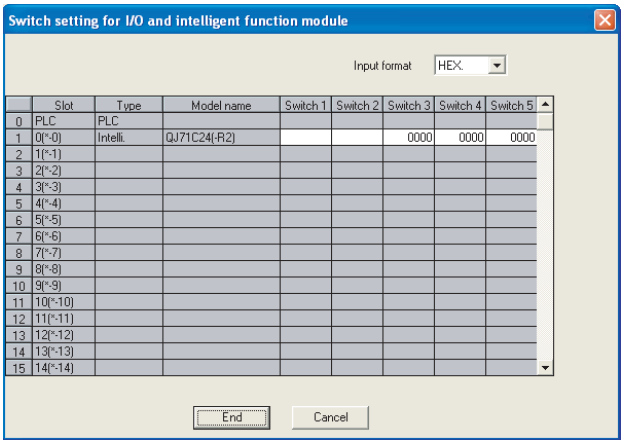
A module can be also connected to a GOT by making the following [intelligent function module switch setting] on GX Developer.

## ■When connecting to the CH1 side




| Switch No. | Bit | | Description | | | Set value[*3] |
|---|---|---|---|---|---|---|
| | Position | Specified value | | | | |
| Switch 1 | b0 | OFF | CH1 transmission settings[*1] | Operation setting | (Operates according to the GOT side specifications.) | 0000H |
| | b1 | OFF | | Data Bit | | |
| | b2 | OFF | | Parity Bit | | |
| | b3 | OFF | | Even/Odd parity | | |
| | b4 | OFF | | Stop bit | | |
| | b5 | OFF | | Sum check code | | |
| | b6 | OFF | | Write during RUN | | |
| | b7 | OFF | | Setting modifications | | |
| | b8 to b15 | — | CH1 transmission speed setting[*2] | | | |
| Switch 2 | — | | CH1 Communication protocol setting | | GX Developer connection | 0000H |
| Switch 5 | — | | Station number setting | | 0th station | 0000H |

## ■When connecting to the CH2 side




| Switch No. | Bit | | Description | | | Set value*3 |
|---|---|---|---|---|---|---|
| | Position | Specified value | | | | |
| Switch 3 | b0 | OFF | CH2 transmission settings*1 | Operation setting | (Operates according to the GOT side specifications.) | 0000H |
| | b1 | OFF | | Data bit | | |
| | b2 | OFF | | Parity bit | | |
| | b3 | OFF | | Even/odd parity | | |
| | b4 | OFF | | Stop bit | | |
| | b5 | OFF | | Sum check code | | |
| | b6 | OFF | | Write during RUN | | |
| | b7 | OFF | | Setting modifications | | |
| | b8 to b15 | — | CH2 transmission speed setting*2 | | | |
| Switch 4 | — | | CH2 Communication protocol setting | | GX Developer connection | 0000H |
| Switch 5 | — | | Station number setting | | 0th station | 0000H |

*1 The module operates under the following transmission specifications.

| Transmission specifications | Setting details |
|---|---|
| Operation setting | Independent |
| Data bit | 8bits |
| Parity bit | Yes |
| Even/odd parity | Odd |
| Stop bit | 1bit |
| Sum check code | Yes |

*2 The serial communication module operates at the transmission speed set on the GOT.

*3 When the value of switch setting is other than "0", the setting of [Format] and [Transmission Speed] on the GOT side are required to be changed.

☞ Page 359 Communication detail settings

**Point**

• When the [intelligent function module switch setting] has been set

After writing PLC parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Connection of multiple GOTs

To some serial communication module models, two GOTs can be connected using both CH1 and CH2.

| Model | Connection of 2 GOTs | |
|---|---|---|
| | Function version A | Function version B |
| QJ71C24(-R2) | △ | ○ |
| QJ71C24N(-R2/R4) | - | ○ |
| LJ71C24(-R2) | ○ | - |

○: 2 GOTs connectable, △: 1 GOT connectable, -: Not applicable

• When connecting to the modem interface module

When the modem interface module is connected, only CH2 can be used.

# Connection to MELSEC-QnA series

**Point**

Serial communication module (MELSEC-QnA series)

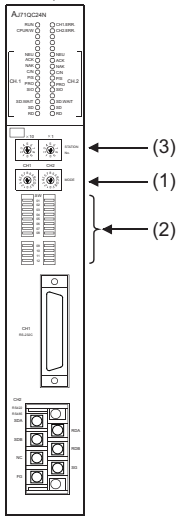
For details on the serial communication module (MELSEC-QnA series), refer to the following.

Serial Communication Module User's Manual (Modem Function Additional Version)

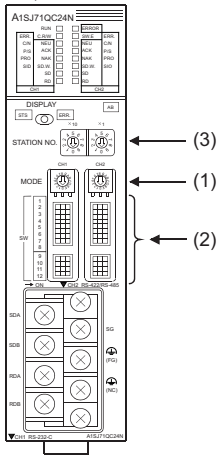
## Switch setting on serial communication module

Set the Station number switches, the Mode setting switch for the channel used for GOT connection, and the Transmission specifications switches.

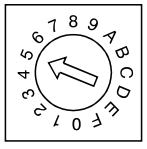
AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4,AJ71QC24, AJ71QC24-R2, AJ71QC24-R4




A1SJ71QC24N1, A1SJ71QC24N1-R2, A1SJ71QC24N, A1SJ71QC24N-R2, A1SJ71QC24, A1SJ71QC24-R2




### ■Mode setting switch

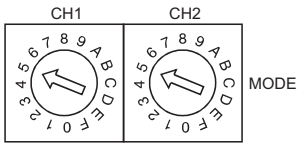
| Mode setting switch*1 | Description | Set value |
|---|---|---|
| CH□<br>  <br>MODE | Dedicated protocol (Format 5)<br>(Binary mode) | 5 |

*1 The mode switch in the figure is for the AJ71QC24 (N) (-R2/R4).

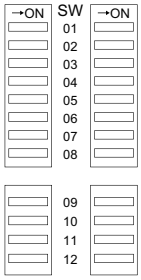
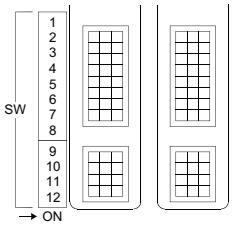
**Point**

When connecting a GOT to CH2

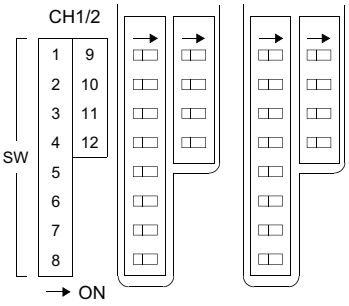
Set the CH1 side mode switch to any other than "0" (interlocked operation).




## ■Transmission specifications setting switch

| Transmission specifications setting switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
| AJ71QC24(N)<br>(-R2/R4)<br>  <br>A1SJ71QC24(N)<br>(N1)(-R2)*1<br>  | SW01 | Operation setting | Independent operation | OFF |
| | SW02 | Data bit setting | 8bits | ON |
| | SW03 | Parity bit enable/disable setting | Enable | ON |
| | SW04 | Even/odd parity setting | Odd | OFF |
| | SW05 | Stop bit setting | 1bit | OFF |
| | SW06 | Sum check enable/disable setting | Enable | ON |
| | SW07 | Write during RUN enable/disable setting | Enable | ON |
| | SW08 | Setting change enable/disable | Disable<br>(prohibit) | OFF |
| | SW09<br>to<br>SW12 | Transmission speed setting | (Consistent with the GOT side specifications) | See (a) |
| | SW13<br>to<br>SW15 | — | The switch is located on the left side of the module.<br>(only on AJ71QC24 (-R2/R4)) | All OFF |

*1 The following shows the layout of switches in the case of the following hardware versions for the module.
Switch settings and switch ON/OFF directions are the same.




| Target unit | Hardware version |
|---|---|
| A1SJ71QC24 | Version E hardware or earlier |
| A1SJ71QC24-R2 | Version D hardware or earlier |
| A1SJ71QC24N, A1SJ71QC24N-R2 | Version A hardware |

• Transmission speed setting (SW09 to SW12)

Set the transmission speed (SW09 to SW12) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting Switch | Transmission speed*1*2*3 | | | | | |
|---|---|---|---|---|---|---|
| | 4800 bps | 9600 bps | 19200 bps | 38400 bps*4 | 57600 bps*4 | 115200 bps*4 |
| SW09 | OFF | ON | OFF | ON | OFF | ON |
| SW10 | OFF | OFF | ON | ON | ON | ON |
| SW11 | ON | ON | ON | ON | OFF | OFF |
| SW12 | OFF | OFF | OFF | OFF | ON | ON |

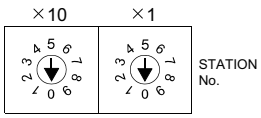
*1 Only transmission speeds available on the GOT side are shown.

*2 When the software version of AJ71QC24 (-R2/R4) and A1SJ71QC24 (-R2) is "L" or earlier, and when 2 devices are connected to the two interfaces individually, make the setting so that the total transmission speed of the two interfaces is within 19200bps.
When the total transmission speed of the two interfaces is within 19200bps, a controller other than GOT can be connected to the computer link module.
When only one device is connected to either of the interfaces, a maximum transmission speed of 19200bps can be set to the one where the device is connected.In this instance, set SW09 to SW12 to "OFF" on the other side.

*3 When 3 devices are connected to the two interfaces individually in the case of AJ71QC24N(-R2/R4), A1SJ71QC24N(-R2), and A1SJ71QC24N1(-R2), make the setting so that the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)).
When the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)), a controller other than GOT can be connected to the computer link module.
When only one device is connected to either of the interfaces, a maximum transmission speed of 115200bps can be set to the one where the device is connected.
In this instance, set SW09 to SW12 to "OFF" on the other side.

*4 This can be set only in the case of AJ71QC24N (-R2/R4), A1SJ71QC24N (-R2) or A1SJ71QC24N1 (-R2).

## ■Station number switch (for both CH1 and CH2)

| Station number switch*1 | Contents | Set value |
|---|---|---|
|  | Set the station number of the serial communication module to which an access is made from the GOT. | 0 |

*1 The station number switch in the figure is for the AJ71QC24 (N) (-R2/R4).

**Point**

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

# Connecting to MELSEC-A series

**Point**

Computer link module (MELSEC-A series)

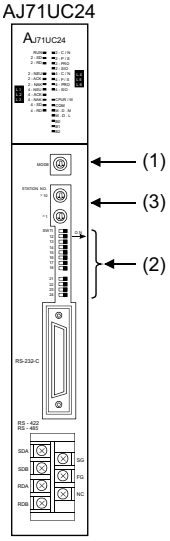
For details on the computer link module (MELSEC-A series), refer to the following.

Computer Link Module (Com. link func./Print. func.) User's Manual

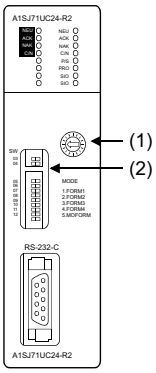
## Switch setting on the computer link module

Set the Mode setting switch, the Transmission specifications switches and the Station number setting switches.

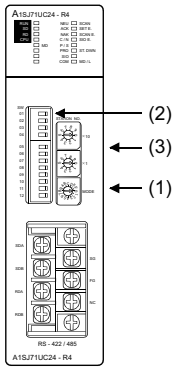
AJ71UC24



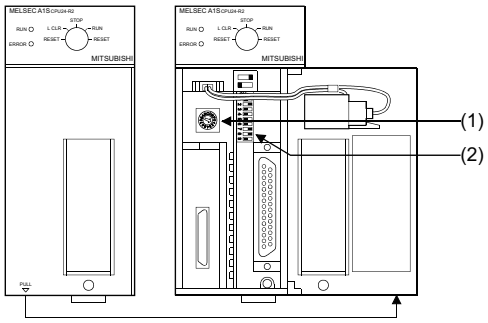

A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF




A1SJ71UC24-R4, A1SJ71C24-R4

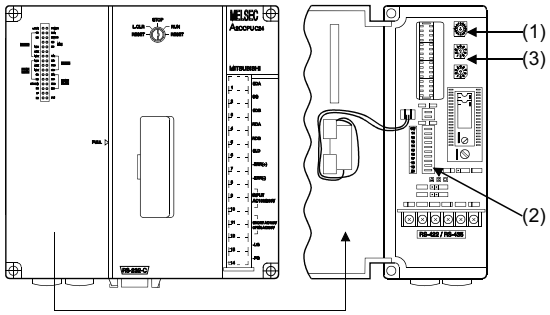



A1SCPUC24-R2




When the cover is open

A2CCPUC24, A2CCPUC24-PRF



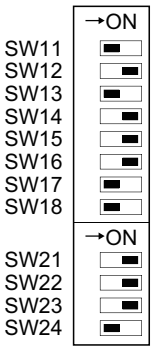

When the cover is open

### ■Mode setting switch

| Mode setting switch | Contents | | Set value |
|---|---|---|---|
|  | Dedicated protocol type 1 | RS-232 connection | 1 |
| | | RS-422 connection | 5 |

## ■Transmission specifications switch

• AJ71UC24

| Transmission specifications switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
|  | SW11 | Main channel setting | RS-232 connection | OFF |
| | | | RS-422 connection | ON |
| | SW12 | Data bit setting | 8bits | ON |
| | SW13 | Transmission speed setting | (Consistent with the GOT side specifications) | See descriptions below. |
| | SW14 | | | |
| | SW15 | | | |
| | SW16 | Parity bit setting | Set | ON |
| | SW17 | Even/odd parity setting | Odd | OFF |
| | SW18 | Stop bit setting | 1bit | OFF |
| | SW21 | Sum check setting | Set | ON |
| | SW22 | Write during RUN enabled/disabled setting | Enabled | ON |
| | SW23 | Computer link/multi-drop selection | Computer link | ON |
| | SW24 | Master station/Local station setting | (Setting ignored) | OFF |

• Transmission speed setting (SW13 to SW15)

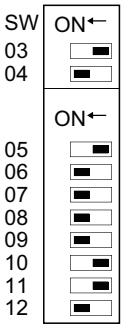
Set the transmission speed (SW13 to SW15) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting switch | Transmission speed*1 | | |
|---|---|---|---|
| | 4800bps | 9600bps | 19200bps |
| SW13 | OFF | ON | OFF |
| SW14 | OFF | OFF | ON |
| SW15 | ON | ON | ON |

*1 Only transmission speeds available on the GOT side are shown.

• A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF

| Transmission specifications switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
|  | SW03 | Unused | — | OFF |
| | SW04 | Write during RUN enabled/disabled setting | Enabled | ON |
| | SW05 | Transmission speed setting | (Consistent with the GOT side specifications) | See descriptions below. |
| | SW06 | | | |
| | SW07 | | | |
| | SW08 | Data bit setting | 8bits | ON |
| | SW09 | Parity bit setting | Set | ON |
| | SW10 | Even/odd parity setting | Odd | OFF |
| | SW11 | Stop bit setting | 1bit | OFF |
| | SW12 | Sum check setting | Set | ON |

• Transmission speed setting (SW05 to SW07)

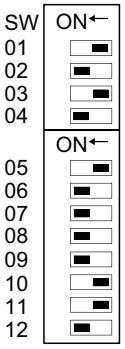
Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting switch | Transmission speed*1 | | |
|---|---|---|---|
| | 4800bps | 9600bps | 19200bps |
| SW05 | OFF | ON | OFF |
| SW06 | OFF | OFF | ON |
| SW07 | ON | ON | ON |

*1 Only transmission speeds available on the GOT side are shown.

• A1SJ71UC24-R4, A1SJ71C24-R4

| Transmission specifications switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
|  | SW01 | Master station/Local station setting | (Setting ignored) | OFF |
| | SW02 | Computer link/multi-drop selection | Computer link | ON |
| | SW03 | Unused | — | OFF |
| | SW04 | Write during RUN enabled/disabled setting | Enabled | ON |
| | SW05 | Transmission speed setting | (Consistent with the GOT side specifications) | See descriptions below. |
| | SW06 | | | |
| | SW07 | | | |
| | SW08 | Data bit setting | 8bits | ON |
| | SW09 | Parity bit setting | Set | ON |
| | SW10 | Even/odd parity setting | Odd | OFF |
| | SW11 | Stop bit setting | 1bit | OFF |
| | SW12 | Sum check setting | Set | ON |

• Transmission speed setting (SW05 to SW07)

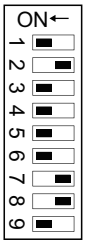
Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting switch | Transmission speed*1 | | |
|---|---|---|---|
| | 4800bps | 9600bps | 19200bps |
| SW05 | OFF | ON | OFF |
| SW06 | OFF | OFF | ON |
| SW07 | ON | ON | ON |

*1 Only transmission speeds available on the GOT side are shown.

• A1SCPUC24-R2

| Transmission specifications switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
|  | 1 | Write during RUN enabled/disabled setting | Enabled | ON |
| | 2 | Transmission speed setting | (Consistent with the GOT side specifications) | See descriptions below. |
| | 3 | | | |
| | 4 | | | |
| | 5 | Data bit setting | 8bits | ON |
| | 6 | Parity bit setting | Set | ON |
| | 7 | Even/odd parity setting | Odd | OFF |
| | 8 | Stop bit setting | 1bit | OFF |
| | 9 | Sum check setting | Set | ON |

• Transmission speed setting (2 to 4)

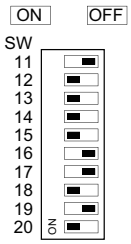
Set the transmission speed (2 to 4) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting switch | Transmission speed*1 | | |
|---|---|---|---|
| | 4800bps | 9600bps | 19200bps |
| 2 | OFF | ON | OFF |
| 3 | OFF | OFF | ON |
| 4 | ON | ON | ON |

*1 Only transmission speeds available on the GOT side are shown.

• A2CCPUC24, A2CCPUC24-PRF

| Transmission specifications switch | Setting switch | Description | | Set value |
|---|---|---|---|---|
|  | SW11 | Transmission speed setting | (Consistent with the GOT side specifications) | See descriptions below. |
| | SW12 | | | |
| | SW13 | | | |
| | SW14 | Data bit setting | 8bits | ON |
| | SW15 | Parity bit setting | Set | ON |
| | SW16 | Even/odd parity setting | Odd | OFF |
| | SW17 | Stop bit setting | 1bit | OFF |
| | SW18 | Sum check setting | Set | ON |
| | SW19 | Main channel setting | RS-232 | OFF |
| | SW20 | Write during RUN enabled/disabled setting | Enabled | ON |

• Transmission speed setting (SW11 to SW13)

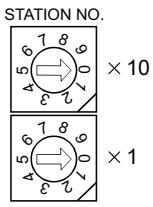
Set the transmission speed (SW11 to SW13) as follows.

The transmission speed setting must be consistent with that of the GOT side.

| Setting switch | Transmission speed*1 | | |
|---|---|---|---|
| | 4800bps | 9600bps | 19200bps |
| SW11 | OFF | ON | OFF |
| SW12 | OFF | OFF | ON |
| SW13 | ON | ON | ON |

*1 Only transmission speeds available on the GOT side are shown.

## ■Station number setting switch

| Station number switch*1 | Description | Set value |
|---|---|---|
|  | Set the station number of the computer link module to which an access is made from the GOT. | 0 |

*1 The station number setting switch in the figure is for the A1SJ71UC24-R4.

**Point**

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

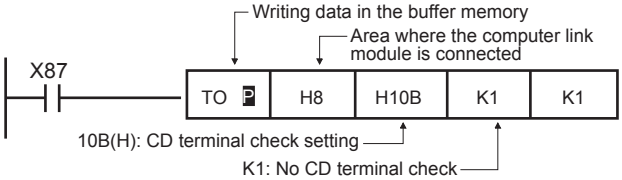
**Point**

When connecting GT2506HS-V or GT2505HS-V to a computer link module

When you connect GT2506HS-V or GT2505HS-V to a computer link module via RS-232, refer to the following sequence programs to set the buffer memory of the computer link module so that CD signals are not checked.

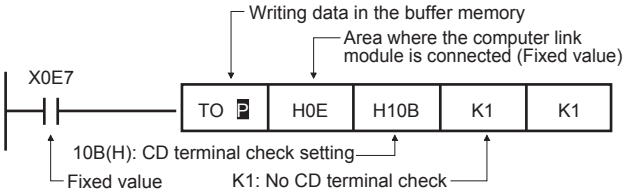
• In the case of A computer link

Refer to the program example below in which the I/O signals of the computer link module are 80 to 9F (H).

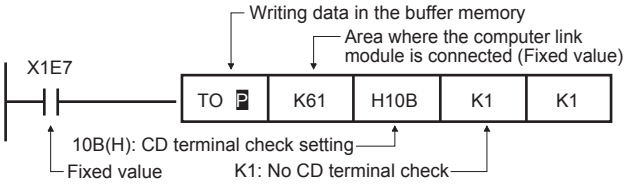



• In the case of CPU equipped with built-in computer link

A1SCPUC24-R2




A2CCPUC24



# 4.6 Precautions

## Time taken until the PLC runs when connected in the multiple CPU system

The following time is taken until the PLC runs.

MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), QCPU (Q mode), Motion CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.Adjust the opening screen time in the GOT setup so that no system alarm occurs.

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## Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

## When monitoring the Q170MCPU

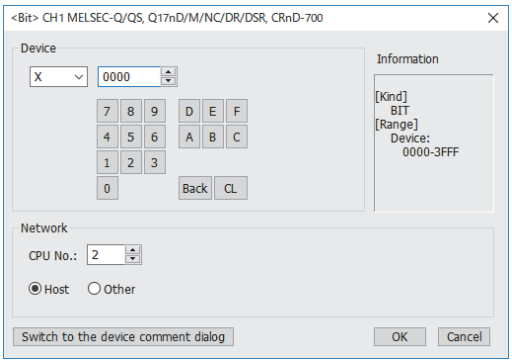
Set [CPU No.] to 2 in the device setting to monitor the device of the Motion CPU area (CPU No. 2).

When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual




## Connection to RnSFCPU

The RnSFCPU takes 10 seconds or more to run.

If the GOT is started before the RnSFCPU runs, a system alarm occurs.

To prevent a system alarm from occurring, adjust the title display time in the [GOT Setup] dialog.

GT Designer3 (GOT2000) Screen Design Manual

# 5 CC-Link CONNECTION (Via G4)


- Page 379 Connectable Model List
- Page 385 System Configuration
- Page 391 Connection Diagram
- Page 393 GOT Side Settings
- Page 399 PLC Side Settings
- Page 408 Precautions


## 5.1 Connectable Model List

### PLC/Motion CPU

The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC iQ-R Series | R00CPU | ○ | CC-Link (G4) | - | - |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU | | | | |
| | R16PCPU | | | | |
| | R32PCPU | | | | |
| | R120PCPU | | | | |
| | R04ENCPU | | | | |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU | | | | |
| | R16PSFCPU | | | | |
| | R32PSFCPU | | | | |
| | R120PSFCPU | | | | |
| | R08SFCPU | | | | |
| | R16SFCPU | | | | |
| | R32SFCPU | | | | |
| | R120SFCPU | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | CC-Link (G4) | - | - |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |
| C Controller module (MELSEC iQ-R Series) | R12CCPU-V | ○ | CC-Link (G4) | - | - |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | × | CC-Link (G4) | - | - |
| CNC C80 | R16NCCPU-S1 | ○ | CC-Link (G4) | - | - |
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | CC-Link (G4) | - | - |

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| CC-Link IE Filed Network head module | RJ72GF15-T2 | × | CC-Link (G4) | - | - |
| MELSEC iQ-F Series | FX5U | ○ | - | - | - |
| | FX5UC | | | | |
| | FX5UJ | | | | |
| | FX5S | | | | |
| MELSEC-Q (Q mode) | Q00JCPU | ○ | CC-Link (G4) | GT2506HS GT2505HS | ☞ Page 385 Connecting to QCPU (Q mode) |
| | Q00CPU*1 | | | | |
| | Q01CPU*1 | | | | |
| | Q02CPU*1 | | | | |
| | Q02HCPU*1<br>Q06HCPU*1<br>Q12HCPU*1<br>Q25HCPU*1 | | | | |
| | Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | ○ | CC-Link (G4) | GT2506HS GT2505HS | |
| | Q12PRHCPU (Main base) | | | | |
| | Q25PRHCPU (Main base) | | | | |
| | Q12PRHCPU (Extension base) | | | | |
| | Q25PRHCPU (Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8 | ○ | CC-Link (G4) | GT2506HS GT2505HS | |
| | Q00UCPU<br>Q01UCPU<br>Q02UCPU<br>Q03UDCPU | | | | |
| | Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | | | | |
| | Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU | | | | |
| | Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | | | | |

*1 When in multiple CPU system configuration, use CPU function version B or later.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| C Controller module (Q Series) | Q12DCCPU-V[*1]<br>Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | ○ | CC-Link(G4) | GT 2506 HS GT 2505 HS | ☞ Page 385 Connecting to QCPU (Q mode) |
| MELSEC-QS | QS001CPU | ○ | - | - | - |
| MELSEC-L | L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L02SCPU<br>L02SCPU-P | ○ | CC-Link(G4) | GT 2506 HS GT 2505 HS | ☞ Page 388 Connecting to LCPU |
| MELSEC-Q (A mode) | Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | ○ | - | - | - |
| MELSEC-QnA (QnACPU) | Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU<br>Q4ARCPU | ○ | - | - | - |
| MELSEC-QnA (QnASCPU) | Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | ○ | - | - | - |
| MELSEC-A (AnCPU) | A2UCPU<br>A2UCPU-S1<br>A3UCPU<br>A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1<br>A3ACPU<br>A3ACPUP21<br>A3ACPUR21<br>A1NCPU<br>A1NCPUP21<br>A1NCPUR21<br>A2NCPU<br>A2NCPUP21<br>A2NCPUR21<br>A2NCPU-S1<br>A2NCPUP21-S1<br>A2NCPUR21-S1<br>A3NCPU<br>A3NCPUP21<br>A3NCPUR21 | ○ | - | - | - |

*1 Use only modules with the upper five digits of the serial No. later than 12042.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSEC-A (AnSCPU) | A2USCPU | ○ | - | - | - |
| | A2USCPU-S1 | | | | |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 | | | | |
| | A1SHCPU | | | | |
| | A2SCPU | | | | |
| | A2SCPU-S1 | | | | |
| | A2SHCPU | | | | |
| | A2SHCPU-S1 | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU | | | | |
| MELSEC-A | A0J2HCPU | × | - | - | - |
| | A0J2HCPUP21 | | | | |
| | A0J2HCPUR21 | | | | |
| | A0J2HCPU-DC24 | | | | |
| | A2CCPU | ○ | - | - | - |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | | | | |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | | | | |
| | A1FXCPU | | | | |
| Motion CPU (Q Series) | Q172CPU*1*2 | ○ | CC-Link (G4) | GT 2506 HS GT 2505 HS | ☞ Page 385 Connecting to QCPU (Q mode) |
| | Q173CPU*1*2 | | | | |
| | Q172CPUN*1 | | | | |
| | Q173CPUN*1 | | | | |
| | Q172HCPU | | | | |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | | | | |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU*3 | | | | |
| | Q170MSCPU*4 | | | | |
| | Q170MSCPU-S1*4 | | | | |

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*3 Only the first step can be used on the extension base unit (Q52B/Q55B).

*4 The extension base unit (Q5□B/Q6□B) can be used.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Motion CPU (A Series) | A273UCPU | ○ | - | - | - |
| | A273UHCPU | | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | | | | |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |
| | A171SHCPU | | | | |
| | A171SHCPUN | | | | |
| | A172SHCPU | | | | |
| | A172SHCPUN | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |
| MELSEC-WS | WS0-CPU0 | × | - | - | - |
| | WS0-CPU1 | | | | |
| | WS0-CPU3 | | | | |
| MELSECNET/H Remote I/O station | QJ72LP25-25 | × | - | - | - |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | - | - | - |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | - | - | - |
| CNC C70 | Q173NCCPU | ○ | CC-Link (G4) | GT 2506 HS GT 2505 HS | ☞ Page 385 Connecting to QCPU (Q mode) |
| Robot controller (Q Series) | CRnQ-700 (Q172DRCPU)<br>CR750-Q (Q172DRCPU)<br>CR751-Q (Q172DRCPU)<br>CR800-Q (Q172DSRCPU) | ○ | CC-Link (G4) | GT 2506 HS GT 2505 HS | ☞ Page 385 Connecting to QCPU (Q mode) |
| MELSEC-FX | FX0 | × | - | - | - |
| | FX0S | | | | |
| | FX0N | | | | |
| | FX1 | | | | |
| | FX2 | × | | | |
| | FX2C | | | | |
| | FX1S | ○ | | | |
| | FX1N | | | | |
| | FX2N | | | | |
| | FX1NC | | | | |
| | FX2NC | × | | | |
| | FX3S | ○ | | | |
| | FX3G | | | | |
| | FX3GC | | | | |
| | FX3GE | | | | |
| | FX3U | | | | |
| | FX3UC | | | | |

# CC-Link module/peripheral module

| CPU series | Model name | |
|---|---|---|
| | CC-Link module | Peripheral module |
| MELSEC-Q (Q mode)<br>C Controller module (Q Series)<br>Motion CPU (Q Series)<br>CNC C70<br>Robot controller (Q Series) | QJ61BT11<br>QJ61BT11N | AJ65BT-G4-S3<br>AJ65BT-R2N |
| MELSEC-L | LJ61BT11 | |

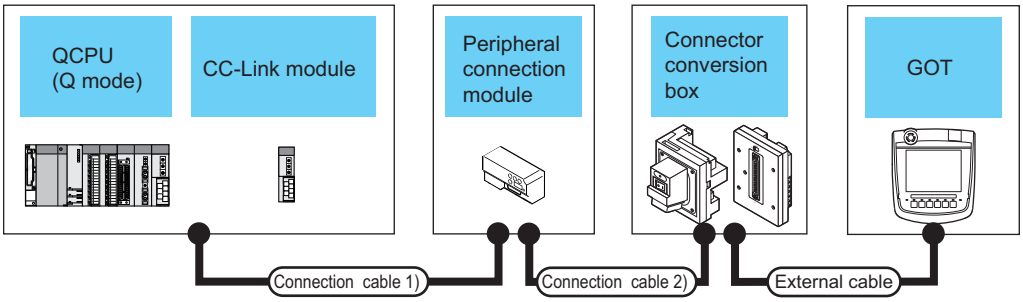
# 5.2 System Configuration

## Connecting to QCPU (Q mode)

Communication driver

CC-Link (G4)

### When using the connector conversion box




| PLC | | Connection cable 1) | | Peripheral connection module | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | Cable model Connection diagram number | | | | | |
| MELSEC-Q (Q mode) C Controller module (Q Series) Robot controller (Q Series) | QJ61BT11 QJ61BT11N | CC-Link dedicated cable *2 | *3 | AJ65BT-R2N | RS-232 | GT09-C30R2-9P or User preparing Page 391 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 peripheral connection module |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | | | AJ65BT-G4-S3 | RS-422 | GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

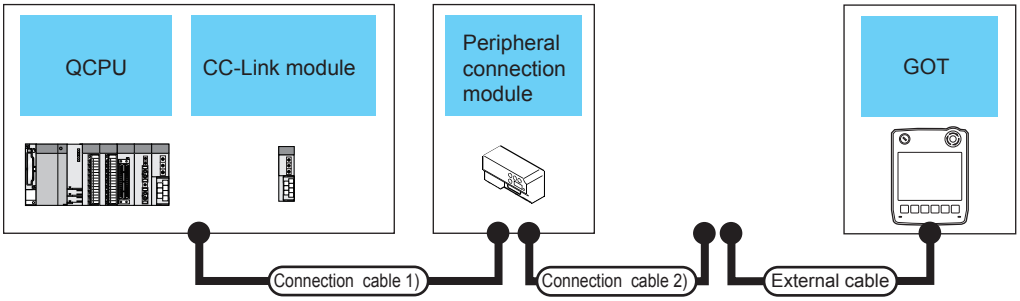
*1 For the system configuration of the CC-Link module, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | | Peripheral connection module | | Connection cable 2) | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | Cable model Connection diagram number | | | | |
| MELSEC-Q C Controller module (Q Series) CR800-Q (Q172DSR CPU) | QJ61BT11 QJ61BT11N | CC-Link dedicated cable *2 | *3 | AJ65BT-R2N | RS-232 | User preparing Page 391 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 peripheral connection module |

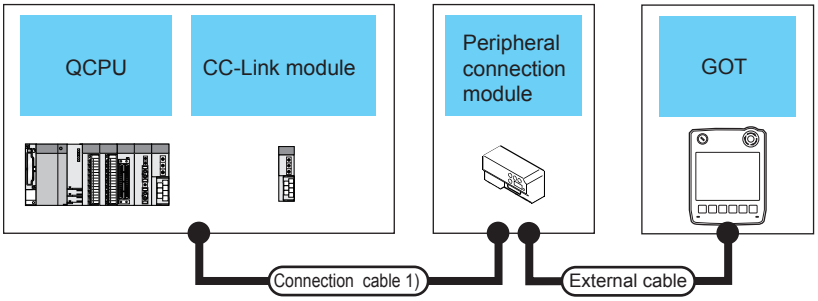
*1 For the system configuration of the CC-Link module, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□)




| PLC | | Connection cable 1) | | Peripheral connection module | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | | | | |
| MELSEC-Q C Controller module (Q Series) CR800-Q (Q172DSRCPU) | QJ61BT11 QJ61BT11N | CC-Link dedicated cable *2 | *3 | AJ65B T-R2N | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 392 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 peripheral connection module |

*1 For the system configuration of the CC-Link module, refer to the following manual.
📖CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
☞ CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
📖CC-Link System Master/Local Module User's Manual QJ61BT11N

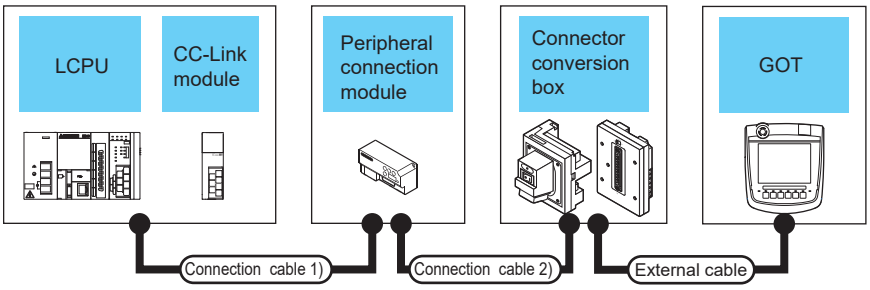
*4 The distance from the GOT to the peripheral connection module (External cable)

# Connecting to LCPU

Communication driver

CC-Link (G4)

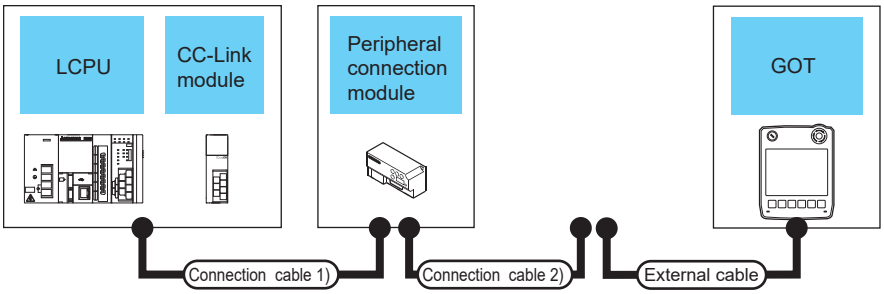
## When using the connector conversion box




| PLC | | Connection cable 1) | | Peripheral connection module | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | Cable model Connection diagram number | | | | | |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L02SCPU<br>L02SCPU-P | LJ61BT11 | CC-Link dedicated cable *2 | *3 | AJ65BT-R2N | RS-232 | GT09-C30R2-9P or Page 391 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 peripheral connection module |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | | | AJ65BT-G4-S3 | RS-422 | GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| L26CPU-BT<br>L26CPU-PBT | - | | | AJ65BT-R2N | RS-232 | GT09-C30R2-9P or Page 391 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | | | AJ65BT-G4-S3 | RS-422 | GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 For the system configuration of the CC-Link module, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/
*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

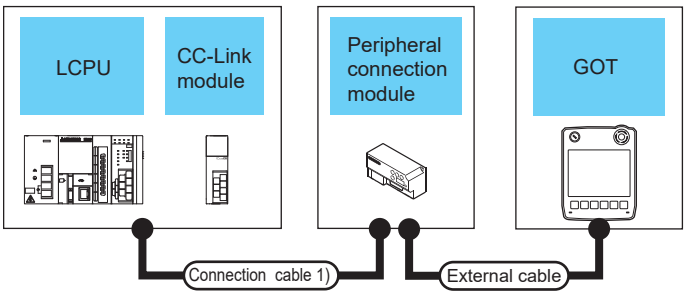
## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | | Peripheral connection module | | Connection cable 2) | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | Cable model Connection diagram number | | | | |
| L02CPU L26CPU-BT L02CPU-P L26CPU-PBT | LJ61BT11 | CC-Link dedicated cable *2 | *3 | AJ65BT-R2N | RS-232 | User preparing Page 391 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 peripheral connection module |
| L26CPU-BT L26CPU-PBT | - | | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 For the system configuration of the CC-Link module, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/
*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□)




| PLC | | Connection cable 1) | | Peripheral connection module | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | CC-Link module *1 | Cable model | Max. distance | Model name | Communication type | | | | |
| L02CPU<br>L26CPU-BT<br>L02CPU-P<br>L26CPU-PBT | LJ61BT11 | CC-Link dedicated cable *2 | *3 | AJ65BT-R2N | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 392 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 peripheral connection module |
| L26CPU-BT<br>L26CPU-PBT | - | | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 392 RS-232 connection diagram 3) | GT 2505HS | | |

*1 For the system configuration of the CC-Link module, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
☞ CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual

*4 The distance from the GOT to the peripheral connection module (External cable)

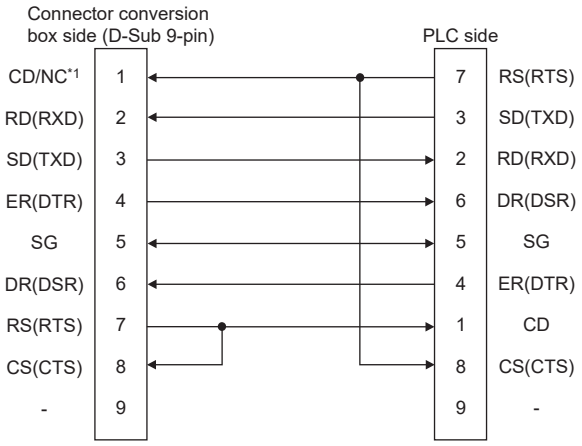
# 5.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

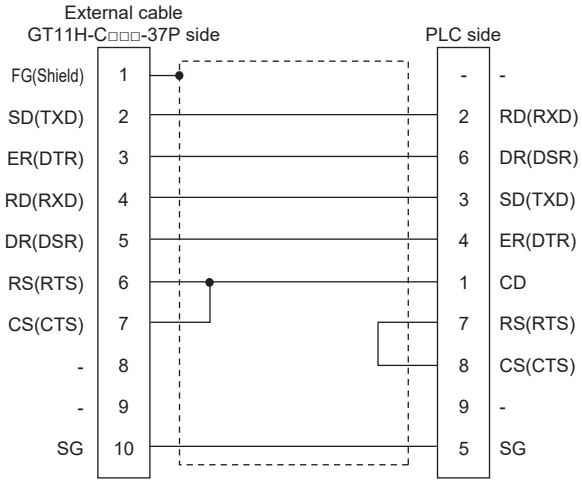
### Connection diagram

#### ■RS-232 connection diagram 1)

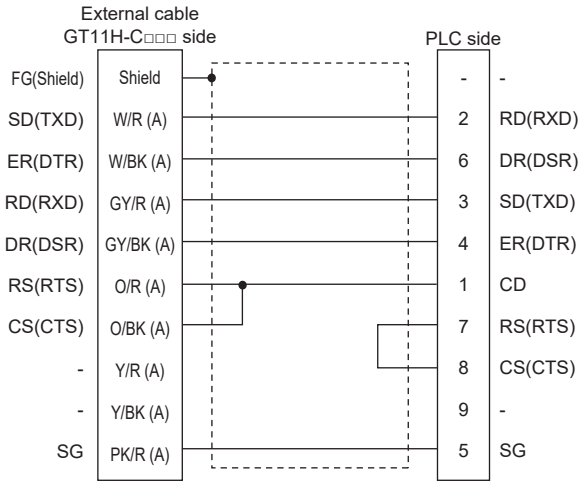



*1 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)



### ■RS-232 connection diagram 3)




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and peripheral connection module) of the RS-232 cable must be 6m or less.

### ■GOT side connector

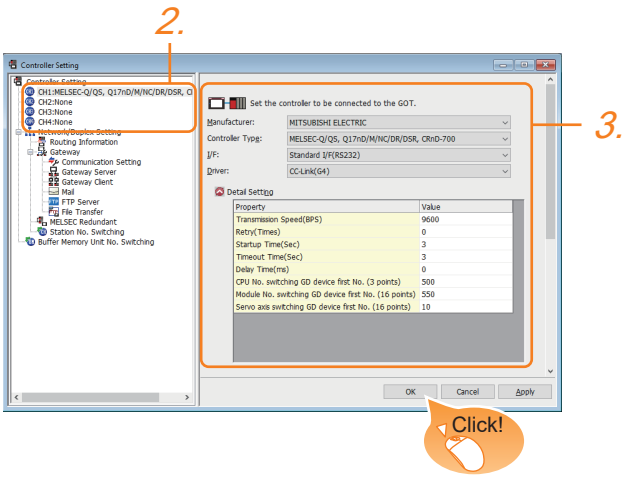
For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

# 5.4 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: [CC-Link(G4)]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 394 Communication detail settings

4. When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Retry(Times) | 0 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching.<br>(Default: 500)<br>For the details, refer to the following.<br>☞ Page 395 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching.<br>(Default: 550)<br>For the details, refer to the following.<br>☞ Page 396 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 397 Servo axis switching GD device first No. | 0 to 65520 |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

📖GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a motion CPU or simple motion module, a servo axis No. can be indirectly specified with the GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

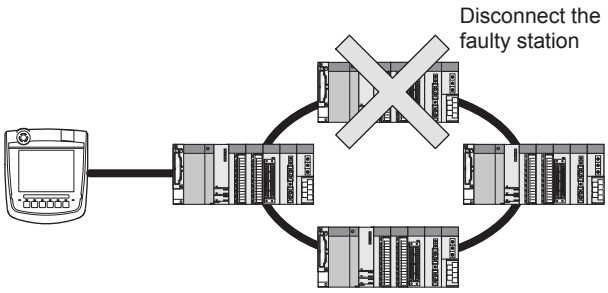
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

**Point**

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.




For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 5.5 PLC Side Settings

| Model | | Reference |
|---|---|---|
| Peripheral connection module | AJ65BT-G4-S3 | ☞ Page 399 Connecting AJ65BT-G4-S3 |
| | AJ65BT-R2N | ☞ Page 401 Connecting AJ65BT-R2N |

## Connecting AJ65BT-G4-S3

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

**Point**

• Peripheral connection module

For details of the peripheral connection module, refer to the following manual.

📖Peripheral Connection Module Type AJ65BT-G4-S3 User's Manual (detail volume)

• CC-Link module

For details of the CC-Link module, refer to the following manual.

📖CC-Link System Master/Local Module User's Manual QJ61BT11N

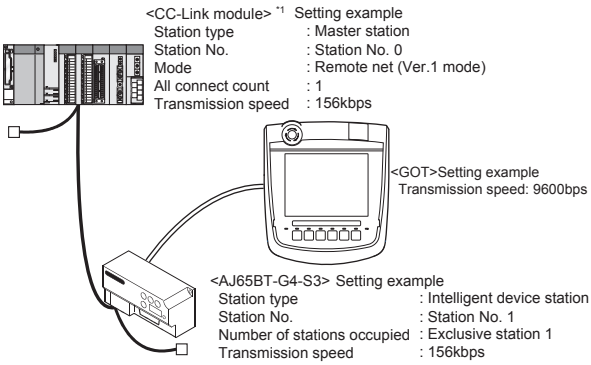
📖MELSEC-L CC-Link System Master/Local Module User's Manual

• CC-Link function built-in CPU

For details on the CC-Link function built-in CPU, refer to the following manual.

📖MELSEC-L CC-Link System Master/Local Module User's Manual

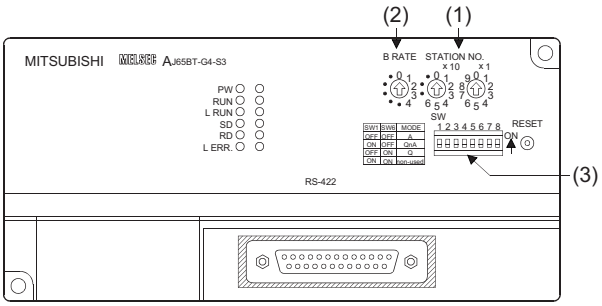
### System configuration



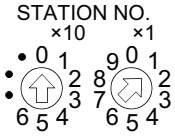

*1 The Start I/O No. of the CC-Link module is set to "0"

### Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.



## ■Station number setting switch

| Station number setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| STATION NO.<br>×10 ×1<br>  | AJ65BT-G4-S3 station number setting | 1 to 64 | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■Data link transmission speed setting switch

| Data link transmission speed setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| B RATE<br>  | Data link transmission speed setting | 0: 156kbps<br>1: 625kbps<br>2: 2.5Mbps<br>3: 5Mbps<br>4: 10Mbps | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■Operation setting DIP switch

| Operation setting DIP switch | Setting Switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|---|
| SW<br>1 2 3 4 5 6 7 8<br>  <br>ON | SW1, SW6 | Operation mode | SW1 = OFF<br>SW6 = ON<br>(fixed) (Q mode) | ○ |
| | SW2 | Peripheral transmission speed*1 | OFF (fixed) | × |
| | SW3 | | | |
| | SW4 | Not used | OFF (fixed) | × |
| | SW5 | | | |
| | SW7 | | | |
| | SW8 | Test mode | OFF (fixed) (Q mode) | ○ |

○: Necessary △: As necessary ×: Not necessary

*1 The peripheral connection module operates with the baud rate set in the GOT.
☞ Page 407 [Controller Setting] of GT Designer3

**Point**

Operation mode of peripheral connection module

Be sure to set the "Q mode" as an operation mode of the peripheral connection module.

# Connecting AJ65BT-R2N

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

**Point**

• Peripheral connection module

For details of the peripheral connection module, refer to the following manual.

Peripheral Connection Module Type AJ65BT-R2N User's Manual

• CC-Link module

For details of the CC-Link module, refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N

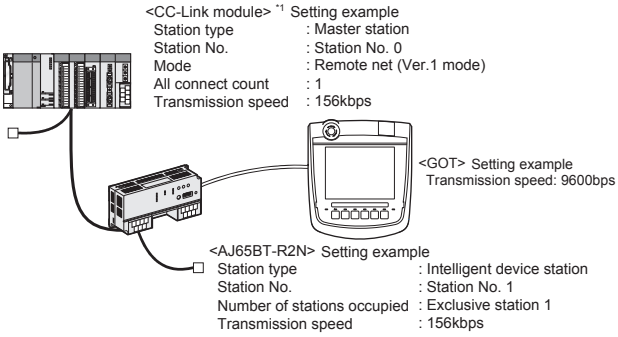
• CC-Link built-in CPU

For details on the CC-Link function built-in CPU, refer to the following manual.

MELSEC-L CC-Link System Master/Local Module User's Manual



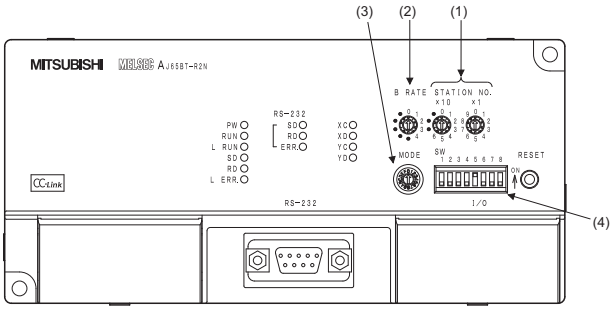
## System configuration




*1 The Start I/O No. of the CC-Link module is set to "0"

## Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.




### ■Station number setting switch

| Station number setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| STATION NO.<br>x10 x1 | AJ65BT-R2N station number setting | 1 to 64 | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■Data link transmission speed setting switch

| Data link transmission speed setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| B RATE   | Data link transmission speed setting | 0: 156kbps<br>1: 625kbps<br>2: 2.5Mbps<br>3: 5Mbps<br>4: 10Mbps | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■Mode setting switch

| Mode setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| MODE  | Mode setting | 5 (fixed) (MELSOFT /connection mode) | ○ |

○: Necessary △: As necessary ×: Not necessary

## ■RS-232 transmission setting switch

| RS-232 transmission setting switch | Setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|---|
| SW 1 2 3 4 5 6 7 8 ON  | SW1 | Peripheral transmission speed*1 | OFF (fixed) | ○ |
| | SW2 | | | |
| | SW3 | | | |
| | SW4 | | | |
| | SW5 | Data bit length | OFF (fixed) | ○ |
| | SW6 | Parity bit length | OFF (fixed) | ○ |
| | SW7 | | | |
| | SW8 | Stop bit length | OFF (fixed) | ○ |

○: Necessary △: As necessary ×: Not necessary

*1 The peripheral connection module operates with the baud rate set in the GOT.
☞ Page 407 [Controller Setting] of GT Designer3

**Point**

Precautions when setting peripheral connection module

• mode setting switch

Be sure to set the Operation mode setting switch to "5" (MELSOFT/connection mode).

• RS-232 transmission setting switch

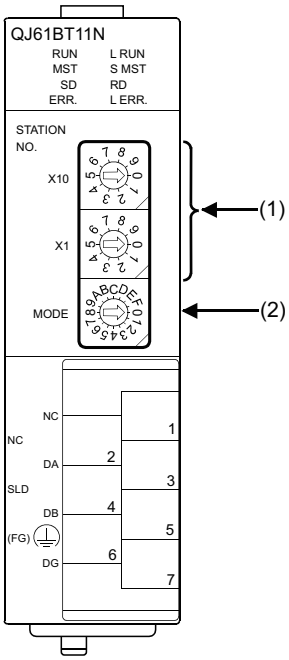
Turn OFF SW1 through SW8 of the RS-232 transmission setting switch.

If any switch of SW1 through SW8 is ON, setting error will occur (RUN LED turns off).

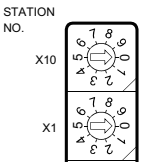
# Switch setting of CC-Link module (Q series)

Set the station number setting switch, transmission speed / mode setting switch.

QJ61BT11, QJ61BT11N



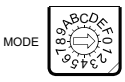

## Station number setting switch

| Station number setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
|  | Station number setting (master station) | 0 (fixed) | ○ |



○: Necessary △: As necessary ×: Not necessary

## Transmission rate/mode setting switch

| Transmission rate/mode setting switch | Description | Set value | Setting necessity at GOT connection |
|---|---|---|---|
|  | Transmission rate/mode setting | 0: 156kbps<br>1: 625kbps<br>2: 2.5Mbps<br>3: 5Mbps<br>4: 10Mbps | ○ |



○: Necessary △: As necessary ×: Not necessary

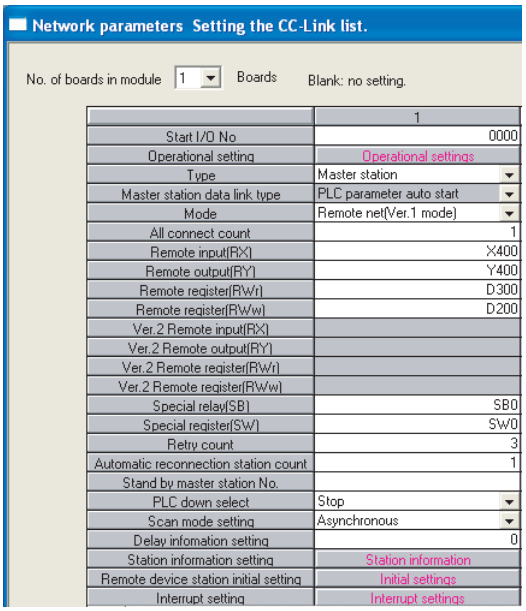
**Point**

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

# [Network parameter] of GX Developer

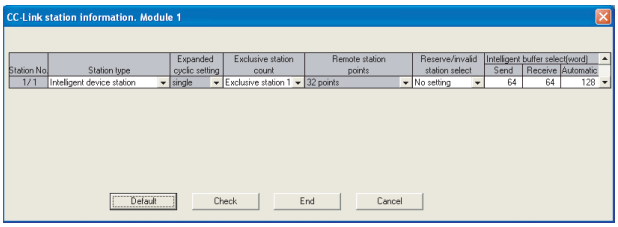
## Network parameter




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| No. of boards in module | 1 | ○ |
| Start I/O No. | 0000H | ○ |
| Operation setting | (Use default value) | △ |
| Type | Master station (fixed) | ○ |
| Mode | Remote net (Ver.1 mode) | ○ |
| All connect count | 1 | ○ |
| Remote input (RX) | X400 | △ |
| Remote output (RY) | Y400 | △ |
| Remote register (RWr) | D300 | △ |
| Remote register (RWw) | D200 | △ |
| Special relay (SB) | SB0 | △ |
| Special register (SW) | SW0 | △ |
| Retry count | (Use default value) | △ |
| Automatic reconnection station count | | △ |
| Stand by master station No. | | × |
| PLC down select | | △ |
| Scan mode setting | | △ |
| Delay information setting | | △ |
| Station information setting | ☞ Page 405 Station information setting | ○ |
| Remote device station initial setting | (Use default value) | × |
| Interrupt setting | | × |

○: Necessary △: As necessary ×: Not necessary

## Station information setting




| Item*1 | Set value | Setting necessity at GOT connection |
|---|---|---|
| Station type*2 | Intelligent device station (fixed) | ○ |
| Number of stations occupied | Exclusive station 1 (fixed) | ○ |
| Reserve/invalid station select | No setting | ○ |
| Intelligent buffer select (word) | (Use default value) | × |

○: Necessary △: As necessary ×: Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set.
[Remote station points] is a setting for the remote I/O station.
The default value (32 points) must be used on the GOT.

*2 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)] or [Remote net - Additional mode], set to [Ver. 1 Intelligent device station].

**Point**

When changing the network parameter

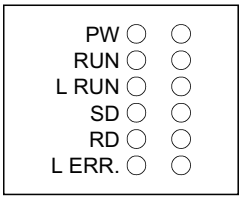
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

## Completion confirmation

After initial communications of CC-Link are completed, the L RUN LED of AJ65BT-G4-S3 turns on.

The GOT starts to monitor after the L-RUN LED of AJ65BT-G4-S3 turns on.

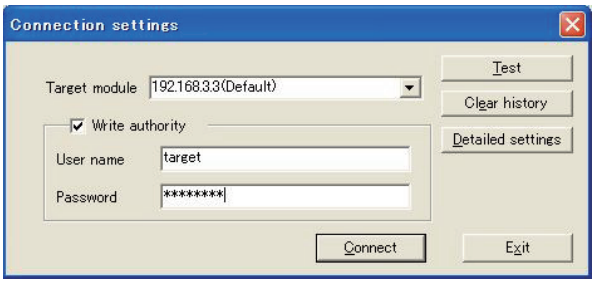
It does not monitor while the L RUN LED turns off.



# Parameter setting (when connecting to C Controller module (Q Series))

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller module setting utility.

## Connection settings




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| Target module*1 | 192.168.3.3 | ○ |
| Write authority | Mark the checkbox | ○ |
| User name*2 | target | ○ |
| Password*2 | password | ○ |
| Detailed settings | - | △ |

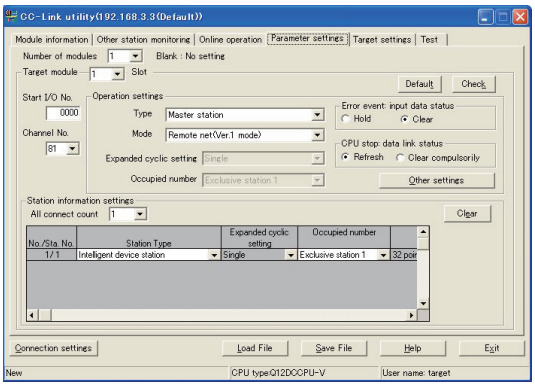
○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address or host name.

*2 If the account of the C Controller module (Q Series) has been changed, input the changed user name and password.

## [Parameter Setting] of CC-Link utility

### ■Network parameter




| Item | | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Number of modules | | 1 | ○ |
| Target module | | 1 | ○ |
| Start I/O No. | | 0000H | ○ |
| Channel No. | | (Use default value) | ○ |
| Operation setting | type | Master station (fixed) | ○ |
| | Mode*1 | Remote net (Ver.1 mode) | ○ |
| | Expanded cyclic station | Single (fixed) | △ |
| | Occupied number | Exclusive station 1 (fixed) | △ |
| | Error event: input data status | Clear | △ |
| | CPU stop: data link status | Refresh | △ |
| | Other settings | (Use default value) | △ |

| Item | | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Station information settings | All connect count | 1 | ○ |
| | Station type | Ver.1 Intelligent device station (fixed) | ○ |
| | Expanded cyclic station | Single | △ |
| | Occupied number*2 | Exclusive station 1 | × |
| | Remote station points | 32 points | ○ |
| | Reserve/invalid station select | No setting | ○ |
| | Intelligent buffer select (word) | (Use default value) | × |

○: Necessary △: As necessary ×: Not necessary

*1 If the CC-Link module [Mode] is [Remote net -Ver.1 mode], [Remote station points] cannot be set.

*2 Set the same setting as that of the GOT.

**Point**

When changing the network parameter

After writing the network parameter to the C Controller module (Q Series), either turn the C Controller module (Q Series) OFF and then ON or reset it.



# [Controller Setting] of GT Designer3

| Item | Set value |
|---|---|
| Transmission Speed | 9600bps<br>19200bps<br>38400bps<br>57600bps<br>115200bps |
| Retry Count | 0 to 5times |
| Timeout Time | 3 to 30sec |
| Delay Time | 0 to 300ms |

**Point**

[Controller Setting] of GT Designer3

For [Controller Setting], of GT Designer3, refer to the following.

☞ Page 393 Setting communication interface (Controller Setting)

# 5.6 Precautions

## Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.
QCPU (Q mode), motion CPU (Q series): 10 seconds or more
MELDAS C70: 18 seconds or more
When the GOT starts before the PLC runs, a system alarm occurs.
Adjust the opening screen time in the GOT setup so that no system alarm occurs.
GT Designer3 (GOT2000) Screen Design Manual

## Connection to LCPU

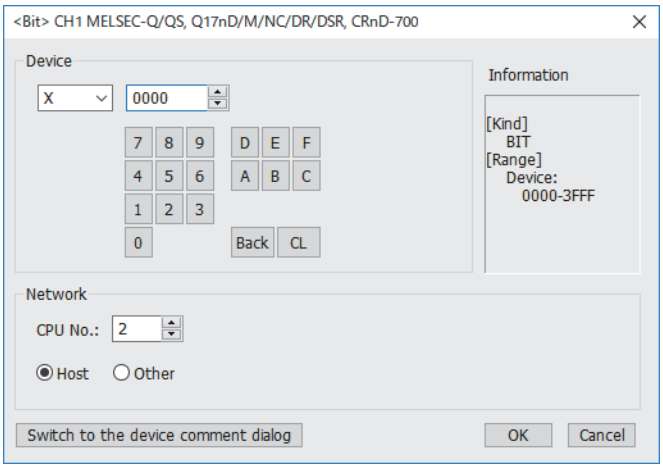
LCPU may diagnose (check file system, execute recovering process, etc.) the SD memory card when turning on the power or when resetting.
Therefore, it takes time until the SD memory card becomes available.
When the GOT starts before the SD card becomes available, a system alarm occurs.
Adjust the opening screen time in the GOT setup so that no system alarm occurs.
GT Designer3 (GOT2000) Screen Design Manual

## Connection to Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, CRnQ-700, or CR800-Q (Q172DSRCPU)

The Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, CRnQ-700, and CR800-Q (Q172DSRCPU) are applicable to CC-Link Ver.2 only.
For connecting to the CC-Link (Via G4) network system, set the CC-Link (G4) network system to the CC-Link Ver.2 mode.

## Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to 2 in the device setting to monitor the device of the motion CPU area (CPU No. 2).
When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.
When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.
For the setting of [CPU No.], refer to the following.
GT Designer3 (GOT2000) Screen Design Manual



# PART 3 MITSUBISHI ELECTRIC FA DEVICE CONNECTIONS

6 MELIPC CONNECTION

7 INVERTER CONNECTION

8 SERVO AMPLIFIER CONNECTION

9 ROBOT CONTROLLER CONNECTION

10 CNC CONNECTION

# 6 MELIPC CONNECTION


- Page 410 Connectable Model List
- Page 411 System Configuration
- Page 413 GOT side settings
- Page 420 MELIPC Side Settings
- Page 426 Settable Device Range


## 6.1 Connectable Model List

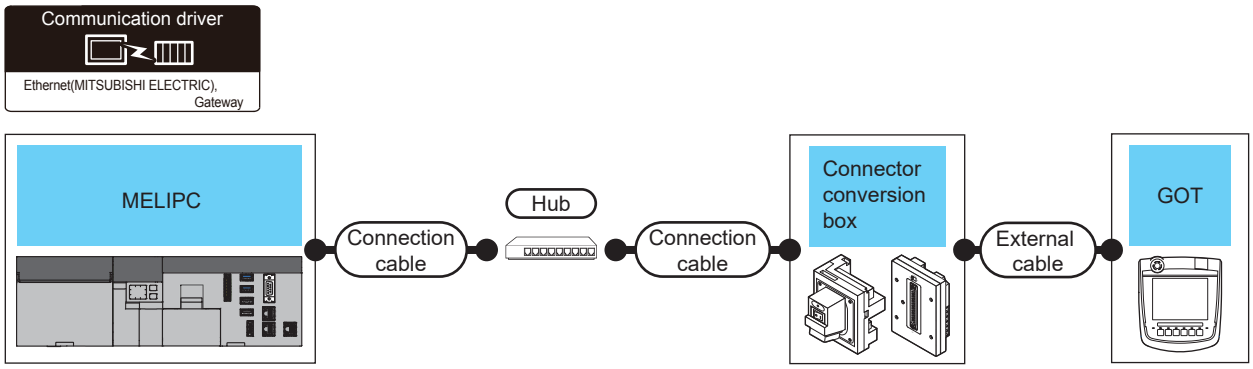
The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELIPC | MI5122-VW | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 411 Connection to MELIPC (MI5122-VW) |

# 6.2 System Configuration

## Connection to MELIPC (MI5122-VW)

### Direct connection




| MELIPC | | Connection cable*1 | Max. distance*2 | Connector conversion box | External cable*5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | | | | | | |
| MI5122-VW*3*4 (Built in Ethernet port: CH1) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 16 GOTs |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

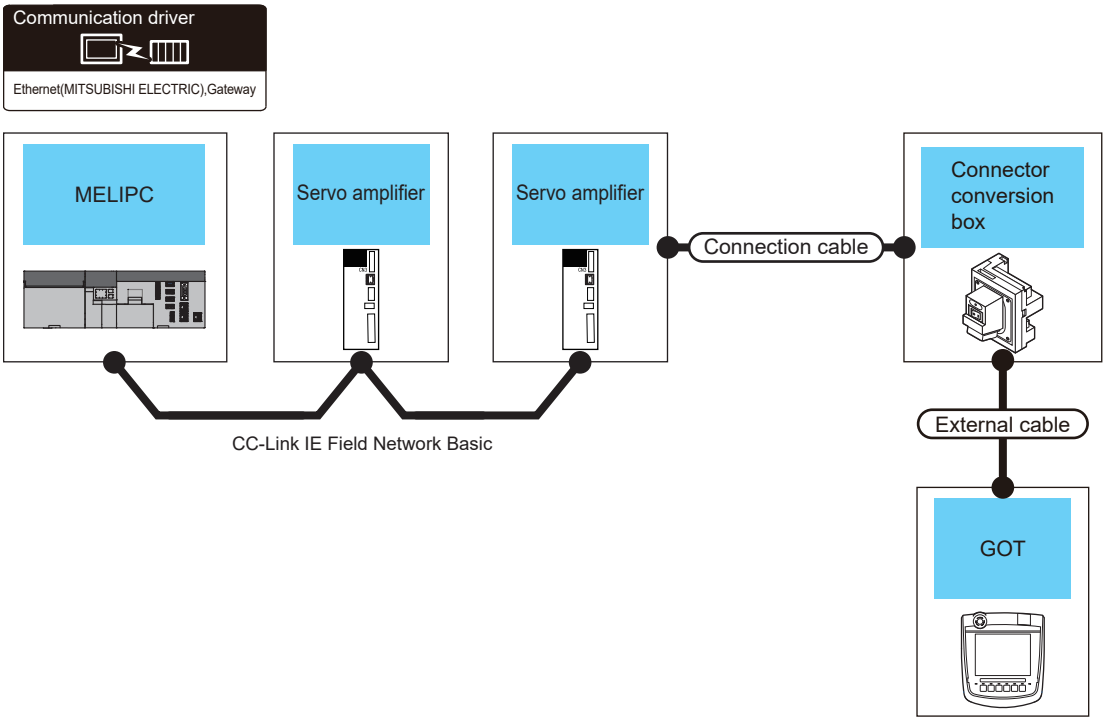
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of MELIPC, refer to the following manual.
Manuals of MELIPC

*4 Select [MELIPC] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 419 Connected Ethernet Controller Setting

*5 Use C or later version of GT11H-C□□-37P.

## Connection through a servo amplifier




| MELIPC*1 | | Servo amplifier | | Connection cable | Maximum segment length*2 | Connector conversion box | External cable | GOT Model *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | Model name | Communication type | | | | | | |
| MI5122-VW | CC-Link IE Field Network Basic | MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5D1-□G4<br>MR-JET-G | Ethernet | 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 GOT for 1 servo amplifier |

*1 For the system configuration of MELIPC, refer to the following manual.
Manuals of MELIPC

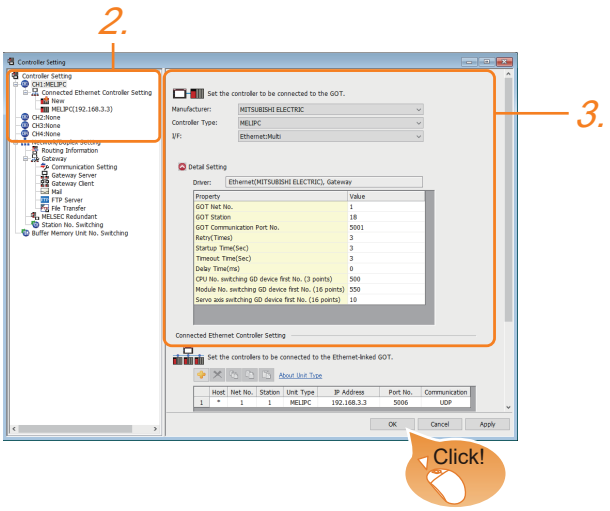
*2 The length between the hub and node.
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 100BASE-TX: Up to 2 pieces using cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit, contact the switching hub manufacturer.

*3 For the settings in GOT, refer to the following.
Page 413 GOT side settings

# 6.3 GOT side settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: [MELIPC]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 414 Communication detail settings

4. When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5001 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 120 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5001) | 1024 to 5010, 5014 to 65534<br>(Except for 5011 to 5013 and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the MELIPC.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination MELIPC.<br>(Default: 0ms) | 0 to 10000(10ms) |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching.<br>(Default: 500)<br>For the details, refer to the following.<br>☞ Page 415 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching.<br>(Default: 550)<br>For the details, refer to the following.<br>☞ Page 416 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 417 Servo axis switching GD device first No. | 0 to 65520 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 419 Connected Ethernet Controller Setting

**Point**

Examples of [Controller Setting]

For examples of [Controller Setting], refer to the following.

☞ Page 420 MELIPC Side Settings

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

- Standard port

## GOT Ethernet common setting

Configure the following settings which are common to standard ports.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

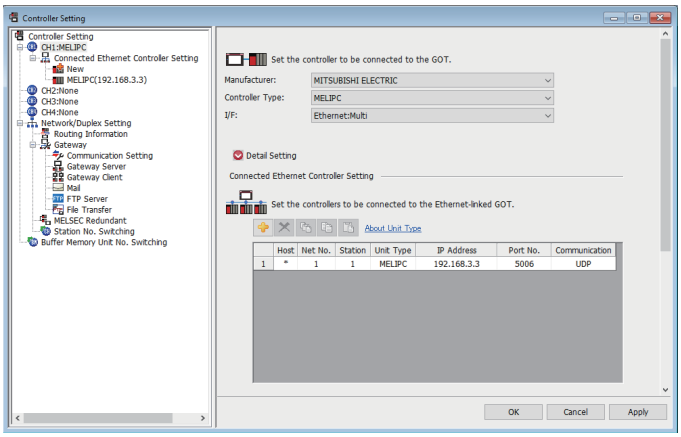
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet Controller Setting




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).)) | - |
| Net No. | N/W No. Set the network No. of the connected MELIPC built-in Ethernet port (CH1).<br>(Default: 1) | 1 to 239 |
| Station*1 | Set the station No. of the connected MELIPC built-in Ethernet port (CH1).<br>(Default: 1) | 1 to120 |
| Unit Type | Set the type of the connected MELIPC built-in Ethernet port (CH1). | MELIPC |
| IP Address | Set the IP address of the connected MELIPC built-in Ethernet port (CH1).<br>(Default: 192.168.3.3) | 0.0.0.0 to 255.255.255.255 |
| Port No. | Set the port No. of the connected MELIPC built-in Ethernet port (CH1).<br>(Default: 5006) | 5006, 5001 |
| Communication | Connection Method differs depending on the port No.<br><Port No.: For 5006><br>UDP (fixed)<br><Port No.: For 5007><br>TCP (fixed) | UDP, TCP |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 414 Communication detail settings

**Point**

• Examples of [Connected Ethernet Controller Setting]

For examples of [Connected Ethernet Controller Setting], refer to the following.

☞ Page 420 MELIPC Side Settings

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 6.4 MELIPC Side Settings

| Model | |
|---|---|
| MELIPC | MI5122-VW |

## Connecting to MELIPC (MI5122-VW) (multiple connection)

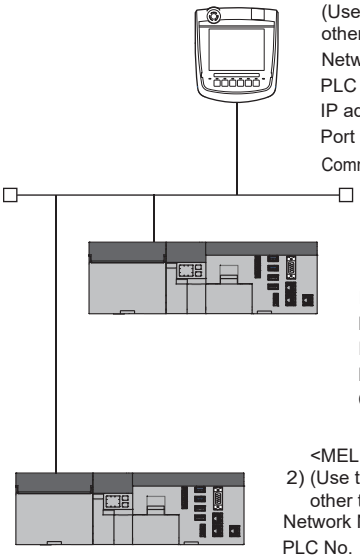
This section describes the settings of the GOT and MELIPC(MI5122-VW) in the following case of system configuration.
The settings of MELIPC side use the Peripheral Tool for Edge Computer MI Configurator.

**Point**

Peripheral Tool for Edge Computer MI Configurator
For details of Peripheral Tool for Edge Computer MI Configurator, refer to the following manual.
Manuals of MELIPC

### When the GOT's communication format is UDP

#### ■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PLC No. :18
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

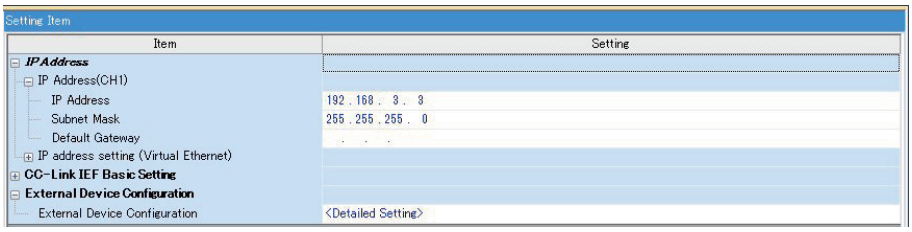
<MELIPC built-in Ethernet port (CH1)>
1) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :1 (virtual)*1
IP address :192.168.3.3
Port No. :5006 (fixed)
Communication format :UDP (fixed)

<MELIPC built-in Ethernet port (CH1)>
2) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :2 (virtual)*1
IP address :192.168.3.4
Port No. :5006 (fixed)
Communication format :UDP (fixed)

*1 These setting items do not exist at the MELIPC side.
However, the virtual values must be set on the GOT side.
☞ Page 421 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

## ■[Basic Parameter] of MI Configurator

• External device interaction setting




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.3 | × |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| CC-Link IEF Basic Setting | (Use default value) | × |
| Target Device Connection Configuration Setting | - | × |

○: Necessary △: As necessary ×: Not necessary

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 413 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when connecting MELIPC built-in Ethernet port (CH1) and a GOT

The setting items for the network number and station number do not exist at the MELIPC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Ethernet Setting | 192.168.3.18 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1) | 2) |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 1*2 | 2*2 |
| | Unit Type | MELIPC | MELIPC |
| | IP Address | 192.168.3.3 | 192.168.3.4 |
| | Port No. | 5006 (fixed) | 5006 (fixed) |
| | Communication | UDP (fixed) | UDP (fixed) |

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other MELIPCs on the same network.

## ■Checking communication state of MELIPC built-in Ethernet port (CH1)

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of MELIPC (faulty or not)

The IP address of MELIPC built-in Ethernet port (CH1) specified in the ping command

**Point**

Ethernet diagnostics of MI Configurator

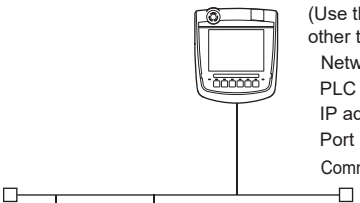
Ethernet diagnostics of MI Configurator is available to a Ping test from the MELIPC.

For details of Ethernet diagnostics of MI Configurator, refer to the following manual.

Manuals of MELIPC

## When the GOT's communication format is TCP

### ■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PLC No. :18
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)



<MELIPC built-in Ethernet port (CH1)>
1) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :1 (virtual)*1
IP address :192.168.3.3

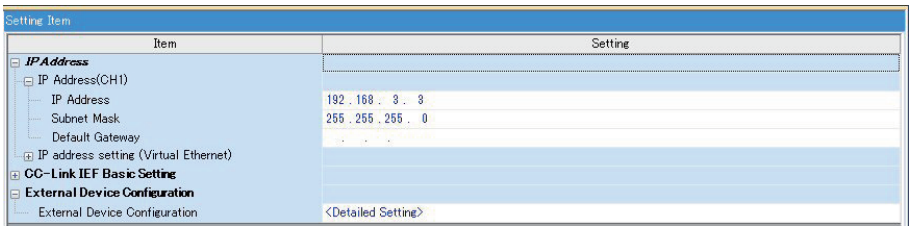


<MELIPC built-in Ethernet port (CH1)>
2) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :2 (virtual)*1
IP address :192.168.3.4

*1 These setting items do not exist at the MELIPC side.
However, the virtual values must be set on the GOT side.
☞ Page 424 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

### ■[Basic Parameter] of MI Configurator

• External device interaction setting

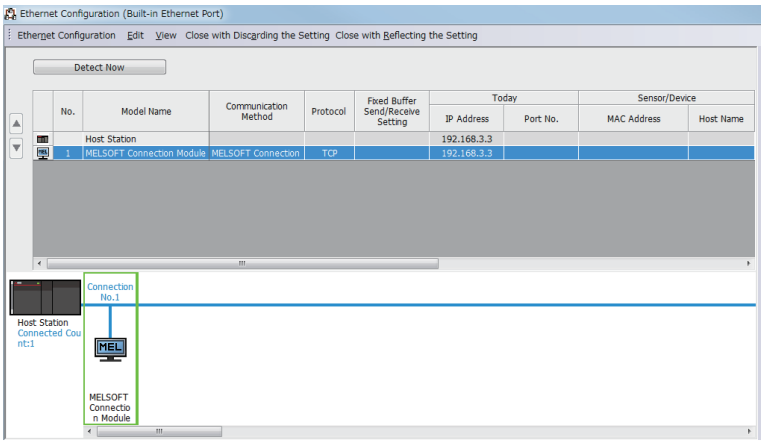



| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address | 192.168.3.3 | × |
| Subnet Mask | - | × |
| Default Gateway | - | × |
| CC-Link IEF Basic Setting | (Use default value) | × |
| Target Device Connection Configuration Setting | ☞ • External Device Configuration | ○ |

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.




| Item | Set value |
|---|---|
| Protocol | (Use default value) |
| Open system | MELSOFT connection |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 413 Setting communication interface (Controller Setting)

**Point**

[Connected Ethernet Controller Setting] when MELIPC built-in Ethernet port (CH1) is connected to a GOT

The setting items for the network No. and station No. do not exist at the MELIPC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Ethernet Setting | 192.168.3.18 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1) | 2) |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1*1 | 1*1 |
| | Station | 1*2 | 2*2 |
| | Unit Type | MELIPC | MELIPC |
| | IP Address | 192.168.3.3 | 192.168.3.4 |
| | Port No. | 5007 | 5007 |
| | Communication | TCP (fixed) | TCP (fixed) |

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

## ■Checking communication state of MELIPC built-in Ethernet port (CH1)

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of MELIPC (faulty or not)

The IP address of MELIPC built-in Ethernet port (CH1) specified in the ping command

**Point**

Ethernet diagnostics of MELIPC

Ethernet diagnostics of MELIPC is available to a Ping test from the MELIPC.

For details of Ethernet diagnostics of MELIPC, refer to the following manual.

Manuals of MELIPC

# 6.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

# 7 INVERTER CONNECTION


- Page 427 Connectable Model List
- Page 430 Serial Connection
- Page 500 Ethernet Connection
- Page 509 Connection through a PLC
- Page 512 Settable Device Range


## 7.1 Connectable Model List

The following table shows the connectable models.

| Type | Series *1 | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|---|
| Inverter | FR-A500(L) series | FR-A5□0(L) | × | RS-485 | GT2506HS GT2505HS | ☞ Page 430 Connection to FR-A500(L), FR-F500(L), or FR-V500(L) |
| | FR-F500(L) series | FR-F5□0(L) | | | | |
| | FR-V500(L) series | FR-V5□0(L) | | | | |
| | FR-E500 series | FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W | × | RS-485 | GT2506HS GT2505HS | ☞ Page 435 Connection to FR-E500, FR-S500(E), FR-F500J, FR-D700, or FR-F700PJ |
| | FR-S500(E) series | FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R) | | | | |
| | FR-F500J series | FR-F5□0J(F) | | | | |
| | FR-D700 series | FR-D7□0<br>FR-D7□0S<br>FR-D7□0W | | | | |
| | FR-F700PJ series | FR-F7□0PJ(F) | | | | |
| | FR-E700 series | FR-E7□0<br>FR-E7□0S<br>FR-E7□0W | × | RS-485 | GT2506HS GT2505HS | ☞ Page 438 Connection to FR-E700 or sensorless servo (FR-E7□0EX) |
| | | FR-E7□0-NE *4 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | FR-A700 series | FR-A7□0 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 444 Connection to FR-A700, FR-F700, or FR-F700P |
| | FR-F700 series | FR-F7□0 | | | | |
| | FR-F700P series | FR-F7□0P | | | | |

| Type | Series [*1] | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|---|
| Inverter | FR-A800 series | FR-A8□0<br>FR-A8□2<br>FR-A8□6 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet [*5] | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-A8□0-GF<br>FR-A8□2-GF | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-A8□0-GN<br>FR-A8□2-GN | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet [*5] | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| Inverter | FR-A800 Plus series | FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-AWH<br>FR-A8□0-LC | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-E-AWH<br>FR-A8□0-E-LC | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | FR-F800 series | FR-F8□0<br>FR-F8□2<br>FR-F8□6 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet [*5] | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-F8□0-E [*3]<br>FR-F8□2-E [*3] | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | Ethernet | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | FR-E800 series | FR-E8□0 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 450 Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | FR-E8□0-E | | Ethernet | GT2506HS GT2505HS | ☞ Page 500 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |
| | | | | *2 | GT2506HS GT2505HS | ☞ Page 509 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800 |

| Type | Series *1 | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|---|
| Sensorless servo | - | FR-E7□0EX | × | RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 438 Connection to FR-E700 or sensorless servo (FR-E7□0EX) |
| Magnet motor drive | MELIPM series | MD-CX522-□K(-A0) | × | RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 458 Connection to MELIPM |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 and FR-A800 series).

*2 The communication type depends on the connection type between a PLC CPU and the GOT.

*3 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter with SERIAL (serial No.) "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*4 Use an inverter with SERIAL (serial No.) "□88******" or later.
For FR-E700-SC-NNE and FR-E700-SC-ENE, use an inverter with SERIAL (serial No.) "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*5 A built-in option (FR-A8NCG) is required.
Use an inverter with the following SERIAL (serial No.).
SERIAL (serial No.) is described on a rating plate of the inverter.

| Country of origin indication | SERIAL (serial No.) |
|---|---|
| MADE in Japan | □96****** and later |
| MADE in China | □97****** and later |

# 7.2 Serial Connection

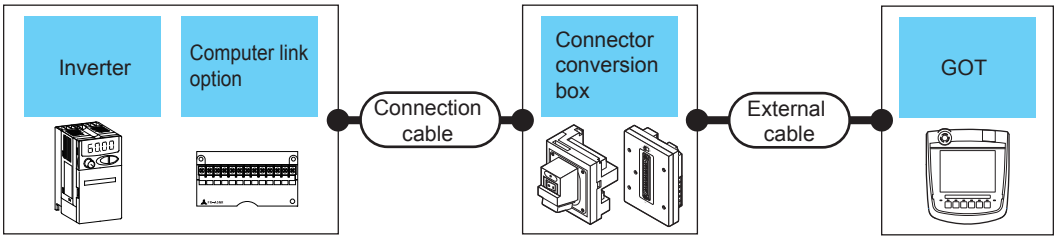
## Connection to FR-A500(L), FR-F500(L), or FR-V500(L)

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

### When connecting to one inverter

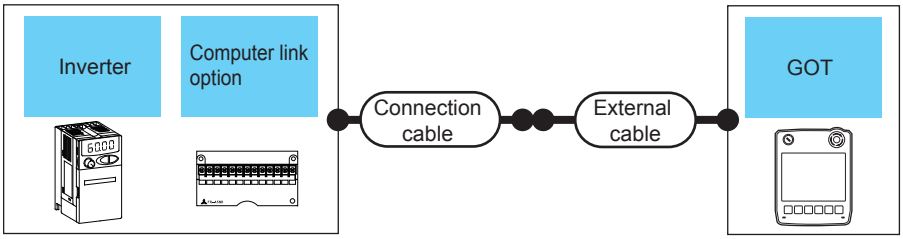
#### ■When using the connector conversion box




| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | Connection diagram number | | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | - | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *1 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | | User preparing Page 462 RS-485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

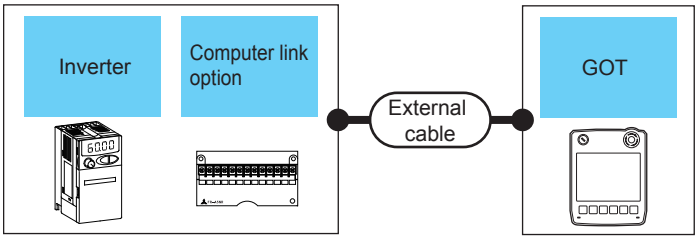
#### ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | Connection diagram number | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | - | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *1 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | | User preparing Page 462 RS-485 connection diagram 4) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

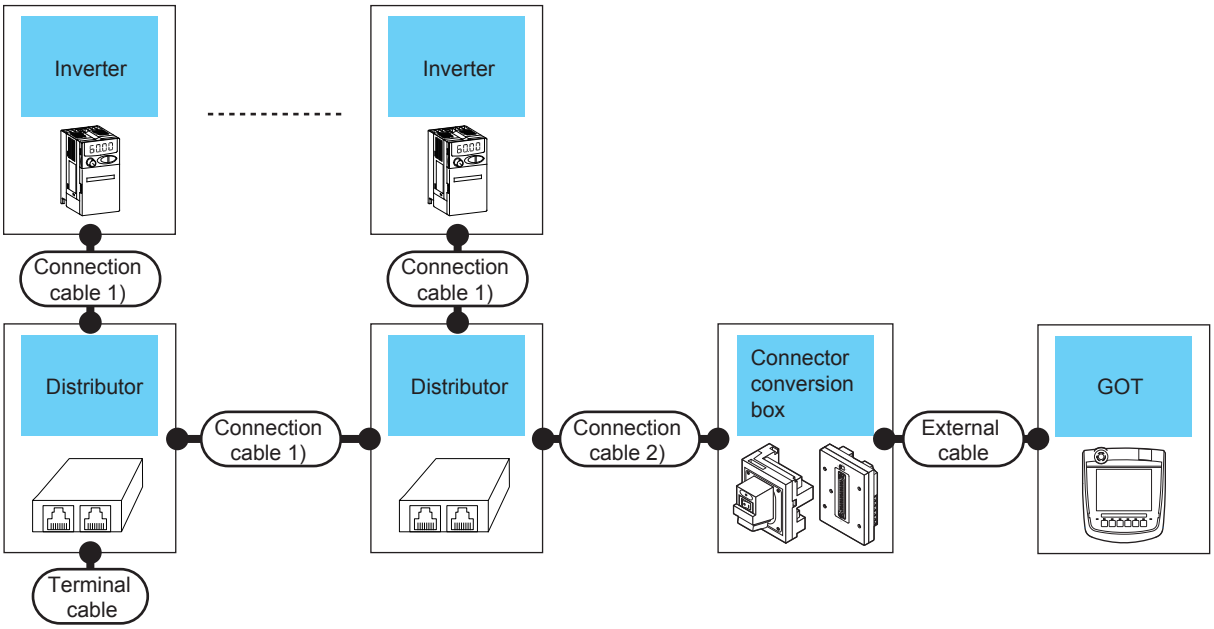
## ■When using the external cable (GT11H-C□□□)




| Inverter | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 462 RS-485 connection diagram 5) | GT 2505HS | 13m | 1 GOT for 1 inverter |

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box



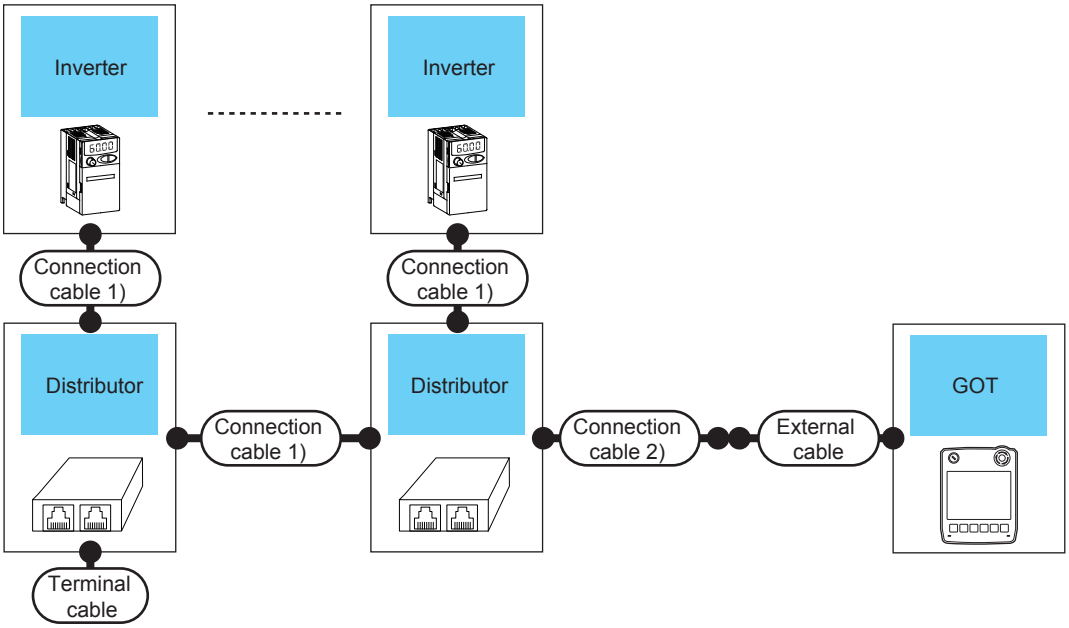

| Inverter | | Terminal cable | Connection cable 1) | Distributor*2 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminal cable | Connection cable 1) | Distributor *2 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

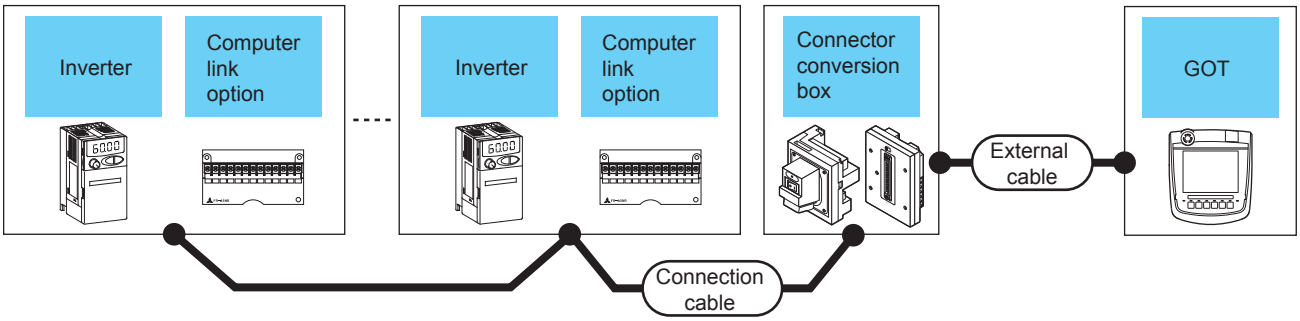
*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

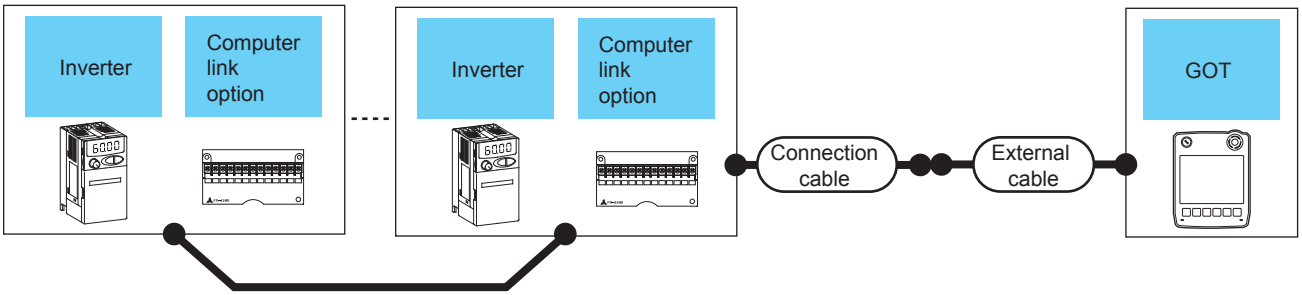
## When connecting to multiple inverters (Max. 31) (Using the computer link option)

### ■When using the connector conversion box



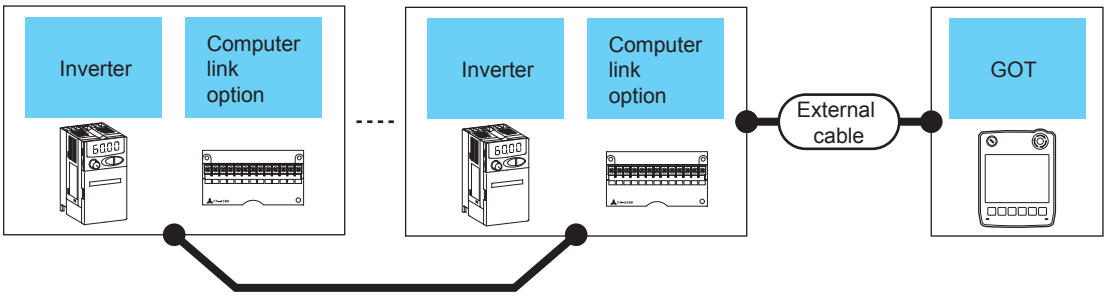

| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | Connection diagram number | | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | RS-485 | User preparing Page 463 RS-485 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

### ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | Connection diagram number | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | RS-485 | User preparing Page 463 RS-485 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

### ■When using the external cable (GT11H-C□□□)




| Inverter | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer link option | Communication type | | | | |
| FR-A5□0(L)<br>FR-F5□0(L)<br>FR-V5□0(L) | FR-A5NR | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 464 RS-485 connection diagram 9) | GT 2505HS | 13m | 10 inverters for one GOT |

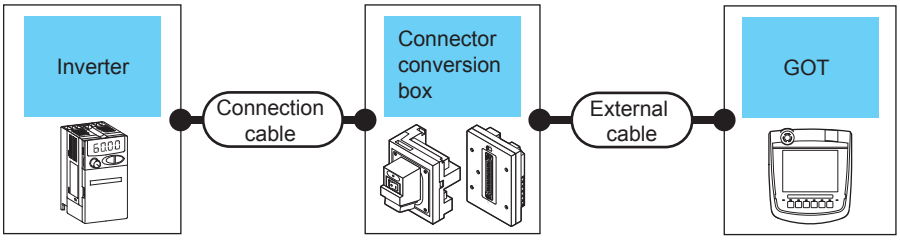
# Connection to FR-E500, FR-S500(E), FR-F500J, FR-D700, or FR-F700PJ

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

## When connecting to one inverter

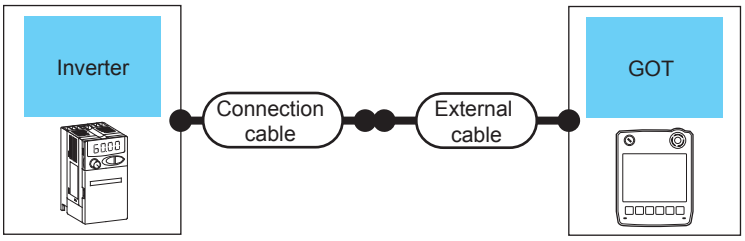
### ■When using the connector conversion box




| Inverter | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W<br>FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R)<br>FR-F5□0J(F)<br>FR-D7□0<br>FR-D7□0S<br>FR-D7□0W<br>FR-F7□0PJ(F) | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *1 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

### ■When using the external cable (GT11H-C□□□-37P)

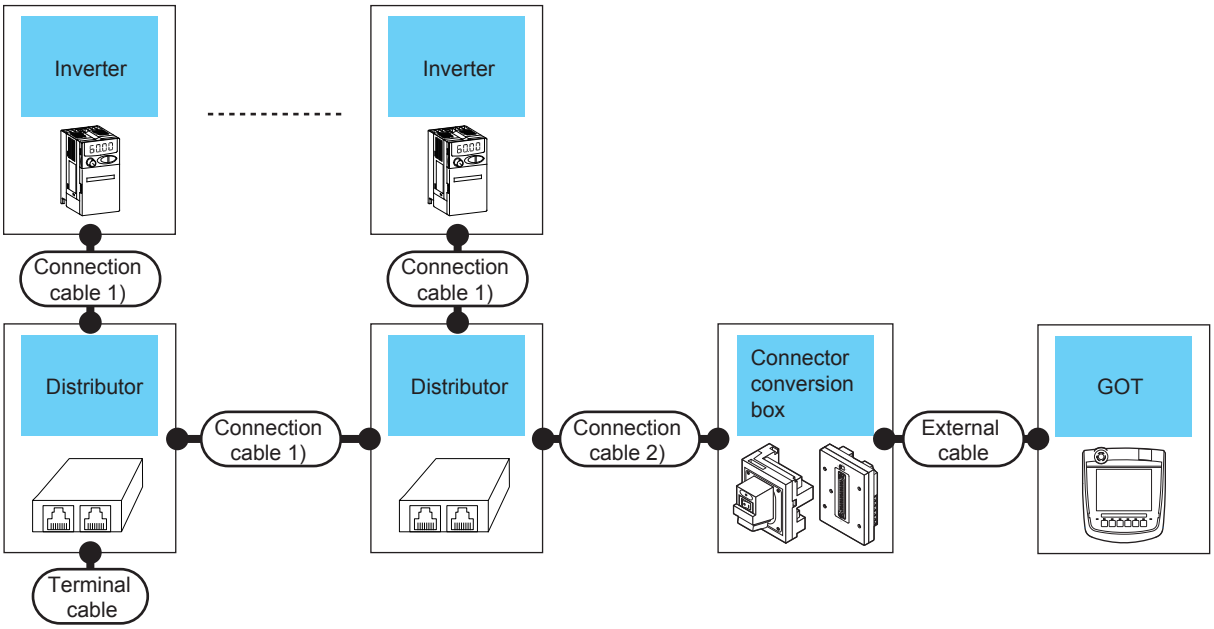



| Inverter | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W<br>FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R)<br>FR-F5□0J(F)<br>FR-D7□0<br>FR-D7□0S<br>FR-D7□0W<br>FR-F7□0PJ(F) | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *1 | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |

*1 Connect to the PU port of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box



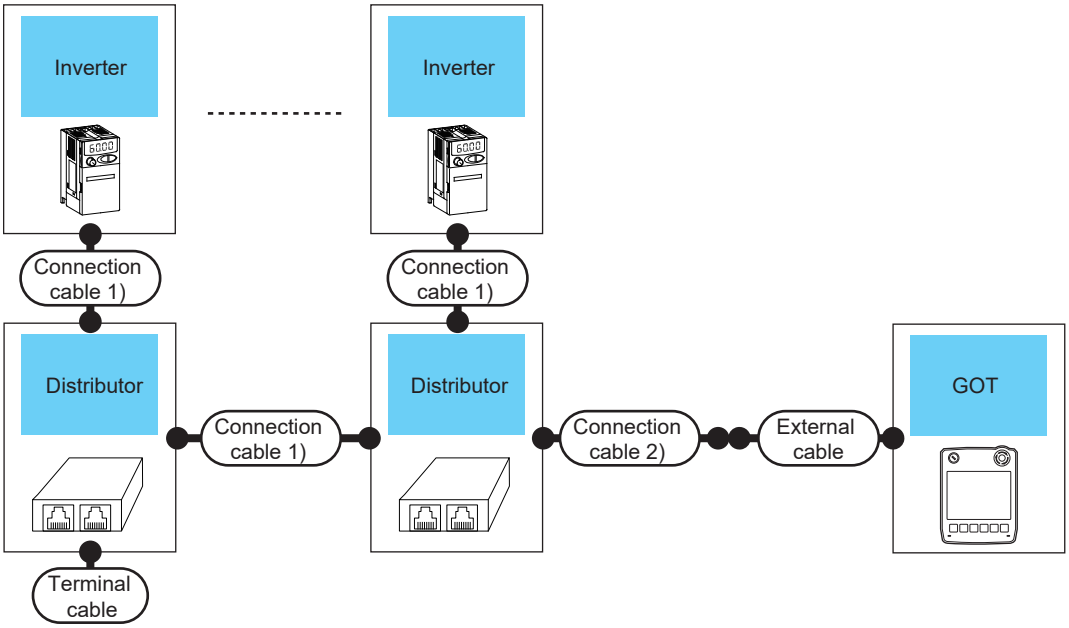

| Inverter | | Terminal cable | Connection cable 1) | Distributor*2 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W<br>FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R)<br>FR-F5□0J(F)<br>FR-D7□0<br>FR-D7□0S<br>FR-D7□0W<br>FR-F7□0PJ(F) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminal cable | Connection cable 1) | Distributor*2 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W<br>FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R)<br>FR-F5□0J(F)<br>FR-D7□0<br>FR-D7□0S<br>FR-D7□0W<br>FR-F7□0PJ(F) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

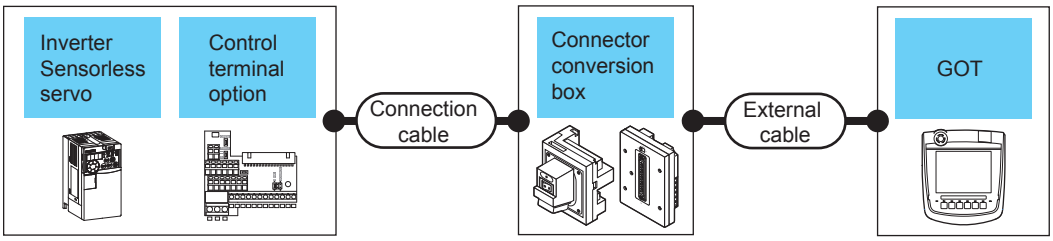
# Connection to FR-E700 or sensorless servo (FR-E7□0EX)

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

## When connecting to one inverter

### ■When using the connector conversion box

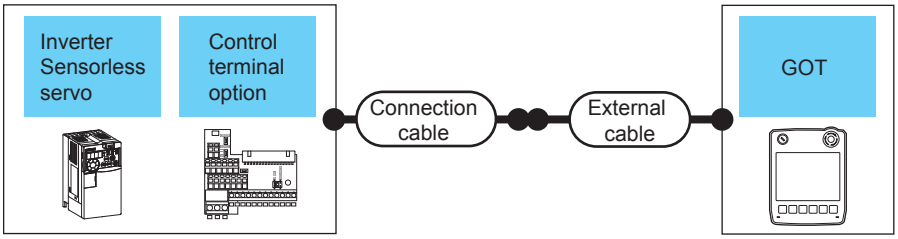



| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | Connection diagram number | | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | - | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *1 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR*2 | | User preparing Page 467 RS-485 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

*2 The control terminal option and the PU port cannot be used at the same time.

## ■When using the external cable (GT11H-C□□□-37P)

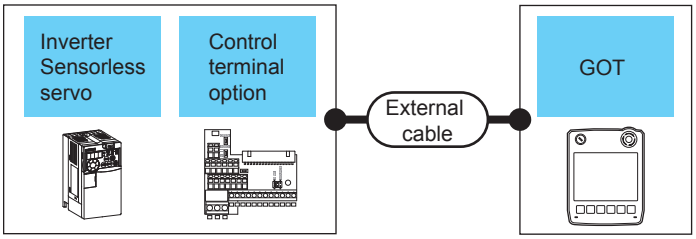



| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | Connection diagram number | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | - | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *1 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR*2 | | User preparing Page 467 RS-485 connection diagram 17) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

*2 The control terminal option and the PU port cannot be used at the same time.

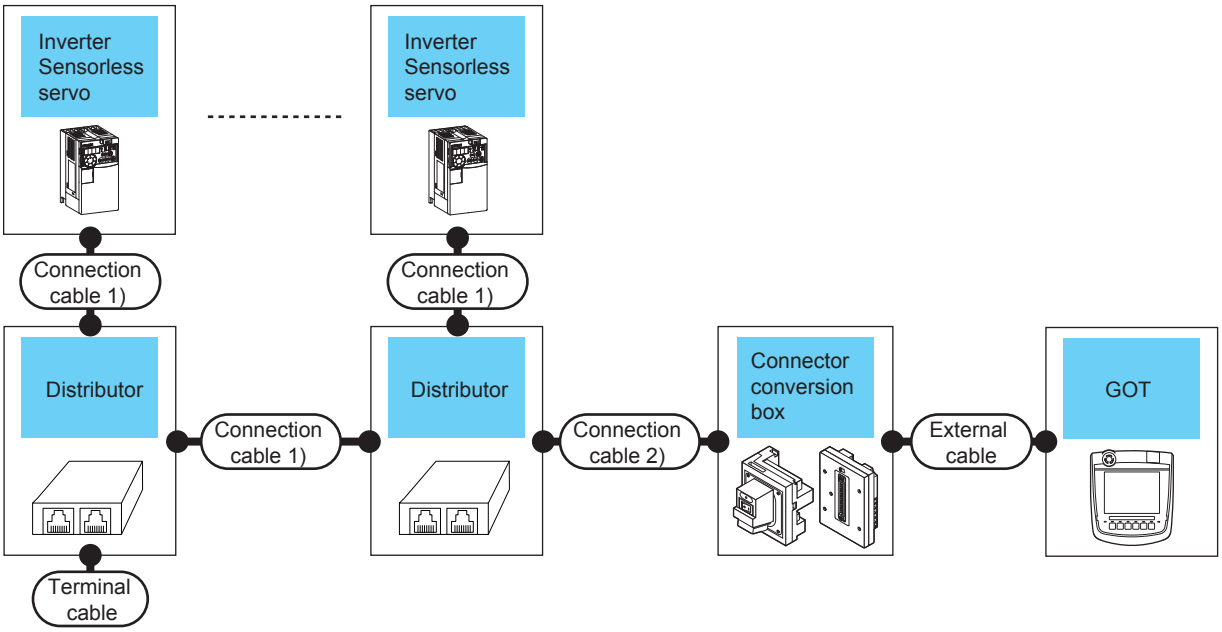
## ■When using the external cable (GT11H-C□□□)




| Inverter | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 468 RS-485 connection diagram 18) | GT 2505HS | 13m | 1 GOT for 1 inverter |

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box



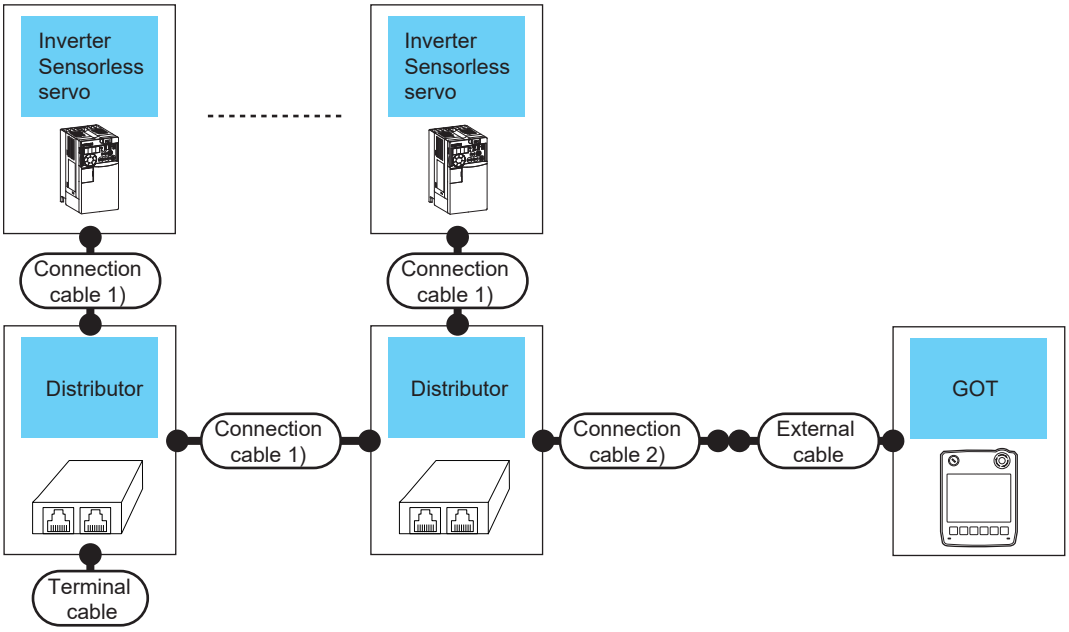

| Inverter | | Terminating cable | Connection cable 1) | Distributor*2 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminating cable | Connection cable 1) | Distributor*2 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

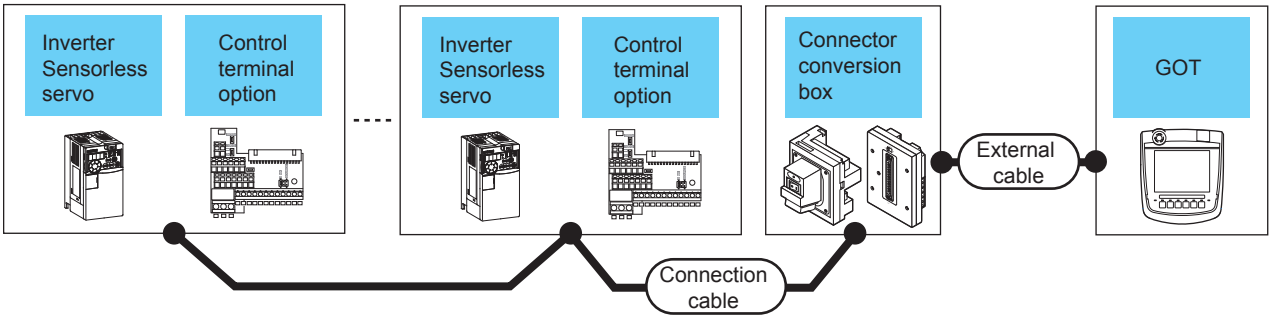
*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

## When connecting to multiple inverters (Max. 31) (Using the control terminal option)

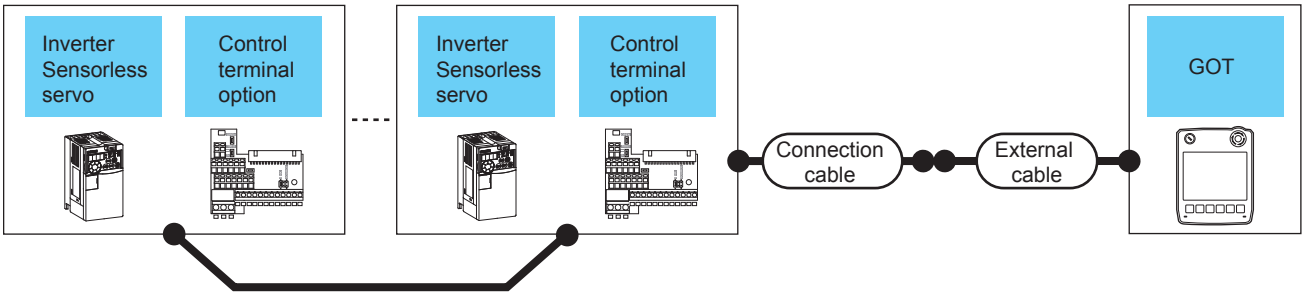
### ■When using the connector conversion box




| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | Connection diagram number | | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR*1 | RS-485 | User preparing Page 468 RS-485 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

*1 The control terminal option and the PU port cannot be used at the same time.

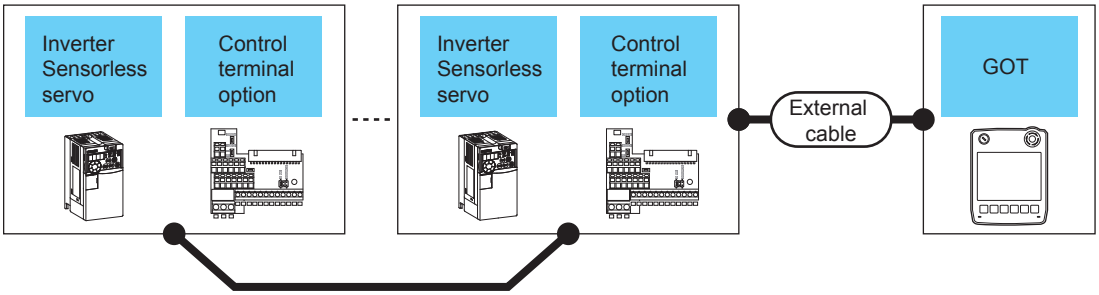
## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | Connection diagram number | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR*1 | RS-485 | User preparing Page 469 RS-485 connection diagram 20) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The control terminal option and the PU port cannot be used at the same time.

## ■When using the external cable (GT11H-C□□□)




| Inverter | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W<br>FR-E7□0EX | FR-E7TR*1 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 469 RS-485 connection diagram 21) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The control terminal option and the PU port cannot be used at the same time.

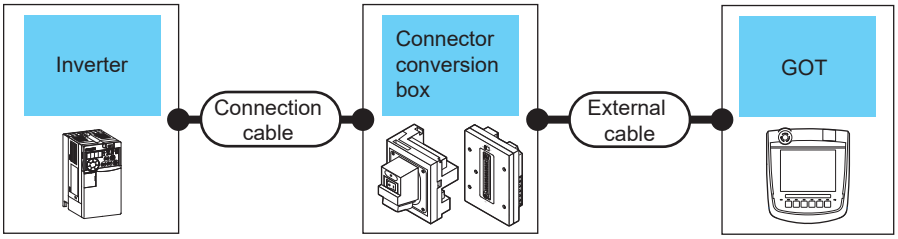
# Connection to FR-A700, FR-F700, or FR-F700P

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

## When connecting to one inverter

### ■When using the connector conversion box



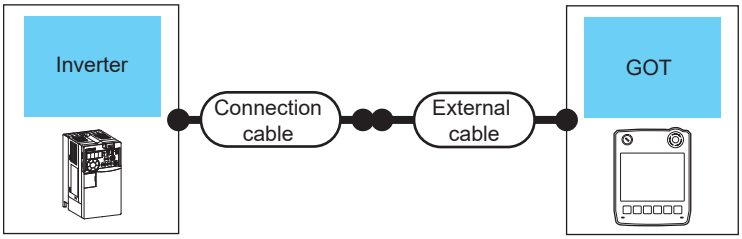

| Inverter | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name*1 | Communication type | Connection diagram number | | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *2 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | RS-485 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 464 RS-485 connection diagram 10) *3 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | RS-485 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*2 Connect to the PU port of the inverter.

*3 Connect to the RS-485 terminal block of the inverter.

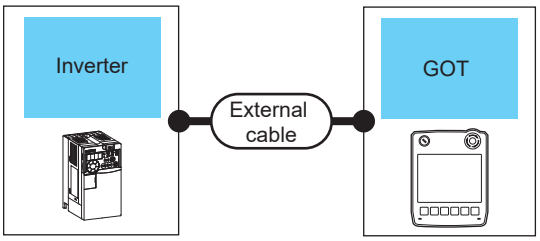
## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name*1 | Communication type | Connection diagram number | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *2 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 465 RS-485 connection diagram 11) *3 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).
*2 Connect to the PU port of the inverter.
*3 Connect to the RS-485 terminal block of the inverter.

## ■When using the external cable (GT11H-C□□□)

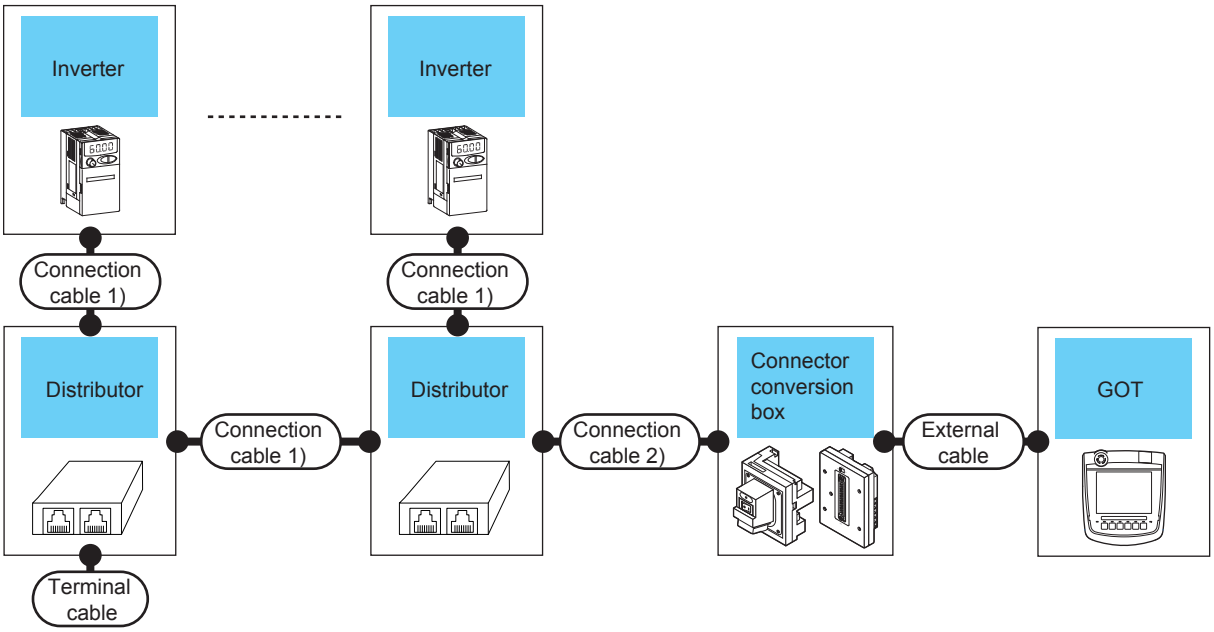



| Inverter | | External cable *2 | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name*1 | Communication type | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 465 RS-485 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 inverter |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).
*2 Connect to the RS-485 terminal block of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box




| Inverter | | Terminal cable | Connection cable 1) | Distributor *1 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name *2 | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *4 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | RS-485 | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

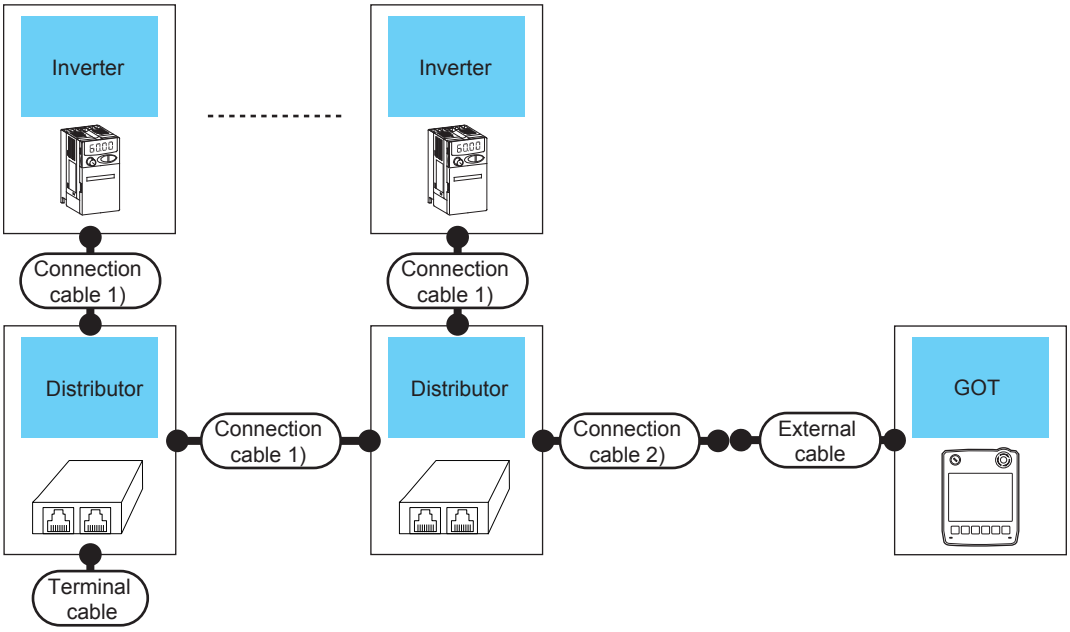
*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminal cable | Connection cable 1) | Distributor *1 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name *2 | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *4 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

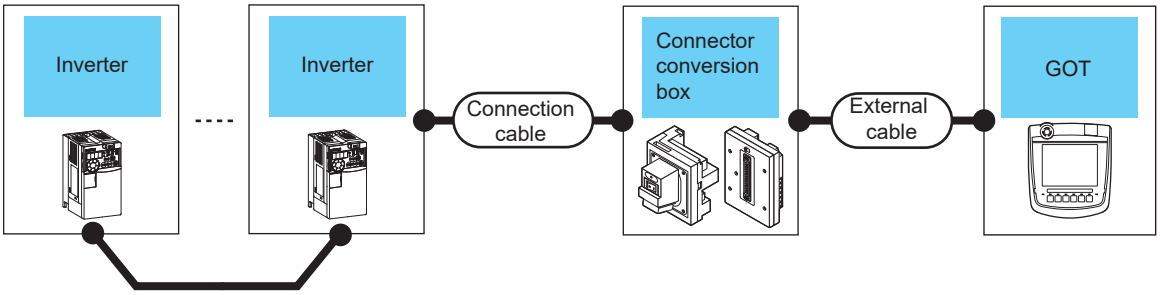
*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the built-in RS485 terminal block)

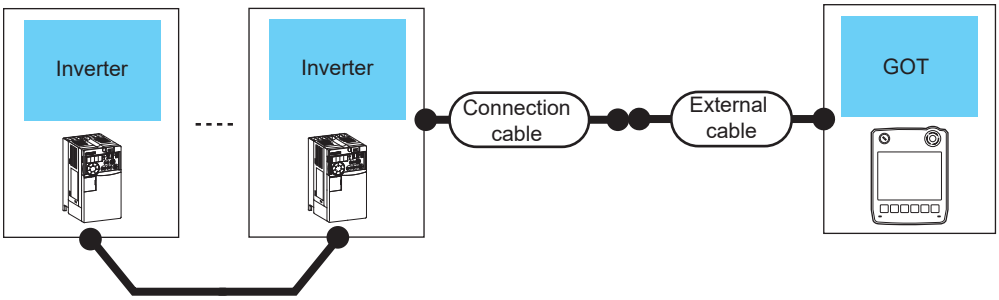
### ■When using the connector conversion box




| Inverter | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name*1 | Communication type | Connection diagram number | | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 466 RS-485 connection diagram 13) *2 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | RS-485 | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 and FR-A800 series).
*2 Connect to the RS-485 terminal block of the inverter.

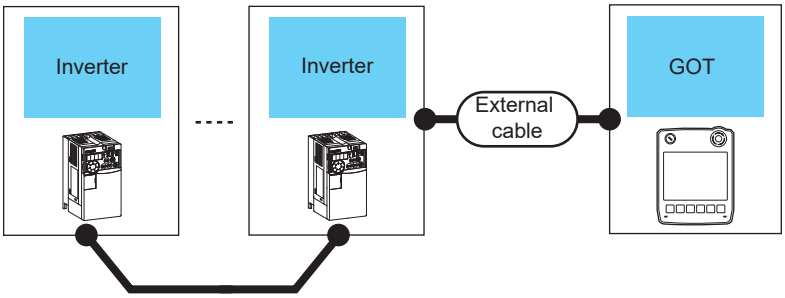
### ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | User preparing Page 466 RS-485 connection diagram 14) *1 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 Connect to the RS-485 terminal block of the inverter.

## ■When using the external cable (GT11H-C□□□)



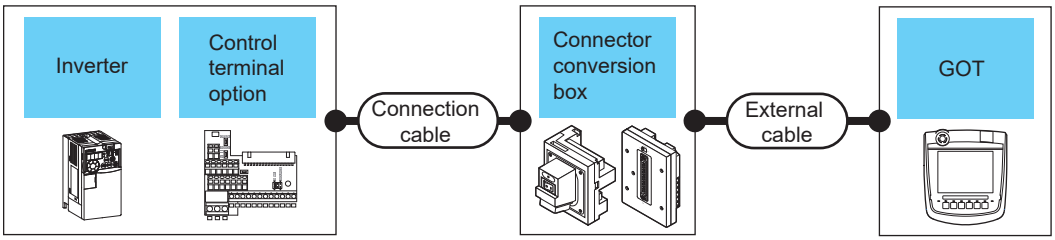

| Inverter | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| FR-A7□0<br>FR-F7□0<br>FR-F7□0P | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 467 RS-485 connection diagram 15) | GT 2505HS | 13m | 10 inverters for one GOT |

# Connection to FR-A800, FR-A800 Plus, FR-F800, or FR-E800

| Communication driver | Communication driver | Communication driver |
|---|---|---|
| FREQROL 500/700/800, SENSORLESS SERVO | FREQROL 800 | FREQROL(Batch monitor) |
| | (For automatic connection, Using the PLC function) | |

## When connecting to one inverter

### ■When using the connector conversion box

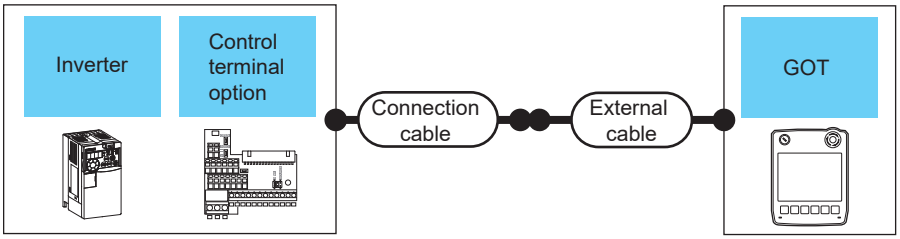



| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name*1 | Control terminal option | Communication type | Connection diagram number | | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E<br>FR-A8□0-GF<br>FR-A8□2-GF<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-AWH<br>FR-A8□0-E-AWH<br>FR-A8□0-LC<br>FR-A8□0-E-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6<br>FR-F8□0-E<br>FR-F8□2-E<br>FR-E8□0 | - | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *3 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-AWH<br>FR-A8□0-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6 | - | RS-485 | User preparing Page 464 RS-485 connection diagram 10) *4 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name*1 | Control terminal option | Communication type | Connection diagram number | | | | | |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS*2 | RS-485 | User preparing Page 464 RS-485 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the PU port of the inverter.
*4 Connect to the RS-485 terminal block of the inverter.

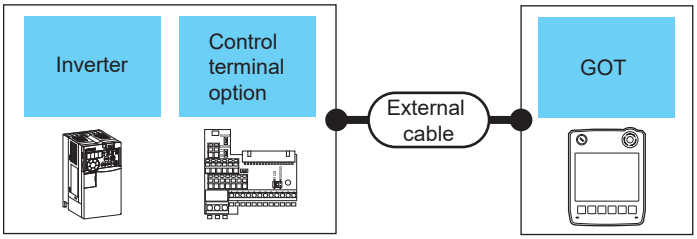
## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name*1 | Control terminal option | Communication type | Connection diagram number | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E<br>FR-A8□0-GF<br>FR-A8□2-GF<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-AWH<br>FR-A8□0-E-AWH<br>FR-A8□0-LC<br>FR-A8□0-E-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6<br>FR-F8□0-E<br>FR-F8□2-E<br>FR-E8□0 | - | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *3 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-AWH<br>FR-A8□0-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6 | - | | User preparing Page 465 RS-485 connection diagram 11) *4 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS*2 | | User preparing Page 465 RS-485 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the PU port of the inverter.
*4 Connect to the RS-485 terminal block of the inverter.

## ■When using the external cable (GT11H-C□□□)

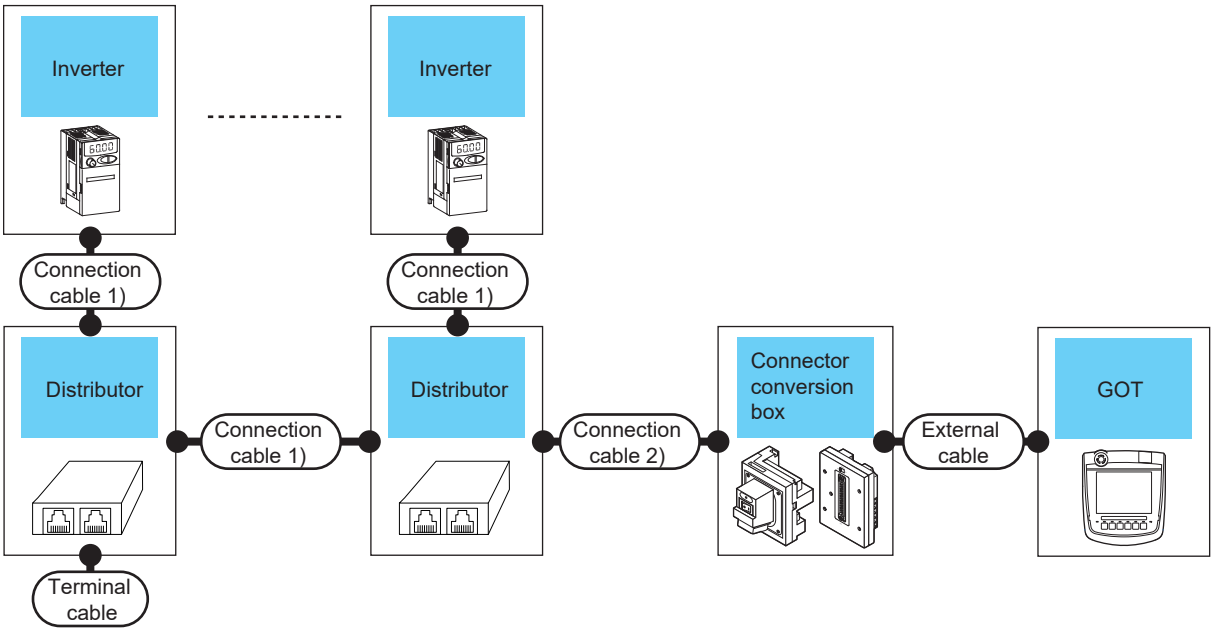



| Inverter | | | External cable *3 | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name*1 | Control terminal option | Communication type | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-AWH<br>FR-A8□0-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6 | - | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 465 RS-485 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 inverter |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS*2 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 465 RS-485 connection diagram 12) | GT 2505HS | | |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the RS-485 terminal block of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box




| Inverter | | Terminal cable | Connection cable 1) | Distributor *1 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name *2 | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E<br>FR-A8□0-GF<br>FR-A8□2-GF<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-AWH<br>FR-A8□0-E-AWH<br>FR-A8□0-LC<br>FR-A8□0-E-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6<br>FR-F8□0-E<br>FR-F8□2-E<br>FR-E8□0 | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *4 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

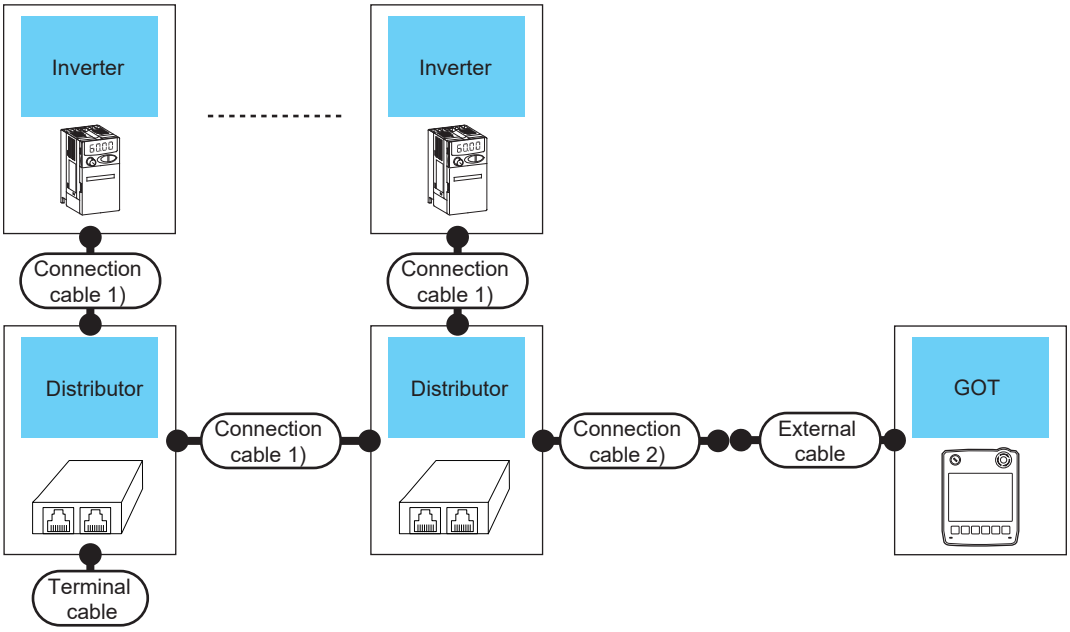
*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminal cable | Connection cable 1) | Distributor *1 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name *2 | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E<br>FR-A8□0-GF<br>FR-A8□2-GF<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-AWH<br>FR-A8□0-E-AWH<br>FR-A8□0-LC<br>FR-A8□0-E-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6<br>FR-F8□0-E<br>FR-F8□2-E<br>FR-E8□0 | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *4 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

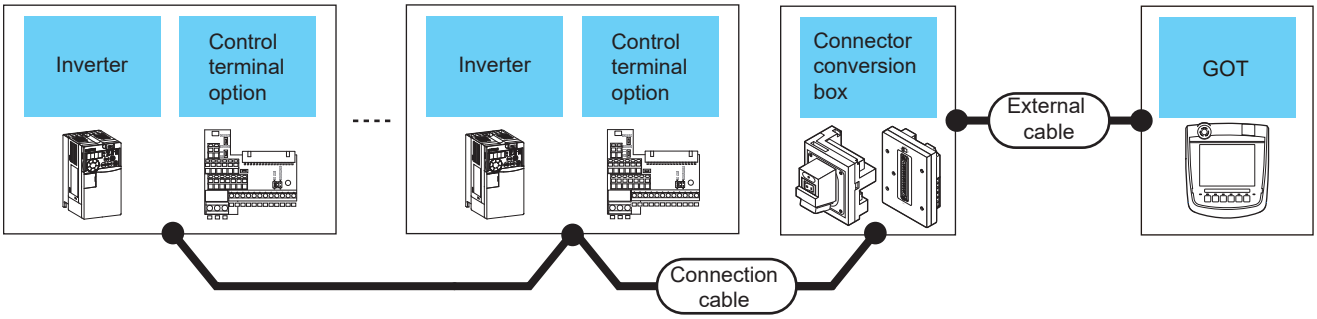
*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the built-in RS485 terminal block)

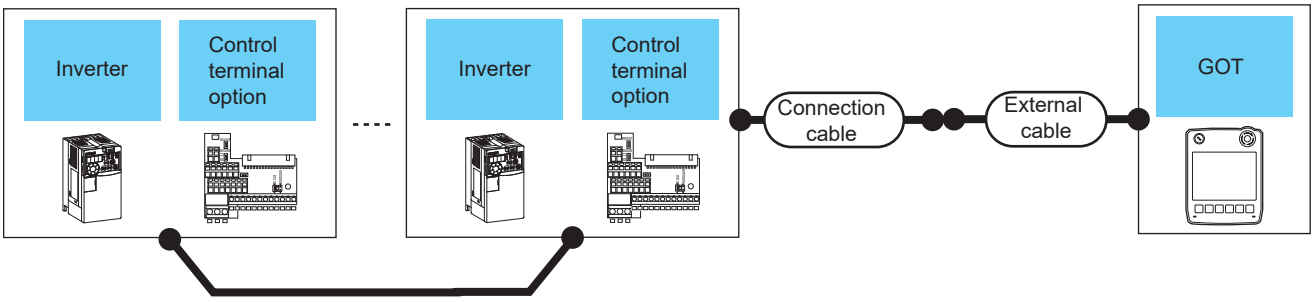
### ■When using the connector conversion box




| Inverter | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name*1 | Control terminal option | Communication type | Connection diagram number | | | | | |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-AWH<br>FR-A8□0-LC<br>FR-F8□0<br>FR-F8□2<br>FR-F8□6 | - | RS-485 | User creating Page 466 RS-485 connection diagram 13) *2 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS | RS-485 | User creating Page 466 RS-485 connection diagram 13) *2 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 Connect to the RS-485 terminal block of the inverter.

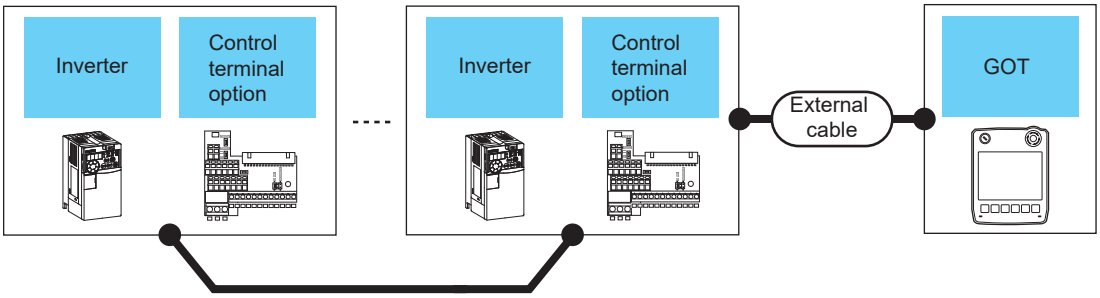
## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | Connection diagram number | | | | |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS | RS-485 | User preparing Page 466 RS-485 connection diagram 14) *1 | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 Connect to the RS-485 terminal block of the inverter.

## ■When using the external cable (GT11H-C□□□)




| Inverter | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Control terminal option | Communication type | | | | |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | A8ERS | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 467 RS-485 connection diagram 15) | GT 2505HS | 13m | 10 inverters for one GOT |

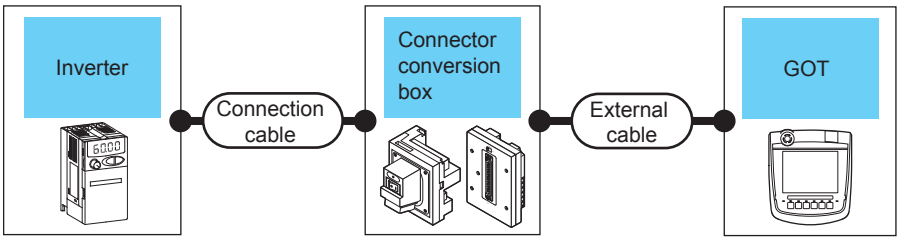
# Connection to MELIPM

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

## When connecting to one inverter

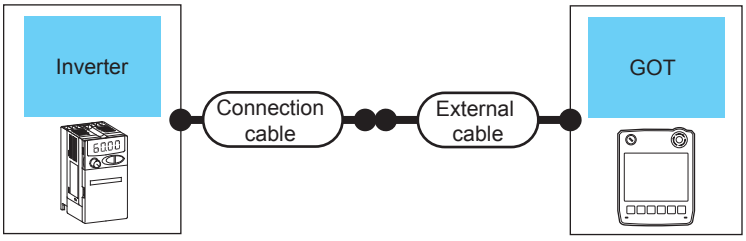
### ■When using the connector conversion box




| Inverter | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| MD-CX522-□K(-A0) | RS-485 | User preparing Page 461 RS-485 connection diagram 1) *1 | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 inverter |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect to the PU port of the inverter.

### ■When using the external cable (GT11H-C□□□-37P)

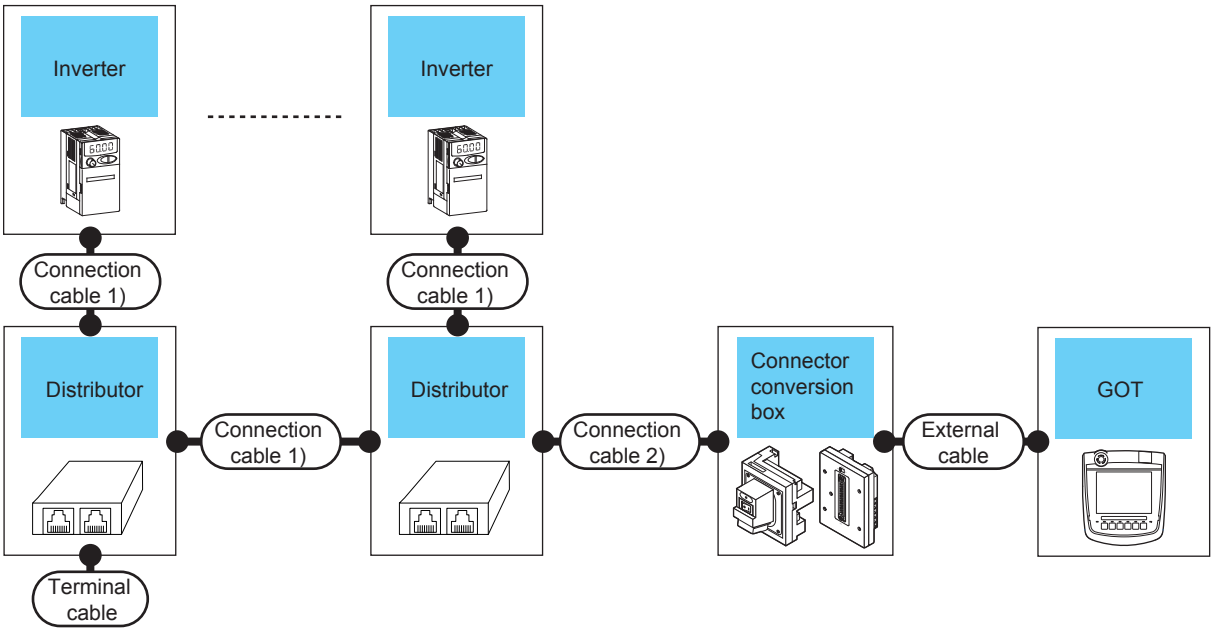



| Inverter | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| MD-CX522-□K(-A0) | RS-485 | User preparing Page 461 RS-485 connection diagram 2) *1 | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 inverter |

*1 Connect to the PU port of the inverter.

## When connecting to multiple inverters (Max. 31) (Using the distributor)

### ■When using the connector conversion box



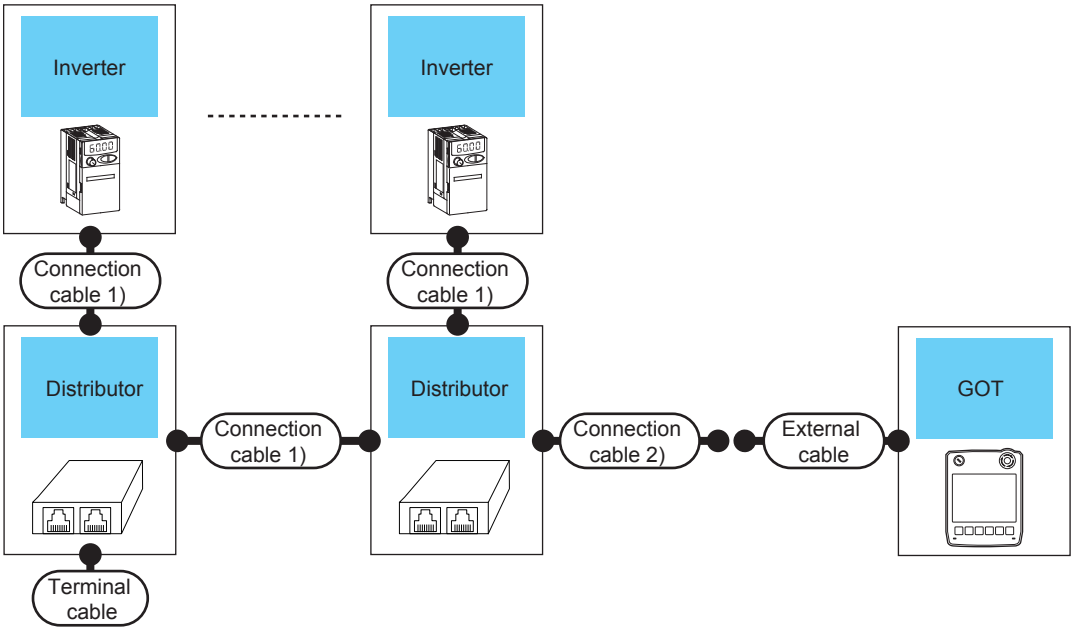

| Inverter | | Terminating cable | Connection cable 1) | Distributor *2 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | | |
| MD-CX522-□K(-A0) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 inverters for one GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Inverter | | Terminating cable | Connection cable 1) | Distributor *2 | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | | Connection diagram number | Model name | Connection diagram number | | | | |
| MD-CX522-□K(-A0) | RS-485 | User preparing Page 469 RS-485 connection diagram 22) | User preparing Page 463 RS-485 connection diagram 6) *1 | BMJ-8 (Recommended) | User preparing Page 461 RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 inverters for one GOT |

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

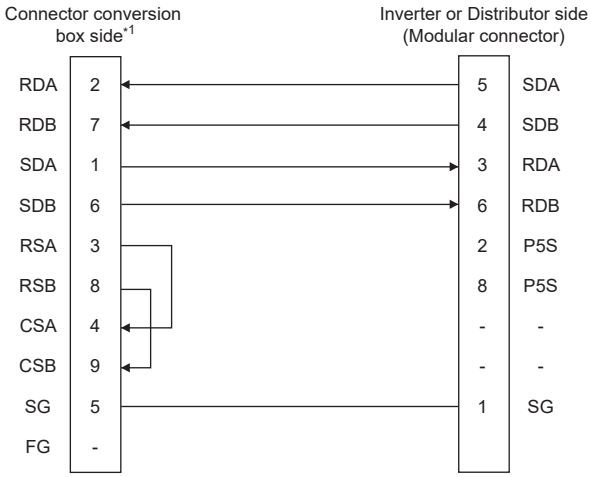
*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

# Connection diagram

The following diagram shows the connection between the GOT and the inverter.

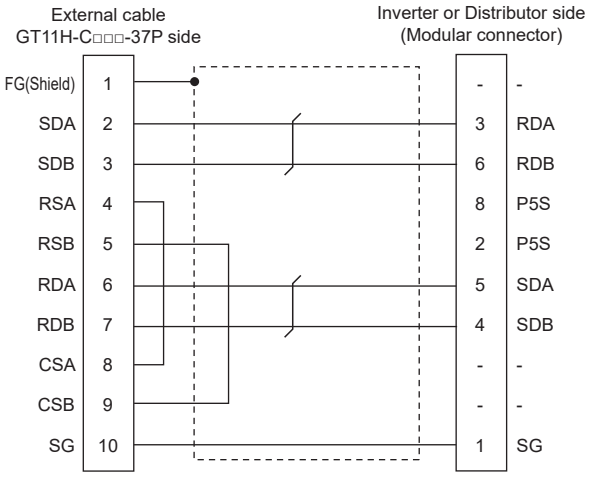
## RS-485 cable

### ■RS-485 connection diagram 1)

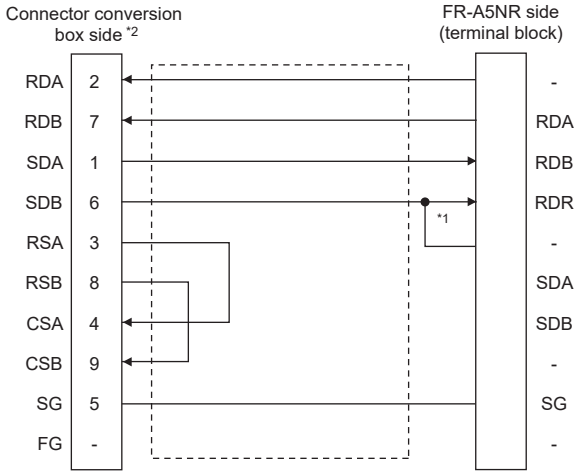



*1 In the case of GT2506HS-V, set the terminating resistor to "Disable".
☞ Page 89 Terminating resistors of GOT

### ■RS-485 connection diagram 2)



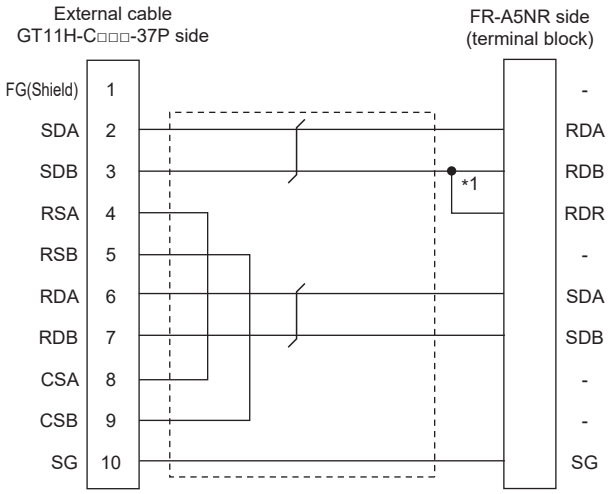
## ■RS-485 connection diagram 3)




*1 Connect a terminating resistor jumper between the RDB and RDR of FR-A5NR.
The terminating resister jumper is supplied with FR-A5NR.

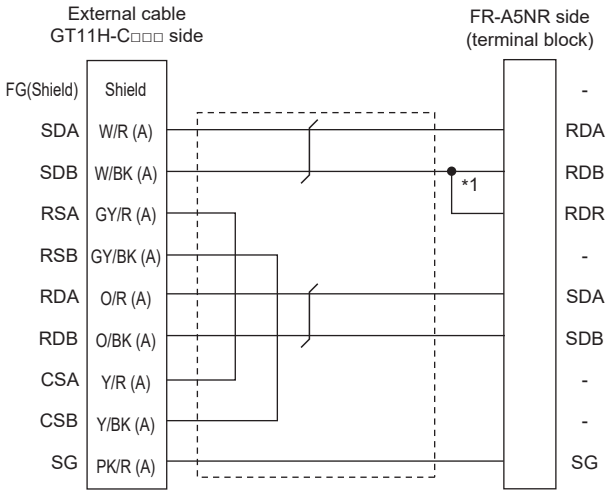
*2 In the case of GT2506HS-V, set the terminating resistor to "Disable".
☞ Page 89 Terminating resistors of GOT

## ■RS-485 connection diagram 4)



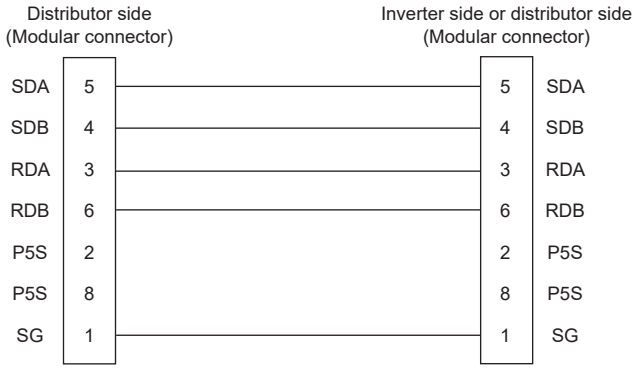

*1 Connect a terminating resistor jumper to RDB and RDR.
The terminating resister jumper is packed together with the FR-A5NR.

## ■RS-485 connection diagram 5)

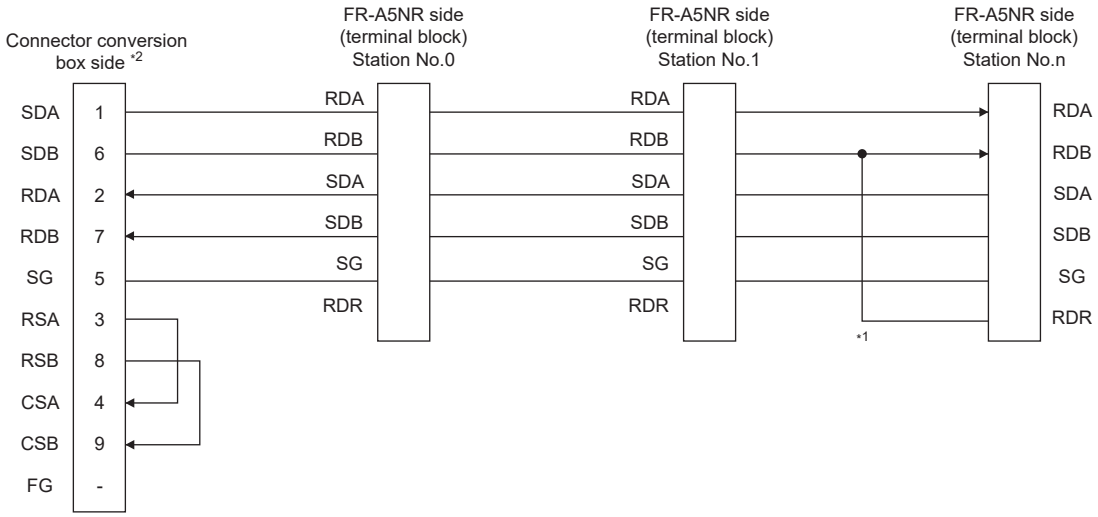



*1 Connect a terminating resistor jumper to RDB and RDR.
The terminating resister jumper is packed together with the FR-A5NR.

## ■RS-485 connection diagram 6)



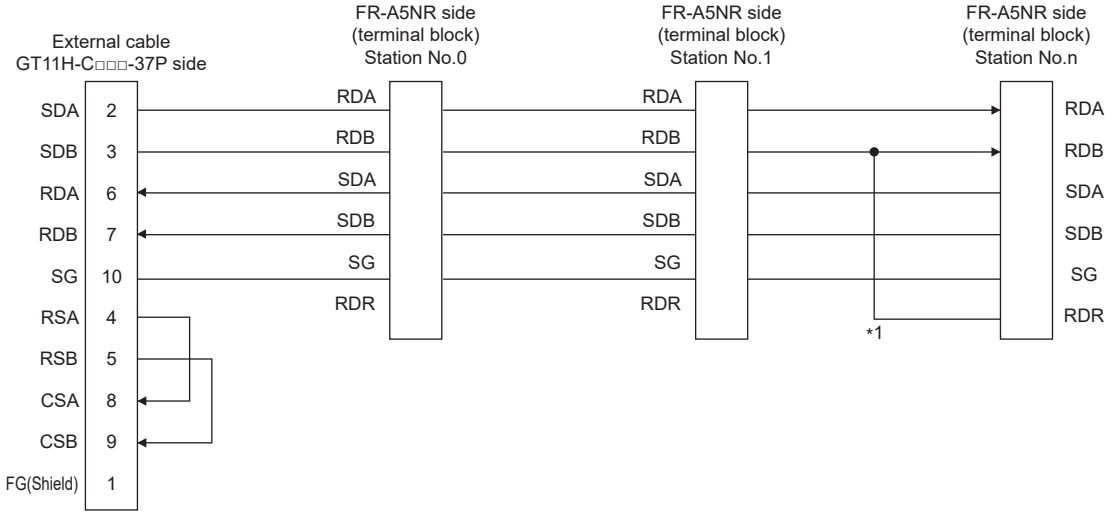

## ■RS-485 connection diagram 7)




*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

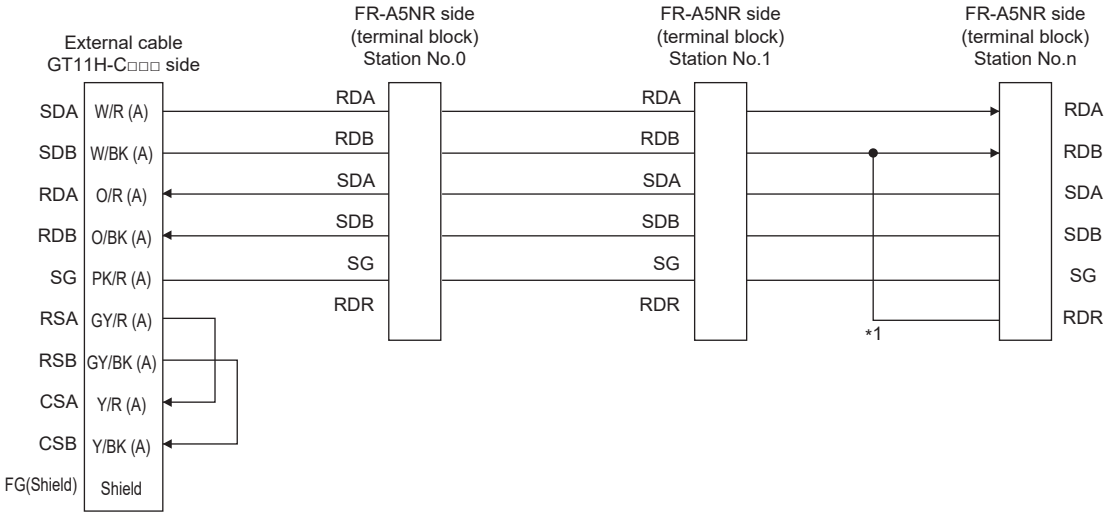
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 89 Terminating resistors of GOT

## ■RS-485 connection diagram 8)



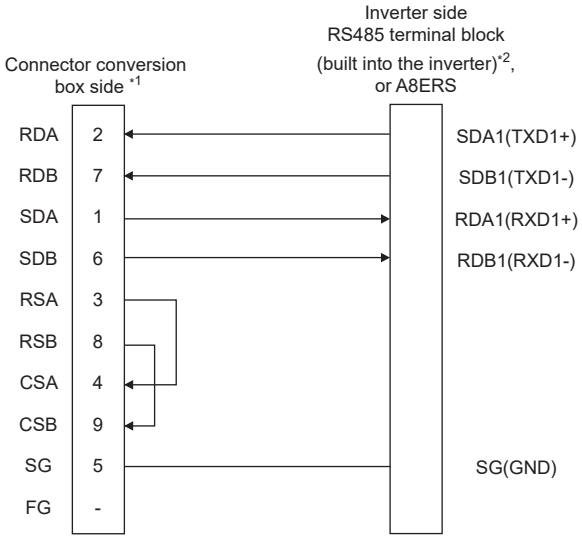

*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

## ■RS-485 connection diagram 9)




*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

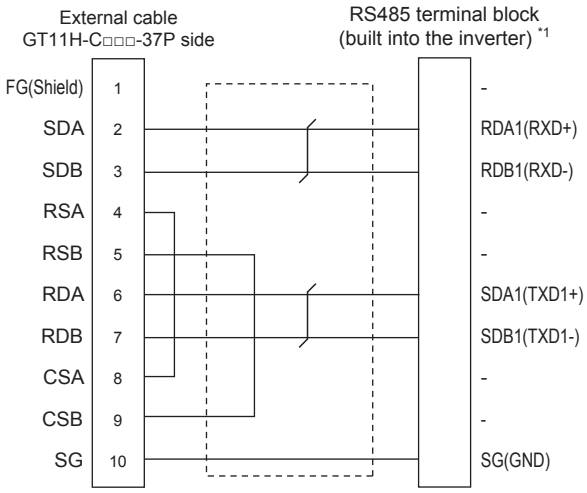
## ■RS-485 connection diagram 10)




*1 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Disable".
☞ Page 89 Terminating resistors of GOT

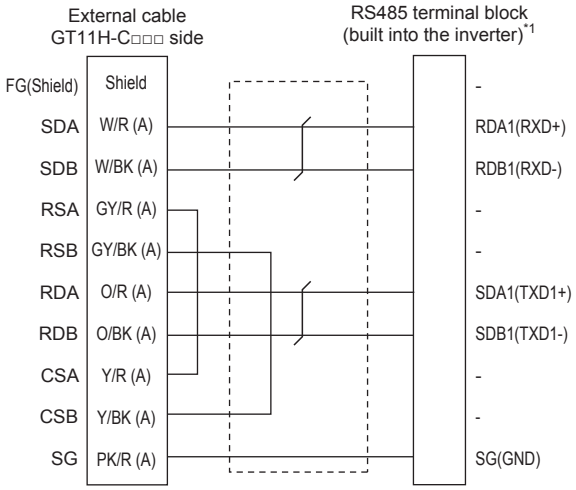
*2 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

## ■RS-485 connection diagram 11)



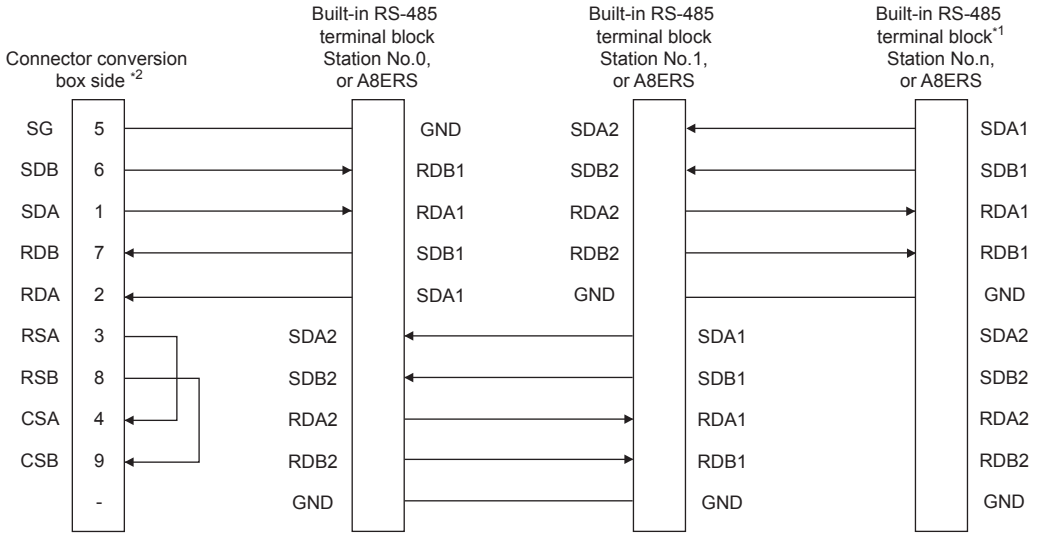

*1 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

## ■RS-485 connection diagram 12)




*1 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

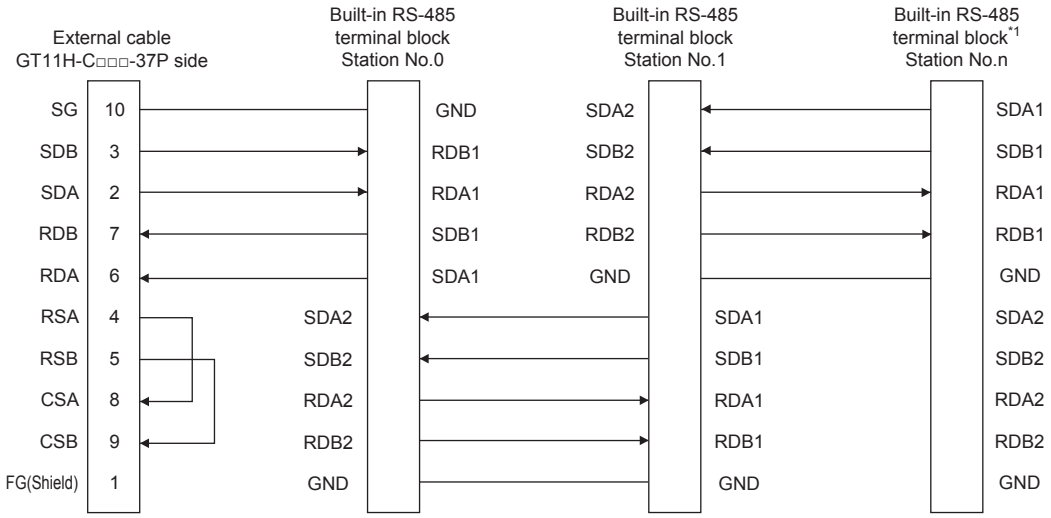
## ■RS-485 connection diagram 13)




*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

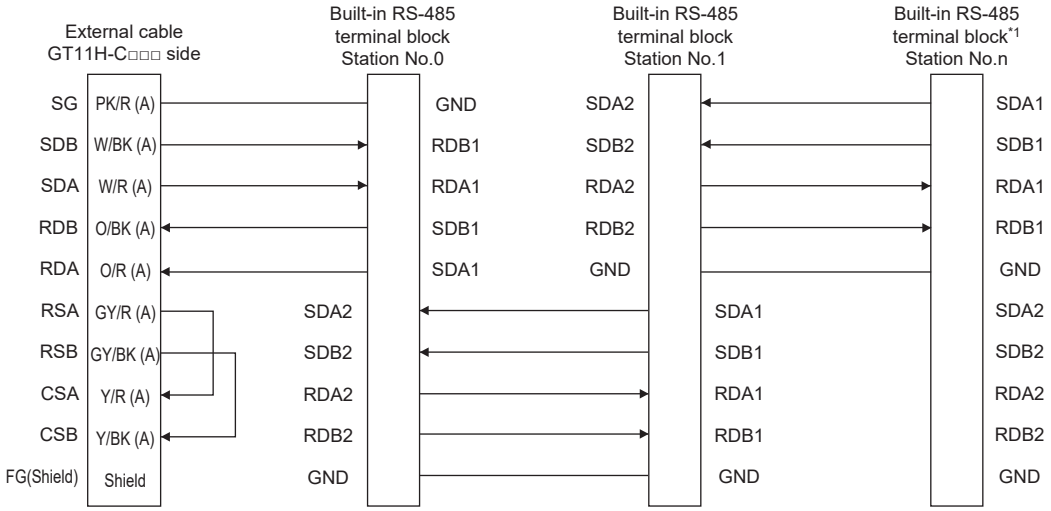
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 89 Terminating resistors of GOT

## ■RS-485 connection diagram 14)



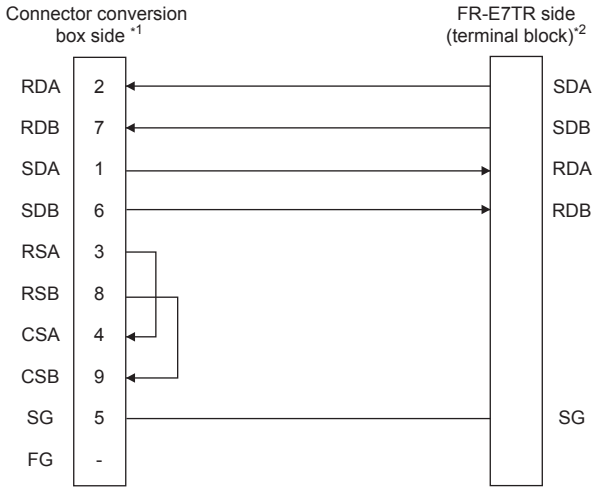

*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

## ■RS-485 connection diagram 15)




*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

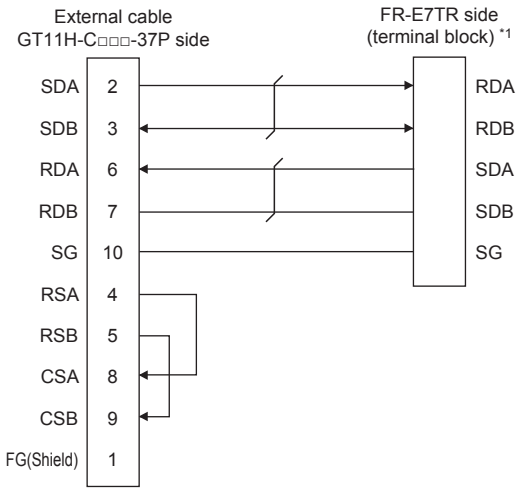
## ■RS-485 connection diagram 16)




*1 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Disable".
☞ Page 89 Terminating resistors of GOT

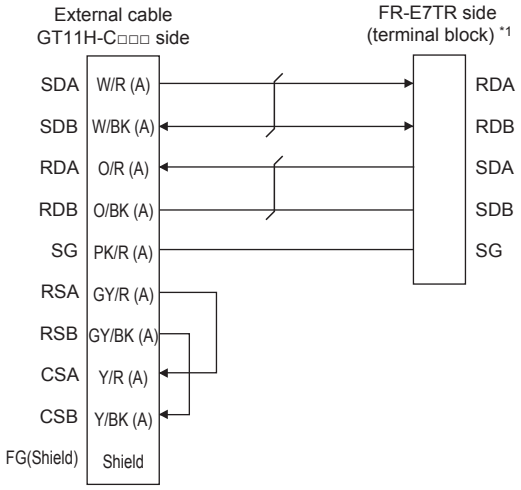
*2 Turn ON (100Ω) the terminator switch for the FR-E7TR.

## ■RS-485 connection diagram 17)



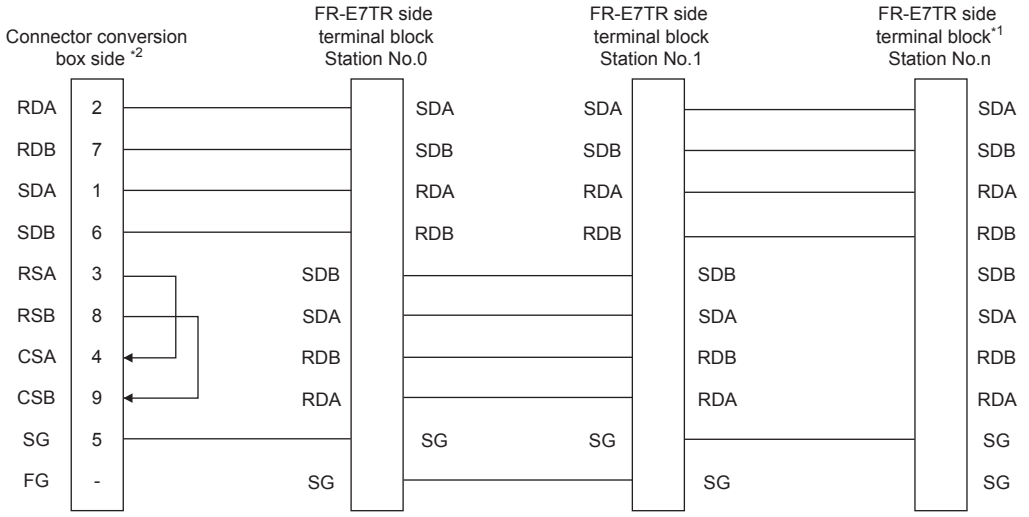

*1 Turn ON (100Ω) the terminator switch for the FR-E7TR.

## ■RS-485 connection diagram 18)




*1 Turn ON (100Ω) the terminator switch for the FR-E7TR.

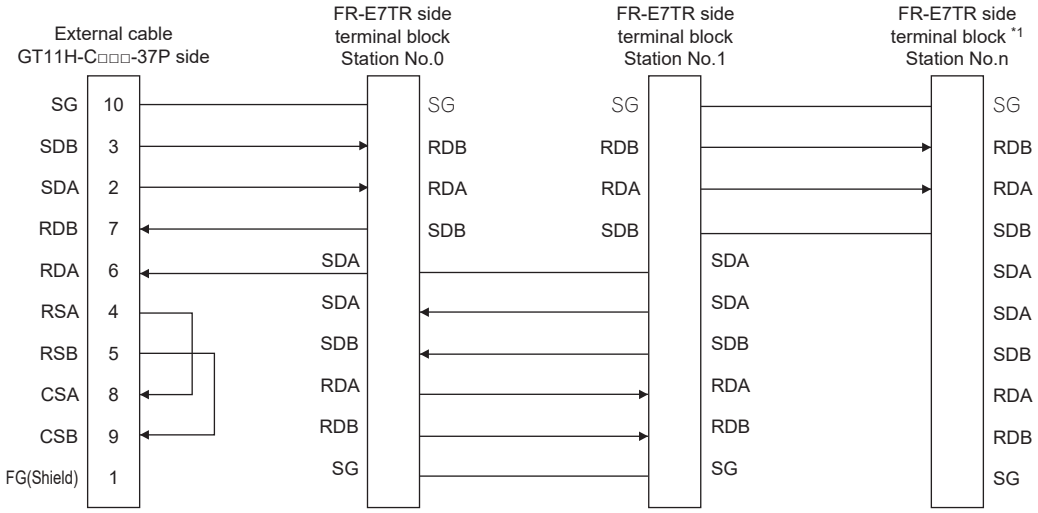
## ■RS-485 connection diagram 19)




*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

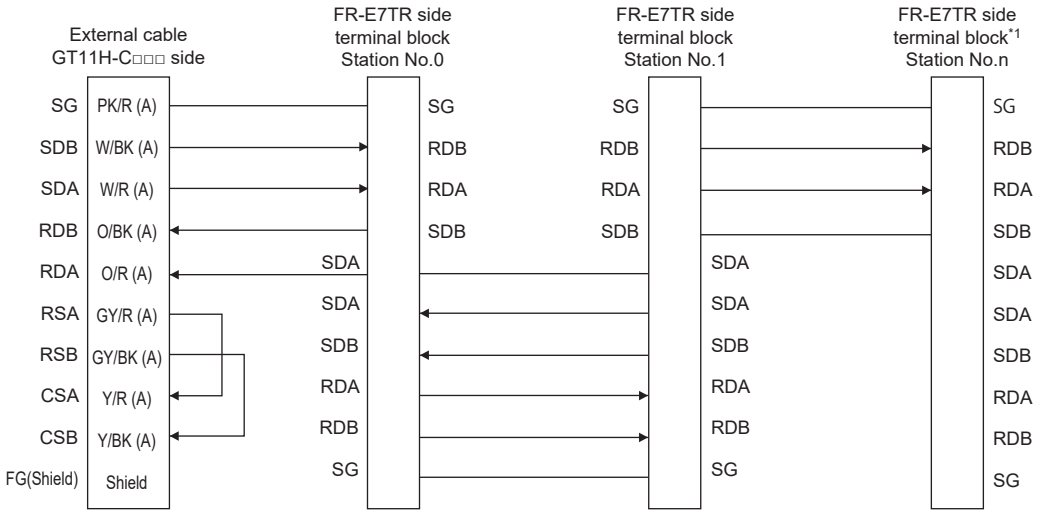
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 89 Terminating resistors of GOT

## ■RS-485 connection diagram 20)



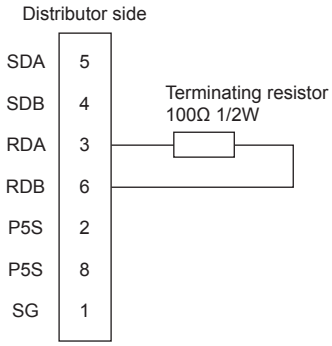

*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

## ■RS-485 connection diagram 21)




*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

## ■RS-485 connection diagram 22)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and inverters) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

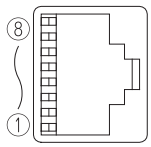
For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Inverter connector specifications

• Pin layout in the PU port

When seen from the front of the inverter
(receptacle side)




Modular jack

| Pin No. | Signal name | Remark |
|---|---|---|
| 1 | GND (SG) | |
| 2 | (P5S) | Not used |
| 3 | RXD+ (RDA) | |
| 4 | TXD- (SDB) | |
| 5 | TXD+ (SDA) | |
| 6 | RXD- (RDB) | |
| 7 | GND (SG) | |
| 8 | (P5S) | Not used |

The contents in the parentheses indicate symbols described in the inverter manual.

The pins number 2 and 8 (P5S) are connected to the power supply for an operation panel or a parameter unit.

Do not use them in RS-485 communication.

• Connector of cable between FREQROL Series inverters

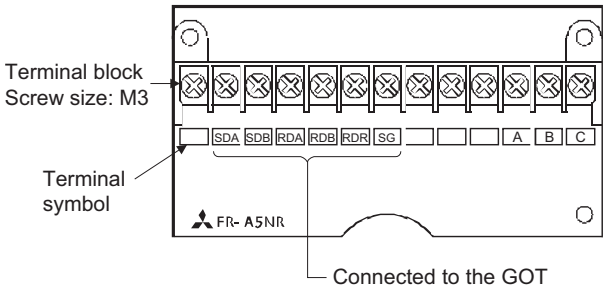
Use the commercial connectors and cables shown in the table below or the comparable products.

(Refer to the manual for the inverter.)

| Name | Model name | Specifications | Manufacturer |
|---|---|---|---|
| Connector | 5-554720-3 | RJ45 connector | Tyco International, Ltd |
| Modular ceiling rosette (Distributor) | BMJ-8 | - | HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171 |
| Cable | SGLPEV 0.5mm × 4P | Cable conforming to EIA568 (such as cable 10BASE-T) | MITSUBISHI CABLE INDUSTRIES, LTD. |

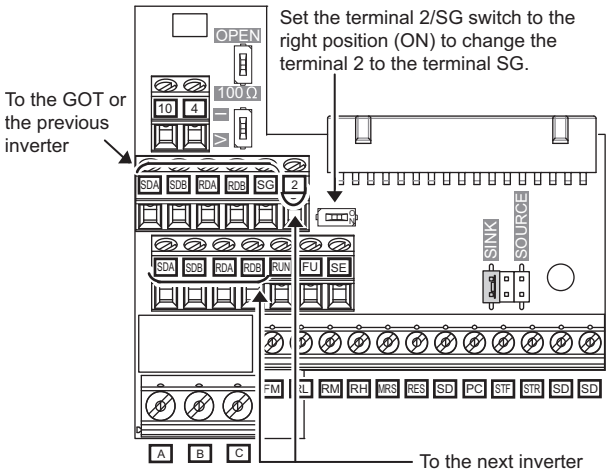
### ■Terminal block layout in the FR-A5NR computer link option

Mount this option to the FR-A500(L), FR-F500(L), or FR-V500(L) series.



### ■Terminal block layout in the FR-E7TR control terminal option

Mount this option to the FR-E700 series or the sensorless servo (FR-E7□0EX).




## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

Set the terminating resistor setting switch.

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

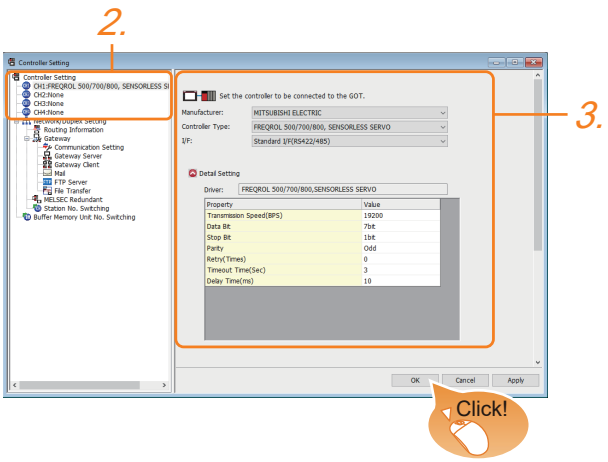
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# GOT side settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 473 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

- When [Controller Type] is set to [FREQROL 800/E700NE(Batch monitor)]

The [Faults history] and [Batch monitor] functions of FR Configurator2 can be realized on GOT by creating the screens.

- Checking controller setting

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

### ■FREQROL 500/700/800, SENSORLESS SERVO

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 10 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 10ms) | 0 to 300ms |

## ■FREQROL(Batch monitor), FREQROL 800

(For automatic connection)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 10 |
| Negotiation Time(Sec) | 5 |
| Initialization Wait Time(Sec) | 3 |
| Automatioc Negotiation | Yes |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | Odd |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the station number of the inverter in the system configuration.<br>(Default: 0) | 0 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 10ms) | 0 to 300ms |
| Negotiation Time | Set the time period that the GOT side communication setting is sent to the inverter.<br>(Default: 5sec) | 1 to 10sec |
| Initialization Wait Time | Set the wait time from when the communication setting is changed until when the communication starts.<br>(Default: 3sec) | 1 to 10sec |
| Automatioc Negotiation | Set whether to use the automatic connection.<br>(Default: Yes) | Yes<br>No |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manuals.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

**Point**

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# FREQROL series inverter side settings

For details on the inverter, refer to the manual of each series.

## Connecting to FR-S500(E) or FR-F500J series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| RS-485 port | Pr.79, n1 to n7, n10 to n12 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.30 (Extended function selection) to 1 [With display] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No.*4 | Set value | Contents of setting |
|---|---|---|---|
| Communication station number | n1 (331) | 0 to 31 | ☞ Page 497 Station number setting |
| Communication speed*2 | n2 (332) | 192*3 | 19200bps |
| Stop bit length*2 | n3 (333) | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | n4 (334) | 1 | Odd |
| Number of communication retries | n5 (335) | -<br>(65535) | The inverter will not come to an alarm stop. |
| Communication check time interval | n6 (336) | - | Communication check suspension |
| Wait time setting | n7 (337) | 0 | 0ms |
| CRLF selection | n11 (341) | 1*3 | With CR, without LF |
| Protocol selection*5 | - | - | - |
| Operation mode selection | Pr.79 | 0*3 | External operation mode at power on |
| Link start mode selection | n10 (340) | 1 | Computer link operation |
| E2PROM write selection | n12 (342) | 0*3 | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-S500(E) and FR-F500J series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 When being monitored from the GOT, the parameter n1 through n7 correspond with Pr.331 through Pr.337, and the parameter n10 through n12 correspond with Pr.340 through Pr.342.
Numbers in brackets show the parameter number when the parameter unit is in use.

*5 There is no Protocol selection setting on the inverter side.

## Connecting to FR-E500 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.146, Pr.342 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| Communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| Communication speed*2 | Pr.118 | 192*3 | 19200bps |
| Stop bit length*2 | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | Pr.120 | 1 | Odd |
| Number of communication retries | Pr.121 | 9999<br>(65535) | The inverter will not come to an alarm stop. |
| Communication check time interval | Pr.122 | 9999 | Communication check suspension |
| Wait time setting | Pr.123 | 0 | 0ms |
| CRLF presence/ absence selection | Pr.124 | 1*3 | With CR, without LF |
| Protocol selection*4 | - | - | - |
| Operation mode selection | Pr.79 | 1*3 | PU operation mode |
| Communication startup mode selection*4 | - | - | - |
| E2PROM write selection | Pr.342 | 0*3 | Written to RAM and EEPROM |
| Frequency setting command selection*5 | Pr.146 | 9999 | Built-in frequency setting potentiometer invalid |

*1 Setting items are the parameter names described in the FR-E500 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 There is no Protocol selection setting on the inverter side.

*5 The setting is required for Frequency setting command selection.

## Connecting to FR-F500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124 |
| FR-A5NR (Option unit) | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.160 (user group read selection) to 0 [All parameters can be accessed for reading and writing.] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | FR-A5NR | | | |
| Communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| Communication speed*2 | Pr.118 | Pr.332 | 192*4 | | 19200bps |
| Stop bit length/data length<br>Stop bit length*2 | Pr.119 | Pr.333 | 10 | | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of communication retries | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| Communication check time interval | Pr.122 | Pr.336 | 9999 | | Communication check suspension |
| Wait time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| CRLF presence/ absence selection | Pr.124 | Pr.341 | 1*3 | | With CR, without LF |
| Protocol selection*5 | - | - | - | | - |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | FR-A5NR | 0*3 | External operation mode at power on |
| Link start mode selection*6 | - | Pr.340 | 1 | | Computer link operation |
| E2PROM write selection*6 | - | Pr.342 | 0*3 | | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-F500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

## Connecting to FR-A500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.342 |
| FR-A5NR (Option unit) | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | FR-A5NR | | | |
| Communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| Communication speed*2 | Pr.118 | Pr.332 | 192*4 | | 19200bps |
| Stop bit length*2 | Pr.119 | Pr.333 | 10 | | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of communication retries | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| Communication check time interval | Pr.122 | Pr.336 | 9999 | | Communication check suspension |
| Wait time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| CRLF presence/ absence selection | Pr.124 | Pr.341 | 1*3 | | With CR, without LF |
| Protocol selection*5 | - | - | - | | - |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | FR-A5NR | 0*3 | External operation mode at power on |
| Link start mode selection*6 | - | Pr.340 | 1 | | Computer link operation |
| E2PROM write selection | Pr.342 | | 0*3 | | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-A500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

## Connecting to FR-V500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.342 |
| FR-A5NR (Option unit) | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.160 (Extended function display selection) to 1 [All parameters can be accessed for reading and writing.] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | FR-A5NR | | | |
| Communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| Communication speed*2 | Pr.118 | Pr.332 | 192*4 | | 19200bps |
| Stop bit length/data length<br>Stop bit length*2 | Pr.119 | Pr.333 | 10 | | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of communication retries | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| Communication check time interval | Pr.122 | Pr.336 | 9999 | | Communication check suspension |
| Wait time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| CRLF presence/ absence selection | Pr.124 | Pr.341 | 1*3 | | With CR, without LF |
| Protocol selection*5 | - | - | - | | - |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | FR-A5NR | 0*3 | External operation mode at power on |
| Link start mode selection*6 | - | Pr.340 | 1 | | Computer link operation |
| E2PROM write selection | Pr.342 | | 0*3 | | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-V500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

## Connecting to FR-E700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549 |
| FR-E7TR<br>(RS-485 terminal block) | |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PU communication speed*2 | Pr.118 | 192*3 | 19200bps |
| PU communication stop bit length*2 | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check*2 | Pr.120 | 1 | Odd |
| Number of PU communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| PU communication check time interval | Pr.122 | 9999 | Communication check suspension |
| PU communication wait time setting | Pr.123 | 0 | 0ms |
| PU communication CR/LF selection | Pr.124 | 1*3 | With CR, without LF |
| Protocol selection | Pr.549 | 0*3 | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | 0*3 | PU operation mode |
| Communication startup mode selection | Pr.340 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | 0*3 | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-E700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

## Connecting to FR-D700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PU communication speed*2 | Pr.118 | 192*3 | 19200bps |
| PU communication stop bit length*2 | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check*2 | Pr.120 | 1 | Odd |
| Number of PU communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| PU communication check time interval | Pr.122 | 9999 | Communication check suspension |
| PU communication wait time setting | Pr.123 | 0 | 0ms |
| PU communication CR/LF selection | Pr.124 | 1*3 | With CR, without LF |
| Protocol selection | Pr.549 | 0*3 | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | 0*3 | PU operation mode |
| Communication startup mode selection | Pr.340 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | 0*3 | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-D700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

## Connecting to FR-F700 or FR-F700P series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342 |
| RS-485 terminal | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | RS-485 | | | |
| PU communication station number/RS-485 communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| PU communication speed/RS-485 communication speed*2 | Pr.118 | Pr.332 | 192*4 | | 19200bps |
| PU communication stop bit length/ RS-485 communication stop bit length*2 | Pr.119 | Pr.333 | 10 | | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check/ RS-485 communication parity check*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of PU communication retries/ RS-485 communication retry count | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| PU communication check time interval/ RS-485 communication check time interval | Pr.122 | Pr.336 | 9999*4 | | Communication check suspension |
| PU communication waiting time setting/ RS-485 communication waiting time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| PU communication CR/LF selection/ RS-485 communication CR/LF selection | Pr.124 | Pr.341 | 1*3 | | With CR, without LF |
| Protocol selection | - | Pr.549 | 0*3 | | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | RS-485 | 0*3 | External operation mode at power on |
| Communication startup mode selection | Pr.340 | | PU connector | 0*3 | Refer to Pr.79 settings. |
| | | | RS-485 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | | 0*3 | | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-F700 and FR-F700P series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

**Point**

Automatic setting with Pr.999 (FR-F700P series only)

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

| Parameter No. | Set value | Description | Operation in parameter setting mode |
|---|---|---|---|
| Pr.999*1 | 10 | GOT Initial settings (PU connector) | [AUTO]→[GOT]→[1]Write |
| | 11 | GOT Initial settings (RS-485 terminal) | - |

*1 When monitoring the value of Pr.999, 9999 is always monitored.

## Connecting to FR-F700PJ series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit). Before setting the parameters, set Pr.160 (Extended function display selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PU communication speed*2 | Pr.118 | 192*3 | 19200bps |
| PU communication stop bit length | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check*2 | Pr.120 | 1 | Odd |
| Number of PU communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| PU communication check time interval | Pr.122 | 9999 | Communication check suspension |
| PU communication waiting time setting | Pr.123 | 0 | 0ms |
| PU communication CR/LF selection | Pr.124 | 1*3 | With CR, without LF |
| Protocol selection | Pr.549 | 0*3 | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | 0*3 | External operation mode at power on |
| Communication startup mode selection | Pr.340 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | 0*3 | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-F700PJ series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

**Point**

Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

| Parameter No. | Set value | Description | Operation in parameter setting mode |
|---|---|---|---|
| Pr.999*1 | 10 | GOT Initial settings (PU connector) | [AUTO] → [GOT] → [1]Write |

*1 When monitoring the value of Pr.999, 9999 is always monitored.

## Connecting to FR-A700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342 |
| RS-485 terminal | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549 |

## ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | RS-485 | | | |
| PU communication station number/ RS-485 communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| PU communication speed/ RS-485 communication speed*2 | Pr.118 | Pr.332 | 192*4 | | 19200bps |
| PU communication stop bit length/ RS-485 communication stop bit length*2 | Pr.119 | Pr.333 | 10 | | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check/ RS-485 communication parity check*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of PU communication retries/ RS-485 communication retry count | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| PU communication check time interval/ RS-485 communication check time interval | Pr.122 | Pr.336 | 9999*4 | | Communication check suspension |
| PU communication waiting time setting/ RS-485 communication waiting time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| PU communication CR/LF selection/ RS-485 communication CR/LF selection | Pr.124 | Pr.341 | 1*3 | | With CR, without LF |
| Protocol selection | - | Pr.549 | 0*3 | | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | RS-485 | 0*3 | External operation mode at power on |
| Communication startup mode selection | Pr.340 | | PU connector | 0*3 | Refer to Pr.79 settings. |
| | | | RS-485 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | | 0*3 | | Written to RAM and EEPROM |

*1 Setting items are the parameter names described in the FR-A700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

**Point**

• Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

| Parameter No. | Set value | Description | Operation in parameter setting mode |
|---|---|---|---|
| Pr.999*1 | 10 | GOT Initial settings (PU connector) | [AUTO] → [GOT] → [1]Write |
| | 11 | GOT Initial settings (RS-485) | - |

*1 When monitoring the value of Pr.999, 9999 is always monitored.

• Inverters available for automatic batch setting

Parameters are not automatically set in a batch depending on the SERIAL (production number) symbol of the inverter to be used.

For details, contact your local distributor.

## Connecting to FR-A800, FR-A800 Plus, or FR-F800 series

Configure the inverter communication settings by one of the following three methods.

To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

☞ Page 485 Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

☞ Page 486 Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

☞ Page 488 Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.414 |
| RS-485 terminal | Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.414, Pr.549 |

### ■Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the following parameters before the automatic connection.

| Setting item | Parameter No. | | Setting range | Contents of setting |
|---|---|---|---|---|
| | PU connector | RS-485 | | |
| PU communication station number/RS-485 communication station number | Pr.117 | Pr.331 | 0 to 31 | ☞ Page 497 Station number setting |
| PLC function operation selection | Pr.414 | | 0 to 2 | 0: Disable PLC function<br>1 or 2: Enable PLC function |
| Protocol selection | - | Pr.549 | 0, 1 | 0: Mitsubishi Electric inverter protocol<br>1: MODBUS RTU protocol |

The following shows the parameters to be reconfigured by the automatic connection.

| Setting item | Parameter No. | |
|---|---|---|
| | PU connector | RS-485 |
| PU communication speed/RS-485 communication speed | Pr.118 | Pr.332 |
| PU communication stop bit length/RS-485 communication stop bit length | Pr.119 | Pr.333 |
| PU communication parity check/RS-485 communication parity check | Pr.120 | Pr.334 |
| Number of PU communication retries/RS-485 communication retry count | Pr.121 | Pr.335 |
| PU communication check time interval/RS-485 communication check time interval | Pr.122 | Pr.336 |
| PU communication waiting time setting/RS-485 communication waiting time setting | Pr.123 | Pr.337 |
| PU communication CR/LF selection/RS-485 communication CR/LF selection | Pr.124 | Pr.341 |

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately.

If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

### ■Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

| Parameter No. | Set value | Description | Operation in parameter setting mode |
|---|---|---|---|
| Pr.999*1 | 10 | GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (PU connector) | [AUTO] → [GOT] → [1]Write |
| | 11 | GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (RS-485) | - |
| | 12 | GOT (FREQROL 800) initial settings (PU connector) | [AUTO] → [GOT] → [2]Write |
| | 13 | GOT (FREQROL 800) initial settings (RS-485) | - |

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

• Pr.999=10

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 1 |
| 118 | PU communication speed | 192 |
| 119 | PU communication stop bit length | 10 |
| 120 | PU communication parity check | 1 |
| 121 | Number of PU communication retries | 9999 |
| 122 | PU communication check time interval | 9999 |
| 123 | PU communication waiting time setting | 0ms |
| 124 | PU communication CR/LF selection | 1 |
| 340 | Communication startup mode selection | 0 |

• Pr.999=11

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 0 |
| 332 | RS-485 communication speed | 192 |
| 333 | RS-485 communication stop bit length | 10 |
| 334 | RS-485 communication parity check | 1 |
| 335 | RS-485 communication retry count | 9999 |
| 336 | RS-485 communication check time interval | 9999 |
| 337 | RS-485 communication waiting time setting | 0ms |
| 340 | Communication startup mode selection | 1 |
| 341 | RS-485 communication CR/LF selection | 1 |
| 549 | Protocol selection | 0 |

• Pr.999=12

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 1 |
| 118 | PU communication speed | 1152 |
| 119 | PU communication stop bit length | 0 |
| 120 | PU communication parity check | 1 |
| 121 | Number of PU communication retries | 9999 |
| 122 | PU communication check time interval | 9999 |
| 123 | PU communication waiting time setting | 0ms |
| 124 | PU communication CR/LF selection | 1 |
| 340 | Communication startup mode selection | 0 |
| 414 | PLC function operation selection | 2*1 |

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

• Pr.999=13

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 0 |
| 332 | RS-485 communication speed | 1152 |
| 333 | RS-485 communication stop bit length | 0 |
| 334 | RS-485 communication parity check | 1 |
| 335 | RS-485 communication retry count | 9999 |
| 336 | RS-485 communication check time interval | 9999 |
| 337 | RS-485 communication waiting time setting | 0ms |
| 340 | Communication startup mode selection | 1 |
| 341 | RS-485 communication CR/LF selection | 1 |
| 414 | PLC function operation selection | 2*1 |
| 549 | Protocol selection | 0 |

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

## ■Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended parameters are displayed. (The default value of FREQROL-F800 is 9999.)

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | | Set value | | Contents of setting |
|---|---|---|---|---|---|
| | PU connector | RS-485 | | | |
| PU communication station number/ RS-485 communication station number | Pr.117 | Pr.331 | 0 to 31 | | ☞ Page 497 Station number setting |
| PU communication speed/ RS-485 communication speed*2 | Pr.118 | Pr.332 | 192*3 | | 19200bps |
| PU communication stop bit length/data length/ RS-485 communication stop bit length/data length*2 | Pr.119 | Pr.333 | 10*4 | | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check/ RS-485 communication parity check*2 | Pr.120 | Pr.334 | 1 | | Odd |
| Number of PU communication retries/ RS-485 communication retry count | Pr.121 | Pr.335 | 9999 | | The inverter will not come to an alarm stop. |
| PU communication check time interval/ RS-485 communication check time interval | Pr.122 | Pr.336 | 9999*3 | | Communication check suspension |
| PU communication waiting time setting/ RS-485 communication waiting time setting | Pr.123 | Pr.337 | 0 | | 0ms |
| PU communication CR/LF selection/ RS-485 communication CR/LF selection | Pr.124 | Pr.341 | 1*5 | | With CR, without LF |
| Protocol selection | - | Pr.549 | 0*5 | | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | | PU connector | 1 | PU operation mode |
| | | | RS-485 | 0*5 | External operation mode at power on |
| Communication startup mode selection | Pr.340 | | PU connector | 0*5 | Refer to Pr.79 settings. |
| | | | RS-485 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | | 0*5 | | Written to RAM and EEPROM |
| PLC function operation selection*6 | Pr.414 | | 1, 2 | | Enabled with 1 and 2. |

*1 Setting items are the parameter names described in the FR-A800 and FR-F800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*4 To use [FR 800 driver], set 0.

*5 Inverter default values (No need to change).

*6 The inverter side setting defaults to 0 (invalid).
To use the PLC function, set 1 or 2.

## ■Parameters for monitoring data specific to FR-A800 Plus series

• How to monitor the winding length (upper + lower) (PV29)

Set Pr.645 (Winding diameter storage selection) to [1], and set Pr.1263 (Stored winding length (lower 4 digits)) and Pr.1298 (Stored winding length (upper 4 digits)) on the inverter side.

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

| Setting item *1 | Parameter No. | Setting range | Description |
|---|---|---|---|
| Winding diameter storage selection | Pr.645 | 0, 1 | Select whether to store the winding diameter and winding length.<br>0: Do not store.<br>1: Stores the current winding diameter. |
| Stored winding diameter | Pr.646 | 1 to 6553 mm | The stored winding diameter can be read/written. |
| Operation time with stored winding diameter | Pr.647 | 0 to 100 s | Set the time to hold the stored winding diameter after the start signal turns on. |
| Target winding diameter | Pr.648 | 1 to 6563 mm | Set the winding diameter to output the Target winding diameter achieved signal (Y233). |
| Winding length increment | Pr.1262 | 0 | 1km |
| | | 1 | 100m |
| | | 2 | 10m |
| | | 3 | 1m |
| | | 4 | 1cm |
| | | 5 | 1mm |
| Stored winding length (lower 4 digits) | Pr.1263 | 0 to 9999 m*2 | The stored winding length (lower 4 digits) can be read/written. |
| Winding length detection (lower 4 digits) | Pr.1264 | 0 to 9999 m*2 | Set the winding length (lower 4 digits) to output the Winding/unwinding completion signal (Y234). |
| Stored winding length (upper 4 digits) | Pr.1298 | 0 to 9999 m*2 | The stored winding length (upper 4 digits) can be read/written. |
| Stored winding length increment | Pr.1299 | 0 | 1m |
| | | 1 | 1cm |
| | | 2 | 1mm |
| Winding length detection (upper 4 digits) | Pr.1346 | 0 to 9999 m*2 | Set the winding length (lower 4 digits) to output the Winding/unwinding completion signal (Y234). |

*1 The parameter names described in the FR-A800 Plus series manuals

*2 The unit differs depending on the setting of Pr.1262.

• How to monitor the actual line speed (PV27)

The actual line speed can be set with the input value of the line speed command by setting Pr.362 (Actual line speed input selection) to [0].

For the line speed command, a value can be set in Pr.360 by setting Pr.361 (Line speed command input selection) to [8].

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

| Setting item [*1] | Parameter No. | Setting range | Description |
|---|---|---|---|
| Line speed command voltage/current bias | Pr.350 | 0 to 100% | Set the converted value (%) of the bias voltage (current) for analog input. |
| Line speed command bias | Pr.351 | 0 to 6553.4 m/min [*2] | Set the bias line speed command value for analog input. |
| Line speed command voltage/current gain | Pr.352 | 0 to 100% | Set the converted value (%) of the gain voltage (current) for analog input. |
| Line speed command gain | Pr.353 | 0 to 6553.4 m/min [*2]<br>9999 | Set the gain line speed command value for analog input. |
| Line speed command pulse input bias | Pr.354 | 0 to 500k pulses/s | Set the number of bias input pulses for pulse train input. |
| Line speed command pulse input gain | Pr.355 | 0 to 500k pulses/s | Set the number of gain input pulses for pulse train input. |
| Line speed command digital input bias | Pr.356 | 0 to 65535 | Set the bias line speed command value for pulse train input. |
| Line speed command digital input gain | Pr.357 | 0 to 65535 | Set the gain line speed command value for pulse train input. |
| Line speed unit | Pr.358 | 0 | m/min |
| | | 1 | m/sec |
| | | 2 | mm/min |
| | | 3 | mm/sec |
| Line speed command value | Pr.360 | 0 to 6553.4 m/min [*2] | Set the line speed command value. |
| Line speed command input selection | Pr.361 | 0 | According to the priority of the speed command rights |
| | | 1 | Terminal JOG single-phase pulse train input |
| | | 2 | FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input |
| | | 3 | Terminal 2 (0 to 100%) |
| | | 4 | Terminal 4 (20 to 100%) |
| | | 5 | Terminal 1 (-100 to 100%) |
| | | 6 | Terminal 6 (FR-A8AZ) (-100 to 100%) |
| | | 7 | FR-A8AL single-phase pulse train input |
| | | 8 | Line speed command according to the setting of Pr.360 (Line speed command value) |
| | | 9999 | No function |
| Actual line speed input selection | Pr.362 | 0 (Default) | V* (line speed command) |
| | | 1 | Terminal JOG single-phase pulse train input |
| | | 2 | FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input (complementary 12 V / differential 5 V (A-, B-phases)) [*3] |
| | | 3 | Terminal 2 (analog value: 0 to 100%) (0 to 5 V DC) [*4] |
| | | 4 | Terminal 4 (analog value: 20 to 100%) (4 to 20 mA DC) [*4] |
| | | 5 | Terminal 1 (analog value: -100 to 100%) (0 to ±10 V DC) [*4] |
| | | 6 | Terminal 6 (FR-A8AZ) (analog value: -100 to 100%) (0 to ±10 V DC) [*4] |
| | | 7 | FR-A8AL single-phase pulse train input (PP, NP) |
| | | 9999 | No function [*5] |
| Command pulse selection | Pr.428 | 0 | Forward/Reverse pulse train (negative logic) |
| | | 1 | Pulse train + rotation direction sign (negative logic) |
| | | 2 | A/B-phase pulse train (negative logic) |
| | | 3 | Forward/Reverse pulse train (positive logic) |
| | | 4 | Pulse train + rotation direction sign (positive logic) |
| | | 5 | A/B-phase pulse train (positive logic) |
| Start line speed command | Pr.622 | 0 to 6553.4 m/min [*2] | Set the line speed command to start operation. |
| Line multi-speed setting (high-speed) | Pr.1265 | 0 to 6553.4 m/min [*2] | Set the line speed command value when the RH signal is ON. |

| Setting item [*1] | Parameter No. | Setting range | Description |
|---|---|---|---|
| Line multi-speed setting (middle-speed) | Pr.1266 | 0 to 6553.4 m/min [*2] | Set the line speed command value when the RM signal is ON. |
| Line multi-speed setting (low-speed) | Pr.1267 | 0 to 6553.4 m/min [*2] | Set the line speed command value when the RL signal is ON. |
| Line multi-speed setting (speed 4) | Pr.1268 | 0 to 6553.4 m/min [*2] | The line speed from 4th speed to 15th speed can be set according to the combination of the RH, RM, RL and REX signals. |
| Line multi-speed setting (speed 5) | Pr.1269 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 6) | Pr.1270 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 7) | Pr.1271 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 8) | Pr.1272 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 9) | Pr.1273 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 10) | Pr.1274 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 11) | Pr.1275 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 12) | Pr.1276 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 13) | Pr.1277 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 14) | Pr.1278 | 0 to 6553.4 m/min [*2] | |
| Line multi-speed setting (speed 15) | Pr.1279 | 0 to 6553.4 m/min [*2] | |

*1 The parameter names described in the FR-A800 Plus series manuals
*2 The unit differs depending on the setting of Pr.358.
*3 When Pr.362 is set to [2], use Pr.862 to select the option used for the actual line speed input.
*4 The input specification in the initial setting is indicated.
*5 When Pr.362 is set to [9999] (No function), the actual line speed is regarded as 0.

## Connecting to FR-E800 series

Configure the inverter communication settings by one of the following three methods.

To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

☞ Page 492 Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

☞ Page 493 Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

☞ Page 494 Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.414, Pr.549 |

### ■Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the following parameters before the automatic connection.

| Setting item | Parameter No. | Setting range | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PLC function operation selection | Pr.414 | 0 to 2 | 0: Disable PLC function<br>1 or 2: Enable PLC function |
| Protocol selection | Pr.549 | 0, 1 | 0: Mitsubishi Electric inverter (computer link) protocol<br>1: MODBUS RTU protocol |

The following shows the parameters to be reconfigured by the automatic connection.

| Setting item | Parameter No. |
|---|---|
| PU communication speed | Pr.118 |
| PU communication stop bit length/data length | Pr.119 |
| PU communication parity check | Pr.120 |
| Number of PU communication retries | Pr.121 |
| PU communication check time interval | Pr.122 |
| PU communication waiting time setting | Pr.123 |
| PU communication CR/LF selection | Pr.124 |

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately.

If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

## ■Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

| Parameter No. | Set value | Description | Operation in parameter setting mode |
|---|---|---|---|
| Pr.999 *1 | 10 | GOT ([FREQROL 500/700/800, SENSORLESS SERVO]) initial settings | [AUTO] → [GOT] → [1]Write |
| | 12 | GOT ([FREQROL 800], [FREQROL(Batch monitor)]) initial settings | [AUTO] → [GOT] → [2]Write |

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

• Pr.999=10

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 1 |
| 118 | PU communication speed | 192 |
| 119 | PU communication stop bit length/data length | 10 |
| 120 | PU communication parity check | 1 |
| 121 | Number of PU communication retries | 9999 |
| 122 | PU communication check time interval | 9999 |
| 123 | PU communication waiting time setting | 0ms |
| 124 | PU communication CR/LF selection | 1 |
| 340 | Communication startup mode selection | 0 |
| 549 | Protocol selection | 0 |

• Pr.999=12

| Pr.No. | Setting item | Set value |
|---|---|---|
| 79 | Operation mode selection | 1 |
| 118 | PU communication speed | 1152 |
| 119 | PU communication stop bit length/data length | 0 |
| 120 | PU communication parity check | 1 |
| 121 | Number of PU communication retries | 9999 |
| 122 | PU communication check time interval | 9999 |
| 123 | PU communication waiting time setting | 0ms |
| 124 | PU communication CR/LF selection | 1 |
| 340 | Communication startup mode selection | 0 |
| 414 | PLC function operation selection | 2 *1 |
| 549 | Protocol selection | 0 |

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

## ■Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PU communication speed *2 | Pr.118 | 192 *4 | 19200bps |
| PU communication stop bit length/data length *2 | Pr.119 | 10 *6 | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check *2 | Pr.120 | 1 | Odd |
| Number of PU communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| PU communication check time interval | Pr.122 | 9999 *4 | Communication check suspension |
| PU communication waiting time setting | Pr.123 | 0 | 0ms |
| PU communication CR/LF selection | Pr.124 | 1 *3 | With CR, without LF |
| Protocol selection | Pr.549 | 0 | Mitsubishi Electric inverter (computer link) protocol |
| Operation mode selection | Pr.79 | 0 *3 | External operation mode at power on |
| Link start mode selection | Pr.340 | 1 | Network operation mode. |
| $E^2$PROM write selection | Pr.342 | 0 | Written to RAM and EEPROM |
| PLC function operation selection*5 | Pr.414 | 1, 2 | Enabled with 1 and 2. |

*1 Setting items are the parameter names described in the FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change).

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 The inverter side setting defaults to 0 (invalid).
To use the PLC function, set 1 or 2.

*6 To use [FREQROL 800] or [FREQROL(Batch monitor)] drivers, set 0.

## Connecting to sensor less servo (FR-E7□0EX)

Make the communication settings of the sensorless servo (FR-E700EX).

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549 |
| FR-E7TR<br>(RS-485 terminal block) | |

### ■Communication settings of sensorless servo

Set the following parameters using the PU (operation panel or parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| PU communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| PU communication speed*2 | Pr.118 | 192*3 | 19200bps |
| PU communication stop bit length*2 | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| PU communication parity check*2 | Pr.120 | 1 | Odd |
| Number of PU communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| PU communication check time interval | Pr.122 | 9999 | Communication check suspension |
| PU communication wait time setting | Pr.123 | 0 | 0ms |
| PU communication CR/LF selection | Pr.124 | 1*3 | With CR, without LF |
| Protocol selection | Pr.549 | 0*3 | Mitsubishi Electric inverter protocol |
| Operation mode selection | Pr.79 | 0*3 | PU operation mode |
| Communication startup mode selection | Pr.340 | 1 | Network operation mode. |
| Communication EEPROM write selection | Pr.342 | 0*3 | Written to RAM and EEPROM |

*1 Setting items are the parameters name described in the sensorless servo (FR-E7□0EfX) manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 No change is required since this is the default value of sensorless servo (FR-E7□0EX).

## Connecting to MELIPM series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

### ■Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| PU connector | Pr.79, Pr.117 to Pr.124 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

After setting the parameters for the communication settings, reset the inverter.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

| Setting item*1 | Parameter No. | Set value | Contents of setting |
|---|---|---|---|
| Communication station number | Pr.117 | 0 to 31 | ☞ Page 497 Station number setting |
| Communication speed*2 | Pr.118 | 192*3 | 19200bps |
| Stop bit length/data length*2 | Pr.119 | 10 | Data length: 7bit<br>Stop bit length: 1bit |
| Parity check presence/absence*2 | Pr.120 | 1 | Odd |
| Number of communication retries | Pr.121 | 9999 | The inverter will not come to an alarm stop. |
| Communication check time interval | Pr.122 | 9999 | Communication check suspension |
| Wait time setting | Pr.123 | 0 | 0ms |
| CRLF presence/absence selection | Pr.124 | 1*3 | With CR, without LF |

*1 Setting items are parameter names described in the manual of MELIPM series.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

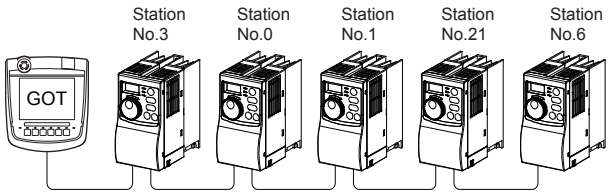
*3 Inverter default values (No need to change)

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the inverter of which data is to be changed.

| Specification range |
|---|
| 0 to 31 |

## Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 155 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the inverter.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 0 to 31<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

# Precautions

## Station No. of inverter system

The station No. required for the inverter system will differ according to the selected driver.

• When selecting [FREQROL 500/700/800, SENSORLESS SERVO]

Make sure to establish inverter system with No.0 station.

• When selecting [FREQROL(Batch monitor)] or [FREQROL 800]

Make sure to establish inverter system with the station number set with the host address.

## Number of inverter

• GT2506HS-V

Up to 31 inverters can be connected.

• GT2505HS-V

Up to 10 inverters can be connected.

## Parameter setting

### ■Communication parameter change

Do not make any change for each communication parameter of the inverter side from GOT.

If changed, the communication to the inverter cannot be made.

### ■When setting "8888" or "9999" to inverter parameter (Pr)

"8888" and "9999" designate special function.

When specifying from the GOT, it will be as follows.

| Set value of inverter side | Value specified by GOT |
|---|---|
| 8888 | 65520 |
| 9999 | 65535 |

## Screen switching devices, system information devices

Make sure to use GD for screen switching devices and system information devices when the GOT is connected to only the inverter.

## GOT clock setting

The clock function is enabled or disabled depending on the driver selected.

• When selecting [FREQROL 500/700/800, SENSORLESS SERVO]

The clock function is disabled even though [Adjust] or [Broadcast] is set by the GOT clock setting.

• When selecting [FREQROL(Batch monitor)] or [FREQROL 800]

The clock function is enabled by using the PLC function of the FR-A800, FR-A800 Plus, or FR-F800 series.

## Settable driver

The following shows the settable drivers according to the models used.

• When connecting the GOT to one or more inverters or sensorless servo drive units

[FREQROL 500/700/800, SENSORLESS SERVO]

• When connecting the GOT to one or more inverters (FR-A800, FR-A800 Plus, or FR-F800 series)

[FREQROL(Batch monitor)]

[FREQROL 800]

• When automatically connecting the GOT to an inverter (FR-A800, FR-A800 Plus, or FR-F800 series) or using the PLC function of an inverter (FR-A800, FR-A800 Plus, or FR-F800 series)

[FREQROL(Batch monitor)]

[FREQROL 800]

## Automatic connection of FR-A800, FR-A800 Plus, or FR-F800 series

The automatic connection requires the user-specified negotiation time and the initialization wait time.

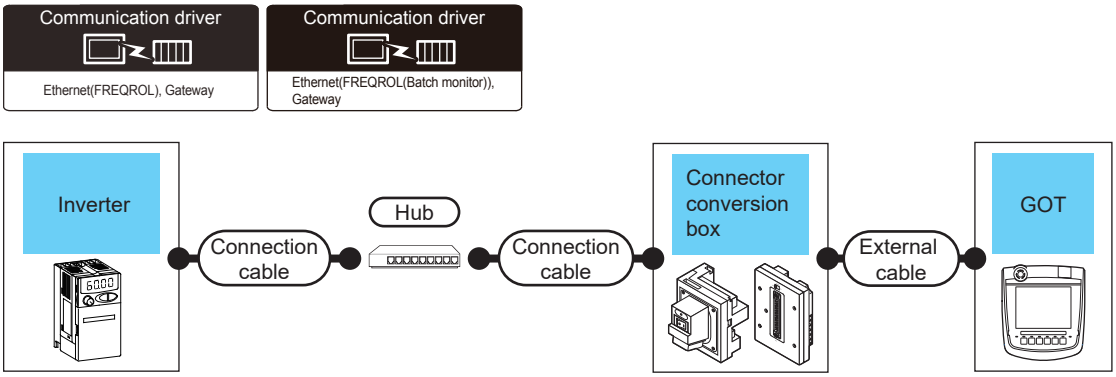
By monitoring the Notify Automatic Connection Status (GS277), you can check the completion of the automatic connection.

For details, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

# 7.3 Ethernet Connection

## Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800




| Inverter | | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | |
| FR-E7□0-NE *6*8<br>FR-A8□0 *7<br>FR-A8□2 *7<br>FR-A8□6 *7<br>FR-A8□0-GN<br>FR-A8□2-GN<br>FR-A8□0-E *5<br>FR-A8□2-E *5<br>FR-A8□6-E *5<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-E-AWH<br>FR-A8□0-E-LC<br>FR-F8□0 *7<br>FR-F8□2 *7<br>FR-F8□6 *7<br>FR-F8□0-E *5<br>FR-F8□2-E *5<br>FR-E8□0-E | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | *9 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

*5 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter with SERIAL (serial No.) "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*6 Use an inverter with SERIAL (serial No.) "□88******" or later.
For FR-E700-SC-NNE and FR-E700-SC-ENE, use an inverter with SERIAL (serial No.) "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*7 A built-in option (FR-A8NCG) is required.
Use an inverter with the following SERIAL (serial No.).
SERIAL (serial No.) is described on a rating plate of the inverter.

| Country of origin indication | SERIAL (serial No.) |
|---|---|
| MADE in Japan | □96****** and later |
| MADE in China | □97****** and later |

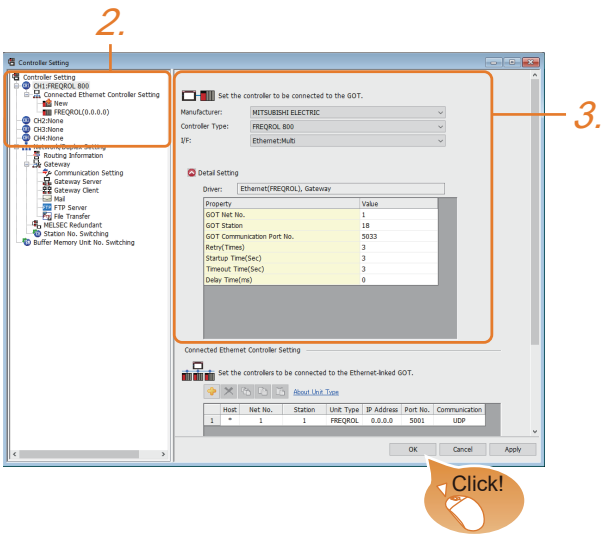
*8 Select [FREQROL 800/E700NE(Batch monitor)] for [Controller Type] in [Controller Setting] in GT Designer3.
*9 The number of connectable GOTs and those of inverters differ depending on [Controller Type] in [Controller Setting] in GT Designer3.

| [Controller Type] | Number of GOTs connectable to one inverter | Number of inverters connectable to one GOT |
|---|---|---|
| [FREQROL 800] | UDP: 16 (When monitoring the devices of the PLC)<br>TCP: 1 | UDP: 128 (16 or less recommended)<br>TCP: 128 (16 or less recommended) |
| [FREQROL 800/E700NE(Batch monitor)] | UDP: Unlimited<br>TCP: 1 | UDP: 128 (16 or less recommended)<br>TCP: 128 (16 or less recommended) |

# GOT side settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

• [Manufacturer]: [MITSUBISHI ELECTRIC]

• [Controller Type]: Select one of the following items.

[FREQROL 800]

[FREQROL 800/E700NE(Batch monitor)]

• [I/F]: [Ethernet:Multi]

• [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 503 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

• When [Controller Type] is set to [FREQROL 800/E700NE(Batch monitor)]

The [Faults history] and [Batch monitor] functions of FR Configurator2 can be realized on GOT by creating the screens.

• Checking controller setting

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5033 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 120 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>The default value varies depending on the [Controller Type].<br>[FREQROL 800]: 5033 *2<br>[FREQROL 800/E700NE(Batch monitor)]: 5036 *2 | 1024 to 5010, 5014 to 65534<br>(Except for 5011 to 5013, 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 504 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

## GOT Ethernet Setting

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

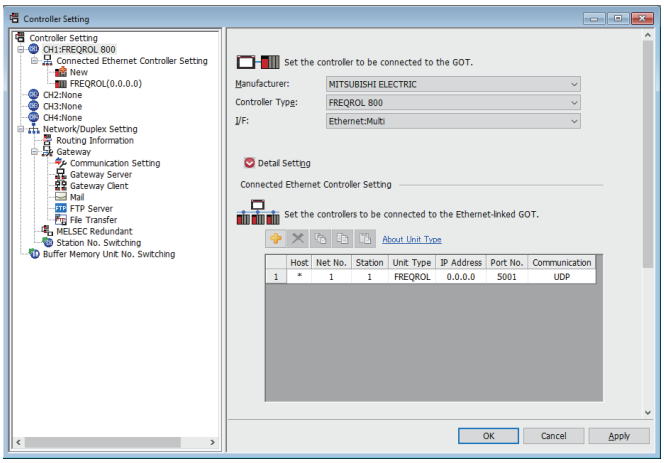
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 to 239 |
| Station*1 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 120 |
| Unit Type | FREQROL (fixed) | FREQROL (fixed) |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 0.0.0.0) | Inverter side IP address |
| Port No. | Set the port No. of the connected Ethernet module.<br>(Default: 5001) | Inverter side port No. |
| Communication | UDP, TCP*2<br>(Default: UDP) | Adjust the settings with the Inverter settings. |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 503 Communication detail settings

*2 For the connection to FR-E700-NE, only UDP is supported.

**Point**

• When connecting to an inverter in communication format [TCP]

When connecting to an inverter via [TCP] communication, use an inverter with SERIAL (serial No.) "□7Z******" or later.

SERIAL (serial No.) is described on a rating plate of the inverter.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# Inverter side settings

For details of the inverter, refer to the manual of each series.

## Connecting to FR-A800, FR-F800, or FR-E800 series (FR-A8□0-E, FR-A8□2-E, FR-A8□6-E, FR-F8□0-E, FR-F8□2-E, or FR-E8□0-E)

### ■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

### ■Communication port and the supported parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| Ethernet connector | Pr.79, Pr.340, Pr.342, Pr.414, Pr.502, Pr.549 to 551, Pr.779, Pr.1424 to 1429, Pr.1431 to 1432, Pr.1434 to 1455 |

### ■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

For parameter setting values, refer to the following.

📖Manual of the inverter used

○: Required, △: Set it as necessary

| Setting item[*1] | Parameter No. | Setting necessity at GOT connection |
|---|---|---|
| Operation mode switching | Pr.79 | △ |
| Communication startup mode | Pr.340 | △ |
| Communication EEPROM write selection | Pr.342 | △ |
| PLC function operation | Pr.414 | △ |
| Stop mode selection at communication error | Pr.502 | △ |
| Protocol selection | Pr.549 | ○ |
| NET mode command source selection | Pr.550 | △ |
| PU mode command source selection | Pr.551 | △ |
| Operation frequency during communication error | Pr.779 | △ |
| Ethernet communication network number[*2] | Pr.1424 | ○ |
| Ethernet communication station number[*2] | Pr.1425 | ○ |
| Link speed and duplex mode selection | Pr.1426 | △ |
| Ethernet function selection 1[*2] | Pr.1427 | ○ |
| Ethernet function selection 2 | Pr.1428 | △ |
| Ethernet function selection 3 | Pr.1429 | △ |
| Ethernet signal loss detection function selection | Pr.1431 | △ |
| Ethernet communication check time interval | Pr.1432 | △ |
| Ethernet IP address 1 (Built-in Ethernet)[*2] | Pr.1434 | ○ |
| Ethernet IP address 2 (Built-in Ethernet)[*2] | Pr.1435 | ○ |
| Ethernet IP address 3 (Built-in Ethernet)[*2] | Pr.1436 | ○ |
| Ethernet IP address 4 (Built-in Ethernet)[*2] | Pr.1437 | ○ |
| Subnet mask 1[*2] | Pr.1438 | △ |
| Subnet mask 2[*2] | Pr.1439 | △ |
| Subnet mask 3[*2] | Pr.1440 | △ |
| Subnet mask 4[*2] | Pr.1441 | △ |
| Ethernet IP filter address 1 | Pr.1442 | △ |
| Ethernet IP filter address 2 | Pr.1443 | △ |
| Ethernet IP filter address 3 | Pr.1444 | △ |
| Ethernet IP filter address 4 | Pr.1445 | △ |
| Ethernet IP filter address 2 range specification | Pr.1446 | △ |
| Ethernet IP filter address 3 range specification | Pr.1447 | △ |

| Setting item*1 | Parameter No. | Setting necessity at GOT connection |
|---|---|---|
| Ethernet IP filter address 4 range specification | Pr.1448 | △ |
| Ethernet command source selection IP address 1 | Pr.1449 | △ |
| Ethernet command source selection IP address 2 | Pr.1450 | △ |
| Ethernet command source selection IP address 3 | Pr.1451 | △ |
| Ethernet command source selection IP address 4 | Pr.1452 | △ |
| Ethernet command source selection IP address 3 range specification | Pr.1453 | △ |
| Ethernet command source selection IP address 4 range specification | Pr.1454 | △ |
| Keepalive time | Pr.1455 | △ |

*1 Setting items are the parameter names described in the FR-A800, FR-F800, and FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

## Connecting to FR-A800 Plus series

### ■Communication setting

For the inverter side settings, refer to the following.

📖Manual of the inverter used

### ■Communication port and corresponding parameters

| GOT connection destination | Inverter side parameter (R2R) | Inverter side parameter (CRN, AWH, LC) |
|---|---|---|
| Ethernet connector | Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1073 to 1078, Pr.1431, 1432, Pr.1434 to 1455 | Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1424 to 1429, Pr.1431, 1432, Pr.1434 to 1455 |

### ■Inverter communication settings

Set the following parameters using the PU (parameter unit).

Do not change the parameters for communication setting from the GOT.

If they are changed, communication with the GOT may be disabled.

○: Required, △: Set it as necessar

| Setting item*1 | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Operation mode switching | Pr.79 | 0 (default) *3 | △ |
| Communication startup mode | Pr.340 | 10 *3 | △ |
| Communication EEPROM write selection | Pr.342 | 0 (default) *3 | △ |
| Stop mode selection at communication error | Pr.502 | 0 (default) *3 | △ |
| Protocol selection | Pr.549 | 0 (default) | ○ |
| NET mode command source selection | Pr.550 | 9999 (default) *3 | △ |
| PU mode command source selection | Pr.551 | 2 *3 | △ |
| Ethernet communication network number *2 | Pr.1073 (R2R) or Pr.1424 (CRN, AWH, LC) | 1 to 239 | ○ |
| Ethernet communication station number *2 | Pr.1074 (R2R) or Pr.1425 (CRN, AWH, LC) | 1 to 120 | ○ |
| Link speed and duplex mode selection | Pr.1075 (R2R) or Pr.1426 (CRN, AWH, LC) | 0 (default) | △ |
| Ethernet function selection 1 *2 | Pr.1076 (R2R) or Pr.1427 (CRN, AWH, LC) | 5000 to 5002, 5006 to 5008 | ○ |
| Ethernet function selection 2 | Pr.1077 (R2R) or Pr.1428 (CRN, AWH, LC) | 45237 (default) *3 | △ |
| Ethernet function selection 3 | Pr.1078 (R2R) or Pr.1429 (CRN, AWH, LC) | 9999 (default) *3 | △ |
| Ethernet signal loss detection function selection | Pr.1431 | 0 (default) *3 | △ |
| Ethernet communication check time interval | Pr.1432 | 9999 (default) *3 | △ |
| Ethernet IP address 1 (Built-in Ethernet) *2 | Pr.1434 | 0 to 255 | ○ |
| Ethernet IP address 2 (Built-in Ethernet) *2 | Pr.1435 | 0 to 255 | ○ |
| Ethernet IP address 3 (Built-in Ethernet) *2 | Pr.1436 | 0 to 255 | ○ |
| Ethernet IP address 4 (Built-in Ethernet) *2 | Pr.1437 | 0 to 255 | ○ |
| Subnet mask 1 *2 | Pr.1438 | 255 (default) *3 | △ |
| Subnet mask 2 *2 | Pr.1439 | 255 (default) *3 | △ |
| Subnet mask 3 *2 | Pr.1440 | 255 (default) *3 | △ |
| Subnet mask 4 *2 | Pr.1441 | 0 (default) *3 | △ |

| Setting item[*1] | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Ethernet IP filter address 1 | Pr.1442 | 0 (default) [*3] | △ |
| Ethernet IP filter address 2 | Pr.1443 | 0 (default) [*3] | △ |
| Ethernet IP filter address 3 | Pr.1444 | 0 (default) [*3] | △ |
| Ethernet IP filter address 4 | Pr.1445 | 0 (default) [*3] | △ |
| Ethernet IP filter address 2 range specification | Pr.1446 | 9999 (default) [*3] | △ |
| Ethernet IP filter address 3 range specification | Pr.1447 | 9999 (default) [*3] | △ |
| Ethernet IP filter address 4 range specification | Pr.1448 | 9999 (default) [*3] | △ |
| Ethernet command source selection IP address 1 | Pr.1449 | 0 (default) [*3] | △ |
| Ethernet command source selection IP address 2 | Pr.1450 | 0 (default) [*3] | △ |
| Ethernet command source selection IP address 3 | Pr.1451 | 0 (default) [*3] | △ |
| Ethernet command source selection IP address 4 | Pr.1452 | 0 (default) [*3] | △ |
| Ethernet command source selection IP address 3 range specification | Pr.1453 | 9999 (default) [*3] | △ |
| Ethernet command source selection IP address 4 range specification | Pr.1454 | 9999 (default) [*3] | △ |
| Keepalive time | Pr.1455 | 3600s (default) [*3*4] | △ |

*1 The parameter names described in the FR-A800 Plus series manuals

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Change the setting depending on the usage environment.

*4 For the precautions for the TCP/IP connection, refer to the following.
☞ Page 508 When the GOT and inverter are connected using TCP/IP

### ■Parameters for monitoring data specific to FR-A800 Plus series

For how to monitor the winding length (upper + lower) (PV29) and actual line speed (PV27), refer to the following.

☞ Page 489 Parameters for monitoring data specific to FR-A800 Plus series

## Connecting to FR-E700 series (FR-E7□0-NE)

### ■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| Ethernet connector | Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.805 to 812, Pr.830 to 835, Pr.837 to 852 |

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters from the GOT.

If they are changed, communication with the GOT is disabled.

○: Required, △: Set it as necessary

| Setting item [*1] | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Operation mode switching | Pr.79 | 0(default)[*3] | △ |
| Communication startup mode | Pr.340 | 10[*3] | △ |
| Communication EEPROM write selection | Pr.342 | 0(default)[*3] | △ |
| Stop mode selection at communication error | Pr.502 | 0(default)[*3] | △ |
| Protocol selection | Pr.549 | 0(default)[*3] | ○ |
| NET mode command source selection | Pr.550 | 0(default)[*3] | △ |
| PU mode command source selection | Pr.551 | 2[*3] | △ |
| Ethernet communication network number [*2] | Pr.830 | 1 to 239 | ○ |
| Ethernet communication station number [*2] | Pr.831 | 1 to 120 | ○ |
| Link speed and duplex mode selection | Pr.832 | 0(default)[*3] | △ |
| Ethernet function selection 1 [*2] | Pr.833 | 30, 31, 36, 38 | ○ |
| Ethernet function selection 2 | Pr.834 | 20(default)[*3] | △ |

| Setting item [*1] | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Ethernet function selection 3 | Pr.835 | 9999(default)[*3] | △ |
| Ethernet signal loss detection function selection | Pr.851 | 3(default)[*3] | △ |
| Ethernet communication check time interval | Pr.852 | 1.5s(default)[*3] | △ |
| Ethernet IP address 1 (Built-in Ethernet) [*2] | Pr.805 | 0 to 255 | ○ |
| Ethernet IP address 2 (Built-in Ethernet) [*2] | Pr.806 | 0 to 255 | ○ |
| Ethernet IP address 3 (Built-in Ethernet) [*2] | Pr.807 | 0 to 255 | ○ |
| Ethernet IP address 4 (Built-in Ethernet) [*2] | Pr.808 | 0 to 255 | ○ |
| Subnet mask 1 [*2] | Pr.809 | 255(default)[*3] | △ |
| Subnet mask 2 [*2] | Pr.810 | 255(default)[*3] | △ |
| Subnet mask 3 [*2] | Pr.811 | 255(default)[*3] | △ |
| Subnet mask 4 [*2] | Pr.812 | 0(default)[*3] | △ |
| Gateway address 1 [*2] | Pr.442 | 0(default)[*3] | △ |
| Gateway address 2 [*2] | Pr.443 | 0(default)[*3] | △ |
| Gateway address 3 [*2] | Pr.444 | 0(default)[*3] | △ |
| Gateway address 4 [*2] | Pr.445 | 0(default)[*3] | △ |
| Ethernet IP filter address 1 | Pr.837 | 0(default)[*3] | △ |
| Ethernet IP filter address 2 | Pr.838 | 0(default)[*3] | △ |
| Ethernet IP filter address 3 | Pr.839 | 0(default)[*3] | △ |
| Ethernet IP filter address 4 | Pr.840 | 0(default)[*3] | △ |
| Ethernet IP filter address 2 range specification | Pr.841 | 9999(default)[*3] | △ |
| Ethernet IP filter address 3 range specification | Pr.842 | 9999(default)[*3] | △ |
| Ethernet IP filter address 4 range specification | Pr.843 | 9999(default)[*3] | △ |
| Ethernet command source specification IP address 1 | Pr.844 | 0(default)[*3] | △ |
| Ethernet command source specification IP address 2 | Pr.845 | 0(default)[*3] | △ |
| Ethernet command source specification IP address 3 | Pr.846 | 0(default)[*3] | △ |
| Ethernet command source specification IP address 4 | Pr.847 | 0(default)[*3] | △ |
| Ethernet command source selection IP address 3 range specification | Pr.848 | 9999(default)[*3] | △ |
| Ethernet command source selection IP address 4 range specification | Pr.849 | 9999(default)[*3] | △ |
| Ethernet TCP disconnection time coefficient | Pr.850 | 3600[*3] | △ |

*1 Setting items are the parameter names described in the FR-E700 series manuals.
*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.
*3 Change the setting depending on the usage environment.

# Precautions

## Connection port of inverter

Make sure to connect an Ethernet cable to an Ethernet port of an inverter.
When connecting an Ethernet cable by mistake to a PU port, there is a fear that equipment is damaged.

## Monitoring virtual devices (RS, WS, A, Pr, PG, SP)

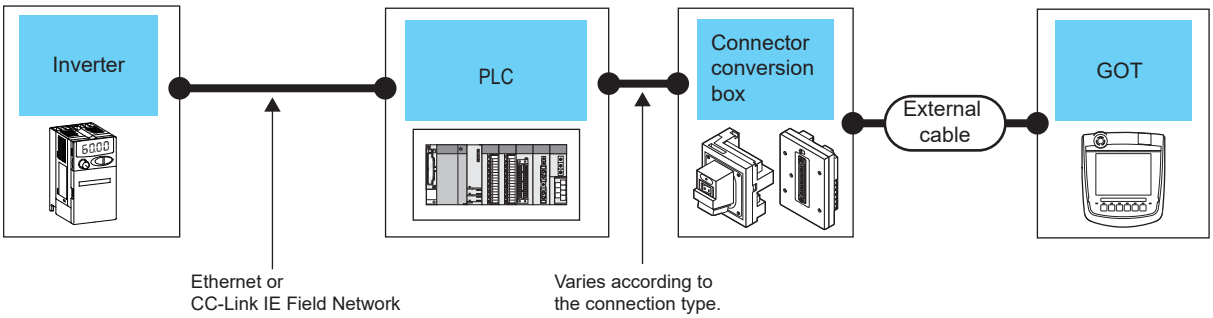
From multiple GOTs, it cannot monitor the virtual devices (RS, WS, A, Pr, PG, SP) of a single inverter at the same time.

## When the GOT and inverter are connected using TCP/IP

When the GOT and inverter are connected using TCP/IP, they may not be connected again after they are disconnected.
In such a case, reset the inverter, or shorten the keepalive time and Ethernet TCP disconnection time coefficient.
For setting the keepalive time and Ethernet TCP disconnection time coefficient, refer to the following.
Manual of the inverter used

# 7.4 Connection through a PLC

## Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, or FR-E800




| Inverter | | PLC | Communication type *1 | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|
| **Model name** | **Communication type** | **CPU type** | | | | |
| FR-E7□0-NE *5<br>FR-A8□0-E *4<br>FR-A8□2-E *4<br>FR-A8□6-E *4<br>FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-E-AWH<br>FR-A8□0-E-LC<br>FR-F8□0-E *4<br>FR-F8□2-E *4<br>FR-E8□0-E | Ethernet | RCPU<br>QCPU<br>LCPU | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION*7<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT16H-CNB-42S<br>or<br>GT16H-CNB-37S | GT 2506HS | *2 |
| FR-A8□0 *3<br>FR-A8□2 *3<br>FR-A8□6 *3<br>FR-A8□0-GF<br>FR-A8□2-GF<br>FR-A8□0-CRN *3<br>FR-A8□2-CRN *3<br>FR-A8□0-R2R *3<br>FR-A8□2-R2R *3<br>FR-A8□0-LC *3<br>FR-F8□0 *3<br>FR-F8□2 *3<br>FR-F8□6 *3 | CC-Link IE Field network*6 | RCPU<br>QCPU<br>LCPU | | GT16H-CNB-37S<br>or<br>GT11H-CNB-37S | GT 2505HS | |

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one PLC
• Number of PLCs connectable to one GOT

*3 The option for the CC-Link IE Field Network communication (FR-A8NCE) is required.
Use a CC-Link IE Field Network communication option (FR-A8NCE) whose SERIAL (serial No.) is "□83***" or later.
SERIAL (serial No.) is described on the CC-Link IE Field Network communication option (FR-A8NCE).

*4 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter whose SERIAL (serial No.) is "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*5 Use an inverter with SERIAL (serial No.) "□88******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*6 Use an inverter having SERIAL (serial No.) "□83******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*7 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 154 Routing parameter setting

# GOT side settings

The GOT settings depend on the connection type between the GOT and PLC.

For details on the GOT settings, refer to the following.

☞ Page 102 ETHERNET CONNECTION

☞ Page 275 DIRECT CPU CONNECTION (SERIAL)

☞ Page 327 SERIAL COMMUNICATION CONNECTION

# Inverter side settings

For details of the inverter, refer to the manual of each series.

## Connection by Ethernet

### ■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

For details on the communication port, parameters corresponding to the inverter, and communication settings of the inverter, refer to the following.

☞ Page 505 Connecting to FR-A800, FR-F800, or FR-E800 series (FR-A8□0-E, FR-A8□2-E, FR-A8□6-E, FR-F8□0-E, FR-F8□2-E, or FR-E8□0-E)

## CC-Link IE Field Network connection

### ■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

| GOT connection destination | Parameters corresponding to inverter |
|---|---|
| Ethernet connector | Pr.79, Pr.313 to 315, Pr.338 to 340, Pr.342, Pr.349, Pr.434 to 435, Pr.500 to 502, Pr.541, Pr.550, Pr.779, Pr.804, Pr.810 |

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

○: Required, △: Set it as necessary

| Setting item *1 | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Operation mode selection | Pr.79 | 0 (default) *3 | △ |
| Communication startup mode selection | Pr.340 | 10 *3 | △ |
| DO0 output selection | Pr.313 | 9999 (default) *3 | △ |
| DO1 output selection | Pr.314 | 9999 (default) *3 | △ |
| DO2 output selection | Pr.315 | 9999 (default) *3 | △ |
| Communication operation command source | Pr.338 | 0 (default) *3 | △ |
| Communication speed command source | Pr.339 | 0 (default) *3 | △ |
| Communication EEPROM write selection | Pr.342 | 0 (default) *3 | △ |
| Communication reset selection | Pr.349 | 0 (default) *3 | △ |
| Network number (CC-Link IE) *2 | Pr.434 | 1 to 239 | ○ |
| Station number (CC-Link IE) *2 | Pr.435 | 1 to 120 | ○ |
| Communication error execution waiting time | Pr.500 | 0s (default) *3 | △ |
| Communication error occurrence count display | Pr.501 | 0 (default) *3 | △ |
| Stop mode selection at communication error | Pr.502 | 0 (default) *3 | △ |
| Frequency command sign selection | Pr.541 | 0 (default) *3 | △ |
| NET mode operation command source selection | Pr.550 | 0 *3 | △ |
| Operation frequency during communication error | Pr.779 *4 | 9999 (default) *3 | △ |

| Setting item *1 | Parameter No. | Set value | Setting necessity at GOT connection |
|---|---|---|---|
| Torque command source selection | Pr.804 | 0 (default) *3 | △ |
| Torque limit input method selection | Pr.810 | 0 (default) *3 | △ |

*1 The setting items are the parameter names described in the manuals of the FR-A800 and FR-F800 series.
*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.
*3 Change the setting depending on the usage environment.
*4 For FR-A8□0-R2R and FR-A8□2-R2R, this setting is unavailable.

### ■Parameters for monitoring data specific to FR-A800 Plus series

For how to monitor the winding length (upper + lower) (PV29) and actual line speed (PV27), refer to the following.

☞ Page 489 Parameters for monitoring data specific to FR-A800 Plus series

# Precautions

## When the device of the PLC and virtual device of the inverter are monitored simultaneously

In the following cases, the device monitor speed of the PLC that passes through the GOT and inverter decreases.

- Monitoring the device of the PLC and virtual device of the inverter on the same screen or background
- Resetting the inverter

By connecting a different channel for each controller with the multi-channel function, the decreasing device monitor speed of the PLC can be improved.

## Link devices of CC-Link IE Field Network, or CC-Link IE Field Network Basic connection

When functions (signals) are assigned to link devices (RX, RY, RWr, RWw) on the inverter, the GOT cannot write data to these virtual devices.

Example) CMD1 (Forward rotation command)

Since the forward rotation command is assigned to RY0 on the inverter, the GOT cannot write data to the virtual device, or CMD1 (forward rotation command).

For the functions (signals) assigned to the link devices (RX, RY, RWw, and RWr), refer to the following.

📖Manual of the inverter used

Control the functions (signals) assigned to the link devices (RX, RY, RWw, and RWr) on the master station.

# 7.5 Settable Device Range

## When directly connecting the GOT to an inverter

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1
[FREQROL 500/700/800, SENSORLESS SERVO]
[FREQROL 800]
[FREQROL 800/E700NE(Batch monitor)]

## When connecting the GOT to an inverter via a PLC

For details of the device setting, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

# 8 SERVO AMPLIFIER CONNECTION


- Page 513 Connectable Model List
- Page 515 Serial Connection
- Page 539 Ethernet Connection
- Page 558 Connection through a PLC
- Page 569 Settable Device Range
- Page 570 Precautions


## 8.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELSERVO-J2-Super | MR-J2S-□A<br>MR-J2S-□CP<br>MR-J2S-□CL | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 515 Connecting to the MELSERVO-J2-Super Series |
| MELSERVO-J2M | MR-J2M-P8A<br>MR-J2M-□DU | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 517 Connecting to the MELSERVO-J2M Series |
| MELSERVO-J3 | MR-J3-□A<br>MR-J3-□T | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 520 Connecting to the MELSERVO-J4, J3 Series |
| MELSERVO-J4 | MR-J4-□A*1<br>MR-J4-□A-RJ*1 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 520 Connecting to the MELSERVO-J4, J3 Series |
| | MR-J4-□B*2*6<br>MR-J4-□B-RJ*2*6<br>MR-J4W2-□B*2*6<br>MR-J4W3-□B*2*6 | × | *3 | GT2506HS GT2505HS | ☞ Page 558 Connection to MELSERVO-J4 series |
| | MR-J4-□GF*4<br>MR-J4-□GF-RJ*4 | × | *5 | | |
| MELSERVO-J5 | MR-J5-□B<br>MR-J5-□B-RJ<br>MR-J5W2-□B<br>MR-J5W3-□B | × | *5 | GT2506HS GT2505HS | ☞ Page 562 Connection to MELSERVO-J5 or JET series |
| | MR-J5-□G*7<br>MR-J5-□G-RJ*7<br>MR-J5W2-□G*7<br>MR-J5W3-□G*7<br>MR-J5D1-□G4*7<br>MR-J5D2-□G4*7<br>MR-J5D3-□G4*7 | × | *5 | GT2506HS GT2505HS | ☞ Page 562 Connection to MELSERVO-J5 or JET series |
| | MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5W2-□G*8<br>MR-J5W3-□G*8<br>MR-J5D1-□G4<br>MR-J5D2-□G4*8<br>MR-J5D3-□G4*8 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 539 Connection to the MELSERVO-J5 or JET series |
| MELSERVO-JET | MR-JET-□G*7 | × | *5 | GT2506HS GT2505HS | ☞ Page 562 Connection to MELSERVO-J5 or JET series |
| | MR-JET-□G | × | Ethernet | GT2506HS GT2505HS | ☞ Page 539 Connection to the MELSERVO-J5 or JET series |
| MELSERVO-JE | MR-JE-□A | × | RS-422 | GT2506HS GT2505HS | ☞ Page 525 Connecting to the MELSERVO-JE-□A Series |
| | MR-JE-□B*2<br>MR-JE-□BF*2 | × | *3 | GT2506HS GT2505HS | ☞ Page 565 Connection to MELSERVO-JE-□B series |
| | MR-JE-□C | × | Ethernet | GT2506HS GT2505HS | ☞ Page 542 Connecting to the MELSERVO-JE-C Series |

*1 For the RS-422 communication, use MELSERVO-J4 of software version A3 or a later version.
*2 The models are connected to the GOT through a Motion controller or Simple Motion module.
*3 The communication type depends on the connection type between a motion CPU or PLC CPU and the GOT.
*4 The models are connected to the GOT through a Simple Motion module or CC-Link IE Field Network master/local module.
*5 The communication type depends on the connection type between a PLC CPU and the GOT.
*6 If the models are J3-compatible, the GOT cannot monitor the servo amplifiers.
*7 The models are connected to the GOT through a Motion module or CC-Link IE TSN master/local module.
*8 The connection with the PLC through a CC-Link IE Field Network Basic is not supported.

# 8.2 Serial Connection

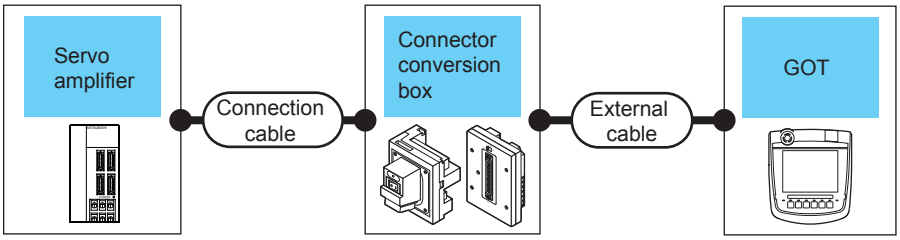
## Connecting to the MELSERVO-J2-Super Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

### When connecting via RS-232 communication

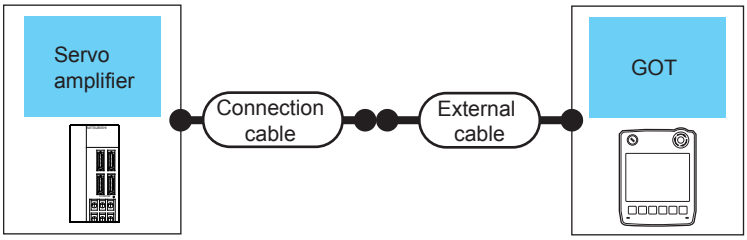
#### ■When using the connector conversion box




| Servo amplifier | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model Connection diagram number | | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-232 | MR-CPCATCBL3M(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 servo amplifier |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

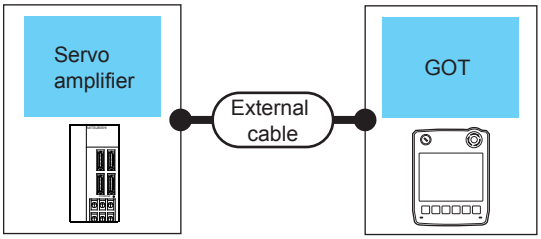
#### ■When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model Connection diagram number | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 servo amplifier |

*1 Connect the connector of the servo amplifier to CN3.

### ■When using the external cable (GT11H-C□□□)

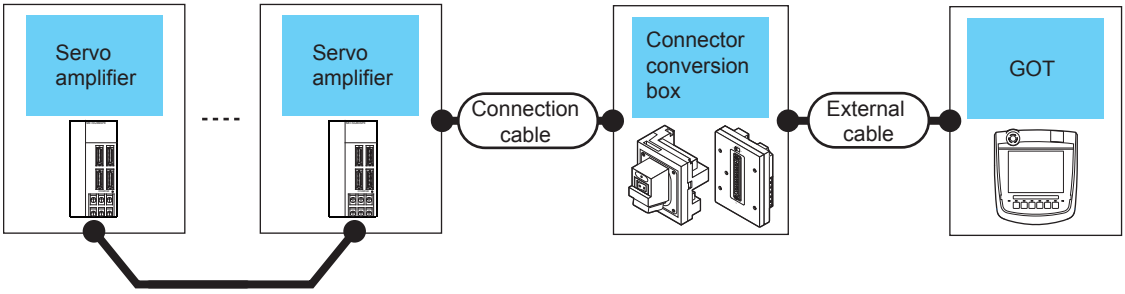



| Servo amplifier | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 servo amplifier |

*1 Connect the connector of the servo amplifier to CN3.

## When connecting via RS-422 communication

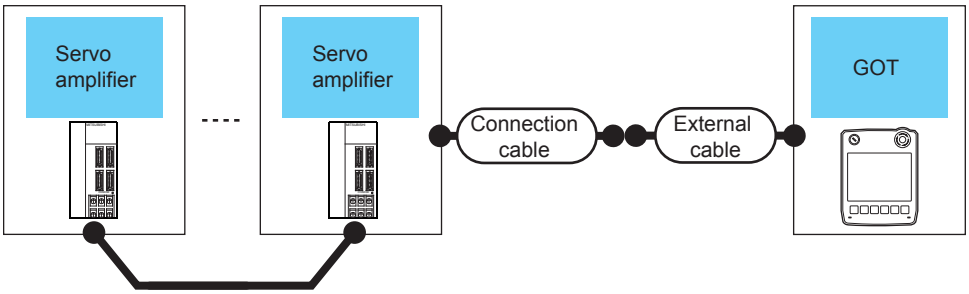
### ■When using the connector conversion box




| Servo amplifier | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-422 | User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

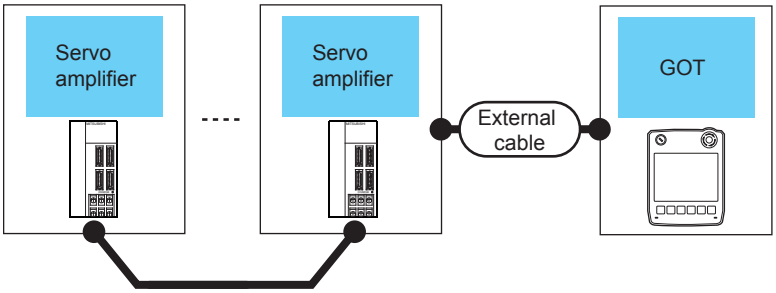
### ■When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |

*1 Connect the connector of the servo amplifier to CN3.

### ■When using the external cable (GT11H-C□□□)




| Servo amplifier | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| MR-J2S-□A*1<br>MR-J2S-□CP*1<br>MR-J2S-□CL*1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |

*1 Connect the connector of the servo amplifier to CN3.

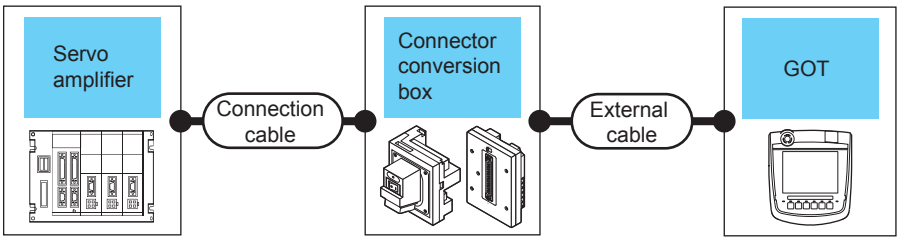
## Connecting to the MELSERVO-J2M Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

### When connecting via RS-232 communication

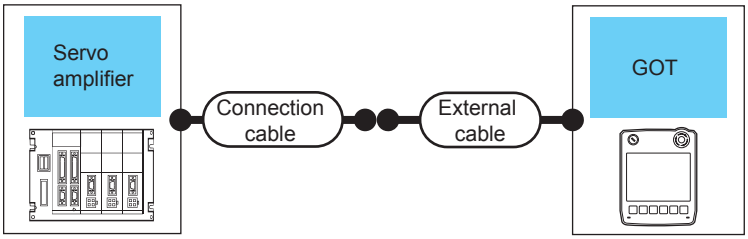
### ■When using the connector conversion box




| Servo amplifier | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model<br>Connection diagram number | | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-232 | MR-CPCATCBL3M(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 servo amplifier |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

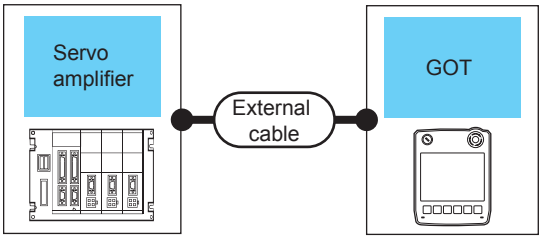
### ■When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model Connection diagram number | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 servo amplifier |

*1 Connect the connector of the servo amplifier to CN3.

### ■When using the external cable (GT11H-C□□□)

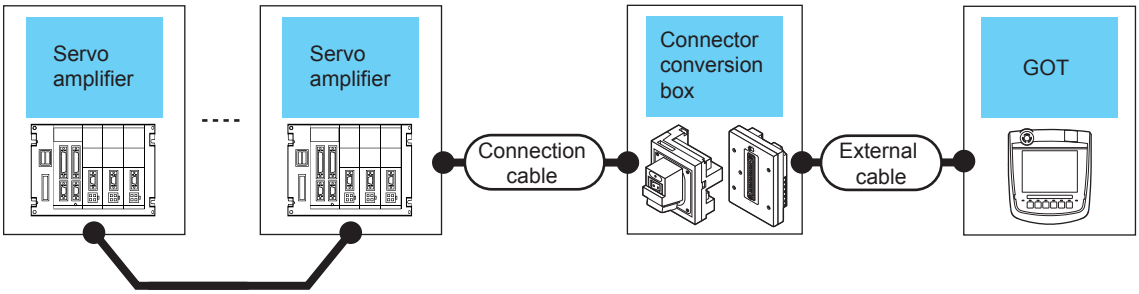



| Servo amplifier | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 servo amplifier |

*1 Connect the connector of the servo amplifier to CN3.

## When connecting via RS-422 communication

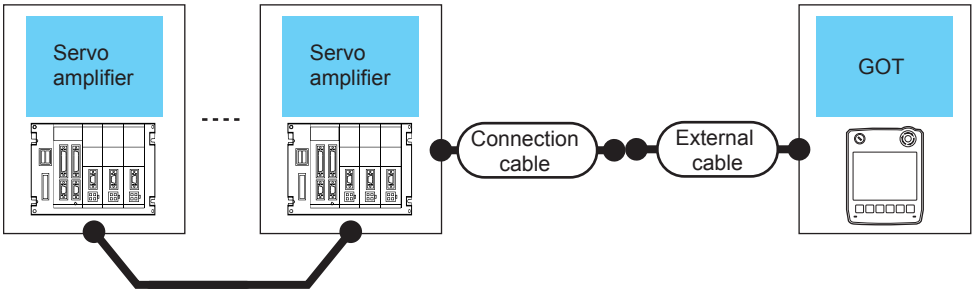
### ■When using the connector conversion box




| Servo amplifier | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-422 | User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 0 to 31 servo amplifiers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

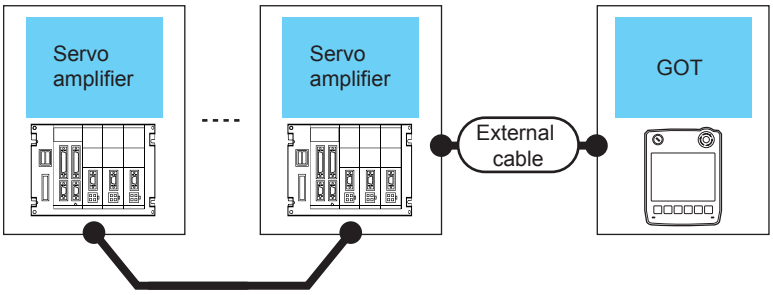
## ■When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 0 to 31 servo amplifiers for 1 GOT |

*1 Connect the connector of the servo amplifier to CN3.

## ■When using the external cable (GT11H-C□□□)




| Servo amplifier | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| MR-J2M-P8A*1<br>MR-J2M-□DU*1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | 0 to 31 servo amplifiers for 1 GOT |

*1 Connect the connector of the servo amplifier to CN3.

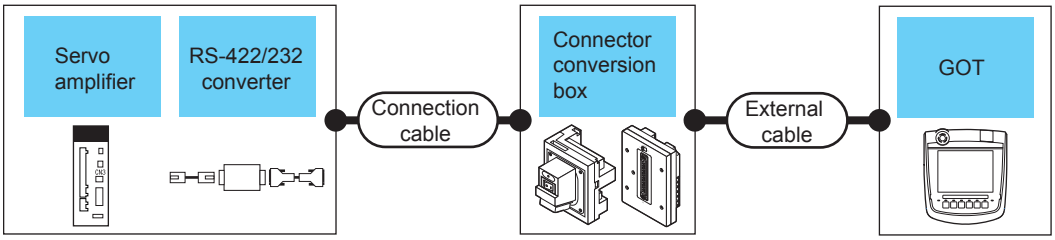
# Connecting to the MELSERVO-J4, J3 Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

## When connecting to one servo amplifier

• When using the connector conversion box




| Servo amplifier | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-422/232 interface converter RS-422/232 conversion cable | Communication type | Cable model Connection diagram number | | | | | |
| MR-J4-□A*1<br>MR-J4-□A-RJ*1<br>MR-J3-□A*1<br>MR-J3-□T*1 | DSV-CABV(1.5m)*2 or FA-T-RS40VS*3 | RS-232 | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 servo amplifier |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | - | RS-422 | User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

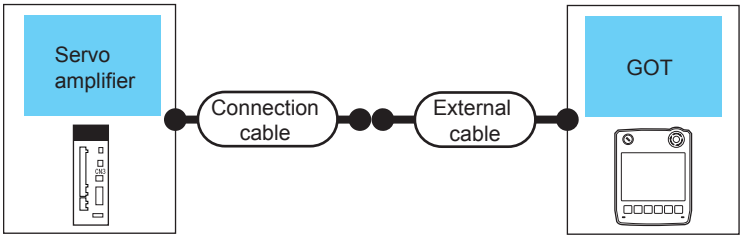
*1 Connect the connector of the servo amplifier to CN3.

*2 DSV-CABV is a product manufactured by Diatrend Corporation.
For details, contact Diatrend Corporation.

*3 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
For details, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together.
Use the provided cables to connect devices.
* FA-T-RS40VS stopped being produced at the end of March, 2013. The replacement product is not produced.

*4 The distance from the GOT to the interface converter or the conversion cable (Connection cable + External cable)

• When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| **Model name** | **Communication type** | **Cable model Connection diagram number** | | | | |
| MR-J4-□A*1<br>MR-J4-□A-RJ*1<br>MR-J3-□A*1<br>MR-J3-□T*1 | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 servo amplifier |

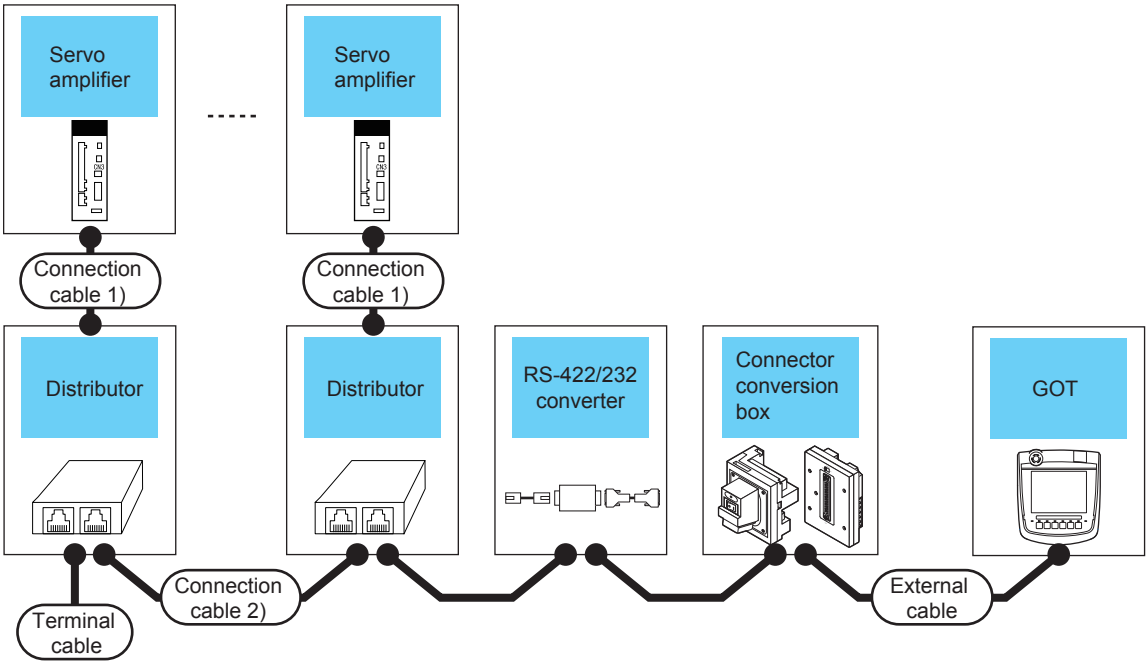
*1 Connect the connector of the servo amplifier to CN3.

*2 The distance from the GOT to the interface converter or the conversion cable (Connection cable + External cable)

## When connecting to multiple servo amplifiers

### ■RS-232 connection

• When using the connector conversion box




| Servo amplifier | Terminating cable | Connection cable 1) | Distributor *3 | Connection cable 2) | Distributor *3 | RS-422/232 interface converter*2 | | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Connection diagram number | Connection diagram number | Model name | Connection diagram number | Model name | Model name | Communication type | | | | | |
| MR-J4-□A*1<br>MR-J4-□A-RJ*1<br>MR-J3-□A*1<br>MR-J3-□T*1 | User preparing RS-422 connection diagram 8) | User preparing RS-422 connection diagram 7) | BMJ-8 (Recommended) | User preparing RS-422 connection diagram 6) | BMJ-8 (Recommended) | FA-T-RS40VS | RS-232 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 32 servo amplifiers for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

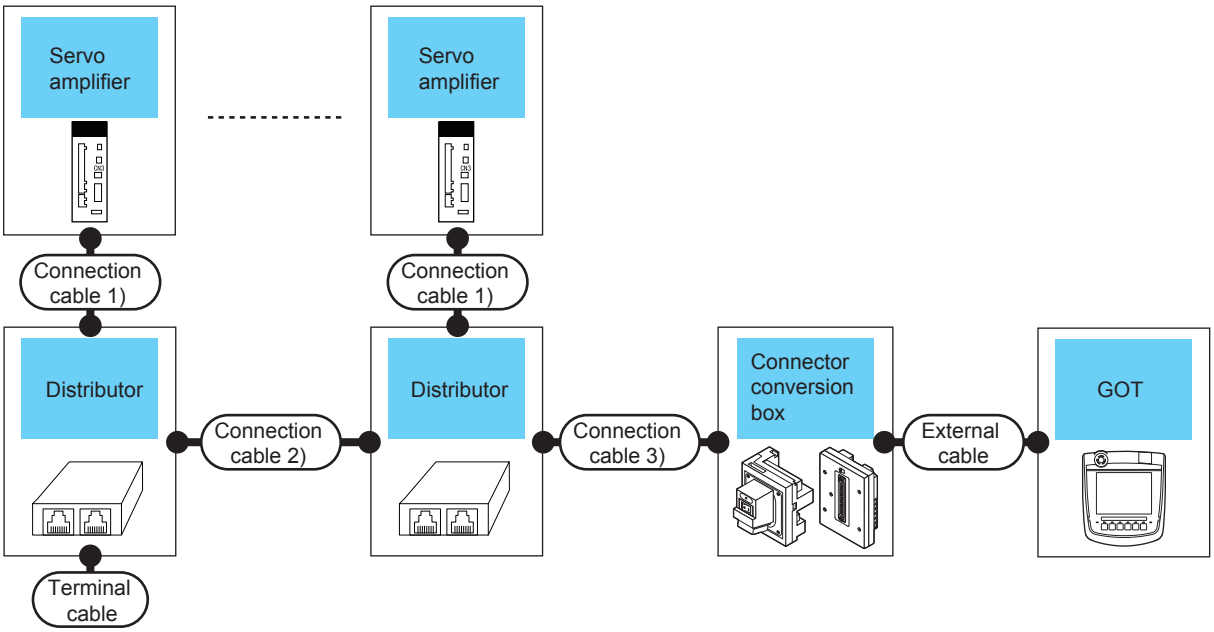
*2 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
For detail of this product, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together.
Use the cables packed together to connect.

*3 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*4 The distance from the GOT to the RS422/232 interface converter.

## ■RS-422 connection

• When using the connector conversion box



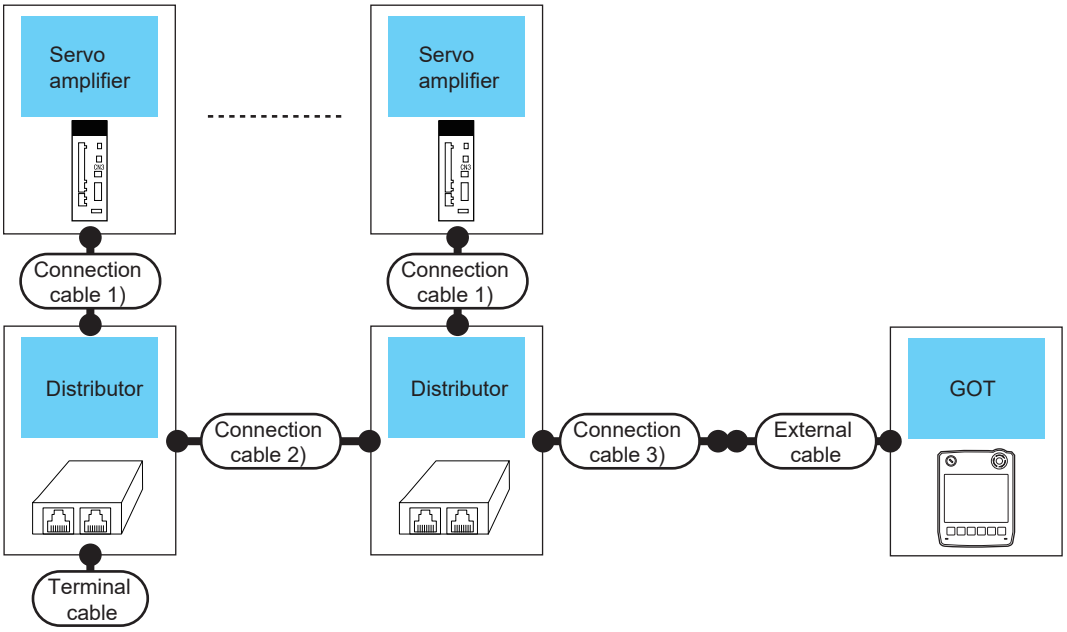

| Servo amplifier | | Terminating cable | Connection cable 1) | Distributor *2 | Connection cable 2) | Distributor *2 | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | Connection diagram number | Model name | Connection diagram number | Model name | Connection diagram number | | | | | |
| MR-J4-□A*1<br>MR-J4-□A-RJ*1<br>MR-J3-□A*1<br>MR-J3-□T*1 | RS-422 | User preparing RS-422 connection diagram 8) | User preparing RS-422 connection diagram 7) | BMJ-8 (Recommended) | User preparing RS-422 connection diagram 6) | BMJ-8 (Recommended) | User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 32 servo amplifiers for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN3.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the servo amplifier (Connection cable 1) + Connection cable 2) + Connection cable 3) + External connection cable).

• When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Terminating cable | Connection cable 1) | Distributor *2 | Connection cable 2) | Distributor *2 | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Model name** | **Communication type** | **Connection diagram number** | **Connection diagram number** | **Model name** | **Connection diagram number** | **Model name** | **Connection diagram number** | | | | |
| MR-J4-□A*1<br>MR-J4-□A-RJ*1<br>MR-J3-□A*1<br>MR-J3-□T*1 | RS-422 | User preparing RS-422 connection diagram 8) | User preparing RS-422 connection diagram 7) | BMJ-8 (Recommended) | User preparing RS-422 connection diagram 6) | BMJ-8 (Recommended) | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 32 servo amplifiers for 1 GOT |

*1 Connect the connector of the servo amplifier to CN3.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

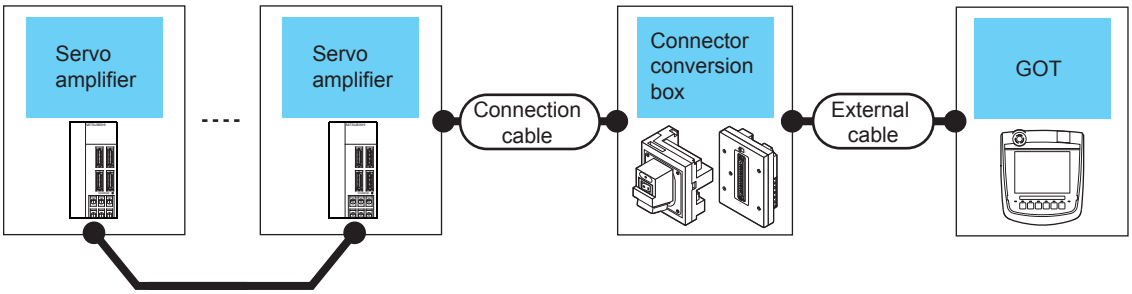
*3 The distance from the GOT to the servo amplifier (Connection cable 1) + Connection cable 2) + Connection cable 3) + External connection cable).

# Connecting to the MELSERVO-JE-□A Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

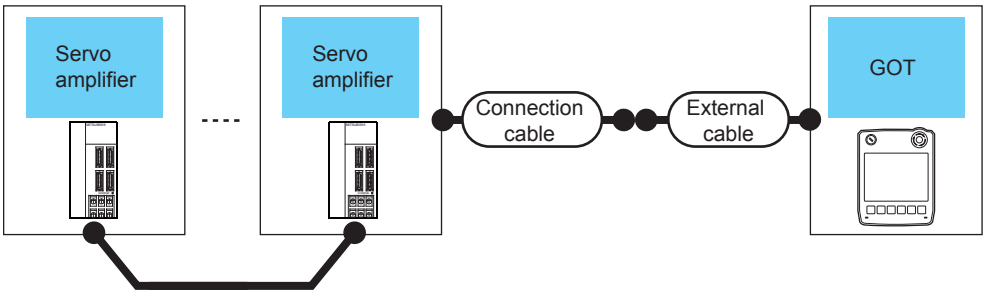
## When using the connector conversion box




| Servo amplifier | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | | |
| MR-JE-□A*1 | RS-422 | User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Connect the connector of the servo amplifier to CN1.

## When using the external cable (GT11H-C□□□-37P)

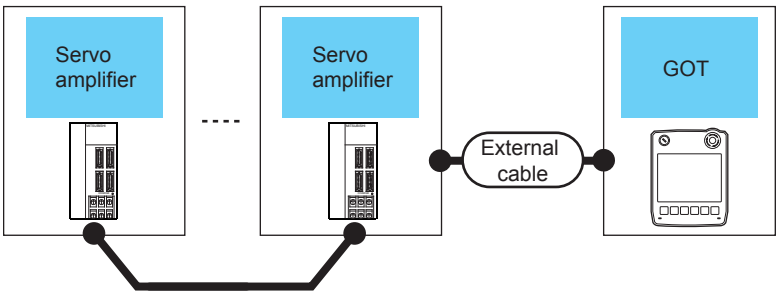



| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| MR-JE-□A*1 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |

*1 Connect the connector of the servo amplifier to CN1.

8

## When using the external cable (GT11H-C□□□)




| Servo amplifier | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Connection diagram number | | | | |
| MR-JE-□A*1 | RS-422 | User preparing RS-422 connection diagram 3) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | Up to 32 servo amplifiers for 1 GOT (multi-drop communication) |

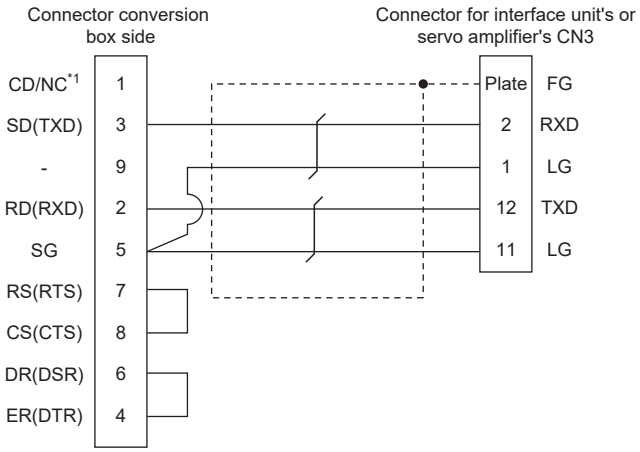
*1 Connect the connector of the servo amplifier to CN1.

# Connection Diagram

The following diagram shows the connection between the GOT and the servo amplifier.

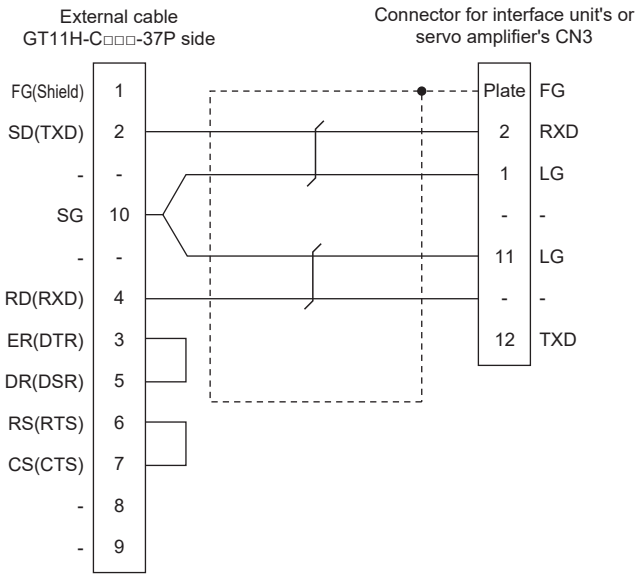
## RS-232 cable

### ■RS-232 connection diagram 1)



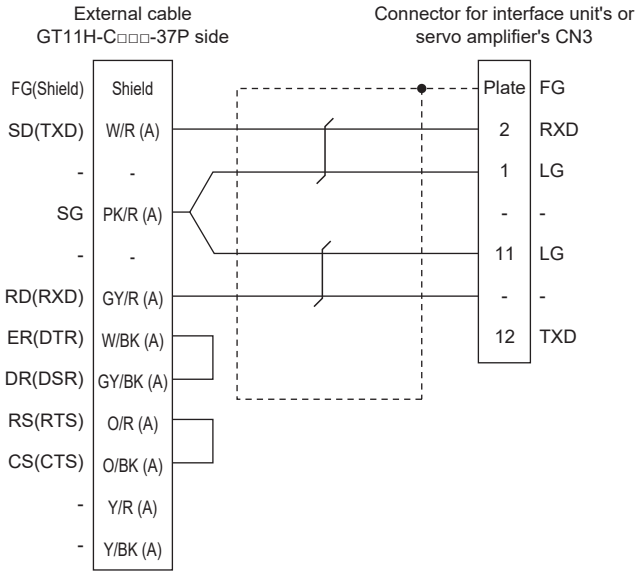

*1 GT2506HS-V: CD, GT2505HS-V: NC

### ■RS-232 connection diagram 2)




8

## ■RS-232 connection diagram 3)




## ■Precautions when preparing cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

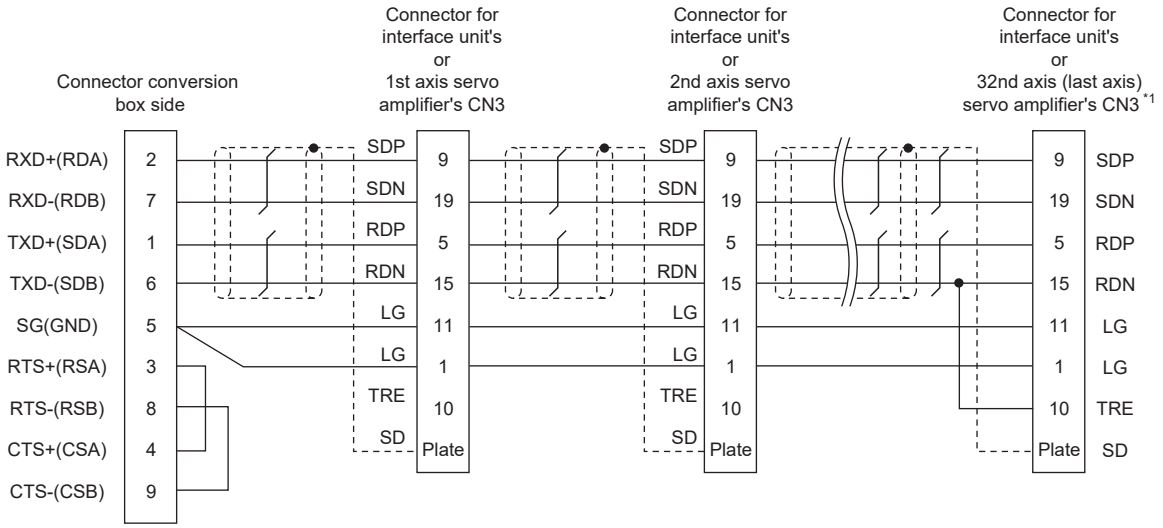
• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

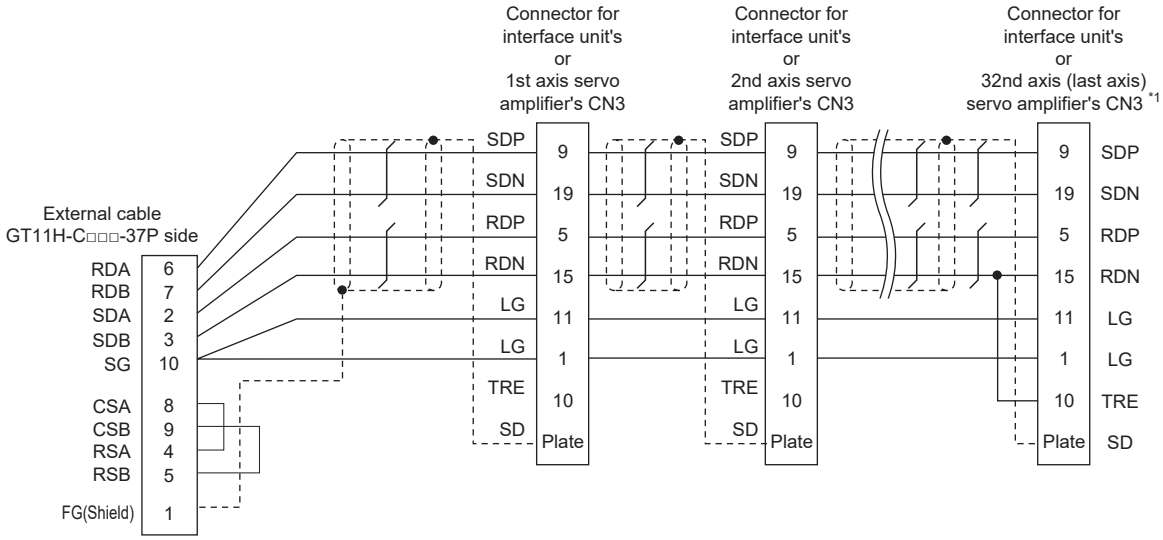
## RS-422 cable

### ■RS-422 connection diagram 1)




*1 At the last axis, connect TRE to RDN.

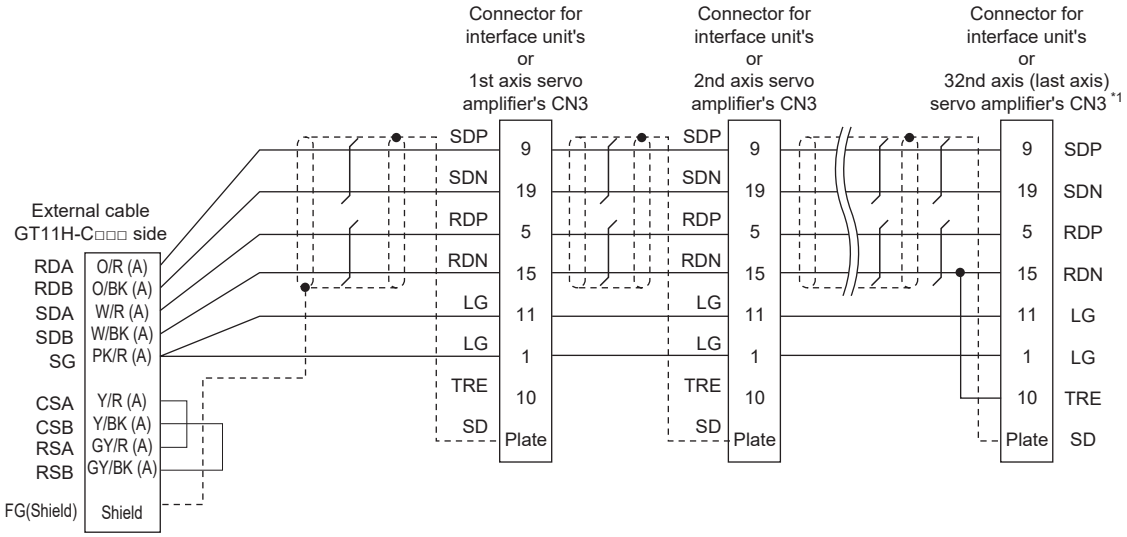
### ■RS-422 connection diagram 2)




*1 At the last axis, connect TRE to RDN.

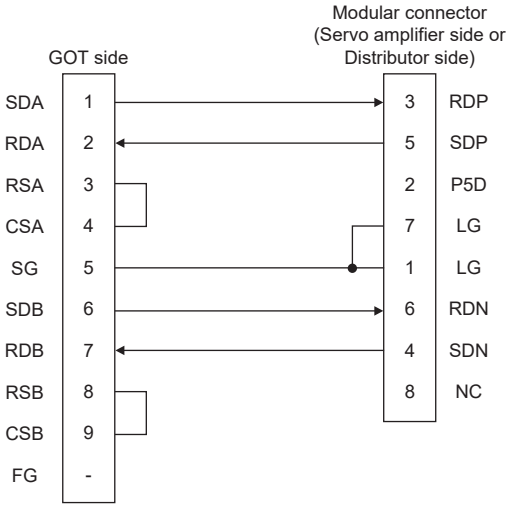
8

## ■RS-422 connection diagram 3)

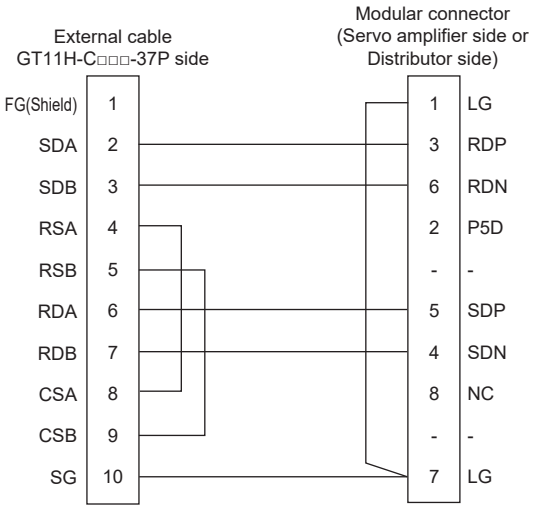



*1 At the last axis, connect TRE to RDN.

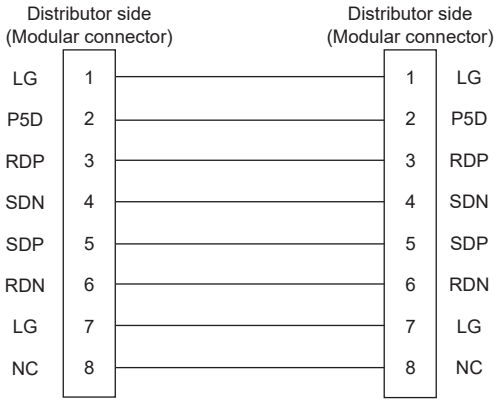
## ■RS-422 connection diagram 4)



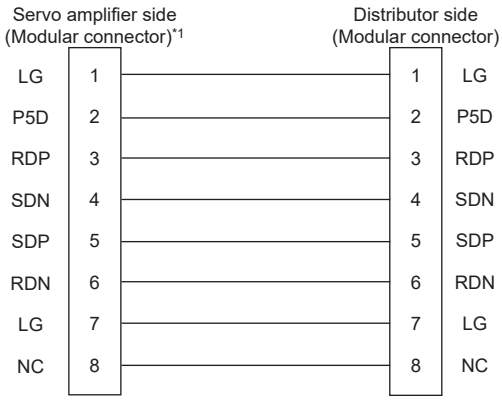

## ■RS-422 connection diagram 5)



## ■RS-422 connection diagram 6)

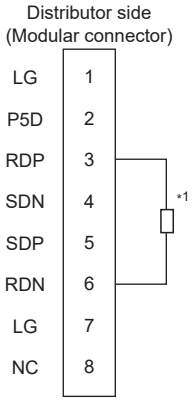



## ■RS-422 connection diagram 7)




*1 Make the wiring between the distributor and servo amplifier as short as possible.

## ■RS-422 connection diagram 8)




*1 Perform terminal processing on the part between RDP (3-pin) and RDN (6-pin) with a 150Ω resistor.

## ■Precautions when preparing cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• Servo amplifier connector

Use the connector compatible with the servo amplifier.

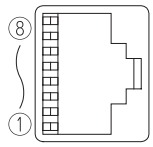
For details, refer to the following.

📖See the technical data of the servo amplifier to be used.

• Servo amplifier connector specifications

Pin layout in the Modular connector

When seen from the front of the servo amplifier
(receptacle side)




Modular jack

| Pin No. | Signal name |
|---|---|
| 1 | LG |
| 2 | P5D |
| 3 | RDP |
| 4 | SDN |
| 5 | SDP |
| 6 | RDN |
| 7 | LG |
| 8 | NC |

Connector of cable between MELSERVO Series servo amplifiers

| Name | Model name | Specifications | Manufacturer |
|---|---|---|---|
| Connector | TM10P-88P (Plug) | RJ45 connector | HIROSE ELECTRIC CO.,LTD. |
| Modular ceiling rosette (Distributor) | BMJ-8 | - | HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171 |
| Cable | - | Cable conforming to EIA568 (such as cable 10BASE-T) | - |

Use the commercial connectors and cables shown in the table below or the comparable products.

(Refer to the manual for the servo amplifier.)

## ■Connecting terminating resistors

When connecting a Servo Amplifier to the GOT, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

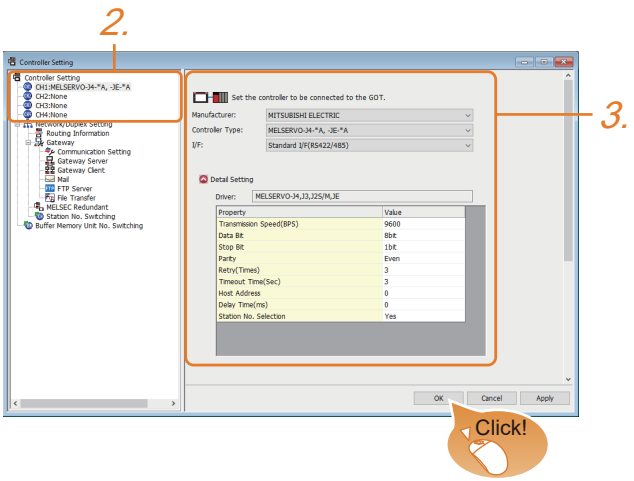
• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

# GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 534 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |
| Station No. Selection | Yes |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the station number of the servo amplifier in the system configuration.<br>(Default: 0) | 0 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |
| Station No. Selection | Specify whether to use the station No. during communication.<br>If [Yes] is selected, the station No. is fixed to "0."<br>(Default: Yes) | Yes/No |

**Point**

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

• Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# Setting on Servo Amplifier Side

| Model name | Refer to |
|---|---|
| MELSERVO-J2-Super Series | ☞ Page 535 Connecting to the MELSERVO-J2-Super Series |
| MELSERVO-J2M Series | ☞ Page 536 Connecting to the MELSERVO-J2M Series |
| MELSERVO-J4, J3, JE-□A, JE Series | ☞ Page 537 Connecting to the MELSERVO-J4,J3, JE-□A Series |

## Connecting to the MELSERVO-J2-Super Series

**Point**

MELSERVO-J2-Super Series

For details of the MELSERVO-J2-Super Series, refer to the following manual.

📖MELSERVO-J2-Super Series Servo Amplifier Instruction Manual

### ■Parameters of MELSERVO-J2-Super Series

Enter the parameters of the MELSERVO-J2-Super Series.

| Item | Set value |
|---|---|
| Basic parameter No. 15 | Station number setting: 0 to 31<br>(Default: 0)*1 |
| Basic parameter No. 16 | Serial communication function selection<br>(Default: 0000)<br>Basic parameter No. 16<br>(3) (2) 0 (1)<br>(1) Serial communication baud rate selection*2<br>0: 9600bps<br>1: 19200bps<br>2: 38400bps<br>3: 57600bps<br>(2) Serial communication I/F selection<br>0: RS-232<br>1: RS-422<br>(3) Communication response delay time selection<br>0: Invalid<br>1: Valid (Response after 800μs or longer delay) |
| In case of MR-J2S-□:<br>Expansion parameter 2 No. 53<br>In case of MR-J2S-□CP:<br>Expansion parameter 2 No. 57<br>In case of MR-J2S-□CL:<br>Expansion parameter 2 No. 57 | Function selection 8<br>(Default: 0000)*3<br>Expansion parameter 2 No. 53 or No. 57<br>0 (1) 0 0<br>(1) Station No. selection for protocol<br>0: With station No.<br>1: Without station No. |

*1 Avoid duplication of the station No. with any of the other axes.

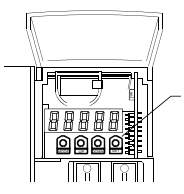
*2 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 533 Connecting terminating resistors

*3 To change the set value, enter "000E" to basic parameter No. 19.

**Point**

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch provided on the operation section of the servo amplifier

• When changing the parameter

Turn off then on the servo amplifier to be effective the new parameter.

## Connecting to the MELSERVO-J2M Series

**Point**

MELSERVO-J2M Series

For details of the MELSERVO-J2M Series, refer to the following manual.

MELSERVO-J2M Series Servo Amplifier Instruction Manual

### ■Parameter of MELSERVO-J2M Series

Enter the parameters of the MELSERVO-J2M Series.

| Item | Set value |
|---|---|
| Basic IFU parameter No. 0 | Serial communication function selection<br>(Default: 0000)<br>Basic IFU parameter No. 0<br>(3) (2) 0 (1)<br>(1) Serial communication baud rate selection*1<br>0: 9600bps<br>1: 19200bps<br>2: 38400bps<br>3: 57600bps<br>(2) Serial communication I/F selection<br>0: RS-232<br>1: RS-422<br>(3) Communication response delay time selection<br>0: Invalid<br>1: Valid (Response after 800μs or longer delay) |
| Basic IFU parameter No. 10 | Interface unit serial communication station No. selection:<br>0 to 31 (Default: 0) *2 |
| Basic IFU parameter No. 11 | Slot 1 serial communication station No. selection:<br>0 to 31 (Default: 1) *2 |
| Basic IFU parameter No. 12 | Slot 2 serial communication station No. selection:<br>0 to 31 (Default: 2) *2 |
| Basic IFU parameter No. 13 | Slot 3 serial communication station No. selection:<br>0 to 31 (Default: 3) *2 |
| Basic IFU parameter No. 14 | Slot 4 serial communication station No. selection:<br>0 to 31 (Default: 4) *2 |
| Basic IFU parameter No. 15 | Slot 5 serial communication station No. selection:<br>0 to 31 (Default: 5) *2 |
| Basic IFU parameter No. 16 | Slot 6 serial communication station No. selection:<br>0 to 31 (Default: 6) *2 |
| Basic IFU parameter No. 17 | Slot 7 serial communication station No. selection:<br>0 to 31 (Default: 7) *2 |
| Basic IFU parameter No. 18 | Slot 8 serial communication station No. selection:<br>0 to 31 (Default: 8) *2 |

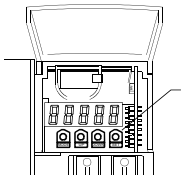
*1 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 533 Connecting terminating resistors

*2 Avoid duplication of the station No. with any of the other units.

**Point**

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.




• When changing the parameter

Turn off then on the servo amplifier to be effective the new parameter.

## Connecting to the MELSERVO-J4,J3, JE-□A Series

**Point**

MELSERVO-J4, J3, JE-□A Series

For details of the MELSERVO-J4, J3, JE Series, refer to the following manual.

MELSERVO-J4, J3, JE Series Servo Amplifier Instruction Manual

### ■Parameters of MELSERVO-J4, J3, JE-□A Series

Enter the parameters of the MELSERVO-J4, J3, JE Series.

| Item | Set value |
|---|---|
| Basic parameter<br>No. PC20 | Station number setting: 0 to 31<br>(Default: 0)*1 |
| Basic parameter<br>No. PC21 | Serial communication function selection<br>(Default: 0000)<br>Basic parameter No. PC21<br>\| \| (2) \| (1) \| \|<br>(1) Serial communication baud rate selection*2<br>0: 9600bps<br>1: 19200bps<br>2: 38400bps<br>3: 57600bps<br>4: 115200bps<br>(2) Communication response delay time selection<br>0: Invalid<br>1: Valid (Response after 800μs or longer delay) |

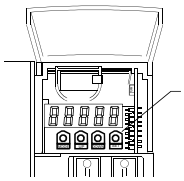
*1 Avoid duplication of the station No. with any of the other axes.

*2 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 533 Connecting terminating resistors

**Point**

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.




• When changing the parameter

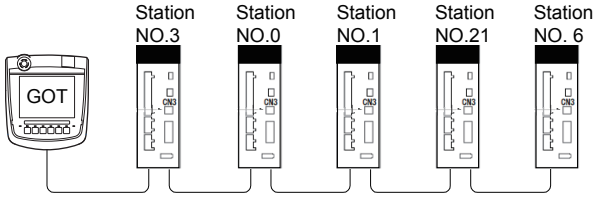
Turn off then on the servo amplifier to be effective the new parameter.

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the servo amplifier of which data is to be changed.

| Specification range |
|---|
| 0 to 31 |

## Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3,the value of GD10 to GD25 compatible to the station No.specification will be the station No.of the servo amplifier.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 0 to 31<br>For the setting other than the above, a communication timeout error will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

## All station specification

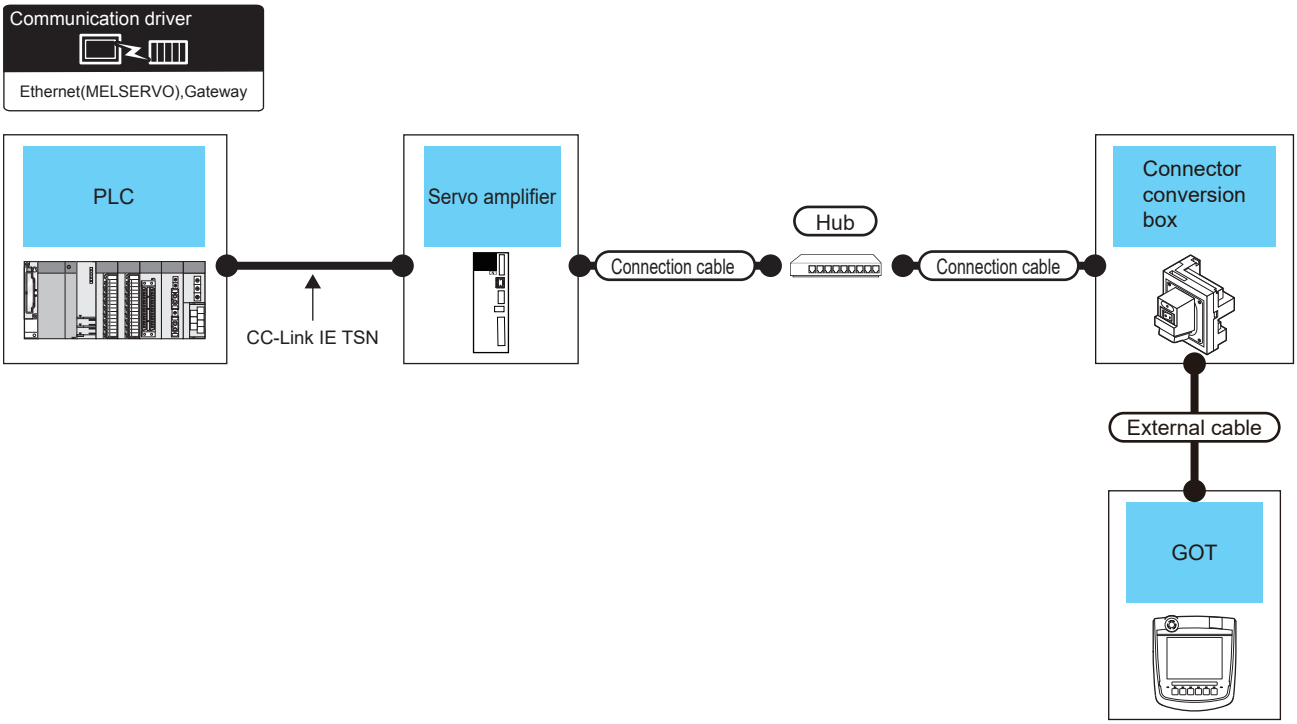
Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.

# 8.3 Ethernet Connection

## Connection to the MELSERVO-J5 or JET series

### When connecting a servo amplifier and PLC or Motion module by the CC-Link IE TSN connection



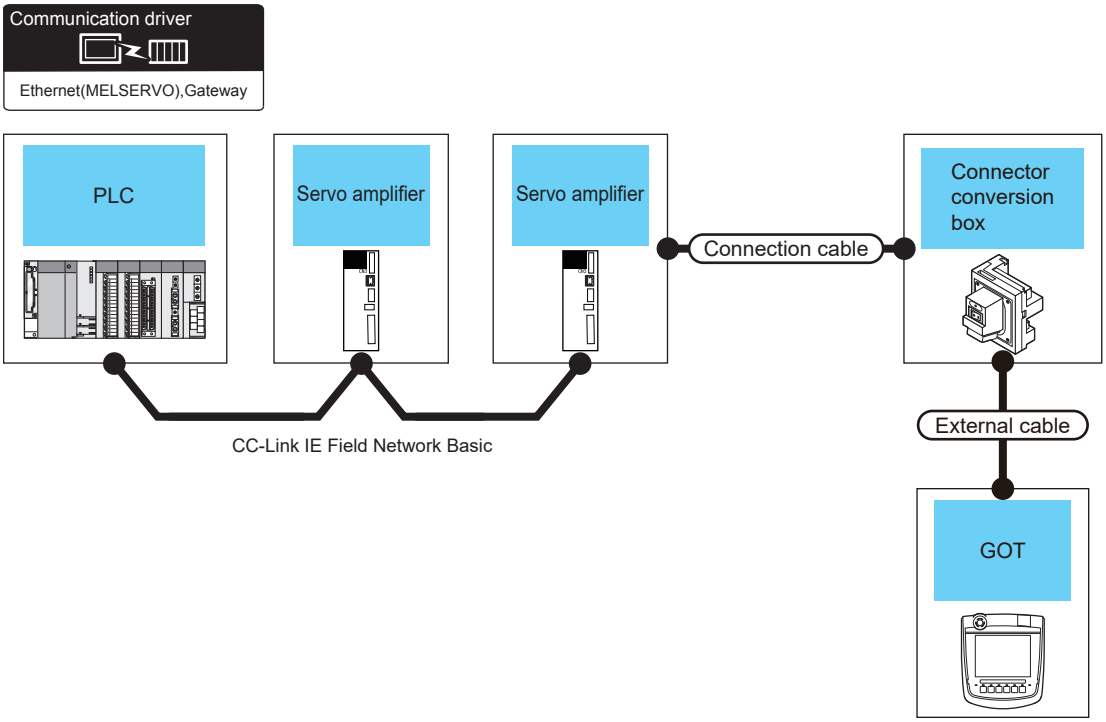

| Controller | Communication type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model | Maximum segment length*2 | | Cable model | Maximum segment length*2 | | | | |
| MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5W2-□G<br>MR-J5W3-□G<br>MR-J5D1-□G4<br>MR-J5D2-□G4<br>MR-J5D3-□G4<br>MR-JET-□G | Ethernet | • 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable: Category 5e or higher | 100 m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P (10m) | GT 2506HS | 1 GOT for 1 servo amplifier |

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## When connecting servo amplifiers and PLC by the CC-Link IE Field Network Basic connection

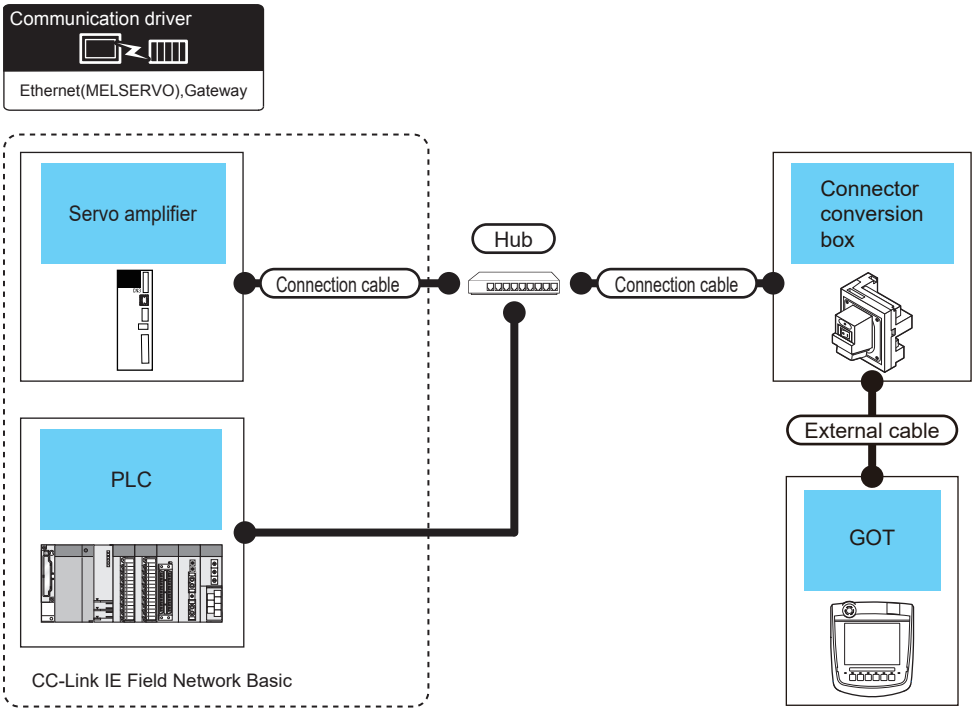
### ■Direct connection to a servo amplifier




| PLC | | Connection cable | | Connector conversion box | External cable | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model | Maximum segment length*1 | | | | |
| MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5D1-□G4<br>MR-JET-□G | Ethernet | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P (10m) | GT 2506HS | 1 GOT for 1 servo amplifier |

*1 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## ■Connection via a hub




| Controller | Communication type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model | Maximum segment length*2 | | Cable model | Maximum segment length*2 | | | | |
| MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5D1-□G4<br>MR-JET-□G | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P (10m) | GT 2506HS | 1 GOT for 1 servo amplifier |

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standard.

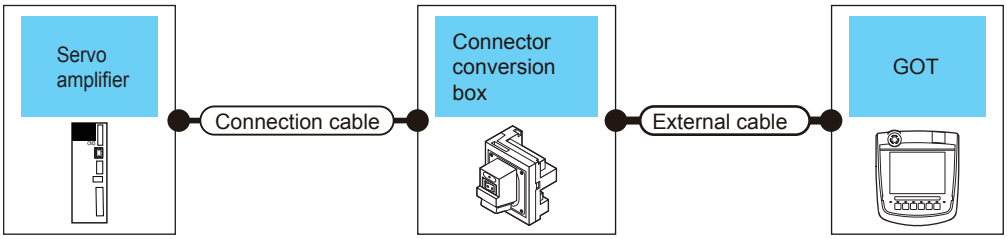
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

# Connecting to the MELSERVO-JE-C Series

Communication driver

Ethernet(MELSERVO),Gateway

## When connecting to one servo amplifier



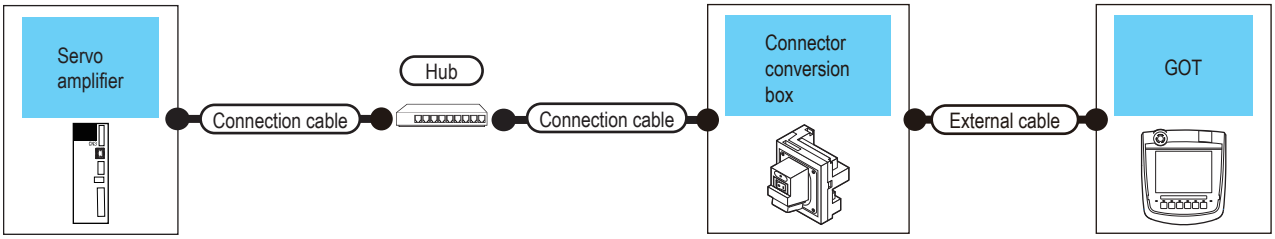

| PLC | | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | |
| MR-JE-C | Ethernet | 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P (3m)<br>GT16H-C60-42P (6m)<br>GT16H-C100-42P (10m) | GT 2506HS | 1 GOT |

*1 The connection destination of the twisted pair cable differs depending on the configuration of the Ethernet network system to be used. Connect to the Ethernet module, hub, transceiver, the wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS) or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 A straight cable is available.
When connecting CPU and GOT directly with Ethernet cable, remember that the by cross cable is available.
GOT2000 Series Instruction Manual (Hardware Section)

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## When connecting to multiple servo amplifiers




| Controller | Communication type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model*3 | Maximum segment length*2 | | Cable model*3 | Maximum segment length*2 | | | | |
| MR-JE-C | Ethernet | 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100m | Hub*1 | 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m) | GT 2506HS | When servo amplifier: GOT is N: 1128 or less servo amplifiers for one GOT When servo amplifier: GOT is 1:N The following number of GOTs for one servo amplifier Depends on MELSERVO-JE-C*4 |

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

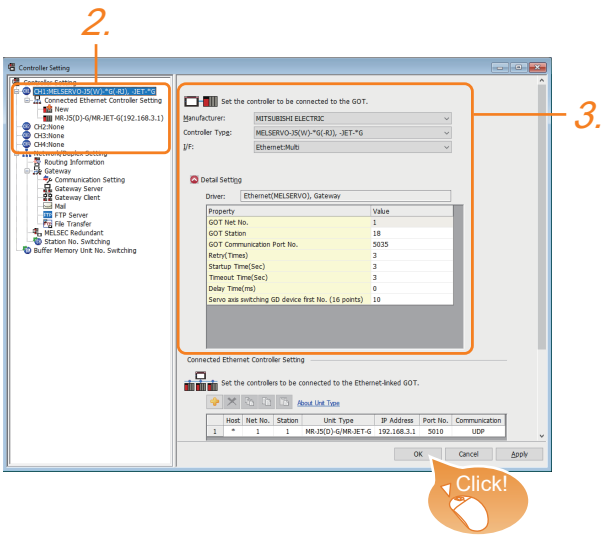
*3 Use the straight cable for the twisted pair cable.

*4 For details, refer to the manual of MELSERVO-JE-C.
One GOT is recommended to connect to MELSERVO-JE-C.

# GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[MELSERVO-J5(W)-*G(-RJ), -JET-*G]

[MELSERVO-JE-*C]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 545 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5035 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>1 (fixed) | 1 (fixed) |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Servo amplifier.<br>(Default: 5035) | 1024 to 5010, 5014 to 65534<br>(Except for 5011 to 5013, 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the Servo amplifier.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000 (ms) |
| Servo axis switching GD device first No. (16 points) *2 | Set the servo axis switching GD device first No.<br>(Default: 10)<br>For the details, refer to the following.<br>☞ Page 546 Servo axis switching GD device first No. | 0 to 65520 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 548 Connected Ethernet Controller Setting

*2 MR-JE-C is not supported.

## ■Servo axis switching GD device first No.

• Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.

Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].

Specify a servo axis number with 16 consecutive GD devices, starting the set device number.

When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>Setting an invalid value causes a device range error. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

• Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

• Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.

Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

• Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## GOT Ethernet Setting

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

### ■IP filter setting

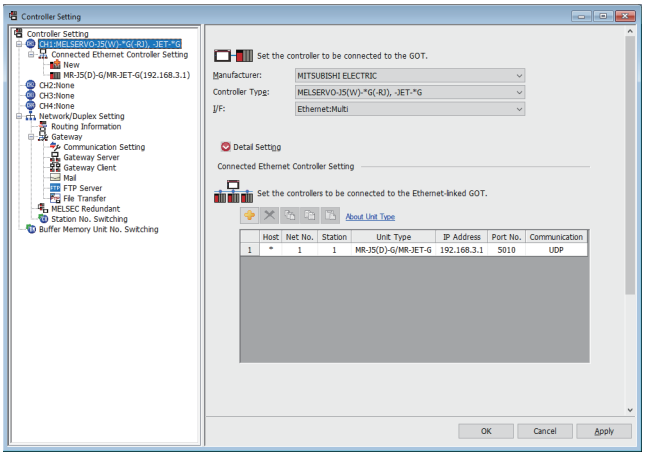
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting

### ■When the model is [MELSERVO-J5(W)-*G(-RJ), -JET-*G]



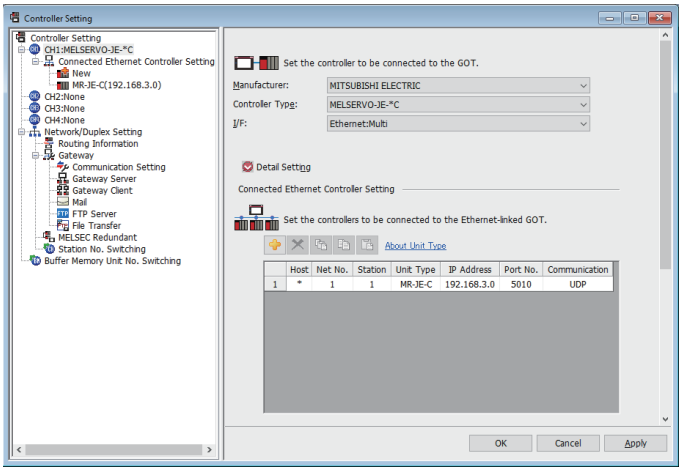

| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>(The host is indicated with an asterisk (*)) | — |
| Net No. *1 | Set the network No. of the connected Servo amplifier.<br>1 (fixed) | 1 (fixed) |
| Station*1*2 | Set the station No. of the connected Servo amplifier.<br>(Default: 1) | 1 to 254 |
| Unit Type | MR-J5(D)-G/MR-JET-G (fixed) | MR-J5(D)-G/MR-JET-G (fixed) |
| IP address | Set the IP address of the connected Servo amplifier.<br>(Default: 192.168.3.1) | 0.0.0.1 to 255.255.255.254 *3 |
| Port No. | Set the port No. of the connected Servo amplifier.<br>5010 (fixed) | 5010 (fixed) |
| Communication | UDP (fixed) | UDP (fixed) |

*1 [Net No.] and [Station] should match [Network No.] and [Station No.] set for the monitoring target device.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 545 Communication detail settings

*3 Since [0.0.0.0] and [255.255.255.255] cannot be set in the servo amplifier, set the IP address within the range of [0.0.0.1] to [255.255.255.254].
When [0.0.0.0] or [255.255.255.255] is set, a communication error occurs.

## ■When the model is [MELSERVO-JE-*C]




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed. (The host is indicated with an asterisk (*)) | — |
| Net No. | Set the network No. of the connected Servo amplifier.<br>1 (fixed) | 1 (fixed) |
| Station*1 | Set the station No. of the connected Servo amplifier.<br>(Default: 1) | 1 to 254 |
| Unit Type | MR-JE-C (fixed) | MR-JE-C (fixed) |
| IP address | Set the IP address of the connected Servo amplifier.<br>(Default: 192.168.3.0) | 0.0.0.0 to 255.255.255.255 |
| Port No./Communication | Set the port No. of the connected Servo amplifier.<br>(Default: 5010)<br>Communication format differs depending on the port No. to be set.<br>• When the port No. is [5010], the communication is [UDP] (fixed).<br>• When the port No. is [5012], the communication is [TCP] (fixed). | |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 545 Communication detail settings

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting]after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# Servo amplifier side settings

This section describes the settings of the GOT and servo amplifier in the following system configuration.

**Point**

• Servo amplifier

For the details of the servo amplifier, refer to the following.

Manual of the MELSERVO-J5

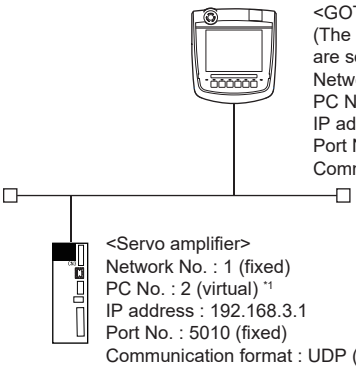
Manual of the MELSERVO-JET

Manual of the MELSERVO-JE-C

## Connection to MELSERVO-J5 or JET series

### ■System configuration

The following shows a system configuration example for connection to the MELSERVO-J5 series.



<GOT>
(The settings other than the following are set to the default)
Network No. : 1 (fixed)
PC No. : 1
IP address : 192.168.3.18
Port No. : 5035
Communication format : UDP (fixed)

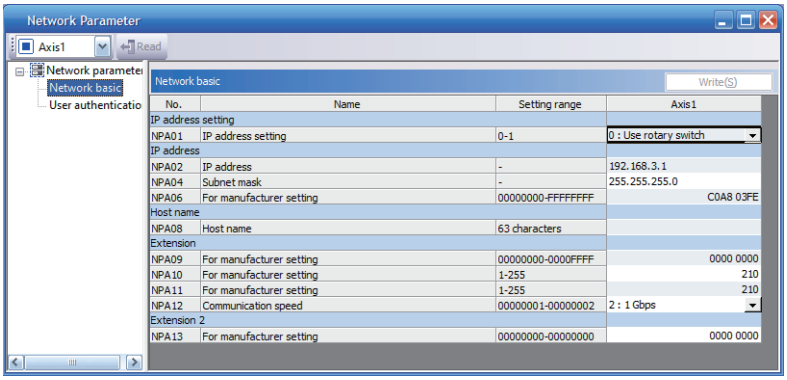
<Servo amplifier>
Network No. : 1 (fixed)
PC No. : 2 (virtual) *1
IP address : 192.168.3.1
Port No. : 5010 (fixed)
Communication format : UDP (fixed)

*1 Although the setting is nonexistent on the servo amplifier side, set a virtual value on the GOT side.
☞ Page 552 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

## ■IP address setting

The following shows an example of servo amplifier settings for connection to the MELSERVO-J5 series.

• [Network basic] of MR Configurator2




| Setting item | Description | Setting value |
|---|---|---|
| [NPA01] | [NPA01] Select whether to set the IP address with the rotary switches or parameter.<br>The following shows the IP address when the rotary switches are used.<br>• First octet to third octet: Values set in [NPA02]<br>• Fourth octet: Values set with the rotary switches SW1 and SW2<br>When the parameter is used, the values set in [NPA02] are used as the IP address. | 0: Use rotary switch<br>1: Use parameter |
| [NPA02] | Set the IP address. | 192.168.3.1 (Default) |
| [NPA04] | Set the subnet mask. | 255.255.255.0 (Default) |

• IP address setting

| Setting value of [NPA01] | Rotary switch (SW1, SW2) | IP address | |
|---|---|---|---|
| 0 : Use rotary switch | 00h | First octet | The first octet set in [NPA02] is used. |
| | | Second octet | The second octet set in [NPA02] is used. |
| | | Third octet | The third octet set in [NPA02] is used. |
| | | Fourth octet | The fourth octet set in [NPA02] is used. |
| | 01h to FEh | First octet | The first octet set in [NPA02] is used. |
| | | Second octet | The second octet set in [NPA02] is used. |
| | | Third octet | The third octet set in [NPA02] is used. |
| | | Fourth octet | The setting values of the rotary switches (SW1 and SW2) are used. |
| | FFh | First octet | Use prohibited |
| | | Second octet | |
| | | Third octet | |
| | | Fourth octet | |
| 1 : Use parameter | — | First octet | The first octet set in [NPA02] is used. |
| | | Second octet | The second octet set in [NPA02] is used. |
| | | Third octet | The third octet set in [NPA02] is used. |
| | | Fourth octet | The fourth octet set in [NPA02] is used. |

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example on the GOT side for connecting to the MELSERVO-J5 series.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5035 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0 ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 (fixed) |
| | Station | 2*1 |
| | Unit Type | MR-J5(D)-G/MR-JET-G |
| | IP address | 192.168.3.1 |
| | Port No. | 5010 |
| | Communication | UDP |

*1 Set a value different from that of GOT PLC No.

## ■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

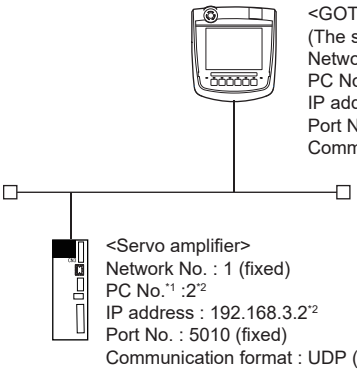
Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

## When connecting to MELSERVO-JE-C (when connecting to GOT and one servo amplifier)

### ■System configuration

The following shows a system configuration example for connection to the MELSERVO-JE-C series.



<GOT>
(The settings other than the following are set to the default)
Network No. : 1 (fixed)
PC No. :1
IP address : 192.168.3.18
Port No. : 5035
Communication format : UDP (fixed)

<Servo amplifier>
Network No. : 1 (fixed)
PC No.*1 :2*2
IP address : 192.168.3.2*2
Port No. : 5010 (fixed)
Communication format : UDP (fixed)

*1 PC No. corresponds to "Identification number" on the servo amplifier side.

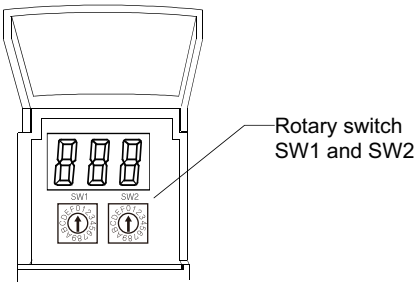
*2 The fourth octet of IP address follows PC No. (Identification number).

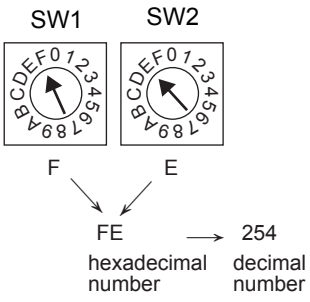
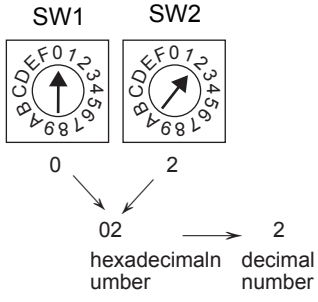
### ■Setting of the identification number and IP address on the servo amplifier side

The following shows an example of servo amplifier settings for connection to the MELSERVO-JE-C series.

Set the identification number of the servo amplifier using the rotary switch SW1 and SW2 in front of the servo amplifier.

The fourth octet of IP address follows the identification number of the servo amplifier.




| Setting item | Setting range | Range |
|---|---|---|
| Identification number | $01_H$ to $FE_H$ | $02_H$ |
| First octet*1 | 192 (Default) | 192 (Default) |
| Second octet*1 | 168 (Default) | 168 (Default) |
| Third octet*1 | 3 (Default) | 3 (Default) |
| Fourth octet | 1 to 254<br>  <br><br>The value of the identification number converted from the hexadecimal number to the decimal number is the value of the fourth octet of IP address on the servo amplifier side. | 2<br>  <br> |

*1 Cannot be set by the rotary switch SW1 and SW2.

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows an example of GOT settings for connection to the MELSERVO-JE-C series.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5035 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0 ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 (fixed) |
| | Station | 2*1 |
| | Unit Type | MR-JE-C |
| | IP address | 192.168.3.2 |
| | Port No.*2 | 5010 |
| | Communication*2 | UDP |

*1 Set a value different from that of GOT PLC No.

*2 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5012
[Communication]: TCP

## ■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.2

Reply from 192.168.3.2:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.2

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

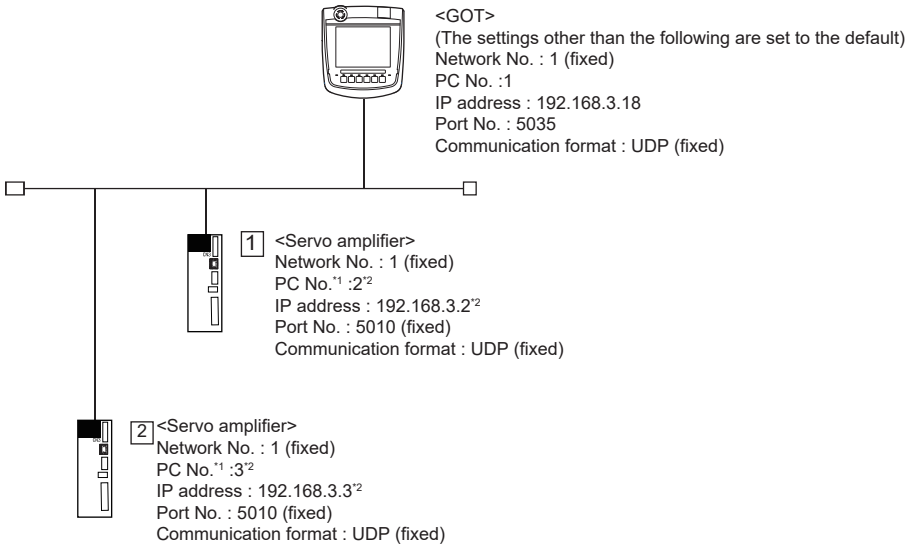
Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

## When connecting to MELSERVO-JE-C (when connecting to GOT and multiple servo amplifiers)

### ■System configuration

The following shows a system configuration example for connection to the MELSERVO-JE-C series.




*1 PC No. corresponds to "Identification number" on the servo amplifier side.

*2 The fourth octet of IP address follows PC No. (Identification number).

### ■Setting of the identification number and IP address on the servo amplifier side

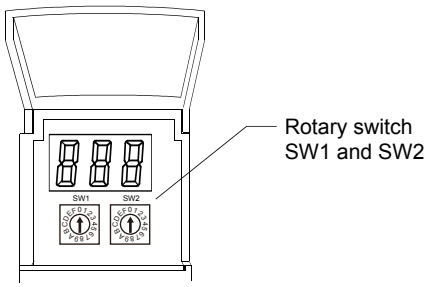
The following shows an example of servo amplifier settings for connection to the MELSERVO-JE-C series.

Set the identification number of the servo amplifier using the rotary switch SW1 and SW2 in front of the servo amplifier.

The fourth octet of IP address follows the identification number of the servo amplifier.

For details of the setting method, refer to the following.

☞ Page 553 When connecting to MELSERVO-JE-C (when connecting to GOT and one servo amplifier)




| Setting item | Set value | |
|---|---|---|
| | 1 | 2 |
| Identification number | $02_H$ | $03_H$ |
| First octet*1 | 192 (Default) | 192 (Default) |
| Second octet*1 | 168 (Default) | 168 (Default) |
| Third octet*1 | 3 (Default) | 3 (Default) |
| Fourth octet*1 | 2 | 3 |

*1 Cannot be set by the rotary switch SW1 and SW2.

## ■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example on the GOT side for connecting to the MELSERVO-JE-C series.

• Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5035 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0 ms |

• GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.3.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

• Connected Ethernet Controller Setting

| Item | | Set value | |
|---|---|---|---|
| | | 1 | 2 |
| Ethernet setting No.1 | Host | * | - |
| | Net No. | 1 (fixed) | 1 (fixed) |
| | Station | 2*1 | 3*1 |
| | Unit Type | MR-JE-C | MR-JE-C |
| | IP address | 192.168.3.2 | 192.168.3.3 |
| | Port No.*2 | 5010 | 5010 |
| | Communication*2 | UDP | UDP |

*1 Set a value different from that of GOT PLC No.

*2 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5012
[Communication]: TCP

## ■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.2

Reply from 192.168.3.2:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.2

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

**Point**

Communication setting other than identification number setting by the rotary switch SW1 and SW2

Communication setting can also be set by the following method other than identification number setting by the rotary switch SW1 and SW2.

- Method for using SLMP command (IP Address Set)
- Method for using MR Configurator2

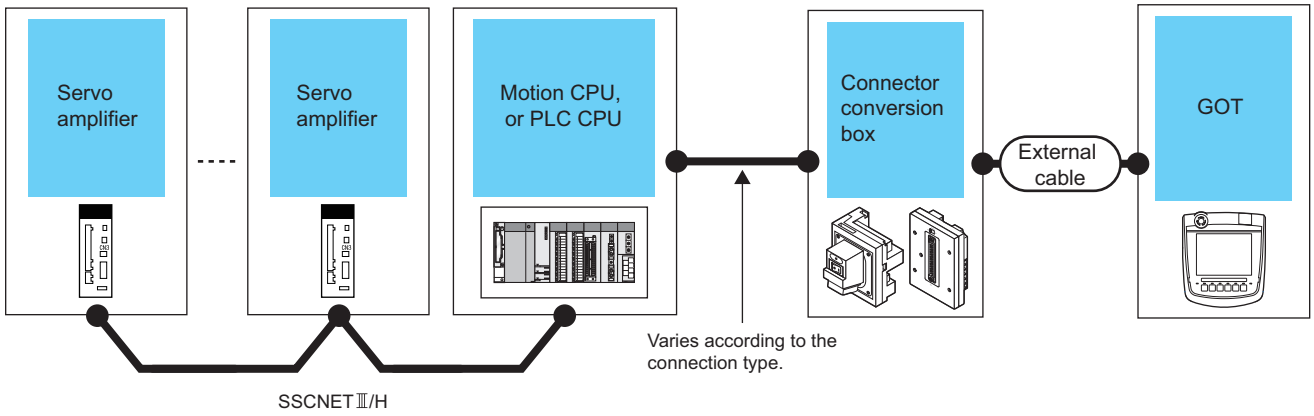
For details, refer to the following manual.

Manual of the MELSERVO-JE-C

# 8.4 Connection through a PLC

## Connection to MELSERVO-J4 series

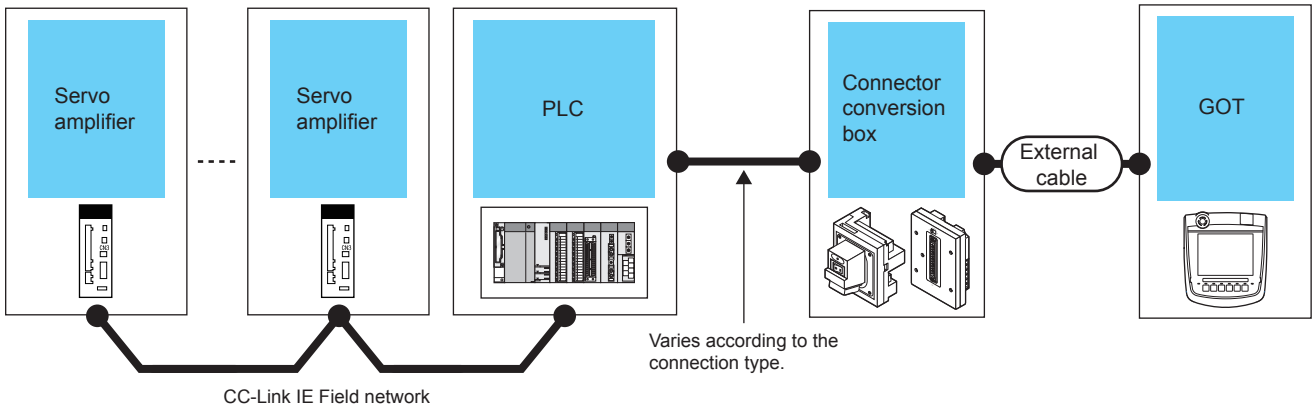
### When connecting the GOT and servo amplifiers through a motion controller or simple motion module




| Servo amplifier | | Motion CPU, or PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Simple motion module or master/local module | CPU type | Communication type*1 | | | |
| MR-J4-□B<br>MR-J4-□B-RJ<br>MR-J4W2-□B<br>MR-J4W3-□B | SSCNETIII/H | - | RnMT<br>Q17nDS<br>Q170MS | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT16H-CNB-42S | GT 2506HS | *2 |
| | | RD77MS2<br>RD77MS4<br>RD77MS8<br>RD77MS16 | RnCPU | | | | |
| | | QD77MS2 *3<br>QD77MS4 *3<br>QD77MS16 *3 | QnCPU | | | | |
| | | LD77MS2<br>LD77MS4<br>LD77MS16 | LnCPU | | | | |
| | | FX5-40SSC-S<br>FX5-80SSC-S*4 | FX5CPU | | | | |
| | | - | RnMT<br>Q17nDS<br>Q170MS | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT11H-CNB-37S<br>or<br>GT16H-CNB-37S | GT 2505HS | *2 |
| | | RD77MS2<br>RD77MS4<br>RD77MS8<br>RD77MS16 | RnCPU | | | | |
| | | QD77MS2 *3<br>QD77MS4 *3<br>QD77MS16 *3 | QnCPU | | | | |
| | | LD77MS2<br>LD77MS4<br>LD77MS16 | LnCPU | | | | |
| | | FX5-40SSC-S<br>FX5-80SSC-S*4 | FX5CPU | | | | |

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT
*3 Use a module with the upper five digits later than 12042.
*4 Use a module with its software version 1.004 or later.

## When connecting the GOT and servo amplifiers through a simple motion module or CC-Link IE field network master/local module




| Servo amplifier | | PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Simple motion module or master/local module | CPU type | Communication type*1 | | | |
| MR-J4-□GF<br>MR-J4-□GF-RJ | CC-Link IE Field network | RD77GF4*3<br>RD77GF8*3<br>RD77GF16*3<br>RD77GF32 | RCPU | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION*4<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT16H-CNB-42S or GT16H-CNB-37S | GT 2506HS | *2 |
| | | QD77GF4*3<br>QD77GF8*3<br>QD77GF16*3 | QCPU | | | | |
| | | RnENCPU | RCPU | | | | |
| | | RJ71EN71<br>RJ71GF11-T2 | RCPU | | | | |
| | | QJ71GF11-T2*3 | QCPU | | | | |
| | | LJ71GF11-T2*3 | LCPU | | | | |
| | | RD77GF4*3<br>RD77GF8*3<br>RD77GF16*3<br>RD77GF32 | RCPU | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION*4<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT11H-CNB-37S or GT16H-CNB-37S | GT 2505HS | *2 |
| | | QD77GF4*3<br>QD77GF8*3<br>QD77GF16*3 | QCPU | | | | |
| | | RnENCPU | RCPU | | | | |
| | | RJ71EN71<br>RJ71GF11-T2 | RCPU | | | | |
| | | QJ71GF11-T2*3 | QCPU | | | | |
| | | LJ71GF11-T2*3 | LCPU | | | | |

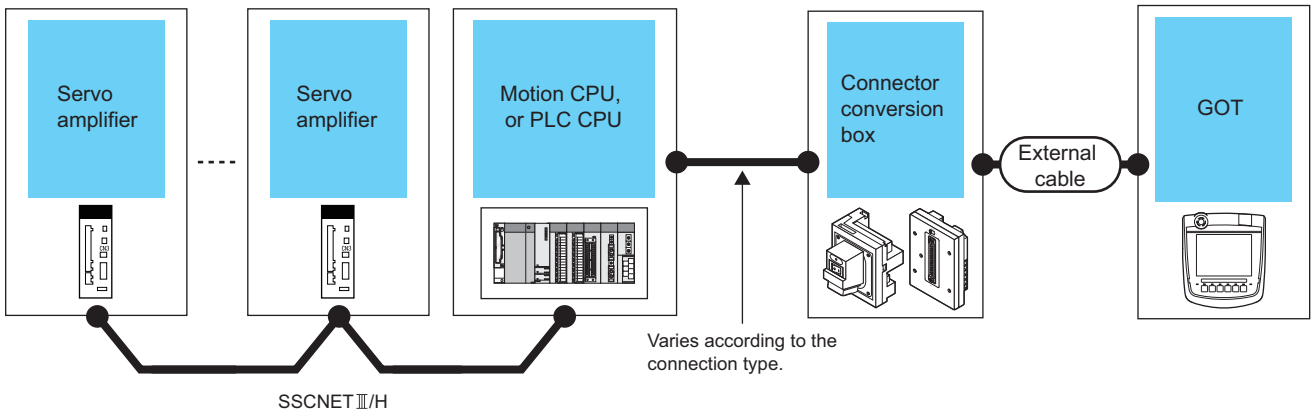
*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one PLC
• Number of PLCs connectable to one GOT
*3 Use the following version or later.

| Simple motion module or master/local module | Motion mode | I/O mode |
|---|---|---|
| RD77GF4, RD77GF8, RD77GF16 | Software version [01] or later | Software version [02] or later |
| RD77GF32 | From first product | From first product |
| QD77GF4, QD77GF8, QD77GF16 | From first product | First 5 digits of serial No. 18022 or higher |
| QJ71GF11-T2 | - | First 5 digits of serial No. 14102 or higher |
| LJ71GF11-T2 | - | First 5 digits of serial No. 14102 or higher |

*4 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 154 Routing parameter setting

# Connection to MELSERVO-J5 or JET series

## When connecting the GOT and servo amplifiers through a motion controller or simple motion module




| Servo amplifier | | Motion CPU, or PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Simple Motion module | CPU type | Communication type*1 | | | |
| MR-J5-□B<br>MR-J5-□B-RJ<br>MR-J5W2-□B<br>MR-J5W3-□B | SSCNETIII/H | - | RnMT<br>Q17nDS*4<br>Q170MS | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT16H-CNB-42S | GT 2506HS | *2 |
| | | RD77MS2<br>RD77MS4<br>RD77MS8<br>RD77MS16 | RnCPU | | | | |
| | | QD77MS2 *3<br>QD77MS4 *3<br>QD77MS16 *3 | QnCPU | | | | |
| | | - | RnMT<br>Q17nDS*4<br>Q170MS | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT11H-CNB-37S<br>or<br>GT16H-CNB-37S | GT 2505HS | *2 |
| | | RD77MS2<br>RD77MS4<br>RD77MS8<br>RD77MS16 | RnCPU | | | | |
| | | QD77MS2 *3<br>QD77MS4 *3<br>QD77MS16 *3 | QnCPU | | | | |

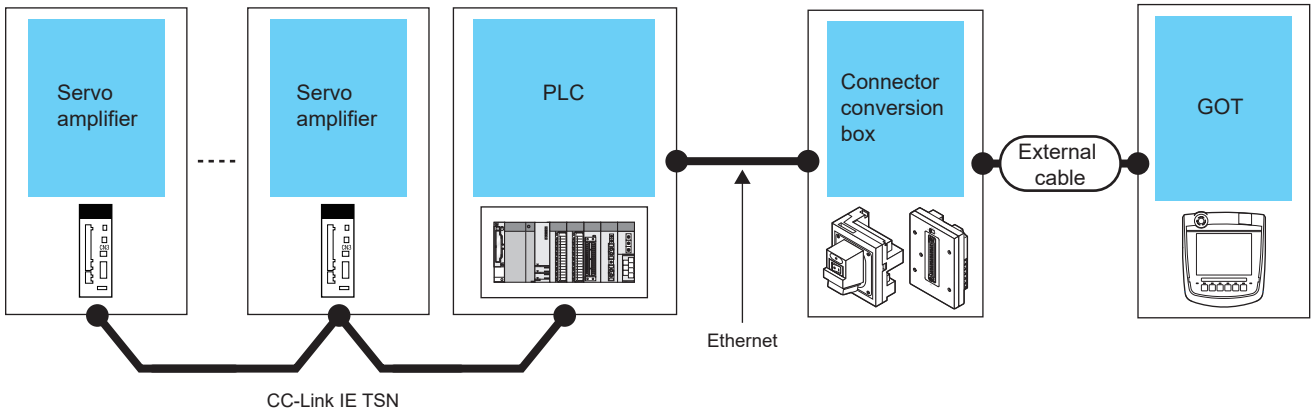
*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use a module that has a serial number starting with 23092 or later.

*4 Use a module with OS software version 00Y or later.

## When connecting the GOT and servo amplifiers through a Motion module




| Servo amplifier | | PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Motion module*4 | CPU type | Communication type | | | |
| MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5W2-□G<br>MR-J5W3-□G<br>MR-J5D1-□G4<br>MR-J5D2-□G4<br>MR-J5D3-□G4<br>MR-JET-□G | CC-Link IE TSN | RD78G4<br>RD78G8<br>RD78G16<br>RD78G32<br>RD78G64<br>RD78GHV<br>RD78GHW | RnCPU*1<br>RnENCPU*1<br>R12CCPU-V*1 | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 136 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC*3 | GT16H-CNB-42S<br>or<br>GT16H-CNB-37S | GT 2506HS | 1 GOT for 1 motion module |
| | | | | | GT16H-CNB-42S<br>or<br>GT16H-CNB-37S | GT 2505HS | 1 GOT for 1 motion module |
| | | FX5-40SSC-G<br>FX5-80SSC-G | FX5U*2<br>FX5UC*2 | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 136 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC*3 | GT16H-CNB-42S<br>or<br>GT16H-CNB-37S | GT 2506HS | 1 GOT for 1 motion module |
| | | | | | GT16H-CNB-42S<br>or<br>GT16H-CNB-37S | GT 2505HS | 1 GOT for 1 motion module |

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For RnCPU and RnENCPU: [RCPU]
• For R12CCPU-V: [RnCCPU/RnWCPU]
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

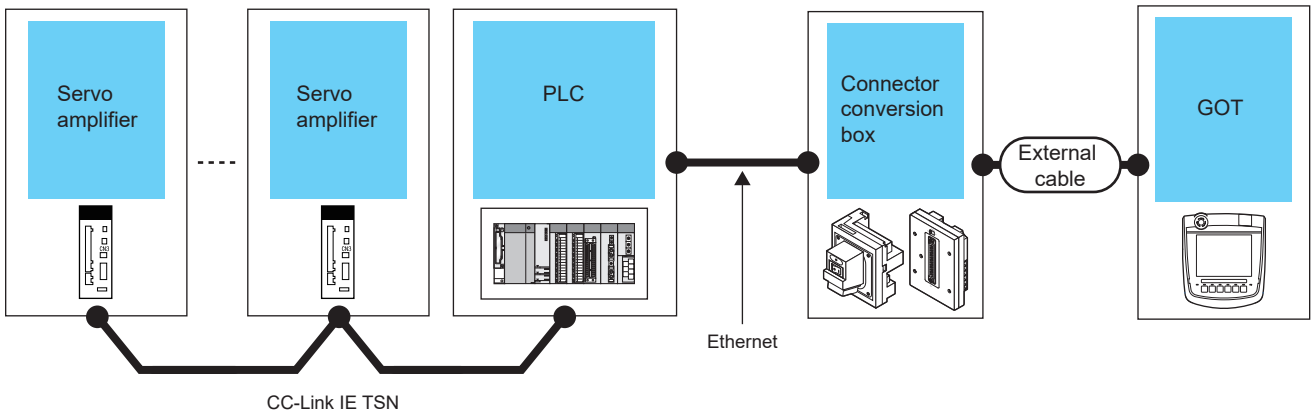
*2 Select [FX5CPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*3 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 154 Routing parameter setting

*4 When monitoring a servo amplifier through a Motion module, the available mode on the servo amplifier varies depending on the firmware version of the Motion module to be used.
The following shows the details.

| Motion module | Motion mode | Simple Motion mode |
|---|---|---|
| RD78G4<br>RD78G8<br>RD78G16 | From the first product | Firmware version 16 or later |
| RD78G32<br>RD78G64 | From the first product | Unavailable |
| RD78GHV<br>RD78GHW | From the first product | Unavailable |
| FX5-40SSC-G<br>FX5-80SSC-G | Unavailable | From the first product |

## When connecting the GOT and servo amplifiers through a CC-Link IE TSN-equipped module




| Servo amplifier | | PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | CC-Link IE TSN-equipped module | CPU type*1 | Communication type | | | |
| MR-J5-□G*5<br>MR-J5-□G-RJ*5<br>MR-J5W2-□G*5<br>MR-J5W3-□G*5<br>MR-J5D1-□G4*5<br>MR-J5D2-□G4*5<br>MR-J5D3-□G4*5<br>MR-JET-□G*5 | CC-Link IE TSN | RJ71GN11-T2*4 | RnCPU<br>RnENCPU<br>RnSFCPU<br>R12CCPU-V<br>R102WCPU-W | For the system configuration between the GOT and the PLC, refer to the following.<br>☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module*2 | GT16H-CNB-42S or GT16H-CNB-37S | GT 2506HS | *3 |
| | | RJ71GN11-EIP | RnCPU<br>RnENCPU | | GT16H-CNB-42S or GT16H-CNB-37S | GT 2505HS | *3 |

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For RnCPU, RnENCPU, or RnSFCPU: [RCPU]
• For R12CCPU-V or R102WCPU-W: [RnCCPU/RnWCPU]
Set either of the following values for [Port No.] when the communication format is:
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 150 Connected Ethernet controller setting

*2 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 154 Routing parameter setting

*3 For the number of connectable GOTs and PLCs, refer to the following.
☞ Page 124 Connection to Built-in Ethernet port CPU or C Controller module

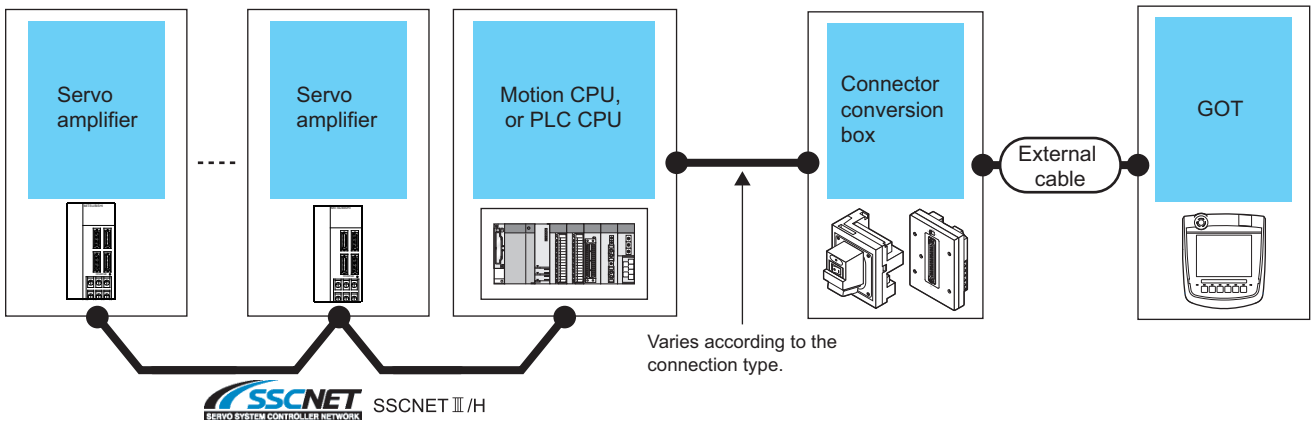
*4 Use one with firmware version 11 or later.

*5 Use one whose firmware version is as shown below.

| Servo amplifier | Applicable firmware version |
|---|---|
| MR-J5-□G<br>MR-J5-□G-RJ<br>MR-J5W2-□G<br>MR-J5W3-□G<br>MR-JET-□G | B9 or later |
| MR-J5D1-□G4<br>MR-J5D2-□G4<br>MR-J5D3-□G4 | C0 or later |

# Connection to MELSERVO-JE-□B series

## When using the connector conversion box




| Servo amplifier | | Motion CPU, or PLC | | | Connector conversion box | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Simple motion module | CPU type | Communication type*1 | | | |
| MR-JE-□B<br>MR-JE-□BF | SSCNETIII/H | RD77MS*3 | RnCPU | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT16H-CNB-42S | GT 2506HS | *2 |
| | | QD77MS*4 | QnCPU | | | | |
| | | LD77MS*4 | LnCPU | | | | |
| | | FX5-40SSC-S | FX5CPU | | | | |
| | | RD77MS*3 | RnCPU | | GT11H-CNB-37S | GT 2505HS | |
| | | QD77MS*4 | QnCPU | | | | |
| | | LD77MS*4 | LnCPU | | | | |
| | | FX5-40SSC-S | FX5CPU | | | | |
| | | FX5-80SSC-S*5 | | | | | |

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

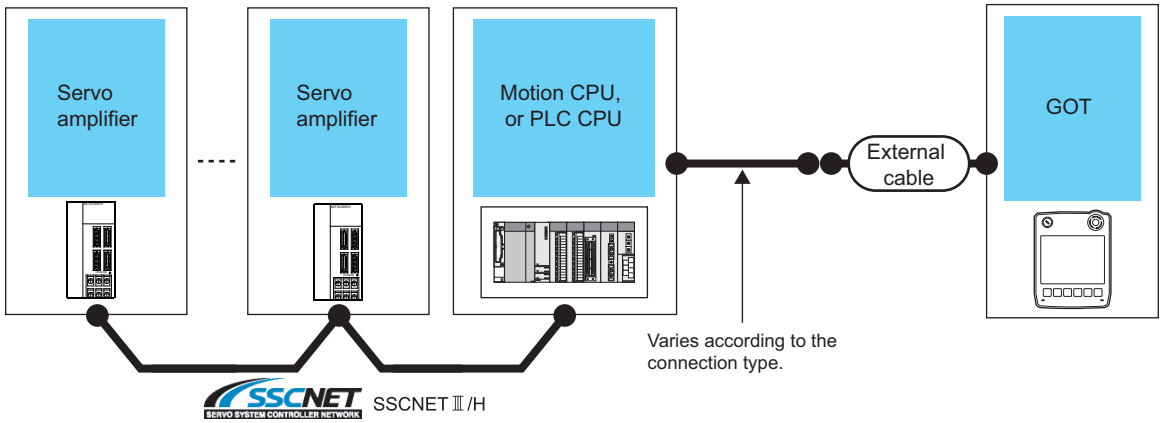
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

## When using the external cable (GT11H-C□□□-37P)




| Servo amplifier | | Motion CPU, or PLC | | | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Simple motion module | CPU type | Communication type*1 | | |
| MR-JE-□B<br>MR-JE-□BF | SSCNETIII/H | RD77MS*3 | RnCPU | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT 2505HS | *2 |
| | | QD77MS*4 | QnCPU | | | |
| | | LD77MS*4 | LnCPU | | | |
| | | FX5-40SSC-S | FX5CPU | | | |
| | | FX5-80SSC-S*5 | | | | |

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

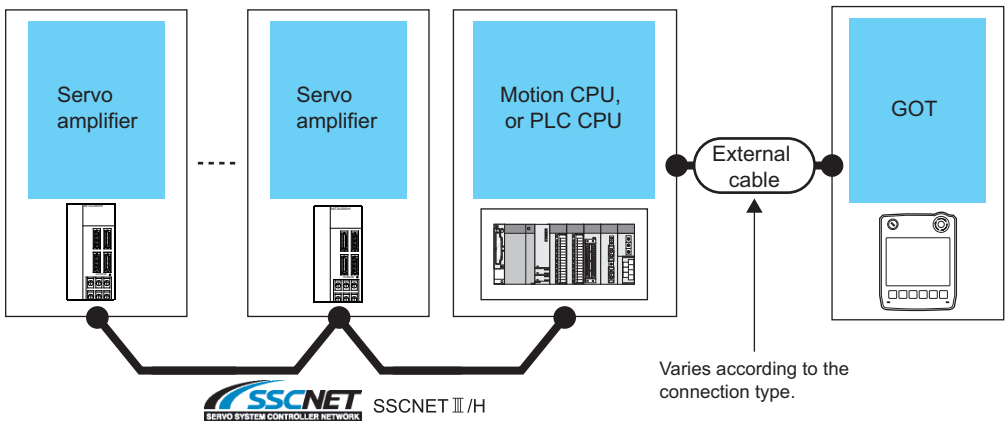
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

## When using the external cable (GT11H-C□□□)




| Servo amplifier | | Motion CPU, or PLC | | | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication type | Simple motion module | CPU type | Communication type*1 | | |
| MR-JE-□B<br>MR-JE-□BF | SSCNETIII/H | RD77MS*3 | RnCPU | For the system configuration between the GOT and the motion controller or PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION<br>☞ Page 379 CC-Link CONNECTION (Via G4) | GT 2505HS | *2 |
| | | QD77MS*4 | QnCPU | | | |
| | | LD77MS*4 | LnCPU | | | |
| | | FX5-40SSC-S | FX5CPU | | | |
| | | FX5-80SSC-S*5 | | | | |

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

# GOT side settings

## Connection through Motion controller or PLC

The settings of the GOT depend on the connection type between the GOT and the Motion module or the GOT and the PLC CPU.

For details of the GOT side settings, refer to the following.

☞ Page 102 ETHERNET CONNECTION
☞ Page 275 DIRECT CPU CONNECTION (SERIAL)
☞ Page 327 SERIAL COMMUNICATION CONNECTION
☞ Page 379 CC-Link CONNECTION (Via G4)

## Connection through Motion module

The settings of the GOT depend on the connection type between the GOT and the PLC CPU.

For details of the GOT side settings, refer to the following.

☞ Page 102 ETHERNET CONNECTION

# 8.5 Settable Device Range

## Direct connection

For the range of devices usable in the GOT when the GOT and servo amplifier are directly connected, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

[MELSERVO-J2M-P8A]
[MELSERVO-J2M-*DU]
[MELSERVO-J2S-*A]
[MELSERVO-J2S-*CP]
[MELSERVO-J2S-*CL]
[MELSERVO-J3-*A]
[MELSERVO-J3-*T]
[MELSERVO-J4-*A, -JE-*A]
[MELSERVO-J4-*A-RJ]
[MELSERVO-JE-*C]
[MELSERVO-J5(W)-*G(-RJ), -JET-*G]

## Connection through Motion controller or PLC

For the range of devices usable in the GOT when the GOT and servo amplifier are connected through a Motion controller or Simple Motion module, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

# 8.6 Precautions

## Station number setting in the servo system

Make sure to establish servo system with the station number set with the host address.
For details of host address setting, refer to the following.
☞ Page 533 GOT Side Settings

## GOT clock function

Since the servo amplifier does not have a clock function, the settings of [Adjust] or [Broadcast] by GOT clock control will be disabled.

## Servo amplifier/test operation using the GOT

During the servo amplifier/test operation, when the communication between the GOT and the servo amplifier is interrupted for 0.5[ms] or more, the servo amplifier decelerates, stops, and then gets into the servo lock status. During the servo amplifier/test operation, continue the communication constantly by monitoring the status display of the servo amplifier on the GOT screen, etc.

## When connecting multiple GOTs

Do not monitor the same servo amplifier simultaneously with multiple GOTs. If multiple GOTs simultaneously write data to a device of the same servo amplifier, the servo amplifier may malfunction.

## When multiple GOTs and the servo amplifier are connected by Ethernet connection

If the same servo amplifier is monitored (read) by multiple GOTs simultaneously, the servo amplifier may not receive all the commands and the GOTs may not monitor (read) the servo amplifier correctly.

## When monitoring same communication channel, PLC and servo amplifier at the same time

### ■Deterioration of the monitoring performance

- If devices of the PLC and servo amplifier are monitored on the same screen or back ground, the monitoring performance will slow down.
- If devices of multiple servo amplifiers are monitored on the same screen, the monitoring performance will slow down.

### ■How to improve deterioration of monitoring performance

- Separating the channel numbers used for the controllers connected by using the multi-channel function can prevent slowdown in monitoring of the PLC devices.

## When monitoring the servo amplifier for multiple axes at the same communication channel

### ■Deterioration of monitoring performance

- If devices of the servo amplifier for multiple axes are monitored on the same screen or back ground, the monitoring performance may extremely slow down.

### ■How to improve deterioration of monitoring performance

- The number of the axes which is monitored on the same screen or back ground should be 4 or less.

Using the multi-channel function, set the monitor of the servo amplifier for multiple axes to the different channel separately per 4 axes.

# 9 ROBOT CONTROLLER CONNECTION




- Page 571 Connectable Model List
- Page 572 System Configuration
- Page 573 GOT Side Settings
- Page 580 PLC Side Settings
- Page 584 Settable Device Range
- Page 584 Precautions


## 9.1 Connectable Model List

The following table shows the connectable models.

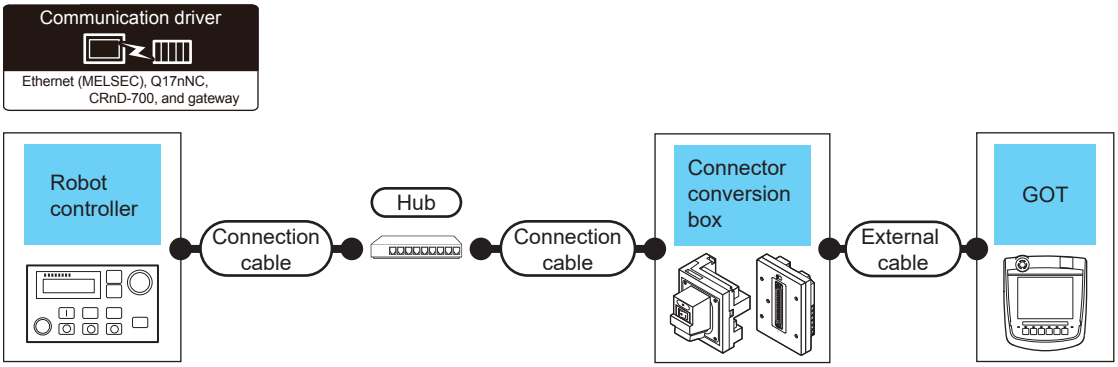
| Series | Model name | Clock | Communication type | Connectable model*2 | Refer to |
|---|---|---|---|---|---|
| Robot controller*1 | CR800-D<br>CRnD-700<br>CR750-D<br>CR751-D | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 572 Connecting to robot controller (CR800-D, CRnD-700) |

*1 For details on the connection with CR800-R (R16RTCPU), CRnQ-700/CR750-Q/CR751-Q (Q172DRCPU), and CR800-Q (Q172DSRCPU), refer to MITSUBISHI ELECTRIC PLC CONNECTIONS.

*2 When the robot controller is connected, use the GOT outside the safety fence.

# 9.2 System Configuration

## Connecting to robot controller (CR800-D, CRnD-700)




| Robot controller | | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable *8 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | | | | | | |
| CR800-D*4*5<br>CRnD-700*6*7<br>CR750-D*6*7<br>CR751-D*6*7 | Ethernet | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3, 4, or 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP) of category 5 or 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 GOT |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 For the system configuration of CR800-D, refer to the following manual.
Manuals of CR800-D

*5 Select [CR800] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 579 Connected Ethernet Controller Setting

*6 For the system configuration of CRnD-700, CR750-D/CR751-D, refer to the following manual.
CRnD-700, CR750-D/CR751-D SET UP MANUAL

*7 Select [CRnD-700] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 579 Connected Ethernet Controller Setting

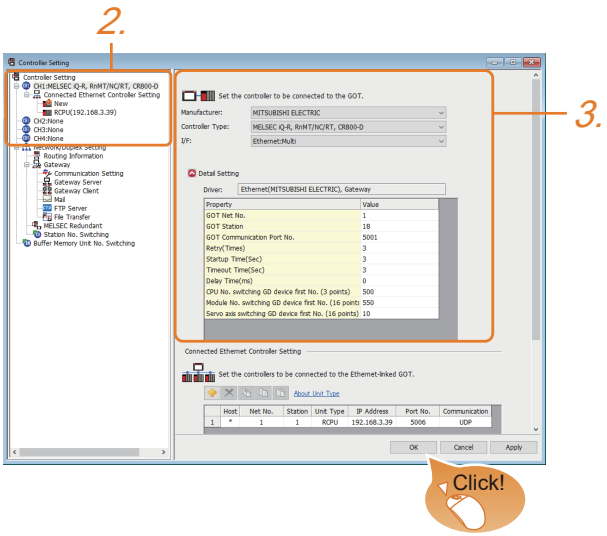
*8 Use C or later version of GT11H-C□□-37P.

# 9.3 GOT Side Settings



## Setting communication interface (Controller Setting)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 574 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5001 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points) | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT. (Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT. (Default: 18) | 1 to 120 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module. (Default: 5001 *2) | 1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out. (Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms) | 0 to 10000 (ms) |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 575 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 576 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 577 Servo axis switching GD device first No. | 0 to 65520 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 579 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

Example of [Controller Setting]

For examples of [Controller Setting], refer to the following.

☞ Page 580 PLC Side Settings

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

- Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

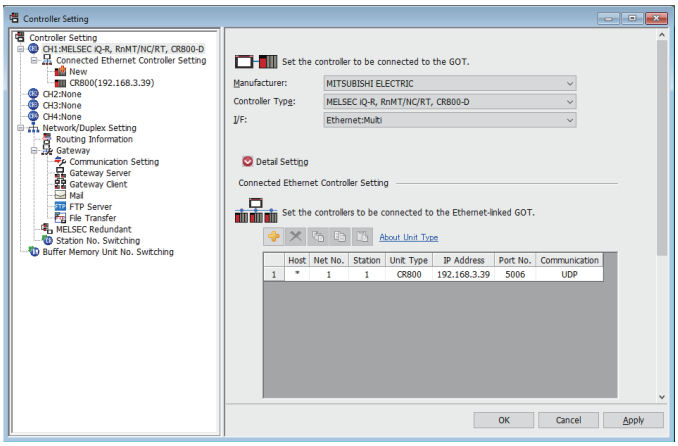
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet Controller Setting




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*)) | — |
| Net No. | Set the network No. of the connected Ethernet module. (Default: 1) | 1 to 239 |
| Station*2 | Set the station No. of the connected Ethernet module. (Default: 1) | 1 to 64 |
| Unit Type*1 | Set the type of the connected Ethernet module.<br>CRnD-700, CR800 | CRnD-700, CR800 |
| IP address | Set the IP address of the connected Ethernet module. (Default: blank) | 0.0.0.0 to 255.255.255.255 |
| Port No./Communication | The port No. and communication that can be set differ depending on the [Unit Type].<br><CR800><br>• When the port No. is [5006], the communication is [UDP] (fixed).<br>• When the port No. is [5007], the communication is [TCP] (fixed).<br><CRnD-700><br>• Port No. can be set only [5001], and the communication is [UDP] (fixed). | |

*1 Selected from [CRnD-700] and [CR800] for [Controller Type].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 574 Communication detail settings

**Point**

• Example of [Connected Ethernet Controller Setting]

For examples of [Connected Ethernet Controller Setting], refer to the following.

☞ Page 580 PLC Side Settings

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 9.4 PLC Side Settings

| Model | | Reference |
|---|---|---|
| Robot controller | CR800-D | ☞ Page 580 Connecting to robot controller (CR800-D) |
| | CRnD-700 | ☞ Page 582 Connecting to robot controller (CRnD-700) |

## Connecting to robot controller (CR800-D)

This section describes the settings of a GOT and a robot controller in the following case of system configuration.

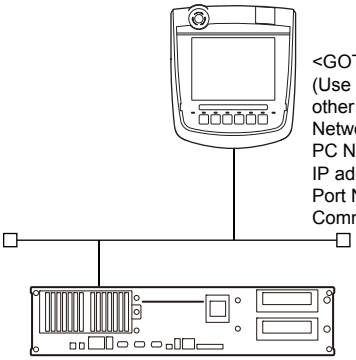
**Point**

Robot controller (CR800-D)

For details of the robot controller (CR800-D), refer to the following manual.

📖CR800-D SET UP MANUAL

### System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PC No. :18
IP address :192.168.0.18
Port No. :5001
Communication format :UDP (fixed)

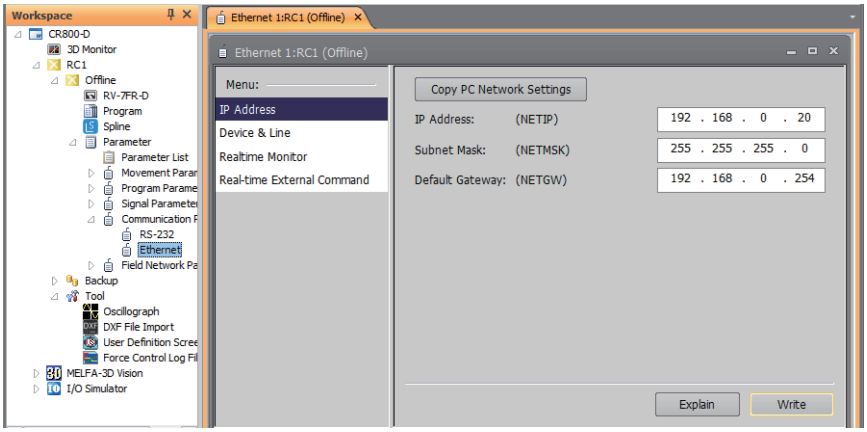
<CR800-D>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PC No. :2 (virtual)*1
IP address :192.168.0.19

*1 These setting items do not exist at the robot controller side.
However, the virtual values must be set on the GOT side.
☞ Page 581 Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

### Parameter settings for CR800-D

Set the parameters using RT ToolBox3

Select [Online] → [Parameter] → [Communication Parameter] → [Ethernet] and set [IP Address].




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| IP Address (NETIP) | 192.168.0.19 | ○ |

○: Necessary △: As necessary ×: Not necessary

## Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 573 Setting communication interface (Controller Setting)

### ■Controller Setting

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT PC No. | 18 |
| GOT Communication Port No. | 5001 |
| Retry | 3 times |
| Startup Time | 3 sec |
| Timeout Time | 3 sec |
| Delay Time | 0 ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.0.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 1 |
| | Unit Type | CR800 |
| | IP Address | 192.168.0.19 |
| | Port No. | 5001 (fixed) |
| | Communication | UDP (fixed) |

## Checking communication state of CR800-D

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.0.19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.0.19

Request timed out.

### ■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of CR800-D (faulty or not)
- The IP address of CR800-D specified in the ping command

# Connecting to robot controller (CRnD-700)

This section describes the settings of a GOT and a robot controller in the following case of system configuration.

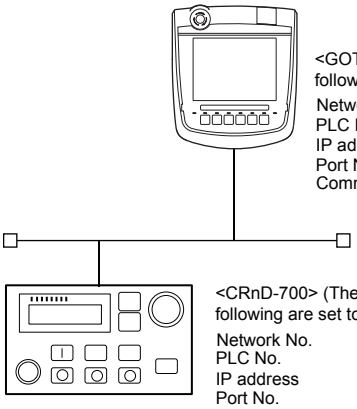
**Point**

Robot controller (CRnD-700)

For details of the robot controller (CRnD-700), refer to the following manual.

CRnD-700 SET UP MANUAL

## System configuration



<GOT> (The settings other than the following are set to the default)

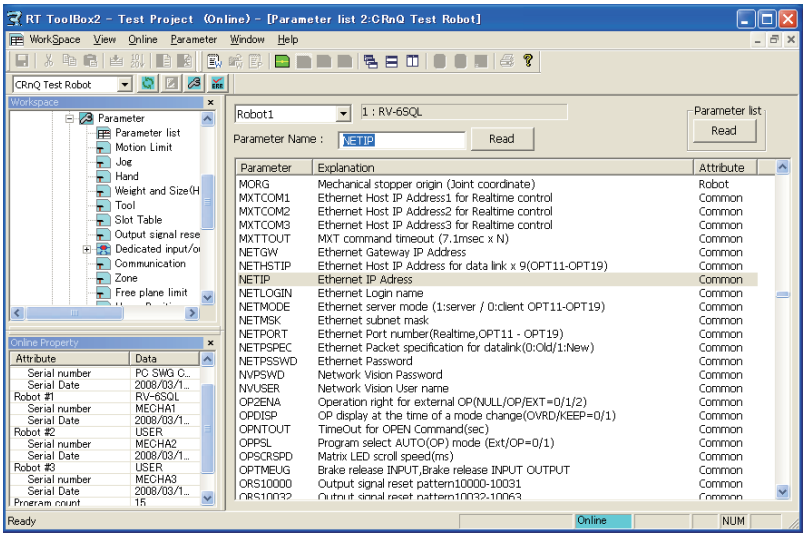
| | |
|---|---|
| Network No. | : 1 |
| PLC No. | : 1 |
| IP address | : 192.168.0.18 |
| Port No. | : 5001 |
| Communication format | : UDP (fixed) |

<CRnD-700> (The settings other than the following are set to the default)

| | |
|---|---|
| Network No. | : 1 |
| PLC No. | : 2 |
| IP address | : 192.168.0.19 |
| Port No. | : 5001 |
| Communication format | : UDP(fixed) |

## Parameter settings for CRnD-700

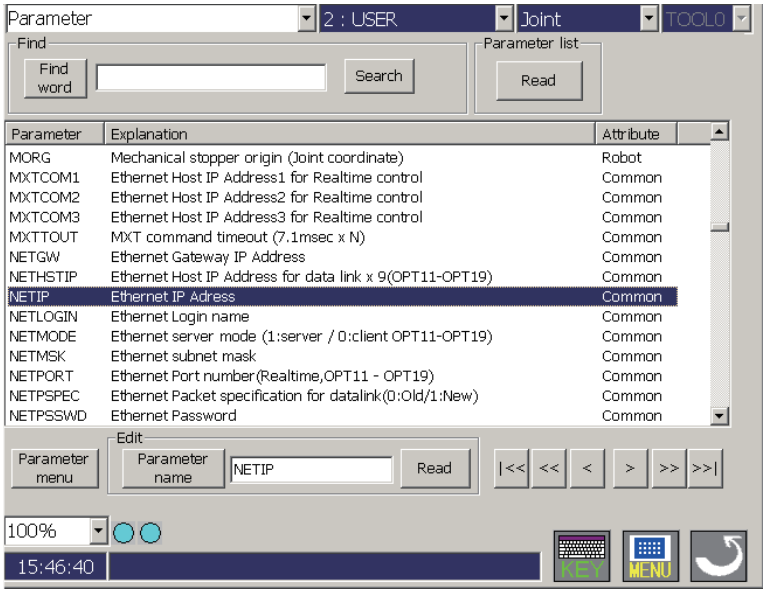
### ■For RT ToolBox2




| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| NETIP | 192.168.0.19 | ○ |
| GOTPORT | 5001 | ○ |

○: Necessary △: As necessary ×: Not necessary

### ■For R32TB or R56TB




(For R56TB)

| Item | Set value | Setting necessity at GOT connection |
|---|---|---|
| NETIP | 192.168.0.19 | ○ |
| GOTPORT | 5001 | ○ |

○: Necessary △: As necessary ×: Not necessary

## [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 573 Setting communication interface (Controller Setting)

### ■Communication settings

| Item | Set value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 1 |
| GOT Communication Port No. | 5001 |
| Retry | 3times |
| Startup Time | 3sec |
| Timeout Time | 3sec |
| Delay Time | 0ms |

### ■GOT Ethernet Setting (standard port)

| Item | Set value |
|---|---|
| GOT IP Address | 192.168.0.18 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 0.0.0.0 |
| Peripheral S/W Communication Port No. | 5015 |
| Transparent Port No. | 5014 |

### ■Connected Ethernet Controller Setting

| Item | | Set value |
|---|---|---|
| Ethernet setting No.1 | Host | * |
| | Net No. | 1 |
| | Station | 2 |
| | Unit Type | CRnD-700 |
| | IP address | 192.168.0.19 |
| | Port No. | 5001 (fixed) |
| | Communication | UDP (fixed) |

## Confirming communication state of CRnD-700

### ■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.0.19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.0.19

Request timed out.

### ■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

• Cable connecting condition
• Parameter settings
• Operation state of the CRnD-700. (faulty or not)
• The IP address of the CRnD-700 specified for the Ping command.

# 9.5 Settable Device Range

For details on the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1
[MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]

# 9.6 Precautions

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

• Using a switching hub
• More high speed by 100BASE-TX (100Mbps)
• Reduction of the monitoring points on GOT

# 10 CNC CONNECTION


- Page 585 Connectable Model List
- Page 586 System Configuration
- Page 589 Connection Diagram
- Page 591 GOT Side Settings
- Page 599 CNC Side Settings
- Page 601 Settable Device Range
- Page 602 Precautions




## 10.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MELDAS C6/C64*1 | FCA C6<br>FCA C64 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 586 Direct CPU connection (serial) |
| | | | MELSECNET/10 | - | - |
| | | | CC-Link (ID) | - | - |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 588 Ethernet connection |
| M700VS/M70V | M700VS<br>M70V | × | CC-Link (ID) | - | - |

*1 Use the NC system software version D0 or later.

For the connection to CNC C80, CNC C70, refer to PART 2 MITSUBISHI ELECTRIC PLC CONNECTIONS.

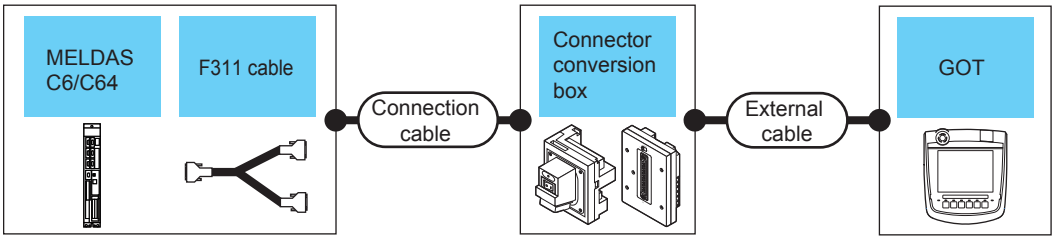
# 10.2 System Configuration

## Direct CPU connection (serial)

Communication driver

AJ71C24, MELDAS C6*

### When using the connector conversion box




| CNC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | F311 cable | Communication type | Cable model | | | | | |
| MELDAS C6/C64*1 | - | RS-232 | User preparing Page 589 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| MELDAS C6/C64*2 | User preparing *3 | RS-422 | GT01-C30R4-25P(3m)<br>GT01-C100R4-25P(10m) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

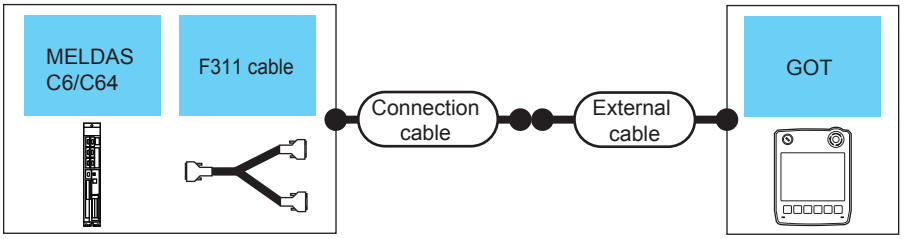
*1 Connect the connector of the CNC side to TERMINAL.

*2 Connect the connector of the CNC side to SIO.

*3 To be prepared by the user, referring the following.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)

*4 The distance from the GOT to the CNC (F311 cable + Connection cable + External connection cable)

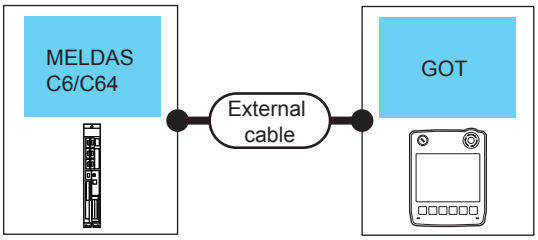
## When using the external cable (GT11H-C□□□-37P)




| CNC | | | Connection cable | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | F311 cable | Communication type | Cable model | | | | |
| MELDAS C6/C64*1 | - | RS-232 | User preparing Page 589 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| MELDAS C6/C64*2 | User preparing *3 | RS-422 | GT11H-C15R4-25P(1.5m) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Connect the connector of the CNC side to TERMINAL.
*2 Connect the connector of the CNC side to SIO.
*3 To be prepared by the user, referring the following.
☞ MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)
*4 The distance from the GOT to the CNC (F311 cable + Connection cable + External connection cable)

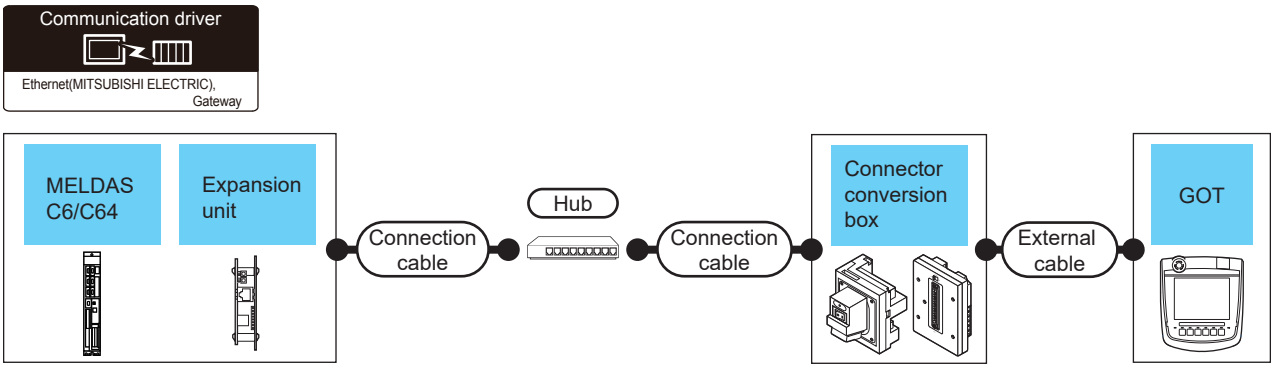
## When using the external cable (GT11H-C□□□)




| CNC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication type | | | | |
| MELDAS C6/C64*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 590 RS232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Connect the connector of the CNC side to TERMINAL.

# Ethernet connection




| CNC | | | Connection cable*1 | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Expansion unit | Communication type | Cable model | Maximum segment length*2 | | | | |
| MELDAS C6/C64 | FUC6-EX875*3*4 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 128 GOTs (recommended to 16 units or less) |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the expansion unit, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)
MELDAS C6/C64 NETWORK MANUAL (BNP-B2373)

*4 Select [AJ71QE71] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 598 Connected Ethernet Controller Setting

*5 Use C or later version of GT11H-C□□-37P.

# 10.3 Connection Diagram

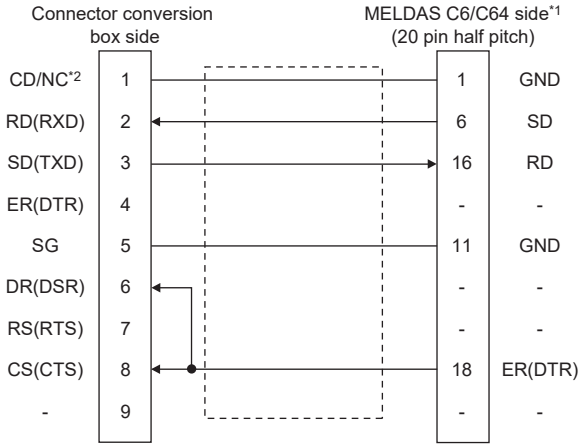
The following diagram shows the connection between the GOT and the CNC.

## RS-232 cable



### Connection diagram

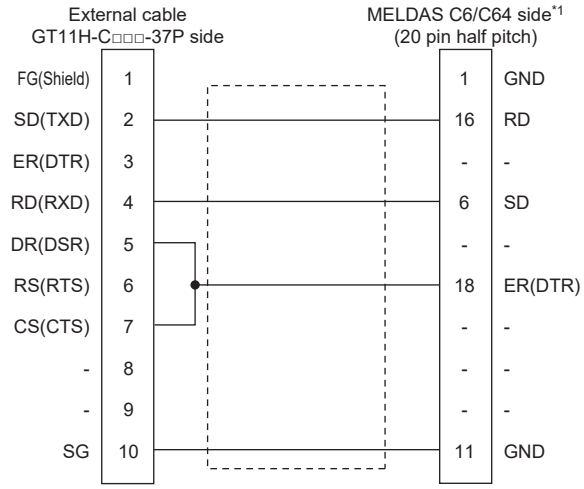
#### ■RS232 connection diagram 1)




*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

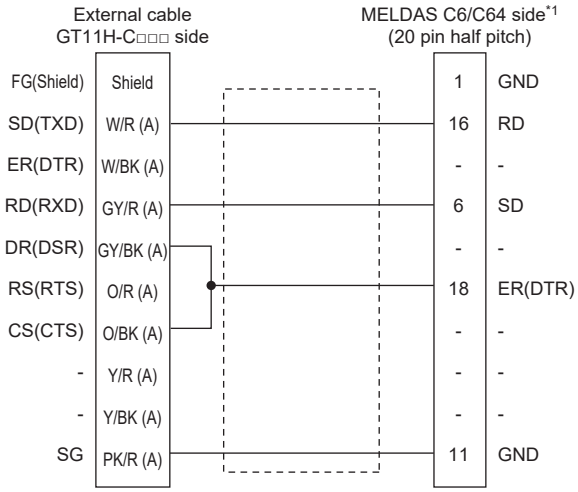
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS232 connection diagram 2)




*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

### ■RS232 connection diagram 3)




*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

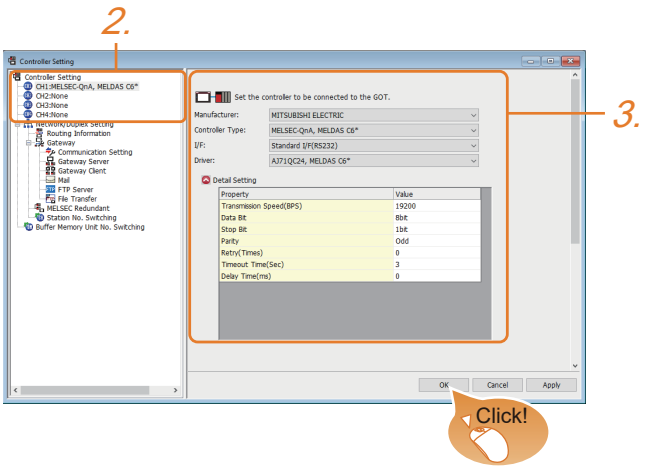
☞ Page 87 GOT connector specifications

# 10.4 GOT Side Settings

## Setting communication interface (Controller Setting)



Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: MITSUBISHI ELECTRIC
- [Controller Type]: MELSEC-QnA, MELDAS C6*
- [I/F]: Interface to be used
- [Driver]:

For direct CPU connection (serial)

[AJ71QC24, MELDAS C6*]

For Ethernet connection

[Ethernet(MITSUBISHI ELECTRIC), Gateway]

- [[Detail Setting]: Configure the settings according to the usage environment.

☞ Page 592 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## AJ71QC24, MELDAS C6*

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment. (Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications. (Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd) | Odd (fixed) |
| Retry | Set the number of retries to be performed when a communication timeout occurs. (Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out. (Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms) | 0 to 300ms |

## Ethernet (MITSUBISHI ELECTRIC), Gateway

| Property | Value |
|---|---|
| Network Type | MNET/H mode |
| Network No. | 1 |
| Station No. | 1 |
| Group No. | 0 |
| Mode Setting | Online(Auto Reconnect) |
| Transmission Speed(Mbps) | 25 |
| Refresh Interval(Times) | 1 |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| CPU No. switching GD device first No. (3 points) | 500 |
| Module No. switching GD device first No. (16 points | 550 |
| Servo axis switching GD device first No. (16 points) | 10 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT. (Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT. (Default: 18) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module. (Default: 5001 *2) | 1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out. (Default: 3sec) | 3 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms) | 0 to 10000 (ms) |
| CPU No. switching GD device first No. (3 points) | Set the start device number of the GD devices for CPU No. switching. (Default: 500)<br>For the details, refer to the following.<br>☞ Page 594 Start device number of the GD devices for CPU number switching | 0 to 65520 |
| Module No. switching GD device first No. (16 points) | Set the start device number of the GD devices for module No. switching. (Default: 550)<br>For the details, refer to the following.<br>☞ Page 595 Start device number of the GD devices for module number switching | 0 to 65520 |
| Servo axis switching GD device first No. (16 points) | Set the servo axis switching GD device first No. (Default: 10)<br>For the details, refer to the following.<br>☞ Page 596 Servo axis switching GD device first No. | 0 to 65520 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 598 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## Start device number of the GD devices for CPU number switching

### ■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

| CPU No. | GD device | Setting range |
|---|---|---|
| 100 | GD500 | 1 to 4<br>Setting an invalid value causes a communication timeout error.<br>Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error. |
| 101 | GD501 | |
| 102 | GD502 | |

### ■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

### ■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Start device number of the GD devices for module number switching

### ■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

| Unit No. | GD device | Setting range |
|---|---|---|
| 100 | GD550 | The setting range depends on [Unit Type].<br>• When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type]<br>00 to FF<br>• When [MELSEC iQ-F] is selected for [Unit Type]<br>01 to 10<br>Setting an invalid value causes a device range error. |
| 101 | GD551 | |
| 102 | GD552 | |
| 103 | GD553 | |
| 104 | GD554 | |
| 105 | GD555 | |
| 106 | GD556 | |
| 107 | GD557 | |
| 108 | GD558 | |
| 109 | GD559 | |
| 10A | GD560 | |
| 10B | GD561 | |
| 10C | GD562 | |
| 10D | GD563 | |
| 10E | GD564 | |
| 10F | GD565 | |

### ■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

## Servo axis switching GD device first No.

### ■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

| Servo axis No. | GD device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 64<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

### ■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

### ■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

### ■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

- Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

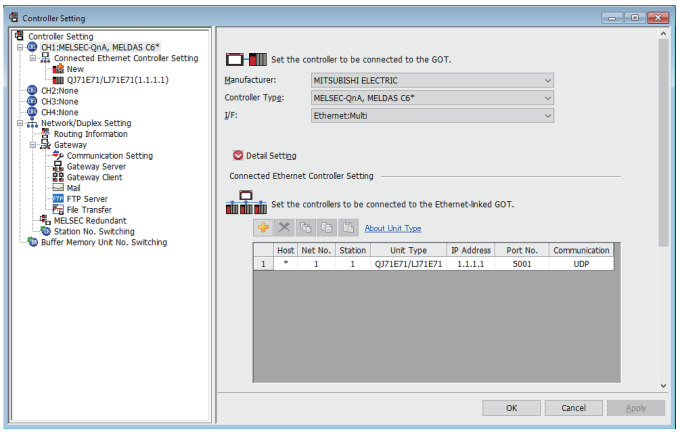
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet Controller Setting




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*)) | — |
| Net No. | Set the network No. of the connected Ethernet module. (Default: 1) | Network No. of CNC*1 |
| Station*2 | Set the station No. of the connected Ethernet module. (Default: 1) | Station No. of CNC |
| Unit Type | Set the type of the connected Ethernet module. (Default: QJ71E71/LJ71E71) | AJ71QE71 |
| IP Address | Set the IP address of the connected Ethernet module. (Default: 1.1.1.1) | IP address of CNC |
| Port No. | Set the port No. of the connected Ethernet module. (Default: 5001) | 5001 |
| Communication | UDP (fixed) | UDP (fixed) |

*1 For operating CNC monitor function, set N/W No. to "239".

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 592 Communication detail settings

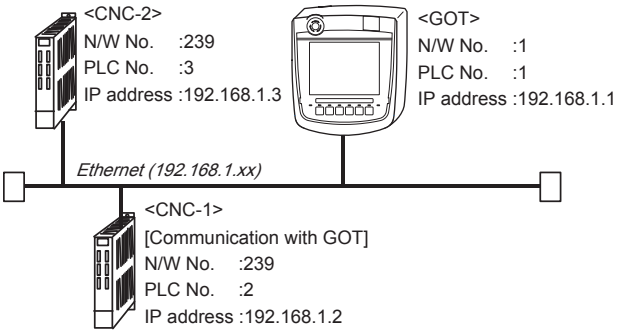
# 10.5 CNC Side Settings

## Ethernet connection



### System configuration

The following shows the example of the system configuration when using the CNC monitor function.




### Parameter setting

Set parameters related to Ethernet with MELSEC's peripheral devices in the same way as parameter setting of MELSEC CPU, and write them on CNC by Personal computer.

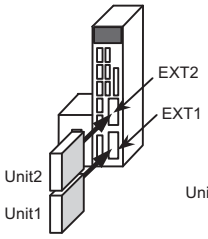
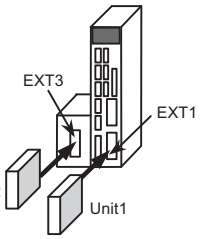
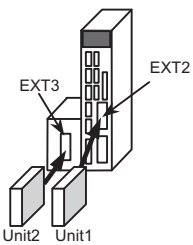
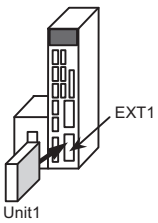
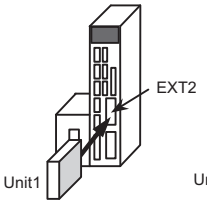
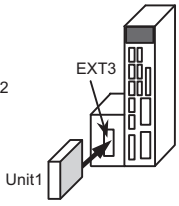
#### ■Network parameter setting

Set the network parameters by peripheral device and write them on CNC.

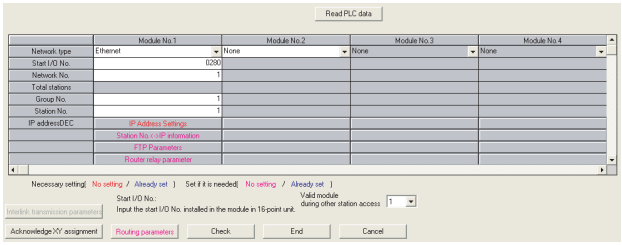
An example of parameter setting by GPPW is as follows.

Set the first I/O No. as follows according to the expansion slot to which the unit is inserted.

• Unit No.

| Slot position | Start I/O No. | Mounting position of extension unit |
|---|---|---|
| EXT1 | 0200 | [When mounted in EXT1 and EXT2]   [When mounted in EXT1 and EXT3]   |
| EXT2 | 0280 | [When mounted in EXT2 and EXT3]   [When mounted in EXT1 only]   |
| EXT3 | 0300 | [When mounted in EXT2 only]   [When mounted in EXT3 only]   |

• Example of GX Developer setting




For details of the parameter setting, refer to the following.

📖C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

**Point**

IP address setting

IP address setting on GX Developer is invalid.

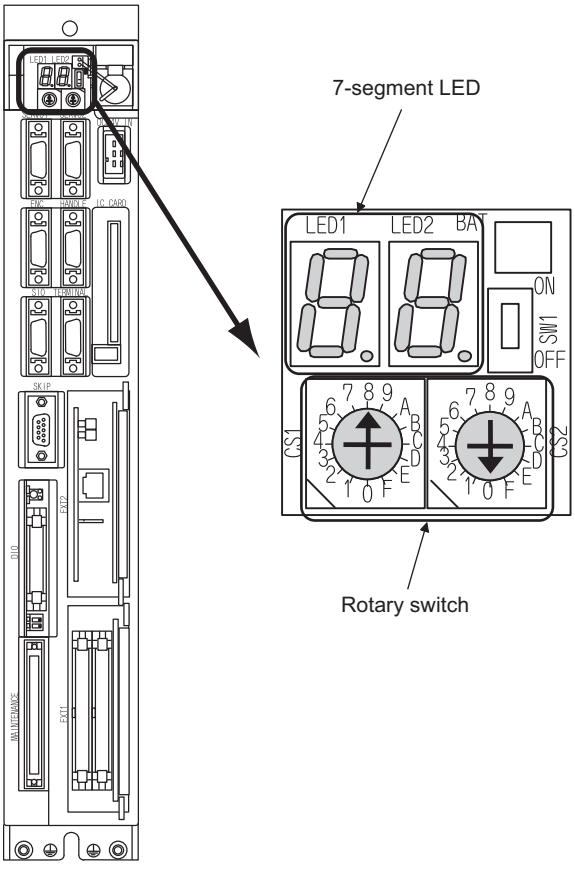
Set the IP address by the 7-segment LED and rotary switch of the CNC side, referring to the next page.

## ■CNC side parameter setting

Confirm the CNC side parameter setting with the settings of IP address, gateway address, subnet mask and port No. by the 7-segment LED and rotary switch of the CNC side.

For details of the parameter setting operation, refer to the following.

📖C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IV Setting the Ethernet IP Address



# 10.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 [MELSEC QnA, MELDAS C6*]

# 10.7 Precautions

## Direct CPU connection (serial)

### Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

## Ethernet connection

### Via network system

GOT with Ethernet communication cannot access the CNCs in another network via the CNC (network module, Ethernet module, etc.).

### When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [PLC No.] to the GOT.

☞ Page 591 Setting communication interface (Controller Setting)

### When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and CNC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

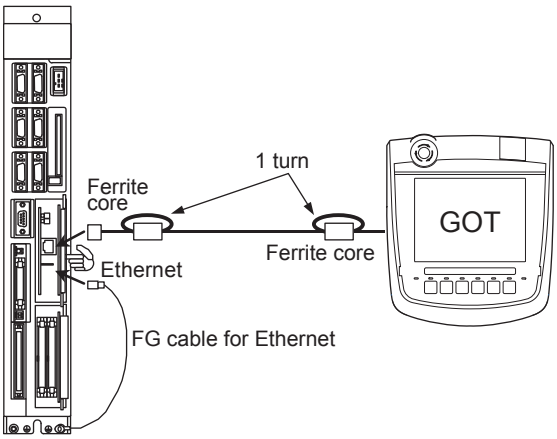
### Ethernet cable connection

Ethernet cable is so susceptible to noise that you should wire power cables and electric supply cables separately.

And you need to attach a ferrite core (attachment) on the control unit side.

For details of the Ethernet cable connection, refer to the following

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IX Connection Function with GOT




### Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

# PART 4 MULTIPLE GOT CONNECTIONS

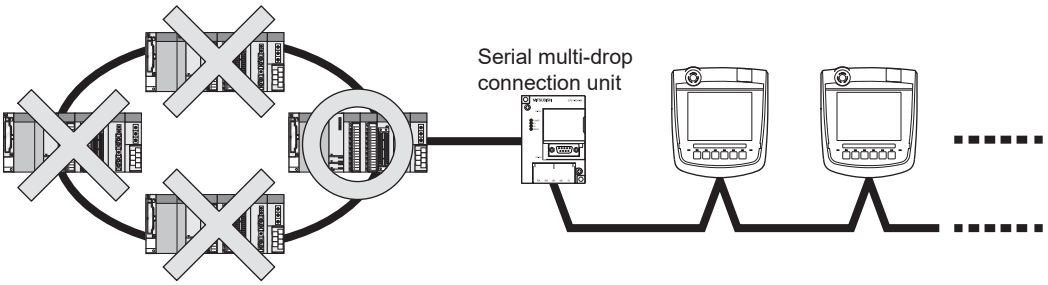
11 GOT MULTI-DROP CONNECTION

# 11 GOT MULTI-DROP CONNECTION


- Page 604 CPU that can be Monitored
- Page 605 Connectable Model List
- Page 620 System Configuration
- Page 621 Connection Diagram
- Page 623 GOT Side Settings
- Page 625 Settings of Serial Multi-Drop Connection Unit
- Page 631 Setting of connection conversion adapter
- Page 632 Precautions


## 11.1 CPU that can be Monitored

The GOT can monitor only a CPU to which a serial multi-drop connection unit (GT01-RS4-M) is connected directly.
GT2505HS-V does not support the GOT multi-drop connection.



# 11.2 Connectable Model List

## Direct CPU connection (serial)

The following table shows the connectable models for direct CPU connection (serial) of the CPU and serial multi-drop connection unit.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC iQ-R Series | R00CPU | ○ | RS-232<br>RS-422 | RS-485 | - |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU | | | | |
| | R16PCPU | | | | |
| | R32PCPU | | | | |
| | R120PCPU | | | | |
| | R04ENCPU | | | | |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU | | | | |
| | R16PSFCPU | | | | |
| | R32PSFCPU | | | | |
| | R120PSFCPU | | | | |
| | R08SFCPU | | | | |
| | R16SFCPU | | | | |
| | R32SFCPU | | | | |
| | R120SFCPU | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | RS-232<br>RS-422 | RS-485 | - |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |
| C Controller module (MELSEC iQ-R Series) | R12CCPU-V | ○ | RS-232<br>RS-422 | RS-485 | - |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | × | RS-232<br>RS-422 | RS-485 | - |
| CNC C80 | R16NCCPU-S1 | ○ | RS-232<br>RS-422 | RS-485 | - |
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | RS-232<br>RS-422 | RS-485 | - |
| MELSEC iQ-F Series | FX5U | ○ | RS-232<br>RS-422 | RS-485 | - |
| | FX5UC | | | | |
| | FX5UJ | | | | |
| | FX5S | | | | |

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-Q (Q mode)*4 | Q00JCPU | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q00CPU*1 | | | | |
| | Q01CPU*1 | | | | |
| | Q02CPU*1 | | | | |
| | Q02HCPU*1 | | | | |
| | Q06HCPU*1 | | | | |
| | Q12HCPU*1 | | | | |
| | Q25HCPU*1 | | | | |
| | Q02PHCPU | ○ | - | - | - |
| | Q06PHCPU | | | | |
| | Q12PHCPU | | | | |
| | Q25PHCPU | | | | |
| | Q12PRHCPU (Main base) | | | | |
| | Q25PRHCPU (Main base) | | | | |
| | Q12PRHCPU (Extension base) | ○ | - | - | - |
| | Q25PRHCPU (Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8 | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q00UCPU | | | | |
| | Q01UCPU | | | | |
| | Q02UCPU | | | | |
| | Q03UDCPU | | | | |
| | Q04UDHCPU | | | | |
| | Q06UDHCPU | | | | |
| | Q10UDHCPU | | | | |
| | Q13UDHCPU | | | | |
| | Q20UDHCPU | | | | |
| | Q26UDHCPU | | | | |
| | Q03UDECPU | ○ | RS-232 | RS-485 | GT 2506 HS<br>*2 |
| | Q04UDEHCPU | | | | |
| | Q06UDEHCPU | | | | |
| | Q10UDEHCPU | | | | |
| | Q13UDEHCPU | | | | |
| | Q20UDEHCPU | | | | |
| | Q26UDEHCPU | | | | |
| | Q50UDEHCPU | | | | |
| | Q100UDEHCPU | | | | |
| | Q03UDVCPU | | | | |
| | Q04UDVCPU | | | | |
| | Q06UDVCPU | | | | |
| | Q13UDVCPU | | | | |
| | Q26UDVCPU | | | | |
| C Controller module (Q Series) | Q12DCCPU-V*3 | ○ | RS-232 | RS-485 | GT 2506 HS<br>*2 |
| | Q24DHCCPU-V/VG | | | | |
| | Q24DHCCPU-LS | | | | |
| | Q26DHCCPU-LS | ○ | RS-232 | RS-485 | - |

*1 When in multiple CPU system configuration, use CPU function version B or later.
*2 Access via the (RS-232) in the multiple CPU system.
*3 Use a module with the upper five digits of the serial No. later than 12042.
*4 Ww and Wr devices cannot be monitored.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-QS*2 | QS001CPU | ○ | - | - | - |
| MELSEC-L*2 | L02CPU*4<br>L06CPU*4<br>L26CPU*4<br>L26CPU-BT*4<br>L02CPU-P*4<br>L06CPU-P*4<br>L26CPU-P*4<br>L26CPU-PBT*4<br>L02SCPU<br>L02SCPU-P | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| MELSEC-Q (A mode)*2 | Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| MELSEC-QnA (QnACPU)*2 | Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU | ○ | RS-422 | RS-485 | GT 2506 HS |
| | Q4ARCPU | ○ | RS-422 | RS-485 | - |
| MELSEC-QnA (QnASCPU)*2 | Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | ○ | RS-422 | RS-485 | GT 2506 HS |
| MELSEC-A (AnCPU)*3 | A2UCPU<br>A2UCPU-S1<br>A3UCPU<br>A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1<br>A3ACPU<br>A3ACPUP21<br>A3ACPUR21<br>A1NCPU*1<br>A1NCPUP21*1<br>A1NCPUR21*1<br>A2NCPU*1<br>A2NCPUP21*1<br>A2NCPUR21*1<br>A2NCPU-S1*1<br>A2NCPUP21-S1*1<br>A2NCPUR21-S1*1<br>A3NCPU*1<br>A3NCPUP21*1<br>A3NCPUR21*1 | ○ | RS-422 | RS-485 | GT 2506 HS |
| MELSEC-A (AnSCPU)*3 | A2USCPU | ○ | RS-422 | RS-485 | GT 2506 HS |

*1 When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU.
- AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later
- A2SCPU: Version H or later

*2 Ww and Wr devices cannot be monitored.

*3 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

*4 The adapter L6ADP-R2 or L6ADP-R4 is required for the direct CPU connection (serial).
When using L6ADP-R4, use an LCPU whose upper five digits are "15102" or later.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-A (AnSCPU)*5 | A2USCPU-S1 | ○ | RS-422 | RS-485 | GT 2506 HS |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 | | | | |
| | A1SHCPU | | | | |
| | A2SCPU*1 | | | | |
| | A2SHCPU | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU | | | | |
| MELSEC-A*5 | A0J2HCPU*1 | × | RS-422 | RS-485 | GT 2506 HS |
| | A0J2HCPUP21*1 | | | | |
| | A0J2HCPUR21*1 | | | | |
| | A0J2HCPU-DC24*1 | | | | |
| | A2CCPU*1 | ○ | RS-422 | RS-485 | GT 2506 HS |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | | | | |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | | | | |
| | A1FXCPU | | | | |
| Motion CPU (Q Series) | Q172CPU*2*3 | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q173CPU*2*3 | | | | |
| | Q172CPUN*2 | | | | |
| | Q173CPUN*2 | | | | |
| | Q172HCPU | ○ | RS-232 | RS-485 | GT 2506 HS *4 |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | | | | |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU | ○ | RS-232 | RS-485 | GT 2506 HS |
| | Q170MSCPU | | | | |
| | Q170MSCPU-S1 | | | | |
| | MR-MQ100 | | | | |
| Motion CPU (A Series)*5 | A273UCPU | ○ | - | - | - |
| | A273UHCPU | ○ | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | ○ | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | | | | |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |

*1 When monitoring A0J2HCPU or A2CCPU, only the following or later software version is used to write to the CPU.
- A0J2HCPU (with/without link): Version E or later
- A0J2HCPU-DC24: Version B or later
- A2CCPU: Version H or later

*2 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*4 Access via the (RS-232) in the multiple CPU system.

*5 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| Motion CPU (A Series)*2 | A171SHCPU | ○ | RS-422 | RS-485 | - |
| | A171SHCPUN | | | | |
| | A172SHCPU | | | | |
| | A172SHCPUN | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |
| MELSEC-WS | WS0-CPU0 | × | RS-232 | - | - |
| | WS0-CPU1 | | | | |
| | WS0-CPU3 | | | | |
| MELSECNET/H remote I/O station | QJ72LP25-25 | × | RS-232 | - | - |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | - | - | - |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | - | - | - |
| CNC C70 | Q173NCCPU | ○ | RS-232 | - | - |
| Robot controller (Q Series) | CRnQ-700 (Q172DRCPU)<br>CR750-Q (Q172DRCPU)<br>CR751-Q (Q172DRCPU)<br>CR800-Q (Q172DSRCPU) | ○ | RS-232 | - | - |
| MELSEC-FX | FX0 | × | RS-422 | RS-485 | GT 2506 HS |
| | FX0S | × | | | |
| | FX0N | | | | |
| | FX1 | × | | | |
| | FX2 | ×*1 | | | |
| | FX2C | | | | |
| | FX1S | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | FX1N | | | | |
| | FX2N | | | | |
| | FX1NC | | | | |
| | FX2NC | ×*1 | | | |
| | FX3S | ○ | | | |
| | FX3G | | | | |
| | FX3GC | | | | |
| | FX3GE | | | | |
| | FX3U | | | | |
| | FX3UC | | | | |
| FR-A500(L) | FR-A5□0(L) | × | - | - | - |
| FR-F500(L) | FR-F5□0(L) | | | | |
| FR-V500(L) | FR-V5□0(L) | | | | |
| FR-E500 | FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W | | | | |
| FR-S500(E) | FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R) | | | | |
| FR-F500J | FR-F5□0J(F) | | | | |

*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

*2 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| FR-D700 | FR-D7□0<br>FR-D7□0S<br>FR-D7□0W | × | - | - | - |
| FR-F700PJ | FR-F7□0PJ(F) | | | | |
| FR-E700 | FR-E7□0<br>FR-E7□0S<br>FR-E7□0W | | | | |
| | FR-E700-NE | | | | |
| FR-A700 | FR-A7□0 | | | | |
| FR-F700 | FR-F7□0 | | | | |
| FR-F700P | FR-F7□0P | | | | |
| FR-A800 | FR-A8□0<br>FR-A8□2<br>FR-A8□6 | | | | |
| FR-A800-E | FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | | | | |
| FR-A800-GF | FR-A8□0-GF<br>FR-A8□2-GF | | | | |
| FR-A800-GN | FR-A8□0-GN<br>FR-A8□2-GN | | | | |
| FR-A800 Plus | FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R | | | | |
| | FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R | | | | |
| FR-F800 | FR-F8□0<br>FR-F8□2<br>FR-F8□6 | | | | |
| FR-F800-E | FR-F8□0-E<br>FR-F8□2-E | | | | |
| FR-E800 | FR-E8□0 | | | | |
| FR-E800-E | FR-E8□0-E | | | | |
| Sensorless servo | FR-E7□0EX | | | | |
| MELIPM | MD-CX522-□K(-A0) | | | | |
| MELSERVO | MR-J2S-□A | × | - | - | - |
| | MR-J2S-□CP | | | | |
| | MR-J2S-□CL | | | | |
| | MR-J2M-P8A | | | | |
| | MR-J2M-□DU | | | | |
| | MR-J3-□A | | | | |
| | MR-J3-□T | | | | |
| | MR-J4-□A | | | | |
| | MR-JE-□A | | | | |

# Serial communication connection

The following table shows the connectable models for connecting the CPU to the serial multi-drop connection unit in the serial communication connection.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC iQ-R Series | R00CPU | ○ | RS-232<br>RS-422 | RS-232<br>RS-422 | - |
| | R01CPU | | | | |
| | R02CPU | | | | |
| | R04CPU | | | | |
| | R08CPU | | | | |
| | R16CPU | | | | |
| | R32CPU | | | | |
| | R120CPU | | | | |
| | R08PCPU | | | | |
| | R16PCPU | | | | |
| | R32PCPU | | | | |
| | R120PCPU | | | | |
| | R04ENCPU | | | | |
| | R08ENCPU | | | | |
| | R16ENCPU | | | | |
| | R32ENCPU | | | | |
| | R120ENCPU | | | | |
| | R08PSFCPU | | | | |
| | R16PSFCPU | | | | |
| | R32PSFCPU | | | | |
| | R120PSFCPU | | | | |
| | R08SFCPU | | | | |
| | R16SFCPU | | | | |
| | R32SFCPU | | | | |
| | R120SFCPU | | | | |
| Motion CPU (MELSEC iQ-R Series) | R16MTCPU | ○ | RS-232<br>RS-422 | RS-485 | - |
| | R32MTCPU | | | | |
| | R64MTCPU | | | | |
| C Controller module (MELSEC iQ-R Series) | R12CCPU-V | ○ | RS-232<br>RS-422 | RS-485 | - |
| MELSECWinCPU (MELSEC iQ-R Series) | R102WCPU-W | × | RS-232<br>RS-422 | RS-485 | - |
| CNC C80 | R16NCCPU-S1 | ○ | RS-232<br>RS-422 | RS-485 | - |
| Robot controller (MELSEC iQ-R Series) | CR800-R(R16RTCPU) | ○ | RS-232<br>RS-422 | RS-485 | - |
| MELSEC iQ-F Series | FX5U | ○ | RS-232<br>RS-422 | RS-485 | - |
| | FX5UC | | | | |
| | FX5UJ | | | | |
| | FX5S | | | | |

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-Q (Q mode)*3 | Q00JCPU | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q00CPU*1 | | | | |
| | Q01CPU*1 | | | | |
| | Q02CPU*1 | | | | |
| | Q02HCPU*1 | | | | |
| | Q06HCPU*1 | | | | |
| | Q12HCPU*1 | | | | |
| | Q25HCPU*1 | | | | |
| | Q02PHCPU | ○ | - | - | - |
| | Q06PHCPU | | | | |
| | Q12PHCPU | | | | |
| | Q25PHCPU | | | | |
| | Q12PRHCPU (Main base) | | | | |
| | Q25PRHCPU (Main base) | | | | |
| | Q12PRHCPU (Extension base) | | | | |
| | Q25PRHCPU (Extension base) | | | | |
| | Q00UJCPU<br>Q00UJCPU-S8 | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q00UCPU | | | | |
| | Q01UCPU | | | | |
| | Q02UCPU | | | | |
| | Q03UDCPU | | | | |
| | Q04UDHCPU | | | | |
| | Q06UDHCPU | | | | |
| | Q10UDHCPU | | | | |
| | Q13UDHCPU | | | | |
| | Q20UDHCPU | | | | |
| | Q26UDHCPU | | | | |
| | Q03UDECPU | | | | |
| | Q04UDEHCPU | | | | |
| | Q06UDEHCPU | | | | |
| | Q10UDEHCPU | | | | |
| | Q13UDEHCPU | | | | |
| | Q20UDEHCPU | | | | |
| | Q26UDEHCPU | | | | |
| | Q50UDEHCPU | | | | |
| | Q100UDEHCPU | | | | |
| | Q03UDVCPU | | | | |
| | Q04UDVCPU | | | | |
| | Q06UDVCPU | | | | |
| | Q13UDVCPU | | | | |
| | Q26UDVCPU | | | | |
| C Controller module (Q Series) | Q12DCCPU-V*2 | ○ | RS-232 | RS-485 | GT 2506 HS |
| | Q24DHCCPU-V/VG | | | | |
| | Q24DHCCPU-LS | | | | |
| | Q26DHCCPU-LS | ○ | RS-232 | RS-485 | - |
| MELSEC-QS | QS001CPU | ○ | - | - | - |

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 Use a module with the upper five digits of the serial No. later than 12042.

*3 Ww and Wr devices cannot be monitored.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-L[*1] | L02CPU | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | L06CPU | | | | |
| | L26CPU | | | | |
| | L26CPU-BT | | | | |
| | L02CPU-P | | | | |
| | L06CPU-P | | | | |
| | L26CPU-P | | | | |
| | L26CPU-PBT | | | | |
| | L02SCPU | | | | |
| | L02SCPU-P | | | | |
| MELSEC-Q (A mode)[*1] | Q02CPU-A | ○ | - | - | - |
| | Q02HCPU-A | | | | |
| | Q06HCPU-A | | | | |
| MELSEC-QnA (QnACPU)[*1] | Q2ACPU | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q2ACPU-S1 | | | | |
| | Q3ACPU | | | | |
| | Q4ACPU | | | | |
| | Q4ARCPU | ○ | - | - | - |
| MELSEC-QnA (QnASCPU)[*1] | Q2ASCPU | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q2ASCPU-S1 | | | | |
| | Q2ASHCPU | | | | |
| | Q2ASHCPU-S1 | | | | |
| MELSEC-A (AnCPU) | A2UCPU | ○ | RS-232<br>RS-422 | - | - |
| | A2UCPU-S1 | | | | |
| | A3UCPU | | | | |
| | A4UCPU | | | | |
| | A2ACPU | | | | |
| | A2ACPUP21 | | | | |
| | A2ACPUR21 | | | | |
| | A2ACPU-S1 | | | | |
| | A2ACPUP21-S1 | | | | |
| | A2ACPUR21-S1 | | | | |
| | A3ACPU | | | | |
| | A3ACPUP21 | | | | |
| | A3ACPUR21 | | | | |
| | A1NCPU | | | | |
| | A1NCPUP21 | | | | |
| | A1NCPUR21 | | | | |
| | A2NCPU | | | | |
| | A2NCPUP21 | | | | |
| | A2NCPUR21 | | | | |
| | A2NCPU-S1 | | | | |
| | A2NCPUP21-S1 | | | | |
| | A2NCPUR21-S1 | | | | |
| | A3NCPU | | | | |
| | A3NCPUP21 | | | | |
| | A3NCPUR21 | | | | |

*1 Ww and Wr devices cannot be monitored.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| MELSEC-A (AnSCPU) | A2USCPU | ○ | RS-232<br>RS-422 | - | - |
| | A2USCPU-S1 | ○ | - | - | - |
| | A2USHCPU-S1 | | | | |
| | A1SCPU | | | | |
| | A1SCPUC24-R2 | | | | |
| | A1SHCPU | | | | |
| | A2SCPU | | | | |
| | A2SHCPU | | | | |
| | A1SJCPU | | | | |
| | A1SJCPU-S3 | | | | |
| | A1SJHCPU | | | | |
| MELSEC-A | A0J2HCPU | × | - | - | - |
| | A0J2HCPUP21 | | | | |
| | A0J2HCPUR21 | | | | |
| | A0J2HCPU-DC24 | | | | |
| | A2CCPU | ○ | | | |
| | A2CCPUP21 | | | | |
| | A2CCPUR21 | | | | |
| | A2CCPUC24 | | | | |
| | A2CCPUC24-PRF | | | | |
| | A2CJCPU-S3 | | | | |
| | A1FXCPU | | | | |
| Motion CPU (Q Series) | Q172CPU*1*2 | ○ | RS-232<br>RS-422 | RS-485 | GT 2506 HS |
| | Q173CPU*1*2 | | | | |
| | Q172CPUN*1*2 | | | | |
| | Q173CPUN*1*2 | | | | |
| | Q172HCPU | | | | GT 2506 HS *3 |
| | Q173HCPU | | | | |
| | Q172DCPU | | | | |
| | Q173DCPU | | | | |
| | Q172DCPU-S1 | | | | |
| | Q173DCPU-S1 | | | | |
| | Q172DSCPU | | | | |
| | Q173DSCPU | | | | |
| | Q170MCPU | | | | GT 2506 HS |
| | Q170MSCPU | | | | |
| | Q170MSCPU-S1 | | | | |
| Motion CPU (A Series) | A273UCPU | ○ | RS-232<br>RS-422 | - | - |
| | A273UHCPU | | | | |
| | A273UHCPU-S3 | | | | |
| | A373UCPU | | | | |
| | A373UCPU-S3 | | | | |
| | A171SCPU | | | | |
| | A171SCPU-S3 | | | | |
| | A171SCPU-S3N | | | | |

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*3 Access via the (RS-232) in the multiple CPU system.

| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| Motion CPU (A Series) | A171SHCPU | ○ | - | - | - |
| | A171SHCPUN | | | | |
| | A172SHCPU | | | | |
| | A172SHCPUN | | | | |
| | A173UHCPU | | | | |
| | A173UHCPU-S1 | | | | |
| MELSEC-WS | WS0-CPU0 | × | - | - | -- |
| | WS0-CPU1 | | | | |
| MELSECNET/H remote I/O station | QJ72LP25-25 | × | - | - | - |
| | QJ72LP25G | | | | |
| | QJ72BR15 | | | | |
| CC-Link IE Field Network head module | LJ72GF15-T2 | × | - | - | - |
| CC-Link IE Field Network Ethernet adapter module | NZ2GF-ETB | × | - | - | - |
| CNC C70 | Q173NCCPU | ○ | - | - | - |
| Robot controller (Q Series) | CRnQ-700 (Q172DRCPU)<br>CR750-Q (Q172DRCPU)<br>CR751-Q (Q172DRCPU)<br>CR800-Q (Q172DSRCPU) | ○ | - | - | - |
| MELSEC-FX | FX0 | × | - | - | - |
| | FX0S | × | | | |
| | FX0N | | | | |
| | FX1 | × | | | |
| | FX2 | ×*1 | | | |
| | FX2C | | | | |
| | FX1S | ○ | | | |
| | FX1N | | | | |
| | FX2N | | | | |
| | FX1NC | | | | |
| | FX2NC | ×*1 | | | |
| | FX3S | ○ | | | |
| | FX3G | | | | |
| | FX3GC | | | | |
| | FX3GE | | | | |
| | FX3U | | | | |
| | FX3UC | | | | |
| FR-A500(L) | FR-A5□0(L) | × | - | - | - |
| FR-F500(L) | FR-F5□0(L) | | | | |
| FR-V500(L) | FR-V5□0(L) | | | | |
| FR-E500 | FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W | | | | |
| FR-S500(E) | FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R) | | | | |
| FR-F500J | FR-F5□0J(F) | | | | |

*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

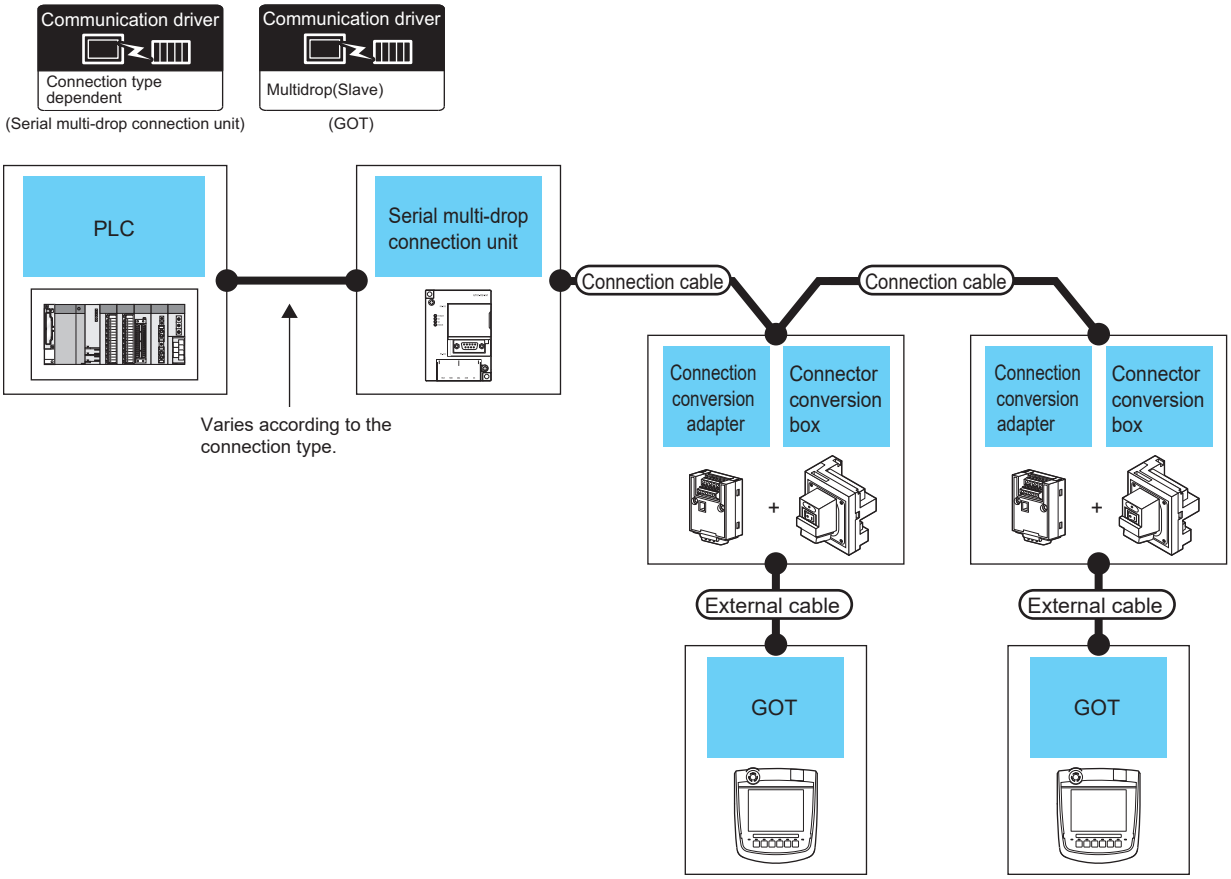
| Series | Model name | Clock | Communication type | | Connectable model |
|---|---|---|---|---|---|
| | | | Between CPU and serial multi-drop connection unit | Between serial multi-drop connection unit and GOT | |
| FR-D700 | FR-D7□0<br>FR-D7□0S<br>FR-D7□0W | × | - | - | - |
| FR-F700PJ | FR-F7□0PJ(F) | | | | |
| FR-E700 | FR-E7□0<br>FR-E7□0S<br>FR-E7□0W | | | | |
| | FR-E7□0-NE | | | | |
| FR-A700 | FR-A7□0 | | | | |
| FR-F700 | FR-F7□0 | | | | |
| FR-F700P | FR-F7□0P | | | | |
| FR-A800 | FR-A8□0<br>FR-A8□2<br>FR-A8□6 | | | | |
| FR-A800-E | FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | | | | |
| FR-A800-GF | FR-A8□0-GF | | | | |
| | FR-A8□2-GF | | | | |
| FR-A800-GN | FR-A8□0-GN<br>FR-A8□2-GN | | | | |
| FR-A800 Plus | FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R | | | | |
| | FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R | | | | |
| FR-F800 | FR-F8□0<br>FR-F8□2<br>FR-F8□6 | | | | |
| FR-F800-E | FR-F8□0-E<br>FR-F8□2-E | | | | |
| FR-E800 | FR-E8□0 | | | | |
| FR-E800-E | FR-E8□0-E | | | | |
| Sensorless servo | FR-E7□0EX | | | | |
| MELIPM | MD-CX522-□K(-A0) | | | | |
| MELSERVO | MR-J2S-□A | × | - | - | - |
| | MR-J2S-□CP | | | | |
| | MR-J2S-□CL | | | | |
| | MR-J2M-P8A | | | | |
| | MR-J2M-□DU | | | | |
| | MR-J3-□A | | | | |
| | MR-J3-□T | | | | |
| | MR-J4-□A | | | | |
| | MR-JE-□A | | | | |

# [Controller Type] and [Communication driver] of GT Designer3

The following table shows the [Controller Type] and [Communication driver] of GT Designer3 for which the GOT multi-drop connection is available.

| GOT type | PLC ←→ Serial multi-drop connection unit | | |
|---|---|---|---|
| | **Connection type** | **Type** | **Serial multi-drop connection driver** |
| GT 2506HS | DIRECT CPU CONNECTION (SERIAL)<br>COMPUTER LINK CONNECTION | MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700 | Serial (MELSEC) |
| | | MELSEC-QnA, MELDAS C6* | |
| | | MELSEC-L | |
| | DIRECT CPU CONNECTION (SERIAL) | MELSEC-A | MELSEC-A |
| | | MELSEC-FX | MELSEC-FX |

# 11.3 System Configuration




| PLC | Serial multi-drop connection unit | | Connection cable | Connector conversion adapter | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| | Model | Communication type | Cable model | | | | | | |
| For the system configuration between the Serial multi-drop connection unit and PLC, refer to the following.<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT01-RS4-M | RS-485 | User preparing Page 621 RS-485 connection diagram 1) | GT10-9PT5S*1 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 500m*2 | 16 GOTs for a serial multi-drop connection unit*3 |

*1 Connect it to the RS-422/485 interface (built into GOT).
*2 The maximum distance from the PLC to the terminal GOT.
*3 When the number of connected GOTs is increased, the response performance decreases.

# 11.4 Connection Diagram

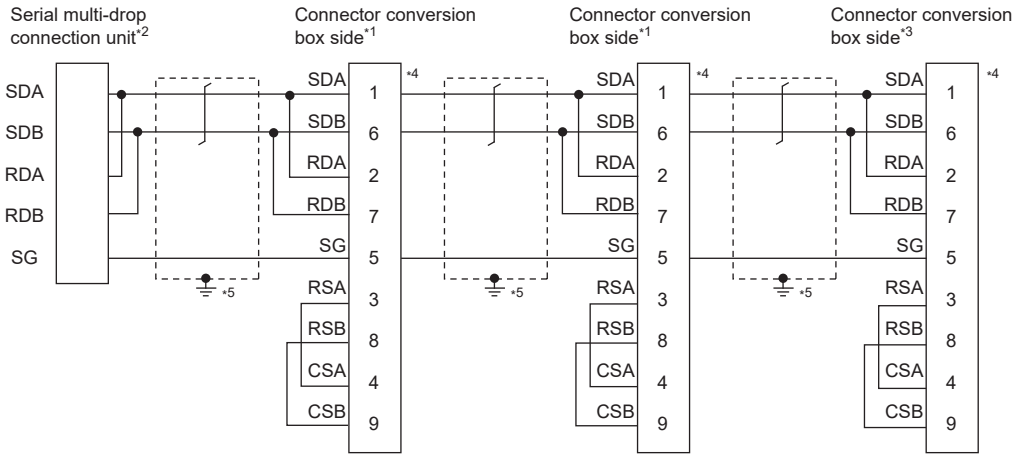
The following diagram shows the cable connection between the serial multi-drop connection unit and the GOT.

## RS-485 cable

### Connection diagram

#### ■RS-485 connection diagram 1)

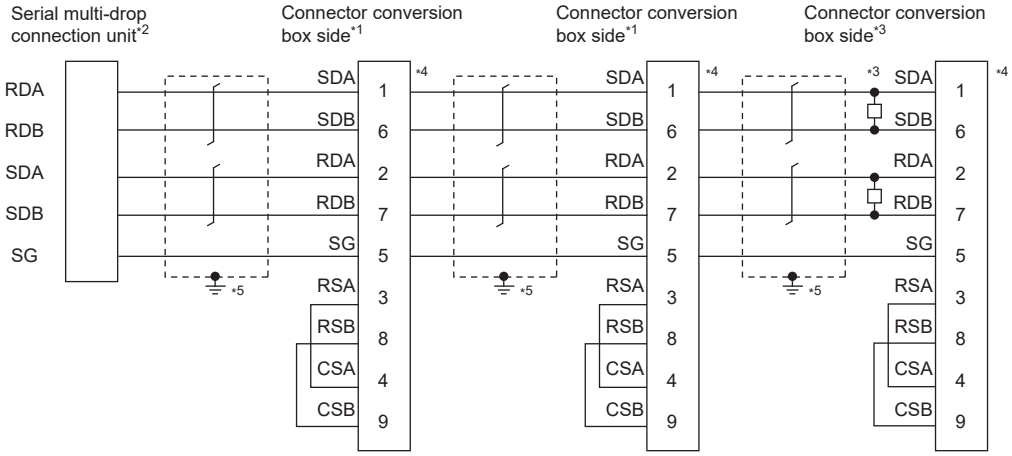
(For 1 pair wiring)




*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".
*2 Set the terminating resistor selector to "110Ω".
*3 Set the terminating resistor setting switch of the GOT main unit to "Enable".
*4 Set the 1pair/2pair signal selection switch of the connection conversion adapter to "1pair".
*5 Make sure to ground a cable shield line by applying Class D Grounding (100Ω or less).

#### ■RS-485 connection diagram 1)

(For 2 pair wiring)




*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".
*2 Set the terminating resistor selector to "330Ω".
*3 Set the terminating resister setting switch of the GOT main unit to "Disable" and connect a 330Ω terminating resistor to the GOT.
*4 Set the 1pair/2pair signal selection switch of the connection conversion adapter to "2pair".
*5 Make sure to ground a cable shield line by applying Class D Grounding (100Ω or less).

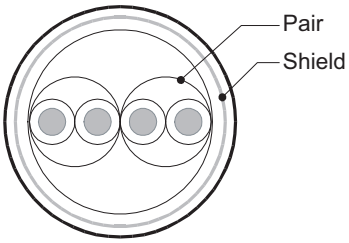
## Precautions when preparing a cable

### ■Cable

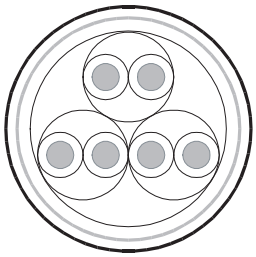
Use a shielded twisted pair cable of 0.3mm2 or more as a cable for GOT multi-drop connection.

The following shows recommended model names and manufacturers of the cable to be used.

| Manufacturer | Model | Remark |
|---|---|---|
| Mitsubishi Cable Industries,Ltd | SPEV(SB)-0.5-2P | Two-pair cable of 0.5mm2 |
| Showa Electric Wire & Cable Co.,Ltd | KMPEV-SB<br>CWS-178 0.5SQ × 2P | Two-pair cable of 0.5mm2 |
| Sumitomo Electric Industries.,Ltd | DPEV SB 0.3 × 3P | Three-pair cable of 0.3mm2 |
| | DPEV SB 0.5 × 3P | Three-pair cable of 0.5mm2 |
| The Furukawa Electric Co.,Ltd | D-KPEV-SB 0.5 × 3P | Three-pair cable of 0.5mm2 |
| Fujikura Ltd. | IPEV-SB 2P × 0.3 mm2 | Two-pair cable of 0.3mm2 |
| | IPEV-SB 2P × 0.5 mm2 | Two-pair cable of 0.5mm2 |




Two-pair cable structural drawing example



Three-pair cable structural drawing example

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## Connecting terminating resistors

When connecting a serial multi-drop connection unit to the GOT, a terminating resistor must be connected to the GOT.

### ■For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

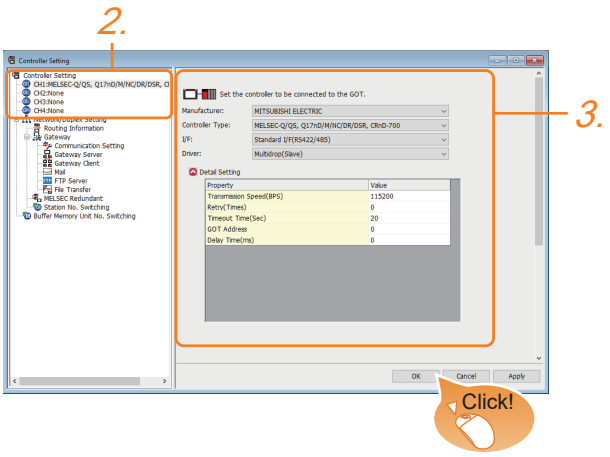
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 11.5 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of connecting equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: Configure the setting according to the controller.
- [Controller Type]: Configure the setting according to the controller.
- [I/F]: Interface to be used
- [Driver]: [Multidrop(Slave)]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 624 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 20 |
| GOT Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out. (Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out. (Default: 3sec) | 1 to 30sec |
| GOT Address | Specify the station number of the host station in the system configuration. (Default: 0) | 0 to 15 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms) | 0 to 300 ms |

**Point**

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 11.6 Settings of Serial Multi-Drop Connection Unit

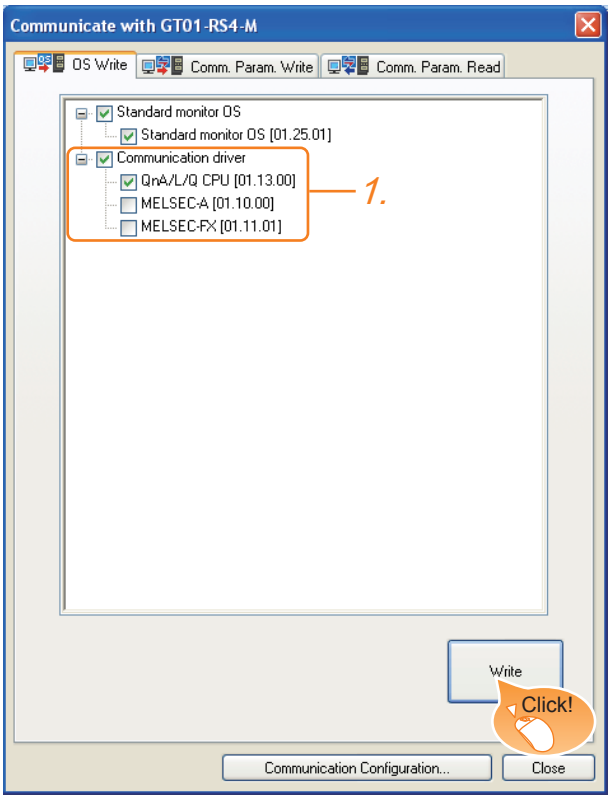
## Write the OS

Install the standard monitor OS and communication driver according to the desired connection type to the serial multi-drop connection unit using GT Designer3 (GOT1000) (Version1.12N or later).

For the OS writing methods, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual



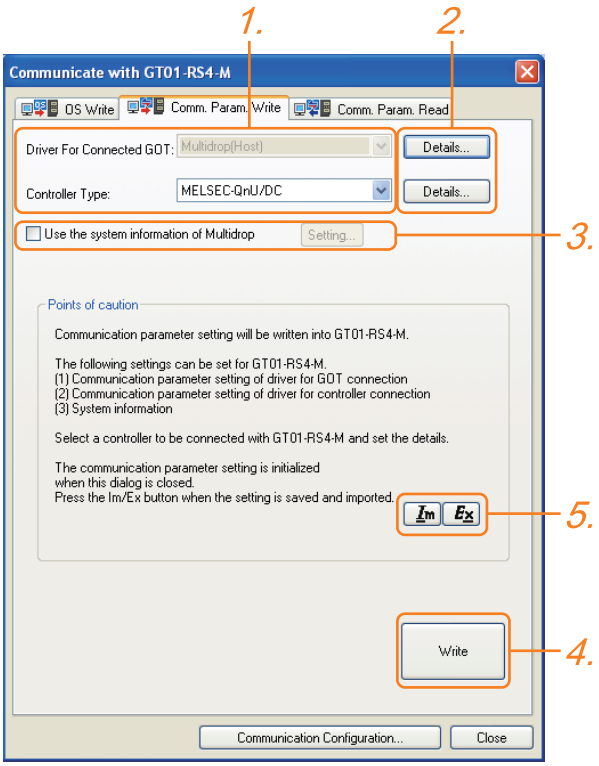



***1.*** Check-mark a communication driver according to the desired connection type and click the [Write] button.

# Setting communication interface (Controller Setting)

Make the serial multi-drop connection unit interface setting on [Communication with GT01-RS4-M] of GT Designer 3.
For the communication interface driver, set the same communication driver as the serial multi-drop connection.
For details on [Communication with GT01-RS4-M] of GT Designer3, refer to the manuals.
GT Designer3 (GOT2000) Screen Design Manual

## Controller Setting




**1.** Set [Controller Type] as follows.

• PLC used

[Driver For Connected GOT] is fixed to the following selection.

• Multi-drop(Host)

**2.** Configure the detailed settings for the driver.

☞ Page 630 Communication detail settings

**3.** Set [Use the system information of Multidrop] as necessary.

☞ Page 627 Setting the multi-drop system information function

**4.** When you have completed the settings, click the [Write] button.

**5.** If the [Communication with GT01-RS4-M] dialog box is closed, communication setting contents for GT01-RS4-M does not remain.

• To maintain the communication setting contents, click Ex (export).

☞ Page 629 Exporting/Importing the communication setting contents

• To use communication setting contents which are saved previously, click Im (import).

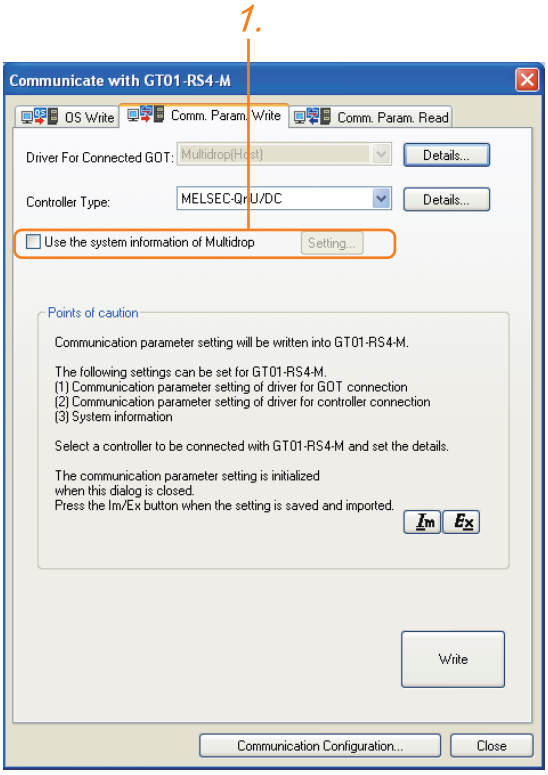
☞ Page 629 Exporting/Importing the communication setting contents

## Setting the multi-drop system information function

When checking the connection status of each GOT which is connected to GT01-RS4-M on the PLC side, set the multi-drop system information function.

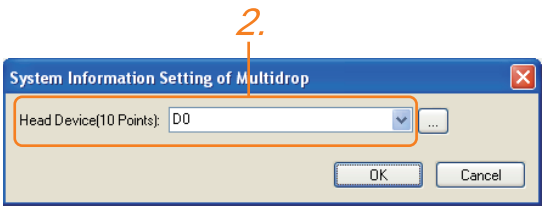
The GOT connection status is stored in the PLC side word device.

### ■Setting on the PLC side word device




**1.** Select [Use the system information of Multidrop] and click the [Set] button.

The following dialog window is displayed.




**2.** Set the PLC side word device to [Head Device (10 Points)].

In this example, "D0" is set.

### ■Assignment contents of the PLC side word device

The following table shows the device assignment contents when setting [Head Device (10 Points)] to "D0".

| Device | Description |
|---|---|
| D0 (Head device+0) | Control signal 1-1 |
| D1(Head device+1) | Station information notification signal |
| D2(Head device+2) | (Reserve) |
| D3(Head device+3) | (Reserve) |
| D4(Head device+4) | (Reserve) |
| D5(Head device+5) | Slave station control signal |
| D6(Head device+6) | (Reserve) |
| D7(Head device+7) | (Reserve) |
| D8(Head device+8) | (Reserve) |
| D9(Head device+9) | (Reserve) |

## ■Details on the word device assignment contents

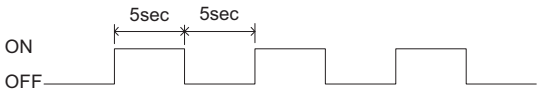
• Control signal 1-1

| Bit position | Description |
|---|---|
| bit0 | 10 second cycle flicker signal |
| bit1 to 15 | (Reserve) |

< 10 second cycle flicker signal *1 >

By the repetition of turning ON/OFF every 5 seconds, the connection between GT01-RS4-M and the PLC can be confirmed on the PLC side.

When no repetition of this ON/OFF is observed, GT01-RS4-M is not connected to the PLC.




*1 When writing or clearing data on the program area from the personal computer to the PLC using FA transparent function, flicker of the signal as shown above may be temporarily stopped.

• Station information notification signal *1

This signal notifies the status of the slave station (GOT) which is connected to the master station (GT01-RS4-M).

Only the bit corresponding to the number of connected slave station (GOT) is turned ON and other bits are turned OFF.

| bit15 | bit14 | ..... | bit2 | bit1 | bit0 |
|---|---|---|---|---|---|
| Station No. 15 | Station No. 14 | ..... | Station No. 2 | Station No. 1 | Station No. 0 |

• 1: Connected

• 0: Unconnected (Including communication error status)

*1 When the communication between GT01-RS4-M and the PLC becomes faulty, the station information notification signal is not updated.

• Slave station control signal

This signal controls slave stations which are not updated by the master station.

Usually, the master station accesses all stations (up to 16 stations).

In addition, if stations are temporarily in communication error due to a power disconnection or screen data transfer during the steady operation, the automatic recovery of the station is executed for one station per ten seconds.

Therefore, the automatic recovery may take maximum 2 minutes and 30 seconds.

Using this control signal, the number of slave stations to be monitored by the master station can be reduced to the actual number of slave stations to be used by a user.

This makes the automatic recovery processing smooth.

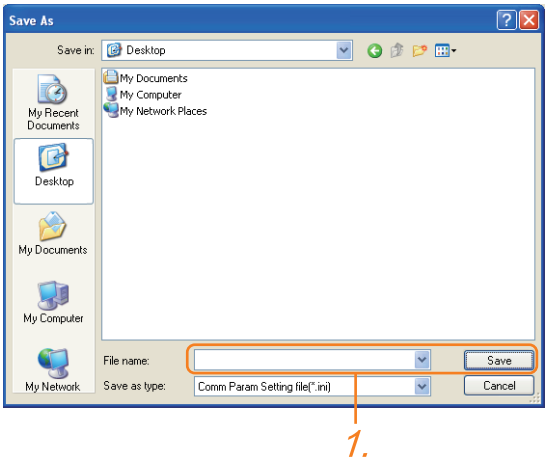
If an error occurs in only one station, the time for the station to recover automatically can be reduced within 10 seconds.

| Device value | Action |
|---|---|
| 0 | The master station accesses all the slave stations (station 0 to 15). When the multi-drop system information is not used, the operation is the same. |
| Other than 0 | Turning on the bit corresponding to a station No. disconnects the specified slave station from the master station.<br><br>bit15 \| bit14 \| ..... \| bit2 \| bit1 \| bit0<br>Station No. 15 \| Station No. 14 \| ..... \| Station No. 2 \| Station No. 1 \| Station No. 0<br><br>1...Connected<br>0...Unconnected |

When the bits are off and the master station and the slave stations are in communication, the communication with the corresponding slave stations is disconnected if the above corresponding bits are turned on.

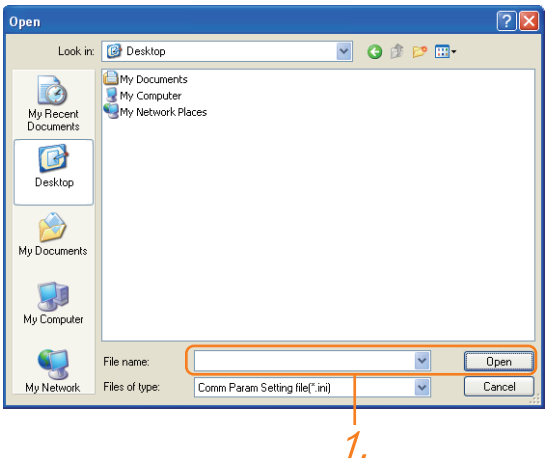
## Exporting/Importing the communication setting contents

### ■ Export




**1.** After determining the storage location as necessary, name the file and save it.
The file format is [*.ini] (fixed).

### ■ Import

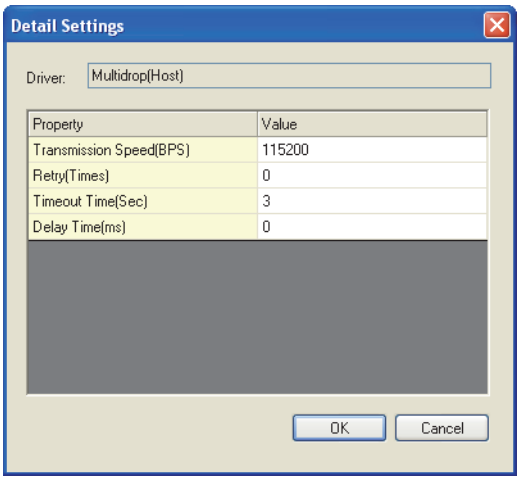



**1.** Enter the name of the file previously saved and open the file.
The file format is [*.ini] (fixed).

## Communication detail settings

Make the settings according to the usage environment.

### ■For the connection with GOT




| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out. (Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out. (Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms) | 0 to 300 ms |

### ■For the connected equipment

Set the communication detail settings of the driver for controllers according to the connection type.

☞ Refer to each chapter.

## Setting switches

Set the switches according to the connection type.

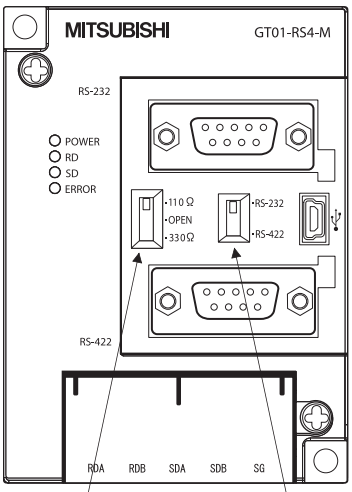
**Point**

Serial multi-drop connection unit

For details on the serial multi-drop connection unit, refer to the following manual.

Serial Multi-Drop Connection Unit User's Manual






Terminating resistor selector switch

PLC communication selection switch

# 11.7 Setting of connection conversion adapter

## Setting switches

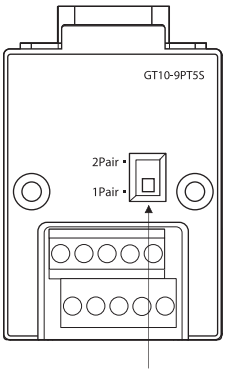
Set the switches according to the connection type.

**Point**

Connector conversion adapter

For details on the connection conversion adapter, refer to the following manual.

Connection Conversion Adapter User's manual




1pair / 2pair signal selection switch

# 11.8 Precautions

## Connecting GOT2000 in multi-drop connection

### ■Installing standard monitor OS and communication driver to the serial multi-drop connection unit

When connecting GOT2000 in multi-drop connection, the standard monitor OS and communication driver must be installed to the GOT from GT Designer3 (GOT1000) (Version 1.12N or later).

The standard monitor OS or communication driver cannot be installed from GT Designer3 (GOT2000).

### ■Device specification

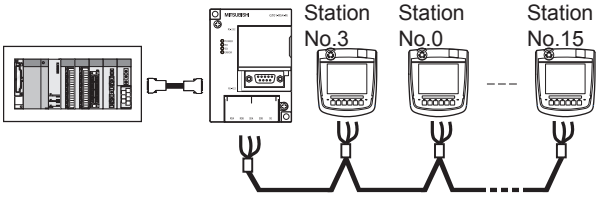
Network No. and station No. are not supported.

## Station number setting on GOT

Set each station number so that no station number overlaps.When the station No. is duplicated, the GOT whose station No. is duplicated cannot be monitored normally.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




The example of a Station No. setting

## Extended function of GOT

The extended functions of GOT shown below are not available.

System monitor, Device monitor, Ladder monitor, A list editor, FX list editor, Intelligent unit monitor, Network monitor, Q motion monitor, Servo amplifier monitor, CNC monitor, Backup/restore, CNC data I/O, SFC monitor, Ladder editor, Log viewer, MELSEC-L troubleshoot, Motion SFC, motion program (SV43) editor, Motion program (SV43) I/O

## System alarm

The alarms of the serial multi-drop connection unit are displayed on the system alarm.

The alarms of the connected PLC are not displayed.

## Activating the serial multi-drop connection unit

The master module detects a slave GOT, which is connected, at the startup.It may take time to detect again the slave station which is not detected at this point.

Activate the master module in the condition that a communication can be made after the startup of the slave GOT.

## Using the multi-drop connection in the multi-channel configuration

If a communication timeout error occurs when using the multi-drop connection in the multi-channel configuration, set the send delay time to the serial multi-drop connection unit side.

☞ Page 630 Communication detail settings

## Device update cycle

- When the number of connected slave GOTs and the device points of each GOT increase, the device update cycle on the screen may get slower.

In such a case, it is recommended to reduce the device points of each GOT.
(Please consider 250 points as a guide of 1 GOT, and 750 points as a guide of the total points.)
In addition, when a timeout error occurs, make the timeout time longer in the communication settings of the slave GOT.

- When the device number is set randomly, the device update cycle becomes slower compared to the case that the device number is set consecutively.

Therefore, it is recommended to set the device number consecutively.

- Depending on the device points or combination, it may take time to switch the screen.

At this time, the device update cycle of other slave station is also affected.

## When using the FA transparent function in the GOT multi-drop connection

FA transparent function is available for each GOT in the GOT multi-drop connection system.

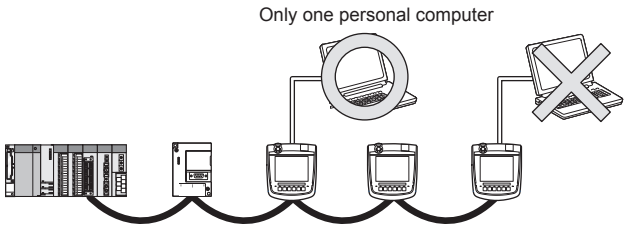
### ■Installing the required system application (standard function) and communication driver

When using the FA transparent function in the GOT multi-drop connection system, make sure to install the required system application (standard function) and communication driver to the GOT, and install the standard monitor OS and communication driver to the serial multi-drop connection unit.

☞ Page 632 Connecting GOT2000 in multi-drop connection

### ■Number of personal computers

Only one personal computer can be connected to the multi-drop connection system.




### ■Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs. While using FA transparent function, the monitoring performance of the whole multi-drop system decreases.
As a result, timeout error may occur in GOTs in the system.

## Specifying a CPU number or module number with a device

In the GOT multi-drop connection, specifying a CPU number or module number with a device is not available.

## 8-bit and 64-bit devices

The GOT multi-drop connection does not support 8-bit and 64-bit devices.
When the GOT multi-drop connection is established with 64-bit devices, the following alarms occur.

- At writing data: System alarm 315
- At reading data: System alarm 322

8-bit devices can be set only to the GOT internal devices (GB). When 8-bit devices are set to the GB devices, no alarm occurs in the GOT multi-drop connection.

## Mixture of GOT2000 series and GOT1000 series

The GOT multi-drop connection allows mixture of GOT2000 series and GOT1000 series.

# MEMO

# PART 5 MULTI-CHANNEL FUNCTION

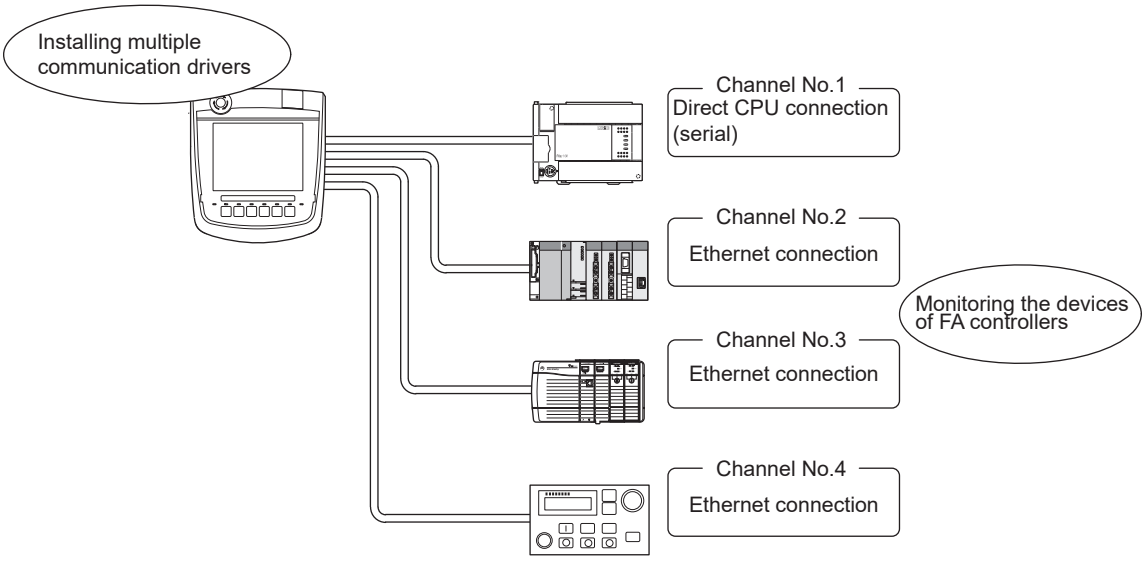
# 12 MULTI-CHANNEL FUNCTION


- Page 636 What is Multi-channel Function?
- Page 638 System Configuration Example
- Page 639 GOT Side Settings
- Page 646 Precautions
- Page 647 Multi-channel function check sheet

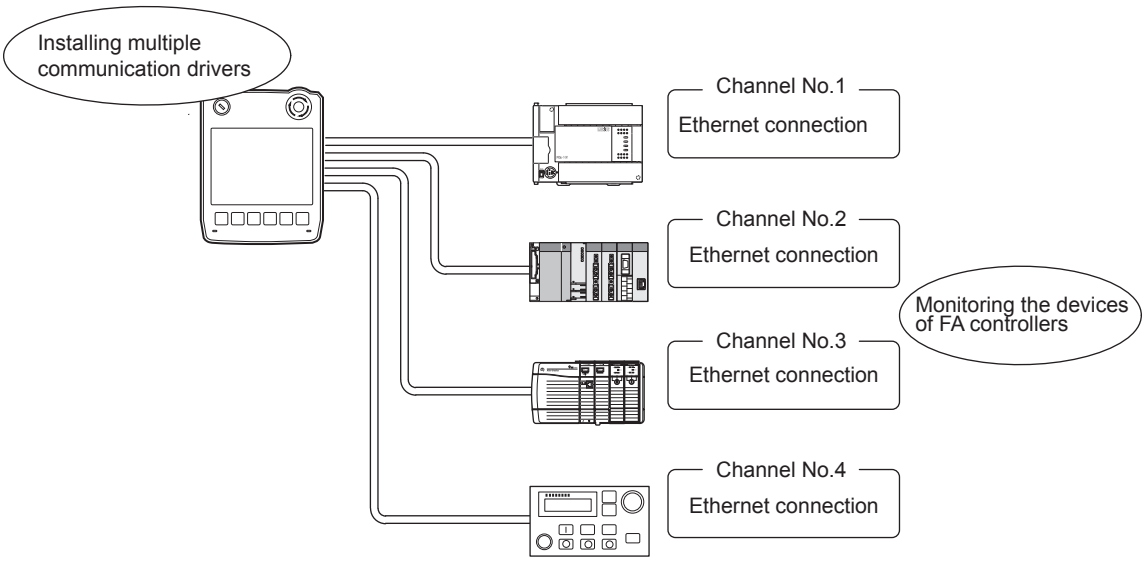

## 12.1 What is Multi-channel Function?

Multi-channel Function is a function to monitor up to four FA controllers on one GOT by writing multiple communication drivers in the GOT.

- For GT2506HS-V




- For GT2505HS-V



**Point**

• Before using the multi-channel function

This manual describes the procedure to use the multi-channel function, based on the following system configuration example.

☞ Page 638 System Configuration Example

• System configuration when the multi-channel function is used

The system configuration between GOT and the controllers is the same as that of when not using the multi-channel function.

For the system configuration between GOT and the controllers, refer to the following.

☞ Each chapter indicating the system configuration

• System configuration of GT2505HS-V

For GT2505HS-V, the Ethernet connection and the serial connection cannot be used simultaneously.



## Features of the multi-channel function

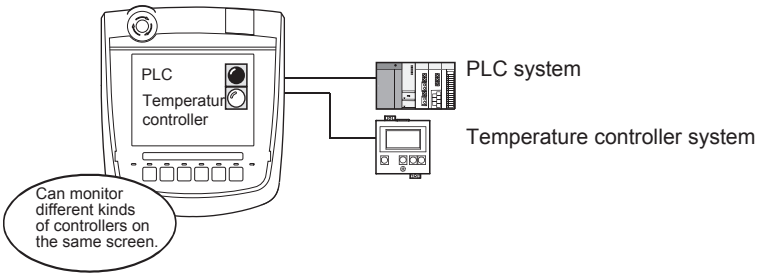
### ■With a single unit of GOT, the system consisting of PLC CPU, temperature controller, servo amplifier and other controllers can be configured.

One GOT can monitor a PLC CPU, temperature controller and servo amplifier, etc.

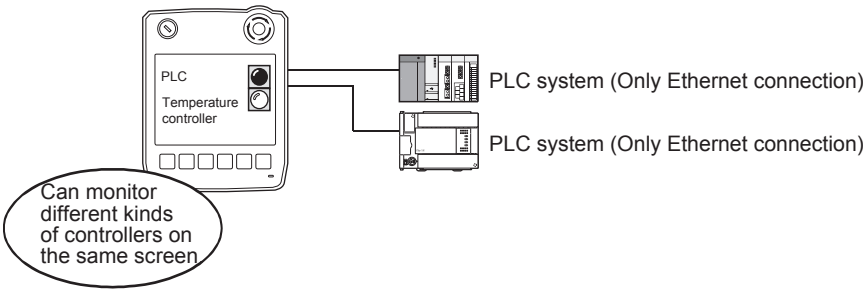
Therefore, the system configuration, in which several controllers are mixed, can be easily established.

In addition, each system can be monitored on the GOT screen, and the unified management of the information is possible.

• For GT2506HS-V




• For GT2505HS-V

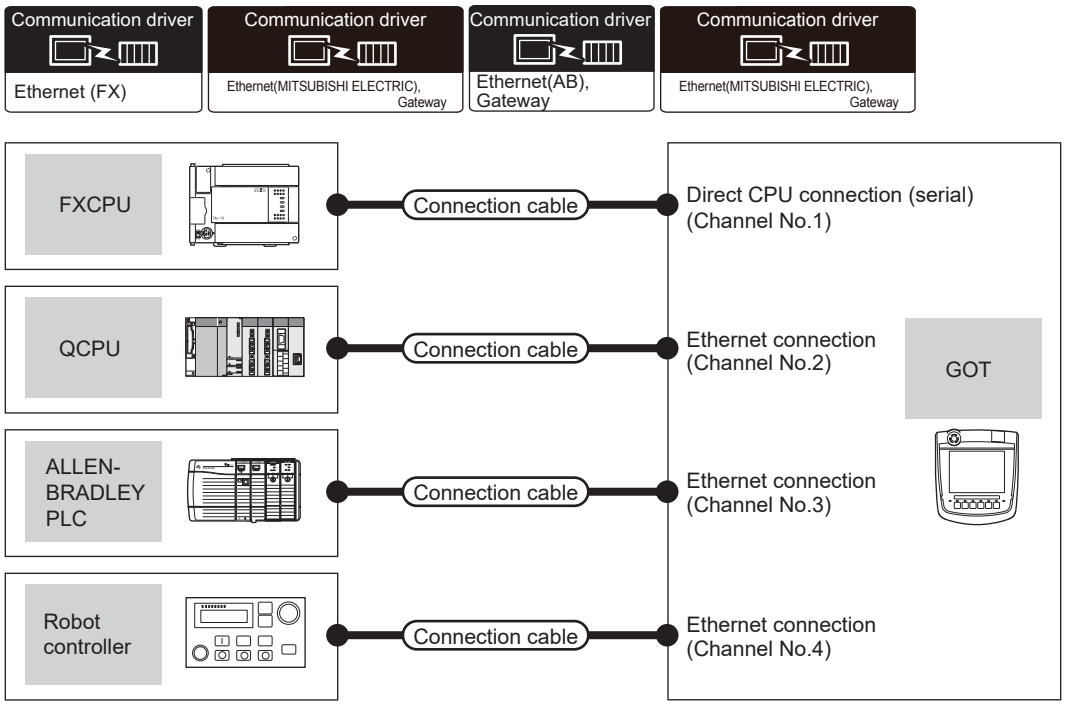


# 12.2 System Configuration Example

Serial connection (one channel) and multiple Ethernet connections can be made to one GOT.
For details on the connection type and channel number to be used, refer to the following.
☞ Page 639 Determining the connection type and channel No. (System selection)

**Point**

Only one channel is available for the serial connection in the multi-channel function.
RS-232 interface and RS-422/485 interface cannot be used at the same time.




| PLC | Communication type | Connection cable | GOT | | Number of connectable equipment |
|---|---|---|---|---|---|
| | | | Channel No. | Model | |
| MELSEC-FX | Direct CPU connection (serial) | For the system configuration between GOT and the controllers, refer to the following. ☞ Each chapter indicating the system configuration | 1 | GT 2506HS | 4 connected equipment for 1 GOT (4 channels) |
| QCPU | Ethernet | | 2 | | |
| ALLEN-BRADLEY PLC | | | 3 | | |
| Robot controller | | | 4 | | |
| MELSEC-FX | | | 1 | GT 2505HS | Ethernet connection only, 4 controllers for 1 GOT (4 channels) |
| QCPU | | | 2 | | |
| ALLEN-BRADLEY PLC | | | 3 | | |
| Robot controller | | | 4 | | |

# 12.3 GOT Side Settings

The following shows the settings on GT2506HS-V as an example.

## General flow from system selection to drawing

System selection for using the multi-channel function is explained below.

Make selection and setting for the multi-channel function by following the order shown below.

***1.*** System selection

Determine the connection type and the channel No. to be used.

☞ Page 639 Determining the connection type and channel No. (System selection)

***2.*** Interface selection

Determine the GOT side interface and communication units to be used for the multichannel function.

☞ Page 640 Determining the GOT side interface (Interface selection)

***3.*** Make settings for Communication Settings.

☞ Page 643 Setting for communication settings

***4.*** Confirm items to know before starting drawing.

☞ Page 644 Items to be checked before starting drawing

## Determining the connection type and channel No. (System selection)

### Determining the connection type

The combinations of the Ethernet connection and the serial connection are available as shown in the following table.

| Ethernet connection | Serial connection | |
|---|---|---|
| Ethernet connection | Direct CPU connection (serial) | MODBUS/RTU connection |
| Microcomputer connection (Ethernet) | | |
| Non-Mitsubishi Electric PLC connection (Ethernet connection) | Computer link connection | Temperature controller connection |
| MODBUS/TCP connection | CC-Link connection (via G4) | Inverter connection |
| Robot controller connection | Non-Mitsubishi Electric PLC connection (serial connection) | Servo amplifier connection |
| CNC connection (Ethernet connection) | Microcomputer connection (Serial) | CNC connection (serial connection) |
| | GOT multi-drop connection | Non-Mitsubishi Electric safety controller connection |
| | Non-Mitsubishi Electric servo amplifier connection | Non-Mitsubishi Electric robot controller connection |
| | Non-Mitsubishi Electric temperature controller connection | |

The following shows the applicable combinations of connection types and the number of channels

| Allowable combination of connection types | Number of channels |
|---|---|
| • Ethernet connection: 1 to 3 channels<br>• Serial connection: 1 channel | Max. 4 channels |
| • Ethernet connection: 4 channels | Max. 4 channels |

## Determining the channel No.

After determining the connection type to be used, determine the channel No. (CH No. 1 to CH No. 4) to be used for the respective connection types.

There are no special cautions to be attended to for determining channel No.

Set the channel No.by selecting [Common] → [Controller Setting] in GT Designer3

GT Designer3 (GOT2000) Screen Design Manual

Write Check Sheet

Write down the following items selected in this section to the check sheet.

① Selection of connection type

Write down the name of connection type to be used.

■ Check sheet No.1 (selection of connection type and interface)

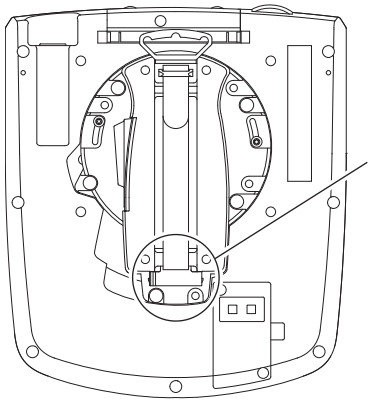
Channel No. of controller (No.1 to 4)

| CH No. | ① Selection of connection type (☞ 28.3.2) | ② Selection of interface (☞ 28.3.3) |
|---|---|---|
| 1 | Connection name QCPU Direct connection | |
| 2 | Connection name YOKOGAWA PLC connection | |
| 3 | Connection name YASKAWA PLC connection | |
| 4 | Connection name MODBUS®/TCP connection | |

RS-232 interface and RS-422/485 interface cannot be used at the same time.

# Determining the GOT side interface (Interface selection)

Use the GOT by combining the RS-232 interface, RS-422/485 interface and Ethernet interface which are built in GOT.



Ethernet interface
RS-232 interface
RS-422/485 interface

RS-422/485 interface and RS-232 interface cannot be used at the same time. Switch the RS-422/485 interface and RS-232 interface with the RS-422/485⇔RS-232 selection connector in the environmental protection back cover.

Select the interface to be used to enable the selected connection.

Select the interfaces and according to the connection type by referring to the following.

| Selected connection type | Reference for required interface and communication unit |
|---|---|
| • Ethernet Connection | ☞ Page 641 GOT interface used for Ethernet connection |
| • Microcomputer connection (Ethernet) | |
| • Non-Mitsubishi Electric PLC connection (Ethernet connection) | |
| • MODBUS®/TCP connection | |
| • Robot controller connection | |
| • CNC connection (Ethernet connection) | |
| • Direct CPU connection (serial) | ☞ Page 641 GOT interface used for serial connection |
| • Computer link connection | |
| • CC-Link connection (via G4) | |
| • Non-Mitsubishi Electric PLC connection (serial connection) | |
| • Microcomputer connection (Serial) | |
| • GOT multi- drop connection | |
| • MODBUS®/RTU connection | |
| • Temperature controller connection | |

| Selected connection type | Reference for required interface and communication unit |
|---|---|
| • Inverter connection | ☞ Page 641 GOT interface used for serial connection |
| • Servo amplifier connection | |
| • CNC connection (serial connection) | |
| • GOT multi-drop connection | |
| • Non-Mitsubishi Electric servo amplifier connection | |
| • Non-Mitsubishi Electric temperature controller connection | |
| • Non-Mitsubishi Electric safety controller connection | |
| • Non-Mitsubishi Electric robot controller connection | |

## GOT interface used for Ethernet connection

For the Ethernet connection, use the following interface built in the GOT.

| Interface | Interface built in GOT |
|---|---|
| Interface built in GOT | Ethernet interface*1 |

*1 Up to four channels can be used.

**Point**

When using Ethernet download and gateway function.

The Ethernet download and the gateway function can be used with the GOT built-in Ethernet interface (1 ch).

## GOT interface used for serial connection

For the serial connection, use the following interface built in the GOT.

| Interface | Interface built in GOT |
|---|---|
| Interface built in GOT | RS-232 interface, RS-422/485 interface |

Refer to the explanation below to check if the number of channels for the multi-channel function to be used is restricted or not. If it is restricted, review the system configuration.

Write Check Sheet

Write down the following items selected in this section to the check sheet.

② Selection of an interface

Write down the name of the interface to be used for each of the connection type.

■ Check sheet No.1 (selection of connection type and interface)

Channel No. of controller (No.1 to 4)

| CH No. | ① Selection of connection type (☞ 28.3.2) | ② Selection of interface (☞ 28.3.3) |
|---|---|---|
| 1 | Connection name QCPU Direct connection | RS-232 interface |
| 2 | Connection name YOKOGAWA PLC connection | Ethernet interface |
| 3 | Connection name YASKAWA PLC connection | Ethernet interface |
| 4 | Connection name MODBUS®/TCP connection | Ethernet interface |

RS-232 interface and RS-422/485 interface cannot be used at the same time.

Write Check Sheet

Write down the following items to the check sheet.



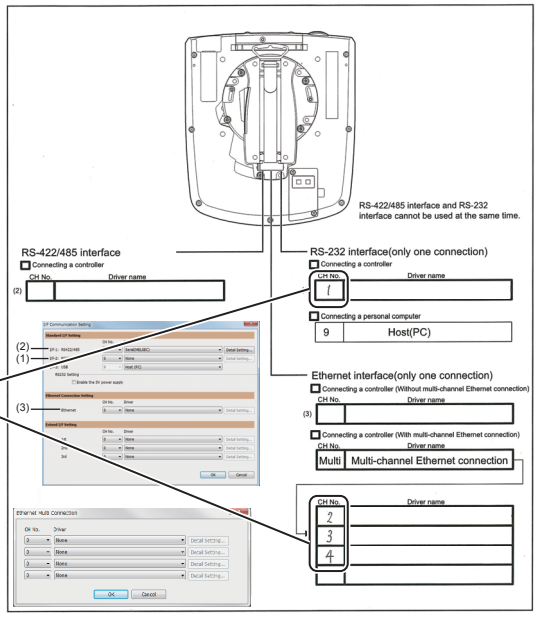
1. After writing down the names of communication units, write down the CH No. to be assigned to each communication interface, based on the entry in ■ Check Sheet No. 1 (selection of connection type and interface).

■ Check sheet No.1 (selection of connection type and interface)

Channel No. of controller (No.1 to 4)

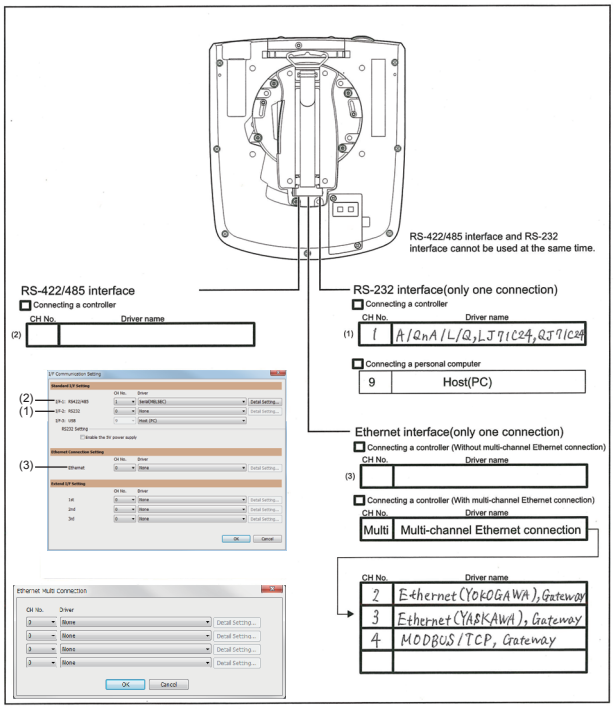
| CH No. | Selection of connection type (28.3.2) | Selection of interface (28.3.3) |
|---|---|---|
| 1 | Connection name QCPU Direct connection | RS-232 interface |
| 2 | Connection name YOKOGAWA PLC connection | Ethernet interface |
| 3 | Connection name YASKAWA PLC connection | Ethernet interface |
| 4 | Connection name MODBUS®/TCP connection | Ethernet interface |

RS-232 interface and RS-422/485 interface cannot be used at the same time.



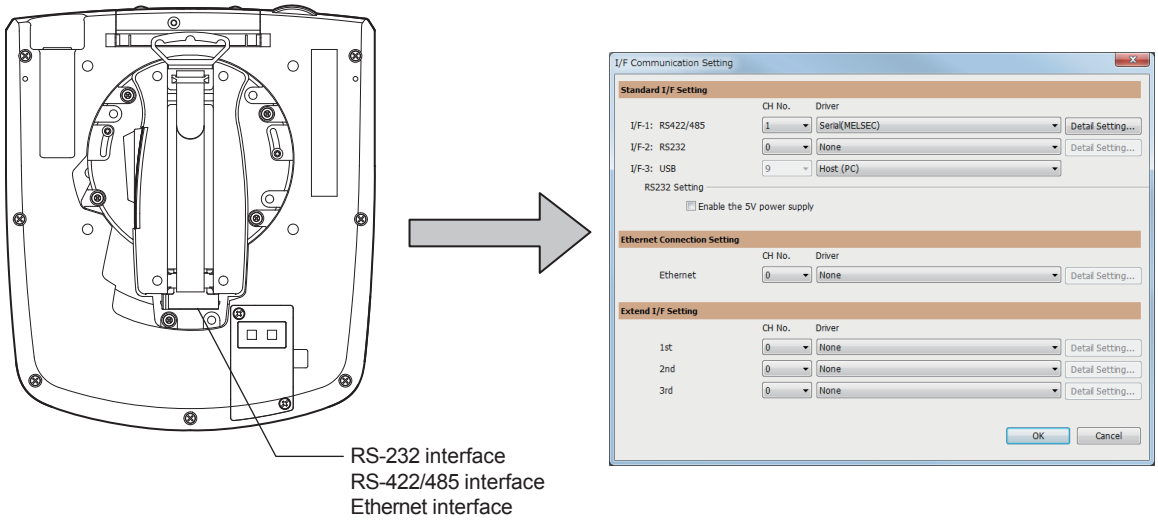

2. After writing down CH No., write down the communication driver name for each connection type.
For the communication drivers used for the respective connection types, r efer to the following.

Chapters of each respective connection type



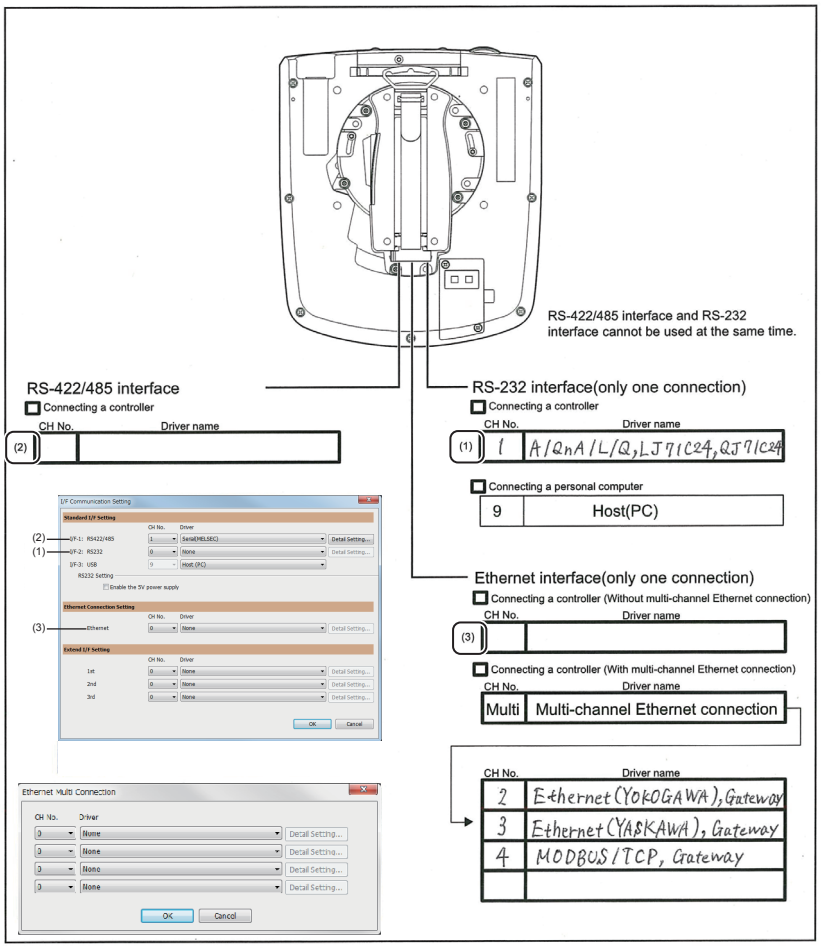
# Setting for communication settings

Make the communication settings in the interface to be used.




Check

Make settings for Communication Settings by GT Designer3 referring to the check sheet where the necessary information has been written.
The position that the settings should be made on the communication settings screen are specified on the check sheet by numbers.




This completes the setting for Communication Settings.
Create a screen with GT Designer3.

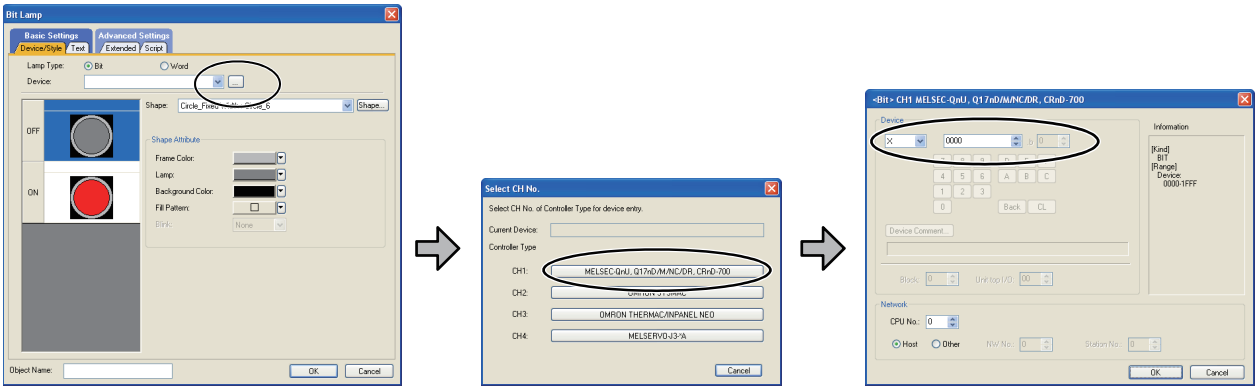
# Items to be checked before starting drawing

The following describes that should be understood before starting drawing and the functions that should be set beforehand when using the multi-channel function.

## Device settings

It is necessary to set the device to be used together with the CH No.

📖GT Designer3 (GOT2000) Screen Design Manual




1. Click the device setting button.
2. Click the controller to be set.
3. Set the device.

## Accessible range for monitoring

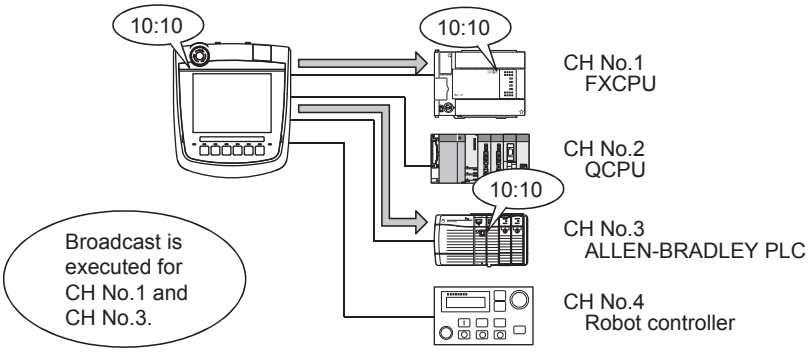
The accessible range for monitoring is not changed even when the multi-channel function is used.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

## Clock function

Set the controller for which adjust/broadcast should be executed by the CH No.

📖GT Designer3 (GOT2000) Screen Design Manual



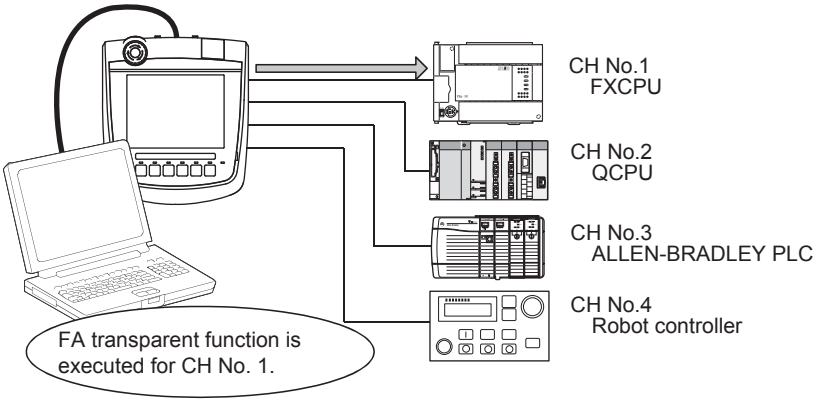
## FA transparent function

Set the controller for which the FA transparent function should be executed by the CH No.

☞ Page 691 Setting communication interface

The set CH No. can be changed by the Utility.

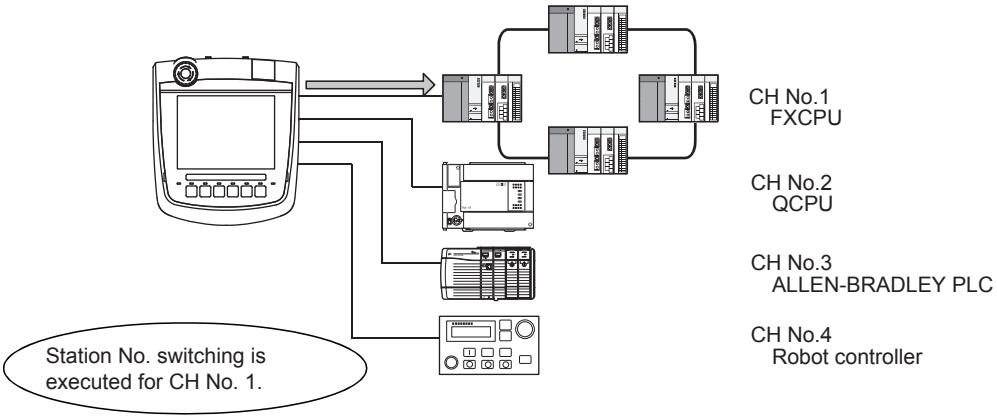
To execute the FA transparent function for other CH No., change the CH No. using the Utility.




## Station No. switching function

Set the controller for which the station No. switching function should be executed by the CH No.

GT Designer3 (GOT2000) Screen Design Manual



# 12.4 Precautions

## Precautions for use

### Occurrence of the same system alarm at different channels

When the advanced system alarm is used, if the system alarms with the same error code occur in different channels the GOT treats the alarms as the same system alarm.
Therefore, if the system alarms with the same error code occur one by one, the time of later system alarm occurrence is not reflected to the GOT.

### Confirmation of the channel No. at which a system alarm occurred

When a system alarm occurred, confirm the channel No. where the alarm occurred, using the procedure indicated below.

**■Check by [System alarm display] of the utility.**

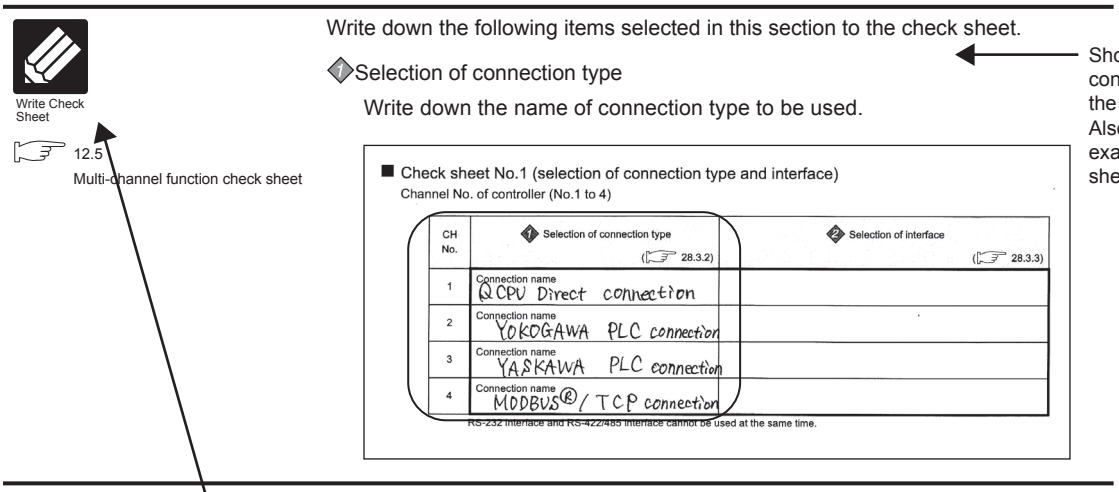
📖GOT2000 Series User's Manual (Utility)

**■Monitor the internal devices of the GOT.**

📖GT Designer3 (GOT2000) Screen Design Manual

# 12.5 Multi-channel function check sheet

This section provides the check sheet to be used for Communication Settings when the multi-channel function is used.
12.3.2 to 12.3.4 contain explanations of the items to be checked on the check sheet.
Checking items explained in these sections using the check sheet on the following page allows you to complete the setting for the multi-channel function.




The following symbols are used for each purpose.




Indicates parts where items and details are to be written.
Confirm the details and write them to the check sheet.




Indicates parts where written details are to be checked.
Confirm the details and perform the Communication Settings.

## Check sheet No.1 (selection of connection type and interface)

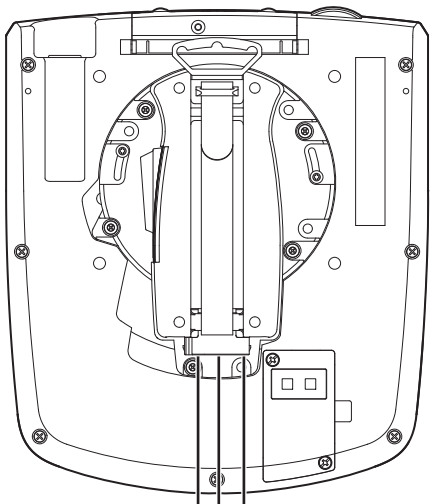
Channel No. of controller (No.1 to 4)

| CHNo. | Selection of connection type | Page 639 Determining the connection type and channel No. (System selection) | Selection of interface | Page 640 Determining the GOT side interface (Interface selection) |
|---|---|---|---|---|
| 1 | Connection name | | | |
| 2 | Connection name | | | |
| 3 | Connection name | | | |
| 4 | Connection name | | | |

*1 RS-232 interface and RS-422/485 interface cannot be used at the same time.

## Check sheet No. 2 (selection of GOT side interface)

3 Assigning the channel No.

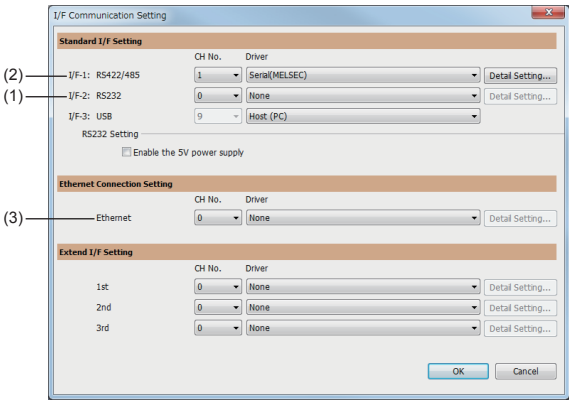


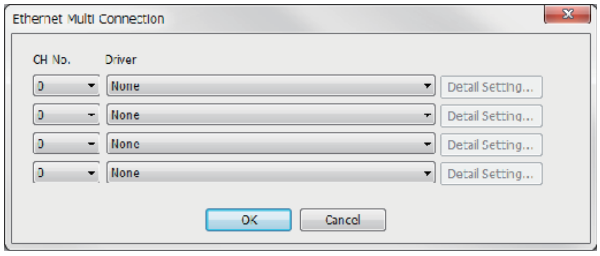
RS-422/485 interface and RS-232 interface cannot be used at the same time.

### RS-422/485 interface

☐ Connecting a controller

| | CH No. | Driver name |
|---|---|---|
| (2) | | |




### RS-232 interface(only one connection)

☐ Connecting a controller

| | CH No. | Driver name |
|---|---|---|
| (1) | | |

☐ Connecting a personal computer

| | |
|---|---|
| 9 | Host(PC) |

### Ethernet interface(only one connection)

☐ Connecting a controller (Without multi-channel Ethernet connection)

| | CH No. | Driver name |
|---|---|---|
| (3) | | |

☐ Connecting a controller (With multi-channel Ethernet connection)

| CH No. | Driver name |
|---|---|
| Multi | Multi-channel Ethernet connection |

| CH No. | Driver name |
|---|---|
| | |
| | |
| | |
| | |

# PART 6 FA TRANSPARENT

13 FA TRANSPARENT FUNCTION

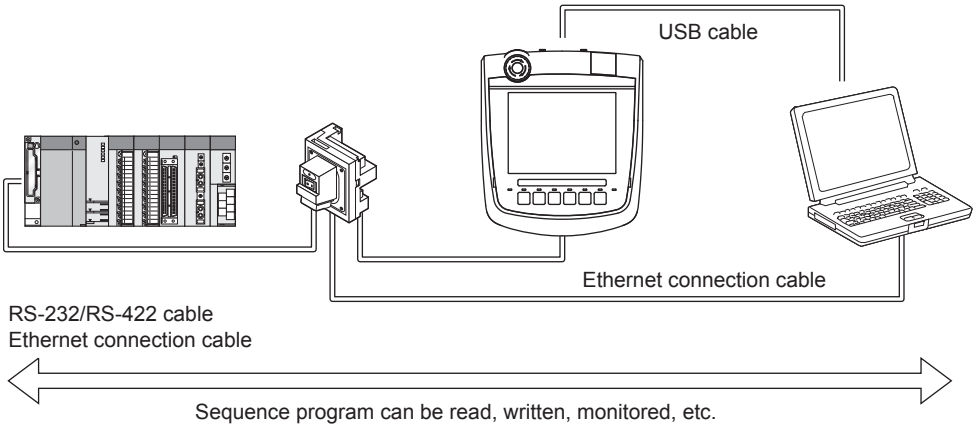
# 13 FA TRANSPARENT FUNCTION


- Page 650 FA Transparent Function
- Page 651 Compatible Software
- Page 659 List of Models that Can Be Monitored
- Page 682 System Configuration
- Page 691 GOT Side Settings
- Page 694 Personal Computer Side Setting
- Page 781 Precautions


## 13.1 FA Transparent Function

The FA transparent function allows the programs of the Mitsubishi Electric PLC to be read, written, and monitored via a GOT connected to a personal computer with the GOT and the PLC connected.

Example) When the sequence programs are read from, written to, and monitored from the Mitsubishi Electric PLC through a GOT




**Point**

The USB cable which connects the Handy GOT and the PC is connected to the USB interface (device) in the interface environmental protection cover of the Handy GOT.

Since the Handy GOT is used with the interface environment protection cover opened, it is out of the warranty for protective structure (IP65f).

# 13.2 Compatible Software

The following shows the software compatible with the FA transparent function.

**Point**

• The range accessible by software when FA transparent function is used

Use of the FA transparent function does not affect the range accessible by the software.

For details on accessible range, refer to the manual for the respective software.

• The software settings when using FA transparent function

For the software settings, refer to the following when using FA transparent function.

☞ Page 694 Accessing by GX Works3
☞ Page 704 Accessing by CW Configurator
☞ Page 710 Accessing the PLC by the PX Developer, GX Configurator
☞ Page 716 Accessing by GX Works2
☞ Page 730 Accessing by GX LogViewer
☞ Page 731 Accessing PLC by GX Configurator-QP
☞ Page 732 Accessing by the MT Developer
☞ Page 733 Accessing by the MT Works2
☞ Page 738 Accessing the servo amplifier by the MR Configurator
☞ Page 738 Accessing the servo amplifier by the MR Configurator2
☞ Page 739 Accessing the inverter by the FR Configurator
☞ Page 740 Accessing the inverter by the FR Configurator2
☞ Page 748 Accessing PLC by FX Configurator-FP
☞ Page 749 Accessing by FX Configurator-EN-L or FX Configurator-EN
☞ Page 750 Accessing by RT ToolBox3
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☞ Page 774 Accessing by MX Component (MX Sheet)
☞ Page 779 Accessing by MI Configurator

## When connecting the GOT and the personal computer by USB

### ■When connecting the GOT and controller using the direct CPU connection (serial)

The following shows the software and the accessible controllers.

| Controller | | Software | Applicable version |
|---|---|---|---|
| FX5U, FX5UC | | GX Works3 | 1.005F or later |
| | | MX Component | 4.11M or later |
| | | MX Sheet | *5 |
| FX5UJ | | GX Works3 | 1.060N or later |
| FX5S | | GX Works3 | 1.080J or later |
| QCPU (Q mode) | | MELSOFT Navigator | 1.71Z or later |
| | | GX Works2 | 1.497T or later |
| | | PX Developer | 1.40S or later |
| | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *1 |
| | | GX LogViewer | 1.32J or later |
| | | CPU Module Logging Configuration Tool | 1.32J or later |
| LCPU*2 | | MELSOFT Navigator | 1.71Z or later |
| | | GX Works2 | 1.497T or later |
| | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *1 |
| | | GX LogViewer | 1.32J or later |
| | | CPU Module Logging Configuration Tool | 1.32J or later |
| QCPU (A mode)<br>QnA/ACPU<br>Motion CPU (A series) | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *1 |
| FXCPU | | MELSOFT Navigator | 1.71Z or later |
| | | GX Works2 | 1.497T or later |
| | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *1 |
| Motion CPU (Q series) | | MELSOFT Navigator | 1.71Z or later |
| | | MT Works2 | 1.66U or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *1 |
| FR-A700 series | | FR Configurator | 3.00 |
| FR-F700 series | | FR Configurator | 3.00 |
| FR-E700 series | | FR Configurator | 3.00 |
| FR-D700 series | | FR Configurator | 3.00 |
| FR-A800 and FR-F800 series | | FR Configurator2 | From the first version |
| FR-A800 Plus series | FR-A800-CRN<br>FR-A800-E-CRN<br>FR-A800-R2R<br>FR-A800-E-R2R | FR Configurator2 | 1.16S or later |
| | FR-A800-LC<br>FR-A800-E-LC | FR Configurator2 | 1.19V or later |
| FR-E800 series | | FR Configurator2 | 1.19V or later |
| Robot controller (CRnQ-700) | | RT ToolBox2 | 3.00 or later |
| | | RT ToolBox3 | From the first version |
| CR800-Q (Q172DSRCPU) | | RT ToolBox3 *19 | 1.20W or later |
| MELSERVO (MR-J3-B)*4 | | MR Configurator2*3 | 1.24A or later |
| MELSERVO (MR-J4-B)*4 | | MR Configurator2*3 | 1.24A or later |

*1 Use MX Component (Version 4.05F or later) for MX Sheet.
*2 An adapter (L6ADP-R2 or L6ADP-R4) is required to use an LCPU other than the following.
• L02SCPU
• L02SCPU-P
When using L6ADP-R4, use an LCPU having a serial number starting with 15102 or later.
*3 Start MR Configurator2 with MT Developer2 Version 1.66U or later.
*4 A Motion controller is required between the GOT and controller in the direct CPU connection (serial).
*5 Use MX Component (Version 4.11M or later) for MX Sheet.

## ■When connecting the GOT and controller using the serial communication connection

The following shows the software and the accessible controllers.

| Controller | Software | Applicable version |
|---|---|---|
| RCPU | GX Works3 | • RCPU redundant system: 1.030G or later<br>• Other than the above: From the first version |
| | MX Component | 4.06G or later |
| | MX Sheet | *2 |
| | CPU Module Logging Configuration Tool | 1.142Y or later |
| Motion CPU (MELSEC iQ-R series) | MX Component | 4.06G or later |
| | MX Sheet | *1 |
| C Controller module (MELSEC iQ-R series) | CW Configurator | 1.013P or later |
| MELSECWinCPU (MELSEC iQ-R series) | CW Configurator | 1.013P or later |
| QCPU (Q mode) | MELSOFT Navigator | 1.71Z or later |
| | GX Works2 | 1.497T or later |
| | PX Developer | 1.40S or later |
| | GX Developer | 8.118Y or later |
| | MX Component | 4.05F or later |
| | MX Sheet | *1 |
| | GX LogViewer | 1.32J or later |
| | CPU Module Logging Configuration Tool | 1.32J or later |
| LCPU | MELSOFT Navigator | 1.71Z or later |
| | GX Works2 | 1.497T or later |
| | GX Developer | 8.118Y or later |
| | MX Component | 4.05F or later |
| | MX Sheet | *1 |
| | GX LogViewer | 1.32J or later |
| | CPU Module Logging Configuration Tool | 1.32J or later |

*1 Use MX Component (Version 4.05F or later) for MX Sheet.

*2 Use MX Component (Version 4.06G or later) for MX Sheet.

## ■When connecting the GOT and controller using the Ethernet connection

The following shows the software and the accessible controllers.

| Controller | | Software | Applicable version |
|---|---|---|---|
| RCPU | | GX Works3 | • RCPU redundant system: 1.030G or later<br>• Other than the above: From the first version |
| | | MX Component | 4.06G or later |
| | | MX Sheet | *5 |
| | | CPU Module Logging Configuration Tool | 1.142Y or later |
| Motion CPU (MELSEC iQ-R series) | | MT Works2 | 1.100E or later |
| | | MX Component | 4.06G or later |
| | | MX Sheet | *5 |
| C Controller module (MELSEC iQ-R series) | | CW Configurator | From the first version |
| MELSECWinCPU (MELSEC iQ-R series) | | CW Configurator | 1.013P or later |
| Robot controller (CR800-R, CR800-D) | | RT ToolBox3 | From the first version |
| FX5U, FX5UC | | GX Works3 | • When using FX5-ENET or FX5-ENET/IP: 1.075D or later<br>• Other than the above: 1.005F or later |
| | | MX Component | • When using FX5-ENET or FX5-ENET/IP: Not available<br>• Other than the above: 4.11M or later |
| | | MX Sheet | • When using FX5-ENET or FX5-ENET/IP: Not available<br>• Other than the above: *6 |
| FX5UJ | | GX Works3 | 1.060N or later |
| FX5S | | GX Works3 | 1.080J or later |
| QCPU (Q mode), C Controller module (Q series) | | MELSOFT Navigator | 1.71Z or later |
| | | GX Works2*1 | 1.497T or later<br>(Same when using the CC-Link IE Field Network Ethernet adapter (NZ2GF-ETB)) |
| | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *2 |
| | | Setting/monitoring tool for C Controller module | 4.04E or later |
| | | GX LogViewer | 1.32J or later |
| | | CPU Module Logging Configuration Tool | 1.32J or later |
| LCPU | | MELSOFT Navigator | 1.71Z or later |
| | | GX Works2 | 1.497T or later |
| | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *2 |
| | | GX LogViewer | 1.32J or later |
| | | CPU Module Logging Configuration Tool | 1.32J or later |
| FXCPU | | GX Works2 | 1.497T or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *2 |
| QCPU (A Mode), QnA/ACPU | | GX Developer | 8.118Y or later |
| | | MX Component | 4.05F or later |
| | | MX Sheet | *2 |
| Motion CPU (Q series) | | MELSOFT Navigator | 1.71Z or later |
| | | MT Works2 | 1.66U or later |
| CNC CPU (Q173NCCPU) | | NC Configurator2 | B0 or later |
| FR-E700 (FR-E7□0-NE), FR-A800, and FR-F800 series | | FR Configurator2 | • Through the Ethernet port built in the RCPU: 1.16S or later<br>• Other than the above: 1.15R or later |
| FR-A800 Plus series | FR-A800-E-CRN<br>FR-A800-E-R2R | FR Configurator2 | 1.16S or later |
| | FR-A800-E-LC | FR Configurator2 | 1.19V or later |

| Controller | Software | Applicable version |
|---|---|---|
| FR-E800 series | FR Configurator2 | 1.19V or later |
| Robot controller (CRnQ-700, CRnD-700) | RT ToolBox2 | 3.00 or later |
| | RT ToolBox3 | From the first version |
| CR800-Q (Q172DSRCPU) | RT ToolBox3 | 1.20W or later |
| MELSERVO (MR-J3-B) *4 | MR Configurator2*3 | 1.23Z or later |
| MELSERVO (MR-J4-B) *4 | MR Configurator2*3 | 1.23Z or later |
| MELIPC | MI Configurator | From the first version |

*1 C controller module (Q series) does not support CC-Link IE Field Network.
*2 Use MX Component (Version 4.05F or later) for MX Sheet.
*3 Start MR Configurator2 with MT Developer2 Version 1.66U or later.
*4 A Motion controller is required between the GOT and controller in the Ethernet connection.
*5 Use MX Component (Version 4.06G or later) for MX Sheet.
*6 Use MX Component (Version 4.11M or later) for MX Sheet.

## When connecting the GOT and the personal computer via Ethernet

### ■When connecting the GOT and controller using the direct CPU connection (serial)

The following shows the software and the accessible controllers.

| Controller | Software | Applicable version |
|---|---|---|
| FX5U, FX5UC | GX Works3 | 1.005F or later |
| | MX Component | 4.11M or later |
| | MX Sheet | *4 |
| FX5UJ | GX Works3 | 1.060N or later |
| FX5S | GX Works3 | 1.080J or later |
| QCPU (Q mode) | GX Works2 | 1.48A or later |
| | MX Component | 3.15R or later |
| | MX Sheet | *2 |
| LCPU*1 | GX Works2 | 1.48A or later |
| | MX Component | 3.15R or later |
| | MX Sheet | *2 |
| FXCPU | GX Works2 | 1.73B or later |
| | MX Component | 4.05F or later |
| | MX Sheet | *5 |
| Motion CPU (Q series) | MT Works2 | 1.19V or later |
| FR-A800 series | FR Configurator2 | 1.31H or later |
| FR-F800 series | FR Configurator2 | 1.31H or later |
| FR-E800 series | FR Configurator2 | 1.31H or later |
| MELSERVO (MR-J3-B)*3 | MR Configurator2 | 1.07H or later |
| MELSERVO (MR-J4-B)*3 | MR Configurator2 | 1.09K or later |

*1 An adapter (L6ADP-R2 or L6ADP-R4) is required to use an LCPU other than the following.
- L02SCPU
- L02SCPU-P

When using L6ADP-R4, use an LCPU having a serial number starting with 15102 or later.

*2 Use MX Component (Version 3.15R or later) for MX Sheet.

*3 A Motion controller is required between the GOT and controller in the direct CPU connection (serial).

*4 Use MX Component (Version 4.11M or later) for MX Sheet.

*5 Use MX Component (Version 4.05F or later) for MX Sheet.

### ■When connecting the GOT and controller using the serial communication connection

The following shows the software and the accessible controllers.

| Controller | Software | Applicable version |
|---|---|---|
| RCPU | GX Works3 | • RCPU redundant system: 1.030G or later<br>• Other than the above: From the first version |
| | MX Component | 4.06G or later |
| | MX Sheet | *2 |
| | CPU Module Logging Configuration Tool | 1.142Y or later |
| Motion CPU (MELSEC iQ-R series) | MX Component | 4.05F or later |
| | MX Sheet | *3 |
| C Controller module (MELSEC iQ-R series) | CW Configurator | 1.013P or later |
| MELSECWinCPU (MELSEC iQ-R series) | CW Configurator | 1.013P or later |
| QCPU (Q mode) | GX Works2 | 1.48A or later |
| | MX Component | 3.15R or later |
| | MX Sheet | *1 |
| LCPU | GX Works2 | 1.48A or later |
| | MX Component | 3.15R or later |
| | MX Sheet | *1 |

*1 Use MX Component (Version 3.15R or later) for MX Sheet.
*2 Use MX Component (Version 4.06G or later) for MX Sheet.
*3 Use MX Component (Version 4.05F or later) for MX Sheet.

# 13.3 List of Models that Can Be Monitored

The following models support FA transparent function.

## When connecting the GOT and the personal computer by USB

### ■MELSEC iQ-R Series

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R00CPU *1<br>R01CPU *1<br>R02CPU *1<br>R04CPU<br>R08CPU<br>R16CPU<br>R32CPU<br>R120CPU | GX Works3<br>MX Component<br>MX Sheet<br>CPU Module Logging Configuration Tool | - | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |
| R08PCPU<br>R16PCPU<br>R32PCPU<br>R120PCPU | | | | |
| R04ENCPU *3<br>R08ENCPU *3<br>R16ENCPU *3<br>R32ENCPU *3<br>R120ENCPU *3 | | | | |
| R08SFCPU *2*3<br>R16SFCPU *2*3<br>R32SFCPU *2*3<br>R120SFCPU *2*3 | | | | |
| R08PSFCPU *4<br>R16PSFCPU *4<br>R32PSFCPU *4<br>R120PSFCPU *4 | GX Works3 *5 | - | - | GT 2506HS<br>GT 2505HS |

*1 For R00CPU, R01CPU, R02CPU, use GX Works3 Ver.1.040S and later.

*2 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).

*4 Mount a SIL2 function module R6PSFM and a redundant function module R6RFM next to RnPSFCPU on the base unit.

*5 Use GX Works3 Version 1.050C or later.

### ■Motion CPU (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R16MTCPU<br>R32MTCPU<br>R64MTCPU | MT Works2 | - | - | GT 2506HS<br>GT 2505HS |
| | MX Component<br>MX Sheet | - | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |

## ■C controller module (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R12CCPU-V | CW Configurator | - | GT 2506HS<br>GT 2505HS<br>*1 | GT 2506HS<br>GT 2505HS |

*1 Use CW Configurator Ver.1.013P or later.

## ■MELSECWinCPU (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R102WCPU-W | CW Configurator*1 | - | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |

*1 Use CW Configurator Ver.1.013P or later.

## ■CNC C80

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R16NCCPU-S1 | GX Works3 | - | - | GT 2506HS<br>GT 2505HS |

## ■Robot controller (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CR800-R(R16RTCPU) | RT ToolBox3 | - | - | GT 2506HS<br>GT 2505HS |
| CR800-D | RT ToolBox3 | - | - | GT 2506HS<br>GT 2505HS |

## ■CC-Link IE Filed Network head module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| RJ72GF15-T2 | GX Works3 | - | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |

## ■MELSEC iQ-F Series

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FX5U<br>FX5UC | GX Works3 *1<br>MX Component *2*3<br>MX Sheet *2*3 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| FX5UJ | GX Works3 *4 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| FX5S | GX Works3 *5 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |

*1 Use FX5-ENET Version 1.240 or later.
*2 The FA transparent through FX5-ENET is not supported.
*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).
*4 Use GX Works3 Version 1.060N or later.
*5 Use GX Works3 Version 1.080J or later.

## ■MELSEC-Q (Q mode)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q00JCPU<br>Q00CPU<br>Q01CPU<br>Q02CPU<br>Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU<br>Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | GX Works2<br>GX Developer<br>GX Configurator<br>PX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |
| Q12PRHCPU (Main base)<br>Q25PRHCPU (Main base) | GX Works2<br>GX Developer<br>GX Configurator<br>PX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| Q12PRHCPU (Extension base)<br>Q25PRHCPU (Extension base) | - | - | - | - |
| Q00UJCPU<br>Q00UJCPU-S8<br>Q00UCPU<br>Q01UCPU<br>Q02UCPU<br>Q03UDCPU<br>Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | GX Works2<br>GX Developer<br>GX Configurator<br>PX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |
| Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU<br>Q03UDVCPU *1<br>Q04UDVCPU *1<br>Q06UDVCPU *1<br>Q13UDVCPU *1<br>Q26UDVCPU *1 | GX Works2<br>GX Developer<br>GX Configurator<br>PX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS<br>*2 | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |

*1 QnUDVCPU is applicable to CPU Module Logging Configuration Tool and GX LogViewer.

*2 Use the serial port of QCPU in the multiple CPU system, since the CPU has no direct coupled I/F.

## ■C Controller module (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q12DCCPU-V | GX Works2<br>GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS<br>*1 | - | GT 2506HS<br>GT 2505HS<br>*2 |
| Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | GX Works2<br>GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS<br>*1 | - | GT 2506HS<br>GT 2505HS<br>*2 |
| | Setting/Monitoring tool for C Controller module | GT 2506HS<br>GT 2505HS<br>*1 | - | GT 2506HS<br>GT 2505HS |

*1 Use the serial port of QCPU in the multiple CPU system since Q12DCCPU-V1 and Q24DHCCPU-V/VG have no direct coupled I/F.

*2 When using Q12DCCPU-V1 or Q24DHCCPU-V/VG as the connected CPU, only MX Component can be used.
When accessing other CPUs relaying Q12DCCPU-V or Q24DHCCPU-V/VG, GX Works2 can also be used.

## ■MELSEC-QS

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| QS001CPU | - | - | - | - |

## ■MELSEC-L

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L06CPU-P *1<br>L26CPU-P *1<br>L02CPU-P *1<br>L26CPU-PBT *1<br>L02SCPU<br>L02SCPU-P *1 | GX Works2 *2<br>GX Developer<br>GX LogViewer<br>MX Component<br>MX Sheet<br>CPU Module Logging Configuration Tool | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS<br>*3 |

*1 L02CPU-P, L06CPU-P, L26CPU-P, L02SCPU-P, and L26CPU-PBT do not support MX Component and MX Sheet.

*2 GX Works2 cannot be connected to the MELSEC-L series through the Ethernet port of the MELSEC iQ-R series built-in Ethernet port CPU.

*3 When connecting to the Ethernet unit (LJ71E71-100), use MX Component Version 4.13P or later and MX Sheet Version 2.10L or later.

## ■MELSEC-Q (A mode)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |

## ■MELSEC-QnA (QnACPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS | GT 2506HS<br>GT 2505HS |
| Q4ARCPU | | | | |

## ■MELSEC-QnA (QnASCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |

## ■MELSEC-A (AnCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A2UCPU<br>A2UCPU-S1 | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |
| A3UCPU | | | | |
| A4UCPU | | | | |
| A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1 | | | | |
| A3ACPU<br>A3ACPUP21<br>A3ACPUR21 | | | | |
| A1NCPU<br>A1NCPUP21<br>A1NCPUR21 | | | | |
| A2NCPU<br>A2NCPUP21<br>A2NCPUR21<br>A2NCPU-S1<br>A2NCPUP21-S1<br>A2NCPUR21-S1 | | | | |
| A3NCPU<br>A3NCPUP21<br>A3NCPUR21 | | | | |

## ■MELSEC-A (AnSCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A2USCPU<br>A2USCPU-S1<br>A2USHCPU-S1 | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |
| A1SCPU<br>A1SCPUC24-R2<br>A1SHCPU | | | | |
| A2SCPU<br>A2SCPU-S1<br>A2SHCPU<br>A2SHCPU-S1 | | | | |
| A1SJCPU<br>A1SJCPU-S3<br>A1SJHCPU | | | | |

## ■MELSEC-A

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A0J2HCPU<br>A0J2HCPUP21<br>A0J2HCPUR21<br>A0J2HCPU-DC24 | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |
| A2CCPU<br>A2CCPUP21<br>A2CCPUR21 | | | | |
| A2CCPUC24<br>A2CCPUC24-PRF | | | | |
| A2CJCPU-S3 | | | | |
| A1FXCPU | | | | |

## ■Motion CPU (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q172CPU<br>Q173CPU<br>Q172CPUN<br>Q173CPUN | MT Developer | GT 2506HS<br>GT 2505HS | - | - |
| Q172HCPU<br>Q173HCPU | MT Developer<br>MR Configurator | GT 2506HS<br>GT 2505HS<br>*1 | - | - |
| Q172DCPU<br>Q173DCPU<br>Q172DCPU-S1<br>Q173DCPU-S1<br>Q172DSCPU<br>Q173DSCPU | MT Works2 | GT 2506HS<br>GT 2505HS<br>*2 | - | GT 2506HS<br>GT 2505HS |
| Q170MCPU<br>Q170MSCPU<br>Q170MSCPU-S1 | MT Works2<br>GX Works2 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |

*1 Use the serial port of QCPU in the multiple CPU system since only the USB port is available as the direct coupled I/F for Q172H/Q173HCPU.

*2 Use the serial port of QCPU in the multiple CPU system since Q172D/Q173DCPU has no direct coupled I/F.

## ■Motion CPU (A Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A273UCPU<br>A273UHCPU<br>A273UHCPU-S3<br>A373UCPU<br>A373UCPU-S3 | GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |
| A171SCPU<br>A171SCPU-S3<br>A171SCPU-S3N<br>A171SHCPU<br>A171SHCPUN<br>A172SHCPU<br>A172SHCPUN<br>A173UHCPU<br>A173UHCPU-S1 | | | | |

## ■MELSEC-FX

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FX0 | GX Works2<br>GX Developer<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | - |
| FX0S<br>FX0N | | | | |
| FX1<br>FX2<br>FX2C | | | | |
| FX1S<br>FX1N<br>FX2N<br>FX1NC<br>FX2NC | | | | |
| FX3G(C)<br>FX3S<br>FX3GE | GX Developer<br>FX Configurator-FP | GT 2506HS<br>GT 2505HS | - | - |
| | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| FX3U(C) *1 | GX Developer<br>FX Configurator-FP<br>FX Configurator-EN-L<br>FX Configurator-EN | GT 2506HS<br>GT 2505HS | - | - |
| | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |

*1 For FX3U-ENET-L and FX3U-ENET, use a module with version 1.12 or later and serial number 1340001 or later.

## ■MELSEC-WS

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| WS0-CPU0<br>WS0-CPU1<br>WS0-CPU3 | - | - | - | - |

## ■MELSECNET/H Remote I/O station

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| QJ72LP25-25<br>QJ72LP25G<br>QJ72BR15 | - | - | - | - |

## ■CC-Link IE Field Network head module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| LJ72GF15-T2 | - | - | - | - |

## ■CC-Link IE Field Network Ethernet adapter module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| NZ2GF-ETB | GX Works2 | - | - | GT 2506HS<br>GT 2505HS |

## ■CNC

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CNC C70 (Q173NCCPU) | NC Configurator2 | - | - | GT 2506HS<br>GT 2505HS<br>*1 |
| MELDAS C6/C64 | - | - | - | - |

*1 Connect to the DISPLAY I/F of Q173NCCPU.

## ■Robot controller (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CRnQ-700(Q172DRCPU)<br>CR750-Q(Q172DRCPU)<br>CR751-Q(Q172DRCPU) | RT ToolBox2<br>RT ToolBox3 | GT 2506HS<br>GT 2505HS<br>*1 | - | GT 2506HS<br>GT 2505HS |
| CR800-Q(Q172DSRCPU) | RT ToolBox3 | | | |
| CRnD-700<br>CR750-D<br>CR751-D | RT ToolBox2<br>RT ToolBox3 | - | - | GT 2506HS<br>GT 2505HS |

*1 Use the serial port of QCPU in the multiple CPU system since CRnQ-700 and CR800-Q (Q172DSRCPU) have no direct coupled I/F.

## ■MELIPC

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MI5122-VW | MI Configurator | - | - | GT 2506HS<br>GT 2505HS |

## ■FR-A500(L), FR-F500(L), FR-V500(L), FR-E500, FR-S500(E), FR-F500J

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A5□0(L) | FR Configurator | GT 2506HS<br>GT 2505HS | - | - |
| FR-F5□0(L) | | | | |
| FR-V5□0(L) | | | | |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W | | | | |
| FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R) | | | | |
| FR-F5□0J(F) | | | | |

## ■FR-D700, FR-F700PJ, FR-E700, FR-A700, FR-F700, FR-F700P

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-D7□0<br>FR-D7□0S<br>FR-D7□0W | FR Configurator | GT 2506HS<br>GT 2505HS | - | - |
| FR-F7□0PJ(F) | | | | |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W | | | | |
| FR-E7□0-NE | FR Configurator2 *1 | - | - | GT 2506HS<br>GT 2505HS<br>*2 |
| FR-A7□0 | FR Configurator | GT 2506HS<br>GT 2505HS | - | - |
| FR-F7□0 | | | | |
| FR-F7□0P | | | | |

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

## ■FR-A800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6 | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS<br>*2 |
| FR-A8□0-GF<br>FR-A8□2-GF | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-GN<br>FR-A8□2-GN | - | - | - | - |

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

## ■FR-A800 Plus

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A8□0-CRN*3<br>FR-A8□2-CRN*3<br>FR-A8□0-R2R*3<br>FR-A8□2-R2R*3<br>FR-A8□0-LC*4 | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-E-CRN*3<br>FR-A8□2-E-CRN*3<br>FR-A8□0-E-R2R*3<br>FR-A8□2-E-R2R*3<br>FR-A8□0-E-LC*4 | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS<br>*2 |

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.
*3 Use FR Configurator2 Version 1.16S or later.
*4 Use FR Configurator2 Version 1.19V or later.

## ■FR-F800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-F8□0<br>FR-F8□2<br>FR-F8□6 | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | - |
| FR-F8□0-E<br>FR-F8□2-E | FR Configurator2 *1 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS<br>*2 |

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

## ■FR-E800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-E8□0 | FR Configurator2 *1*2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-E8□0-E | FR Configurator2 *1*2 | - | - | GT 2506HS<br>GT 2505HS<br>*3 |

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Use FR Configurator2 Version 1.19V or later.
*3 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

## ■Sensorless servo

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-E7□0EX | FR Configurator | GT 2506HS<br>GT 2505HS | - | - |

## ■MELIPM

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MD-CX522-□K(-A0) | FR Configurator | GT 2506HS<br>GT 2505HS | - | - |

## ■MELSERVO

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MR-J2S-□A<br>MR-J2S-□CP<br>MR-J2S-□CL | - | - | - | - |
| MR-J2M-P8A<br>MR-J2M-□DU | - | - | - | - |
| MR-J3-□A<br>MR-J3-□T | - | - | - | - |
| MR-J3-□B *1 | MR Configurator | GT 2506HS<br>GT 2505HS | - | - |
| | MR Configurator2 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| MR-J4-□A<br>MR-J4-□A-RJ<br>MR-JE-□A | - | - | - | - |
| MR-J4-□B *1<br>MR-J4-□B-RJ *1<br>MR-J4W2-□B *1<br>MR-J4W3-□B *1 | MR Configurator2 | GT 2506HS<br>GT 2505HS | - | GT 2506HS<br>GT 2505HS |
| MR-JE-□B | MR Configurator2 | - | - | - |

*1 A motion controller is required between the GOT and PLC in direct CPU connection (serial).

## When connecting the GOT and the personal computer by Ethernet

### ■MELSEC iQ-R Series

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R00CPU *1<br>R01CPU *1<br>R02CPU *1<br>R04CPU<br>R08CPU<br>R16CPU<br>R32CPU<br>R120CPU<br>R08PCPU<br>R16PCPU<br>R32PCPU<br>R120PCPU<br>R04ENCPU *2<br>R08ENCPU *2<br>R16ENCPU *2<br>R32ENCPU *2<br>R120ENCPU *2<br>R08SFCPU *2*3<br>R16SFCPU *2*3<br>R32SFCPU *2*3<br>R120SFCPU *2*3 | GX Works3<br>MX Component<br>MX Sheet<br>CPU Module Logging Configuration Tool | - | GT 2506HS | - |
| R08PSFCPU<br>R16PSFCPU<br>R32PSFCPU<br>R120PSFCPU | - | - | - | - |

*1 For R00CPU, R01CPU, R02CPU, use GX Works3 Ver.1.040S and later.

*2 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).

*3 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

### ■Motion CPU (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R16MTCPU<br>R32MTCPU<br>R64MTCPU | MT Works2 | - | - | - |
| | MX Component<br>MX Sheet | - | GT 2506HS | - |

### ■C controller module (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R12CCPU-V | CW Configurator*1 | - | GT 2506HS | - |

*1 Use CW Configurator Ver.1.013P or later.

### ■MELSECWinCPU (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R102WCPU-W | CW Configurator*1 | - | GT 2506HS | - |

*1 Use CW Configurator Ver.1.013P or later.

## ■CNC C80

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| R16NCCPU-S1 | GX Works3 | - | - | - |

## ■Robot controller (MELSEC iQ-R Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CR800-R(R16RTCPU) | - | - | - | - |
| CR800-D | - | - | - | - |

## ■CC-Link IE Filed Network head module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| RJ72GF15-T2 | GX Works3 | - | GT 2506HS | - |

## ■MELSEC iQ-F Series

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FX5U<br>FX5UC | GX Works3<br>MX Component *1*2*3<br>MX Sheet *1*2*3 | GT 2506HS | - | - |
| FX5UJ | GX Works3 *4 | GT 2506HS | - | - |
| FX5S | GX Works3 *5 | GT 2506HS | - | - |

*1 Use FX5-ENET Version 1.240 or later.
*2 The FA transparent through FX5-ENET is not supported.
*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).
*4 Use GX Works3 Version 1.060N or later.
*5 Use GX Works3 Version 1.080J or later.

## ■MELSEC-Q (Q mode)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q00JCPU | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS | GT 2506HS | - |
| Q00CPU | | | | |
| Q01CPU | | | | |
| Q02CPU | | | | |
| Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU | | | | |
| Q02PHCPU<br>Q06PHCPU<br>Q12PHCPU<br>Q25PHCPU | | | | |
| Q12PRHCPU<br>(Main base) | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS | - | - |
| Q25PRHCPU<br>(Main base) | | | | |

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q12PRHCPU (Extension base) | - | - | - | - |
| Q25PRHCPU (Extension base) | | | | |
| Q00UJCPU<br>Q00UJCPU-S8 | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS | GT 2506HS | - |
| Q00UCPU | | | | |
| Q01UCPU | | | | |
| Q02UCPU | | | | |
| Q03UDCPU | | | | |
| Q04UDHCPU<br>Q06UDHCPU<br>Q10UDHCPU<br>Q13UDHCPU<br>Q20UDHCPU<br>Q26UDHCPU | | | | |
| Q03UDECPU<br>Q04UDEHCPU<br>Q06UDEHCPU<br>Q10UDEHCPU<br>Q13UDEHCPU<br>Q20UDEHCPU<br>Q26UDEHCPU<br>Q50UDEHCPU<br>Q100UDEHCPU | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS<br>*1 | GT 2506HS | - |
| Q03UDVCPU<br>Q04UDVCPU<br>Q06UDVCPU<br>Q13UDVCPU<br>Q26UDVCPU | | | | |

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

## ■C controller module (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q12DCCPU-V | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS<br>*1 | - | - |
| Q24DHCCPU-V/VG<br>Q24DHCCPU-LS<br>Q26DHCCPU-LS | GX Works2<br>MX Component<br>MX Sheet<br>Setting/Monitoring tool for C Controller module | GT 2506HS<br>*1 | - | - |

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

## ■MELSEC-QS

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| QS001CPU | - | - | - | - |

## ■MELSEC-L

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| L02CPU<br>L06CPU<br>L26CPU<br>L26CPU-BT<br>L02CPU-P<br>L06CPU-P<br>L26CPU-P<br>L26CPU-PBT<br>L02SCPU<br>L02SCPU-P | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS | GT 2506HS | - |

## ■MELSEC-Q (A mode)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q02CPU-A<br>Q02HCPU-A<br>Q06HCPU-A | - | - | - | - |

## ■MELSEC-QnA (QnACPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q2ACPU<br>Q2ACPU-S1<br>Q3ACPU<br>Q4ACPU | - | - | - | - |
| Q4ARCPU | - | - | - | - |

## ■MELSEC-QnA (QnASCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q2ASCPU<br>Q2ASCPU-S1<br>Q2ASHCPU<br>Q2ASHCPU-S1 | - | - | - | - |

## ■MELSEC-A (AnCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A2UCPU<br>A2UCPU-S1 | - | - | - | - |
| A3UCPU | - | - | - | - |
| A4UCPU<br>A2ACPU<br>A2ACPUP21<br>A2ACPUR21<br>A2ACPU-S1<br>A2ACPUP21-S1<br>A2ACPUR21-S1 | - | - | - | - |
| A3ACPU<br>A3ACPUP21<br>A3ACPUR21 | - | - | - | - |
| A1NCPU<br>A1NCPUP21<br>A1NCPUR21 | - | - | - | - |
| A2NCPU<br>A2NCPUP21<br>A2NCPUR21<br>A2NCPU-S1<br>A2NCPUP21-S1<br>A2NCPUR21-S1 | - | - | - | - |
| A3NCPU<br>A3NCPUP21<br>A3NCPUR21 | - | - | - | - |

## ■MELSEC-A (AnSCPU)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A2USCPU<br>A2USCPU-S1<br>A2USHCPU-S1 | - | - | - | - |
| A1SCPU | - | - | - | - |
| A1SCPUC24-R2<br>A1SHCPU | - | - | - | - |
| A2SCPU<br>A2SCPU-S1<br>A2SHCPU<br>A2SHCPU-S1 | - | - | - | - |
| A1SJCPU<br>A1SJCPU-S3<br>A1SJHCPU | - | - | - | - |

## ■MELSEC-A

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A0J2HCPU<br>A0J2HCPUP21<br>A0J2HCPUR21<br>A0J2HCPU-DC24 | - | - | - | - |
| A2CCPU<br>A2CCPUP21<br>A2CCPUR21 | - | - | - | - |
| A2CCPUC24<br>A2CCPUC24-PRF | - | - | - | - |
| A2CJCPU-S3 | - | - | - | - |
| A1FXCPU | - | - | - | - |

## ■Motion CPU (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| Q172CPU<br>Q173CPU<br>Q172CPUN<br>Q173CPUN | - | - | - | - |
| Q172HCPU<br>Q173HCPU | - | - | - | - |
| Q172DCPU<br>Q173DCPU<br>Q172DCPU-S1<br>Q173DCPU-S1<br>Q172DSCPU<br>Q173DSCPU | MT Works2 | GT 2506HS<br>*1 | - | - |
| Q170MCPU<br>Q170MSCPU<br>Q170MSCPU-S1 | MT Works2<br>GX Works2 | GT 2506HS | - | - |

*1 Use the serial port of QCPU in the multiple CPU system since Q172D/Q173DCPU has no direct coupled I/F.

## ■Motion CPU (A Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| A273UCPU<br>A273UHCPU<br>A273UHCPU-S3<br>A373UCPU<br>A373UCPU-S3 | - | - | - | - |
| A171SCPU<br>A171SCPU-S3<br>A171SCPU-S3N<br>A171SHCPU<br>A171SHCPUN<br>A172SHCPU<br>A172SHCPUN<br>A173UHCPU<br>A173UHCPU-S1 | - | - | - | - |

## ■MELSEC-FX

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FX0 | GX Works2<br>MX Component<br>MX Sheet | GT 2506HS | - | - |
| FX0S<br>FX0N | | | | |
| FX1<br>FX2<br>FX2C | | | | |
| FX1S<br>FX1N<br>FX2N<br>FX1NC<br>FX2NC | | | | |
| FX3G(C)<br>FX3S<br>FX3GE<br>FX3U(C) | MX Component<br>MX Sheet | GT 2506HS | - | - |

## ■MELSEC-WS

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| WS0-CPU0<br>WS0-CPU1<br>WS0-CPU3 | - | - | - | - |

## ■MELSECNET/H Remote I/O station

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| QJ72LP25-25<br>QJ72LP25G<br>QJ72BR15 | - | - | - | - |

## ■CC-Link IE Field Network head module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| LJ72GF15-T2 | - | - | - | - |

## ■CC-Link IE Field Network Ethernet adapter module

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| NZ2GF-ETB | - | - | - | - |

## ■CNC

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CNC C70(Q173NCCPU) | - | - | - | - |
| MELDAS C6/C64 | - | - | - | - |

## ■Robot controller (Q Series)

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| CRnQ-700(Q172DRCPU)<br>CR750-Q(Q172DRCPU)<br>CR751-Q(Q172DRCPU) | - | - | - | - |
| CR800-Q(Q172DSRCPU) | - | - | - | - |
| CRnD-700<br>CR750-D<br>CR751-D | - | - | - | - |

## ■MELIPC

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MI5122-VW | - | - | - | - |

## ■FR-A500(L), FR-F500(L), FR-V500(L), FR-E500, FR-S500(E), FR-F500J

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A5□0(L) | - | - | - | - |
| FR-F5□0(L) | - | - | - | - |
| FR-V5□0(L) | - | - | - | - |
| FR-E5□0(C)<br>FR-E5□0S<br>FR-E5□0W | - | - | - | - |
| FR-S5□0(E)(-R)(-C)<br>FR-S5□0S(E)(-R)<br>FR-S5□0W(E)(-R) | - | - | - | - |
| FR-F5□0J(F) | - | - | - | - |

## ■FR-D700, FR-F700PJ, FR-E700, FR-A700, FR-F700, FR-F700P

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-D7□0<br>FR-D7□0S<br>FR-D7□0W | - | - | - | - |
| FR-F7□0PJ(F) | - | - | - | - |
| FR-E7□0<br>FR-E7□0S<br>FR-E7□0W | - | - | - | - |
| FR-E7□0-NE | - | - | - | - |
| FR-A7□0 | - | - | - | - |
| FR-F7□0 | - | - | - | - |
| FR-F7□0P | - | - | - | - |

## ■FR-A800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A8□0<br>FR-A8□2<br>FR-A8□6 | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-E<br>FR-A8□2-E<br>FR-A8□6-E | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-GF<br>FR-A8□2-GF | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-A8□0-GN<br>FR-A8□2-GN | - | - | - | - |

## ■FR-A800 Plus

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-A8□0-CRN<br>FR-A8□2-CRN<br>FR-A8□0-R2R<br>FR-A8□2-R2R<br>FR-A8□0-LC | - | - | - | - |
| FR-A8□0-E-CRN<br>FR-A8□2-E-CRN<br>FR-A8□0-E-R2R<br>FR-A8□2-E-R2R<br>FR-A8□0-E-LC | - | - | - | - |

## ■FR-F800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-F8□0<br>FR-F8□2<br>FR-F8□6 | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-F8□0-E<br>FR-F8□2-E | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |

## ■FR-E800

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-E8□0 | FR Configurator2 | GT 2506HS<br>GT 2505HS | - | - |
| FR-E8□0-E | - | - | - | - |

## ■Sensorless servo

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| FR-E7□0EX | - | - | - | - |

## ■MELIPM

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MD-CX522-□K(-A0) | - | - | - | - |

## ■MELSERVO

| Model name | Target software | Connection type | | |
|---|---|---|---|---|
| | | Direct CPU connection (serial) | Serial communication connection | Ethernet connection |
| MR-J2S-□A<br>MR-J2S-□CP<br>MR-J2S-□CL | - | - | - | - |
| MR-J2M-P8A<br>MR-J2M-□DU | - | - | - | - |
| MR-J3-□A<br>MR-J3-□T | - | - | - | - |
| MR-J3-□B *1 | MR Configurator2 | GT 2506HS | - | - |
| MR-J4-□A<br>MR-J4-□A-RJ<br>MR-JE-□A | - | - | - | - |
| MR-J4-□B *1<br>MR-J4-□B-RJ *1<br>MR-J4W2-□B *1<br>MR-J4W3-□B *1 | MR Configurator2 | GT 2506HS | - | - |
| MR-JE-□B | MR Configurator2 | - | - | - |

*1 A motion controller is required between the GOT and PLC in direct CPU connection (serial).

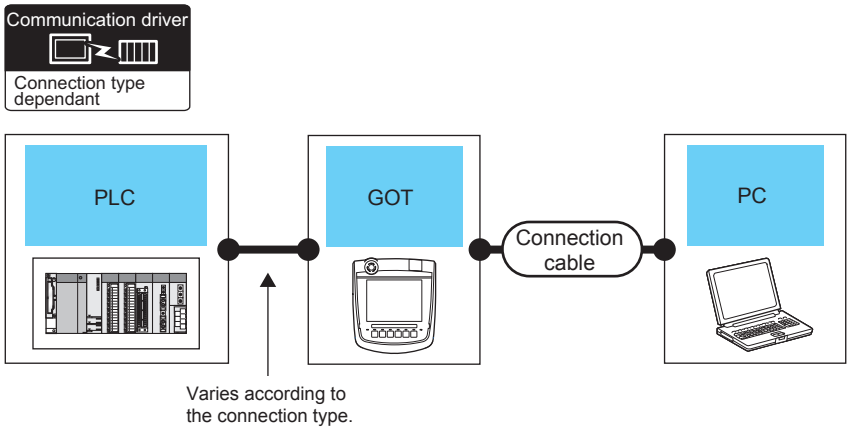
# 13.4 System Configuration

## GX Series, MX Series, for C Controller module

The following shows the software for each series.

| Series | Software |
|---|---|
| GX Series | GX Works3, GX Works2, GX Developer, GX LogViewer, CPU Module Logging Configuration Tool |
| MX Series | MX Component, MX Sheet |
| For C Controller module | CW Configurator, setting/monitoring tool for C Controller module |

### When connecting the GOT and the personal computer by USB




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)*4<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | GX Works3<br>CW Configurator<br>MX Component<br>MX Sheet<br>CPU Module Logging Configuration Tool | 1 personal computer for 1 GOT |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)*3<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION*1<br>☞ Page 604 GOT MULTI-DROP CONNECTION*2 | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | GX Works2<br>GX Developer<br>GX LogViewer<br>MX Component<br>MX Sheet<br>CPU Module Logging Configuration Tool<br>Setting/Monitoring toolfor C Controllermodule | 1 personal computer for 1 GOT |

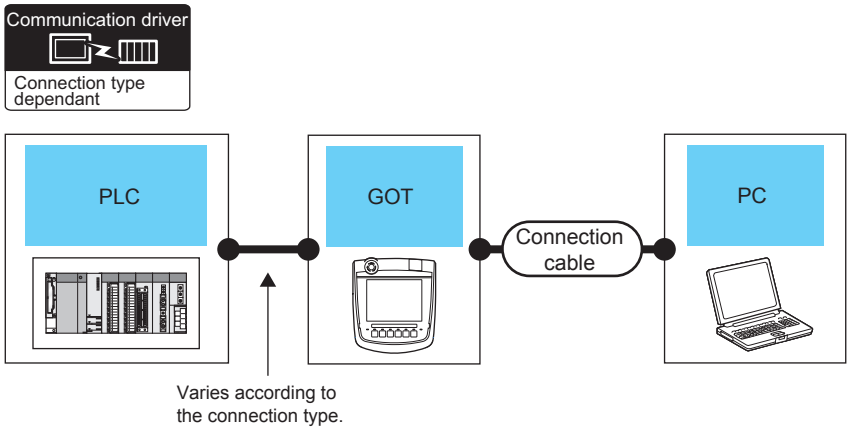
*1 Applicable to the QCPU only

*2 GX LogViewer, MX Component, MX Sheet, QnUDVCPU•LCPU Logging Configuration Tool and Setting/Monitoring tool for C Controller module are not supported.

*3 Not applicable to Setting/Monitoring tool for C Controller module.

*4 CPU Module Logging Configuration Tool does not support the direct CPU connection (serial).

## When connecting the GOT and the personal computer by Ethernet




| PLC | GOT | | Connection cable*1 | Maximum segment length*2 | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)*3<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION*3 | GT 2506HS | - (Built into GOT) | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GX Works2<br>Setting/Monitoring tool for C Controller module | 1 personal computer for 1 GOT |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION*3 | GT 2505HS | | | | GX Works3<br>CW Configurator<br>CPU Module Logging Configuration Tool | |

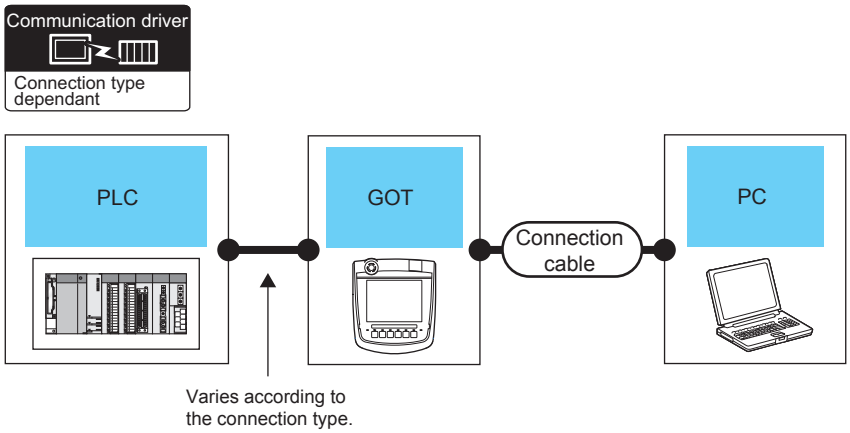
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Not applicable to Setting/Monitoring tool for C Controller module.

# PX Developer, GX Configurator

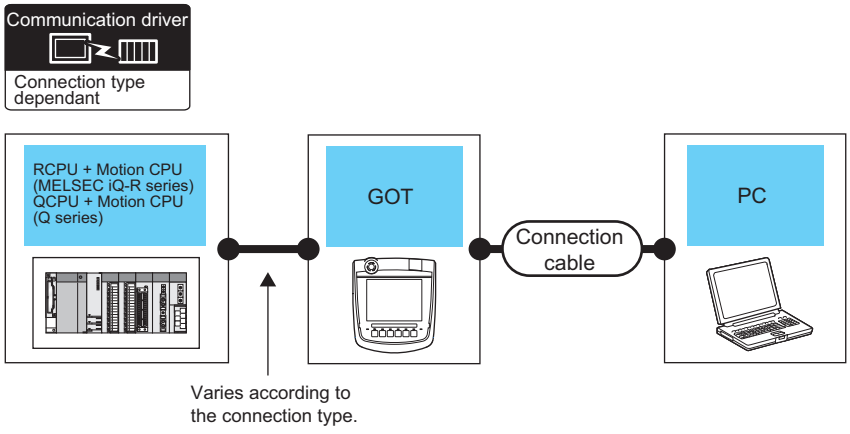
## When connecting the GOT and the personal computer by USB




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)<br>☞ Page 327 SERIAL COMMUNICATION CONNECTION | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | PX Developer<br>GX Configurator | 1 personal computer for 1 GOT |

# MT Developer, MT Works2

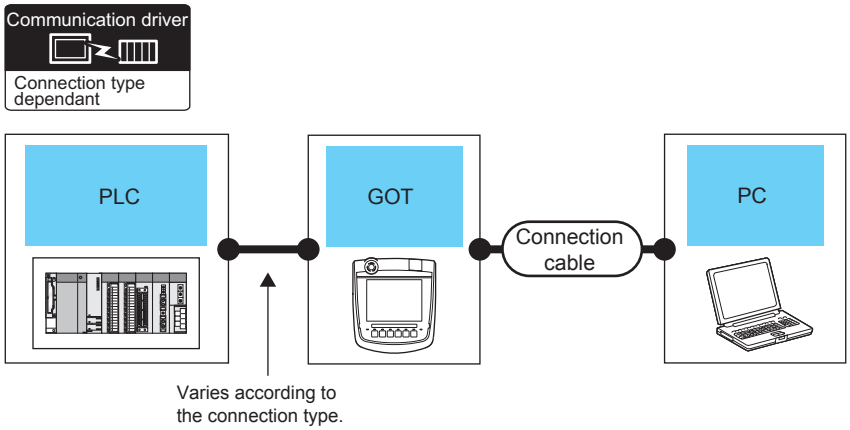
## When connecting the GOT and the personal computer by USB




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)*1<br>☞ Page 604 GOT MULTI-DROP CONNECTION*1 | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | MT Developer<br>MT Works2 | 1 personal computer for 1 GOT |

*1 The Motion CPU (MELSEC iQ-R series) does not support the direct CPU connection (serial) and GOT multi-drop connection.

## When connecting the GOT and the personal computer by Ethernet



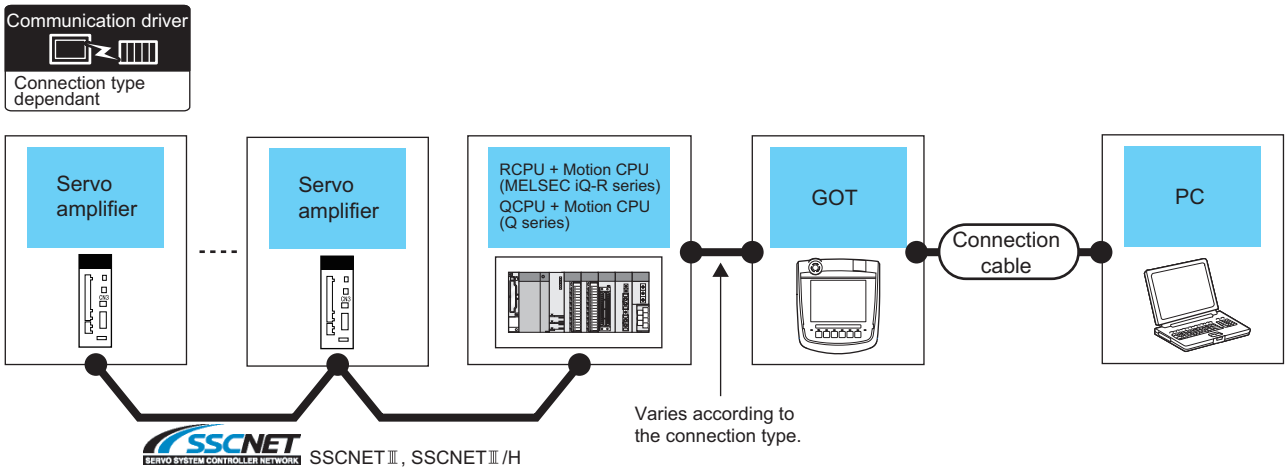

| PLC | GOT | | Connection cable*1 | Maximum segment length*2 | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | | Software | |
| For the system configuration between the GOT and PLC, refer to the following. ☞ Page 275 DIRECT CPU CONNECTION (SERIAL) | GT 2506HS | - (Built into GOT) | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | MT Works2 | 1 personal computer for 1 GOT |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

# MR Configurator, MR Configurator2

## When connecting the GOT and the personal computer by USB

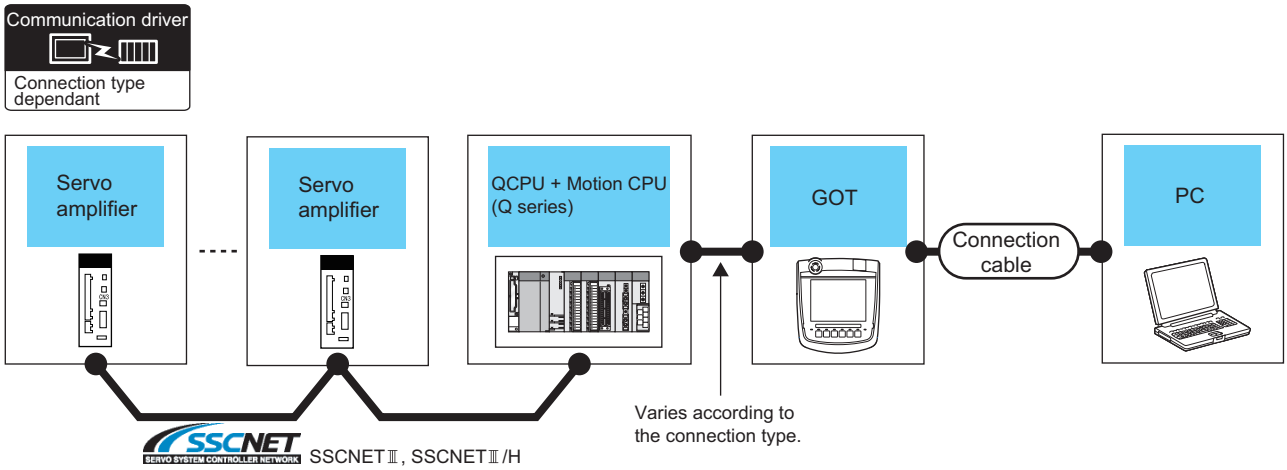



| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 102 ETHERNET CONNECTION[*1]<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL)[*2] | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | MR Configurator<br>MR Configurator2 | 1 personal computer for 1 GOT |

*1 Only MR Configurator2 is compatible with the Ethernet connection.

*2 The Motion CPU (MELSEC iQ-R series) does not support the direct CPU connection (serial).

## When connecting the GOT and the personal computer by Ethernet




| PLC | GOT | | Connection cable[*1] | Maximum segment length[*2] | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | | Software | |
| For the system configuration between the GOT and PLC, refer to the following.<br>☞ Page 275 DIRECT CPU CONNECTION (SERIAL) | GT 2506HS | - (Built into GOT) | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | MR Configurator2 | 1 personal computer for 1 GOT |

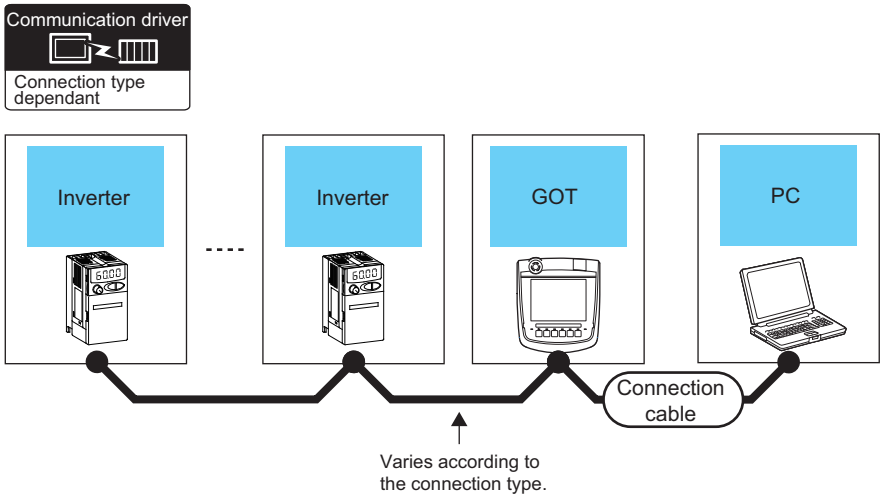
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

# FR Configurator, FR Configurator2

## When connecting the GOT and the personal computer by USB



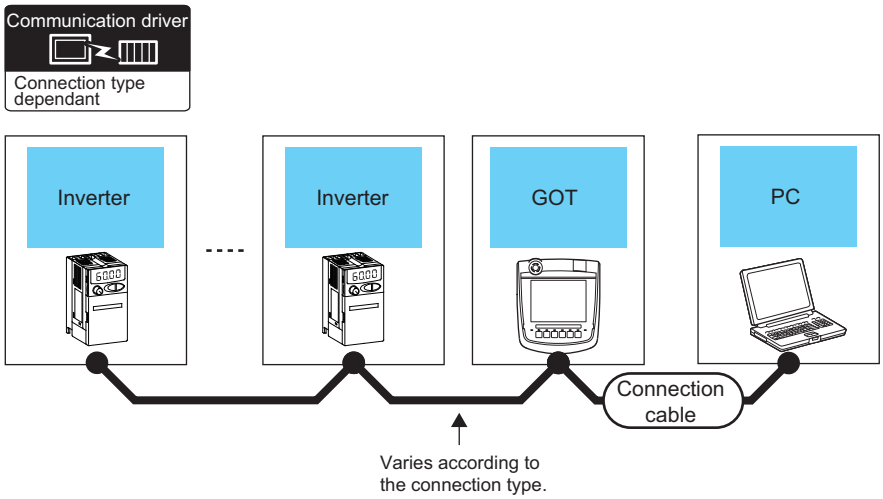



| Inverter | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For details on the system configuration between GOT and Mitsubishi Electric inverter, refer to the following. ☞ Page 427 INVERTER CONNECTION | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | FR Configurator<br>FR Configurator2 | 1 personal computer for 1 GOT |

## When connecting the GOT and the personal computer by Ethernet

**Point**

When the GOT and the inverters are connected using the direct CPU connection (serial), the communication driver [FREQROL 500/700/800, SENSORLESS SERVO] is not supported.

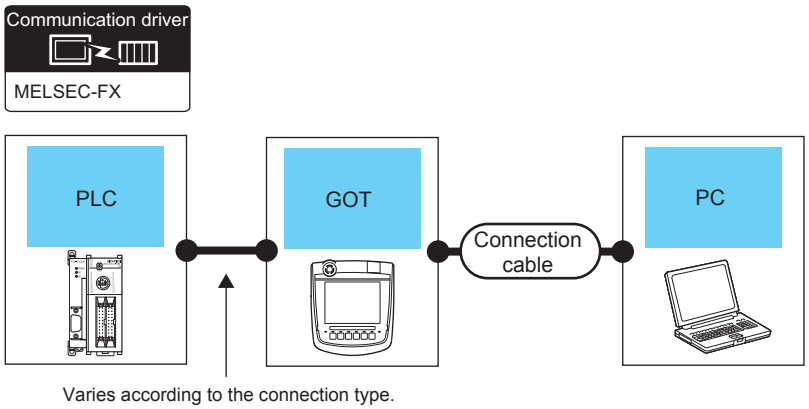



| Inverter | GOT | | Connection cable *1 | Maximum segment length *2 | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | | Software | |
| For details on the system configuration between GOT and Mitsubishi Electric inverter, refer to the following.<br>☞ Page 427 INVERTER CONNECTION | GT 2506HS<br>GT 2505HS | - (Built into GOT) | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | FR Configurator2 | 1 personal computer for 1 GOT |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

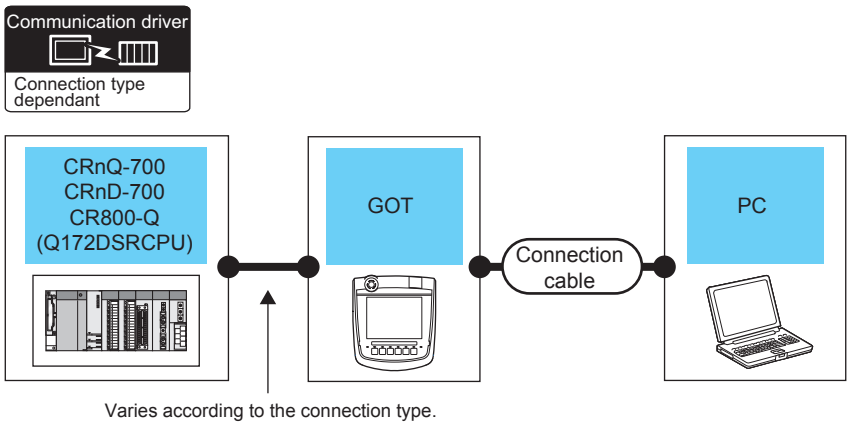
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## FX Configurator-FP, FX Configurator-EN-L, FX Configurator-EN




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following. ☞ Page 275 DIRECT CPU CONNECTION (SERIAL) | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | FX Configurator-FP, FX Configurator-EN-L<br>FX Configurator-EN | 1 personal computer for 1 GOT |

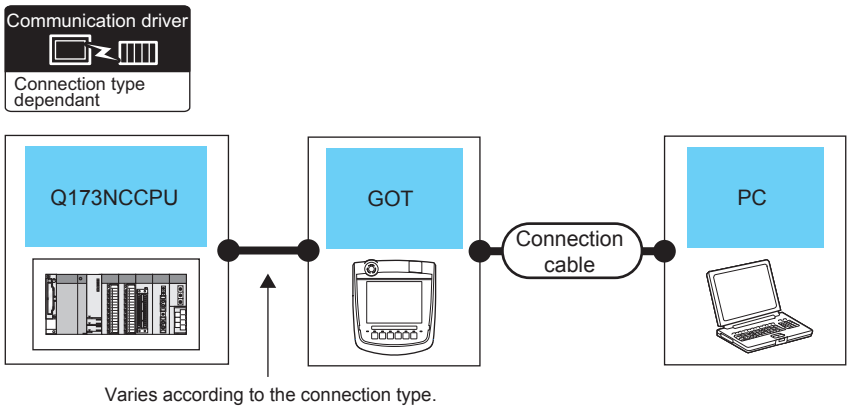
## RT ToolBox2, RT ToolBox3




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following. ☞ Page 102 ETHERNET CONNECTION ☞ Page 275 DIRECT CPU CONNECTION (SERIAL)*1 | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | RT ToolBox2<br>RT ToolBox3 | 1 personal computer for 1 GOT |

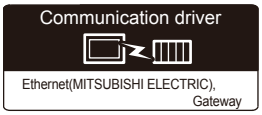
*1 CRnD-700 does not support the direct CPU connection (serial).

# NC Configurator2

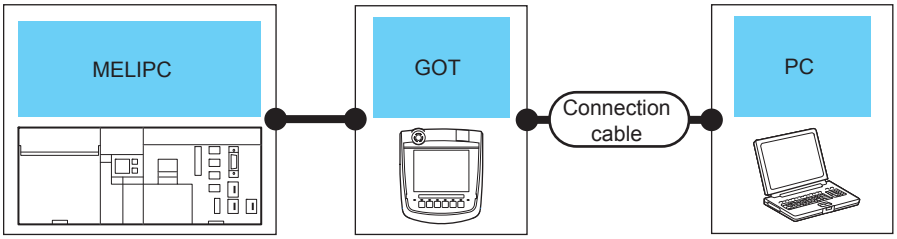



| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and PLC, refer to the following. ☞ Page 102 ETHERNET CONNECTION | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | NC Configurator2 | 1 personal computer for 1 GOT |

# MI Configurator




## When connecting the GOT and the personal computer by USB




| PLC | GOT | | Connection cable | | Personal computer | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Connection type | Model | Interface | Cable model | Max. distance | Software | |
| For the system configuration between the GOT and the MELIPC, refer to the following. ☞ Page 410 MELIPC CONNECTION*1 | GT 2506HS<br>GT 2505HS | USB | GT09-C30USB-5P(3m)<br>GT09-C20USB-5P(2m) | 3m | MI Configurator | 1 personal computer for 1 GOT |

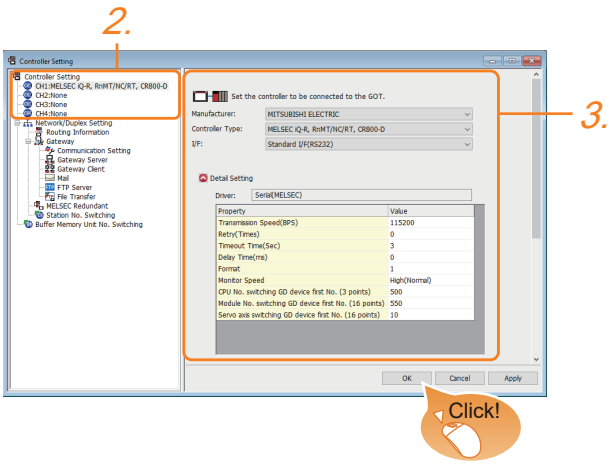
*1 The FA transparent function is supported only when the GOT is connected to the MELIPC by Ethernet.

# 13.5 GOT Side Settings

## Setting communication interface

### Controller Setting

Set the channel of the connected equipment.



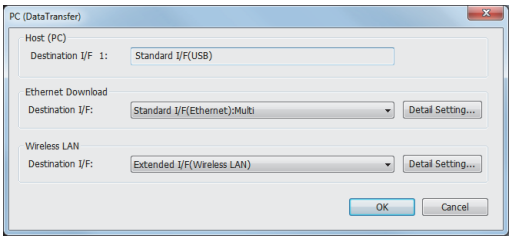

1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

### Communication setting with personal computer

Set the communication setting between the GOT and the personal computer.
For details of the setting contents, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual




1. Select [Common] → [Peripheral Setting] → [PC (Data Transfer)] from the menu.
2. The [PC (Data Transfer)] is displayed.

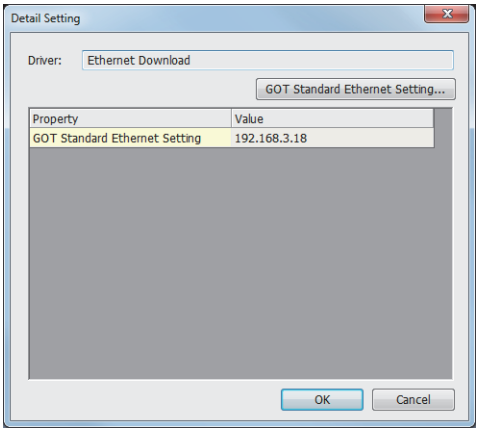
Set the interface of the GOT to be used in the communication with the personal computer.

## ■Host (PC) setting

When communicating the GOT and the personal computer in the direct connection, set the interface of the GOT to be used in the communication with the personal computer.

## ■Ethernet download setting

When communicating the GOT via Ethernet, set the interface of the GOT to be used in the communication with the personal computer.

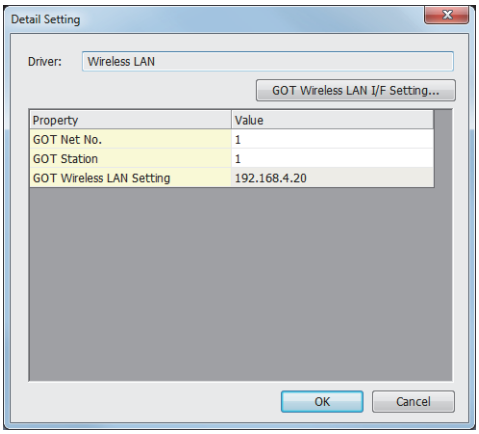



| Item | Description | Range |
|---|---|---|
| GOT Standard Ethernet Setting *1 | Set the IP address of the GOT. (Default: 192.168.3.18) | 0.0.0.0 to 255.255.255.255 |

*1 For setting, refer to the following.
☞ Page 78 GOT Ethernet Setting

## ■Wireless LAN setting

When communicating the GOT via wireless LAN, set the interface of the GOT to be used in the communication with the personal computer.




| Item | Description | Range |
|---|---|---|
| GOT Wireless LAN I/F Setting *1 | Set the IP address of the GOT. (Default: 192.168.4.20) | 0.0.0.0 to 255.255.255.255 |

*1 For setting, refer to the following.
☞ Page 78 GOT Ethernet Setting

**Point**

When connecting the GOT and the personal computer by Ethernet or wireless LAN, match the GOT IP address and the transparent port No. with those in [PLC side I/F Detailed Setting of GOT] of GX Works2.
☞ Page 716 Accessing by GX Works2

1. Click the [OK] button when settings are completed.

**Point**

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after downloading [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

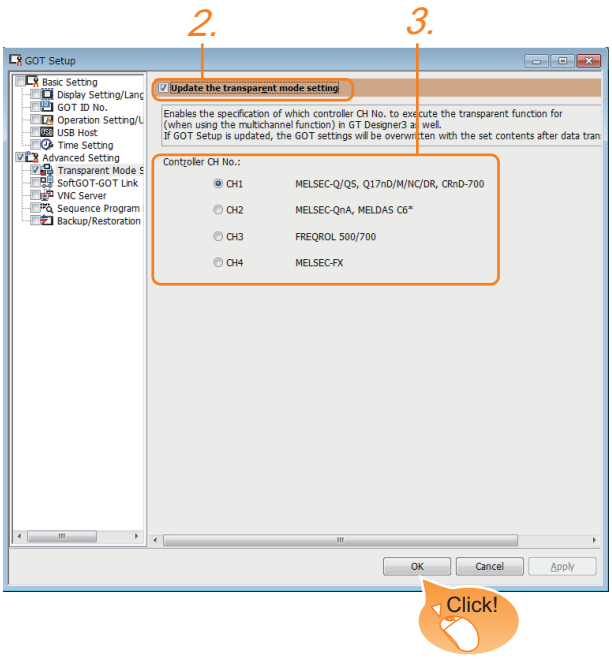
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Setup

When using the multi-channel function, specify the channel No. on which FA transparent function is executed.




1. Select [Common] → [GOT Environmental Setting] → [GOT Setup] from the menu.
2. Check [Enable GOT Setup].
3. As necessary, check one of [CH1] to [CH4]. (Default: CH1)

| GOT | Selectable CH No. |
|---|---|
| GT 2506HS<br>GT 2505HS | [CH1], [CH2], [CH3], [CH4] |

4. When you have completed the settings, click the [OK] button.

**Point**

Transparent setting on the utility screen

Transparent setting can be performed by the GOT.

For details of the operating, refer to the following.

GOT2000 Series User's Manual (Utility)

# 13.6 Personal Computer Side Setting

## Accessing by GX Works3

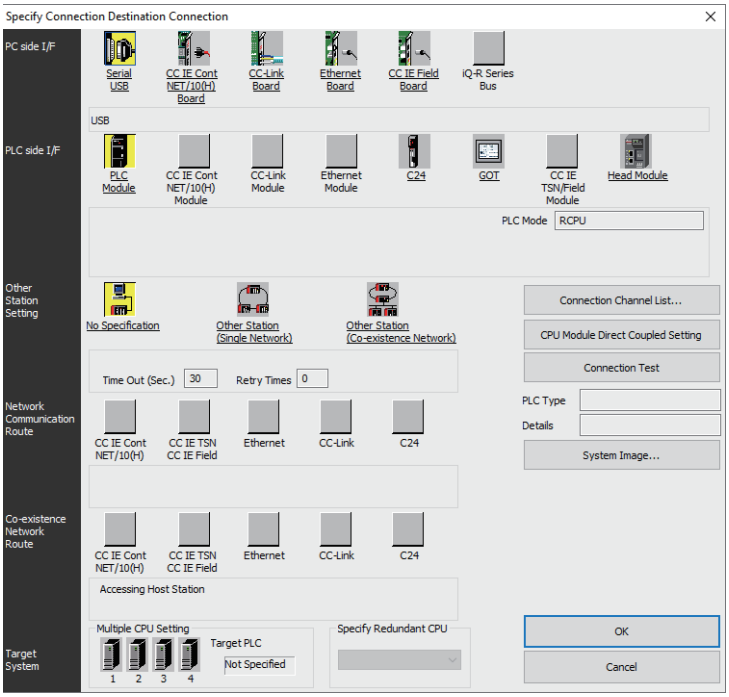
The following shows the procedure to set the FA transparent function of GX Works3.

GX Works3 Version 1.030G or later is required to use the FA transparent function for the RCPU redundant system.

### When connecting the GOT and the personal computer by USB

#### ■Connecting the GOT and PLC in Ethernet connection

- When connecting to RCPU

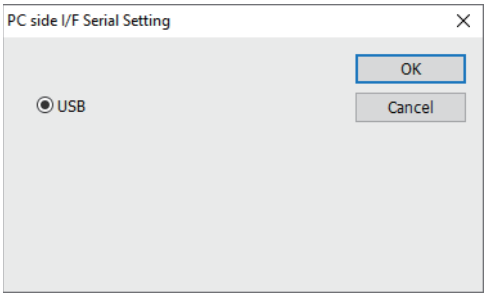


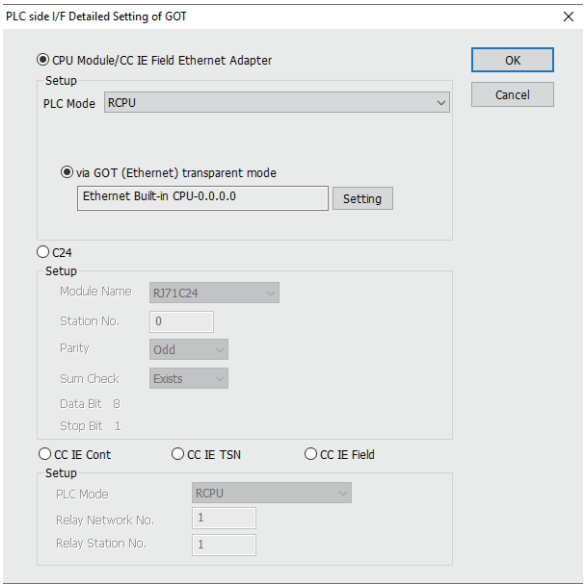

**1.** Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

**2.** Set [Specify Connection Destination].

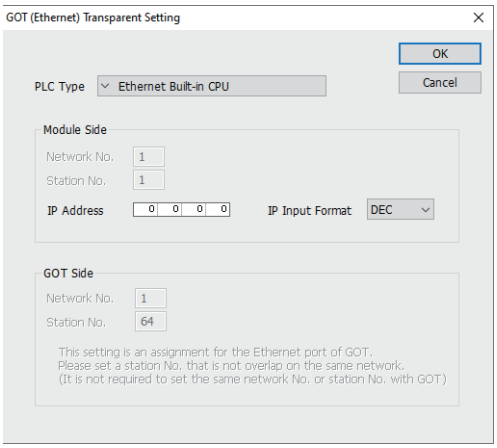
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification






***3.*** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

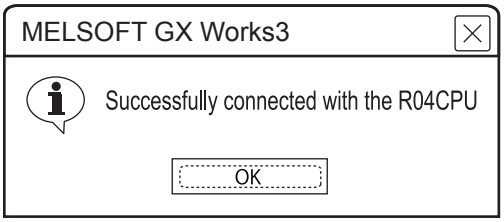
***4.*** On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].




***5.*** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

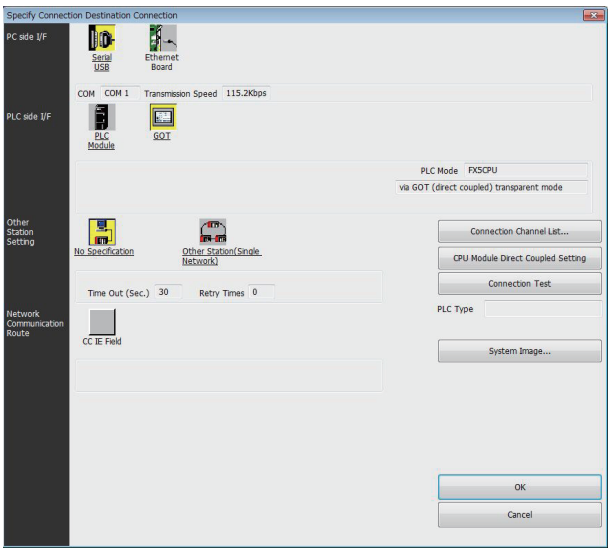
Here, set the built-in Ethernet port CPU or Ethernet module, which is firstly connected via a GOT.

| Item | | Description |
|---|---|---|
| [PLC Type] | | Select the controller connected to the GOT by Ethernet.<br>• [RJ71EN71]<br>• [Ethernet Built-in CPU] |
| [Module Side] | [Network No.] | When [RJ71EN71] is set for [PLC type], specify the network number assigned to the Ethernet module. |
| | [Station No.] | When [RJ71EN71] is set for [PLC type], specify the station number assigned to the Ethernet module. |
| | [IP address] | Specify the IP address assigned to the built-in Ethernet port CPU or Ethernet module. |




***6.*** The screen returns to the [Connection Channel Setup]. Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

• When connecting to FX5U, FX5UC, or FX5UJ



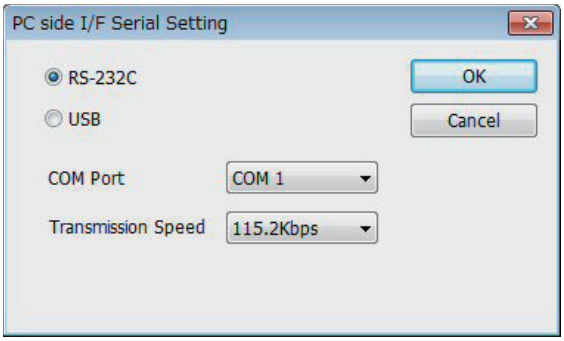

***1.*** Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.
Displays the [Specify Connection Destination] dialog.

***2.*** Set the [Specify Connection Destination]:

• PC side I/F: Serial USB

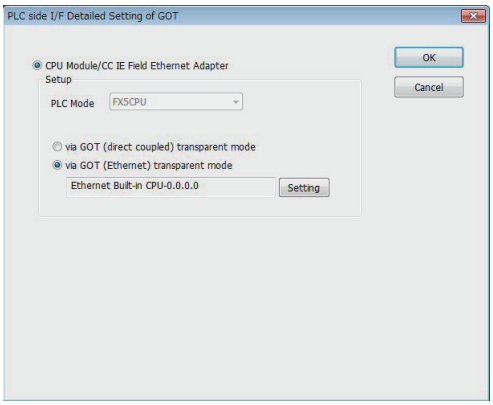
• PLC side I/F: GOT

• Other Station Setting: No Specification



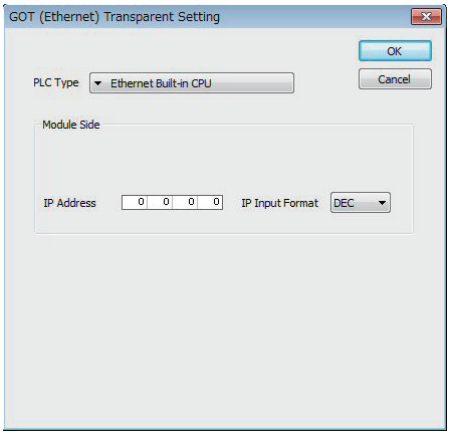

***3.*** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

**4.** Select [USB] in the [PC side I/F Serial Setting] dialog.



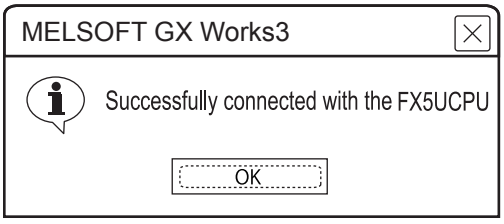

**5.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**6.** On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT (Ethernet) transparent mode] checkbox and click [Setting...].



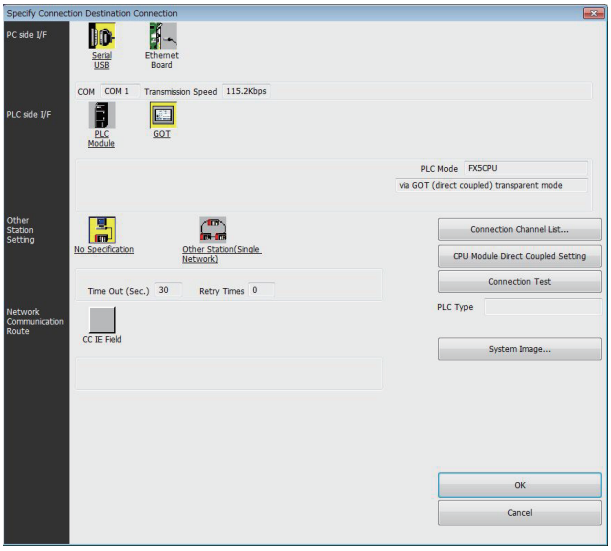

**7.** By clicking [Setting], the [GOT (Ethernet) transparent setting] is displayed.
Here, set the built-in Ethernet port CPU , which is firstly connected via a GOT.

**8.** Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port CPU.




**9.** The screen returns to Specify Connection Destination Connection1.
Click [Connection Test] to check if GX Works3 has been connected to the FX5CPU.

## ■Connecting the GOT and PLC in direct CPU connection (serial) (FX5U, FX5UC, FX5UJ)

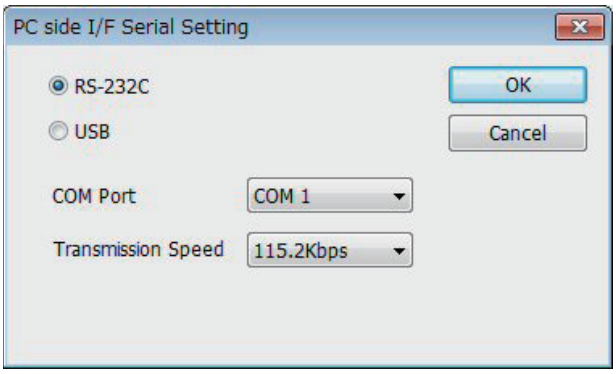



**1.** Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.

Displays the [Specify Connection Destination] dialog.

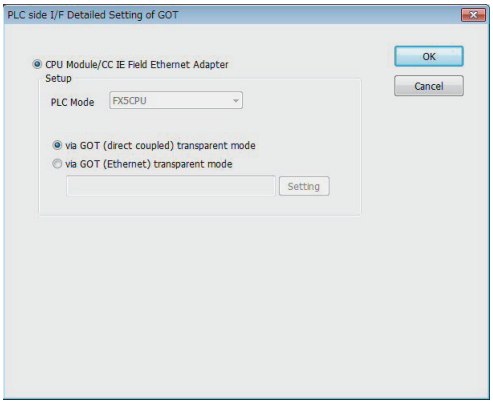
**2.** Set the [Specify Connection Destination]:

- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification:



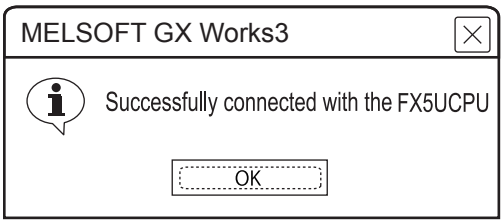

**3.** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

**4.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**5.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

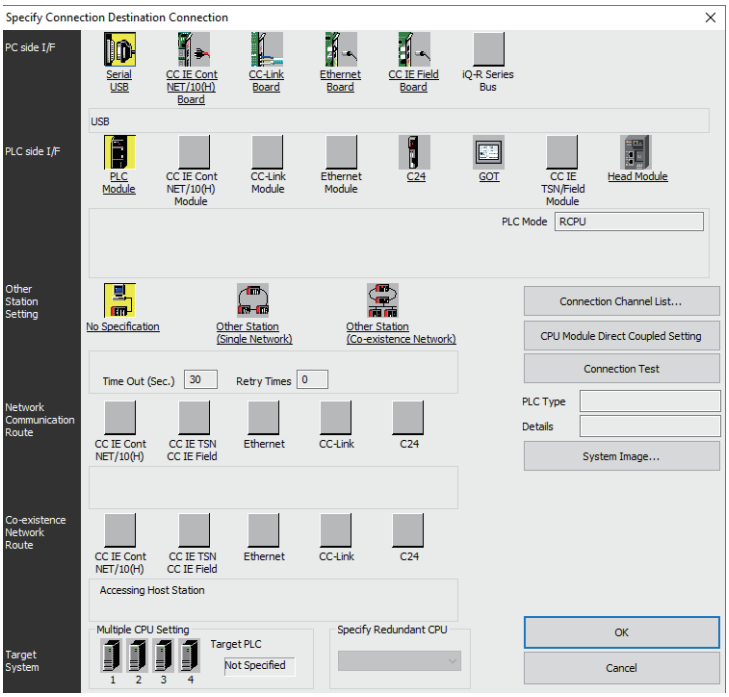
**6.** Check-mark [via GOT (direct coupled) transparent mode] in [PLC side I/F Detailed Setting of GOT].




**7.** The screen returns to Specify Connection Destination Connection1.

Click [Connection Test] to check if GX Works3 has been connected to the FX5UCPU.

### ■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

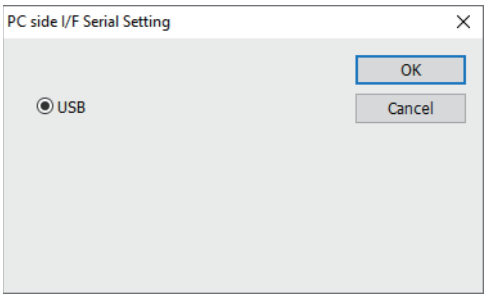


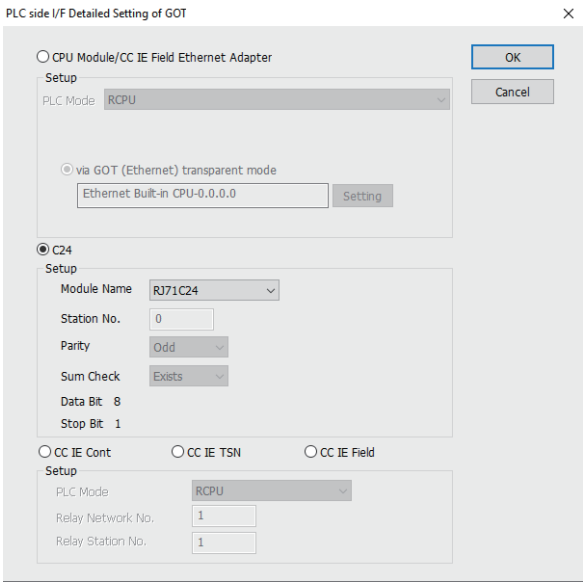

**1.** Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

**2.** Set [Specify Connection Destination].

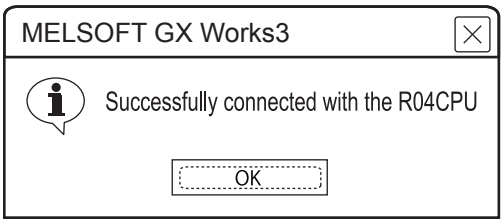
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification




**3.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**4.** Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

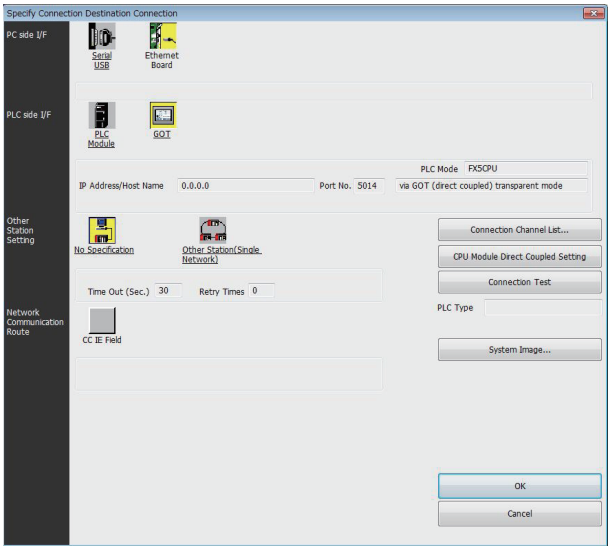



**5.** The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

## When connecting the GOT and the personal computer by Ethernet

### ■Connecting the GOT and PLC in direct CPU connection (serial) (FX5U, FX5UC, FX5UJ)

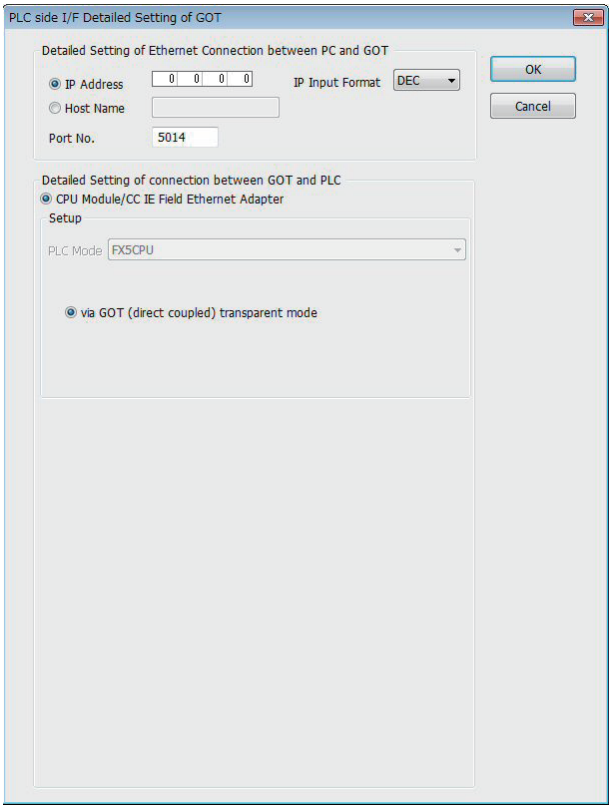



**1.** Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.

Displays the [Specify Connection Destination] dialog.

**2.** Set [Specify Connection Destination].

- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting : No Specification

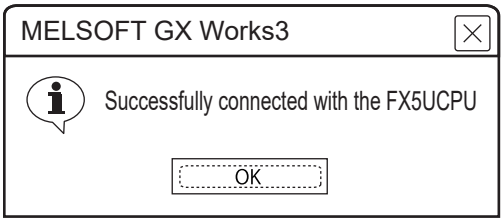



**3.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**4.** [Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

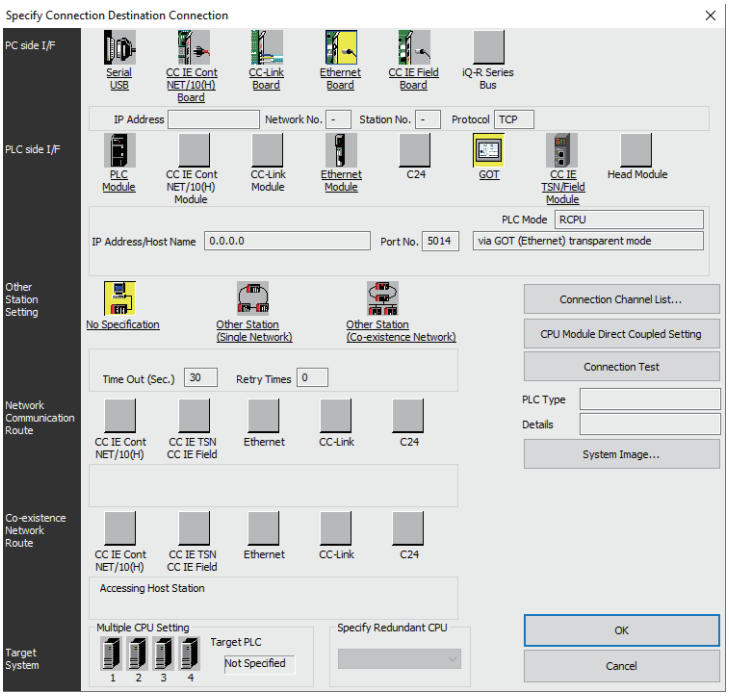
☞ Page 692 Ethernet download setting




**5.** The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if GX Works3 has been connected to the FX5CPU.

## ■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

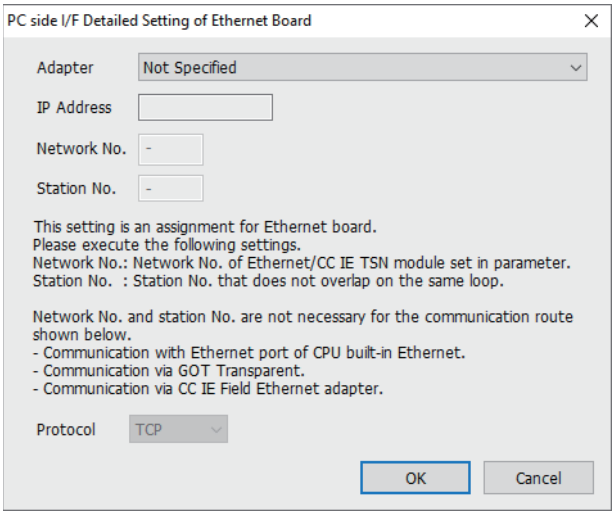



**1.** Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

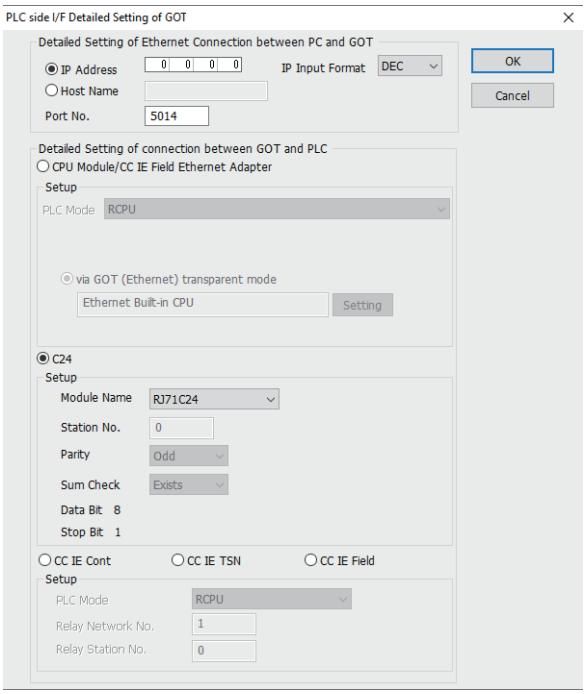
**2.** Set [Specify Connection Destination].

- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting : No Specification




***3.*** Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

***4.*** Network No. and Station No. are not required to be changed (default) because they are not used.



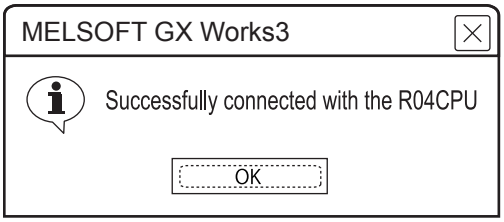

***5.*** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

***6.*** Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 692 Ethernet download setting

***7.*** Check-mark [C24] in [Detail setting for GOT and PLC connection].




***8.*** The screen returns to the [Connection Channel Setup].

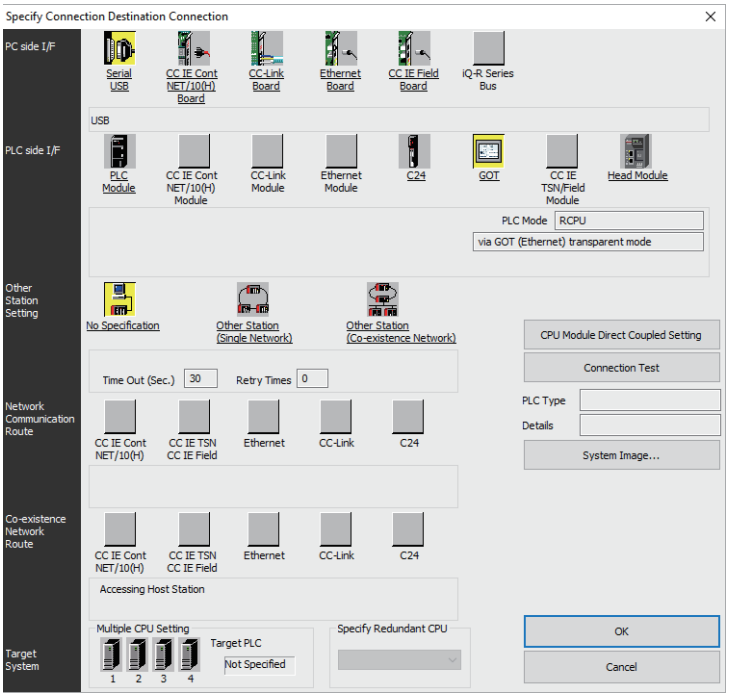
Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

# Accessing by CW Configurator

The following shows the procedure to set the FA transparent function of CW Configurator.

## When connecting the GOT and the personal computer by USB

### ■Connecting the GOT and PLC in Ethernet connection

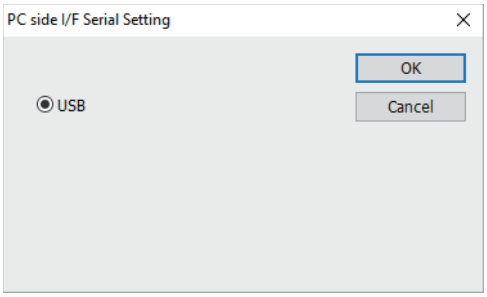


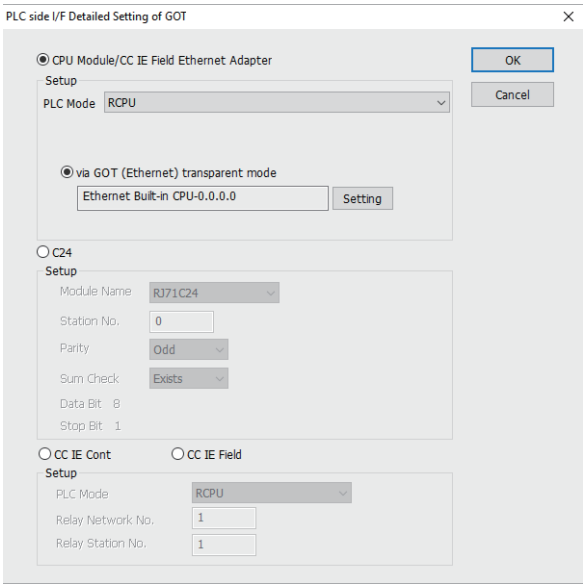

***1.*** Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

***2.*** Set [Specify Connection Destination].

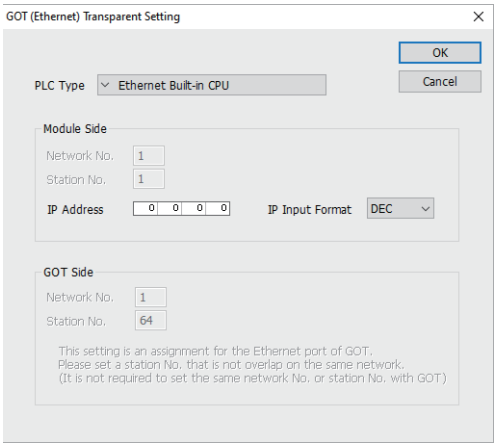
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification






***3.*** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

***4.*** On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].

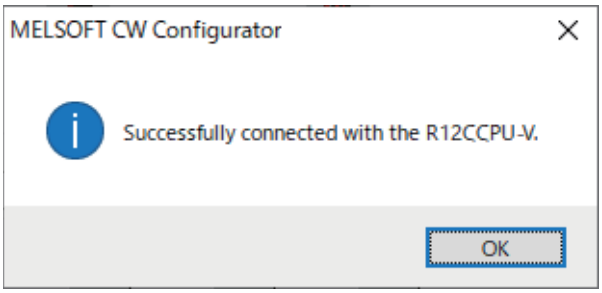



***5.*** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the built-in Ethernet port CPU, which is firstly connected via a GOT.

***6.*** Set [Ethernet Built-in CPU] for [PLC Type].

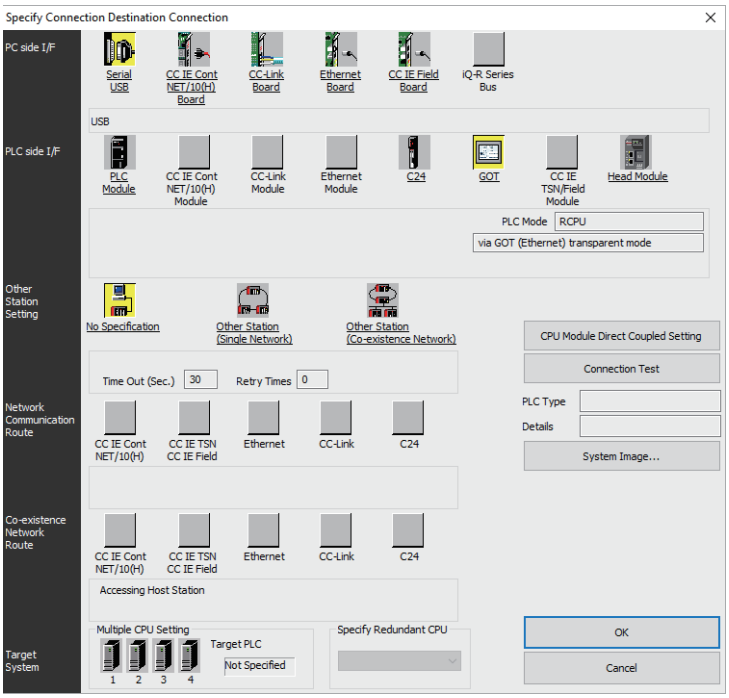
***7.*** For [IP address], specify the IP address that is set for the Built-in Ethernet port CPU.




***8.*** The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

## ■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

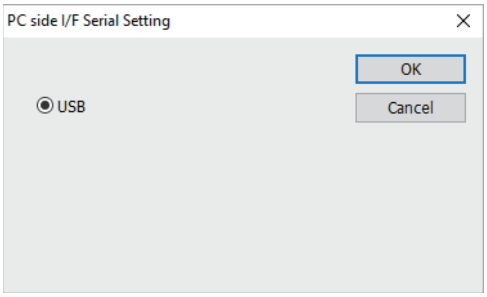


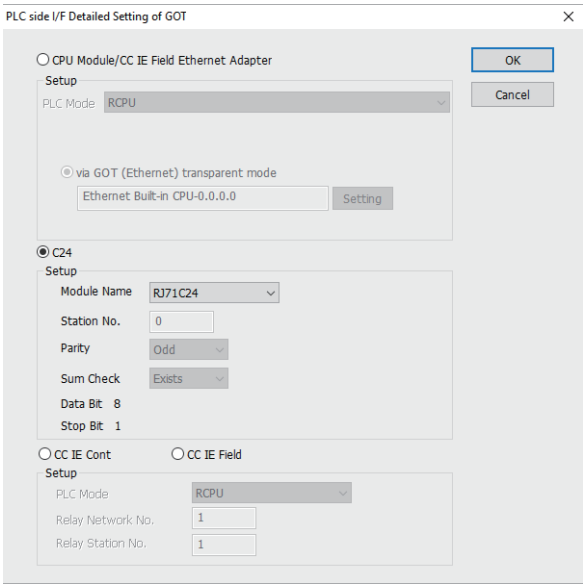

**1.** Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

**2.** Set [Specify Connection Destination].

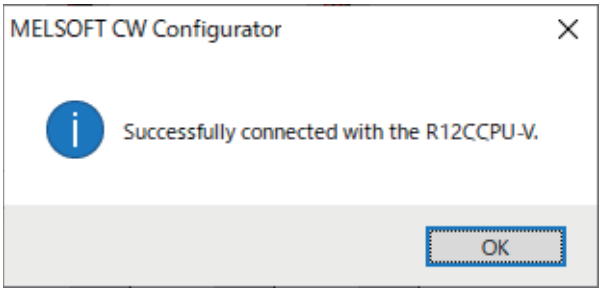
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification






***3.*** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

***4.*** Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

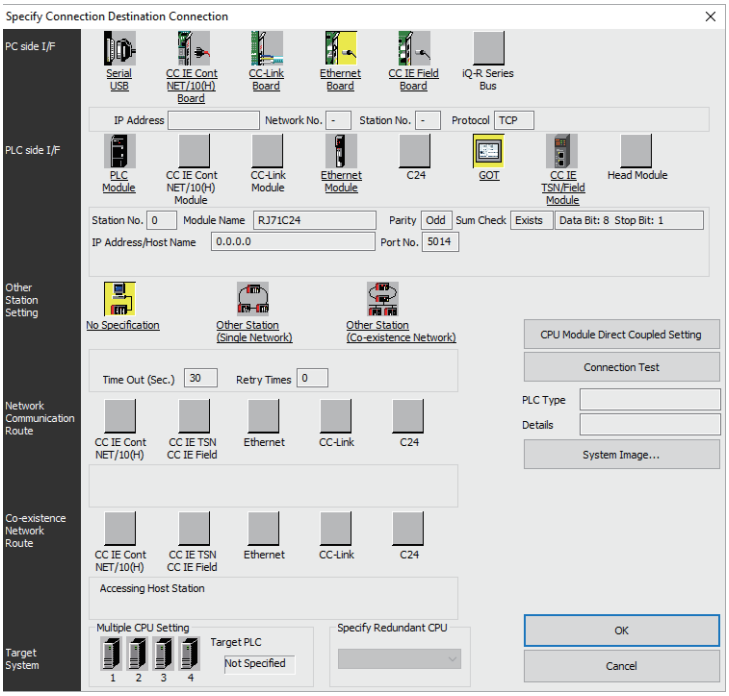



***5.*** The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

## When connecting the GOT and the personal computer by Ethernet

### ■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

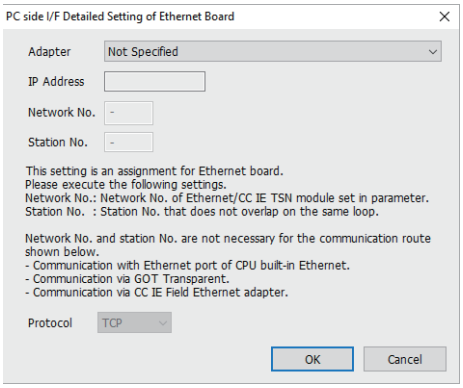



**1.** Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

**2.** Set [Specify Connection Destination].

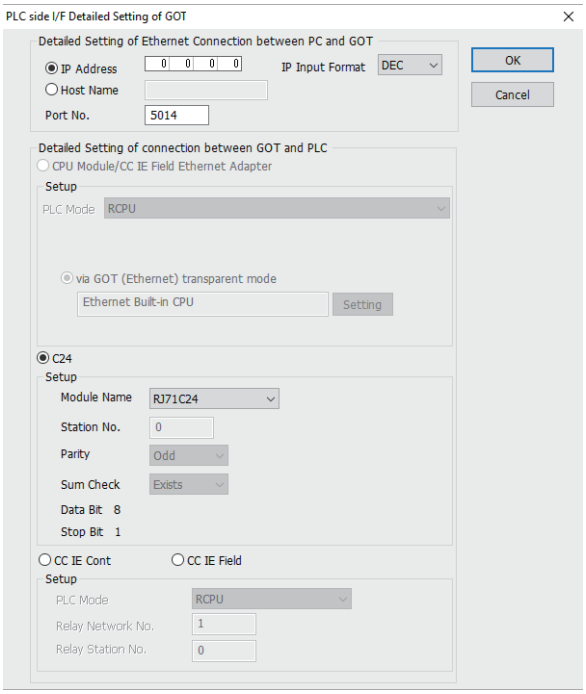
- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting: No Specification




**3.** Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

**4.** Select [Adapter] in [PC side I/F Detailed Setting of Ethernet Board].

The network number and the station number are not used. The default settings need not be changed.




***5.*** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

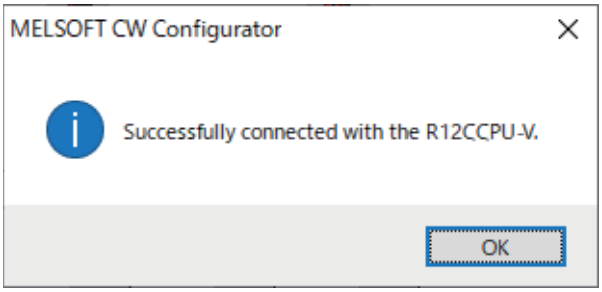
***6.*** Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Check the IP address and port number on the GOT side in the [GOT Ethernet Setting] window in GT Designer3.

For the details, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

***7.*** Check-mark [C24] in [Detail setting for GOT and PLC connection].



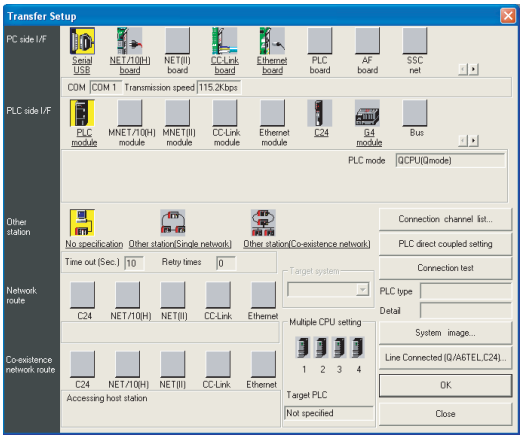

***8.*** The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

# Accessing the PLC by the PX Developer, GX Configurator

The setting method for the FA transparent function of PX Developer is used as an example.

## Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))




**1.** Click [Online] → [Transfer Setup] in PX Developer.

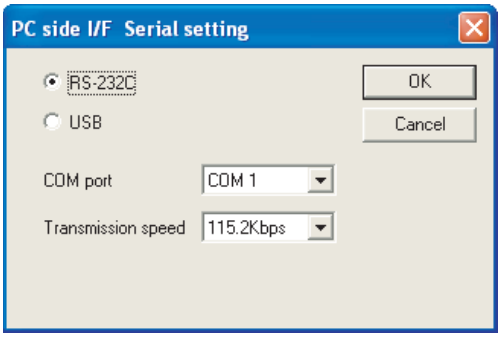
**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:

PC side I/F: Serial USB (COM)

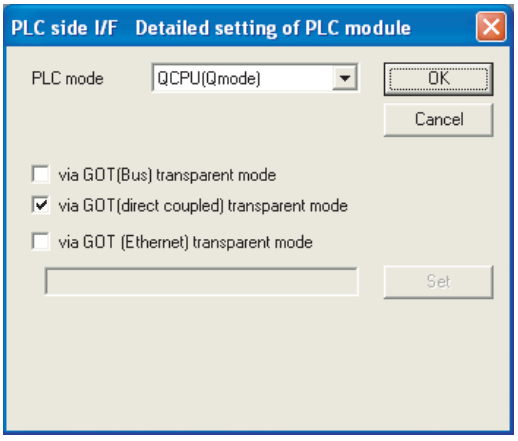
PLC side I/F: PLC module

Other station: No specification




**4.** Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].

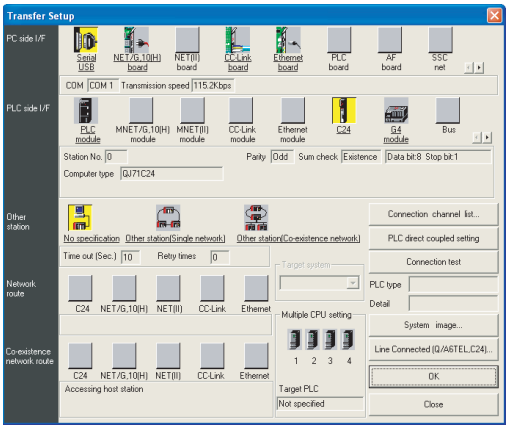
**7.** Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].




**8.** The screen returns to [Transfer Setup].

Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

## Connecting the GOT and PLC in serial communication connection (when connected to the QJ71C24(N)) (GX Configurator is not supported.)




**1.** Click [Online] → [Transfer Setup] in PX Developer.

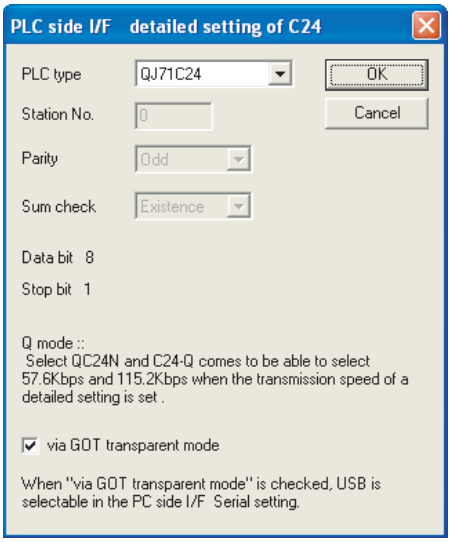
**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:

PC side I/F: Serial

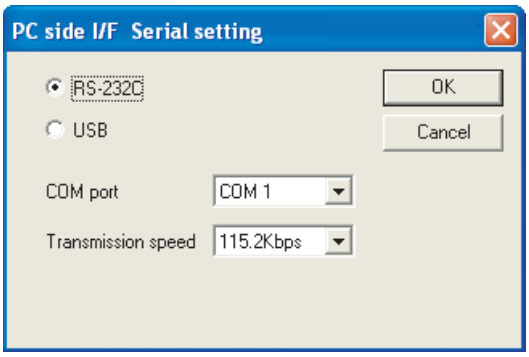
PLC side I/F: C24

Other station: No specification




**4.** Return to [Transfer Setup] and double-click [C24] of the PLC side I/F to display [PLC side I/F detailed setting of C24].

**5.** Check [via GOT transparent mode] for [PLC side I/F detailed setting of C24].




**6.** Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

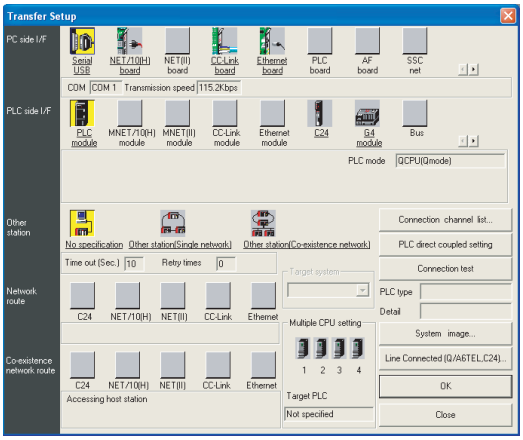
**7.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**8.** The screen returns to [Transfer Setup].

Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

## When connecting the GOT and PLC in Ethernet communication (when connecting to QCPU (Q mode))




**1.** Click [Online] → [Transfer Setup] in PX Developer.

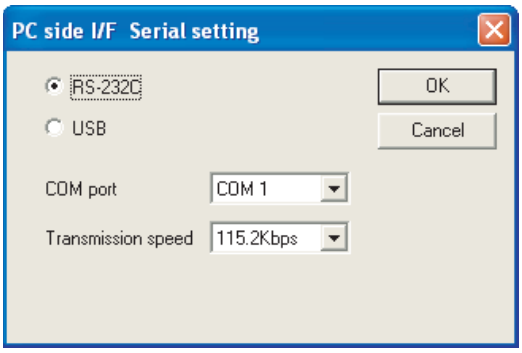
**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:

PC side I/F: Serial USB (COM)

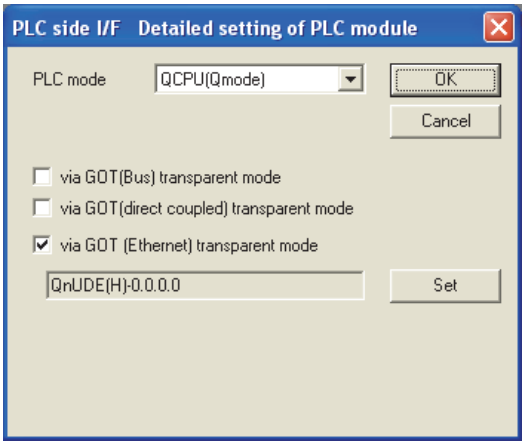
PLC side I/F: PLC module

Other station: No specification



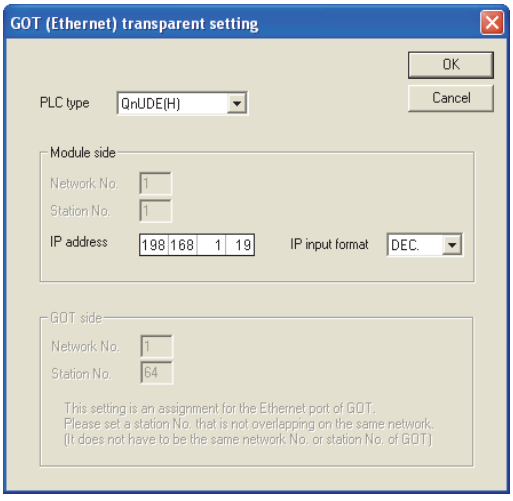

**4.** Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].

**7.** On the [PLC side I/F Detailed setting of PLC module], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].




**8.** By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.

Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

**9.** Set [QnUDE (H)] or [QJ71E71] for [Type name].

When connecting the Q173NCCPU, set [QJ71E71].

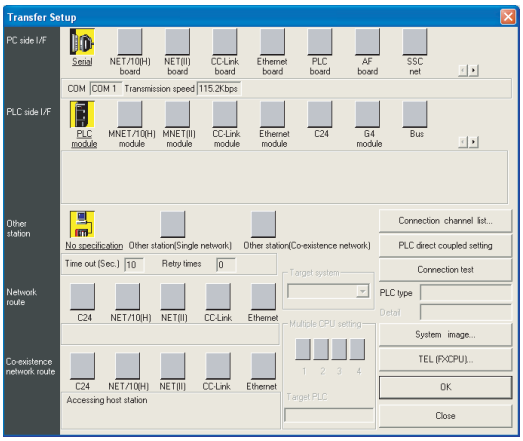
**10.** Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.
When [QnUDE (H)] is set for [Type name], the setting is not required.

**11.** Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.




**12.** The screen returns to [Transfer Setup].
Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

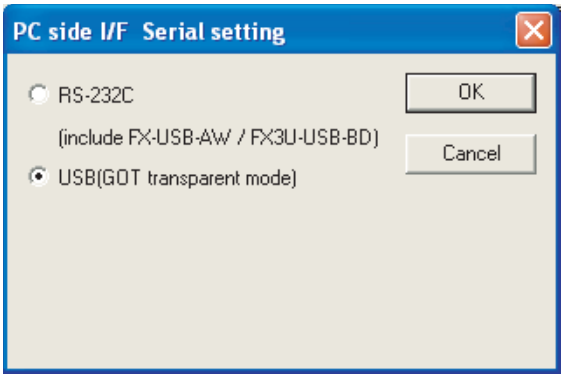
## Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to FXCPU)




**1.** Click [Online] → [Transfer Setup] in PX Developer.

**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:
PC side I/F: Serial
PLC side I/F: PLC module
Other station: No specification




**4.** Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

**5.** Select [USB (GOT transparent mode)] in the [PC side I/F Serial Setting] dialog.




**6.** The screen returns to the [Transfer Setup].

Click the [Connection Test] to check if PX Developer has been connected to the FXCPU.

**Point**

How to operate PX Developer

For the PX Developer operation method, refer to the following manual.

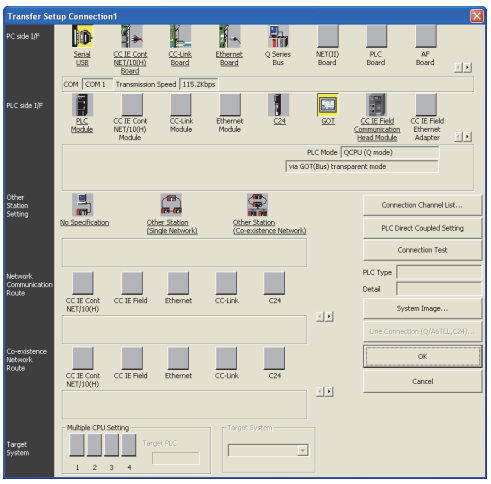
PX Developer Version 1 Operating Manual (Programming Tool)

# Accessing by GX Works2

The following shows the procedure to set the FA transparent function of GX Works2.

## When connecting the GOT and the personal computer by USB

### ■Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))

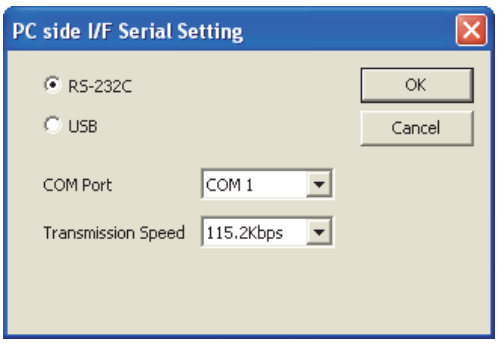



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
2. The [Transfer Setup Connection1] is displayed.
3. Set the [Transfer Setup Connection1]:

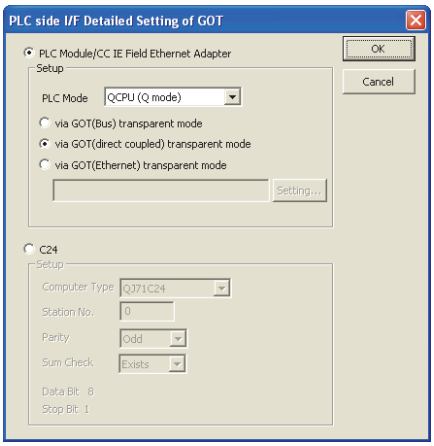
PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No Specification:

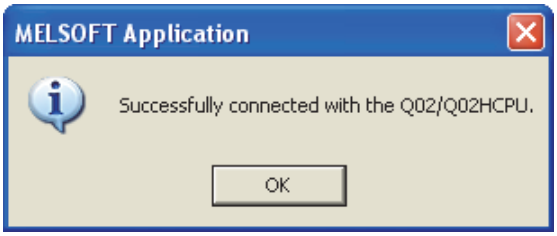



4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.



**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

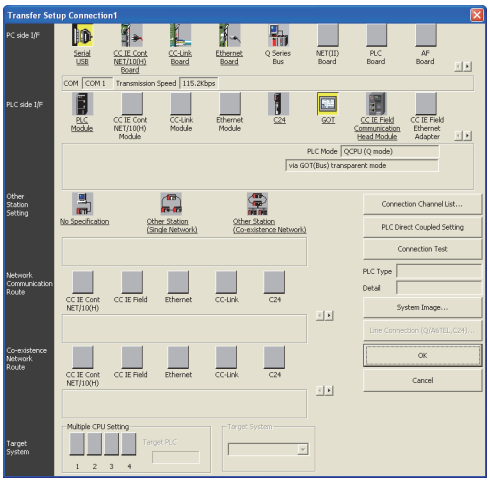
**7.** Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed Setting of GOT].




**8.** The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

### ■Connecting the GOT and PLC in serial communication connection (when connecting to QJ71C24 (N))




**1.** Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

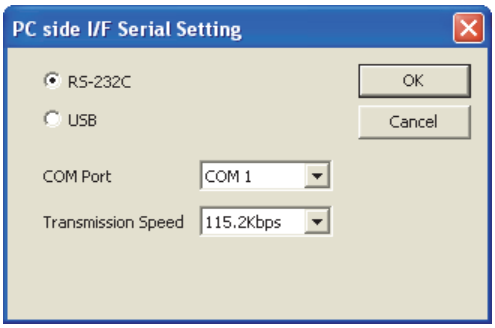
**2.** The [Transfer Setup Connection1] is displayed.

**3.** Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

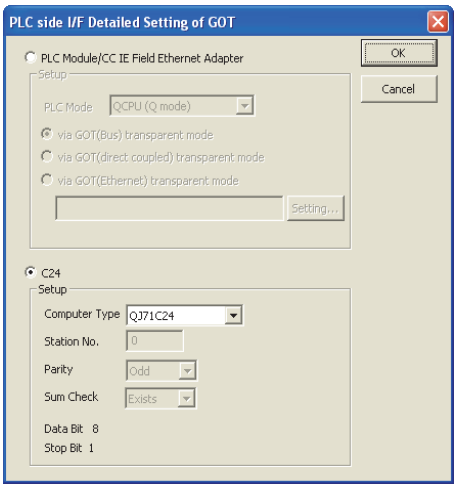
PLC side I/F: GOT

Other Station Setting: No Specification



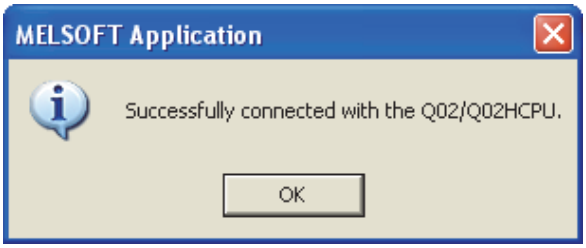

**4.** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

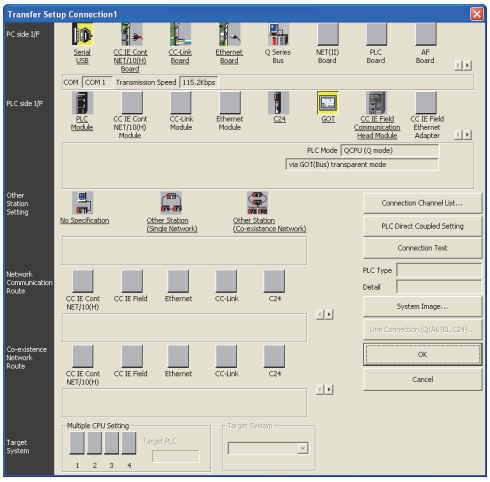



**8.** The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

## ■Connecting the GOT and PLC in Ethernet connection

• Connecting to QCPU (Q mode)




**1.** Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

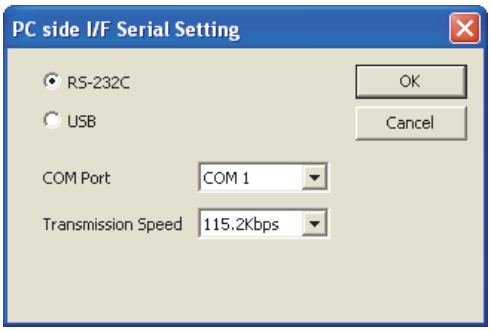
**2.** The [Transfer Setup Connection1] is displayed.

**3.** Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

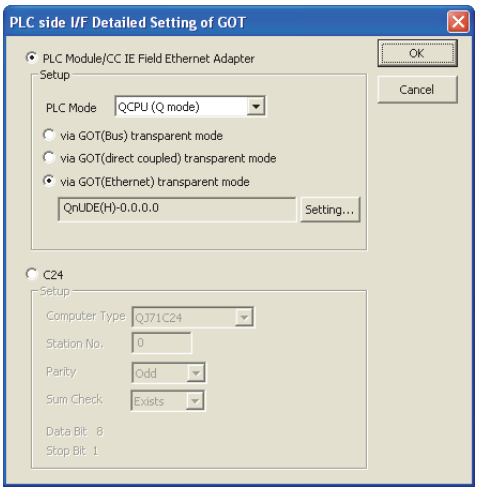
PLC side I/F: GOT

Other Station Setting: No Specification



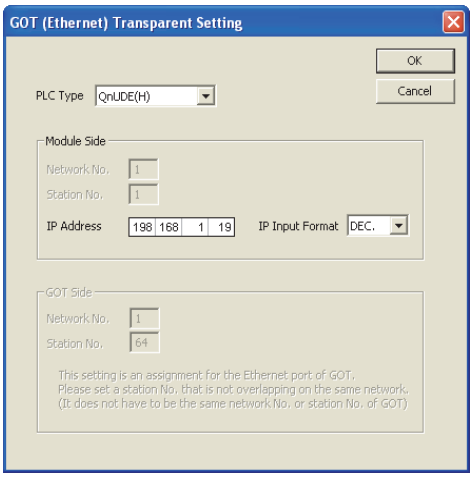

**4.** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].




**8.** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

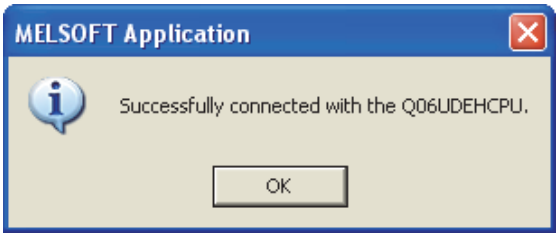
Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

**9.** Set [QnUDE(H)] or [QJ71E71] for [PLC Type].

**10.** Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [PLC type], the setting is not required.

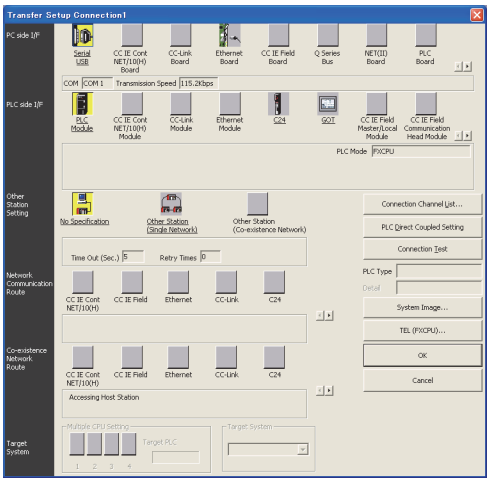
**11.** Specify the IP address for [IP Address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.




**12.** The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

- Connecting to FXCPU




**1.** Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

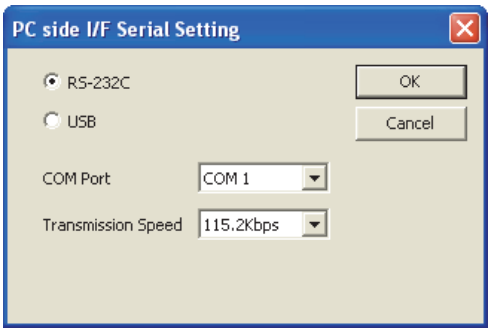
**2.** The [Transfer Setup Connection1] is displayed.

**3.** Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

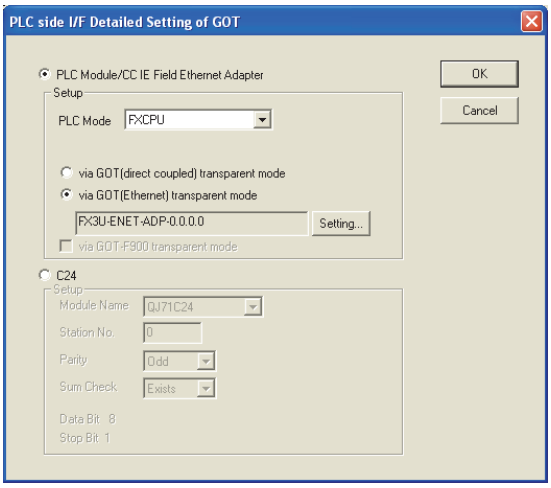
PLC side I/F: GOT

Other Station Setting: No Specification



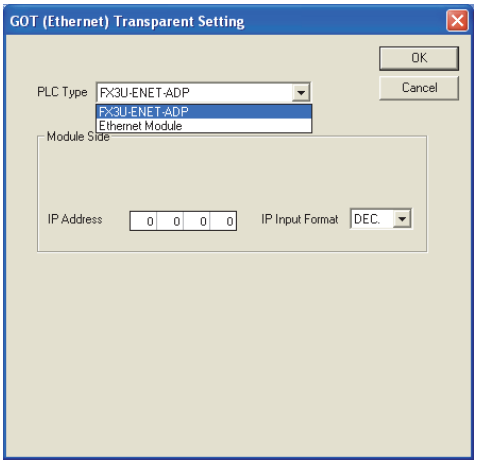

**4.** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

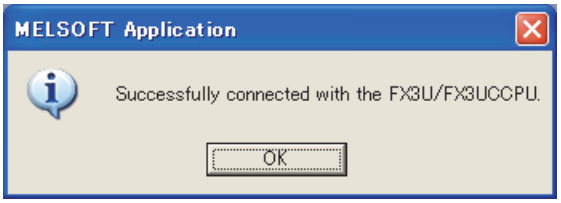
**7.** On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].




**8.** By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.
Here, set the [FX3U-ENET-ADP] or [Ethernet Module], which is connected via a GOT.

**9.** Set [FX3U-ENET-ADP] or [Ethernet Module] for [PLC Type].

**10.** Specify the IP address for [IP address] same as the IP address assigned to the [FX3U-ENET-ADP] or [Ethernet Module].




**11.** The screen returns to [Transfer Setup].
Click [Connection Test] to check if GX Works2 has been connected to the FXCPU.

## ■Connecting the GOT and Ethernet adapter (NZ2GF-ETB) in Ethernet connection, and connecting it to a PLC in the CC-Link IE Field Network.

This section describes the settings of the GX Works2 in the following case of system configuration.

**Point**

Version of GX Works2

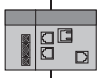
GX Works2 Version 1.34L or later is required to execute the FA transparent function with using Ethernet adapter (NZ2GF-ETB).

<GOT>
(Use default value for settings other than the following.)



Network No. :3
PC No. :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

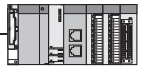
Ethernet



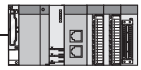
<Ethernet adapter module>
(Use default value for settings other than the following.)
・Ethernet setting
IP address :192.168.3.30
CC-Link IE Field Network setting
Network No. :1
Station No. :1

CC-Link IE Field Network

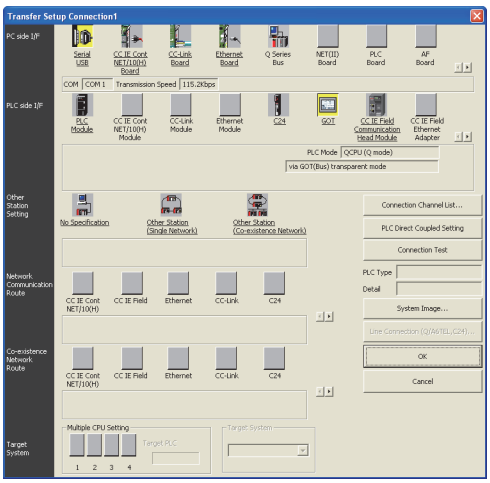
HUB



<CC-Link IE Field Network Master/Local module>
(Use default value for settings other than the following.)
Network Type : CC IE Field (Master station)
Network No. : 1
PC No. : 0
Total Stations : 2



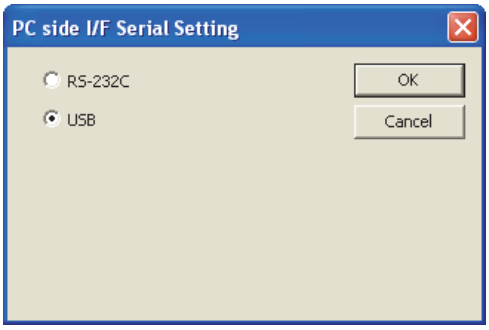
<CC-Link IE Field Network Master/Local module>
(Use default value for settings other than the following.)
Network Type : CC IE Field (Local station)
Network No. : 1
PC No. : 2



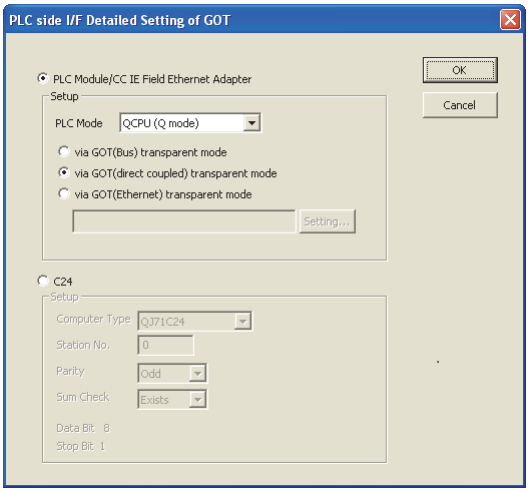
1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
2. The [Transfer Setup Connection1] is displayed.
3. Set the [Transfer Setup Connection1].

PC side I/F: Serial USB

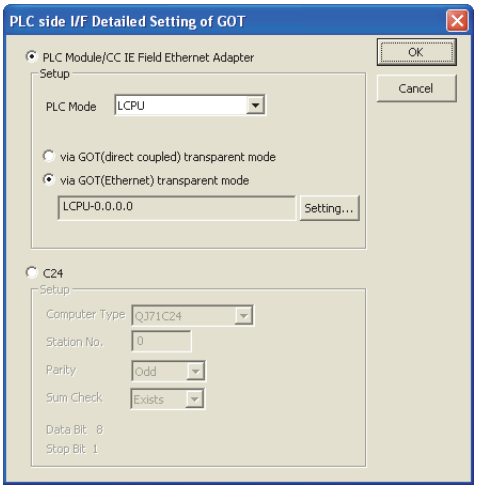
PLC side I/F: GOT



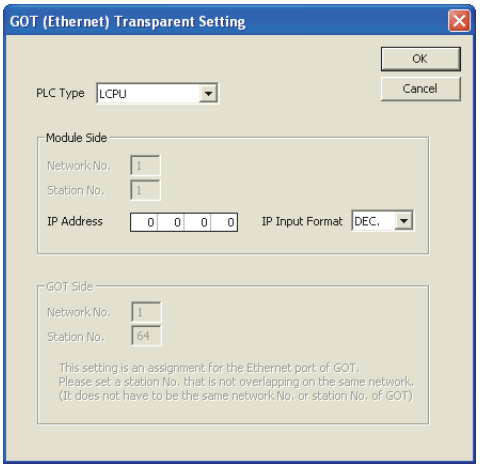

4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.




6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
7. Set the [CPU mode] to [LCPU].



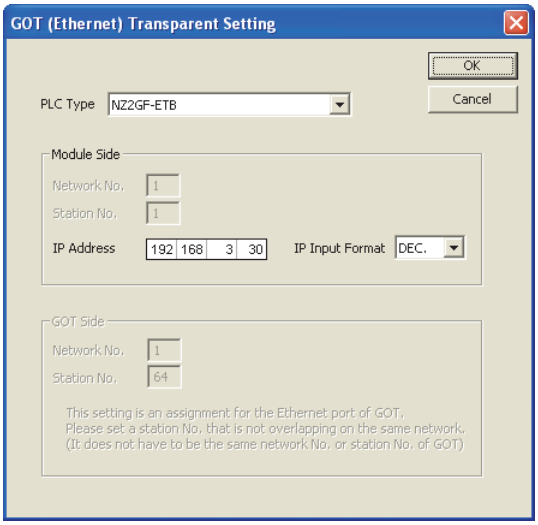
**8.** On the[PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].




**9.** [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the Ethernet module, which is firstly connected via a GOT.

**10.** Set [NZ2GF-ETB] for [PLC Type].

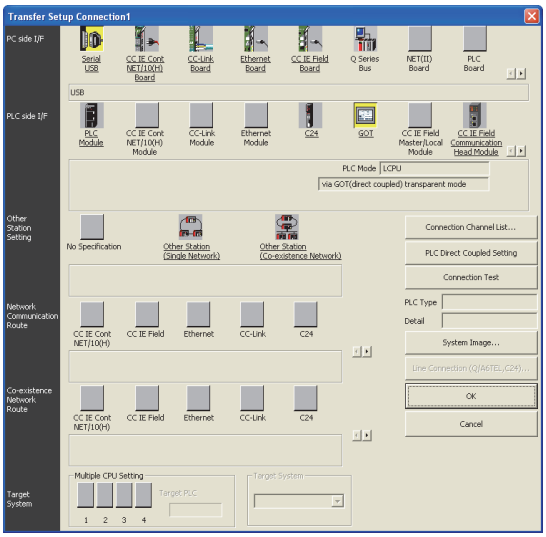



**11.** Set the same number to [IP address] as the number assigned to NZ2GF-ETB, and click [OK].

In the system configuration example, the setting is as follows.

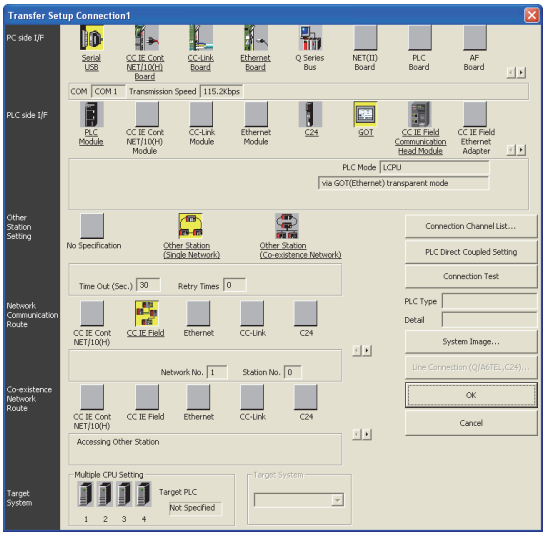
[IP address]: 192 168 3 30

**12.** Return to [PLC side I/F Detailed Setting of GOT], and click [OK].

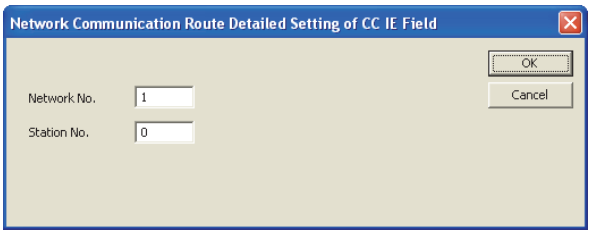



**13.** The [Transfer Setup Connection1] is displayed.

**14.** Click [Other station (Single network)].




**15.** Double-click [CC IE Field].



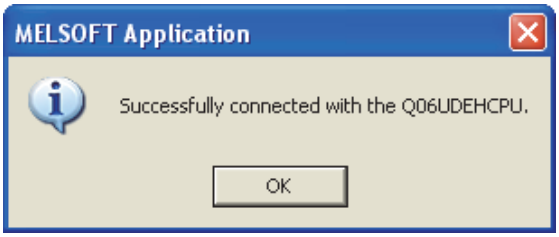

**16.** Network Communication Route Detailed Setting of CC IE Field is displayed.

**17.** Set [Network No.] and [Station No.] assigned to CPU, and click [OK].

When connecting to CC-Link IE Field Network Master/Local module of the system configuration example, the setting is as follows.

[Network No.] :1

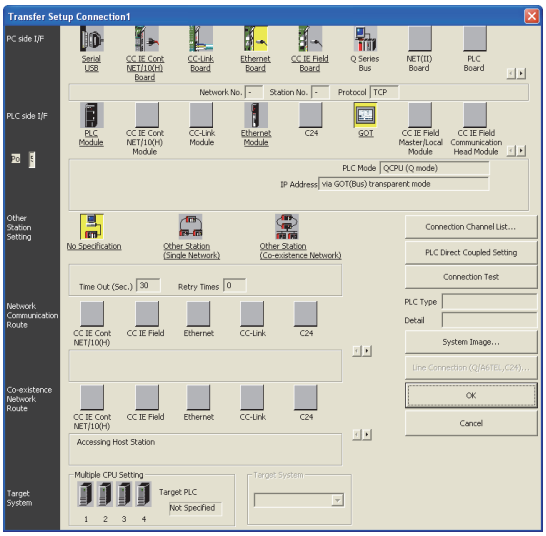
[Station No.] :0




**18.** The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

## When connecting the GOT and the personal computer by Ethernet

### ■Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))




**1.** Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

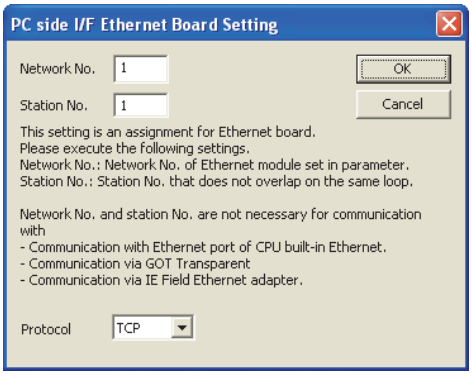
**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:

PC side I/F :Ethernet Board

PLC side I/F :GOT

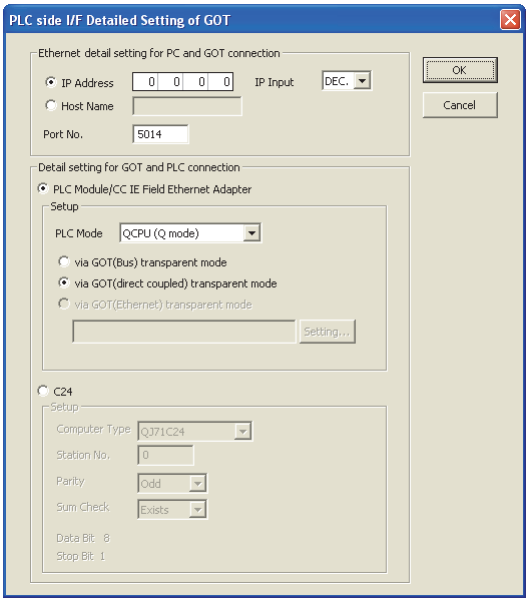
Other Station Setting : No specification




**4.** Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

**5.** Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.

(For bus connection)



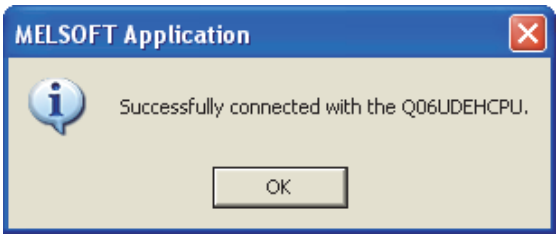

**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

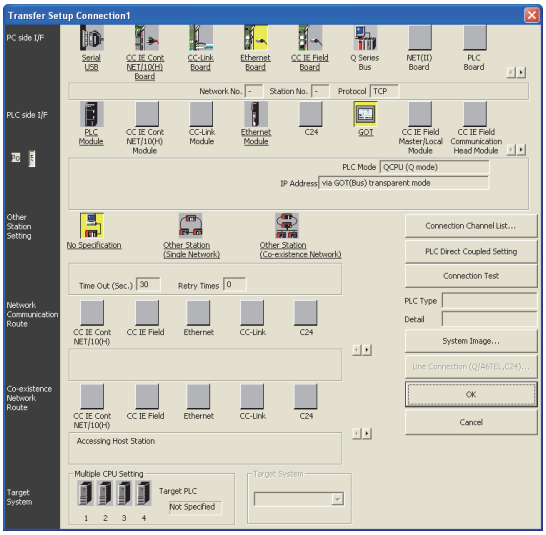
☞ Page 692 Ethernet download setting

**8.** Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed Setting of GOT].




**9.** The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

## ■Connecting the GOT and PLC in computer link connection (when connecting to QJ71C24 (N))




**1.** Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

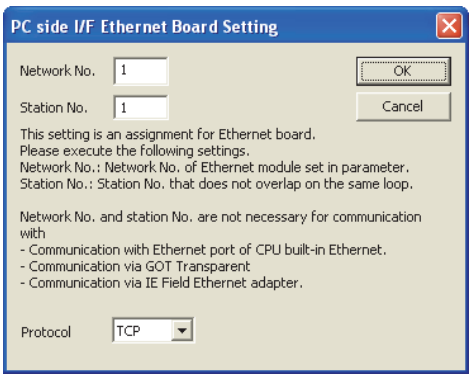
**2.** The [Transfer Setup] is displayed.

**3.** Set the [Transfer Setup]:

PC side I/F: Ethernet Board

PLC side I/F: GOT

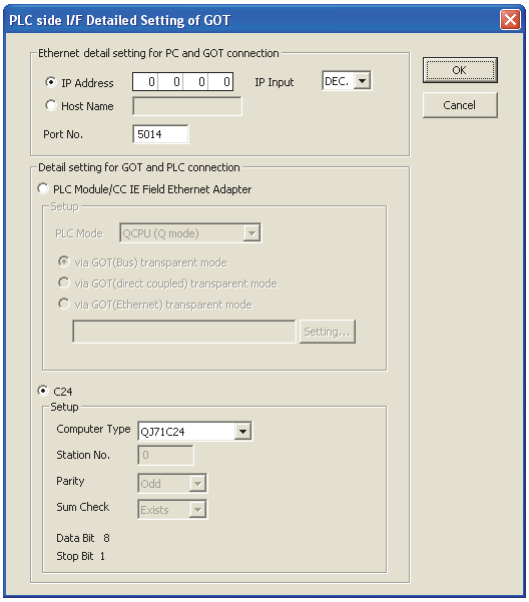
Other Station Setting: No specification




**4.** Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

**5.** Set the protocol to TCP.

Network No. and Station No. are not required to be changed (default) because they are not used.



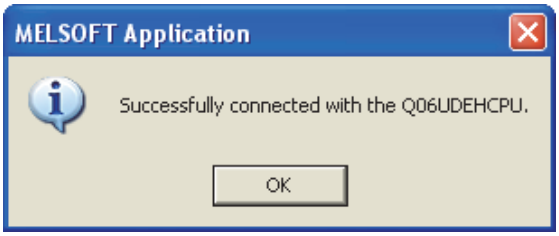

**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 692 Ethernet download setting

**8.** Check [C24] in [Detail setting for GOT and PLC connection].

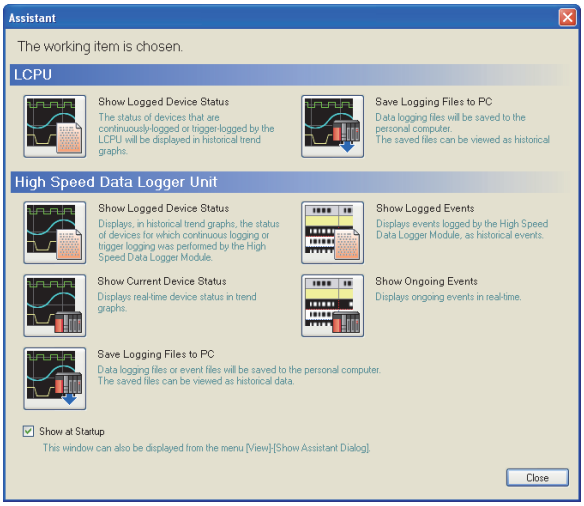



**9.** The screen returns to [Transfer Setup].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

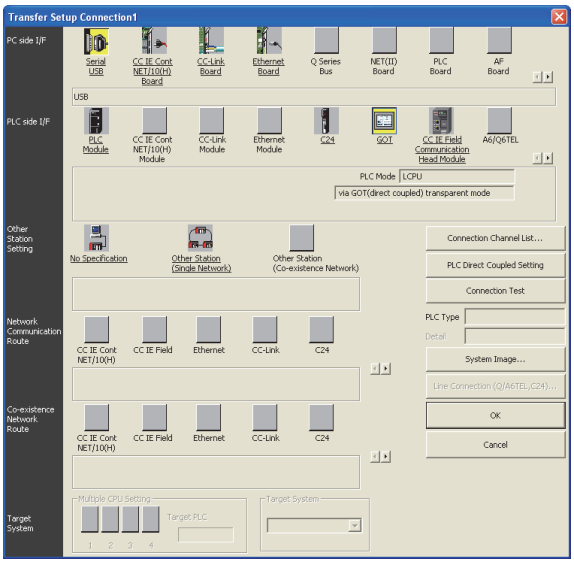
# Accessing by GX LogViewer

The following shows the procedure to set the FA transparent function of GX LogViewer.




**1.** Click [Show Assistant Dialog] for [View] on GX LogViewer.

**2.** The [Assistant] dialog box is displayed.




**3.** Click [LCPU] → [Show Logged Device Status] in the [Assistant] dialog box.

**4.** The [Transfer Setup Connection 1] dialog box is displayed.

**5.** Set the [Transfer Setup Connection 1]:

PC side I/F: Serial USB

PLC side I/F: GOT

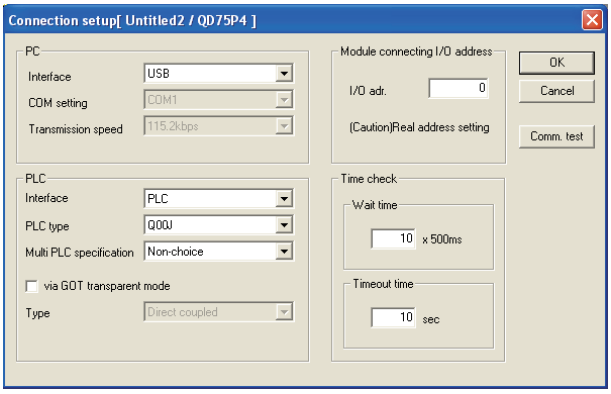
Other Station Setting: (Select from the system configuration)

**6.** For [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] of [Transfer Setup], refer to the following.

☞ Page 716 Accessing by GX Works2

# Accessing PLC by GX Configurator-QP

The following shows the procedure to set the FA transparent function of GX Configurator-QP.



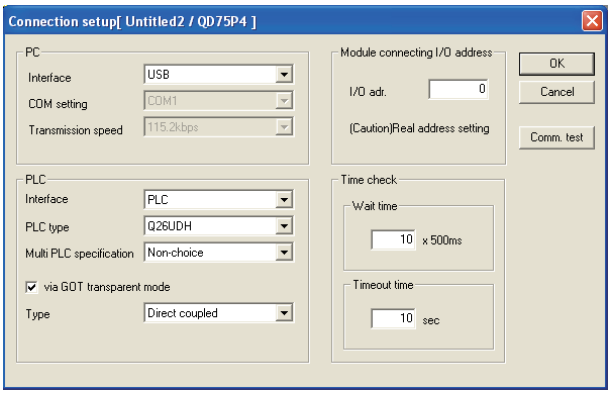

***1.*** Click [Transfer setup] for [Online] on GX Configurator-QP.

***2.*** The [Transfer Setup] is displayed.

***3.*** Set the following in [PC] in [Connection setup].

### When connecting the GOT and PC with USB

Interface: USB




***4.*** Set the [PLC] in [Connection setup].

PLC type: Q series PLC type

Multi PLC specification: Non-choice/No.1 to 4

Mark the [via GOT transparent mode] checkbox.

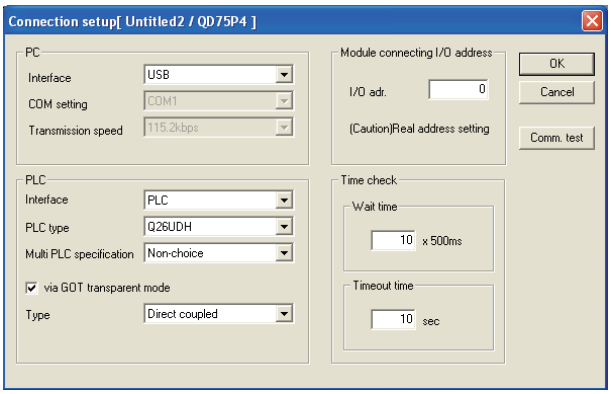
### Direct CPU connection (serial)

Interface: PLC

Type: Direct coupled

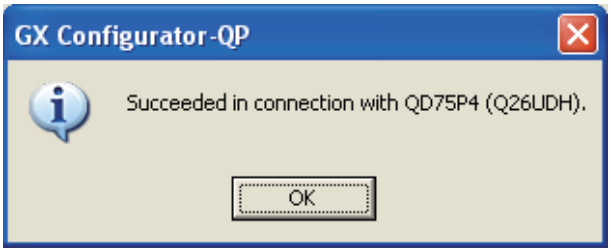
### Computer link connection

Interface: C24



**5.** Set the [Module connecting I/O address] in [Transfer setup].

Specify the actual I/O address of the module.

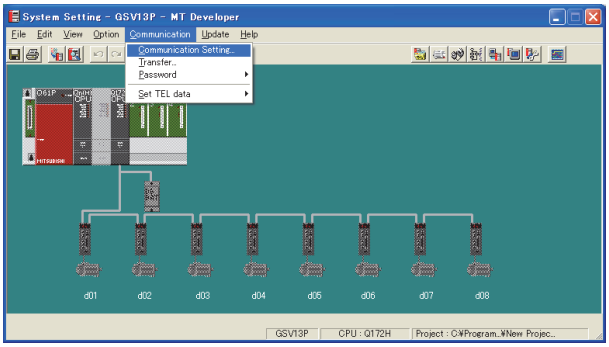



**6.** The screen returns to the [Transfer setup].

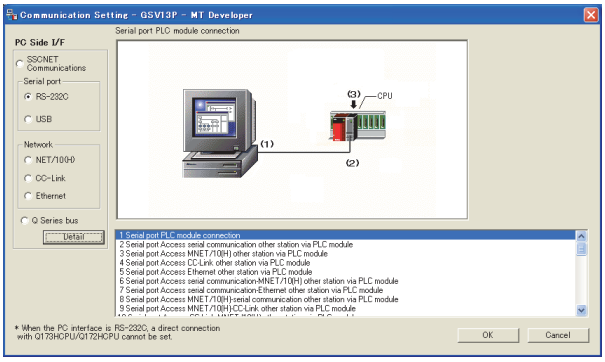
Click the Connection Test to check if GX Developer has been connected to the QD75*** (QnCPU).

# Accessing by the MT Developer

This section explains the procedure for setting the FA transparent function of MT Developer using the setting when the motion CPU (Q series) is connected as an example.

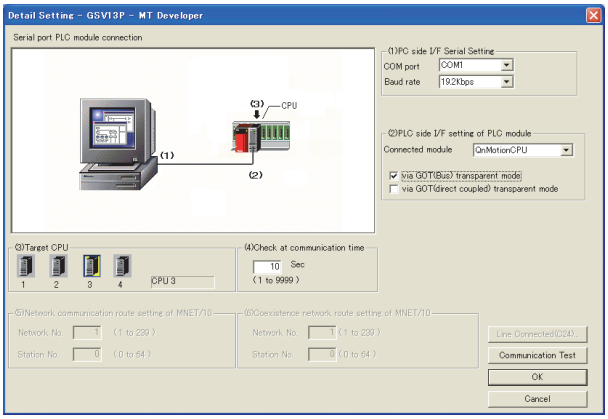



**1.** Click [Communication] → [Communication Setting] in MT Developer.

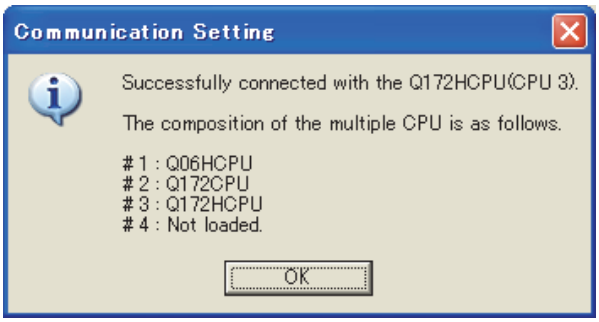



**2.** Select [USB] in [Serial port].

**3.** Click [Detail].



4. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].
5. As necessary, select a CPU that is targeted by using the transparent function in [CPU].
6. Click [Connection Test].



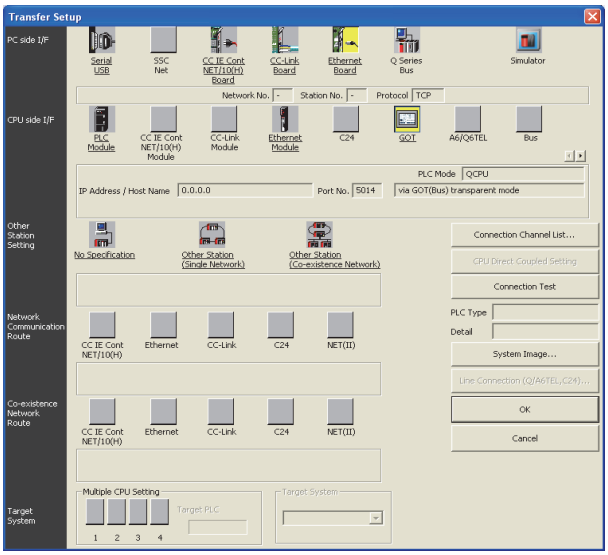

7. Confirm that the personal computer is connected to the Motion CPU (Q series).

# Accessing by the MT Works2

This section explains the procedure to set the FA transparent function of MT Works2 with an example of connecting to the Motion CPU (Q series).

## When connecting the GOT and the personal computer by USB

### ■Connecting the GOT and PLC in direct CPU connection (serial)



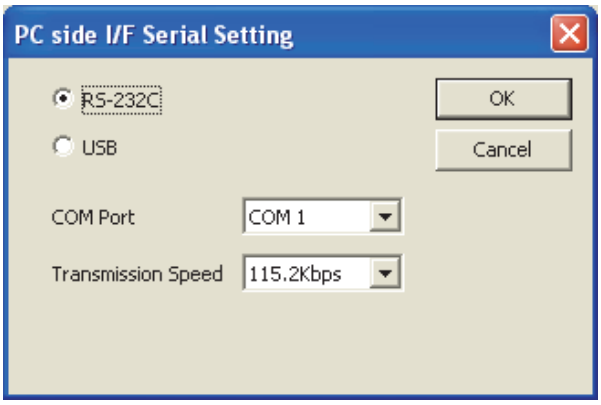

1. Click [Transfer setup] → [Online].
2. The [Transfer setup] is displayed.

**3.** Set the [Transfer setup]:

PC side I/F: Serial USB

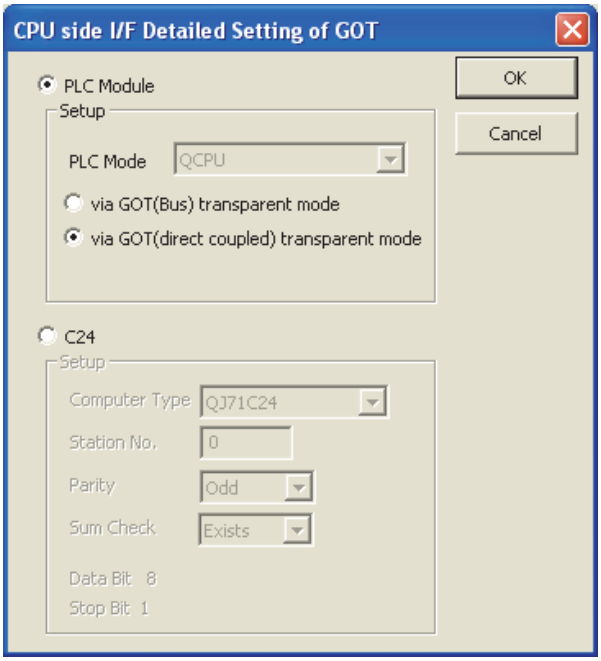
CPU side I/F: GOT

Other Station Setting: No specification



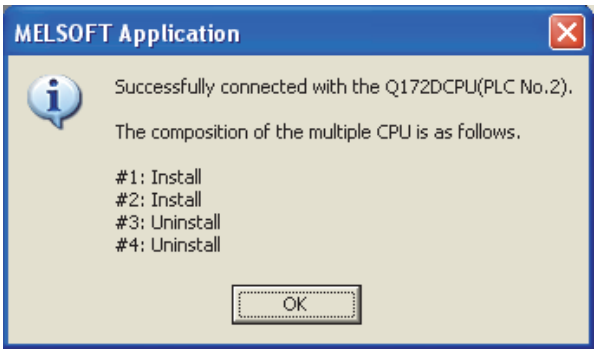

**4.** Double-click [Serial] of the PLC side I/F to display [PC side I/F Serial setting].

**5.** Select [USB] in the [PC side I/F Serial Setting] dialog.




**6.** Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].

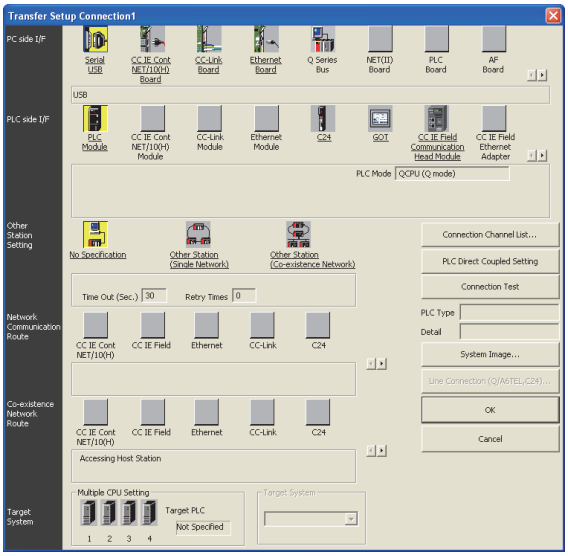
**7.** Check [via GOT (direct coupled) transparent mode] for [CPU side I/F Detailed Setting of GOT].




**8.** The screen returns to [Transfer setup].

Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode).

## ■When connecting the GOT and PLC in Ethernet communication

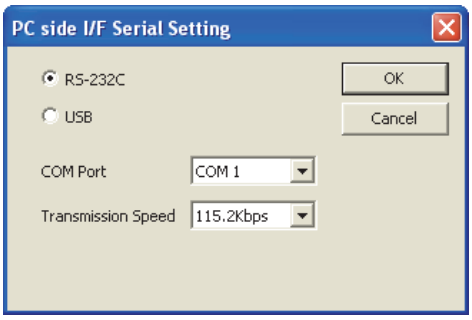



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

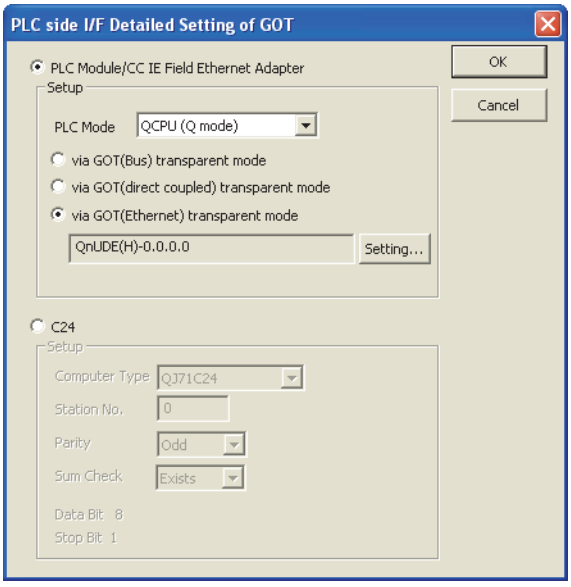
PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No Specification:



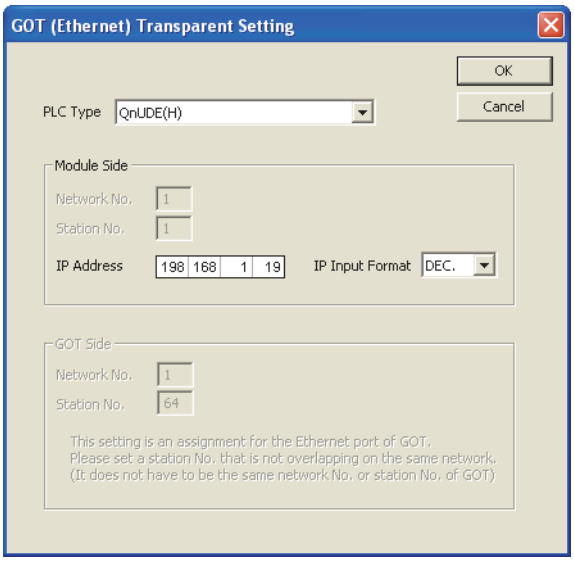

4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.



**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** PLC side I/F Detailed Setting of GOT

Mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].




**8.** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

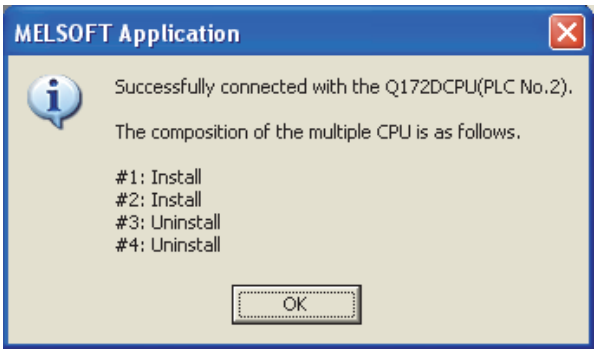
Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

**9.** Set [QnUDE(H)] or [QJ71E71] for [Type name].

**10.** Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [Type name], the setting is not required.

**11.** Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.

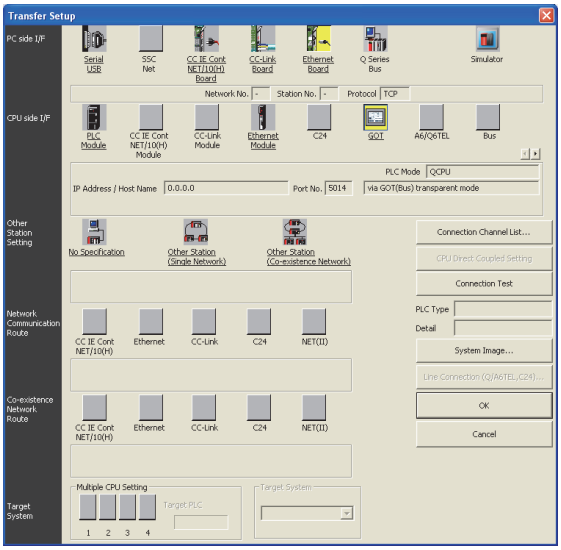



**12.** The screen returns to [Transfer setup].

Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode).

## When connecting the GOT and the personal computer by Ethernet

### ■Connecting the GOT and PLC in direct CPU connection (serial)

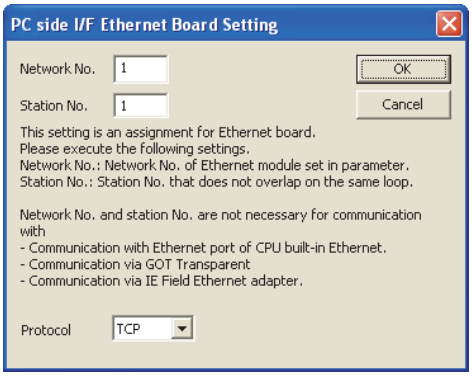



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

PC side I/F: Ethernet Board

PLC side I/F: GOT

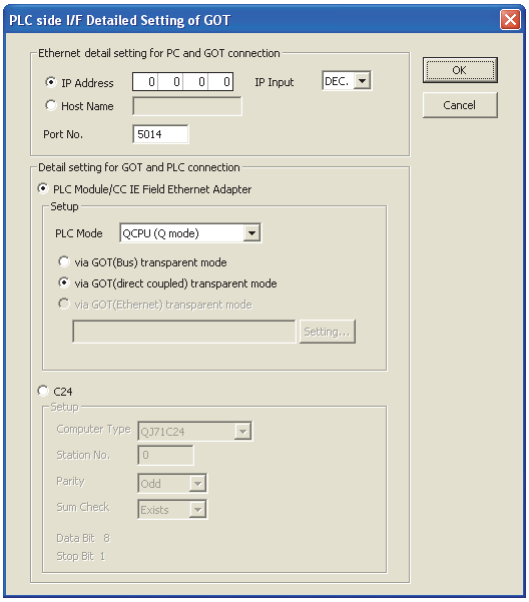
Other Station Setting: No Specification:




4. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

**5.** Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.

(Direct CPU connection (serial))



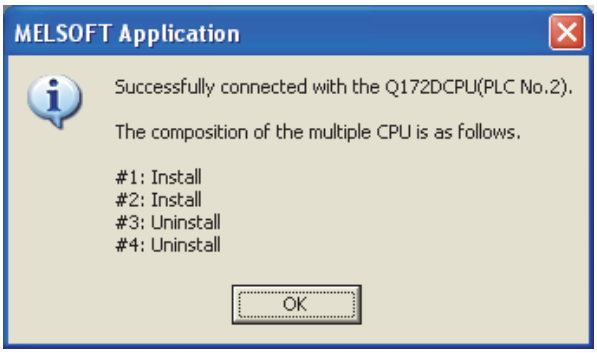

**6.** Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

**7.** Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 692 Ethernet download setting

**8.** Check [via GOT (direct coupled) transparent mode] for [Detail setting for GOT and PLC connection].




**9.** The screen returns to [Transfer Setup].

Click [Connection Test] to check if MT Works2 has been connected to the Motion controller (Q mode).

# Accessing the servo amplifier by the MR Configurator

Make the FA transparent settings with the of MT Developer.

For details, refer to the following:

☞ Page 732 Accessing by the MT Developer

# Accessing the servo amplifier by the MR Configurator2

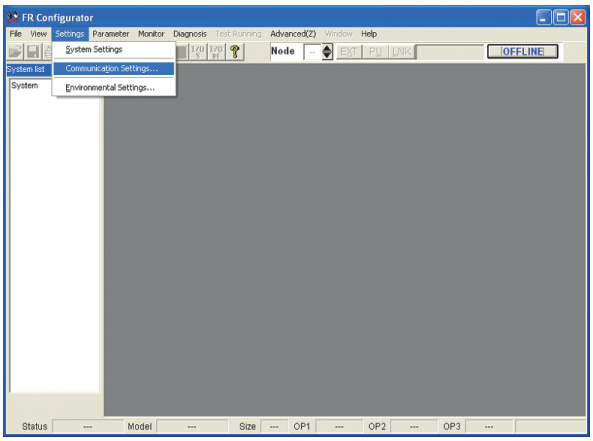
Make the FA transparent settings in the MT Works2 communication settings.

For details of MT Works2, refer to the following.

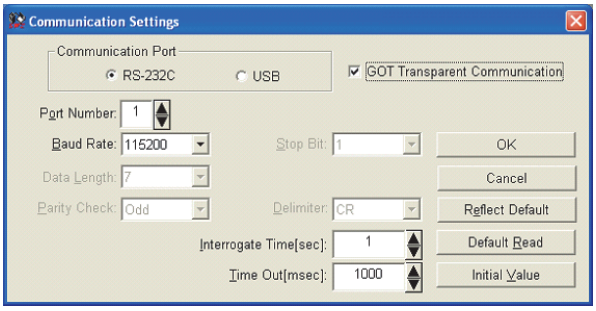
☞ Page 733 Accessing by the MT Works2

# Accessing the inverter by the FR Configurator

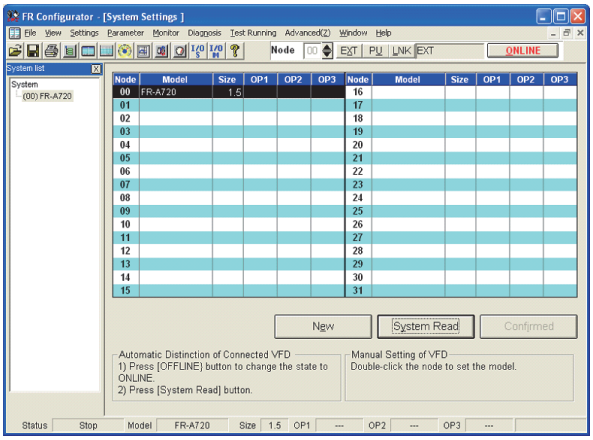
This section explains how to set the FA transparent function of FR Configurator using a connection to the FR-A700 or FR-F700 series as an example.




1. Click [Settings] → [Communication Settings...] in FR Configurator.




2. Select [USB] in [Communication Port].
3. Click [GOT Transparent Communication].
4. Click the [OK].



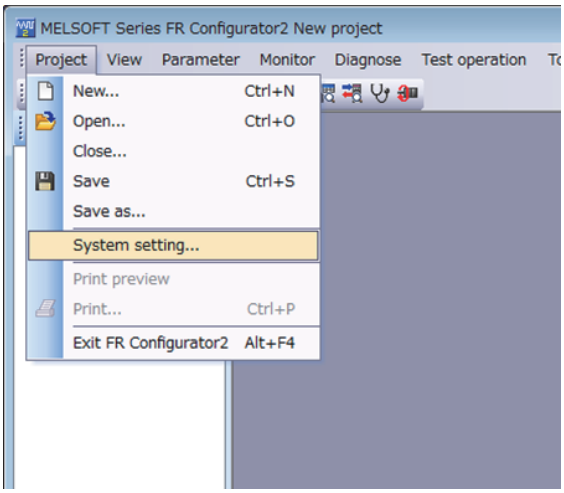

5. Click [OFFLINE] to make it [ONLINE].
6. Click [System Read], and ensure that the GOT has been connected to the FR-A700 or FR-F700 series properly.

# Accessing the inverter by the FR Configurator2

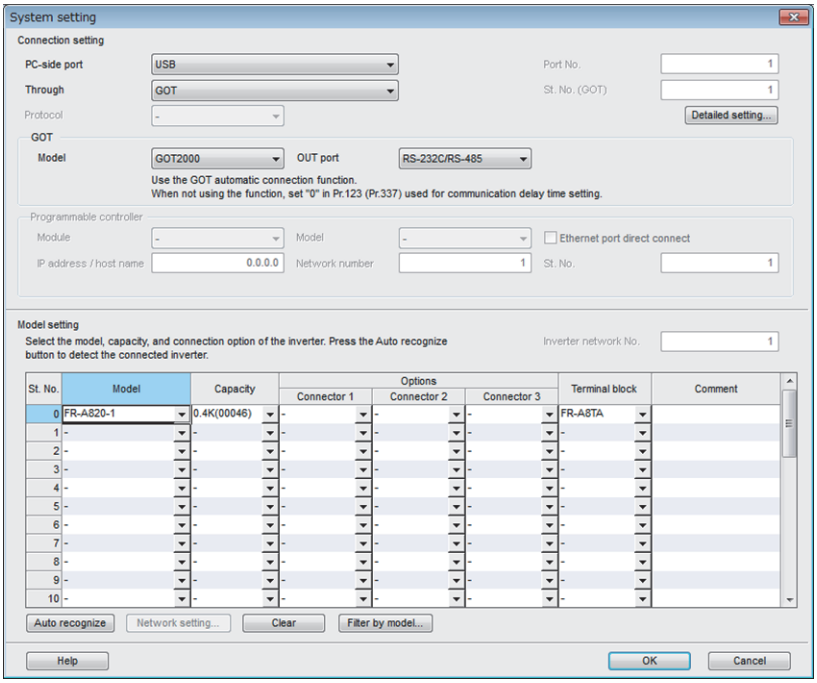
This section explains how to set the FA transparent function of FR Configurator2 using a connection to the FR-E700 (FR-E700-NE), FR-A800, or FR-F800 series as an example.

## When directly connecting the GOT and inverter

### ■USB connection between the GOT and personal computer, serial connection between the GOT and inverter




**1.** Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.




**2.** Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT]

**3.** Set [GOT].

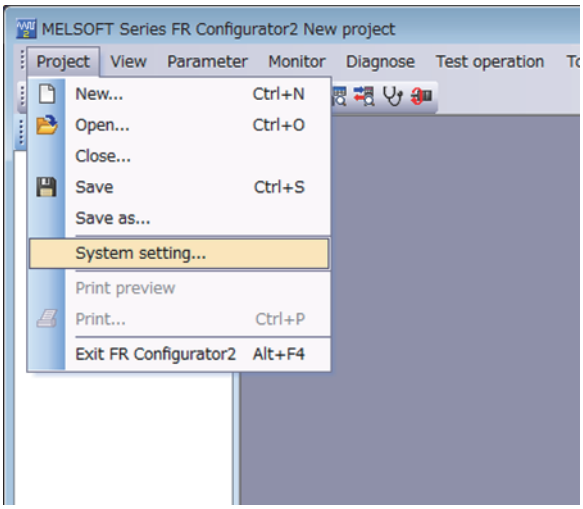
- [Model]: [GOT2000]
- [OUT port]: [RS-232C/RS-485]

**4.** Set [Model setting].

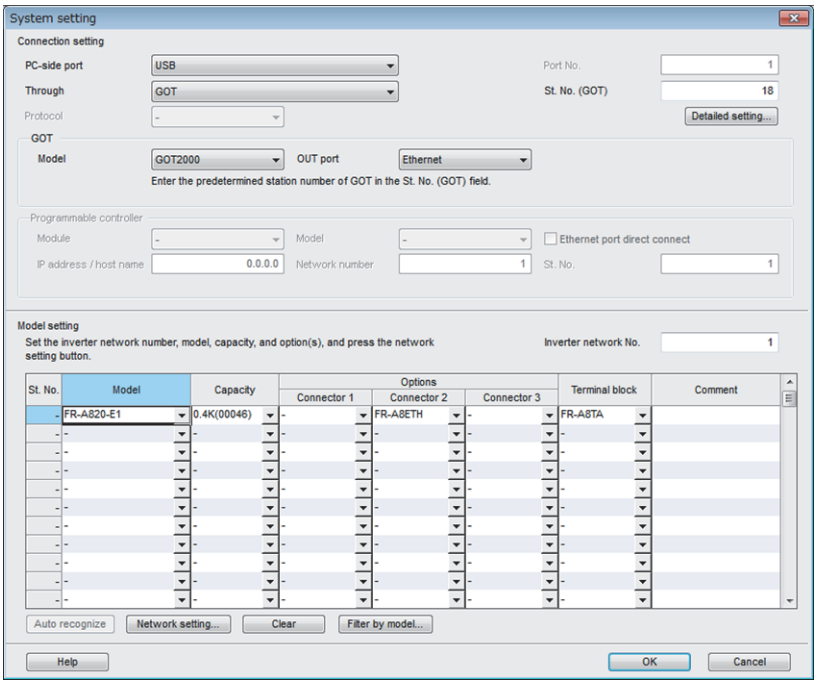
- [Model]: Model of the inverter to be connected

**5.** Click [OK] to complete the setting.

## ■USB connection between the GOT and personal computer, Ethernet connection between the GOT and inverter




**1.** Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.




**2.** Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT]
- [St. No. (GOT)]: Station number of the GOT to be used

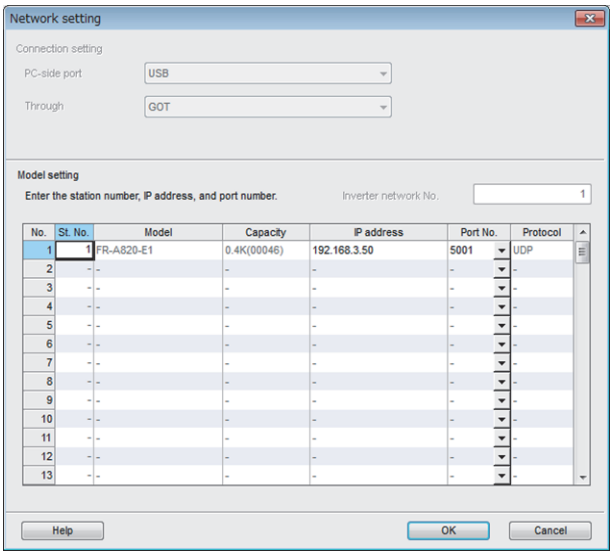
**3.** Set [GOT].

- [Model]: [GOT2000]
- [OUT port]: [Ethernet]

**4.** Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

**5.** Click the [Network setting] button to display the [Network setting] dialog.

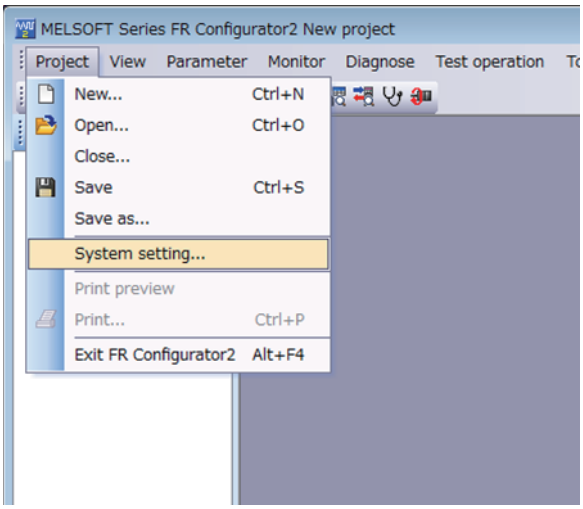



**6.** Configure [Model setting] in the [Network setting] dialog, and click [OK].

- [St. No.]: Station number of the inverter to be connected
- [IP address]: IP address of the inverter to be connected
- [Port No.]: Port number of the inverter to be connected

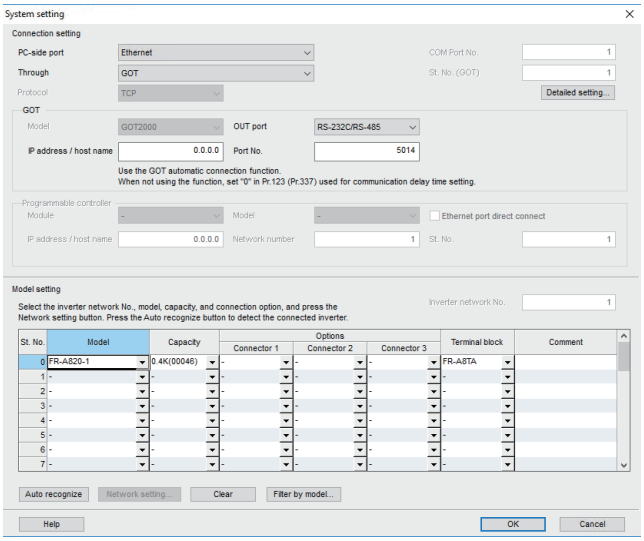
**7.** Click [OK] in the [System setting] dialog to complete the settings.

## ■Connecting the GOT and a personal computer in an Ethernet connection, and the GOT and an inverter in a serial connection






***1.*** Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.




***2.*** Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [Ethernet]
- [Through]: [GOT]

***3.*** Set [GOT].

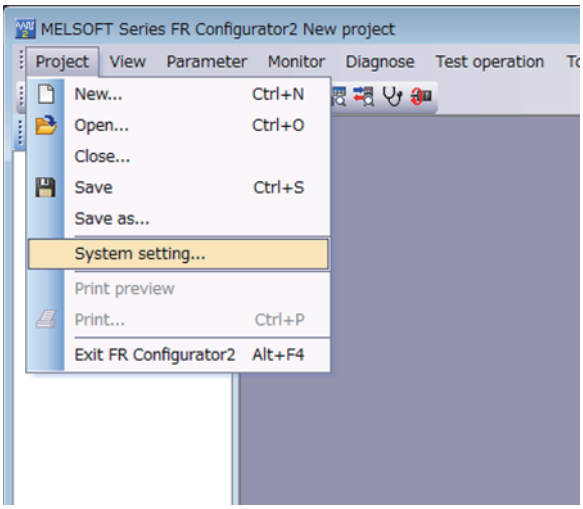
- [OUT port]: [RS-232C/RS-485]
- [IP address / host name]: IP address assigned to the GOT
- [Port No.]: [5014]

***4.*** Set [Model setting].

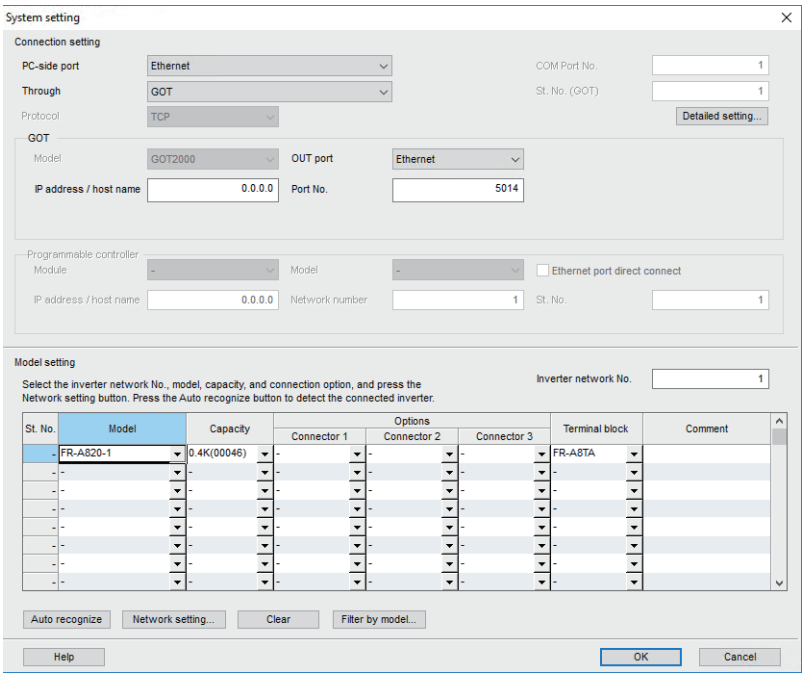
- [Model]: Model of the inverter to be connected

***5.*** Click [OK] to complete the setting.

## ■Ethernet connection between the GOT and personal computer, Ethernet connection between the GOT and inverter




**1.** Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.




**2.** Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [Ethernet]
- [Through]: [GOT]

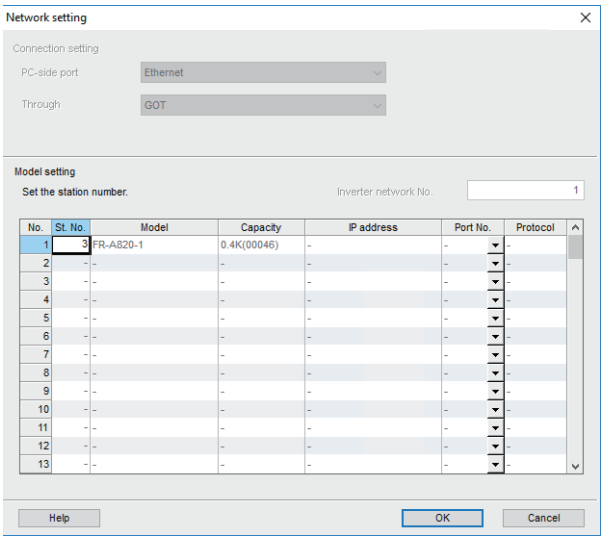
**3.** Set [GOT].

- [IP address / host name]: IP address assigned to the GOT
- [Port No.]: [5014]

**4.** Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

**5.** Click the [Network setting] button to display the [Network setting] dialog.

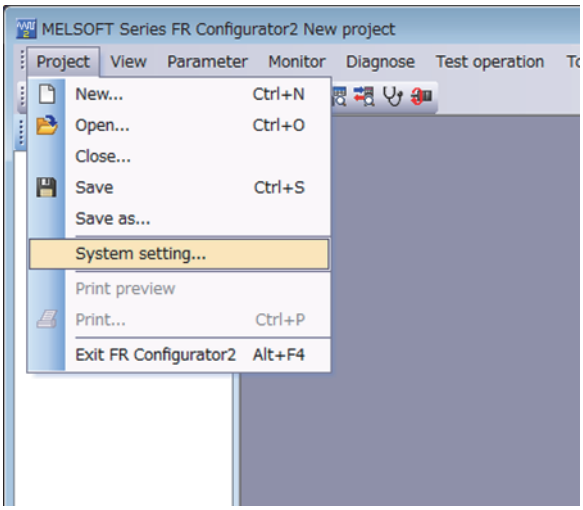



**6.** Configure [Model setting] in the [Network setting] dialog, and click [OK].

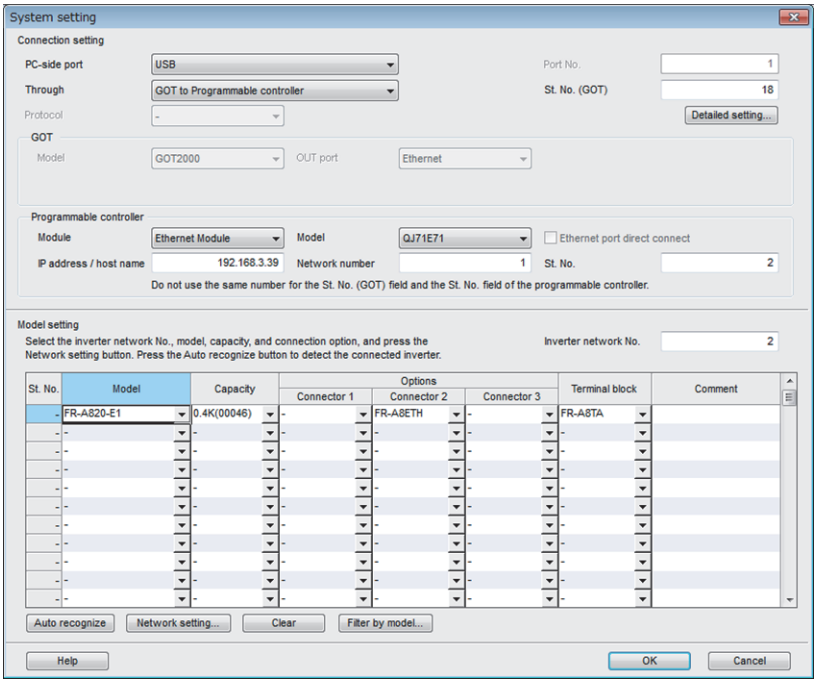
- [St. No.]: Station number of the inverter to be connected

**7.** Click [OK] in the [System setting] dialog to complete the settings.

## When connecting the GOT and inverter via a PLC




**1.** Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.




**2.** Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT to Programmable controller]
- [St. No. (GOT)]: Station number of the GOT to be used

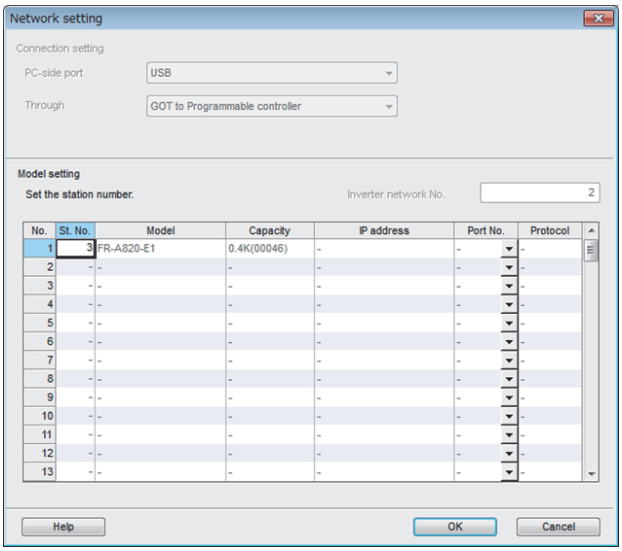
**3.** Set [Programmable controller].

- [Module]: Type of the PLC module that relays the GOT and inverter
- [Model]: Model of the PLC module that relays the GOT and inverter
- [IP address / host name]: IP address/host name of the PLC module that relays the GOT and inverter
- [Network number]: Network No. of the PLC module that relays the GOT and inverter
- [St. No.]: Station number of the PLC module that relays the GOT and inverter

**4.** Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

**5.** Click the [Network setting] button to display the [Network setting] dialog.



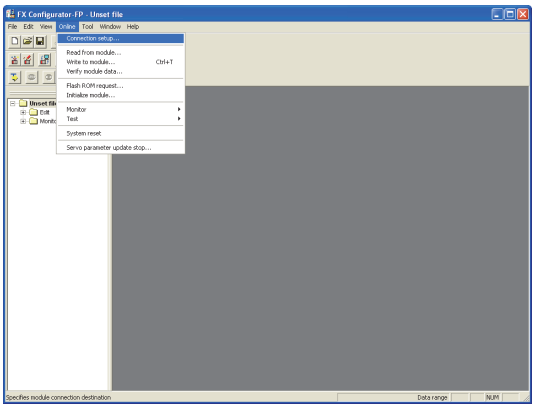

**6.** Configure [Model setting] in the [Network setting] dialog, and click [OK].

- [St. No.]: Station number of inverter to be connected

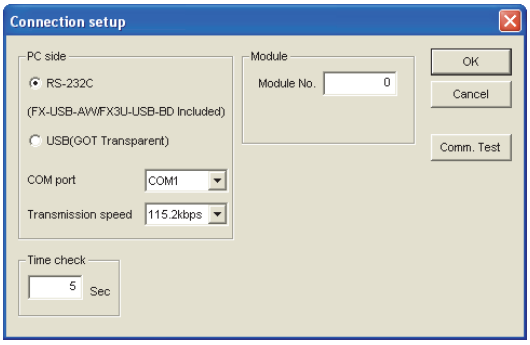
**7.** Click [OK] in the [System setting] dialog to complete the settings.

# Accessing PLC by FX Configurator-FP

This section explains the procedure to set the FA transparent function of FX Configurator-FP with an example of connecting to FXCPU.

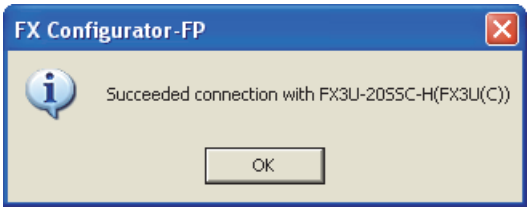


**1.** Click [Connection setup] for [Online] on FX Configurator-FP.




**2.** Select [USB (GOT Transparent)] in [PC side].

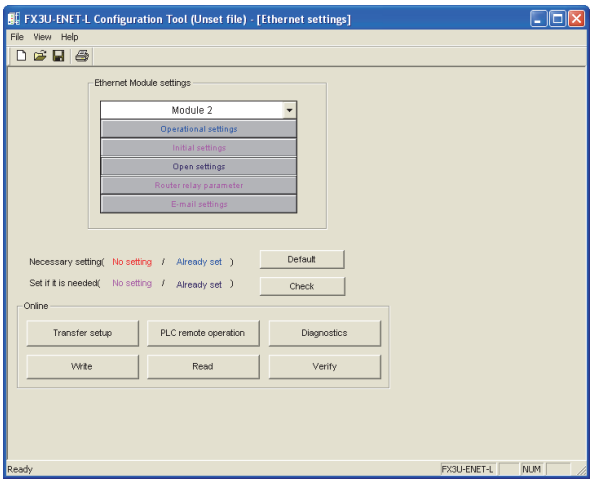
**3.** Click [Comm. Test].



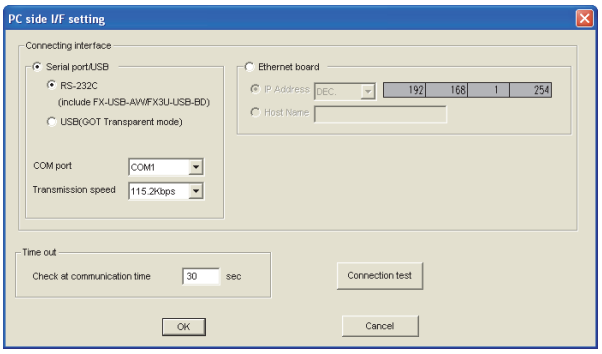

**4.** After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

# Accessing by FX Configurator-EN-L or FX Configurator-EN

This section explains how to set the FA transparent function using FX Configurator-EN-L or FX Configurator-EN.
The following shows FX Configurator-EN-L as an example.

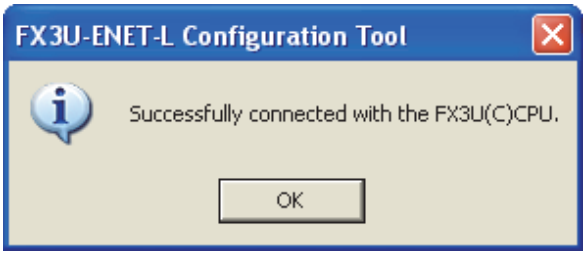



**1.** Click [Transfer setup] on the FX Configurator-EN-L.




**2.** Select [USB (GOT Transparent mode)] in [Serial port/USB] of [Connecting interface].

**3.** Click [Connection test]

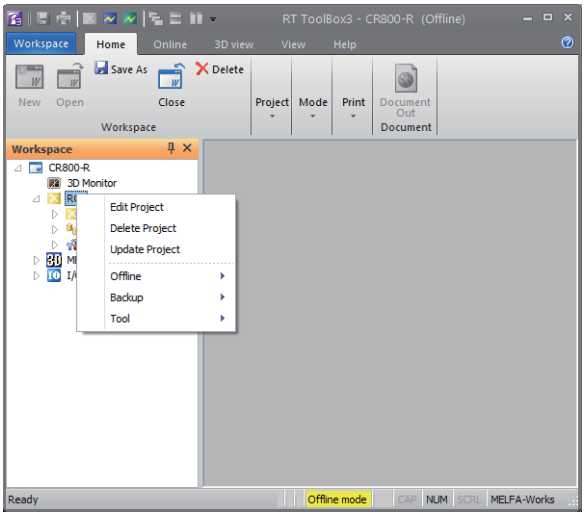



**4.** After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

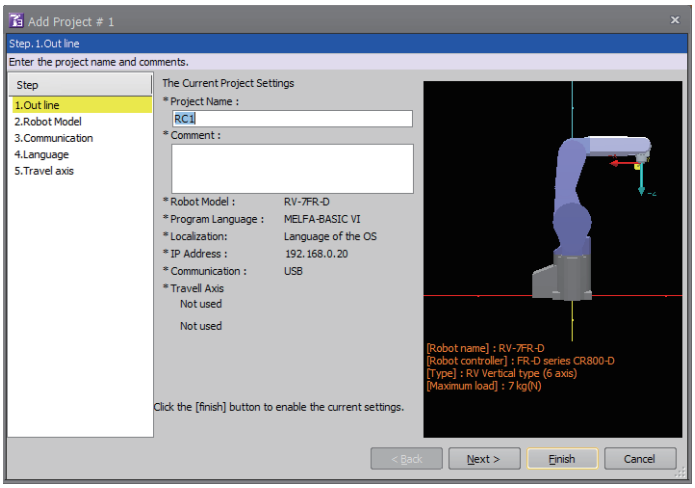
# Accessing by RT ToolBox3

The following shows the procedure to set the FA transparent function of RT ToolBox3.

## CR800-R Series



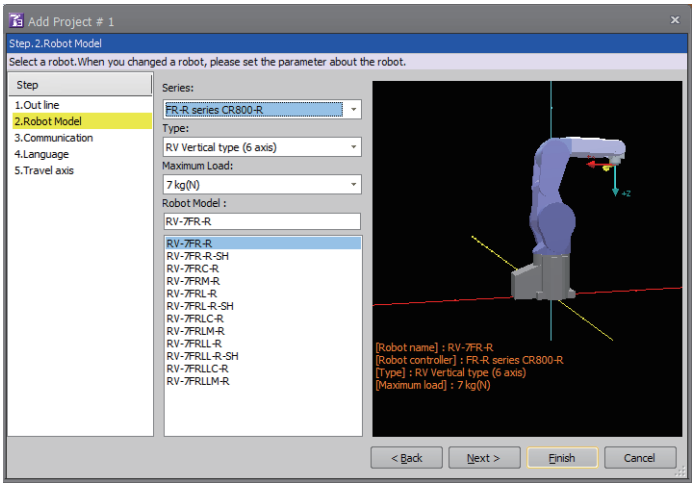

**1.** Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.




**2.** Click the [Next] button.

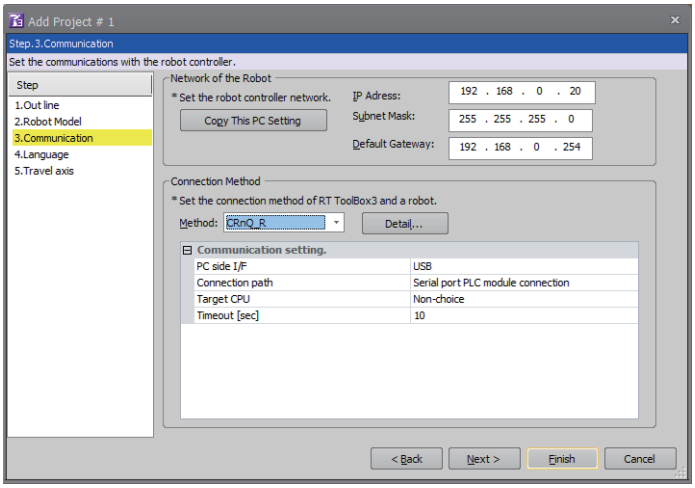
**3.** Set the following item, and click the [Next] button.

- [Series]: [FR-R series CR800-R]



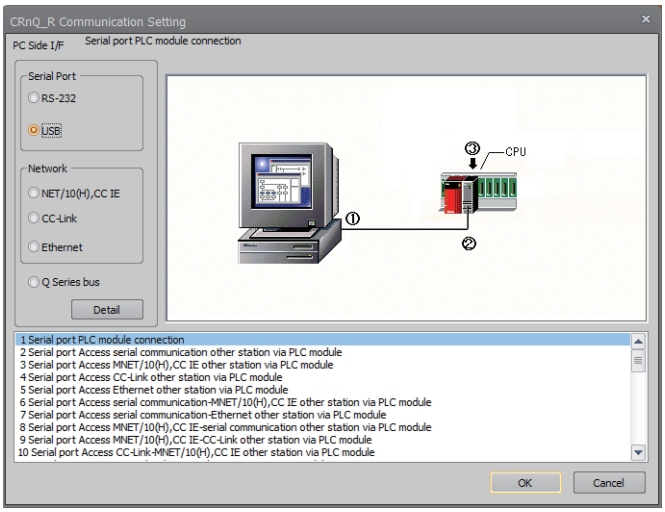
**4.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]



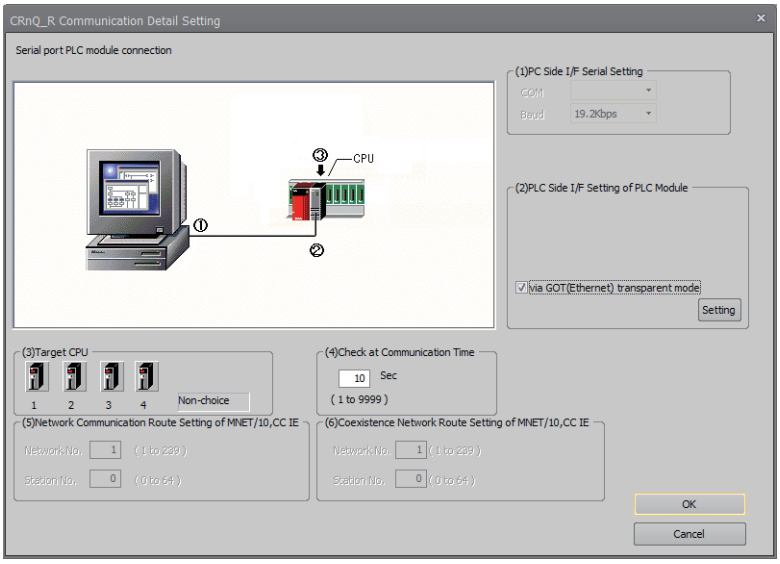

**5.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]




**6.** Select [via GOT(Ethernet) transparent mode] in [(2)PLC Side I/F Setting of PLC Module].

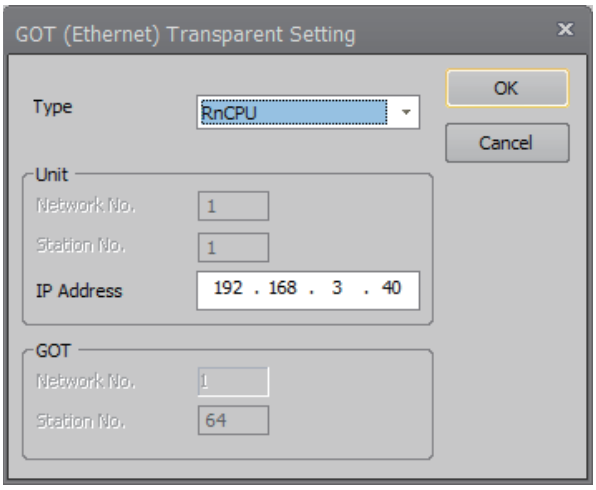
Select the transparent target controller in [(3)Target CPU] as necessary.



***7.*** Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

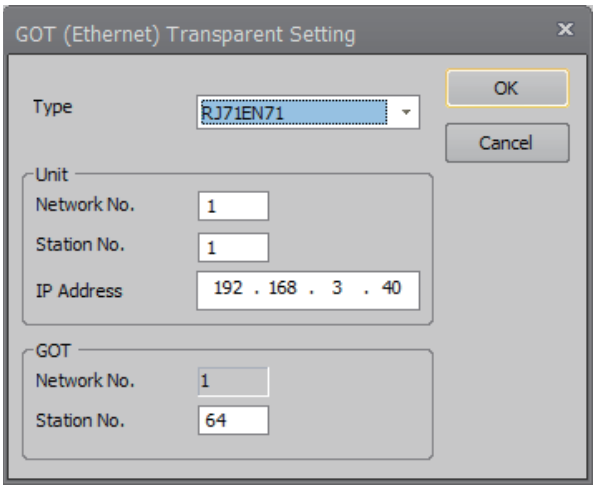
***8.*** Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU




| Item | | Setting |
|---|---|---|
| [Type] | | [RnCPU] |
| [Unit] | [IP Address] | IP address assigned to RnCPU |

• When connecting with an Ethernet module



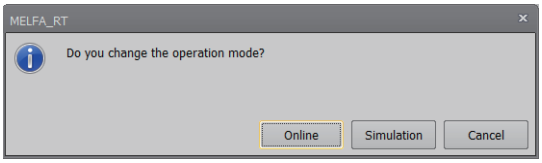

| Item | | Setting |
|---|---|---|
| [Type] | | [RJ71EN71] |
| [Unit] | [Network No.] | Network number assigned to the Ethernet module |
| | [Station No.] | Station number assigned to the Ethernet module |
| | [IP Address] | IP address assigned to the Ethernet module |
| [GOT] | [Station No.] | Station number assigned to the GOT |

***9.*** Click the [OK] buttons of the dialogs set at Step 5 to 8 to complete the settings.

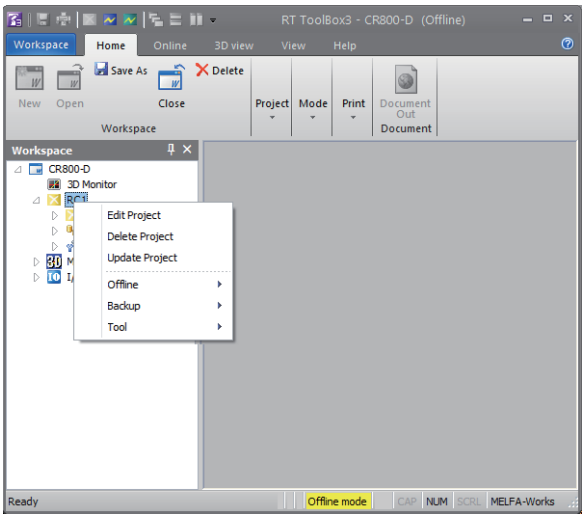
***10.*** Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

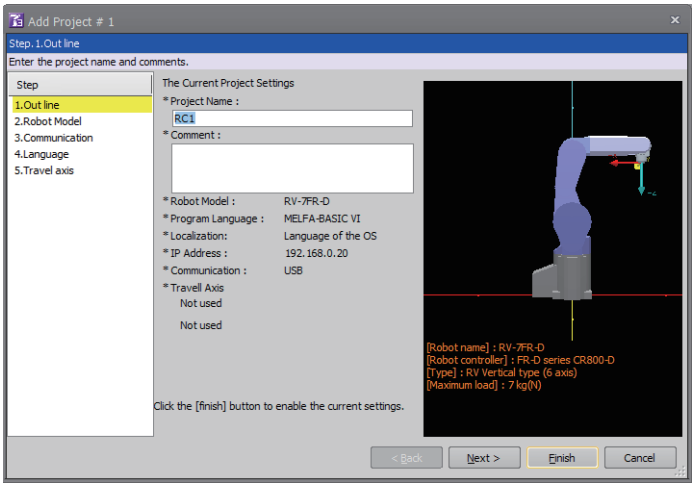
Change the operation mode with the GOT and robot controller connected.



## CR800-D Series



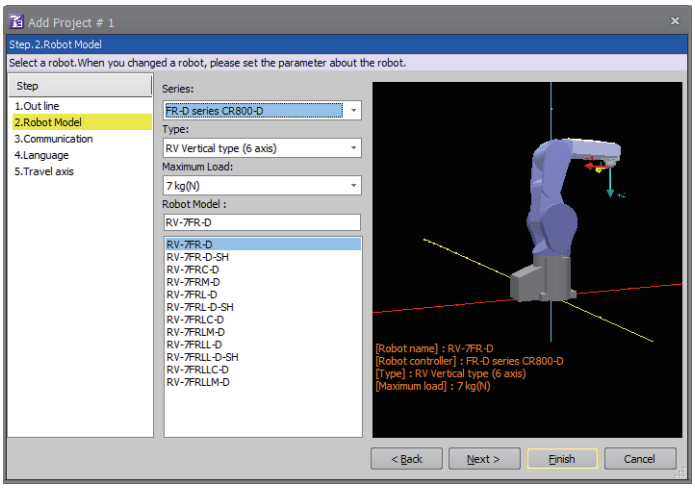

**1.** Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



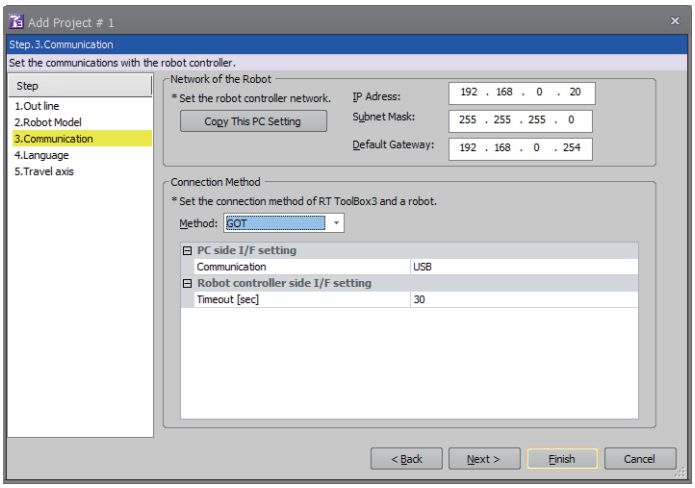

**2.** Click the [Next] button.

**3.** Set the following item, and click the [Next] button.

- [Series]: [FR-D series CR800-D]



**4.** Set the following items.

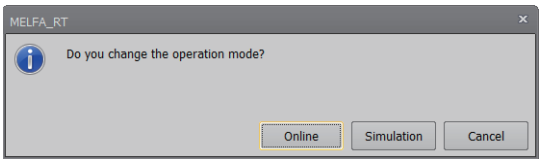



| Item | | Setting |
|---|---|---|
| [Method] | | [GOT] |
| [PC side I/F setting] | [Communication] | [USB] |
| [Robot controller side I/F setting] | [Timeout [sec]] | Set this item as necessary. |

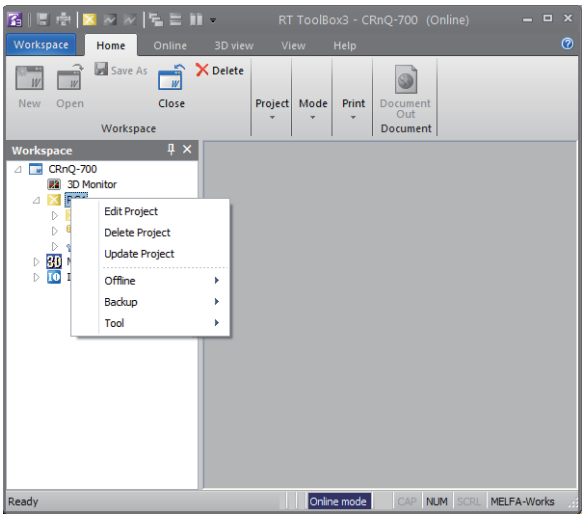
**5.** Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

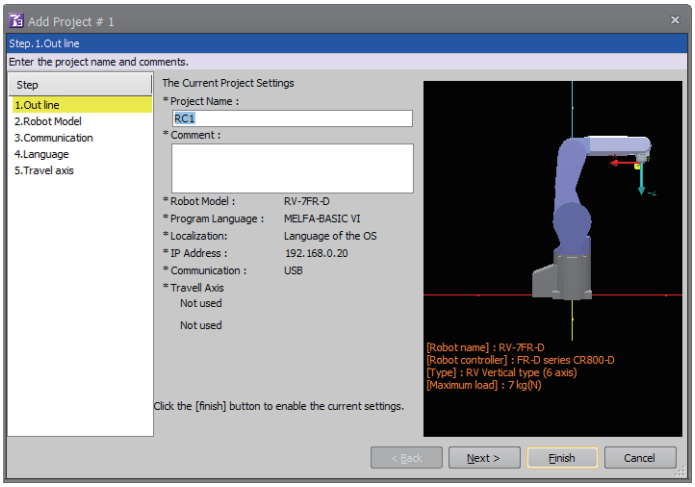
Change the operation mode with the GOT and robot controller connected.



## CRnQ-700 Series



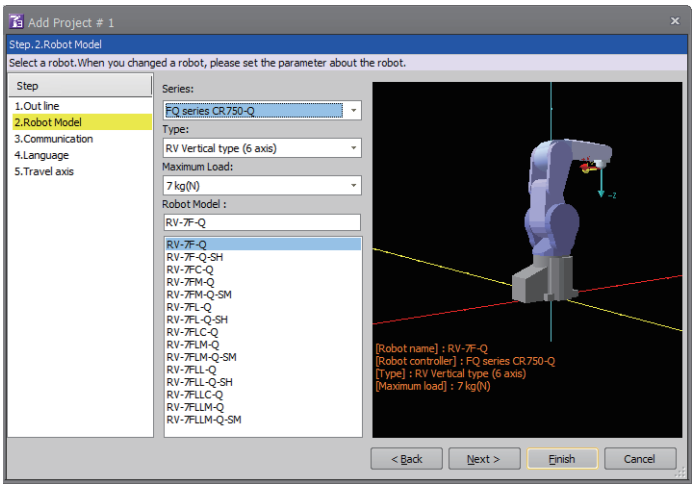

**1.** Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.




**2.** Click the [Next] button.

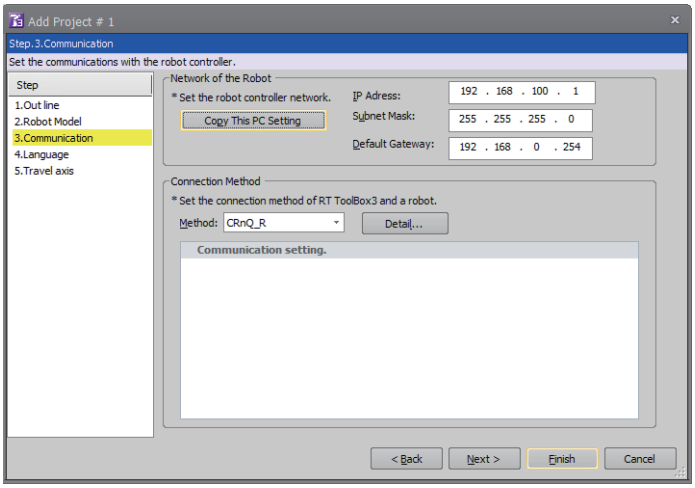
**3.** Set the following item, and click the [Next] button.

- [Series]: [FQ series CR750-Q]



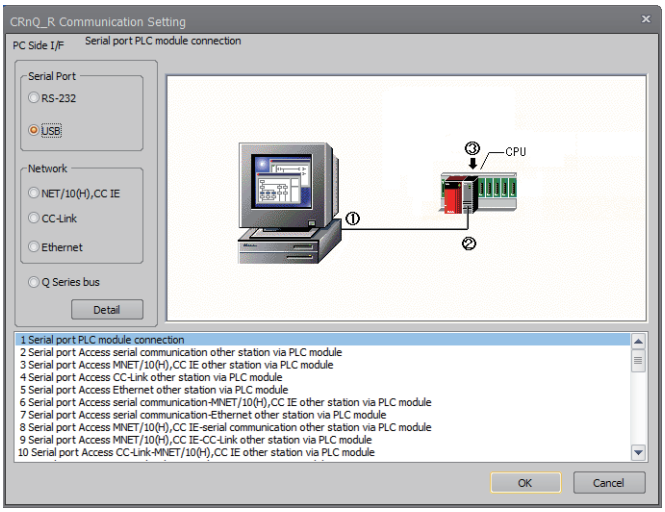
**4.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]




**5.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]



**6.** Select either of the following in [(2)PLC Side I/F Setting of PLC Module].

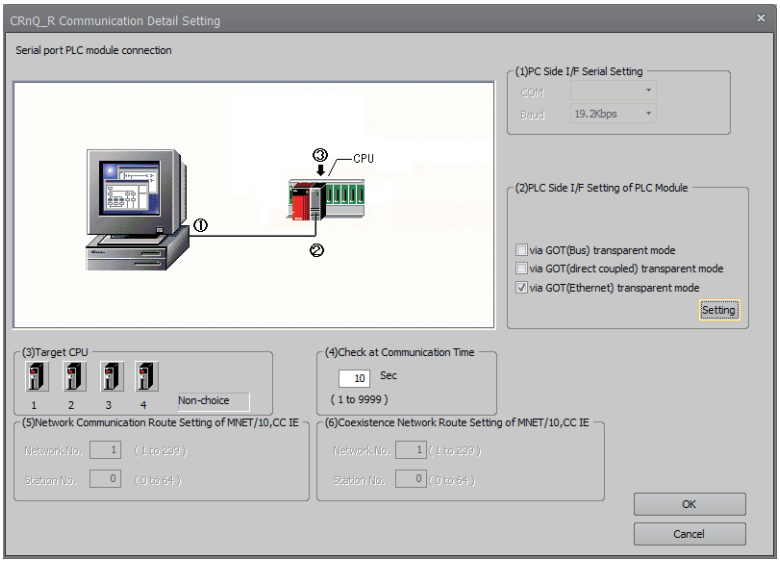
[via GOT(Bus) transparent mode]

[via GOT(direct coupled) transparent mode]

[via GOT(Ethernet) transparent mode]

Here, select [via GOT(Ethernet) transparent mode].

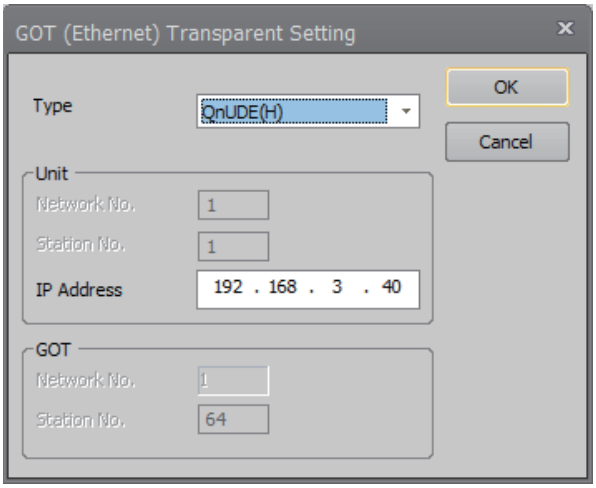
Select the transparent target controller in [(3)Target CPU] as necessary.




**7.** Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

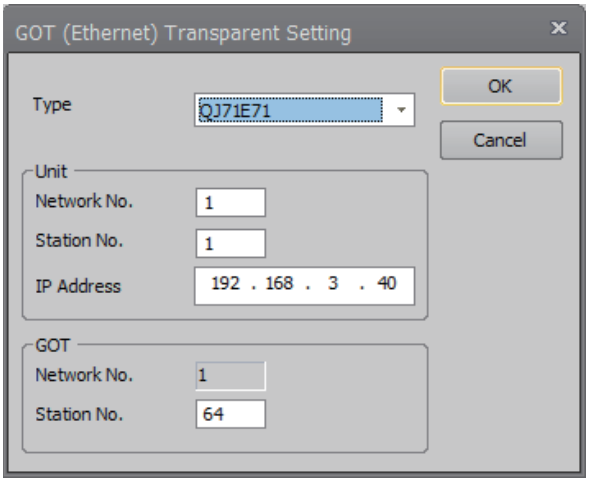
**8.** Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU




| Item | | Setting |
|---|---|---|
| [Type] | | [QnUDE(H)] |
| [Unit] | [IP Address] | IP address assigned to QnUDE(H) |

• When connecting with an Ethernet module



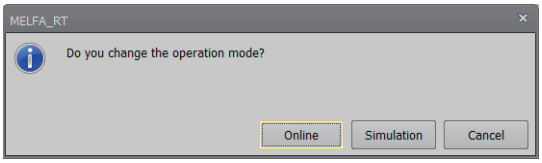

| Item | | Setting |
|---|---|---|
| [Type] | | [QJ71E71] |
| [Unit] | [Network No.] | Network number assigned to the Ethernet module |
| | [Station No.] | Station number assigned to the Ethernet module |
| | [IP Address] | IP address assigned to the Ethernet module |
| [GOT] | [Station No.] | Station number assigned to the GOT |

***9.*** Click the [OK] buttons of the dialogs set at Step 5 to complete the settings.

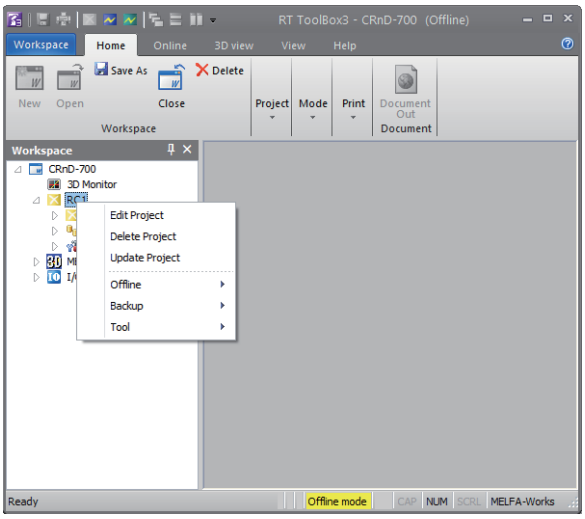
***10.*** Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

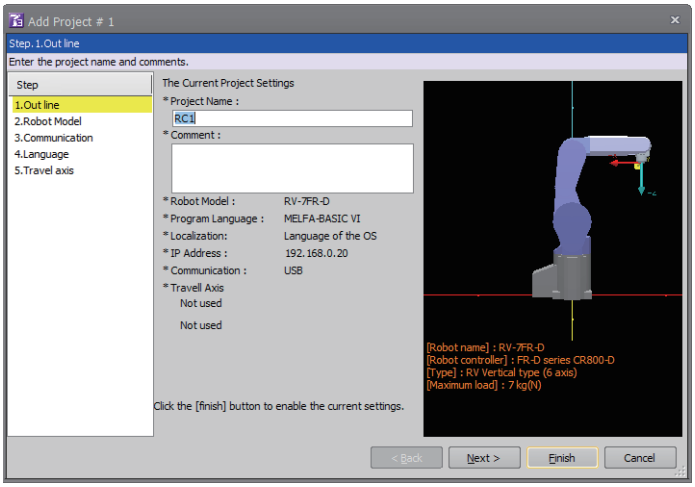
Change the operation mode with the GOT and robot controller connected.



## CRnD-700 Series



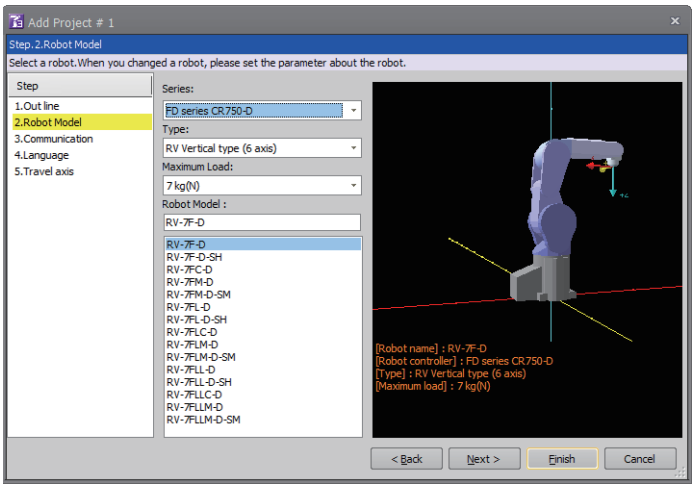

***1.*** Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



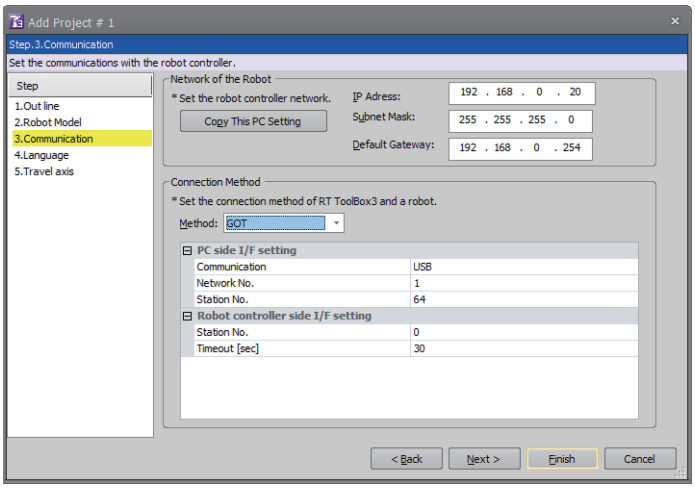

***2.*** Click the [Next] button.

***3.*** Set the following item, and click the [Next] button.

• [Series]: [FD series CR750-D]



**4.** Set the following items.

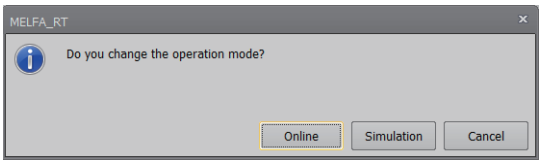



| Item | | Setting |
|---|---|---|
| [Method] | | [GOT] |
| [PC side I/F setting] | [Communication] | [USB] |
| | [Network No.] | Network number assigned to the GOT |
| | [Station No.] | Station number assigned to the GOT |
| [Robot controller side I/F setting] | [Station No.] | Station number assigned to the robot controller |
| | [Timeout [sec]] | Set this item as necessary. |

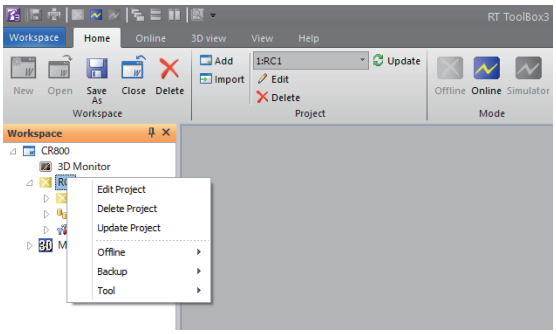
**5.** Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

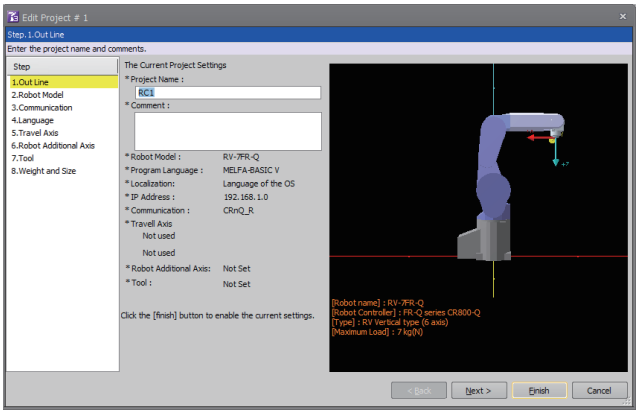
Change the operation mode with the GOT and robot controller connected.



## CR800-Q Series



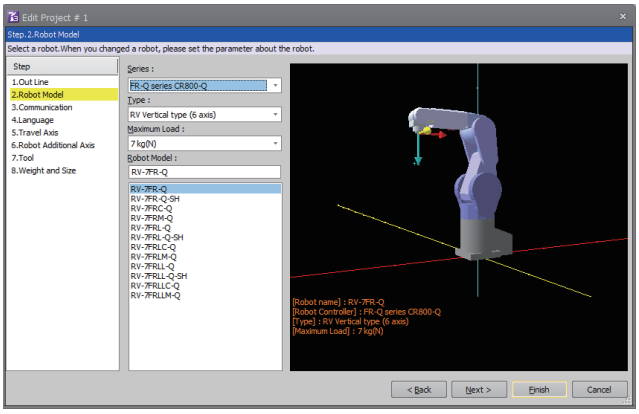

**1.** Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.




**2.** Click the [Next] button.

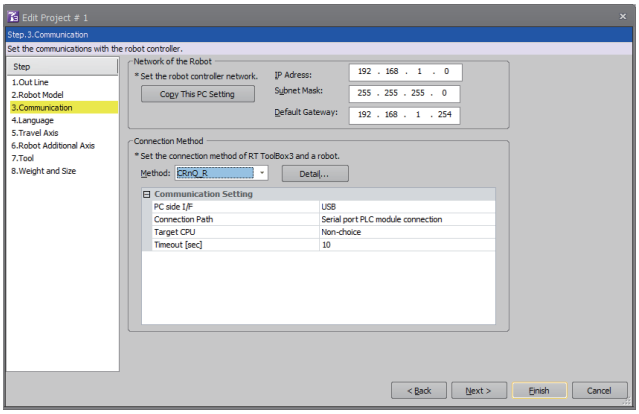
**3.** Set the following item, and click the [Next] button.

- [Series]: [FR-Q series CR800-Q]



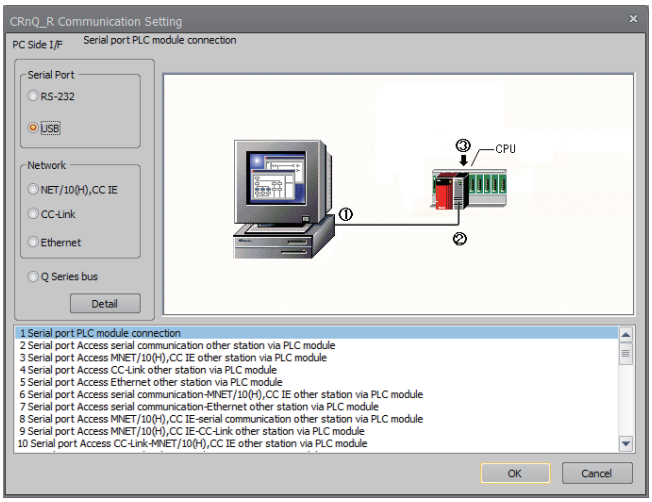
**4.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]




**5.** Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]




**6.** Select either of the following in [(2)PLC Side I/F Setting of PLC Module].

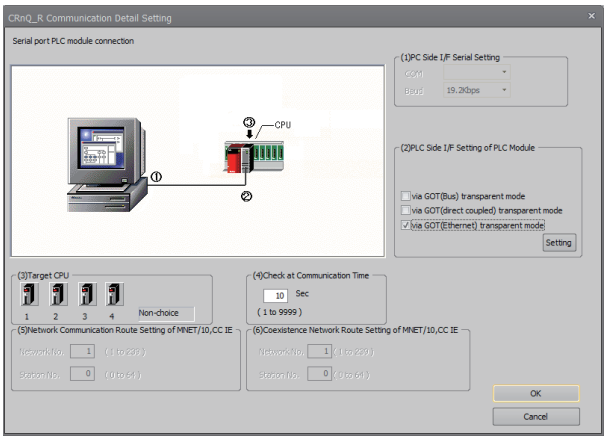
• [via GOT(Bus) transparent mode]

• [via GOT(direct coupled) transparent mode]

• [via GOT(Ethernet) transparent mode]

Here, select [via GOT(Ethernet) transparent mode].

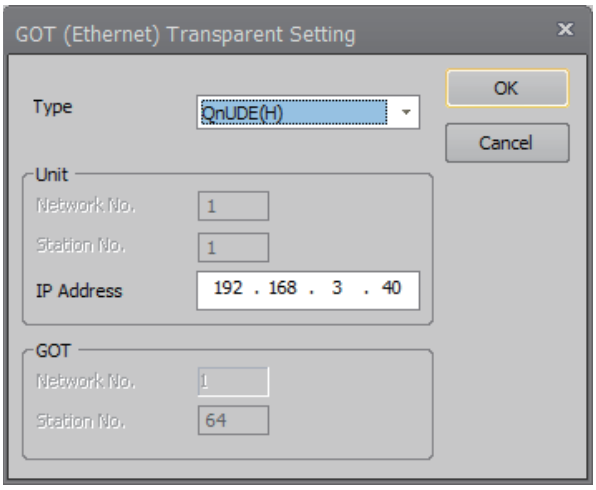
Select the transparent target controller in [(3)Target CPU] as necessary.



**7.** Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

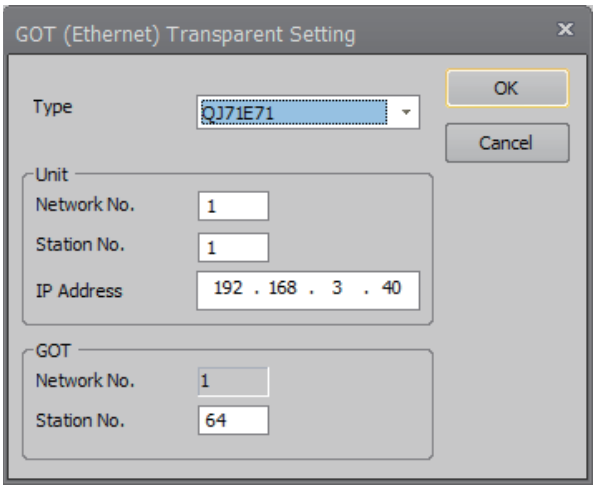
**8.** Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU




| Item | | Setting |
|---|---|---|
| [Type] | | [QnUDE(H)] |
| [Unit] | [IP Address] | IP address assigned to QnUDE(H) |

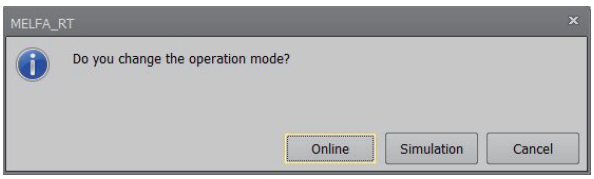
• When connecting with a PERIPHERAL I/F of CR800-Q (Q172DSRCPU) or Ethernet module




| Item | | Setting |
|---|---|---|
| [Type] | | [QJ71E71] |
| [Unit] | [Network No.] | Arbitrary network number |
| | [Station No.] | Arbitrary station number |
| | [IP Address] | IP address assigned to the Ethernet module |
| [GOT] | [Station No.] | Station number assigned to the GOT |

**9.** Click the [OK] buttons of the dialogs set at Step 5 to 8 to complete the settings.

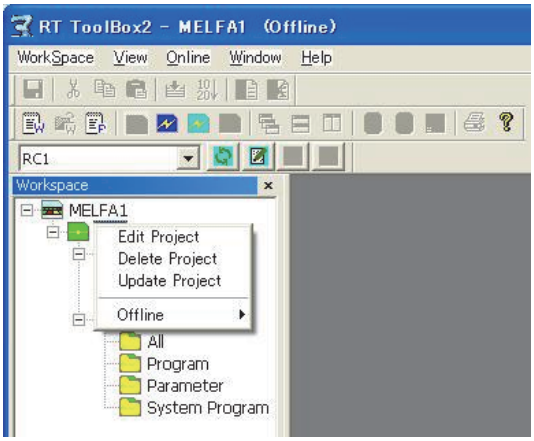
**10.** Click [Finish] in the [Edit Project] dialog to complete the settings.



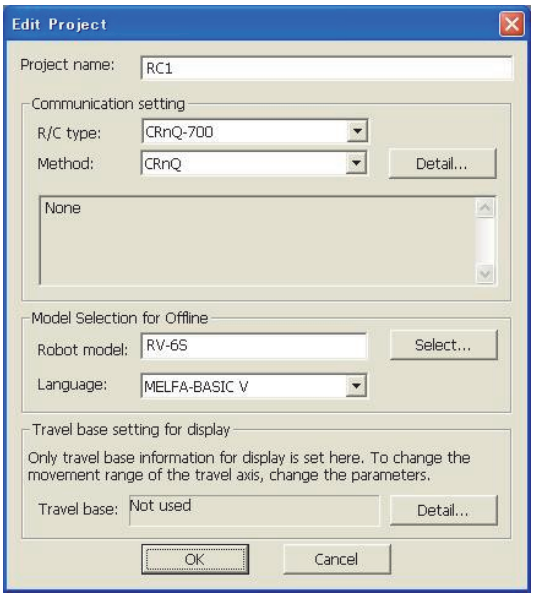
# Accessing by RT ToolBox2

This section explains the procedure to set the FA transparent function of RT ToolBox2 with an example of connecting to CRnQ-700.

## Connecting the GOT and controller in direct CPU connection (serial) (CRnQ-700)

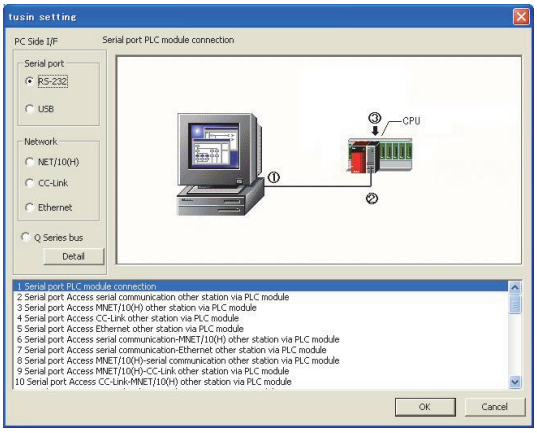



***1.*** Right-click a project name to be a target on the project tree of RT ToolBox2.
Click [Edit Project].



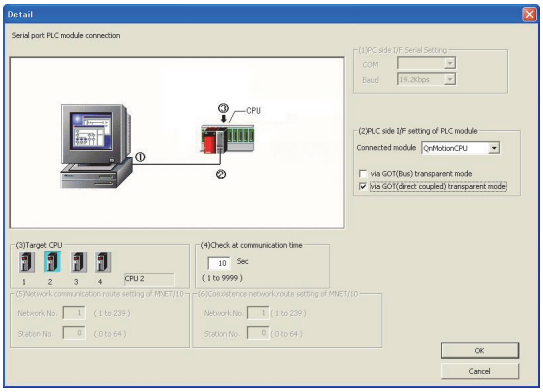

***2.*** Set [Method] to [CRnC].

***3.*** Click [Detail].



4. Select [USB] in [Serial port].

5. Click [Detail].

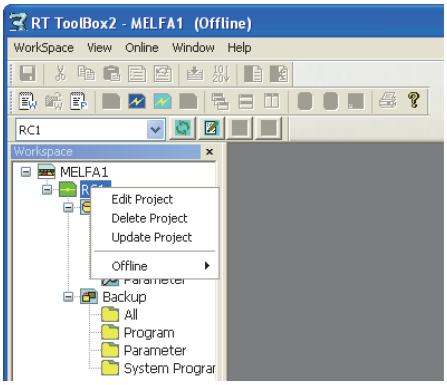



6. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].

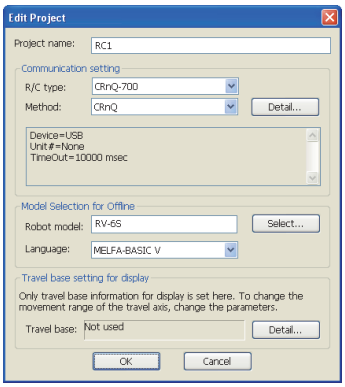
7. As necessary, select a CPU that is targeted in [CPU].



## Connecting the GOT and Controller in Ethernet connection

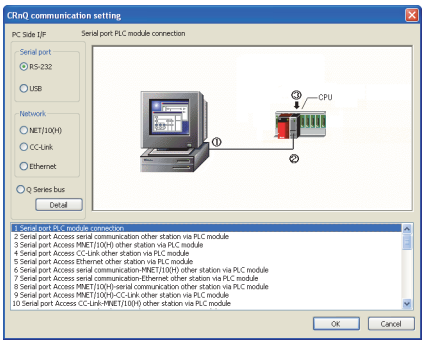



1. Right-click a project name to be a target on the project tree of RT ToolBox2.
Click [Edit Project].



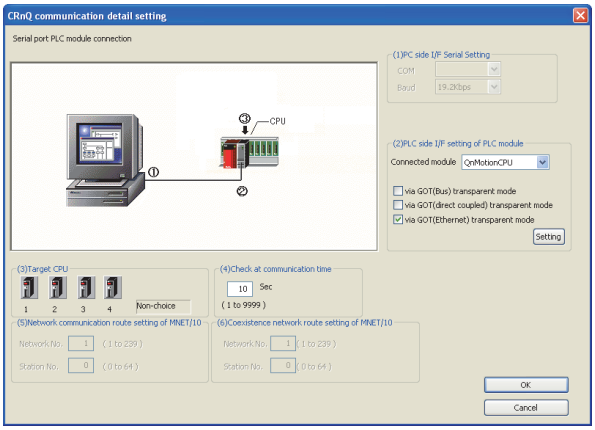

2. Set [Method] to [CRnQ].

**3.** Click [Detail].

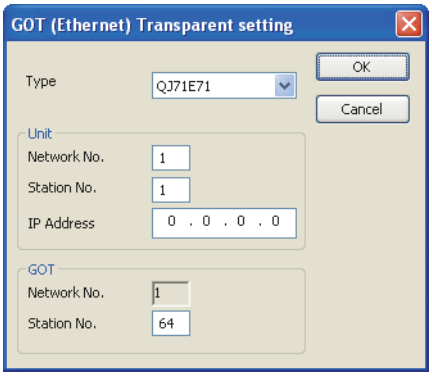



**4.** Select [USB] in [Serial port].

**5.** Click [Detail].




**6.** On the [PLC side I/F setting of PLC module], mark the [via GOT (Ethernet) transparent mode] checkbox and click [Set].




**7.** Set [QJ71E71] for [Type].

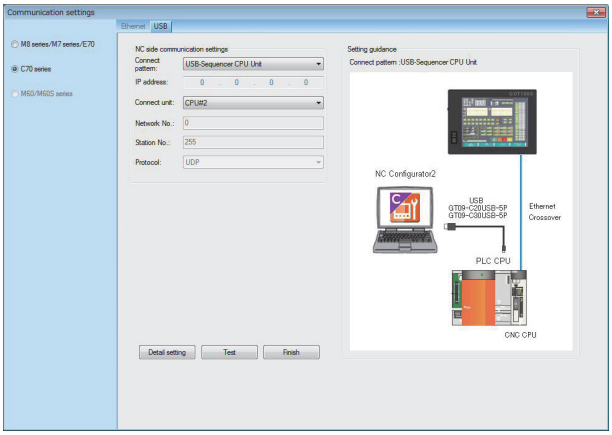
**8.** Specify the number assigned to the Ethernet module for [Network No.], [Station No.] and [IP Address] in "Module side".

**9.** Specify the number assigned to the GOT for [Network No.], [Station No.] and [IP Address] in "GOT side".

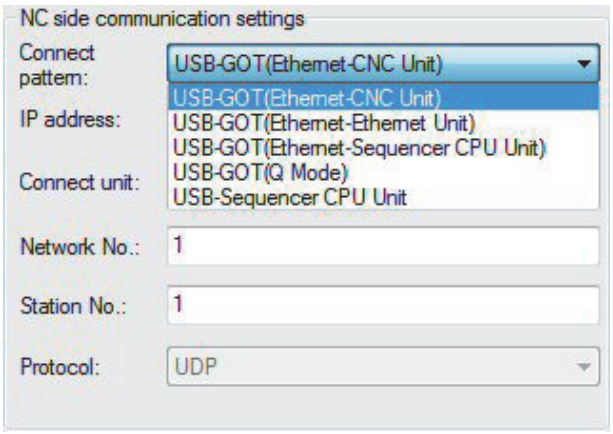
**10.** As necessary, select a CPU that is targeted in [CPU].

# Accessing by NC Configurator2

The following shows the procedure to set the FA transparent function of NC Configurator2.




***1.*** Click [Communicate] → [Communication settings] → [C70 series] → [USB].




***2.*** Depending on the connect pattern, set one of the following in the [Connect pattern].

USB-GOT (Ethernet-CNC Unit)

USB-GOT (Ethernet-Ethernet Unit)

USB-GOT (Ethernet-Sequencer CPU Unit)

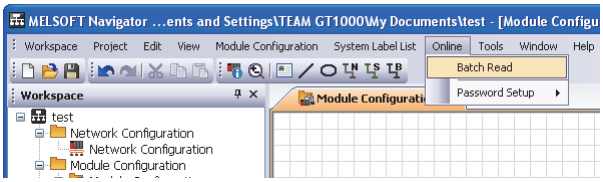
USB-GOT (Q Mode)

***3.*** Set as necessary [IP address], [Network No.] and [Station No.].

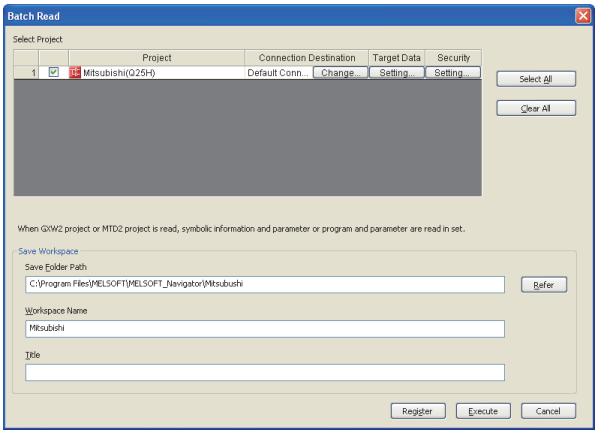
***4.*** check that the GOT is correctly connected to the CNC in [Test].

# Accessing by MELSOFT Navigator

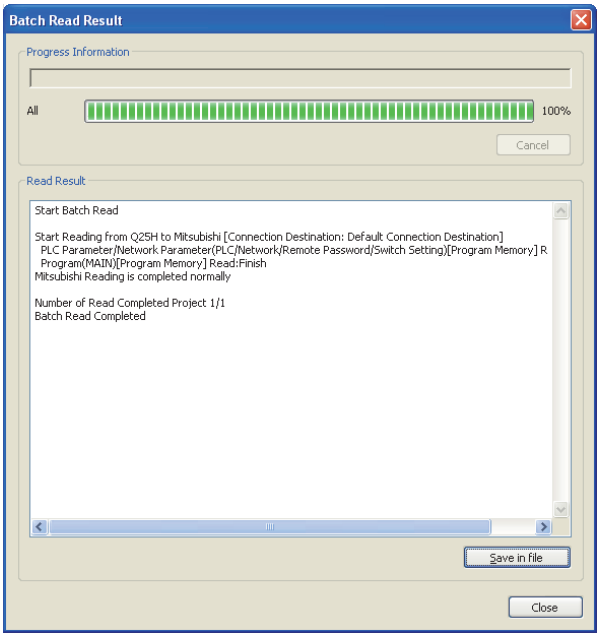
This section explains the procedure to set the FA transparent function of the MELSOFT Navigator.




1. Click [Online] → [Batch Read] in MELSOFT Navigator.
2. The [Batch Read] is displayed.




3. Select the projects to be read from [Select Project], and set the storage destination of the workspace in [Save Workspace].
4. Click [Execute] to read and display the specified project.



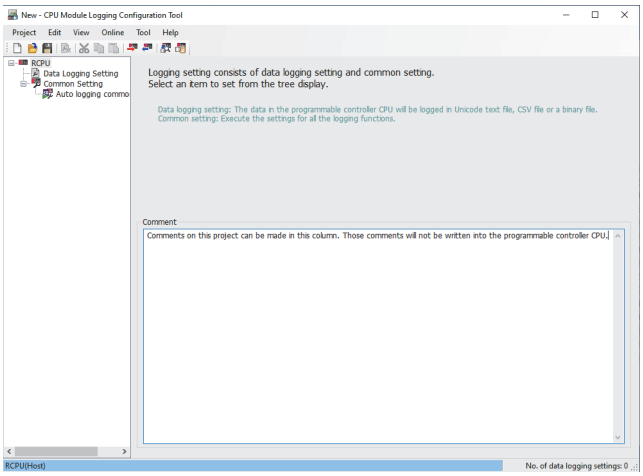
# Accessing by CPU Module Logging Configuration Tool

The following shows the procedure to set the FA transparent function of CPU Module Logging Configuration Tool.

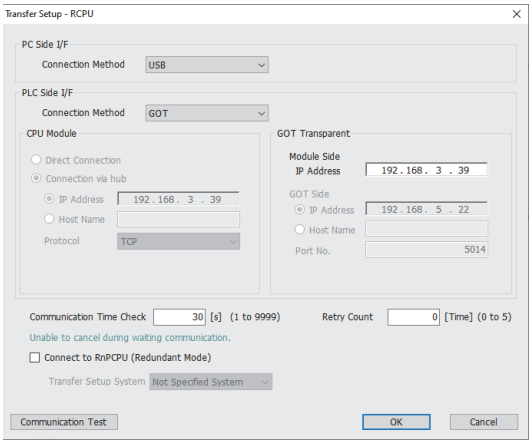
## When connecting the GOT and the RCPU or FX5CPU

The following shows an example of connection with the RCPU.

### ■Connecting the GOT and the personal computer by a USB




**1.** Click [Online] → [Transfer Setup] in CPU Module Logging Configuration Tool.




**2.** Set the following items in the [Transfer Setup] dialog.

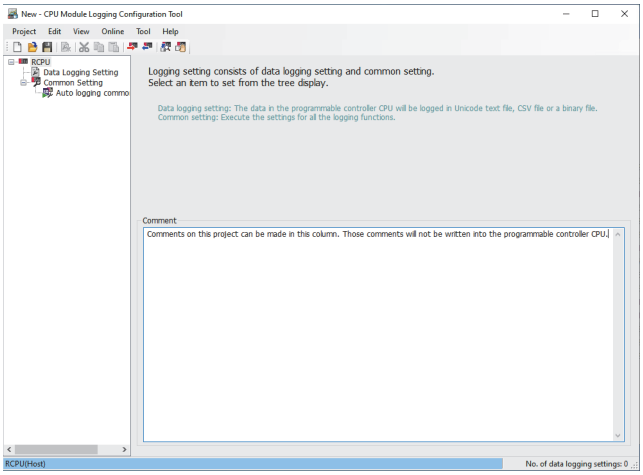
- [PC Side I/F]: [USB]
- [PLC Side I/F]: [GOT]

**3.** Set the following item in [Module Side] in [GOT Transparent].

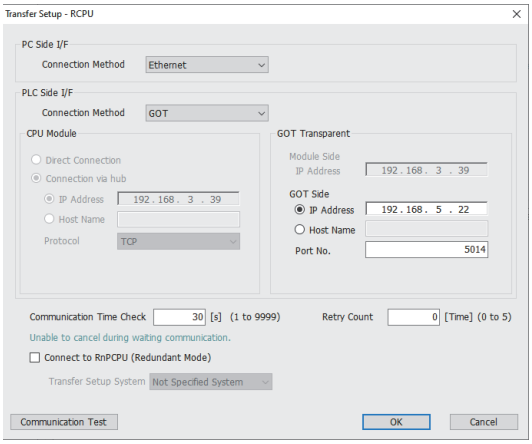
- [IP Address]: IP address of the PLC

**4.** Click [OK] to complete the setting.

## ■Connecting the GOT and the personal computer in an Ethernet connection




**1.** Click [Online] → [Transfer Setup] in CPU Module Logging Configuration Tool.




**2.** Set the following items in the [Transfer Setup] dialog.

- [PC Side I/F]: [Ethernet]
- [PLC Side I/F]: [GOT]

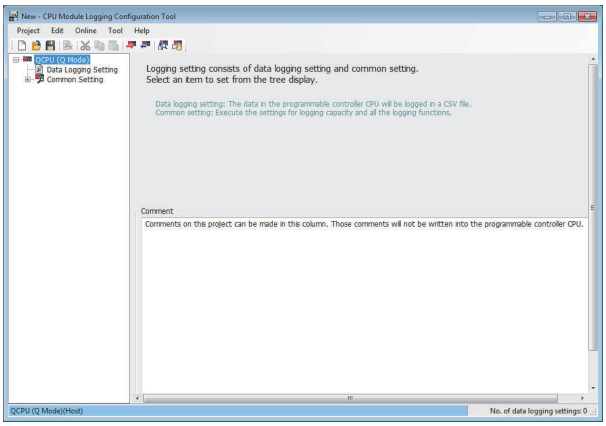
**3.** Set the following items in [GOT Side] in [GOT Transparent]

Set either [IP Address] or [Host Name].

- [IP Address]: IP address assigned to the GOT
- [Host Name]: Host name assigned to the GOT
- [Port No.]: Port No. for GOT transparent

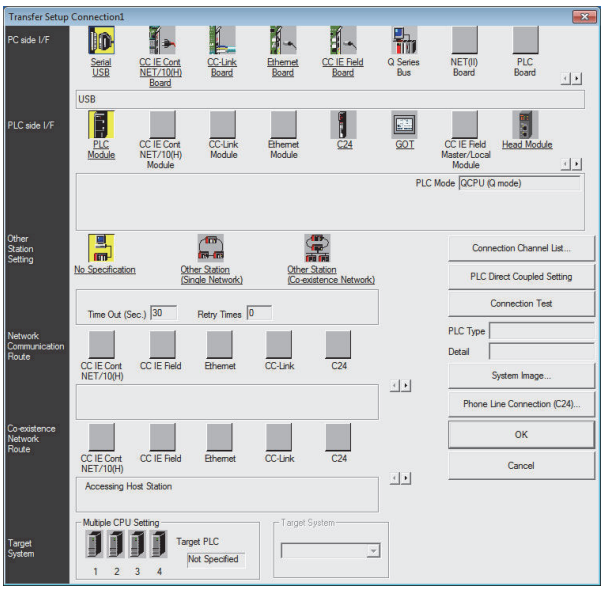
**4.** Click [OK] to complete the setting.

## When connecting the GOT and the QCPU (Q mode) or LCPU




**1.** Click [Online] → [Transfer Setup...].

**2.** The [Transfer Setup] is displayed.




**3.** Set the [Transfer Setup]:

PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No specification

**4.** Set [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] in [Transfer Setup].

For details, refer to the following.

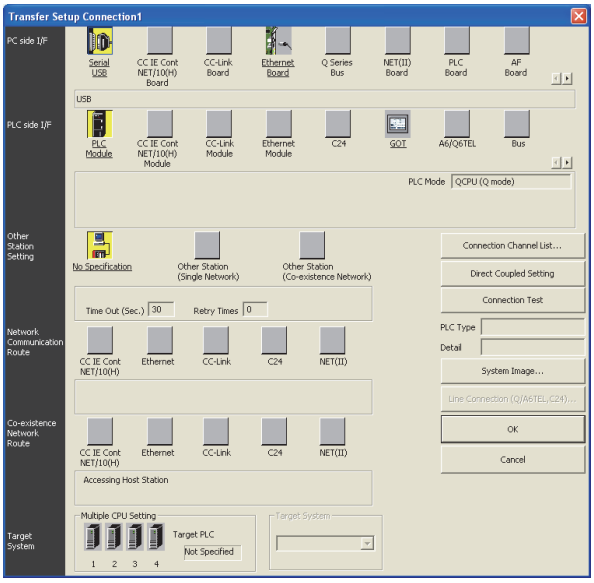
☞ Page 716 Accessing by GX Works2

# Accessing by Setting/ Monitoring tool for C Controller module

The following shows the procedure to set the FA transparent function of Setting/Monitoring tool for C Controller module (Q Series) with the C Controller module (Q24DHCCPU-V) connected.

## When connecting the GOT and personal computer with USB

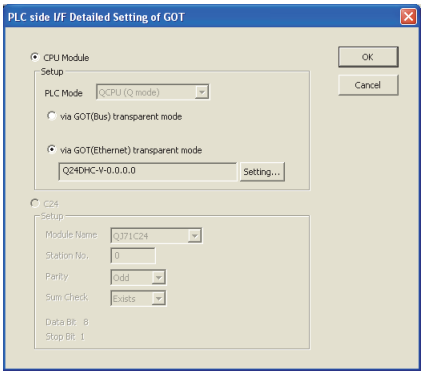
### ■When connecting the GOT and PLC in Ethernet communication




1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Setting/Monitoring tool for C Controller module.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

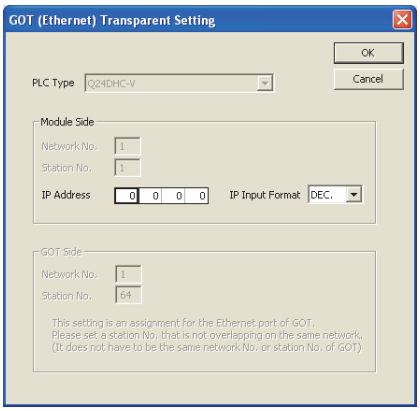
PLC side I/F: GOT

Other station: No specification




4. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].

**5.** Mark the [via GOT(Ethernet) transparent mode] checkbox on the [CPU side I/F Detailed Setting of GOT] screen.




**6.** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the C Controller module (Q Series) (Q24DHCCPU-V), which is firstly connected via a GOT.

**7.** Specify the IP address for [IP address] same as the IP address assigned to the C Controller module (Q Series) (Q24DHCCPU-V).




**8.** The screen returns to [Transfer Setup].

Click [Connection Test] to check if Setting/Monitoring tool for C Controller module has been connected to the C Controller module (Q Series) (Q24DHCCPU-V).

# Accessing by MX Component (MX Sheet)

This section explains the procedure to set the FA transparent function of MX Component (MX Sheet) with an example of MX Sheet Version2.

**Point**

MX Component (MX Sheet) manuals

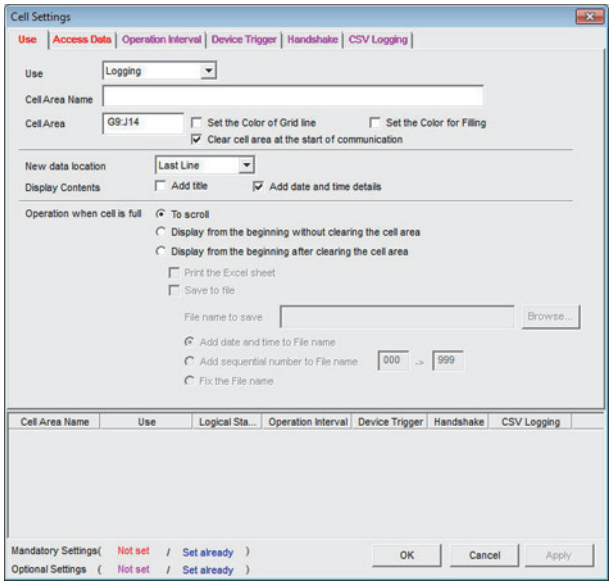
For details of the MX Component (MX Sheet), refer to the following manual.

MX Sheet Version 2 Operating Manual (Introduction)

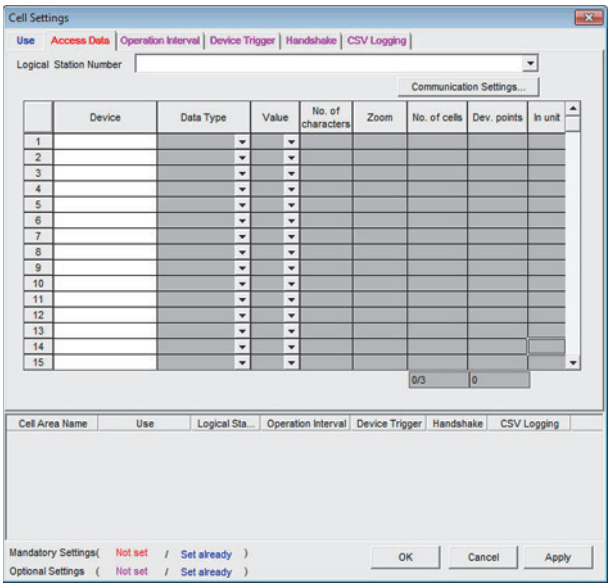
MX Component Version 4 Operating Manual

When MX Component is used alone

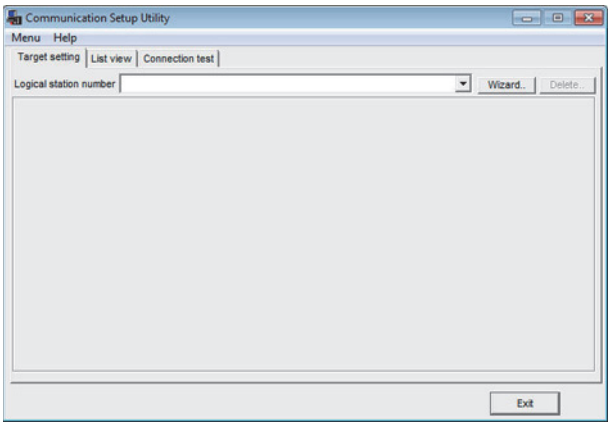
Start [Communication Setting Utility] and start communication setting from the following step 3.



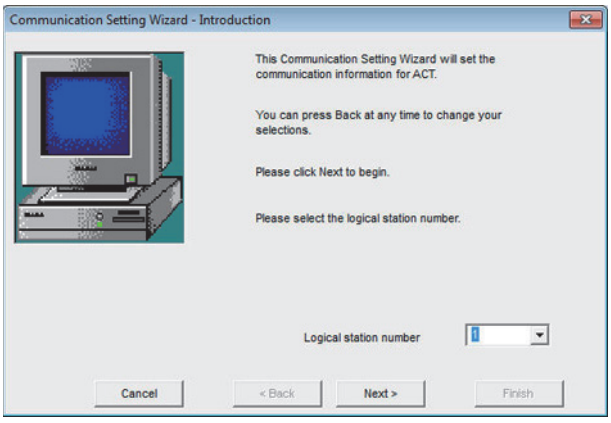

**1.** Click [MX sheet] of Microsoft Excel → [Cell Settings]. Set [Use] and click [Access Data].



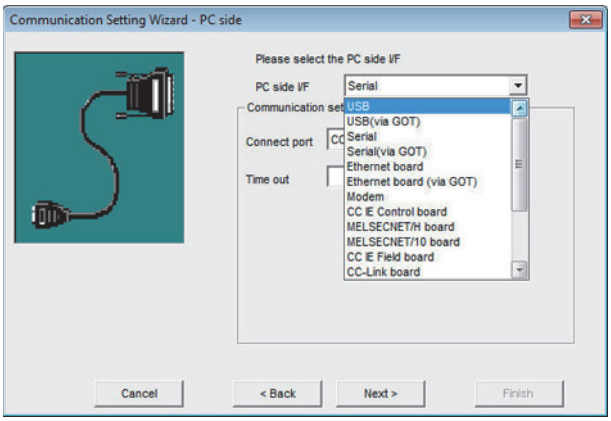
**2.** Click [Communication Setting].




**3.** Click [Wizard].




**4.** Set [Logical station number] and click [Next].



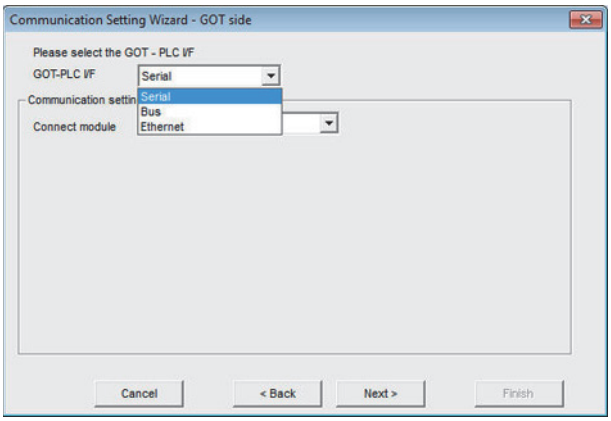
**5.** Select either of the following option from [PC side I/F] according to the connection configuration and click [Next].

### GOT and USB connection

[USB (Via GOT)]

### GOT and Ethernet connection

[Ethernet Board (Via GOT)]



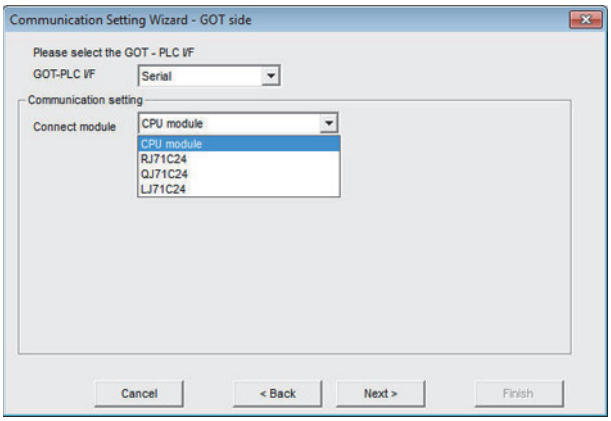

**6.** Select either of the following option from [GOT PLC I/F] according to the connection configuration.

### Direct CPU connection (serial)

[Serial]

### Ethernet connection

[Ethernet]



**7.** Select either of the following option from [Connect module] according to the setting of [GOT PLC I/F] and click [Next].

• For [Serial]

[CPU unit],[RJ71C24],[QJ71C24], [LJ71C24]

• For [Ethernet]

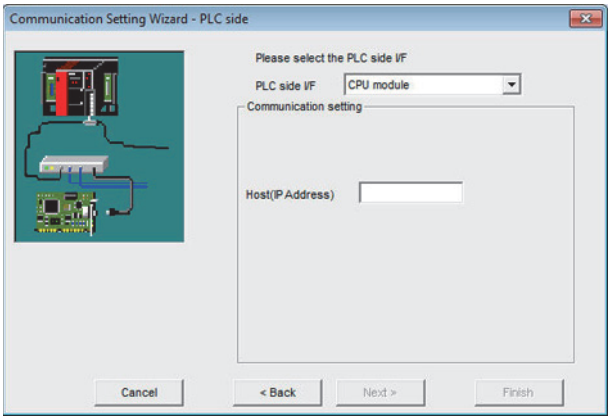
[CPU unit], [QJ71E71], [RJ71E71],[CC IE Field Ethernet adapter], [FX3U-ENET-ADP]

[FX3U-ENET(-L)], [CPU unit(FX5)]

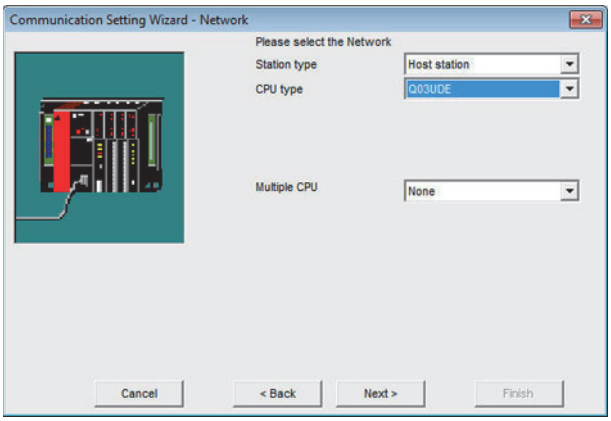
For example, set as shown below and click [Next].

[GOT and PLC I/F]: [Ethernet]

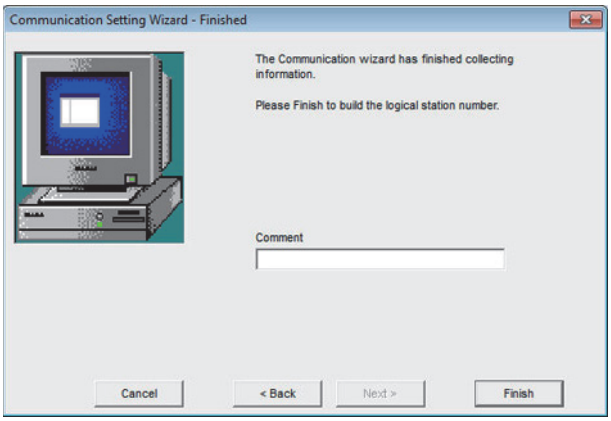
[Connection destination unit type]: [CPU unit]



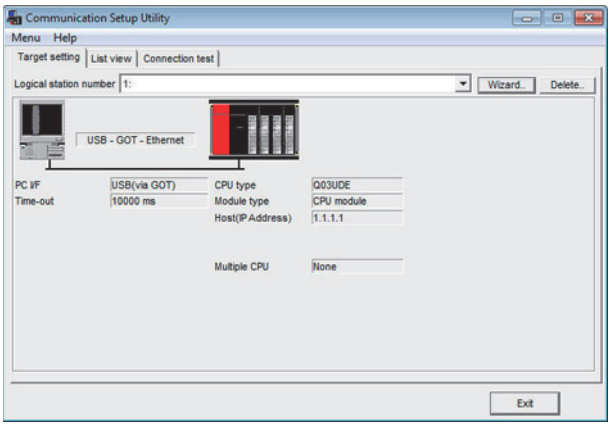

• Select [Host(IP Address)] according to the connection configuration and click [Next].



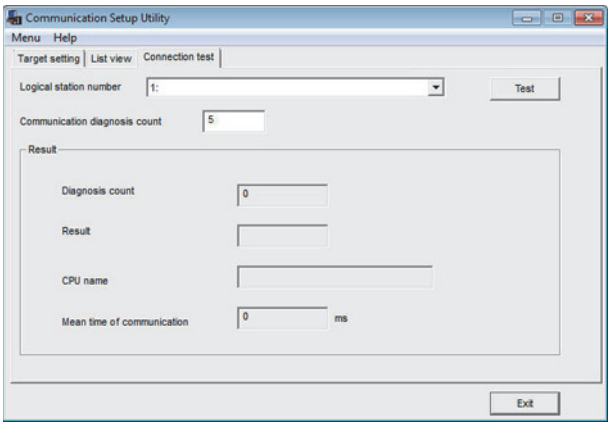

**8.** Select [Station type], [CPU type], and [Multiple CPU] according to the connection configuration and click [Next].



**9.** Set [Comment] and click [Finish].




**10.** Click [Connection test]



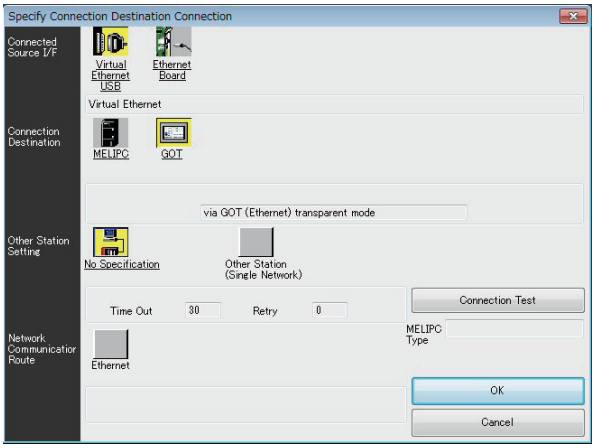

**11.** Click [Test] and check that normal communication is performed.

# Accessing by MI Configurator

This section explains the procedure to set the FA transparent function of the MI Configurator.

## When connecting the GOT and personal computer with USB

### ■When connecting the GOT and PLC in bus connection

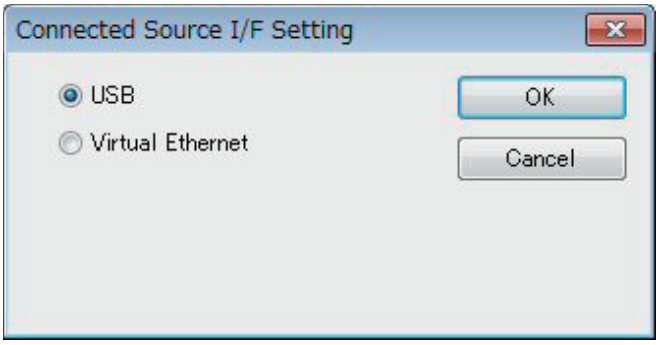


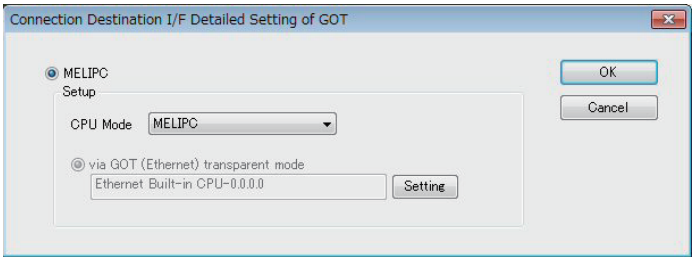

1. Click [Online] → [Transfer Setup] in MI Configurator.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup].

Connection source I/F: USB

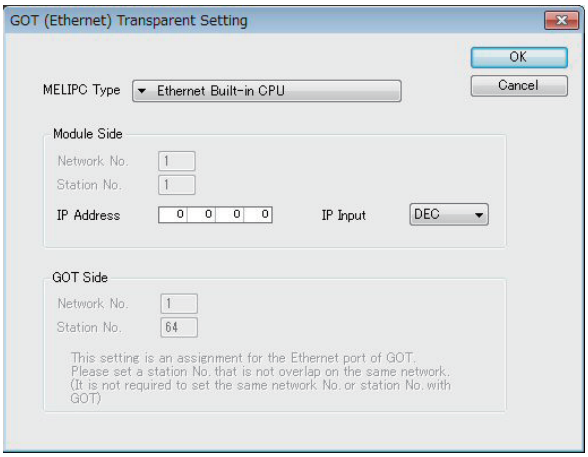
Connection destination I/F: GOT

Other station: No specification



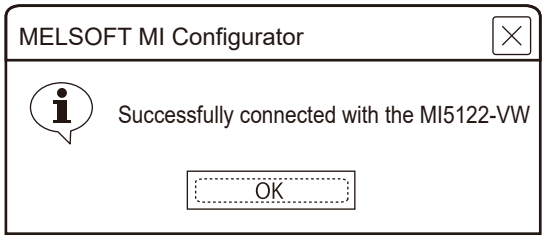



**4.** Double-click [GOT] of the Connection destination I/F to display [Connection destination I/F Detailed Setting of GOT].




**5.** By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

**6.** Specify the IP address for [IP address] same as the IP address assigned to the MELIPC.




**7.** The screen returns to the [Transfer Setup].

Click the [Connection Test] to check if MI Configurator has been connected to the MELIPC.

# 13.7 Precautions

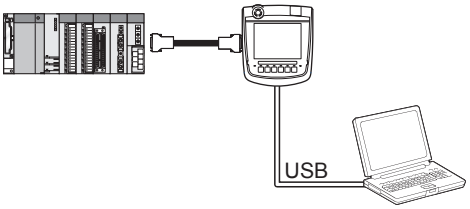
## Precautions common to each software

### GOT interface required to use the FA transparent function

Connect the personal computer, to which PX Developer or any other relevant software has been installed, to the USB interface of the GOT.

When performing the FA transparent function, use USB interface of the GOT.

Using both of them to perform the FA transparent function concurrently is not allowed.




### Conditions for suspending the FA transparent function

The FA transparent function is also suspended when any of the following operations, which stop the GOT monitor, is performed.

Note that the FA transparent function will not be stopped while using the extended function such as the Utility display or ladder monitor function.

- When project data is written/read, or when the OS is written by GT Designer3[*1]
- When the GOT is set up[*1]
- When no communication request (online monitor, etc.) has been issued from PX Developer for 45 minutes

*1 A timeout error occurs in PX Developer.

### When GOT monitoring is faulty

The FA transparent function cannot be used in case that the GOT monitoring is faulty due to PLC CPU errors or faulty communication between the PLC CPU and GOT.

When GOT monitoring is faulty, check the following.

#### ■Whether the PLC CPU operates normally

📖Refer to the User's Manual of the PLC CPU you use.

#### ■Whether the PLC CPU and GOT are connected normally

☞ Page 275 DIRECT CPU CONNECTION (SERIAL)
☞ Page 327 SERIAL COMMUNICATION CONNECTION

### When monitoring the PLC CPU from a personal computer

When monitoring the PLC CPU from a personal computer, the GOT and personal computer refresh the display slower.

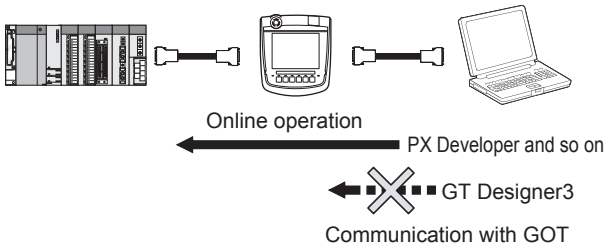
## Software available for the FA transparent function

When multiple kinds of software are activated on one personal computer, only one of them is available for communications using the FA transparent function.

Do not concurrently perform any communications using the FA transparent function.

(Offline operation with each software is available)

Also, do not perform communications with the GOT (e.g. downloading project data) from GT Designer3 during execution of communications using the FA transparent function.




## When PLC power disconnection occurs with the FA transparent function being used

While the FA transparent function is being used, if the communication between the PLC and the GOT is stopped due to PLC power disconnection or a disconnection of the communication cable between the PLC and the GOT, the GOT waits for timeout against the communication request from the peripheral devices (PX Developer, etc.), and it takes a few minutes to recover the monitoring between the PLC and the GOT.



## When the FA transparent function is used in an Ethernet connection

### ■GX Works3, GX Works2 function

When the FA transparent function is used in an Ethernet connection, the following GX Works3, GX Works2 functions cannot be executed.

The message [The executed function is not supported. Please check the manual and other documentation.] is displayed on GX Works3, GX Works2.

| Unsupported functions | Remark |
|---|---|
| • Remote Reset<br>• Remote system reset | — |
| • Remote RUN<br>• Remote STOP<br>• Remote PAUSE<br>• Remote STEP-RUN<br>• Remote latch clear<br>• Write clock data<br>• Clear malfunction log | Inexecutable only when specify all stations/groups has been performed. |
| • Remote password function<br>• MELSECNET diagnostics<br>• CC IE Control diagnostics<br>• CC-Link IE TSN/CC-Link IE Field diagnostics (GX Works3)<br>• CC IE Field diagnostics (GX Works2)<br>• Ethernet diagnostics (PING test/loopback test with the Ethernet module (R/Q series)) | — |

### ■GOT station monitoring function

When the FA transparent function is used in an Ethernet connection, GOT station monitoring function cannot be operated. Therefore, in the cases of [no connection target], [PLC power OFF], etc., the monitoring of the GOT delays for the timeout time.

### ■When connecting to FXCPU

When connecting the GOT and FXCPU in Ethernet communication, and using the FA transparent function, a timeout may occur.

When a timeout occurs, set [Delay Time] in the communication detail settings according to the circumstance of the system.

☞ Page 145 Communication detail settings

## When using the FA transparent function in the GOT multi-drop connection

FA transparent function is available for each GOT in the GOT multi-drop connection system.

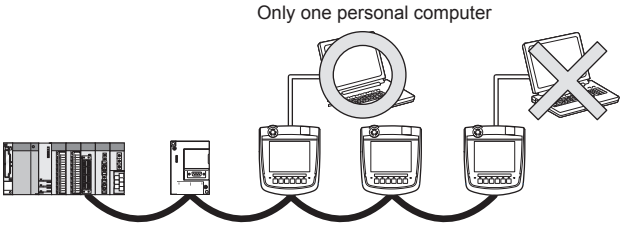
### ■Installing a system application (standard function) and writing the communication driver

When using the FA transparent function in the GOT multi-drop connection, the writing of the system application (standard function) and communication driver to the GOT, as well as the writing of the standard monitor OS and communication driver to the serial multi-drop connection unit are required.

☞ Page 632 Connecting GOT2000 in multi-drop connection

### ■Number of personal computers

Only one personal computer can be connected to the multi-drop connection system.




### ■Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs.

While using FA transparent function, the monitoring performance of the whole multi-drop system decreases.

As a result, timeout error may occur in GOTs in the system.

## When connecting the GOT and the personal computer by USB

When the following operations are executed, the display on the GOT may stop temporarily or a timeout message may appear on GX Works3 or GX Works2.

The operations are executed in the PLC.

| Operation | Target station |
|---|---|
| • Remote Reset | Current station |
| • Remote RUN<br>• Remote STOP<br>• Remote PAUSE<br>• Remote STEP-RUN<br>• Remote Reset<br>• Remote latch clear<br>• Write clock data | All stations |

# When using GX Works3, GX Works2

## When [monitor conditions] have been set on GX Works3, GX Works2

### ■Monitoring performance of the GOT is temporarily suspended.

### ■The GOT cannot respond to the touch switch operation and numerical/ascii inputs.

### ■Writing to PLC results in a system alarm occurrence and displays the message, "315 Device writing error. Correct device".

### ■While setting the monitor conditions, do not perform any operation which makes the GOT restart (e.g. downloading project data, changing utility data).

Doing so may display a system alarm, "402 Communication timeout.
Confirm communication pathway or modules." when the GOT restarts.
When the monitor conditions setting for the PLC CPU has not been cancelled, reconnect GX Works3, GX Works2 to cancel the setting.(An error may be output when the monitor conditions setting is cancelled.)

### ■When the time check of GX Works3, GX Works2 is set to 30 seconds or more in the monitor condition settings, the message "402 Communication timeout. Confirm communication pathway or modules." may appear.

Set the time check time of GX Works3, GX Works2 to 30 seconds or less.

## When exiting GX Works3, GX Works2

For 30 seconds after GX Works3, GX Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.

## When performing [Read to PLC], [Write to PLC] and other file operations on GX Works3, GX Works2

If any of the following GOT functions is executed during the file operation such as [Read to PLC] or [Write to PLC], an error may occur on the GOT, GX Works3, GX Works2.
In this case, take the following corrective action:

- File reading in the ladder monitor function for MELSEC-Q

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| The file is not found. | With no file operation being executed on GX Works2, re-execute the file reading. | File access failure.<br>Please retry. | With no file reading being executed in the ladder monitor function for MELSEC-Q, re-execute the file operation. |

- Read/write of values of the file register specified for the recipe function

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| 358 PLC file access failure.<br>Confirm PLC drive.*1 | With no file operation on GX Works3, GX Works2, turn ON the trigger device for the recipe function again. | File access failure.<br>Please retry. | Execute the file access operation again with the recipe in-process signal in GOT system information OFF. |
| | | PLC file system error.<br>Unable to communicate with PLC. | |

*1 The numerical indicates the system alarm No.

- Reading TC monitor set value in the system monitor function

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| No message is displayed.<br>(The TC set value space is blank.) | With no file operation being executed on GX Works3, GX Works2, re-execute the TC monitor. | File access failure.<br>Please retry. | With no TC set value being read, re-execute the file operation. |

• Reading the special module monitor CPU Malfunction log

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| Communication error | With no file operation being executed on GX Works3, GX Works2, re-execute the CPU malfunction log reading. | File access failure.<br>Please retry. | With no special module monitor malfunction log being read, execute the file operation. |

• Backup/restore

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| Backup | With no file operation being executed on GX Works2, re-execute the backup. | - | With no backup being executed, execute the file operation. |
| Restore | With no file operation being executed on GX Works2, re-execute the restore. | - | With no restore being executed, execute the file operation. |

• SFC monitor file reading

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| - | With no file operation being executed on GX Works3, GX Works2, re-execute the file reading. | - | With no special module monitor CPU malfunction log being read, execute the file operation. |

• Reading/Writing files of ladder edit

| Error messages on GOT | Corrective action on GOT side | Error messages on GX Works2 | Corrective action on GX Works2 |
|---|---|---|---|
| Read | With no file operation being executed on GX Works2, re-execute the file reading. | — | With no file reading being executed on ladder edit, execute the file operation. |
| Write | With no file operation being executed on GX Works3, GX Works2, re-execute the file writing. | — | With no file writing being executed on ladder edit, execute the file operation. |

## When PLC write fails while using the FA transparent function

The execution of PLC write using the FA transparent function may fail due to some reason such as cable disconnection.
When this occurs, re-execute the PLC write from the same personal computer, or reset the PLC CPU.

## Restrictions on GX Works2 during backup/restoration

### ■When PLC read, PLC write, or monitoring is executed from GX Works2 using the FA transparent function during backup/restoration of the GOT, the backup/restoration stops.

Check that PLC read, PLC write, or monitoring is not executed from GX Works2 using the FA transparent. Then, execute backup/restoration of the GOT again.

### ■When backup/restoration is executed from the GOT while PLC read, PLC write, monitoring, or other operation is run with GX Works2 using the FA transparent function, an errors on GX Works2.

Backup/restoration of the GOT is correctly executed.

# When using MT Developer, MT Works2

## When exiting MT Developer, MT Works2

For 45 seconds after MT Developer, MT Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.

## When PLC write fails while using the FA transparent function

The execution of PLC write to the Motion CPU using the FA transparent function may fail due to some reasons such as cable disconnection.
In that case, re-execute the PLC write from the same personal computer, or reset the Motion CPU.

## When a cable disconnection has occurred

When the cable between the GOT and the motion CPU is disconnected, it takes time until a timeout error occurs in MT Developer, MT Works2.



# When using MR Configurator, MR Configurator2

## Unavailable functions and restrictions

For the use via the motion controller, there are unavailable functions and restrictions.
For details on the restrictions, refer to the help screen of MR Configurator.

## Monitor speed of GOT

Since the FA transparent function is used via the motion CPU, the monitor speed of GOT is slow.

# When using FR Configurator, FR Configurator2

## GOT monitoring when using FA transparent function

When FA transparent function is used, GOT suspends monitoring on channels supporting FA transparent function.

**Point**

Cancelling the suspended GOT monitoring immediately
To cancel the suspended (45 seconds) GOT monitoring immediate30ly after FA transparent is executed, input "1" to device GS457.
Then GOT resumes monitoring.
If FA transparent is resumed even if "1" is already input to device GS457, an error will occur on FR Configurator.
For the details of the device, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

## When using the oscilloscope function (When using FR Configurator)

Since the monitoring of the inverter data may be not performed at the specified sampling intervals depending on the settings of oscilloscope function, adjust the communication setting, a sampling interval, etc.

## PU mode operation command source selection

On the setting of PU mode operation command source selection (Pr:551) of the inverter, specify the terminal (1:RS-485 terminals, 2:PU connected) connected to GOT.

## High speed sampling using FR Configurator2

High speed sampling is unavailable when the FA transparent function is used.

# MEMO

# PART 7 CONNECTIONS TO NON-MITSUBISHI ELECTRIC PRODUCTS

14 IAI ROBOT CONTROLLER

15 AZBIL CONTROL EQUIPMENT

16 OMRON PLC

17 OMRON TEMPERATURE CONTROLLER

18 KEYENCE PLC

19 KOYO EI PLC

20 JTEKT PLC

21 SHARP PLC

22 SHINKO TECHNOS INDICATING CONTROLLER

23 CHINO CONTROLLER

24 TOSHIBA PLC

25 SHIBAURA MACHINE PLC

26 PANASONIC SERVO AMPLIFIER

27 PANASONIC INDUSTRIAL DEVICES SUNX PLC

28 HITACHI IES PLC

29 HITACHI PLC

30 FUJI PLC

31 FUJI TEMPERATURE CONTROLLER

32 YASKAWA PLC

33 YASKAWA ROBOT CONTROLLER

34 YOKOGAWA PLC

35 YOKOGAWA TEMPERATURE CONTROLLER

36 RKC TEMPERATURE CONTROLLER

37 ALLEN-BRADLEY PLC

38 GE PLC

39 LS INDUSTRIAL SYSTEMS PLC

40 MITSUBISHI ELECTRIC INDIA PLC

41 SICK SAFETY CONTROLLER

42 SIEMENS PLC

43 HIRATA CORPORATION HNC CONTROLLER

44 MURATEC CONTROLLER

# 14 IAI ROBOT CONTROLLER


- Page 791 Connectable Model List
- Page 795 System Configuration
- Page 817 Connection Diagram
- Page 824 GOT Side Settings
- Page 826 Robot Controller Side Setting
- Page 832 Settable Device Range
- Page 832 Precautions


## 14.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| X-SEL | XSEL-J | × | RS-232 | GT 2506 HS GT 2505 HS | ☞ Page 795 Connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL |
| | XSEL-K | | | | |
| | XSEL-KE | | | | |
| | XSEL-KT | | | | |
| | XSEL-KET | | | | |
| | XSEL-P | | | | |
| | XSEL-Q | | | | |
| | XSEL-JX | | | | |
| | XSEL-KX | | | | |
| | XSEL-KTX | | | | |
| | XSEL-PX | | | | |
| | XSEL-QX | | | | |
| SSEL | SSEL | | | | |
| ASEL | ASEL | | | | |
| PSEL | PSEL | | | | |
| RSEL | RSEL | | | | |

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| PCON | PCON-C | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 797 System Configuration for connecting to PCON, ACON, SCON, ERC2 |
| | PCON-CG | | | | |
| | PCON-CF | | | | |
| | PCON-CY | | | | |
| | PCON-SE | | | | |
| | PCON-PL | | | | |
| | PCON-PO | | | | |
| | PCON-CA | | | | |
| | PCON-CFA | | | | |
| | PCON-CFA | | | | |
| | PCON-CB | | | | |
| | PCON-CFB | | | | |
| ACON | ACON-C | | | | |
| | ACON-CG | | | | |
| | ACON-CY | | | | |
| | ACON-SE | | | | |
| | ACON-PL | | | | |
| | ACON-PO | | | | |
| | ACON-CB | | | | |
| SCON | SCON-C | | | | |
| | SCON-CA | | | | |
| | SCON-CB | | | | |
| ERC2 | ERC2-□-□-□-□-□-NP-□-□ | | | | |
| | ERC2-□-□-□-□-□-PN-□-□ | | | | |
| | ERC2-□-□-□-□-□-SE-□-□ | | | | |
| RCON | RCON-GW(GWG)-CC | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 815 System Configuration for connecting to RCON |
| | RCON-GW(GWG)-CIE | | | | |
| | RCON-GW(GWG)-DV | | | | |
| | RCON-GW(GWG)-EP | | | | |
| | RCON-GW(GWG)-PR | | | | |
| | RCON-GW(GWG)-PRT | | | | |

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| EC | EC-S3 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | *1<br>*2 |
| | EC-S4 | | | | |
| | EC-S6 | | | | |
| | EC-S7 | | | | |
| | EC-S6□R | | | | |
| | EC-S7□R | | | | |
| | EC-S6□AH | | | | |
| | EC-S7□AH | | | | |
| | EC-S6□AHR | | | | |
| | EC-S7□AHR | | | | |
| | EC-R6 | | | | |
| | EC-R7 | | | | |
| | EC-RP4 | | | | |
| | EC-GS4 | | | | |
| | EC-GD4 | | | | |
| | EC-RR3 | | | | |
| | EC-RR4 | | | | |
| | EC-RR6 | | | | |
| | EC-RR7 | | | | |
| | EC-RR6□R | | | | |
| | EC-RR7□R | | | | |
| | EC-RR6□AH | | | | |
| | EC-RR7□AH | | | | |
| | EC-RR6□AHR | | | | |
| | EC-RR7□AHR | | | | |
| | EC-TC4 | | | | |
| | EC-TW4 | | | | |
| | EC-R6□W | | | | |
| | EC-R7□W | | | | |
| | EC-RR6□W | | | | |
| | EC-RR7□W | | | | |
| | EC-B6 | | | | |
| | EC-B7 | | | | |
| | EC-B6U | | | | |
| | EC-B7U | | | | |
| | EC-S3R | | | | |
| | EC-S4R | | | | |
| | EC-RR3R | | | | |
| | EC-RR4R | | | | |
| | EC-ST15 | | | | |
| | EC-RTC9 | | | | |
| | EC-RTC12 | | | | |
| | EC-S13 | | | | |
| | EC-S13X | | | | |
| | EC-S15 | | | | |
| | EC-S15X | | | | |
| | EC-RR6X□AH | | | | |
| | EC-RR7X□AH | | | | |

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| EC | EC-WS10 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | *1<br>*2 |
| | EC-WS12 | | | | |
| | EC-GD5 | | | | |
| | EC-RP5 | | | | |
| | EC-TC5 | | | | |
| | EC-TW5 | | | | |
| | EC-S6□CR | | | | |
| | EC-S7□CR | | | | |
| | EC-S6AH□CR | | | | |
| | EC-S7AH□CR | | | | |
| | EC-S3□CR | | | | |
| | EC-S4□CR | | | | |
| | EC-GRB8M | | | | |
| | EC-GRB10M | | | | |
| | EC-GRB13M | | | | |
| | EC-GRB13L | | | | |
| | EC-S10 | | | | |
| | EC-S10X | | | | |

*1 Sample screen data are required for connection with EC series.
To obtain sample screen data, contact your local sales office.

*2 EC series with an ACR option is designed to be connected with RCON-EC. The series cannot be directly connected with the GOT.

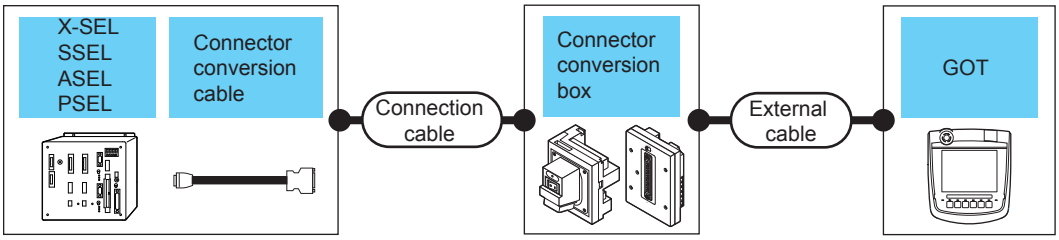
# 14.2 System Configuration

## Connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL

Communication driver

IAI X-SEL

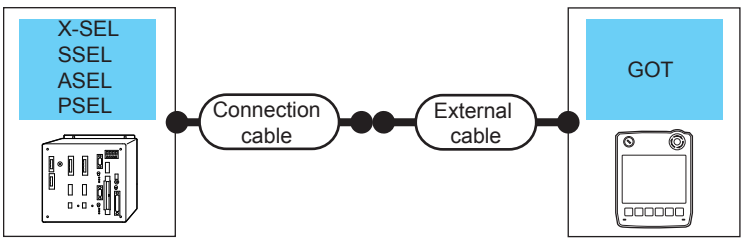
### When using the connector conversion box




| Controller | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | RS-232C adapter | Communication Type | Cable model Connection diagram number | | | | | |
| X-SEL (Teaching connector) | - | RS-232 | CB-ST-E1MW050*1 or User preparing Page 817 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 Controller |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| X-SEL (General RS232C port connector) | | | User preparing Page 818 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| SSEL ASEL PSEL | CB-SEL-SJ002*1 | | CB-ST-E1MW050*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| RSEL | CB-SEL-SJS002*1 | | CB-ST-E1MW050*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

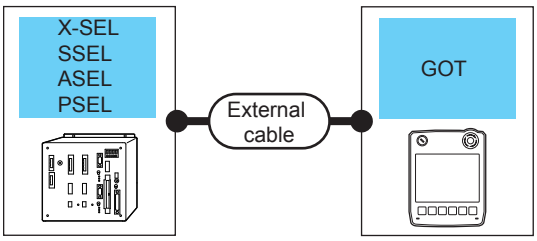
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

### When using the external cable (GT11H-C□□□-37P)




| Controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | | | | |
| X-SEL (Teaching connector) | RS-232 | User preparing Page 817 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 Controller |
| X-SEL (General RS232C port connector) | | | GT11H-C30-37P(3m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□)




| Controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| X-SEL (Teaching connector) | RS-232 | GT11H-C30(3m) ☞Page 818 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 Controller |
| X-SEL (General RS232C port connector) | | GT11H-C30(3m) ☞Page 818 RS-232 connection diagram 3) | GT 2505HS | | |

# System Configuration for connecting to PCON, ACON, SCON, ERC2

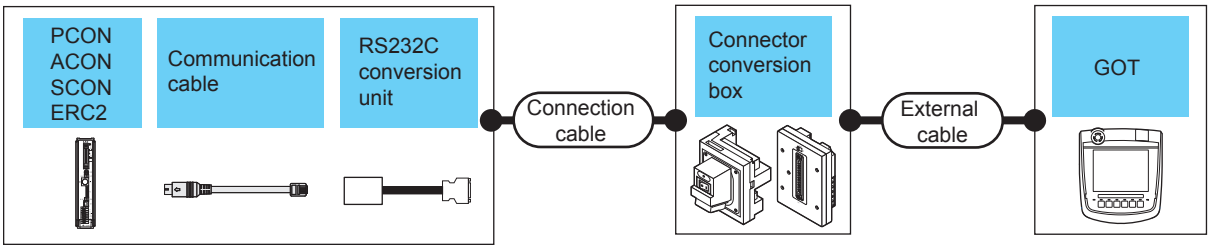
Communication driver

IAI ROBO CYLINDER

## When connecting the GOT to a controller via RS-232

### ■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box




| Controller | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Communication cable | RS232C conversion unit | Communication Type | Connection diagram number | | | | | |
| PCON<br>ACON<br>SCON<br>ERC2 (NP/PN specifications) *3 | CB-RCA-SIO050*1 (5m) | RCB-CV-MW*1 (0.3m) | RS-232 | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 Controller |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| ERC2 (SIO specifications) *2 | CB-ERC2-SIO020*1<br>+<br>CB-ERC2-PWBIO□□□ *1<br>or<br>CB-ERC2-PWBIO□□□ -RB*1 | RCB-CV-MW*1 (0.3m) | RS-232 | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

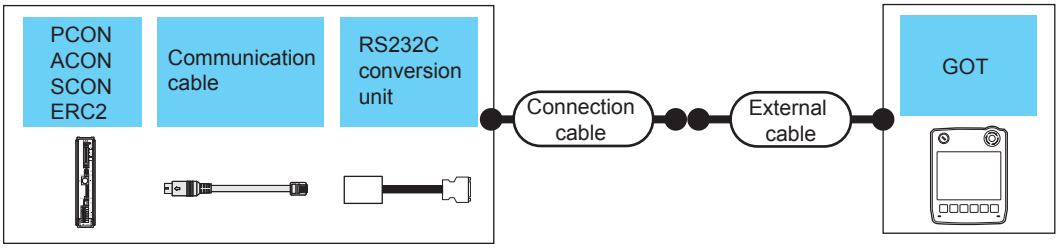
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-SE-□-□.

*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

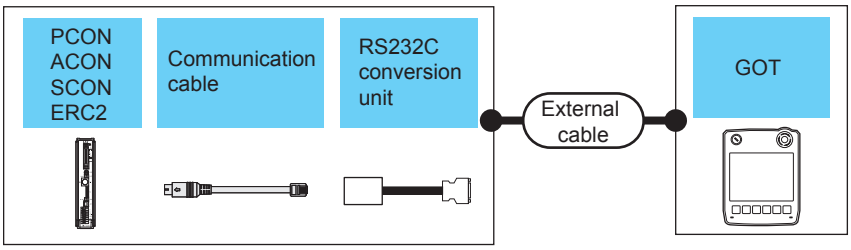
• When using the external cable (GT11H-C□□□-37P)




| Controller | | | Connection cable | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication cable | RS232C conversion unit | Connection diagram number | | | | |
| PCON<br>ACON<br>SCON<br>ERC2 (NP/PN specifications)*3 | CB-RCA-SIO050*1<br>(5m) | RCB-CV-MW*1<br>(0.3m) | User preparing Page 820 RS-232 connection diagram 10) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 Controller |
| ERC2 (SIO specifications)*2 | CB-ERC2-SIO020*1<br>+<br>CB-ERC2-PWBIO □□□ *1<br>or<br>CB-ERC2-PWBIO □□□ -RB*1 | RCB-CV-MW*1<br>(0.3m) | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-SE-□-□.
*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

• When using the external cable (GT11H-C□□□)

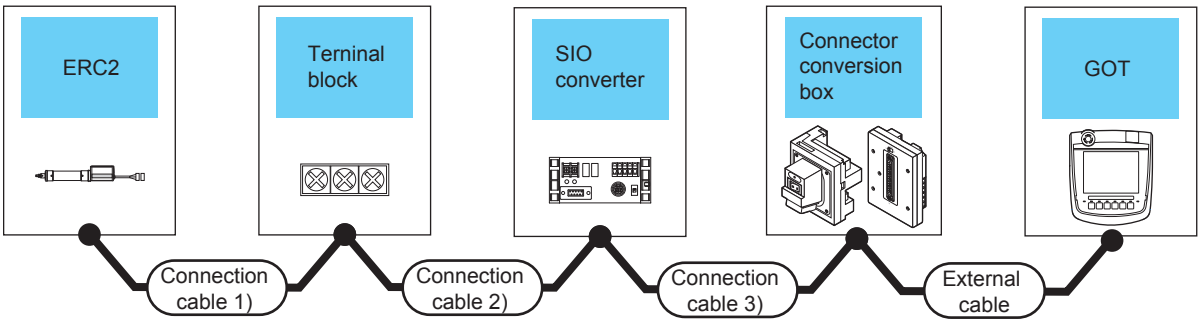



| Controller | | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication cable | RS232C conversion unit | | | | |
| PCON<br>ACON<br>SCON<br>ERC2 (NP/PN specifications)*3 | CB-RCA-SIO050*1<br>(5m) | RCB-CV-MW*1<br>(0.3m) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 820 RS-232 connection diagram 11) | GT 2505HS | 6m | 1 GOT for 1 Controller |
| ERC2 (SIO specifications)*2 | CB-ERC2-SIO020*1<br>+<br>CB-ERC2-PWBIO □□□ *1<br>or<br>CB-ERC2-PWBIO □□□ -RB*1 | RCB-CV-MW*1<br>(0.3m) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 820 RS-232 connection diagram 11) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-SE-□-□.
*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

## ■ERC2 (NP/PN specifications) only

• When using the connector conversion box



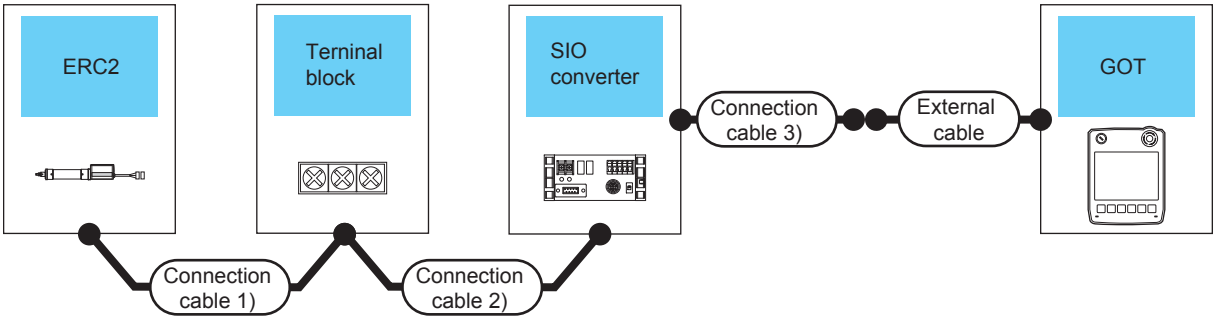

| Controller | Connection cable 1)*1 | Terminal block | Connection cable 2) | Max. distance | SIO converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model | | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| ERC2 (NP/PN specifications)*2 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 5) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 819 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 9m | 1 GOT for 16 Controller |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

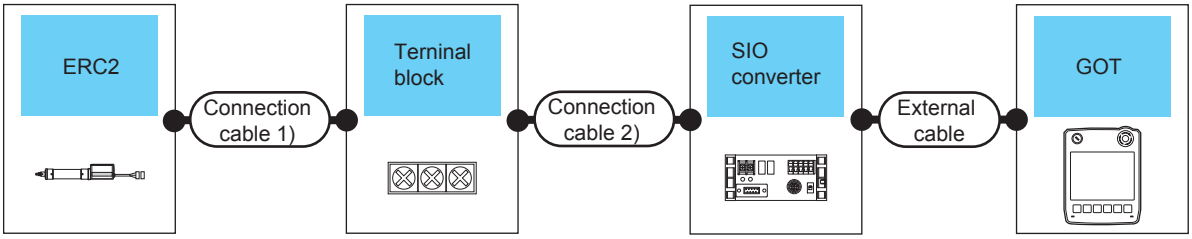
• When using the external cable (GT11H-C□□□-37P)




| Controller | | Connection cable 1)*1 | Terminal block | Connection cable 2) | Max. distance | SIO converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model | | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| ERC2 (NP/PN specifications)*2 | RS-422 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 5) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 9m | 1 GOT for 1 Controller |
| | | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

• When using the external cable (GT11H-C□□□)



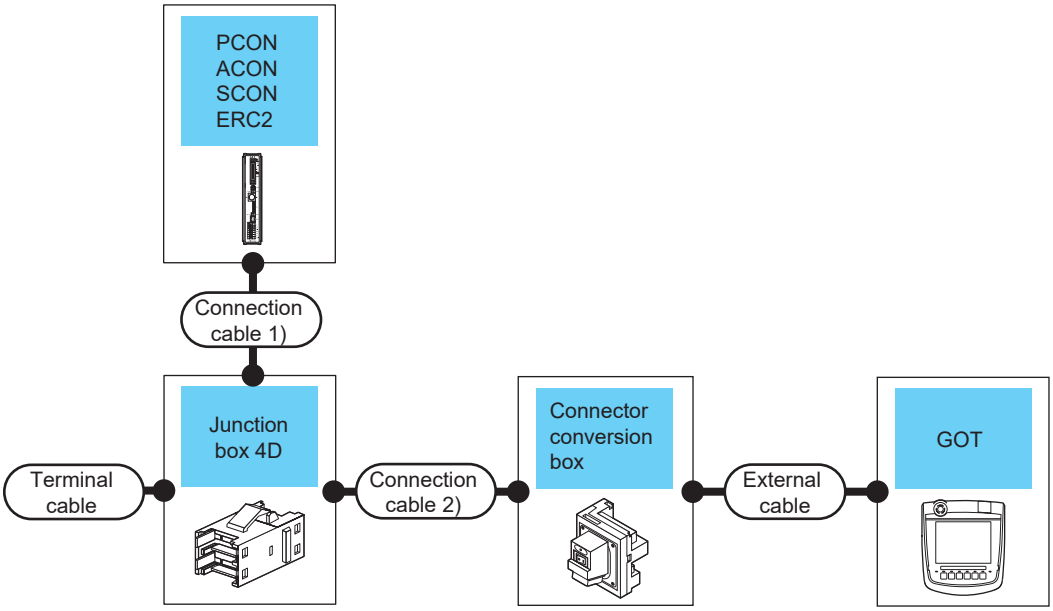

| Controller | | Connection cable 1)*1 | Terminal block | Connection cable 2) | Max. distance | SIO converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model | | Connection diagram number | | Model name | Communication Type | | | | |
| ERC2 (NP/PN specifications)*2 | RS-422 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 819 RS-232 connection diagram 7) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | 9m | 1 GOT for 1 Controller |
| | | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (External cable)

## When connecting the GOT to a controller via RS-422/485

### ■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box




| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | | | | | |
| PCON<br>ACON<br>SCON<br>ERC2 (NP/PN specifications)<br>*4 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002 (0.2m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 16 Controllers for 1 GOT |
| ERC2 (SIO specifications)<br>*3 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC2-CTL001<br>+<br>CB-ERC2-PWBIO □□□<br>or<br>CB-ERC2-PWBIO □□□ -RB | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

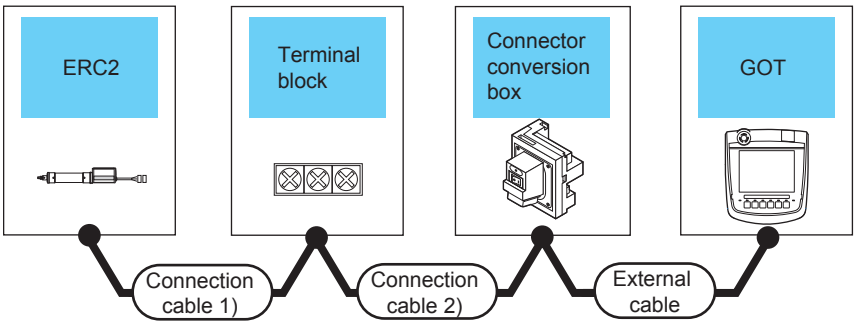
*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 Use ERC2-□-□-□-□-□-SE-□-□.

*4 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

## ■ERC2 (NP/PN specifications) only

• When using the connector conversion box




| Controller | Connection cable 1)*1 | Terminal block | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model | | Connection diagram number | | | | | |
| ERC2 (NP/PN specifications)*2 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 16 Controllers for 1 GOT |

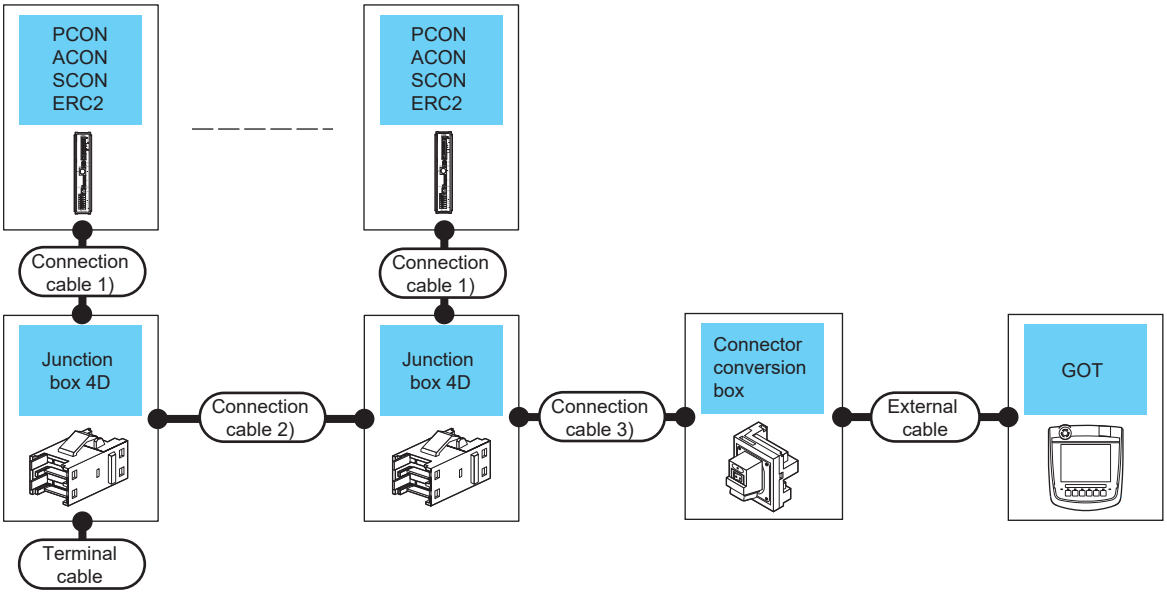
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

## When connecting to multiple controllers

### ■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box




| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | | | | |
| PCON ACON SCON ERC2 (NP/PN specifications) *4 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002(0.2 m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 16 Controllers for 1 GOT |
| ERC2 (SIO specifications) *3 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

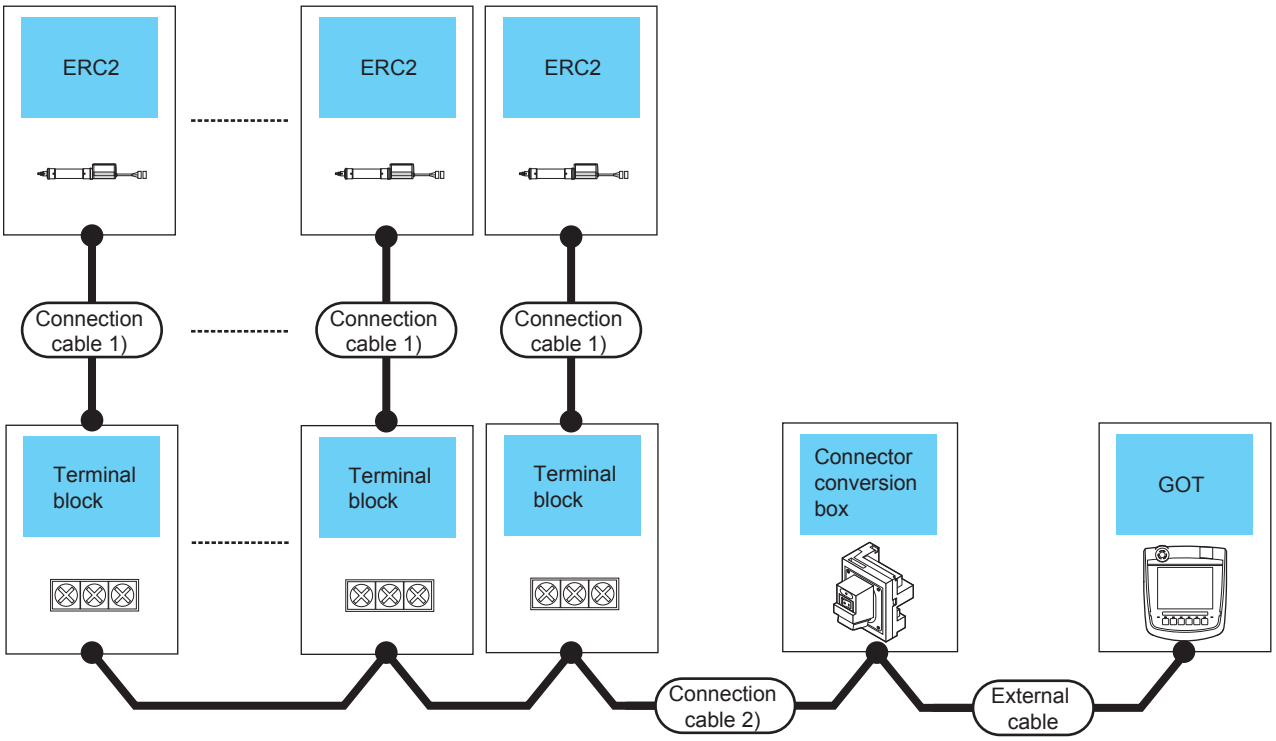
*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 Use ERC2-□-□-□-□-□-SE-□-□.

*4 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

## ■ERC2 (NP/PN specifications) only

• When using the connector conversion box




| Controller | Connection cable 1)*1 | Terminal block | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model | | Connection diagram number | | | | | |
| ERC2 (NP/PN specifications)*2 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 16 Controllers for 1 GOT |

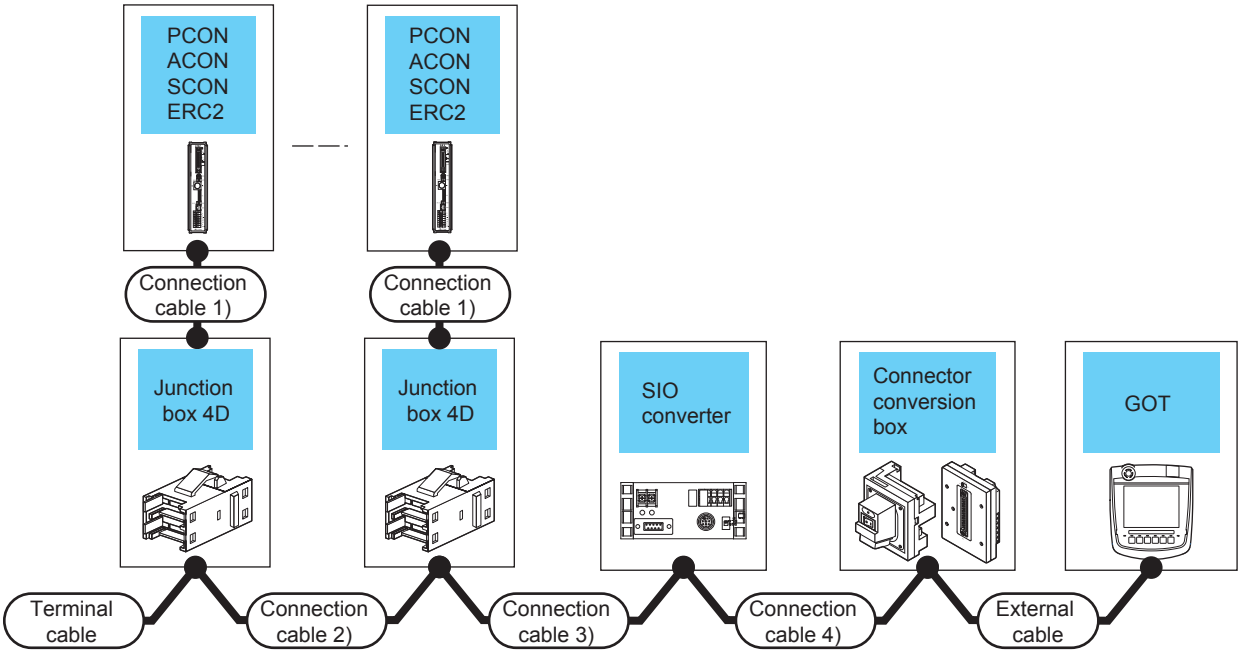
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

## When connecting to multiple controllers (via SIO converter)

### ■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box




| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. distance | SIO converter*1 | | Connection cable 4) | Connector conversion box | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PCON ACON SCON | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002 (0.2m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 819 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 9m | 16 Controllers for 1 GOT |
| | | | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | - | CB-RCB-CTL002*3 (0.2m) | - | - | - | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 2 Controllers for 1 GOT |
| | | | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. distance | SIO converter*1 | | Connection cable 4) | Connector conversion box | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| ERC2 (SIO specifications)*4 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 819 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 9m | 16 Controllers for 1 GOT |
| | | | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | - | | - | - | - | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 2 Controllers for 1 GOT |
| | | | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| ERC2 (NP/PN specifications)*5 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 823 RS-422/485 connection diagram 8) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | | | | RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 819 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 16 Controllers for 1 GOT |
| | | | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

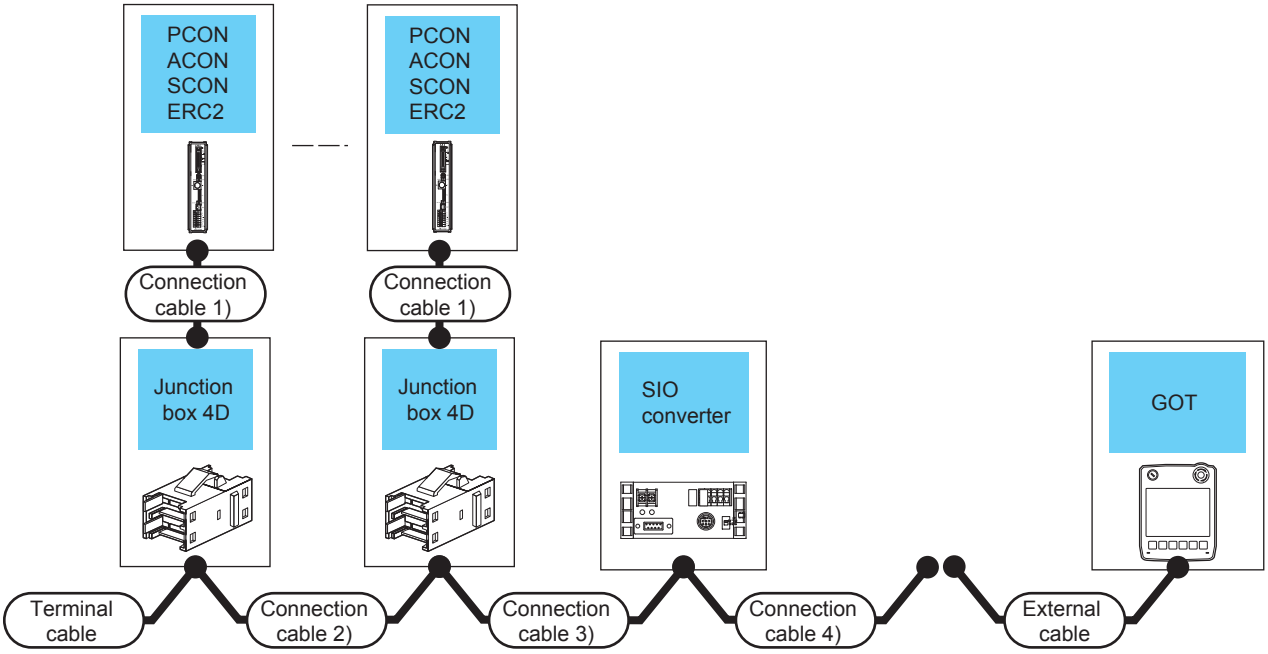
*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

• When using the external cable (GT11H-C□□□-37P)




| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. distance | SIO converter*1 | | Connection cable 4) | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PCON ACON SCON | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002 (0.2m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 9m | 16 Controllers for 1 GOT |
| | - | CB-RCB-CTL002*3 (0.2m) | - | - | - | | | | | GT11H-C30-37P(3m) | GT 2505HS | | 2 Controllers for 1 GOT |
| ERC2 (SIO specifications)*4 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | | | | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | 16 Controllers for 1 GOT |
| | - | | - | - | - | | | | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | 2 Controllers for 1 GOT |

| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. distance | SIO converter*1 | | Connection cable 4) | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| ERC2 (NP/PN specifications)*5 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 823 RS-422/485 connection diagram 9) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 9m | 16 Controllers for 1 GOT |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

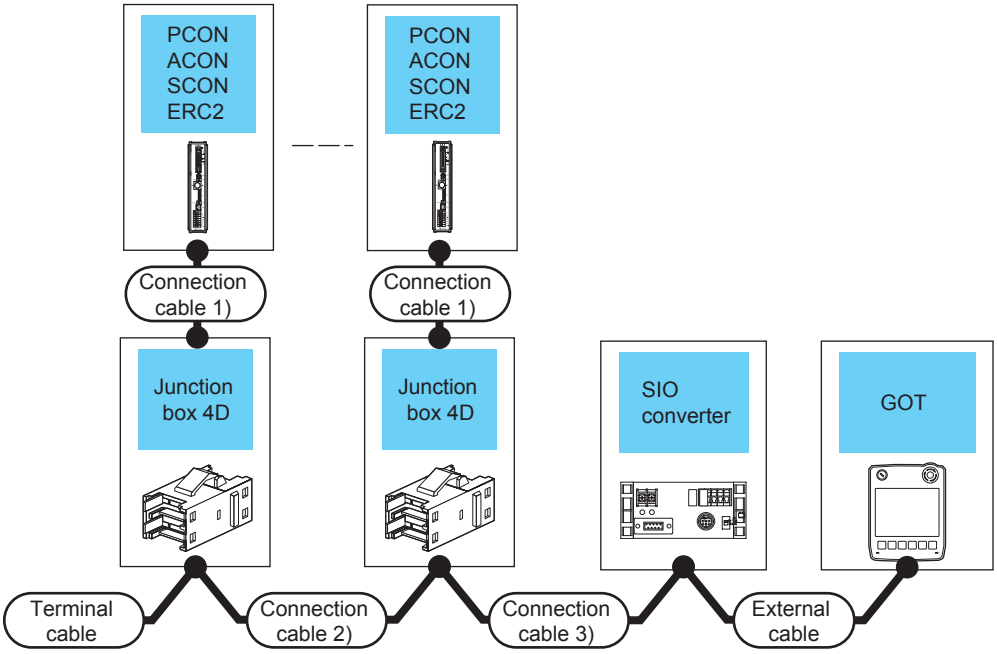
*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

• When using the external cable (GT11H-C□□□)




| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. disatance | SIO converter*1 | | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | | | | |
| PCON ACON SCON | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002 (0.2m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | GT11H-C30(3m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | 9m | 16 Controllers for 1 GOT |
| | - | CB-RCB-CTL002*3 (0.2m) | - | - | - | | | | | GT 2505HS | | 2 Controllers for 1 GOT |
| ERC2 (SIO specifications)* 4 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | | | | GT11H-C30(3m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | | 16 Controllers for 1 GOT |
| | - | | - | - | - | | | | | GT 2505HS | | 2 Controllers for 1 GOT |

| Controller | Terminal cable | Connection cable 1)*1 | Junction box 4D*2 | Connection cable 2) | Connection cable 3) | Max. distance | SIO converter*1 | | External cable | GOT Model | Total distance *6 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Connection diagram number | Cable model | Model name | Connection diagram number | Connection diagram number | | Model name | Communication Type | | | | |
| ERC2 (NP/PN specifications)*5 | User preparing Page 821 RS-422/485 connection diagram 1) | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 823 RS-422/485 connection diagram 9) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 2) | User preparing Page 821 RS-422/485 connection diagram 2) or User preparing Page 822 RS-422/485 connection diagram 4) | 100m | RCB-TU-SIO-□ | RS-232 | GT11H-C30(3m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | 9m | 16 Controllers for 1 GOT |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

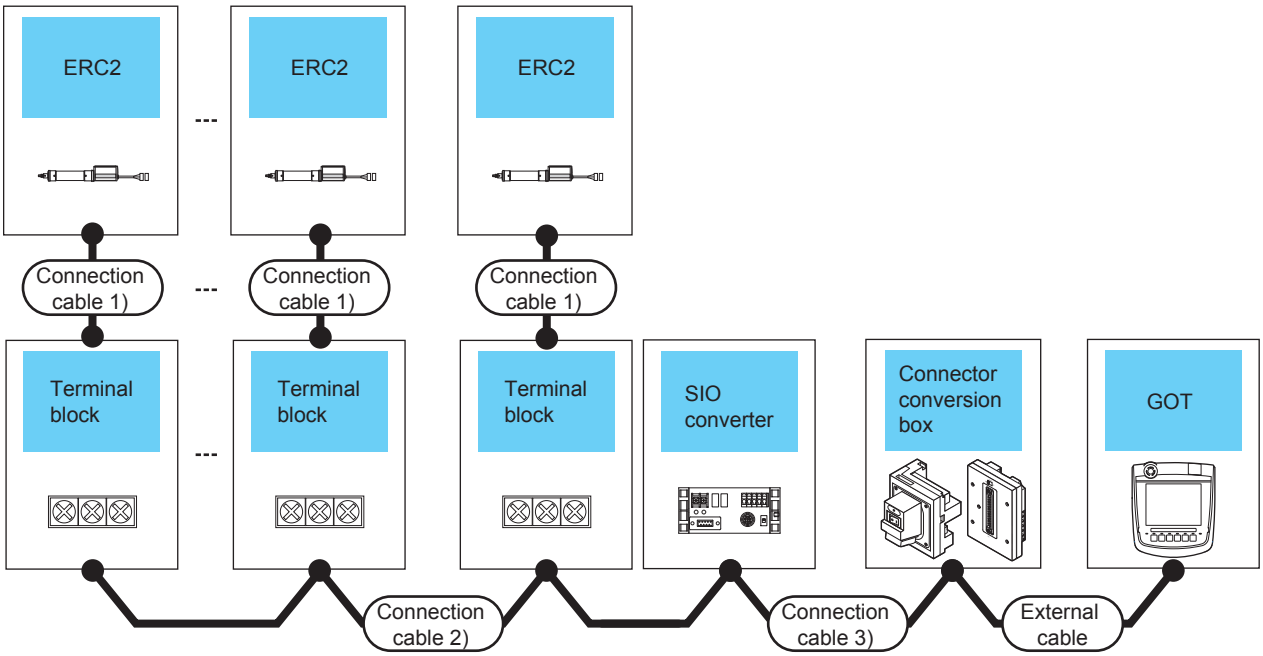
*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

## ■ERC2 (NP/PN specifications) only

• When using the connector conversion box



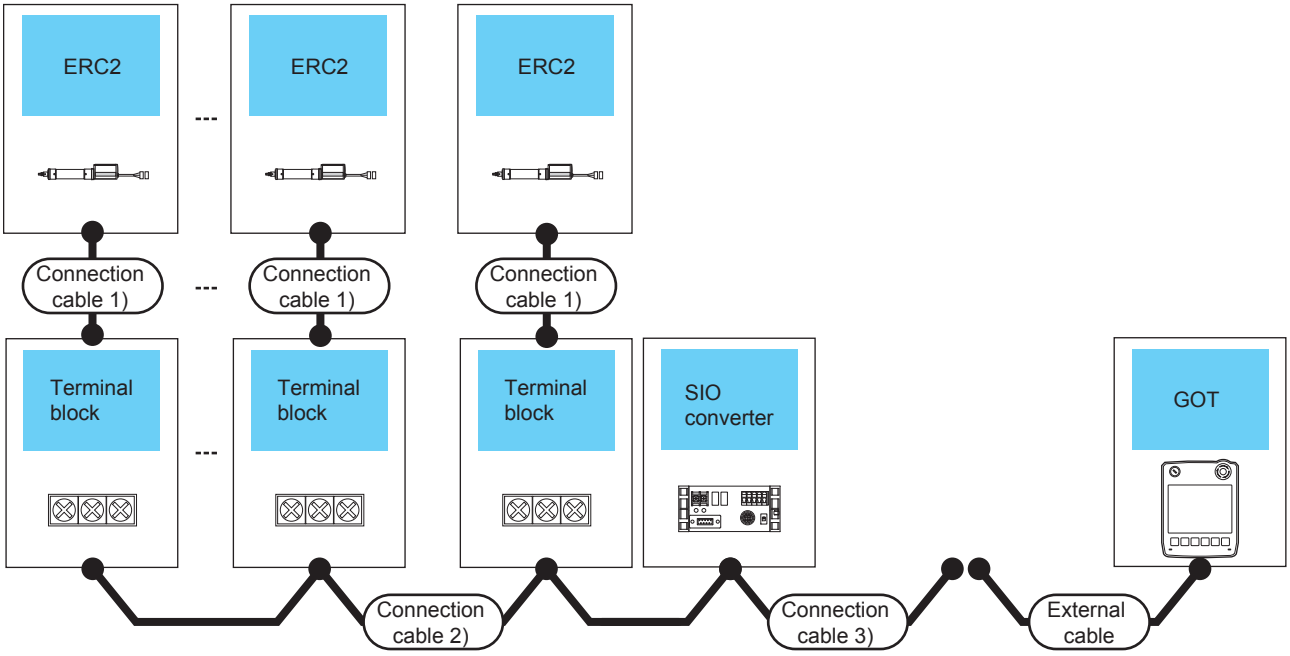

| Controller Series | Connection cable 1)*1 Cable model | Terminal block | Connection cable 2) Connection diagram number | Max. distance | SIO converter*1 Model name | SIO converter*1 Communication Type | Connection cable 3) Cable model Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ERC2 (NP/PN specifications)*2 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 823 RS-422/485 connection diagram 9) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 819 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 9m | 16 Controllers for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

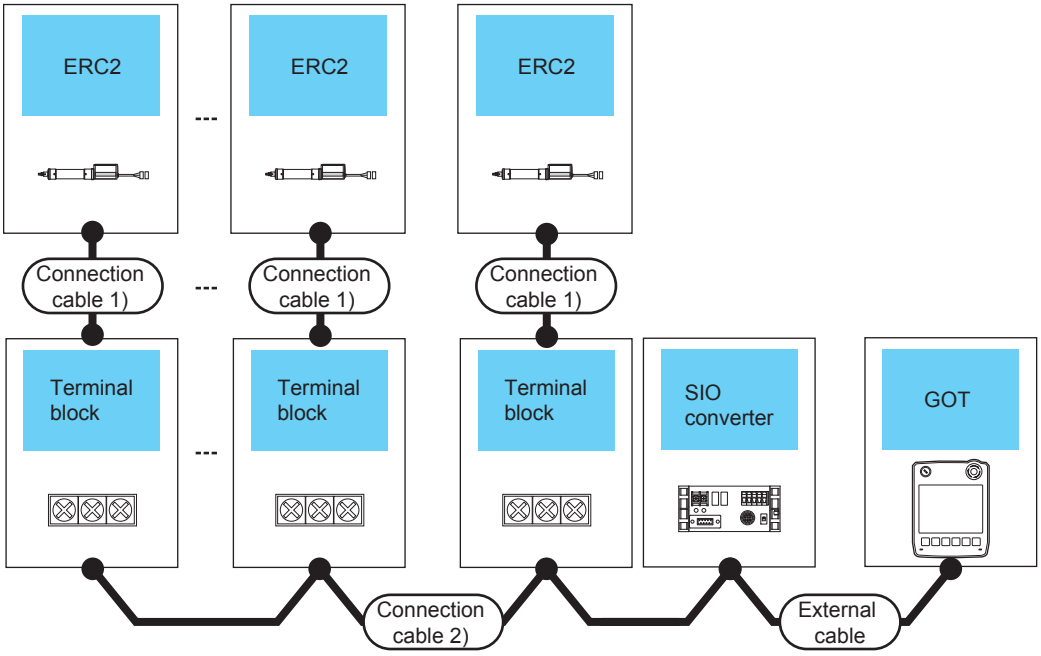
• When using the external cable (GT11H-C□□□-37P)




| Controller | | Connection cable 1)*1 | Terminal block | Connection cable 2) | Max. distance | SIO converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model | | Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| ERC2 (NP/PN specifications)*2 | RS-422 | CB-ERC-PWBIO□□□ or CB-ERC-PWBIO□□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 5) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 9m | 16 Controllers for 1 GOT |
| | | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | User preparing Page 819 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

• When using the external cable (GT11H-C□□□)




| Controller | | Connection cable 1)*1 | Terminal block | Connection cable 2) | Max. distance | SIO converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model | | Connection diagram number | | Model name | Communication Type | | | | |
| ERC2 (NP/PN specifications)*2 | RS-422 | CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB | Terminal block (User preparing) | User preparing Page 822 RS-422/485 connection diagram 5) or User preparing Page 822 RS-422/485 connection diagram 6) | 100m | RCB-TU-SIO-□ | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | 9m | 16 Controllers for 1 GOT |
| | | | RC□-TU-PIO*1 | User preparing Page 823 RS-422/485 connection diagram 9) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 820 RS-232 connection diagram 9) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (External cable)

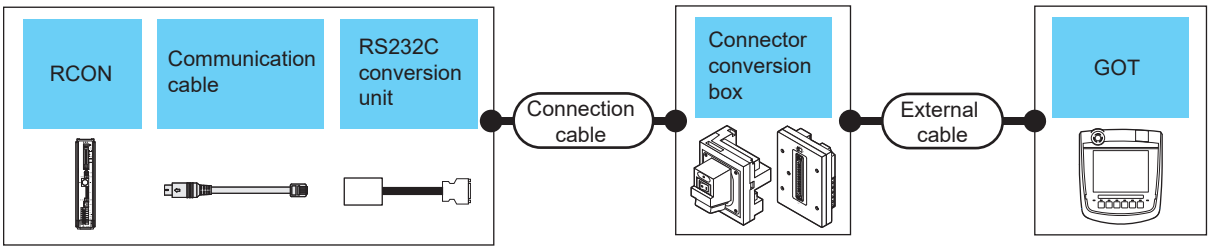
# System Configuration for connecting to RCON

Communication driver

IAI ROBO CYLINDER

## When using the RS-232 connection

### ■When using the connector conversion box

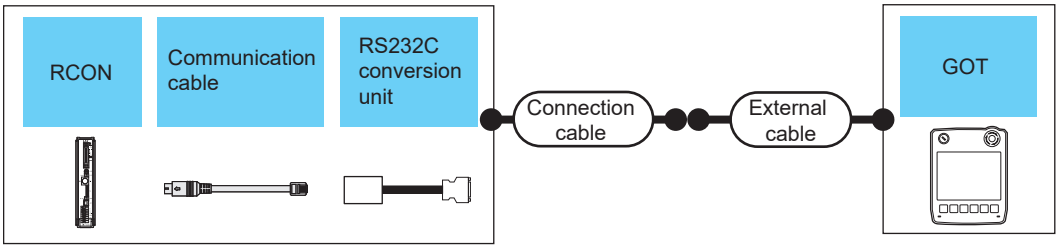



| Controller | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Communication cable | RS232C conversion unit | Communication Type | Connection diagram number | | | | | |
| RCON | CB-RCA-SIO050 *1 (5m) | RCB-CV-MW *1 (0.3m) | RS-232 | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 Controller |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.

*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

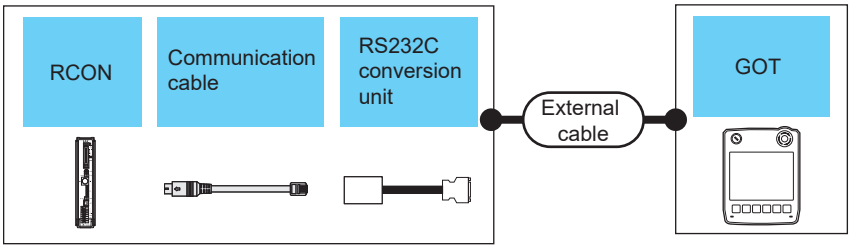



| Controller | Communication cable | RS232C conversion unit | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | | | Connection diagram number | | | | |
| RCON | CB-RCA-SIO050*1 (5m) | RCB-CV-MW*1 (0.3m) | User preparing Page 820 RS-232 connection diagram 10) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 Controller |

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.

*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

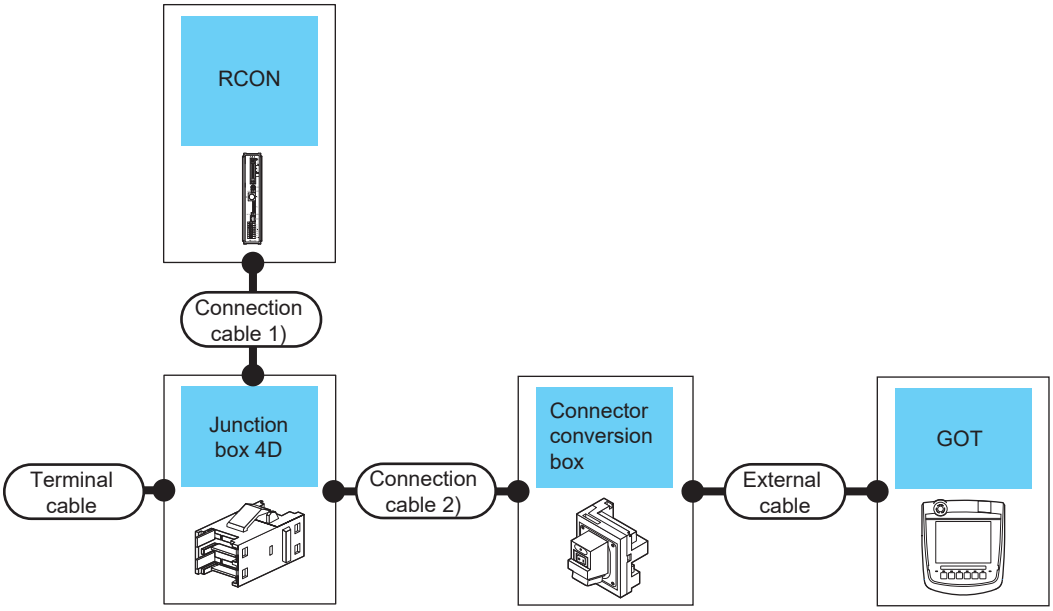
### ■When using the external cable (GT11H-C□□□)




| Controller Series | Communication cable | RS232C conversion unit | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| RCON | CB-RCA-SIO050*1 (5m) | RCB-CV-MW*1 (0.3m) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 820 RS-232 connection diagram 11) | GT 2505HS | 6m | 1 GOT for 1 Controller |

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.
*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

## When using the RS-422/485 connection




| Controller Series | Terminal cable Connection diagram number | Connection cable 1)*1 Cable model | Junction box 4D*2 Model name | Connection cable 2) Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| RCON | User preparing Page 821 RS-422/485 connection diagram 1) | CB-RCB-CTL002 (0.2m) | 5-1473574-4 | User preparing Page 821 RS-422/485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 16 Controllers for 1 GOT |

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.
*2 Product manufactured by Tyco Electronics. For details of the product, contact Tyco Electronics.

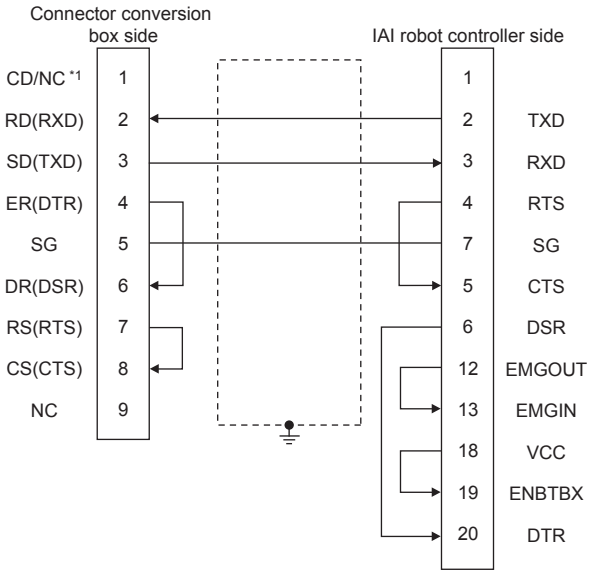
# 14.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

## RS-232 cable

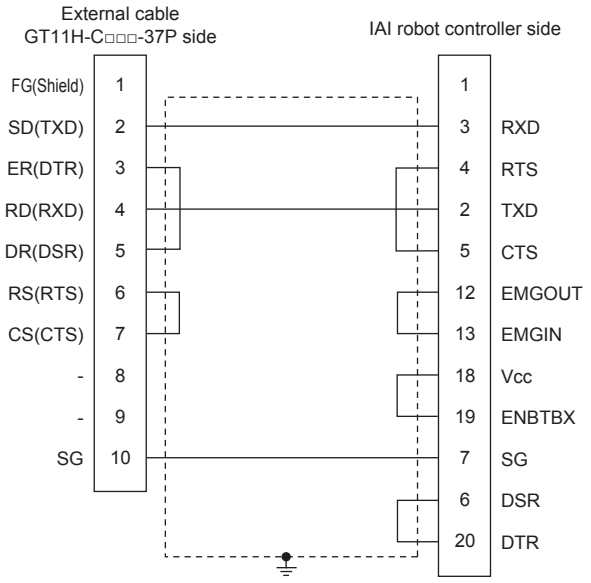
### Connection diagram

#### ■RS-232 connection diagram 1)



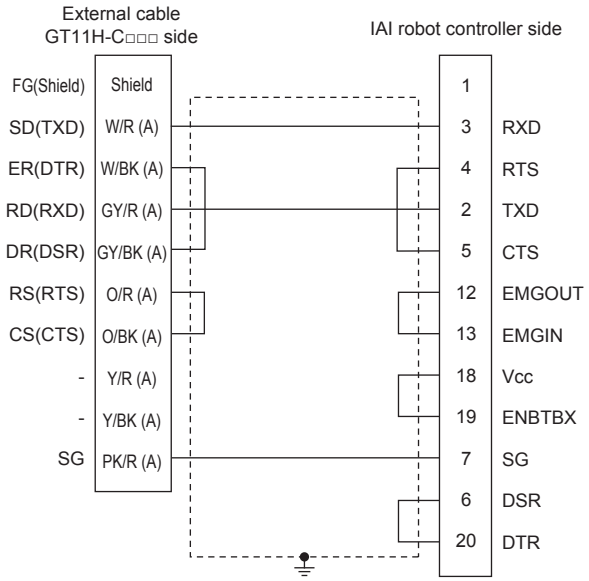

*1 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)

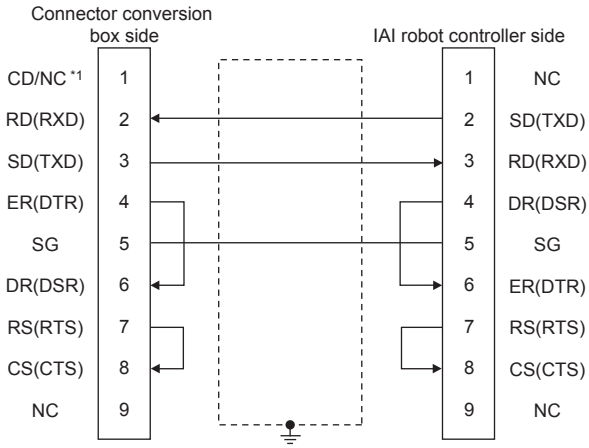



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## ■RS-232 connection diagram 3)

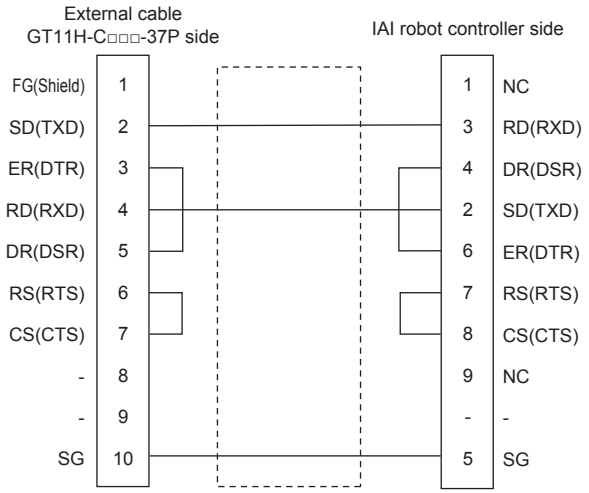



## ■RS-232 connection diagram 4)

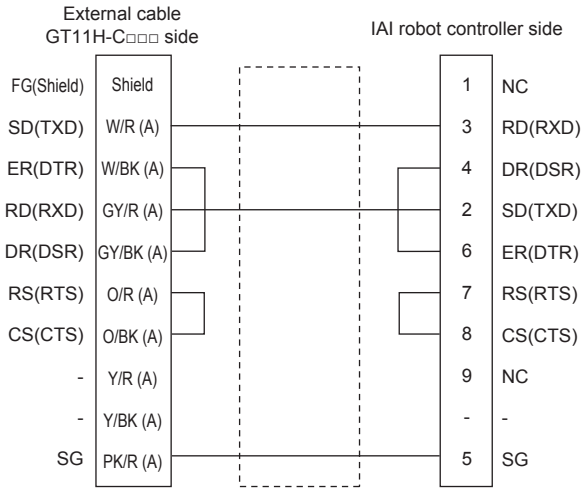



*1 GT2506HS-V: CD, GT2505HS-V: NC

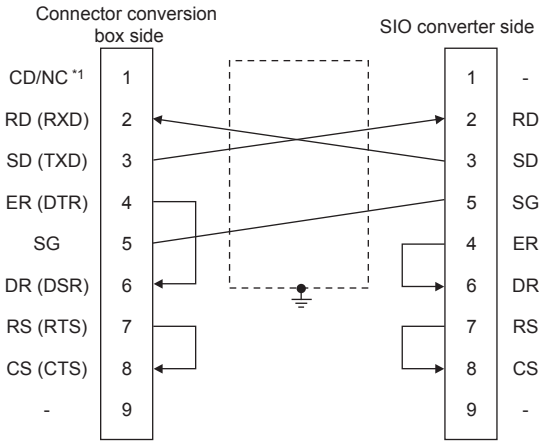
## ■RS-232 connection diagram 5)



## ■RS-232 connection diagram 6)

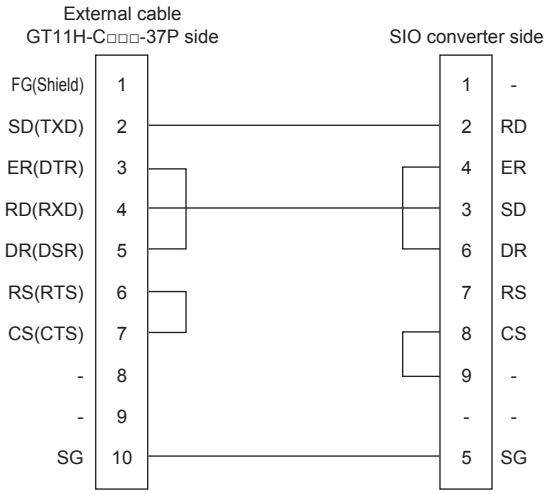



## ■RS-232 connection diagram 7)

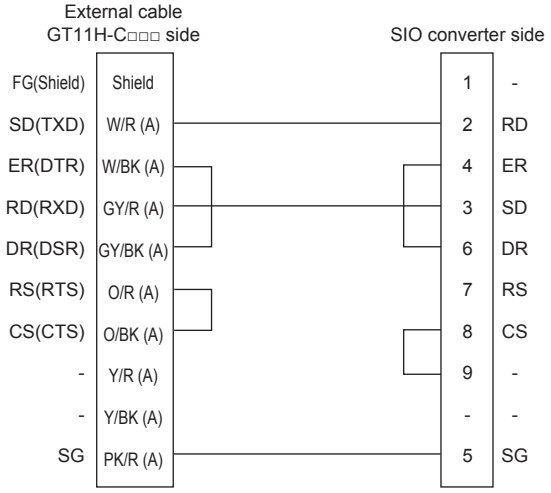



*1 GT2506HS-V: CD, GT2505HS-V: NC

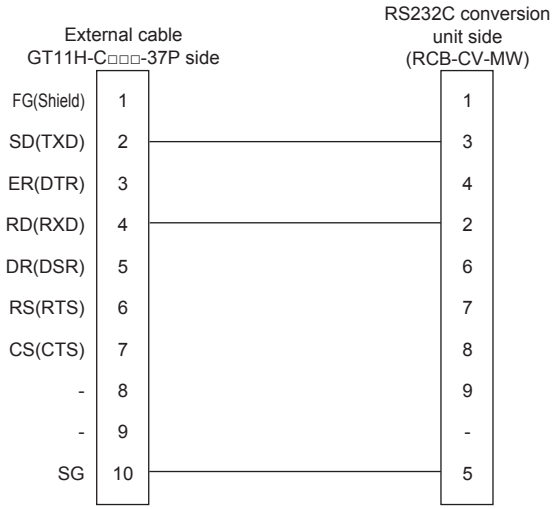
## ■RS-232 connection diagram 8)



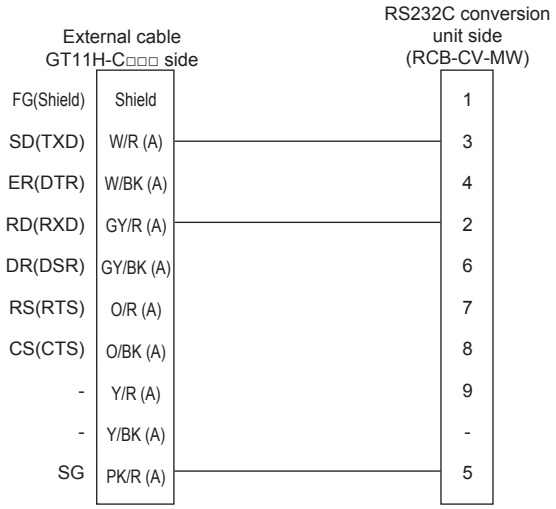
## ■RS-232 connection diagram 9)




## ■RS-232 connection diagram 10)




## ■RS-232 connection diagram 11)



## Precautions when preparing a cable

### ■Cable length

The length of the RS-232 cable must be 3 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■IAI Robot Controller side connector

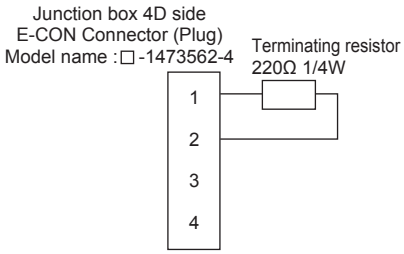
Use the connector compatible with the IAI Robot Controller.

For details, refer to the IAI Robot Controller user's manual.

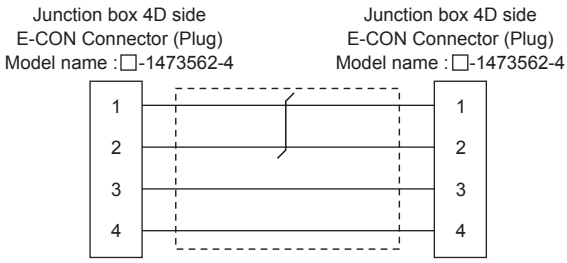
# RS-422/485 cable

## Connection diagram

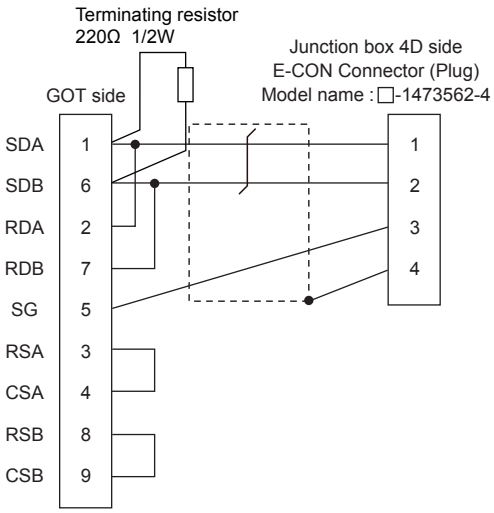
### ■RS-422/485 connection diagram 1)



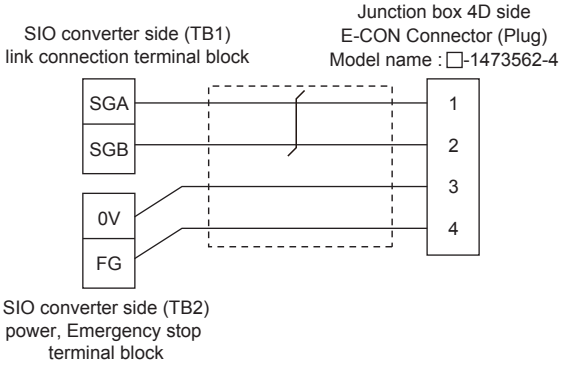

### ■RS-422/485 connection diagram 2)



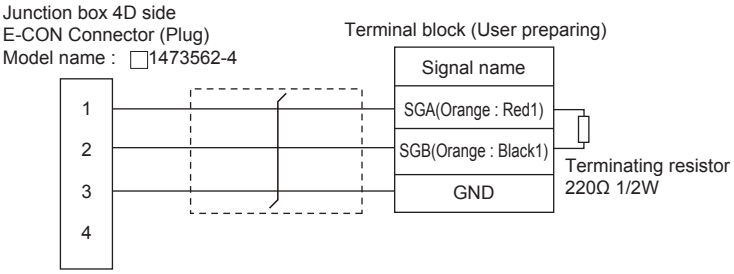

### ■RS-422/485 connection diagram 3)



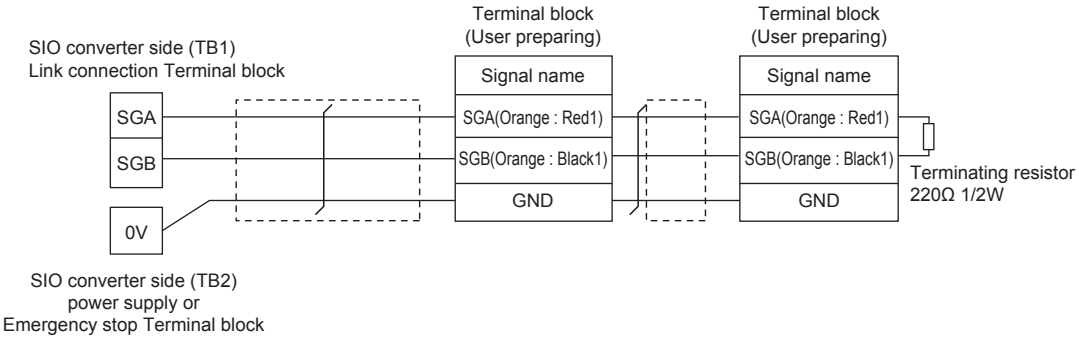
## ■RS-422/485 connection diagram 4)



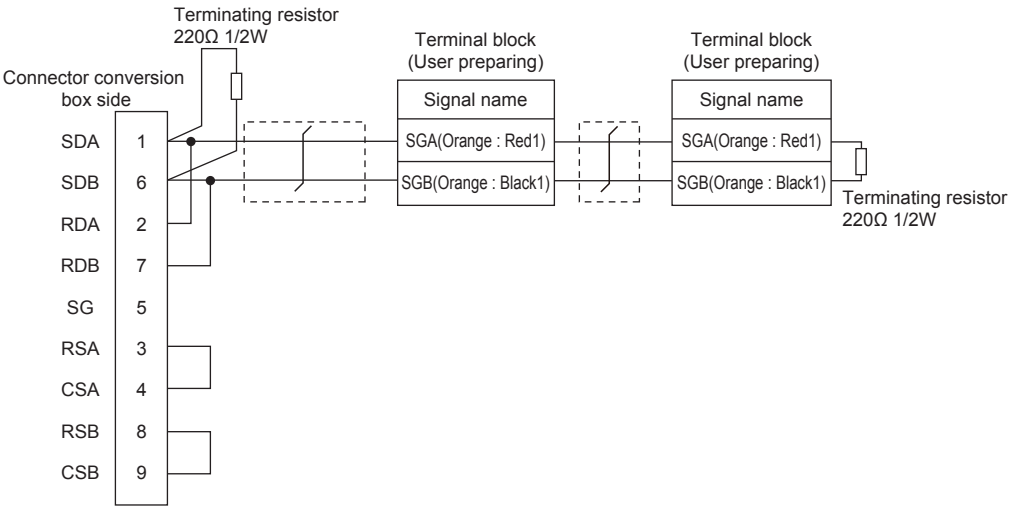

## ■RS-422/485 connection diagram 5)



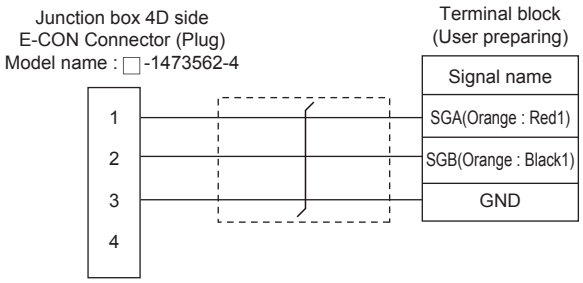

## ■RS-422/485 connection diagram 6)



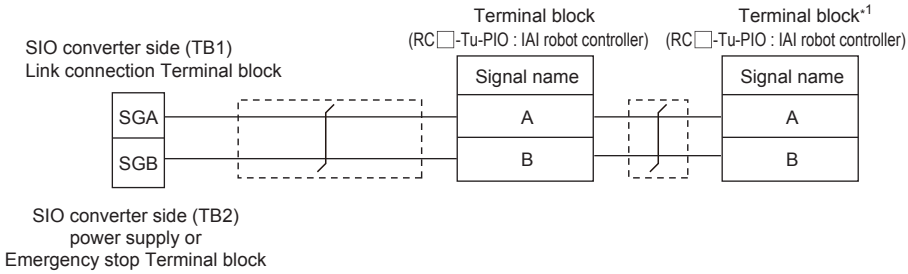

## ■RS-422/485 connection diagram 7)



### ■RS-422/485 connection diagram 8)




### ■RS-422/485 connection diagram 9)




*1 Turn the terminator switch of a terminal block which will be a terminal to "RTON".

## Precautions when preparing a cable

### ■Cable length

• When the communication route between the GOT and the robot controller does not go through the SIO converter

The distance from the robot controller to the Handy GOT converter must be 13 m or less.

• When the communication route between the GOT and the robot controller goes through the SIO converter

The distance from the robot controller to the SIO converter must be 100 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■E-CON connector (plug) (Type name: □-1473562-4)

Product manufactured by Tyco Electronics. For details of the product, contact Tyco Electronics.

## Connecting terminating resistors

### ■GOT side

When connecting the GOT and a controller, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

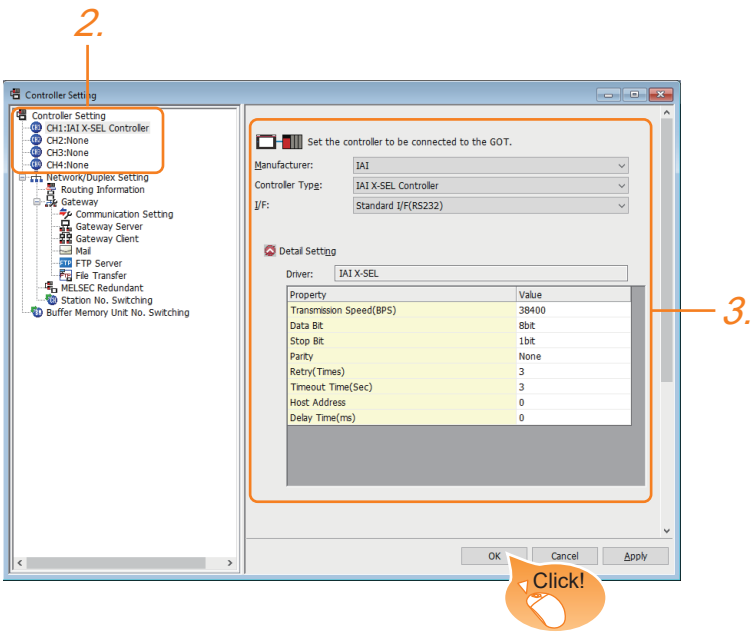
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 14.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [IAI]
- [Controller Type]

When connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL: [IAI X-SEL Controller]

When connecting to PCON, ACON, SCON, RCON, or ERC2: [IAI ROBO CYLINDER]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 825 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 38400 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 38400bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bit, 8bit |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bits) | 1bit, 2bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3timse) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Make the settings according to the station number (station code) of the controller to be monitored.<br>(Default: 0) | <When connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL><br>0 to 255<br><When connecting to PCON, ACON, SCON, RCON, ERC2><br>0 to 15 *1 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

*1 When connecting to RCON, set the axis number of the driver unit to be monitored.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 14.5 Robot Controller Side Setting

**Point**

IAI Robot Controller

For details of IAI Robot Controller, refer to the following manuals.

IAI Robot Controller user's Manual

## Connecting to X-SEL or RSEL

### Parameter setting

Enter the following parameters using peripheral software.

When setting parameters, set the mode switch of the controller to "MANU".

| Parameter | Parameter Name | Set Value*4 |
|---|---|---|
| I/O parameter 90 | Usage of SIO channel 1*1 opened to user | • When used in "MANU"<br>Set either of the following.<br>0: SEL opened program<br>2: IAI protocol B<br>• When used in "AUTO"<br>2: IAI protocol B |
| I/O parameter 91 | Station code of SIO channel 1*1 opened to user | 0 to 255<br>153* |
| I/O parameter 92*2 | Baud rate type of SIO channel 1*1 opened to user | 0: 9600bps*<br>1: 19200bps<br>2: 38400bps<br>3: 57600bps<br>5: 115200bps |
| I/O parameter 93 | Data length of SIO channel 1*1 opened to user | 7bit, 8bit* |
| I/O parameter 94 | Stop bit length of SIO channel 1*1 opened to user | 1bit*, 2bit |
| I/O parameter 95 | Parity type of SIO channel 1 *1 opened to user | 0: None*<br>1: Odd<br>2: Even |
| I/O parameter 97 *3 | IAI-protocol minimum response delay for SIO channel 1*1 opened to user | 0 to 999(ms) |
| Other parameter 46 | Other setting bit pattern 1 | bit0 to 3 = 1<br>(fixed) |

*1 For X-SEL(P/Q/PX/QX), the parameter becomes the SIO channel 0 opened to user.

*2 Indicates only the transmission that can be specified on the GOT side.
Specify the transmission speed to match the baud rate of the GOT.

*3 Set it only when a wait time is required before the response and transmission to the GOT request.
Normally, the communication is available using default values.

*4 When using the "MANU" mode, the set value is fixed to the value with *.
Adjust the settings of the GOT side to the * settings.
However, the communication setting of the PC software becomes the setting of X-SEL after the PC software for X-SEL is connected.
In this case, adjust the communication setting of the GOT to the setting of the PC software.

## Mode switch

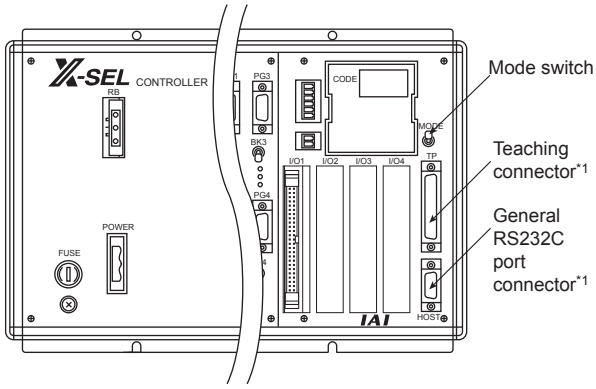
### ■X-SEL K type

• When setting the mode switch to "MANU"

Connect the GOT to the following teaching connector.

• When setting the mode switch to "AUTO"

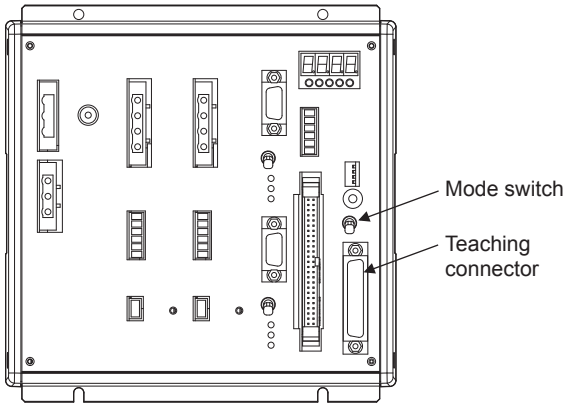
Connect the GOT to the following general RS232C port connector.




*1 The teaching connector and general RS232C port connector cannot be used at the same time.

### ■Other than X-SEL K type

Set the mode switch to "MANU" or "AUTO" and connect the GOT to the following teaching connector.



# Connecting to SSEL, ASEL, PSEL

## Parameter setting

Enter the following parameters using peripheral software.

When setting parameters, set the mode switch of the controller to "MANU".

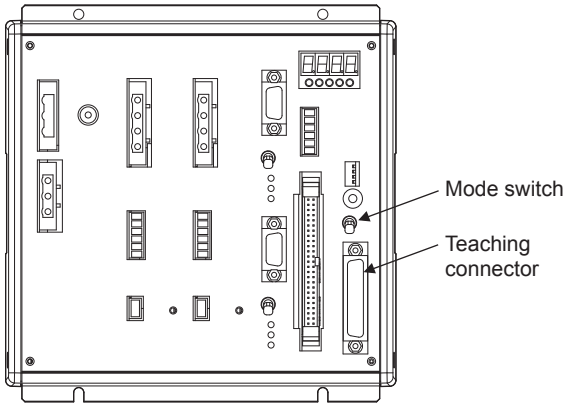
| Parameter | Parameter Name | Set Value |
|---|---|---|
| I/O parameter 90 | Usage of SIO channel 0 opened to user | 2: IAI protocol B<br>(fixed) |
| I/O parameter 91 | Station code of SIO channel 0 opened to user | 0 to 255 |
| I/O parameter 92*1 | Baud rate type of SIO channel 0 opened to user | 0: 9600bps<br>1: 19200bps<br>2: 38400bps<br>3: 57600bps<br>5: 115200bps |
| I/O parameter 93 | Data length of SIO channel 0 opened to user | 7bit, 8bit |
| I/O parameter 94 | Stop bit length of SIO channel 0 opened to user | 1bit, 2bit |
| I/O parameter 95 | Parity type of SIO channel 0 opened to user | 0: None<br>1: Odd<br>2: Even |
| I/O parameter 97 *2 | IAI-protocol minimum response delay for SIO channel 0 opened to user | 0 to 999(ms) |
| Other parameter 46 | Other setting bit pattern 1 | bit0 to 3 = 1<br>(fixed) |

*1 Indicates only the transmission that can be specified on the GOT side.
Specify the transmission speed to match the baud rate of the GOT.

*2 Set it only when a wait time is required before the response and transmission to the GOT request.
Normally, the communication is available using default values.

## Mode switch

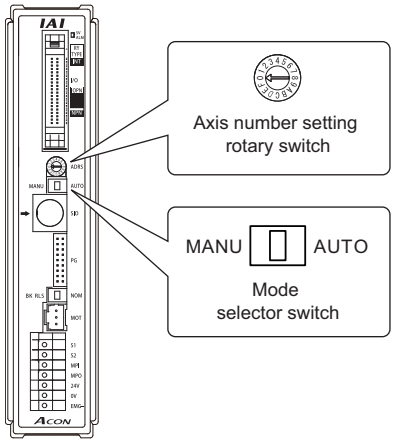
Set the mode switch to "AUTO" and connect the GOT to the following teaching connector.



# Connecting to PCON, ACON, SCON

## Axis number setting, Mode select

For controllers without the following switches, set from the setting tool (PC software).




| Switch | Setting details |
|---|---|
| Axis number setting rotary switch | 0 to 15 |
| Mode selector switch | <Only the monitor><br>AUTO<br><monitor, data change><br>MANU |

## Transmission speed setting

Set the transmission speed from the setting tool (PC software).

| Item | Range |
|---|---|
| SIO transmission speed*1 | 9600/19200/38400/57600/115200bps<br>Default: 38400bps |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.

# Connecting to RCON

## Communication setting

The communication setting is fixed.

The following shows each setting value.

| Item | Set value |
|---|---|
| Baud rate | 115200bps |
| Data length | 8bit |
| Stop bit | 1bit |
| Parity | None |

## Axis number setting

Configure the axis number setting using the engineering tool for RCON.

For the setting details, refer to the following.

Manual of the IAI robot controller

# Connecting to ERC2

## Axis number setting, Mode select

Set from the setting tool (PC software).

## Transmission speed setting

Set the transmission speed from the setting tool (PC software).

| Item | Range |
|---|---|
| SIO transmission speed*1 | 9600/19200/38400/57600/115200bps<br>Default: 38400bps |

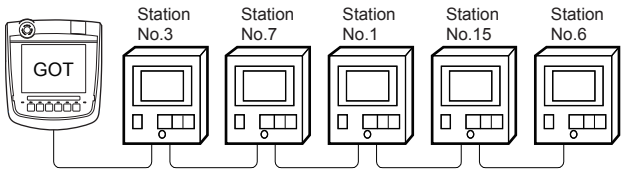
*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.

# Station No.settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the controller of which data is to be changed.

| Model name | Specification range | Refer to |
|---|---|---|
| PCON, ACON, SCON | 0 to 15 | ☞ Page 829 Connecting to PCON, ACON, SCON |
| ERC2 | 0 to 15 | ☞ Page 830 Connecting to ERC2 |

## Indirect specification

When setting the device, indirectly specify the station number of the controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the controller.

| Specification station No. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 0 to 15<br>(If setting a value out of the range above, a timeout error occurs.) |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

# 14.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

IAI equipment ([IAI X-SEL Controller])

IAI equipment ([IAI ROBO CYLINDER])

# 14.7 Precautions

## Program control device

- When Program Execution Command (0), Program Exit Command (2), or Program Restart Command (4) is written to the program control device (PRG 0), it will be a request for all programs running in the controllers.
- When unsupported write data is input to the program control device, the following error is displayed in the system alarm.

315: Device writing error.

Correct device.

## Variable devices

The variable number 99 of Integer device and variable number 199 of Real device are special devices used for operations by the X-SEL controller system.

Do not use these variables for general purpose.

## Command trigger compatible device

- For the device whose obtained data No.0 is a command trigger, communication with the controller is performed when the Write(1)/Read(2) is set to the command trigger.

When the command trigger and setting value are written in a batch, the communication is performed based on the value set with batch write.

- When Clear(4) is set to the command trigger, the communication with the controller is not performed and the set value is initialized.
- When an unsupported set value is input to the command trigger, the following error is displayed in the system alarm.

315: Device writing error.

Correct device.

## Device reserved for system use

Devices of "Reserved for system use" are devices with indefinite values.

Do not write to these devices.

## Write to the flash ROM

- The point data can be written to the flash ROM of the X-SEL controller.

When the point data is written to the flash ROM, it is not cleared even when power supply to the controller is turned off.

However, there are limits in the number of writing.

For details, refer to the user's manual of X-SEL controller used.

- Never turn off the main power supply during the flash ROM write.

Doing so may cause the loss of data and malfunction of controllers.

For details, refer to the user's manual of X-SEL controller used.

## Communication disconnection

- Writing to the flash ROM disconnects the communication with controllers until the writing is completed.
- Resetting software restarts the controllers.

During this time, the communication with controllers is disconnected.

## Station number setting of the IAI robot controller system

The robot controller with the station number set with the host address must be included.

☞ Page 825 Communication detail settings

## Connection of the IAI X-SEL K type

Note the following precaution when using the controller with the mode switch set to MANU.

- After powering up the X-SEL, connecting the GOT before the PC software causes the program startup disabled (A1D alarm) on the X-SEL side.

## System area for status (S) devices

### ■Access to the system area for status (S) devices

Do not access the system area for status (S) devices.

If access is attempted to an area that contains the system area, the response from the accessed robot controller differs depending on the model of the controller or the accessed area.

For the details, refer to the following.

📖IAI Robot Controller user's Manual

### ■When monitoring multiple status (S) devices

The GOT requests for data in 16-bit chunks.

If the requested data contains the system area, monitoring may not be performed properly.

To monitor multiple status (S) devices, use multiples of 16 to specify the lowest device number.

Example) Monitoring S01A1 and S01AF simultaneously

- When S01A1 is specified as the start device, an error occurs as the specified 16-bit data contains the system area.

| Status | Area name |
|---|---|
| S01A1 (monitoring target) | Press program judgement status register (Servo Press) (PPJD) |
| S01A2 | |
| S01A3 | |
| S01A4 | |
| : | |
| S01AE | |
| S01AF (monitoring target) | |
| S01B0 | Reserved for system |

- When S01A0 is specified as the start device, the target devices can be monitored properly as the specified 16-bit data does not contain the system area.

| Status | Area name |
|---|---|
| S01A0 | Press program judgement status register (Servo Press) (PPJD) |
| S01A1 (monitoring target) | |
| S01A2 | |
| S01A3 | |
| : | |
| S01AD | |
| S01AE | |
| S01AF (monitoring target) | |

# MEMO

# 15 AZBIL CONTROL EQUIPMENT


- Page 835 Connectable Model List
- Page 837 System Configuration
- Page 875 Connection Diagram
- Page 886 GOT Side Settings
- Page 889 Control Equipment Side Setting
- Page 902 Settable Device Range
- Page 902 Precautions


## 15.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| DMC | DMC10 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 837 Connecting to DMC10 |
| | DMC50 | ○ | RS-485 | GT2506HS GT2505HS | ☞ Page 840 Connecting to DMC50 |
| SDC | SDC15<br>SDC25<br>SDC26<br>SDC35<br>SDC36 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 842 Connecting to SDC15, SDC25/26 or SDC35/36 |
| | SDC20<br>SDC21 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 844 Connecting to SDC20/21 |
| | SDC30<br>SDC31 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 848 Connecting to SDC30/31 |
| | SDC40A<br>SDC40B<br>SDC40G | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 851 Connecting to SDC40A/40B/40G |
| | SDC45<br>SDC46 | ○ | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 855 Connecting to SDC45/46 |
| CMS | CMS | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 858 Connecting to CMS, MQV, MPC, MVF, RX |
| CMF | CMF015<br>CMF050 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 860 Connecting to CMF015, CMF050 |
| CML | CML | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 864 Connecting to CML, PBC201-VN2 |
| MQV | MQV | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 858 Connecting to CMS, MQV, MPC, MVF, RX |
| MPC | MPC | | | | ☞ Page 858 Connecting to CMS, MQV, MPC, MVF, RX |
| MVF | MVF | | | | ☞ Page 858 Connecting to CMS, MQV, MPC, MVF, RX |
| PBZ | PBC201-VN2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 864 Connecting to CML, PBC201-VN2 |
| AUR | AUR350C<br>AUR450C | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 867 Connecting to AUR350C, AUR450C |
| RX | RX | ○ | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 858 Connecting to CMS, MQV, MPC, MVF, RX |
| CMC | CMC10B | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 869 Connecting to CMC10B |
| AHC2001 | AHC2001 | ○ | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 872 Connecting to AHC2001 |

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| NX | NX-D15<br>NX-D25<br>NX-D35<br>NX-DX1<br>NX-DX2<br>NX-DY<br>NX-S01<br>NX-S11<br>NX-S12<br>NX-S21 | × | RS-232<br>RS-485<br>(MODBUS) | GT2506HS GT2505HS | ☞ Page 874 Connecting to NX series |
| | NX-D15<br>NX-D25<br>NX-D35<br>NX-DX1<br>NX-DX2<br>NX-DY<br>NX-S01<br>NX-S11<br>NX-S12<br>NX-S21 | × | Ethernet<br>(MODBUS) | GT2506HS GT2505HS | ☞ Page 874 Connecting to NX series |

# 15.2 System Configuration

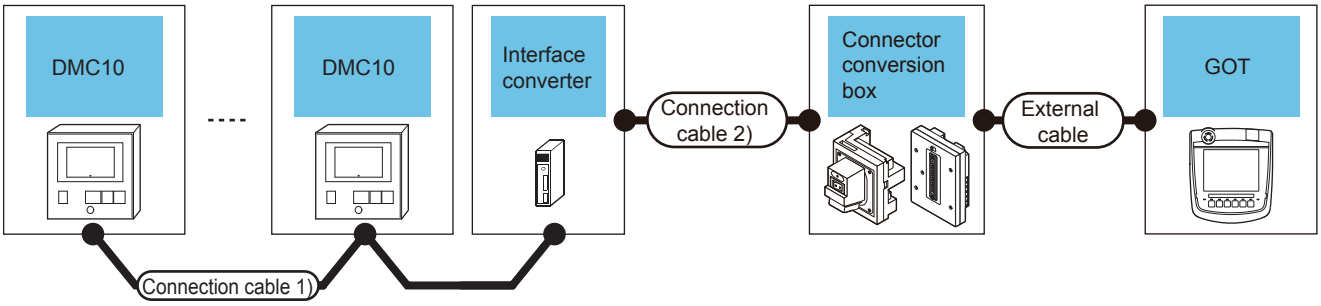
## Connecting to DMC10

Communication driver

AZBIL SDC/DMC

### When using the Interface converter

#### ■When using the connector conversion box

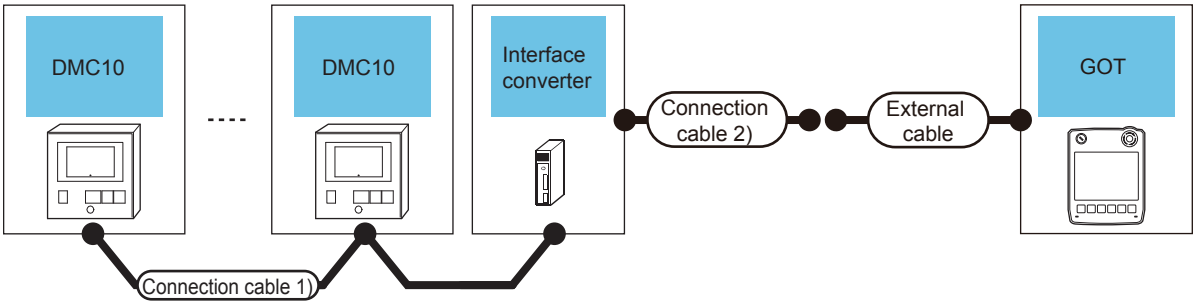



| Temperature controller | Connection cable 1) | | Interface converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| DMC10 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 15 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

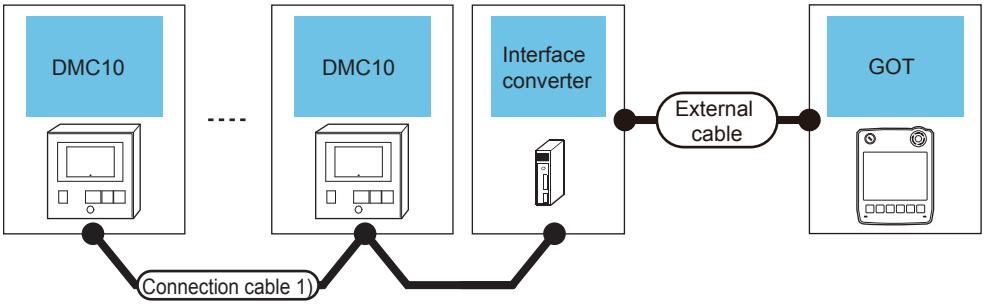



| Temperature controller | Connection cable 1) | | Interface converter *1 | | Connection cable 2) | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| DMC10 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 15 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



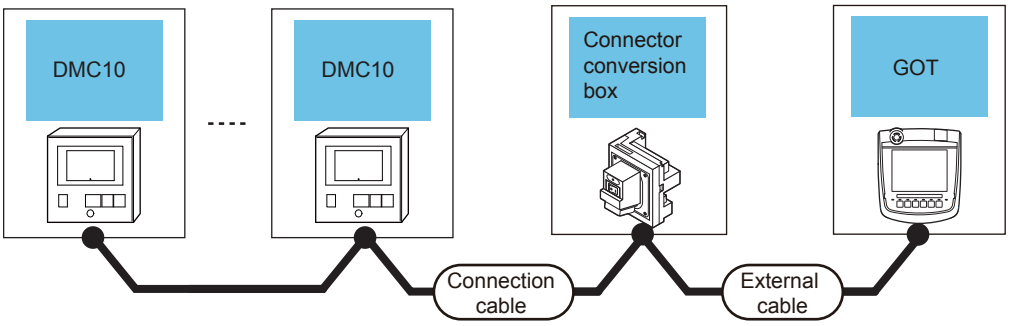

| Temperature controller | Connection cable 1) | | Interface converter *1 | | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| DMC10 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 15 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| DMC10 | RS-485 | User preparing Page 882 RS485 connection diagram 9) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 15 temperature controllers for 1 GOT |

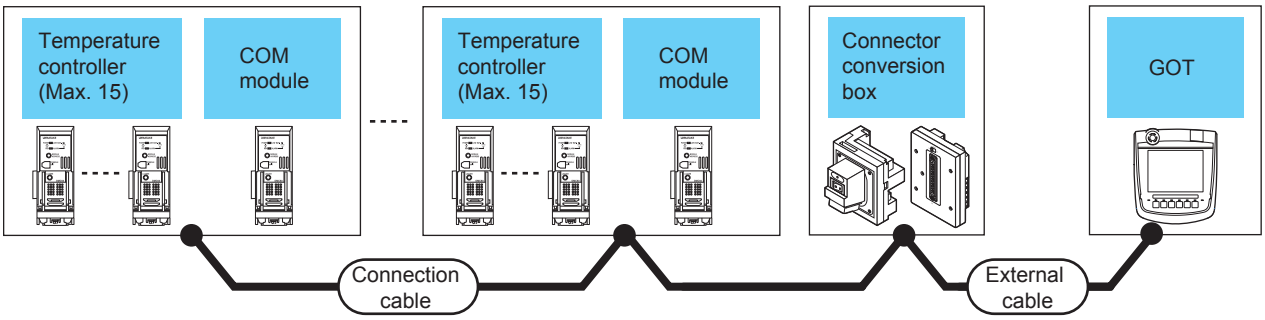
# Connecting to DMC50

Communication driver

AZBIL DMC50

## When using the COM module

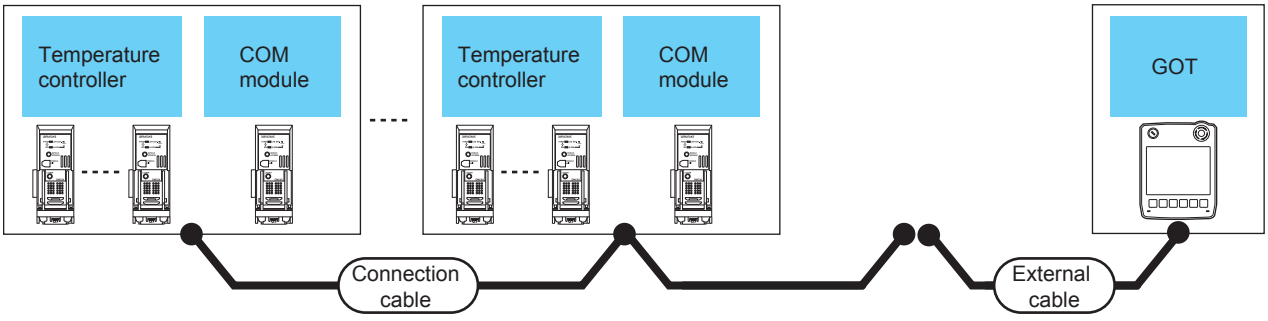
### ■When using the connector conversion box




| Temperature controller | Connection cable | COM module*1 | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Connection diagram number | Model name | Communication Type | | | | | |
| DMC50C□□□X | User preparing Page 881 RS485 connection diagram 6) | DMC50M□20X | RS-485 | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 8 COM module for 1 GOT. Up to 120 temperature controllers for 1 COM module. |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

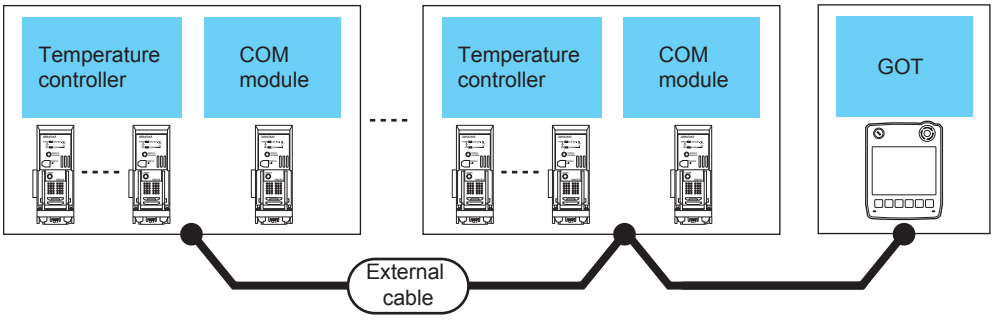
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable | COM module*1 | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Connection diagram number | Model name | Communication Type | | | | |
| DMC50C□□□X | User preparing Page 882 RS485 connection diagram 7) | DMC50M□20X | RS-485 | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 COM module for 1 GOT. Up to 8 temperature controllers for 1 COM module. |

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

### ■When using the external cable (GT11H-C□□□)

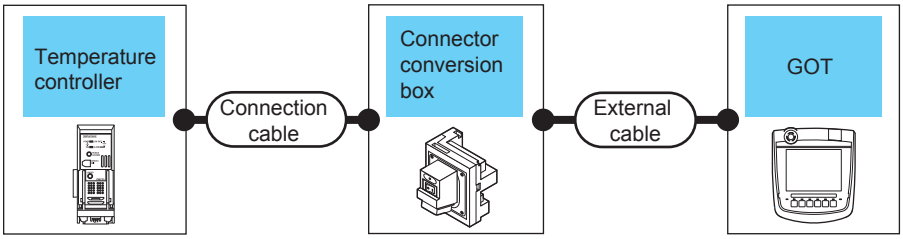



| Temperature controller | COM module*1 | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Model name | Communication Type | | | | |
| DMC50C□□□X | DMC50M□20X | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 882 RS485 connection diagram8) | GT 2505HS | 13m | Up to 10 COM module for 1 GOT.<br>Up to 8 temperature controllers for 1 COM module. |

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

## When connecting directly to one temperature controller

### ■When using the connector conversion box




| Temperature controller | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Connection diagram number | Communication Type | | | | | |
| DMC50CX | (User preparing) Page 883 RS485 connection diagram 10) | RS-485 | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 1 temperature controller for 1 GOT |

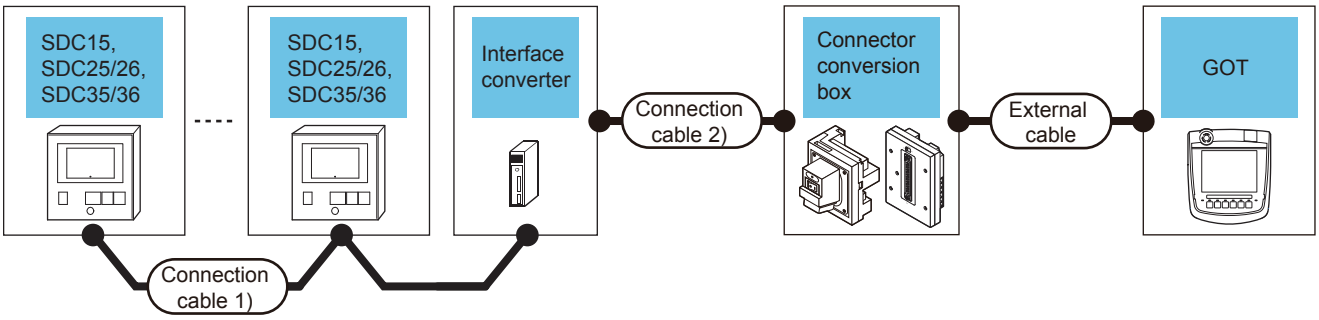
# Connecting to SDC15, SDC25/26 or SDC35/36

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

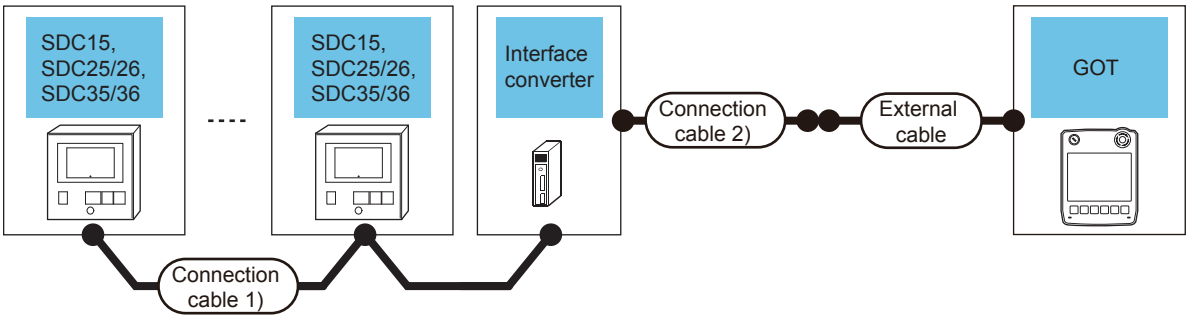



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC15 SDC25/26 SDC35/36 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

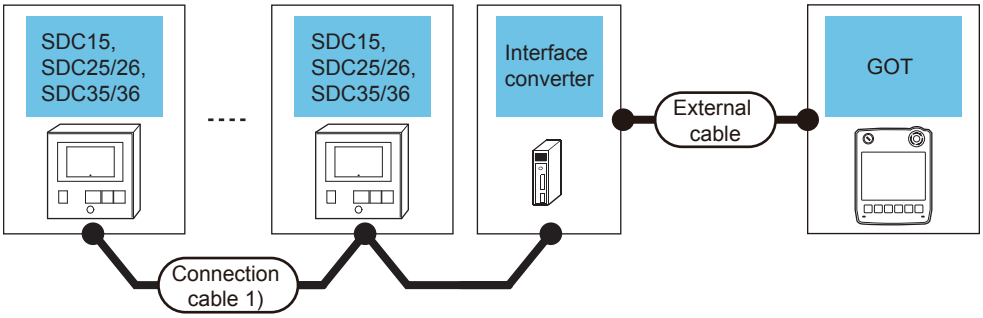



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC15 SDC25/26 SDC35/36 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SDC15<br>SDC25/26<br>SDC35/36 | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

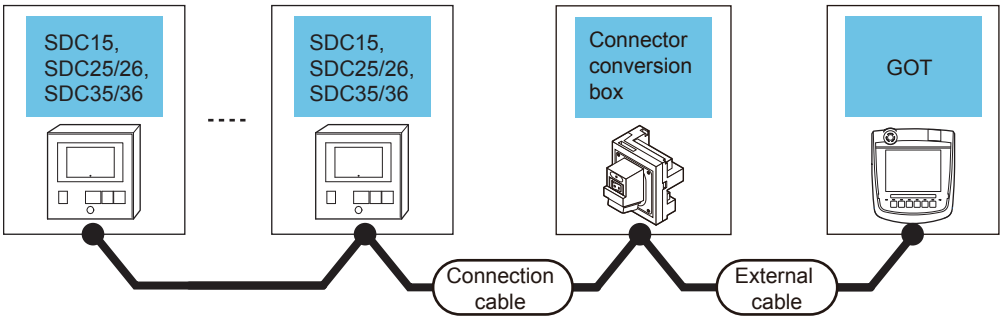
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

15

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC15<br>SDC25/26<br>SDC35/36 | RS-485 | User preparing Page 882 RS485 connection diagram 9) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

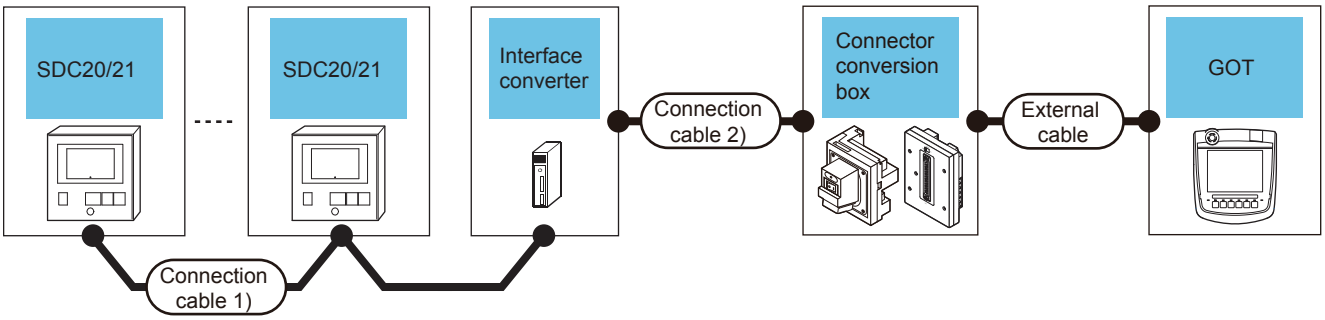
# Connecting to SDC20/21

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

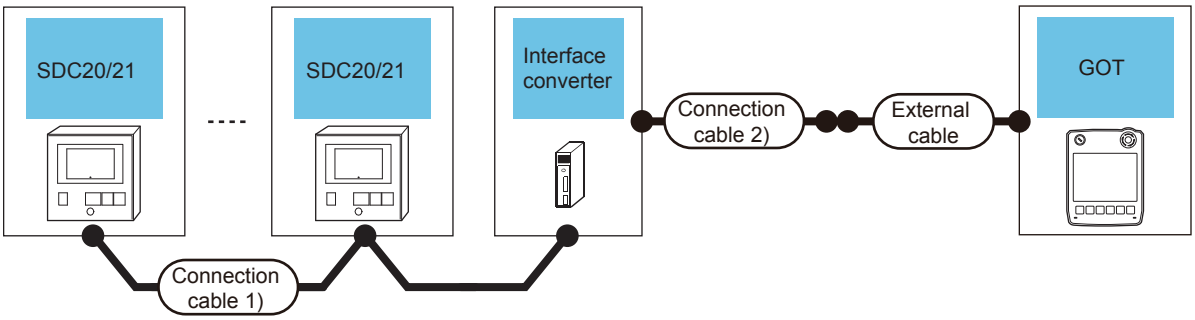



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC20/21 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

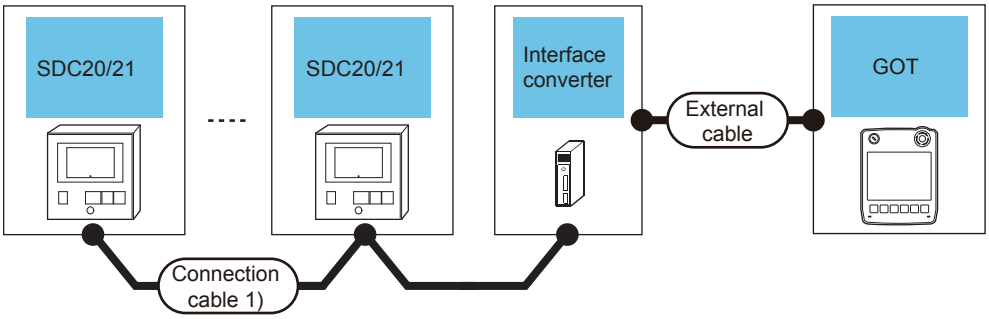



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC20/21 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SDC20/21 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

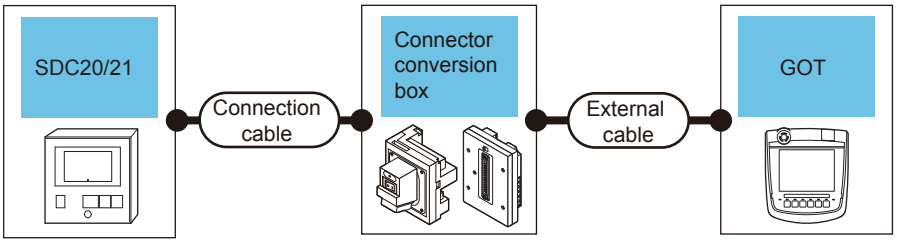
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

15

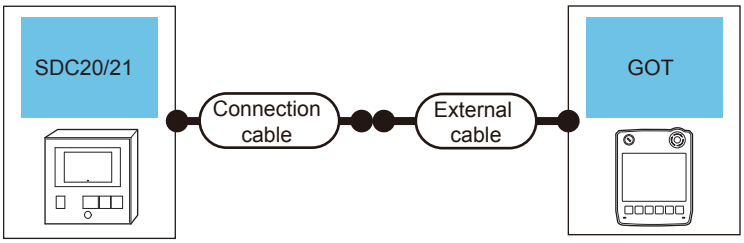
## When connecting directly to one temperature controller

### ■When using the connector conversion box



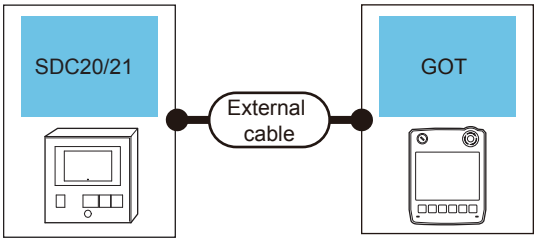

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC20/21 | RS-232 | User preparing Page 876 RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC20/21 | RS-232 | User preparing Page 877 RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

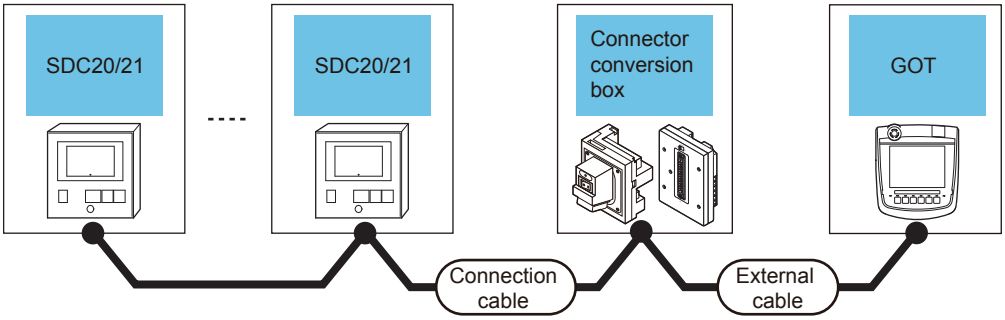
### ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SDC20/21 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 877 RS232 connection diagram 6) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

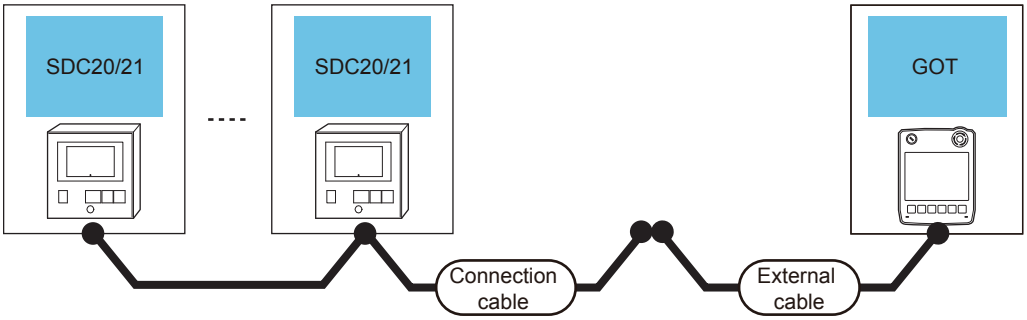
## When connecting directly to multiple temperature controllers

### ■When using the connector conversion box



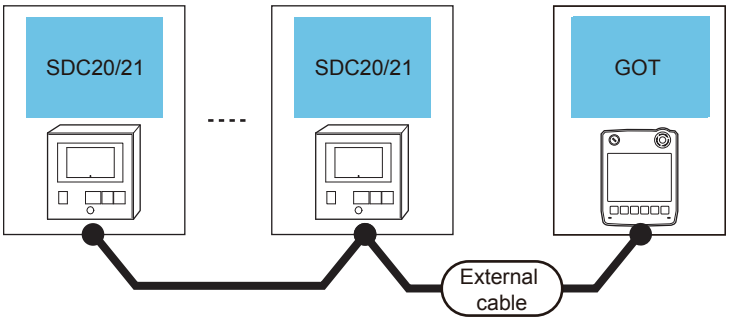

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| SDC20/21 | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| SDC20/21 | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SDC20/21 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

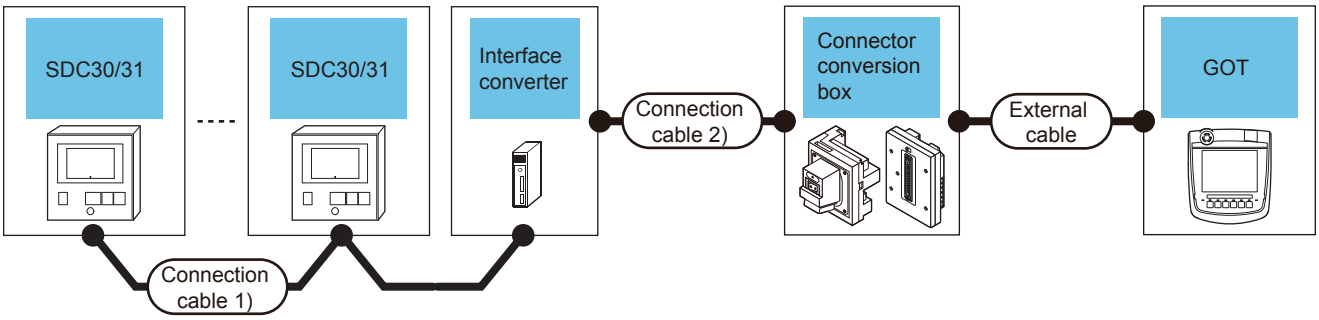
# Connecting to SDC30/31

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

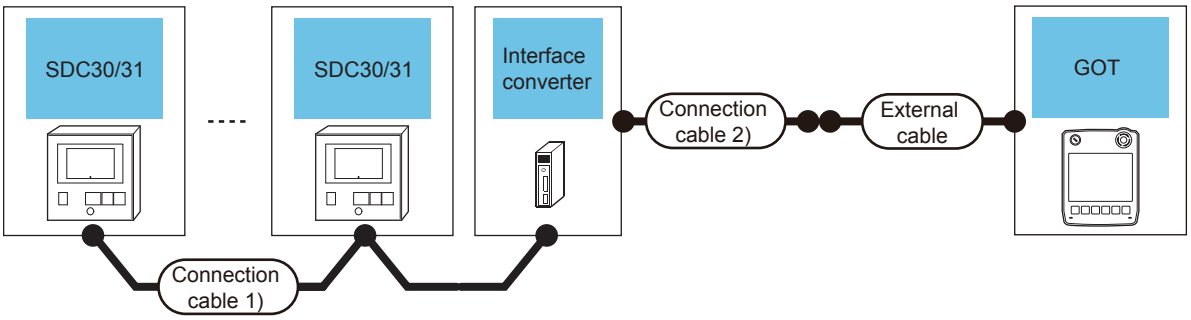



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC30/31 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

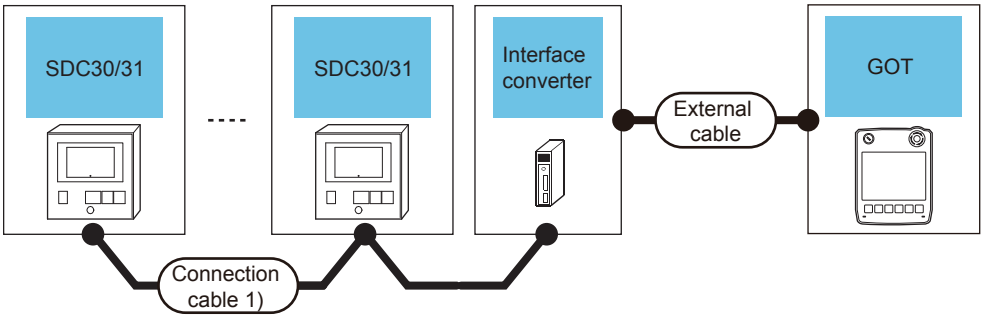



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC30/31 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



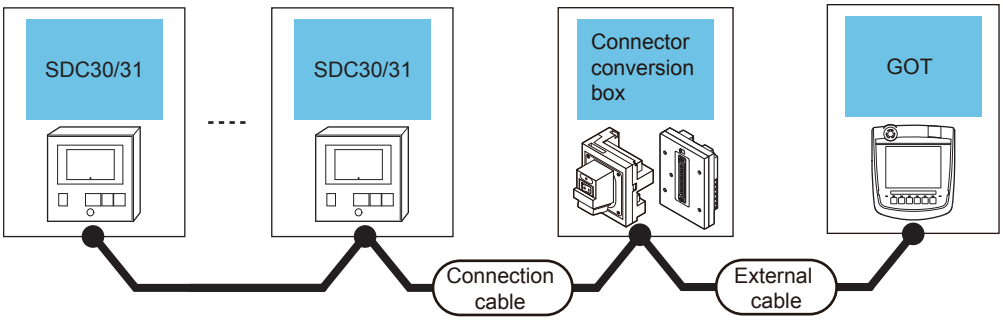

| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SDC30/31 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

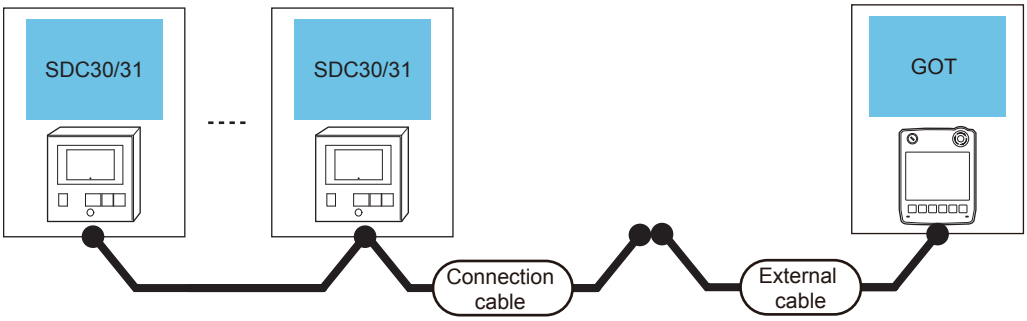
## When connecting directly

### ■When using the connector conversion box



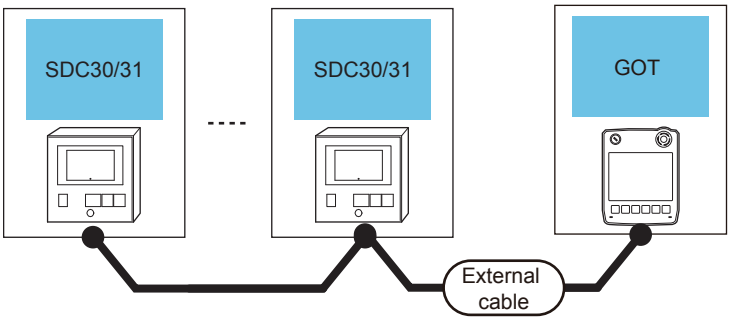

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC30/31 | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| SDC30/31 | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SDC30/31 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

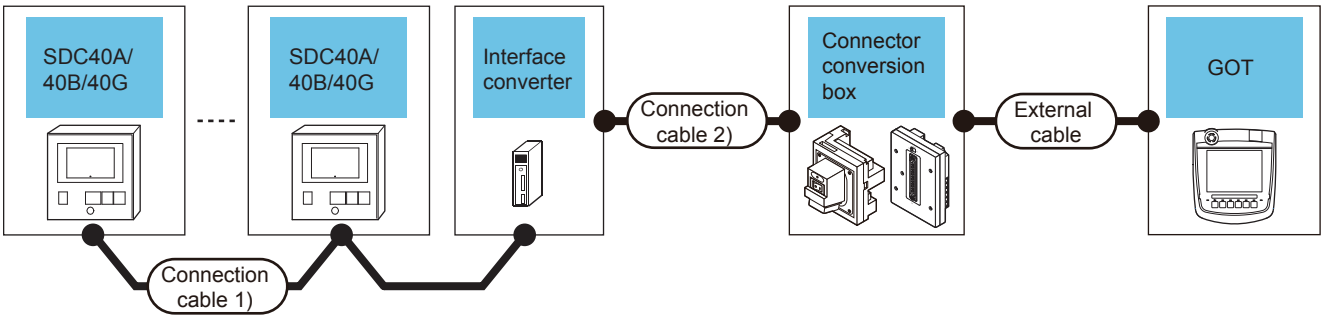
# Connecting to SDC40A/40B/40G

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

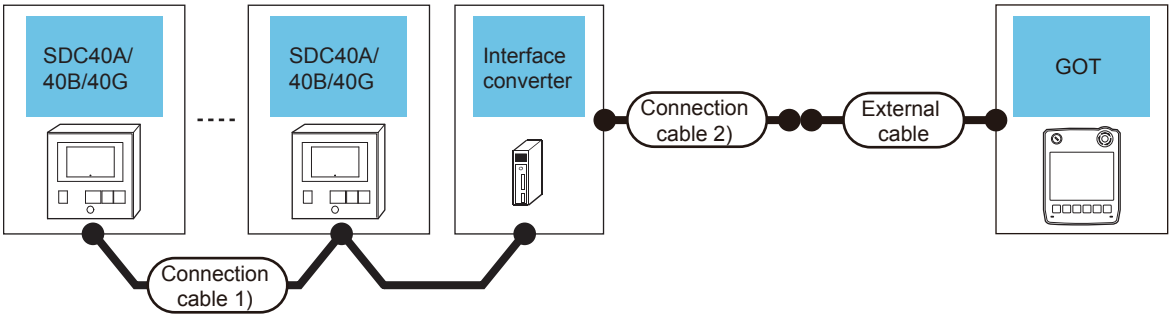



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC40A/40B/40G | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

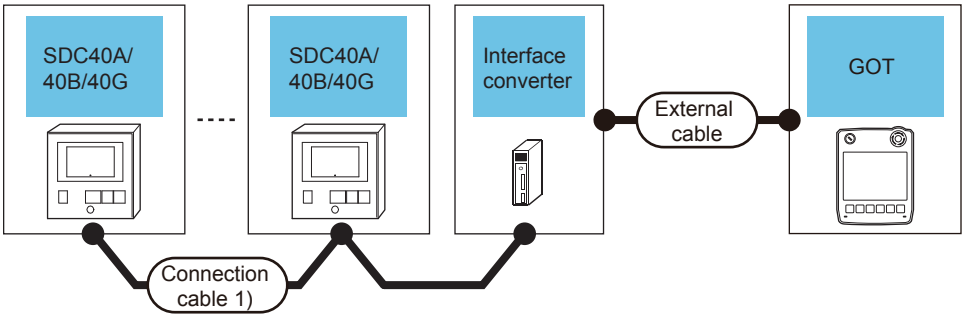



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC40A/40B/40G | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

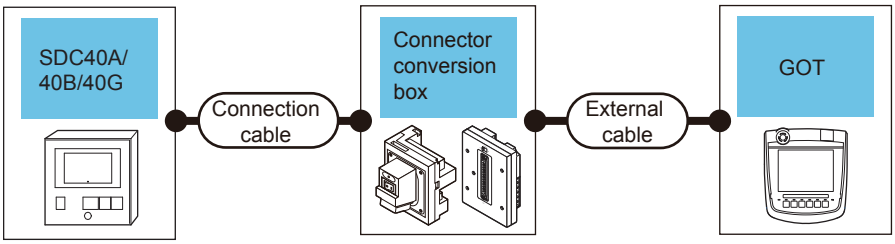



| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SDC40A/40B/40G | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.
*2 The distance from the converter to the GOT (External cable)

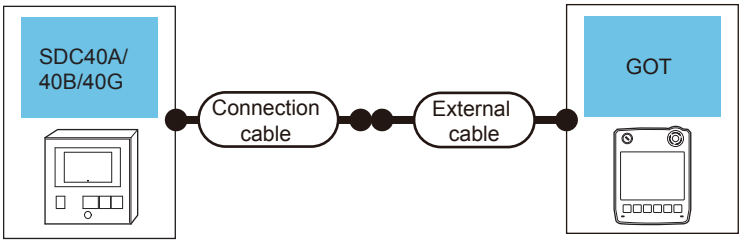
## When connecting directly to one temperature controller

### ■When using the connector conversion box



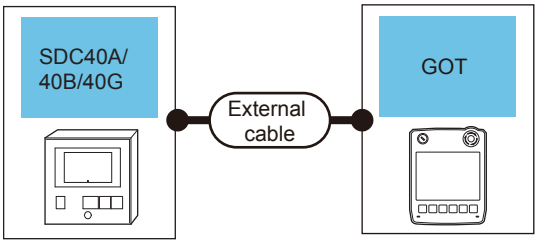

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC40A/40B/40G | RS-232 | User preparing Page 876 RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC40A/40B/40G | RS-232 | User preparing Page 877 RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

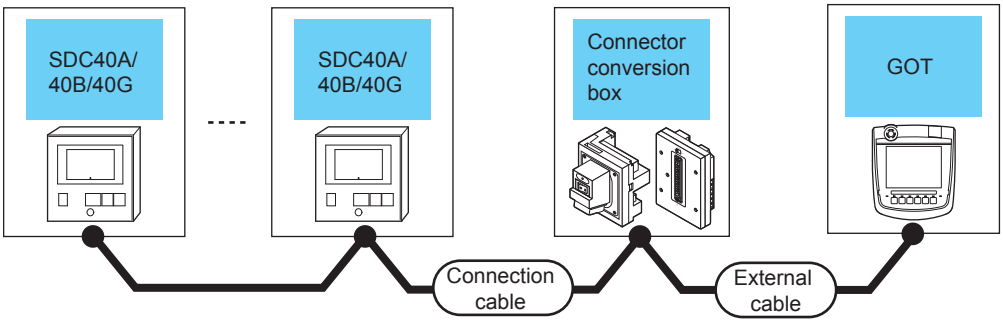
### ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SDC40A/ 40B/40G | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 877 RS232 connection diagram 6) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

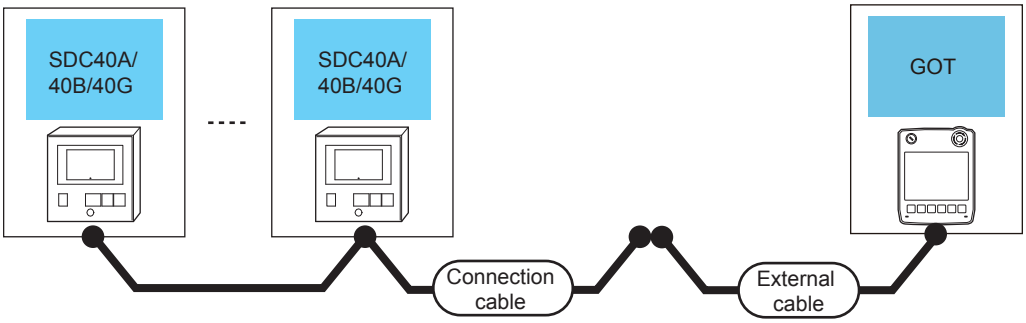
## When connecting directly to multiple temperature controllers

### ■When using the connector conversion box



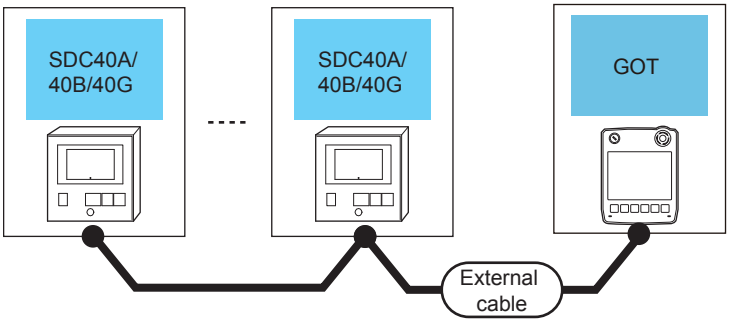

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| SDC40A/ 40B/40G | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| SDC40A/<br>40B/40G | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SDC40A/<br>40B/40G | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5)(4-wire) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

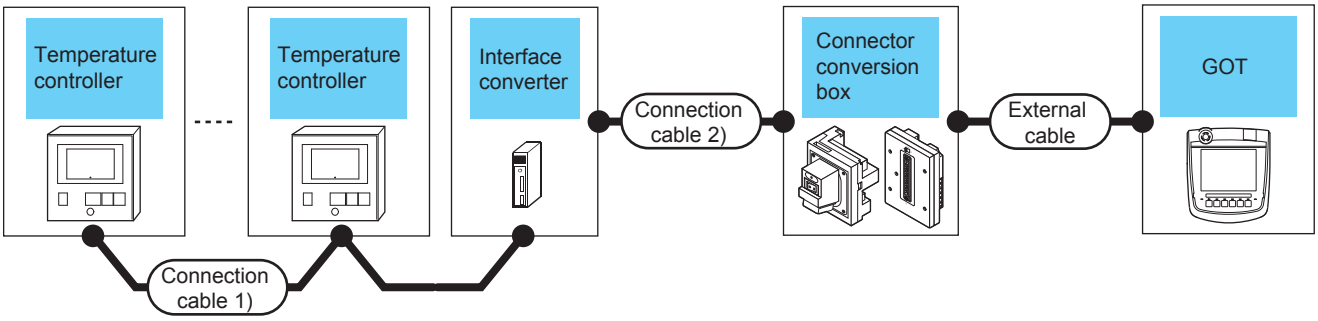
# Connecting to SDC45/46

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

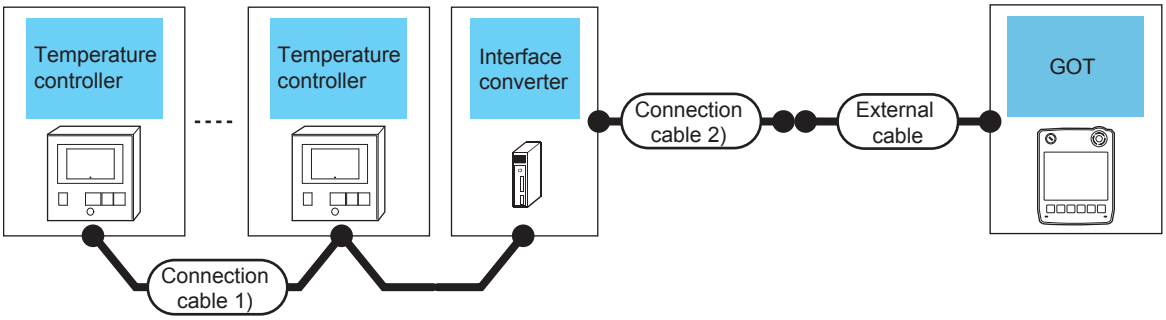



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC45/46 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

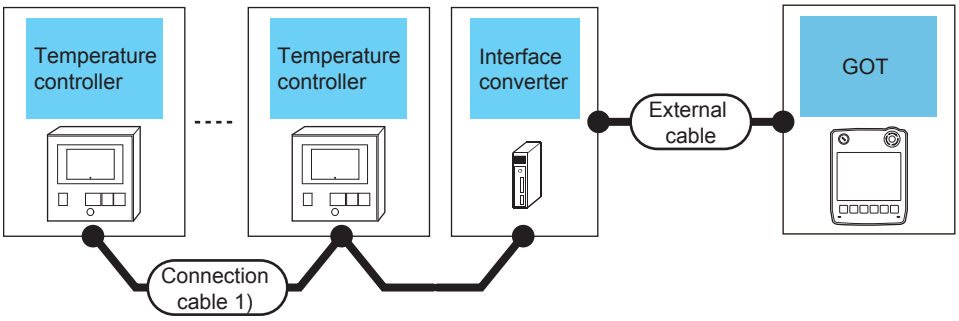



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SDC45/46 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



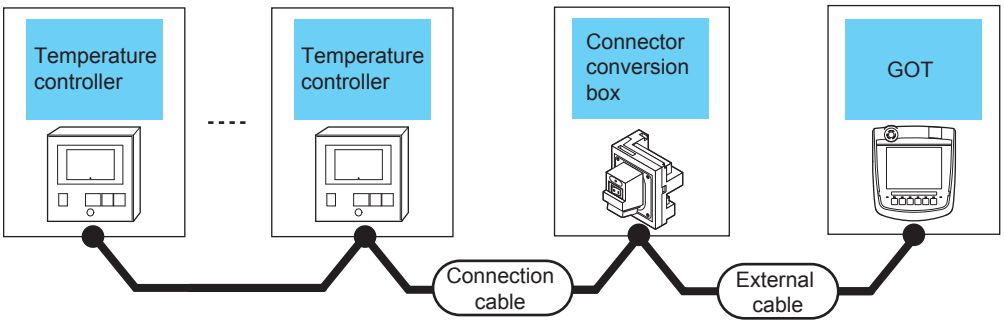

| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SDC45/46 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly to multiple temperature controllers

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SDC45/46 | RS-485 | User preparing Page 884 RS485 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controller for 1 GOT |

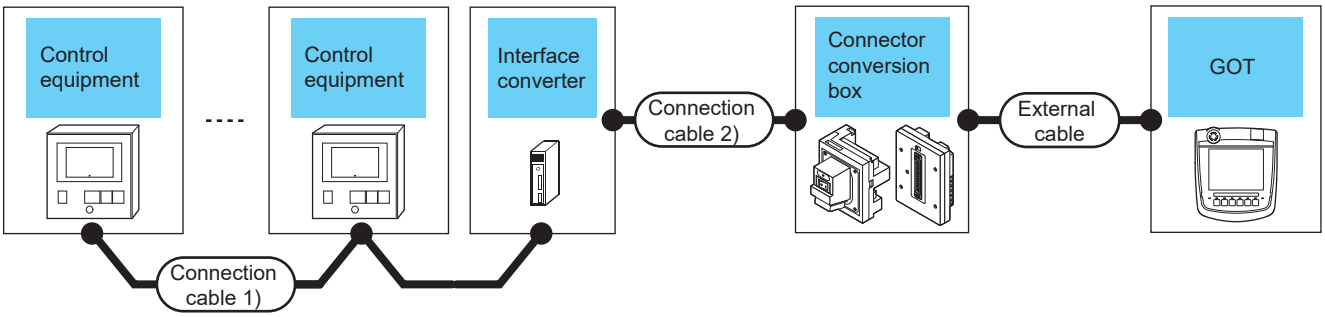
# Connecting to CMS, MQV, MPC, MVF, RX

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

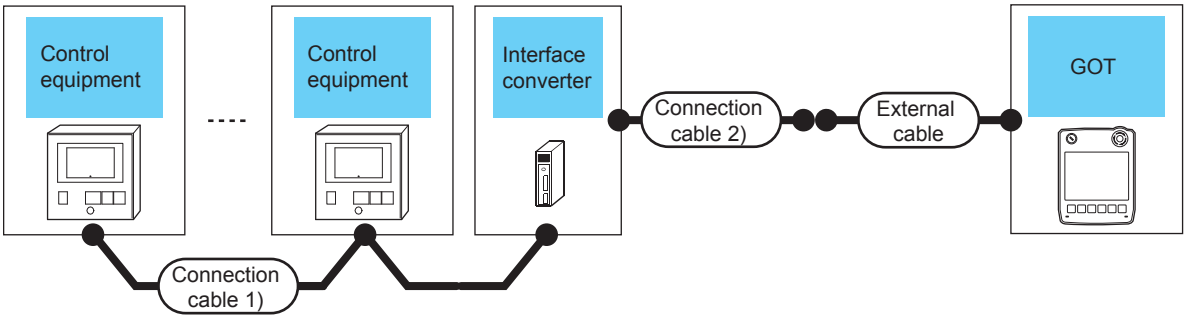



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMS<br>MQV<br>MPC<br>MVF<br>RX | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 control equipment for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

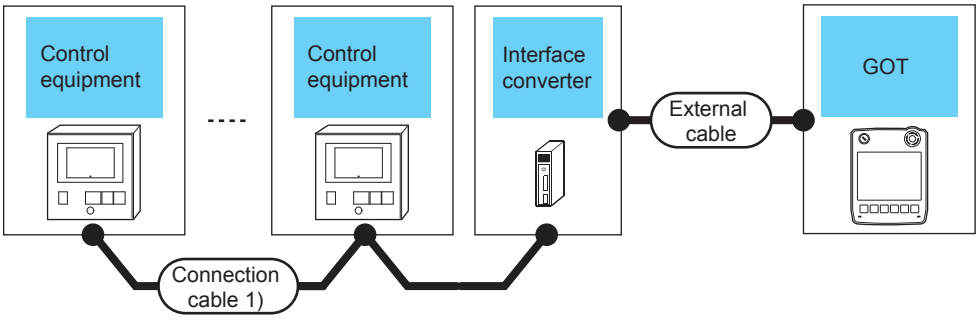



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| CMS<br>MQV<br>MPC<br>MVF<br>RX | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



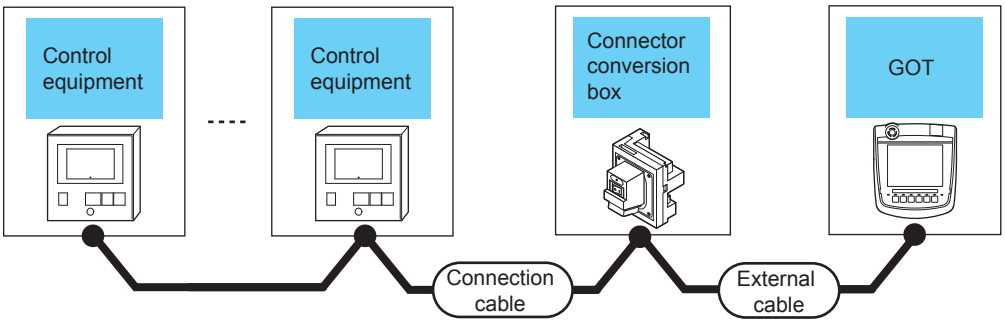

| Control equipment | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| CMS<br>MQV<br>MPC<br>MVF<br>RX | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly to multiple control equipments

### ■When using the connector conversion box




| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMS<br>MQV<br>MPC<br>MVF<br>RX | RS-485 | User preparing Page 884 RS485 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 1 control equipment for 1 GOT |

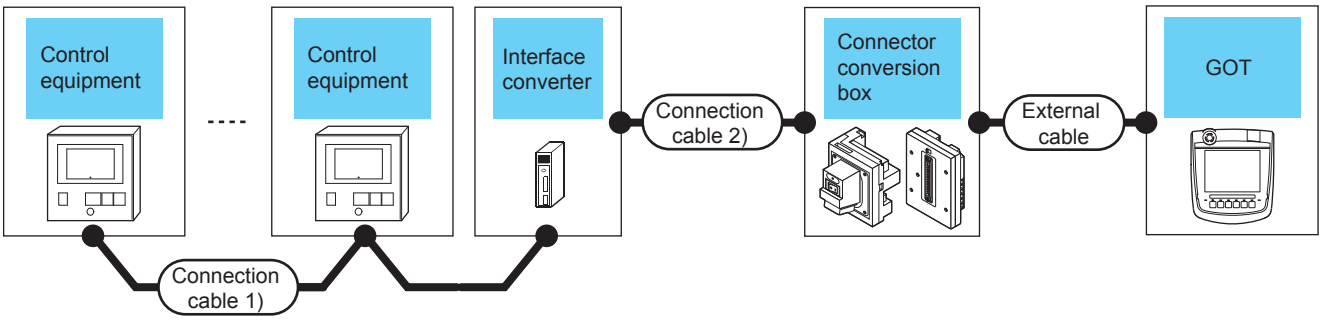
# Connecting to CMF015, CMF050

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

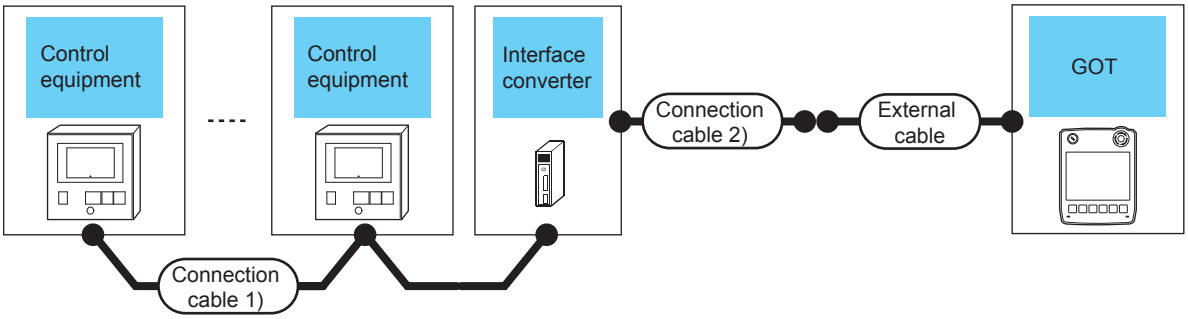



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMF015 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 control equipment for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CMF050 | User preparing Page 878 RS485 connection diagram 2) | 500m | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

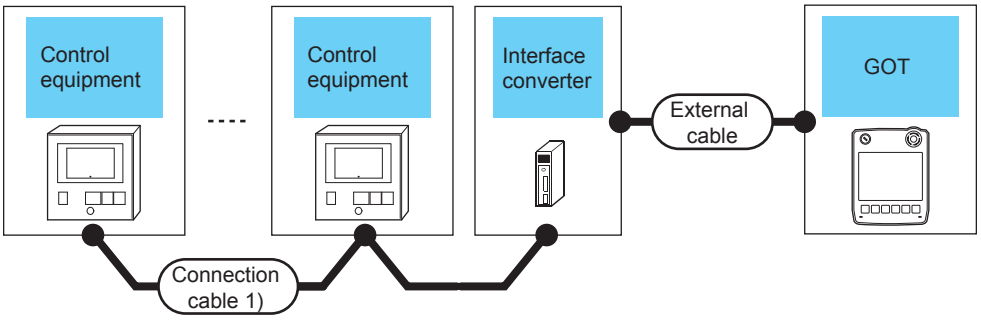



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| CMF015 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |
| CMF050 | User preparing Page 878 RS485 connection diagram 2) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Control equipment | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| CMF015 | User preparing Page 884 RS485 connection diagram 12) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |
| CMF050 | User preparing Page 878 RS485 connection diagram 2) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | | |

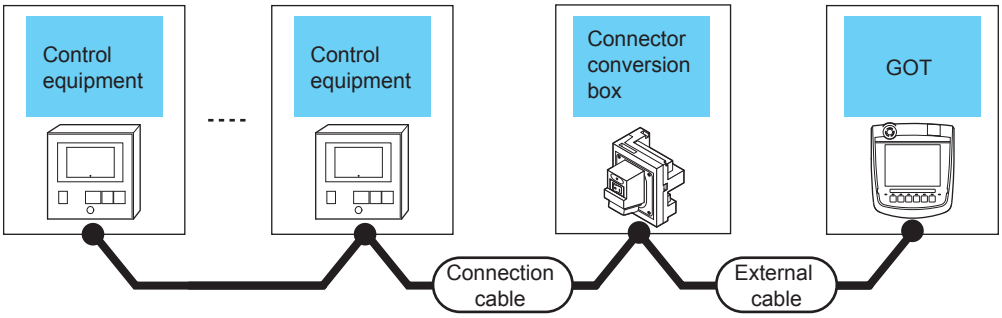
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■Connecting to CMF015

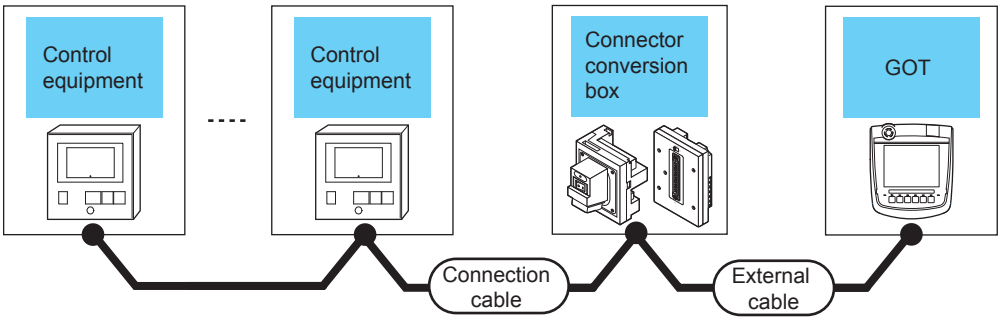
• When using the connector conversion box




| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMF015 | RS-485 | User preparing Page 884 RS485 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 control equipment for 1 GOT |

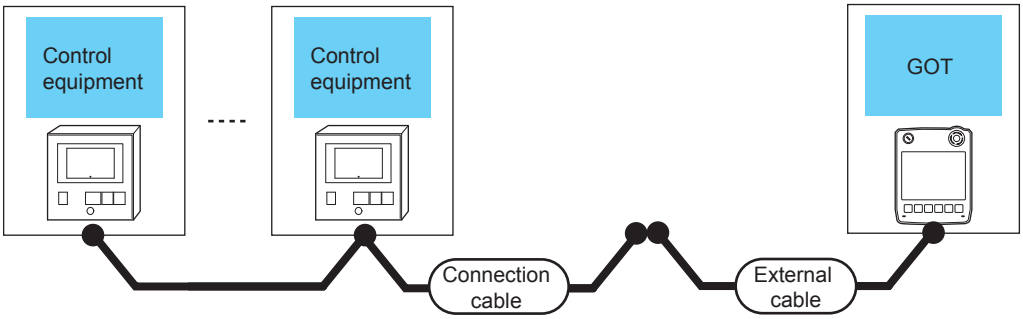
### ■Connecting to CMF050

• When using the connector conversion box



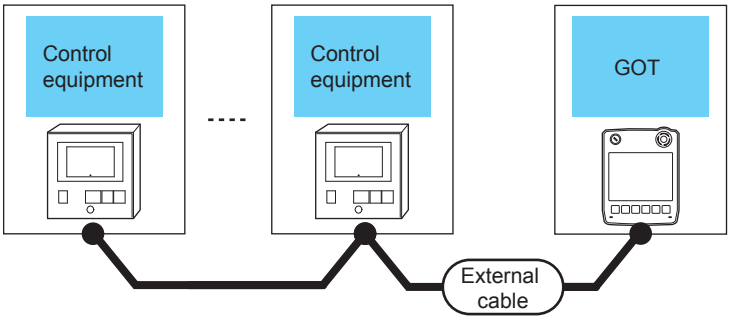

| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMF050 | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 control equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 control equipment for 1 GOT |
| | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 control equipment for 1 GOT |

• When using the external cable (GT11H-C□□□-37P)




| Control equipment | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| CMF050 | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

• When using the external cable (GT11H-C□□□)




| Control equipment | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| CMF050 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5)(4-wire) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

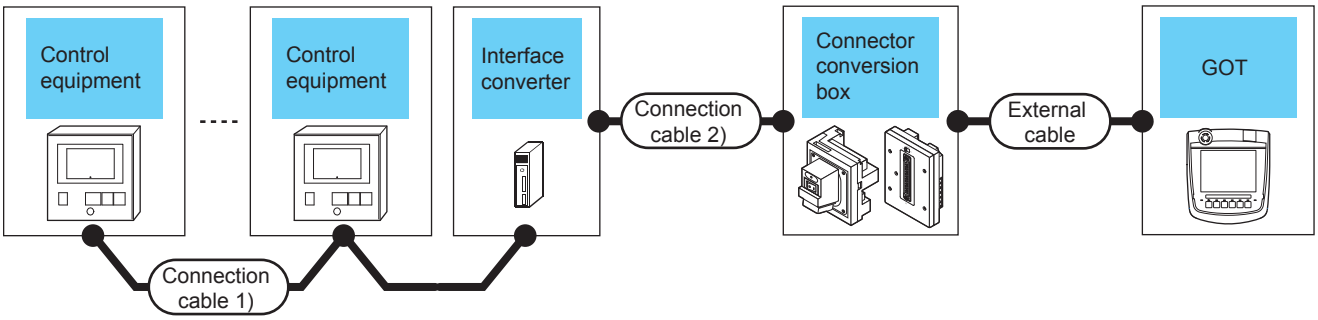
# Connecting to CML, PBC201-VN2

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

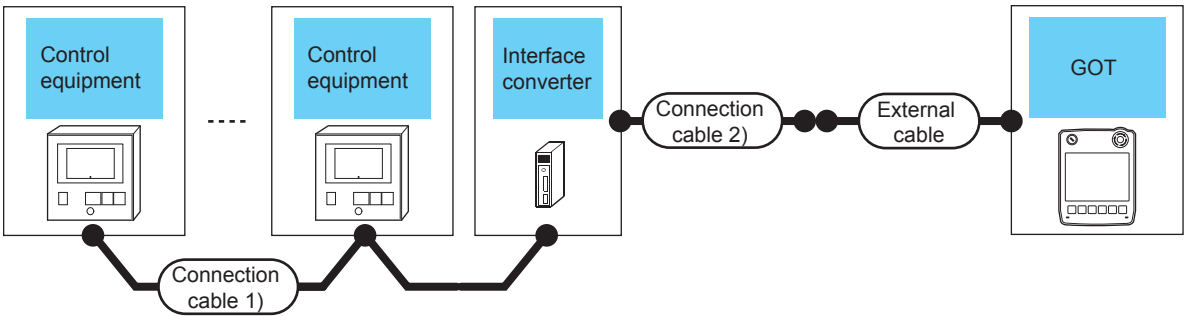



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CML PBC201-VN2 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 control equipment for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

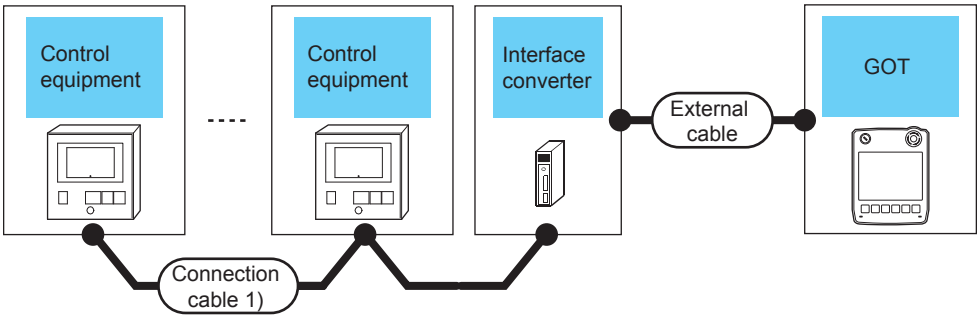



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| CML PBC201-VN2 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



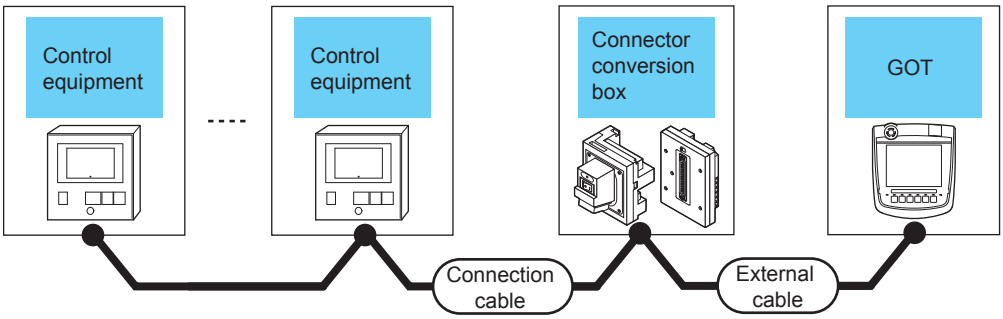

| Control equipment | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| CML PBC201-VN2 | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

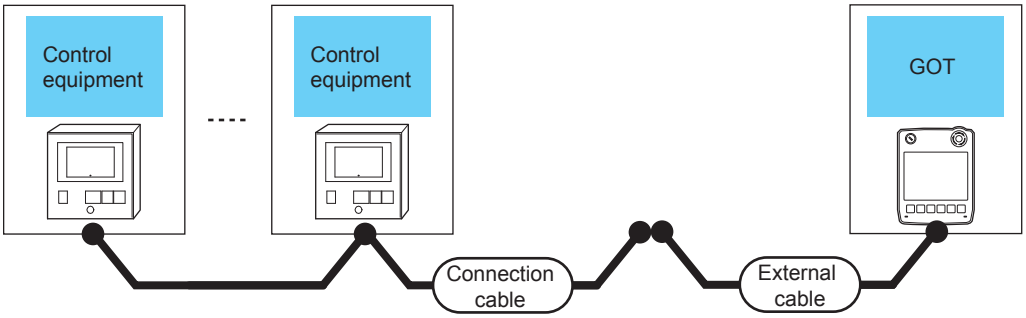
## When connecting directly

### ■When using the connector conversion box



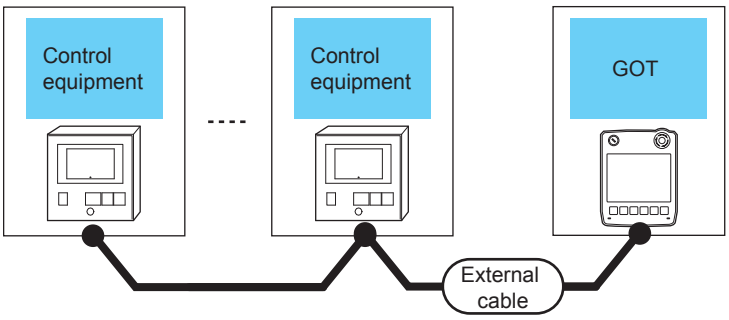

| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CML PBC201-VN2 | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 control equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 control equipment for 1 GOT |
| | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 control equipment for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Control equipment | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| CML PBC201-VN2 | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Control equipment | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| CML PBC201-VN2 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5)(4-wire) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

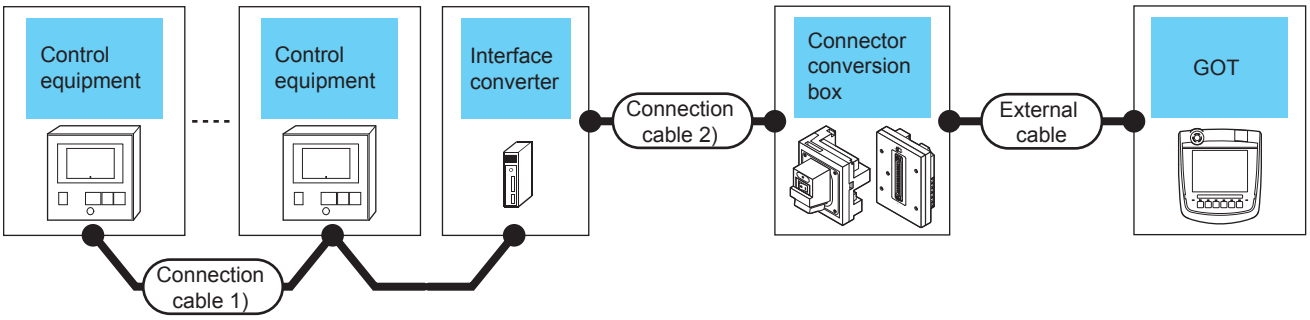
# Connecting to AUR350C, AUR450C

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

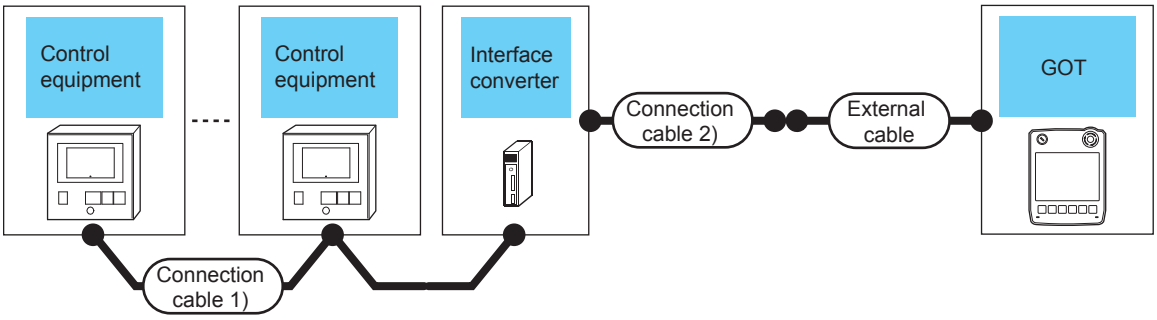



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| AUR350C AUR450C | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 control equipment for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

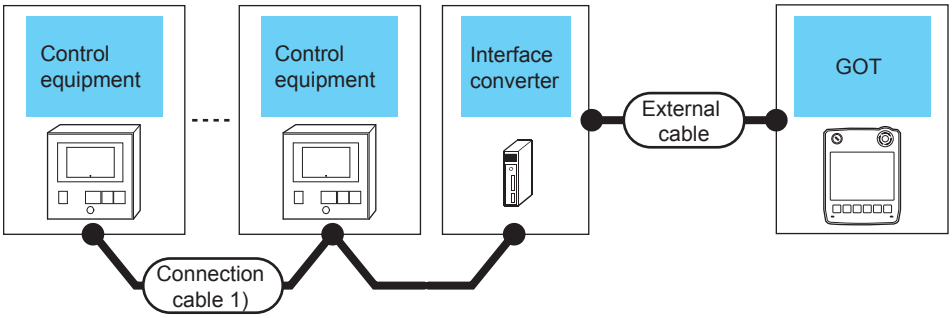



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| AUR350C AUR450C | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

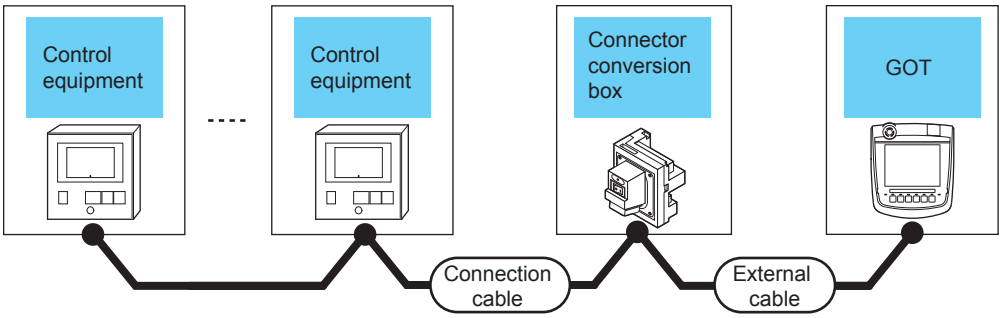



| Control equipment | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| AUR350C AUR450C | User preparing Page 878 RS485 connection diagram 1) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.
*2 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box




| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| AUR350C AUR450C | RS-485 | User preparing Page 882 RS485 connection diagram 9) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 control equipment for 1 GOT |

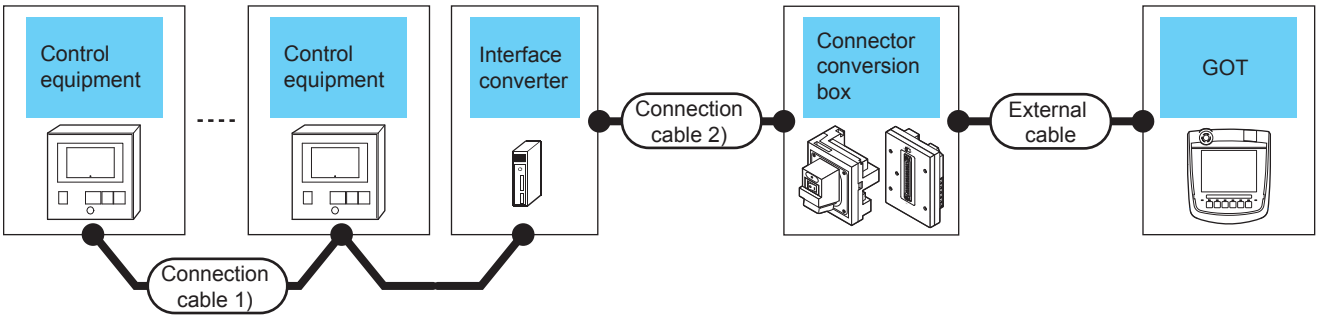
# Connecting to CMC10B

Communication driver

AZBIL SDC/DMC

## When using the Interface converter

### ■When using the connector conversion box

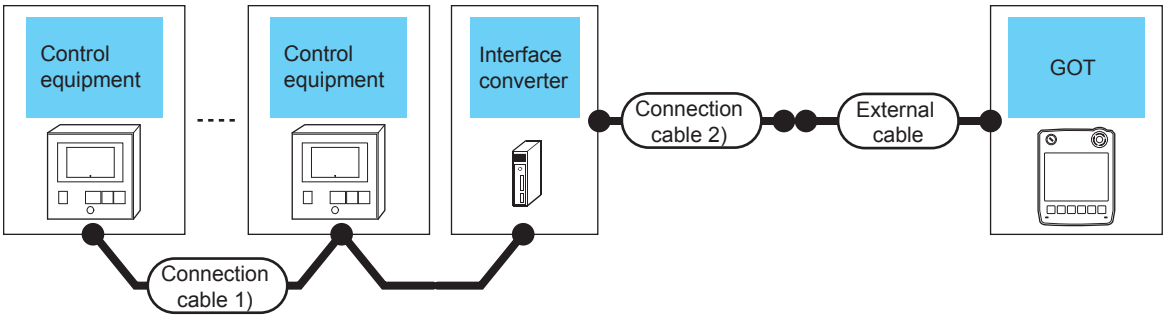



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMC10B | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 control equipment for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

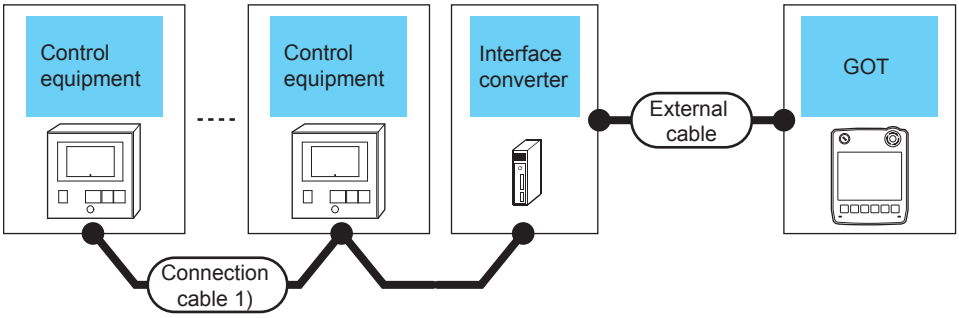



| Control equipment | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| CMC10B | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | User preparing Page 875 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



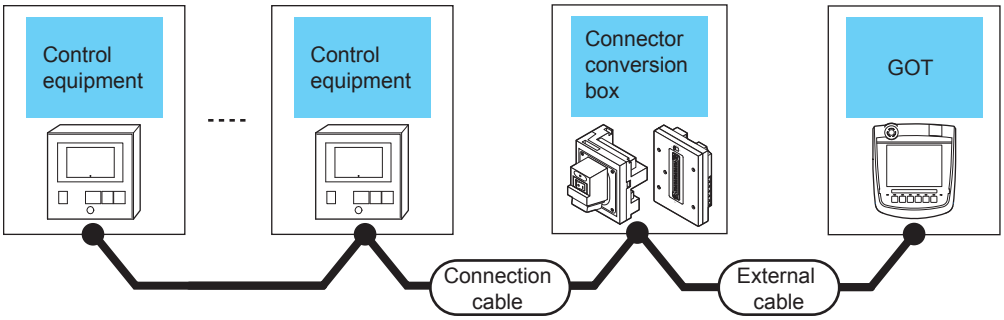

| Control equipment | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| CMC10B | User preparing Page 878 RS485 connection diagram 2) | 500m | CMC10L | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 876 RS232 connection diagram 3) | GT 2505HS | 6m | Up to 31 control equipment for 1 GOT |

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

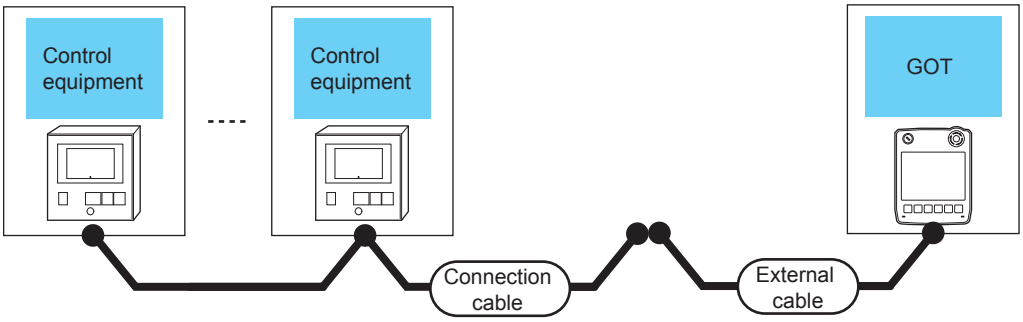
## When connecting directly to multiple control equipments

### ■When using the connector conversion box



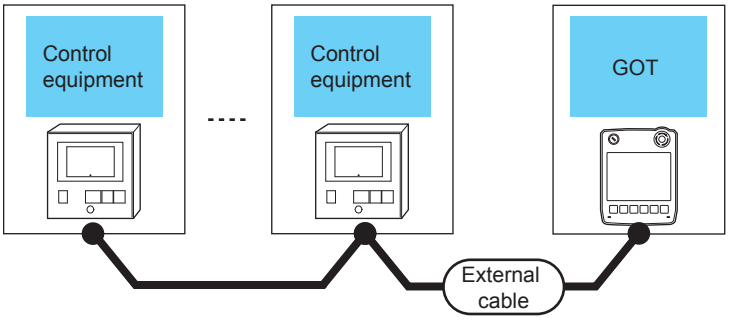

| Control equipment | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CMC10B | RS-485 | User preparing Page 879 RS485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 control equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 control equipment for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Control equipment | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| CMC10B | RS-485 | User preparing Page 880 RS485 connection diagram 4) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Control equipment | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| CMC10B | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5) | GT 2505HS | 13m | Up to 10 control equipment for 1 GOT |

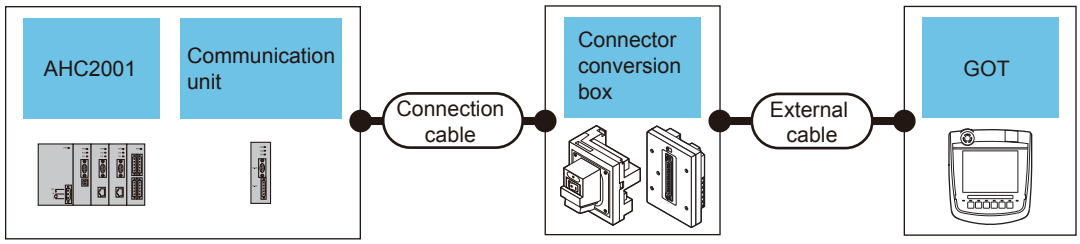
# Connecting to AHC2001

Communication driver

AZBIL DMC50

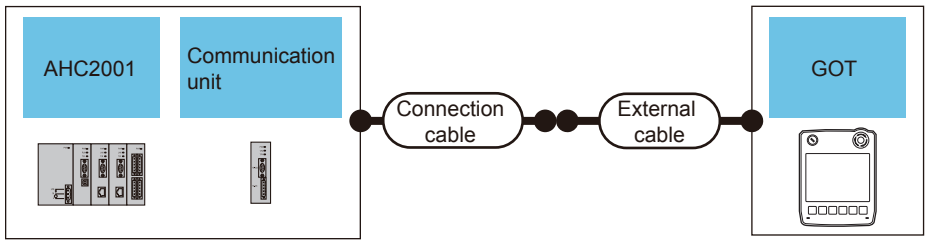
## When connecting to one temperature controller

### ■When using the connector conversion box



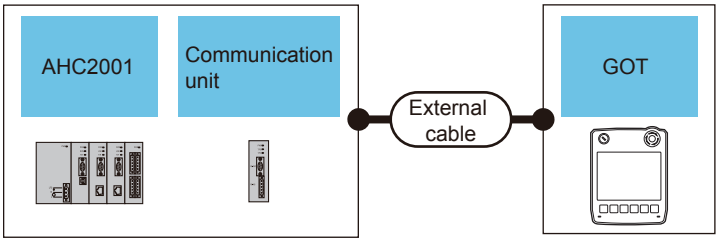

| Control equipment | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | Cable model Connection diagram number | | | | | |
| AHC2001 | - | RS-232 | User preparing Page 876 RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | SCU | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| Control equipment | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | Cable model Connection diagram number | | | | |
| AHC2001 | - | RS-232 | User preparing Page 877 RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controllers for 1 GOT |
| | SCU | | | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

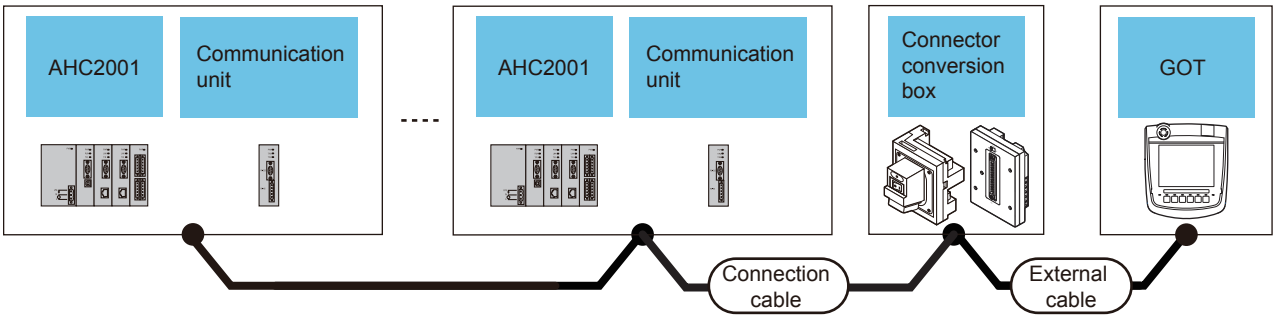
### ■When using the external cable (GT11H-C□□□)




| Control equipment | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | | | | |
| AHC2001 | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 877 RS232 connection diagram 6) | GT 2505HS | 6m | Up to 1 temperature controllers for 1 GOT |
| | SCU | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 877 RS232 connection diagram 6) | GT 2505HS | | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5)(4-wire) | GT 2505HS | 13m | |

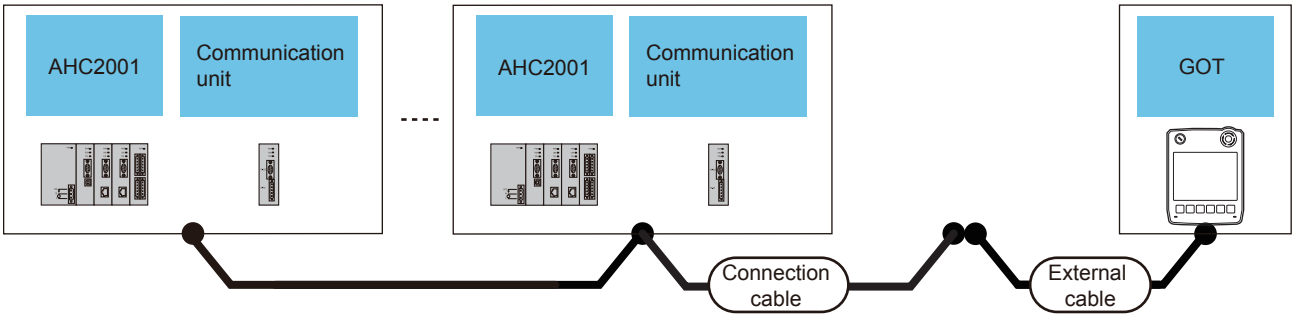
## When connecting to multiple temperature controllers

### ■When using the connector conversion box



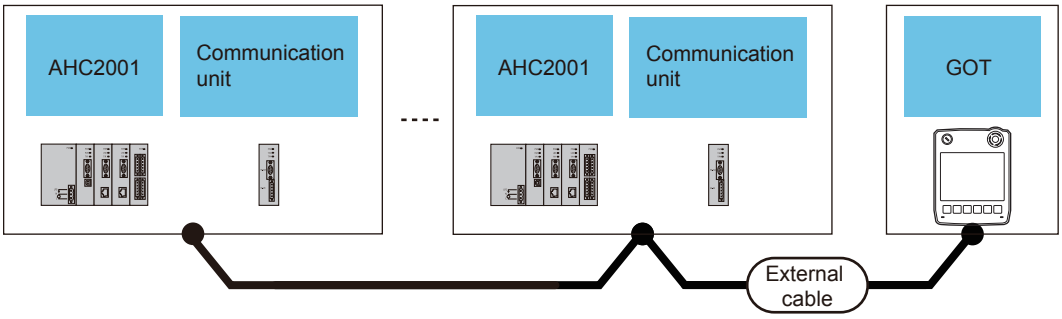

| Control equipment | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | Cable model Connection diagram number | | | | | |
| AHC2001 | SCU | RS-485 | User preparing Page 879 RS485 connection diagram 3)(4-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | | | User preparing Page 883 RS485 connection diagram 11)(2-wire) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| Control equipment | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | Cable model Connection diagram number | | | | |
| AHC2001 | SCU | RS-485 | User preparing Page 880 RS485 connection diagram 4)(4-wire) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 31 temperature controllers for 1 GOT |

### ■When using the external cable (GT11H-C□□□)




| Control equipment | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication unit | Communication Type | | | | |
| AHC2001 | SCU | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 881 RS485 connection diagram 5)(4-wire) | GT 2505HS | 13m | Up to 31 temperature controllers for 1 GOT |

## Connecting to NX series

Communication driver

MODBUS/RTU
MODBUS/TCP

Use a MODBUS/RTU or MODBUS/TCP communication driver to connect the GOT to NX series.

For the MODBUS/RTU or MODBUS/TCP connection, refer to the following manual.

📖GOT2000 Series Connection Manual (Microcomputer/MODBUS/Peripheral Connection)

5. MODBUS/RTU MASTER CONNECTION

6. MODBUS/TCP MASTER CONNECTION

For the valid devices, refer to the following Technical News.

📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)

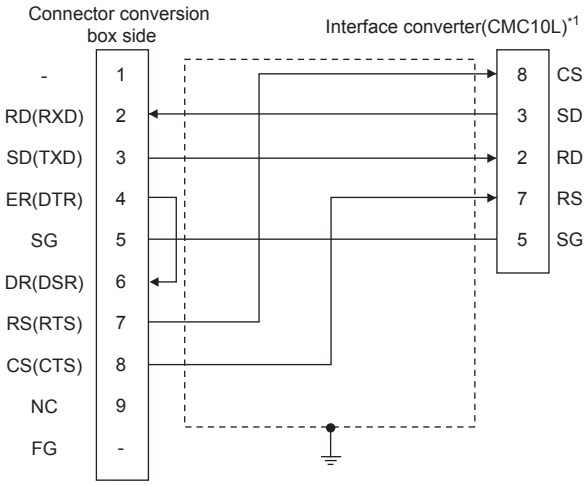
# 15.3 Connection Diagram

The following diagram shows the connection between the GOT and the control equipment.

## RS-232 cable

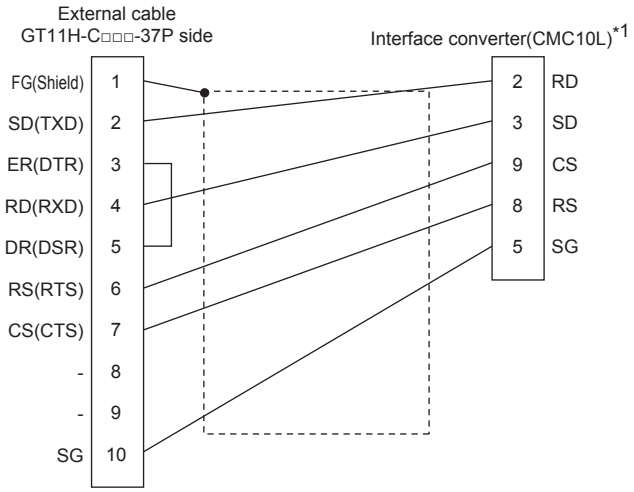
### Connection diagram

#### ■RS232 connection diagram 1)



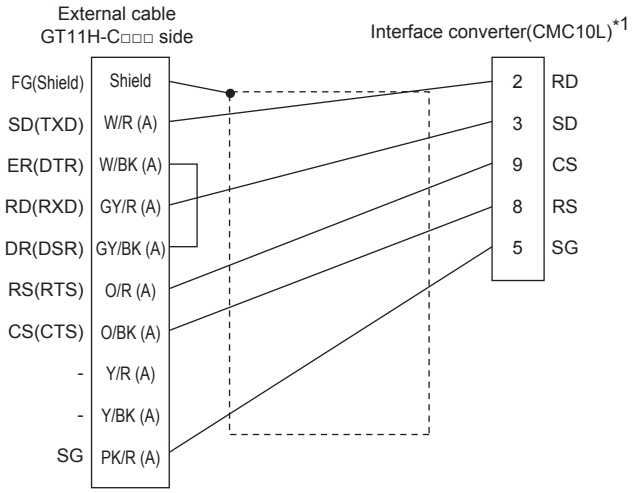

*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 891 Connecting to CMC10L

#### ■RS232 connection diagram 2)



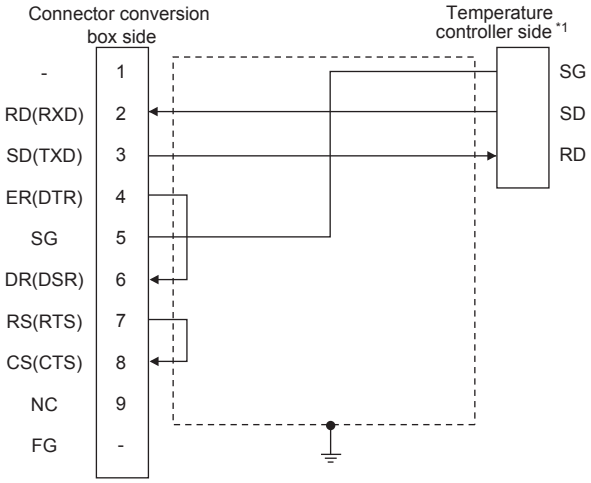

*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 891 Connecting to CMC10L

## ■RS232 connection diagram 3)




*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 891 Connecting to CMC10L

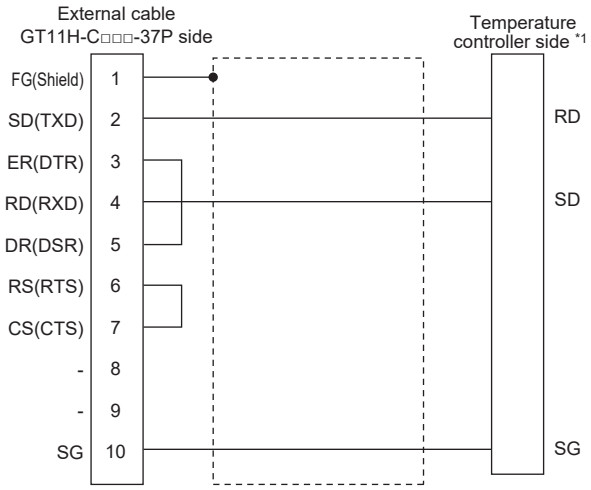
## ■RS232 connection diagram 4)




*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC40A, SDC40B, SDC40G | AHC2001 | |
| | (03, 05) | (10) | (04, 07, 09) | | CPU | SCU |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SG | 5 | 18 | 29 | 61 | 5 | 5 |
| SD | 17 | 16 | 27 | 60 | 3 | 3 |
| RD | 18 | 17 | 28 | 59 | 2 | 2 |

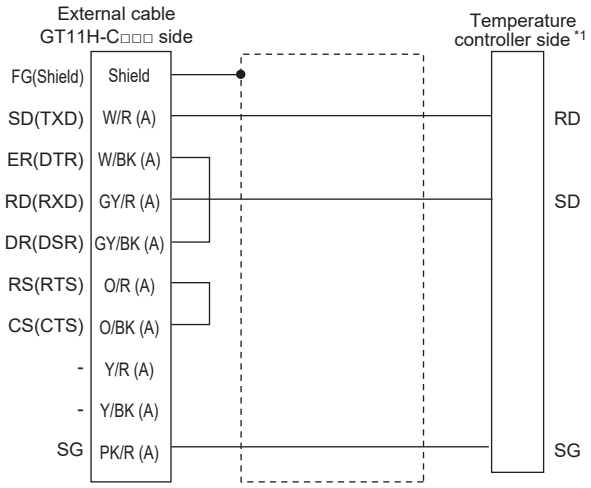
## ■RS232 connection diagram 5)




*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC40A, SDC40B, SDC40G | AHC2001 | |
| | (03, 05) | (10) | (04, 07, 09) | | CPU | SCU |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SG | 5 | 18 | 29 | 61 | 5 | 5 |
| SD | 17 | 16 | 27 | 60 | 3 | 3 |
| RD | 18 | 17 | 28 | 59 | 2 | 2 |

## ■RS232 connection diagram 6)




*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC40A, SDC40B, SDC40G | AHC2001 | |
| | (03, 05) | (10) | (04, 07, 09) | | CPU | SCU |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SG | 5 | 18 | 29 | 61 | 5 | 5 |
| SD | 17 | 16 | 27 | 60 | 3 | 3 |
| RD | 18 | 17 | 28 | 59 | 2 | 2 |

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■AZBIL control equipment side connector

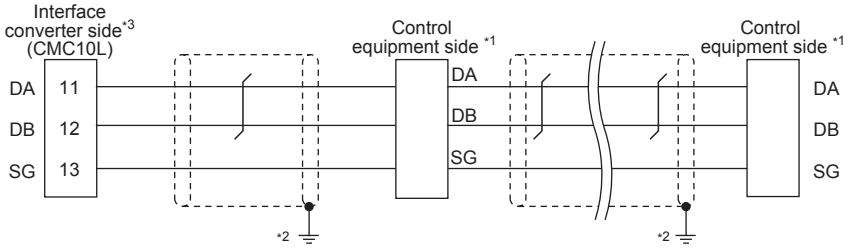
Use the connector compatible with the AZBIL control equipment side module.

For details, refer to the user's manual of the AZBIL control equipment

# RS-485 cable

## Connection diagram

### ■RS485 connection diagram 1)



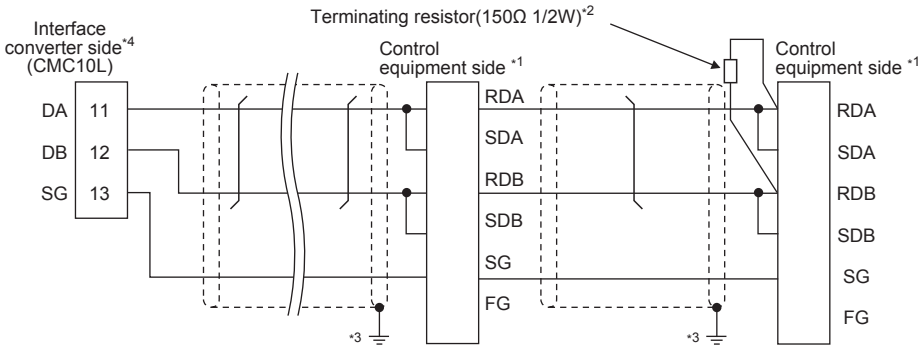

*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | DMC10 | SDC15 | SDC25/26<br>SDC35/36 | AUR350C<br>AUR450C |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| DA | 4 | 16 | 22 | DA |
| DB | 5 | 17 | 23 | DB |
| SG | 6 | 18 | 24 | SG |

*2 Connect FG grounding to the single-sided end of a cable shield line.

*3 Set the terminal resistor to "Disable".
For details of terminating resistor settings, refer to the following.
☞ Page 891 Connecting to CMC10L

### ■RS485 connection diagram 2)

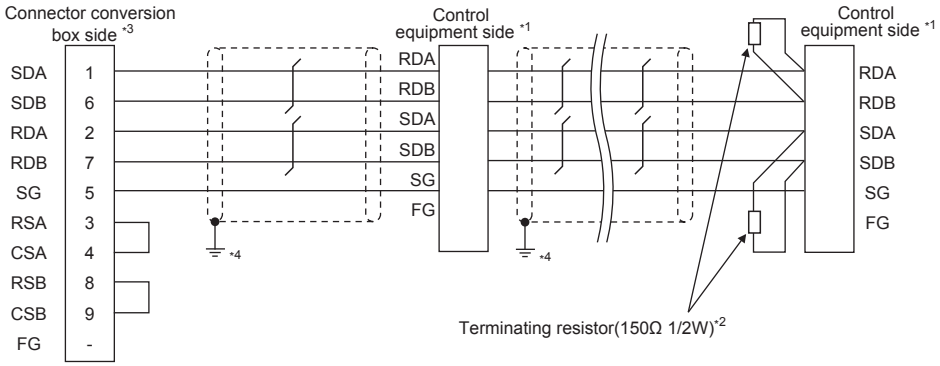


*1 Pin No. of control equipment differs depending on model and optional function model. Refer to the following table.The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of control equipment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC30 | SDC31 | | SDC40A/40B/40G | CMF050CML | PBC201-VN2 | CMC10B |
| | (02, 04) | (09) | (03, 06, 08) | (040, 041) | (045) | (446, 546) | | | | |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 17 | 18 | 27 | 18 | 18 | 27 | 59 | 7 | 14 | 13 |
| RDB | 18 | 19 | 28 | 19 | 19 | 28 | 60 | 8 | 15 | 14 |
| SDA | 15 | 16 | 25 | 16 | 16 | 25 | 57 | 9 | 12 | 11 |
| SDB | 16 | 17 | 26 | 17 | 17 | 26 | 58 | 10 | 13 | 12 |
| SG | 5 | 5 | 29 | 5 | 5 | 29 | 61 | 12 | 16 | 15 |
| FG | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3 | 19 | 3 | - |

*2 Terminating resistor should be provided for a Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Since the Interface converter has a built-in terminating resistor, set the terminating resistor of GOT to "Enable".
For details of terminating resistor settings, refer to the following.
☞ Page 891 Connecting to CMC10L

## ■RS485 connection diagram 3)



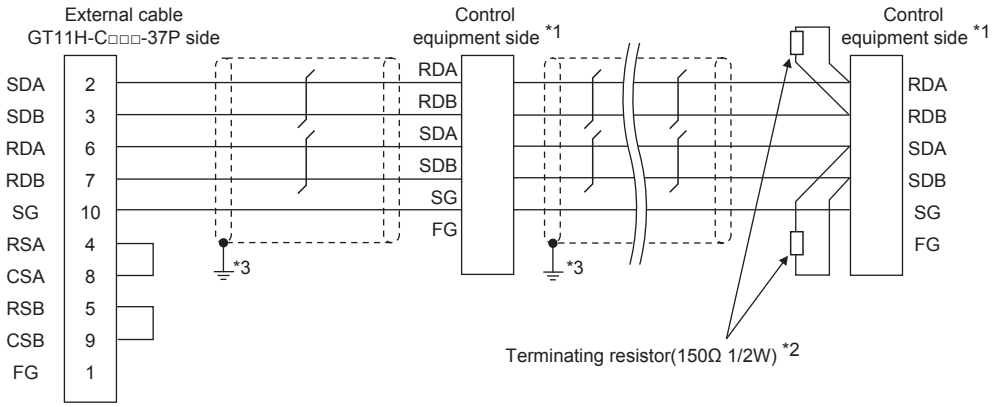

*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of control equipment | | | | | | |
|---|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC30 | SDC31 | | SDC40A/40B/40G |
| | (02, 04) | (09) | (03, 06, 08) | (040, 041) | (045) | (446, 546) | |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 17 | 18 | 27 | 18 | 18 | 27 | 59 |
| RDB | 18 | 19 | 28 | 19 | 19 | 28 | 60 |
| SDA | 15 | 16 | 25 | 16 | 16 | 25 | 57 |
| SDB | 16 | 17 | 26 | 17 | 17 | 26 | 58 |
| SG | 5 | 5 | 29 | 5 | 5 | 29 | 61 |
| FG | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3 |

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | CMF050 CML | PBC201-VN2 | CMC10B | AHC2001 |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 7 | 14 | 13 | 3 |
| RDB | 8 | 15 | 14 | 2 |
| SDA | 9 | 12 | 11 | 5 |
| SDB | 10 | 13 | 12 | 4 |
| SG | 12 | 16 | 15 | 1 |
| FG | 19 | 3 | - | - |

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
Set the terminating resistor selector to "330Ω".
☞ Page 885 Connecting terminating resistors
*4 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 4)



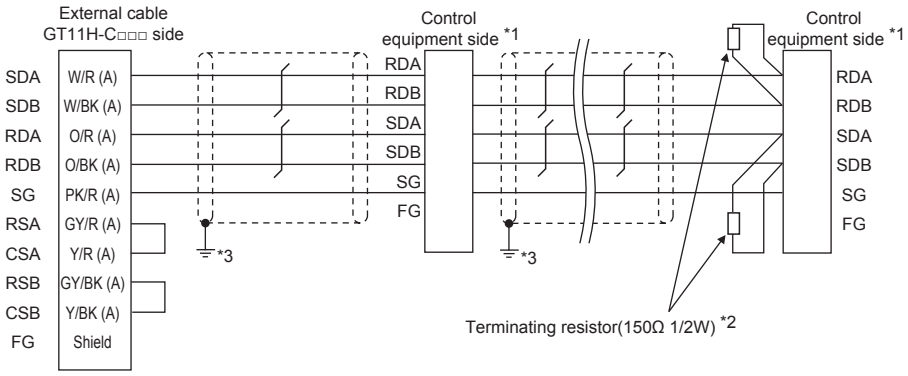

*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of control equipment | | | | | | |
|---|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC30 | SDC31 | | SDC40A/40B/40G |
| | (02, 04) | (09) | (03, 06, 08) | (040, 041) | (045) | (446, 546) | |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 17 | 18 | 27 | 18 | 18 | 27 | 59 |
| RDB | 18 | 19 | 28 | 19 | 19 | 28 | 60 |
| SDA | 15 | 16 | 25 | 16 | 16 | 25 | 57 |
| SDB | 16 | 17 | 26 | 17 | 17 | 26 | 58 |
| SG | 5 | 5 | 29 | 5 | 5 | 29 | 61 |
| FG | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3 |

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | CMF050<br>CML | PBC201-VN2 | CMC10B | AHC2001 |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 7 | 14 | 13 | 3 |
| RDB | 8 | 15 | 14 | 2 |
| SDA | 9 | 12 | 11 | 5 |
| SDB | 10 | 13 | 12 | 4 |
| SG | 12 | 16 | 15 | 1 |
| FG | 19 | 3 | - | - |

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 5)



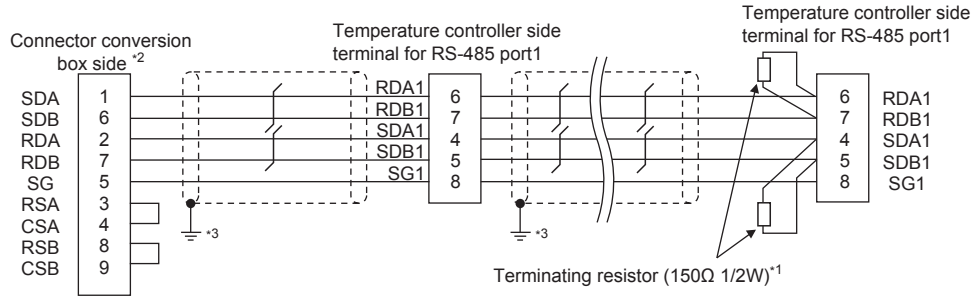

*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

| Signal name | Model of control equipment | | | | | | |
|---|---|---|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC30 | SDC31 | | SDC40A/40B/40G |
| | (02, 04) | (09) | (03, 06, 08) | (040, 041) | (045) | (446, 546) | |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 17 | 18 | 27 | 18 | 18 | 27 | 59 |
| RDB | 18 | 19 | 28 | 19 | 19 | 28 | 60 |
| SDA | 15 | 16 | 25 | 16 | 16 | 25 | 57 |
| SDB | 16 | 17 | 26 | 17 | 17 | 26 | 58 |
| SG | 5 | 5 | 29 | 5 | 5 | 29 | 61 |
| FG | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3 |

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | CMF050<br>CML | PBC201-VN2 | CMC10B | AHC2001 |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 7 | 14 | 13 | 3 |
| RDB | 8 | 15 | 14 | 2 |
| SDA | 9 | 12 | 11 | 5 |
| SDB | 10 | 13 | 12 | 4 |
| SG | 12 | 16 | 15 | 1 |
| FG | 19 | 3 | - | - |

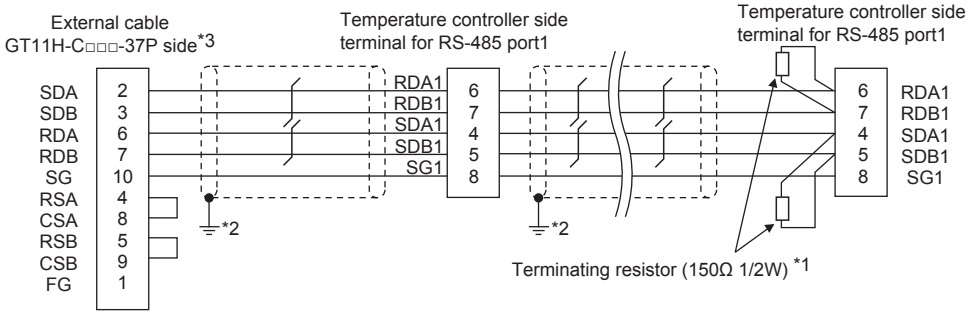
*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 6)




*1 Terminating resistor should be provided for a temperature controller which will be a terminal.
*2 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 885 Connecting terminating resistors
*3 Connect FG grounding to the single-sided end of a cable shield line.

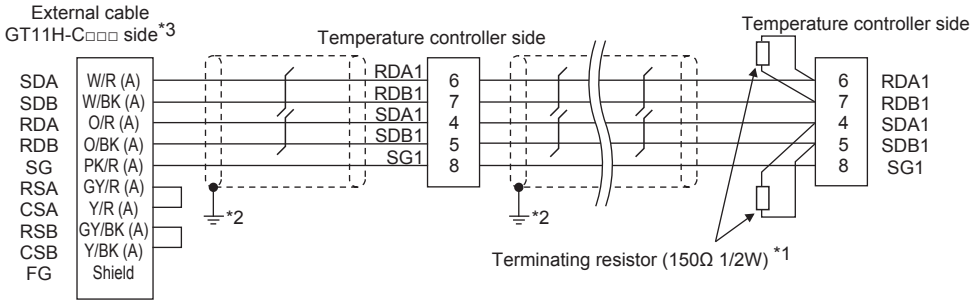
## ■RS485 connection diagram 7)




*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the single-sided end of a cable shield line.

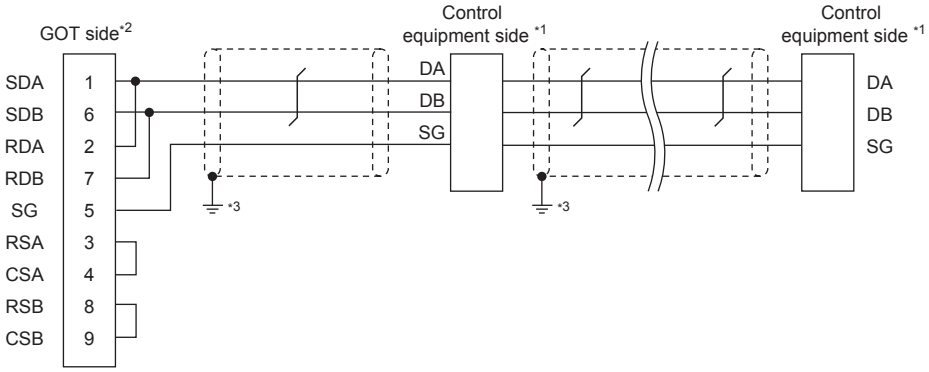
## ■RS485 connection diagram8)




*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 9)



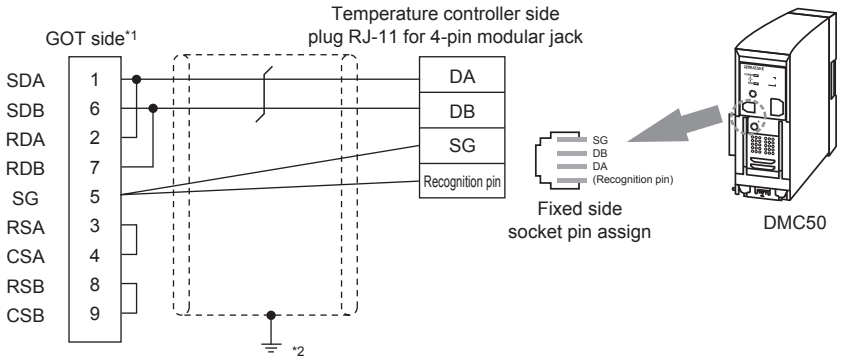

*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | DMC10 | SDC15 | SDC25/26<br>SDC35/36 | AUR350C<br>AUR450C |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| DA | 4 | 16 | 22 | DA |
| DB | 5 | 17 | 23 | DB |
| SG | 6 | 18 | 24 | SG |

*2 Set the terminating resistor setting switch of the GOT main unit to "Disable".
☞ Page 885 Connecting terminating resistors

*3 Connect FG grounding to the single-sided end of a cable shield line.

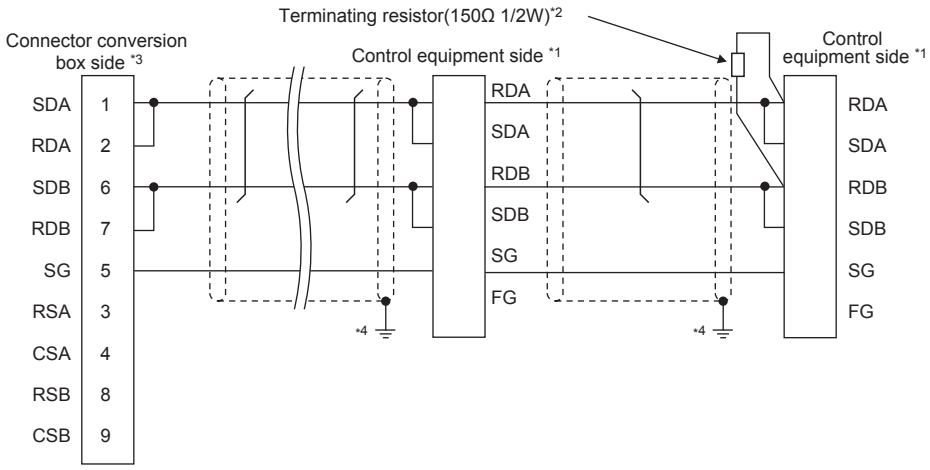
## ■RS485 connection diagram 10)




*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 885 Connecting terminating resistors

*2 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 11)



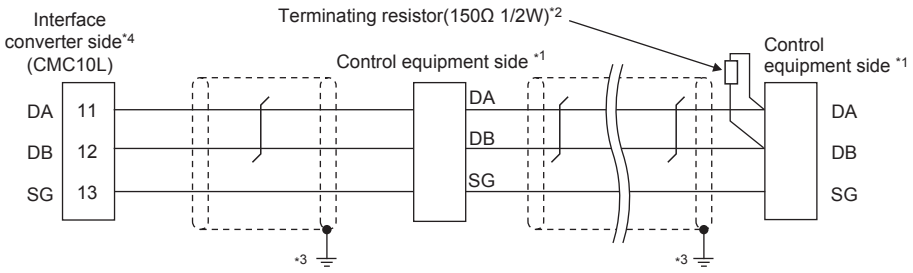

*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | SDC20 | | SDC21 | SDC40A/40B/40G |
| | (02, 04) | (09) | (03, 06, 08) | |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 17 | 18 | 27 | 59 |
| RDB | 18 | 19 | 28 | 60 |
| SDA | 15 | 16 | 25 | 57 |
| SDB | 16 | 17 | 26 | 58 |
| SG | 5 | 5 | 29 | 61 |
| FG | 3, 4 | 3, 4 | 3, 4 | 3 |

| Signal name | Model of control equipment | | | |
|---|---|---|---|---|
| | CMF050<br>CML | PBC201-VN2 | CMC10B | AHC2001 |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| RDA | 7 | 14 | 13 | 3 |
| RDB | 8 | 15 | 14 | 2 |
| SDA | 9 | 12 | 11 | 5 |
| SDB | 10 | 13 | 12 | 4 |
| SG | 12 | 16 | 15 | 1 |
| FG | 19 | 3 | - | - |

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 885 Connecting terminating resistors
*4 Connect FG grounding to the single-sided end of a cable shield line.

## ■RS485 connection diagram 12)

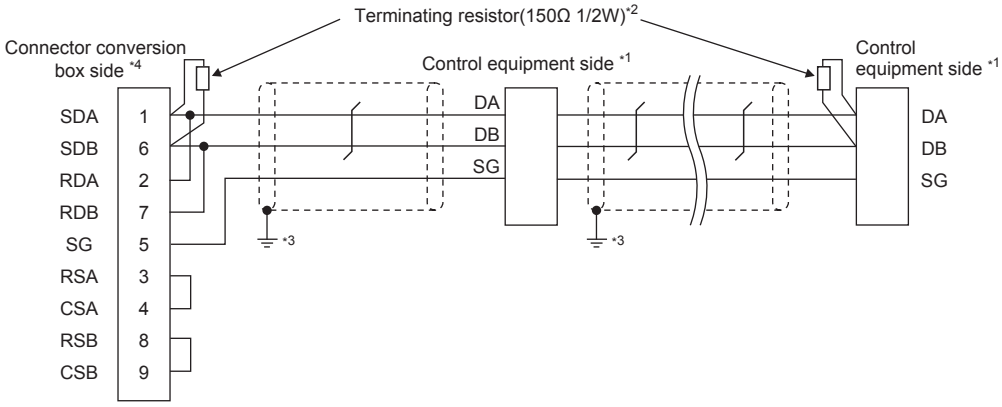



*1 Pin No. of control equipment differs depending on the model.
Refer to the following table

| Signal name | Model of control equipment | | | | |
|---|---|---|---|---|---|
| | SDC45/46 | CMS CMF015 | MQV MPC | MVF | RX |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| DA | C10 | 5 | 7 | 1 | 1 |
| DB | C11 | 6 | 8 | 2 | 2 |
| SG | C12 | 10 | 9 | 7 | 3 |

*2 Terminating resistor should be provided for an Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Since the Interface converter has a built-in terminating resistor, set the terminating resistor of GOT to "Enable".
For details of terminating resistor settings, refer to the following.
☞ Page 891 Connecting to CMC10L

## ■RS485 connection diagram 13)




*1 Pin No. of control equipment differs depending on the model.
Refer to the following table

| Signal name | Model of control equipment | | | | |
|---|---|---|---|---|---|
| | SDC45/46 | CMS CMF015 | MQV MPC | MVF | RX |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| DA | C10 | 5 | 7 | 1 | 1 |
| DB | C11 | 6 | 8 | 2 | 2 |
| SG | C12 | 10 | 9 | 7 | 3 |

*2 Terminating resistor should be provided for an Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "Disable".
☞ Page 885 Connecting terminating resistors

## Precautions when preparing a cable

### ■Cable length

The length of the RS-485 cable must be within 13m (the total distance between the GOT and a controller).

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■AZBIL control equipment side connector

Use the connector compatible with the AZBIL control equipment side module.

For details, refer to the user's manual of the AZBIL control equipment.

## Connecting terminating resistors

### ■GOT side

- For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■AZBIL control equipment side

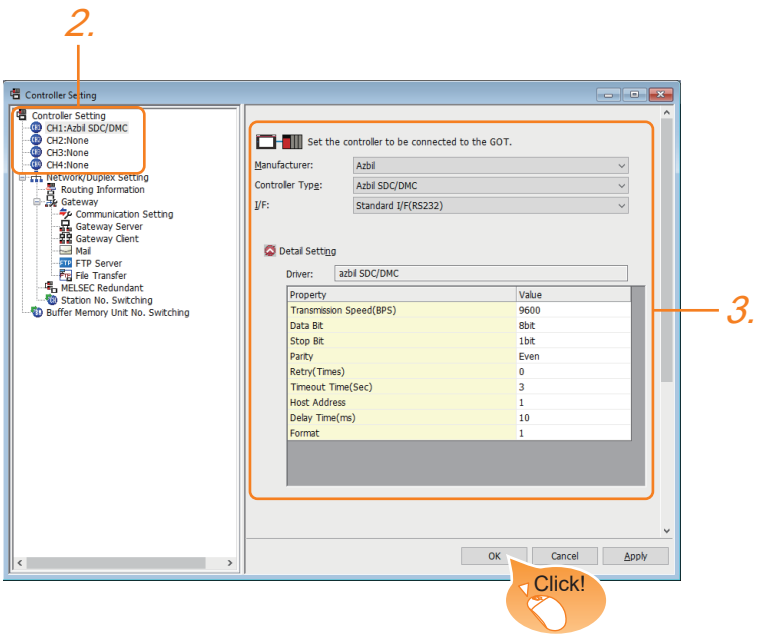
When connecting a AZBIL control equipment to the GOT, a terminating resistor must be connected.

☞ Page 889 Control Equipment Side Setting

# 15.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Azbil]
- [Controller Type]

When connecting to DMC50 or AHC2001: [Azbil DMC50]

When connecting to models other than the above: [Azbil SDC/DMC]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 887 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 10 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address*3*4 | Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network.<br>(Default: 1) | 1 to 15 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.*1<br>(Default: 10ms) | 0 to 300ms |
| Format*2 | Select the communication format.<br>(Default: 1)<br>format 1: only continuous access<br>format 2: continuous and random access | 1/2 |

*1 Do not specify "0".
*2 Format is ignored when connecting to DMC50.
*3 Host Address is ignored when connecting to DMC10 or SDC.
*4 Host Address is valid when connecting to DMC50.
Devices to be the target of Host Address setting differ depending on the system configuration.
<When connecting to the temperature controller via COM module>
Specify the station No. of the COM module.
<When connecting to the temperature controller directly>
Specify the station No. of the temperature controller.

**Point**

Format setting

The compatible format of control equipment differs depending on model.

| Model name | Compatible format |
|---|---|
| SDC20/21, SDC30/31, SDC40A/40B/40G, CMS, CMF, CML, MQV, MPC, MVF, PBC201-VN2, RX | Format 1 only |
| DMC10, SDC15, SDC25/26, SDC35/36, SDC45/46, AUR350C, AUR450C, CMC10B | Format 1 or Format 2 |
| DMC50, AHC2001 | The format setting is invalid. |

For the continuous access and random access of the control equipment, refer to the following manual.

User's Manual of the AZBIL control equipment

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 15.5 Control Equipment Side Setting

**Point**

AZBIL control equipment

For details of AZBIL control equipment, refer to the following manual.

User's Manual of the AZBIL control equipment

| Model name | | Refer to |
|---|---|---|
| Control equipment | DMC10 | ☞ Page 889 Connecting to DMC10 |
| | SDC15, SDC25/26, SDC35/36 | ☞ Page 890 Connecting to SDC15, SDC25/26 or SDC35/36 |
| | SDC20/21 | ☞ Page 891 Connecting to SDC20/21, SDC30/31 |
| | SDC30/31 | ☞ Page 891 Connecting to SDC20/21, SDC30/31 |
| | SDC40A/40B/40G | ☞ Page 890 Connecting to SDC40A/40B/40G |
| | DMC50 | ☞ Page 893 Connecting to DMC50 |
| | SDC45/46 | ☞ Page 893 Connecting to SDC45/46 |
| | CMS, CMF015 | ☞ Page 894 Connecting to CMS, CMF015 |
| | CML, CMF050 | ☞ Page 894 Connecting to CML, CMF050 |
| | MQV | ☞ Page 894 Connecting to MQV |
| | MPC | ☞ Page 895 Connecting to MPC |
| | PBC201-VN2 | ☞ Page 895 Connecting to PBC201-VN2 |
| | MVF | ☞ Page 895 Connecting to MVF |
| | AUR350C, AUR450C | ☞ Page 897 Connecting to AUR350C, AUR450C |
| | RX | ☞ Page 898 Connecting to RX |
| | CMC10B | ☞ Page 898 Connecting to CMC10B |
| | AHC2001 CPU | ☞ Page 899 Connecting to AHC2001 CPU |
| | AHC2001 SCU | ☞ Page 899 Connecting to AHC2001 SCU |
| Interface converter | CMC10L | ☞ Page 891 Connecting to CMC10L |

## Connecting to DMC10

### Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D10) of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Communication mode*2 | CPL |
| Data bit | 8bits |
| Parity bit*1 | Even, none |
| Stop bit | 2bits |
| Communication minimum response time | 1ms, 10ms, 100ms, 200ms |
| Station address*3*4 | 0 to F |

*1 Adjust the settings with GOT settings.

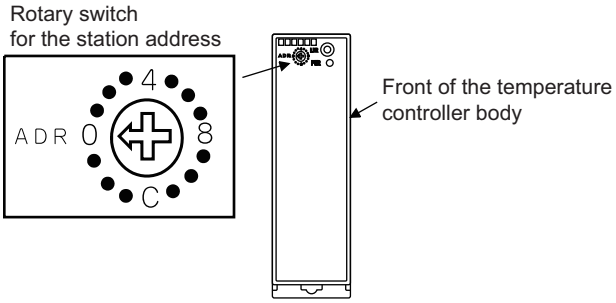
*2 Set to CPL.

*3 Do not set to "0".

*4 Select the station address without overlapping with that of other units.

### Station address setting

Set the station address using the rotary switch for the station address.




## Connecting to SDC40A/40B/40G

### Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps |
| Data Bit | 8bits |
| Parity bit*1 | Even, none |
| Stop bit | 1bit, 2bits |
| Station address*2*3 | 0 to 127 |

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

## Connecting to SDC15, SDC25/26 or SDC35/36

### Communication settings

Make the communication settings by operating the key or Smart Loader Package (SLP-C35) of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Communication mode*2 | CPL |
| Data bit*1 | 7bits, 8bits |
| Parity bit*1 | Odd, even, none |
| Stop bit*1 | 1bit, 2bits |
| Communication minimum response time | 1 to 250ms |
| Station address*3*4 | 0 to 127 |

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Set to CPL.
*3 Do not set to "0".
*4 Select the station address without overlapping with that of other units.

# Connecting to SDC20/21, SDC30/31

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps |
| Data bit | 8bits |
| Parity bit | Disable |
| Stop bit | 2bits |
| Station address*2*3 | 0 to 127 |

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to CMC10L

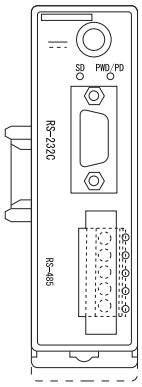
## Communication settings

Make the communication settings by operating the DIP switch of the Interface converter

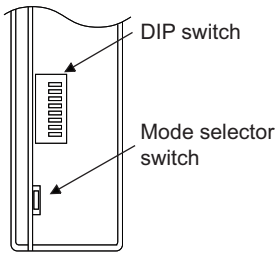
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Frame length*2 | 9 to 15bits |

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 The sum of data length, parity bit and stop bit

## Settings by switch



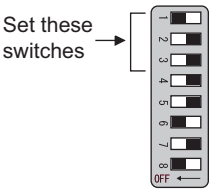

Front view of CMC10L body




Rear view of CMC10L body

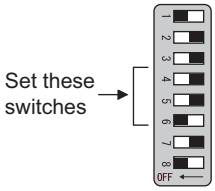
### ■Setting DIP switches

• Transmission speed settings



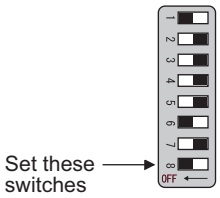

| Transmission speed (bps) | Switch No. | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 9600 | ON | OFF | ON |
| 19200 | OFF | ON | ON |
| 38400 | ON | ON | ON |

• Frame length settings




| Frame length | Switch No. | | |
|---|---|---|---|
| | 4 | 5 | 6 |
| 8bits | OFF | OFF | OFF |
| 9bits | ON | OFF | OFF |
| 10bits | OFF | ON | OFF |
| 11bits | ON | ON | OFF |
| 12bits | OFF | OFF | ON |
| 13bits | ON | OFF | ON |
| 14bits | OFF | ON | ON |
| 15bits | ON | ON | ON |

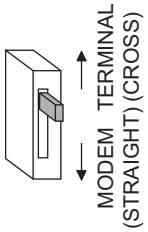
• Connecting terminating resistors




| Terminating resistor | Switch No. |
|---|---|
| | 8 |
| Enable | ON |
| Disable | OFF |

## ■Mode selector switch settings

Set the switch to “TERMINAL”.



# Connecting to DMC50

## Communication settings

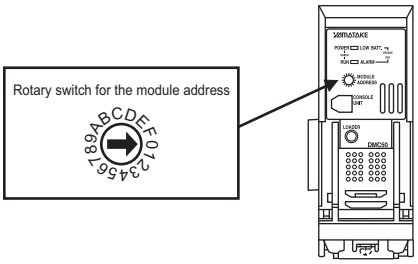
Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication mode | CPL |
| Data bit | 8bits (fixed) |
| Parity bit | Even (fixed) |
| Stop bit | 1bit (fixed) |
| Module address*2*3*4 | 0 to F |

*1 Adjust the settings with GOT settings.
*2 Set the module address using the rotary switch for module address.
*3 Do not set to "0".
*4 Select the module address without overlapping with that of other units.

## Module address setting

Set the module address using the rotary switch for module address.




# Connecting to SDC45/46

## Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-C45) of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication mode*2 | CPL |
| Data bit | 7bits, 8bits |
| Parity bit*1 | Odd, even, none |
| Stop bit | 1bit, 2bits |
| Communication minimum response time*5 | 1 to 250ms |
| Station address*3*4 | 0 to 120 |

*1 Adjust the settings with GOT settings.
*2 Set to CPL.
*3 Do not set to "0".
*4 Select the station address without overlapping with that of other units.
*5 When using the interface converter CMC10L, set the communication minimum response time to 3ms or more.

# Connecting to CMS, CMF015

## Communication settings

Make the communication settings by operating the key of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps |
| Communication condition selection | 0: 8-bit data length, Even parity, Stop bit 1 |
| | 1: 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 99 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to CML, CMF050

## Communication settings

Make the communication settings by operating the key of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps |
| Communication condition selection*1 | 00: 8-bit data length, Even parity, Stop bit 1 |
| | 01: 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 7F |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to MQV

## Communication settings

Make the communication settings by operating the key of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication condition selection*1 | 00: 8-bit data length, Even parity, Stop bit 1 |
| | 01: 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 127 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to MPC

## Communication settings

Make the communication settings by operating the key of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication condition selection*1 | 0: 8-bit data length, Even parity, Stop bit 1 |
| | 1: 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 127 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to PBC201-VN2

## Communication settings

Make the communication settings by operating the key of the control equipment.

| Item | Set value |
|---|---|
| Communication protocol | CPL |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps, 115200bps |
| Communication condition selection*1 (Fixed 8-bit data length) | 0:Even parity, Stop bit 1 |
| | 1:Odd parity, Stop bit 1 |
| | 2:Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 126 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to MVF

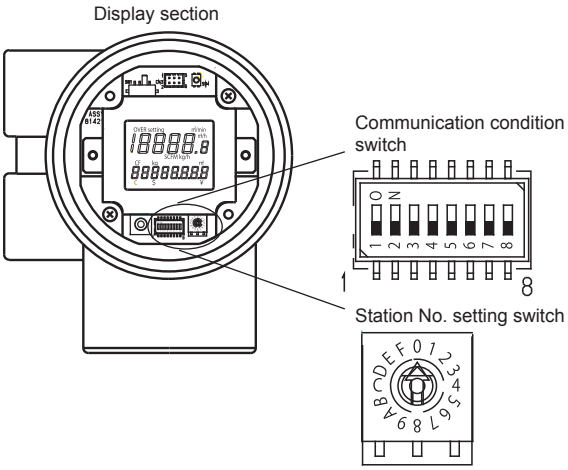
## Communication settings

Make the communication settings by operating the switch of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Communication condition selection*1 | 8-bit data length, Even parity, Stop bit 1 |
| | 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to F |

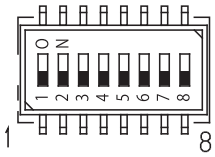
*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

## Settings by switch




### ■Transmission speed settings

Set the communication condition switch.



| Transmission speed (bps) | Switch No. | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 9600 | ON | ON | OFF |
| 19200 | ON | OFF | OFF |

### ■Communication condition selection

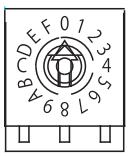
Set the communication condition switch.

| Communication condition | Switch No. |
|---|---|
| | 4 |
| 8-bit data length, Even parity, Stop bit 1 | OFF |
| 8-bit data length, Non parity, Stop bit 2 | ON |

### ■Station address setting

Set the station address switch.

Station No. setting switch



# Connecting to AUR350C, AUR450C

## Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-A35, SLP-A45) of the control equipment.

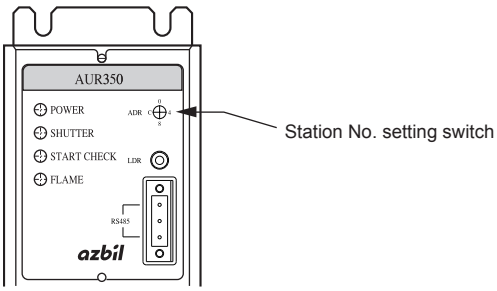
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Communication condition selection*1 | 8-bit data length, Even parity, Stop bit 1 |
| | 8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to F |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

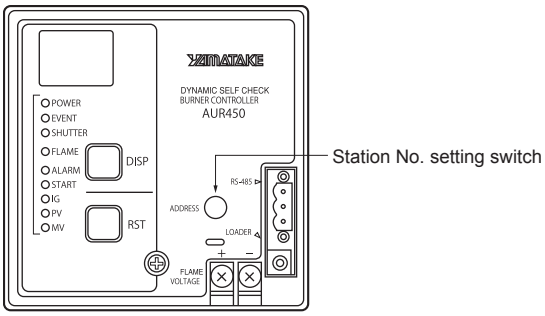
## Station address setting

Set the station address switch.

### ■For AUR350C




### ■For AUR450C



# Connecting to RX

## Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-RX) of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication condition selection*1 | Even parity stop 1<br>(8-bit data length, Even parity, Stop bit 1) |
| | Even parity stop 2<br>(8-bit data length, Even parity, Stop bit 2) |
| | Odd parity stop 1<br>(8-bit data length, Odd parity, Stop bit 1) |
| | Odd parity stop 2<br>(8-bit data length, Odd parity, Stop bit 2) |
| Station address*2*3 | 1 to 32 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

# Connecting to CMC10B

## Communication settings

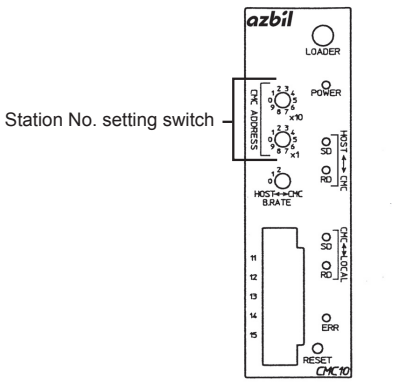
Make the communication settings by operating the Smart Loader Package (SLP-CM1) of the control equipment.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Communication format*1 | 0:8-bit data length, Even parity, Stop bit 1 |
| | 1:8-bit data length, Non parity, Stop bit 2 |
| Station address*2*3 | 0 to 99 |

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

## Station address setting

Set the station address switch.



# Connecting to AHC2001 CPU

## Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps, 57600bps |
| Communication mode*2 | 0: MODBUS<br>1: CPL |
| Data bit | 8bits (fixed) |
| Parity bit | Even (fixed) |
| Stop bit | 1bit (fixed) |
| Station address*3 | 1 to 15*4 |

*1 Adjust the settings with GOT settings.
*2 Set this item to 1: CPL.
*3 Select the station address without overlapping with that of other units.
*4 The station address for AHC2001 ranges from 1 to 127.
However, use station address from 1 to 15, which are the range for DMC50.

# Connecting to AHC2001 SCU

## Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit*1 | 7bits, 8bits |
| Parity bit*1 | 0: None, 1:Even, 2: Odd |
| Stop bit*1 | 1bit, 2bits |
| Half duplex/Full duplex*2 | 0: Half duplex, 1: Full duplex |
| Space sending | 0 (fixed) |
| Protocol setup*3 | 1 to 30 |

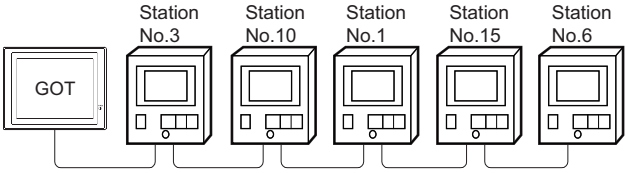
*1 Adjust the settings with GOT settings.
*2 Set this item to 0: Half duplex.
*3 Set this item to 2: CPL.

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the control equipment of which data is to be changed.

| Model name | Specification range |
|---|---|
| SDC40A/40B/40G, SDC15,<br>SDC25/26, SDC35/36,<br>SDC20/21, SDC30/31<br>CML, CMF050, MQV, MPC | 1 to 127 |
| PBC201-VN2 | 1 to 126 |
| SDC45/46 | 1 to 120 |
| CMS, CMF015, CMC10B | 1 to 99 |
| RX | 1 to 32 |
| DMC10, DMC50, MVF,<br>AUR350C, AUR450C, AHC2001*1 | 1 to 15 |

*1 The station number for AHC2001 ranges from 1 to 127.
However, use station numbers from 1 to 15, which are the range for DMC50.

## Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from the following table on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the control equipment.

| Specification station No. | | Compatible device | Setting range |
|---|---|---|---|
| DMC50 AHC2001 | Other than DMC50 | | |
| 100 | 200 | GD10 | 1 to 127:For SDC40A/40B/40G,<br>SDC15, SDC25/26,<br>SDC35/36, SDC20/21,<br>SDC30/31, CML, CMF050, MQV, MPC<br>1 to 126: PBC201-VN2<br>1 to 120: SDC45/46<br>1 to 99: CMS, CMF015, CMC10B<br>1 to 32: RX<br>1 to 15: DMC10, DMC50, MVF, AUR350C, AUR450C, AHC2001*1<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | 201 | GD11 | |
| 102 | 202 | GD12 | |
| 103 | 203 | GD13 | |
| 104 | 204 | GD14 | |
| 105 | 205 | GD15 | |
| 106 | 206 | GD16 | |
| 107 | 207 | GD17 | |
| 108 | 208 | GD18 | |
| 109 | 209 | GD19 | |
| 110 | 210 | GD20 | |
| 111 | 211 | GD21 | |
| 112 | 212 | GD22 | |
| 113 | 213 | GD23 | |
| 114 | 214 | GD24 | |
| 115 | 215 | GD25 | |

*1 The station number for AHC2001 ranges from 1 to 127.
However, use station numbers from 1 to 15, which are the range for DMC50.

# 15.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
AZBIL equipment ([Azbil SDC/DMC])
AZBIL equipment ([Azbil DMC50])

# 15.7 Precautions

## Station number setting of the temperature controller system

- When connecting to DMC10 or SDC

Make sure to establish temperature controller system with No.1 station.

- When connecting to DMC50 or AHC2001

A COM module or temperature controller with the station number set with the host address must be included.

Page 887 Communication detail settings

## GOT clock control

Since the control equipment does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

## When DMC50/AHC2001 and DMC10/SDC are mixed

GOT does not support connections with DMC50/AHC2001 and DMC10/SDC mixed.

## Station number range for AHC2001

The station number for AHC2001 ranges from 1 to 127.

However, use station numbers from 1 to 15, which are the range for DMC50.

## Device range for AHC2001

The GOT only supports some devices for the AHC2001.

Use the devices within the device range for the DMC50.

# 16 OMRON PLC


- Page 903 Connectable Model List
- Page 905 Serial Connection
- Page 966 Ethernet Connection
- Page 979 Settable Device Range


## 16.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| SYSMAC CPM | CPM1 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 905 Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1 |
| | CPM1A | × | | | |
| | CPM2A | ○ | | | |
| | CPM2C | ○*3 | | | |
| SYSMAC CQM1 | CQM1*1 | ○*4 | RS-232 | GT2506HS GT2505HS | ☞ Page 905 Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1 |
| SYSMAC CQM1H | CQM1H | ○*4*5 | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 909 Connecting to CQM1H |
| SYSMAC CJ1 | CJ1H | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 912 Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M |
| | CJ1G | | | | |
| | CJ1M | | | | |
| SYSMAC CJ2 | CJ2H | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 912 Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M |
| | CJ2M*9 | | | | |
| SYSMAC CP1 | CP1H | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 916 Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N |
| | CP1L | | | | |
| | CP1E (N type)*8 | | | | |
| SYSMAC C200HS | C200HS | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 922 Connecting to C200HS, C200H, C200HX, C200HG, or C200HE |
| SYSMAC C200H | C200H | ○*6 | | | |
| SYSMAC α | C200HX | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 922 Connecting to C200HS, C200H, C200HX, C200HG, or C200HE |
| | C200HG | | | | |
| | C200HE*2 | ○*7 | | | |
| SYSMAC CS1 | CS1H | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 926 Connecting to CS1H, CS1G, or CS1D |
| | CS1G | | | | |
| | CS1D | | | | |
| SYSMAC CP2 | CP2E-E | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 916 Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N |
| | CP2E-S | | | | |
| | CP2E-N | ○ | RS-232<br>RS-422 | | |
| SYSMAC C1000H | C1000H | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 930 Connecting to C1000H, C2000H |
| SYSMAC C2000H | C2000H | | | | |
| SYSMAC CVM1/CV | CV500*10 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 932 Connecting to CV500, CV1000, CV2000, or CVM1 |
| | CV1000*10 | | | | |
| | CV2000*10 | | | | |
| | CVM1*10 | ○*3 | | | |

*1 The CQM1-CPU11 is unable to communicate with GOT since the CQM1-CPU11 has no RS-232C interface.
*2 The C200HE-CPU11 does not support communication board.
Use a host Link unit.
*3 Some models do not have a clock function.
*4 The memory cassette equipped with a clock is required.
*5 The EM device of the CQM-CPU61 cannot be monitored.
*6 To use the C200H-CPU21/CPU22/CPU23, the memory cassette equipped with a clock is required.
The C200H-CPU01/CPU02/CPU03 does not support the clock function.

*7 The C200HE-CPU11 does not support the clock function.
*8 Only the direct CPU connection (serial) is available for CP1E (N type) CPU module with 20 or less I/O points.
*9 The direct CPU connection (serial) is available for CJ2M-CPU1□ only.
*10 Use the CPU module Ver. V1 or later.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| SYSMAC CJ1 | CJ1H | ○ | Ethernet | GT 2506 HS GT 2505 HS *1 | ☞ Page 966 Connecting to SYSMAC CJ1, CJ2, CS1, or CP2 series |
| | CJ1G | | | | |
| | CJ1M | | | | |
| SYSMAC CJ2 | CJ2H | | | | |
| | CJ2M | | | | |
| SYSMAC CS1 | CS1H | | | | |
| | CS1G | | | | |
| | CS1D | | | | |
| SYSMAC CP2 | CP2E-N | ○ | Ethernet | | |
| NJ | NJ501-1500<br>NJ501-1400<br>NJ501-1300<br>NJ501-1520<br>NJ501-1420<br>NJ501-1320<br>NJ501-1340 | ○ *2 | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 969 Connecting to NJ or NX series |
| | NJ301-1200<br>NJ301-1100 | | | | |
| | NJ101-1000<br>NJ101-9000<br>NJ101-1020<br>NJ101-9020 | | | | |
| NX | NX1P2-1140DT<br>NX1P2-1140DT1<br>NX1P2-1040DT<br>NX1P2-1040DT1<br>NX1P2-9024DT<br>NX1P2-9024DT | | | | |
| | NX701-1700<br>NX701-1600 | | | | |
| | NX502-1700<br>NX502-1600<br>NX502-1500<br>NX502-1400<br>NX502-1300 | | | | |
| | NX102-1200<br>NX102-1100<br>NX102-1000<br>NX102-9000 | | | | |

*1 Not compatible with the redundant Ethernet.
*2 The time setting function of the GOT is supported.

# 16.2 Serial Connection

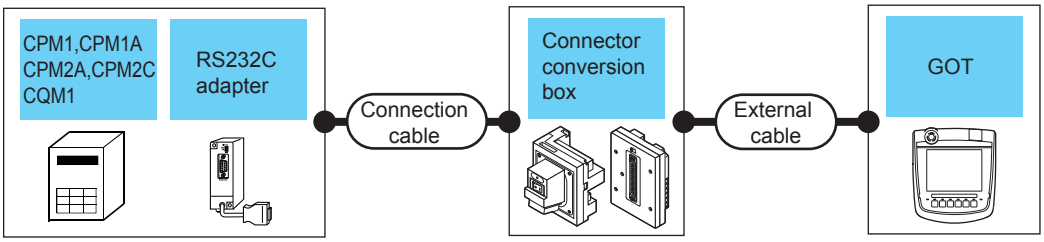
## Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1

Communication driver

OMRON SYSMAC

### When connecting to PLC or RS-232C

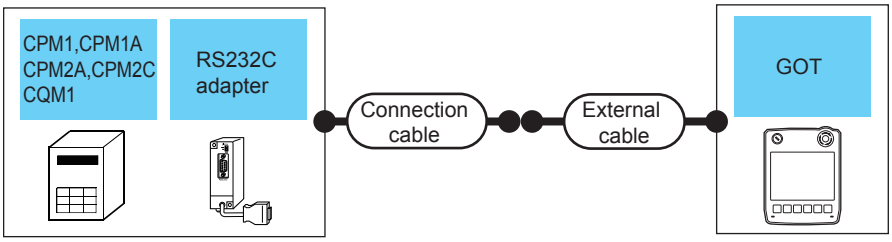
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CPM2A CQM1 | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CPM1 CPM1A CPM2A CPM2C | CPM1-CIF01 | | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 GOT for 1 RS-232C adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CPM2C | CPM2C-CIF01-V1 | | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

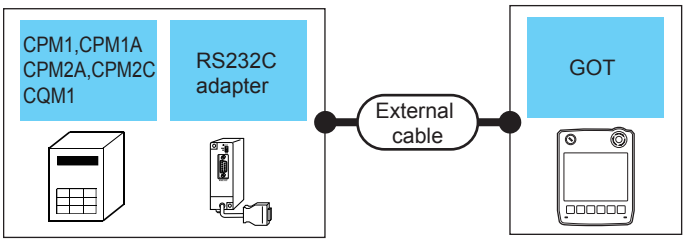
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| CPM2A<br>CQM1 | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CPM1<br>CPM1A<br>CPM2A<br>CPM2C | CPM1-CIF01 | | | GT11H-C30-37P(3m) | GT 2505HS | | 1 GOT for 1 RS-232C adapter |
| CPM2C | CPM2C-CIF01-V1 | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)

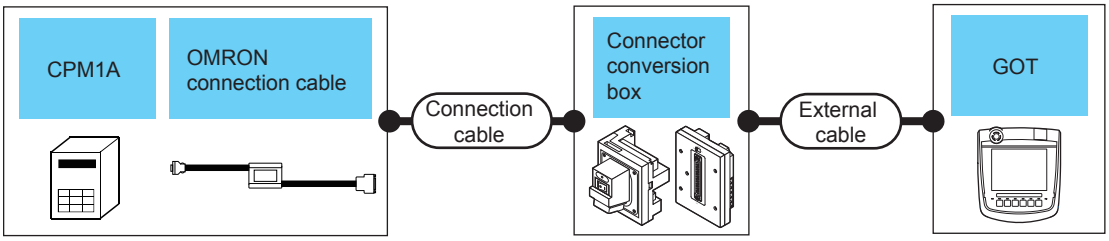



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C adapter*1 | Communication Type | | | | |
| CPM2A<br>CQM1 | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CPM1<br>CPM1A<br>CPM2A<br>CPM2C | CPM1-CIF01 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | | 1 GOT for 1 RS-232C adapter |
| CPM2C | CPM2C-CIF01-V1 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## When connecting to OMRON connection cable

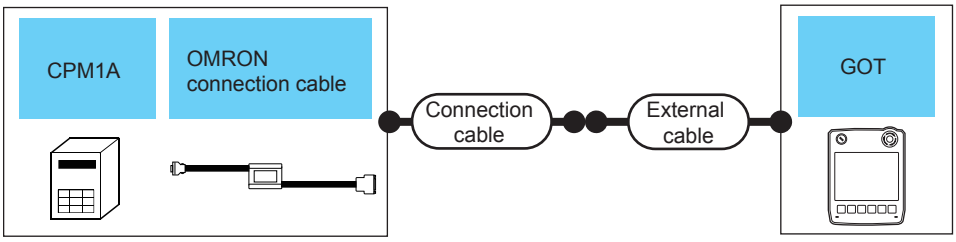
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CPM1A | CQM1-CIF01 | RS-232 | GT09-C30R20102-25S(3m) or User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CPM2C | CPM2C-CN111 | | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

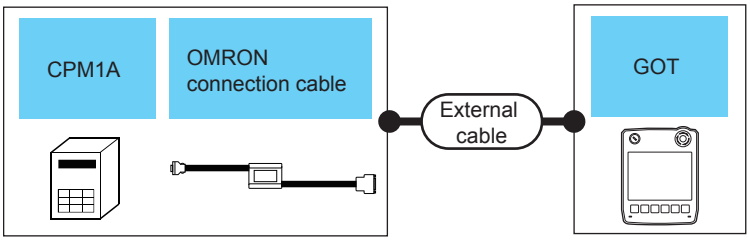
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | Cable model Connection diagram number | | | | |
| CPM1A | CQM1-CIF01 | RS-232 | User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CPM2C | CPM2C-CN111 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | | | | |
| CPM1A | CQM1-CIF01 | RS-232 | GT11H-C30(3m)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CPM2C | CPM2C-CN111 | RS-232 | GT11H-C30(3m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

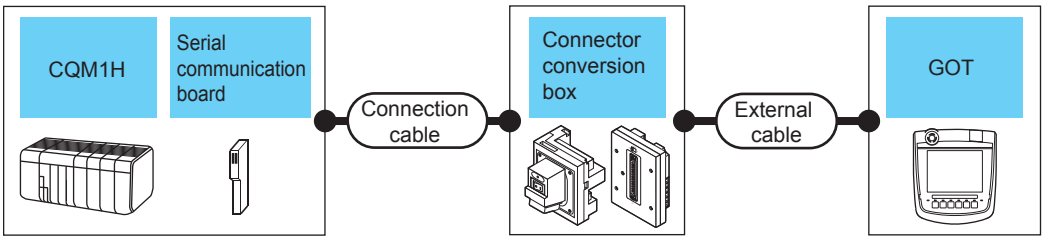
# Connecting to CQM1H

Communication driver

OMRON SYSMAC

## When connecting to PLC or serial communication board

### ■When using the connector conversion box

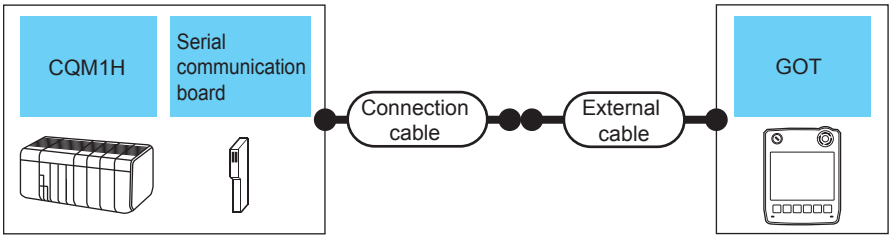



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CQM 1H | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CQM1H-SCB41 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 GOT for 1 serial communication board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

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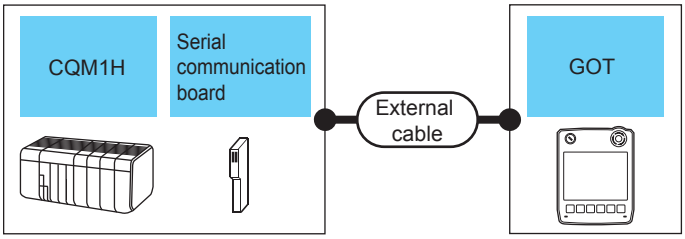
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | Cable model Connection diagram number | | | | |
| CQM 1H | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CQM1H-SCB41 | | | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 serial communication board |
| | | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)

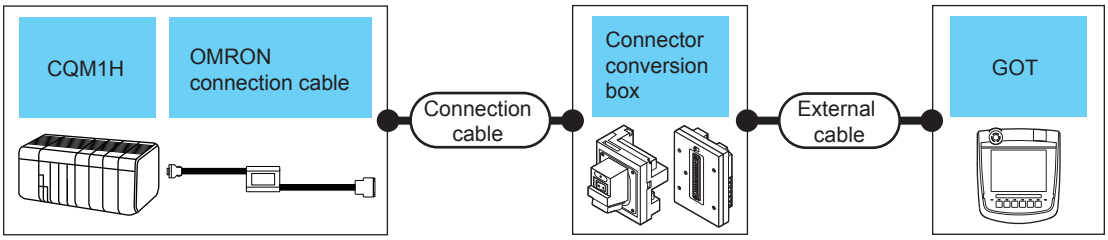



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | | | | |
| CQM 1H | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CQM1H-SCB41 | | | GT 2505HS | | 1 GOT for 1 serial communication board |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## When connecting to OMRON connection cable

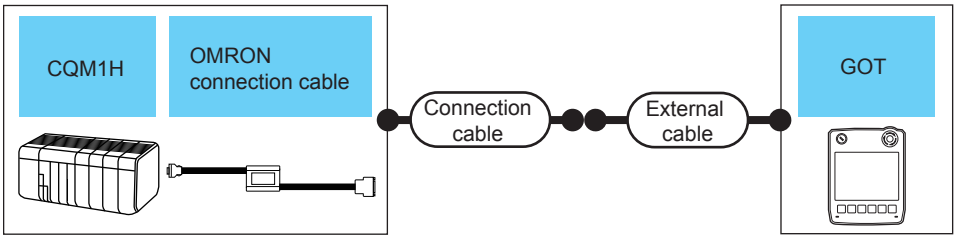
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CQM 1H | CQM1-CIF02 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

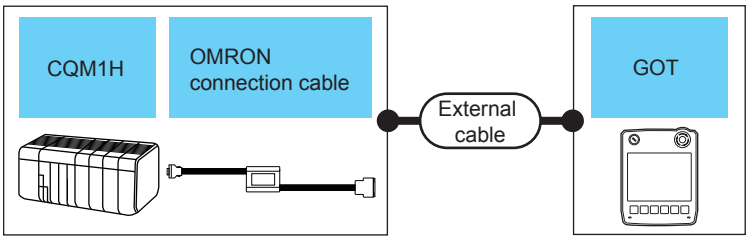
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | Cable model Connection diagram number | | | | |
| CQM 1H | CQM1-CIF02 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

### ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | OMRON connection cable*1 | Communication Type | | | | |
| CQM 1H | CQM1-CIF02 | RS-232 | GT11H-C30(3m) ☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |

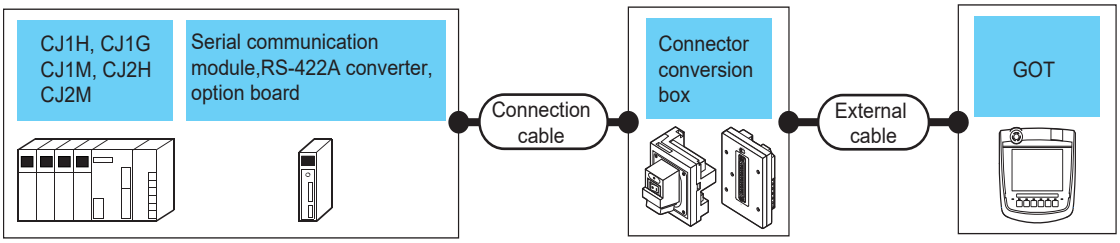
*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

# Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M

Communication driver

OMRON SYSMAC

## When using the connector conversion box

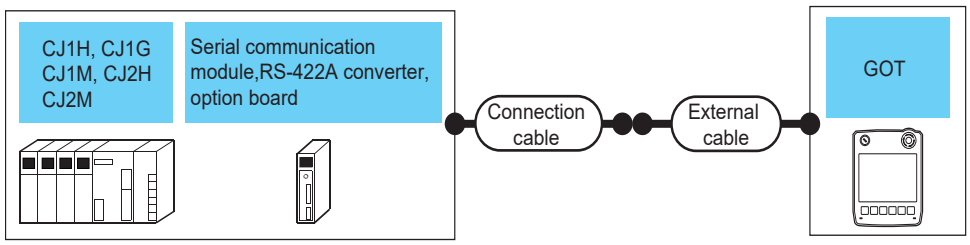



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1, RS-422A converter*1, option board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CJ1H<br>CJ1G<br>CJ1M<br>CJ2H | - | RS-232 | GT09-C30R20101-9P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 GOT for each port of a serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | GT09-C30R40101-9P(3m)<br>GT09-C100R40101-9P(10m)<br>or<br>User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for each port of a serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | CJ1W-CIF11 | | GT09-C30R40103-5T(3m)<br>GT09-C100R40103-5T(10m)<br>or<br>User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 1 GOT for 1 RS-422A converter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| CJ1H<br>CJ1G<br>CJ1M | CJ1W-SCU21<br>CJ1W-SCU41 | RS-232 | GT09-C30R20101-9P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for each port of a serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-SCU41 | RS-422 | GT09-C30R40101-9P(3m)<br>GT09-C100R40101-9P(10m)<br>or<br>User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1, RS-422A converter*1, option board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CJ2M-CPU1□ | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-CIF11 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 RS-422A converter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| CJ2M-CPU1□ CJ2M-CPU3□ | CJ1W-SCU21-V1 CJ1W-SCU41-V1 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for each port of a serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-SCU31-V1 CJ1W-SCU41-V1 | RS-422 | GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| CJ2M-CPU3□ | CP1W-CIF01 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP1W-CIF11 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 RS-422A/485 option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | CP1W-CIF12 CP1W-CIF12-V1 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

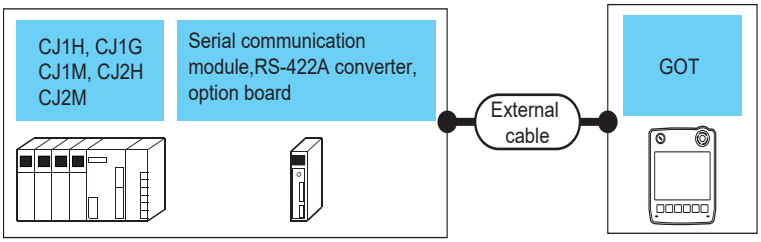
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1, RS-422A converter*1, option board*1 | Communication Type | Cable model Connection diagram number | | | | |
| CJ1H<br>CJ1G<br>CJ1M<br>CJ2H | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for each port of a serial communication module |
| | CJ1W-CIF11 | | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 1 GOT for 1 RS-422A converter |
| CJ1H<br>CJ1G<br>CJ1M | CJ1W-SCU21<br>CJ1W-SCU41 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU41 | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| CJ2M-CPU1□ | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CJ1W-CIF11 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 RS-422A converter |
| CJ2M-CPU1□<br>CJ2M-CPU3□ | CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| CJ2M-CPU3□ | CP1W-CIF01 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS-232C option board |
| | CP1W-CIF11 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 RS-422A/485 option board |
| | CP1W-CIF12<br>CP1W-CIF12-V1 | RS-422 | | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
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## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module*1, RS-422A converter*1, option board*1 | Communication Type | | | | |
| CJ1H<br>CJ1G<br>CJ1M<br>CJ2H | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | | | GT 2505HS | | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | 1 GOT for each port of a serial communication module |
| | CJ1W-CIF11 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 RS-422A converter |
| CJ1H<br>CJ1G<br>CJ1M | CJ1W-SCU21<br>CJ1W-SCU41 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU41 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |
| CJ2M-CPU1□ | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CJ1W-CIF11 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 RS-422A converter |
| CJ2M-CPU1□<br>CJ2M-CPU3□ | CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |
| CJ2M-CPU3□ | CP1W-CIF01 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS-232C option board |
| | CP1W-CIF11 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 RS-422A/485 option board |
| | CP1W-CIF12<br>CP1W-CIF12-V1 | RS-422 | | GT 2505HS | | |

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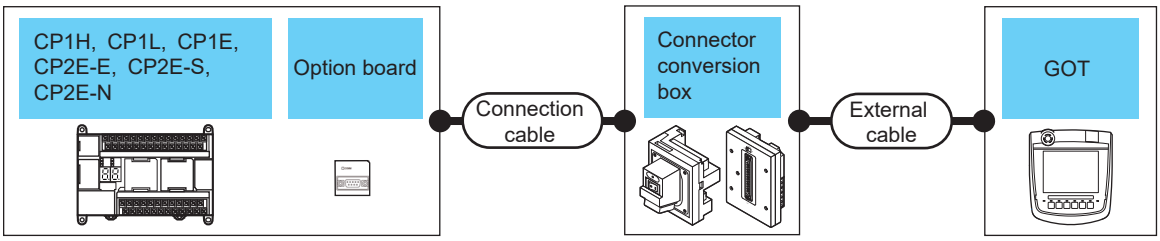
# Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N

Communication driver

OMRON SYSMAC

## When connecting a PLC or option board

### ■When using the connector conversion box

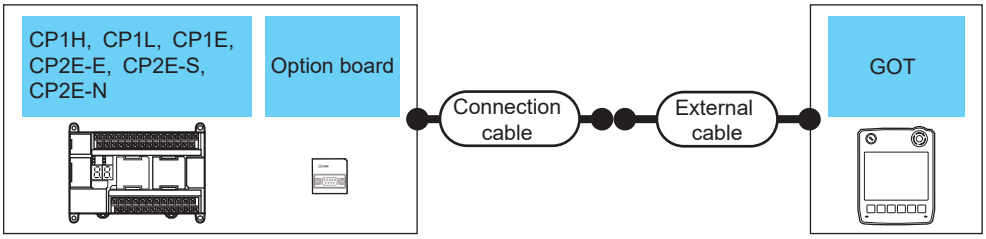



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Option board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CP1E | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CP2E-E CP2E-S | - | RS-232 | User preparing RS-232 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CP1H CP1L CP1E | CP1W-CIF01 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP1W-CIF11 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 RS-422A/485 option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | CP1W-CIF12 CP1W-CIF12-V1 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Option board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CP2E-N | CP1W-CIF01 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP2W-CIFD1 | | User preparing RS-232 connection diagram 11) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C&RS-232C option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP2W-CIFD2 | | User preparing RS-232 connection diagram 11) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C&RS-485 option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP1W-CIF11 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m) | GT 2506HS | 13m | 1 GOT for 1 RS-422A/485 option board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | CP1W-CIF12-V1 | | | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

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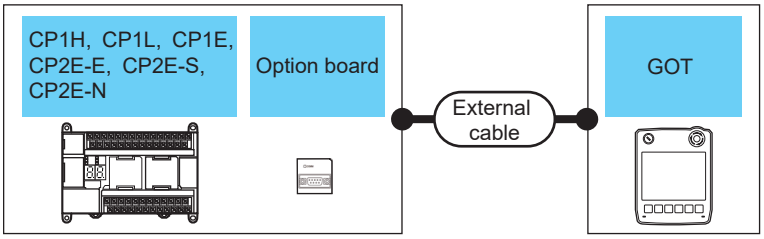
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Option board*1 | Communication Type | Cable model Connection diagram number | | | | |
| CP1E | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CP2E-E CP2E-S | - | RS-232 | User preparing RS-232 connection diagram 12) | | | | |
| CP1H CP1L CP1E | CP1W-CIF01 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | | 6m | 1 GOT for 1 RS-232C option board |
| | CP1W-CIF11 CP1W-CIF12 CP1W-CIF12-V1 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | 13m | 1 GOT for 1 RS-422A/485 option board |
| CP2E-N | CP1W-CIF01 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | | 6m | 1 GOT for 1 RS-232C option board |
| | CP2W-CIFD1 | RS-232 | User preparing RS-232 connection diagram 13) | GT11H-C30-37P(3m) | | 6m | 1 GOT for 1 RS-232C&RS-232C option board |
| | CP2W-CIFD2 | RS-232 | | | | 6m | 1 GOT for 1 RS-232C&RS-485 option board |
| | CP1W-CIF11 CP1W-CIF12-V1 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | 13m | 1 GOT for 1 RS-422A/485 option board |

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## ■When using the external cable (GT11H-C□□□)

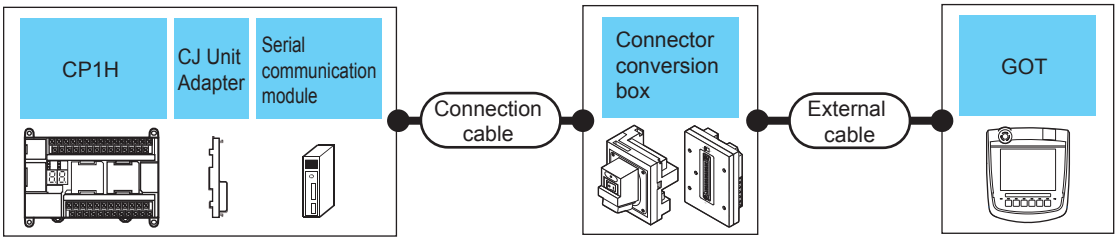



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Option board*1 | Communication Type | | | | |
| CP1E | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CP2E-E<br>CP2E-S | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 14) | | 6m | |
| CP1H<br>CP1L<br>CP1E | CP1W-CIF01 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | | 6m | 1 GOT for 1 RS-232C option board |
| | CP1W-CIF11<br>CP1W-CIF12<br>CP1W-CIF12-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 12) | | 13m | 1 GOT for 1 RS-422A/485 option board |
| CP2E-N | CP1W-CIF01 | RS-232 | GT11H-C30 (3m)<br>GT11H-C60 (6m)<br>☞ RS-232 connection diagram 3) | | 6m | 1 GOT for 1 RS-232C option board |
| | CP2W-CIFD1 | | ☞ RS-232 connection diagram 15) | | | 1 GOT for 1 RS-232C&RS-232C option board |
| | CP2W-CIFD2 | | | | | 1 GOT for 1 RS-232C&RS-485 option board |
| | CP1W-CIF11<br>CP1W-CIF12-V1 | RS-422 | GT11H-C30 (3m)<br>GT11H-C60 (6m)<br>GT11H-C100 (10m)<br>☞ RS-422 connection diagram 12) | | 13m | 1 GOT for 1 RS-422A/485 option board |

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## When connecting to serial communication module

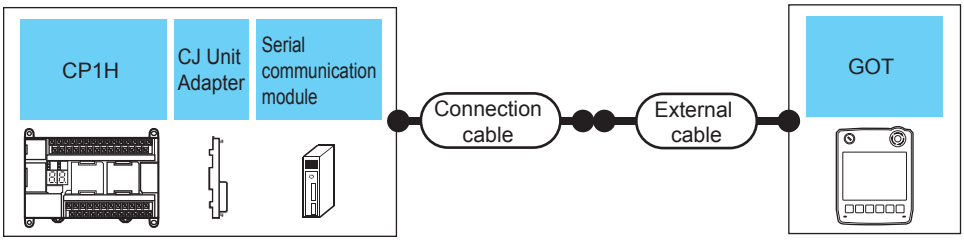
### ■When using the connector conversion box




| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | CJ unit adapter*1 | Serial communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CP1H | CP1W-EXT01 | CJ1W-SCU21<br>CJ1W-SCU41<br>CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | RS-232 | GT09-C30R20101-9P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for each port of a serial communication module |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | CJ1W-SCU41<br>CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | GT09-C30R40101-9P(3m)<br>GT09-C100R40101-9P(10m)<br>or<br>User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
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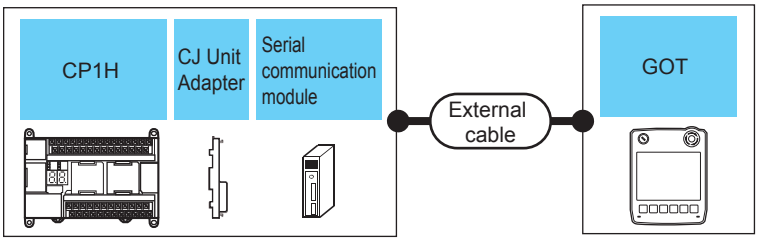
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | CJ unit adapter*1 | Serial communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| CP1H | CP1W-EXT01 | CJ1W-SCU21<br>CJ1W-SCU41<br>CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | | CJ1W-SCU41<br>CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | CJ unit adapter*1 | Serial communication module*1 | Communication Type | | | | |
| CP1H | CP1W-EXT01 | CJ1W-SCU21<br>CJ1W-SCU41<br>CJ1W-SCU21-V1<br>CJ1W-SCU41-V1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for each port of a serial communication module |
| | | CJ1W-SCU41<br>CJ1W-SCU31-V1<br>CJ1W-SCU41-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

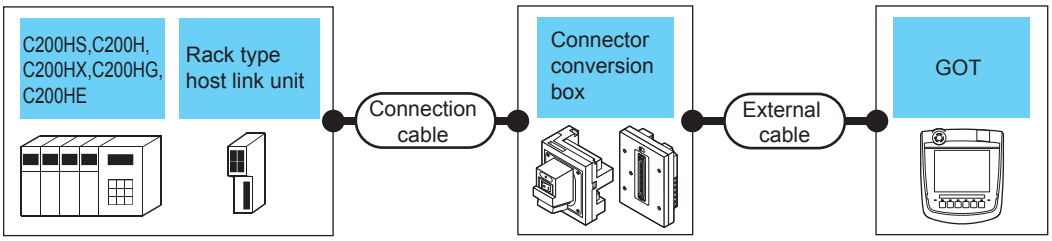
# Connecting to C200HS, C200H, C200HX, C200HG, or C200HE

Communication driver

OMRON SYSMAC

## When connecting to PLC or rack type host link unit

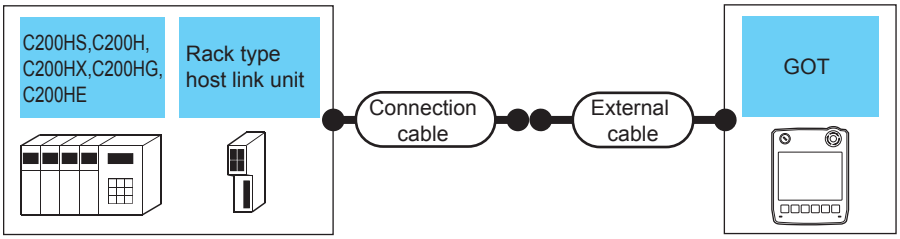
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| C200HX C200HG C200HE | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| C200HS C200H C200HX C200HG C200HE | C200H-LK201-V1 | | GT09-C30R20103-25P(3m) or User preparing RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 GOT for 1 rack type host link unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| C200HS C200H C200HX C200HG C200HE | C200H-LK202-V1 | RS-422 | GT09-C30R40102-9P(3m) GT09-C100R40102-9P(10m) or User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

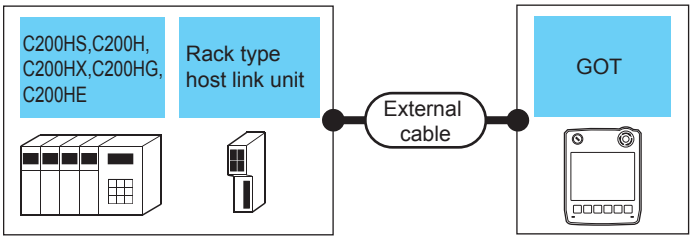
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| C200HX<br>C200HG<br>C200HE | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| C200HS<br>C200H<br>C200HX<br>C200HG<br>C200HE | C200H-LK201-V1 | RS-232 | User preparing RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | 1 GOT for 1 rack type host link unit |
| C200HS<br>C200H<br>C200HX<br>C200HG<br>C200HE | C200H-LK202-V1 | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)

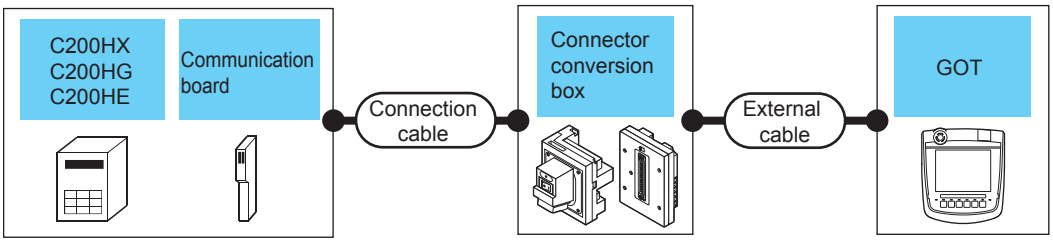



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | | | | |
| C200HX<br>C200HG<br>C200HE | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| C200HS<br>C200H<br>C200HX<br>C200HG<br>C200HE | C200H-LK201-V1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 9) | GT 2505HS | | 1 GOT for 1 rack type host link unit |
| C200HS<br>C200H<br>C200HX<br>C200HG<br>C200HE | C200H-LK202-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 6) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## When connecting to a communication board

### ■When using the connector conversion box

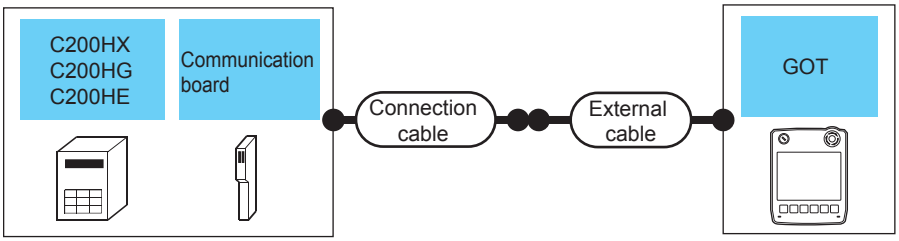



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| C200HX C200HG C200HE*2 | C200HW-COM02(-V1) C200HW-COM05(-V1) C200HW-COM06(-V1) | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for each port of a communication board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | C200HW-COM03(-V1) C200HW-COM06(-V1) | RS-422 | GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

### ■When using the external cable (GT11H-C□□□-37P)

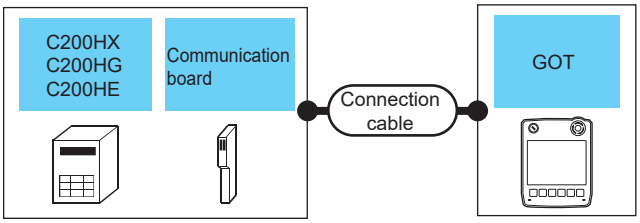



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication board*1 | Communication Type | Cable model Connection diagram number | | | | |
| C200HX C200HG C200HE*2 | C200HW-COM02(-V1) C200HW-COM05(-V1) C200HW-COM06(-V1) | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for each port of a communication board |
| | C200HW-COM03(-V1) C200HW-COM06(-V1) | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication board*1 | Communication Type | | | | |
| C200HX<br>C200HG<br>C200HE*2 | C200HW-COM02(-V1)<br>C200HW-COM05(-V1)<br>C200HW-COM06(-V1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for each port of a communication board |
| | C200HW-COM03(-V1)<br>C200HW-COM06(-V1) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
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*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

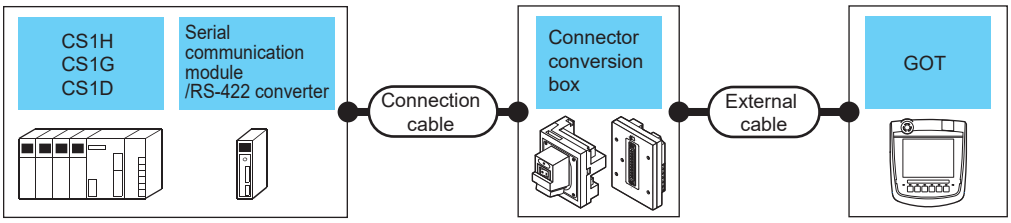
# Connecting to CS1H, CS1G, or CS1D

Communication driver

OMRON SYSMAC

## When connecting to a PLC or a serial communication module

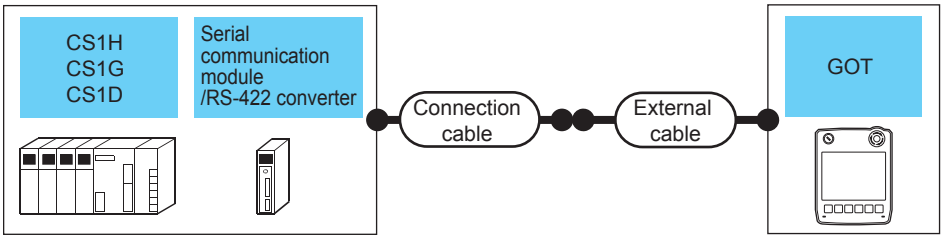
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 /RS-422A converter | Communication Type | Cable model Connection diagram number | | | | | |
| CS1H CS1G CS1D | - | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CS1W-SCU21 CS1W-SCU21-V1 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 GOT for 1 serial communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CJ1W-CIF11 | RS-422 | GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 RS-422A converter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

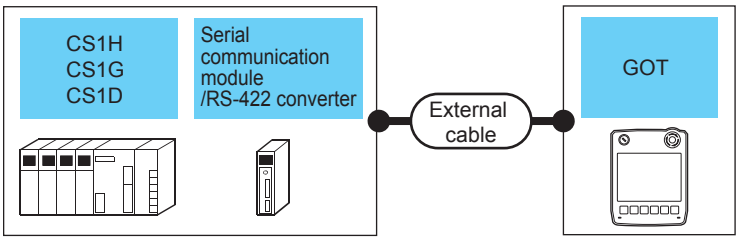
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 /RS-422A converter | Communication Type | Cable model Connection diagram number | | | | |
| CS1H CS1G CS1D | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CS1W-SCU21 CS1W-SCU21-V1 | | | GT11H-C30-37P(3m) | GT 2505HS | | 1 GOT for 1 serial communication module |
| | CJ1W-CIF11 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 RS-422A converter |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)

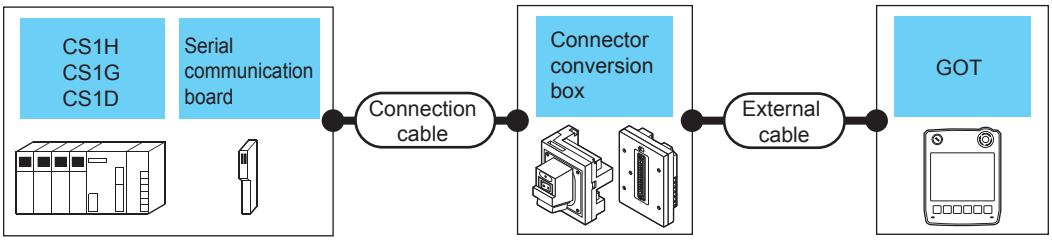



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication module*1 /RS-422A converter | Communication Type | | | | |
| CS1H CS1G CS1D | - | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | CS1W-SCU21 CS1W-SCU21-V1 | | GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) | GT 2505HS | | 1 GOT for 1 serial communication module |
| | CJ1W-CIF11 | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12) | GT 2505HS | 13m | 1 GOT for 1 RS-422A converter |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## When connecting to a serial communication board

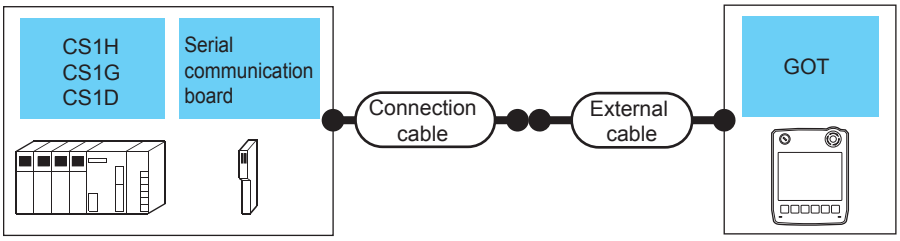
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CS1H CS1G CS1D | CS1W-SCB21 CS1W-SCB41 CS1W-SCB21-V1 CS1W-SCB41-V1 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for each port of a serial communication board |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CS1W-SCB41 CS1W-SCB41-V1 | RS-422 | GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
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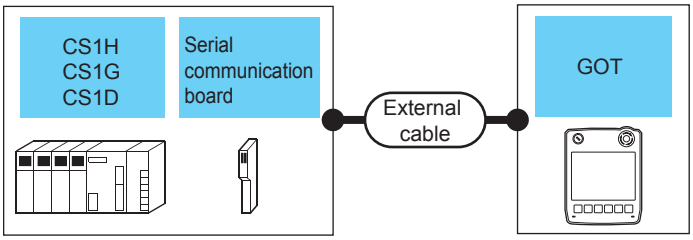
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | Cable model Connection diagram number | | | | |
| CS1H CS1G CS1D | CS1W-SCB21 CS1W-SCB41 CS1W-SCB21-V1 CS1W-SCB41-V1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for each port of a serial communication board |
| | CS1W-SCB41 CS1W-SCB41-V1 | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)



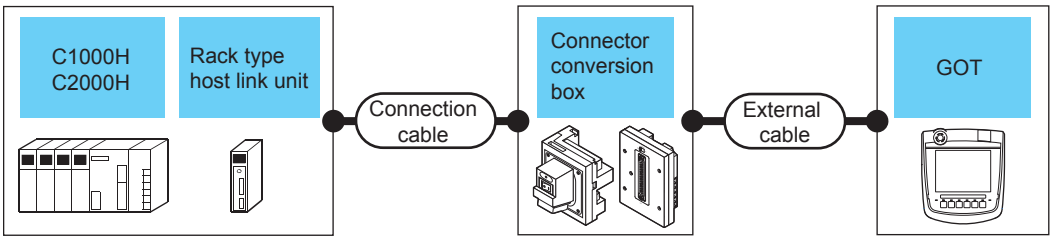

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication board*1 | Communication Type | | | | |
| CS1H<br>CS1G<br>CS1D | CS1W-SCB21<br>CS1W-SCB41<br>CS1W-SCB21-V1<br>CS1W-SCB41-V1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for each port of a serial communication board |
| | CS1W-SCB41<br>CS1W-SCB41-V1 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

# Connecting to C1000H, C2000H

Communication driver
OMRON SYSMAC

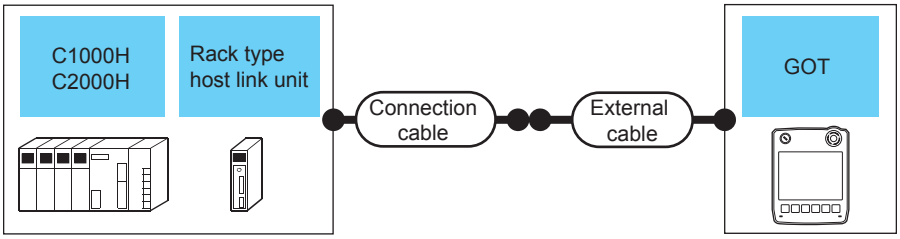
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| C1000H C2000H | C500-LK201-V1 | RS-232 | GT09-C30R20103-25P(3m) or User preparing RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 rack type host link unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

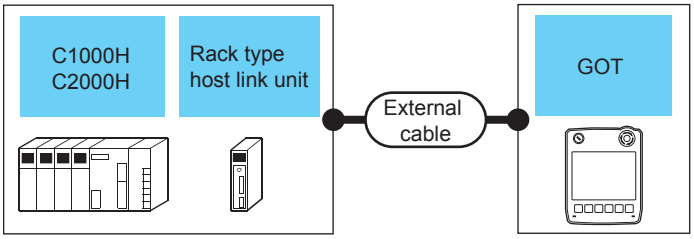
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| C1000H C2000H | C500-LK201-V1 | RS-232 | User preparing RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 rack type host link unit |
| | | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Rack type host link unit*1 | Communication Type | | | | |
| C1000H<br>C2000H | C500-LK201-V1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 9) | GT 2505HS | 6m | 1 GOT for 1 rack type host link unit |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 6) | GT 2505HS | 13m | |

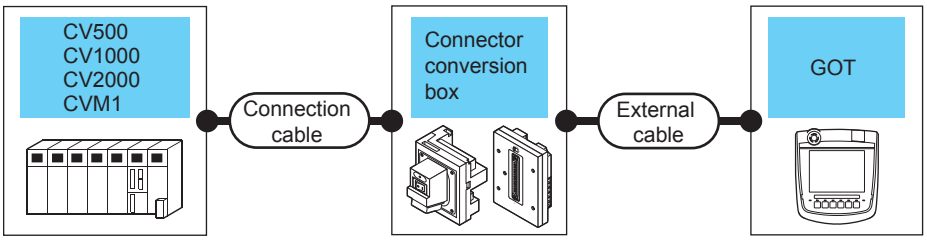
*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

# Connecting to CV500, CV1000, CV2000, or CVM1

Communication driver

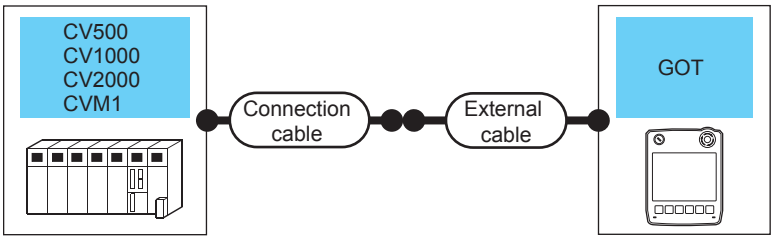
OMRON SYSMAC

## When using the connector conversion box



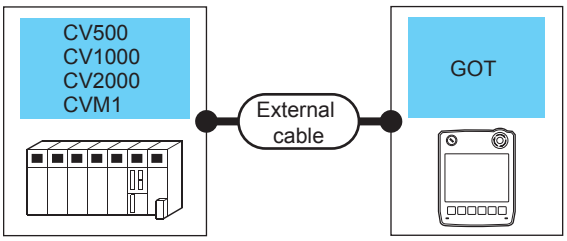

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CV500 CV1000 CV2000 CVM1 | RS-232 | GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| CV500 CV1000 CV2000 CVM1 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| CV500<br>CV1000<br>CV2000<br>CVM1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |

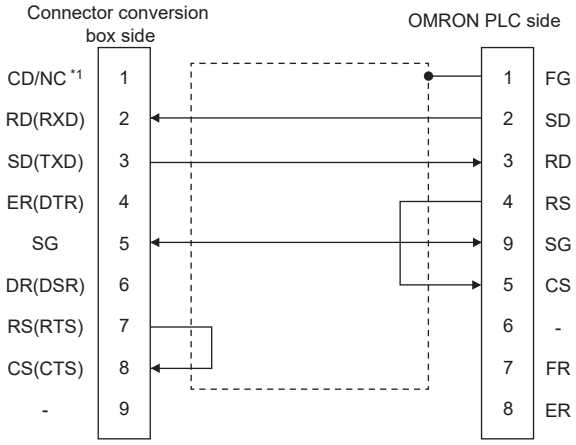
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

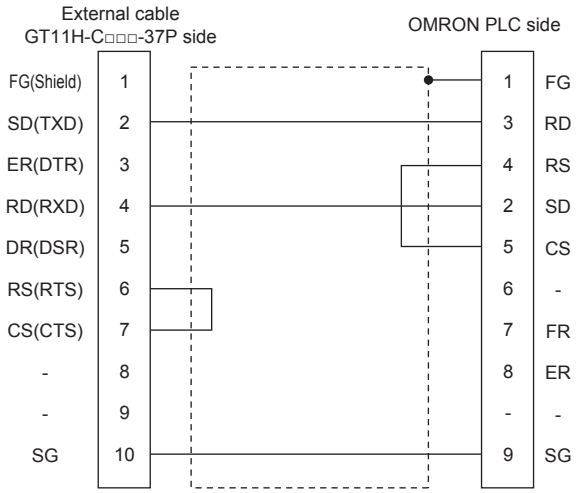
### ■Connection diagram

• RS-232 connection diagram 1)

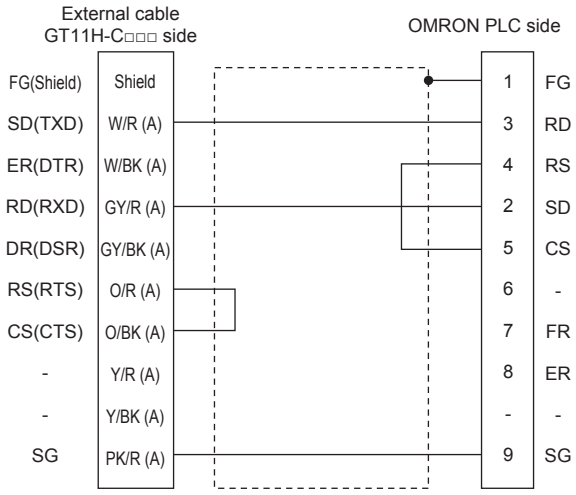



*1 GT2506HS-V: CD, GT2505HS-V: NC

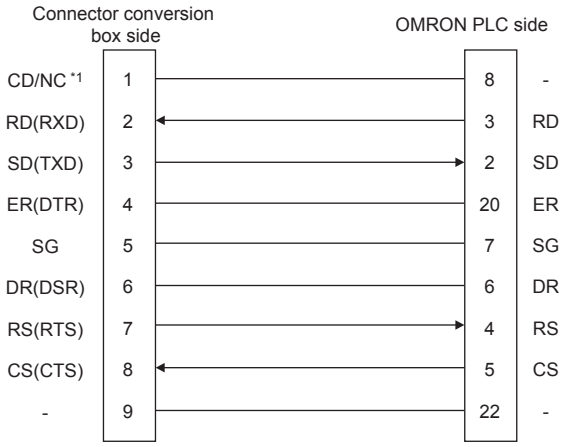
• RS-232 connection diagram 2)




• RS-232 connection diagram 3)

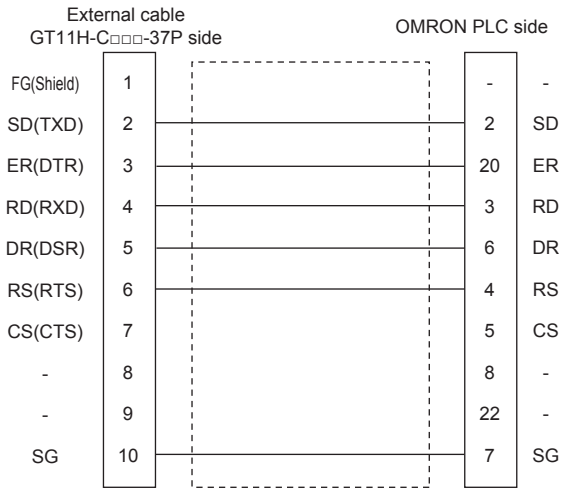


• RS-232 connection diagram 4)

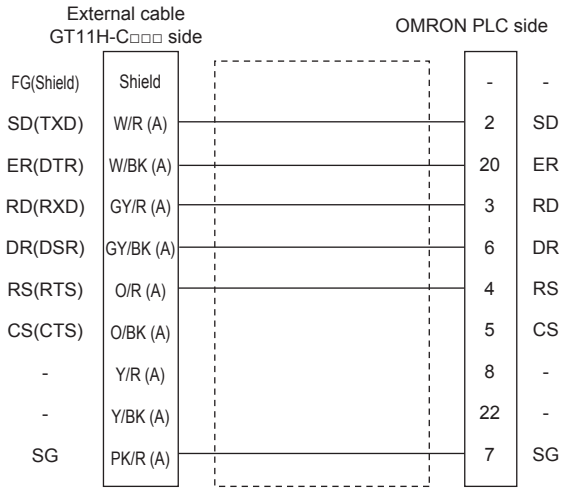



*1 GT2506HS-V: CD, GT2505HS-V: NC

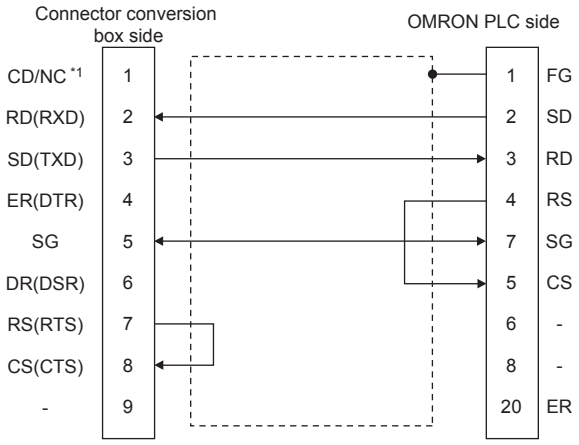
• RS-232 connection diagram 5)




• RS-232 connection diagram 6)

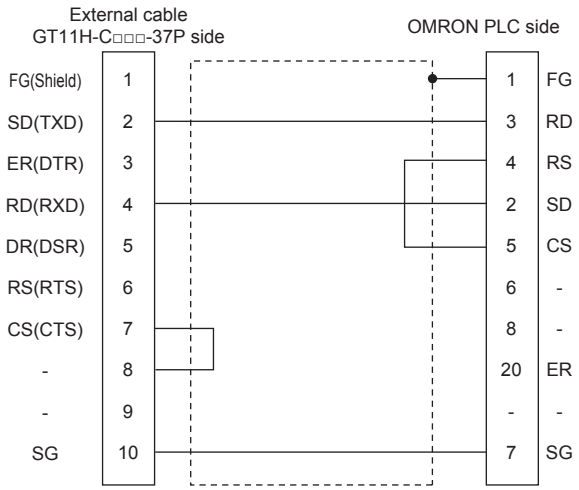


• RS-232 connection diagram 7)

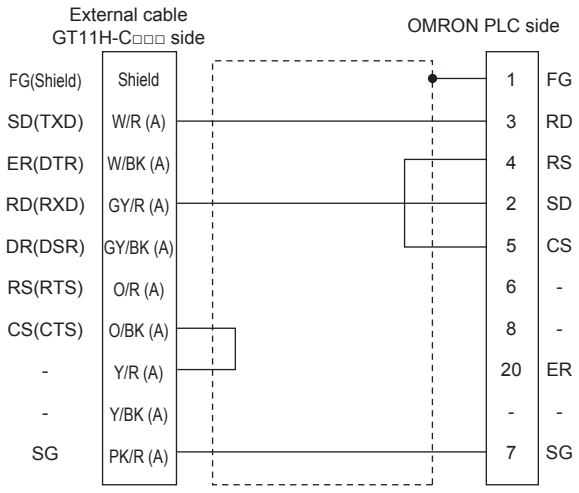



*1 GT2506HS-V: CD, GT2505HS-V: NC

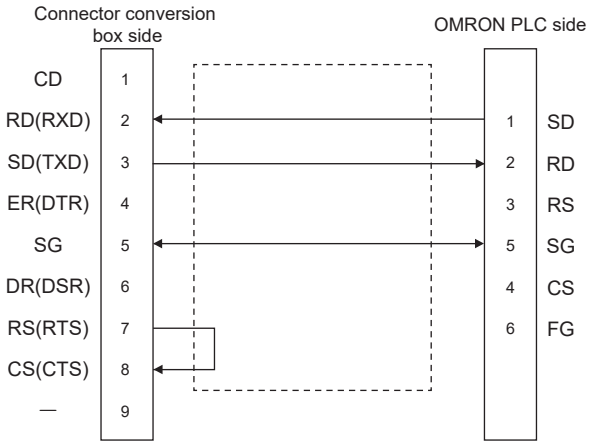
• RS-232 connection diagram 8)



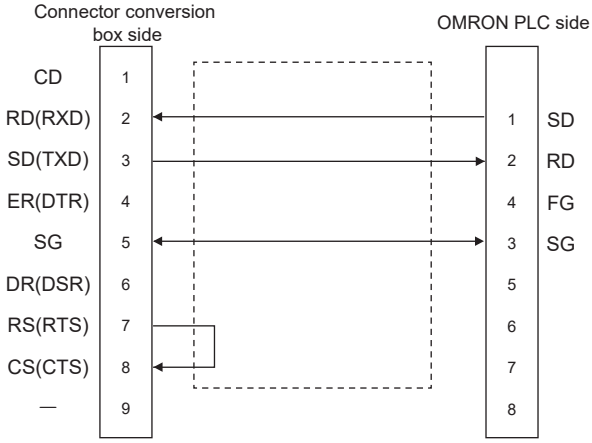

• RS-232 connection diagram 9)



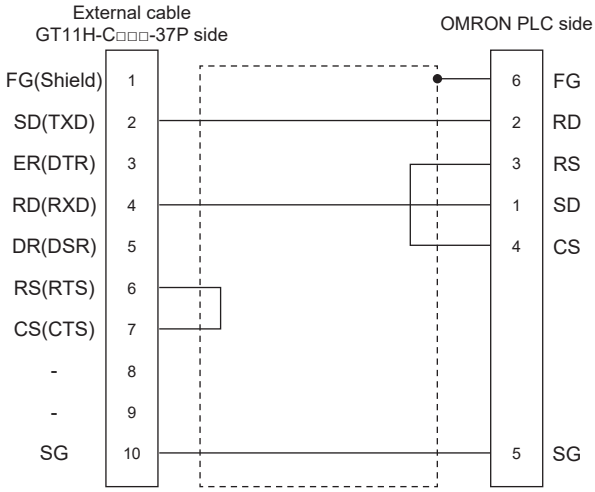
• RS-232 connection diagram 10)



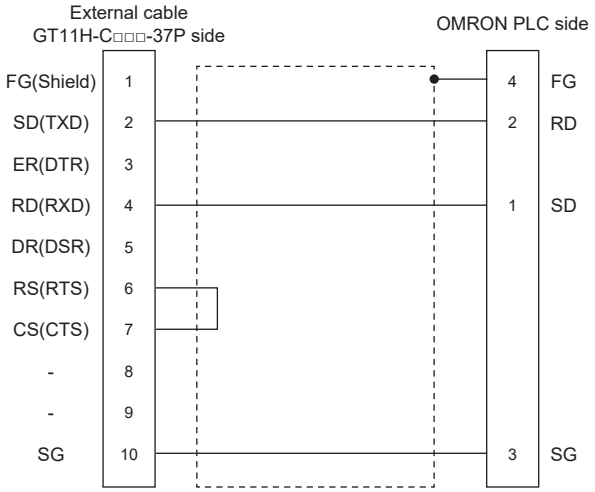

• RS-232 connection diagram 11)



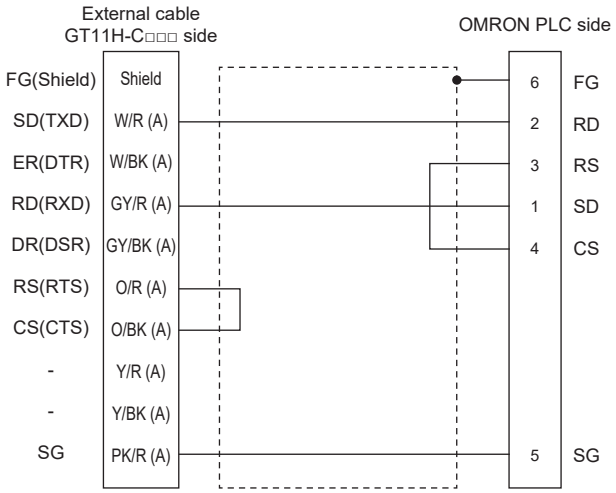

• RS-232 connection diagram 12)



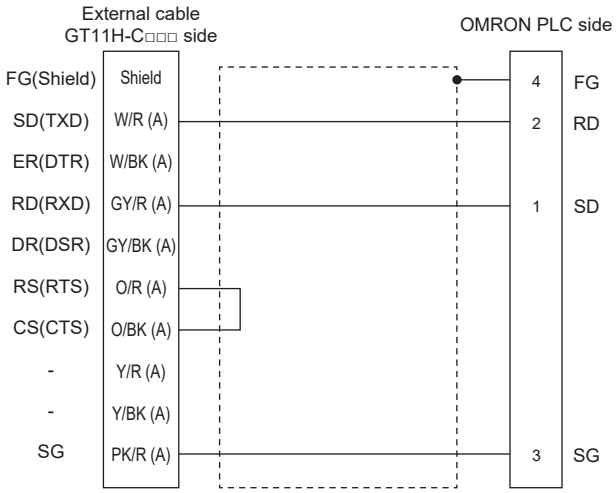
• RS-232 connection diagram 13)




• RS-232 connection diagram 14)




• RS-232 connection diagram 15)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• OMRON PLC side connector

Use the connector compatible with the OMRON PLC.

For details, refer to the OMRON PLC user's manual.

## RS-422 cable

**Point**

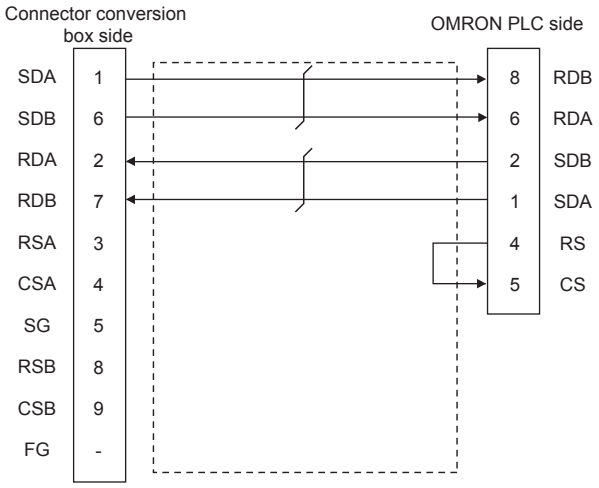
Differences in polarity between GOT and OMRON PLCs

The polarity of poles A and B in signal names is reversed between GOT and OMRON PLCs.

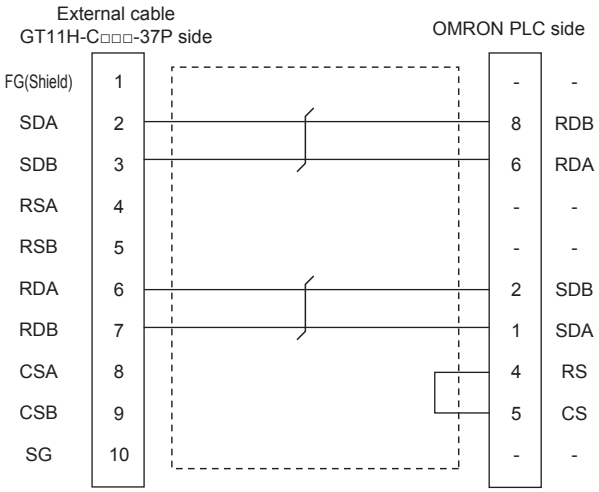
■Connect a cable according to the following connection diagrams.

### ■Connection diagram

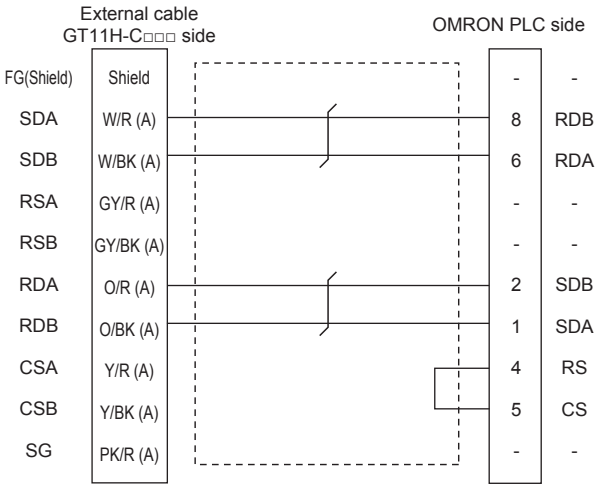
• RS-422 connection diagram 1)



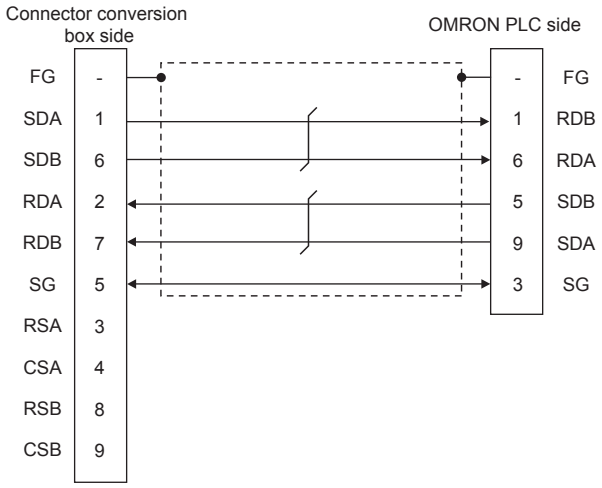

• RS-422 connection diagram 2)



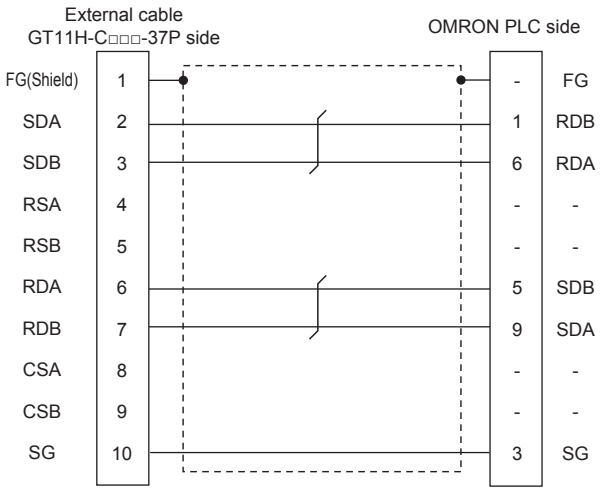

• RS-422 connection diagram 3)



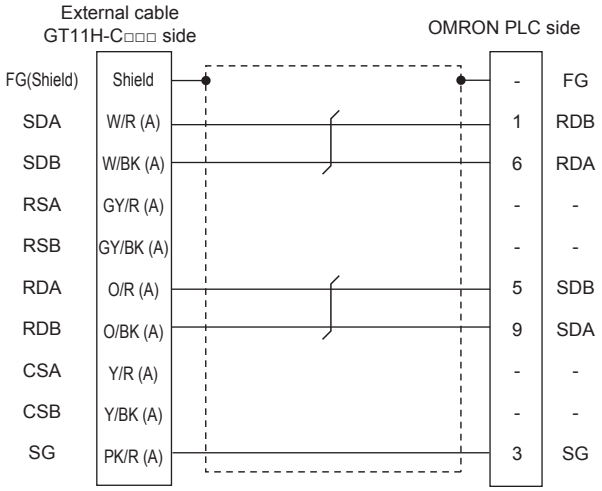
• RS-422 connection diagram 4)



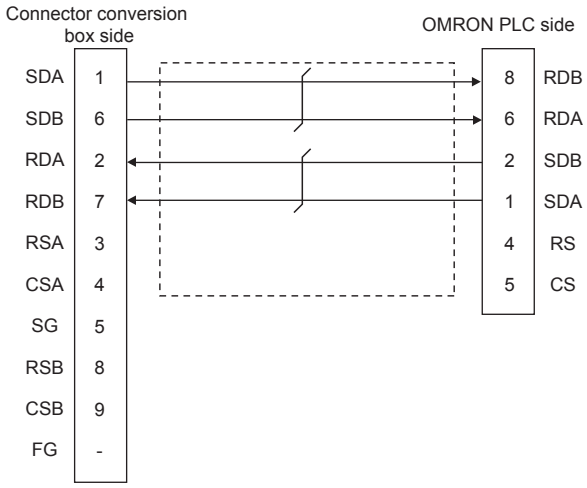

• RS-422 connection diagram 5)



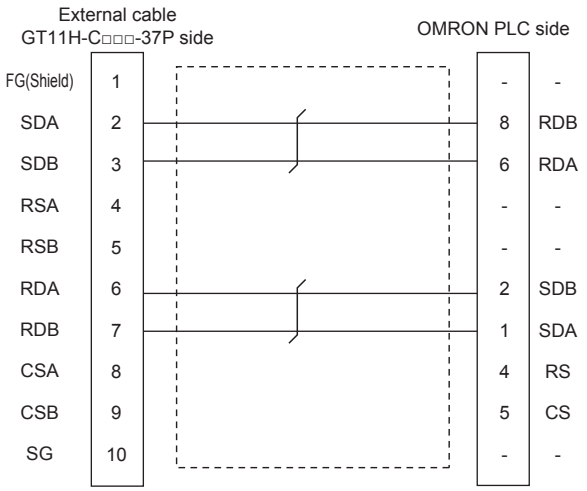

• RS-422 connection diagram 6)



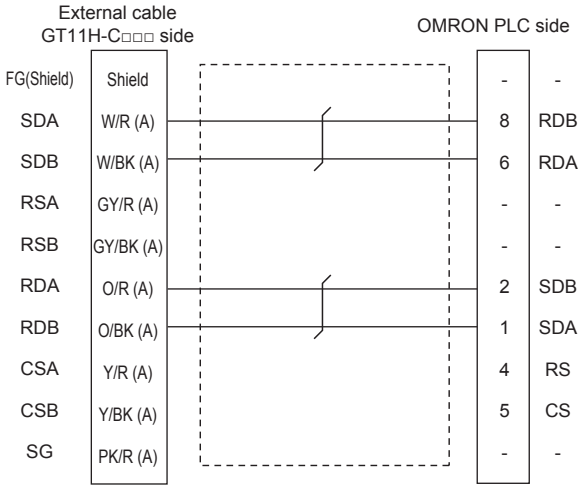
• RS-422 connection diagram 7)



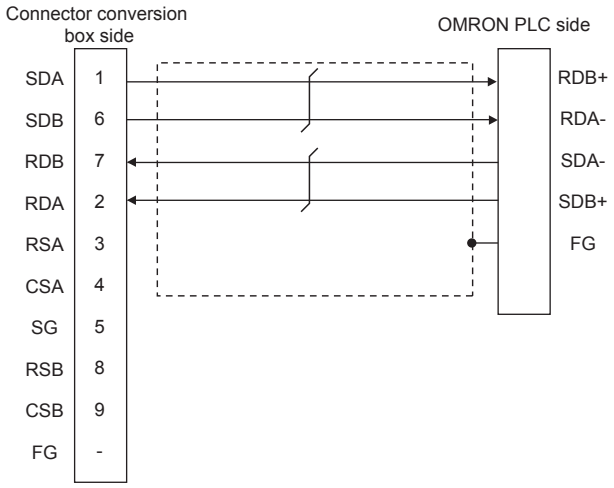

• RS-422 connection diagram 8)



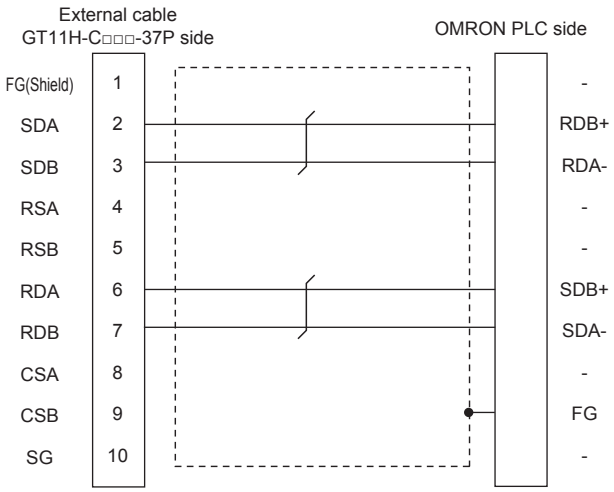

• RS-422 connection diagram 9)



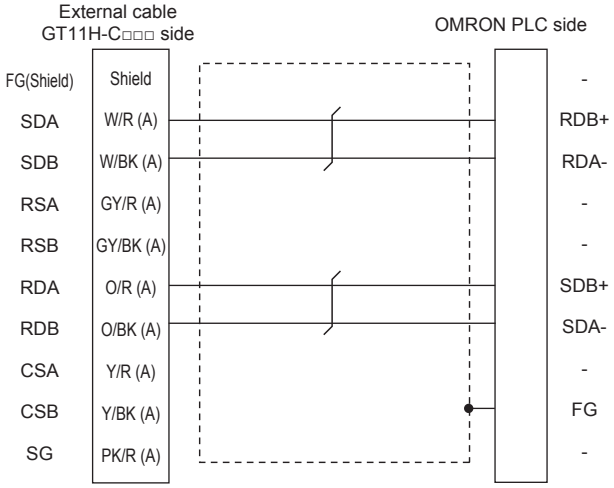
• RS-422 connection diagram 10)




• RS-422 connection diagram 11)




• RS-422 connection diagram 12)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• OMRON PLC side connector

Use the connector compatible with the OMRON PLC.

For details, refer to the OMRON PLC user's manual.

## ■Setting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

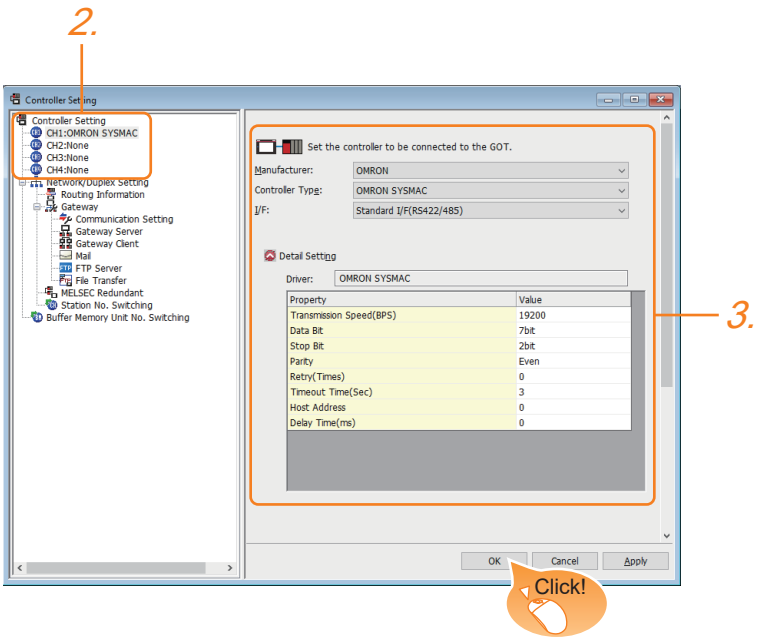
• OMRON PLC side

When connecting an OMRON PLC to a GOT, a terminating resistor must be set to the OMRON PLC.

📖OMRON PLC user's Manual

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [OMRON]
- [Controller Type]: [OMRON SYSMAC]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 946 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 2 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bits) | 2bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 0) | 0 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

OMRON PLC

For details of OMRON PLCs, refer to the following manuals.

OMRON PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| PLC CPU | CPM2A | ☞ Page 948 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter |
| | CQM1, CQM1H | |
| | CS1, CJ1, CJ2 | ☞ Page 949 Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E |
| | CP1H, CP1L, CP1E, CP2E-E, CP2E-S | ☞ Page 949 Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E |
| | C200Hα | ☞ Page 948 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter |
| | CV500, CV1000, CV2000, CVM1 | ☞ Page 952 Connecting to CV500/CV1000/CV2000 or CVM1 |
| RS-232C adapter | CPM1-CIF01, CPM2C-CIF01-V1 | ☞ Page 948 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter |
| Connection cable | CQM1-CIF01 | ☞ Page 953 Connecting to connection cable |
| | CQM1-CIF02 | |
| | CPM2C-CN111 | |
| Rack type host link unit | C200H-LK201-V1 | ☞ Page 954 Connecting to rack type host link unit |
| | C200H-LK202-V1 | ☞ Page 954 Connecting to rack type host link unit |
| | C500-LK201-V1 | ☞ Page 954 Connecting to rack type host link unit |
| Serial communication module | CJ1W-SCU21 | ☞ Page 959 Connecting to serial communication unit |
| | CJ1W-SCU41 | |
| | CJ1W-SCU21-V1 | |
| | CJ1W-SCU31-V1 | |
| | CJ1W-SCU41-V1 | |
| | CS1W-SCU21 | |
| | CS1W-SCU21-V1 | |
| Communication board | C200HW-COM02(-V1) | ☞ Page 960 Connecting to communication board |
| | C200HW-COM03(-V1) | |
| | C200HW-COM05(-V1) | |
| | C200HW-COM06(-V1) | |
| Serial communication board | CQM1H-SCB41 | ☞ Page 962 Connecting to serial communication board |
| | CS1W-SCB21<br>CS1W-SCB21-V1 | |
| | CS1W-SCB41<br>CS1W-SCB41-V1 | |
| RS-422A/485 Option board | CP1W-CIF11 | ☞ Page 964 Connecting to RS-422A/485 Option board |
| | CP1W-CIF12<br>CP1W-CIF12-V1 | |
| RS-422A converter | CJ1W-CIF11 | ☞ Page 964 Connecting to RS-422A converter |
| RS-232C&RS-485 Option Board | CP2W-CIFD2 | ☞ Page 965 Connecting to RS-232C&RS-485 Option Board |

# Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter

## Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

| Device name | Set value |
|---|---|
| DM6645 | 0001H(fixed) |
| DM6646 | b15 to b8 \| b7 to b0<br>2) \| 1)<br>1) RS-232C port transmission speed setting *1*2<br>02H: 4800bps<br>03H: 9600bps<br>04H: 19200bps<br>2) RS-232C port communication frame format<br>03H (fixed): The settings are:<br>Start bit : 1 bit<br>Data length: 7 bits<br>Stop bit : 2 bits<br>Parity : Even bits |
| DM6647 | 0000 (fixed) |
| DM6648*3 | 0000 to 0031 |
| DM6649 | 0000 (fixed) |

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the RS-232C port as that of the GOT side.
*3 Set the RS-232C port host link station No. according to the Host Address on the GOT side.

**Point**

Precautions for changing device values

Before changing the device values, make sure that the switch settings have been changed as follows:

CPM2A:

The communication condition switch to "individual"

Other PLC CPU:

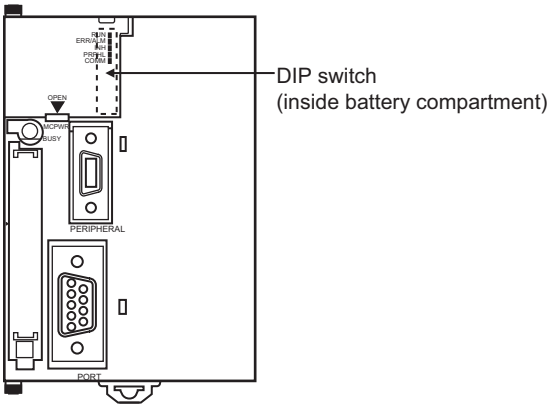
Front panel DIP switch SW5 to "OFF"

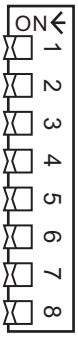
# Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E

## Setting DIP switches

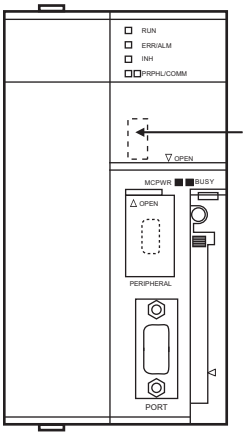
Set the DIP switches.

### ■Setting on the CJ1, CJ2

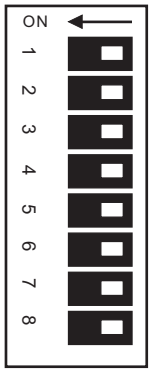



| Switch | | Description | Settings |
|---|---|---|---|
|  | SW1 | Enable/disable write to user memory (UM) | OFF |
| | SW2 | Enable/disable automatic transfer of user program at power ON | OFF |
| | SW3 | Free | OFF |
| | SW4 | CJ1: Peripheral port communication condition<br>CJ2: Free | OFF |
| | SW5 | RS-232C communication condition | OFF |
| | SW6 | User customized DIP switch | OFF |
| | SW7 | Type specification for simplified backup | OFF |
| | SW8 | - | OFF |

## ■Setting on the CS1

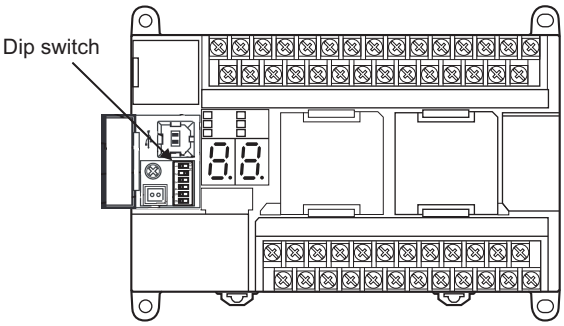


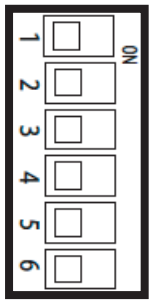

DIP switch
(inside battery compartment)

| Switch | | Description | Settings |
|---|---|---|---|
|  | SW1 | Enable/disable write to user memory (UM) | OFF |
| | SW2 | Enable/disable automatic transfer of user program at power ON | OFF |
| | SW3 | Programming console message display language (Japanese/English) | OFF |
| | SW4 | Peripheral port communication condition | OFF |
| | SW5 | RS-232C communication condition | OFF |
| | SW6 | User customized DIP switch | OFF |
| | SW7 | Type specification for simplified backup | OFF |
| | SW8 | - | OFF |



## ■Setting on the CP1H, CP1L




| Switch | | Description | | Settings |
|---|---|---|---|---|
|  | SW4 | Option Board Slot1 | According to PLC Setup. | OFF |
| | SW5 | Option Board Slot2 | | OFF |



## ■Setting on the CP1E, CP2E

Settings by DIP switch are not required.

## Setting PLC system settings

### ■CJ1, CJ2, CS1

Make the PLC system settings.

| Channel | Bit | Item | Set value |
|---|---|---|---|
| 160 | 15 | Arbitrary settings ON/OFF | 1H: Arbitrary settings (fixed) |
| | 8 to 11 | Serial communication mode | 0H: Upper link (fixed) |
| | 3 | Data bit | 0H: 7bits (fixed) |
| | 2 | Stop bit | 0H: 2bits (fixed) |
| | 0 to 1 | Parity | 0H: Even (fixed) |
| 161 | 0 to 7 | Port transmission speed*1*2 | 00H: 9600bps<br>05H: 4800bps<br>06H: 9600bps<br>07H: 19200bps<br>08H: 38400bps<br>09H: 57600bps<br>0AH: 115200bps |
| 163 | 0 to 7 | Host link station No.*3 | 0H to 1FH<br>: No.00 to 31 |

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same port transmission speed as that of the GOT side.
*3 Set the host link station No. according to the Host Address on the GOT side.

**Point**

Precautions for changing the PLC system settings

Before changing the PLC system settings, make sure that the switch settings have been changed as follows:

CJ1, CJ2, CS1: Front panel DIP switch SW5 to "OFF"

### ■CP1H, CP1L, CP1E, CP2E

Set the PLC system settings of the option slot connected to the GOT.

| Item | Set value |
|---|---|
| Mode | Host link |
| Parameter | 7, 2, E |
| Baud rate*1*2 | 4800bps,<br>9600bps,<br>19200bps<br>38400bps,<br>57600bps,<br>115200bps |
| Unit number*3 | 00 to 31 |

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same port transmission speed as that of the GOT side.
*3 Set the host link station No. according to the Host Address on the GOT side.

**Point**

Precautions for changing the PLC system settings

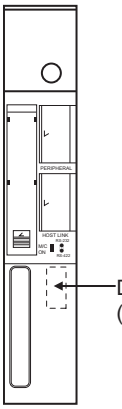
When using the CP1H or CP1L, if you change the PLC system settings, check the settings of the front DIP switch that corresponds to the option slot used to establish communication with the GOT.

☞ Page 950 Setting on the CP1H, CP1L

# Connecting to CV500/CV1000/CV2000 or CVM1

## Setting DIP switches

Set the DIP switches.




### ■Host link RS-422/232 switch

RS-232



RS-422

| Settings | |
|---|---|
| For RS-232 communication | For RS-422 communication |
| RS-232 (up) | RS-422 (down) |

### ■DIP switches




| Switch No. | Settings | |
|---|---|---|
| | For RS-232 communication | For RS-422 communication |
| 6 | OFF (no terminating resistor) | ON (terminating resistor attached) |
| 5 | OFF | |
| 4 | OFF | |
| 3 | OFF | |
| 2 | OFF | |
| 1 | OFF | |

## Setting PLC system settings

Make the PLC system settings.

| Item | Set value |
|---|---|
| Transmission speed*1*2 | 4800bps/9600bps/19200bps |
| Stop bit | 2 stop bits (fixed) |
| Parity | Even (fixed) |
| Data bit | 7bits (fixed) |
| Unit number*3 | 00 to 31 |

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the GOT.
*3 Set the station No. according to the Host Address on the GOT side.

# Connecting to connection cable

## Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

| Device name | Set value |
|---|---|
| DM6650 | 0001H(fixed) |
| DM6651 | b15 to b8 \| b7 to b0<br>2) \| 1)<br>1) RS-232C port transmission speed setting*1*2<br>02H: 4800bps<br>03H: 9600bps<br>04H: 19200bps<br>2) RS-232C port communication frame format<br>03H (fixed): The settings are:<br>Start bit : 1 bit<br>Data length: 7 bits<br>Stop bit : 2 bits<br>Parity : Even bits |
| DM6652 | 0000 (fixed) |
| DM6653*3 | 0000 to 0031 |

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the peripheral port as that of the GOT side.
*3 Set the peripheral port host link station No. according to the Host Address on the GOT side.

**Point**

Precautions for changing device values

Before changing the device values, make sure that the switch settings have been changed as follows:

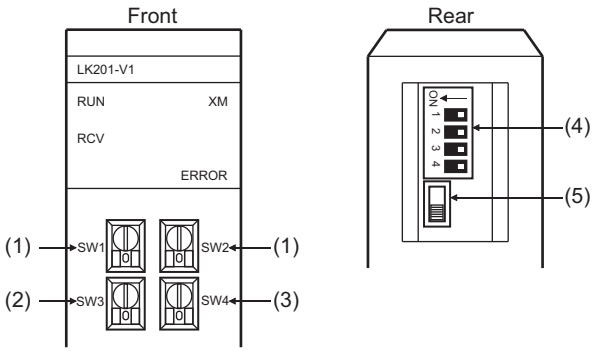
CPM2A: The communication condition switch to "individual"

CPM2C: The communication port function switch to "OFF"

# Connecting to rack type host link unit

## Switch setting on C200H-LK201-V1

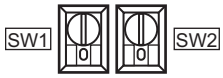
Set the switches accordingly.




### ■Setting Machine No. (SW1, SW2)

Set the Machine No. within the range of 00 to 31.

Set the station No. according to the Host Address on the GOT side.




| Rotary switch | Description | Settings |
|---|---|---|
| SW1 | Machine No. upper digit ($\times 10^1$) | 0 to 3 |
| SW2 | Machine No. lower digit ($\times 10^0$) | 0 to 9 |

### ■Setting transmission speed (SW3)

Set the same transmission speed of the GOT.




| Setting*1 | Settings |
|---|---|
| 4 | 4800bps |
| 5 | 9600bps |
| 6 | 19200bps |

*1 Only transmission speeds available on the GOT side are shown.

### ■Setting command level/parity/transmission code (SW4)




| Settings | Setting details | | |
|---|---|---|---|
| | Command level | Parity | Transmission code |
| 2 (fixed) | Levels 1, 2 and 3 enabled | Even | ASCII 7 bits<br>2 stop bits |

### ■Setting DIP switches




| Switch No. | Set value |
|---|---|
| 1 | OFF |
| 2 | OFF |
| 3 | ON (1:N procedure) |
| 4 | OFF (no 5V power supply) |

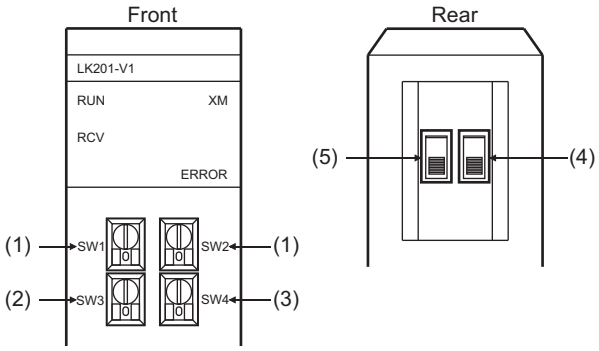
### ■Setting the CTS switch



| Settings |
|---|
| 0V |

## Switch setting on C200H-LK202-V1

Set the switches accordingly.




### ■Setting Machine No. (SW1, SW2)

Set the Machine No. within the range of 00 to 31.

Set the station No. according to the Host Address on the GOT side.




| Rotary switch | Description | Settings |
|---|---|---|
| SW1 | Machine No. upper digit ($\times 10^1$) | 0 to 3 |
| SW2 | Machine No. lower digit ($\times 10^0$) | 0 to 9 |

## ■Setting transmission speed (SW3)

Set the same transmission speed of the GOT.




| Setting*1 | Settings |
|---|---|
| 4 | 4800bps |
| 5 | 9600bps |
| 6 | 19200bps |

*1 Only transmission speeds available on the GOT side are shown.

## ■Setting command level/parity/transmission code (SW4)




| Settings | Setting details | | |
|---|---|---|---|
| | Command level | Parity | Transmission code |
| 2 (fixed) | Levels 1, 2 and 3 enabled | Even | ASCII 7 bits<br>2 stop bits |

## ■Setting the 1:1/1:N procedure switch



| Settings |
|---|
| OFF (1:N procedure) |

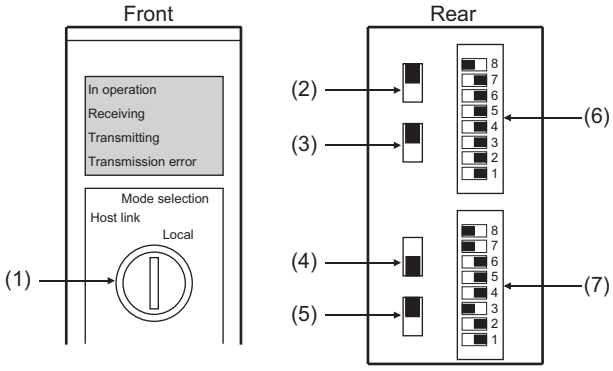
## ■Setting the terminating resistor connection switch



| Settings |
|---|
| ON (terminating resistor attached) |

## Switch setting on C500-LK201-V1

Set the switches accordingly.




### ■Setting host link/local



| Settings |
|---|
| Host link |

### ■RS-232C/RS-422 switch



| Settings | |
|---|---|
| For RS-232 communication | For RS-422 communication |
| RS-232 (down) | RS-422 (up) |

### ■Internal/external clock switch



| Settings |
|---|
| Internal (up) |

### ■Terminating resistor connection switch



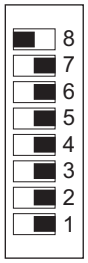
| Settings |
|---|
| Attached (down) |

### ■CTS switch

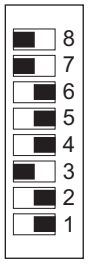


| Settings |
|---|
| 0V (up) |

## ■Setting SW1 (Station No., Run/Stop)

| Switch No. | | Settings | Description |
|---|---|---|---|
|  | 8 | ON | Run |
| | 7 | OFF | - |
| | 6 | OFF | - |
| | 5 | Set the station No. within the range of 00 to 31.<br>For details, refer to the following manual.<br>OMRON PLC user's Manual | |
| | 4 | | |
| | 3 | | |
| | 2 | | |
| | 1 | | |

## ■Setting SW2 (Transmission speed, Procedure, Level)

| Switch No. | | Settings | Description |
|---|---|---|---|
|  | 8 | ON | Levels 1, 2 and 3 enabled |
| | 7 | ON | |
| | 6 | OFF | 1:N procedure |
| | 5 | OFF | - |
| | 4 | *1 | Transmission speed |
| | 3 | | |
| | 2 | | |
| | 1 | | |

*1 Only transmission speeds available on the GOT side are shown.

| Transmission speed | Switch No. | | | |
|---|---|---|---|---|
| | SW1 | SW2 | SW3 | SW4 |
| 4800bps | OFF | ON | ON | OFF |
| 9600bps | ON | OFF | ON | OFF |
| 19200bps | OFF | OFF | ON | OFF |

# Connecting to serial communication unit

## Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

| Device name | | Set value |
|---|---|---|
| Port 1 | Port 2 | |
| DM (m) | DM (m+10) | 8000H(fixed): The settings are:<br>Port setting: Arbitrary setting<br>Serial communication mode: Host link<br>Start bit: 1bit<br>Data bit: 7bits<br>Stop bit: 2bits<br>Parity: Even |
| DM (m+1) | DM (m+11) | b15 to b8 \| b7 to b0<br>0H \| 1)<br>1) Transmission speed*1*2<br>00H: 9600bps 08H: 38400bps<br>05H: 4800bps 09H: 57600bps<br>06H: 9600bps 0AH: 115200bps<br>07H: 19200bps |
| DM (m+2) | DM (m+12) | 8000H(fixed) |
| DM (m+3)*3 | DM (m+13)*3 | 8000H to 801FH |

m = 30000 + (100 × unit No.)

*1 Only transmission speeds available on the GOT side are shown.

*2 Set the same transmission speed of the GOT.

*3 Set the host link station No. according to the Host Address on the GOT side.

## DIP switch setting

Set the DIP switches when connecting to CJ1W-SCU31-V1 or CJ1W-SCU41(-V1) to perform the RS-422 communications.

| DIP switch | | Set value |
|---|---|---|
| Name | Description | |
| WIRE | Setting(2-wire/4-wire) Switch | 4 (4-wire type) |
| TERM | Terminator ON/OFF switch | OFF (no terminating resistor) |

# Connecting to communication board

## Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

| Device name | | Set value |
|---|---|---|
| Port B | Port A | |
| DM6550 | DM6555 | 0001H(fixed) |
| DM6551 | DM6556 | b15 to b8 \| b7 to b0<br>2) \| 1)<br>1) Transmission speed*1*2<br>02H:4800bps<br>03H:9600bps<br>04H:19200bps<br>2) Frame format setting<br>03H (fixed): The settings are:<br>Start bit :1 bit<br>Data length:7 bits<br>Stop bit :2 bits<br>Parity :Even bits |
| DM6552 | DM6557 | 0000 (fixed) |
| DM6553*3 | DM6558*3 | 0000 to 0031 |

*1 Only transmission speeds available on the GOT side are shown.

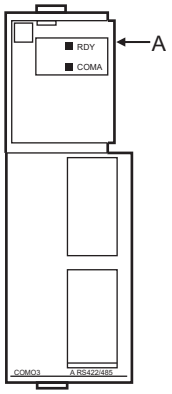
*2 Set the same transmission speed as that of the GOT side.

*3 Set the host link station No. according to the Host Address on the GOT side.

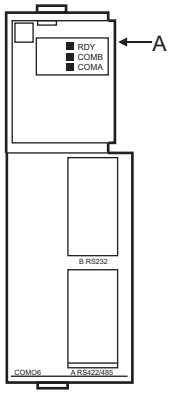
## Setting DIP switches (C200HW-COM03(-V1) and C200HW-COM06(-V1) only)

Set the DIP switches when performing the RS-422 communications on the C200HW-COM03(-V1) and C200HW-COM06(-V1).

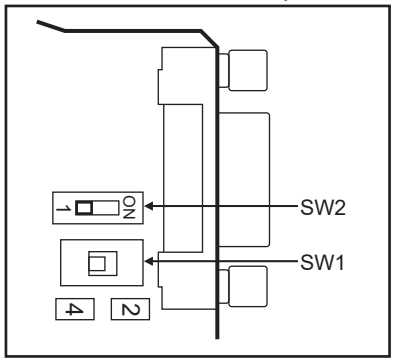
C200HW-COM03(-V1)




C200HW-COM06(-V1)




Side view indicated by A




| DIP switch | | Set value |
|---|---|---|
| No. | Item | |
| SW1 | RS-422/485 cable (2-wire/4-wire type) switching | 4 (4-wire type) |
| SW2 | Terminator ON/OFF | 1 (no terminating resistor attached) |

# Connecting to serial communication board

For the setting for connecting to the serial communication board (CQM1H-SCB41), refer to the following.

☞ Page 960 Connecting to communication board

## Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

| Device name | | Set value |
|---|---|---|
| Port 1 | Port 2 | |
| D32000 | D32010 | 8000H(fixed):<br>The settings are:<br>Port setting: Arbitrary setting<br>Serial communication mode: Host link<br>Start bit: 1bit<br>Data bit: 7bits<br>Stop bit: 2bits<br>Parity: Even |
| D32001 | D32011 | b15 to b8 / b7 to b0<br>0H / 1)<br>1) Transmission speed*1*2<br>00H: 9600bps, 08H: 38400bps<br>05H: 4800bps, 09H: 57600bps<br>06H: 9600bps, 0AH: 115200bps<br>07H: 19200bps |
| D32002 | D32012 | 8000H(fixed) |
| D32003*3 | D32013*3 | 0000H to 0001FH |

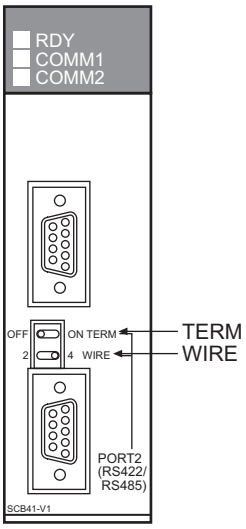
*1 Only transmission speeds available on the GOT side are shown.

*2 Set the same transmission speed of the GOT.

*3 Set the host link station No. according to the Host Address on the GOT side.

## Setting the DIP switches (CS1W-SCB41(-V1) only)

Set the DIP switches when performing the RS-422 communications on the CS1W-SCB41(-V1).




| DIP switch | | Set value |
|---|---|---|
| **Name** | **Description** | |
| WIRE | Setting(2-wire/4-wire) Switch | 4 (4-wire type) |
| TERM | Terminator ON/OFF switch | OFF (no terminating resistor) |

**Point**

Precautions for changing the DM area

Before changing the DM area, make sure that the switch setting has been changed as follows.

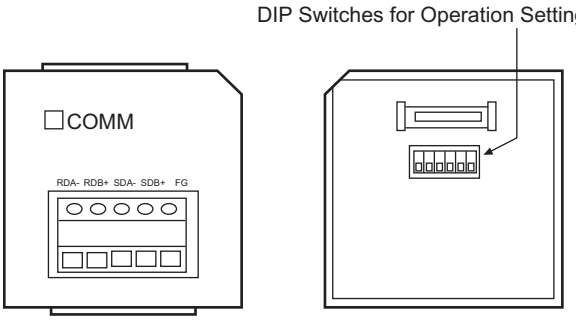
CS1: Front panel DIP switch SW5 to "OFF"

# Connecting to RS-422A/485 Option board

## Setting DIP switches

Set the DIP switches.

The DIP switch differs according to the type of the option board.

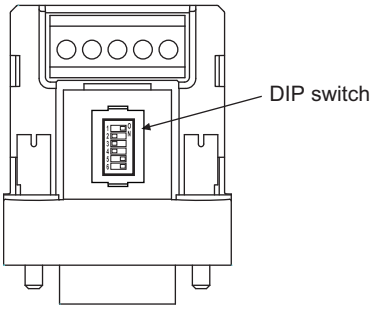



| Option board | | | | Settings | Description | |
|---|---|---|---|---|---|---|
| CP1W-CIF11, CP1W-CIF12 | | CP1W-CIF12-V1 | | | | |
| | Pin No. | | Pin No. | | | |
| SW1  | 1 | SW1  | 1 | ON | Enable | Terminating resistance selection |
| | 2 | | 2 | OFF | 4-wire type | 2-wire or 4-wire selection |
| | 3 | | 3 | OFF | 4-wire type | 2-wire or 4-wire selection |
| | 5 | SW2 | 1 | ON | RS control enabled | RS control selection for RD |
| | 6 |  | 2 | ON | RS control enabled | RS control selection for SD |

# Connecting to RS-422A converter

## Setting DIP switches

Set the DIP switches.

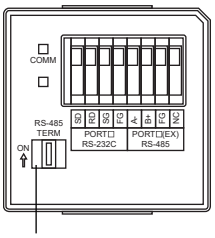



| Switch No. | | Settings | Description | |
|---|---|---|---|---|
|  | 1 | ON | Enable | Terminating resistance selection |
| | 2 | OFF | 4-wire type | 2-wire or 4-wire selection |
| | 3 | OFF | 4-wire type | 2-wire or 4-wire selection |
| | 5 | ON | RS control enabled | RS control selection for RD |
| | 6 | ON | RS control enabled | RS control selection for SD |

# Connecting to RS-232C&RS-485 Option Board

## Setting DIP switch

Set whether to enable or disable terminating resistors using the DIP switch.




DIP switch

| Settings | | Description | |
|---|---|---|---|
| RS-485 TERM ON | ON | Enable (both terminals) | Terminating resistance selection |

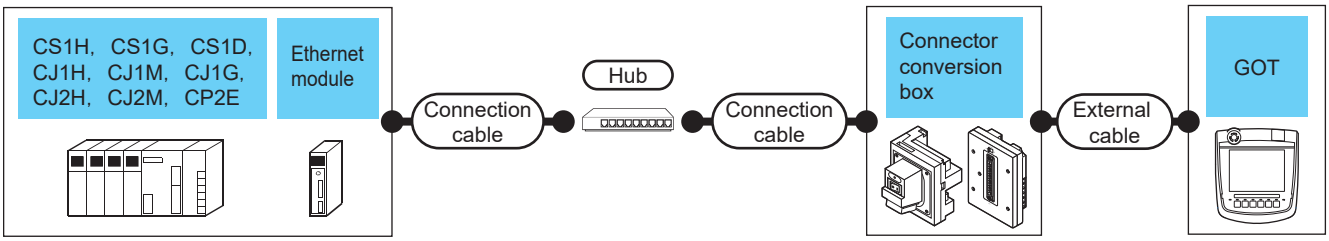
16

# 16.3 Ethernet Connection

## Connecting to SYSMAC CJ1, CJ2, CS1, or CP2 series

Communication driver

Ethernet (OMRON), Gateway




| PLC | | Connection cable | | Connector conversion box | External cable *6 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| CS1H<br>CS1G<br>CS1D | CS1W-ETN21<br>CS1W-EIP21 | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC:GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>TCP: 16 or less*4<br>UDP: No limit number*5 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CS1D | CS1D-ETN21D | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CJ1H<br>CJ1M<br>CJ1G | CJ1W-ETN21<br>CS1W-EIP21 | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

| PLC | | Connection cable | | Connector conversion box | External cable *6 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| CJ2H-CPU6□-EIP<br>CJ2M-CPU3□ | - | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC:GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>TCP: 16 or less*4<br>UDP: No limit number*5 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| | CJ1W-ETN21<br>CS1W-EIP21 | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CJ2H-CPU6□<br>CJ2M-CPU1□ | CJ1W-ETN21<br>CS1W-EIP21 | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CP2E | - | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

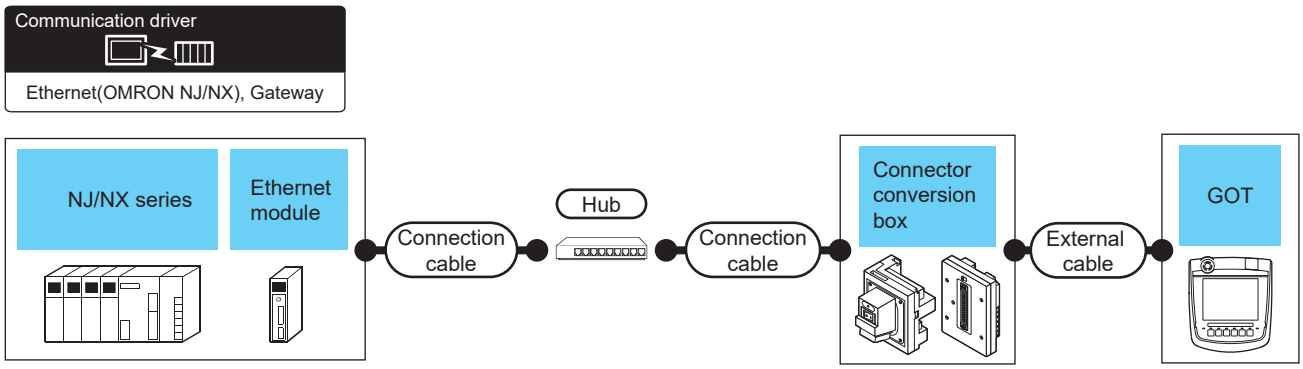
*3 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*4 If it is connected to devices other than the GOT using the connection, the number of connectable GOTs decreases.
For details, refer to the OMRON PLC user's manual.

*5 There is no restriction for the number of GOTs. However, if the number of GOTs increases, the communication becomes high-loaded, and it may affect the communication performance.

*6 Use C or later version of GT11H-C□□-37P.

# Connecting to NJ or NX series




| PLC | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| NJ501-1500<br>NJ501-1400<br>NJ501-1300<br>NJ501-1520<br>NJ501-1420<br>NJ501-1320<br>NJ501-1340<br>NJ301-1200<br>NJ301-1100<br>NJ101-1000<br>NJ101-9000<br>NJ101-1020<br>NJ101-9020 | CJ1W-EIP21 | Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC:GOT is 1:N<br>The following shows the number of GOTs for 1 PLC<br><Connection: CLASS3><br>128 or less *4<br><Connection: UCMM><br>32 or less *4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| NJ501-1500<br>NJ501-1400<br>NJ501-1300<br>NJ501-1520<br>NJ501-1420<br>NJ501-1320<br>NJ501-1340<br>NJ301-1200<br>NJ301-1100<br>NJ101-1000<br>NJ101-9000<br>NJ101-1020<br>NJ101-9020<br>NX1P2-1140DT<br>NX1P2-1140DT1<br>NX1P2-1040DT<br>NX1P2-1040DT1<br>NX1P2-9024DT<br>NX1P2-9024DT1 | - | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC:GOT is 1:N<br>The following shows the number of GOTs for 1 PLC<br><Connection: CLASS3><br>32 or less *4<br><Connection: UCMM><br>32 or less *4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| NX701-1700<br>NX701-1600 | - | Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC:GOT is 1:N<br>The following shows the number of GOTs for 1 PLC<br><Connection: CLASS3><br>128 or less per port<br>(Total 256 or less for 2 ports) *4<br><Connection: UCMM><br>32 or less per port<br>(Total 64 or less for 2 ports) *4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

| PLC | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| NX502-1700<br>NX502-1600<br>NX502-1500<br>NX502-1400<br>NX502-1300 | - | Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC:GOT is 1:N<br>The following shows the number of GOTs for 1 PLC<br><Connection: CLASS3><br>128 or less per port<br>(Total 256 or less for 2 ports) *4<br><Connection: UCMM><br>32 or less per port<br>(Total 64 or less for 2 ports) *4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| NX102-1200<br>NX102-1100<br>NX102-1000<br>NX102-9000 | - | Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC:GOT is 1:N<br>The following shows the number of GOTs for 1 PLC<br><Connection: CLASS3><br>32 or less per port<br>(Total 64 or less for 2 ports) *4<br><Connection: UCMM><br>32 or less per port<br>(Total 64 or less for 2 ports) *4 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

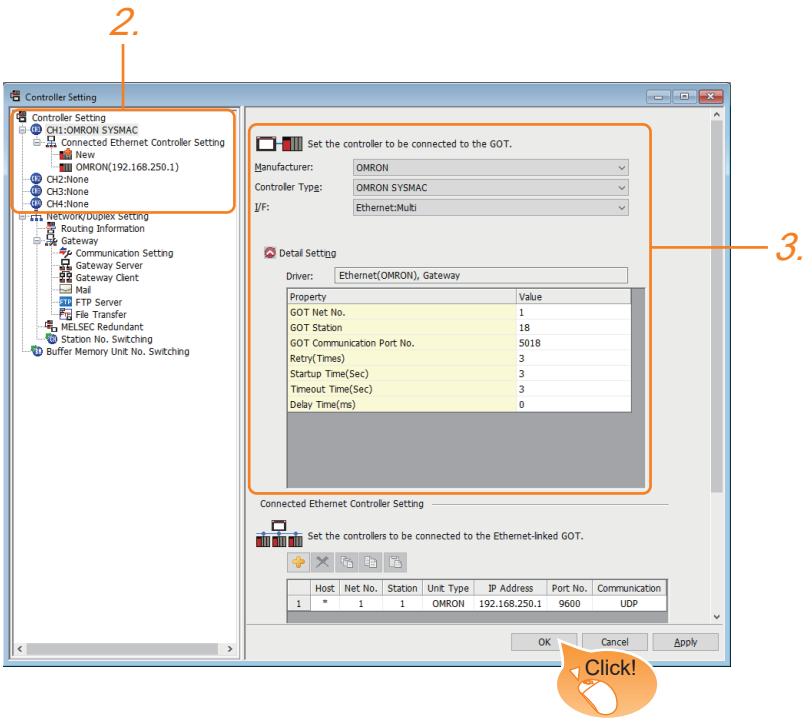
*4 If it is connected to devices other than the GOT using the connection, the number of connectable GOTs decreases.
For details, refer to the OMRON PLC user's manual.

*5 Use C or later version of GT11H-C□□-37P.

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [OMRON]
- [Controller Type]: Depends on the PLC.

SYSMAC CJ1/CJ2/CS1/CP2 series: [OMRON SYSMAC]

NJ/NX series: [OMRON NJ/NX]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 972 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

### ■Ethernet (OMRON), Gateway

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5018 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 127 |
| GOT Station*2*4*5 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No.*1*4 | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5018 *3) | 1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set [FINS UDP Port] of OMRON PLC CX-Programmer to the same value that is set in [GOT Communication Port No.].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 974 Connected Ethernet Controller Setting

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

*4 Set a value within the setting range of the software for the programming apparatus.
☞ Page 976 CX-Programmer setting

*5 When connecting to CS1H, set the least significant byte of the GOT IP address to [GOT Station].
☞ Page 78 GOT IP Address Setting

### ■Ethernet (OMRON NJ/NX), Gateway

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5034 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5034 *4) | 1024 to 5010, 5014 to 65534<br>(Except for 5011, 5012, 5013 and 49153 to 49170) |
| Startup Time*3 | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time*2 | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 974 Connected Ethernet Controller Setting

*2 When [CJ1W-EIP21] is set for [Unit Type] in [Connected Ethernet Controller Setting], even if [Timeout Time] is set to 10 seconds or shorter, the GOT operates with the communication timeout period of 10 seconds.
If [CJ1W-EIP21] and [OMRON NJ] are selectable for [Unit Type] in [Connected Ethernet Controller Setting], and [OMRON NJ] (built-in port connecting side) is set, the GOT also operates with the communication timeout period of 10 seconds.
☞ Page 974 Connected Ethernet Controller Setting

*3 When writing or reading OMRON NJ tag immediately after NJ series setup, a system alarm may occur.
In this case, make the time to start communication with NJ series longer in [Startup Time].
For details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

*4 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.*1

- Standard port

*1 Set a value within the setting range of the software for the programming apparatus.
☞ Page 976 CX-Programmer setting

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

### ■IP filter setting

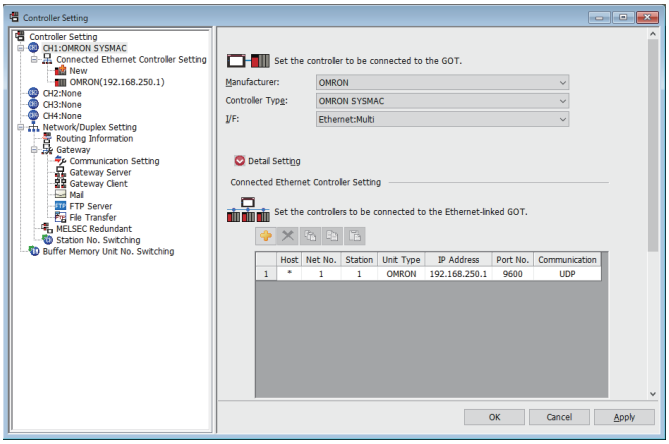
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting

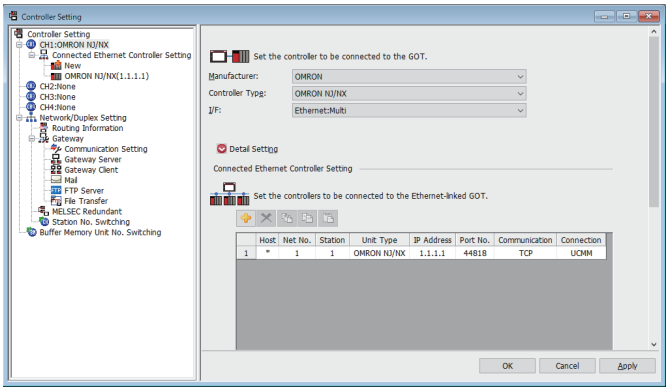
### ■Ethernet (OMRON), Gateway




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 to 127 |
| Station *1 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 254 |
| Unit Type | OMRON (fixed) | OMRON (fixed) |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 192.168.250.1) | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet module.<br>(Default: 9600) | 256 to 65534 |
| Communication format | Select a communication protocol.<br>(Default: UDP) | UDP, TCP |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 972 Communication detail settings

## ■Ethernet (OMRON NJ/NX), Gateway




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 64 |
| Unit Type | Select the device according to the connection destination.<br>Built in Ethernet port: OMRON NJ/NX<br>Communication unit: CJ1W-EIP21*2<br>(Default: OMRON NJ/NX) | OMRON NJ/NX,<br>CJ1W-EIP21 |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 1.1.1.1) | PLC side IP address *3 |
| Port No. | 44818 (fixed) | 44818 (fixed) |
| Communication format | TCP (fixed) | TCP (fixed) |
| Connection | Set the connection.<br>(Default: UCMM) | UCMM, Class3 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 972 Communication detail settings

*2 For the NX series, [CJ1W-EIP21] is not selectable.

*3 NX701, NX502, and NX102 have two built-in EtherNet/IP ports.
Set [IP Address] in [Connected Ethernet Controller Setting] in GT Designer3 according to the port number setting of the NX701, NX502, or NX102 to be connected.

# PLC side setting

## Communication settings for SYSMAC CJ1/CJ2/CS1/CP2 series

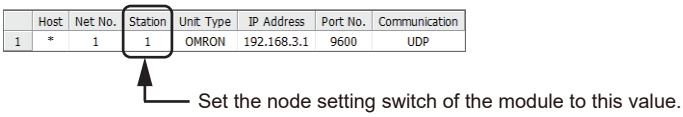
For the communication between OMRON PLC (SYSMAC CJ1/CJ2/CS1/CP2 series) and GOT, use the FINS communication.
For the FINS communication, the node must be specified according to the realm of FINS. However, for the Ethernet network, the data transfer according to the IP address is required.
The following four methods are available for converting the FINS node address to the IP address.

- Automatic generation method (dynamic)
- Automatic generation method (static)
- IP address table conversion method
- Combined method

For details of OMRON PLCs, refer to the following manual.
OMRON PLC user's Manual

### ■Node setting switch

Set the node setting switch of the module to the value of [Station] in [Connected Ethernet Controller Setting] in GT Designer3.
Note that the node setting switch is set in hexadecimal.
Convert this hexadecimal number to decimal, and set the value to [Station].

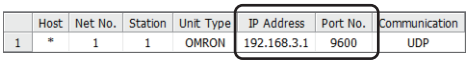



### ■CX-Programmer setting

For the PLC communication setting, set with a software for programming apparatus (CX-Programmer Ver.3.20 or later).

| Item | | Setting range | | | |
|---|---|---|---|---|---|
| | | Automatic generation method (dynamic) | Automatic generation method (static) *4*5 | IP address table method*4*6 | Combined method *4 |
| Ethernet module CPU highly-functional module | Global | All 1 (Default) | All 1 (Default) | All 1 (Default) | All 1 (Default) |
| | IP address*1 | 192.168.3.1 *3 | 192.168.3.1 *3 | 192.168.3.1 | 192.168.3.1 |
| | Subnet Mask | 255.255.255.0 | 255.255.255.0 | 255.255.255.0 | 255.255.255.0 |
| | FINS UDP port*1 | 9600 | 9600 | 9600 | 9600 |
| | IP address conversion | Automatic generation method (dynamic) | Automatic generation method (static) | IP address table method | Combined method |
| | IP address table | - | - | Destination node address: 18 *7<br>Destination IP address: 192.168.3.18 | - *8 |
| | Transmission speed | Automatic detection (Default) | Automatic detection (Default) | Automatic detection (Default) | Automatic detection (Default) |
| | Node IP Address dynamically change*2 | Change dynamically (Default)*9 | Change dynamically (Default) | Change dynamically (Default) | Change dynamically (Default) |

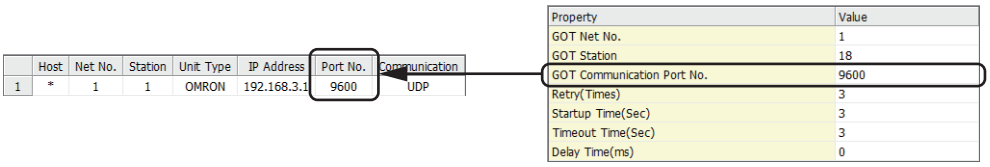
*1 Set the values of [IP Address] and [Port No.] in [Connected Ethernet Controller Setting] in GT Designer3 to [IP address] and [FINS UDP Port].



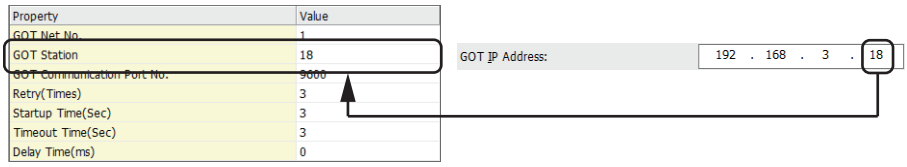

*2 The Node IP Address dynamically change function is available only when the Ethernet module to be used is Ver.1.3 or later.
For the setting, set in the module setting of CX-ProgrammerVer.5.0 or later or in the WEB function.
For details of Node IP Address dynamically change, refer to the following manual.
OMRON PLC user's Manual

*3 Set the same lowermost bit of the [IP address] setting as that of the node setting switch of the module.
Note that the node setting switch is set in hexadecimal.
Convert this hexadecimal number to decimal, and set the value to the lowermost bit of [IP Address].

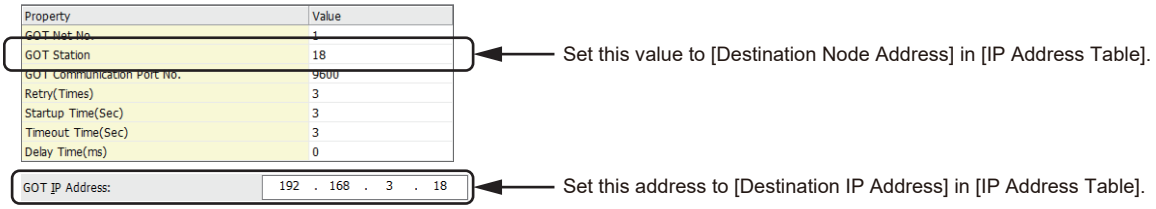
*4 In GT Designer3, set the value of [GOT Communication Port No.] in [Detail Setting] to [Port No.] in [Connected Ethernet Controller Setting].




*5 In GT Designer3, set the value of [GOT Station] in [Detail Setting] to the lowermost byte of [GOT IP address] in [GOT IP Address Setting].




*6 In GT Designer3, set the value of [IP address table] to [GOT IP address] in [GOT IP Address Setting] and to [GOT Station] in [Detail Setting].




*7 Set the lowest byte of [Destination IP Address] to [Destination Node Address].

*8 To use [IP Address Table], apply the settings of the IP address table method.

*9 Not to set the dynamical change, set the same value to [GOT Communication Port No.] in [Detail Setting] and [Port No.] in [Connected Ethernet Controller Setting] in GT Designer3.

16

## Communication Setting for NJ/NX series

For the PLC communication setting, set with an automation software Sysmac Studio.

For the Sysmac Studio compatible versions of the NJ/NX series, refer to the following manual.

📖OMRON PLC user's Manual

### ■Setting of an automation software Sysmac Studio

| Item | Description | Range |
|---|---|---|
| IP address *1*3 | Set the IP address. | 0.0.0.0 to 255.255.255.255 |
| Subnet Mask *2*3 | Set the subnet mask for the sub network. (Only for connection via router)<br>If the sub network is not used, the default value is set.<br>(Default: 255.255.255.0) | 0.0.0.0 to 255.255.255.255 |

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.
☞ Page 973 Ethernet (OMRON NJ/NX), Gateway

*2 Apply the same setting as [GOT Ethernet Setting] of the GOT.
☞ Page 78 GOT Ethernet Setting

*3 NX701-□□□□, NX502-□□□□, and NX102-□□□□ have two built-in EtherNet/IP ports that can be set individually.

# Precautions

## When connecting to multiple GOTs

### ■Setting station no.

When connecting two or more GOTs in the Ethernet network, set each station no. to the GOT.

☞ Page 974 Connected Ethernet Controller Setting

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

## NJ/NX series start up

When writing or reading OMRON NJ/NX tag immediately after NJ/NX series setup, a system alarm may occur.

In this case, make the time to start communication with NJ/NX series longer in [Startup Time] for the communication detail settings.

For details, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

# 16.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
OMRON equipment ([OMRON SYSMAC])
OMRON equipment ([OMRON NJ/NX])

# MEMO

# 17 OMRON TEMPERATURE CONTROLLER




- Page 981 Connectable Model List
- Page 982 System Configuration
- Page 995 Connection Diagram
- Page 1001 GOT Side Settings
- Page 1004 Temperature Controller Side Setting
- Page 1009 Settable Device Range
- Page 1009 Precautions


## 17.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|
| THERMAC NEO | E5AN<br>E5EN<br>E5GN<br>E5CN(-H,-HT) | RS-232 | GT2506HS GT2505HS | ☞ Page 982 Connecting to the THERMAC NEO series |
| | | RS-485 | GT2506HS | |
| | E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT | RS-232<br>RS-422 | GT2506HS GT2505HS | |
| | | RS-485 | GT2506HS | |
| INPANEL NEO | E5ZN | RS-232 | GT2506HS GT2505HS | ☞ Page 989 Connecting to the INPANEL NEO |
| | | RS-485 | GT2506HS | |
| E5□C | E5CC(-T,-B)<br>E5DC<br>E5GC<br>E5EC(-T,-B)<br>E5AC(-T) | RS-232 | GT2506HS GT2505HS | ☞ Page 991 Connecting to the E5□C series, E5□D series |
| | | RS-485 | GT2506HS | |
| E5□D | E5CD(-B)<br>E5ED(-B) | RS-232 | GT2506HS GT2505HS | ☞ Page 991 Connecting to the E5□C series, E5□D series |
| | | RS-485 | GT2506HS | |
| THERMAC R | E5AR(-T)<br>E5ER(-T) | RS-232 | GT2506HS GT2505HS | ☞ Page 993 Connecting to the THERMAC R series |
| | | RS-485 | GT2506HS | |

# 17.2 System Configuration

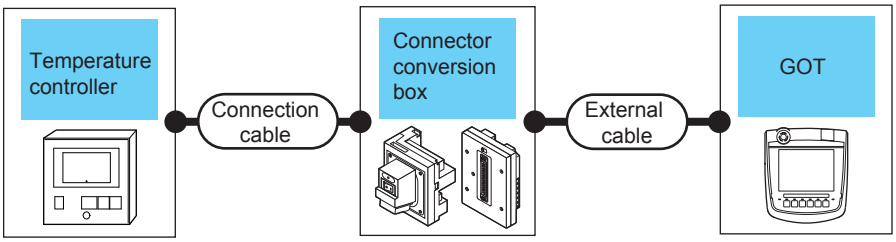
## Connecting to the THERMAC NEO series

### When connecting to one temperature controller

#### ■When connecting to E5AN, E5EN

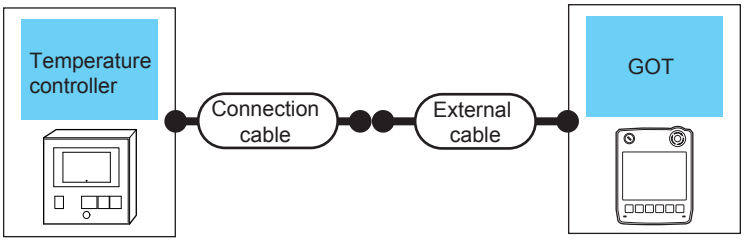
Communication driver
OMRON THERMAC/INPANEL NEO

- When using the connector conversion box



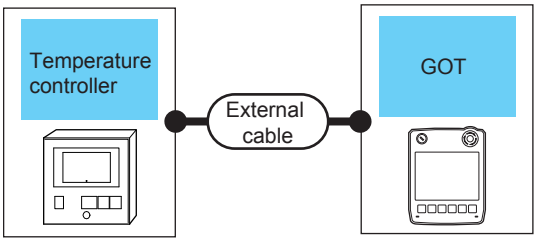

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN<br>E5EN | RS-232 | User preparing Page 995 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

- When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5AN<br>E5EN | RS-232 | User preparing Page 995 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 temperature controller for 1 GOT |

- When using the external cable (GT11H-C□□□)



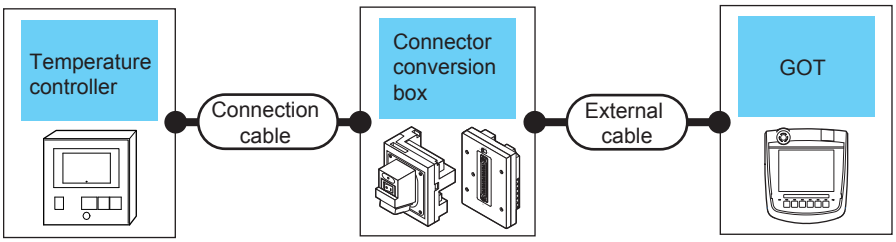

| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| E5AN<br>E5EN | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 995 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 temperature controller for 1 GOT |

## ■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

Communication driver

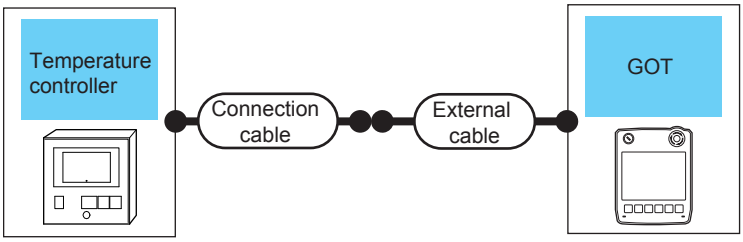
OMRON digital temperature controller

• When using the connector conversion box



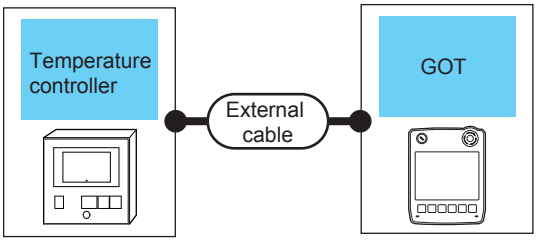

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | RS-232 | User preparing Page 995 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

• When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | RS-232 | User preparing Page 995 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 temperature controller for 1 GOT |

• When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 995 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 temperature controller for 1 GOT |

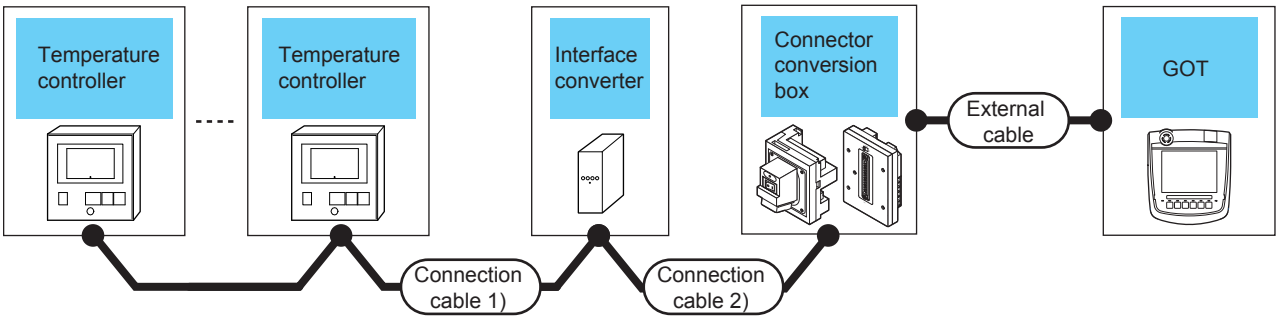
## When connecting to multiple temperature controllers (via an interface converter)

### ■When connecting to E5AN, E5EN, E5CN, E5GN

Communication driver

OMRON THERMAC/INPANEL NEO

- When using the connector conversion box

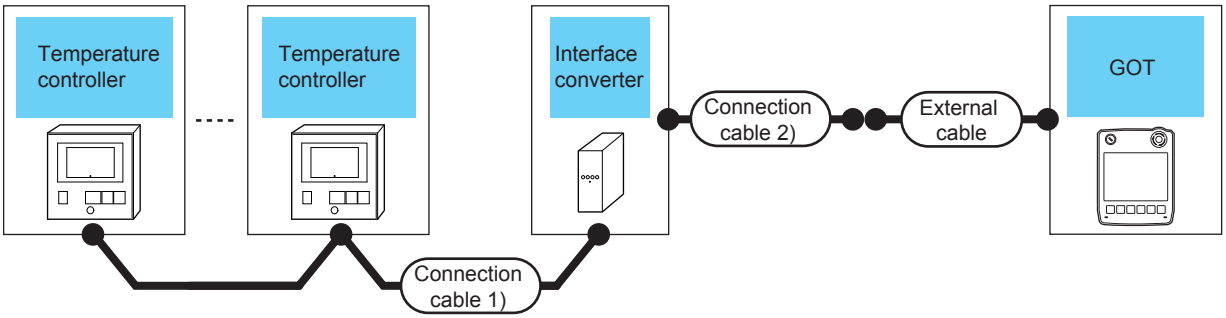



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN<br>E5EN<br>E5CN<br>E5GN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

- When using the external cable (GT11H-C□□□-37P)

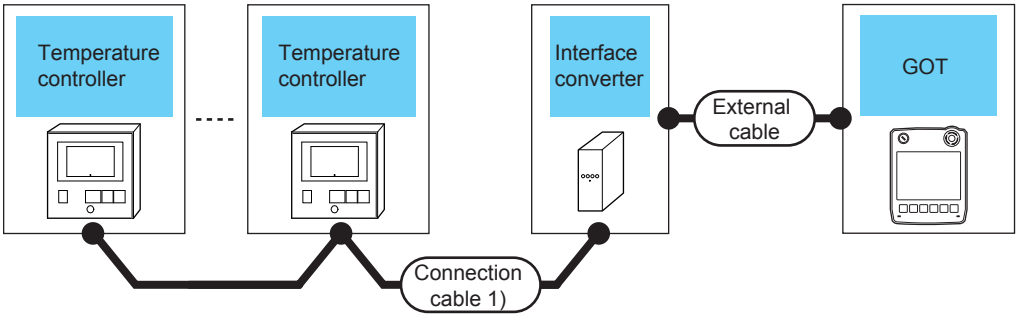



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5AN<br>E5EN<br>E5CN<br>E5GN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| E5AN<br>E5EN<br>E5CN<br>E5GN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 996 RS-232 connection diagram 6) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

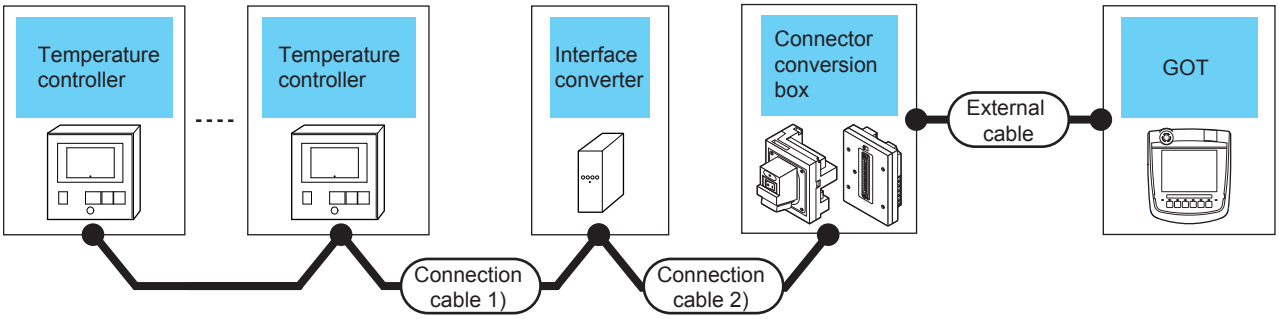
*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

## ■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

Communication driver
OMRON digital temperature controller

• When using the connector conversion box

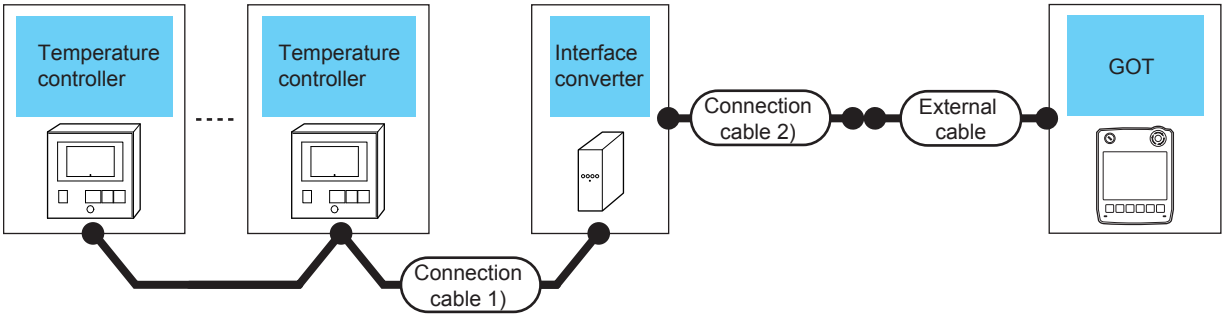



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□-37P)

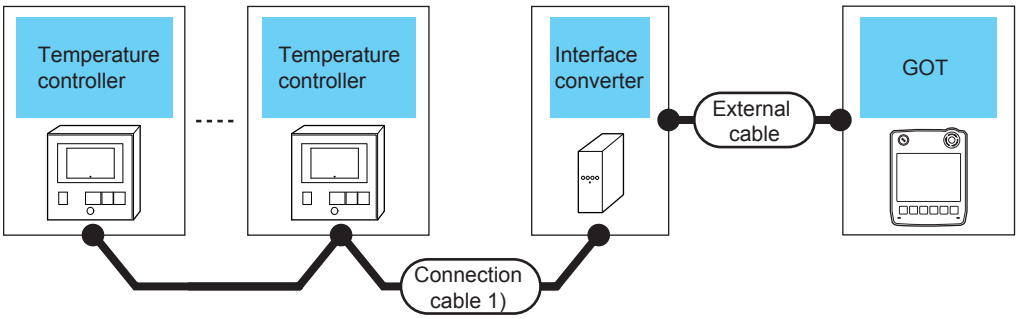



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 996 RS-232 connection diagram 6) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

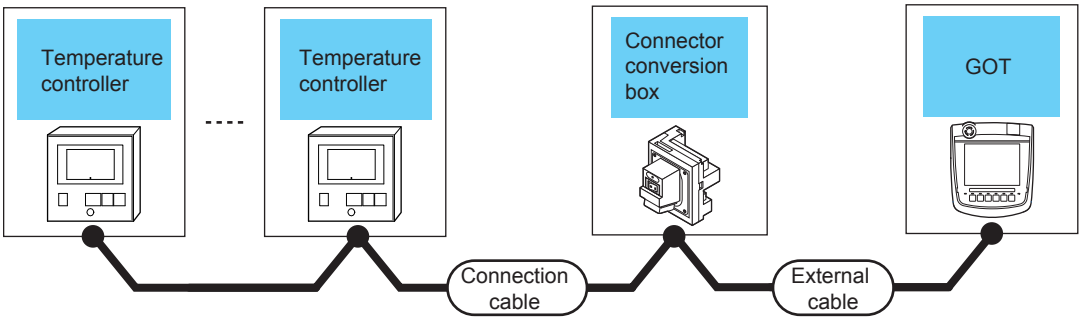
*2 The distance from the GOT to the interface converter (External cable)

## When connecting to multiple temperature controllers

### ■When connecting to E5AN, E5EN, E5CN, E5GN

Communication driver
OMRON THERMAC /INPANEL NEO

- When using the connector conversion box

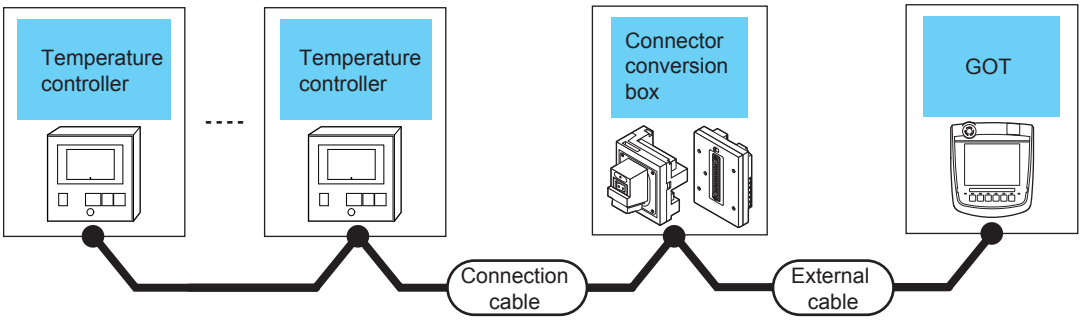



| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN<br>E5EN<br>E5CN<br>E5GN | RS-485 | User preparing Page 1000 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 temperature controllers for 1 GOT |

### ■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

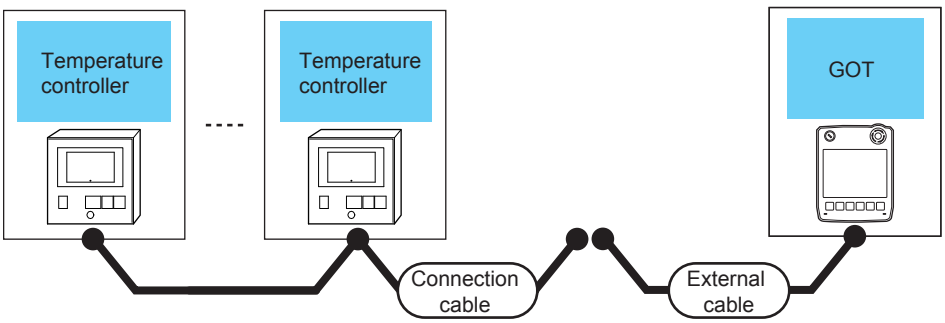
Communication driver
OMRON digital temperature controller

- When using the connector conversion box



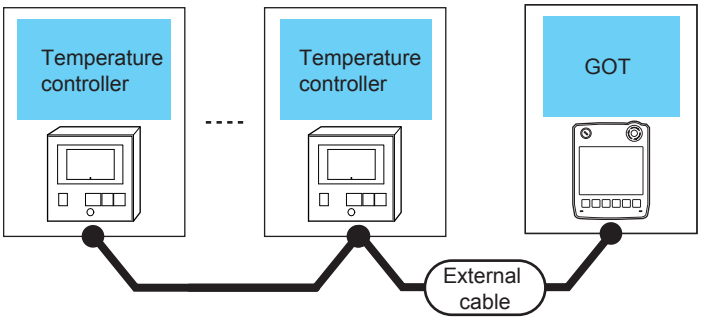

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT<br>E5CN-H<br>E5CN-HT | RS-485 | User preparing Page 1000 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 temperature controllers for 1 GOT |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT | RS-422 | User preparing Page 997 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

• When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT | RS-422 | User preparing Page 997 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 31 temperature controllers for 1 GOT |

• When using the external cable (GT11H-C□□□)



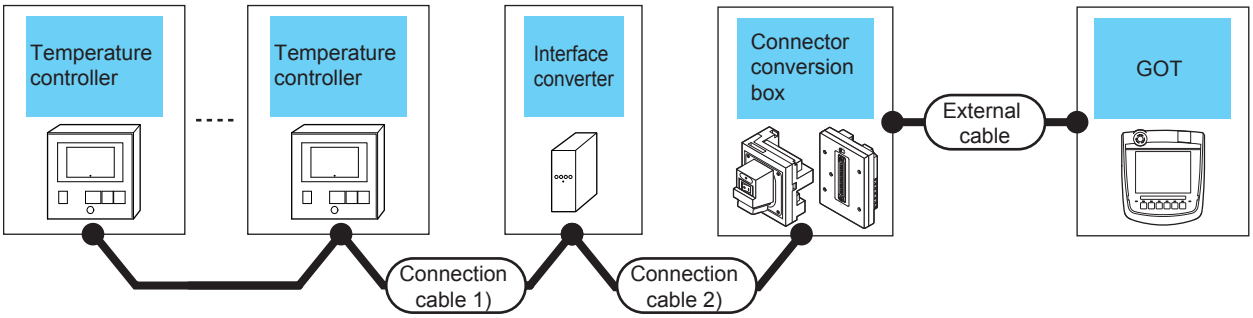

| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| E5AN-H<br>E5EN-H<br>E5AN-HT<br>E5EN-HT | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 998 RS-422 connection diagram 3) | GT 2505HS | 13m | 31 temperature controllers for 1 GOT |

# Connecting to the INPANEL NEO

Communication driver
OMRON THERMAC/INPANEL NEO

## When connecting to multiple temperature controllers (via interface converter)

### ■When using the connector conversion box

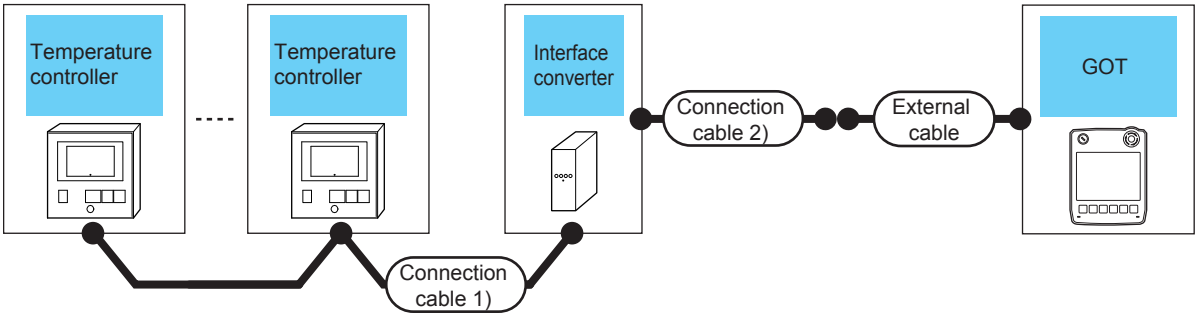



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5ZN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 16 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

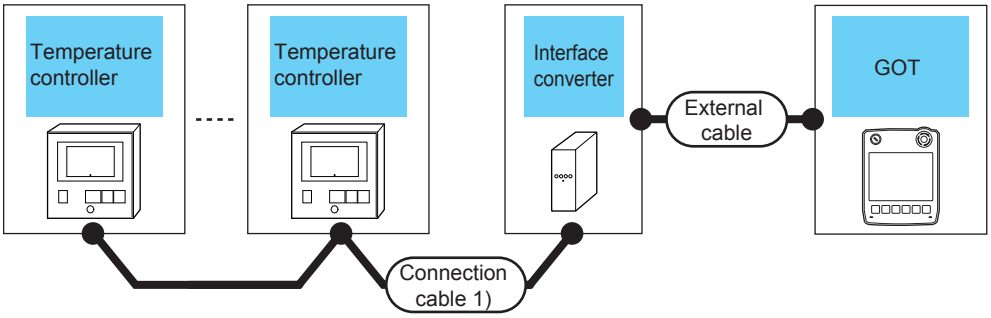



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5ZN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 16 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



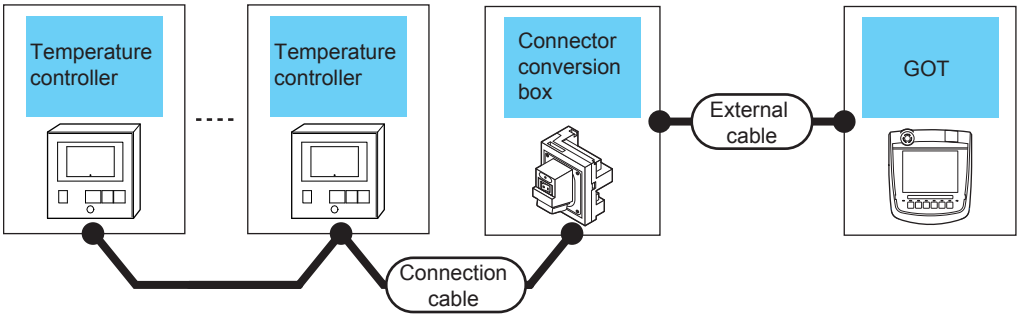

| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| E5ZN | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 996 RS-232 connection diagram 6) | GT 2505HS | 6m | 16 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation. For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

## When connecting to multiple temperature controllers

### ■When using the connector conversion box



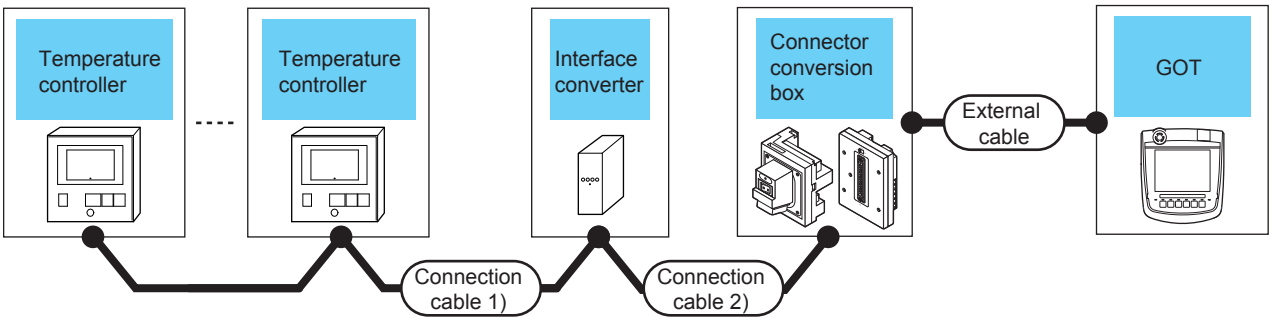

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5ZN | RS-232 | User preparing Page 1000 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 temperature controllers for 1 GOT |

# Connecting to the E5□C series, E5□D series

Communication driver
OMRON digital temperature controller

## When connecting to multiple temperature controllers (via interface converter)

### ■When using the connector conversion box

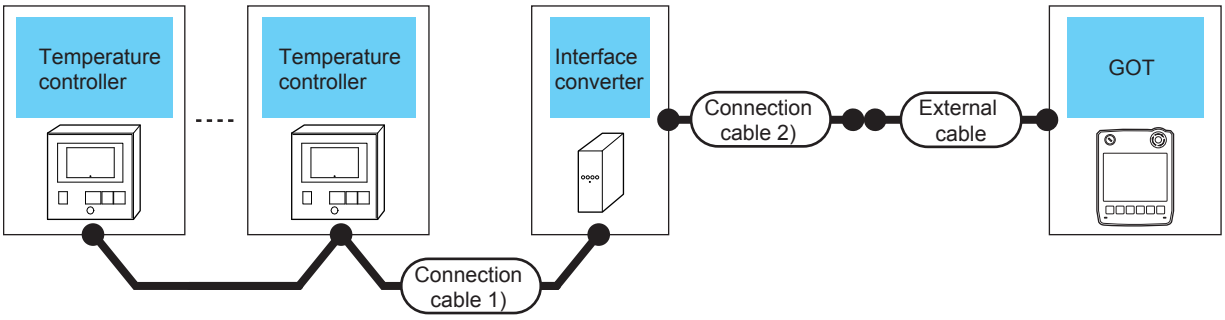



| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5CC(-T,-B)<br>E5DC<br>E5GC<br>E5EC(-T,-B)<br>E5AC(-T)<br>E5CD(-B)<br>E5ED(-B) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

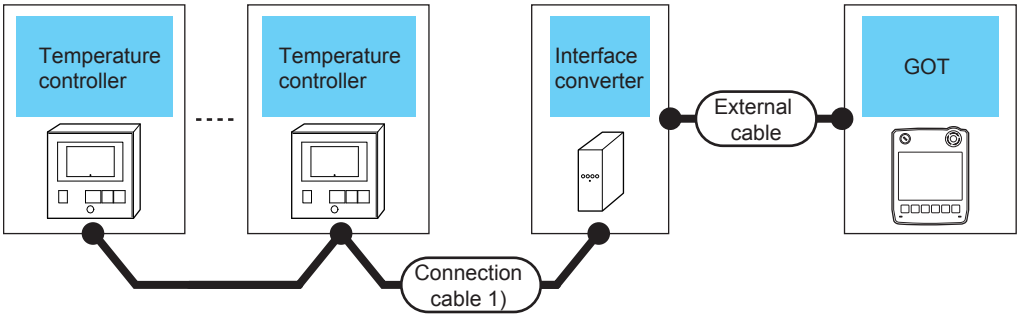
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5CC(-T,-B)<br>E5DC<br>E5GC<br>E5EC(-T,-B)<br>E5AC(-T)<br>E5CD(-B)<br>E5ED(-B) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

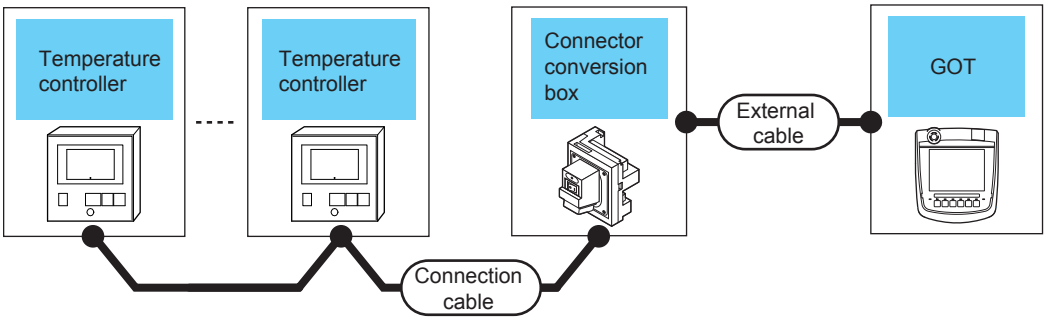



| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| E5CC(-T,-B)<br>E5DC<br>E5GC<br>E5EC(-T,-B)<br>E5AC(-T)<br>E5CD(-B)<br>E5ED(-B) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 996 RS-232 connection diagram 6) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (External cable)

## When connecting to multiple temperature controllers

### ■When using the connector conversion box



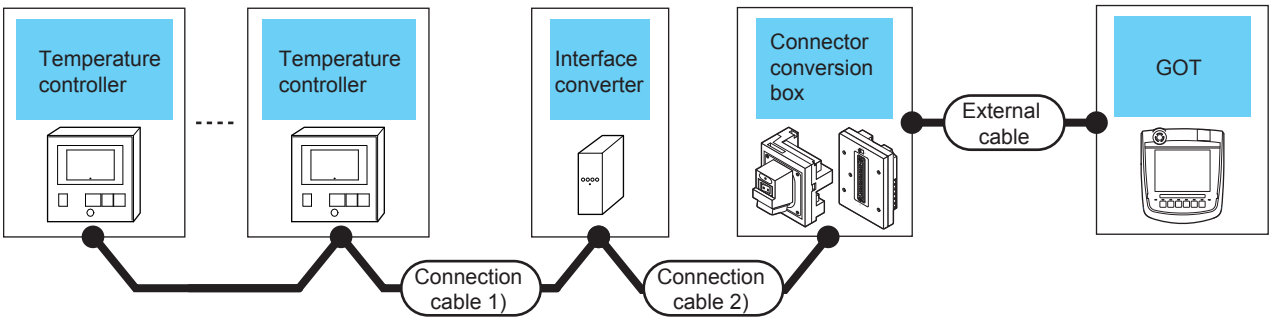

| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5CC(-T,-B)<br>E5DC<br>E5GC<br>E5EC(-T,-B)<br>E5AC(-T)<br>E5CD(-B)<br>E5ED(-B) | RS-485 | User preparing Page 1000 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 temperature controllers for 1 GOT |

# Connecting to the THERMAC R series

Communication driver
OMRON digital temperature controller

## When connecting to multiple temperature controllers (via interface converter)

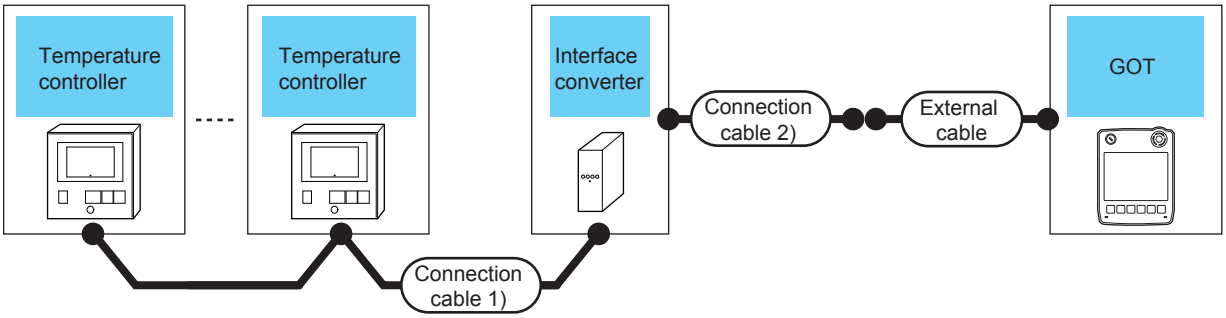
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AR(-T)<br>E5ER(-T) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

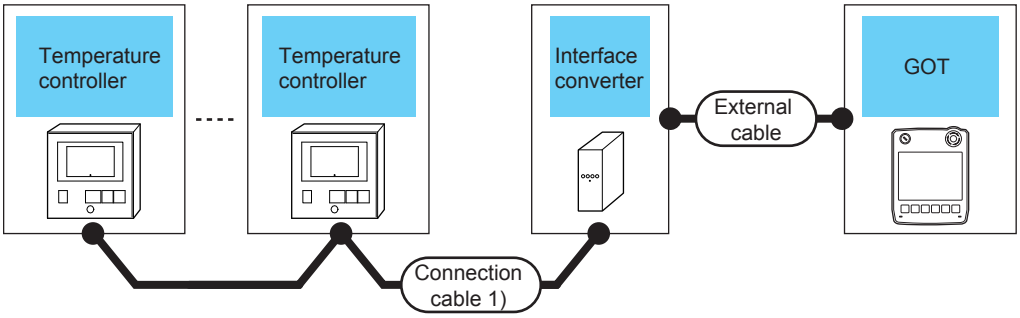
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| E5AR(-T)<br>E5ER(-T) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | User preparing Page 996 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)



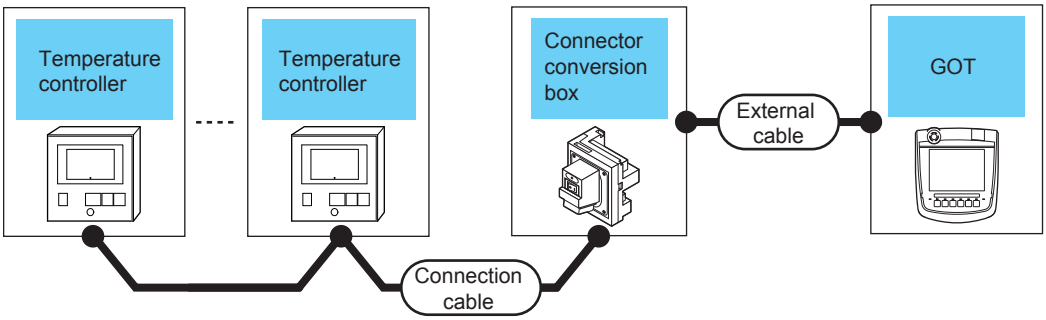

| Temperature controller | Connection cable 1) | | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| E5AR(-T)<br>E5ER(-T) | User preparing Page 999 RS-485 connection diagram 1) | 500m | K3SC-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 996 RS-232 connection diagram 6) | GT 2505HS | 6m | 32 temperature controllers for 1 GOT |

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

## When connecting to multiple temperature controllers

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| E5AR(-T)<br>E5ER(-T) | RS-485 | User preparing Page 1000 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 temperature controllers for 1 GOT |

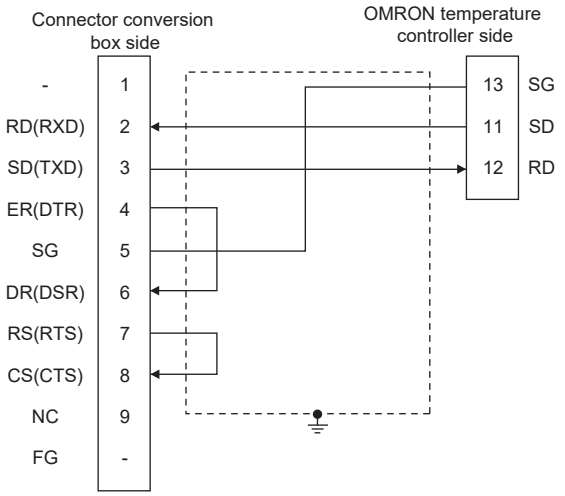
# 17.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

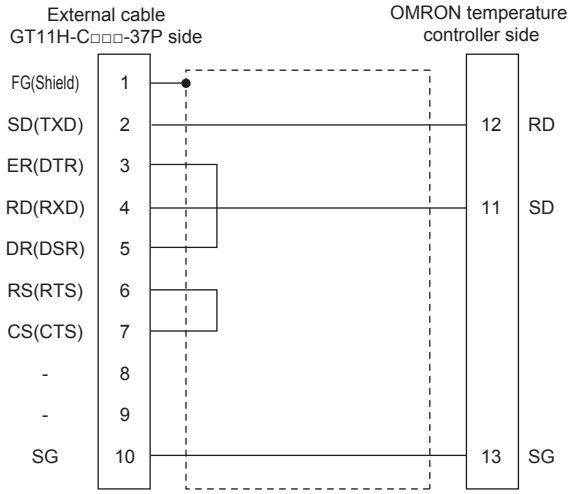
## RS-232 cable

### Connection diagram

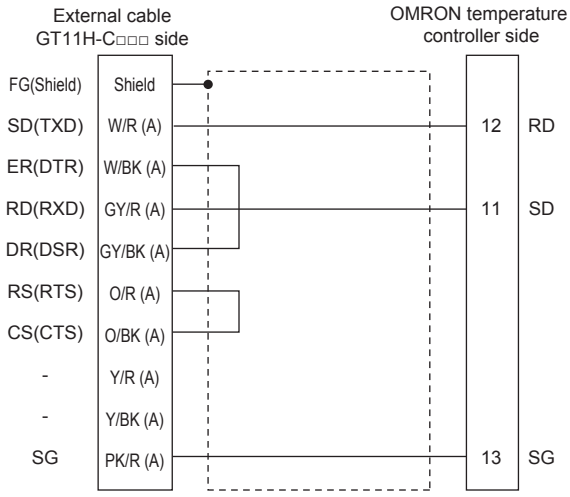
#### ■RS-232 connection diagram 1)



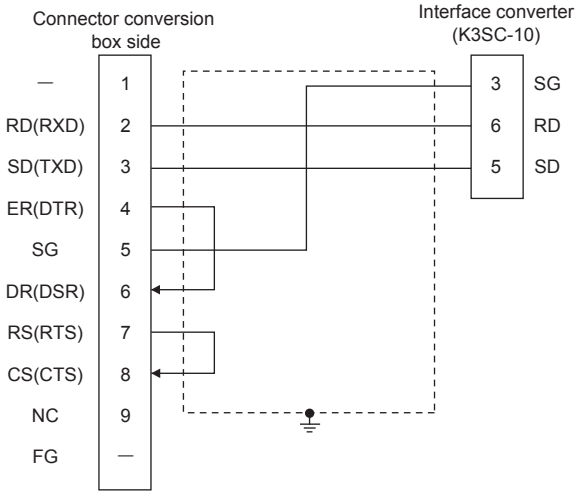

#### ■RS-232 connection diagram 2)



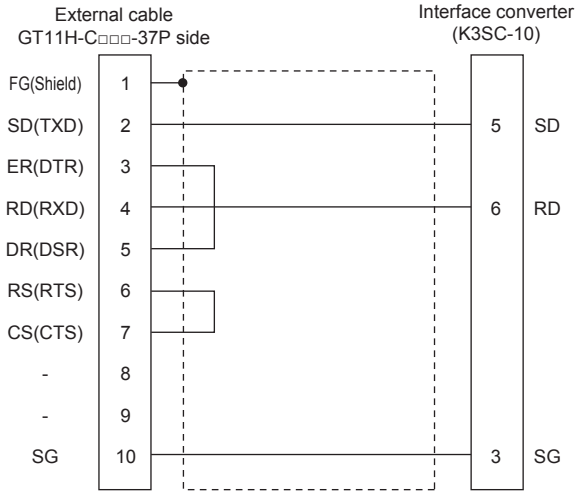

#### ■RS-232 connection diagram 3)



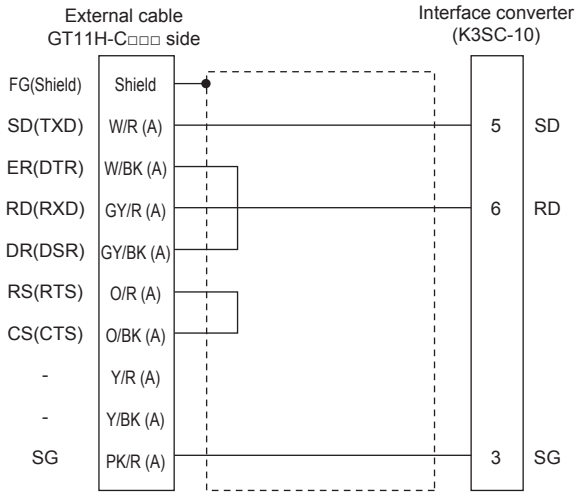
## ■RS-232 connection diagram 4)




## ■RS-232 connection diagram 5)




## ■RS-232 connection diagram 6)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■OMRON temperature controller side connector

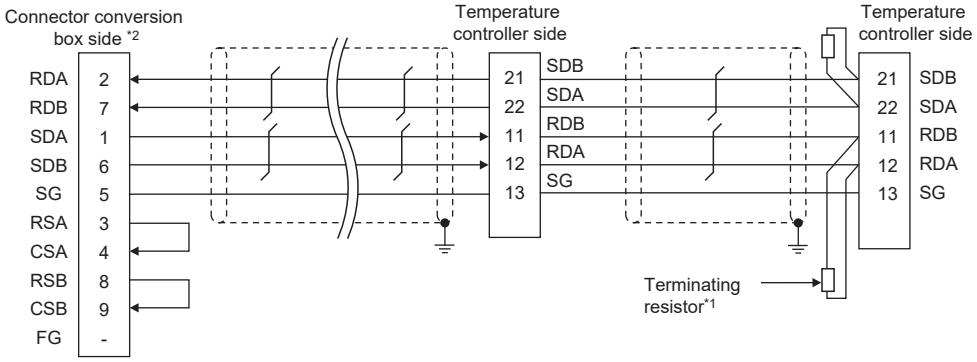
Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

# RS-422 cable

## Connection diagram

### ■RS-422 connection diagram 1)

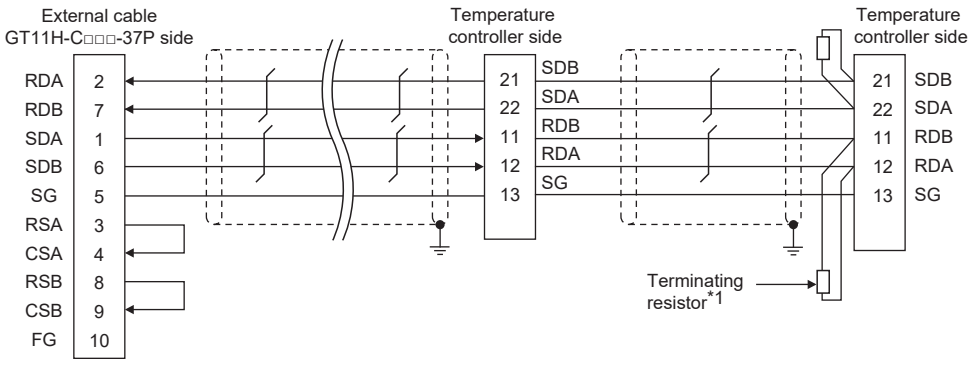



*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Set the terminating resistor of GOT side, which will be a terminal, to "Enable".

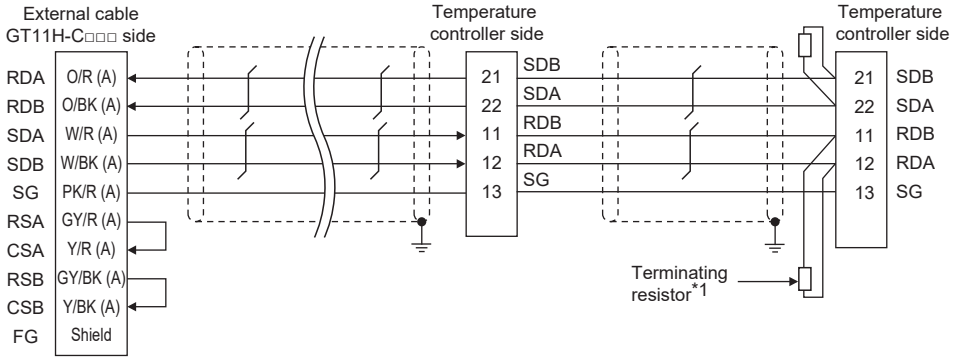
☞ Page 89 Terminating resistors of GOT

### ■RS-422 connection diagram 2)




*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

## ■RS-422 connection diagram 3)




*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■OMRON temperature controller side connector

Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

## Setting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■OMRON temperature controller side

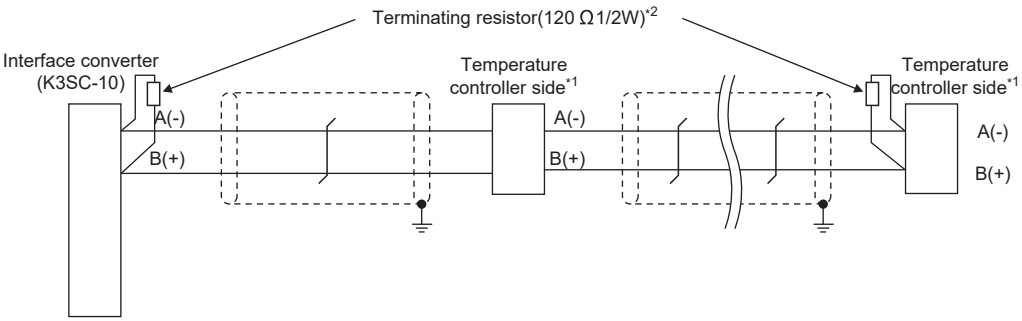
When connecting a OMRON temperature controller to the GOT, the terminating resistor must be connected to the OMRON temperature controller.

📖User's Manual of the OMRON temperature controller

# RS-485 cable

## Connection diagram

### ■RS-485 connection diagram 1)

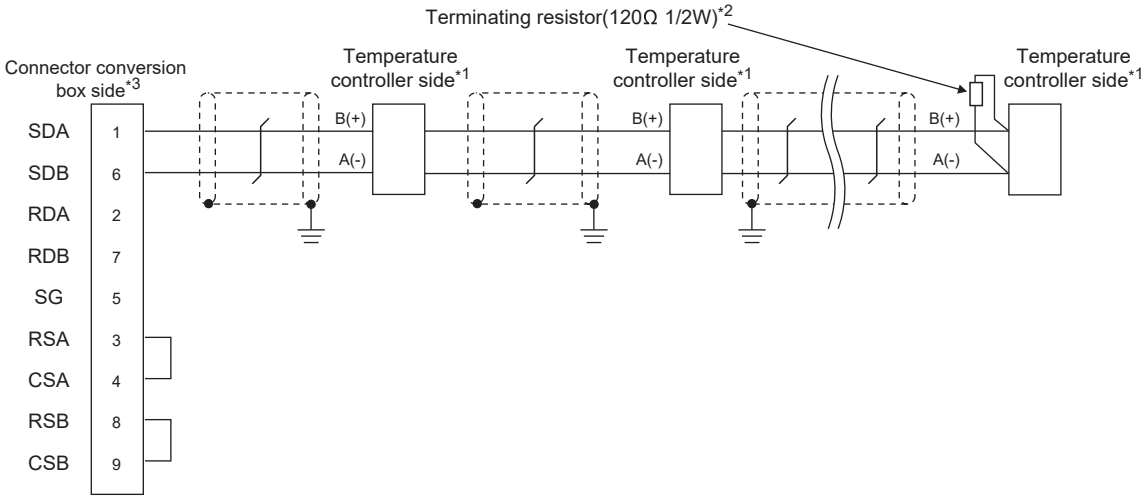



*1 Pin No. of temperature controller differs depending on the model.Refer to the following.

| Signal name | Model of temperature controller | | | | | | | | Interface converter (K3SC-10) |
|---|---|---|---|---|---|---|---|---|---|
| | E5AN(-H,-HT) E5EN(-H,-HT) E5CN(-H,-HT) | E5GN | E5ZN | E5CC(-T) E5EC(-T) E5AC(-T) E5CD E5ED | E5CC-B E5EC-B E5CD-B E5ED-B | E5DC | E5GC | E5AR(-T) E5ER(-T) | |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| A(-) | 12 | 6 | 24 | 14 | 19 or 20 | 4 | 8 | 2 | 8 |
| B(+) | 11 | 5 | 23 | 13 | 17 or 18 | 3 | 7 | 1 | 11 |

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminating resistors.

### ■RS-485 connection diagram 2)




*1 Pin No. of temperature controller differs depending on the model.Refer to the following.

| Signal name | Model of temperature controller | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | E5AN(-H,-HT)<br>E5EN(-H,-HT)<br>E5CN(-H,-HT) | E5GN | E5ZN | E5CC(-T)<br>E5EC(-T)<br>E5AC(-T)<br>E5CD<br>E5ED | E5CC-B<br>E5EC-B<br>E5CD-B<br>E5ED-B | E5DC | E5GC | E5AR(-T)<br>E5ER(-T) |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| A(-) | 12 | 6 | 24 | 14 | 19 or 20 | 4 | 8 | 2 |
| B(+) | 11 | 5 | 23 | 13 | 17 or 18 | 3 | 7 | 1 |

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminating resistors.

*3 Set the terminating resistor to "Enable".

☞ Page 89 Terminating resistors of GOT

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■OMRON temperature controller side connector

Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

## Setting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■OMRON temperature controller side

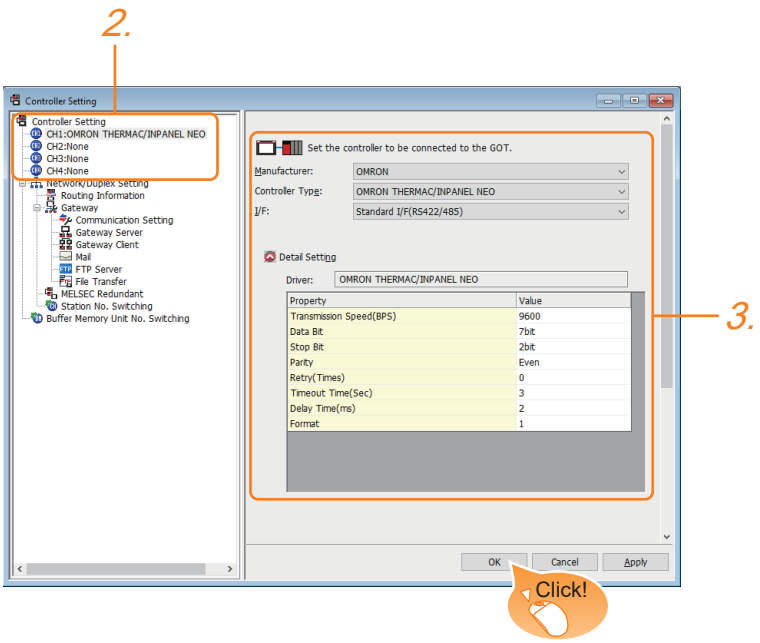
When connecting a OMRON temperature controller to the GOT, the terminating resistor must be connected to the OMRON temperature controller.

📖User's Manual of the OMRON temperature controller

# 17.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [OMRON]
- [Controller Type]: Select one of the following items according to the controller to be connected.

| Series | Model of temperature controller | Controller Type |
|---|---|---|
| THERMAC NEO | E5AN, E5EN, E5CN, E5GN | OMRON THERMAC/INPANEL NEO or OMRON digital temperature controller |
| | E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT | OMRON digital temperature controller |
| INPANEL NEO | E5ZN | OMRON THERMAC/INPANEL NEO or OMRON digital temperature controller |
| E5□C | E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T) | OMRON digital temperature controller |
| E5□D | E5CD(-B), E5ED(-B) | OMRON digital temperature controller |
| THERMAC R | E5AR(-T), E5ER(-T) | OMRON digital temperature controller |

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1002 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## OMRON THERMAC/INPANEL NEO

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 7 bit |
| Stop Bit | 2 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 2 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bits) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 2ms) | 0 to 300 (ms) |
| Format | Select the communication format.<br>(Default: 1)<br>format 1: only continuous access<br>format 2: continuous and random access | 1, 2 |

## OMRON Digital temperature controller

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 7bit |
| Stop Bit | 2bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 2 |
| Format | 2 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bits) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network.<br>(Default: 1) | 0 to 99 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 2ms) | 0 to 300 (ms) |
| Format | Select the communication format.<br>(Default: 2)<br>format 1: only continuous access<br>format 2: continuous and random access | 1, 2 |

**Point**

• Delay Time

When connecting to the temperature controller E5ZN, set the delay time to 5ms or more.

• Format setting

Make sure to select format 1 when connecting with previous models (manufactured in December 2007 or before) of the THERMAC NEO series (E5AN, E5CN, E5EN, E5GN).

For the continuous access and random access of the temperature controller, refer to the following manual.

User's Manual of the OMRON temperature controller

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 17.5 Temperature Controller Side Setting

**Point**

OMRON temperature controller

For details of OMRON temperature controller, refer to the following manual.

User's Manual of the OMRON temperature controller

| Model name | | Refer to |
|---|---|---|
| Temperature controller | E5AN, E5EN, E5CN, E5GN | ☞ Page 1004 Connecting E5AN, E5EN, E5CN, E5GN |
| | E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT) | ☞ Page 1004 Connecting to E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT) |
| | E5ZN | ☞ Page 1005 Connecting E5ZN |
| | E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T) | ☞ Page 1005 Connecting E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T) |
| | E5CD(-B), E5ED(-B) | ☞ Page 1005 Connecting E5CD(-B), E5ED(-B) |
| | E5AR(-T), E5ER(-T) | ☞ Page 1005 Connecting E5CD(-B), E5ED(-B) |
| Interface converter | K3SC-10 | ☞ Page 1006 Connection to interface converter (K3SC-10) |

## Connecting E5AN, E5EN, E5CN, E5GN

Set the communication data by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8 bits, 7 bits |
| Parity bit*1 | Odd, Even, None |
| Stop bit*1 | 1bit, 2bits |
| Communication unit No.*2 | 0 to 99 |
| CMWT (Communications writing) *3 | ON |

*1 Adjust the settings with GOT settings.

*2 Select the communication unit No. without overlapping with that of other units.

*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

## Connecting to E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT)

Set the communication data by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed*1 | 9600bps,19200bps,38400bps,57600bps |
| Data bit*1 | 8 bits, 7 bits |
| Parity bit*1 | Odd, Even, None |
| Stop bit*1 | 1bit, 2bits |
| Communication unit No.*2 | 0 to 99 |
| CMWT (Communications writing) *3 | ON |

*1 Adjust the settings with GOT settings.

*2 Select the communication unit No. without overlapping with that of other units.

*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

## Connecting E5ZN

Set the communication data by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed*1 | 9600bps, 38400bps |
| Data bit*1 | 8 bits, 7 bits |
| Parity bit*1 | Odd, Even, None |
| Stop bit*1 | 1bit, 2bits |
| Communication unit No.*2 | 0 to 15 |
| CMWT (Communications writing) *3 | ON |

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

## Connecting E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T)

Set the communication data by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed*1 | 9600bps,19200bps,38400bps,57600bps |
| Data bit*1 | 8 bits, 7 bits |
| Parity bit*1 | Odd, Even, None |
| Stop bit*1 | 1bit, 2bits |
| Communication unit No.*2 | 0 to 99 |
| CMWT (Communications writing) *3 | ON |

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

## Connecting E5CD(-B), E5ED(-B)

Configure the communication data settings by operating the keys of the temperature controller.

| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed *1 | 9600bps,19200bps,38400bps,57600bps,115200bps |
| Data bit *1 | 8 bits, 7 bits |
| Parity bit *1 | Odd, Even, None |
| Stop bit *1 | 1 bit, 2 bits |
| Communication unit No. *2 | 0 to 99 |
| CMWT (Communications writing) *3 | ON |

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn on CMWT (Communications writing) in advance.

# Connection to interface converter (K3SC-10)

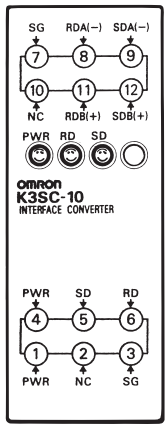
## Communication settings

Make the communication settings by operating the DIP switch of the temperature controller.

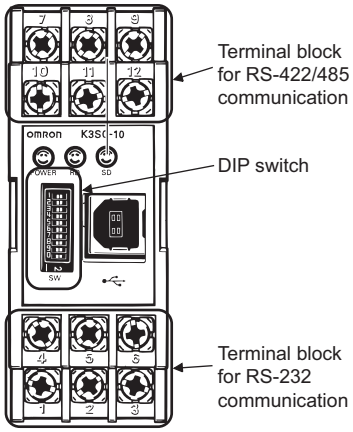
| Item | Set value |
|---|---|
| Protocol | CompoWay/F (Sysway) |
| Transmission speed*1 | 19200bps, 38400bps |
| Data bit*1 | 7 bits, 8 bits |
| Parity bit*1 | Odd, Even, None |
| Stop bit*1 | 1bit, 2bits |
| Communication Type | RS-232 ↔ RS485 |
| Echo back*2 | With, Without |

*1 Adjust the settings with GOT settings.
*2 Set to “Without”.

## Settings by DIP switch

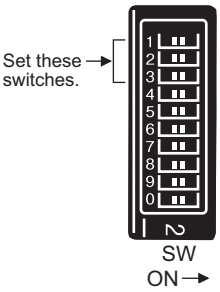



Front of K3SC-10 body



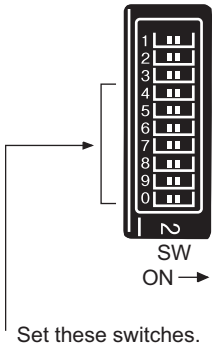

Inside of K3SC-10 body
(When removing the front cover)

### ■Transmission speed settings




| Transmission speed (bps) | Switch No. | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 1200 | ON | OFF | OFF |
| 2400 | OFF | ON | OFF |
| 4800 | ON | ON | OFF |
| 9600 | OFF | OFF | OFF |
| 19200 | ON | OFF | ON |
| 38400 | OFF | ON | ON |

### ■Settings of data length, parity bit, stop bit, master/slave device and echoback




Set these switches.

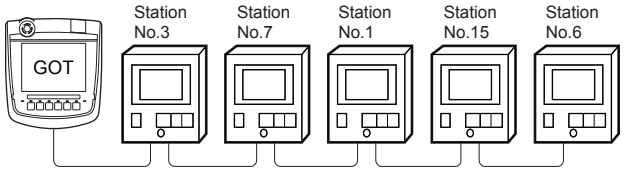
| Setting item | Set value | Switch No. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Data bit | 7bits | OFF | | | | | | |
| | 8bits | ON | | | | | | |
| Stop bit | 2bits | | OFF | | | | | |
| | 1bit | | ON | | | | | |
| Parity | Even | | | OFF | OFF | | | |
| | Odd | | | ON | OFF | | | |
| | None | | | OFF | ON | | | |
| Communication Type | RS232 ↔ RS422 | | | | | OFF | ON | |
| | RS-232 ↔ RS485 | | | | | OFF | OFF | |
| Echo back | Without | | | | | | | OFF |
| | With | | | | | | | ON |

# Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

| Model name | Specification range |
|---|---|
| E5AN, E5EN, E5CN, E5GN | 0 to 99 |
| E5ZN | 0 to 15 |

## Indirect specification

When setting the device, indirectly specify the station number of the temperature controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 0 to 99: For E5AN, E5EN, E5CN or E5GN<br>0 to 15: For E5ZN<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

## All station specification

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.

# 17.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
OMRON equipment ([OMRON THERMAC/INPANEL NEO])
OMRON equipment ([OMRON Digital Temperature Controller])

# 17.7 Precautions

## Station number setting of the temperature controller system

Make sure to establish temperature controller system with No.1 station.

## GOT clock control

Since the temperature controller does not have a clock function, the settings of [time adjusting] or [Broadcast] by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# MEMO

# 18 KEYENCE PLC


- Page 1011 Connectable Model List
- Page 1013 Serial Connection
- Page 1050 Ethernet Connection
- Page 1056 Settable Device Range




## 18.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| KV-8000 | KV-8000 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1013 Connecting to KV-8000 or KV-7000 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |
| KV-7000 | KV-7500<br>KV-7300 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1013 Connecting to KV-8000 or KV-7000 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |
| KV-5000 | KV-5500<br>KV-5000 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1017 Connecting to KV-5000 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |
| KV-3000 | KV-3000 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1019 Connecting to KV-3000 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |
| KV-1000 | KV-1000 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1022 Connecting to KV-1000 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |
| KV-700 | KV-700 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1025 Connecting to KV-700 series |
| | | | RS-422 | | |
| | | | RS-485 | GT2506HS GT2505HS | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| KV Nano | KV-N14□□ | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1028 Connecting to KV Nano series |
| | | | RS-422 | | |
| | | | RS-485 | | |
| | KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1028 Connecting to KV Nano series |
| | | | RS-422 | | |
| | | | RS-485 | | |
| | | | Ethernet | GT2506HS GT2505HS | ☞ Page 1050 Ethernet connection |

# 18.2 Serial Connection

## Connecting to KV-8000 or KV-7000 series

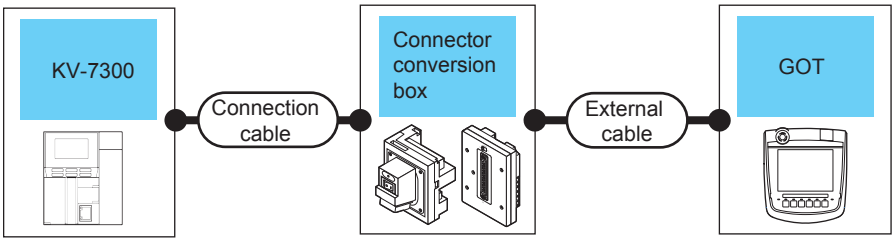


Communication driver

Serial (KEYENCE)

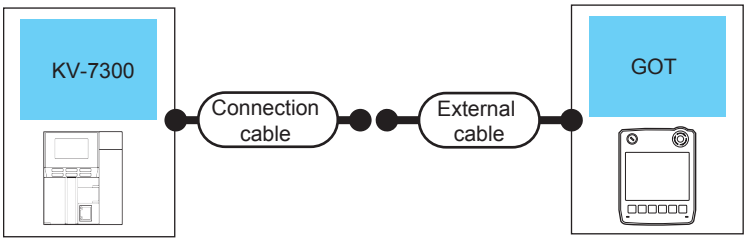
### When connecting to a PLC

#### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| KV-7300 | RS-232 | GT09-C30R21101-6P<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

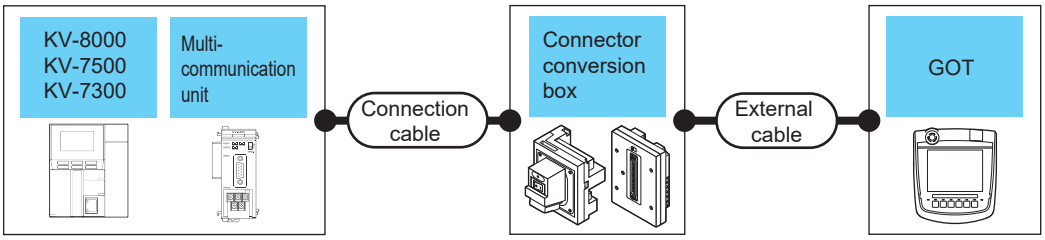
#### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-7300 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to multi-communication unit

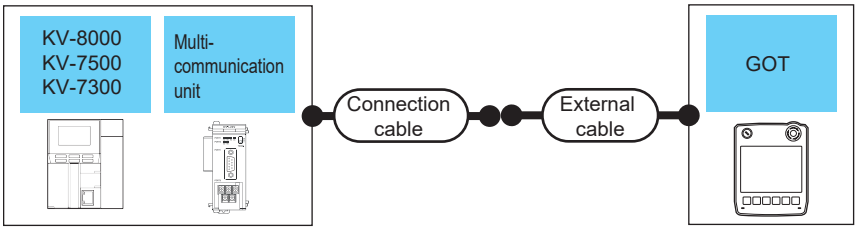
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-8000 KV-7500 KV-7300 | KV-L20V (port 1) KV-L21V (port 1) KV-XL202 | RS-232 | GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | KV-L20V (port 2) KV-L21V (port 2) | | GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | | RS-485 | User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | KV-XL402 | RS-422 | User preparing RS422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | | RS-485 | User preparing RS485 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

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For details of the product, contact KEYENCE CORPORATION.

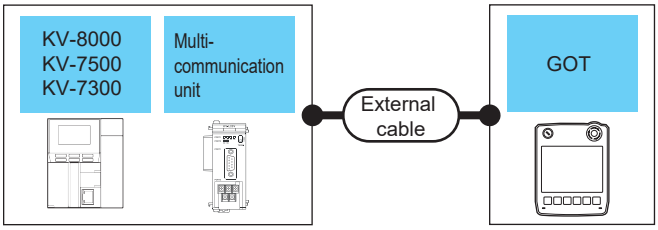
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-8000<br>KV-7500<br>KV-7300 | KV-L20V<br>(port 1)<br>KV-L21V<br>(port 1)<br>KV-XL202 | RS-232 | User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V<br>(port 2)<br>KV-L21V<br>(port 2) | RS-232 | User preparing RS-232 connection diagram 7) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | KV-XL402 | RS-422 | User preparing RS422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS485 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | | | | |
| KV-8000<br>KV-7500<br>KV-7300 | KV-L20V<br>(port 1)<br>KV-L21V<br>(port 1)<br>KV-XL202 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V<br>(port 2)<br>KV-L21V<br>(port 2) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 8) | GT 2505HS | | |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | | |
| | KV-XL402 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 9) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS485 connection diagram 9) | GT 2505HS | | |

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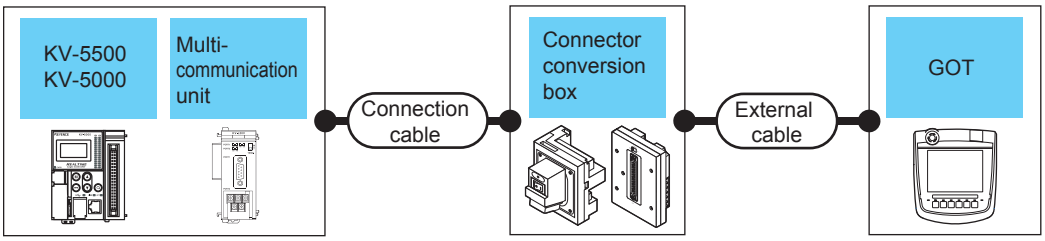
# Connecting to KV-5000 series

Communication driver

Serial (KEYENCE)



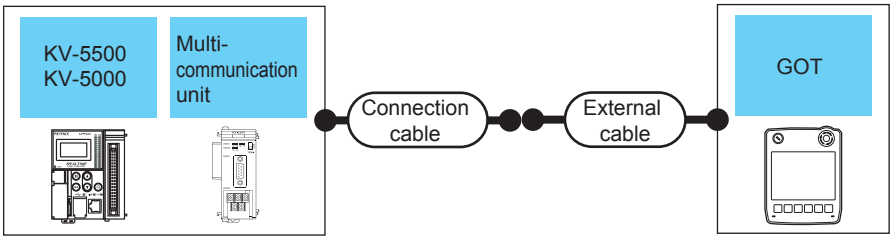
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-5500 KV-5000 | KV-L20V (port 1) | RS-232 | GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | KV-L20V (port 2) | | GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | | | User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

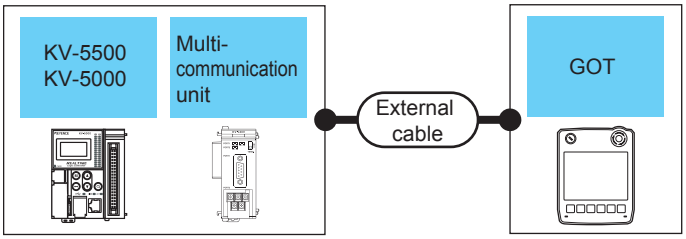
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-5500<br>KV-5000 | KV-L20V<br>(port 1) | RS-232 | GT09-C30R21102-9S(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V<br>(port 2) | | GT09-C30R21103-3T(3m)<br>or<br>User preparing RS-232 connection diagram 7) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m)<br>GT09-C100R41101-5T(10m)<br>or<br>User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

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## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | | | | |
| KV-5500<br>KV-5000 | KV-L20V<br>(port 1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V<br>(port 2) | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 8) | GT 2505HS | | |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | | |

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# Connecting to KV-3000 series

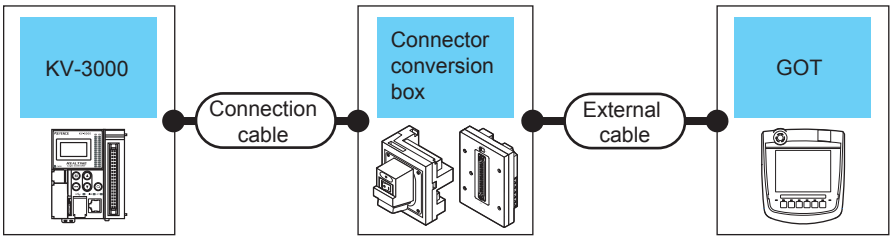
Communication driver

Serial (KEYENCE)



## When connecting to a PLC

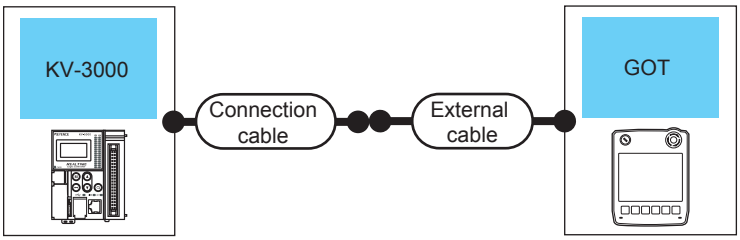
### ■When using the connector conversion box




| PLC | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Conversion connector*1 | | | | | |
| KV-3000 | RS-232 | GT09-C30R21101-6P or User preparing RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | OP-26487*1 | OP-26486 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The cable and conversion connector are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

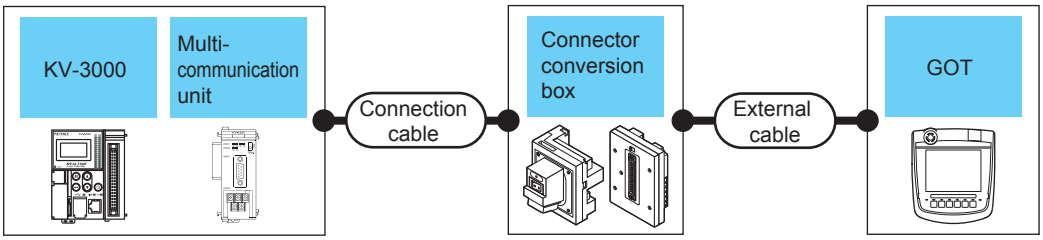
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| KV-3000 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to multi-communication unit

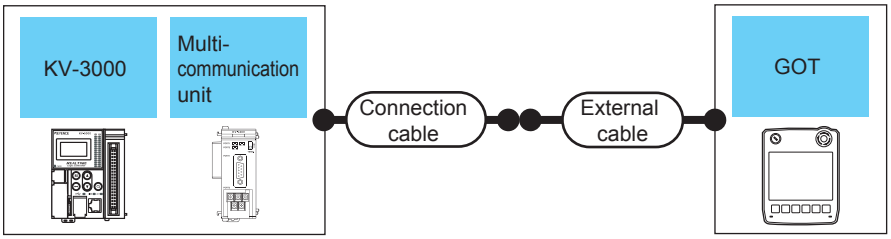
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-3000 | KV-L20V (port 1) | RS-232 | GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | KV-L20V (port 2) | | GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| KV-3000 | KV-L20V (port 2) | RS-485 | User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

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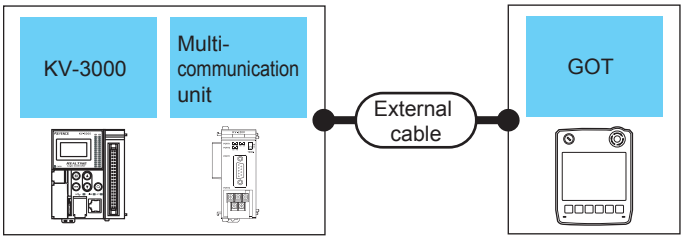
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-3000 | KV-L20V (port 1) | RS-232 | User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V (port 2) | | User preparing RS-232 connection diagram 7) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | | | | |
| KV-3000 | KV-L20V (port 1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20V (port 2) | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 8) | GT 2505HS | | |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | | |

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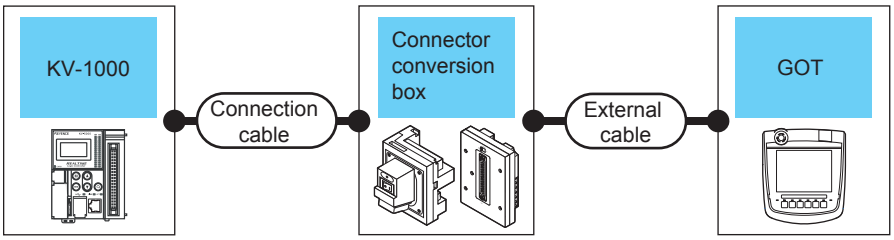
# Connecting to KV-1000 series

Communication driver

Serial (KEYENCE)

## When connecting to PLC

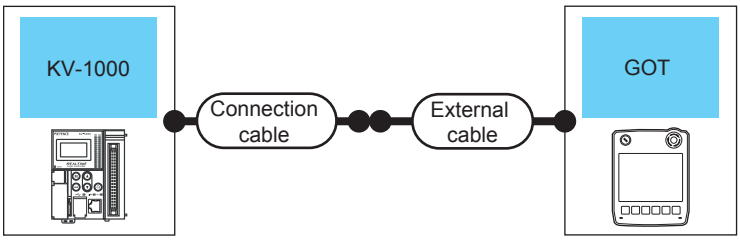
### ■When using the connector conversion box




| PLC | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Conversion connector*1 | | | | | |
| KV-1000 | RS-232 | GT09-C30R21101-6P or User preparing RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | OP-26487*1 | OP-26486 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The cable and conversion connector are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

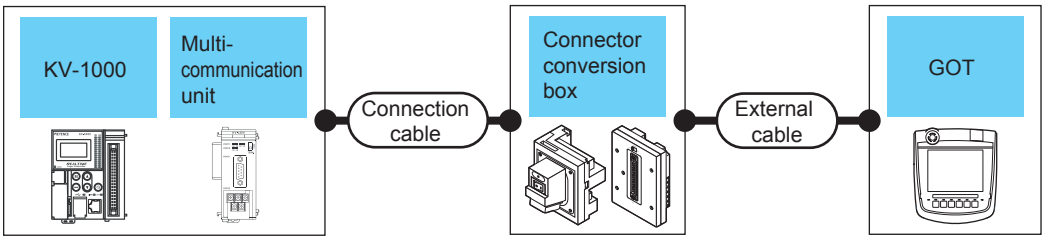
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| KV-1000 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to multi-communication unit

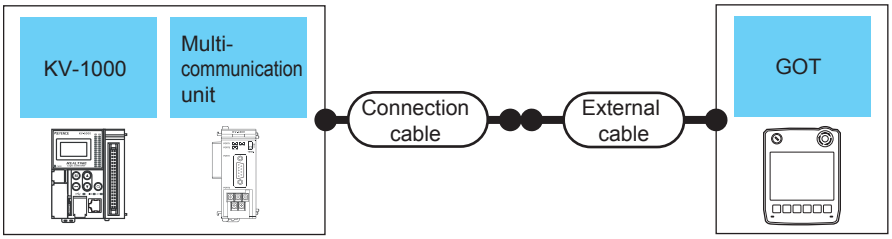
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-1000 | KV-L20R, KV-L20V (port 1) | RS-232 | GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | KV-L20R, KV-L20V (port 2) | | GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | | RS-485 | User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

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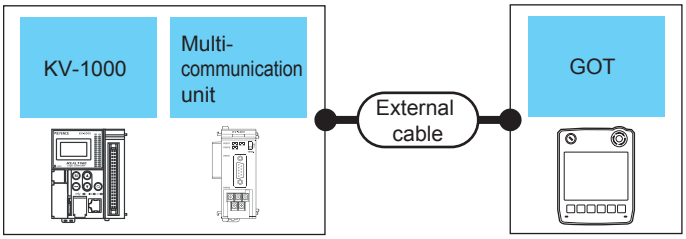
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-1000 | KV-L20R,<br>KV-L20V<br>(port 1) | RS-232 | User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20R,<br>KV-L20V<br>(port 2) | | User preparing RS-232 connection diagram 7) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | | | | |
| KV-1000 | KV-L20R,<br>KV-L20V<br>(port 1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20R,<br>KV-L20V<br>(port 2) | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 8) | GT 2505HS | | |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | | |

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

# Connecting to KV-700 series

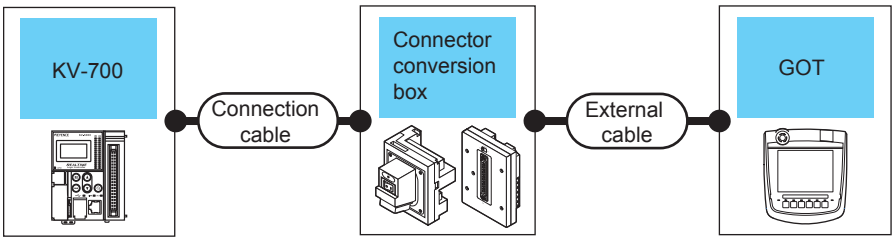
Communication driver

Serial (KEYENCE)



## When connecting to PLC

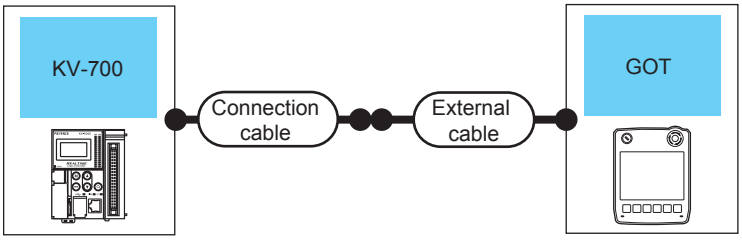
### ■When using the connector conversion box




| PLC | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | Conversion connector*1 | | | | | |
| KV-700 | RS-232 | GT09-C30R21101-6P<br>or<br>User preparing RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | OP-26487*1 | OP-26486 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The cable, conversion connector, and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

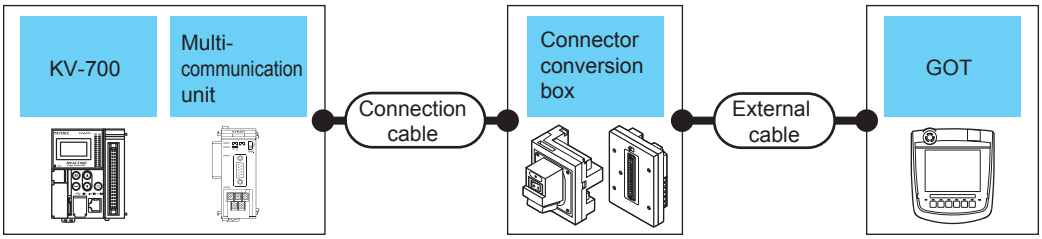
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-700 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to multi-communication unit

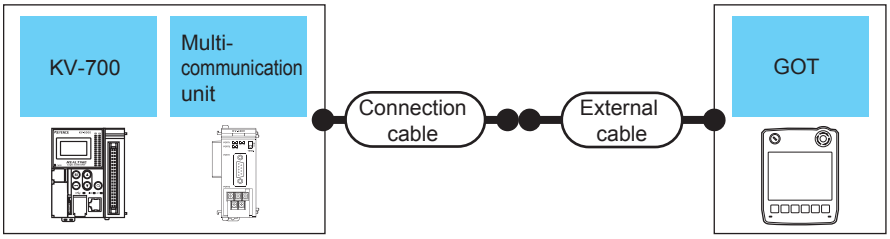
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-700 | KV-L20R, KV-L20, KV-L20V (port 1) | RS-232 | GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | KV-L20R, KV-L20, KV-L20V (port 2) | | GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| KV-700 | KV-L20R, KV-L20, KV-L20V (port 2) | RS-485 | User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 multi-communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

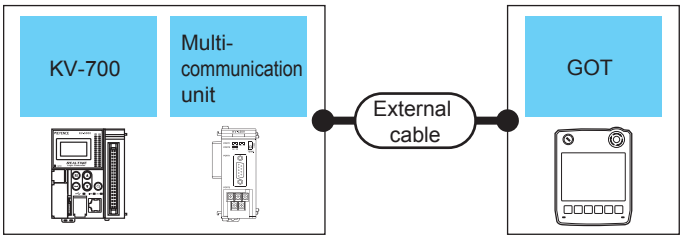
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-700 | KV-L20R,<br>KV-L20,<br>KV-L20V<br>(port 1) | RS-232 | User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20R,<br>KV-L20,<br>KV-L20V<br>(port 2) | | User preparing RS-232 connection diagram 7) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit*1 | Communication Type | | | | |
| KV-700 | KV-L20R,<br>KV-L20,<br>KV-L20V<br>(port 1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit |
| | KV-L20R,<br>KV-L20,<br>KV-L20V<br>(port 2) | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 8) | GT 2505HS | | |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | | |

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

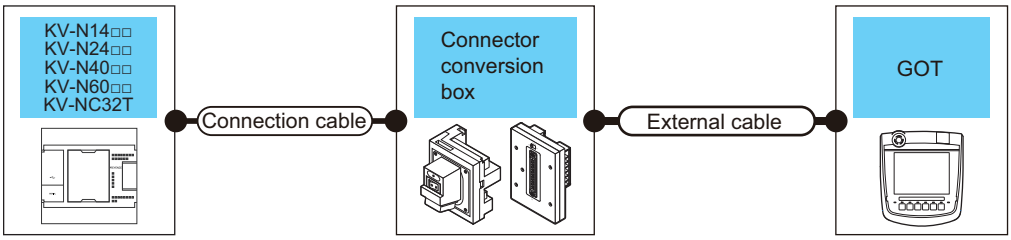
# Connecting to KV Nano series

Communication driver

Serial (KEYENCE)

## When connecting to PLC

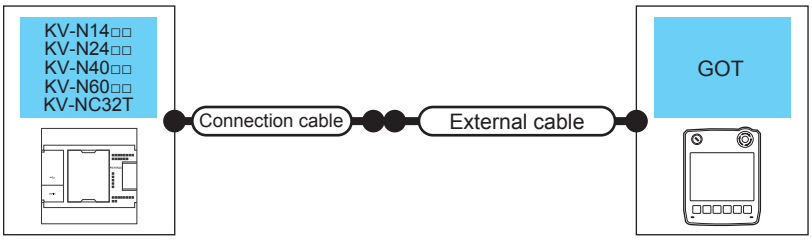
### ■When using the connector conversion box




| PLC | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Conversion connector*1 | | | | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | RS-232 | GT09-C30R21101-6P<br>or<br>User preparing RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | OP-26487*1 | OP-26486 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The cable, conversion connector, and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

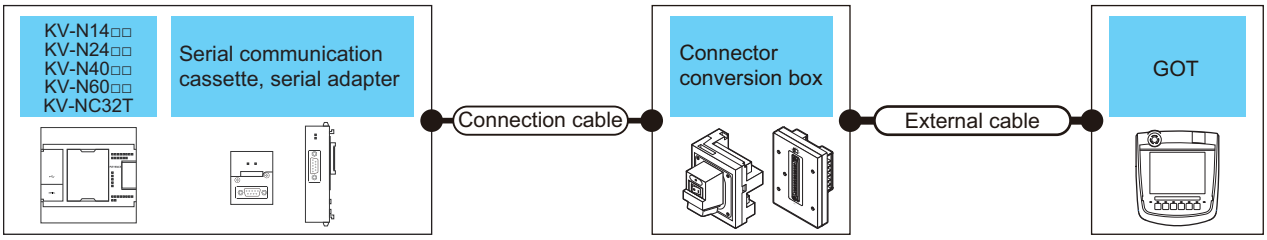
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## Connecting to serial communication cassette or serial adapter

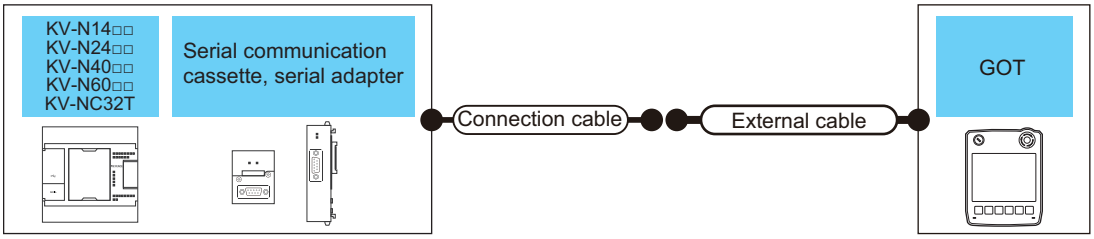
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Serial communication cassette, serial adapter *1 | Communication Type | Cable model Connection diagram number | | | | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-N10L,<br>KV-NC10L,<br>KV-NC20L<br>(port 1) | RS-232 | GT09-C30R21102-9S(3m)<br>or<br>User preparing RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| KV-NC32T | KV-NC20L<br>(port 2) | RS-232 | User preparing RS-232 connection diagram 9) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-N11L,<br>KV-NC20L<br>(port 2) | RS-422 | User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 serial communication cassette or serial adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | | RS-485 | User preparing RS-485 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

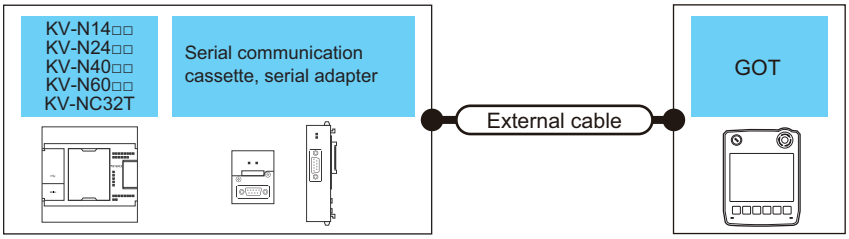
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Serial communication cassette, serial adapter *1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-N10L,<br>KV-NC10L,<br>KV-NC20L<br>(port 1) | RS-232 | User preparing RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-NC20L<br>(port 2) | RS-232 | User preparing RS-232 connection diagram 10) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| | KV-N11L,<br>KV-NC20L<br>(port 2) | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | | RS-485 | User preparing RS-485 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Serial communication cassette, serial adapter *1 | Communication Type | | | | |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-N10L,<br>KV-NC10L,<br>KV-NC20L<br>(port 1) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 5) | GT 2505HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| KV-N14□□<br>KV-N24□□<br>KV-N40□□<br>KV-N60□□<br>KV-NC32T | KV-NC20L<br>(port 2) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 11) | GT 2505HS | 6m | 1 GOT for 1 serial communication cassette or serial adapter |
| | KV-N11L,<br>KV-NC20L<br>(port 2) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 6) | GT 2505HS | 13m | |
| | | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 6) | GT 2505HS | 13m | |

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

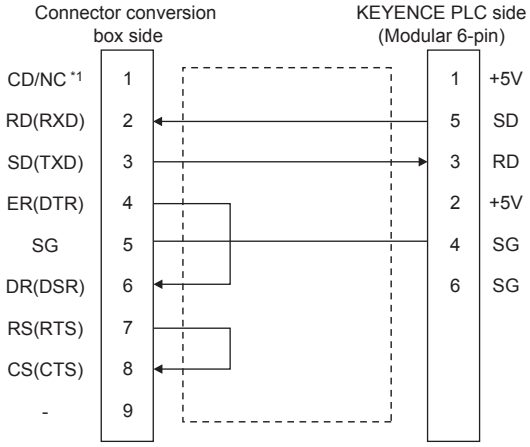
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

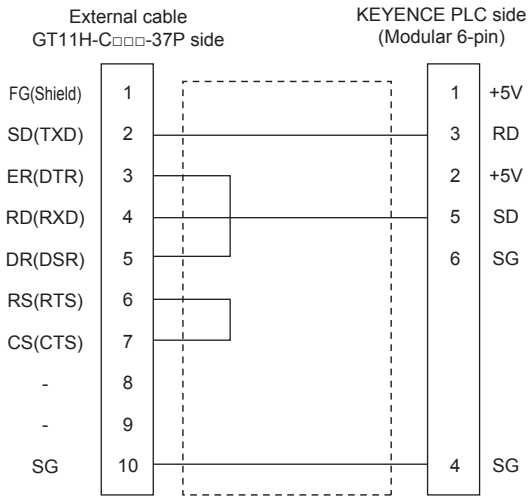
### ■Connection diagram

• RS-232 connection diagram 1)

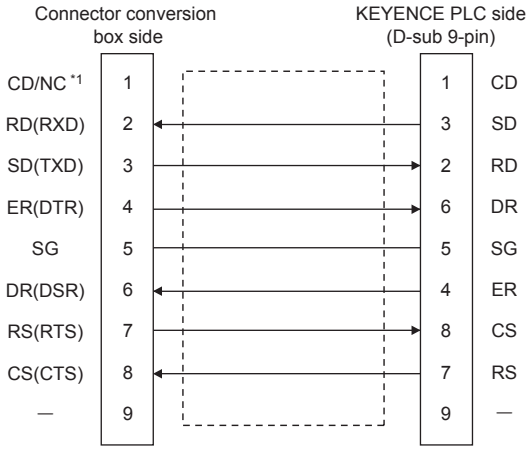



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 2)

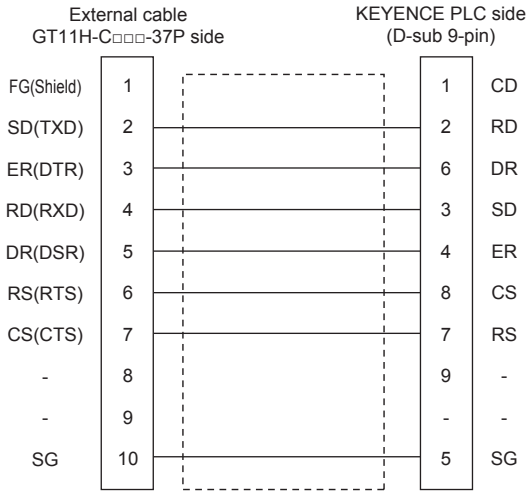



• RS-232 connection diagram 3)

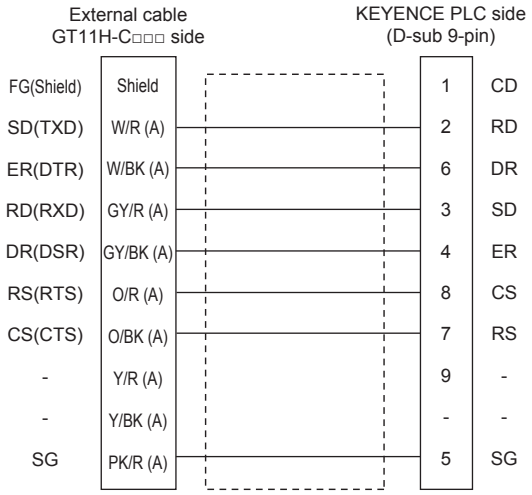



*1 GT2506HS-V: CD, GT2505HS-V: NC

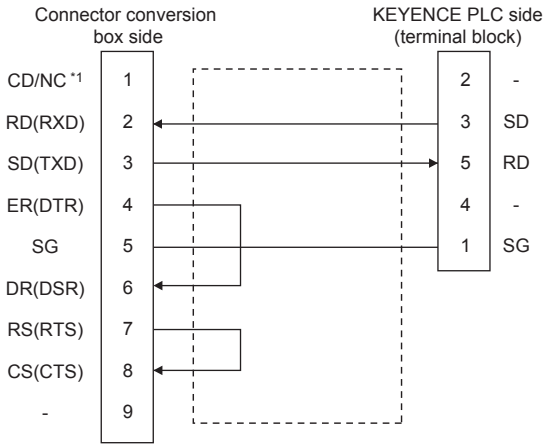
• RS-232 connection diagram 4)




• RS-232 connection diagram 5)

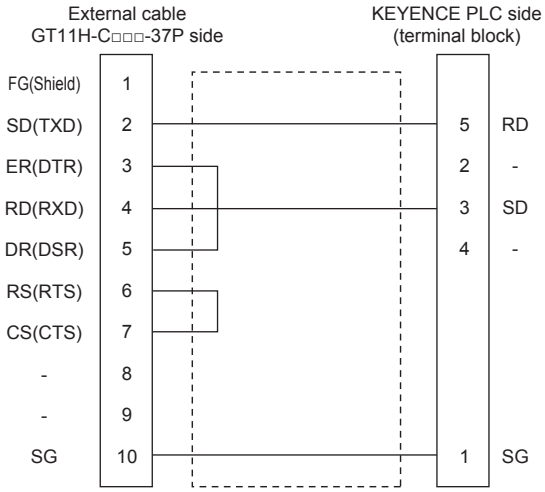



• RS-232 connection diagram 6)

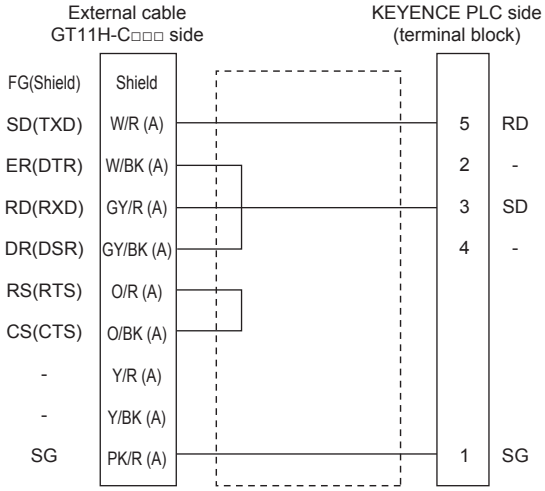



*1 GT2506HS-V: CD, GT2505HS-V: NC

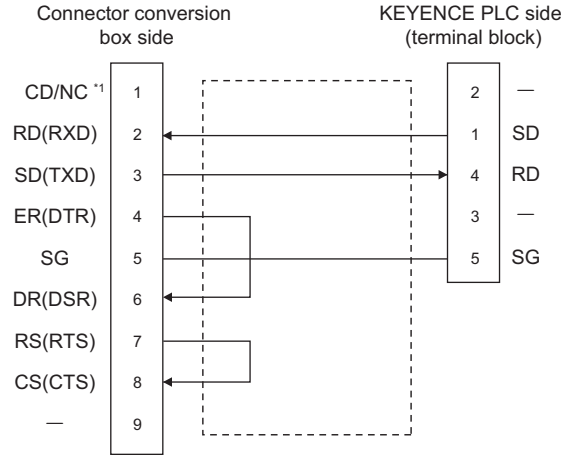
• RS-232 connection diagram 7)




• RS-232 connection diagram 8)

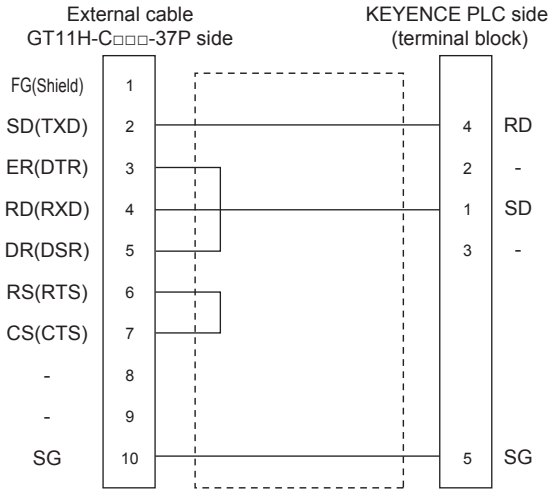



• RS-232 connection diagram 9)

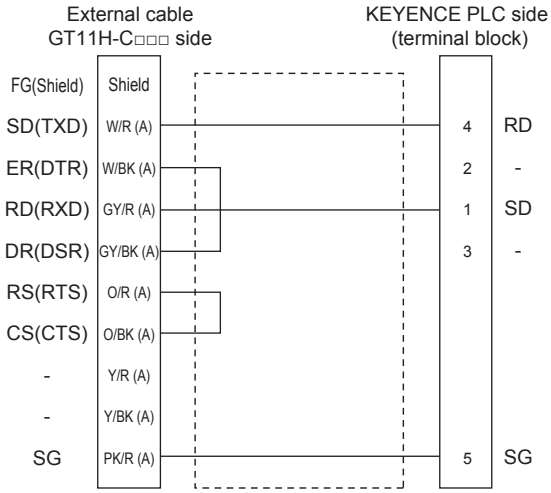



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 10)




• RS-232 connection diagram 11)




## ■Precaution when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• KEYENCE PLC side connector

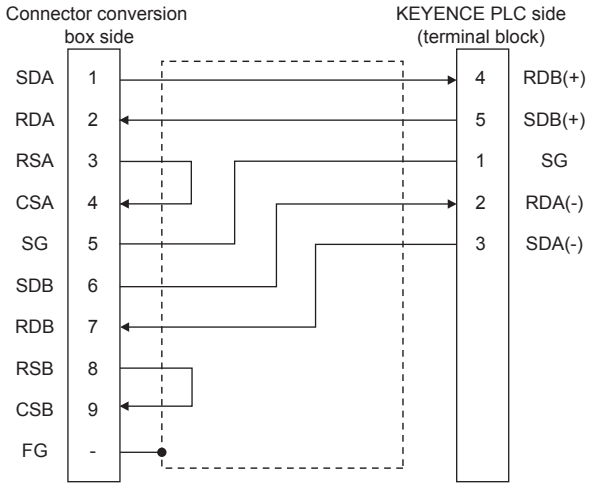
Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

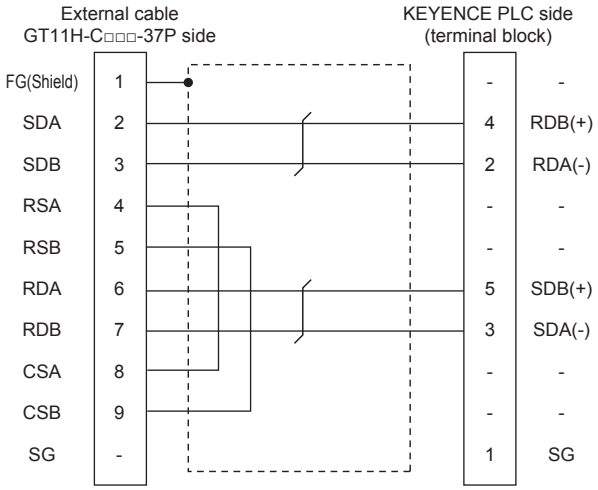
## RS-422 cable

### ■Connection diagram

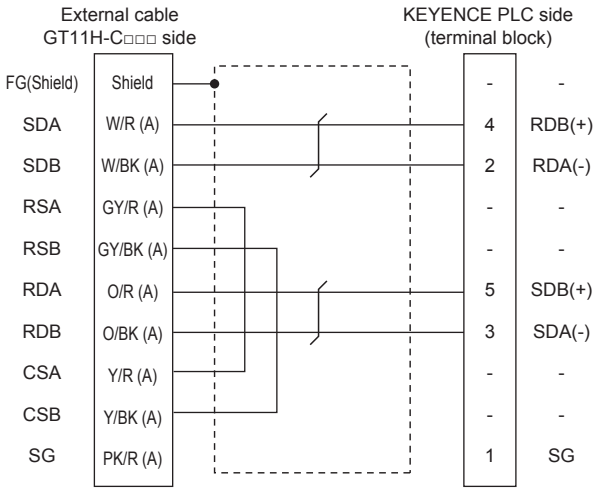
• RS-422 connection diagram 1)



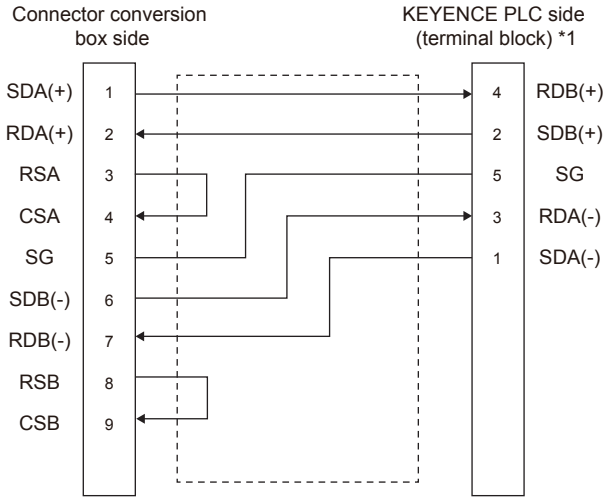

• RS-422 connection diagram 2)




• RS-422 connection diagram 3)

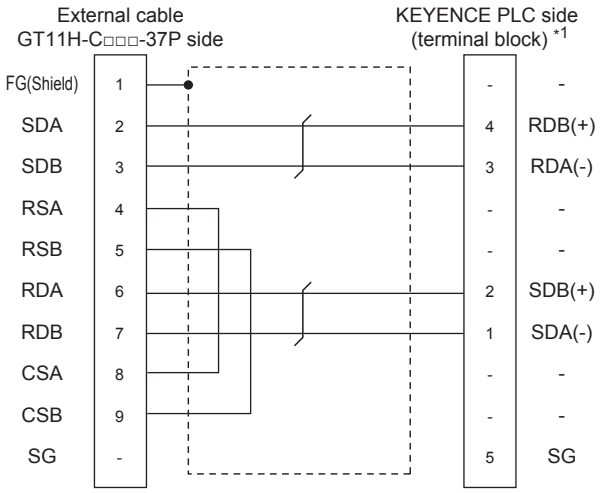


• RS-422 connection diagram 4)



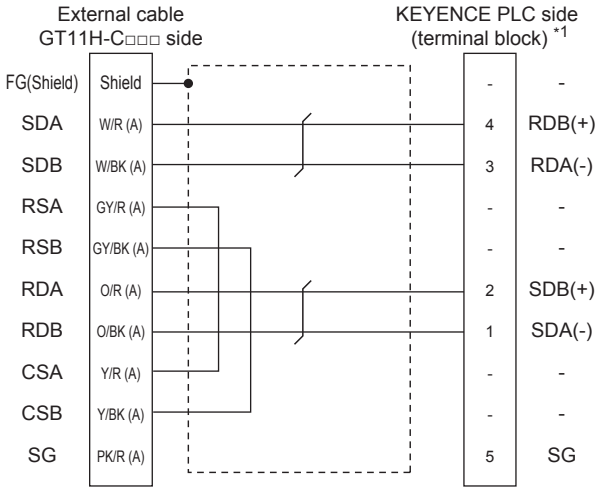

*1 Turn on the terminating resistor selector.

• RS-422 connection diagram 5)



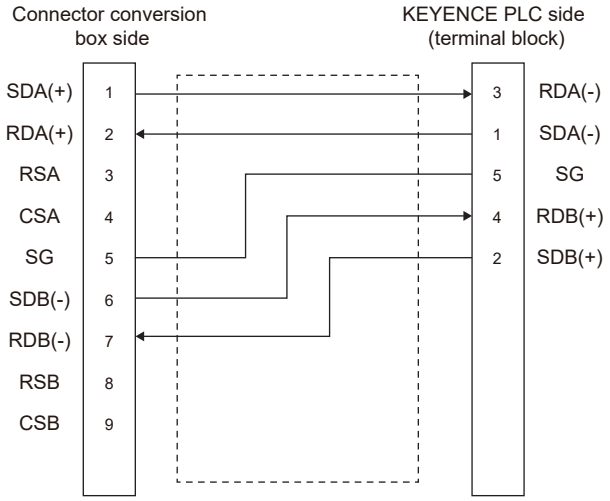

*1 Turn on the terminating resistor selector.

• RS-422 connection diagram 6)

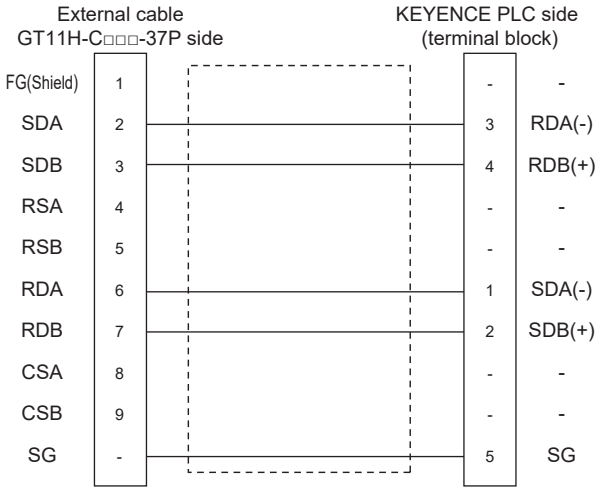



*1 Turn on the terminating resistor selector.

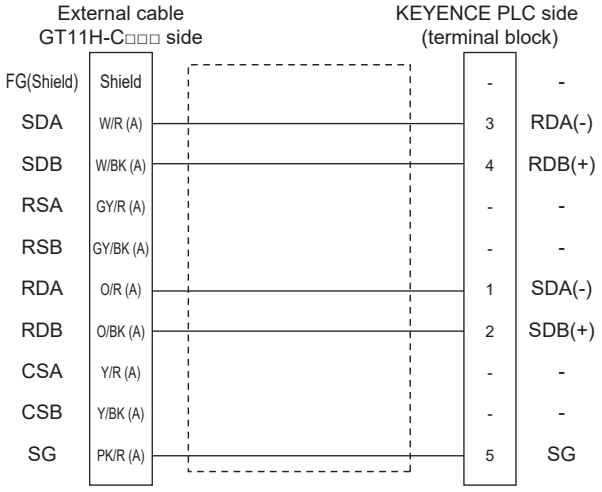
• RS422 connection diagram 7)




• RS422 connection diagram 8)




• RS422 connection diagram 9)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• KEYENCE PLC side connector

Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

## ■Connecting terminating resistors

• GOT side

When connecting a KEYENCE PLC to the GOT, a terminating resistor must be connected to the GOT.

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

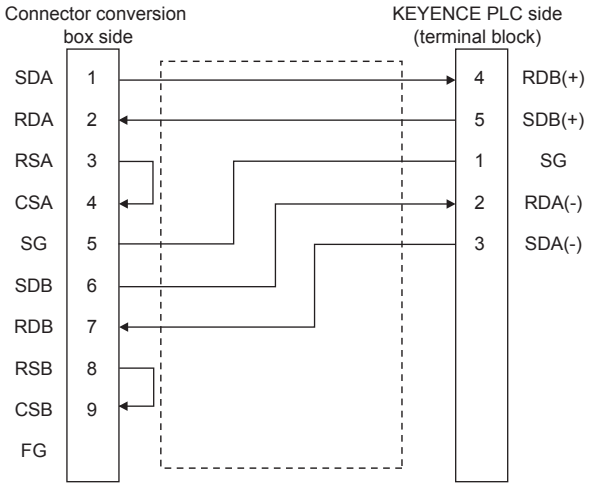
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

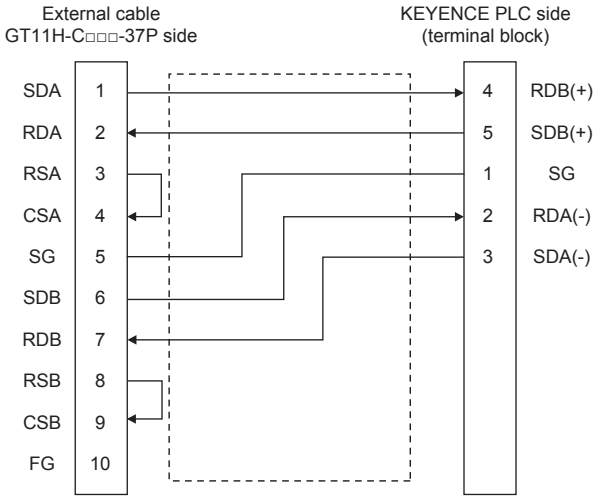
## RS-485 cable

### ■Connection diagram

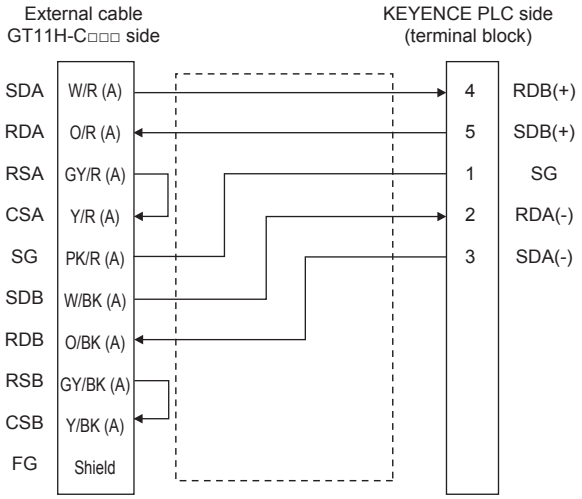
• RS-485 connection diagram 1)



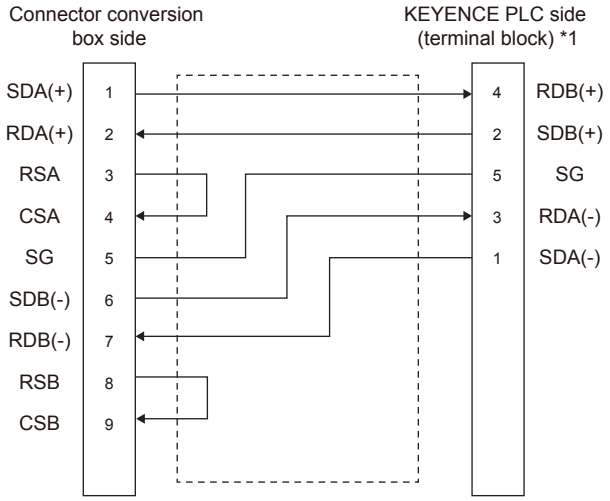

• RS-485 connection diagram 2)




• RS-485 connection diagram 3)

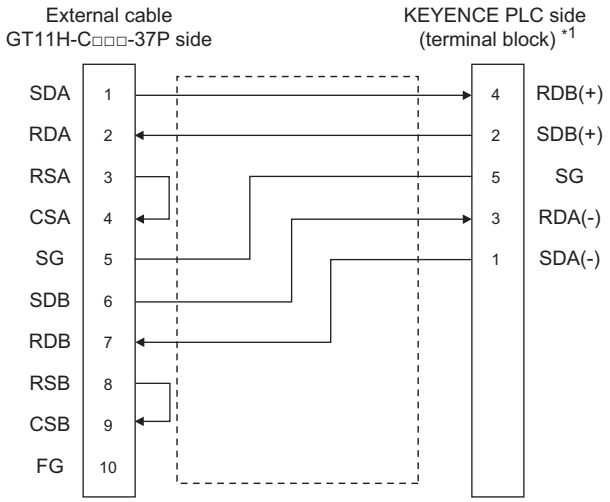


• RS-485 connection diagram 4)



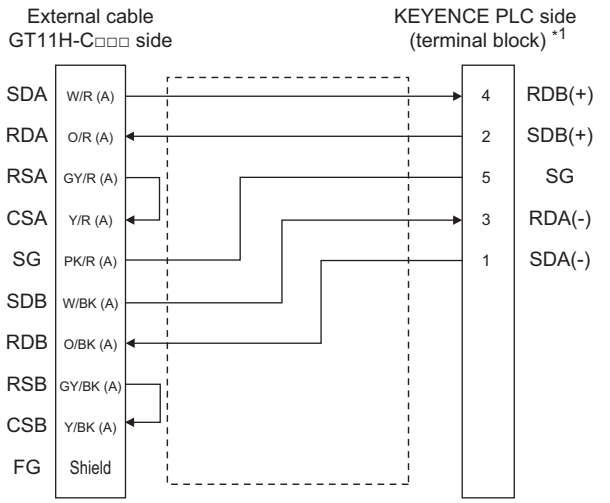

*1 Turn on the terminating resistor selector.

• RS-485 connection diagram 5)



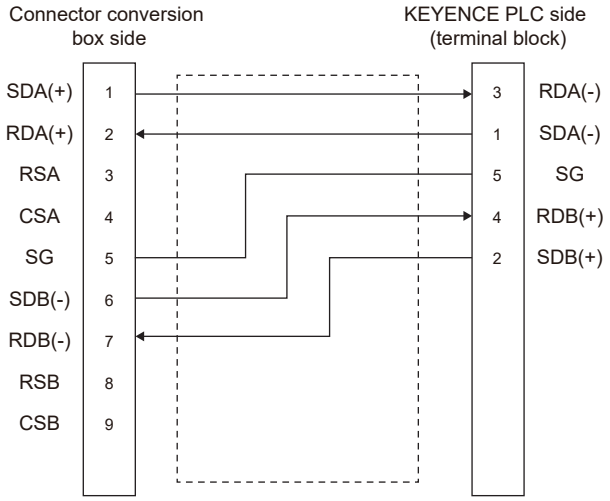

*1 Turn on the terminating resistor selector.

• RS-485 connection diagram 6)

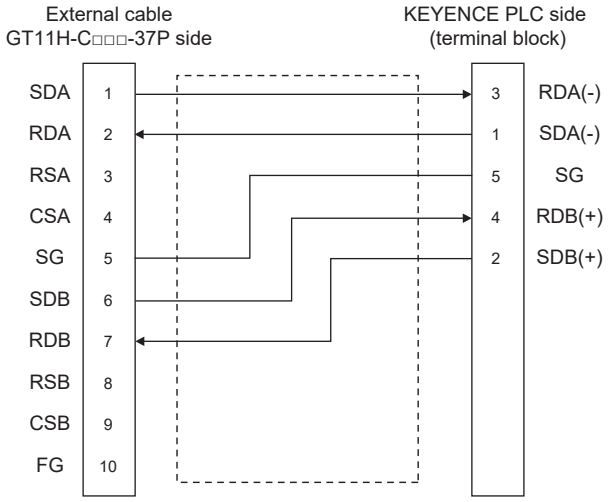



*1 Turn on the terminating resistor selector.

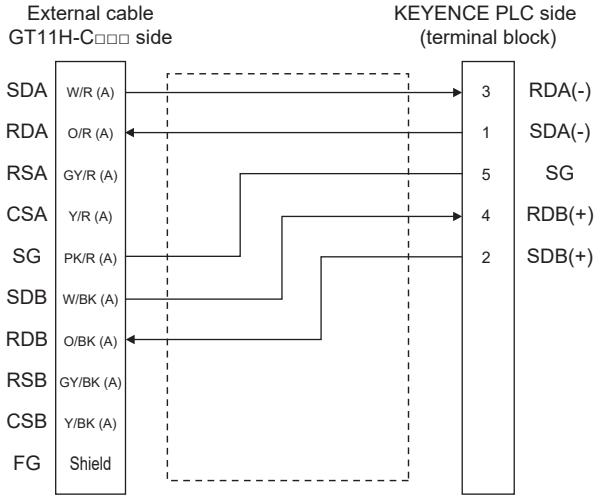
• RS485 connection diagram 7)




• RS485 connection diagram 8)




• RS485 connection diagram 9)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• KEYENCE PLC side connector

Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

## ■Connecting terminating resistors

• GOT

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

• KEYENCE PLC

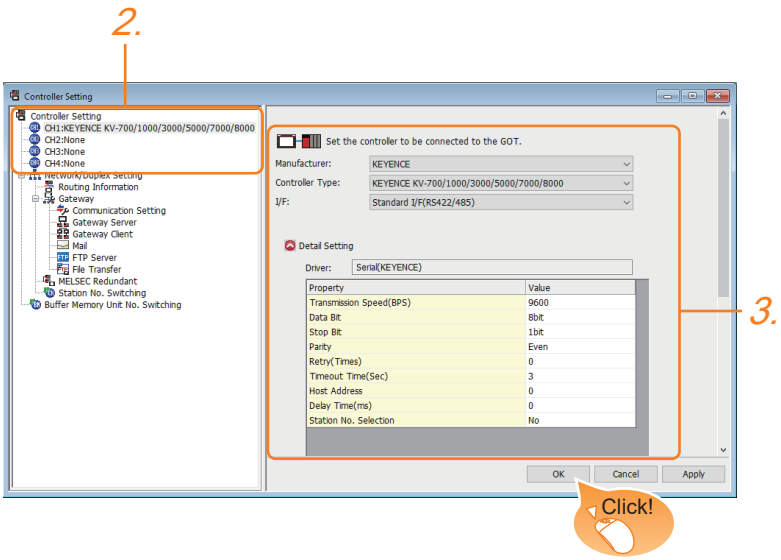
Connect the terminating resistor on the KEYENCE PLC side when connecting a GOT to a KEYENCE PLC.

☞ Page 1046 PLC Side Setting

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [KEYENCE]
- [Controller Type]: [KEYENCE KV-700/1000/3000/5000/7000/8000]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1045 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |
| Station No. Selection | No |

| Item | Contents | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 0) | 0 to 9 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |
| Station No. Selection | Specify whether to use the station No. during communication.<br>(Default: No) | Yes or No<br>According to the connection type, configure the setting as shown below.<br>• Select "Yes" for connection through either of the following.<br>Multi-communication unit (port 2)<br>Serial communication adapter (port 2)<br>• Select "No" for connection through one of the following.<br>Direct CPU connection (serial)<br>Multi-communication unit (port 1)<br>Serial communication cassette (port 1)<br>Serial communication adapter (port 1) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

KEYENCE PLC

For details of KEYENCE PLC, refer to the following manual.

KEYENCE PLC user's Manual

| Model name | | Reference |
|---|---|---|
| PLC CPU | KV-7300 | ☞ Page 1046 Connecting KV-7300, KV-3000, KV-1000 |
| | KV-3000 | ☞ Page 1046 Connecting KV-7300, KV-3000, KV-1000 |
| | KV-1000 | ☞ Page 1046 Connecting KV-7300, KV-3000, KV-1000 |
| | KV-700 | ☞ Page 1046 Connecting to KV-700 |
| | KV-N14□□ | ☞ Page 1047 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T |
| | KV-N24□□ | ☞ Page 1047 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T |
| | KV-N40□□ | ☞ Page 1047 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T |
| | KV-N60□□ | ☞ Page 1047 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T |
| | KV-NC32T | ☞ Page 1047 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T |
| Multi-communication unit | KV-L20R | ☞ Page 1047 Connecting to KV-L20R, KV-L20, KV-L20V, KV-L21V, KV-XL202, KV-XL402 |
| | KV-L20 | |
| | KV-L20V | |
| | KV-L21V | |
| | KV-XL202 | |
| | KV-XL402 | |
| Serial communication cassette | KV-N10L | ☞ Page 1049 Connecting to KV-N10L, KV-N11L, KV-NC10L, KV-NC20L |
| | KV-N11L | |
| Serial adapter | KV-NC10L | |
| | KV-NC20L | |

## Connecting KV-7300, KV-3000, KV-1000

| Setting items | Set value |
|---|---|
| Communication mode *2 | KV mode (Upper link) |
| Transmission Speed | 9600 to 115200 bps*1 |
| Data bit | 8bits |
| Parity bit | Even |
| Stop bit | 1bit |

*1 There is no transmission speed setting on the PLC side.
The transmission speed of the PLC side is automatically adjusted to that of the GOT side.

*2 KV-3000 and KV-1000 do not have the communication mode setting.

## Connecting to KV-700

| Setting items | Set value |
|---|---|
| Transmission Speed | 9600bps |
| Data bit | 8bits |
| Parity bit | Even |
| Stop bit | 1bit |

## Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T

| Setting items | Set value |
|---|---|
| Communication mode | KV mode (Upper link) |
| Transmission speed *1*2 | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 8bits |
| Parity bit | Even |
| Stop bit | 1bit |

*1 Only transmission speeds available on the GOT side are shown.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1044 Setting communication interface (Communication settings)

## Connecting to KV-L20R, KV-L20, KV-L20V, KV-L21V, KV-XL202, KV-XL402

### ■Communication settings

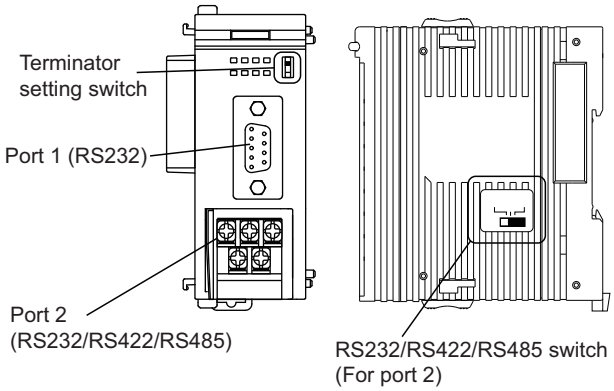
| Setting items | Set value |
|---|---|
| Communication mode | KV mode (Upper link) |
| Transmission speed*1*2 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 8bits |
| Parity bit | Even |
| Stop bit | 1bit |
| Station No.*3 | 0 to 9 |

*1 Only transmission speeds available on the GOT side are shown.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1044 Setting communication interface (Communication settings)
*3 Set the station No. according to the host address on the GOT side.
For the Host Address setting on the GOT side, refer to the following.
☞ Page 1044 Setting communication interface (Communication settings)

## ■Setting DIP switches

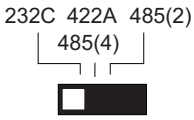
Set the DIP switches.

- When using KV-L20R or KV-L20



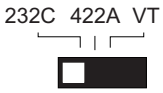

RS232/RS422/RS485 switch (For port 2)

(For KV-L20R)




| Settings | |
|---|---|
| **For RS-232 communication** | **For RS-422 communication** |
| RS-232C | RS-422A<br>485(4) |

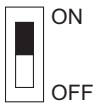
(For KV-L20)




| Settings | |
|---|---|
| **For RS-232 communication** | **For RS-422 communication** |
| RS-232C | RS-422A |

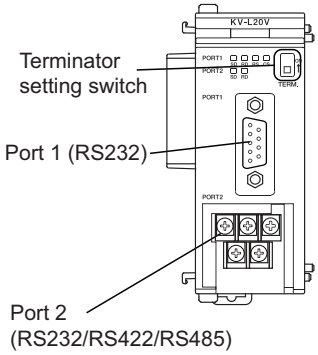
Terminator setting switch

Set when carrying out RS-422 communication.




| Settings | |
|---|---|
| **When multi-communication unit is a terminal** | **When multi-communication unit is not a terminal** |
| ON | OFF |

• When using KV-L20, KV-L21V



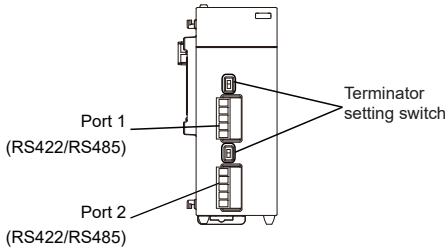

Terminator setting switch

Set when carrying out RS-422 communication.




| Settings | |
|---|---|
| **When multi-communication unit is a terminal** | **When multi-communication unit is not a terminal** |
| ON | OFF |

• When using KV-XL402




Terminator setting switch

Set when carrying out RS-422 communication.




| Settings | |
|---|---|
| **When multi-communication unit is a terminal** | **When multi-communication unit is not a terminal** |
| ON | OFF |

## Connecting to KV-N10L, KV-N11L, KV-NC10L, KV-NC20L

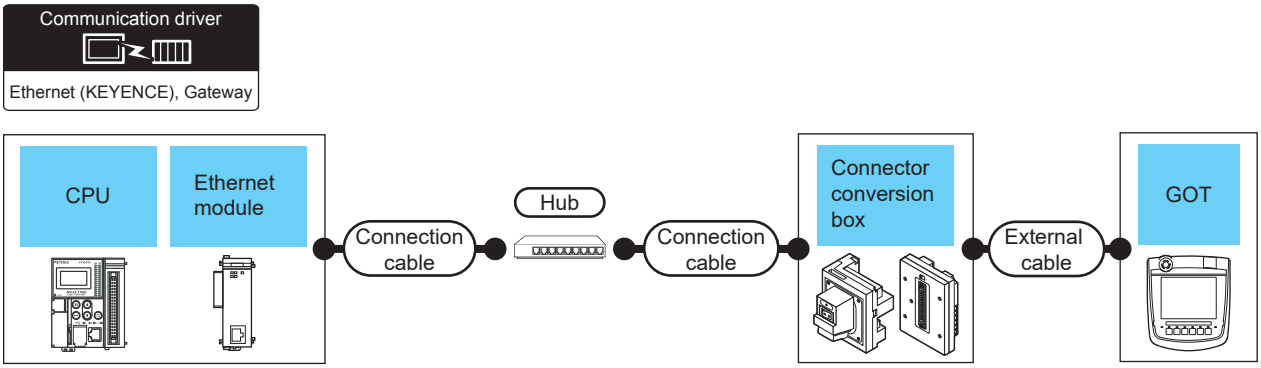
| Setting items | Set value |
|---|---|
| Communication mode | KV mode (Upper link) |
| Transmission speed *1*2 | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 8bits |
| Parity bit | Even |
| Stop bit | 1bit |

*1 Only transmission speeds available on the GOT side are shown.

*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1044 Setting communication interface (Communication settings)

# 18.3 Ethernet Connection

## Ethernet connection




| PLC Series | Ethernet module*3 | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| | | Cable model *1 | Maximum segment length*2 | | | | |
| KV-5000<br>KV-7500<br>KV-8000 | - | Twisted pair cable*1<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br><br>When PLC:GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>TCP: 15 or less<br>UDP: 1 or less |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| KV-700<br>KV-1000<br>KV-3000<br>KV-5000<br>KV-5500<br>KV-7300<br>KV-7500<br>KV-8000 | KV-LE20V<br>KV-LE21V | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| KV-7300<br>KV-7500<br>KV-8000 | KV-EP21V<br>KV-XLE02 | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

| PLC Series | Ethernet module*3 | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| | | Cable model *1 | Maximum segment length*2 | | | | |
| KV-N24□□<br>KV-N40□□<br>KV-N60□□ | KV-N1 +<br>KV-NC1EP | Twisted pair cable*1<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br><br>When PLC:GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>TCP: 15 or less<br>UDP: 1 or less |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| KV-NC32T | KV-NC1EP | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

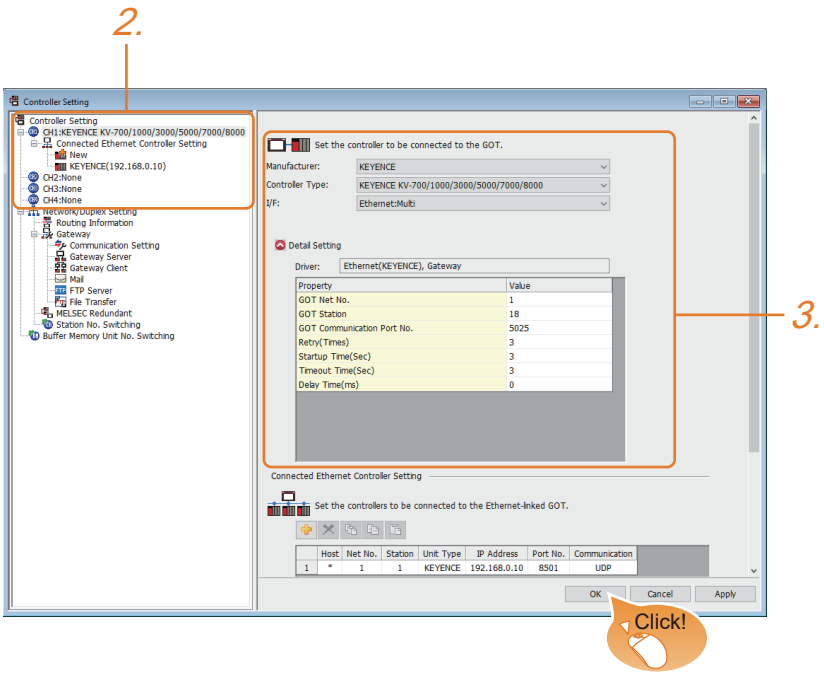
*3 Product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

*4 Use C or later version of GT11H-C□□-37P.

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [KEYENCE]
- [Controller Type]: [KEYENCE KV-700/1000/3000/5000/7000/8000]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1053 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5025 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5025 *2) | 1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013, and 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1054 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

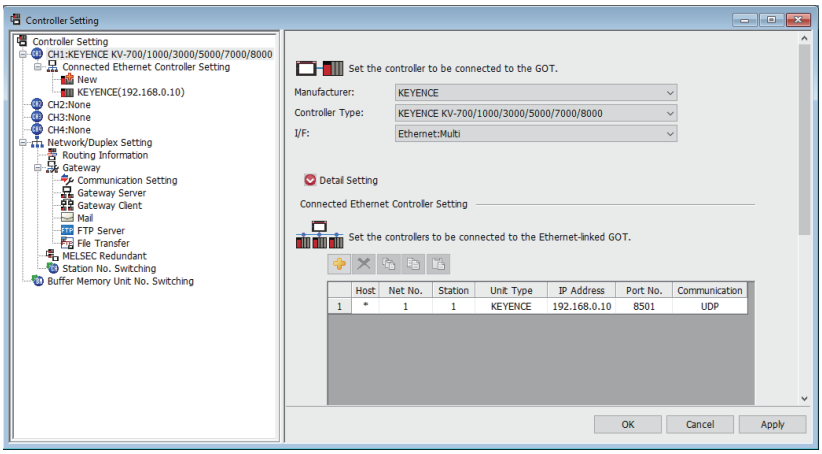
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: blank) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet module.<br>(Default: blank) | 1 to 254 |
| Unit Type | KEYENCE (fixed) | KEYENCE (fixed) |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 192.168.0.10) | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet module.<br>(Default: 8501) | PLC side port No. |
| Communication*2 | UDP, TCP<br>(Default: UDP) | Adjust the settings with the PLC settings. |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1053 Communication detail settings

*2 During UDP communication, if communications become unstable after a communication error due to noise, network disconnection, or power failure, use TCP communication.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC side setting

**Point**

KEYENCE PLC

For details of KEYENCE PLC, refer to the following manual.

KEYENCE PLC user's Manual



## Setting of KV-5000, KV-7500, and KV-8000 (built-in Ethernet)

Set the communication mode, IP address, and port No. with the unit editor of KV STUDIO.

| Item | Description | Range |
|---|---|---|
| Communication mode | Ethernet | - |
| IP address*1 | Set the IP address. | 0.0.0.0 to 255.255.255.255 |
| Port No.*1 (Host link) | Set the port No. | 256 to 65534 |

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.

Page 1054 Connected Ethernet Controller Setting

## Setting of KV-LE21V, KV-LE20V, KV-EP21V, KV-XLE02, and KV-NC1EP

Set the IP address and port No. with the unit editor of KV STUDIO.

| Item | Description | Range |
|---|---|---|
| IP address*1 | Set the IP address. | 0.0.0.0 to 255.255.255.255 |
| Port No.*1 (Host link) | Set the port No. | 256 to 65534 |

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.

Page 1054 Connected Ethernet Controller Setting

# 18.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
KEYENCE equipment ([KEYENCE KV-700/1000/3000/5000/7000/8000])

# 19 KOYO EI PLC


- Page 1057 Connectable Model List
- Page 1058 System Configuration
- Page 1080 Connection Diagram
- Page 1096 GOT Side Settings
- Page 1098 PLC Side Setting
- Page 1106 Settable Device Range
- Page 1106 Precautions




## 19.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock*1 | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| KOSTAC SU Series | SU-5E | × | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1058 Connecting to SU-5E or SU-6B |
| | SU-6B | ○ | | | |
| | SU-5M | ○ | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1062 Connecting to SU-5M or SU-6M |
| | SU-6M | ○ | | | |
| DirectLOGIC 05 Series | D0-05AA | × | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1066 Connecting to DirectLOGIC 05 series |
| | D0-05AD | × | | | |
| | D0-05AR | × | | | |
| | D0-05DA | × | | | |
| | D0-05DD | × | | | |
| | D0-05DD-D | × | | | |
| | D0-05DR | × | | | |
| | D0-05DR-D | × | | | |
| DirectLOGIC 06 Series | D0-06DD1 | ○ | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1069 Connecting to DirectLOGIC 06 series |
| | D0-06DD2 | ○ | | | |
| | D0-06DR | ○ | | | |
| | D0-06DA | ○ | | | |
| | D0-06AR | ○ | | | |
| | D0-06AA | ○ | | | |
| | D0-06DD1-D | ○ | | | |
| | D0-06DD2-D | ○ | | | |
| | D0-06DR-D | ○ | | | |
| DirectLOGIC 205 Series | D2-240 | ○ | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1073 Connecting to D2-240, D2-250-1 or D2-260 |
| | D2-250-1 | ○ | | | |
| | D2-260 | ○ | | | |
| PZ series | PZ3 | × | RS232<br>RS422 | GT 2506 HS GT 2505 HS | ☞ Page 1077 Connecting to PZ |

*1 The GOT can only read the clock data.In the clock setting, though the adjust is available, the broadcast is not available.

# 19.2 System Configuration

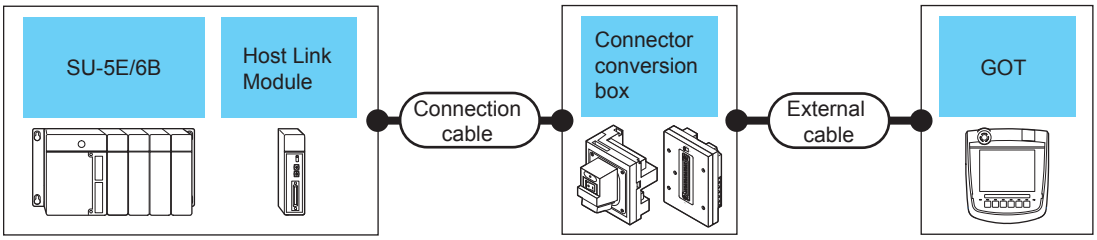
## Connecting to SU-5E or SU-6B

Communication driver

KOYO KOSTAC/DL

### When connecting to one PLC

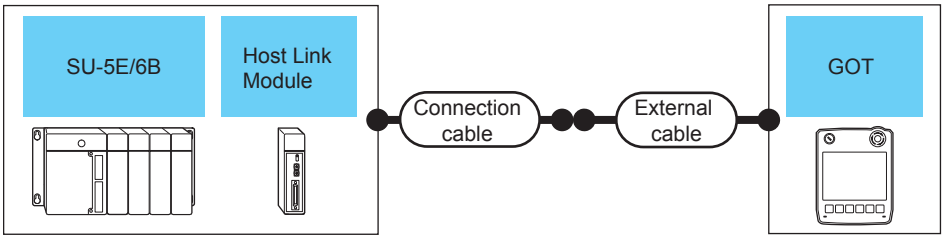
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Host link module *1 | Communication Type | Cable model Connection diagram number | | | | | |
| SU-5E/6B (general communication port) | - | RS-232 | User preparing Page 1080 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1083 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| SU-5E/6B | U-01DM | RS-232 | User preparing Page 1080 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 host link module for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

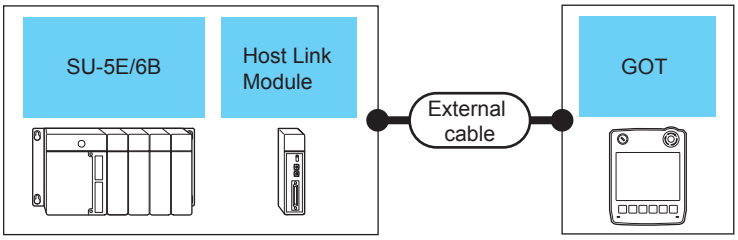
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| SU-5E/6B (general communication port) | - | RS-232 | User preparing Page 1080 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | User preparing Page 1083 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| SU-5E/6B | U-01DM | RS-232 | User preparing Page 1080 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 host link module for 1 GOT |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## ■When using the external cable (GT11H-C□□□)

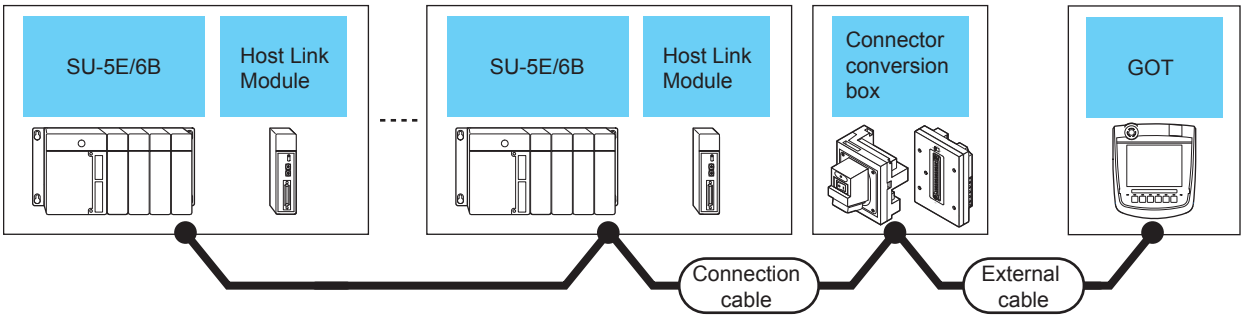



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | | | | |
| SU-5E/6B (general communication port) | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1081 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1084 RS-422 connection diagram 3) | GT 2505HS | 13m | |
| SU-5E/6B | U-01DM | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1081 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 host link module for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1087 RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## When connecting to multiple PLCs

### ■When using the connector conversion box

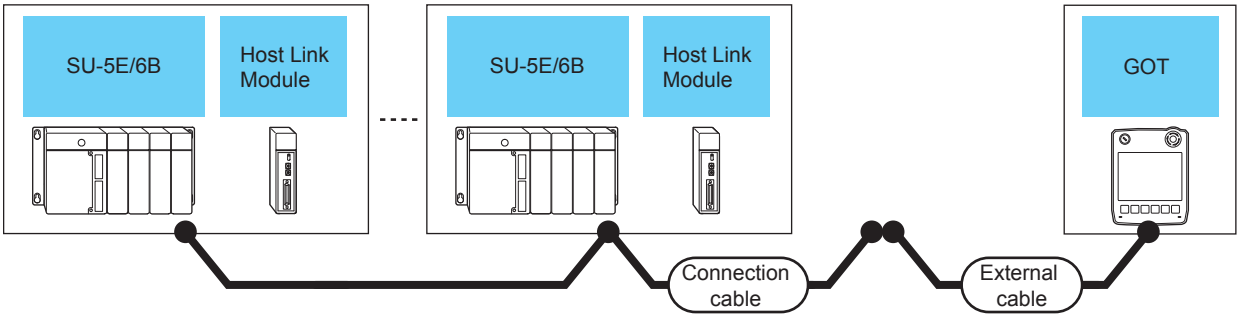



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SU-5E/6B | - | RS-422 | User preparing Page 1089 RS-422 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 PLCs for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | U-01DM | | User preparing Page 1092 RS-422 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 90 host link module for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□-37P)

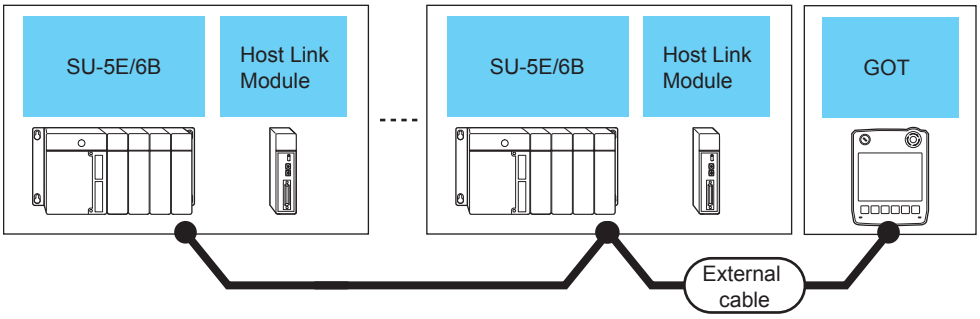



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| SU-5E/6B | - | RS-422 | User preparing Page 1089 RS-422 connection diagram 14) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| | U-01DM | | User preparing Page 1092 RS-422 connection diagram 20) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 90 host link module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | | | | |
| SU-5E/6B | - | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1090 RS-422 connection diagram 15) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| | U-01DM | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1093 RS-422 connection diagram 21) | GT 2505HS | | 90 host link module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

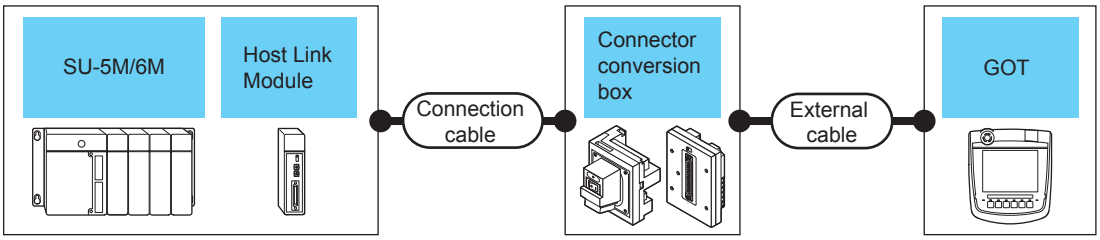
# Connecting to SU-5M or SU-6M

Communication driver

KOYO KOSTAC/DL

## When connecting to one PLC

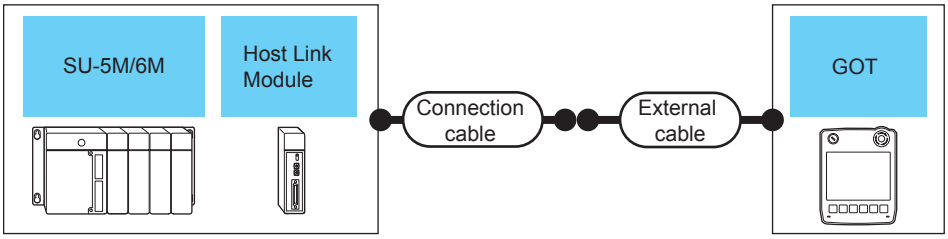
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SU-5M/6M (general communication port 1) | - | RS-232 | User preparing Page 1080 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | | RS-422 | User preparing Page 1083 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |
| SU-5M/6M (general communication port 2) | | RS-232 | Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| SU-5M/6M (general communication port 3) | | RS-422 | User preparing Page 1084 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |
| SU-5M/6M | U-01DM | RS-232 | User preparing Page 1080 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 host link module for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

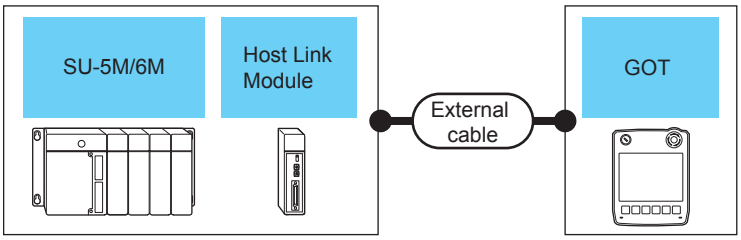
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| SU-5M/6M (general communication port 1) | - | RS-232 | User preparing Page 1080 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | User preparing Page 1083 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| SU-5M/6M (general communication port 3) | - | RS-422 | User preparing Page 1085 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| SU-5M/6M | U-01DM | RS-232 | User preparing Page 1080 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 host link module for 1 GOT |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## ■When using the external cable (GT11H-C□□□)



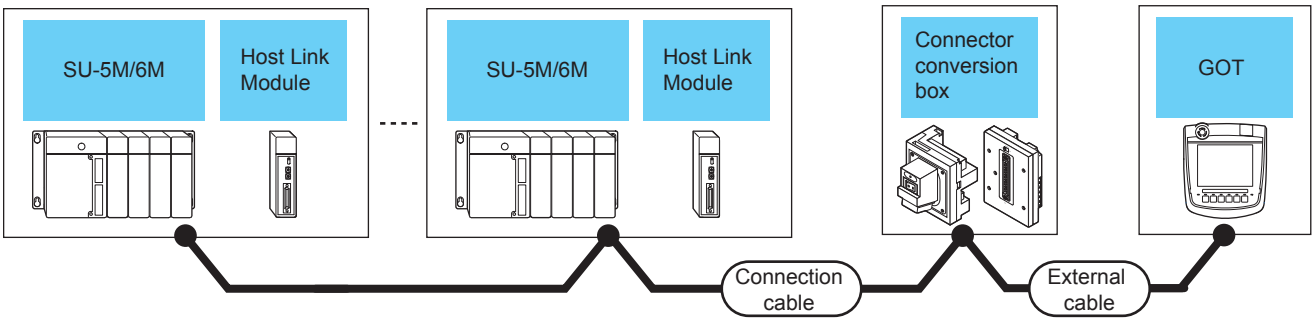

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | | | | |
| SU-5M/6M (general communication port 1) | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1081 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1084 RS-422 connection diagram 3) | GT 2505HS | 13m | |
| SU-5M/6M (general communication port 3) | - | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1085 RS-422 connection diagram 6) | GT 2505HS | | |

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | | | | |
| SU-5M/6M | U-01DM | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1081 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 host link module for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1087 RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## When connecting to multiple PLCs

### ■When using the connector conversion box

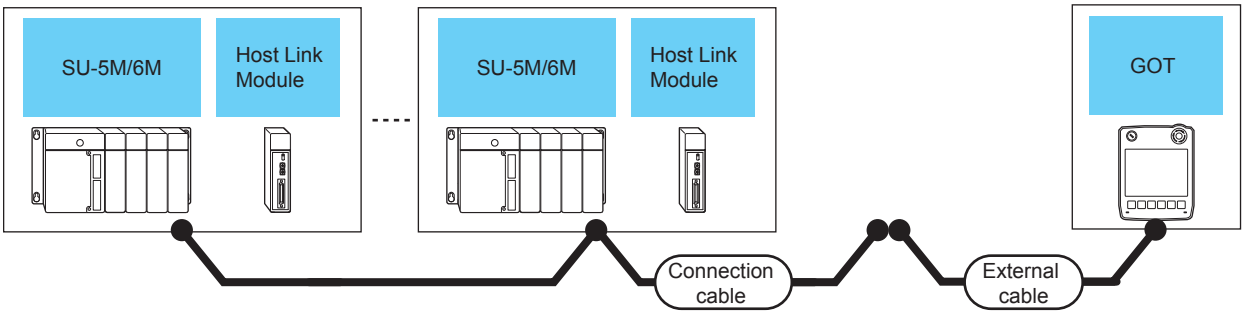



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SU-5M/6M (general communication port 1) | - | RS-422 | User preparing Page 1089 RS-422 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 PLCs for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| SU-5M/6M (general communication port 3) | | | User preparing Page 1090 RS-422 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| SU-5M/6M | U-01DM | | User preparing Page 1092 RS-422 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 90 host link module for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□-37P)

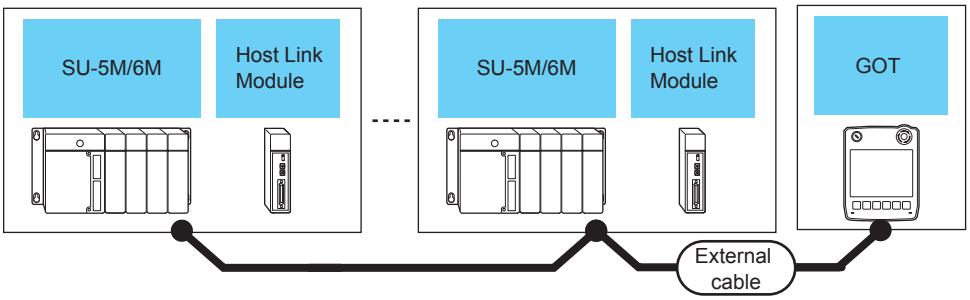



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| SU-5M/6M (general communication port 1) | - | RS-422 | User preparing Page 1089 RS-422 connection diagram 14) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| SU-5M/6M (general communication port 3) | | | User preparing Page 1091 RS-422 connection diagram 17) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| SU-5M/6M | U-01DM | | User preparing Page 1092 RS-422 connection diagram 20) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 90 host link module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Host link module*1 | Communication Type | | | | |
| SU-5M/6M (general communication port 1) | - | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1090 RS-422 connection diagram 15) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| SU-5M/6M (general communication port 3) | | | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1091 RS-422 connection diagram 18) | GT 2505HS | | |
| SU-5M/6M | U-01DM | | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1093 RS-422 connection diagram 21) | GT 2505HS | | 90 host link module for 1 GOT*2 |

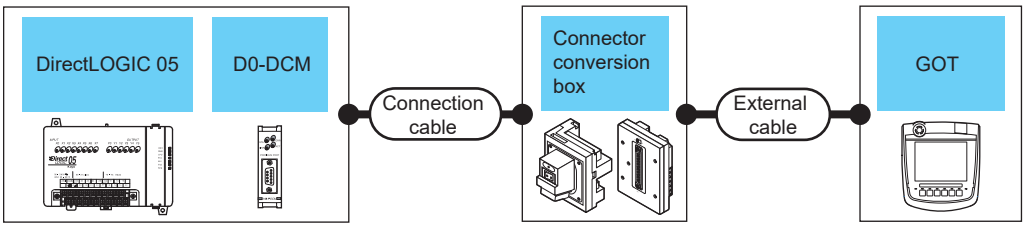
*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

# Connecting to DirectLOGIC 05 series

## When connecting to one PLC

### ■When using the connector conversion box

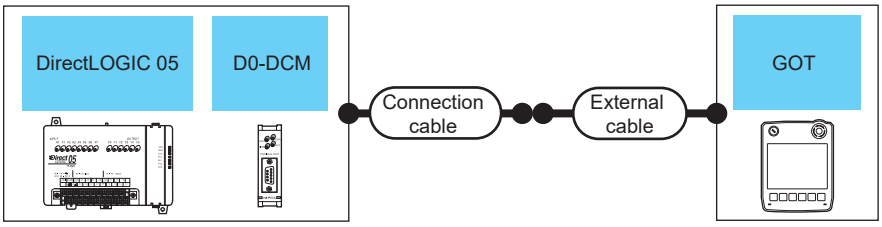



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Data communications module *2 | Communication Type | Cable model Connection diagram number | | | | | |
| Direct LOGIC 05 (communication port 1) (communication port 2) | - | RS-232 | Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| Direct LOGIC 05 | D0-DCM (port 1) | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | 1 data communication module for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| Direct LOGIC 05 | D0-DCM (port 2) | | User preparing Page 1081 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1087 RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

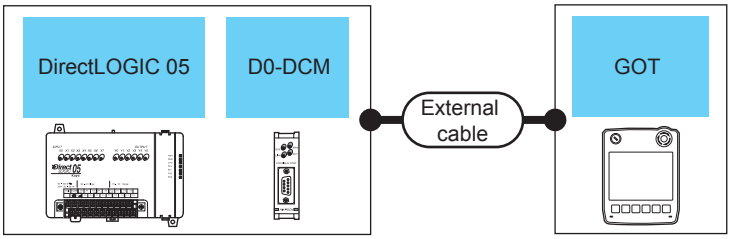
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communications module *1 | Communication Type | Cable model Connection diagram number | | | | |
| Direct LOGIC 05 | D0-DCM (port 2) | RS-232 | User preparing Page 1081 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | User preparing Page 1088 RS-422 connection diagram 11) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

### ■When using the external cable (GT11H-C□□□)

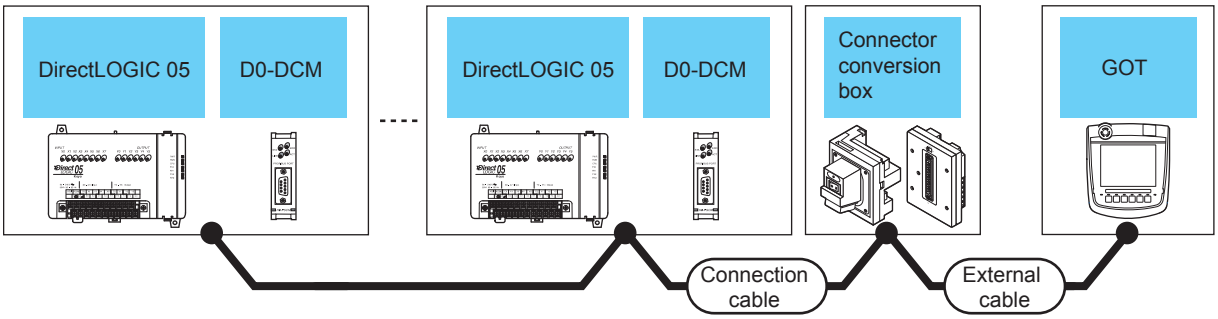



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communications module *1 | Communication Type | | | | |
| Direct LOGIC 05 | D0-DCM (port 2) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1082 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1088 RS-422 connection diagram 12) | GT 2505HS | 13m | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## When connecting to multiple PLCs

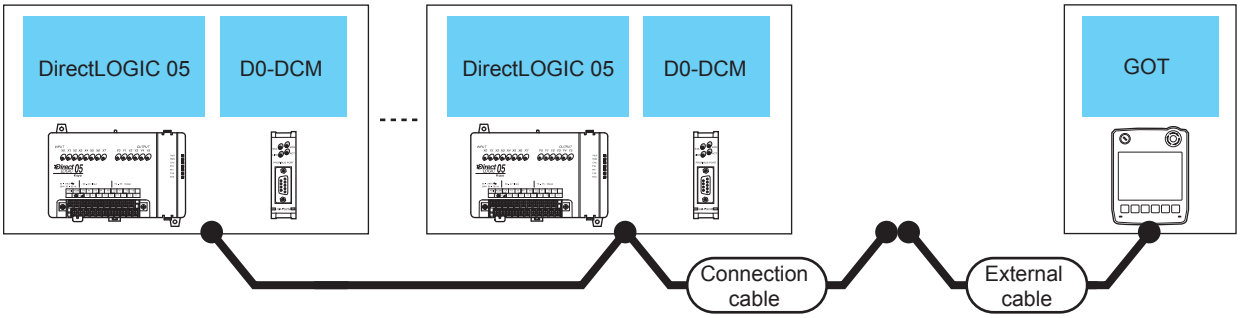
### ■When using the connector conversion box




| PLC | | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| Direct LOGIC 05 | D0-DCM (port 2) | RS-422 | User preparing Page 1093 RS-422 connection diagram 22) | 1000m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 data communication module for 1 GOT*2 |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.
*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□-37P)

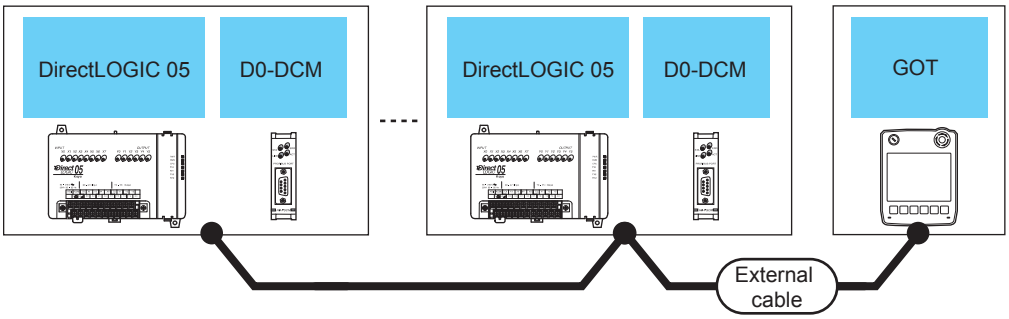



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | |
| Direct LOGIC 05 | D0-DCM (port 2) | RS-422 | User preparing Page 1094 RS-422 connection diagram 23) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 data communication module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | | | | |
| Direct LOGIC 05 | D0-DCM (port 2) | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1094 RS-422 connection diagram 24) | GT 2505HS | 13m | 90 data communication module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

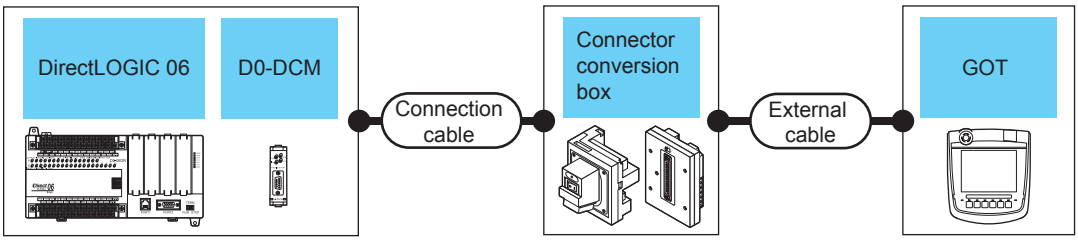
# Connecting to DirectLOGIC 06 series

Communication driver

KOYO KOSTAC/DL

## When connecting to one PLC

### ■When using the connector conversion box

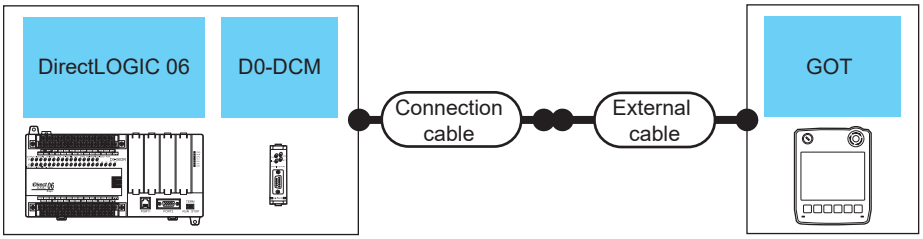



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| Direct LOGIC 06 (communication port 1) | - | RS-232 | Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*2 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| Direct LOGIC 06 (communication port 2) | | | User preparing Page 1081 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1087 RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| Direct LOGIC 06 | D0-DCM (port 1) | RS-232 | Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*2 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 data communication module for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | D0-DCM (port 2) | | User preparing Page 1081 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1087 RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

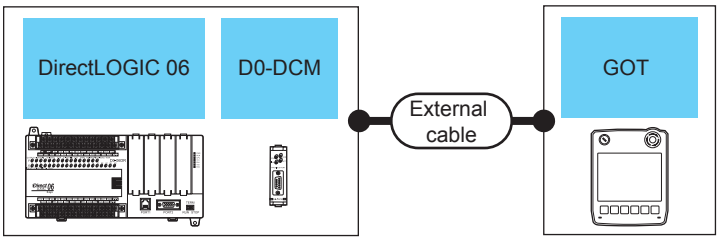
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | |
| Direct LOGIC 06 (communication port 2) | - | RS-232 | User preparing Page 1081 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | User preparing Page 1088 RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| Direct LOGIC 06 | D0-DCM (port 2) | RS-232 | User preparing Page 1081 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | User preparing Page 1088 RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## ■When using the external cable (GT11H-C□□□)

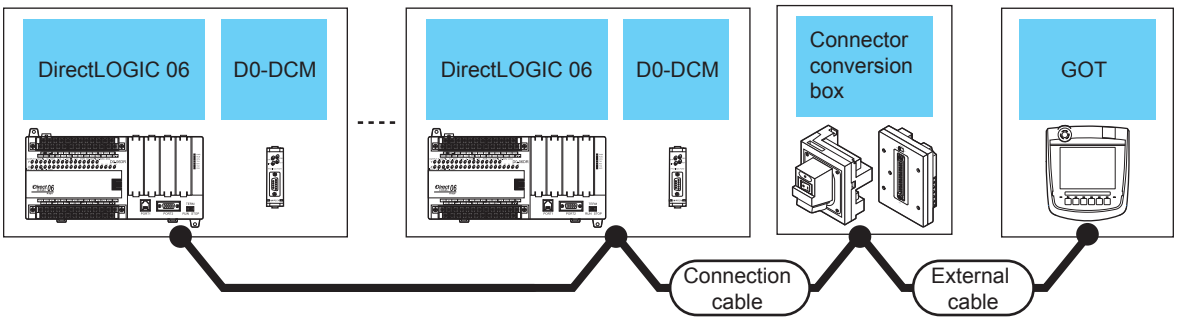



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | | | | |
| Direct LOGIC 06 (communication port 2) | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1082 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1088 RS-422 connection diagram 12) | GT 2505HS | 13m | |
| Direct LOGIC 06 | D0-DCM (port 2) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1082 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1088 RS-422 connection diagram 12) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## When connecting to multiple PLCs

### ■When using the connector conversion box

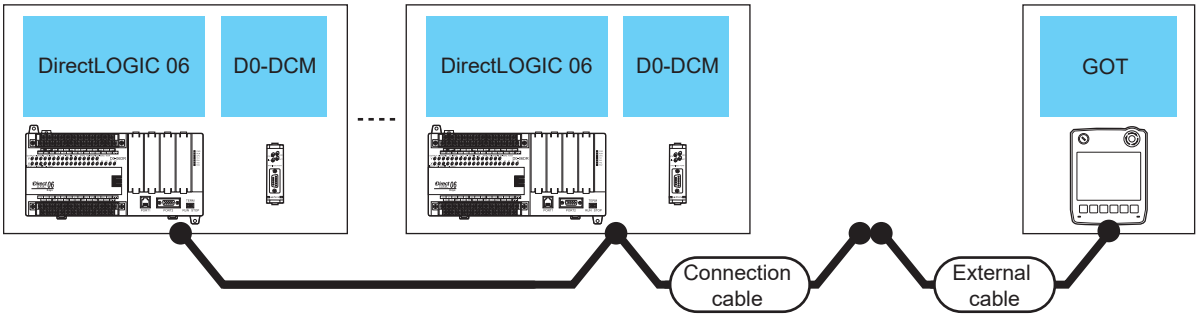



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Data communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| Direct LOGIC 06 (communication port 2) | - | RS-422 | User preparing Page 1093 RS-422 connection diagram 22) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 PLCs for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| Direct LOGIC 06 | D0-DCM (port 2) | | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 90 data communication module for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□-37P)

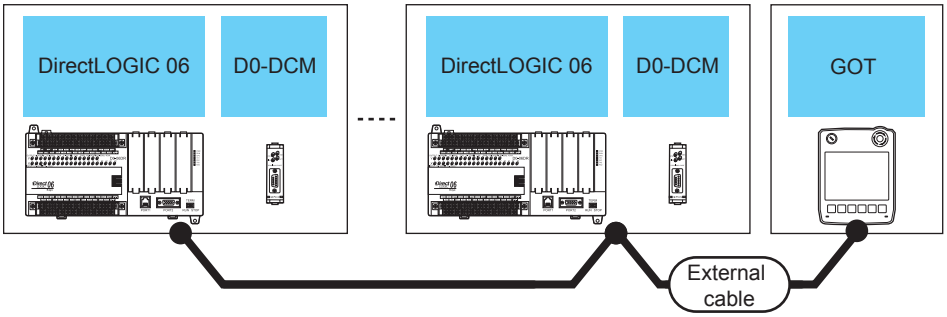



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| Direct LOGIC 06 (communication port 2) | - | RS-422 | User preparing Page 1094 RS-422 connection diagram 23) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| Direct LOGIC 06 | D0-DCM (port 2) | | | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 90 data communication module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communication module*1 | Communication Type | | | | |
| Direct LOGIC 06 (communication port 2) | - | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1094 RS-422 connection diagram 24) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| Direct LOGIC 06 | D0-DCM (port 2) | | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1094 RS-422 connection diagram 24) | GT 2505HS | | 90 data communication module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

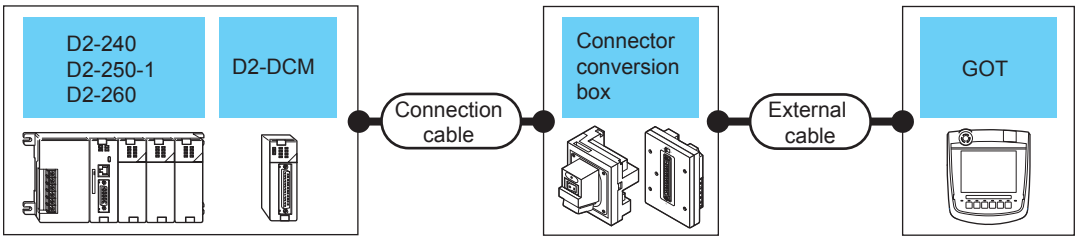
# Connecting to D2-240, D2-250-1 or D2-260

Communication driver

KOYO KOSTAC/DL

## When connecting to one PLC

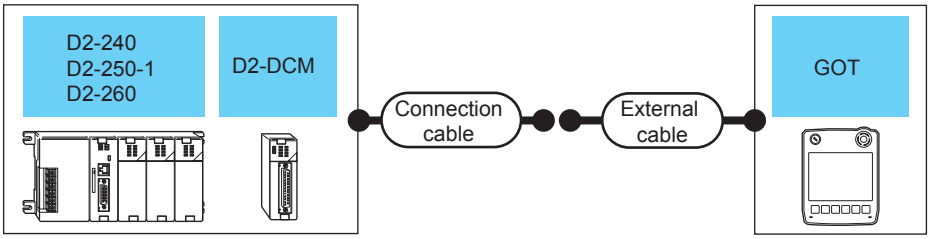
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| D2-240<br>D2-250-1<br>D2-260<br>(communication port 2) | - | RS-232 | User preparing Page 1081 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| D2-250-1<br>D2-260<br>(communication port 2) | | RS-422 | User preparing Page 1087 RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | RS-232 | User preparing Page 1080 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 data communication module for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

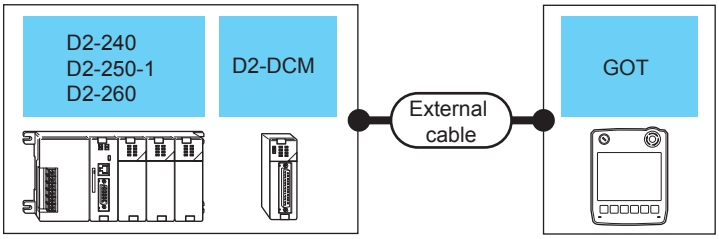
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | |
| D2-240<br>D2-250-1<br>D2-260<br>(communication port 2) | - | RS-232 | User preparing Page 1081 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| D2-250-1<br>D2-260<br>(communication port 2) | | RS-422 | User preparing Page 1088 RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | RS-232 | User preparing Page 1080 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | User preparing Page 1086 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## ■When using the external cable (GT11H-C□□□)

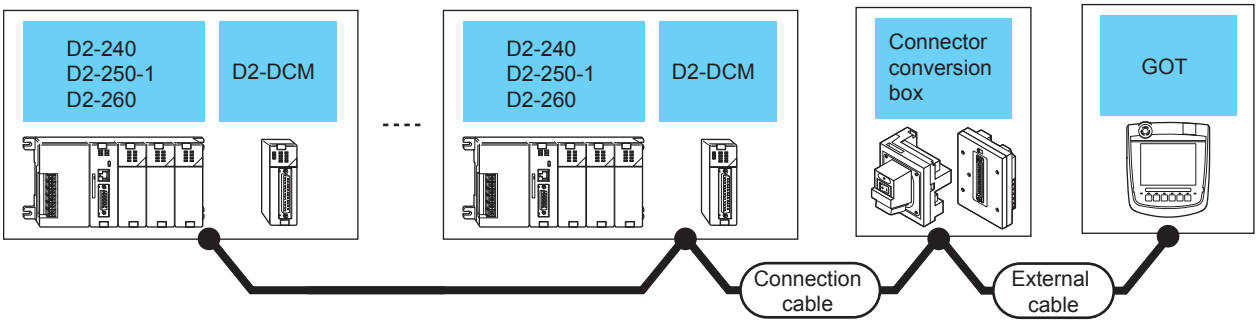



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | | | | |
| D2-240<br>D2-250-1<br>D2-260<br>(communication port 2) | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1082 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| D2-250-1<br>D2-260<br>(communication port 2) | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1088 RS-422 connection diagram 12) | GT 2505HS | 13m | |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1081 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 data communication module for 1 GOT |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1087 RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

## When connecting to multiple PLCs

### ■When using the connector conversion box

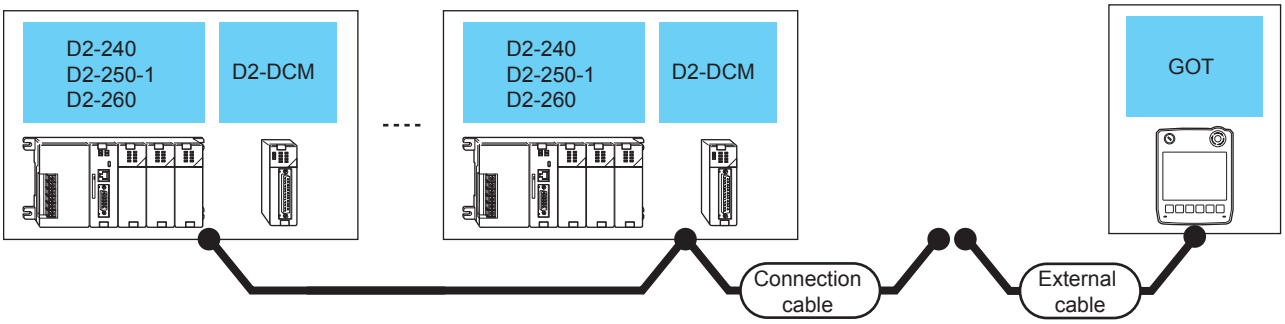



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| D2-250-1<br>D2-260<br>(communication port 2) | - | RS-422 | User preparing Page 1093 RS-422 connection diagram 22) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 PLCs for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | | User preparing Page 1092 RS-422 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 90 data communication module for 1 GOT*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□-37P)

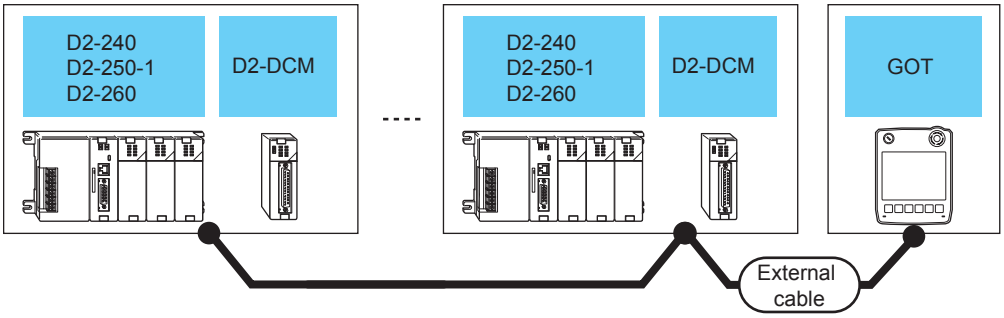



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | Cable model Connection diagram number | | | | |
| D2-250-1<br>D2-260<br>(communication port 2) | - | RS-422 | User preparing Page 1094 RS-422 connection diagram 23) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | | User preparing Page 1092 RS-422 connection diagram 20) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 90 data communicatio n module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Data communications module*1 | Communication Type | | | | |
| D2-250-1<br>D2-260<br>(communication port 2) | - | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1094 RS-422 connection diagram 24) | GT 2505HS | 13m | 90 PLCs for 1 GOT*2 |
| D2-240<br>D2-250-1<br>D2-260 | D2-DCM | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1093 RS-422 connection diagram 21) | GT 2505HS | | 90 data communication module for 1 GOT*2 |

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
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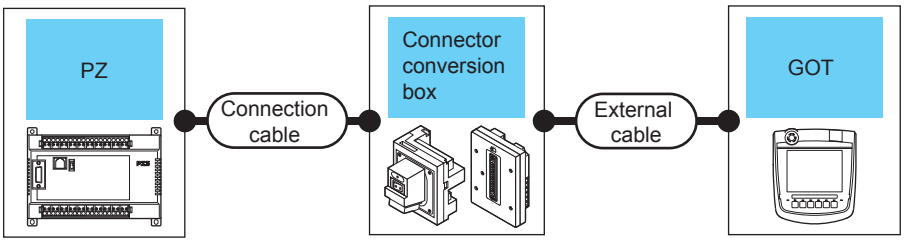
# Connecting to PZ

Communication driver

KOYO KOSTAC/DL

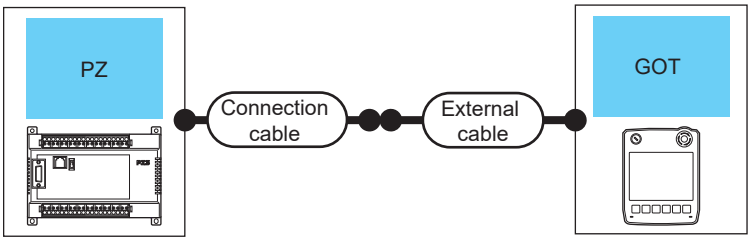
## When connecting to one PLC

### ■When using the connector conversion box



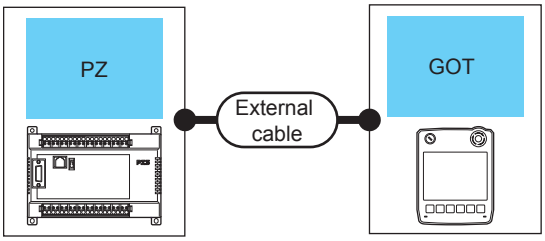

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PZ (general communication port 2) | RS-232 | User preparing Page 1081 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | User preparing Page 1087 RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| PZ (general communication port 2) | RS-232 | User preparing Page 1081 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | RS-422 | User preparing Page 1088 RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

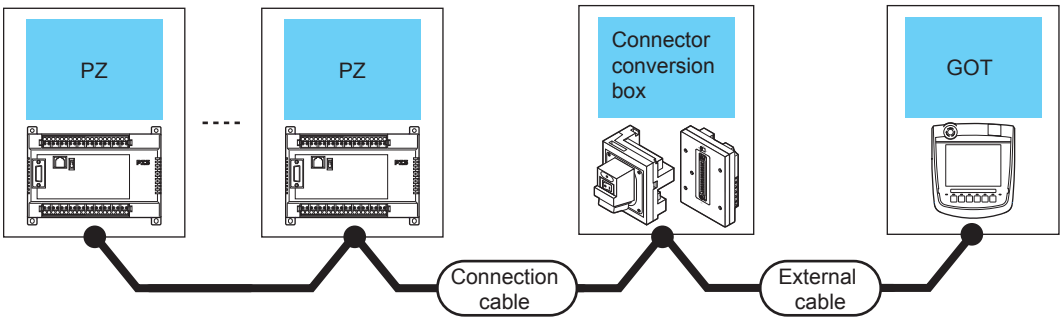
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| PZ (general communication port 2) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1082 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1088 RS-422 connection diagram 12) | GT 2505HS | 13m | |

## When connecting to multiple PLCs

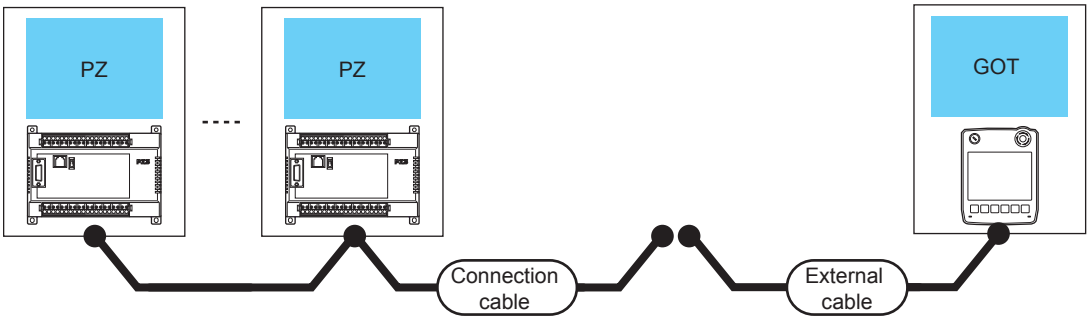
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| PZ (general communication port 2) | RS-422 | User preparing Page 1093 RS-422 connection diagram 22) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 90 PLCs for 1 GOT*1 |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

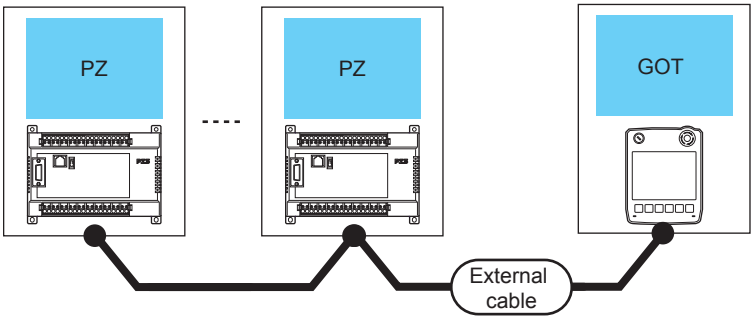
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| PZ<br>(general communication port 2) | RS-422 | User preparing Page 1094 RS-422 connection diagram 23) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 90 PLCs for 1 GOT*1 |

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| PZ<br>(general communication port 2) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1094 RS-422 connection diagram 24) | GT 2505HS | 13m | 90 PLCs for 1 GOT*1 |

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

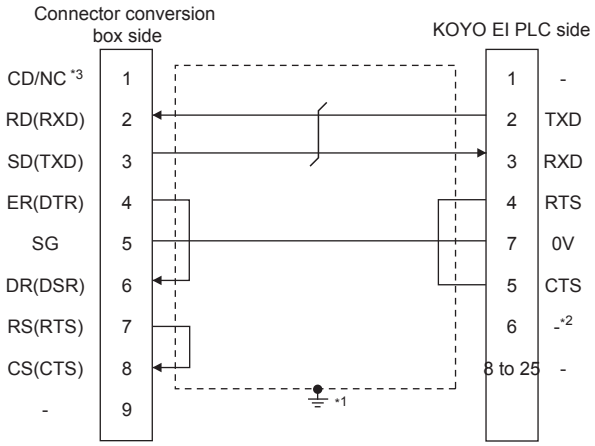
# 19.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

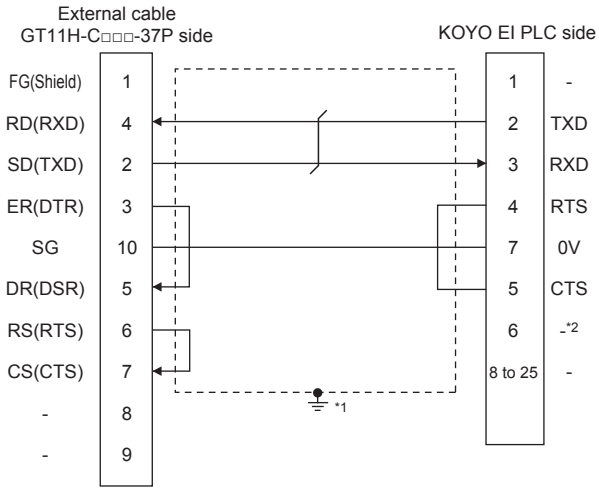
### Connection diagram

#### ■RS-232 connection diagram 1)



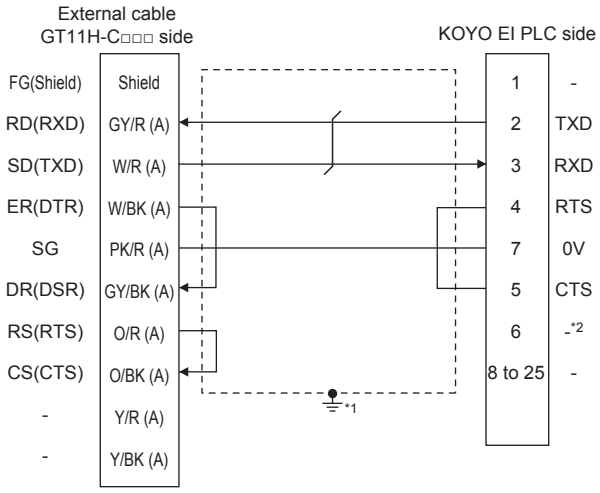

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.
*3 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)



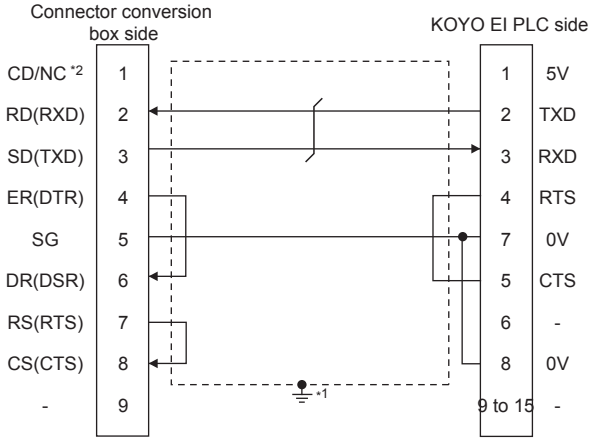

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.

## ■RS-232 connection diagram 3)



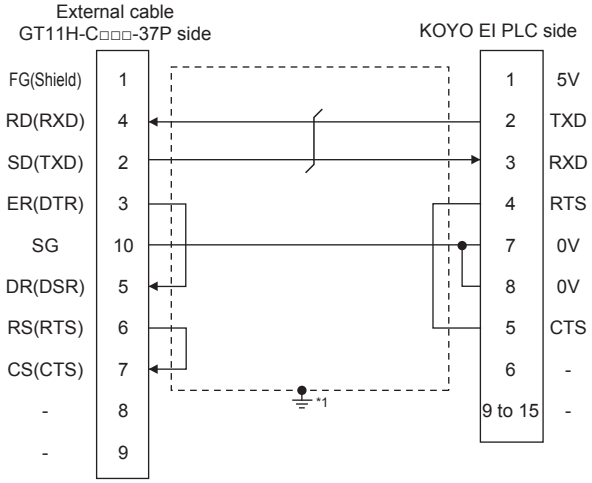

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.

## ■RS-232 connection diagram 4)



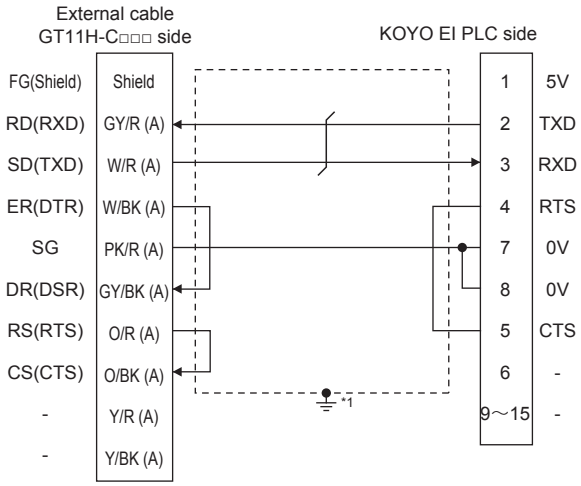

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 5)




*1 Connect FG grounding to the appropriate part of a cable shield line.

### ■RS-232 connection diagram 6)




*1 Connect FG grounding to the appropriate part of a cable shield line.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■KOYO EI PLC side connector

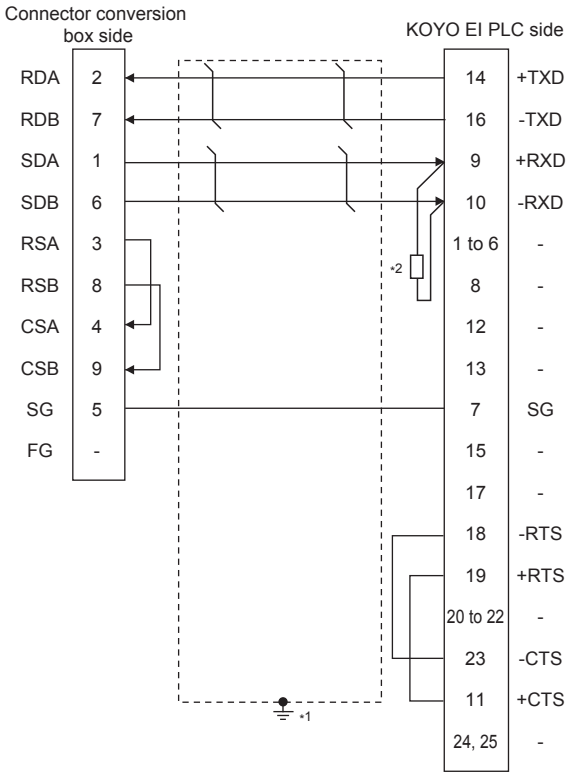
Use the connector compatible with the KOYO EI PLC side.

For details, refer to the KOYO EI PLC user's manual.

# RS-422 cable

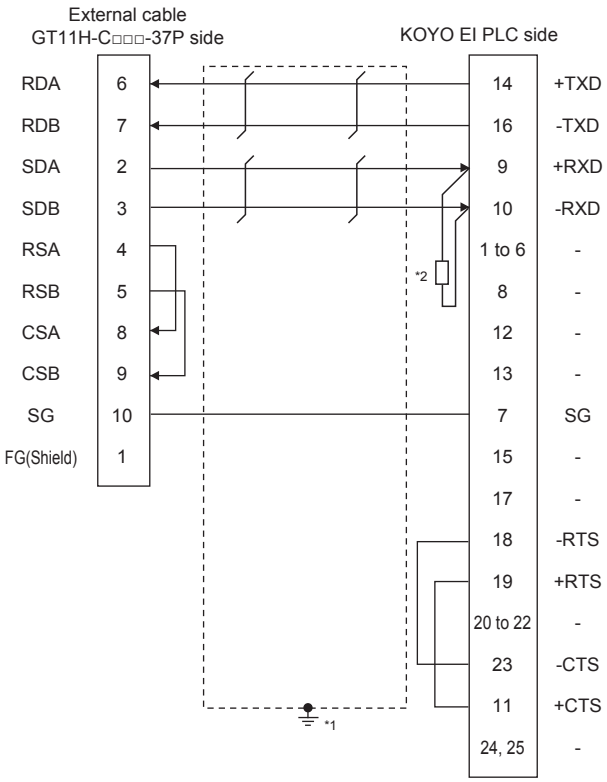
## Connection diagram

### ■RS-422 connection diagram 1)



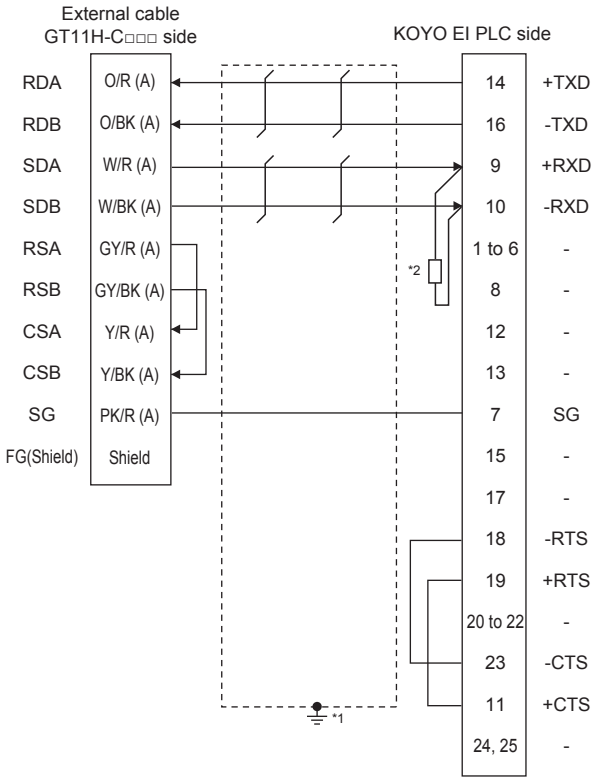

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

### ■RS-422 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

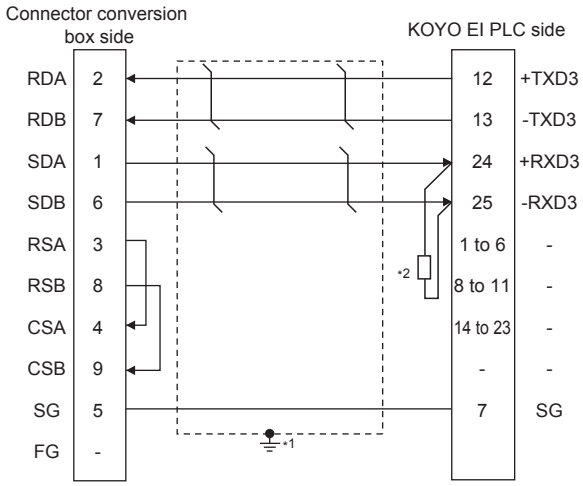
## ■RS-422 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

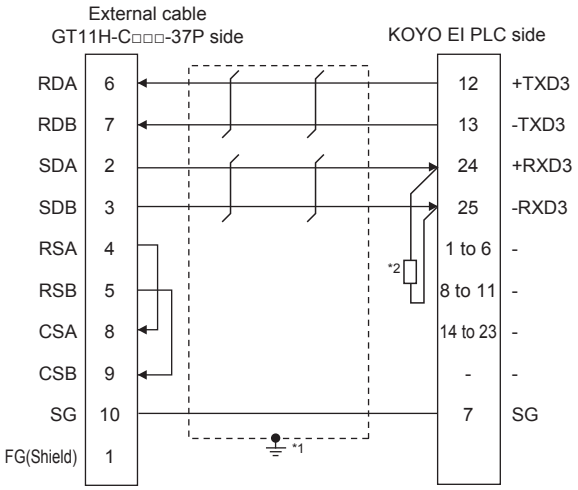
## ■RS-422 connection diagram 4)




*1 Connect FG grounding to the appropriate part of a cable shield line.

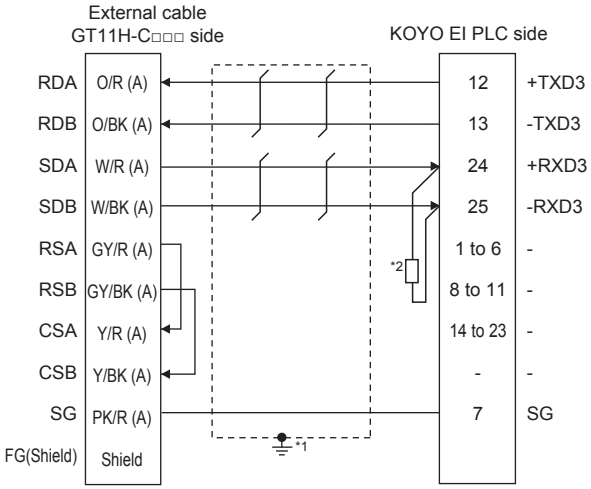
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

## ■RS-422 connection diagram 5)



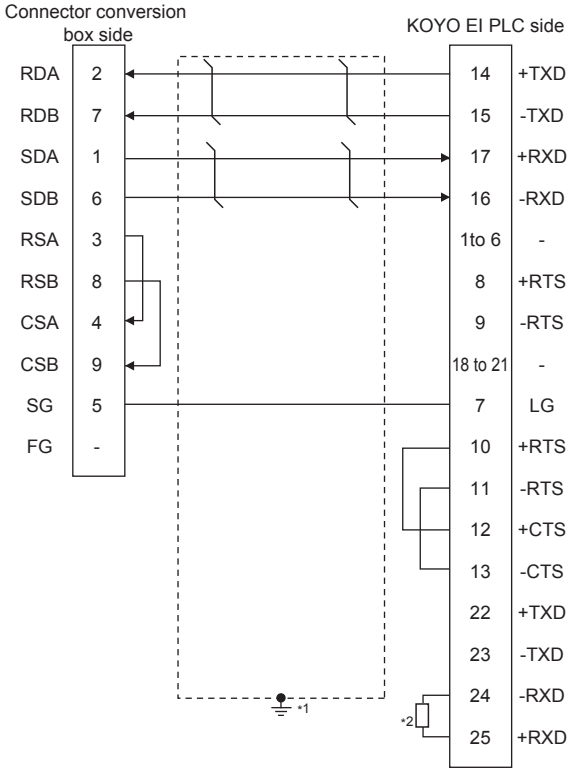

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

## ■RS-422 connection diagram 6)




*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

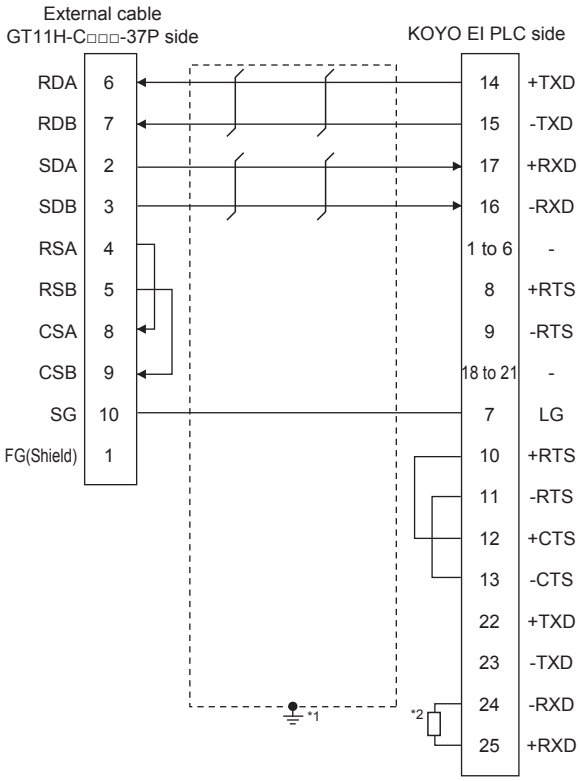
## ■RS-422 connection diagram 7)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

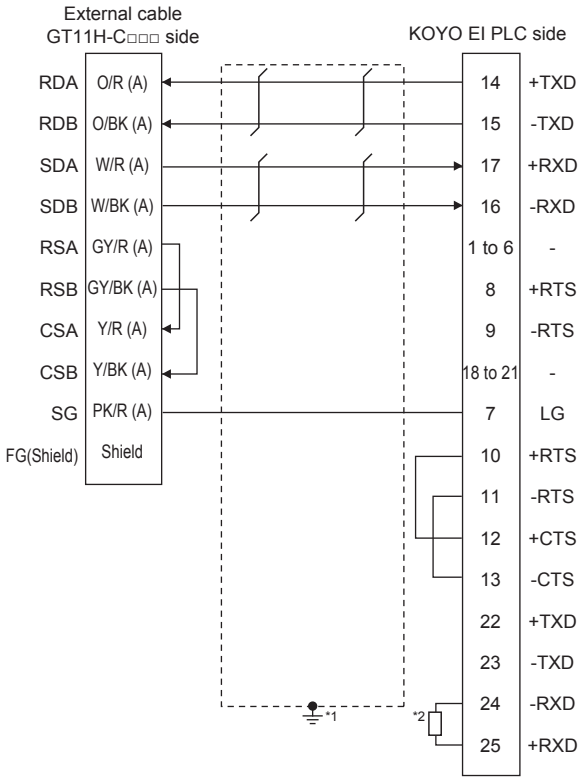
## ■RS-422 connection diagram 8)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

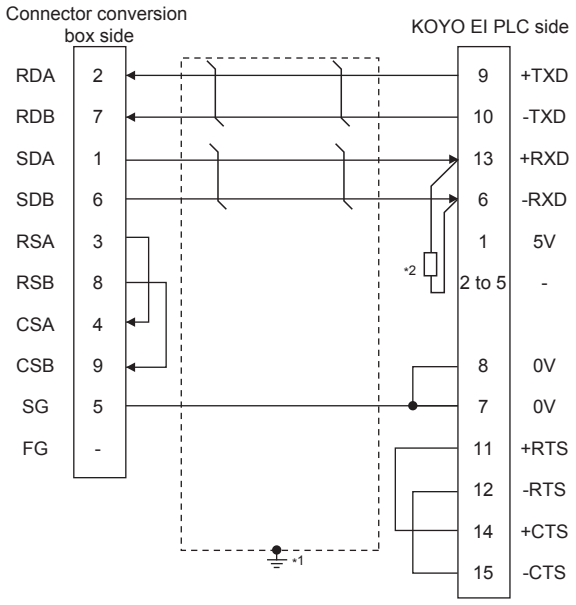
## ■RS-422 connection diagram 9)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

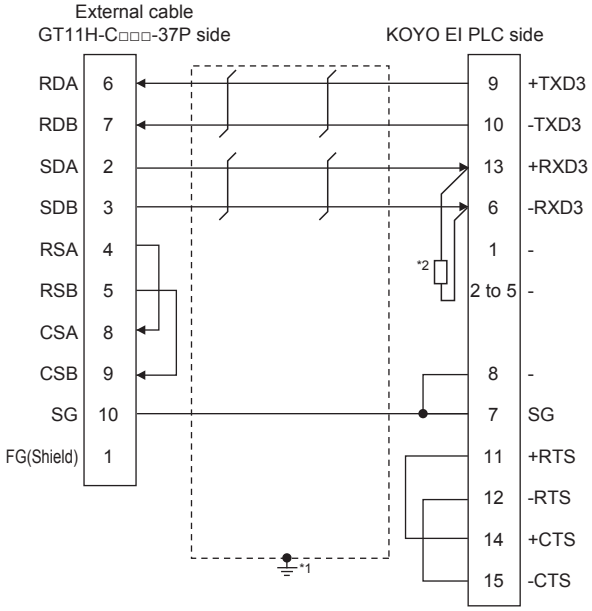
## ■RS-422 connection diagram 10)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

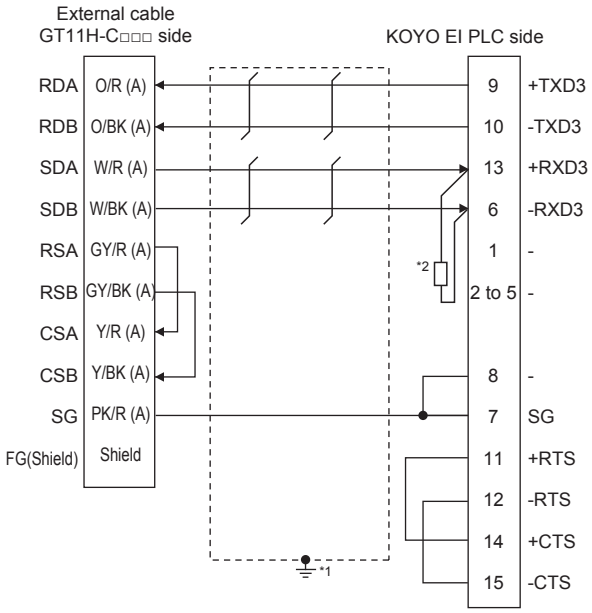
## ■RS-422 connection diagram 11)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

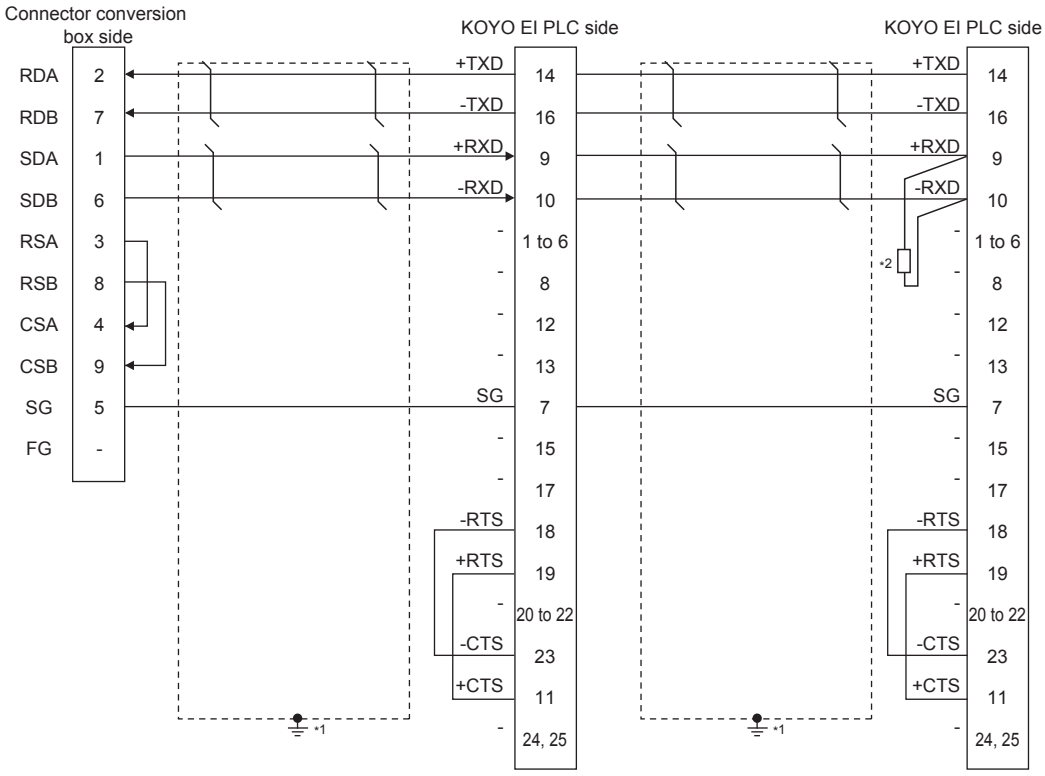
## ■RS-422 connection diagram 12)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

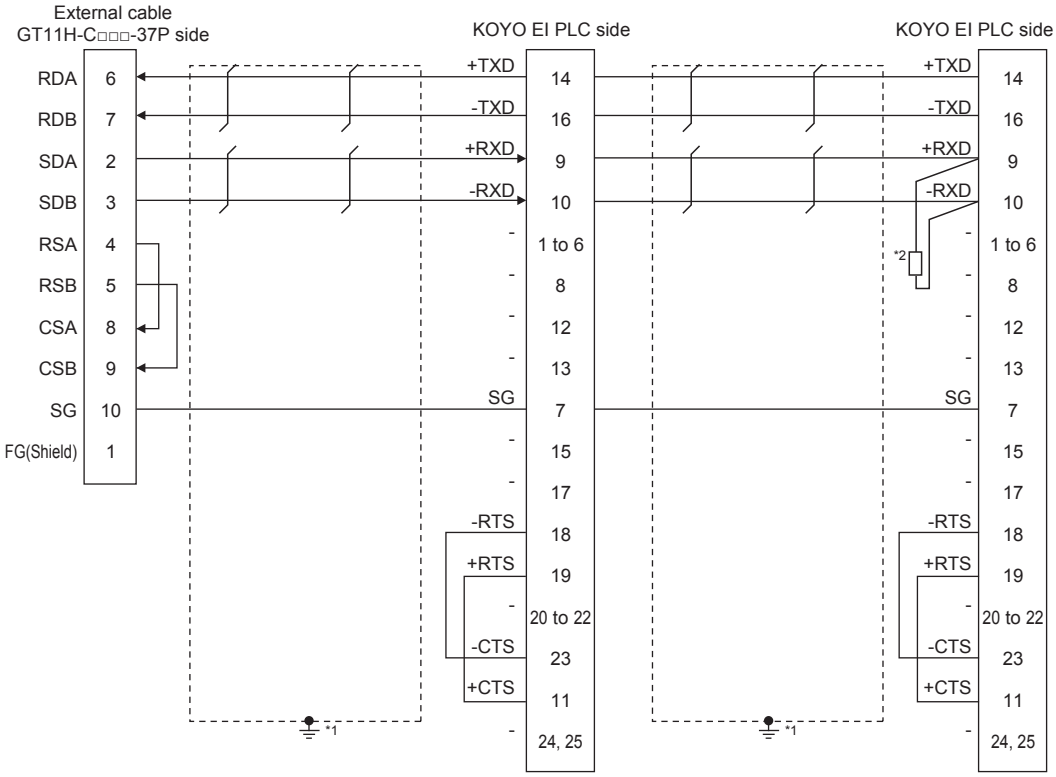
## ■RS-422 connection diagram 13)




*1 Connect FG grounding to the appropriate part of a cable shield line.

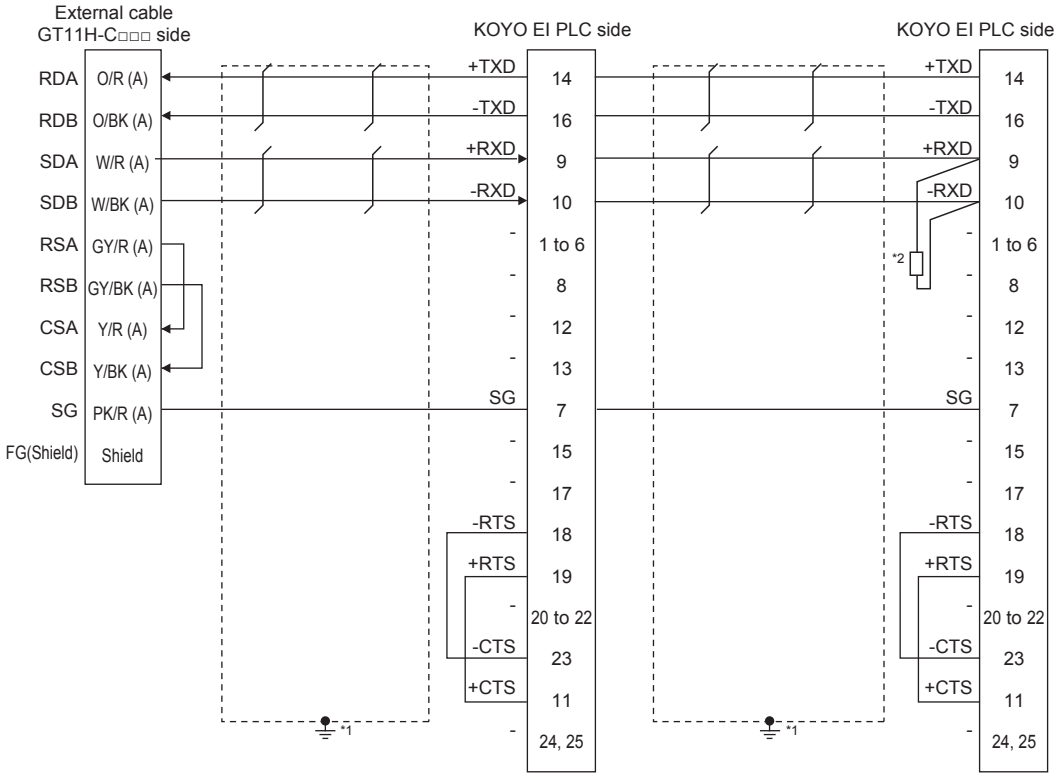
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 14)



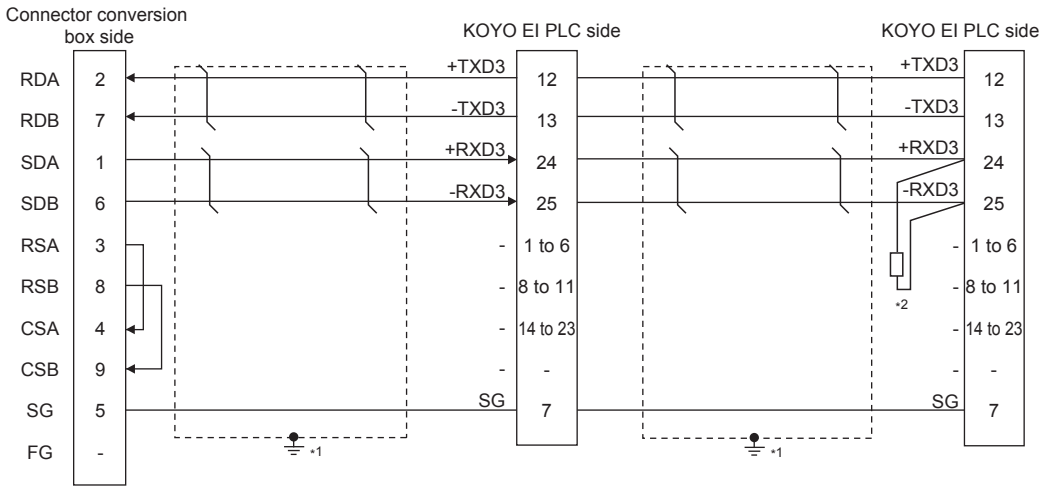
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 15)



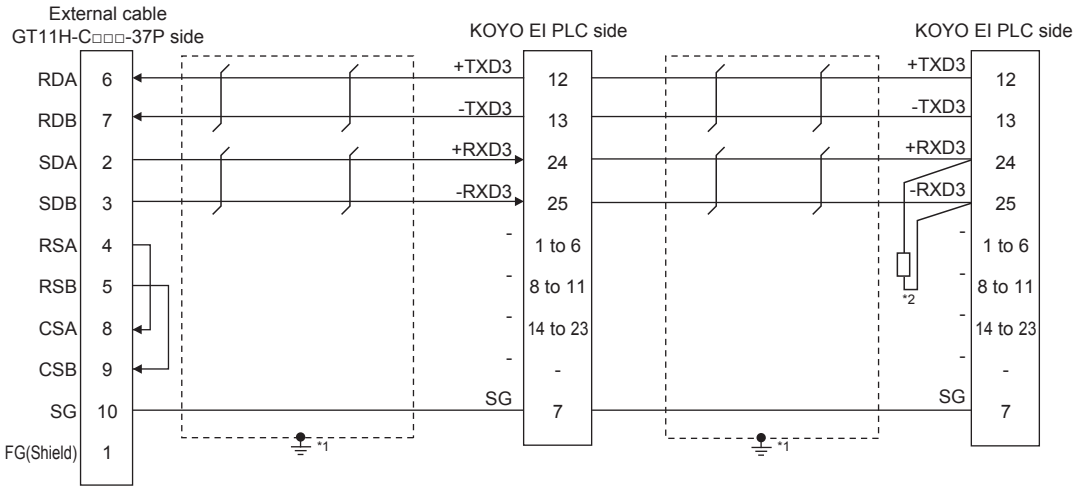

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 16)




*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

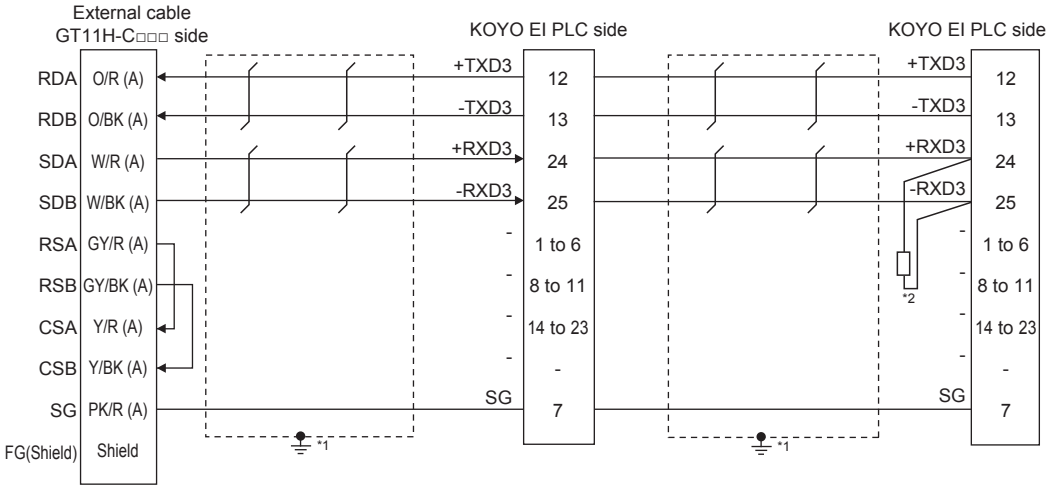
## ■RS-422 connection diagram 17)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

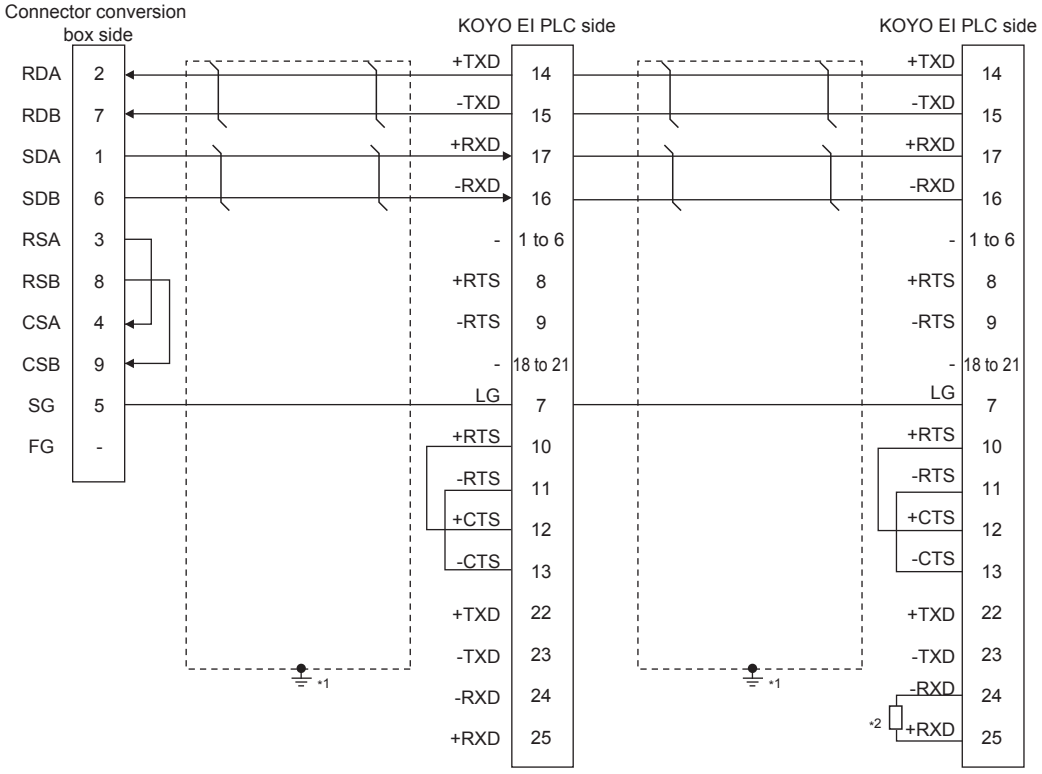
## ■RS-422 connection diagram 18)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

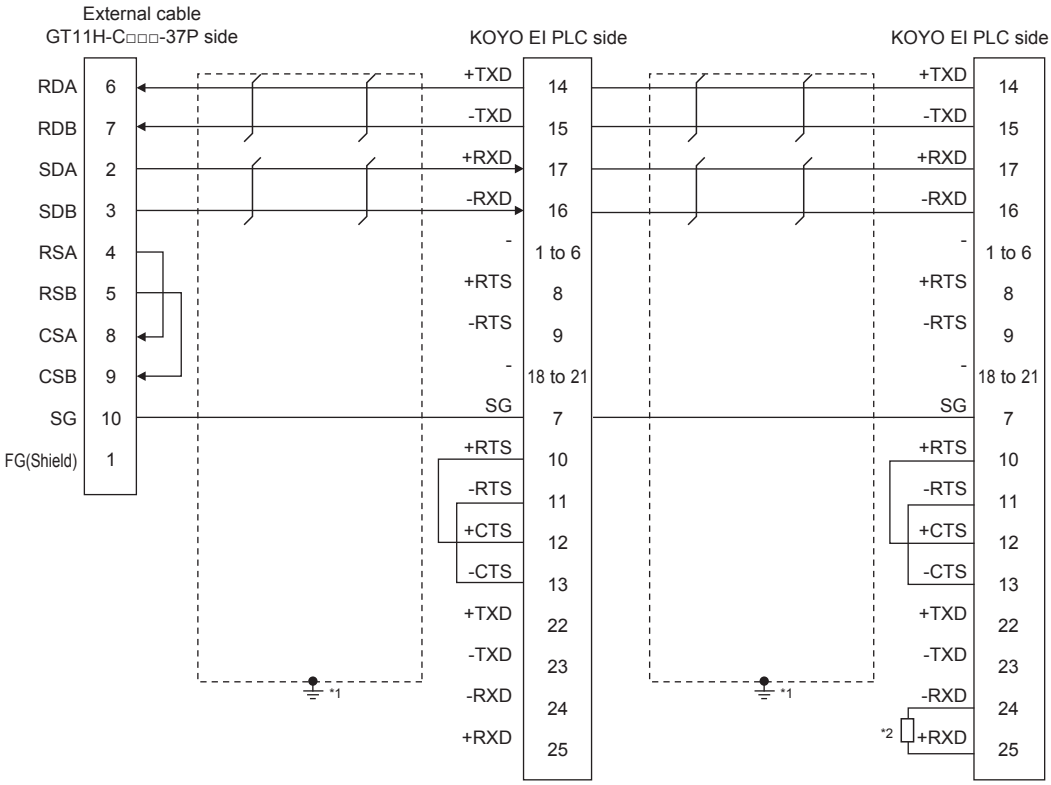
## ■RS-422 connection diagram 19)




*1 Connect FG grounding to the appropriate part of a cable shield line.

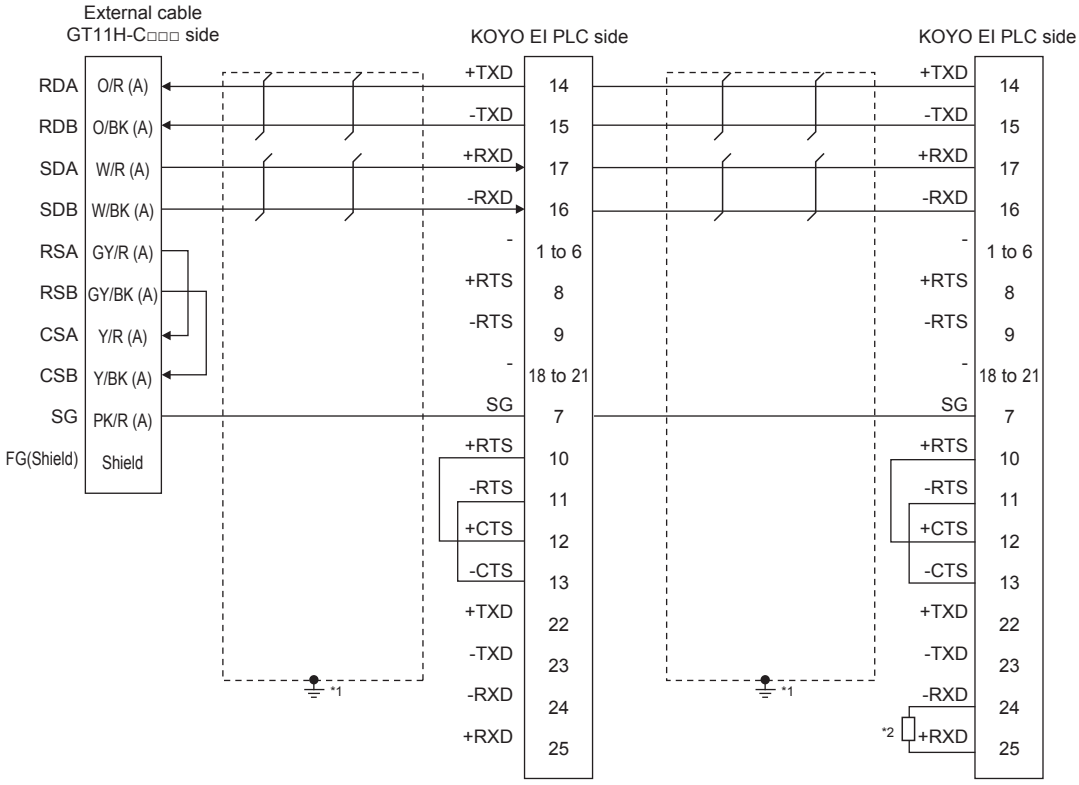
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 20)



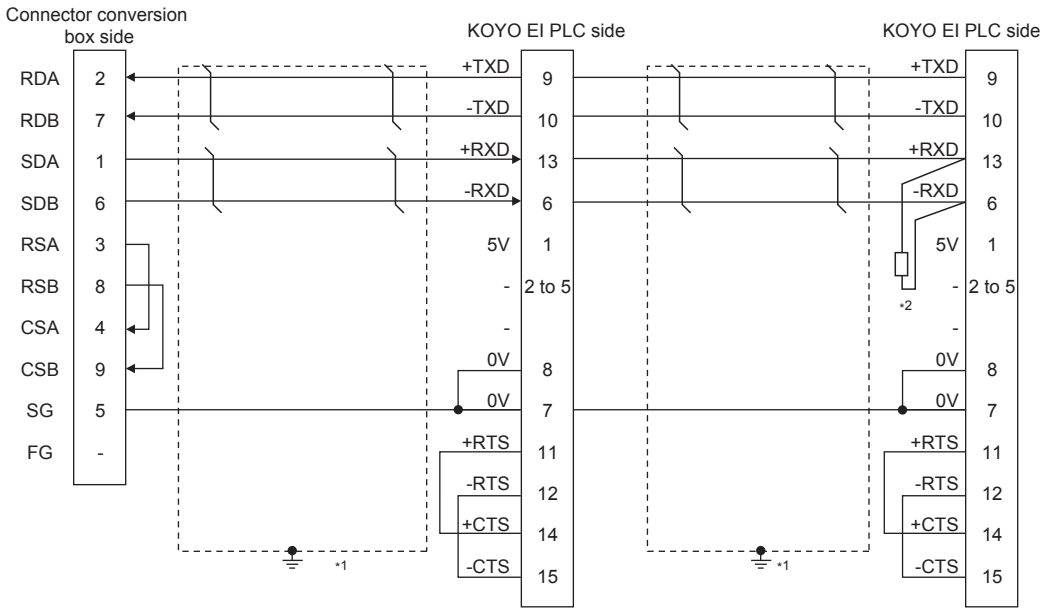
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 21)



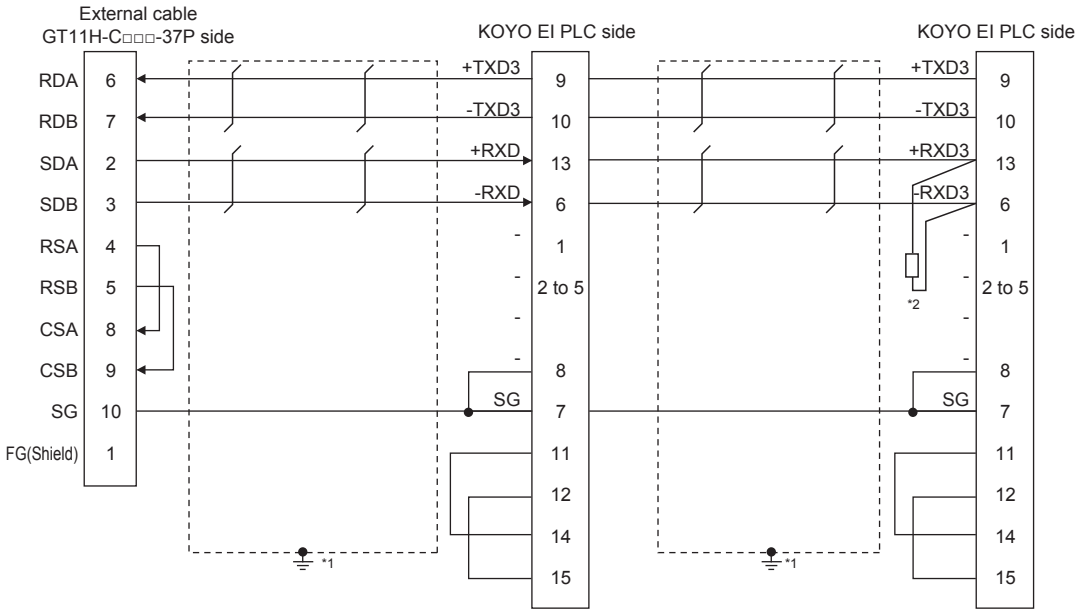

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 22)




*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

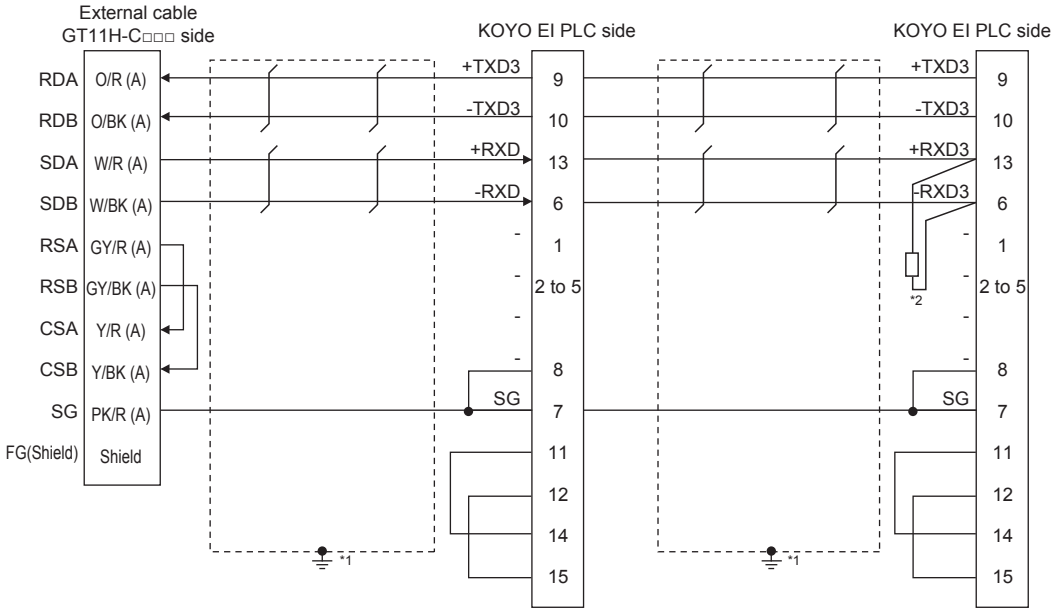
## ■RS-422 connection diagram 23)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## ■RS-422 connection diagram 24)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■KOYO EI PLC side connector

Use the connector compatible with the KOYO EI PLC side.

For details, refer to the KOYO EI PLC user's manual.



## Connecting terminating resistors

### ■GOT side

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■KOYO EI PLC

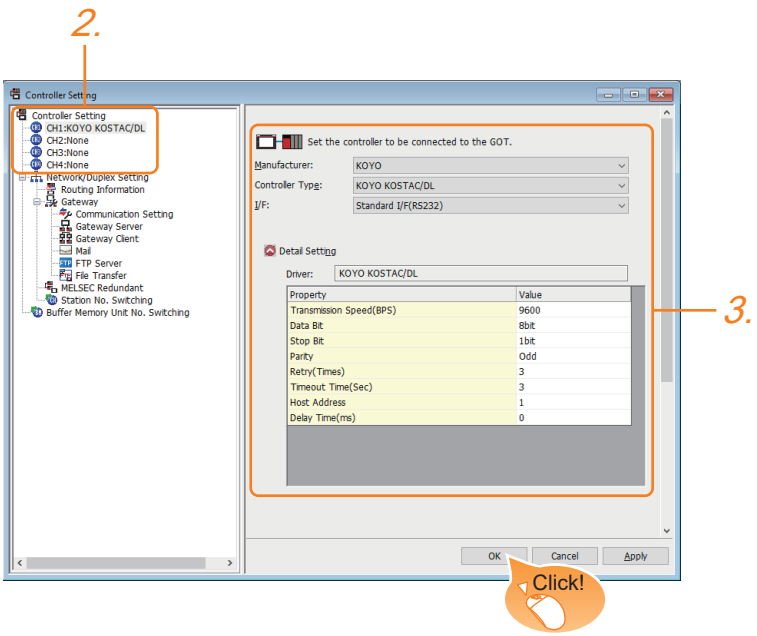
To connect a KOYO EI PLC to a GOT, a terminating resistor must be set to the KOYO EI PLC.

📖KOYO EI PLC user's Manual

# 19.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [KOYO]
- [Controller Type]: [KOYO KOSTAC/DL]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1097 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications. (Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs. (Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 50sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms) | 0 to 300ms |
| Host Address | Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 1) | 1 to 90 |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 19.5 PLC Side Setting

**Point**

KOYO EI PLC

For details of KOYO EI PLCs, refer to the following manuals.

KOYO EI PLC user's Manual

| Model name | | | Refer to |
|---|---|---|---|
| PLC CPU | KOSTAC SU Series | SU-5E/6B | ☞ Page 1099 Connecting to SU-5E/6B |
| | | SU-5M/6M | ☞ Page 1100 Connecting to SU-5M/6M |
| | DirectLOGIC 05 Series<br>DirectLOGIC 06 Series | | ☞ Page 1100 Connecting to DirectLOGIC 05 series or DirectLOGIC 06 series |
| | DirectLOGIC 205 Series | | ☞ Page 1101 Connecting to DirectLOGIC 205 series |
| | PZ series | | ☞ Page 1101 Connecting to PZ Series |
| Host Link Module | U-01DM | | ☞ Page 1102 Connecting to U-01DM |
| Data Communications Module | D0-DCM | | ☞ Page 1104 Connecting to D0-DCM |
| | D2-DCM | | ☞ Page 1105 Connecting to D2-DCM |

# Connecting to SU-5E/6B

## Communication settings

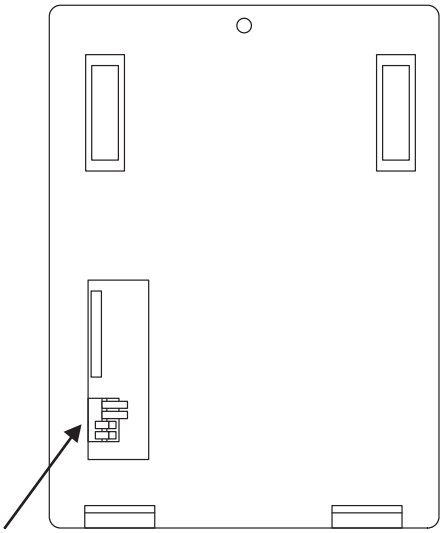
Make the following settings using the programmer system parameter setting.

| Item | Set value |
|---|---|
| Station No. | 1 to 90 |
| Transmission mode | HEX |
| Parity | NONE, ODD |
| Data bit | 8 bit (Fixation) |
| Stop bit | 1 bit (Fixation) |



## Setting DIP switches

Set the transmission speed using the CPU DIP switch.



CPU DIP switch




| Item | Set value | Switch No. | |
|---|---|---|---|
| | | 3 | 4 |
| Transmission speed*1 | 9600bps | ON | OFF |
| | 19200bps | ON | ON |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Connecting to SU-5M/6M

## Communication settings

Make the following settings using the programmer system parameter setting.

| Item | Set value |
|---|---|
| Protocol | CCM |
| Response delay time | 0ms |
| Timeout Time | 800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms |
| Station No. | 1 to 90 |
| Transmission mode | HEX |
| Stop bit | 1bit, 2bits |
| Data bit | 8bits (Fixed) |
| Parity | NONE, ODD, EVEN |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Connecting to DirectLOGIC 05 series or DirectLOGIC 06 series

## Communication settings

Make the following settings using the programmer system parameter setting.

| Item | Set value |
|---|---|
| Protocol | CCM NET (DirectNET) |
| Timeout | 780ms or more |
| RTS On Delay Time | 0ms*1 |
| RTS Off Delay Time | 0ms*1 |
| Station No. | 1 to 90 |
| Transmission speed*2 | 9600bps, 19200bps, 38400bps |
| Stop bit | 1bit, 2bits |
| Parity | NONE, ODD, EVEN |
| Communication format | HEX |

*1 To use a PLC with multidrop, set the "RTS on delay time" to 5ms or more and the "RTS off delay time" to 2ms or more.
*2 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Connecting to DirectLOGIC 205 series

## Communication settings

Make the following settings using the programmer system parameter setting.

| Item | Set value |
|---|---|
| Protocol | CCM NET (DirectNET) |
| Station No. | 1 to 90 |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits (fixed) |
| Stop bit | 1bit (fixed) |
| Parity | NONE, ODD |
| Self-diagnostic mode | OFF |
| Response delay time | 0ms |
| Peer to Peer | OFF |
| Master/Slave | Slave |
| Timeout | Enable |
| Transmission mode | HEX |
| MODBUS | OFF |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Connecting to PZ Series

## Communication settings

Make the following settings using the programmer system parameter setting.

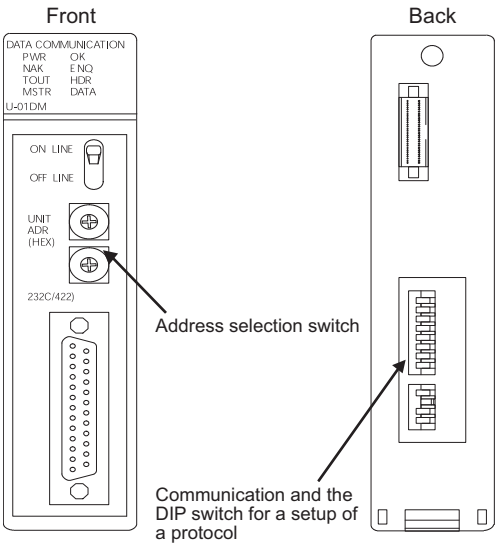
| Item | Set value |
|---|---|
| Protocol | CCM NET |
| Timeout | 800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms |
| Response delay time | 0ms |
| Station No. | 1 to 90 |
| Communication format | HEX |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Stop bit | 1bit |
| Parity | NONE, ODD |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

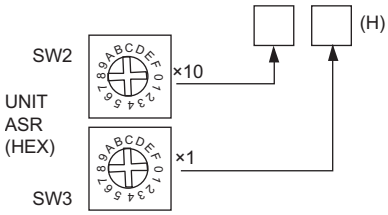
# Connecting to U-01DM

## Setting switches

Make the communication settings using each setting switch.

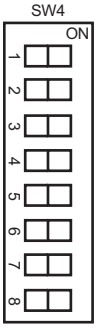



### ■Address selection switch(SW2, SW3)




| Switch No. | Settings | Setting details |
|---|---|---|
| SW2 | Code higher rank ($10^1$figures) | 01 to 5A |
| SW3 | Code low rank ($10^0$figures) | |

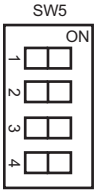
## ■Communication and the DIP switch for a setup of a protocol(SW4)




| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Transmission speed*1 | 9600bps | OFF | ON | ON | | | | | |
| | 19200bps | ON | ON | ON | | | | | |
| | 38400bps | OFF | OFF | OFF | | | | | |
| Parity | ODD | | | | ON | | | | |
| | NONE | | | | OFF | | | | |
| Self-diagnostic | OFF | | | | | OFF | | | |
| Response delay time | 0ms | | | | | | OFF | OFF | OFF |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

## ■Communication and the DIP switch for a setup of a protocol(SW5)




| Item | Set value | Switch No. | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Peer to Peer | OFF | OFF | | | |
| M/S | Slave | | OFF | | |
| TOUT existence | Enable | | | OFF | |
| ASCII/HEX | HEX | | | | OFF |

# Connecting to D0-DCM

## Communication settings

Write the following communication settings to the specified register using the programmer.For details of the register, refer to the following manual.

KOYO EI PLC user's Manual

| Item | Set value |
|---|---|
| Transmission mode | HEX |
| Protocol | DirectNet |
| Station No. | 1 to 90 |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Parity | NONE, ODD, EVEN (Only communication port 2) |
| RTS On Delay Time (Only communication port 2) | 0ms |
| RTS Off Delay Time (Only communication port 2) | 0ms |
| Timeout (Only communication port 2) | 800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms |
| 485 mode selection (Only communication port 2) | RS232, RS422/485 4 line type |
| Data bit (Only communication port 2) | 8bits, 7bits |
| Stop bit (Only communication port 2) | 1bit, 2bits |
| The timeout between characters (Only communication port 2) | 0 to 9999ms |
| The completion of a setting | Default use,A preset value is effective |
| Reset timeout | Invalid,Effective |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Connecting to D2-DCM

## Communication settings

Make the following settings using the programmer.

| Item | Set value |
|---|---|
| Station No. | 1 to 90 |
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits (fixed) |
| Stop bit | 1bit (fixed) |
| Parity | NONE, ODD |
| Self-diagnostic mode | OFF |
| Response delay time | 0ms |
| Peer to Peer | OFF |
| Master/Slave | Slave |
| Timeout | Enable |
| Transmission mode | HEX |
| MODBUS | OFF |

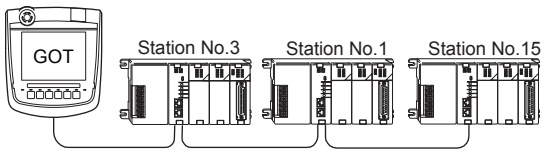
*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1096 Setting communication interface (Communication settings)

# Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




The example of a Station No. setting

## Direct specification

Specify the station No. of the PLC to be changed when setting device.

| Specification range |
|---|
| 1 to 90 |

# 19.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
KOYO EI equipment ([KOYO KOSTAC/DL])

# 19.7 Precautions

## GOT clock control

The GOT clock function is available only for the PLC with a calendar function.

Note: Although the "time adjusting" and "time broadcast" functions can be selected on the GOT, the "time broadcast" function is not available.

Do not select the "time broadcast" function.

If both of the functions are selected, not only the "time broadcast" function but also the "time adjusting" function will be disabled.

# 20 JTEKT PLC


- Page 1107 Connectable Model List
- Page 1108 System Configuration
- Page 1136 Connection Diagram
- Page 1146 GOT Side Settings
- Page 1148 PLC Side Setting
- Page 1158 Settable Device Range
- Page 1158 Precautions




## 20.1 Connectable Model List

The following table shows the connectable models.

| Model name | | Model type | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|---|
| PC3JG | PC3JG-P | TIC-6088 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1108 Connecting to PC3JG, PC3JD |
| | PC3JG | TIC-6125 | | | | |
| PC3JD | PC3JD | TIC-5642 | | | | |
| | PC3JD-C | TIC-6029 | | | | |
| PC3J | PC3J*1 | TIC-5339 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1113 Connecting to PC3J |
| | PC3JL | TIC-5783 | | | | |
| PC2J | PC2J | THC-2764 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1119 Connecting to PC2J (PC2J, PC2JS, or PC2JR) |
| | PC2JS | THC-2994 | | | | |
| | PC2JR | THC-5053 | | | | |
| | PC2JC | THC-5070 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1123 Connecting to PC2J (PC2JC, PC2J16P, or PC2J16PR) |
| | PC2J16P | THC-5169 | | | | |
| | PC2J16PR | THC-5173 | | | | |
| PC10G | PC10G-CPU | TCC-6353 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1128 Connecting to PC10G |

*1 Use PC3J of the version 2.1 or later.

# 20.2 System Configuration

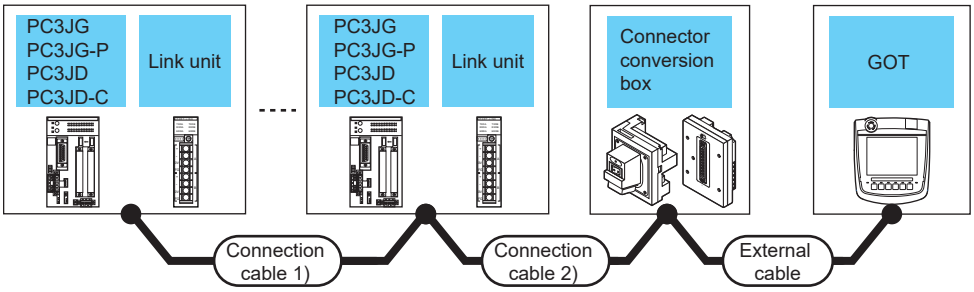
## Connecting to PC3JG, PC3JD

Communication driver

JTEKT TOYOPUC-PC

### For the RS-422 connection

#### ■When using the connector conversion box



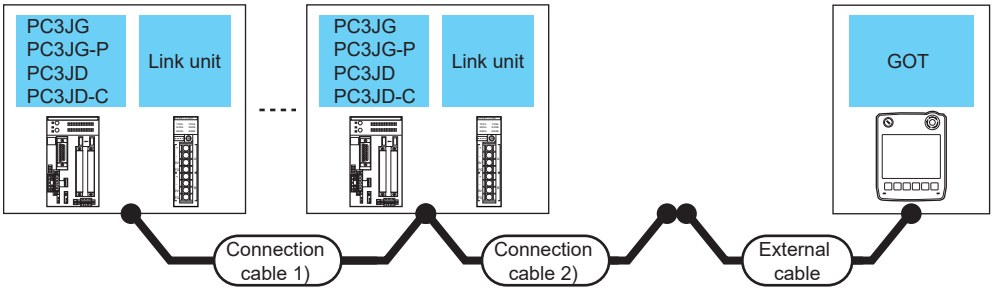

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□-37P)



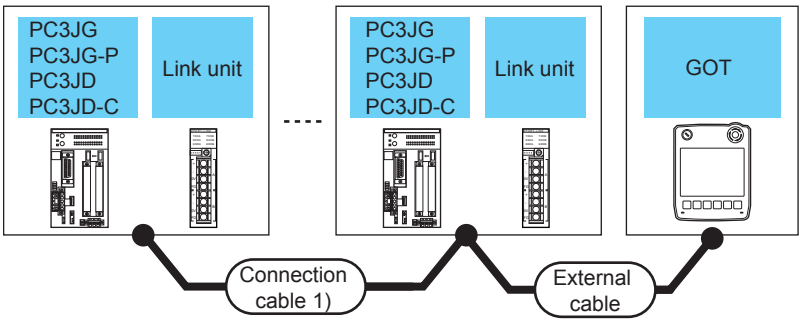

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | User preparing Page 1142 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□)




| PLC*3 | | | | Connection cable 1) | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

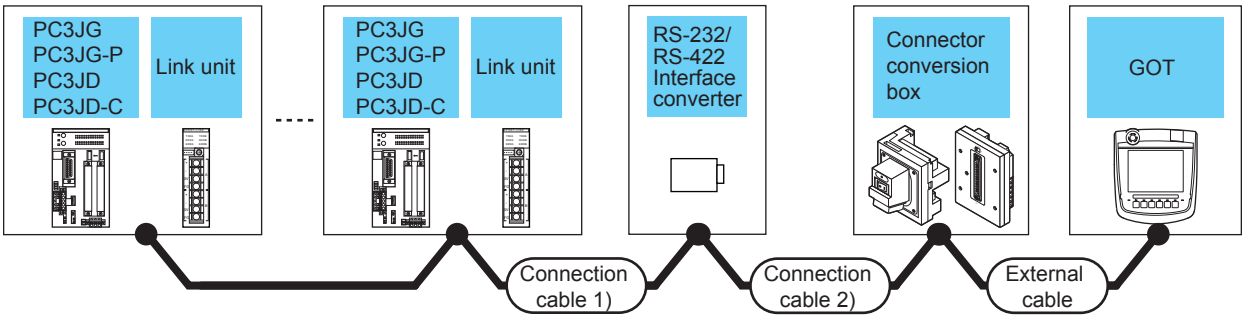
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## For the RS-232 connection (via an interface converter)

### ■When using the connector conversion box



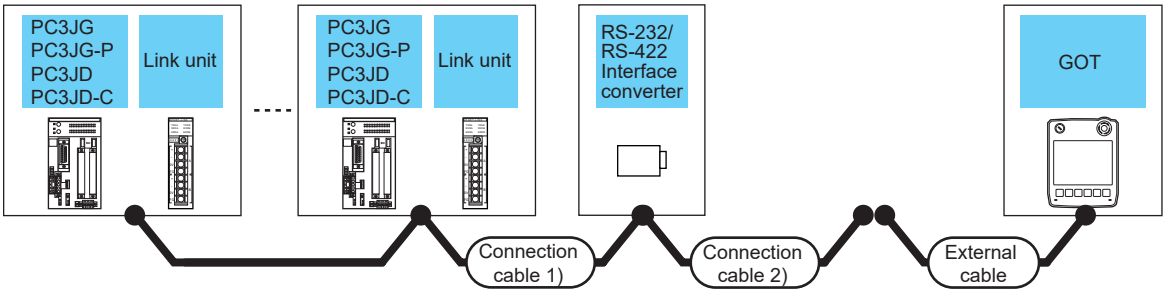

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 PLCs for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)



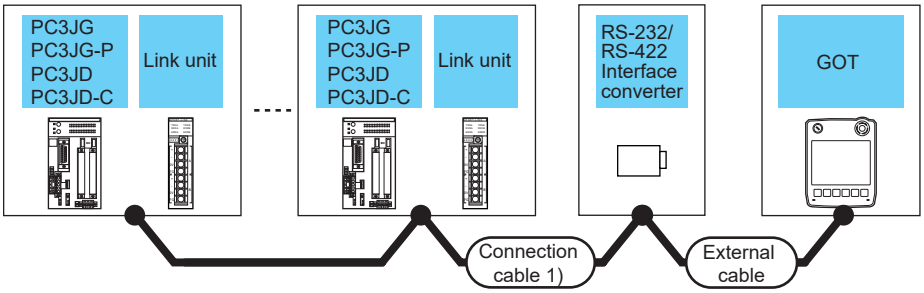

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PC3JG PC3JD | PC3JG PC3JG-P PC3JD PC3JD-C | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

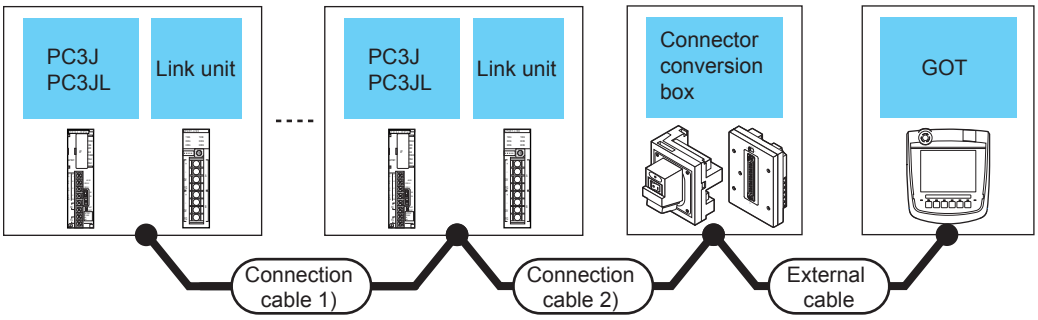
# Connecting to PC3J

Communication driver

JTEKT TOYOPUC-PC

## For the RS-422 connection

### ■When using the connector conversion box



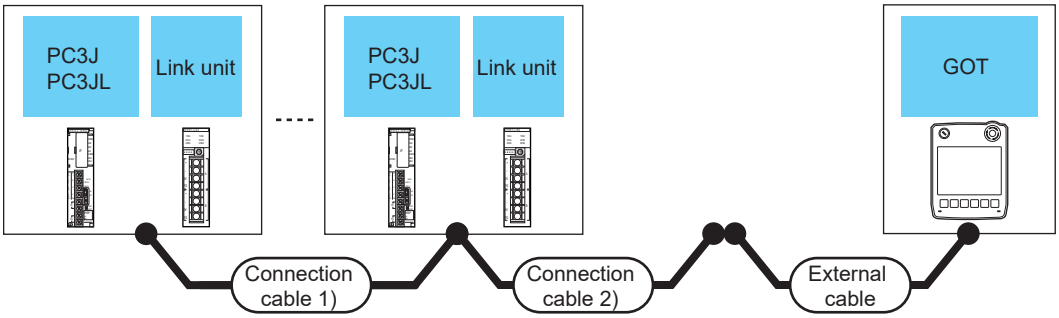

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PC3J | PC3J PC3JL | - | RS-422 | User preparing Page 1141 RS-422 connection diagram 6) | GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |
| | | PC/CMP2-LINK (THU-5139) | | User preparing Page 1141 RS-422 connection diagram 4) | GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□-37P)



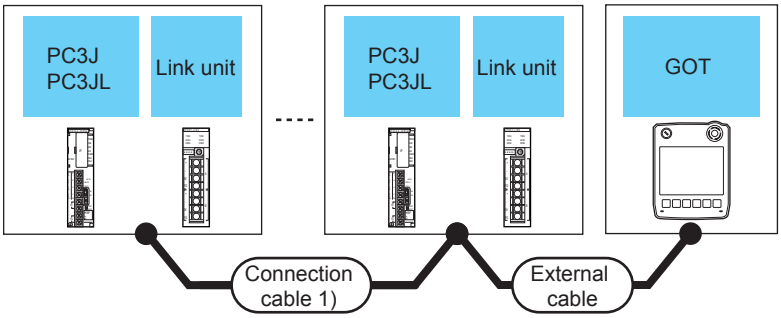

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PC3J | PC3J PC3JL | - | RS-422 | User preparing Page 1141 RS-422 connection diagram 6) | User preparing Page 1142 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |
| | | PC/CMP2-LINK (THU-5139) | | User preparing Page 1141 RS-422 connection diagram 4) | | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□)




| PLC*3 | | | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC3J | PC3J PC3JL | - | RS-422 | User preparing Page 1141 RS-422 connection diagram 6) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | 13m | 10 PLCs for 1 GOT |
| | | PC/CMP2-LINK (THU-5139) | | User preparing Page 1141 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | | |

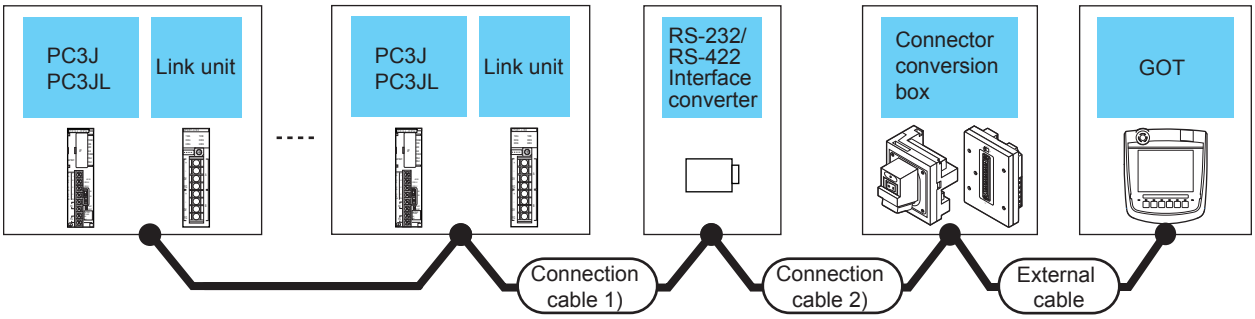
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## For the RS-232 connection (via interface converter)

### ■When using the connector conversion box



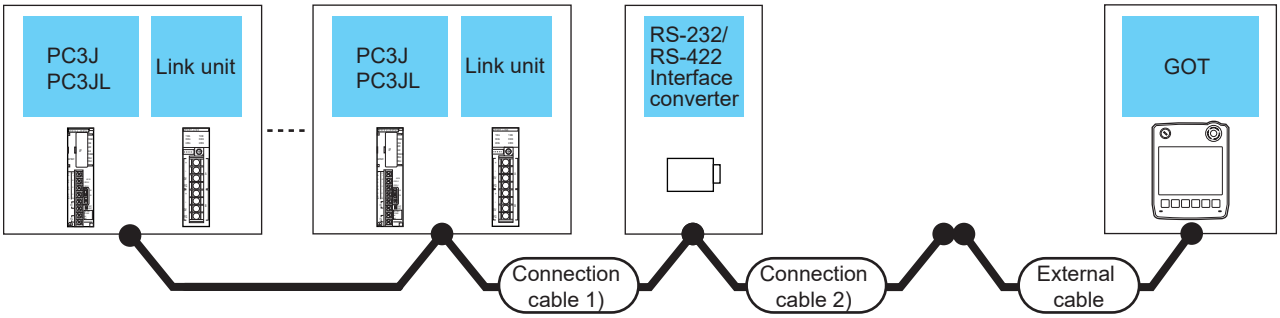

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PC3J | PC3J PC3JL | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 PLCs for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | | User preparing Page 1141 RS-422 connection diagram 5) | | | | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)



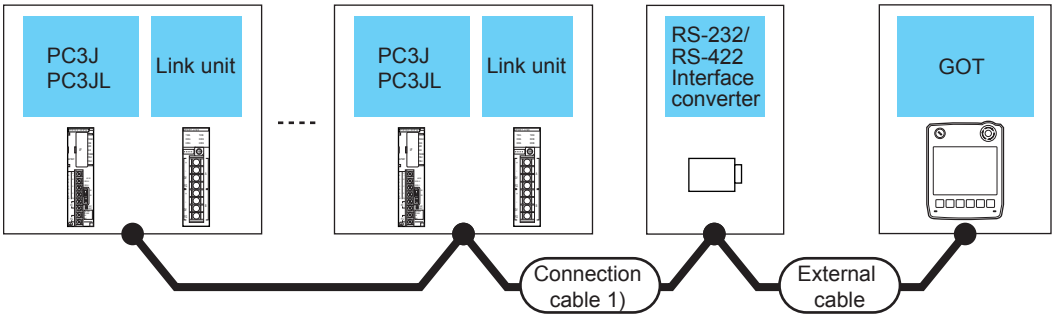

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PC3J | PC3J PC3JL | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | | User preparing Page 1141 RS-422 connection diagram 5) | | | | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PC3J | PC3J PC3JL | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | | User preparing Page 1141 RS-422 connection diagram 5) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

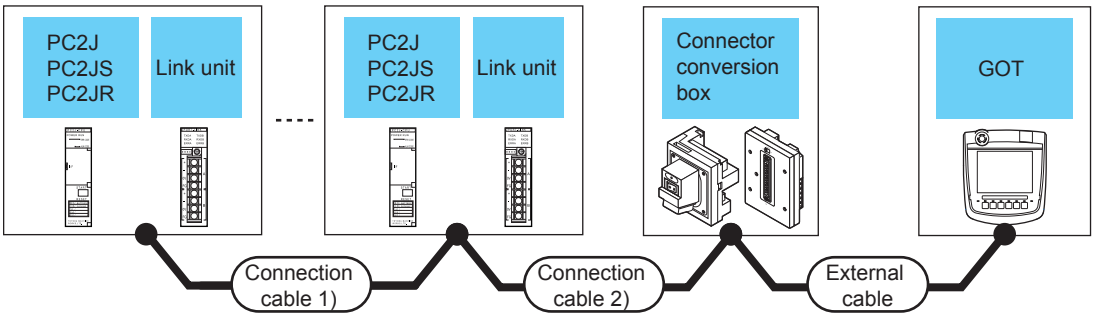
# Connecting to PC2J (PC2J, PC2JS, or PC2JR)

Communication driver

JTEKT TOYOPUC-PC

## For the RS-422 connection

### ■When using the connector conversion box

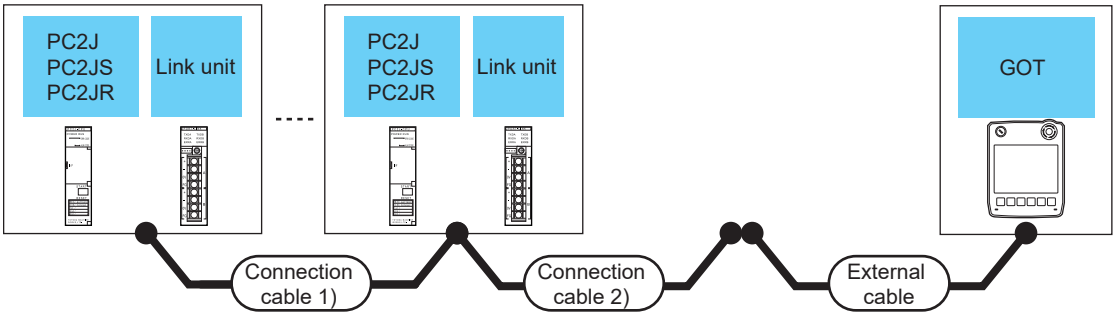



| PLC | | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

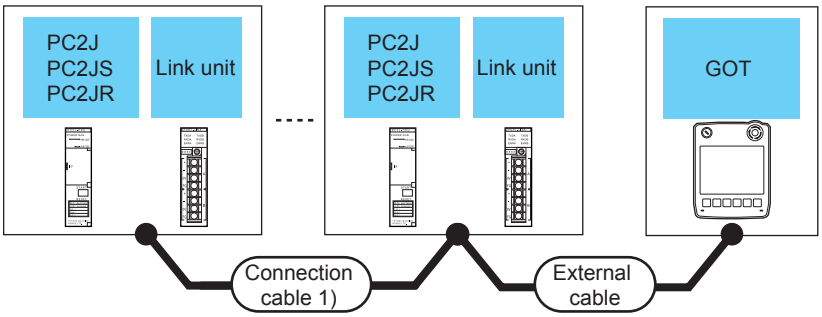



| PLC | | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | User preparing Page 1142 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



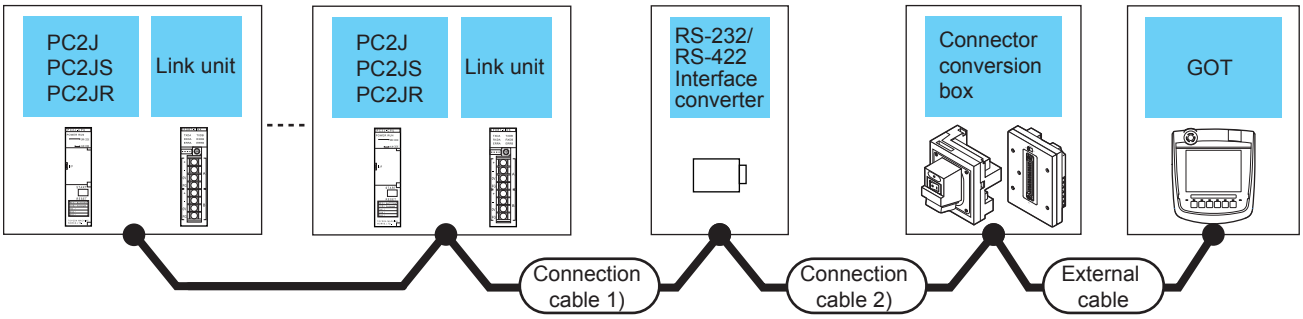

| PLC | | | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

## For the RS-232 connection (via interface converter)

### ■When using the connector conversion box



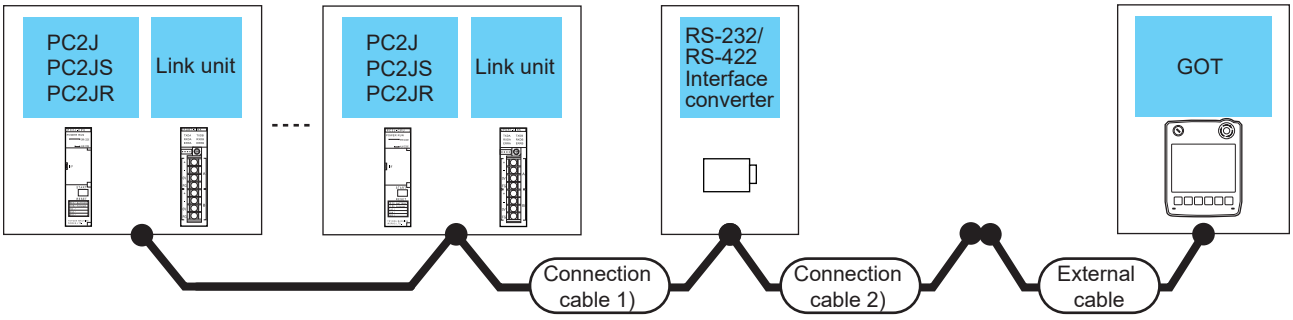

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 PLCs for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

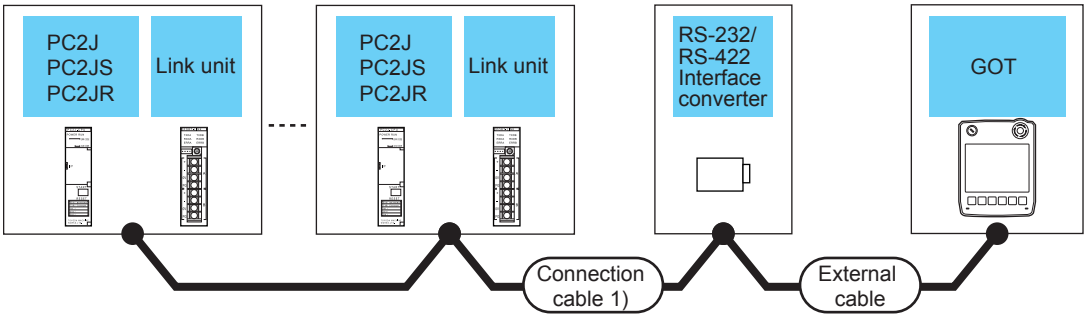
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | 500m | TXU-2051 | RS-232 | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 10 PLCs for 1 GOT |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PC2J | PC2J PC2JS PC2JR | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | 500m | TXU-2051 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | 6m | 10 PLCs for 1 GOT |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*3 The distance from the converter to the GOT (External cable)

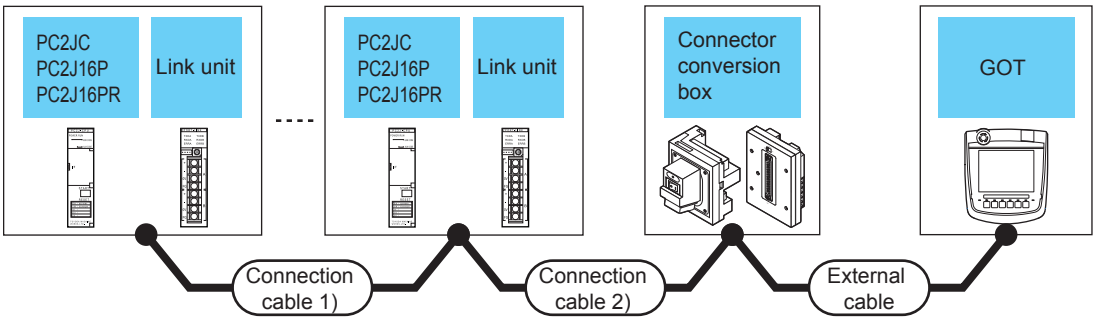
# Connecting to PC2J (PC2JC, PC2J16P, or PC2J16PR)

Communication driver

JTEKT TOYOPUC-PC

## For the RS-422 connection

### ■When using the connector conversion box

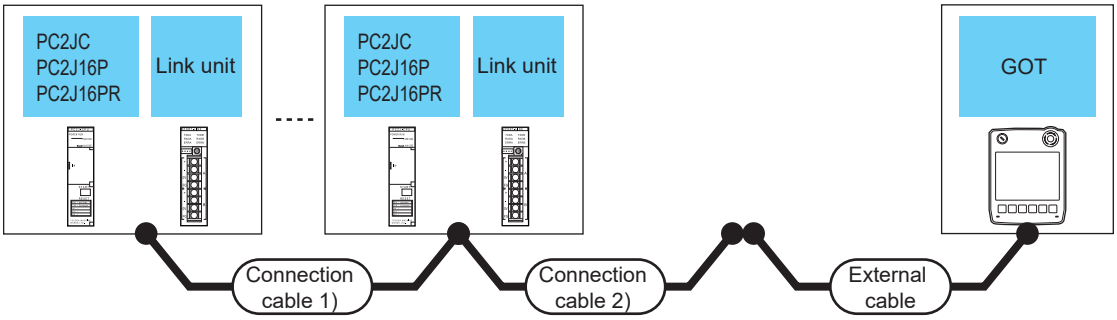



| PLC | | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit *1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

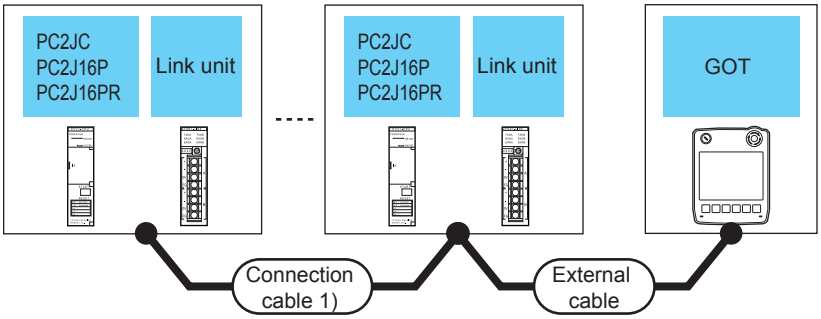



| PLC | | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | User preparing Page 1142 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



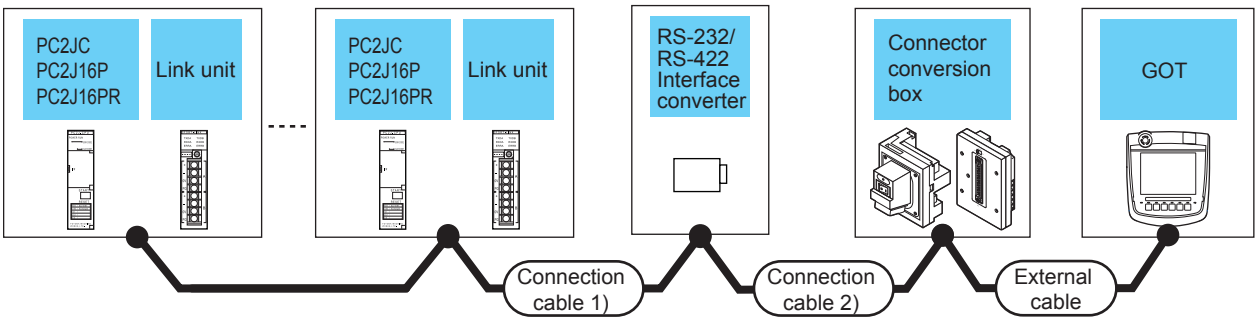

| PLC | | | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

## For the RS-232 connection (via interface converter)

### ■When using the connector conversion box



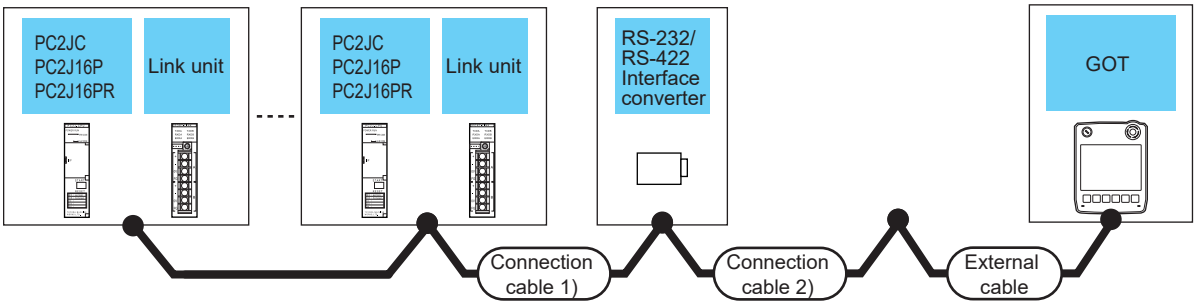

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 PLCs for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)



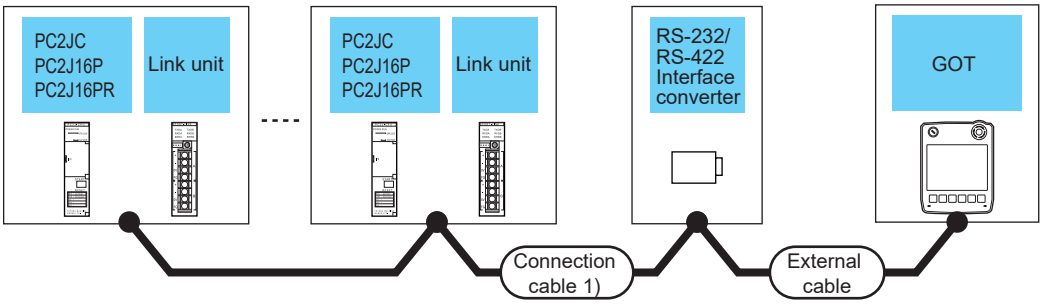

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PC2J | PC2JC PC2J16P PC2J16PR | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |
| | | PC/CMP2-LINK (THU-5139) | User preparing Page 1141 RS-422 connection diagram 3) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

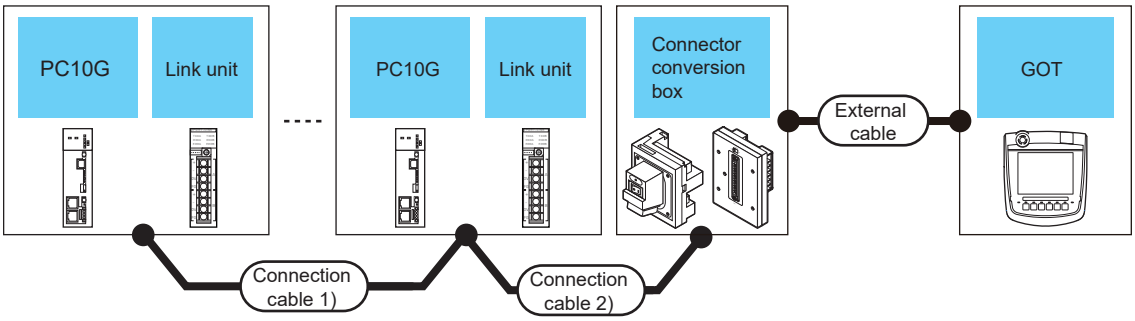
# Connecting to PC10G

Communication driver

JTEKT TOYOPUC-PC

## For the RS-422 connection

### ■When using the connector conversion box



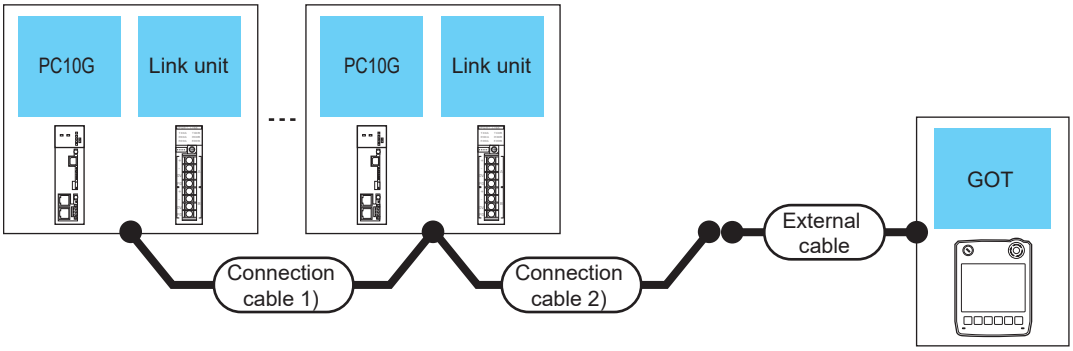

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PC10G | PC10G-CPU | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1142 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |
| | | ML10 (TCU-6903) | RS-422 | User preparing Page 1143 RS-422 connection diagram 11) | User preparing Page 1144 RS-422 connection diagram 12) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 32 PLCs for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□-37P)



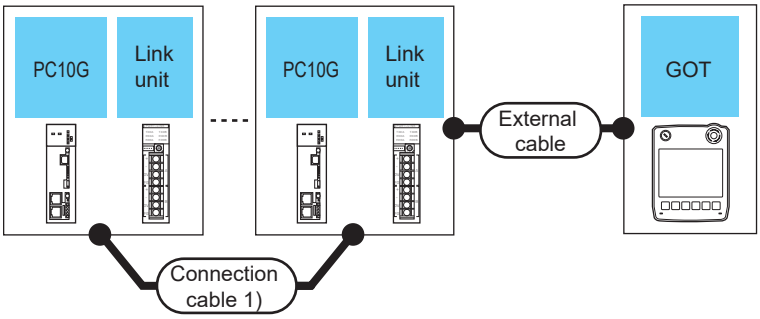

| PLC*3 | | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PC10G | PC10G-CPU | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | User preparing Page 1142 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |
| | | ML10 (TCU-6903) | RS-422 | User preparing Page 1143 RS-422 connection diagram 11) | User preparing Page 1144 RS-422 connection diagram 13) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## ■When using the external cable (GT11H-C□□□)




| PLC*3 | | | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC10G | PC10G-CPU | PC/CMP2-LINK (THU-5139) | RS-422 | User preparing Page 1141 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1143 RS-422 connection diagram 9) | GT 2505HS | 13m | 10 PLCs for 1 GOT |
| | | ML10 (TCU-6903) | RS-422 | User preparing Page 1143 RS-422 connection diagram 11) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1145 RS-422 connection diagram 14) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

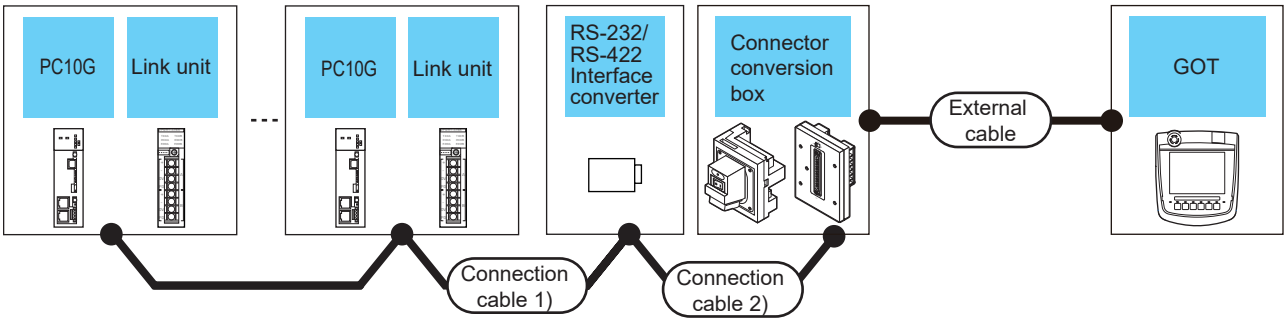
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1147 Communication detail settings

## For the RS-232 connection (via an interface converter)

### ■When using the connector conversion box



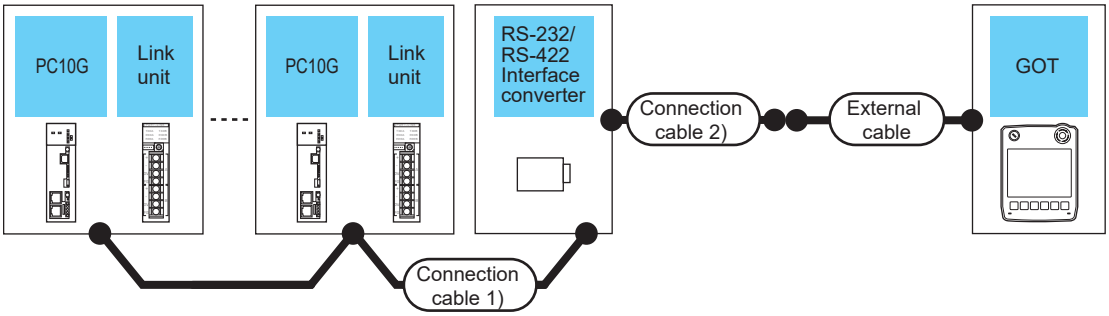

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PC10G | PC10G-CPU | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 32 PLCs for 1 GOT |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | ML10 (TCU-6903) | User preparing Page 1143 RS-422 connection diagram 10) | 500m | TXU-2051 | RS-232 | GT09-C30R21201-25P(3m) or User preparing Page 1136 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)



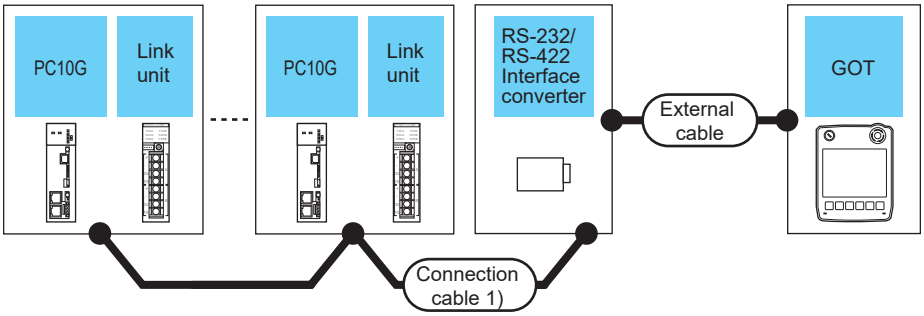

| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PC10G | PC10G-CPU | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | User preparing Page 1136 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | ML10 (TCU-6903) | User preparing Page 1143 RS-422 connection diagram 10) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | Connection cable 1) | | RS-232/RS-422 interface converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| P10G | PC10G-CPU | - | User preparing Page 1140 RS-422 connection diagram 1) | 500m | TXU-2051 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | 6m | 32 PLCs for 1 GOT |
| | | PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927) | User preparing Page 1140 RS-422 connection diagram 2) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |
| | | ML10 (TCU-6903) | User preparing Page 1143 RS-422 connection diagram 10) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1137 RS-232 connection diagram 3) | GT 2505HS | | |

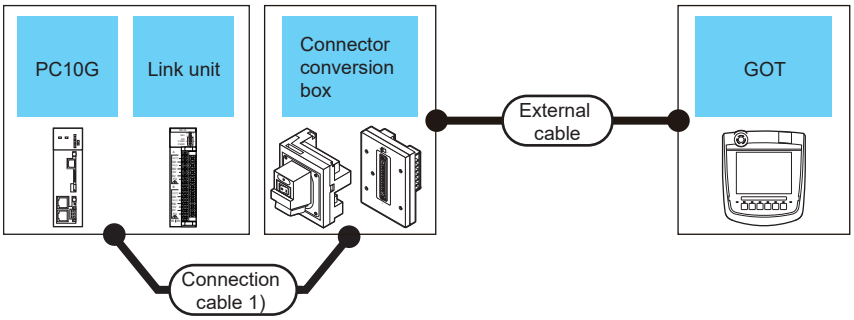
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

## For the RS-232 connection (via link unit)

### ■When using the connector conversion box

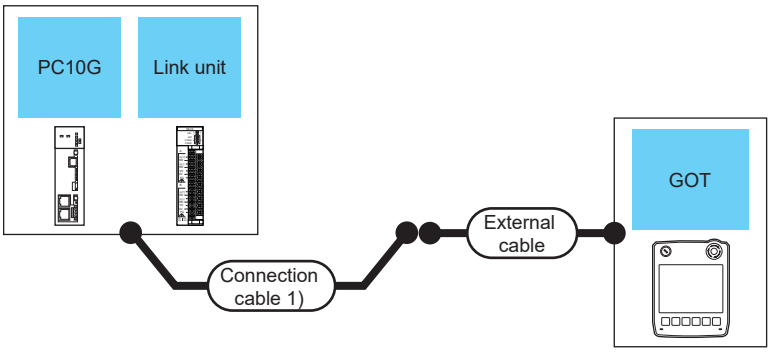



| PLC | | | | Connection cable 1) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| PC10G | PC10G-CPU | ML10 (TCU-6903) | RS-232 | User preparing Page 1137 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLCs for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

### ■When using the external cable (GT11H-C□□□-37P)

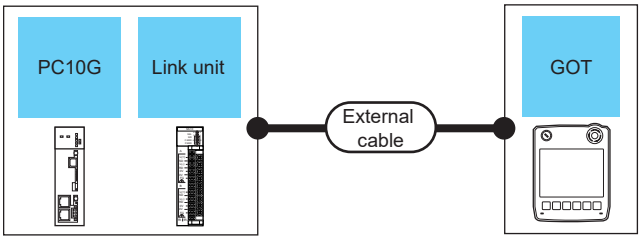



| PLC | | | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| PC10G | PC10G-CPU | ML10 (TCU-6903) | RS-232 | User preparing Page 1138 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | | Link unit*1 | Communication Type | | | | |
| P10G | PC10G-CPU | ML10 (TCU-6903) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1138 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLCs for 1 GOT |

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

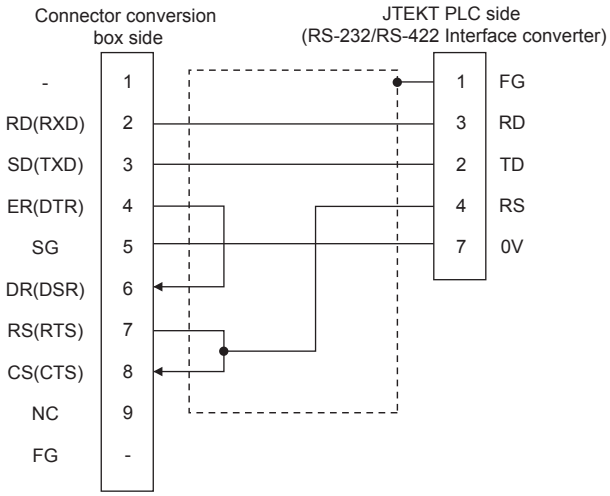
# 20.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

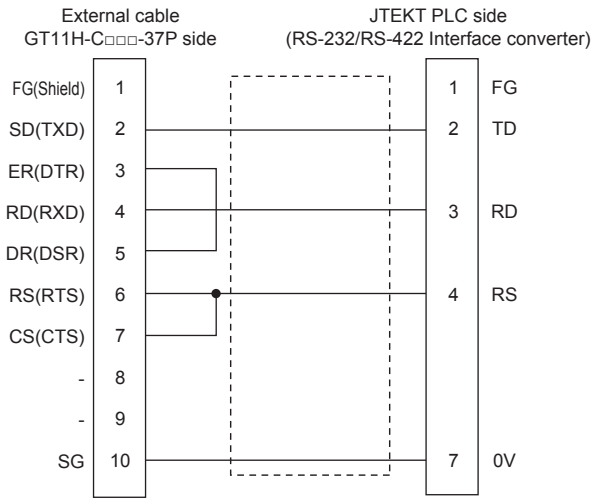
## RS-232 cable

### Connection diagram

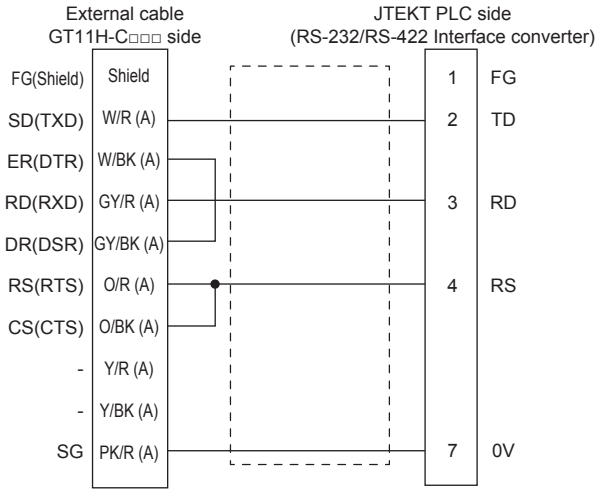
#### ■RS-232 connection diagram 1)



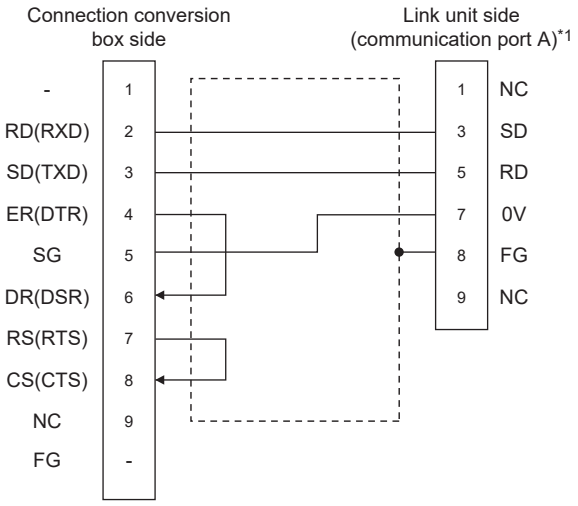

#### ■RS-232 connection diagram 2)



## ■RS-232 connection diagram 3)



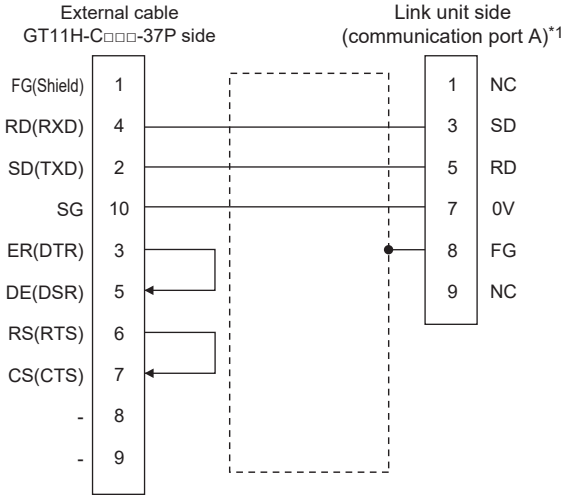

## ■RS-232 connection diagram 4)




*1 When using communication port B of the ML10, use the following terminal numbers.

| Signal name | Terminal No. |
|---|---|
| SD | 13 |
| RD | 15 |
| 0V | 17 |
| FG | 18 |

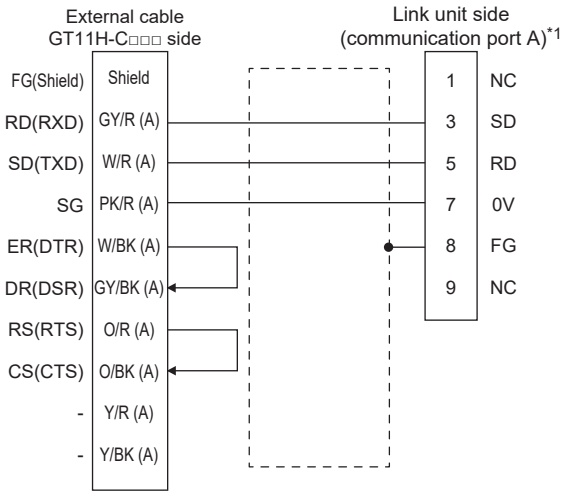
## ■RS-232 connection diagram 5)




*1 When using communication port B of the ML10, use the following terminal numbers.

| Signal name | Terminal No. |
|---|---|
| SD | 13 |
| RD | 15 |
| 0V | 17 |
| FG | 18 |

## ■RS-232 connection diagram 6)




*1 When using communication port B of the ML10, use the following terminal numbers.

| Signal name | Terminal No. |
|---|---|
| SD | 13 |
| RD | 15 |
| 0V | 17 |
| FG | 18 |

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■JTEKT PLC side connector

Use the connector compatible with the JTEKT PLC side module.

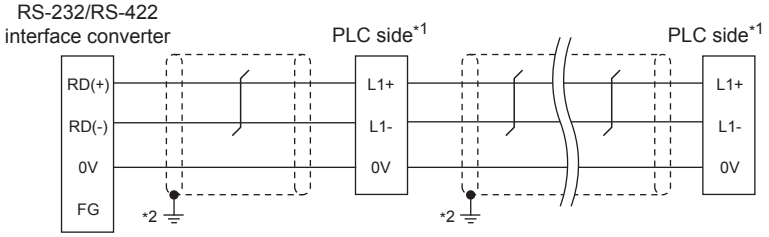
For details, refer to the JTEKT PLC user's manual.

# RS-422 cable

## Connection diagram

### ■RS-422 connection diagram 1)

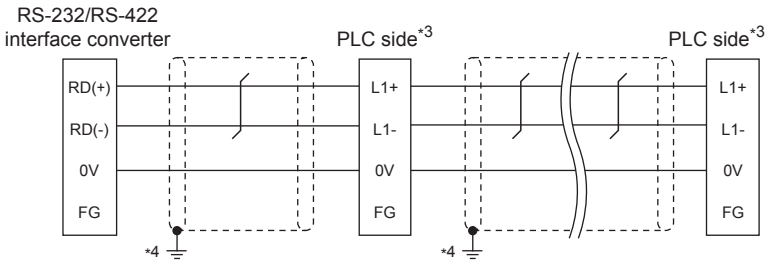
(For PC3JG-P/PC3JG/PC3JD/PC3JD-C)




*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

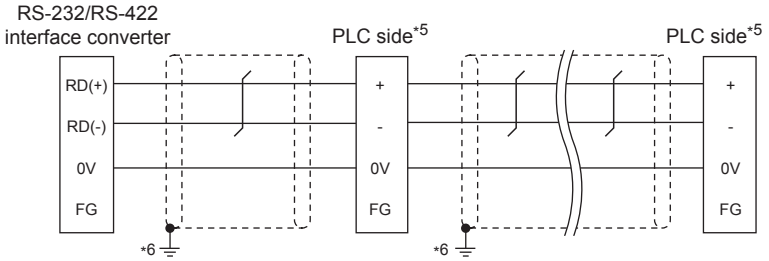
(For PC3J/PC3JL)




*3 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*4 Connect FG grounding to the appropriate part of a cable shield line.

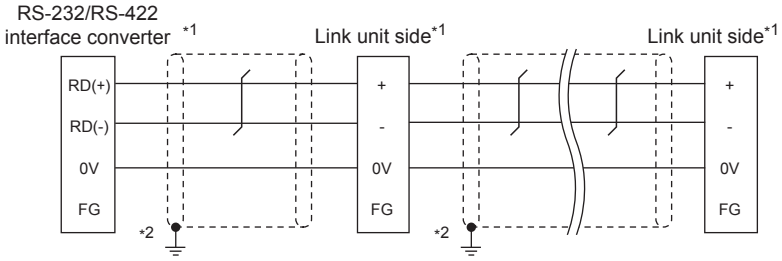
(For PC2JC/PC2J16P, PC2J16PR)




*5 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*6 Connect FG grounding to the appropriate part of a cable shield line.

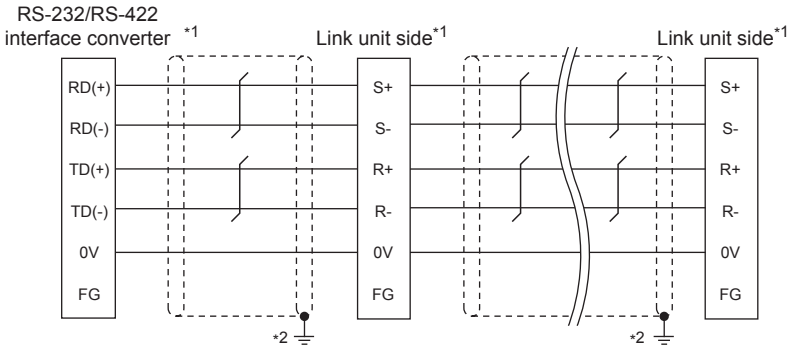
### ■RS-422 connection diagram 2)




*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

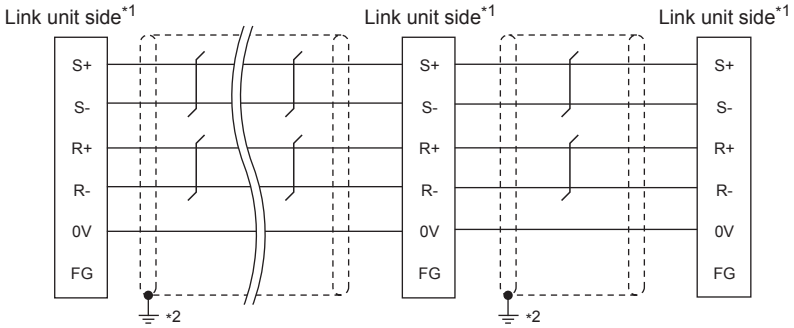
*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 3)



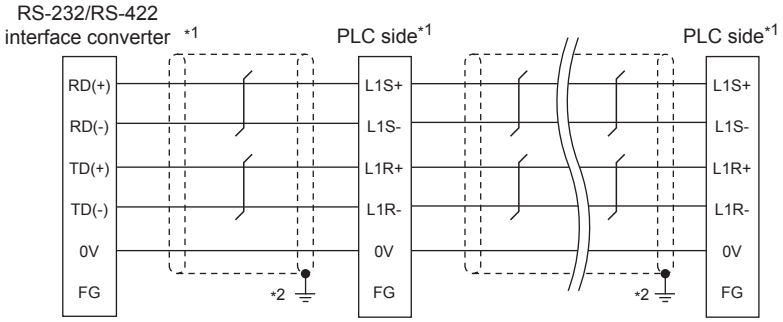

*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 4)



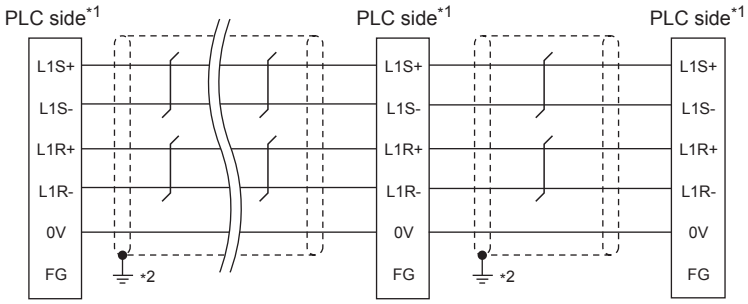

*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 5)



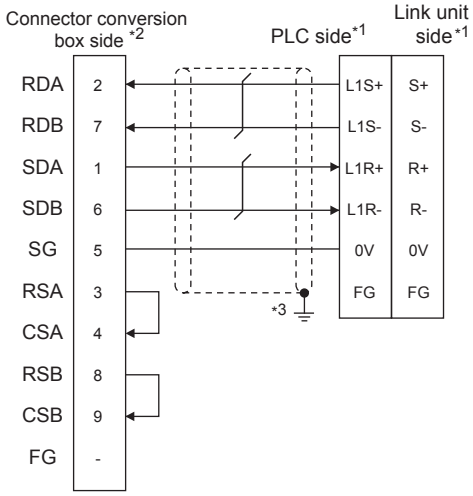

*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 6)




*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 7)



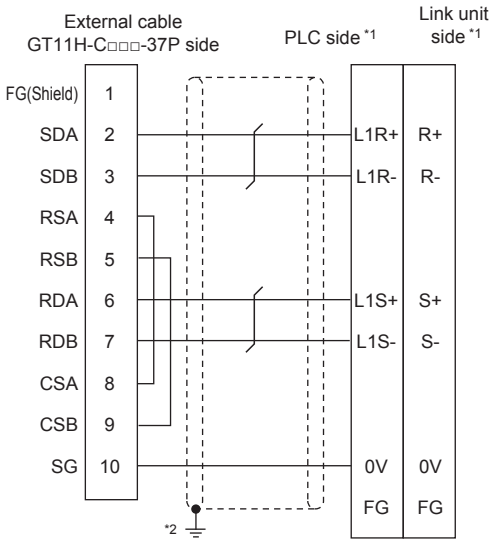

*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1145 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

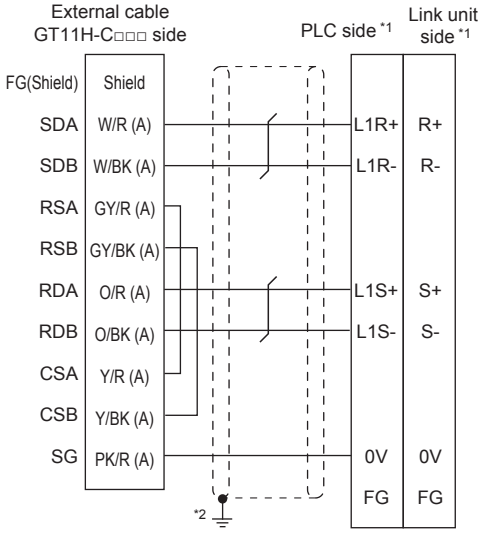
## ■RS-422 connection diagram 8)




*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

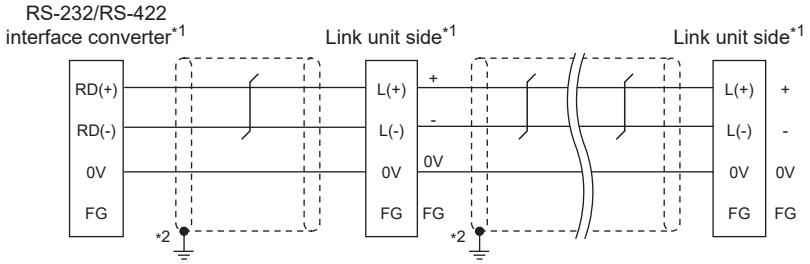
## ■RS-422 connection diagram 9)




*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

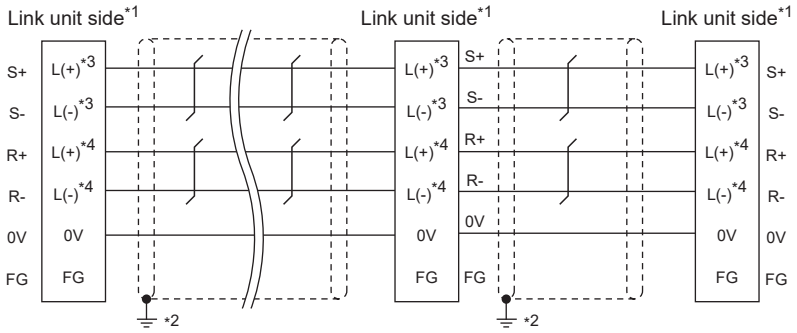
## ■RS-422 connection diagram 10)




*1 Do not provide terminating resistors for the link unit and RS-232/RS-422 interface converter which will be the terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-422 connection diagram 11)



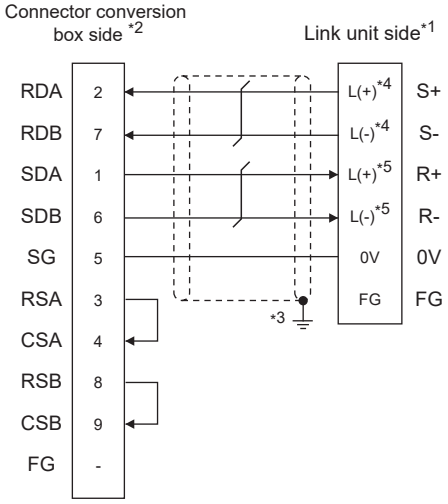

*1 Do not provide terminating resistors for the terminal link units.

*2 Connect FG grounding to the appropriate part of a cable shield line.

*3 Connect the cable to the terminal of communication port A.

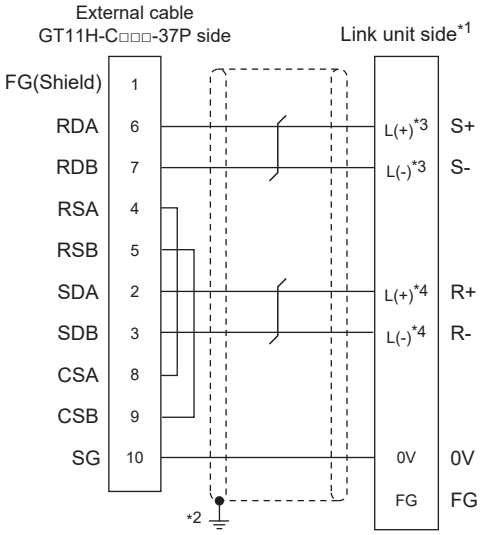
*4 Connect the cable to the terminal of communication port B.

## ■RS-422 connection diagram 12)



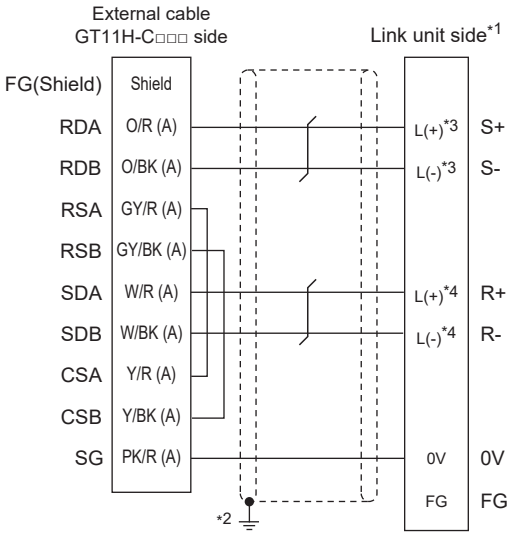

*1 Do not provide a terminating resistor for the terminal link unit.
*2 Set the terminating resistor settings on the terminal GOT.
☞ Page 1145 Connecting terminating resistors
*3 Connect FG grounding to the appropriate part of a cable shield line.
*4 Connect the cable to the terminal of communication port A.
*5 Connect the cable to the terminal of communication port B.

## ■RS-422 connection diagram 13)




*1 Do not provide a terminating resistor for the terminal link unit.
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 Connect the cable to the terminal of communication port A.
*4 Connect the cable to the terminal of communication port B.

### ■RS-422 connection diagram 14)




*1 Do not provide a terminating resistor for the terminal link unit.
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 Connect the cable to the terminal of communication port A.
*4 Connect the cable to the terminal of communication port B.

## Precautions when preparing a cable

### ■Cable length

• The length of the RS-422 cable used for connecting the connected equipment to the communication converter

The length of the RS-422 cable must be 500 m or less.

• The length of the RS-422 cable used for connecting the connected equipment to the GOT

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■JTEKT PLC side connector

Use the connector compatible with the JTEKT PLC side module.

For details, refer to the JTEKT PLC user's manual.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

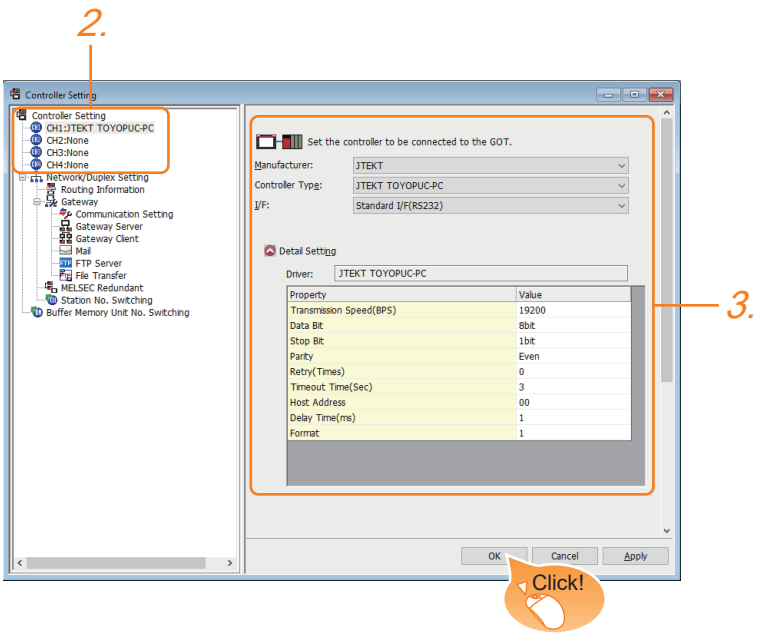
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 20.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [JTEKT]
- [Controller Type]: [JTEKT TOYOPUC-PC]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1147 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 00 |
| Delay Time(ms) | 1 |
| Format | 1 |



| Item | Description | Range |
|---|---|---|
| Transmission Speed*1 | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network.<br>(Default: 00) | 00 to 37<br>(Octal) |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0) | 0 to 300ms |
| Format | Select the communication format.<br>(Default: 1)<br>format 1: PC3J extended function incompliant<br>format 2: PC3J extended function compliant | 1/2 |

*1 When using an RS-232/RS-422 interface converter, set 19200 bps or less for [Transmission Speed(BPS)].

**Point**

• Format setting

The compatible format of PLC differs depending on model.

| Model name | Compatible format |
|---|---|
| PC2J, PC2JS, PC2JR, PC2JC, PC2J16P, PC2J16PR | Format 1 only |
| PC3JG, PC3JG-P, PC3JD, PC3JD-C, PC3J, PC3JL, PC10G | Format 1 or Format 2 |

For details of PC3J extended function, refer to the following manual.

JTEKT PLC user's manual

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 20.5 PLC Side Setting

**Point**

JTEKT PLC

For details of JTEKT PLCs, refer to the following manuals.

JTEKT PLC user's manual

| Model name | | Refer to |
|---|---|---|
| PLC CPU | PC3JG, PC3JG-P, PC3JD, PC3JD-C, PC2J, PC2JS, PC2JR, PC10G-CPU | Page 1148 Connecting to PC3JG, PC3JD, PC2J (PC2J, PC2JS, or PC2JR), or PC10G |
| | PC3J, PC3JL | Page 1149 Connecting to PC3J |
| | PC2JC | Page 1150 Connecting to PC2JC |
| | PC2J16P, PC2J16PR | Page 1151 Connecting to PC2J16P or PC2J16PR |
| RS-232/RS-422 interface converter | RS-232/RS-422 interface converter | Page 1152 RS-232/RS-422 interface converter setting |
| Link unit | PC/CMP-LINK | Page 1153 PC/CMP-LINK, 2PORT-LINK, or PC/CMP2-LINK settings |
| | 2PORT-LINK | |
| | PC/CMP2-LINK | |
| | ML10 | Page 1155 ML10 settings |

## Connecting to PC3JG, PC3JD, PC2J (PC2J, PC2JS, or PC2JR), or PC10G

### Communication settings

The following shows the communication settings to connect the GOT and a PLC through an RS-232/RS-422 interface converter.

Configure the communication settings using the PLC peripheral device (PCwin).

| Item | | Set value |
|---|---|---|
| Transmission speed*1 | Connection via interface converter*2 | 9600bps, 19200bps |
| Data bit*1 | | 8bits, 7bits |
| Parity bit | | Even (fixed) |
| Stop bit*1 | | 1bit, 2bits |
| Station No.*3 | | 0 to 37 (Octal) |
| 2-wire/4-wire type*4 | | 2-wire type or 4-wire type |

*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Avoid duplication of the station No. with any of the other units.

*4 Make the settings referring to the following connection diagram.

Page 1140 RS-422 cable

# Connecting to PC3J

## Communication settings

The following shows the communication settings to connect the GOT and a PLC directly or through an RS-232/RS-422 interface converter.

Configure the communication settings using the PLC peripheral device (PCwin).

| Item | | Set value |
|---|---|---|
| Transmission speed*1 | Direct connection | 9600bps, 19200bps, 38400bps |
| | Connection via interface converter*2 | 9600bps, 19200bps |
| Data bit*1 | | 8bits, 7bits |
| Parity bit | | Even (fixed) |
| Stop bit*1 | | 1bit, 2bits |
| Station No.*3 | | 0 to 37 (Octal) |
| 2-wire/4-wire type*4 | | 2-wire type or 4-wire type |

*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Avoid duplication of the station No. with any of the other units.

*4 Make the settings referring to the following connection diagram.

☞ Page 1140 RS-422 cable

# Connecting to PC2JC

## Communication settings

Make the communication settings using each setting switch.

For the detail settings, refer to the following manual.

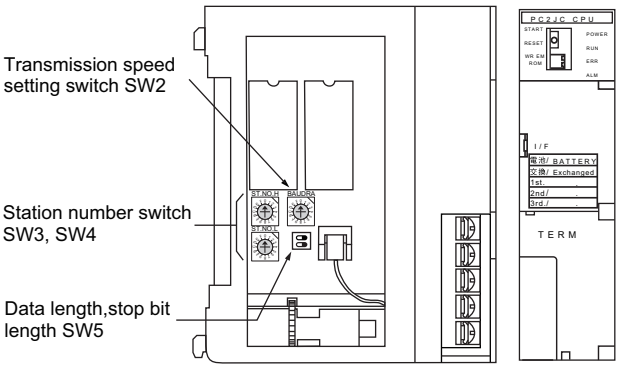
JTEKT PLC user's manual

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits, 7bits |
| Stop bit*1 | 1bit, 2bits |
| Station No.*1 | 0 to 37 (Octal) |

*1 Adjust the settings with GOT settings.

## Settings by switch

Make the communication settings using each setting switch.




### ■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

| Switch name | Station number setting |
|---|---|
| SW3 | Upper digit |
| SW4 | Lower digit |

### ■Transmission speed settings

| Switch name | Switch position | Transmission speed (bps) |
|---|---|---|
| SW2 | 1 | 19200 |
| | 2 | 9600 |

### ■Settings of data length and stop bit length

| Switch name | Setting item | Set value | Switch No. | |
|---|---|---|---|---|
| | | | 2 | 1 |
| SW5 | Data bit | 8bits | OFF | |
| | | 7bits | ON | |
| | Stop bit length | 2bits | | OFF |
| | | 1bit | | ON |

# Connecting to PC2J16P or PC2J16PR

## Communication settings

Make the communication settings using each setting switch.

For the detail settings, refer to the following manual.

JTEKT PLC user's manual

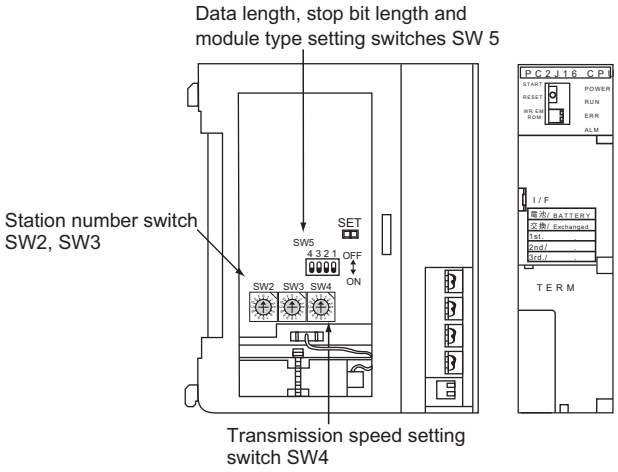
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits, 7bits |
| Stop bit*1 | 1bit, 2bits |
| Station No.*1 | 0 to 37 (Octal) |
| Selection of module type | Computer link |

*1 Adjust the settings with GOT settings.



## Settings by switch

Make the communication settings using each setting switch.




### ■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

| Switch name | Station number setting |
|---|---|
| SW2 | Upper digit |
| SW3 | Lower digit |

### ■Transmission speed settings

| Switch name | Switch position | Transmission speed (bps) |
|---|---|---|
| SW4 | 1 | 19200 |
| | 2 | 9600 |

### ■Settings of data length, stop bit length and module type

| Switch name | Setting item | Set value | Switch No. | | |
|---|---|---|---|---|---|
| | | | 4 | 3 | 2 |
| SW5 | Data bit | 8bits | OFF | | |
| | | 7bits | ON | | |
| | Stop bit length | 2bits | | OFF | |
| | | 1bit | | ON | |
| | Module type | Computer link | | | OFF |

# RS-232/RS-422 interface converter setting

## Communication settings

Make the communication settings by the setting switch of the RS-232/RS-422 interface converter.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| 2-wire/4-wire type*2 | 2-wire type or 4-wire type |
| Echo back | OFF |

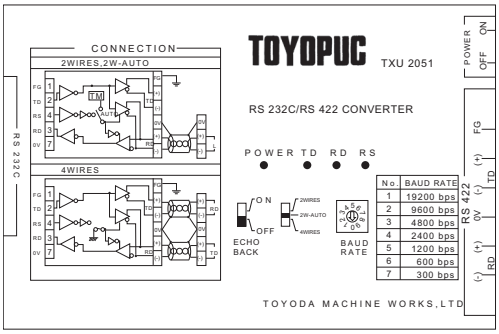
*1 Adjust the settings with GOT settings.

*2 Set referring to the RS-422 connection diagram.For details, refer to the following.

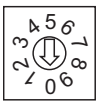
☞ Page 1140 RS-422 cable

## Settings by switch

Make the communication settings by each setting switch of the RS-232/RS-422 interface converter.

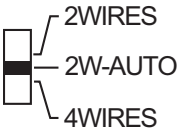



### ■Transmission speed settings



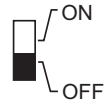

| Transmission speed (bps) | Switch position |
|---|---|
| 9600 | 2 |
| 19200 | 1 |

### ■Mode setting switch




| Mode | Switch position |
|---|---|
| 2-wire type | 2W-AUTO |
| 4-wire type | 4 WIRES |

### ■Echoback setting switch




| Setting | Switch position |
|---|---|
| OFF | OFF |

# PC/CMP-LINK, 2PORT-LINK, or PC/CMP2-LINK settings

## Communication settings

Make the communication settings using each setting switch of the link unit.

For the detail settings, refer to the following manual.

User's Manual of the JTEKT link unit

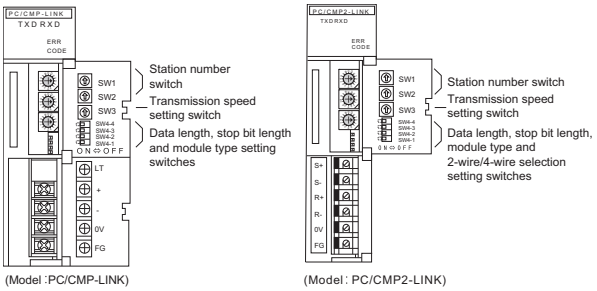
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits, 7bits |
| Stop bit*1 | 1bit, 2bits |
| Station No.*1 | 0 to 37 (Octal) |
| Selection of module type | Computer link |
| Selection of 2-wire type or 4- wire type*2 | 2-wire type or 4-wire type |

*1 Adjust the settings with GOT settings.

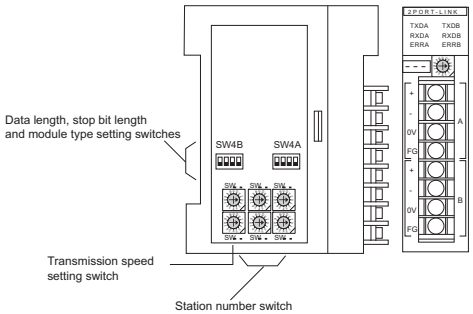
*2 Set referring to the RS-422 connection diagram.For details, refer to the following.

☞ Page 1140 RS-422 cable

## Settings by switch




(Model :PC/CMP-LINK) (Model : PC/CMP2-LINK)




(Model :2PORT-LINK)

### ■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

| Switch name | Station number setting |
|---|---|
| SW1 | Upper digit |
| SW2 | Lower digit |

### ■Transmission speed settings

The settings must be consistent with the GOT settings.

| Switch name | Switch position | Transmission speed (bps) |
|---|---|---|
| SW3 | 2 | 9600 |
| | 1 | 19200 |

## ■Data length, stop bit length, module type and 2-wire/4-wire type communication selection setting

| Switch name | Setting item | Set value | Switch No. | | | |
|---|---|---|---|---|---|---|
| | | | 4 | 3 | 2 | 1 |
| SW4 | Data bit | 8bits | OFF | | | |
| | | 7bits | ON | | | |
| | Stop bit length | 2bits | | OFF | | |
| | | 1bit | | ON | | |
| | Module type*1 | PC link | | | OFF | |
| | | Computer link | | | ON | |
| | 2-wire type/4- wire type communication selection*2 | 2-wire type communication | | | | OFF |
| | | 4-wire type communication | | | | ON |

*1 Set to ON (computer link) when connecting the GOT.

*2 The setting is available only for the link unit (Model: PC/CMP2-LINK).

# ML10 settings

## Communication settings

Make the communication settings using each setting switch of the link unit.

For the detail settings, refer to the following manual.

User's Manual of the JTEKT link unit

| Item | Set value |
|---|---|
| Transmission speed*1*2 | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit*1 | 8bits, 7bits |
| Stop bit*1 | 1bit, 2bits |
| Station No.*1 | 0 to 37 (Octal) |
| Port function | Computer link |
| Selection of 2-wire type or 4- wire type*3 | 2-wire type or 4-wire type |

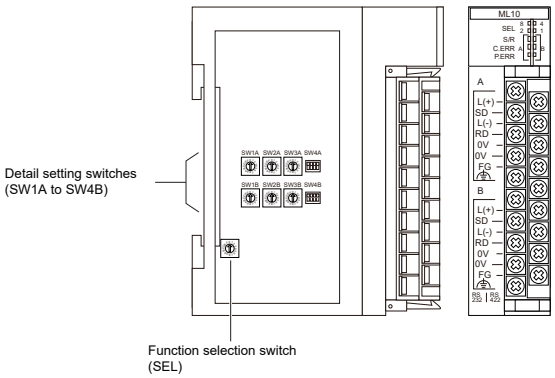
*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Set referring to the RS-422 connection diagram.For details, refer to the following.

Page 1140 RS-422 cable

## Settings by switch




### ■Function selection switch (SEL)

Configure the communication function settings for communication port A and B.

| SEL | Function | | 2-wire type/ 4-wire type | Detail setting switch to be used |
|---|---|---|---|---|
| | Communication port A | Communication port B | | |
| 0 | PC link, computer link*1 | - | 2-wire type | SW1A to SW4A |
| 1 | PC link, computer link (send)*1 | PC link, computer link (receive)*1 | 4-wire type | SW1A to SW4A |
| 8 to E | PC link, computer link*1 | PC link, computer link*1 | 2-wire type | • Communication port A setting: SW1A to SW4A<br>• Communication port B setting: SW1A to SW4A |

*1 Set SW4A and SW4B to the computer link when connecting the GOT.
When setting the value of the SEL to 8 to E, also set the unused communication port to the computer link.

## ■Detail setting switches (SW1A to SW4B)

• Setting of the station No.

Set the station No. between 00 and 37 (Octal).

| Switch name | | Station number setting |
|---|---|---|
| Communication port A or 4-wire type | Communication port B | |
| SW1A | SW1B | Upper digit |
| SW2A | SW2B | Lower digit |

• Transmission speed settings

The settings must be consistent with the GOT settings.

| Switch name | | Switch position | Transmission speed (bps)*1 |
|---|---|---|---|
| Communication port A or 4-wire type | Communication port B | | |
| SW3A | SW3B | 0 | 57600 |
| | | 1 | 19200 |
| | | 2 | 9600 |
| | | A | 38400 |
| | | B | 115200 |

*1 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

• Data length, stop bit length, port function, and 2-wire type/4-wire type settings

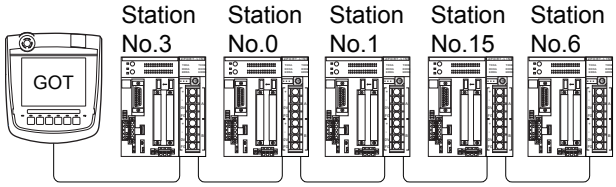
| Switch name | | Setting item | Set value | Switch No. | | | |
|---|---|---|---|---|---|---|---|
| Communication port A or 4-wire type | Communication port B | | | 4 | 3 | 2 | 1 |
| SW4A | SW4B | Data length | 8bits | OFF | | | |
| | | | 7bits | ON | | | |
| | | Stop bit length | 2bits | | OFF | | |
| | | | 1bit | | ON | | |
| | | Port function*1 | PC link | | | OFF | |
| | | | Computer link | | | ON | |
| | | 2-wire type/4-wire type | 2-wire type | | | | OFF |
| | | | 4-wire type | | | | ON |

*1 Set to ON (computer link) when connecting the GOT.

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order. There is no problem even if station numbers are not consecutive.




Examples of station number setting



## Direct specification

Specify the station No. of the PLC to be changed when setting device.

| Specification range |
|---|
| 00 to 37 (Octal) |

# 20.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
JTEKT equipment ([JTEKT TOYOPUC-PC])

# 20.7 Precautions

## Station No. settings of the PLC side

In the system configuration, the PLC with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1146 Setting communication interface (Communication settings)

## GOT clock control

The GOT clock function is available only for the PLC with the station number set with the host address.

For details of host address setting, refer to the following.

☞ Page 1146 Setting communication interface (Communication settings)

## System configuration

If the system is configured by mixing the PC3J extended function compliant PLC with the PC3J extended function incompliant PLC, normal communication may not be performed.

Unify the PLCs into PC3J extended function compliant or PC3J extended function incompliant to configure the system.

## System alarm

The system alarm can be displayed only for the PLC set with a host address.

When connected to the PC3J extended function compliant PLC, only the system alarm of program No. 1 can be displayed.

# 21 SHARP PLC


- Page 1159 Connectable Model List
- Page 1160 System Configuration
- Page 1168 Connection Diagram
- Page 1174 GOT Side Settings
- Page 1176 PLC Side Setting
- Page 1183 Settable Device Range


## 21.1 Connectable Model List

The following table shows the connectable models.

| Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|
| JW-21CU | × | RS-422 | GT2506HS GT2505HS | ☞ Page 1160 Connecting to JW-21CU or JW-22CU |
| JW-22CU | ○ | RS-232<br>RS-422 | | |
| JW-31CUH | × | RS-422 | GT2506HS GT2505HS | ☞ Page 1162 Connecting to JW-31CUH, JW-32CUH or JW-33CUH |
| JW-32CUH | ○ | RS-232<br>RS-422 | | |
| JW-33CUH | ○ | | | |
| JW-50CUH | × | RS-422 | GT2506HS GT2505HS | ☞ Page 1164 Connecting to JW-50CUH, JW-70CUH, JW-100CUH, or JW-100CU |
| JW-70CUH | ○*1 | RS-232<br>RS-422 | | |
| JW-100CUH | ○*1 | | | |
| JW-100CU | ○ | | | |
| Z-512J | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1166 Connecting to Z-512J |

*1 When the link unit (ZW-10CM) is used in JW-70CUH/100CUH, the clock function is not available.

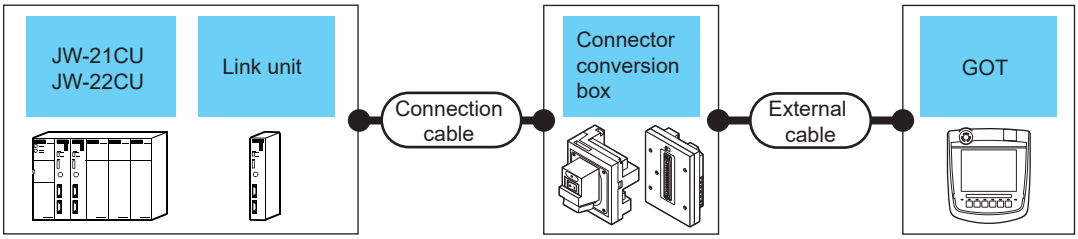
# 21.2 System Configuration

## Connecting to JW-21CU or JW-22CU

Communication driver

SHARP JW

### When using the connector conversion box

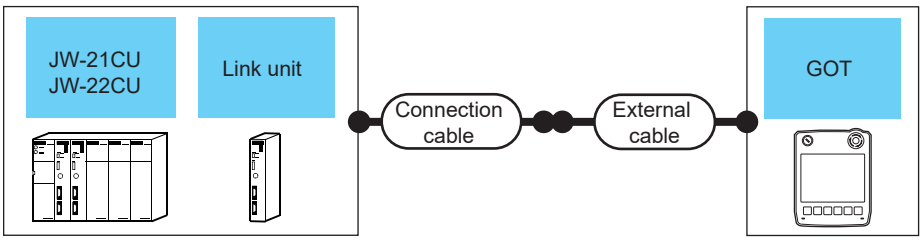



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| JW-22CU | - | RS-232 | GT09-C30R20601-15P(3m) or User preparing Page 1168 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | | RS-422 | GT09-C30R40601-15P(3m) GT09-C100R40601-15P(10m) or User preparing Page 1170 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |
| JW-21CU JW-22CU | JW-21CM | | GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or User preparing Page 1172 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | 1 GOT for 1 link unit*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□-37P)

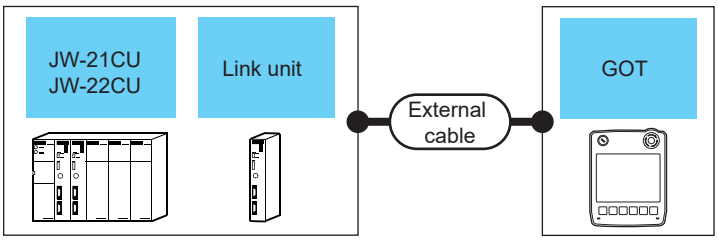



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| JW-22CU | - | RS-232 | User preparing Page 1168 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | User preparing Page 1170 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | |
| JW-21CU<br>JW-22CU | JW-21CM | | User preparing Page 1172 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | 1 GOT for 1 link unit*2 |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | | | | |
| JW-22CU | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1168 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1171 RS-422 connection diagram 3) | | 13m | |
| JW-21CU<br>JW-22CU | JW-21CM | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1173 RS-422 connection diagram 9) | | 13m | 1 GOT for 1 link unit*2 |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

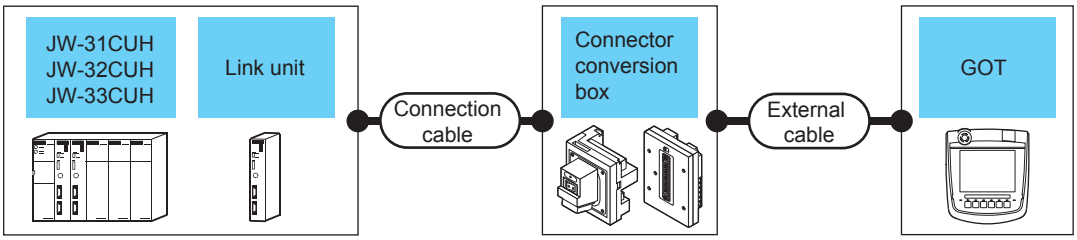
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

# Connecting to JW-31CUH, JW-32CUH or JW-33CUH

Communication driver

SHARP JW

## When using the connector conversion box

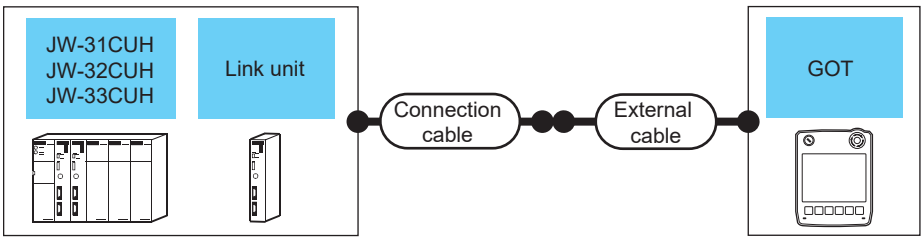



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| JW-32CUH JW-33CUH | - | RS-232 | GT09-C30R20602-15P(3m) or User preparing Page 1169 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R40602-15P(3m) GT09-C100R40602-15P(10m) or User preparing Page 1171 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| JW-31CUH JW-32CUH JW-33CUH | JW-21CM | RS-422 | GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or User preparing Page 1172 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 link unit*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□-37P)

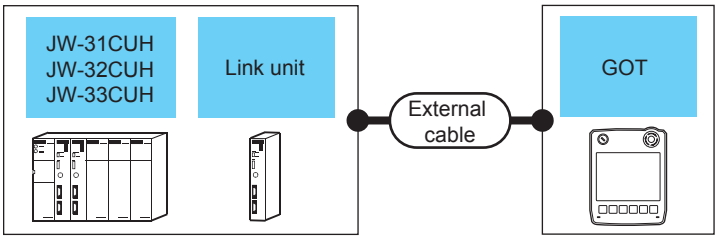



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| JW-32CUH<br>JW-33CUH | - | RS-232 | User preparing Page 1169 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | User preparing Page 1171 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | |
| JW-31CUH<br>JW-32CUH<br>JW-33CUH | JW-21CM | RS-422 | User preparing Page 1172 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | 1 GOT for 1 link unit*2 |

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | | | | |
| JW-32CUH<br>JW-33CUH | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1169 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1172 RS-422 connection diagram 6) | | 13m | |
| JW-31CUH<br>JW-32CUH<br>JW-33CUH | JW-21CM | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1173 RS-422 connection diagram 9) | | 13m | 1 GOT for 1 link unit*2 |

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

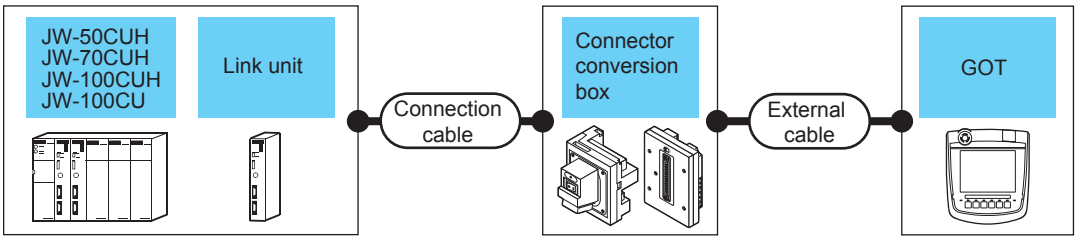
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

# Connecting to JW-50CUH, JW-70CUH, JW-100CUH, or JW-100CU

Communication driver

SHARP JW

## When using the connector conversion box

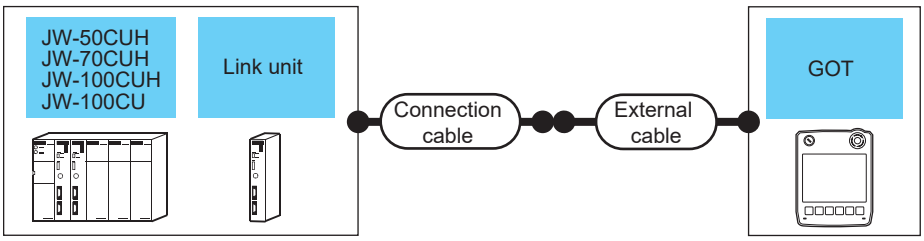



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| JW-70CUH JW-100CUH JW-100CU | - | RS-232 | GT09-C30R20601-15P(3m) or Page 1168 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | | RS-422 | GT09-C30R40601-15P(3m) GT09-C100R40601-15P(10m) or Page 1170 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |
| JW-50CUH JW-70CUH JW-100CUH JW-100CU | JW-10CM ZW-10CM | RS-422 | GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or Page 1172 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT2506HS | 13m | 1 GOT for 1 link unit*2 |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT2505HS | | |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□-37P)

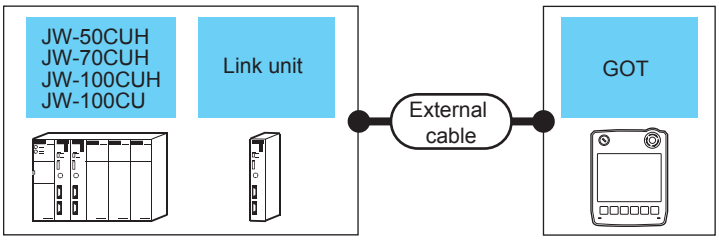



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| JW-70CUH<br>JW-100CUH<br>JW-100CU | - | RS-232 | User preparing Page 1168 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | User preparing Page 1170 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | |
| JW-50CUH<br>JW-70CUH<br>JW-100CUH<br>JW-100CU | JW-10CM<br>ZW-10CM | RS-422 | User preparing Page 1172 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | 1 GOT for 1 link unit*2 |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Link unit*1 | Communication Type | | | | |
| JW-70CUH<br>JW-100CUH<br>JW-100CU | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1168 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1171 RS-422 connection diagram 3) | | 13m | |
| JW-50CUH<br>JW-70CUH<br>JW-100CUH<br>JW-100CU | JW-10CM<br>ZW-10CM | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1173 RS-422 connection diagram 9) | | 13m | 1 GOT for 1 link unit*2 |

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

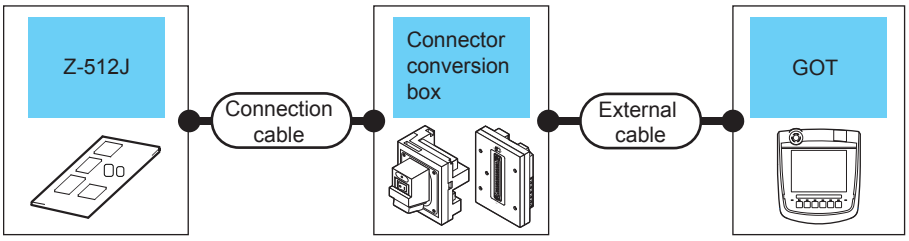
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

# Connecting to Z-512J

Communication driver

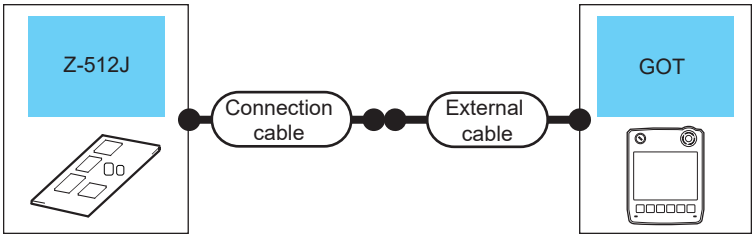
SHARP JW

## When using the connector conversion box



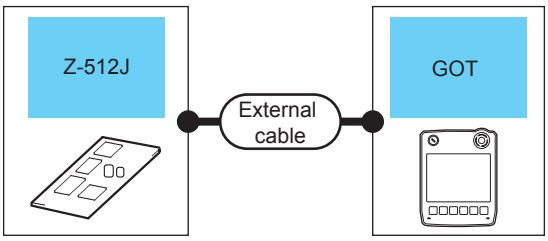

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| Z-512J | RS-232 | GT09-C30R20602-15P(3m)<br>or<br>User preparing Page 1169 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | GT09-C30R40602-15P(3m)<br>GT09-C100R40602-15P(10m)<br>or<br>User preparing Page 1171 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| Z-512J | RS-232 | User preparing Page 1169 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | User preparing Page 1171 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| Z-512J | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1169 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1172 RS-422 connection diagram 6) | GT 2505HS | 13m | |

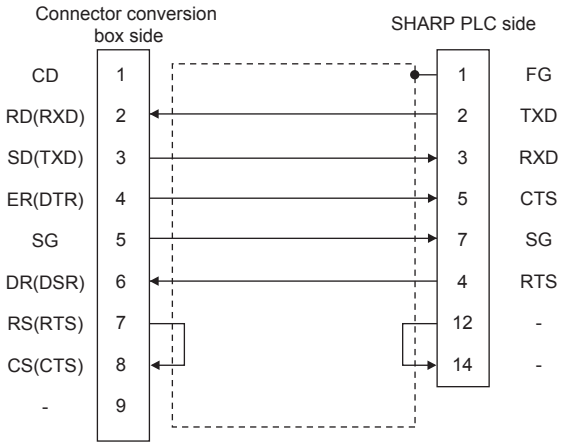
# 21.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

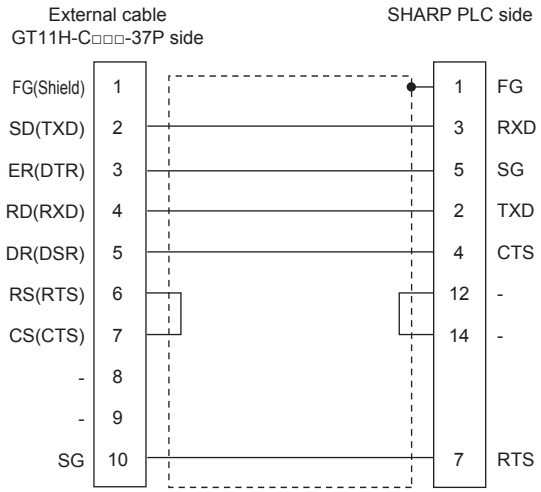
## RS-232 cable

### Connection diagram

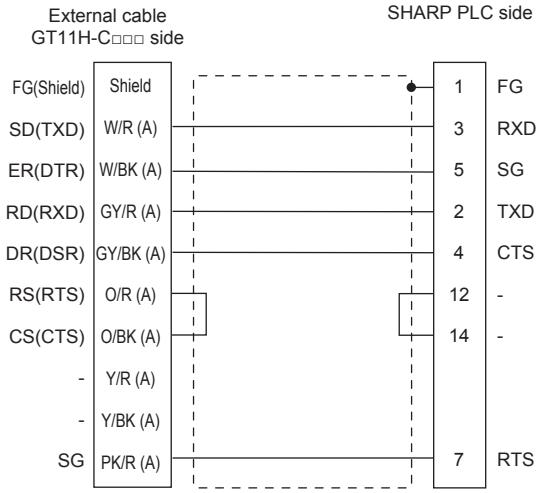
#### ■RS-232 connection diagram 1)



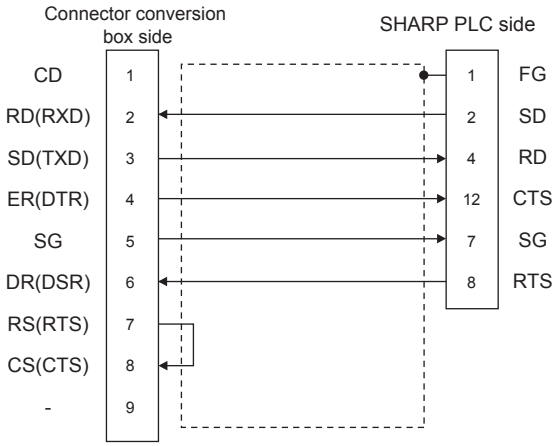

#### ■RS-232 connection diagram 2)



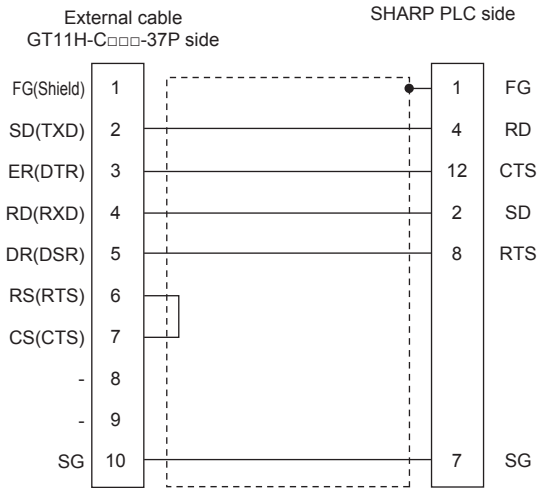

#### ■RS-232 connection diagram 3)



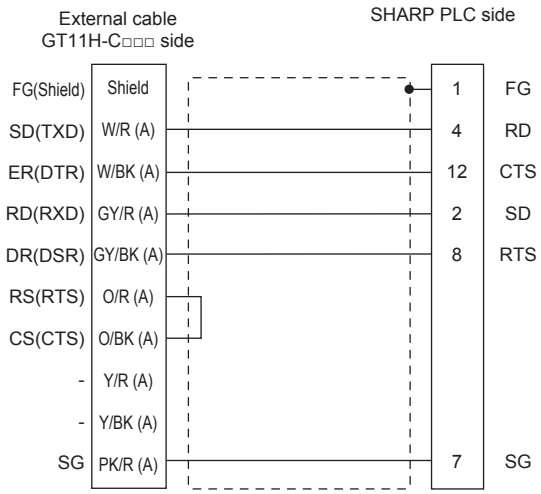
## ■RS-232 connection diagram 4)




## ■RS-232 connection diagram 5)




## ■RS-232 connection diagram 6)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■SHARP PLC side connector

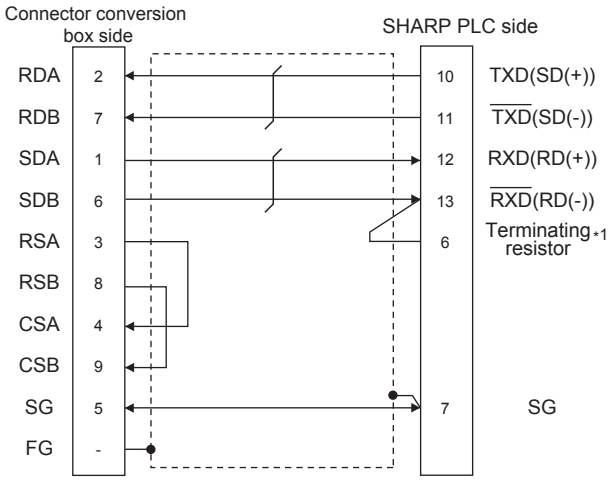
Use the connector compatible with the SHARP PLC side module.

For details, refer to the SHARP PLC user's manual.

# RS-422 cable

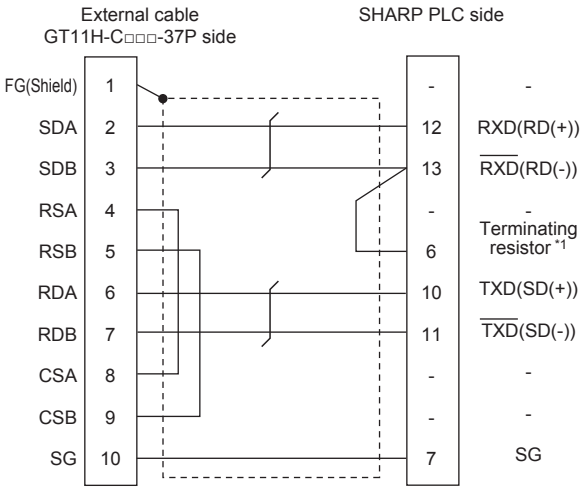
## Connection diagram

### ■RS-422 connection diagram 1)



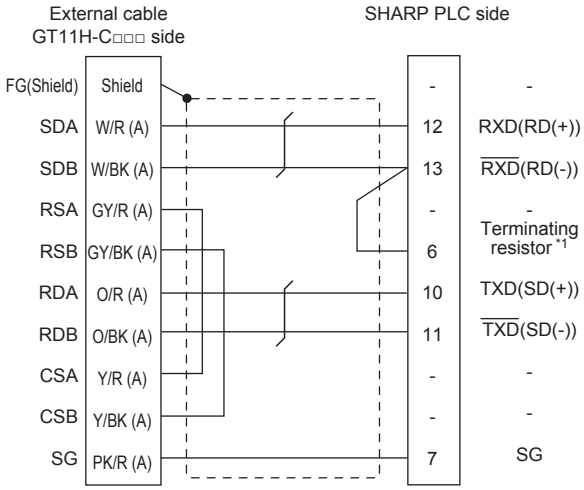

*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

### ■RS-422 connection diagram 2)



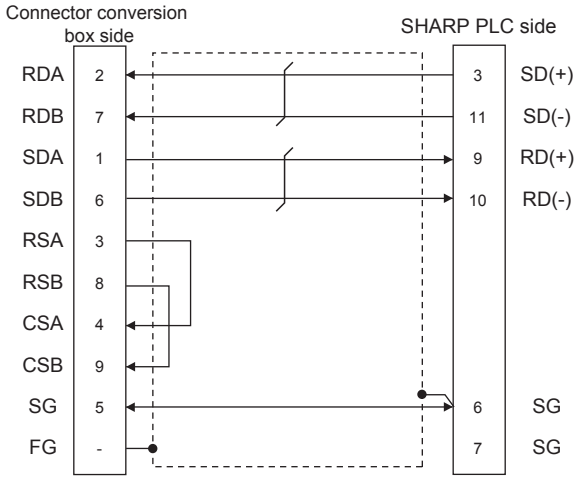

*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

## ■RS-422 connection diagram 3)

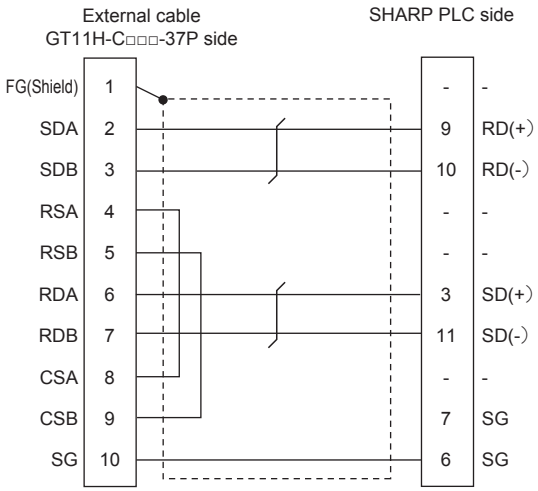



*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

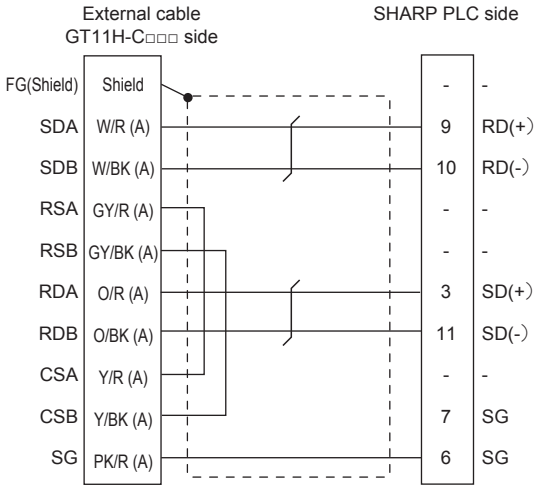
## ■RS-422 connection diagram 4)



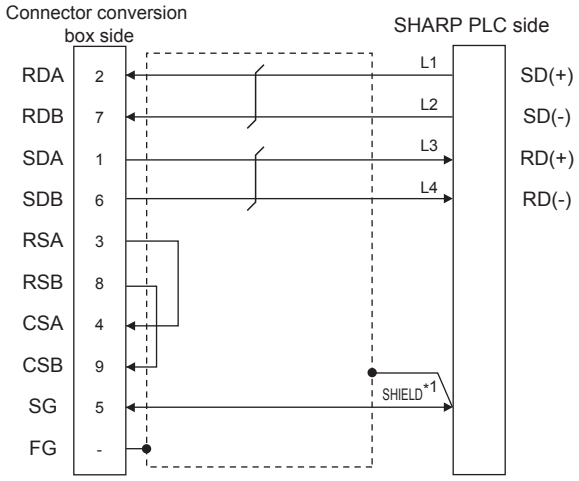

## ■RS-422 connection diagram 5)



## ■RS-422 connection diagram 6)

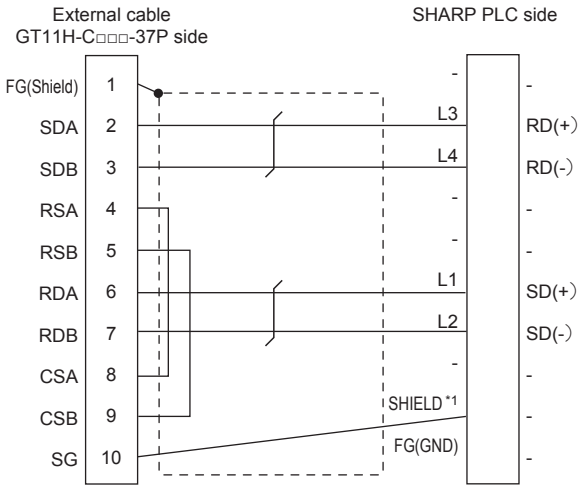



## ■RS-422 connection diagram 7)



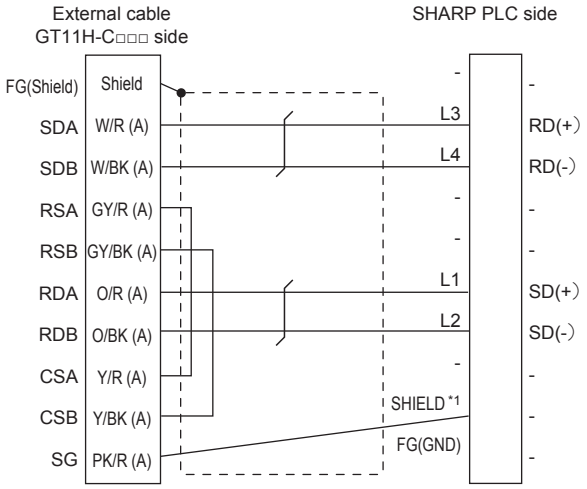

*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

## ■RS-422 connection diagram 8)




*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

### ■RS-422 connection diagram 9)




*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■SHARP PLC side connector

Use the connector compatible with the SHARP PLC side module.

For details, refer to the SHARP PLC user's manual.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■SHARP PLC side

Connect the terminating resistor on the SHARP PLC side when connecting a GOT to a SHARP PLC.

The PLC CPUs and the modules on the PLC CPU side requiring a terminating resistor are shown below.

• JW-22CU

Turn "ON" the terminating resistor setting switch (SW1) on the back of JW-22CU to validate the terminating resistor.

• JW-70CUH and JW-100CUH

Connect the pin 6 (terminating resistor) of the communication port connection connector with the pin 13 (RXD) only at the terminal station to validate the terminating resistor.

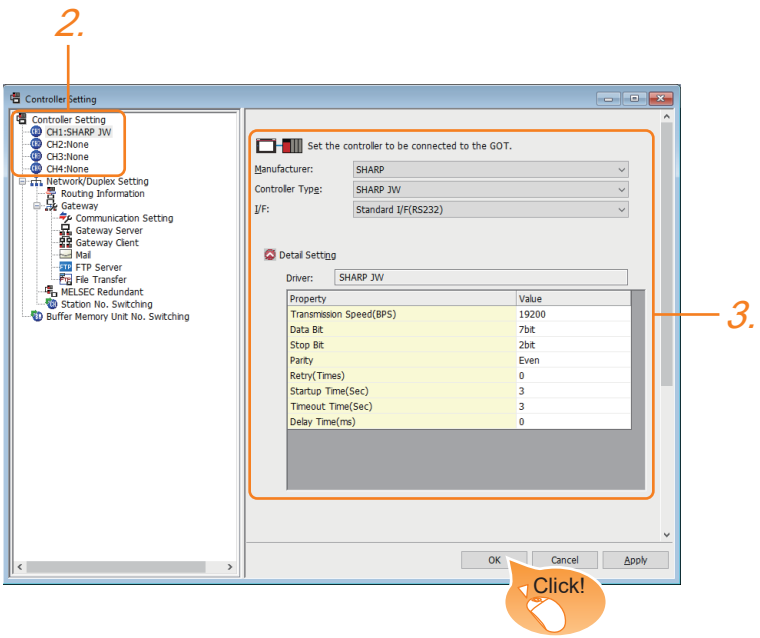
• JW-21CM, JW-10CM and ZW-10CM

Turn "ON" the terminator switch (SW7) on the front panel only at the terminal station to validate the terminating resistor.

# 21.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [SHARP]
- [Controller Type]: [SHARP JW]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1175 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 2 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bit) | 2bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 30sec |
| Timeout Time*1 | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |

*1 When connecting to the communication port or link module, set [Delay Time] of the GOT side to 30ms or more.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 21.5 PLC Side Setting

**Point**

SHARP PLC

For details of the SHARP PLC, refer to the following manual.

SHARP PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| PLC CPU | JW-22CU | ☞ Page 1176 Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU |
| | JW-32CUH, JW-33CUH | ☞ Page 1178 Connecting to JW-32CUH, JW-33CUH or Z-512J |
| | JW-70CUH, JW-100CUH, JW-100CU | ☞ Page 1176 Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU |
| | Z-512J | ☞ Page 1178 Connecting to JW-32CUH, JW-33CUH or Z-512J |
| Link unit | JW-21CM | ☞ Page 1179 Connecting to the link unit (JW-21CM) |
| | JW-10CM, ZW-10CM | ☞ Page 1181 Connecting to the link unit (JW-10CM or ZW-10CM) |

## Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU

### System memory setting

Set the system memory.

| System memory No. | Item | Set value |
|---|---|---|
| #236 | Transmission speed, parity and stop bit | D7 D6 D5 D4 D3 D2 to D0<br>0 0 (3) (2) (1)<br>(1) Transmission speed *1 *2<br>000: 19200bps<br>001: 9600bps<br>010: 4800bps<br>(2) Parity<br>10 (fixed): Even<br>(3) Stop bit<br>1 (fixed): 2 bits |
| #237 | Station No. | 1: Station No. 1 (fixed) |

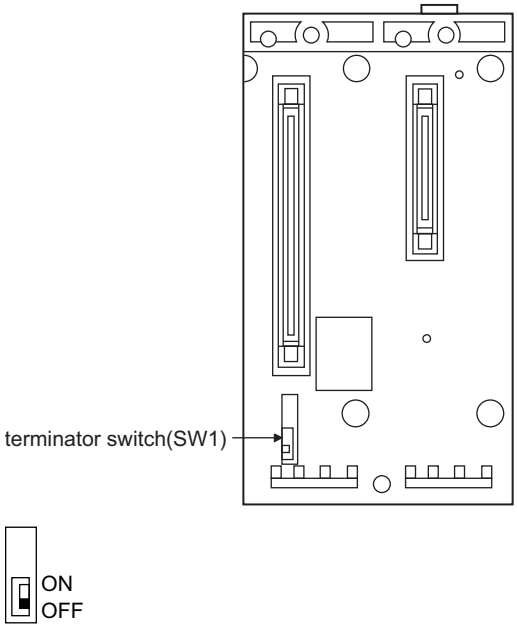
*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1174 Setting communication interface (Communication settings)

## Terminating resistor setting switch (For JW-22CU only)

Set the terminating resistor setting switch.

### ■When using KV-L20R or KV-L20




| Settings | |
|---|---|
| **For RS-232 communication** | **RS-422 communication** |
| OFF (no terminating resistor) | ON (terminating resistor attached) |

# Connecting to JW-32CUH, JW-33CUH or Z-512J

## Settings for connecting to communication port 1 (PG/COMM1 port)

Set the system memory.

| System memory No. | Item | Set value |
|---|---|---|
| #234 | Transmission speed, parity and stop bit | D7 D6 D5 D4 D3 D2 to D0<br>0 0 (3) (2) (1)<br>(1) Transmission speed *1 *2<br>000: 19200bps<br>001: 9600bps<br>010: 4800bps<br>(2) Parity<br>10 (fixed): Even<br>(3) Stop bit<br>1 (fixed): 2 bits |
| #235 | Station No. | 1: Station No. 1 (fixed) |

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1174 Setting communication interface (Communication settings)

## Settings for connecting to communication port 2 (PG/COMM2 port)

Set the system memory.

| System memory No. | Item | Set value |
|---|---|---|
| #236 | Transmission speed, parity and stop bit | D7 D6 D5 D4 D3 D2 to D0<br>0 0 (3) (2) (1)<br>(1) Transmission speed *1 *2<br>000: 19200bps<br>001: 9600bps<br>010: 4800bps<br>(2) Parity<br>10 (fixed): Even<br>(3) Stop bit<br>1 (fixed): 2 bits |
| #237 | Station No. | 1: Station No. 1 (fixed) |

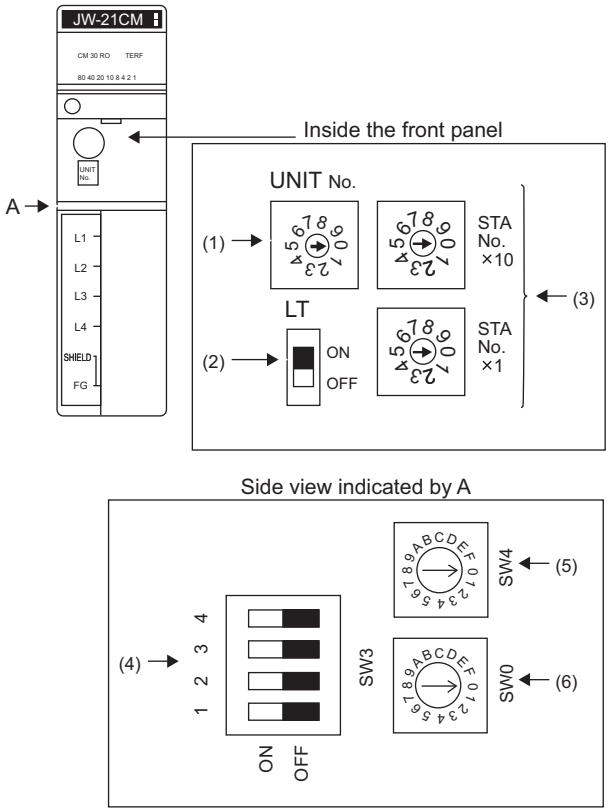
*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1174 Setting communication interface (Communication settings)

# Connecting to the link unit (JW-21CM)

## Switch setting of the link unit (JW-21CM)

Make setting for each switch.

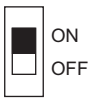



### ■Module No. switch (SW8)

The module No. switch is not used for communication with the GOT.

### ■Terminator switch(SW7)

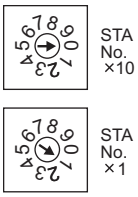
LT




| Settings | Setting details |
|---|---|
| ON*1 | Terminating resistor validated |

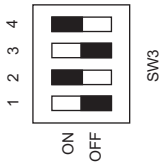
*1 Turn on only for the terminal station.

### ■Station number setting switch(SW1,SW2)




| Switch No. | Settings | Setting details |
|---|---|---|
| SW1 | Station No. lower digit ($10^0$ digit) | 1 (fixed) |
| SW2 | Station No. upper digit ($10^1$ digit) | 0 (fixed) |

## ■Operation mode setting switch(SW3)



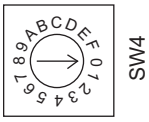

| Switch No. | Settings | Setting details |
|---|---|---|
| SW3-1 | OFF (fixed) | Invalid |
| SW3-2 | ON (fixed) | 4-wire type |
| SW3-3 | OFF (fixed) | Invalid |
| SW3-4 | ON (fixed) | Even |

## ■Transmission speed setting switch (SW4)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

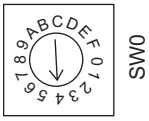
☞ Page 1174 Setting communication interface (Communication settings)




| Setting*1 | Setting details |
|---|---|
| 0 | 19200bps |
| 1 | 9600bps |
| 2 | 4800bps |

*1 Indicates only the transmission speeds that can be set on the GOT side.

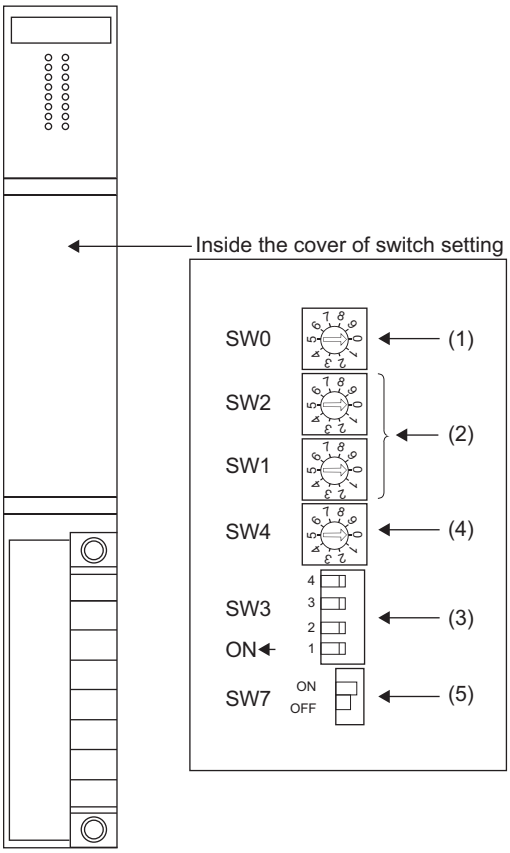
## ■Function setting switch(SW0)




| Settings | Setting details |
|---|---|
| 4 (fixed) | Computer link |

# Connecting to the link unit (JW-10CM or ZW-10CM)

## Switch setting of link unit (JW-10CM and ZW-10CM)




### ■Function setting switch(SW0)

SW0 

| Settings | Setting details |
|---|---|
| 4 (fixed) | Computer link<br>(command mode) |

### ■Station number switch(SW1,SW2)

SW2 

SW1 

| Switch No. | Settings | Setting details |
|---|---|---|
| SW1 | Station No. lower digit ($10^0$ digit) | 1 (fixed) |
| SW2 | Station No. upper digit ($10^1$ digit) | 0 (fixed) |

### ■Operation mode setting switch(SW3)

SW3 

| Switch No. | Settings | Setting details |
|---|---|---|
| SW3-1 | OFF (fixed) | Invalid |
| SW3-2 | ON (fixed) | 4-wire type |
| SW3-3 | OFF (fixed) | Invalid |
| SW3-4 | ON (fixed) | Even |

## ■Transmission speed setting switch (SW4)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1174 Setting communication interface (Communication settings)

SW4 

| Setting*1 | Setting details |
|---|---|
| 0 | 19200bps |
| 1 | 9600bps |
| 2 | 4800bps |

*1 Indicates only the transmission speeds that can be set on the GOT side.

## ■Terminator switch(SW7)

SW7 


| Settings | Setting details |
|---|---|
| ON*2 | Terminating resistor validated |

*1 Set to ON only for the terminal station.

# 21.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
SHARP equipment ([SHARP JW])

# 21.7 Precautions

## Connecting to the communication port or link module

When connecting to the communication port or link module, the send delay time of 30ms is required.

In the communication detail settings, set [Delay Time] to 30ms or more.

If a communication timeout error occurs even when [Delay Time] is set to 30ms or more, adjust the following settings so that no communication timeout error occurs.

- [Retry]
- [Startup Time]
- [Timeout Time]

For the details of each setting, refer to the following.

☞ Page 1175 Communication detail settings

# MEMO

# 22 SHINKO TECHNOS INDICATING CONTROLLER


- Page 1185 Connectable Model List
- Page 1187 System Configuration
- Page 1194 Connection Diagram
- Page 1199 GOT Side Settings
- Page 1201 Indicating Controller Side Setting
- Page 1203 Settable Device Range
- Page 1204 Precautions


## 22.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| ACS-13A Series | ACS-13A□/□,□,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| JC Series | JCS-33A-□/□□,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| | JCR-33A-□/□□,C5*2 | | | | |
| | JCD-33A-□/□□,C5*2 | | | | |
| JCM-33A Series | JCM-33A□/□,□C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| JIR-301-M Series | JIR-301-M□,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| PCD-300 Series | PCD-33A-□/M,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| PC-900 Series | PC935-□/M,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| | PC955-□/M,C5*2 | | | | |
| | PC935-□/M,C*1 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |
| | PC955-□/M,C*1 | | | | |
| FCD-100 Series*1 | FCD-13A-□/M,C | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |
| | FCD-15A-□/M,C | | | | |
| FCR-100 Series*1 | FCR-13A-□/M,C | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |
| | FCR-15A-□/M,C | | | | |
| FCR-23A Series*1 | FCR-23A-□/M,C | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |
| | FCR-23A-□/M,C5 | | | GT2506HS GT2505HS | |
| FIR Series*1 | FIR-201-M,C | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |
| DCL-33A Series | DCL-33A-□/M,□,C5*2 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1191 When connecting to DCL-33A Series |
| ACD-13A<br>ACR-13A | ACD-13A-□/M□,C5<br>ACR-13A-□/M□,C5 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |
| | ACD-13A-□/M□,C<br>ACR-13A-□/M□,C | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1190 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A |

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| BC□2 Series | BCD2□□□-□□<br>BCR2□□□-□□<br>BCS2□□□-□□ | × | RS-232<br>RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 1187 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2 |

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

*2 The indicating controller of the following version or later can be connected.

| Series | Model name | Version |
|---|---|---|
| ACS-13A Series | ACS-13A□/□,□,C5 | Products manufactured in October 2007 or later<br>(Indicating controllers with the serial numbers 07Axxxxxx, 07Kxxxxxx, and 07Xxxxxxx or later)<br>(The first two digits of the serial numbers show the last two digits of the year.) |
| JC Series | JCS-33A-□/□□,C5 | |
| | JCR-33A-□/□□,C5 | |
| | JCD-33A-□/□□,C5 | |
| JCM-33A Series | JCM-33A-□/□,□C5 | |
| JIR-301-M Series | JIR-301-M□,C5 | |
| PCD-300 Series | PCD-33A-□/M,C5 | |
| PC-900 Series | PC935-□/M,C5 | |
| | PC955-□/M,C5 | |
| DCL-33A Series | DCL-33A-□/M,□,C5 | |

# 22.2 System Configuration

## Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2

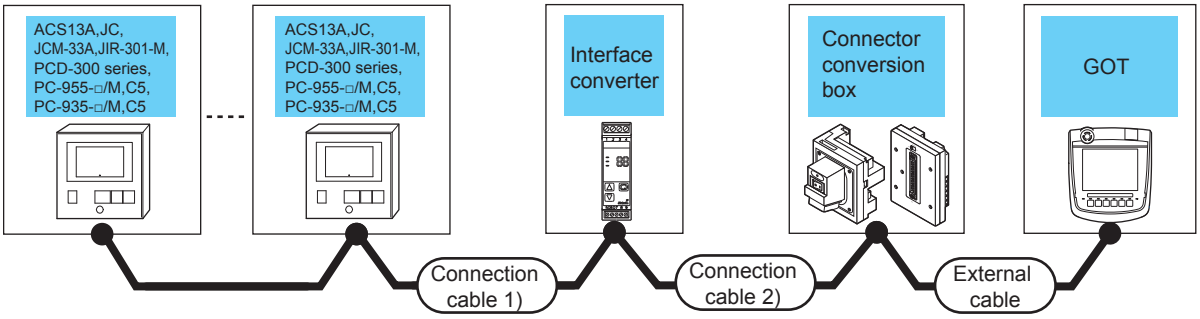
In this section,

- PC-900 series represents PC-955-□/M,C5 and PC-935-□/M,C5.
- ACD-13A represents ACD-13A-□/M□,C5.
- ACR-13A represents ACR-13A□/M□,C5.




### For the RS-232 connection (via interface converter)

#### ■When using the connector conversion box

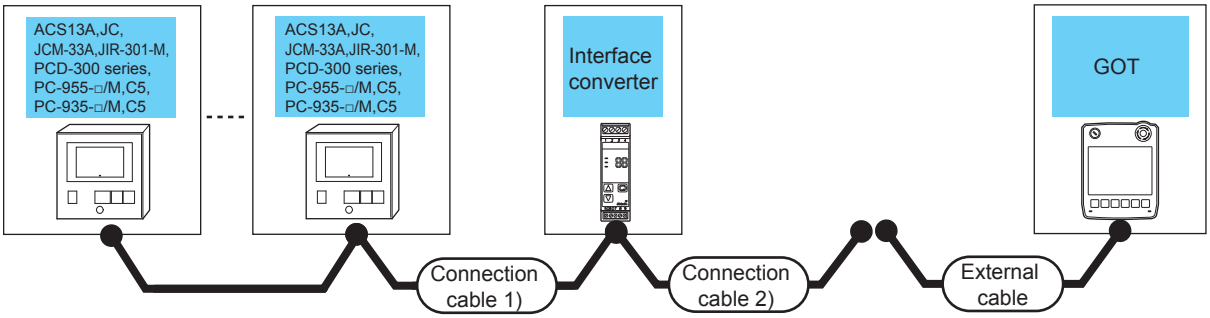



| Indicating controller | | Connection cable 1) | | Communication converter *1 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | Cable model Connection diagram number | | | | | |
| ACS13A<br>JC<br>JCM-33A<br>JIR-301-M<br>PCD-300 Series<br>PC-955-□/M,C5<br>PC-935-□/M,C5<br>ACD-13A-□/M□,C5<br>ACR-13A-□/M□,C5<br>BC□2 | RS-232 | User preparing Page 1196 RS-485 connection diagram 1) | 1,200m | IF-400 | RS-232C CFP-C2*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 indicating controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

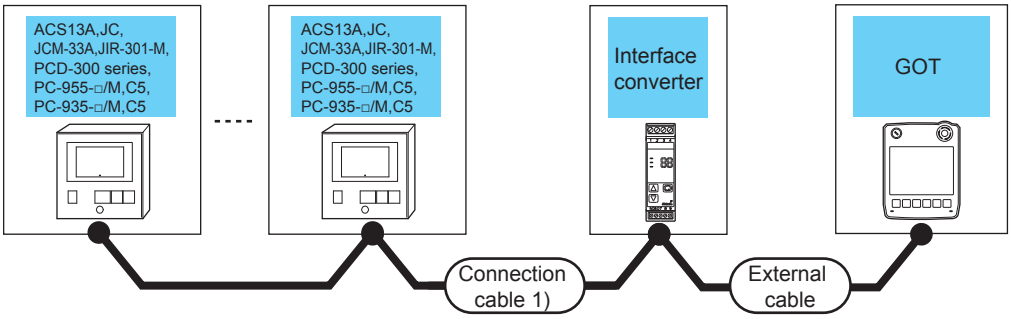



| Indicating controller | | Connection cable 1) | | Communication converter*1 | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | Cable model Connection diagram number | | | | |
| ACS13A<br>JC<br>JCM-33A<br>JIR-301-M<br>PCD-300 Series<br>PC-955-□/M,C5<br>PC-935-□/M,C5<br>ACD-13A-□/M□,C5<br>ACR-13A-□/M□,C5<br>BC□2 | RS-232 | User preparing Page 1196 RS-485 connection diagram 1) | 1,200m | IF-400 | User preparing Page 1194 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 indicating controllers for 1 GOT |

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



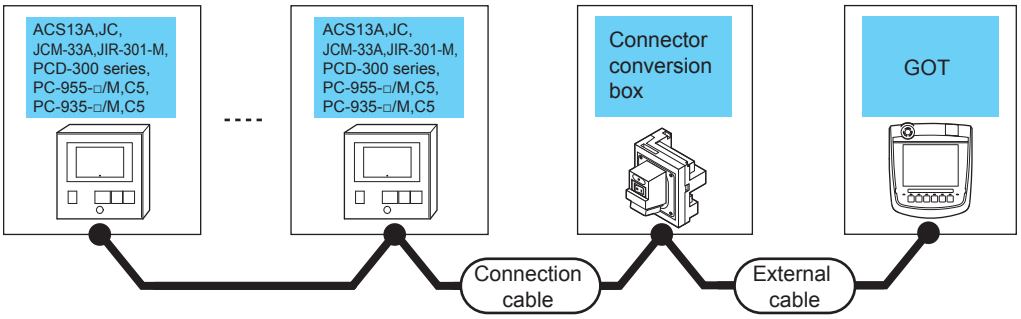

| Indicating controller | | Connection cable 1) | | Communication converter*1 | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| ACS13A<br>JC<br>JCM-33A<br>JIR-301-M<br>PCD-300 Series<br>PC-955-□/M,C5<br>PC-935-□/M,C5<br>ACD-13A-□/M□,C5<br>ACR-13A-□/M□,C5<br>BC□2 | RS-232 | User preparing Page 1196 RS-485 connection diagram 1) | 1,200m | IF-400 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1195 RS-232 connection diagram 3) | GT 2505HS | 6m | 31 indicating controllers for 1 GOT |

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (External cable)

## For the RS-485 connection

### ■When using the connector conversion box




| Indicating controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| ACS13A<br>JC<br>JCM-33A<br>JIR-301-M<br>PCD-300 Series<br>PC-955-□/M,C5<br>PC-935-□/M,C5<br>ACD-13A-□/M□,C5<br>ACR-13A-□/M□,C5<br>BC□2 | RS-485 | User preparing Page 1197 RS-485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 indicating controllers for 1 GOT |

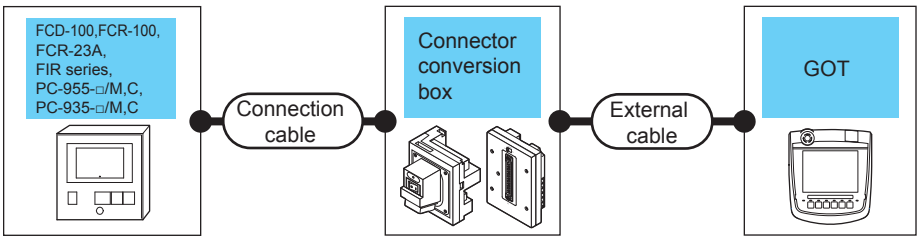
# Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A

In this section,

- PC-900 series represents PC-955-□/M,C and PC-935-□/M,C.
- ACD-13A represents ACD-13A-□/M□,C.
- ACR-13A represents ACR-13A□/M□,C.



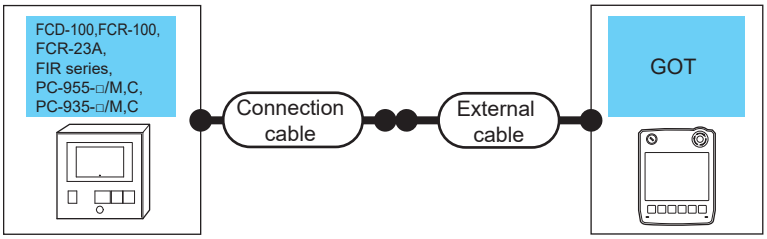

## When using the connector conversion box




| Indicating controller*1 | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FCD-100<br>FCR-100<br>FCR-23A<br>FIR Series<br>PC-955-□/M,C<br>PC-935-□/M,C<br>ACD-13A-□/M□,C<br>ACR-13A-□/M□,C | RS-232 | GT09-C30R21401-4T(3m)<br>or<br>User preparing Page 1194 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 indicating controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

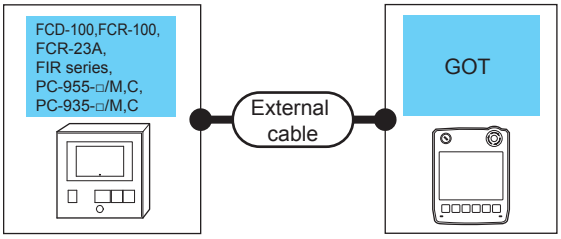
## When using the external cable (GT11H-C□□□-37P)




| Indicating controller*1 | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FCD-100<br>FCR-100<br>FCR-23A<br>FIR Series<br>PC-955-□/M,C<br>PC-935-□/M,C<br>ACD-13A-□/M□,C<br>ACR-13A-□/M□,C | RS-232 | User preparing Page 1194 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 indicating controllers for 1 GOT |

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

## When using the external cable (GT11H-C□□□)




| Indicating controller*1 | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FCD-100<br>FCR-100<br>FCR-23A<br>FIR Series<br>PC-955-□/M,C<br>PC-935-□/M,C<br>ACD-13A-□/M□,C<br>ACR-13A-□/M□,C | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1195 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 indicating controllers for 1 GOT |

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

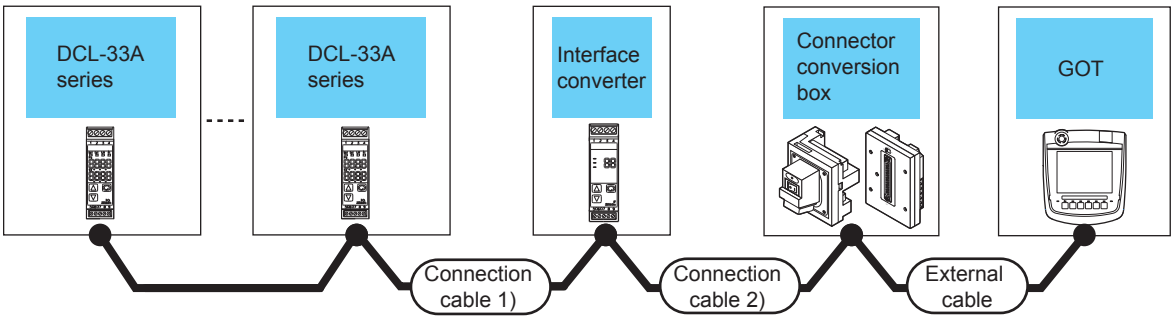
22

# When connecting to DCL-33A Series




## For the RS-232 connection (via communication converter)

### ■When using the connector conversion box

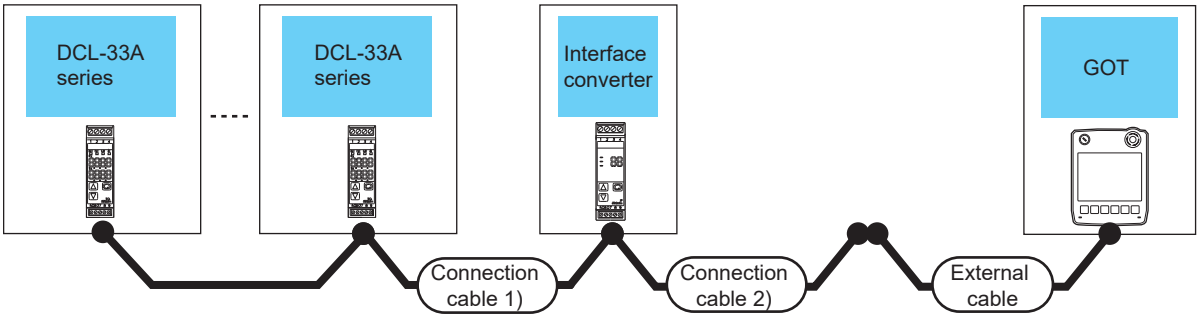



| Indicating controller | | Connection cable 1) | | Communication converter *1 | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | Cable model Connection diagram number | | | | | |
| DCL-33A Series | RS-232 | RS485-CPP *1 | 1,200m | IF-400 | RS-232CCFP-C2 *1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 indicating controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

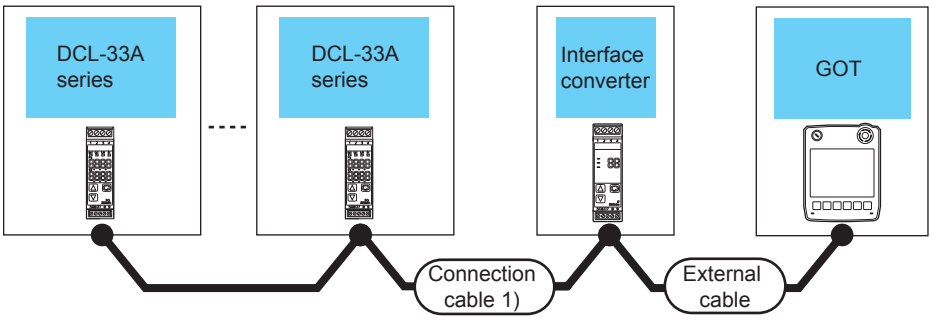



| Indicating controller | | Connection cable 1) | | Communication converter*1 | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | Cable model Connection diagram number | | | | |
| DCL-33A Series | RS-232 | RS485-CPP *1 | 1,200m | IF-400 | User preparing Page 1194 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 indicating controllers for 1 GOT |

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



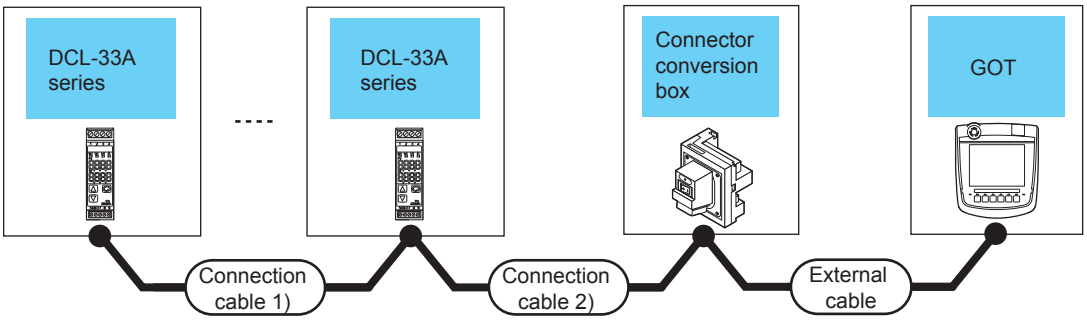

| Indicating controller | | Connection cable 1) | | Communication converter*1 | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| DCL-33A Series | RS-232 | RS485-CPP *1 | 1,200m | IF-400 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1195 RS-232 connection diagram 3) | GT 2505HS | 6m | 31 indicating controllers for 1 GOT |

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (External cable)

## For the RS-485 connection

### ■When using the connector conversion box




| Indicating controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| DCL-33A Series | RS-485 | RS-485 CPP*1 | User preparing Page 1196 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 indicating controllers for 1 GOT |

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

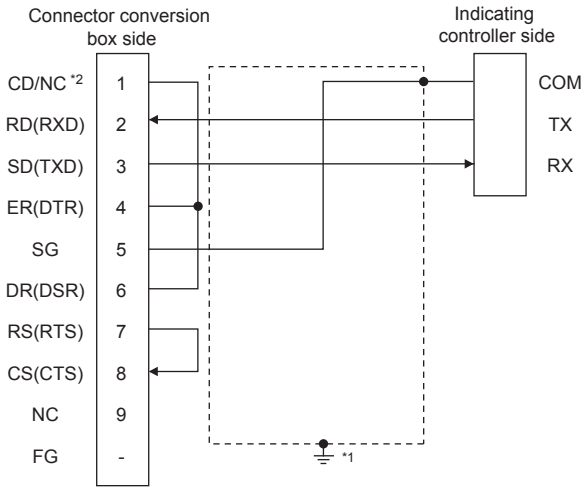
# 22.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

## RS-232 cable

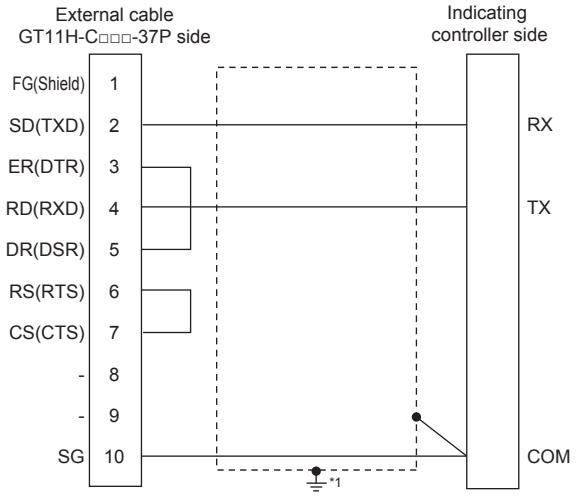
### Connection diagram

#### ■RS-232 connection diagram 1)



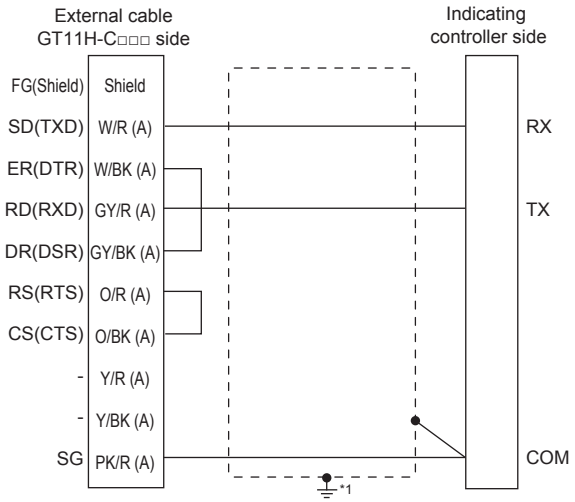

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.

### ■RS-232 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Shinko Technos indicating controller side connector

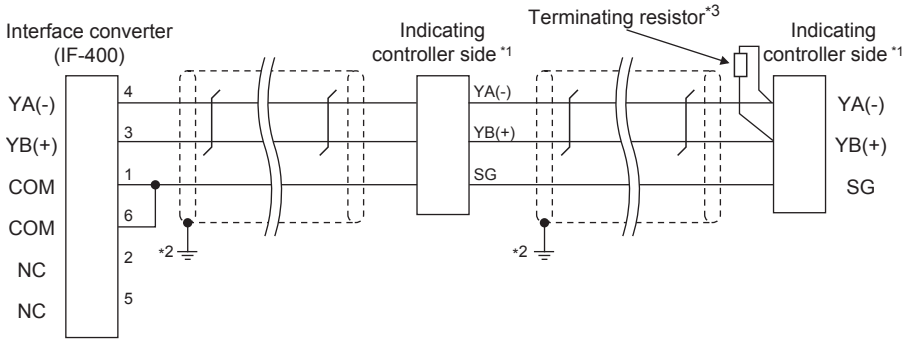
Use the connector compatible with the Shinko Technos indicating controller side.

For details, refer to the user's manual of the Shinko Technos indicating controller.

# RS-485 cable

## Connection diagram

### ■RS-485 connection diagram 1)



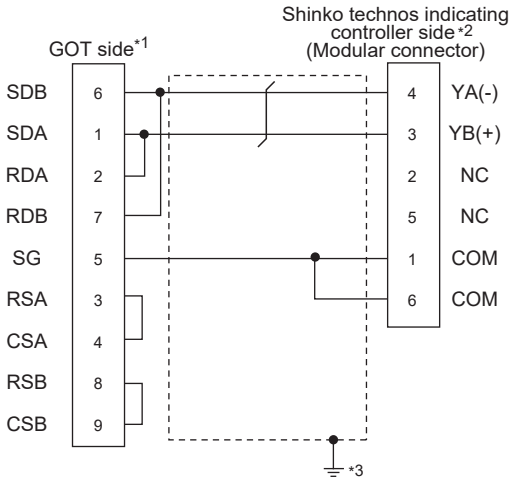

*1 Pin No. of communication converter differs depending on the model.
Refer to the following table.

| Signal name | Model of indicating controller | | | | | |
|---|---|---|---|---|---|---|
| | JCS-33A | JCR-33A | JCD-33A | JCM-33A | JIR-301-M | ACS-13A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| YA(-) | 13 | 11 | 11 | 10 | 11 | 16 |
| YB(+) | 14 | 14 | 14 | 13 | 14 | 17 |
| SG | 15 | 17 | 17 | 14 | 17 | 18 |

| Signal name | Model of indicating controller | | | | | |
|---|---|---|---|---|---|---|
| | PCD-33A | PC-955 | PC-935 | ACD-13A | ACR-13A | BC□2 |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| YA(-) | 11 | 11 | 11 | 13 | 13 | 16 |
| YB(+) | 14 | 12 | 12 | 14 | 14 | 17 |
| SG | 17 | 16 | 16 | 15 | 15 | 18 |

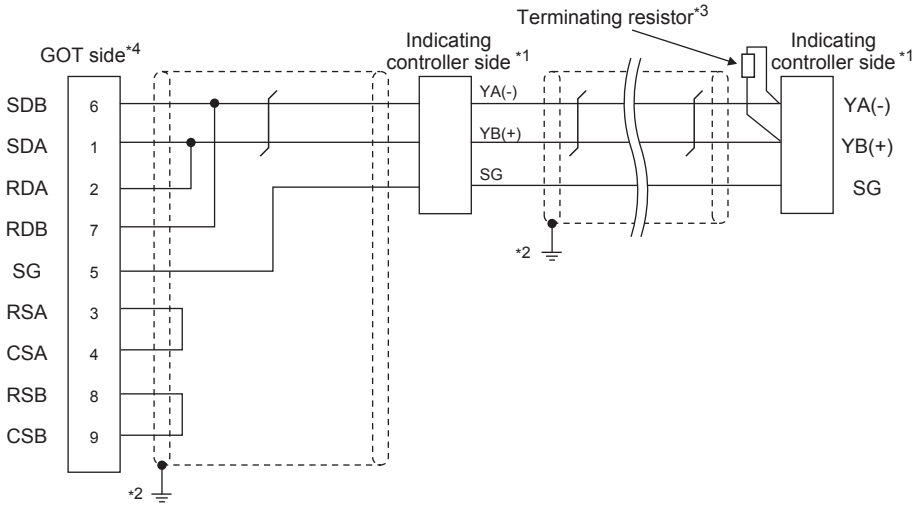
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 For details of the terminating resistor specifications, refer to the following manual.
User's Manual of the Shinko Technos indicating controller

### ■RS-485 connection diagram 2)




*1 Set the terminating resistor of GOT side.
☞ Page 1198 Connecting terminating resistors
*2 For details of the pin assignment, refer to the following manual.
User's Manual of the Shinko Technos indicating controller
*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 3)




*1 Pin No. of communication converter differs depending on the model.
Refer to the following table.

| Signal name | Model of indicating controller | | | | | |
|---|---|---|---|---|---|---|
| | JCS-33A | JCR-33A | JCD-33A | JCM-33A | JIR-301-M | ACS-13A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| YA(-) | 13 | 11 | 11 | 10 | 11 | 16 |
| YB(+) | 14 | 14 | 14 | 13 | 14 | 17 |
| SG | 15 | 17 | 17 | 14 | 17 | 18 |

| Signal name | Model of indicating controller | | | | | |
|---|---|---|---|---|---|---|
| | PCD-33A | PC-955 | PC-935 | ACD-13A | ACR-13A | BC□2 |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| YA(-) | 11 | 11 | 11 | 13 | 13 | 16 |
| YB(+) | 14 | 12 | 12 | 14 | 14 | 17 |
| SG | 17 | 16 | 16 | 15 | 15 | 18 |

*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 For details of the terminating resistor specifications, refer to the following manual.
User's Manual of the Shinko Technos indicating controller
*4 Set the terminating resistor of GOT side which will be a terminal.
Page 1198 Connecting terminating resistors

## Precautions when preparing a cable

### ■Cable length

• The length of the RS-485 cable used for direct connecting the indicating controller to the communication converter

The length of the RS-485 cable must be 1200 m or less.

• The length of the RS-485 cable used for direct connecting the indicating controller to GOT

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Shinko Technos indicating controller side connector

Use the connector compatible with the Shinko Technos indicating controller side.

For details, refer to the user's manual of the Shinko Technos indicating controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■Shinko Technos indicating controller side

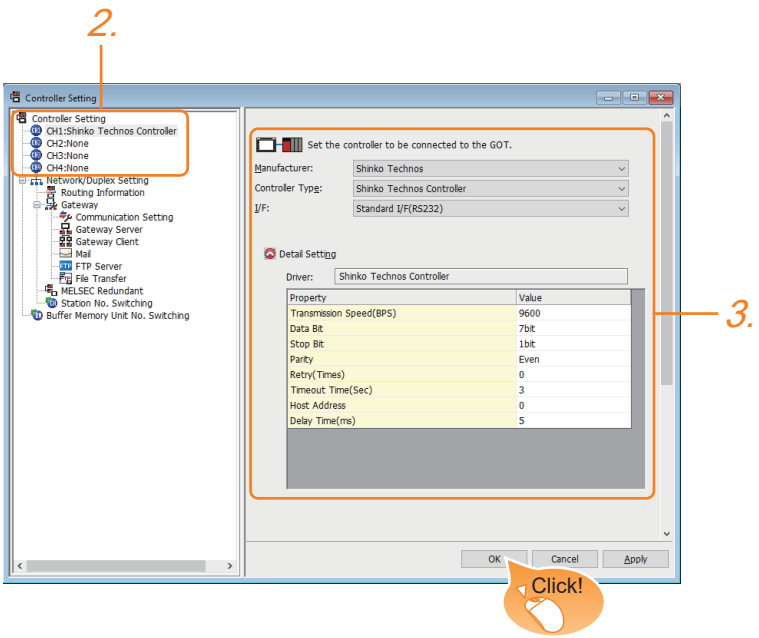
When connecting a Shinko Technos indicating controller to the GOT, a terminating resistor must be connected to the Shinko Technos indicating controller.

📖User's Manual of the Shinko Technos indicating controller

# 22.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Shinko Technos]
- [Controller Type]: [Shinko Technos Controller]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1200 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 7 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 5 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the indicating controller is connected) in the connected network.<br>(Default: 0) | 0 to 94 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 22.5 Indicating Controller Side Setting

**Point**

• Shinko Technos indicating controller

For details of Shinko Technos indicating controller, refer to the following manual.

📖User's Manual of the Shinko Technos indicating controller

• Communication converter

For details on communication settings of the communication converter, refer to the following manual.

📖User's Manual of communication converter

| Model name | | Refer to |
|---|---|---|
| Indicating controller | ACS-13A, DCL-33A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, FCD-100, FCR-100, FCR-23A, FIR, ACD-13A, ACR-13A, BC□2 Series | ☞ Page 1201 Connecting to indicating controller |
| Communication converter | IF-400 | ☞ Page 1201 Connecting to communication converter |

## Connecting to indicating controller

Make the communication settings by operating the key of the indicating controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps*4 |
| Data bit | 7bits (fixed) |
| Parity bit | Even (fixed) |
| Stop bit | 1bit (fixed) |
| Station No. *1*2*3 | 0 to 95 |
| Communication protocol | Shinko protocol |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 When setting the "95" to the station No., the read-out of data cannot be performed.
*4 The speed (38400bps) is available for ACD-13A, ACR-13A, and BC□2 series only.
However, select 9600bps or19200bps to use a converter (IF-400).

## Connecting to communication converter

Make the communication settings by operating the key of the communication converter.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Sending/Receiving switching period*2 | 1 character, 2 character |

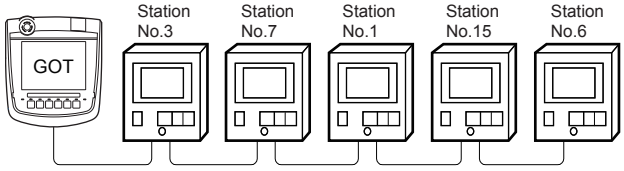
*1 Adjust the settings with GOT and the indicating controller settings.
*2 The setting of 1 character is recommended.

# Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the indicating controller of which data is to be changed.

| Specification range |
|---|
| 0 to 94 |

## Indirect specification

When setting the device, indirectly specify the station number of the indicating controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the indicating controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 0 to 94<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

## All station specification

Target station differs depending on write-in operation or read-out operation.

• For write-in operation, all station will be a target.

In the WORD BIT write-in operation, only the indicating controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1199 Setting communication interface (Communication settings)

• In the read-out operation, only the indicating controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1199 Setting communication interface (Communication settings)

# 22.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
SHINKO equipment ([Shinko Technos Controller])

# 22.7 Precautions

## Station number settings of indicating controller

In the system configuration, the indicating controller with the station number set with the host address must be included.
For details of host address setting, refer to the following.
☞ Page 1199 Setting communication interface (Communication settings)

## GOT clock control

Since the indicating controller does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

## When using the communication converter IF-400

When using the communication converter IF-400, some communication error may occur.
Set the number of retries to more than one time.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.
📖GT Designer3 (GOT2000) Screen Design Manual

# 23 CHINO CONTROLLER


- Page 1205 Connectable Model List
- Page 1206 System Configuration
- Page 1222 Connection Diagram
- Page 1235 GOT Side Settings
- Page 1237 Controller Side Setting
- Page 1247 Settable Device Range
- Page 1247 Precautions


## 23.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name*1 | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| LT230 Series | LT230 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1206 Connecting to LT230, LT300, LT400, LT830, DZ, DB series |
| LT300 Series | LT350 | × | RS-232<br>RS-422 | | |
| | LT370 | | | | |
| LT400 Series | LT450 | × | | | |
| | LT470 | | | | |
| LT830 Series | LT830 | × | RS-232 | | |
| DZ Series | DZ1000<br>DZ2000 | × | RS-232<br>RS-422 | | |
| DB Series | DB1000<br>DB2000 | × | | | |
| KP Series | KP1000<br>KP2000 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1211 Connecting to KP, AL3000, AH3000 series |
| AL3000 Series | AL3000 | × | | | |
| AH3000 Series | AH3000 | × | | | |
| SE3000 Series | SE3000 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1215 Connecting to SE3000, JU, KE3000, LE5000 series |
| JU Series | JU | × | RS-422 | | |
| KE Series | KE3000 | × | | | |
| LE5000 Series | LE5000 | × | | | |
| GT120 Series | GT120 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1219 Connecting to GT120 Series |

*1 From the models of controller, select the detailed model name which supports each communication type.
For details of CHINO controller detailed model names, refer to the following catalog.
☞ Catalog of CHINO controllers

# 23.2 System Configuration

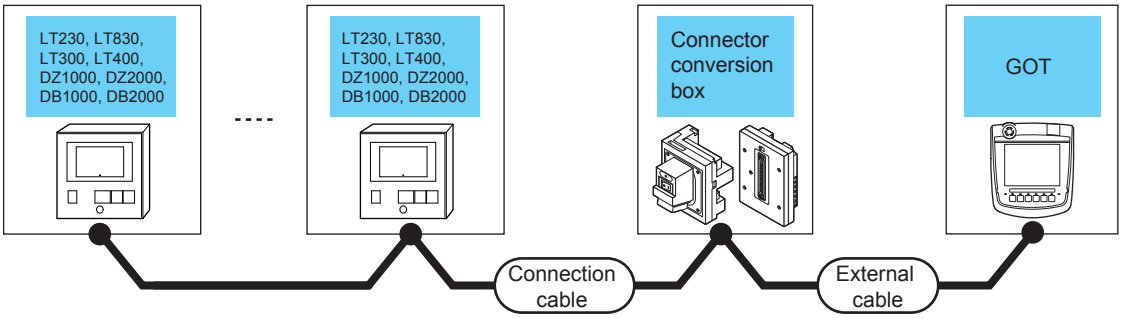
## Connecting to LT230, LT300, LT400, LT830, DZ, DB series

Communication driver

CHINO MODBUS device

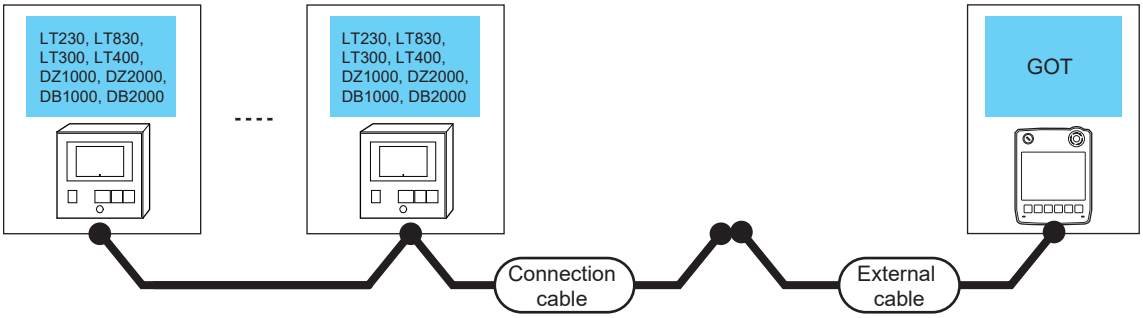
### When connecting to controller

#### ■When using the connector conversion box



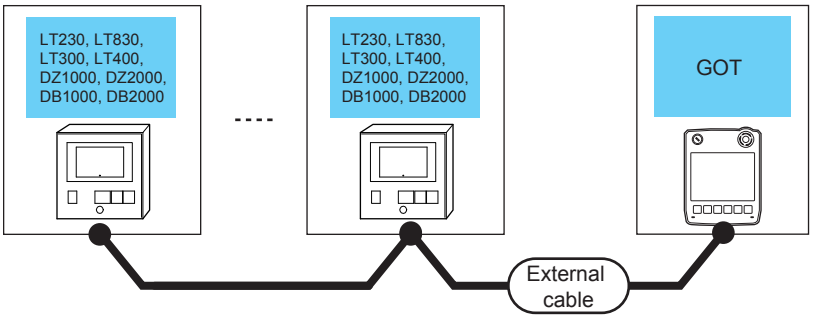

| Indicating controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| LT300<br>LT400<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | RS-232 | User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | User preparing Page 1226 RS422 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 controllers for 1 GOT |
| LT230<br>LT300<br>LT400<br>LT830<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | RS-485 | User preparing Page 1232 RS485 connection diagram 6) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 31 controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□-37P)




| Indicating controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| LT300<br>LT400<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | User preparing Page 1227 RS422 connection diagram 3) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 controllers for 1 GOT |

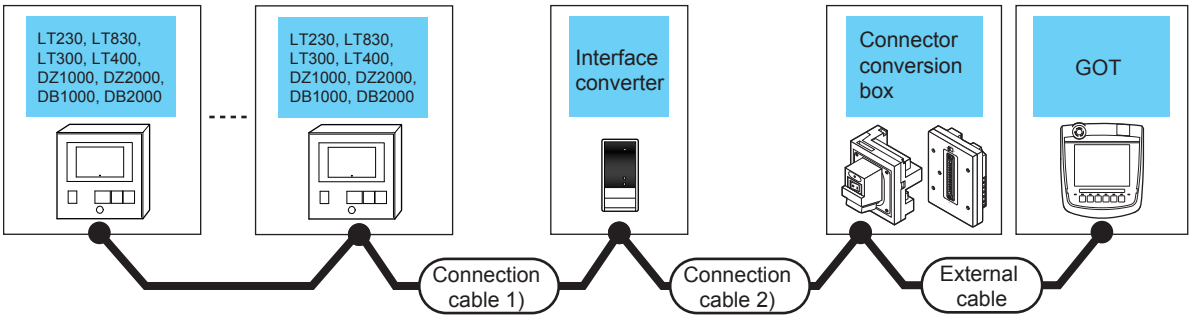
## ■When using the external cable (GT11H-C□□□)




| Indicating controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| LT300<br>LT400<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1228 RS422 connection diagram 4) | GT 2505HS | 13m | 10 controllers for 1 GOT |

## When connecting to converter

### ■When using the connector conversion box

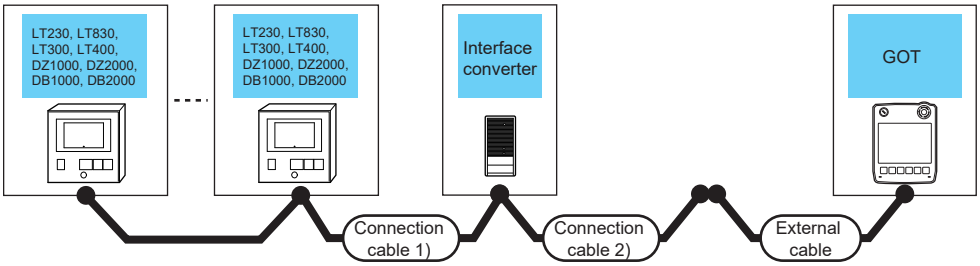



| Indicating controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| LT300 LT400 DZ1000 DZ2000 DB1000 DB2000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| LT230 LT300 LT400 LT830 DZ1000 DZ2000 DB1000 DB2000 | User preparing Page 1230 RS485 connection diagram 1) | | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

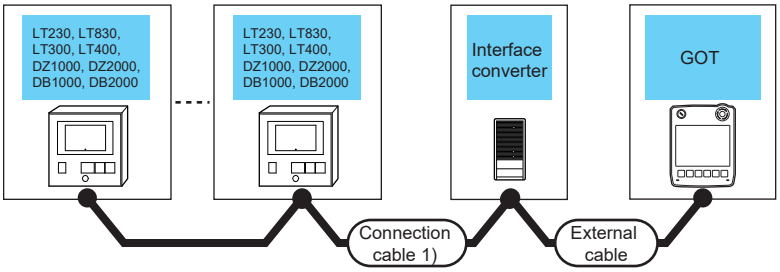



| Indicating controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| LT300<br>LT400<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| LT230<br>LT300<br>LT400<br>LT830<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | User preparing Page 1230 RS485 connection diagram 1) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Indicating controller | Connection cable 1) | | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| LT300<br>LT400<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| LT230<br>LT300<br>LT400<br>LT830<br>DZ1000<br>DZ2000<br>DB1000<br>DB2000 | User preparing Page 1230 RS485 connection diagram 1) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | | |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (External cable)

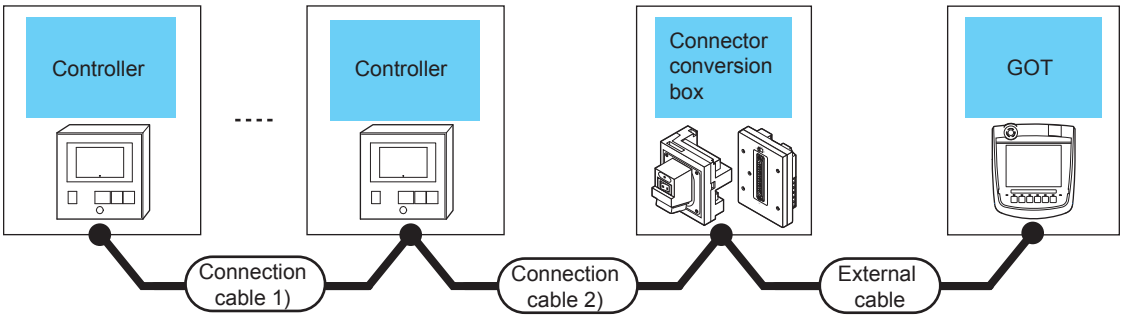
# Connecting to KP, AL3000, AH3000 series

Communication driver

CHINO MODBUS device

## When connecting to controller

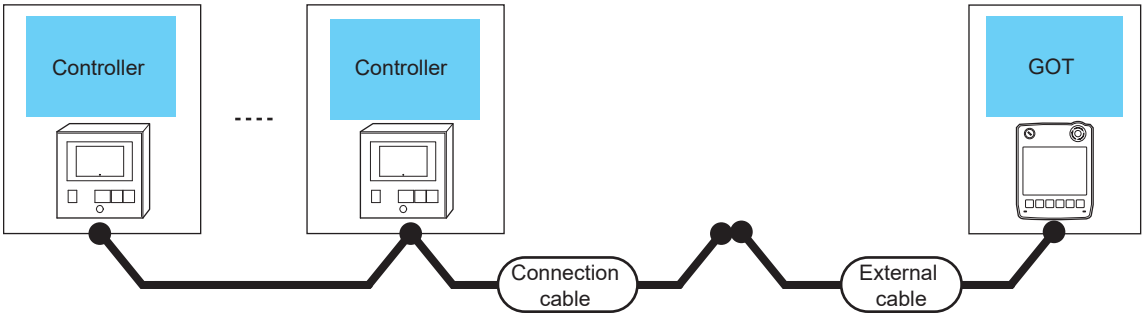
### ■When using the connector conversion box




| Indicating controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | | | | |
| KP1000<br>KP2000<br>AL3000<br>AH3000 | RS-232 | - | RZ-CRS6□□<br>or<br>User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 controller for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | RZ-CRA1□□ | User preparing Page 1226 RS422 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | | User preparing Page 1226 RS422 connection diagram 2) | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 10 controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| | RS-485 | User preparing Page 1232 RS485 connection diagram 6) | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | 31 controllers for 1 GOT |

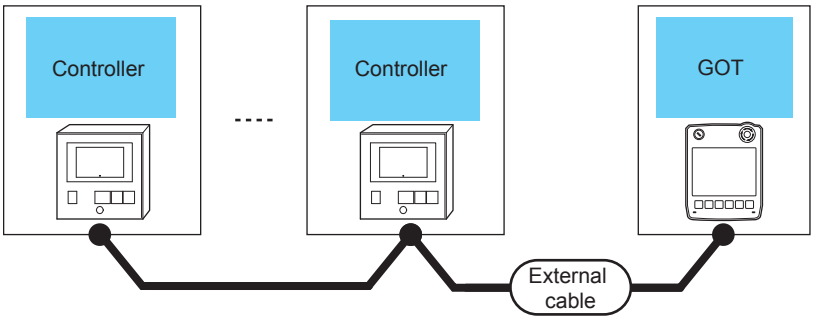
*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

## ■When using the external cable (GT11H-C□□□-37P)




| Indicating controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| KP1000<br>KP2000<br>AL3000<br>AH3000 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | User preparing Page 1227 RS422 connection diagram 3) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 controllers for 1 GOT |

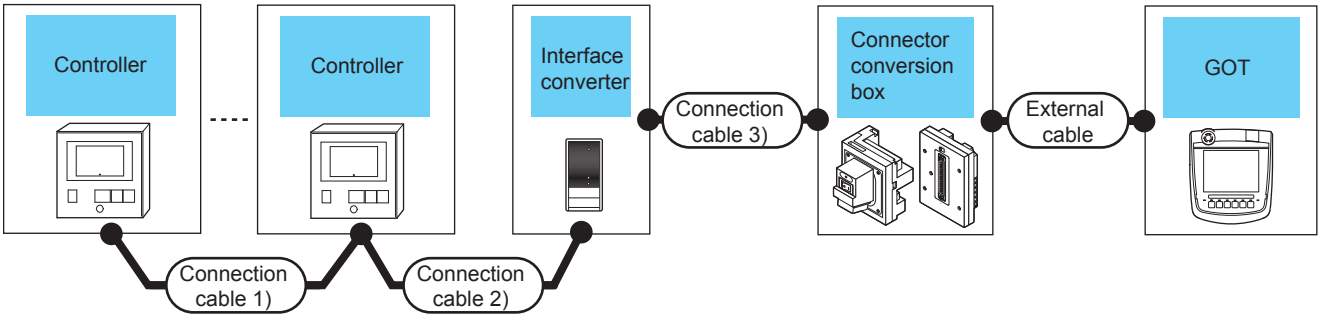
## ■When using the external cable (GT11H-C□□□)




| Indicating controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| KP1000<br>KP2000<br>AL3000<br>AH3000 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1228 RS422 connection diagram 4) | GT 2505HS | 13m | 10 controllers for 1 GOT |

## When connecting to converter

### ■When using the connector conversion box

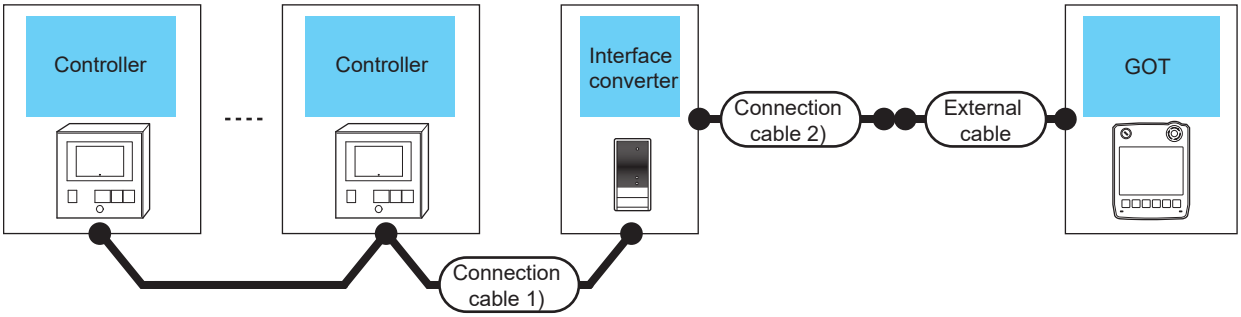



| Indicating controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| KP1000 KP2000 AL3000 AH3000 | RZ-CRA1□□ or User preparing Page 1225 RS422 connection diagram 1) | RZ-CRA2□□ or User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | RZ-CRS6□ or User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RZ-LEC□□□ or User preparing Page 1230 RS485 connection diagram 1) | RZ-LEC□□□ (only KP1000, KP2000) RZ-LED□□□ (only AL3000, AH3000) or User preparing Page 1230 RS485 connection diagram 1) | | | | RZ-CRS6□ or User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

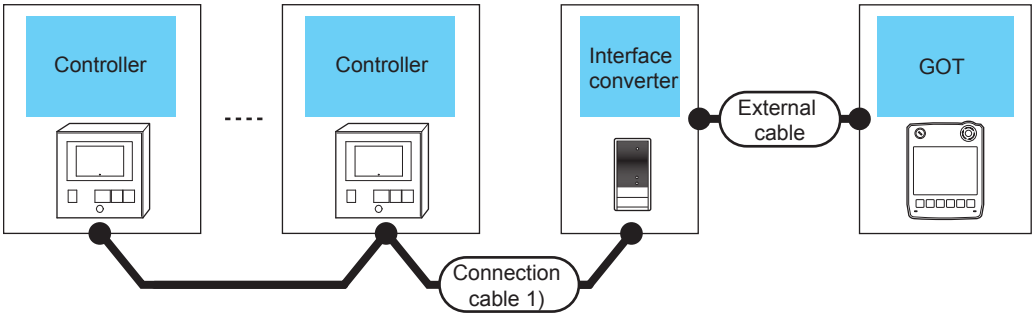



| Indicating controller | Connection cable 1) | Max. distance | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| KP1000<br>KP2000<br>AL3000<br>AH3000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| | User preparing Page 1230 RS485 connection diagram 1) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Indicating controller | Connection cable 1) | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | | | | |
| KP1000<br>KP2000<br>AL3000<br>AH3000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| | User preparing Page 1230 RS485 connection diagram 1) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (External cable)

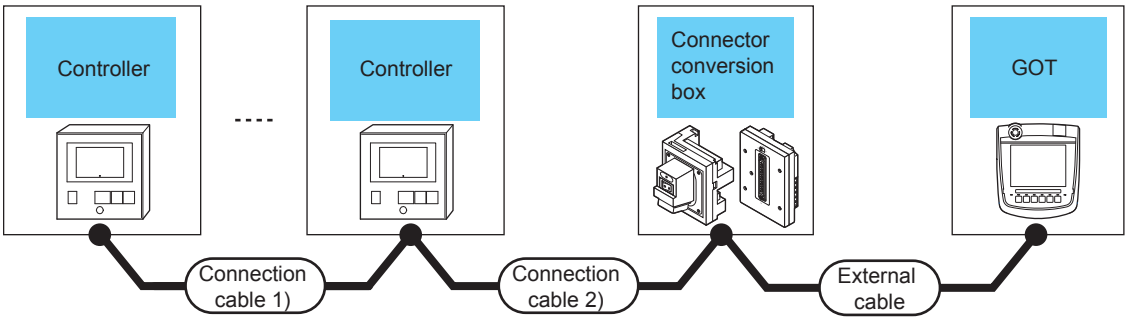
# Connecting to SE3000, JU, KE3000, LE5000 series

Communication driver

CHINO MODBUS device

## When connecting to controller

### ■When using the connector conversion box

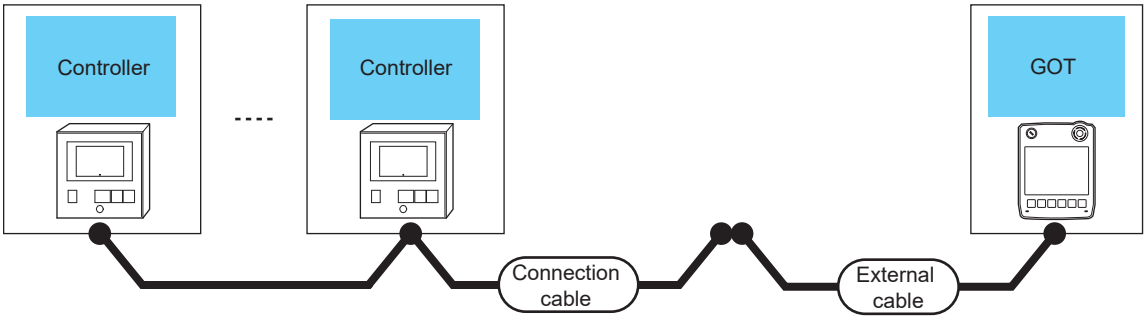



| Indicating controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | | | | |
| SE3000 | RS-232 | -- | RZ-CRS6□□ or User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 controller for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| SE3000 JU KE3000 LE5000 | RS-422 | RZ-CRA1□□*2 | User preparing Page 1226 RS422 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 controllers for 1 GOT |
| | | User preparing Page 1226 RS422 connection diagram 2) | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 31 controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | 10 controllers for 1 GOT |
| | RS-485 | User preparing Page 1233 RS485 connection diagram 7) | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 31 controllers for 1 GOT |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 RZ-CRA1□□ and RZ-LEC□□□ can be used in SE3000, JU or LE5000 series only.

## ■When using the external cable (GT11H-C□□□-37P)

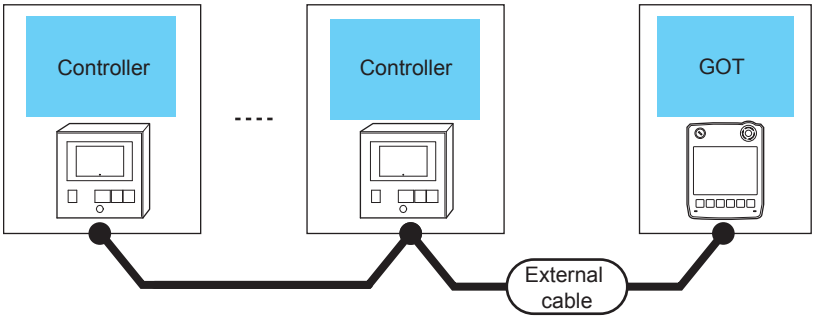



| Indicating controller | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | | | | |
| SE3000 JU KE3000 LE5000 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | User preparing Page 1227 RS422 connection diagram 3) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 controllers for 1 GOT |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable + External cable)

## ■When using the external cable (GT11H-C□□□)

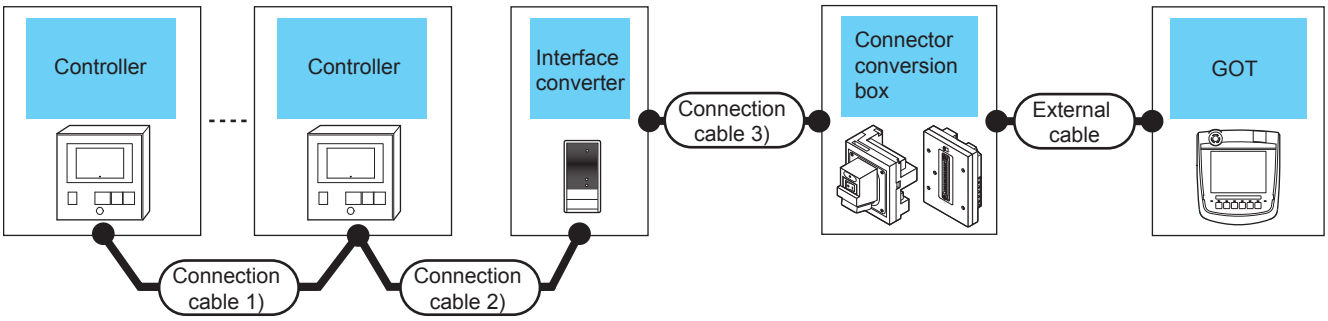



| Indicating controller | | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| SE3000 JU KE3000 LE5000 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 1 controller for 1 GOT |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1228 RS422 connection diagram 4) | GT 2505HS | 13m | 10 controllers for 1 GOT |

*1 The distance from the GOT to the PLC (External cable)

## When connecting to converter

### ■When using the connector conversion box




| Indicating controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SE3000 JU KE3000 LE5000 | RZ-CRA1□□*2 or User preparing Page 1225 RS422 connection diagram 1) | RZ-CRA2□□*2 or User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | RZ-CRS6□ or User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RZ-LEC□□□ (only SE3000, JU, LE5000) or RZ-CSS1Z2*3 or User preparing Page 1231 RS485 connection diagram 5) | RZ-LEC□□□ (only JU, LE5000) RZ-LED□□□ (only SE3000) or User preparing Page 1231 RS485 connection diagram 5) | | | | RZ-CRS6□ or User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

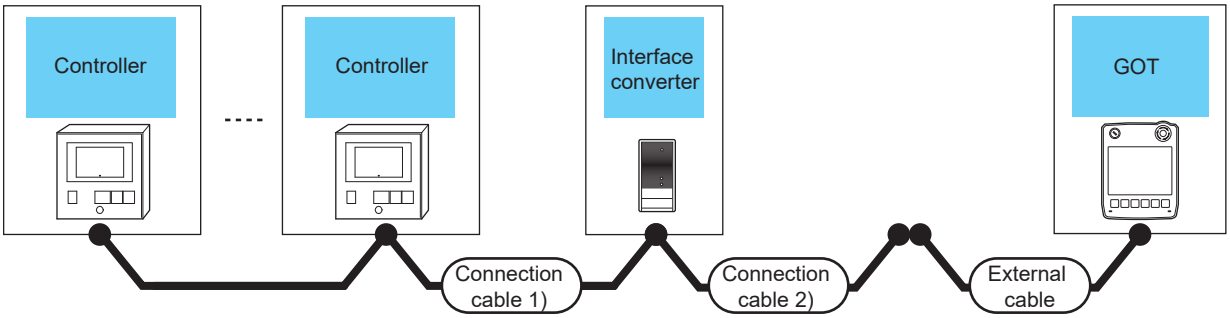
*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 RZ-CRA1□□ and RZ-CRA2□□ can be used in SE3000, JU or LE5000 series only.

*3 RZ-CSS1Z2 can be used in JU series only.

*4 The distance from the GOT to the PLC (Connection cable 3) + External cable)

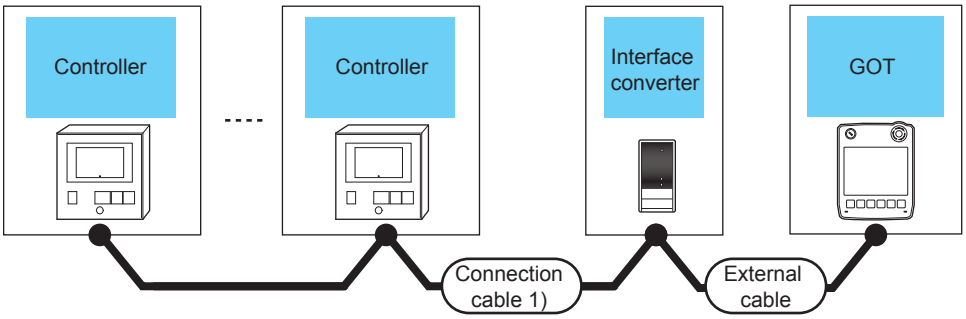
## ■When using the external cable (GT11H-C□□□-37P)




| Indicating controller | Connection cable 1) | Max. distance | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SE3000 JU KE3000 LE5000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| | User preparing Page 1231 RS485 connection diagram 5) | | | | User preparing Page 1223 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.
*2 The distance from the GOT to the PLC (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Indicating controller | Connection cable 1) | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | | | | |
| SE3000 JU KE3000 LE5000 | User preparing Page 1225 RS422 connection diagram 1) | 1200m | SC8-10 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 31 controllers for 1 GOT |
| | User preparing Page 1231 RS485 connection diagram 5) | | | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.
*2 The distance from the GOT to the PLC (External cable)

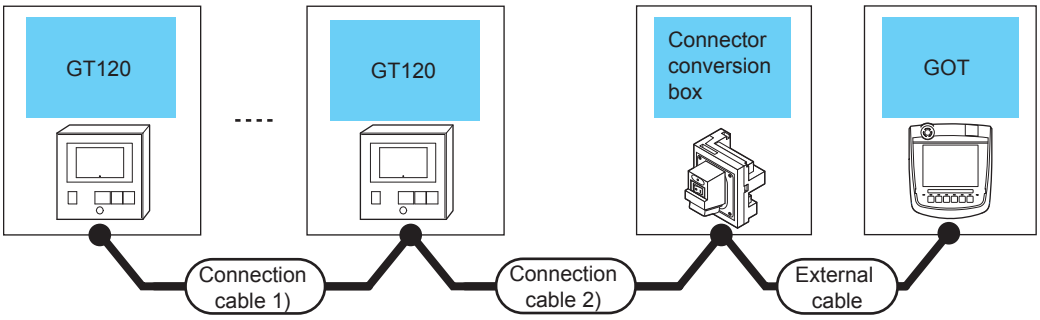
# Connecting to GT120 Series

Communication driver

CHINO MODBUS device

## When connecting to controller

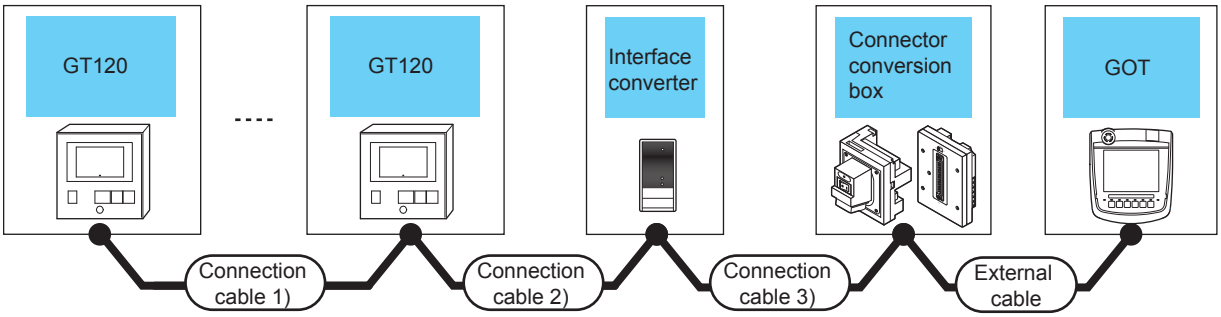
### ■When using the connector conversion box




| Indicating controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| GT120 | RS-485 | GT8-CDD(60mm) or User preparing Page 1230 RS485 connection diagram 2) | User preparing Page 1231 RS485 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 controllers for 1 GOT |

## When connecting to converter

### ■When using the connector conversion box

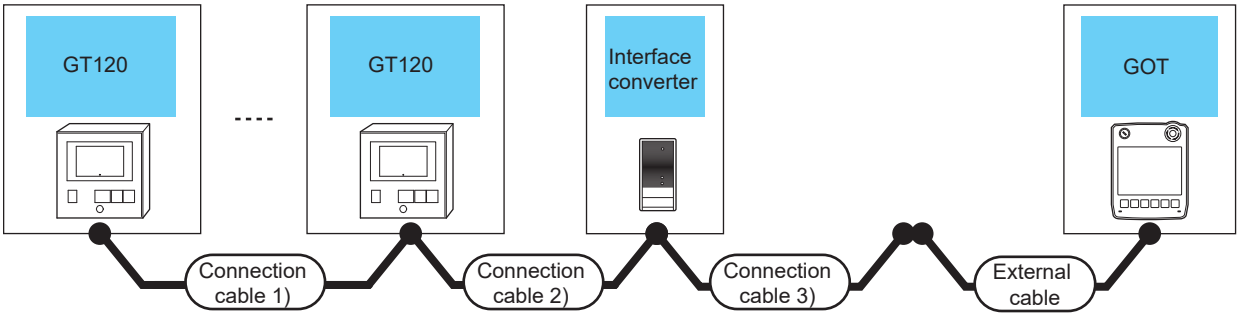



| Indicating controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| GT120 | GT8-CDD(60mm) or User preparing Page 1230 RS485 connection diagram 2) | GT8-CDM(3m) or User preparing Page 1231 RS485 connection diagram 4) | 1200m | SC8-10 | RS-232 | User preparing Page 1222 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

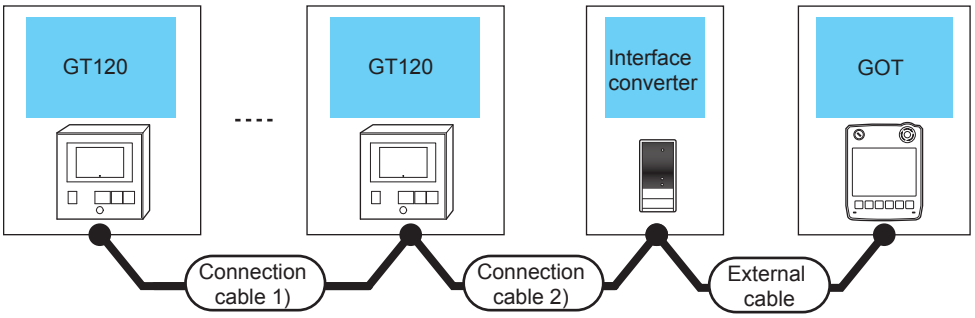



| Indicating controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| GT120 | GT8-CDD(60mm) or User preparing Page 1230 RS485 connection diagram 2) | GT8-CDM(3m) or User preparing Page 1231 RS485 connection diagram 4) | 1200m | SC8-10 | RS-232 | User preparing Page 1222 RS232 connection diagram 1) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 controllers for 1 GOT |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Indicating controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| GT120 | GT8-CDD(60mm) or User preparing Page 1230 RS485 connection diagram 2) | GT8-CDM(3m) or User preparing Page 1231 RS485 connection diagram 4) | 1200m | SC8-10 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1224 RS232 connection diagram 3) | GT 2505HS | 6m | 31 controllers for 1 GOT |

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (External cable)

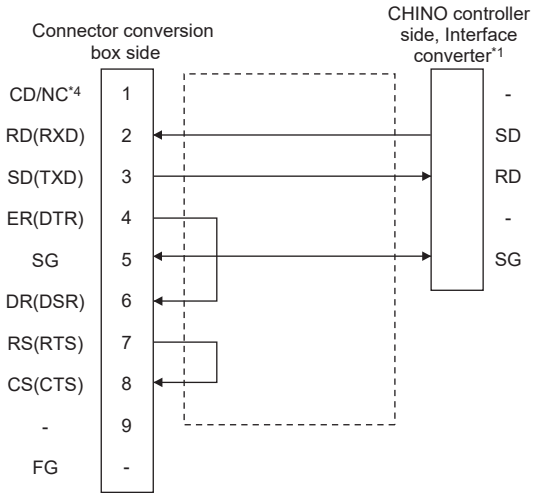
# 23.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

## RS-232 cable

### Connection diagram

#### ■RS232 connection diagram 1)



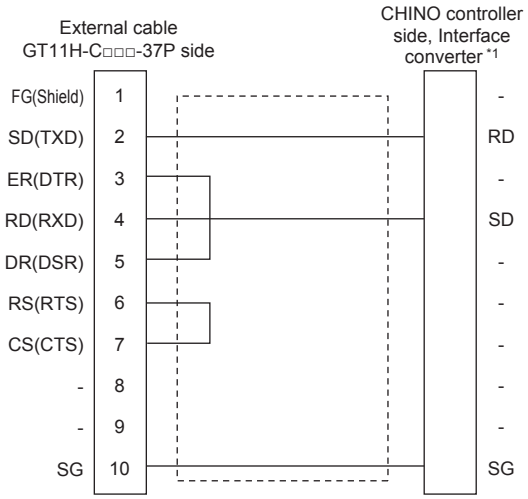

*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

| Signal name | Controller | | | | | Converter |
|---|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 | SC8-10 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SD | 11 | 11 | 19 | 13 | 27 | 2 |
| RD | 13 | 13 | 21 | 12 | 26 | 1 |
| SG | 15 | 15 | 23 | 14 | 28 | 3 |

| Signal name | Controller | | | | |
|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000<br>AH3000 |
| | Terminal No. | Terminal No.*2 | | Terminal name | Terminal name |
| | | R*3, B*3, C*3, D*3 | B*3, E*3 | | |
| SD | 13 | 27 | 30 | SD | SD |
| RD | 12 | 26 | 29 | RD | RD |
| SG | 14 | 28 | 31 | SG | SG |

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available. Select as necessary.
*4 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS232 connection diagram 2)



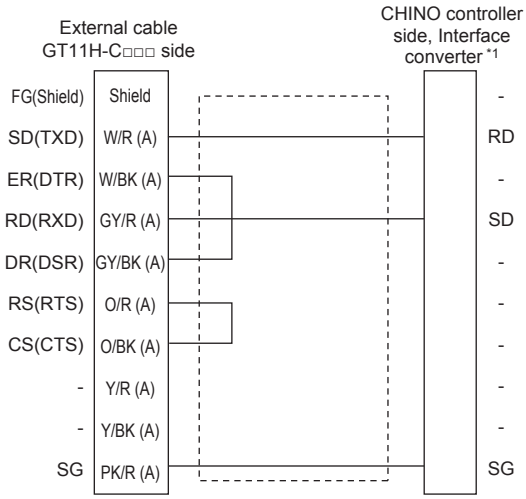

*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

| Signal name | Controller | | | | | Converter |
|---|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 | SC8-10 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SD | 11 | 11 | 19 | 13 | 27 | 2 |
| RD | 13 | 13 | 21 | 12 | 26 | 1 |
| SG | 15 | 15 | 23 | 14 | 28 | 3 |

| Signal name | Controller | | | | |
|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000<br>AH3000 |
| | Terminal No. | Terminal No.*2 | | Terminal name | Terminal name |
| | | R*3, B*3, C*3, D*3 | B*3, E*3 | | |
| SD | 13 | 27 | 30 | SD | SD |
| RD | 12 | 26 | 29 | RD | RD |
| SG | 14 | 28 | 31 | SG | SG |

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available.
Select as necessary.

## ■RS232 connection diagram 3)




*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

| Signal name | Controller | | | | | Converter |
|---|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 | SC8-10 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SD | 11 | 11 | 19 | 13 | 27 | 2 |
| RD | 13 | 13 | 21 | 12 | 26 | 1 |
| SG | 15 | 15 | 23 | 14 | 28 | 3 |

| Signal name | Controller | | | | |
|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000<br>AH3000 |
| | Terminal No. | Terminal No.*2 | | Terminal name | Terminal name |
| | | R*3, B*3, C*3, D*3 | B*3, E*3 | | |
| SD | 13 | 27 | 30 | SD | SD |
| RD | 12 | 26 | 29 | RD | RD |
| SG | 14 | 28 | 31 | SG | SG |

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available.
Select as necessary.

# Precautions when preparing a cable

## ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

## ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## ■CHINO controller side connector

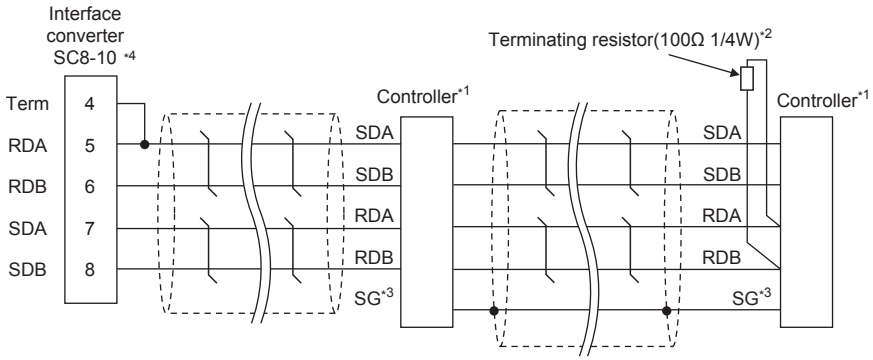
Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

# RS-422 cable

## Connection diagram

### ■RS422 connection diagram 1)



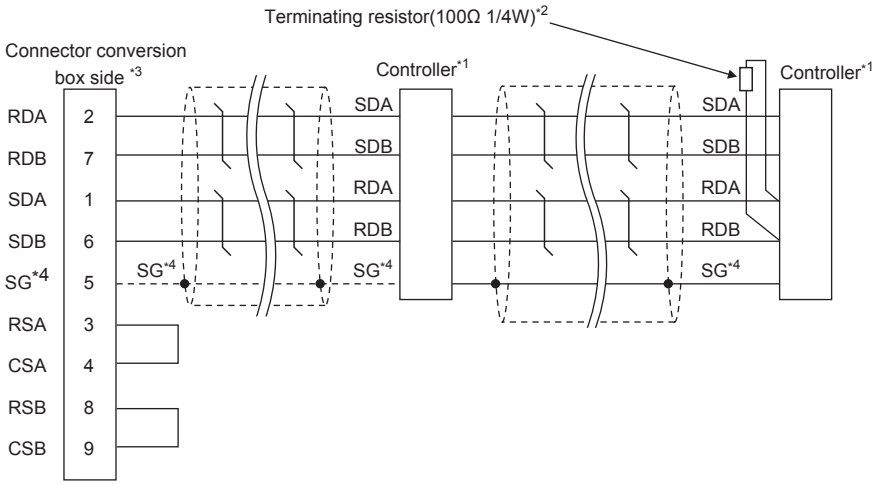

*1 Pin No. of controller differs depending on the model.
Refer to the following table.

| Signal name | Controller type | | | | |
|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SDA | 11 | 11 | 19 | 14 | 28 |
| SDB | 12 | 12 | 20 | 15 | 29 |
| RDA | 13 | 13 | 21 | 12 | 26 |
| RDB | 14 | 14 | 22 | 13 | 27 |
| SG | 15 | 15 | 23 | 16 | 30 |

| Signal name | Controller type | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000 AH3000 | JU | KE3000 | LE5000 |
| | Terminal No. | Terminal No.*5 | | Terminal name | Terminal name | Terminal No. | Terminal name | Terminal name |
| | | A*6 | C*6, F*6 | | | | | |
| SDA | 14 | 28 | 31 | SDA | SDA | 1 | SDA | SDA |
| SDB | 15 | 29 | 32 | SDB | SDB | 2 | SDB | SDB |
| RDA | 12 | 26 | 29 | RDA | RDA | 3 | RDA | RDA |
| RDB | 13 | 27 | 30 | RDB | RDB | 4 | RDB | RDB |
| SG | 16 | 30 | 28 | SG | SG | 5 | SG | SG |

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Do not connect SG of the controller and SG of the converter.
*4 Set the Communication Type switch of the converter to RS-422.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

## ■RS422 connection diagram 2)



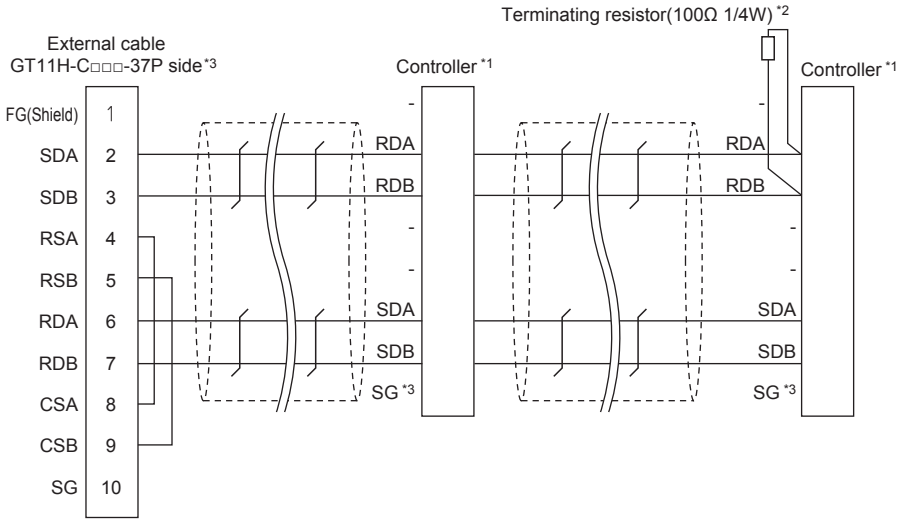

*1 Pin No. of controller differs depending on the model.
Refer to the following table.

| Signal name | Controller type | | | | |
|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SDA | 11 | 11 | 19 | 14 | 28 |
| SDB | 12 | 12 | 20 | 15 | 29 |
| RDA | 13 | 13 | 21 | 12 | 26 |
| RDB | 14 | 14 | 22 | 13 | 27 |
| SG | 15 | 15 | 23 | 16 | 30 |

| Signal name | Controller type | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000 AH3000 | JU | KE3000 | LE5000 |
| | Terminal No. | Terminal No.*5 | | Terminal name | Terminal name | Terminal No. | Terminal name | Terminal name |
| | | A*6 | C*6, F*6 | | | | | |
| SDA | 14 | 28 | 31 | SDA | SDA | 1 | SDA | SDA |
| SDB | 15 | 29 | 32 | SDB | SDB | 2 | SDB | SDB |
| RDA | 12 | 26 | 29 | RDA | RDA | 3 | RDA | RDA |
| RDB | 13 | 27 | 30 | RDB | RDB | 4 | RDB | RDB |
| SG | 16 | 30 | 28 | SG | SG | 5 | SG | SG |

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Set the terminating resistor of GOT side.
☞ Page 1229 Connecting terminating resistors
*4 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

## ■RS422 connection diagram 3)



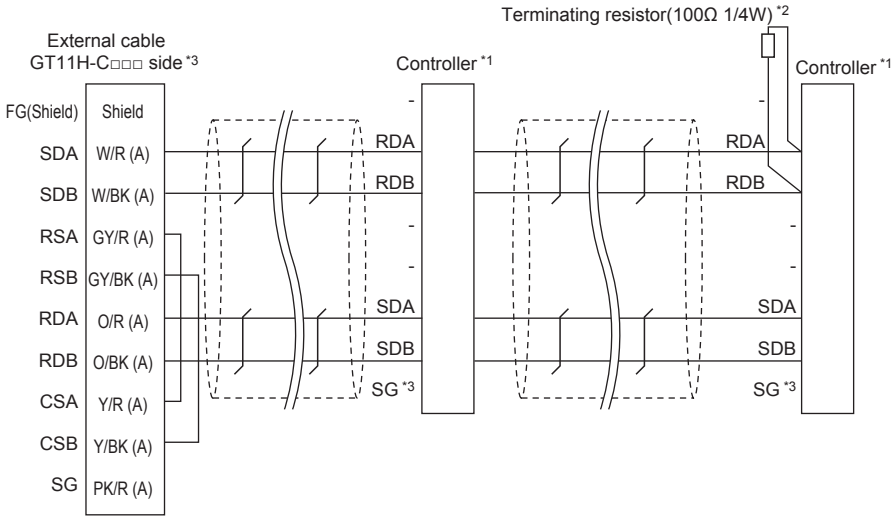

*1 Pin No. of controller differs depending on the model.
Refer to the following table.

| Signal name | Controller type | | | | |
|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SDA | 11 | 11 | 19 | 14 | 28 |
| SDB | 12 | 12 | 20 | 15 | 29 |
| RDA | 13 | 13 | 21 | 12 | 26 |
| RDB | 14 | 14 | 22 | 13 | 27 |
| SG | 15 | 15 | 23 | 16 | 30 |

| Signal name | Controller type | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000 AH3000 | JU | KE3000 | LE5000 |
| | Terminal No. | Terminal No.*4 | | Terminal name | Terminal name | Terminal No. | Terminal name | Terminal name |
| | | A*5 | C*5, F*5 | | | | | |
| SDA | 14 | 28 | 31 | SDA | SDA | 1 | SDA | SDA |
| SDB | 15 | 29 | 32 | SDB | SDB | 2 | SDB | SDB |
| RDA | 12 | 26 | 29 | RDA | RDA | 3 | RDA | RDA |
| RDB | 13 | 27 | 30 | RDB | RDB | 4 | RDB | RDB |
| SG | 16 | 30 | 28 | SG | SG | 5 | SG | SG |

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*4 For KP2000 series, the terminal No. differs according to the model.
*5 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

## ■RS422 connection diagram 4)




*1 Pin No. of controller differs depending on the model.
Refer to the following table.

| Signal name | Controller type | | | | |
|---|---|---|---|---|---|
| | LT300 | LT400 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SDA | 11 | 11 | 19 | 14 | 28 |
| SDB | 12 | 12 | 20 | 15 | 29 |
| RDA | 13 | 13 | 21 | 12 | 26 |
| RDB | 14 | 14 | 22 | 13 | 27 |
| SG | 15 | 15 | 23 | 16 | 30 |

| Signal name | Controller type | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | KP1000 | KP2000 | | SE3000 | AL3000 AH3000 | JU | KE3000 | LE5000 |
| | Terminal No. | Terminal No.*4 | | Terminal name | Terminal name | Terminal No. | Terminal name | Terminal name |
| | | A*5 | C*5, F*5 | | | | | |
| SDA | 14 | 28 | 31 | SDA | SDA | 1 | SDA | SDA |
| SDB | 15 | 29 | 32 | SDB | SDB | 2 | SDB | SDB |
| RDA | 12 | 26 | 29 | RDA | RDA | 3 | RDA | RDA |
| RDB | 13 | 27 | 30 | RDB | RDB | 4 | RDB | RDB |
| SG | 16 | 30 | 28 | SG | SG | 5 | SG | SG |

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*4 For KP2000 series, the terminal No. differs according to the model.
*5 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

## Precautions when preparing a cable

### ■Cable length

• The length of the RS-422 cable used for connecting the controller to the converter

The length of the RS-422 cable must be 1200 m or less.

• The length of the RS-422 cable used for connecting the controller to the GOT

The total distance (between GOT and the controller) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■CHINO controller side connector

Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■CHINO controller side

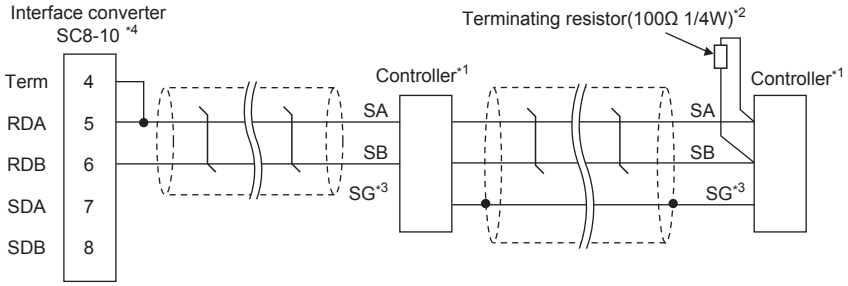
When connecting a CHINO controller to the GOT, a terminating resistor must be connected to the CHINO controller.

📖User's Manual of the CHINO controller

# RS-485 cable

## Connection diagram

### ■RS485 connection diagram 1)



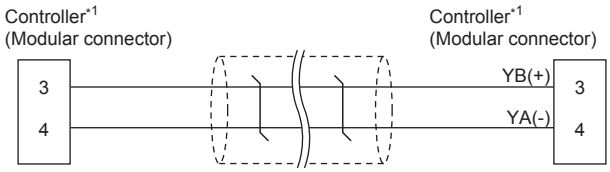

*1 Pin No. of controller differs depending on the model.
Refer to the following table.

| Signal name | Controller type | | | | | | |
|---|---|---|---|---|---|---|---|
| | LT230 | LT300 | LT400 | LT830 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SA | 6 | 11 | 11 | 6 | 19 | 12 | 26 |
| SB | 7 | 12 | 12 | 7 | 20 | 13 | 27 |
| SG | 8 | 15 | 15 | 8 | 23 | 14 | 28 |

| Signal name | Controller type | | | |
|---|---|---|---|---|
| | KP1000 | KP2000 | | AL3000 AH3000 |
| | Terminal No. | Terminal No.*5 | | Terminal name |
| | | S*6, E*6, F*6, G*6 | D*6, G*6 | |
| SA | 12 | 26 | 29 | SA |
| SB | 13 | 27 | 30 | SB |
| SG | 14 | 28 | 31 | SG |

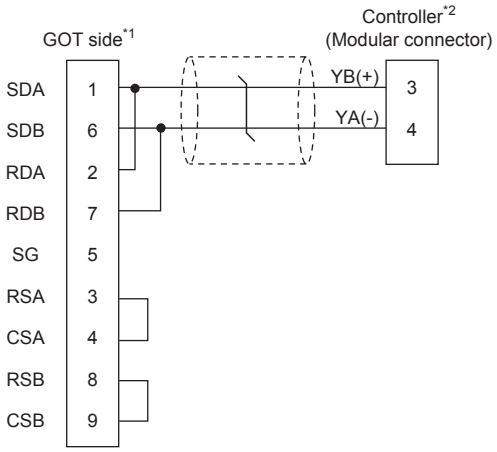
*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Do not connect SG of the controller and SG of the GOT.
*4 Set the Communication Type switch of the converter to RS-485.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol G, two terminal numbers are available.
Select as necessary.

### ■RS485 connection diagram 2)




*1 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

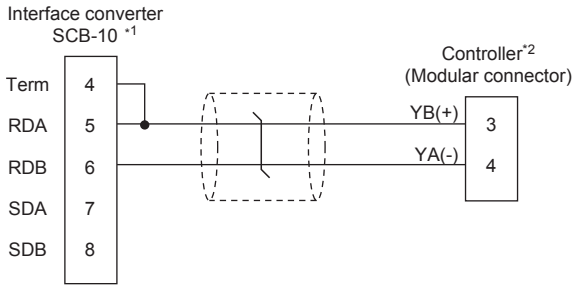
## ■RS485 connection diagram 3)




*1 Set the terminating resistor of GOT side.
☞ Page 1229 Connecting terminating resistors

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

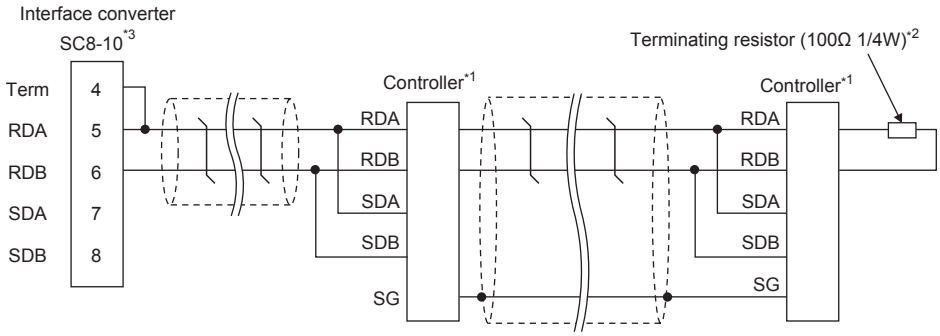
## ■RS485 connection diagram 4)




*1 Set the Communication Type switch of the converter to RS-485.

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

## ■RS485 connection diagram 5)



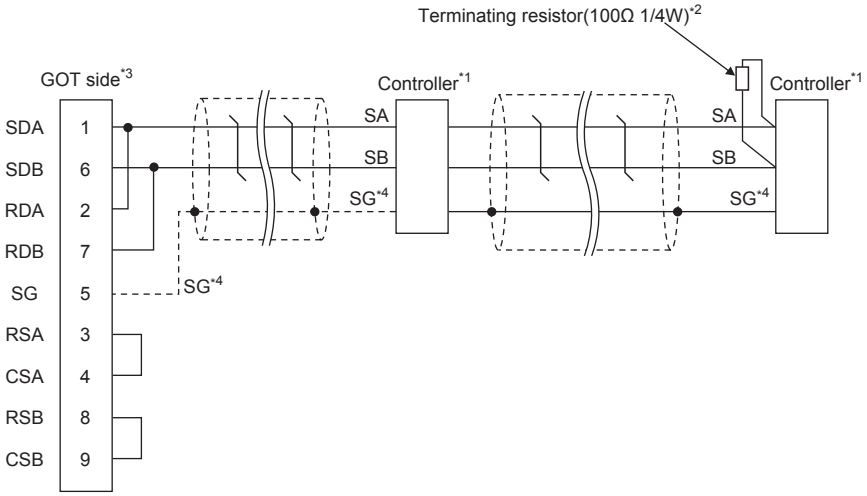

*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the Communication Type switch of the converter to RS-485.

| Signal name | Controller type | | | |
|---|---|---|---|---|
| | SE3000 | JU | KE3000 | LE5000 |
| | Terminal name | Terminal No. | Terminal name | Terminal name |
| RDA | RDA | 3 | RDA | RDA |
| RDB | RDB | 4 | RDB | RDB |
| SDA | SDA | 1 | SDA | SDA |
| SDB | SDB | 2 | SDB | SDB |
| SG | SG | 5 | SG | SG |

## ■RS485 connection diagram 6)




*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the terminating resistor of The GOT side.
☞ Page 1229 Connecting terminating resistors

*4 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.

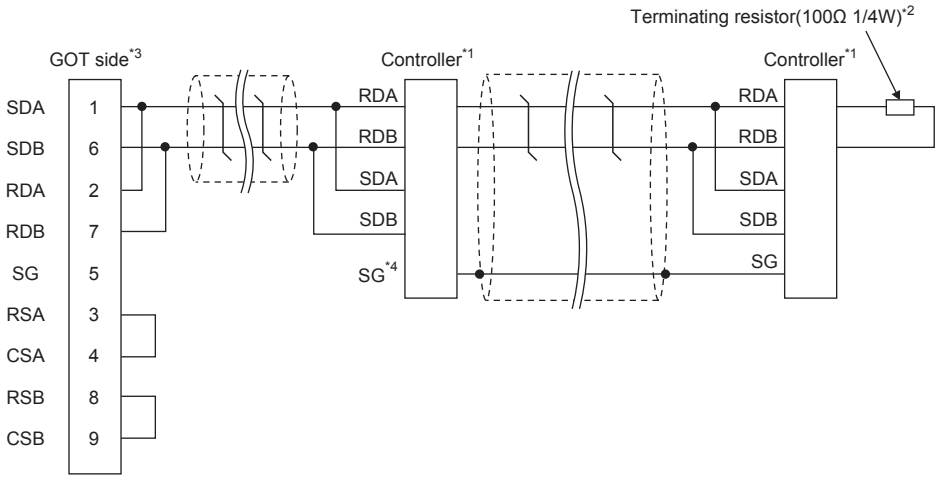
| Signal name | Controller type | | | | | | |
|---|---|---|---|---|---|---|---|
| | LT230 | LT300 | LT400 | LT830 | DZ1000, DZ2000 | DB1000 | DB2000 |
| | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. | Terminal No. |
| SA | 6 | 11 | 11 | 6 | 19 | 12 | 26 |
| SB | 7 | 12 | 12 | 7 | 20 | 13 | 27 |
| SG | 8 | 15 | 15 | 8 | 23 | 14 | 28 |

| Signal name | Controller type | | | |
|---|---|---|---|---|
| | KP1000 | KP2000 | | AL3000 AH3000 |
| | Terminal No. | Terminal No.*5 | | Terminal name |
| | | S*6, E*6, F*6, G*6 | D*6, G*6 | |
| SA | 12 | 26 | 29 | SA |
| SB | 13 | 27 | 30 | SB |
| SG | 14 | 28 | 31 | SG |

*5 For KP2000 series, the terminal No. differs according to the model.

*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) - 12) 13) 14)
For the symbol G, two terminal numbers are available.
Select as necessary.

## ■RS485 connection diagram 7)




*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the terminating resistor of The GOT side.
☞ Page 1229 Connecting terminating resistors

*4 Do not connect SG of the controller and SG of the GOT.

| Signal name | Controller type | | | |
|---|---|---|---|---|
| | SE3000 | JU | KE3000 | LE5000 |
| | Terminal name | Terminal No. | Terminal name | Terminal name |
| RDA | RDA | 3 | RDA | RDA |
| RDB | RDB | 4 | RDB | RDB |
| SDA | SDA | 1 | SDA | SDA |
| SDB | SDB | 2 | SDB | SDB |
| SG | SG | 5 | SG | SG |

# Precautions when preparing a cable

## ■Cable length

• The length of the RS-485 cable used for connecting the controller to the converter

The length of the RS-485 cable must be 1200 m or less.

• The length of the RS-485 cable used for connecting the controller to the GOT

The total distance (between GOT and the controller) of the RS-485 cable must be 13 m or less.

## ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## ■CHINO controller side connector

Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■CHINO controller side

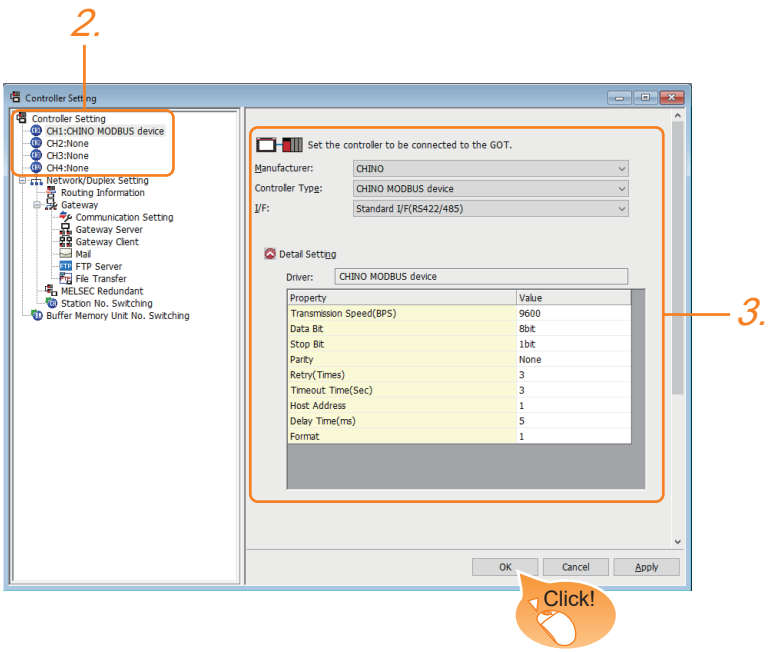
When connecting a CHINO controller to the GOT, a terminating resistor must be connected to the CHINO controller.

📖User's Manual of the CHINO controller

# 23.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [CHINO]
- [Controller Type]: [CHINO MODBUS device]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1236 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 5 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 1sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the controller is connected) in the connected network.<br>(Default: 1) | 1 to 99 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |
| Format | Select the communication format.<br>(Default: 1)<br>Format 1:<br>Accessible to LT230/300/400/830, DZ1000/2000, Not accessible to GT120<br>Format 2:<br>Accessible to GT120 | 1/2 |

**Point**

• Format

When connecting to GT120, specify format 2.

• Delay Time

When connecting to the following models, set the send delay time to 30ms or more.

| Model name |
|---|
| DZ1000, DZ2000 |

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 23.5 Controller Side Setting

**Point**

• CHINO controller

For details of CHINO controller, refer to the following manual.

User's Manual of the CHINO controller

• Converter

For details on communication settings of the converter, refer to the following manual.

User's Manual for converter

| Model name | | Refer to |
|---|---|---|
| Controller | LT230, LT300 | ☞ Page 1237 Connecting to LT230, LT300 Series |
| | LT400, LT830 | ☞ Page 1238 Connecting to LT400, LT830 Series |
| | DZ1000, DZ2000 | ☞ Page 1238 Connecting to DZ1000, DZ2000 Series |
| | DB1000, DB2000 | ☞ Page 1239 Connecting to DB1000, DB2000 Series |
| | GT120 | ☞ Page 1239 Connecting to GT120 Series |
| | KP1000, KP2000 | ☞ Page 1240 Connecting to KP1000, KP2000 |
| | AL3000, AH3000 | ☞ Page 1240 Connecting to AL3000, AH3000 |
| | SE3000 | ☞ Page 1241 Connecting to SE3000 |
| | JU | ☞ Page 1242 Connecting to JU |
| | KE3000 | ☞ Page 1243 Connecting to KE3000 |
| | LE5000 | ☞ Page 1244 Connecting to LE5000 |
| Converter | SC8-10 | ☞ Page 1244 Connecting to converter SC8-10 |



## Connecting to LT230, LT300 Series

### Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 4.

### Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | rtU: MODBUS RTU |
| Function | Com: Upper communication |
| Station No.*1 | 1 to 99 |
| Transmission speed*2 | 9600bps, 19200bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | 5: 8bit, None, 1bit<br>6: 8bit, None, 2bit<br>7: 8bit, Even, 1bit<br>8: 8bit, Even, 2bit<br>9: 8bit, Odd, 1bit<br>10: 8bit, Odd, 2bit |

*1 Avoid duplication of the station No. with any of the other units.

*2 Adjust the settings with GOT settings.

# Connecting to LT400, LT830 Series

## Key Lock setting

To write the Digital and the Analog parameters, set thefollowing Key Lock setting

- LT400: Lock4
- LT830: Lock3

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | rtU: MODBUS RTU |
| Function | Com: Upper communication |
| Station No.*1 | 1 to 99 |
| Transmission speed*2 | 9600bps, 19200bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | 8N1: 8bit, None, 1bit<br>8N2: 8bit, None, 2bit<br>8E1: 8bit, Even, 1bit<br>8E2: 8bit, Even, 2bit<br>8O1: 8bit, Odd, 1bit<br>8O2: 8bit, Odd, 2bit |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to DZ1000, DZ2000 Series

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 2.

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | rtU: MODBUS RTU |
| Function | Com: Upper communication |
| Station No.*1 | 1 to 31 |
| Transmission speed*2 | 9600bps, 19200bps |
| Data bit | 8bits (fixed) |
| Stop bit | 1bit (fixed) |
| Parity bit | None (fixed) |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to DB1000, DB2000 Series

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | MODBUS (RTU) |
| Function | Com: Upper communication |
| Station No.*1 | 01 to 99 |
| Transmission speed*2 | 9600bps, 19200bps, 38400bps |
| Character | 7BIT/EVEN/STOP1<br>7BIT/EVEN/STOP2<br>7BIT/ODD/STOP1<br>7BIT/ODD/STOP2<br>8BIT/NON/STOP1<br>8BIT/NON/STOP2<br>8BIT/EVEN/STOP1<br>8BIT/EVEN/STOP2<br>8BIT/ODD/STOP1<br>8BIT/ODD/STOP2 |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to GT120 Series

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 3.

## Communication settings

Release the controller lock function in advance and set the following communication settings.

After completing the communication settings, set the Key Lock setting to Lock 3.

| Item | Set value |
|---|---|
| Communication protocol | comr: MODBUS RTU |
| Station No.*1 | 1 to 95 |
| Transmission speed*2 | 96: 9600bps<br>192: 19200bps |
| Data bit | 8bits (fixed) |
| Stop bit*2 | 1bit, 2bits |
| Parity bit*2 | nonE: None<br>EVEn: Even<br>odd: Odd |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to KP1000, KP2000

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | MODBUS (RTU) |
| Function | COM |
| Station No.*1 | 1 to 99 |
| Transmission speed*2 | 2400bps, 4800bps, 9600bps, 19200bps, 38400bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | 8BIT/NON/STOP1<br>8BIT/NON/STOP2<br>8BIT/EVEN/STOP1<br>8BIT/EVEN/STOP2<br>8BIT/ODD/STOP1<br>8BIT/ODD/STOP2 |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to AL3000, AH3000

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | MODBUS |
| Transmission code | rtu |
| Communication type | RS232C, RS-422A, RS-485 |
| Station No.*1 | 1 to 31 |
| Transmission speed*2 | 2400bps, 4800bps, 9600bps, 19200bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to SE3000

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

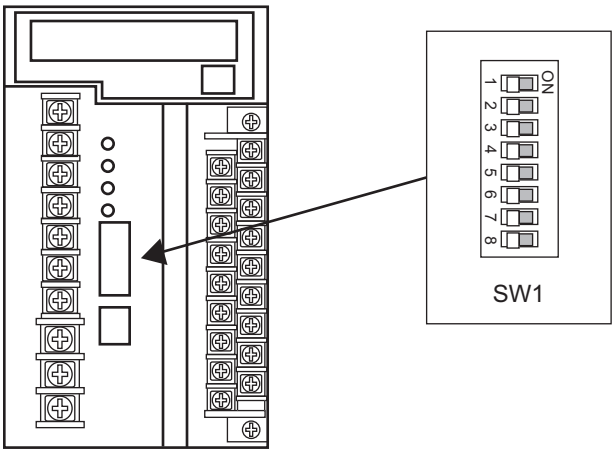
Make the communication settings using the engineering software package (PASS)

| Item | Set value |
|---|---|
| Protocol | MODBUS RTU |
| Station No.*1*3 | 1 to 31 |
| Transmission speed*2*3 | 9600bps, 19200bps |
| Data bit | 8bits (fixed) |
| Parity bit*2 | Even, Odd, Non |
| Stop bit*2 | 1bit, 2bits |
| Transmission code | Binary (fixed) |
| Error check | CRC-16 (fixed) |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.
*3 Station No. and Transmission speed can also be set by switch SW1.

## Setting by Switch (SW1)

Station No. and Transmission speed can be set.



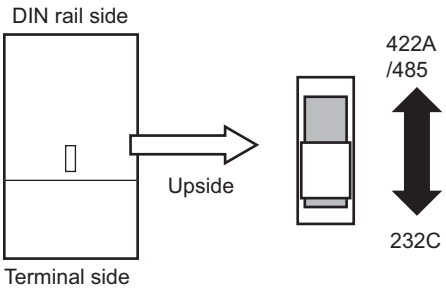

### ■Station No.

| SW1-1 | SW1-2 | SW1-3 | SW1-4 | SW1-5 | Station No. |
|---|---|---|---|---|---|
| OFF | OFF | OFF | OFF | OFF | 1 |
| ON | OFF | OFF | OFF | OFF | 1 |
| OFF | ON | OFF | OFF | OFF | 2 |
| ON | ON | OFF | OFF | OFF | 3 |
| : | | | | | |
| : | | | | | |
| ON | OFF | ON | ON | ON | 29 |
| OFF | ON | ON | ON | ON | 30 |
| ON | ON | ON | ON | ON | 31 |

### ■Transmission speed

| SW1-6 | SW1-7 | communication port | Transmission speed |
|---|---|---|---|
| OFF | OFF | Upper communication | 9600bps |
| OFF | ON | Upper communication | 19200bps |
| ON | OFF | ENG | - |
| ON | ON | User setting inhibited | |

## Setting by Switch (SW2)




| SW2 | |
|---|---|
| Front side (Terminal side) | Rear side (DIN rail side) |
| RS232C | RS422A/485 |

# Connecting to JU

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| Protocol | rtU |
| Station No.*1 | 1 to 99 |
| Transmission speed*2 | 9600bps, 19200bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

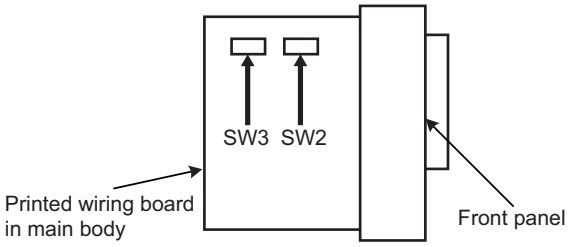
# Connecting to KE3000

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

Make the communication settings by operating the switches SW2 and SW3 of the module.




### ■Setting by SW2

| Item | Set value | SW2-2 | SW2-3 |
|---|---|---|---|
| Transmission code*2 | MODBUS RTU | OFF | - |
| Transmission speed*1 | 9600bps | - | OFF |
| | 19200bps | - | ON |
| Transmission character structure*2 | 8bits, None, 1bit (fixed) | - | - |

*1 Adjust the settings with GOT settings.
*2 When the transmission code is MODBUS RTU, the setting of the transmission character structure is fixed.

### ■Setting by SW3

Set the station No. as follows.

| SW3-4 | SW3-5 | SW3-6 | SW3-7 | SW3-8 | Station No.*1 |
|---|---|---|---|---|---|
| OFF | OFF | OFF | OFF | OFF | 1 |
| ON | OFF | OFF | OFF | OFF | 1 |
| OFF | ON | OFF | OFF | OFF | 2 |
| ON | ON | OFF | OFF | OFF | 3 |
| : | | | | | |
| : | | | | | |
| ON | OFF | ON | ON | ON | 29 |
| OFF | ON | ON | ON | ON | 30 |
| ON | ON | ON | ON | ON | 31 |

*1 Avoid duplication of the station No. with any of the other units.

# Connecting to LE5000

## Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

## Communication settings

Set the communication settings with controller key operation.

| Item | Set value |
|---|---|
| RTU/ASCII | RTU |
| Station No.*1 | 1 to 99 |
| Transmission speed*2 | 9600bps, 19200bps |
| Character*2<br>(Bit length, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

# Connecting to converter SC8-10

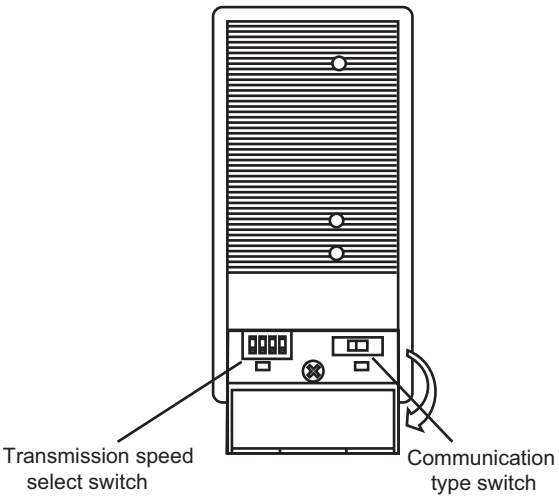
## Communication settings

Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| Transmission speed select switch*1 | 9600bps, 19200bps |
| Communication type switch | RS-485, RS-422 |

*1 Adjust the settings with GOT and controller settings.

## Settings by switch



### ■Transmission speed setting




| Setting item | Set value | Switch No. | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Transmission speed | 9600bps | OFF | ON | OFF | OFF |
| | 19200bps | OFF | OFF | ON | OFF |

### ■Communication type setting



RS-485⟷RS-422A

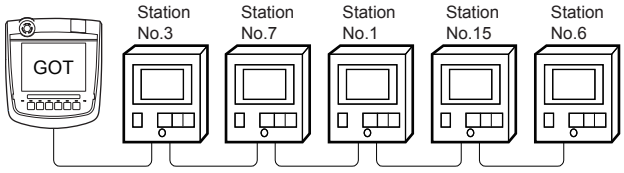
| Setting item |
|---|
| RS-485/RS-422 |

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the controller of which data is to be changed.

| Model name | Specification range | Refer to |
|---|---|---|
| LT230, LT300, LT400, LT830 | 1 to 99 | ☞ Page 1237 Connecting to LT230, LT300 Series<br>☞ Page 1238 Connecting to LT400, LT830 Series |
| DZ1000, DZ2000 | 1 to 31 | ☞ Page 1238 Connecting to DZ1000, DZ2000 Series |
| DB1000, DB2000 | 1 to 99 | ☞ Page 1239 Connecting to DB1000, DB2000 Series |
| GT120 | 1 to 95 | ☞ Page 1239 Connecting to GT120 Series |
| KP1000, KP2000 | 1 to 99 | ☞ Page 1240 Connecting to KP1000, KP2000 |
| AL3000, AH3000 | 1 to 31 | ☞ Page 1240 Connecting to AL3000, AH3000 |
| SE3000 | 1 to 31 | ☞ Page 1241 Connecting to SE3000 |
| JU | 1 to 99 | ☞ Page 1242 Connecting to JU |
| KE3000 | 1 to 31 | ☞ Page 1243 Connecting to KE3000 |
| LE5000 | 1 to 99 | ☞ Page 1244 Connecting to LE5000 |

## Indirect specification

When setting the device, indirectly specify the station number of the controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 99: LT230, LT300, LT400, LT830, DB1000, DB2000, KP1000, KP2000, JU, LE5000<br>1 to 31: DZ1000, DZ2000, AL3000, AH3000, KE3000, SE3000<br>1 to 95: GT120<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

## All station specification

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.
- All station specification is not available for KE3000.

Do not use the all station specification for systems which include KE3000.

# 23.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

CHINO equipment ([CHINO MODBUS device])

# 23.7 Precautions

## Station number settings of temperature controller

In the system configuration, the controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1235 Setting communication interface (Communication settings)

## GOT clock control

Since the controller does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

# MEMO

# 24 TOSHIBA PLC


- Page 1249 Connectable Model List
- Page 1250 Serial Connection
- Page 1264 Settable Device Range


## 24.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| PROSEC T Series | T2 (PU224) | ○ | RS-422 | GT2506HS GT2505HS | ☞ Page 1250 Connecting to PROSEC T series |
| | T3 | ○ | | | |
| | T3H | ○ | | | |
| | T2E | ○ | RS-232<br>RS-422 | | |
| | T2N | ○ | | | |
| PROSEC V Series | model 2000(S2) | ○ | RS-422 | GT2506HS GT2505HS | ☞ Page 1252 Connecting to PROSEC V series |
| | model 2000(S2T) | ○ | | | |
| | model 2000(S2E) | ○ | | | |
| | model 3000 (S3) | ○ | | | |

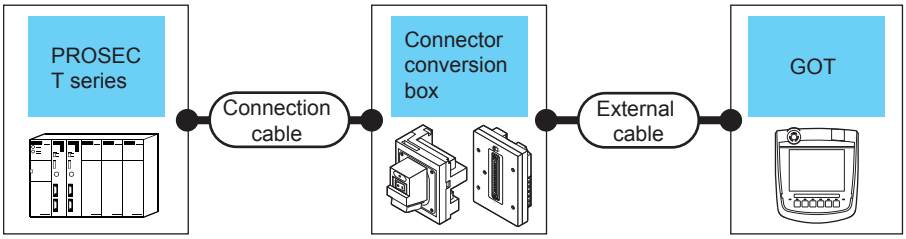
# 24.2 Serial Connection

## Connecting to PROSEC T series

Communication driver

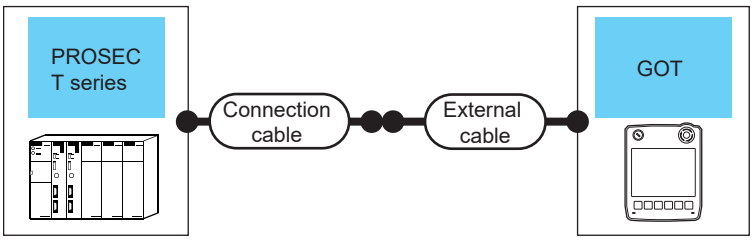
TOSHIBA PROSEC T/V

### When using the connector conversion box



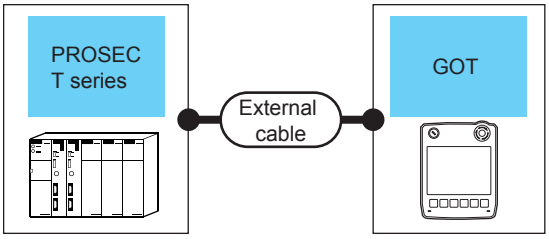

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| T2 (PU224)<br>T3<br>T3H | RS-422 | GT09-C30R40501-15P(3m)<br>GT09-C100R40501-15P(10m)<br>or<br>User preparing RS422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| T2E | RS-232 | GT09-C30R40102-9P(3m)<br>or<br>User preparing RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | GT09-C30R40502-6C(3m)<br>GT09-C100R40502-6C(10m)<br>or<br>User preparing RS422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| T2N | RS-232 | GT09-C30R20502-15P(3m)<br>or<br>User preparing RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | GT09-C30R40503-15P(3m)<br>GT09-C100R40503-15P(10m)<br>or<br>User preparing RS422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| T2 (PU224)<br>T3<br>T3H | RS-422 | User preparing RS422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC |
| T2E | RS-232 | User preparing RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | RS-422 | User preparing RS422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| T2N | RS-232 | User preparing RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | RS-422 | User preparing RS422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the external cable (GT11H-C□□□)



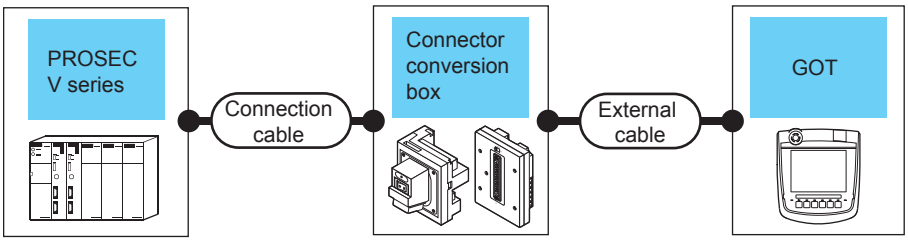

| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| T2 (PU224)<br>T3<br>T3H | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 3) | GT 2505HS | 13m | 1 GOT for 1 PLC |
| T2E | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 3) | GT 2505HS | 6m | |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 6) | GT 2505HS | 13m | |
| T2N | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 6) | GT 2505HS | 6m | |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 9) | GT 2505HS | 13m | |

# Connecting to PROSEC V series

Communication driver

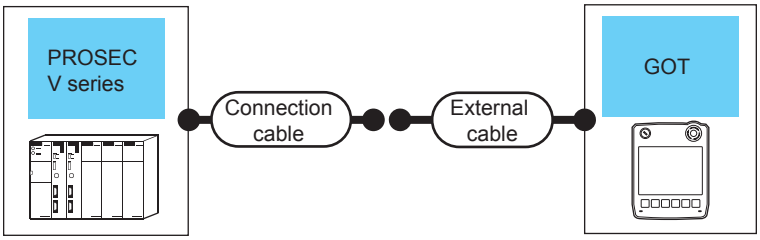
TOSHIBA PROSEC T/V

## When using the connector conversion box



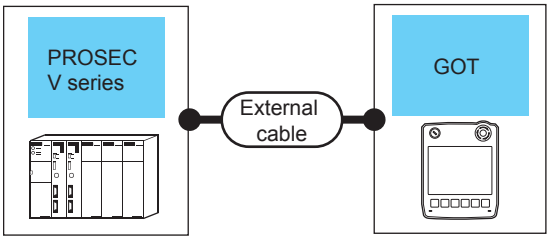

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| model 2000 (S2)<br>model 2000 (S2T)<br>model 2000 (S2E) | RS-422 | GT09-C30R40502-6C(3m)<br>GT09-C100R40502-6C(10m)<br>or<br>User preparing RS422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| model 3000 (S3) | | GT09-C30R40501-15P(3m)<br>GT09-C100R40501-15P(10m)<br>or<br>User preparing RS422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| model 2000 (S2)<br>model 2000 (S2T)<br>model 2000 (S2E) | RS-422 | User preparing RS422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 PLC |
| model 3000 (S3) | RS-422 | User preparing RS422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| model 2000 (S2)<br>model 2000 (S2T)<br>model 2000 (S2E) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 6) | GT 2505HS | 13m | 1 GOT for 1 PLC |
| model 3000 (S3) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS422 connection diagram 3) | GT 2505HS | 13m | |

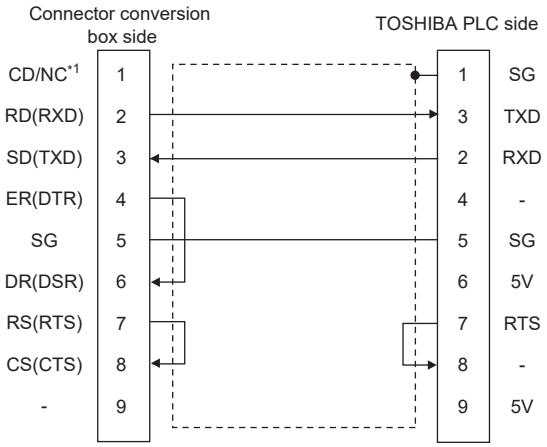
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

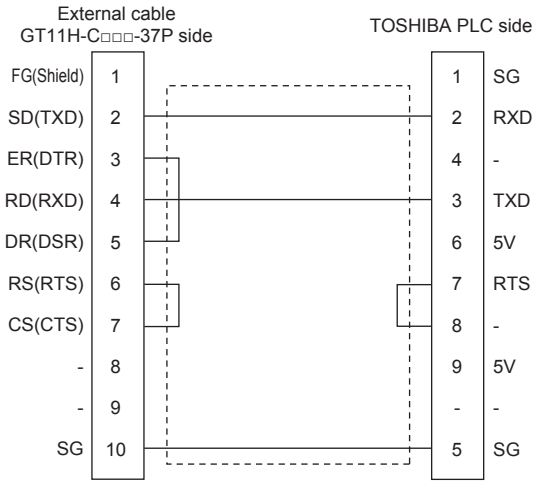
### ■Connection diagram

- RS232 connection diagram 1)

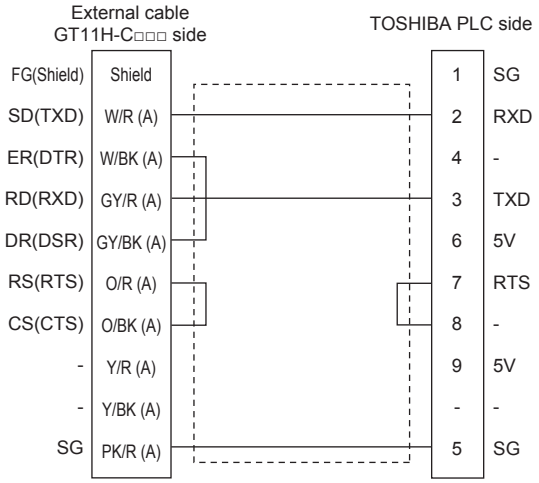



*1 GT2506HS-V: CD, GT2505HS-V: NC

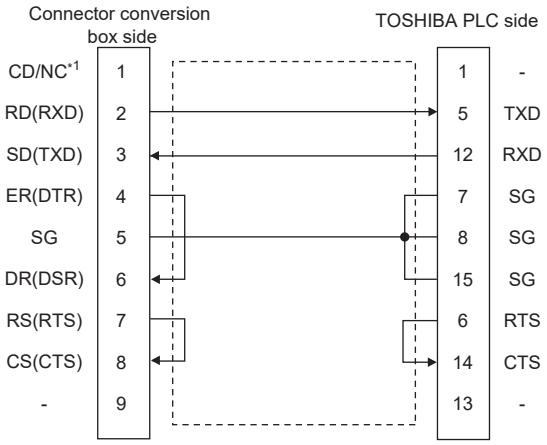
• RS232 connection diagram 2)




• RS232 connection diagram 3)

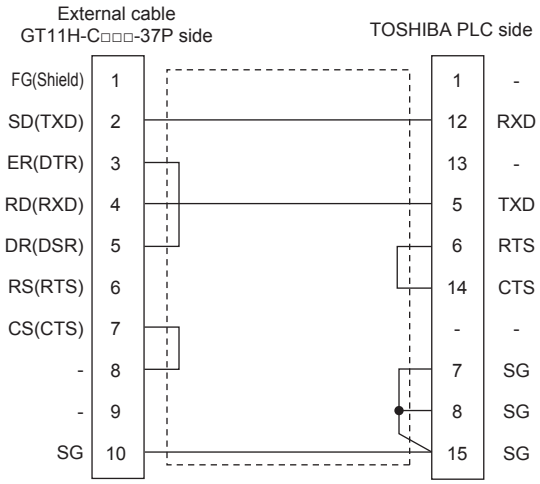



• RS232 connection diagram 4)

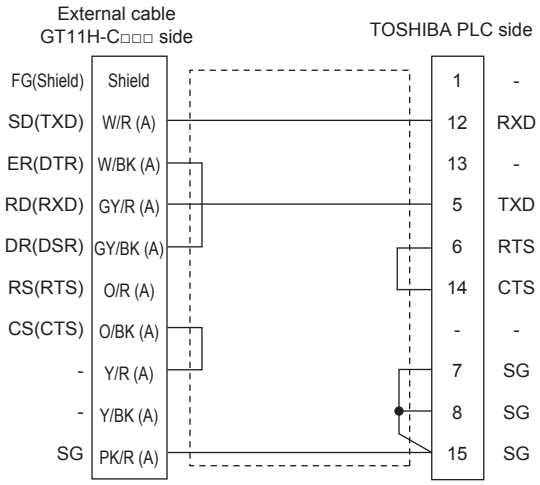



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 5)




• RS232 connection diagram 6)




## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• TOSHIBA PLC side connector

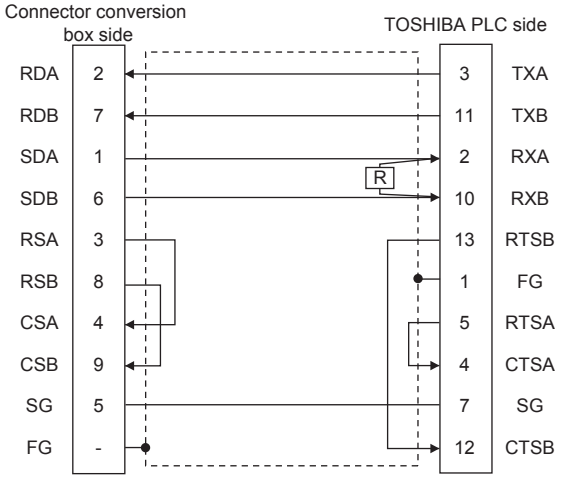
Use the connector compatible with the TOSHIBA PLC.

For details, refer to the TOSHIBA PLC user's manual.

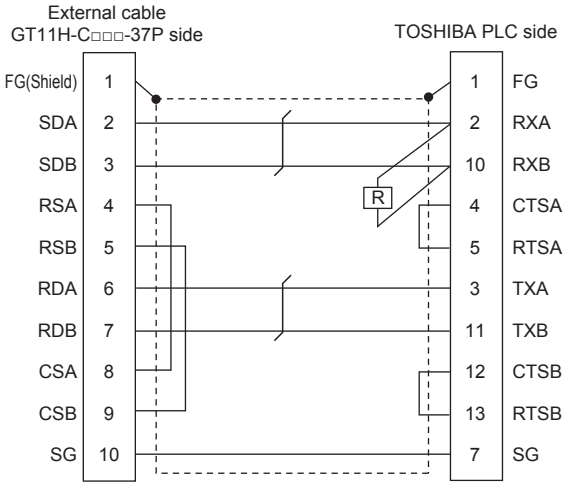
## RS-422 cable

### ■Connection diagram

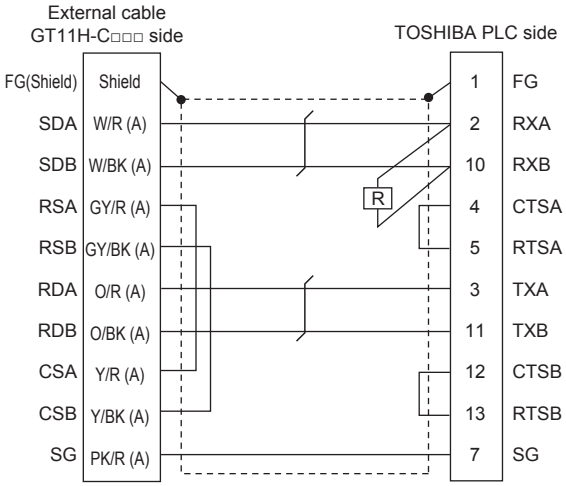
• RS422 connection diagram 1)



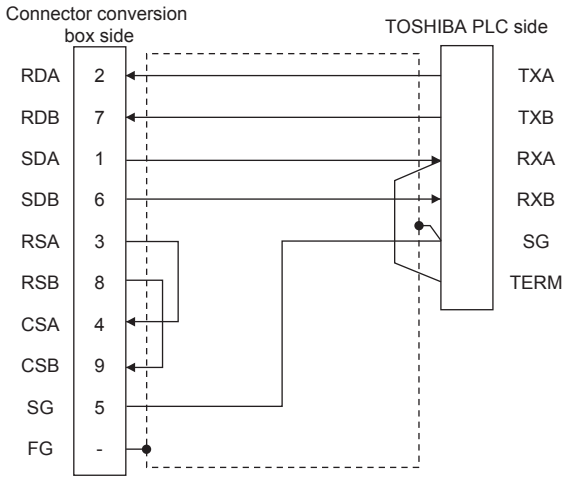

• RS422 connection diagram 2)



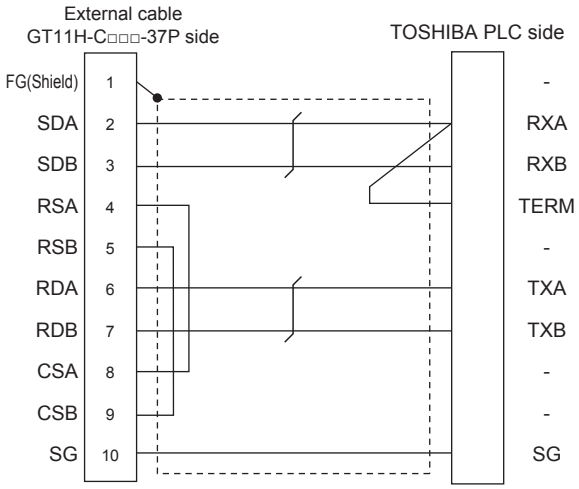

• RS422 connection diagram 3)



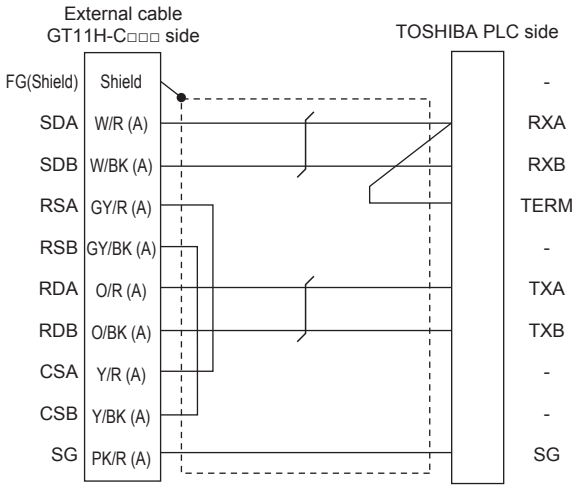
• RS422 connection diagram 4)



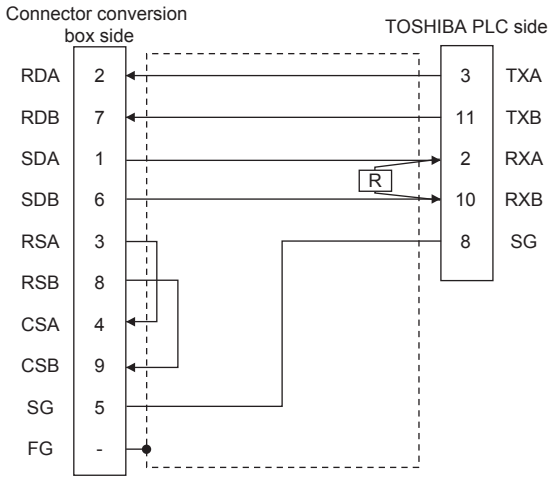

• RS422 connection diagram 5)



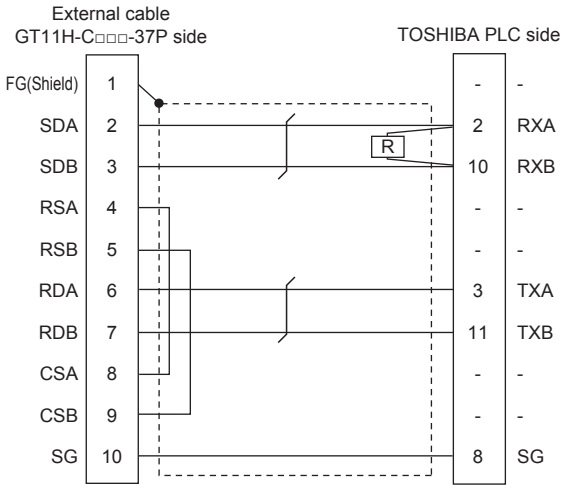

• RS422 connection diagram 6)



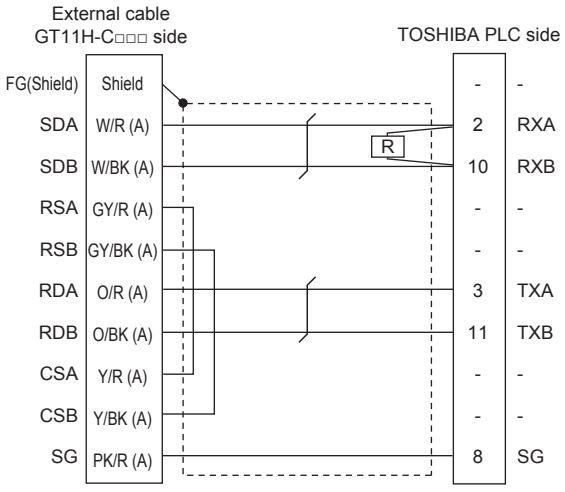
• RS422 connection diagram 7)




• RS422 connection diagram 8)




• RS422 connection diagram 9)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• TOSHIBA PLC side connector

Use the connector compatible with the TOSHIBA PLC.

For details, refer to the TOSHIBA PLC user's manual.

## ■Setting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 89 Terminating resistors of GOT

• TOSHIBA PLC side

When connecting an TOSHIBA PLC to a GOT, a terminating resistor must be set to the TOSHIBA PLC.

For the setting of the terminating resistor, refer to the following manual.

📖TOSHIBA PLC user's Manual

T2 (PU224), T2N, T3, T3H, model 3000 (S3)

Connect the terminating resistor (1/2W-120Ω) across RXA and RXB.

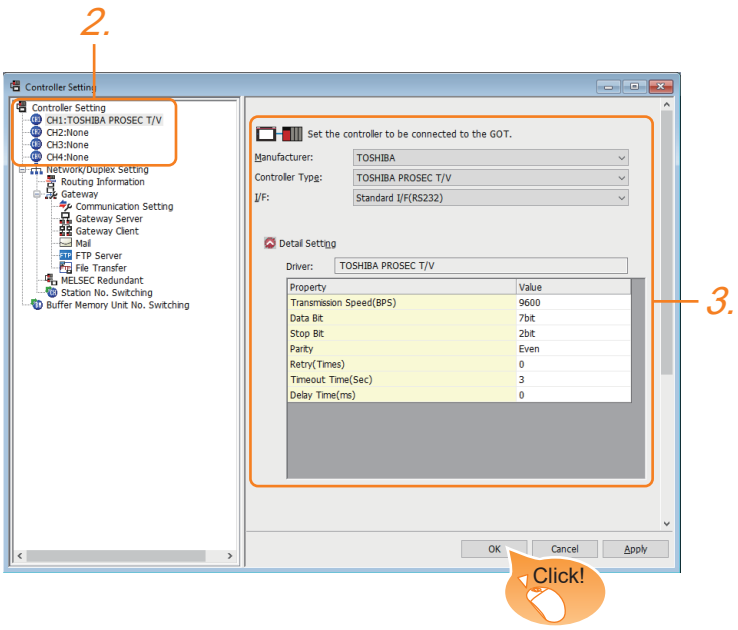
T2E, model 2000 (S2, S2T)

Short across the RXA and TERM terminals.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [TOSHIBA]
- [Controller Type]: [TOSHIBA PROSEC T/V]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1261 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 7 bit |
| Stop Bit | 2 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bit,<br>8bit |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bit) | 1bit,<br>2bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None,<br>Even,<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

TOSHIBA PLC

For details of the TOSHIBA PLC, refer to the following manual.

TOSHIBA PLC user's Manual

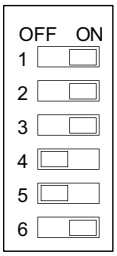
| Model name | | Refer to |
|---|---|---|
| PLC CPU | T2 (PU224), T2E, T2N | Page 1262 Connecting to T2 (PU224), T2E or T2N |
| | T3, T3H | Page 1263 Connecting to T3 or T3H |
| | model 2000 (S2, S2T, S2E), model 3000 (S3) | Page 1263 Connecting to model 2000 (S2, S2T, S2E), model 3000 (S3) |

## Connecting to T2 (PU224), T2E or T2N

### ■Switch setting

Set the switches accordingly.

- Operation mode setting switch




| Switch No. | Settings | Setting details |
|---|---|---|
| 4 | OFF (fixed) | Computer link |
| 5 | OFF (fixed) | |

- DIP switch on module PCB (T2N only)

| Switch No. | Set value | |
|---|---|---|
| | For RS-232 communication | For RS-422 communication |
| DIP switch: No. 1 | ON (RS-232C) | OFF (RS-485*1) |

*1 Can be used as RS-422.

### ■Transmission parameter setting

Enter the transmission parameters.

| Item | Set value |
|---|---|
| Transmission speed*1*2*3 | 4800bps, 9600bps, 19200bps |
| Data bit | 7bit |
| Stop bit | 2bit |
| Parity bit | Even |
| Station No. | 1 |

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Fixed to 9600bps for T2E only.

*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1260 Setting communication interface (Communication settings)

## Connecting to T3 or T3H

Enter the transmission parameters.

| Item | Set value |
|---|---|
| Transmission speed*1*2 | 4800bps, 9600bps, 19200bps |
| Data bit | 7bit |
| Stop bit | 2bit |
| Parity bit | Even |
| Station No. | 1 |

*1 Indicates only the transmission speeds that can be set on the GOT side.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1260 Setting communication interface (Communication settings)

## Connecting to model 2000 (S2, S2T, S2E), model 3000 (S3)

Enter the transmission parameters.

| Item | Set value |
|---|---|
| Transmission method | RS485*1 |
| RS485 | COM1 |
| Timeout time | 5sec |
| Transmission speed*2*3 | 4800bps, 9600bps, 19200bps |
| Data bit | 7bit |
| Stop bit | 2bit |
| Parity bit | Even |
| Station No. | 1 |

*1 Can be used as RS-422.
*2 Indicates only the transmission speeds that can be set on the GOT side.
*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1260 Setting communication interface (Communication settings)

# 24.3 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
TOSHIBA equipment ([TOSHIBA PROSEC T/V])

# 25 SHIBAURA MACHINE PLC




- Page 1265 Connectable Model List
- Page 1266 System Configuration
- Page 1269 Connection Diagram
- Page 1272 GOT Side Settings
- Page 1274 PLC Side Setting
- Page 1274 Settable Device Range


## 25.1 Connectable Model List

The following table shows the connectable models.

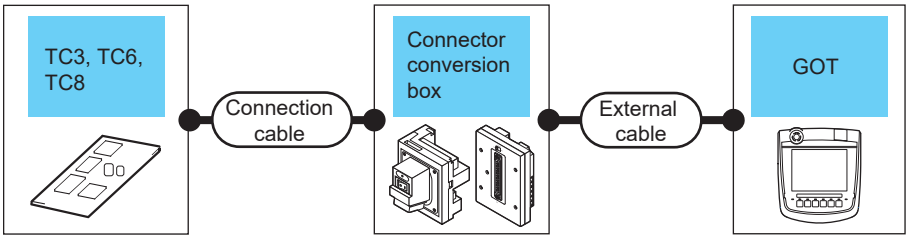
| Series | Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| TCmini Series | TC3-01 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1266 Connecting to TC3, TC6, TC8 |
| | TC3-02 | ○ | | | |
| | TC6-00 | ○ | | | |
| | TC8-00 | ○ | | | |
| Robot controller | TS2000 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1268 Connecting to TS2000, TS2100 |
| | TS2100 | × | | | |

# 25.2 System Configuration

## Connecting to TC3, TC6, TC8

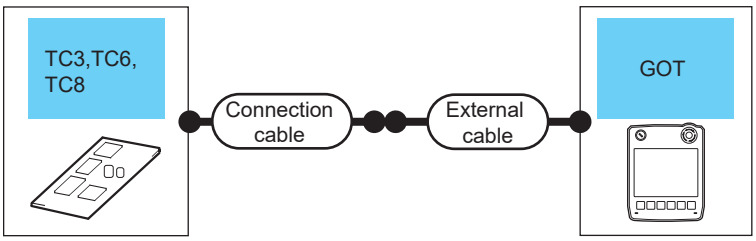
Communication driver
SHIBAURA MACHINE
TCmini

### When using the connector conversion box



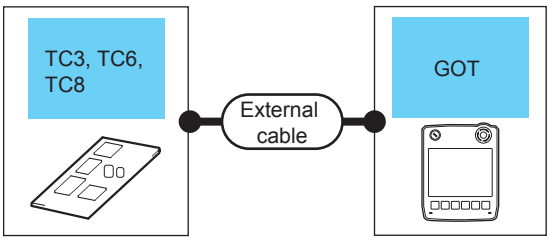

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| TC3, TC6, TC8 | RS-232 | User preparing Page 1269 RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| TC3, TC6, TC8 | RS-232 | User preparing Page 1269 RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When using the external cable (GT11H-C□□□)

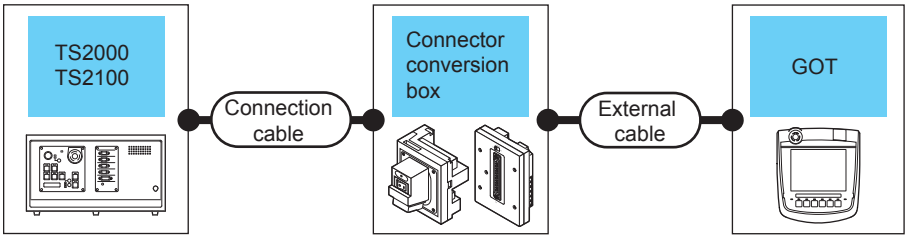



| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| TC3,<br>TC6,<br>TC8 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1269 RS232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |

# Connecting to TS2000, TS2100

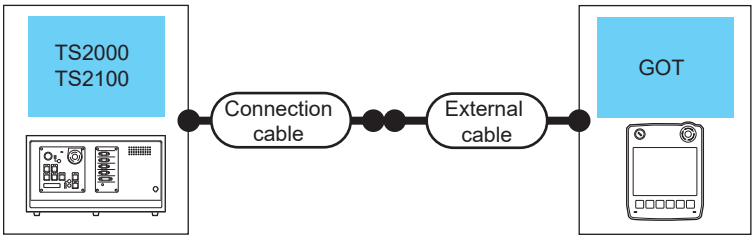
Communication driver
SHIBAURA MACHINE
TCmini

## When using the connector conversion box



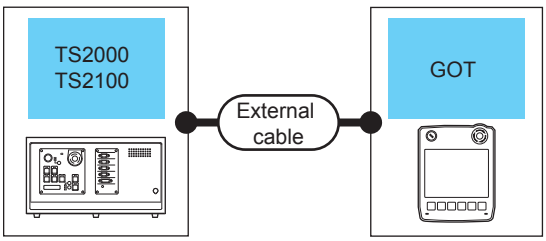

| Robot controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| TS2000 TS2100 (POD port) | RS-232 | User preparing Page 1270 RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 robot controller |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| Robot controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| TS2000 TS2100 (POD port) | RS-232 | User preparing Page 1270 RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 robot controller |

## When using the external cable (GT11H-C□□□)




| Robot controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| TS2000 TS2100 (POD port) | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1270 RS232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 robot controller |

# 25.3 Connection Diagram

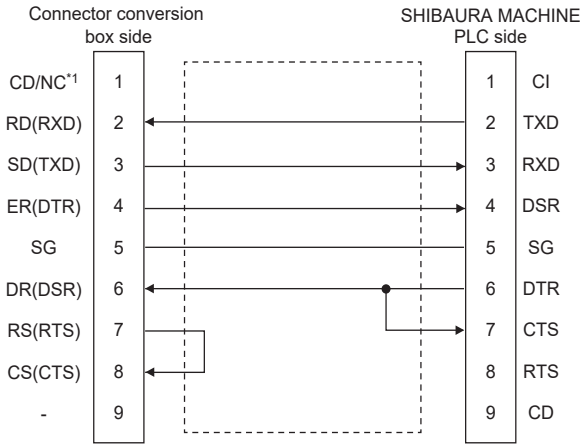


The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

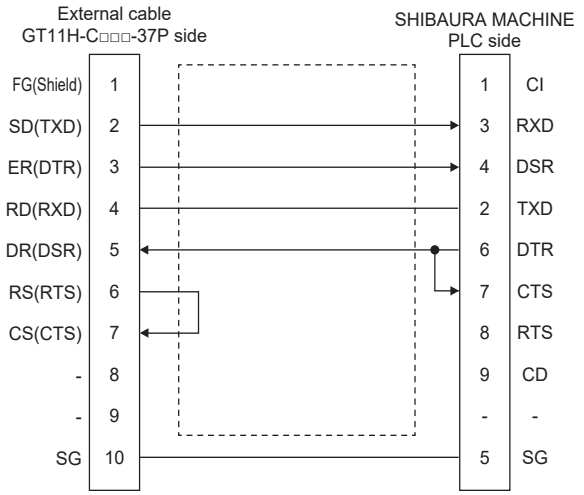
### Connection diagram

#### ■RS232 connection diagram 1)

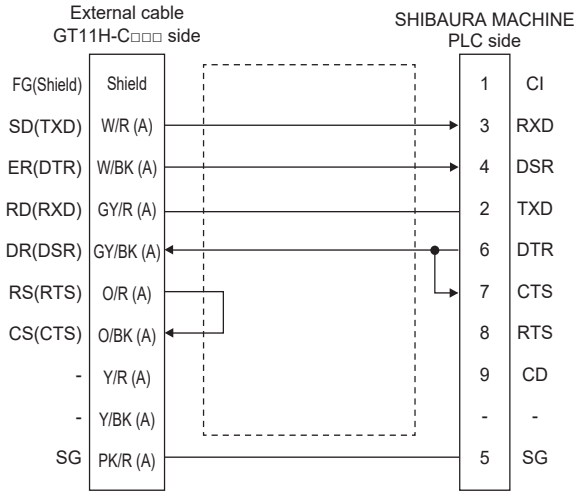



*1 GT2506HS-V: CD, GT2505HS-V: NC

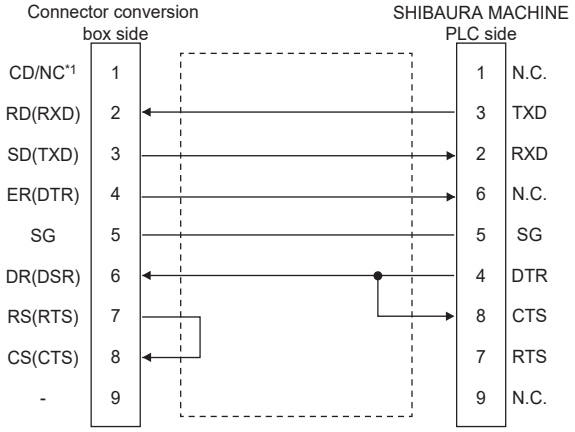
#### ■RS232 connection diagram 2)




#### ■RS232 connection diagram 3)

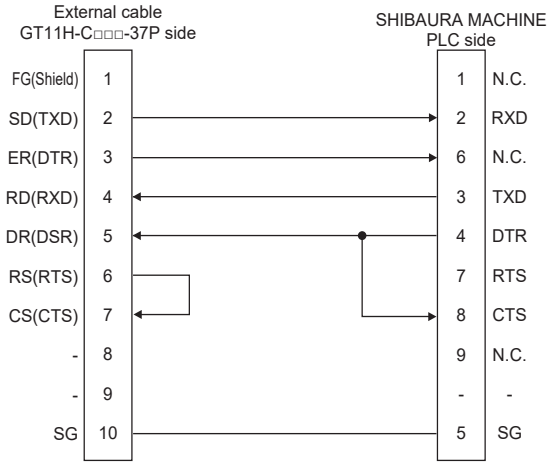


## ■RS232 connection diagram 4)

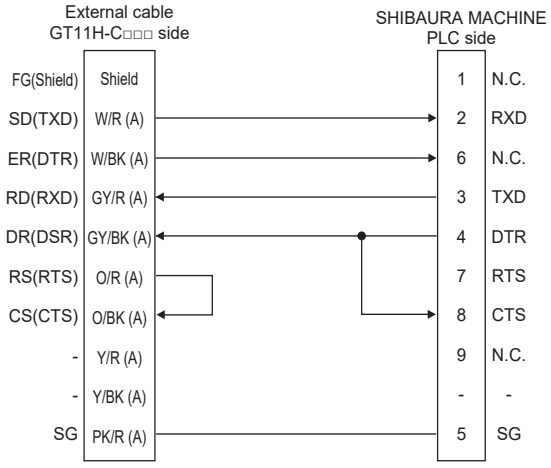



*1 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS232 connection diagram 5)




## ■RS232 connection diagram 6)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connector for the SHIBAURA MACHINE PLC

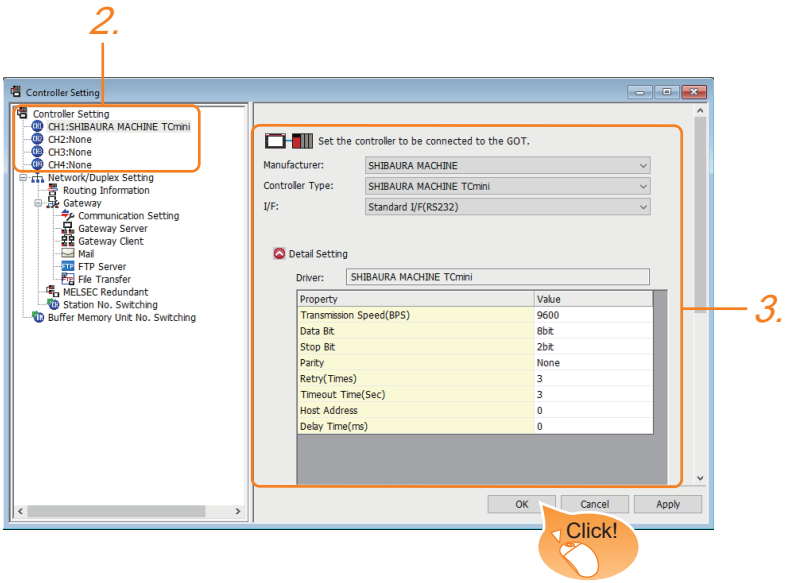
Use a connector applicable to the SHIBAURA MACHINE PLC.

For the details, refer to the manual of the SHIBAURA MACHINE PLC.

# 25.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] Pwindow, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [SHIBAURA MACHINE]
- [Controller Type]: [SHIBAURA MACHINE TCmini]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1273 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 2 bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 2bits) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network.<br>(Default: 0) | 0 to 63 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Delay Time

When connecting to the PLC and RS-485, set the delay time to 1ms or more.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 25.5 PLC Side Setting

**Point**

SHIBAURA MACHINE PLC

For details on the SHIBAURA MACHINE PLC, refer to the following manual.

Manual of the SHIBAURA MACHINE PLC

| Model name | | Refer to |
|---|---|---|
| PLC CPU | TC3, TC8 | Page 1274 Connecting to TC3, TC8 series |
| | TC6 | Page 1274 Connecting to TC6 series |
| Robot controller | TS2000, TS2100 | Page 1274 Connecting to TS2000, TS2100 |

## Connecting to TC3, TC8 series

No communication settings.

Communication is available using default value of the PLC.

## Connecting to TC6 series

The setting of transmission speed is changeable.

Set the following Special AUX Relay (A) using engineering tool.

The communication may not work properly if the settings are made using the GOT.

| Transmission speed*1 | Special AUX Relay | | |
|---|---|---|---|
| | A158 | A159 | A15A |
| 9600bps | OFF | OFF | OFF |
| 19200bps | ON | OFF | OFF |
| 38400bps | - | ON | OFF |
| 57600bps | - | OFF | ON |
| 115200bps | - | ON | ON |

*1 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1272 Setting communication interface (Communication settings)

## Connecting to TS2000, TS2100

No communication settings.

Communication is available using the default value of the robot controller.

# 25.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
SHIBAURA MACHINE equipment ([SHIBAURA MACHINE TCmini])

# 26 PANASONIC SERVO AMPLIFIER


- Page 1275 Connectable Model List
- Page 1276 System Configuration
- Page 1280 Connection Diagram
- Page 1283 GOT Side Settings
- Page 1285 Servo Amplifier Side Setting
- Page 1287 Settable Device Range
- Page 1287 Precautions




## 26.1 Connectable Model List

The following table shows the connectable models.

| Model name | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|
| MINAS A4 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1276 Connecting to MINAS A4, MINAS A4F, MINAS A4L series |
| MINAS A4F | × | | | |
| MINAS A4L | × | | | |
| MINAS A5 | | | | ☞ Page 1278 Connecting to MINAS A5 series |

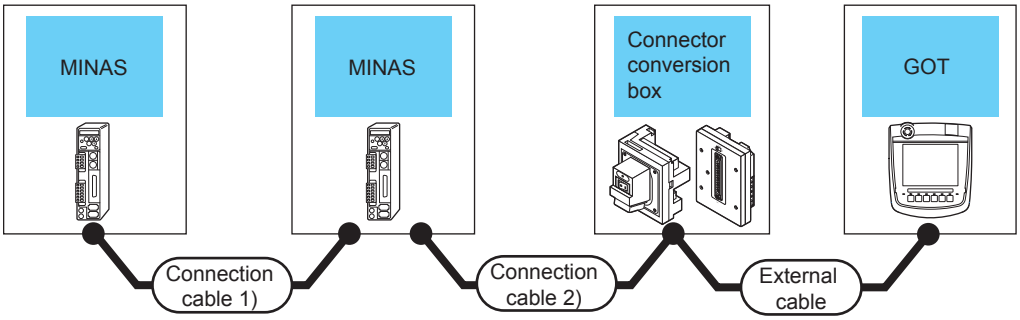
# 26.2 System Configuration

## Connecting to MINAS A4, MINAS A4F, MINAS A4L series

Communication driver

PANASONIC MINAS

### When using the connector conversion box

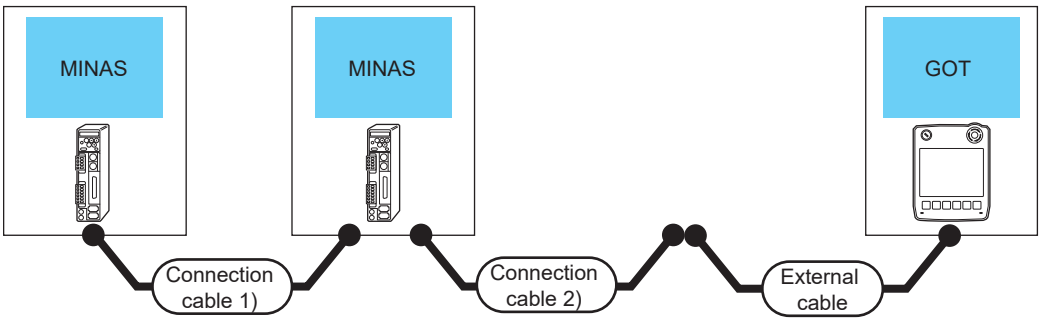



| Servo amplifier | | Connection cable 1) | Servo amplifier | | Connection cable 2) | | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 | Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| MINAS A4 MINAS A4F MINAS A4L | RS-485 | DVOP1970 (0.2m) DVOP1971 (0.5m) DVOP1972 (1m) | MINAS A4 MINAS A4F MINAS A4L | RS-232 | DVOP1960*1 or User's manual Page 1280 RS-232 connection diagram 1) | 2m | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 17m | 16 servo amplifiers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□-37P)

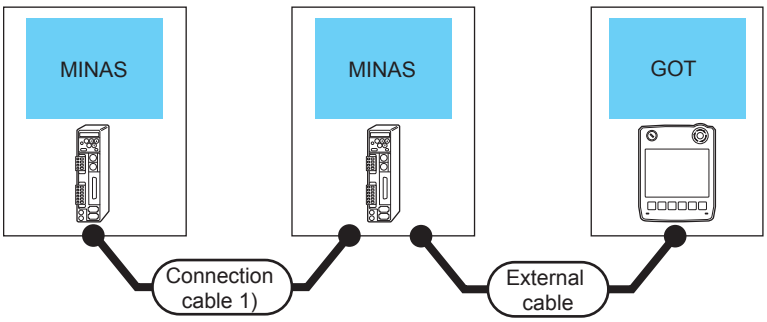



| Servo amplifier | | Connection cable 1) | Servo amplifier | | Connection cable 2) | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 | Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | |
| MINAS A4<br>MINAS A4F<br>MINAS A4L | RS-485 | DVOP1970 (0.2m)<br>DVOP1971 (0.5m)<br>DVOP1972 (1m) | MINAS A4<br>MINAS A4F<br>MINAS A4L | RS-232 | User preparing Page 1280 RS-232 connection diagram 2) | 2m | GT11H-C30-37P(3m) | GT 2505HS | 17m | 16 servo amplifiers for 1 GOT |

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□)




| Servo amplifier | | Connection cable 1) | Servo amplifier | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 | Model name | Communication Type | | | | |
| MINAS A4<br>MINAS A4F<br>MINAS A4L | RS-485 | DVOP1970(0.2m)<br>DVOP1971(0.5m)<br>DVOP1972(1m) | MINAS A4<br>MINAS A4F<br>MINAS A4L | RS-232 | GT11H-C30(3m) ☞ Page 1280 RS-232 connection diagram 3) | GT 2505HS | 17m | 16 servo amplifiers for 1 GOT |

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

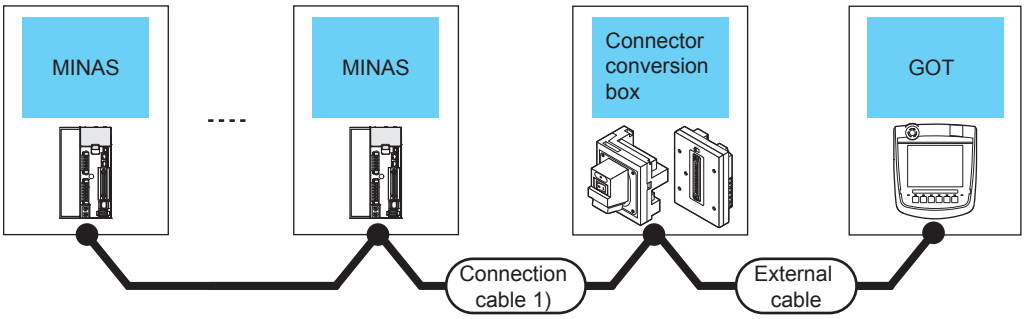
*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

# Connecting to MINAS A5 series

Communication driver

PANASONIC MINAS

## When using the connector conversion box

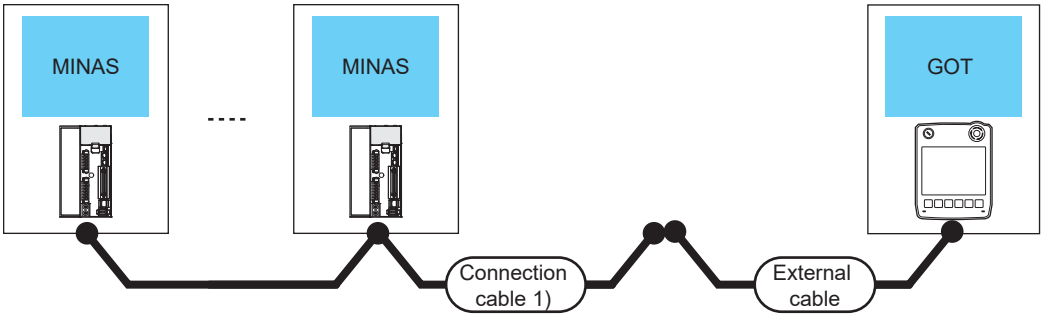



| Servo amplifier | | Connection cable 1) | | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| MINAS A5 | • Between MINAS and GOT:RS-232<br>• Between MINAS and MINAS:RS-485 | User preparing Page 1281 RS-232/485 connection diagram 1) | *1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 33m | 32 servo amplifiers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

## When using the external cable (GT11H-C□□□-37P)

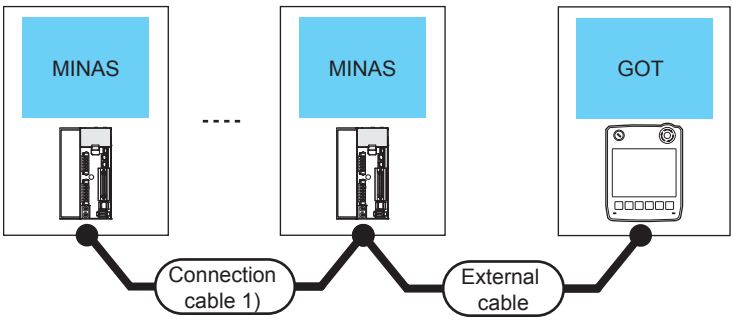



| Servo amplifier | | Connection cable 1) | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | |
| MINAS A5 | • Between MINAS and GOT:RS-232<br>• Between MINAS and MINAS:RS-485 | User preparing Page 1281 RS-232/485 connection diagram 2) | *1 | GT11H-C30-37P(3m) | GT 2505HS | 33m | 32 servo amplifiers for 1 GOT |

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

## When using the external cable (GT11H-C□□□)




| Servo amplifier | | Connection cable 1) | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Max. distance | | | | |
| MINAS A5 | • Between MINAS and GOT: RS-232<br>• Between MINAS and MINAS: RS-485 | User preparing Page 1282 RS-232/485 connection diagram 3) | *1 | GT11H-C30(3m) | GT 2505HS | 33m | 32 servo amplifiers for 1 GOT |

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (External cable)

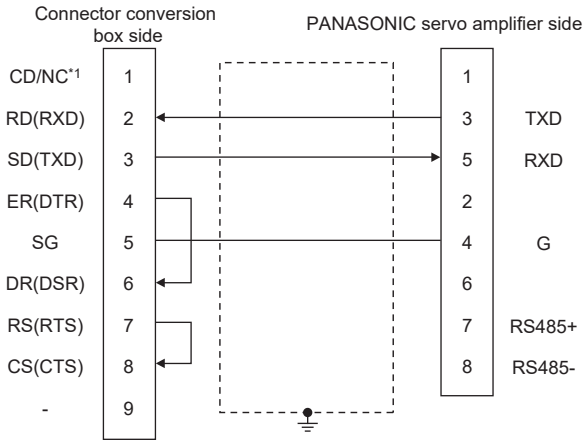
# 26.3 Connection Diagram

The following diagram shows the connection between the GOT and the Servo amplifier.

## RS-232 cable

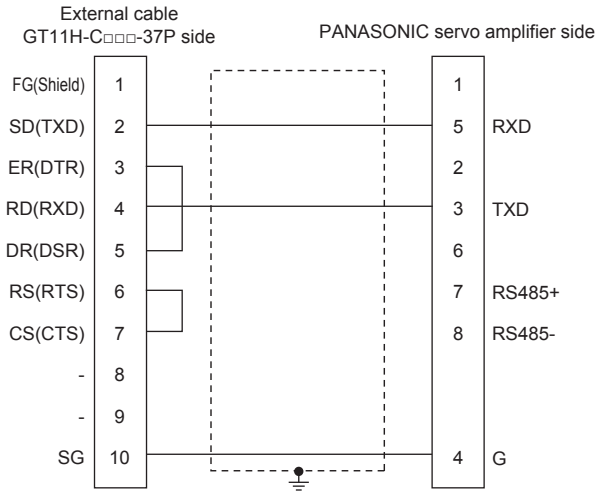
### Connection diagram

#### ■RS-232 connection diagram 1)

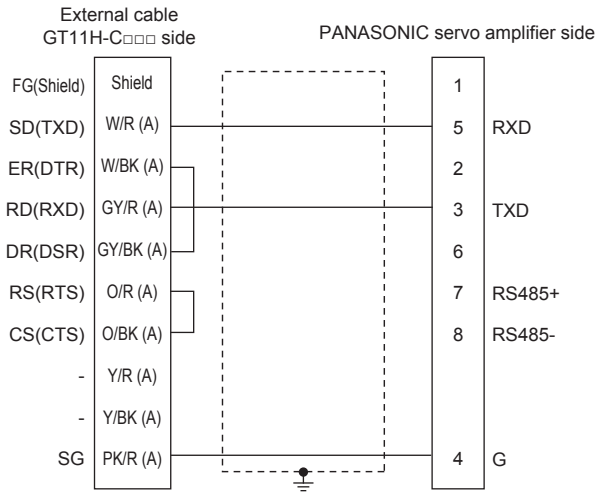



*1 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




#### ■RS-232 connection diagram 3)



## Precautions when preparing a cable

### ■Cable length

The length of the RS-232 cable must be 2m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■PANASONIC servo amplifier side connector

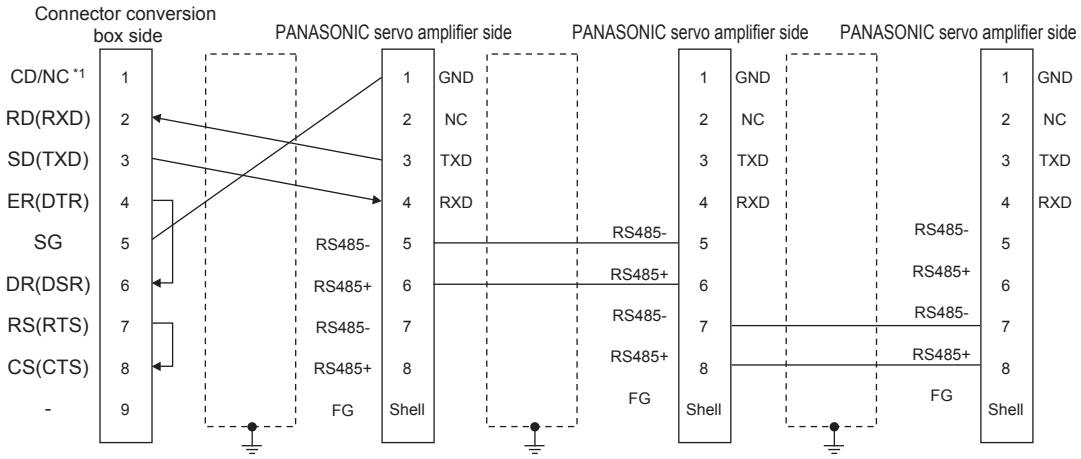
Use the connector compatible with the PANASONIC servo amplifier.

For details, refer to the user's manual of the PANASONIC servo amplifier.

# RS-232/RS-485 cable

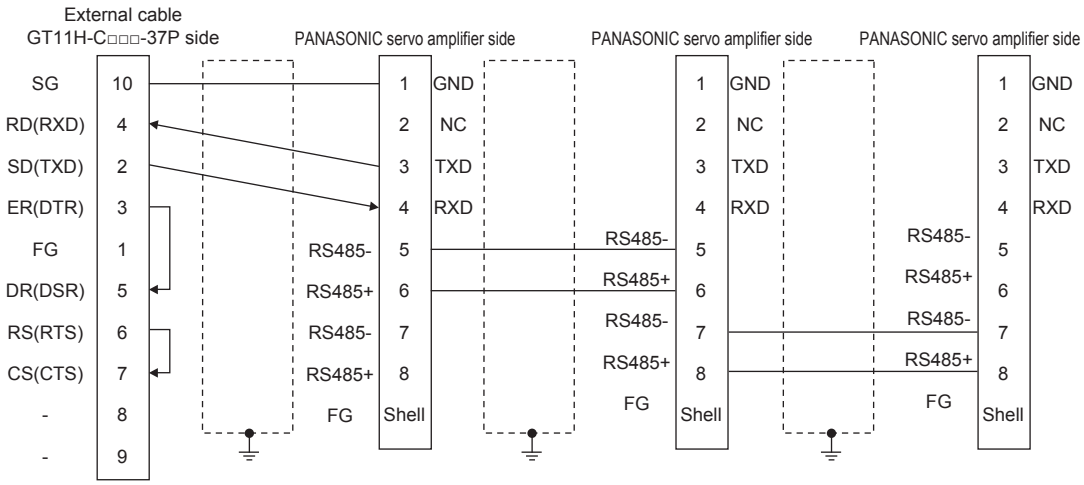
## Connection diagram

### ■RS-232/485 connection diagram 1)

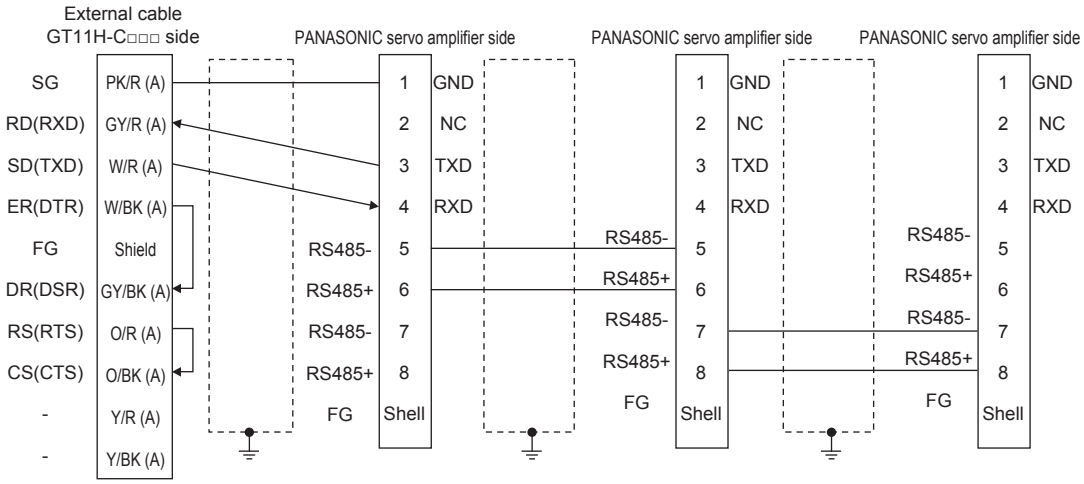



*1 GT2506HS-V: CD, GT2505HS-V: NC

### ■RS-232/485 connection diagram 2)



### ■RS-232/485 connection diagram 3)




## Precautions when preparing a cable

### ■Cable length

- The length of the cable between GOT and MINAS must be 2m or less.
- The length of the cable between MINAS and MINAS must be 1m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■PANASONIC servo amplifier side connector

Use the connector compatible with the PANASONIC servo amplifier.

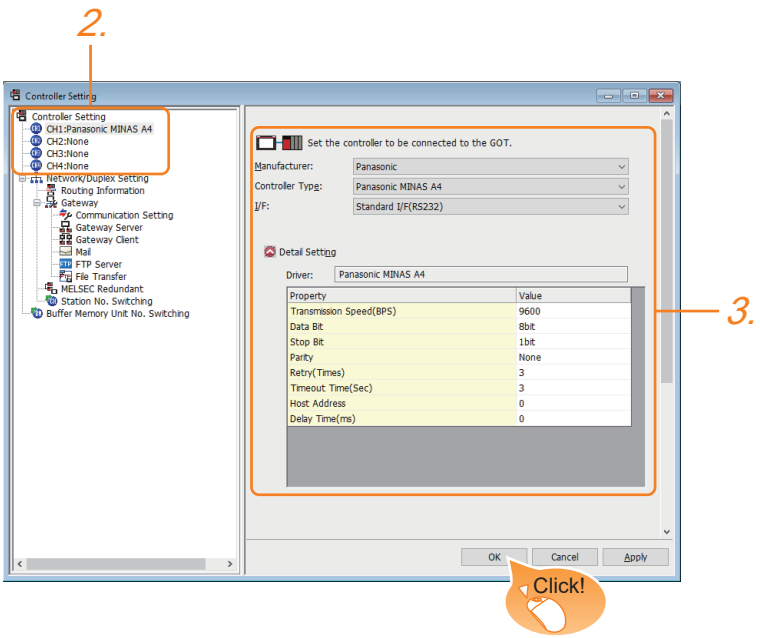
For details, refer to the user's manual of the PANASONIC servo amplifier.

# 26.4 GOT Side Settings

## Setting communication interface (Communication settings)



Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Panasonic]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[Panasonic MINAS A4]

[Panasonic MINAS A5]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1284 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bit/8bit |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default:3times) | 0 to 5times |
| Timeout Time*1 | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the station No. of the servo amplifier to connect the GOT.<br>(Default: 0) | 0 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 26.5 Servo Amplifier Side Setting

**Point**

PANASONIC Servo Amplifier

For details of the PANASONIC Servo Amplifier, refer to the following manual.

PANASONIC Servo Amplifier user's Manual



## Connecting to MINAS A4/A4F/A4L

### MINAS A4/A4F/A4L communication settings

Set them from the main unit front panel of MINAS A4/A4F/A4L or using the setup support software.

| Pr No. | Set value |
|---|---|
| Address of axis<br>(Parameter No.00) | 0 to 15 |
| Baud rate setup of RS232*1<br>(Parameter No.0C) | 2: 9600bps<br>3: 19200bps<br>4: 38400bps<br>5: 57600bps |
| Baud rate setup of RS485*1<br>(Parameter No.0D) | 2: 9600bps<br>3: 19200bps<br>4: 38400bps<br>5: 57600bps |

*1 Only transmission speeds available on the GOT side are shown.
Adjust the settings with GOT settings.

**Point**

Axis name setting

- The axis name is determined according to the rotary switch ID set value when the power supply to the servo amplifier is turned on.

This value will be the station number (axis number) during communication.

- The axis name setting can be changed only with the rotary switch ID.

## Connecting to MINAS A5

### MINAS A5 communication settings

Set them from the main unit front panel of MINAS A5 or using the setup support software.

| Pr No. | Set value |
|---|---|
| Address of axis<br>(Parameter No.00) | 0 to 31 |
| Baud rate setup of RS232*1<br>(Parameter No.5.29) | 2: 9600bps<br>3: 19200bps<br>4: 38400bps<br>5: 57600bps |
| Baud rate setup of RS485*1<br>(Parameter No.5.30) | 2: 9600bps<br>3: 19200bps<br>4: 38400bps<br>5: 57600bps |

*1 Only transmission speeds available on the GOT side are shown.
Adjust the settings with GOT settings.

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.

• When connecting the GOT and servo amplifier with RS-232

Set the station number (axis number) of the servo amplifier connected to the GOT to 0.

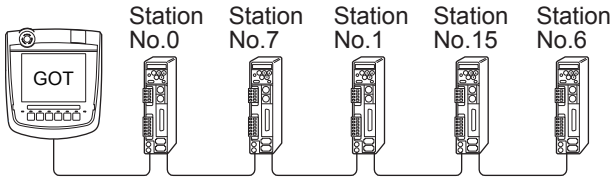
Set the station numbers (axis numbers) of other servo amplifiers connected to the GOT to other than 0.

• When connecting the GOT and servo amplifier with RS-485

The GOT will be the station number (axis number) 0.

Set the station numbers (axis numbers) of other connected servo amplifiers to other than 0.

Example of RS-232 connection between GOT-servo amplifier




Examples of station number setting

## Direct specification

When setting the device, specify the station number of the servo amplifier of which data is to be changed.

| Model name | Specification range |
|---|---|
| MINAS A4, MINAS A4F, MINAS A4L | 0 to 15 |
| MINAS A5 | 0 to 31 |

## Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on drawing software, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the servo amplifier.

| Specification Station No. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | • MINAS A4, MINAS A4F, MINAS A4L<br>0 to 15<br>• MINAS A5<br>0 to 31<br>For the setting other than the above, a communication timeout error will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

# 26.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

PANASONIC equipment ([Panasonic MINAS A4])

PANASONIC equipment ([Panasonic MINAS A5])



# 26.7 Precautions

## Station number setting in the servo system

Configure the servo system so that there is a servo amplifier with a station number set with a host address.

For details of host address setting, refer to the following manual.

☞ Page 1284 Communication detail settings

## Monitor speed

When monitoring multiple station devices placed on the same GOT screen, the monitor speed is slow.

Even when monitoring a single station, the monitor speed is slow if the device points is large.

## Mixing of MINAS A4 series and MINAS A5 series

MINAS A4 series and MINAS A5 series cannot be mixed.

The multiple MINAS A4 series can be used together.

# MEMO

# 27 PANASONIC INDUSTRIAL DEVICES SUNX PLC


- Page 1289 Connectable Model List
- Page 1290 System Configuration
- Page 1329 Connection Diagram
- Page 1350 GOT Side Settings
- Page 1353 PLC Side Setting
- Page 1356 Settable Device Range




## 27.1 Connectable Model List

The following table shows the connectable models.

| Model name | | Clock | Communication Type | Connectable GOT | Refer to |
|---|---|---|---|---|---|
| FP0 | FP0-C16CT | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1290 Connecting to FP0-C16CT, FP0-C32CT, or FP0R |
| | FP0-C32CT | | | | |
| FP0R | | ○ | | | |
| FP1 | FP1-C24C | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1292 Connecting to FP1-C24C or FP1-C40C |
| | FP1-C40C | | | | |
| FP2 | | ○*1 | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1294 Connecting to FP2 or FP2SH |
| FP2SH | | ○ | | | |
| FP3 | | ○*2 | RS-232 | GT2506HS GT2505HS | ☞ Page 1299 Connecting to FP3 or FP5 |
| FP5 | | ○ | | | |
| FP10(S) | | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1303 Connecting to FP10(S) |
| FP10SH | | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1307 Connecting to FP10SH |
| FP-M | FP-M(C20TC) | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1310 Connecting to FP-M(C20TC) or FP-M(C32TC) |
| | FP-M(C32TC) | ○ | | | |
| FPΣ | | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1312 Connecting to FPΣ |
| FP-X | | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1315 Connecting to FP-X |
| FP7 | | ○*3 | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1319 Connecting to FP7 |
| | | | RS-485 | GT2506HS | |
| FP0H | AFP0H32T | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1323 Connecting to FP0H |
| | AFP0H32P | | | | |
| | AFP0H32ET | | | | |
| | AFP0H32EP | | | | |
| FP-XH | | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1326 System configuration for connecting to FP-XH |

*1 Any of the extension memory unit FP2-EM1, FP2-EM2 or FP2-EM3 is required.

*2 The clock function is available for the AFP3210C-F, AFP3211C-F, AFP3212C-F and AFP3220C-F.

*3 The GOT can only read the clock data.
In the clock setting, though the adjust is available, the broadcast is not available.

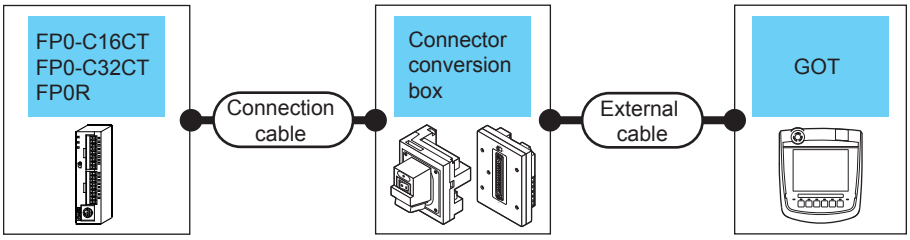
# 27.2 System Configuration

## Connecting to FP0-C16CT, FP0-C32CT, or FP0R

Communication driver

Panasonic MEWNET-FP

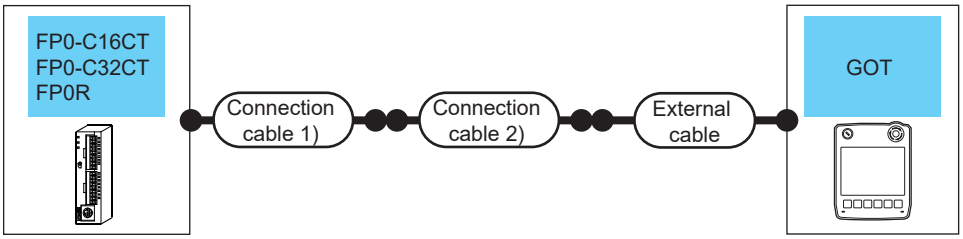
### When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(Tool port) | RS-232 | AFC8503(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(RS232C port) | | GT09-C30R20904-3C(3m)<br>or<br>User preparing Page 1332 RS-232 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

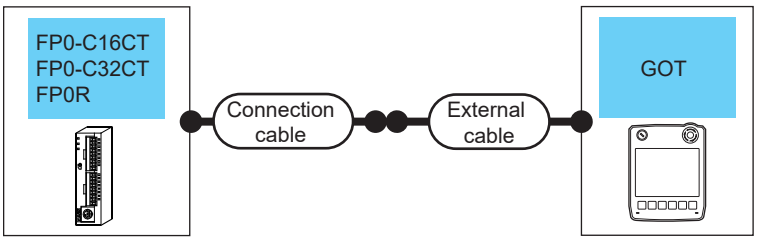
### When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(Tool port) | RS-232 | AFC8503(3m)*1 | User preparing Page 1337 RS-232 connection diagram 25) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(RS232C port) | | - | User preparing Page 1332 RS-232 connection diagram 11) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## When using the external cable (GT11H-C□□□)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(Tool port) | RS-232 | AFC8503(3m)*1 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1337 RS-232 connection diagram 26) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP0-C16CT<br>FP0-C32CT<br>FP0R<br>(RS232C port) | | - | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1332 RS-232 connection diagram 12) | GT 2505HS | | |

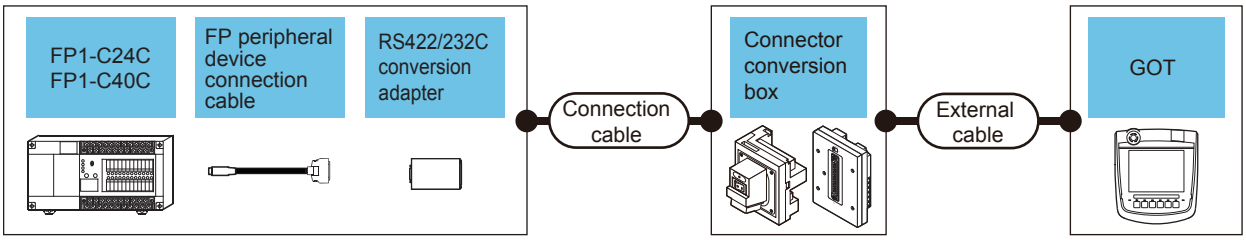
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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# Connecting to FP1-C24C or FP1-C40C

Communication driver

Panasonic MEWNET-FP

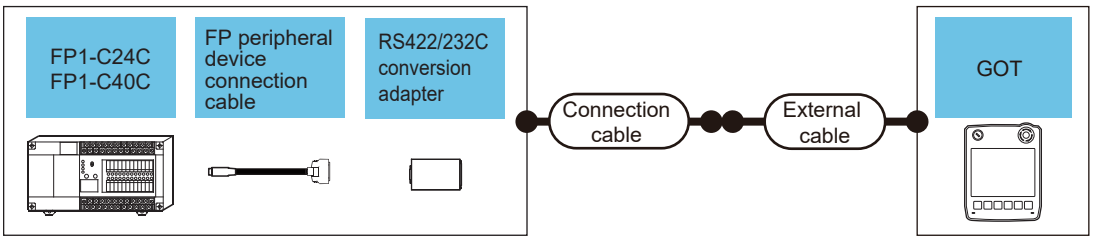
## When using the connector conversion box




| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | FP peripheral device connection cable*1 | RS422/232C conversion adapter*1 | Cable model Connection diagram number | | | | | |
| | | Cable model Connection diagram number | | | | | | | |
| FP1-C24C FP1-C40C (Tool port) | RS-232 | AFP15205 (0.5m) | AFP8550 | GT09-C30R20901-25P(3m) or User preparing Page 1329 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FP1-C24C FP1-C40C (RS232C port) | | - | - | GT09-C30R20903-9P(3m) or User preparing Page 1331 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

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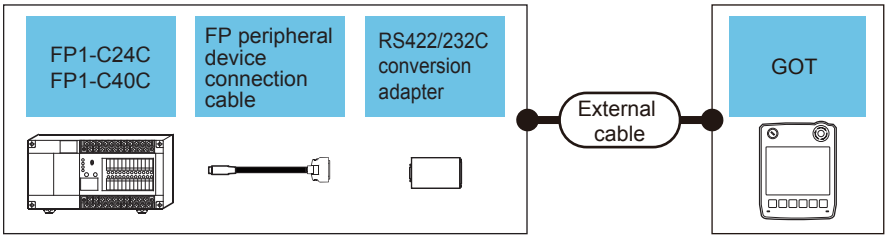
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | FP peripheral device connection cable*1 Cable model Connection diagram number | RS422/232C conversion adapter*1 | Cable model Connection diagram number | | | | |
| FP1-C24C FP1-C40C (Tool port) | RS-232 | AFP15205 (0.5m) | AFP8550 | User preparing Page 1329 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP1-C24C FP1-C40C (RS232C port) | | - | - | User preparing Page 1331 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## When using the external cable (GT11H-C□□□)




| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | FP peripheral device connection cable*1 Cable model Connection diagram number | RS422/232C conversion adapter*1 | | | | |
| FP1-C24C FP1-C40C (Tool port) | RS-232 | AFP15205 (0.5m) | AFP8550 | GT11H-C30(3m) ☞ Page 1329 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP1-C24C FP1-C40C (RS232C port) | | - | - | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1331 RS-232 connection diagram 9) | GT 2505HS | | |

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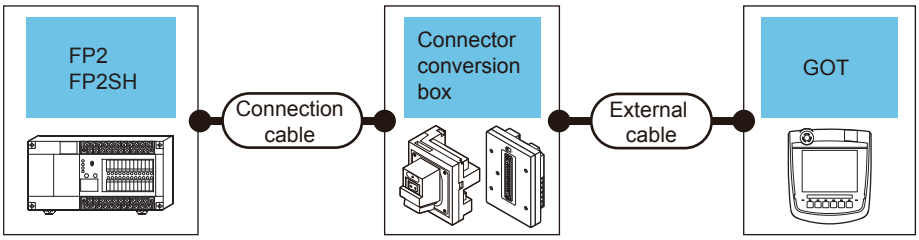
# Connecting to FP2 or FP2SH

Communication driver

Panasonic MEWNET-FP

## When connecting to tool port or RS232C port

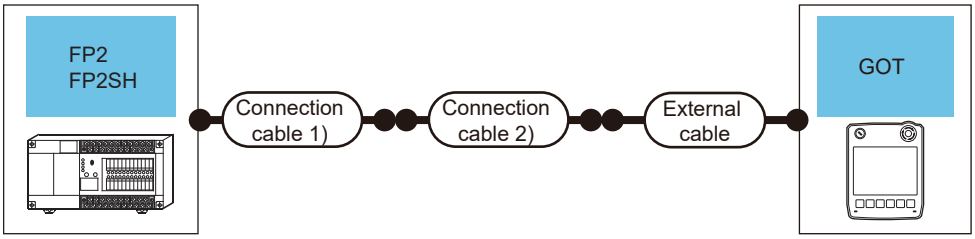
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP2 FP2SH (Tool port) | RS-232 | AFC8503(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FP2 FP2SH (RS232C port) | | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

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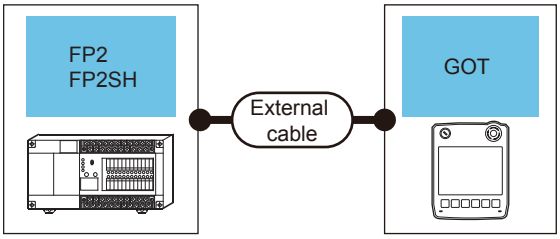
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| FP2 FP2SH (Tool port) | RS-232 | AFC8503(3m)*1 | User preparing Page 1337 RS-232 connection diagram 25) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP2 FP2SH (RS232C port) | | - | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | | |

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### ■When using the external cable (GT11H-C□□□)

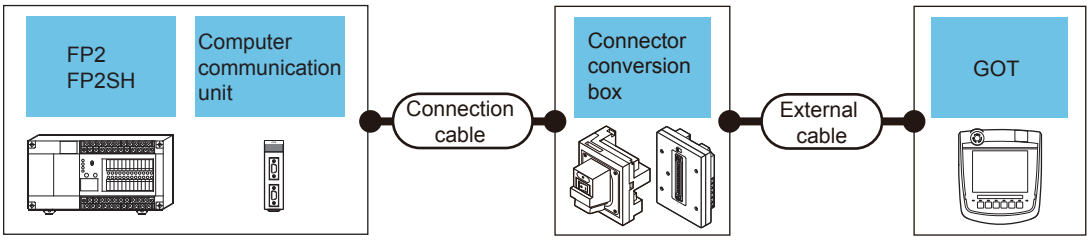



| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| FP2<br>FP2SH<br>(Tool port) | RS-232 | AFC8503(3m)*1 | GT11H-C30(3m)<br>☞ Page 1337 RS-232 connection diagram 26) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP2<br>FP2SH<br>(RS232C port) | | - | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | | |

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## When connecting to computer communication unit

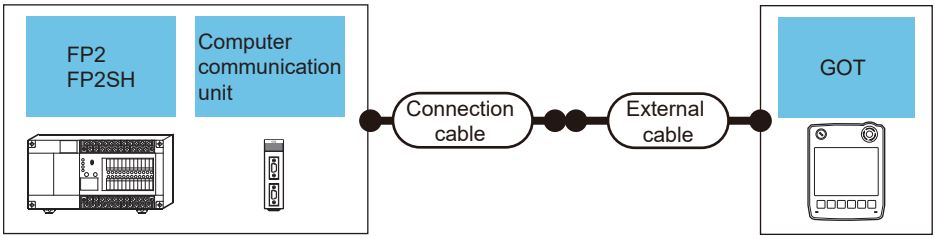
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| FP2<br>FP2SH | AFP2462 | RS-232 | AFB85853(3m)*1<br>GT09-C30R20902-9P(3m)<br>or<br>User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

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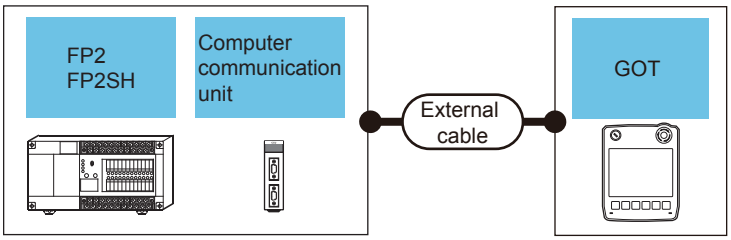
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP2 FP2SH | AFP2462 | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

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## ■When using the external cable (GT11H-C□□□)

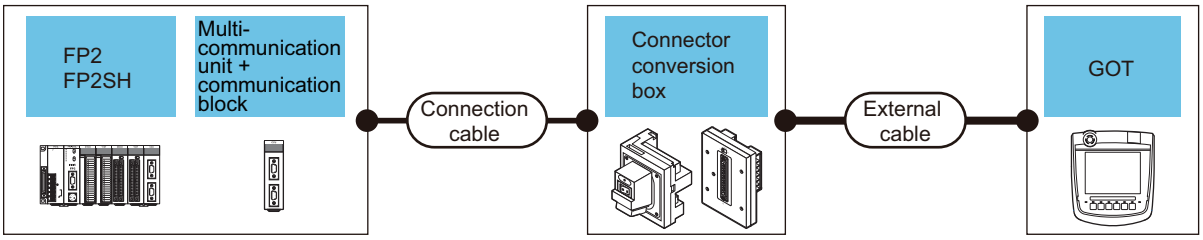



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | | | | |
| FP2 FP2SH | AFP2462 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

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## Connecting to multi-communication unit and communication block

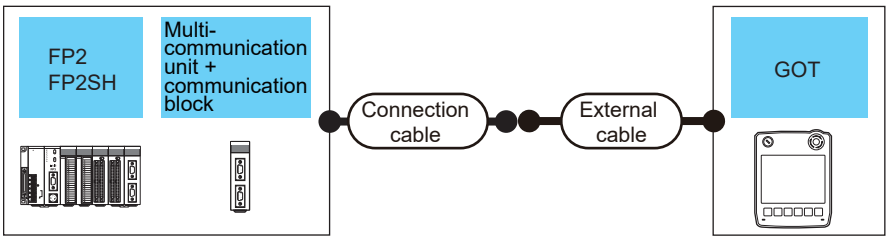
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit + communication block *1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP2 FP2SH | AFP2465 + AFP2803 | RS-232 | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or (User preparing) Page 1343 RS-232 connection diagram 42) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 multi-communication unit + communication block |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP2465 + AFP2804 | RS-422 | (User preparing) Page 1347 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

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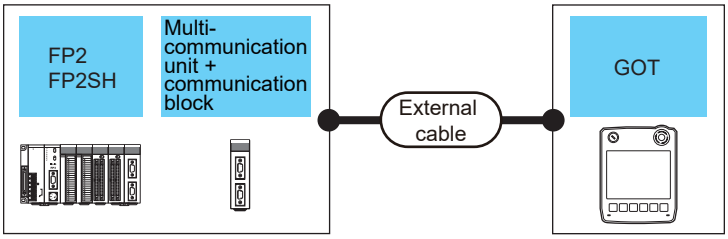
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Multi-communication unit + communication block *1 | Communication Type | Cable model Connection diagram number | | | | |
| FP2 FP2SH | AFP2465 + AFP2803 | RS-232 | (User preparing) Page 1343 RS-232 connection diagram 43) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit + communication block |
| | AFP2465 + AFP2804 | RS-422 | (User preparing) Page 1347 RS-422 connection diagram 8) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Multi-communication unit + communication block *1 | Communication Type | | | | |
| FP2<br>FP2SH | AFP2465 + AFP2803 | RS-232 | GT11H-C30(3m)<br>☞ Page 1343 RS-232 connection diagram 44) | GT 2505HS | 6m | 1 GOT for 1 multi-communication unit + communication block |
| | AFP2465 + AFP2804 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1348 RS-422 connection diagram 9) | GT 2505HS | 13m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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# Connecting to FP3 or FP5

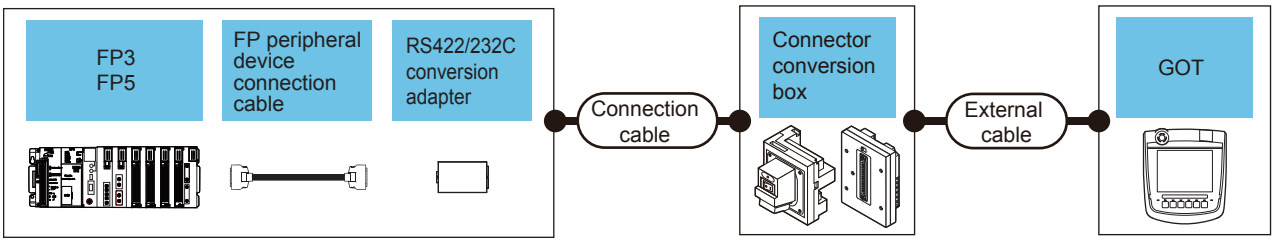
Communication driver

Panasonic MEWNET-FP



## When connecting to tool port

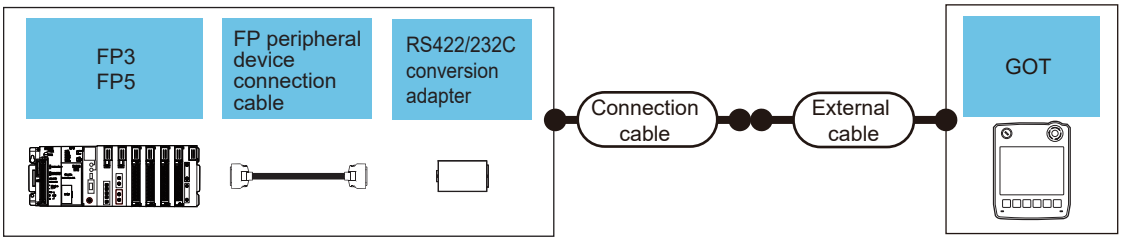
### ■When using the connector conversion box




| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1<br>Cable model Connection diagram number | RS422/232C conversion adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP3<br>FP5 | AFP5520<br>(0.5m) | AFP8550 | RS-232 | GT09-C30R20901-25P(3m)<br>or<br>User preparing Page 1329 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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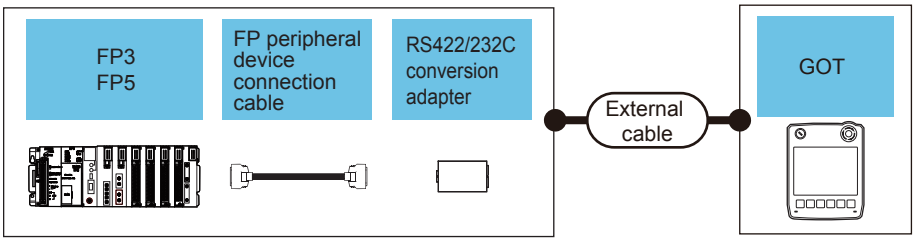
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1<br>Cable model Connection diagram number | RS422/232C conversion adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP3<br>FP5 | AFP5520<br>(0.5m) | AFP8550 | RS-232 | User's manual Page 1329 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## ■When using the external cable (GT11H-C□□□)

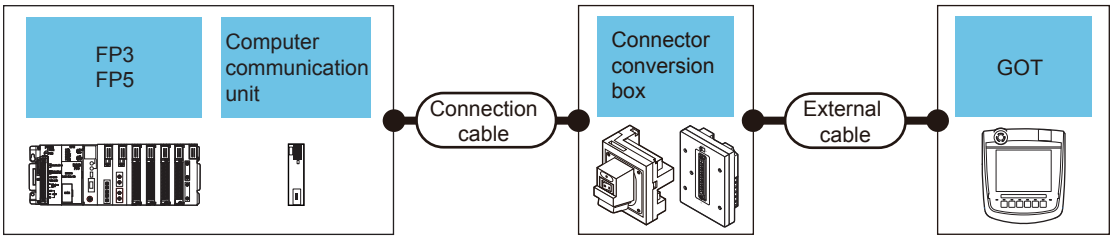



| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1<br>Cable model Connection diagram number | RS422/232C conversion adapter*1 | Communication Type | | | | |
| FP3<br>FP5 | AFP5520<br>(0.5m) | AFP8550 | RS-232 | GT11H-C30(3m)<br>☞ Page 1329 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## When connecting to computer communication unit

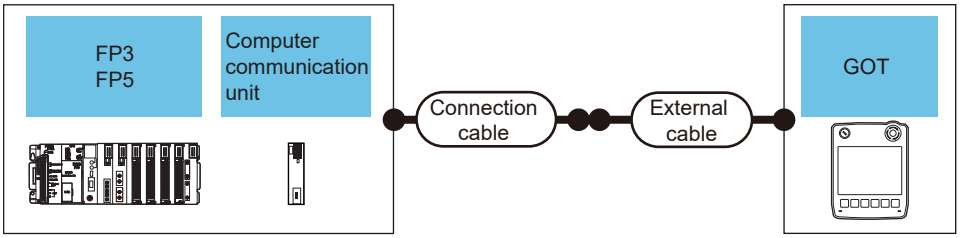
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP3 | AFP3462 | RS-232 | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FP5 | AFP5462 | | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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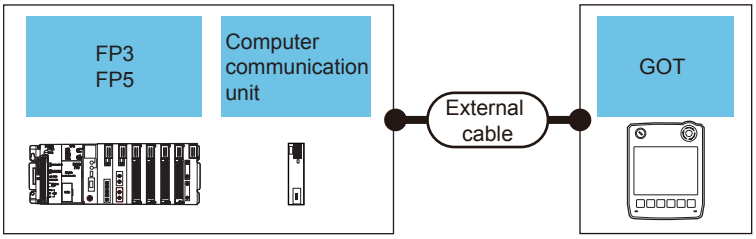
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP3 | AFP3462 | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |
| FP5 | AFP5462 | | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | | | | |
| FP3 | AFP3462 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |
| FP5 | AFP5462 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

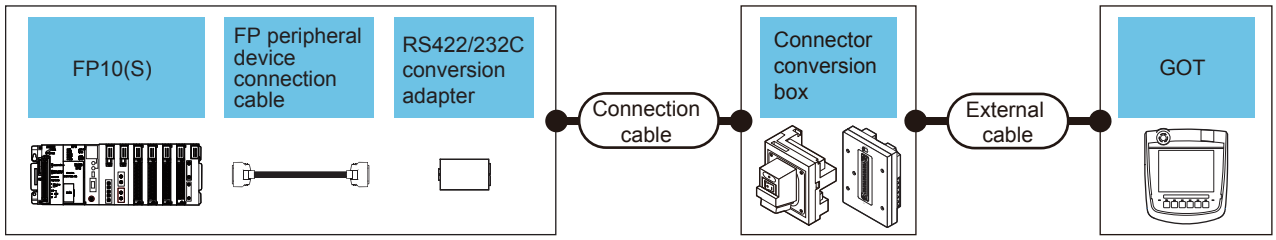
# Connecting to FP10(S)

Communication driver

Panasonic MEWNET-FP

## When connecting to tool port

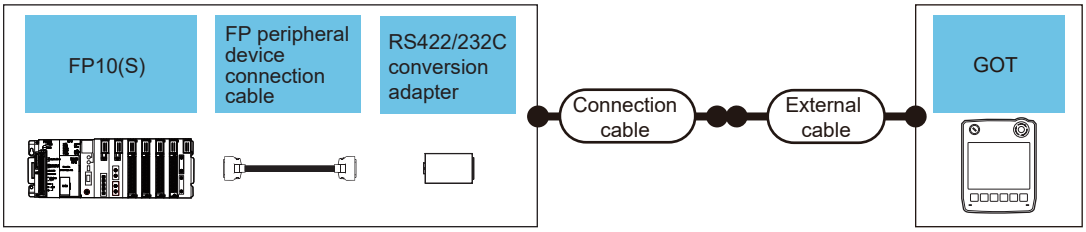
### ■When using the connector conversion box




| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1 | RS422/232C conversion adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| | Cable model Connection diagram number | | | | | | | | |
| FP10(S) | AFP5520(0.5m) | AFP8550 | RS-232 | GT09-C30R20901-25P or (User preparing) Page 1329 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

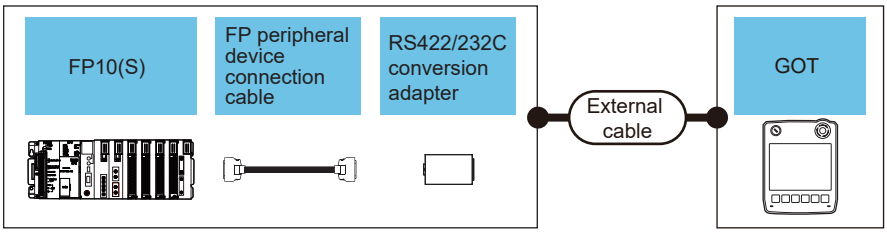
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1<br>Cable model Connection diagram number | RS422/232C conversion adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP10(S) | AFP5520(0.5m) | AFP8550 | RS-232 | User preparing Page 1329 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## ■When using the external cable (GT11H-C□□□)

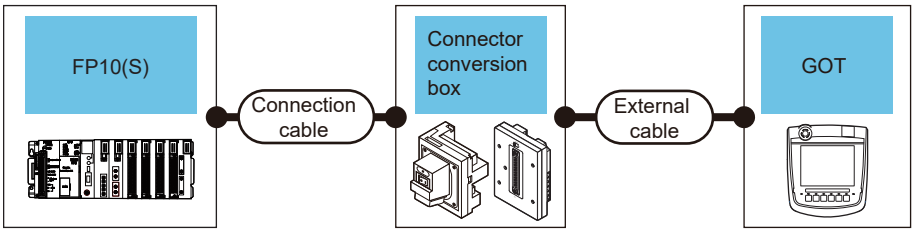



| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | FP peripheral device connection cable*1<br>Cable model Connection diagram number | RS422/232C conversion adapter*1 | Communication Type | | | | |
| FP10(S) | AFP5520(0.5m) | AFP8550 | RS-232 | GT11H-C30(3m) ☞ Page 1329 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS422/232 conversion adapter |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## When connecting to RS232C port

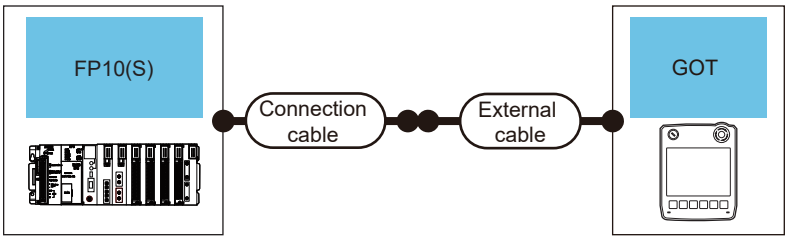
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| FP10(S) | RS-232 | AFB85853(3m)*1<br>GT09-C30R20902-9P(3m)<br>or<br>User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

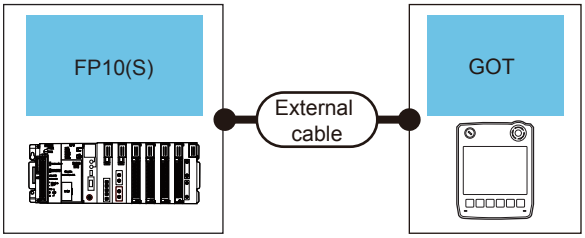
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| FP10(S) | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

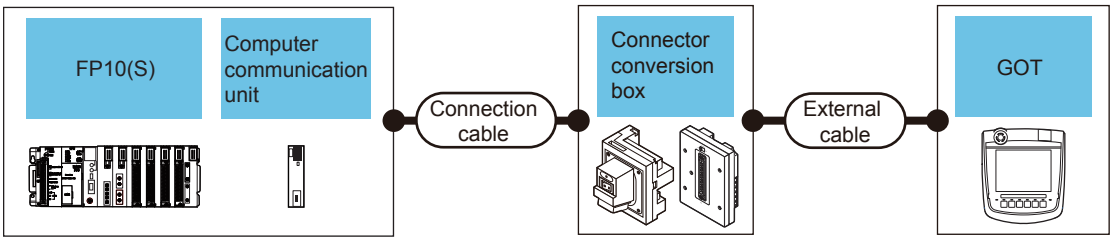
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FP10(S) | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to computer communication unit

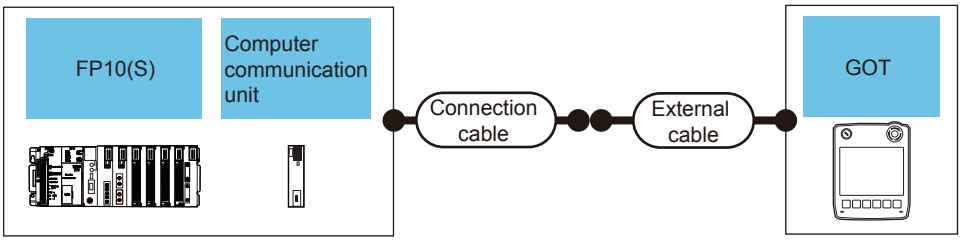
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP10(S) | AFP3462 | RS-232 | AFB85853(3m)*1<br>GT09-C30R20902-9P(3m)<br>or<br>User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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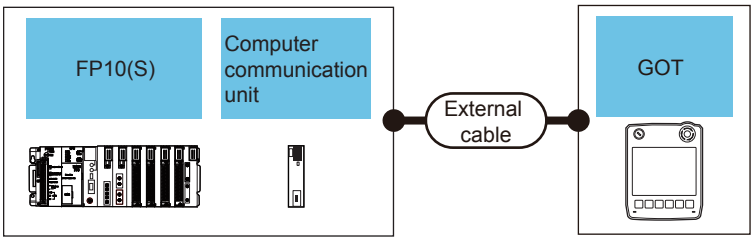
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP10(S) | AFP3462 | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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### ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | | | | |
| FP10(S) | AFP3462 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

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# Connecting to FP10SH

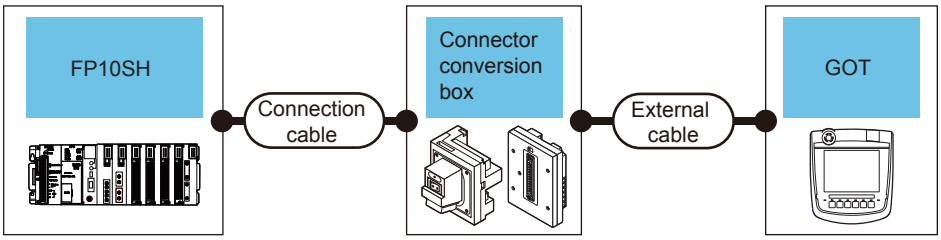
Communication driver

Panasonic MEWNET-FP



## When connecting to tool port or RS232C port

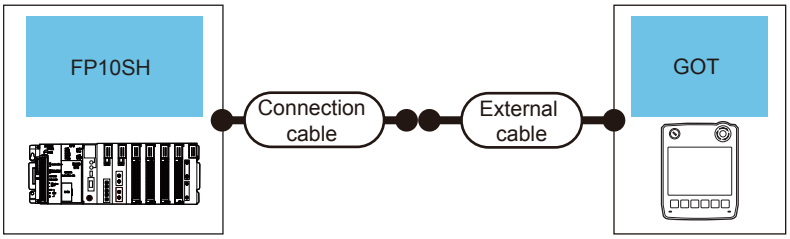
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP10SH | RS-232 | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

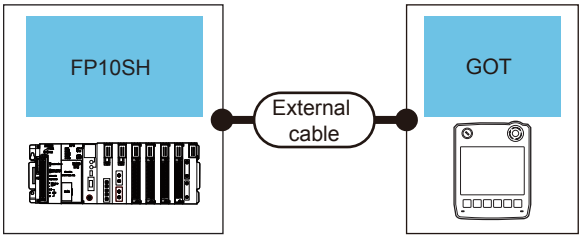
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FP10SH | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

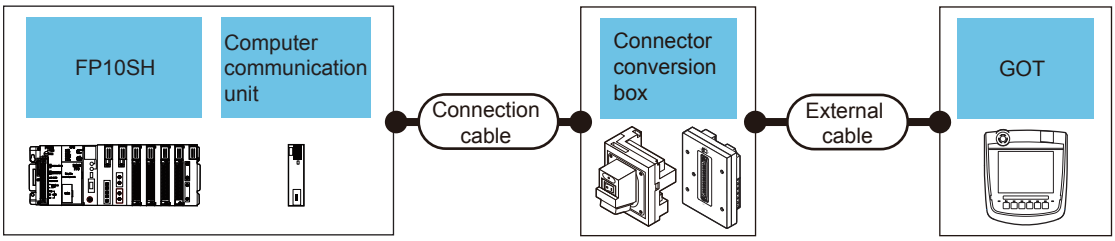
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FP10SH | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to computer communication unit

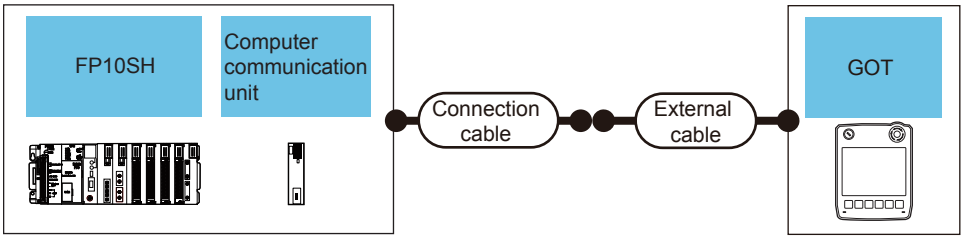
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| FP10SH | AFP3462 | RS-232 | AFB85853(3m)*1<br>GT09-C30R20902-9P(3m)<br>or<br>User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 computer communication unit |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

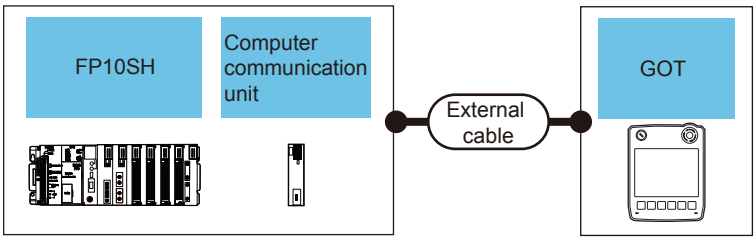
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP10SH | AFP3462 | RS-232 | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Computer communication unit*1 | Communication Type | | | | |
| FP10SH | AFP3462 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 computer communication unit |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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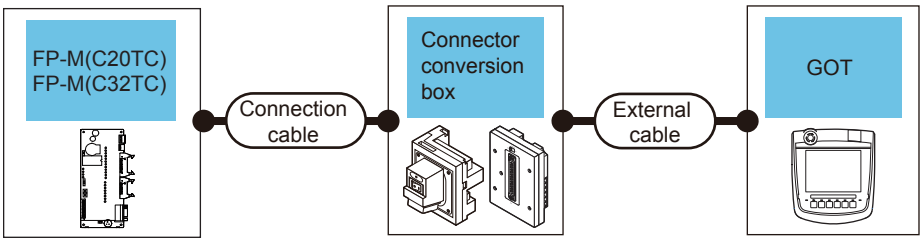
# Connecting to FP-M(C20TC) or FP-M(C32TC)

Communication driver

Panasonic MEWNET-FP

## When connecting to tool port or RS232C port

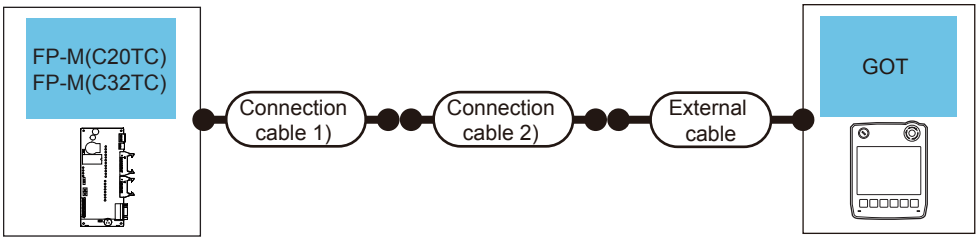
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP-M(C20TC), FP-M(C32TC) (Tool port) | RS-232 | AFC8503(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| FP-M(C20TC), FP-M(C32TC) (RS232C port) | | AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1330 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

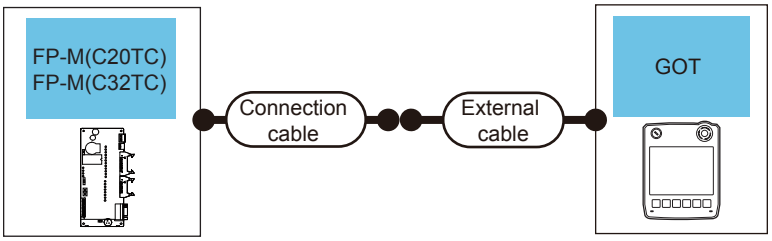
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| FP-M(C20TC), FP-M(C32TC) (Tool port) | RS-232 | AFC8503(3m)*1 | User preparing Page 1337 RS-232 connection diagram 25) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP-M(C20TC), FP-M(C32TC) (RS232C port) | | - | User preparing Page 1330 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## ■When using the external cable (GT11H-C□□□)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| FP-M(C20TC), FP-M(C32TC) (Tool port) | RS-232 | AFC8503(3m)*1 | GT11H-C30(3m)<br>☞ Page 1337 RS-232 connection diagram 26) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| FP-M(C20TC), FP-M(C32TC) (RS232C port) | | - | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1330 RS-232 connection diagram 6) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

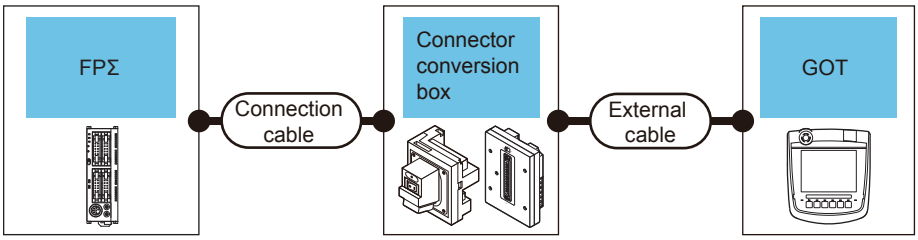
# Connecting to FPΣ

Communication driver

Panasonic MEWNET-FP

## When connecting to tool port

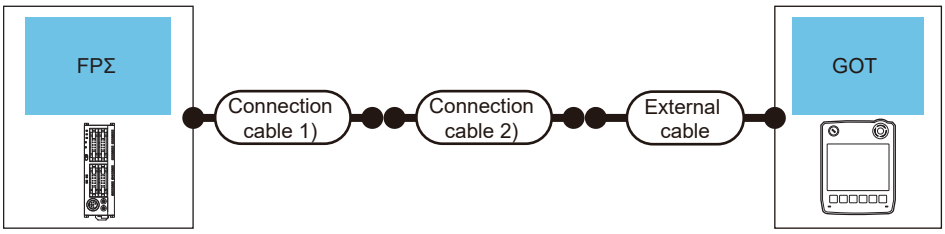
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FPΣ | RS-232 | AFC8503(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

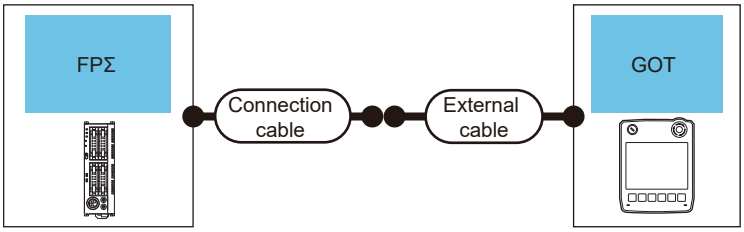
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| FPΣ | RS-232 | AFC8503(3m)*1 | User preparing Page 1337 RS-232 connection diagram 25) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

### ■When using the external cable (GT11H-C□□□)

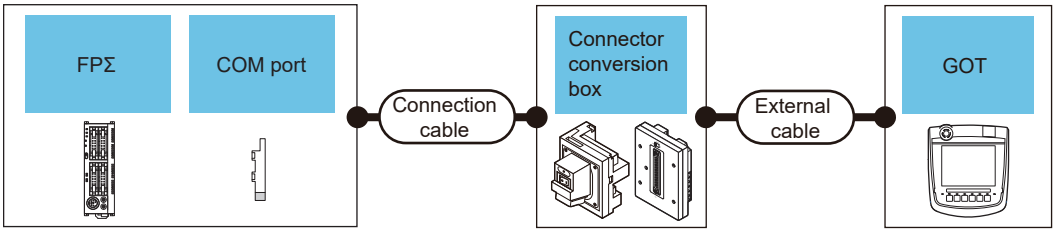



| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| FPΣ | RS-232 | AFC8503(3m)*1 | GT11H-C30(3m)<br>☞ Page 1337 RS-232 connection diagram 26) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## When connecting to COM port

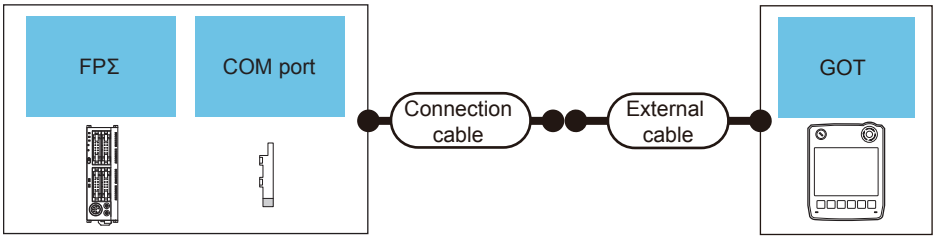
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | COM port*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FPΣ | AFPG801 | RS-232 | User preparing Page 1333 RS-232 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPG802 | | User preparing Page 1334 RS-232 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

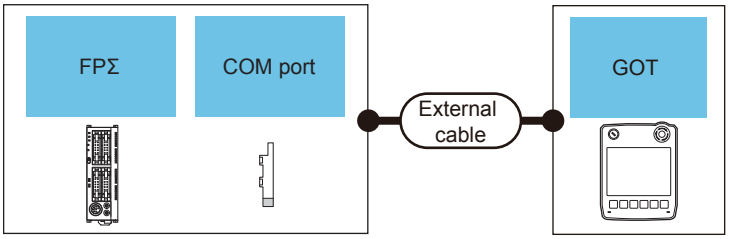
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | COM port*1 | Communication Type | Cable model Connection diagram number | | | | |
| FPΣ | AFPG801 | RS-232 | User preparing Page 1333 RS-232 connection diagram 14) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFPG802 | | User preparing Page 1334 RS-232 connection diagram 17) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | COM port*1 | Communication Type | | | | |
| FPΣ | AFPG801 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1333 RS-232 connection diagram 15) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFPG802 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1334 RS-232 connection diagram 18) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

# Connecting to FP-X

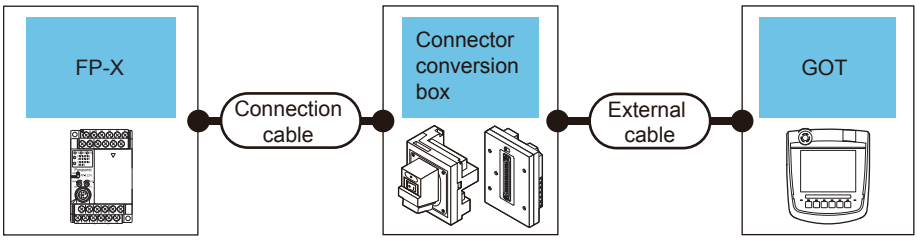
Communication driver

Panasonic MEWNET-FP



## When connecting to tool port

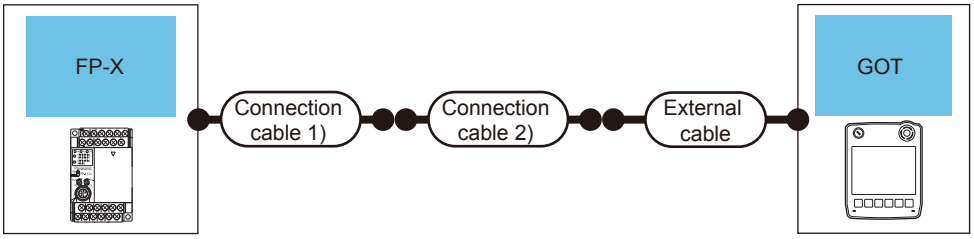
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP-X | RS-232 | AFC8503(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

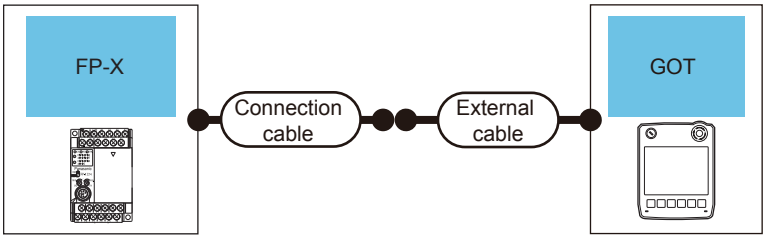
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| FP-X | RS-232 | AFC8503(3m)*1 | User preparing Page 1337 RS-232 connection diagram 25) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## ■When using the external cable (GT11H-C□□□)

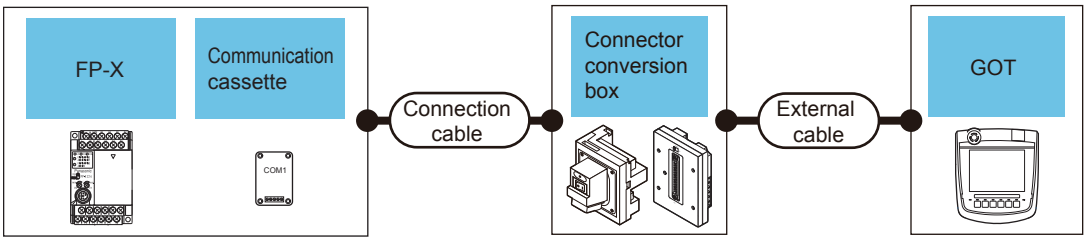



| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| FP-X | RS-232 | AFC8503(3m)*1 | GT11H-C30(3m)<br>☞ Page 1337 RS-232 connection diagram 26) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## When connecting to communication cassette

### ■When using the connector conversion box

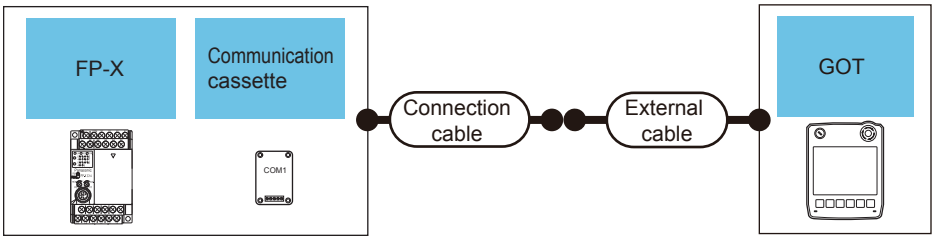



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP-X | AFPX-COM1 (RS232C one channel type) | RS-232 | User preparing Page 1333 RS-232 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPX-COM2*2 (RS232C two channel type) | | User preparing Page 1334 RS-232 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPX-COM3 (RS485/RS422 one channel type) | RS-422 | User preparing Page 1345 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type) | RS-232 | User preparing Page 1335 RS-232 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

## ■When using the external cable (GT11H-C□□□-37P)

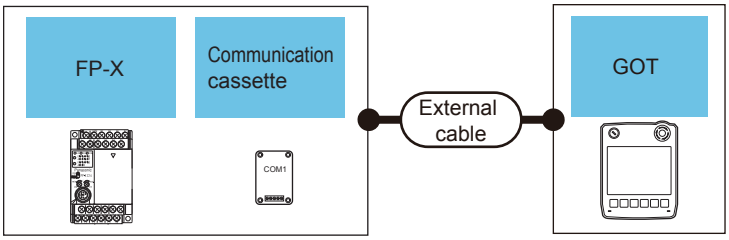



| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP-X | AFPX-COM1 (RS232C one channel type) | RS-232 | User preparing Page 1333 RS-232 connection diagram 14) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFPX-COM2*2 (RS232C two channel type) | | User preparing Page 1334 RS-232 connection diagram 17) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPX-COM3 (RS485/RS422 one channel type) | RS-422 | User preparing Page 1345 RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type) | RS-232 | User preparing Page 1335 RS-232 connection diagram 20) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | | | | |
| FP-X | AFPX-COM1 (RS232C one channel type) | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1333 RS-232 connection diagram 15) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFPX-COM2*2 (RS232C two channel type) | | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1334 RS-232 connection diagram 18) | GT 2505HS | | |
| | AFPX-COM3 (RS485/RS422 one channel type) | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1345 RS-422 connection diagram 3) | GT 2505HS | 13m | |
| | AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type) | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1335 RS-232 connection diagram 21) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

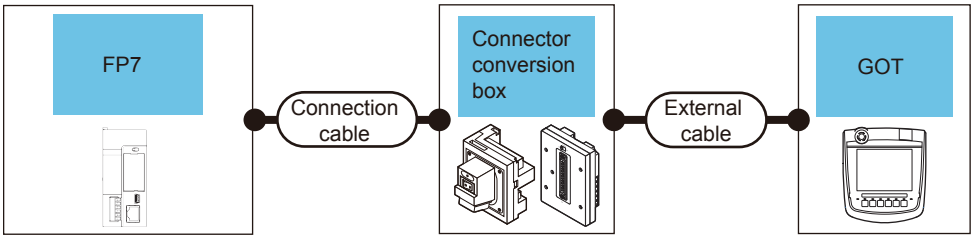
*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

# Connecting to FP7

Communication driver
Panasonic MEWTOCOL-7

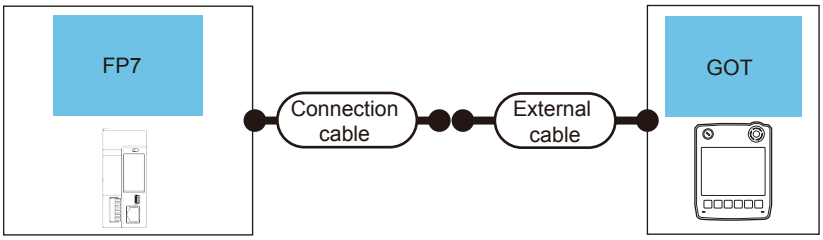
## When connecting to Serial port built into CPU module

### ■When using the connector conversion box



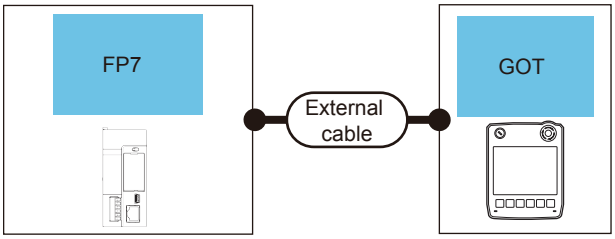

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FP7 | RS-232 | User preparing Page 1337 RS-232 connection diagram 27) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FP7 | RS-232 | User preparing Page 1338 RS-232 connection diagram 28) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

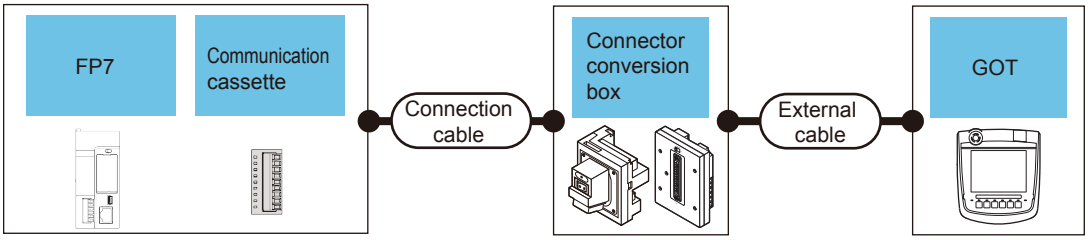
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FP7 | RS-232 | GT11H-C30(3m) ☞ Page 1338 RS-232 connection diagram 29) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to communication cassette

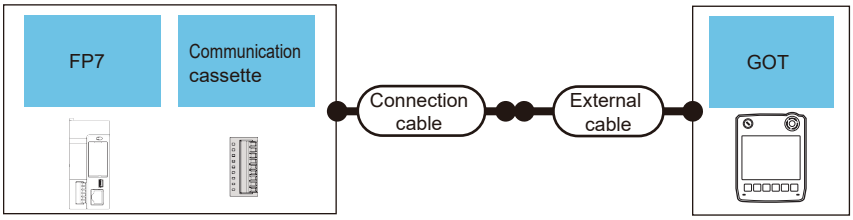
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP7 | AFP7CCS1 | RS-232 | User preparing Page 1337 RS-232 connection diagram 27) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP7CCS2 ([3 Wire] is selected) | | User preparing Page 1337 RS-232 connection diagram 27) (3 Wire) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP7CCS2 ([5 Wire] is selected) | | User preparing Page 1339 RS-232 connection diagram 30) (5 Wire) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP7CCS1M1 ([RS-422] is selected) | RS-422 | User preparing Page 1346 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | AFP7CCS1M1 ([RS-485] is selected) | RS-485 | User preparing Page 1349 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | AFP7CCS1M2 ([RS-422] is selected) | RS-422 | User preparing Page 1346 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | AFP7CCS1M2 ([RS-485] is selected) | RS-485 | User preparing Page 1349 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | AFP7CCS1M1 | RS-232 | User preparing Page 1337 RS-232 connection diagram 27) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-485 | User preparing Page 1349 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

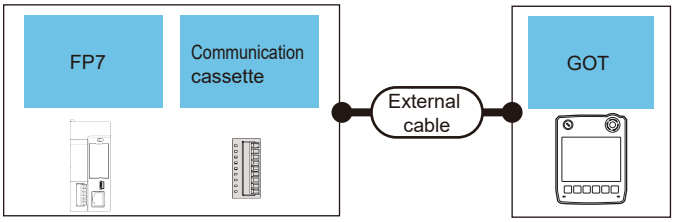
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP7 | AFP7CCS1 | RS-232 | User preparing Page 1338 RS-232 connection diagram 28) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFP7CCS2 ([3 Wire] is selected) | | User preparing Page 1338 RS-232 connection diagram 28) (3 Wire) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP7CCS2 ([5 Wire] is selected) | | User preparing Page 1339 RS-232 connection diagram 31) (5 Wire) | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP7CCS1M1 ([RS-422] is selected) | RS-422 | User preparing Page 1346 RS-422 connection diagram 5) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | AFP7CCS1M2 ([RS-422] is selected) | RS-422 | User preparing Page 1346 RS-422 connection diagram 5) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | AFP7CCS1M1 | RS-232 | User preparing Page 1338 RS-232 connection diagram 28) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | | | | |
| FP7 | AFP7CCS1 | RS-232 | GT11H-C30(3m)<br>☞ Page 1338 RS-232 connection diagram 29) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFP7CCS2<br>([3 Wire] is selected) | | GT11H-C30(3m)<br>☞ Page 1338 RS-232 connection diagram 29) | GT 2505HS | | |
| | AFP7CCS2<br>([5 Wire] is selected) | | GT11H-C30(3m)<br>☞ Page 1339 RS-232 connection diagram 32) | GT 2505HS | | |
| | AFP7CCS1M1<br>([RS-422] is selected) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1347 RS-422 connection diagram 6) | GT 2505HS | 13m | |
| | AFP7CCS1M2<br>([RS-422] is selected) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1347 RS-422 connection diagram 6) | GT 2505HS | | |
| | AFP7CCS1M1 | RS-232 | GT11H-C30(3m)<br>☞ Page 1338 RS-232 connection diagram 29) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

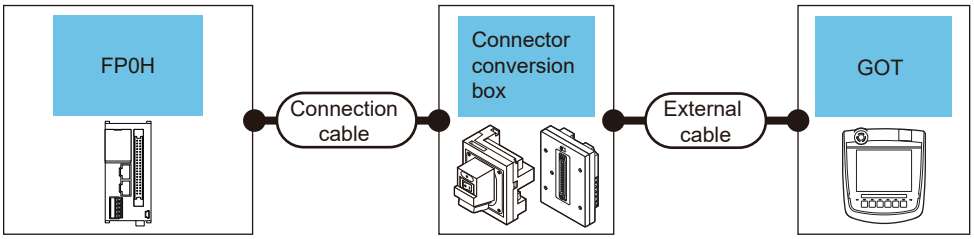
# Connecting to FP0H

Communication driver
Panasonic
MEWTOCOL-7



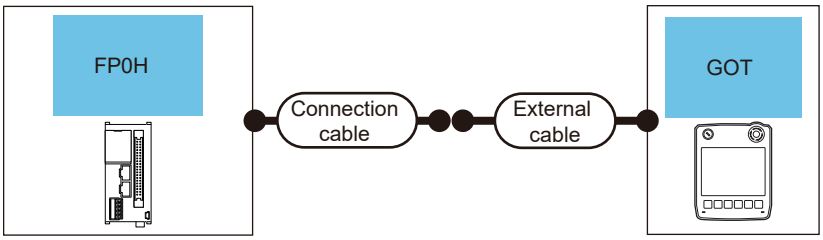
## When connecting to Serial port built into CPU module

### ■When using the connector conversion box



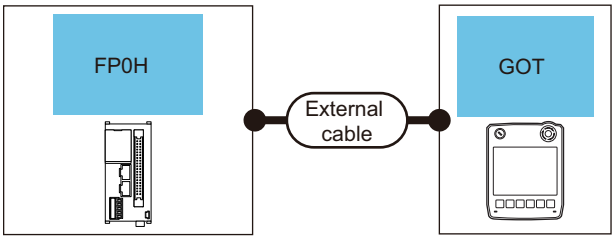

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| FP0H | RS-232 | (User preparing) Page 1340 RS-232 connection diagram 33) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| FP0H | RS-232 | (User preparing) Page 1340 RS-232 connection diagram 34) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

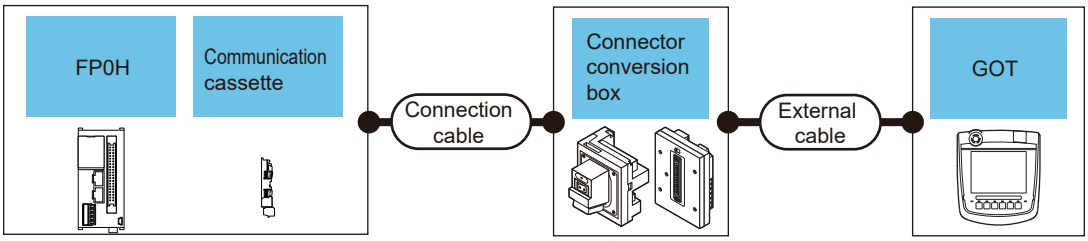
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FP0H | RS-232 | GT11H-C30(3m)<br>(User preparing) Page 1340 RS-232 connection diagram 35) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to communication cassette

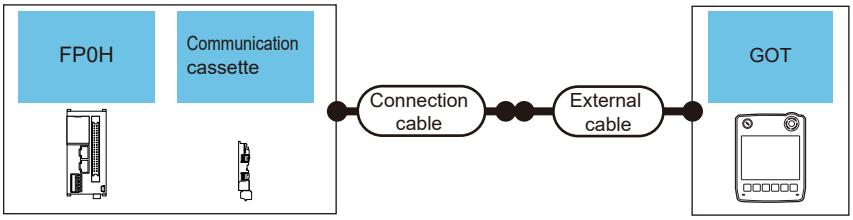
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP0H | AFP0HCCS1 AFP0HCCS2 | RS-232 | User preparing Page 1341 RS-232 connection diagram 36) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFP0HCCS1M1 | RS-232 | User preparing Page 1341 RS-232 connection diagram 37) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

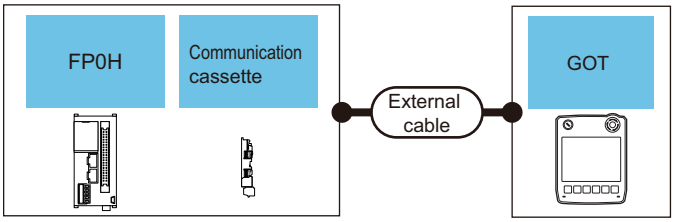
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | |
| FP0H | AFP0HCCS1 AFP0HCCS2 | RS-232 | User preparing Page 1341 RS-232 connection diagram 38) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFP0HCCS1M1 | RS-232 | User preparing Page 1342 RS-232 connection diagram 39) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | | | | |
| FP0H | AFP0HCCS1<br>AFP0HCCS2 | RS-232 | GT11H-C30(3m)<br>(User preparing) Page 1342 RS-232 connection diagram 40) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | AFP0HCCS1M1 | RS-232 | GT11H-C30(3m)<br>(User preparing) Page 1342 RS-232 connection diagram 41) | GT 2505HS | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

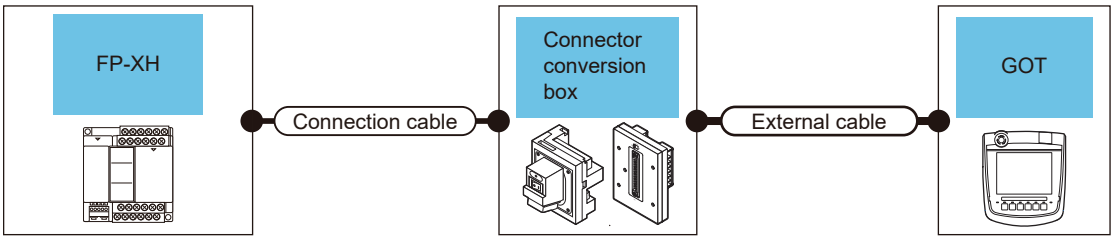
# System configuration for connecting to FP-XH

Communication driver

Panasonic MEWNET-FP

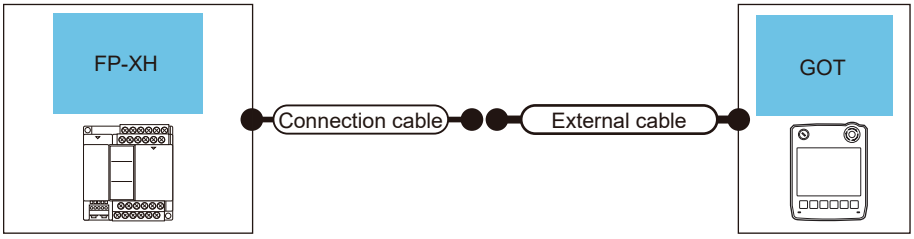
## When connecting to COM0 port

### ■When using the connector conversion box



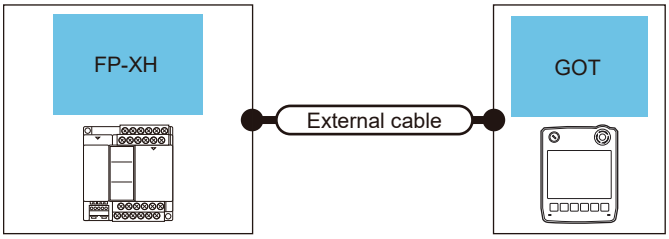

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| FP-XH | RS-232 | User preparing Page 1340 RS-232 connection diagram 33) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| FP-XH | RS-232 | User preparing Page 1340 RS-232 connection diagram 34) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

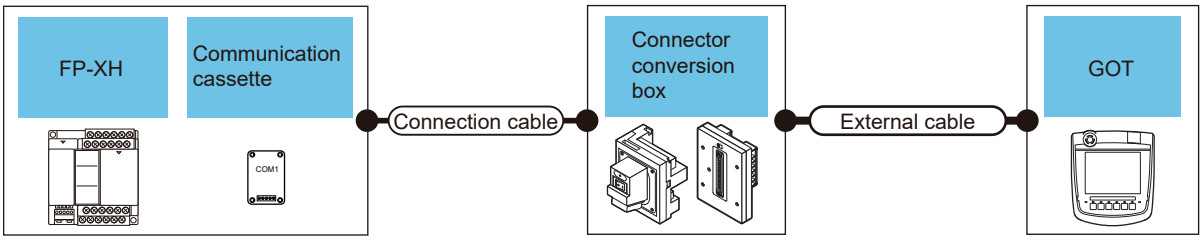
### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FP-XH | RS-232 | GT11H-C30(3m)<br>User preparing Page 1340 RS-232 connection diagram 35) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to communication cassette

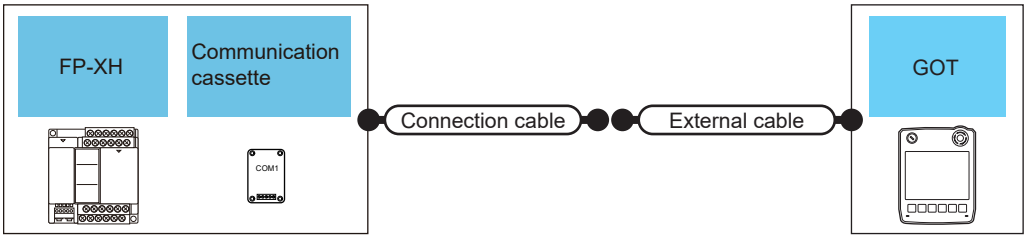
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication cassette*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FP-XH | AFPX-COM1 (RS232C one channel type) | RS-232 | User preparing Page 1333 RS-232 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPX-COM2 (RS232C two channel type) | | User preparing Page 1334 RS-232 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | AFPX-COM3 (RS485/RS422 one channel type) | RS-422 | User preparing Page 1345 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | AFPX-COM4 (RS485 one channel and RS232C one channel mixed type) | RS-232 | User preparing Page 1335 RS-232 connection diagram 19) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

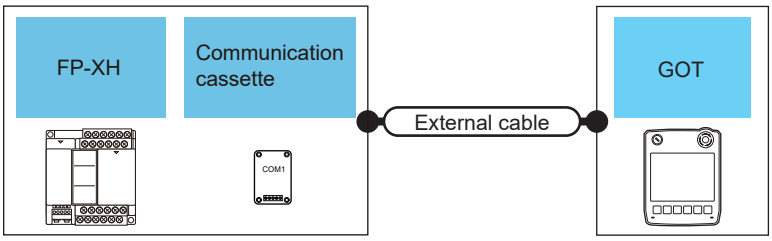
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Communication cassette*1 | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | | Cable model Connection diagram number | | | | |
| FP-XH | RS-232 | AFPX-COM1 (RS232C one channel type) | User preparing Page 1333 RS-232 connection diagram 14) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | AFPX-COM2 (RS232C two channel type) | User preparing Page 1334 RS-232 connection diagram 17) | GT11H-C30-37P(3m) | | 6m | |
| | RS-422 | AFPX-COM3 (RS485/RS422 one channel type) | User preparing Page 1345 RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | 13m | |
| | RS-232 | AFPX-COM4 (RS485 one channel and RS232C one channel mixed type) | User preparing Page 1335 RS-232 connection diagram 20) | GT11H-C30-37P(3m) | | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

## ■When using the external cable (GT11H-C□□□)




| PLC | | Communication cassette*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | | | | | |
| FP-XH | RS-232 | AFPX-COM1 (RS232C one channel type) | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1333 RS-232 connection diagram 15) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | | AFPX-COM2 (RS232C two channel type) | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1334 RS-232 connection diagram 18) | | 6m | |
| | RS-422 | AFPX-COM3 (RS485/RS422 one channel type) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1345 RS-422 connection diagram 3) | | 13m | |
| | RS-232 | AFPX-COM4 (RS485 one channel and RS232C one channel mixed type) | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1335 RS-232 connection diagram 21) | | 6m | |

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

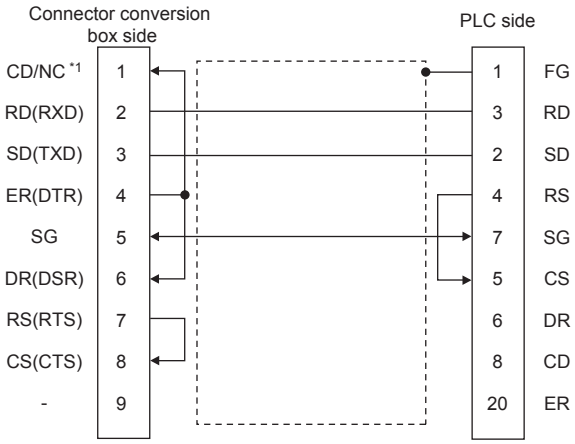
# 27.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

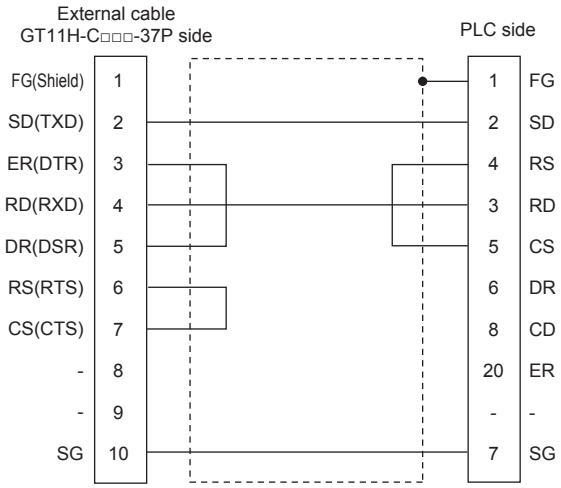
### Connection diagram

#### ■RS-232 connection diagram 1)

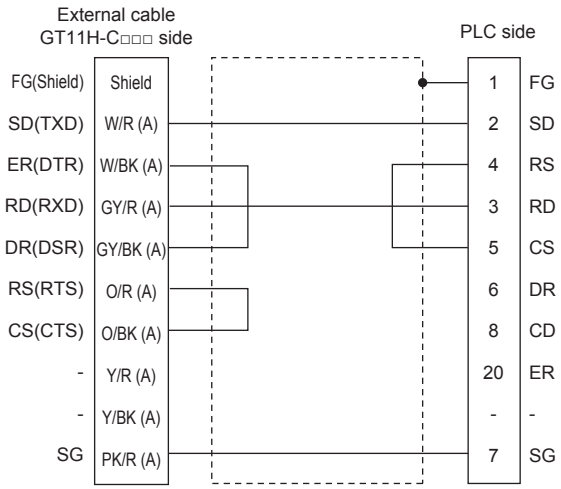



*1 GT2506HS-V: CD, GT2505HS-V: NC

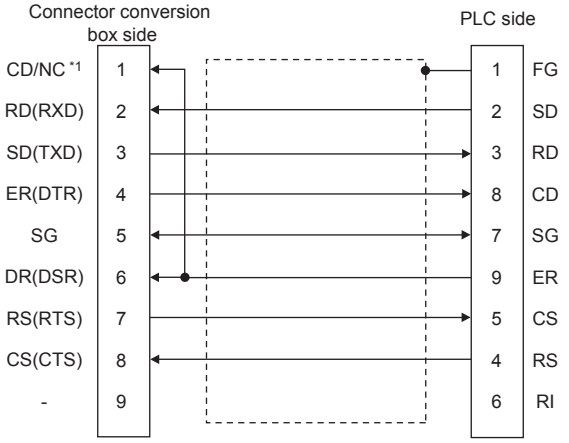
#### ■RS-232 connection diagram 2)




#### ■RS-232 connection diagram 3)

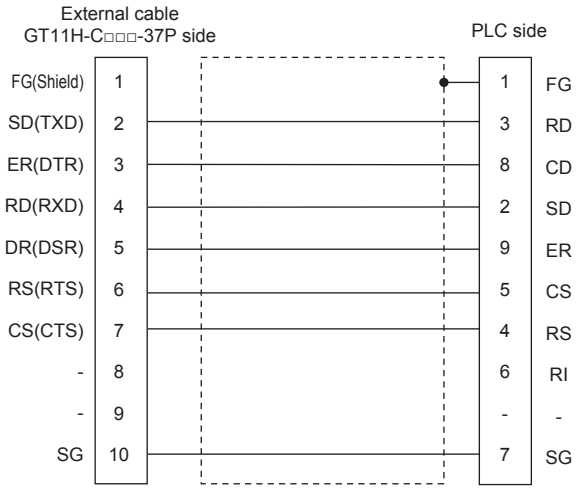


## ■RS-232 connection diagram 4)

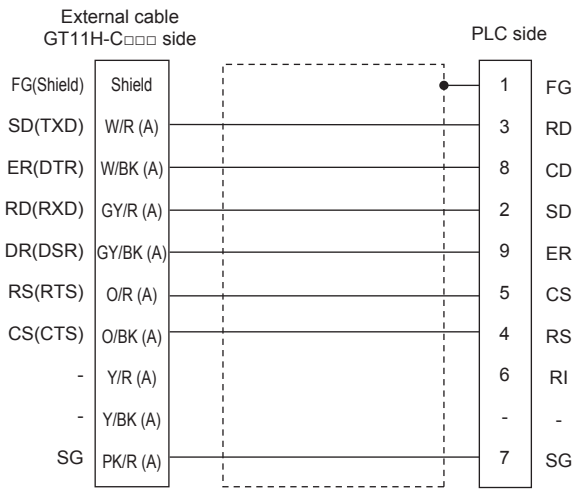



*1 GT2506HS-V: CD, GT2505HS-V: NC

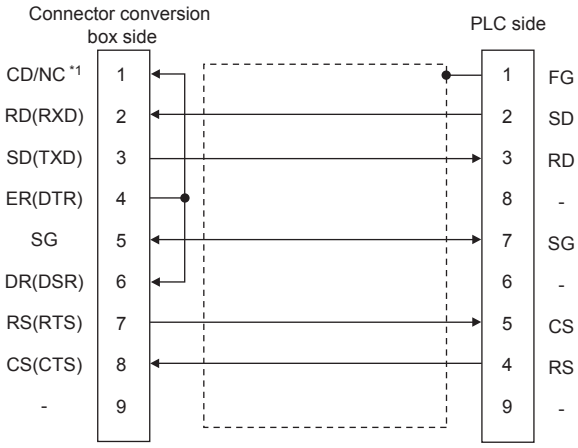
## ■RS-232 connection diagram 5)




## ■RS-232 connection diagram 6)

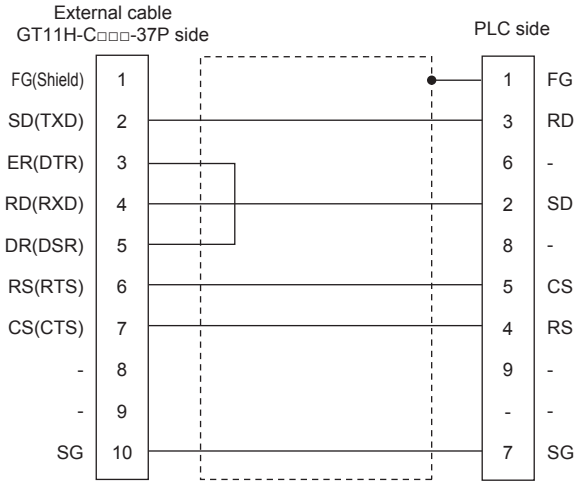


## ■RS-232 connection diagram 7)

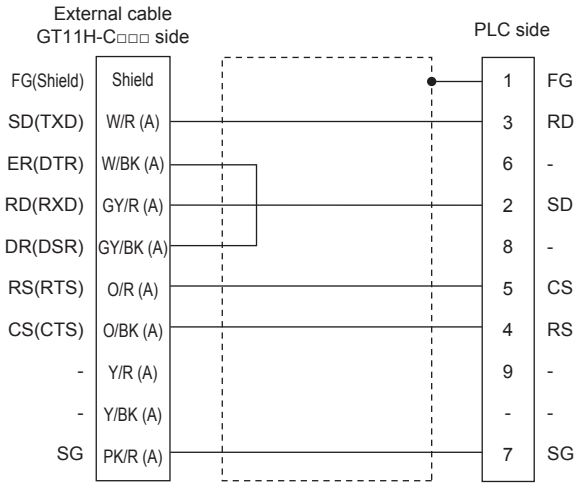



*1 GT2506HS-V: CD, GT2505HS-V: NC

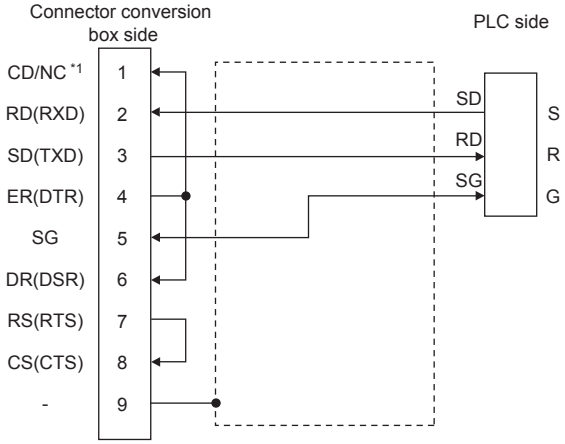
## ■RS-232 connection diagram 8)




## ■RS-232 connection diagram 9)

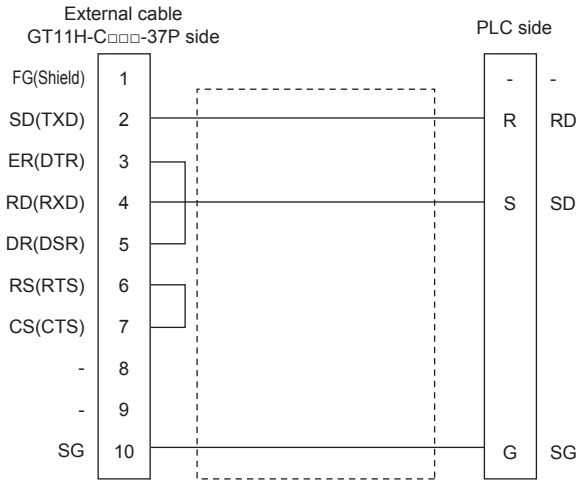


## ■RS-232 connection diagram 10)

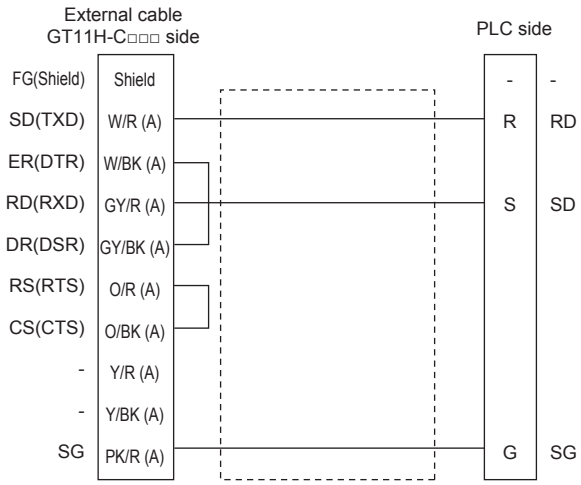



*1 GT2506HS-V: CD, GT2505HS-V: NC

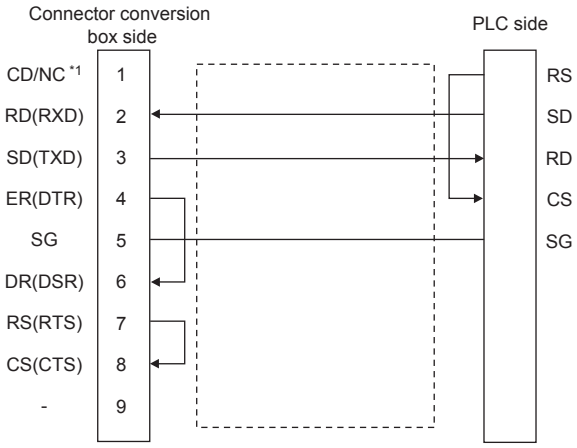
## ■RS-232 connection diagram 11)




## ■RS-232 connection diagram 12)

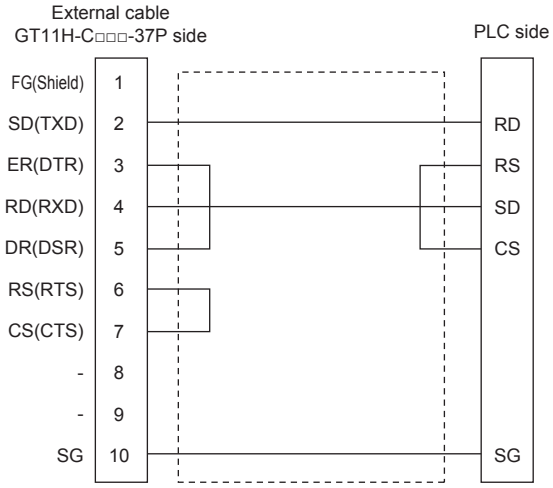


## ■RS-232 connection diagram 13)

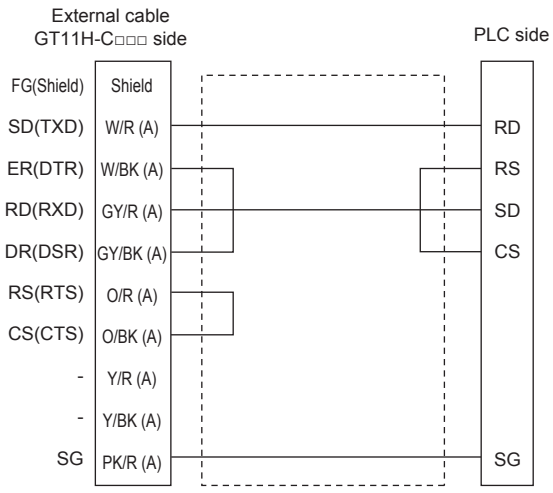



*1 GT2506HS-V: CD, GT2505HS-V: NC

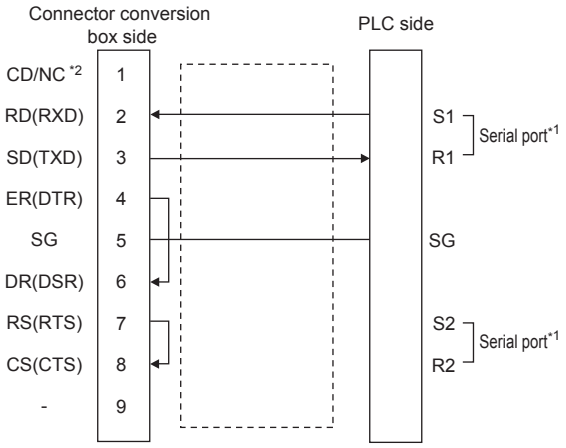
## ■RS-232 connection diagram 14)




## ■RS-232 connection diagram 15)



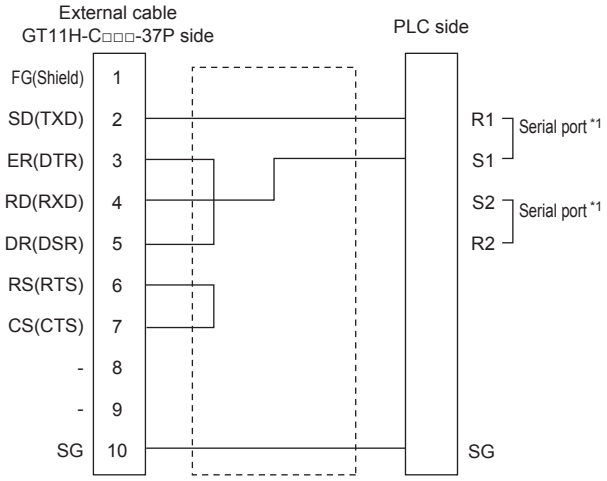
## ■RS-232 connection diagram 16)




*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

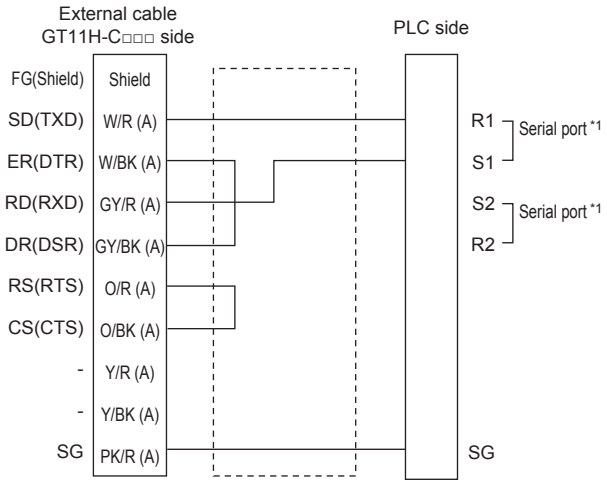
*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 17)



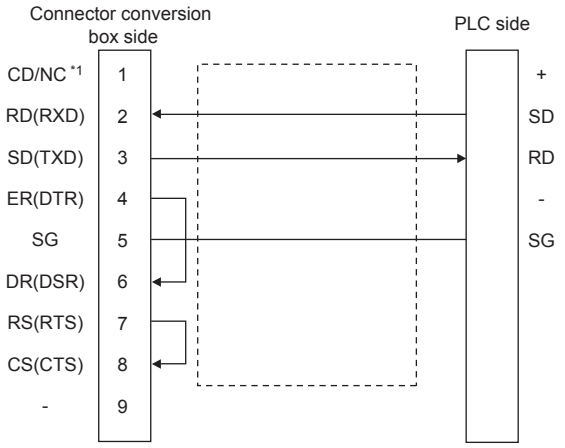

*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

## ■RS-232 connection diagram 18)



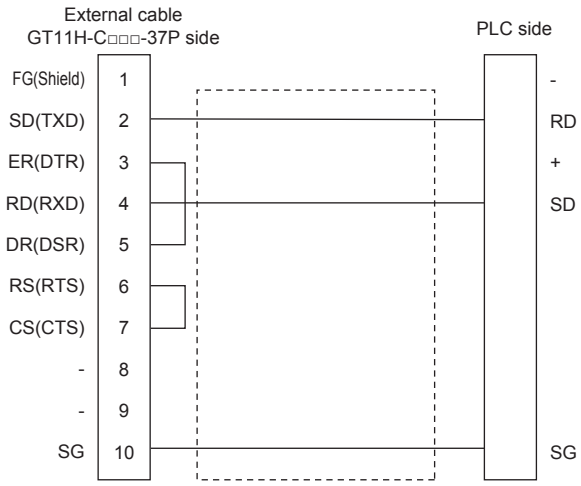

*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

## ■RS-232 connection diagram 19)

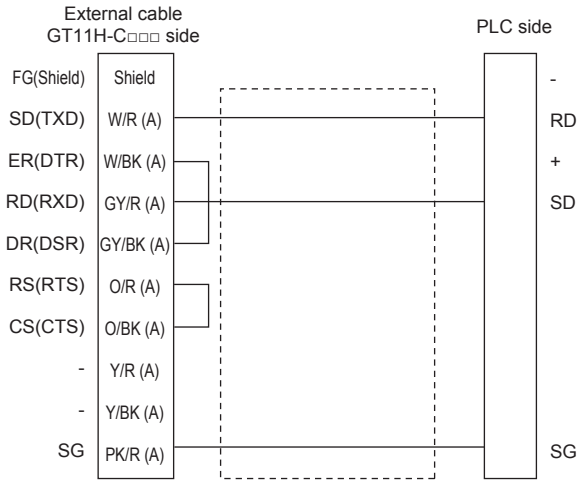



*1 GT2506HS-V: CD, GT2505HS-V: NC

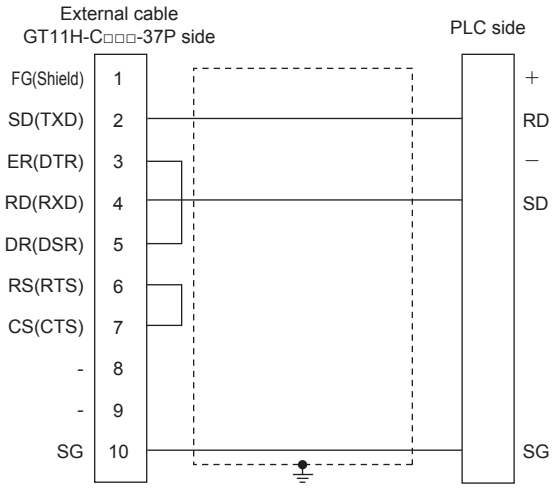
## ■RS-232 connection diagram 20)



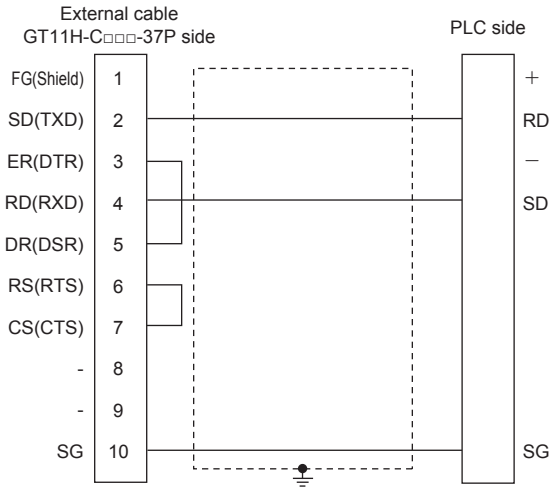

## ■RS-232 connection diagram 21)



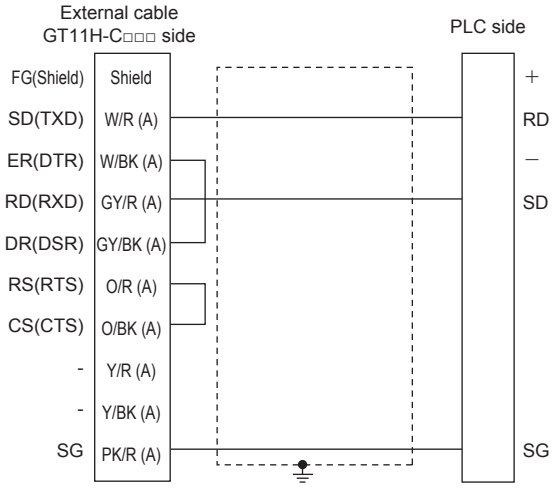
## ■RS-232 connection diagram 22)



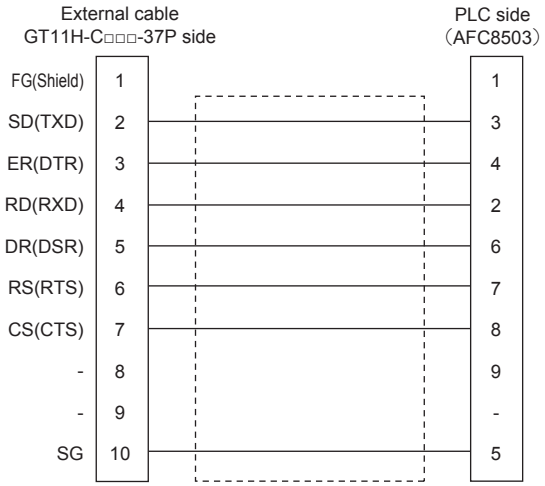

## ■RS-232 connection diagram 23)



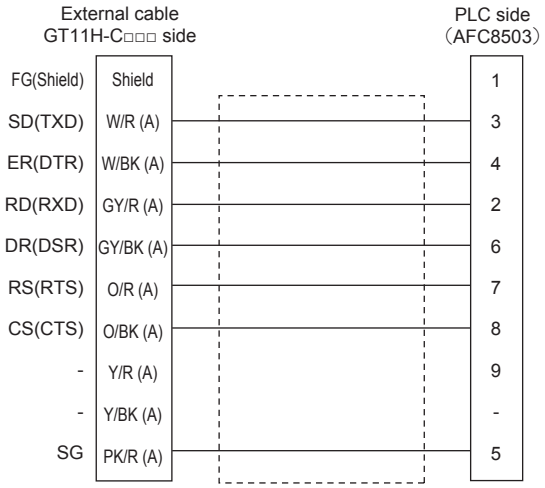

## ■RS-232 connection diagram 24)



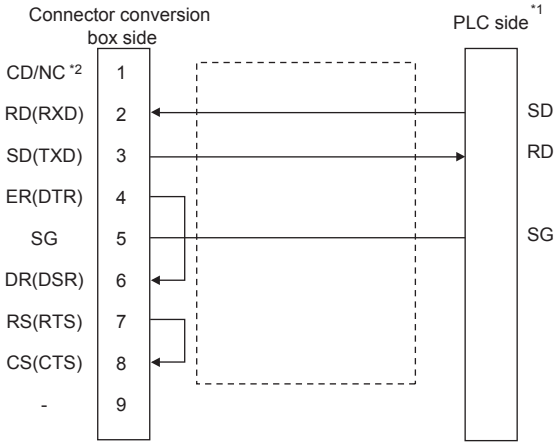
## ■RS-232 connection diagram 25)




## ■RS-232 connection diagram 26)



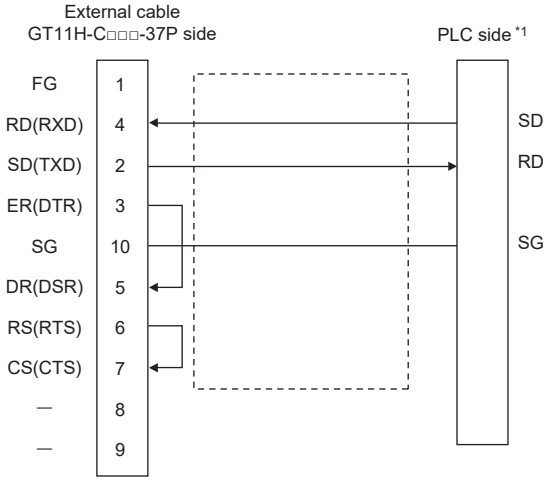

## ■RS-232 connection diagram 27)




*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

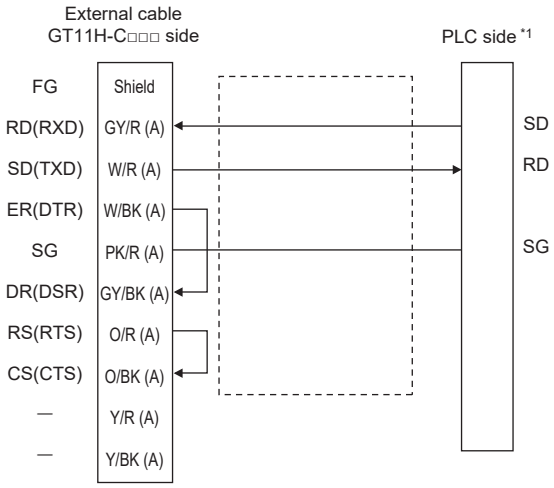
*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 28)



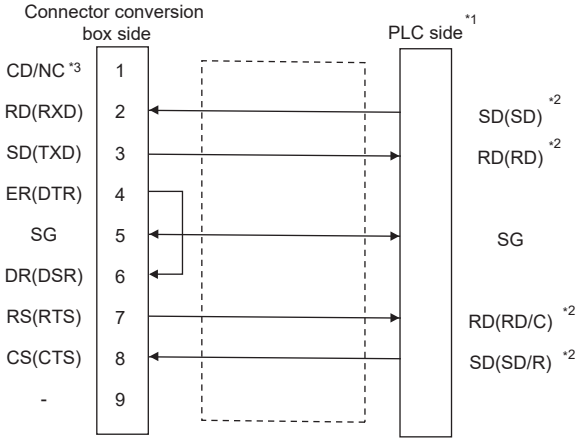

*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

## ■RS-232 connection diagram 29)




*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

## ■RS-232 connection diagram 30)

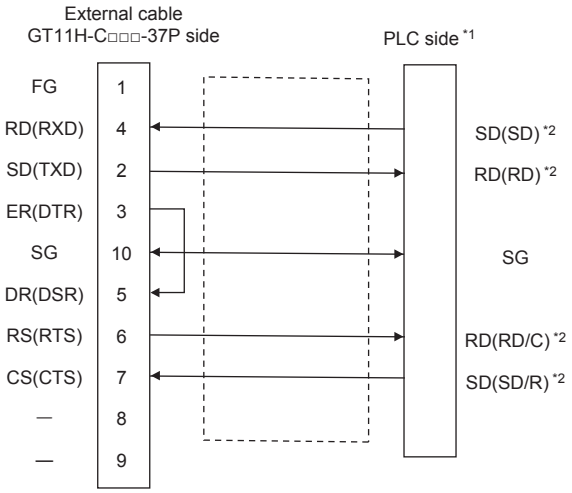



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

*3 GT2506HS-V: CD, GT2505HS-V: NC

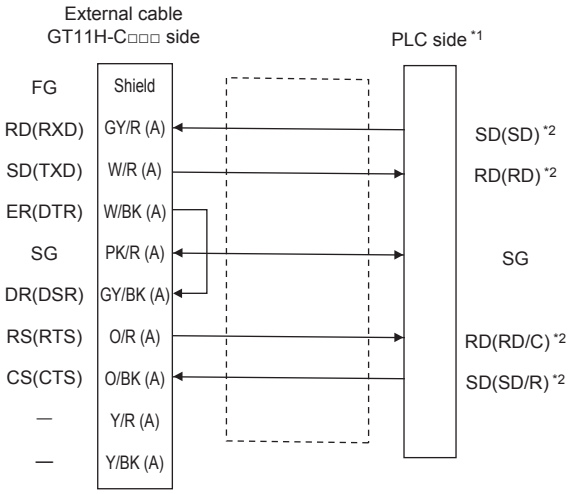
## ■RS-232 connection diagram 31)




*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

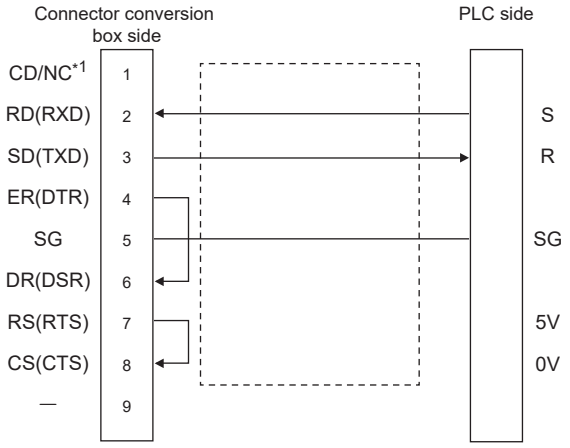
## ■RS-232 connection diagram 32)




*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

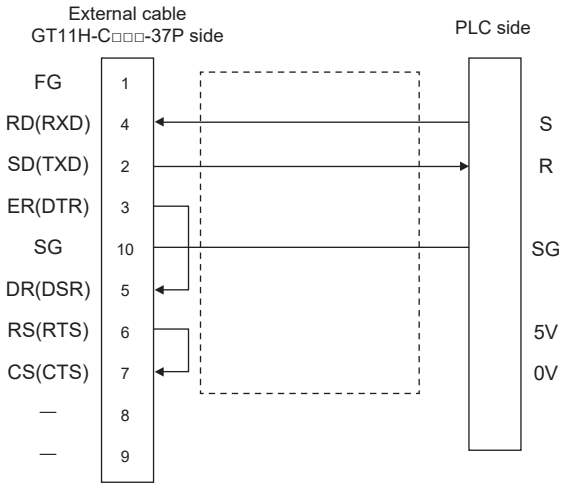
*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

## ■RS-232 connection diagram 33)

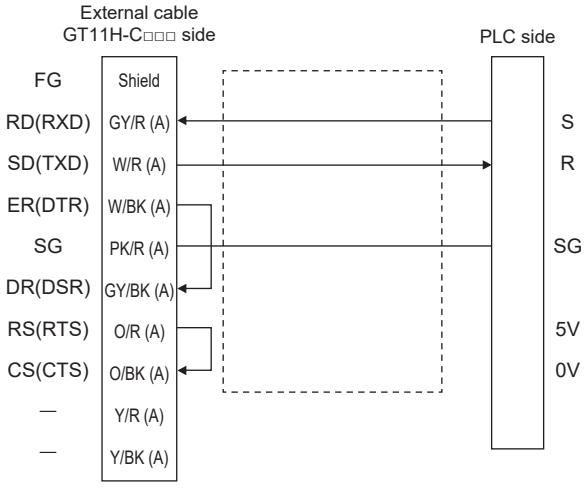



*1 GT2506HS-V:CD, GT2505HS-V: NC

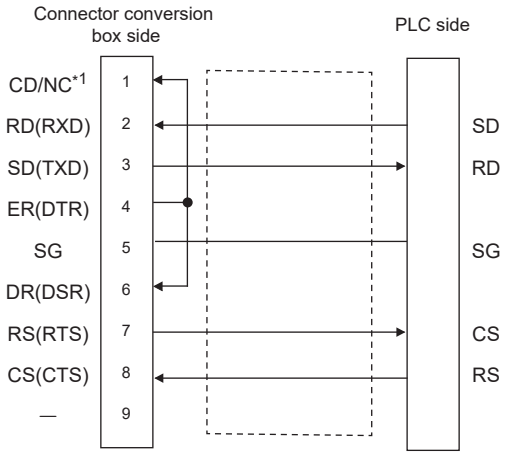
## ■RS-232 connection diagram 34)




## ■RS-232 connection diagram 35)

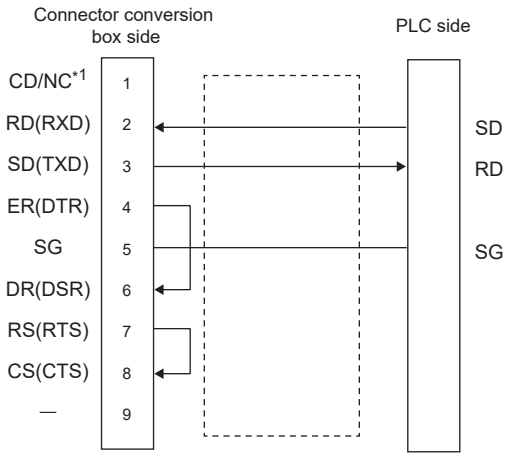


## ■RS-232 connection diagram 36)



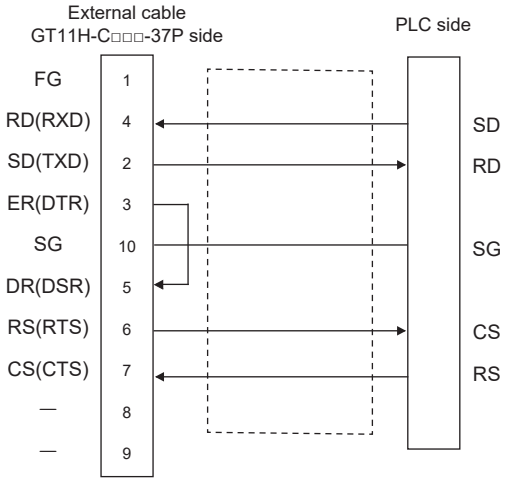

*1 GT2506HS-V:CD, GT2505HS-V: NC

## ■RS-232 connection diagram 37)

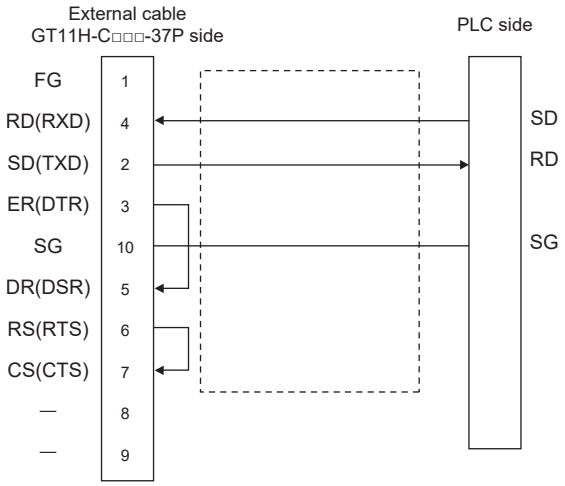



*1 GT2506HS-V:CD, GT2505HS-V: NC

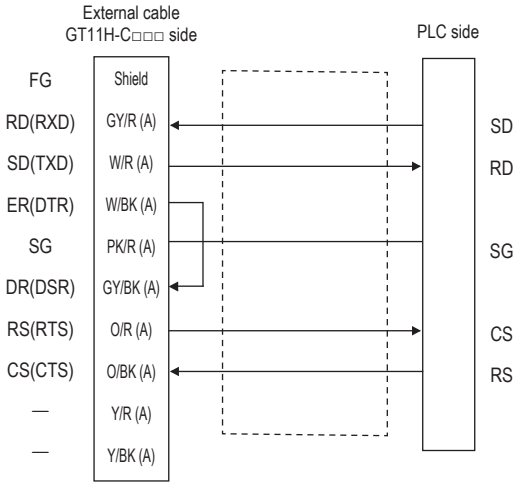
## ■RS-232 connection diagram 38)



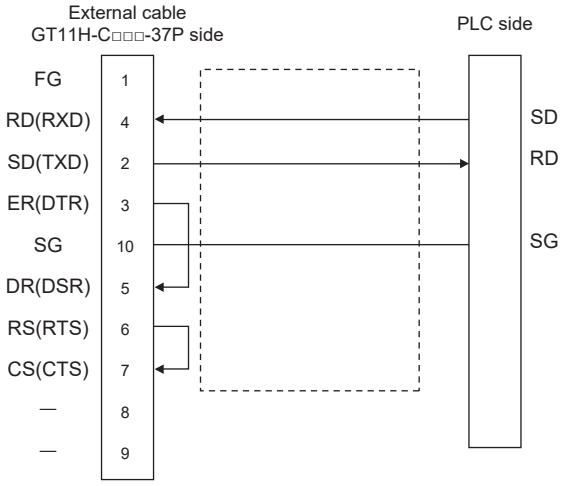
## ■RS-232 connection diagram 39)



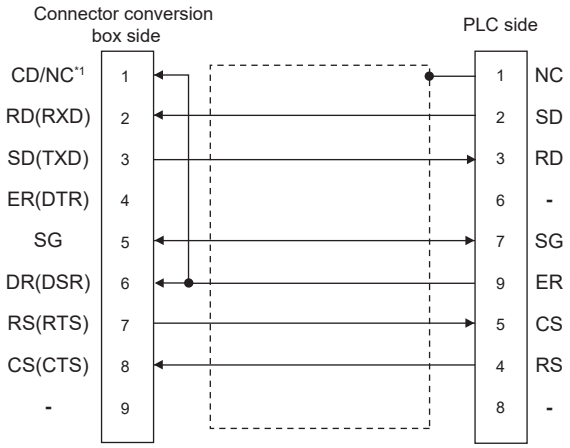

## ■RS-232 connection diagram 40)




## ■RS-232 connection diagram 41)

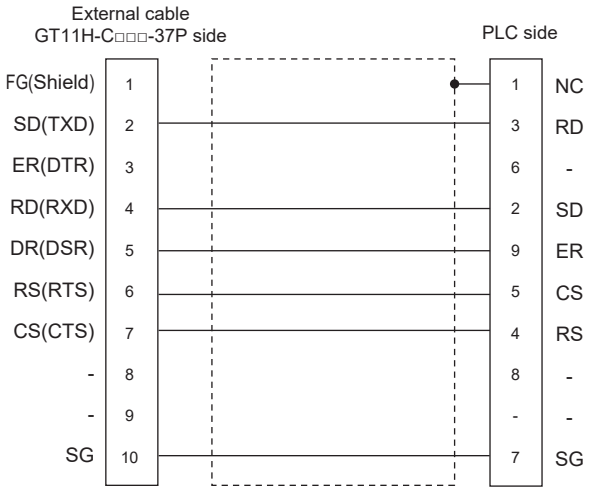


## ■RS-232 connection diagram 42)

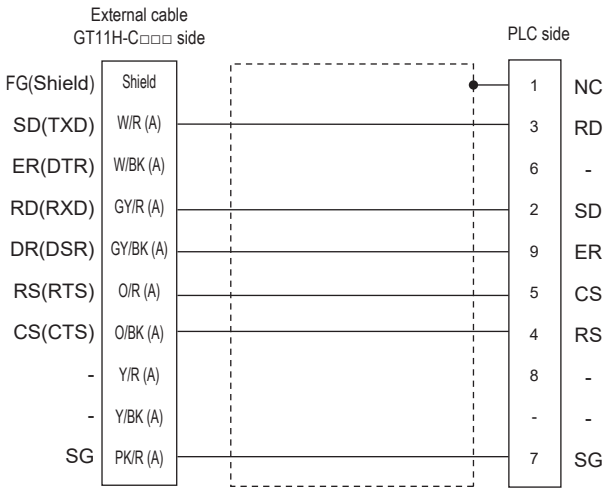



*1 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 43)




## ■RS-232 connection diagram 44)



## Precautions when preparing a cable

### ■Cable length

The total distance (between the GOT and a controller) of the RS-232 cable must be 6 m or less.

The length of the cable must be 3 m or less with a transmission speed of 38400 bps.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connector for Panasonic Industrial Devices SUNX PLC

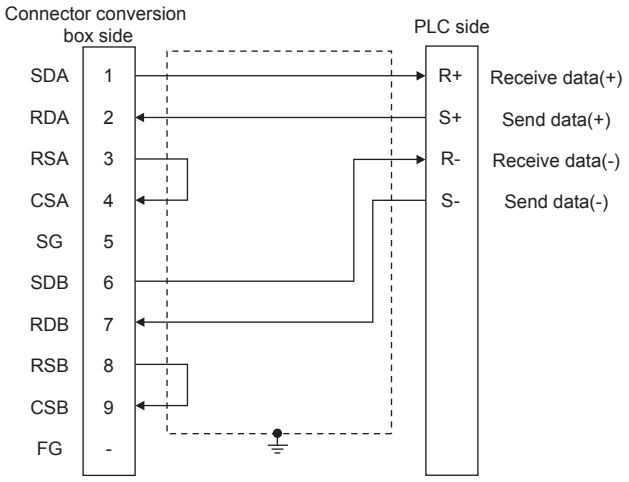
Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

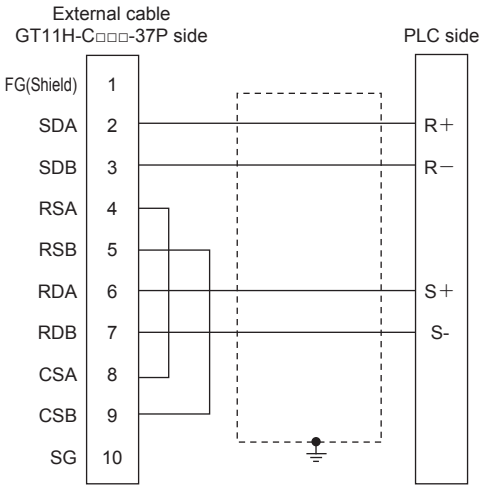
# RS-422 cable

## Connection diagram

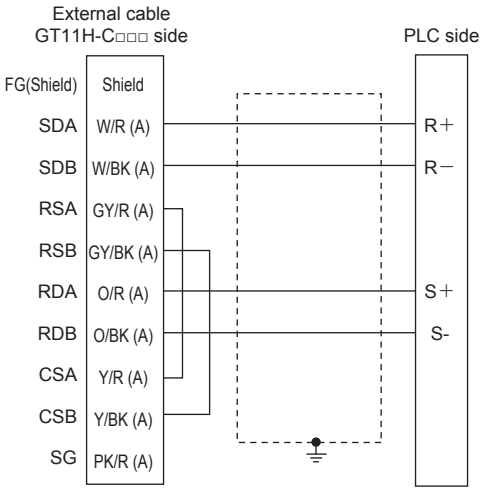
### ■RS-422 connection diagram 1)



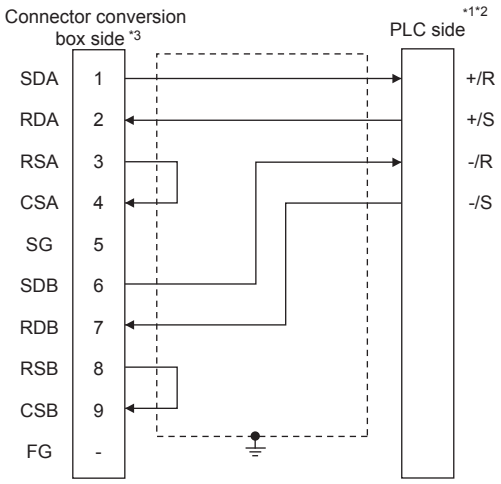

### ■RS-422 connection diagram 2)




### ■RS-422 connection diagram 3)



## ■RS-422 connection diagram 4)

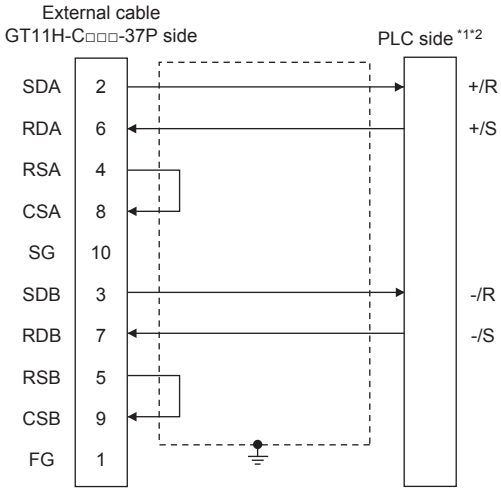



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)

*2 Set the terminating resistor of the PLC to [ON].

*3 Set the terminating resistor of the GOT as follows.
For GT2506HS-V: Set the terminating resistor to "Disable".

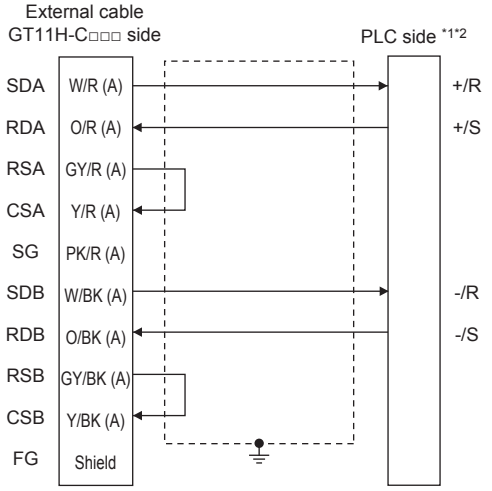
## ■RS-422 connection diagram 5)




*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)

*2 Set the terminating resistor of the PLC to [ON].

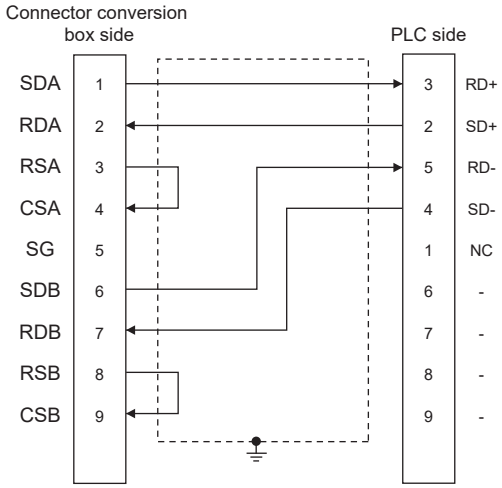
## ■RS-422 connection diagram 6)



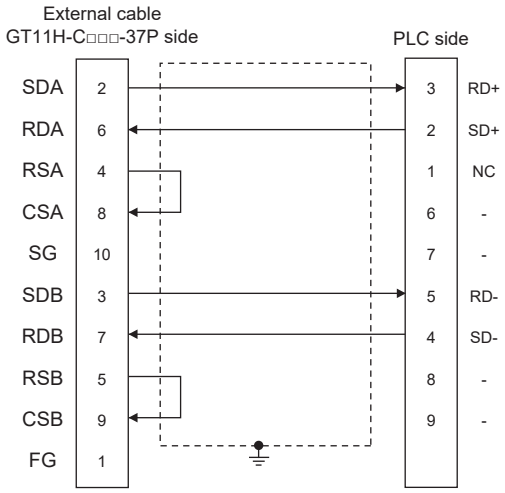

*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)

*2 Set the terminating resistor of the PLC to [ON].

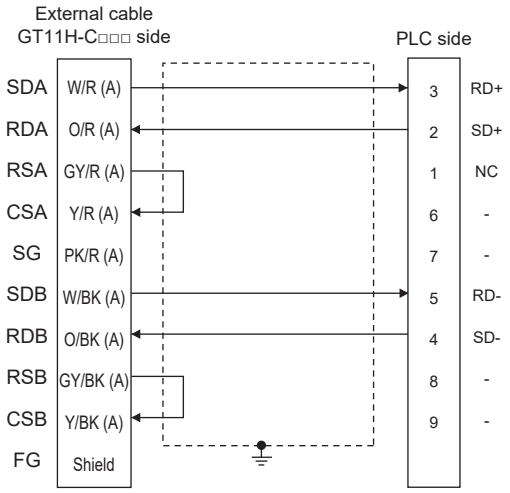
## ■RS-422 connection diagram 7)




## ■RS-422 connection diagram 8)



### ■RS-422 connection diagram 9)




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connector for Panasonic Industrial Devices SUNX PLC

Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

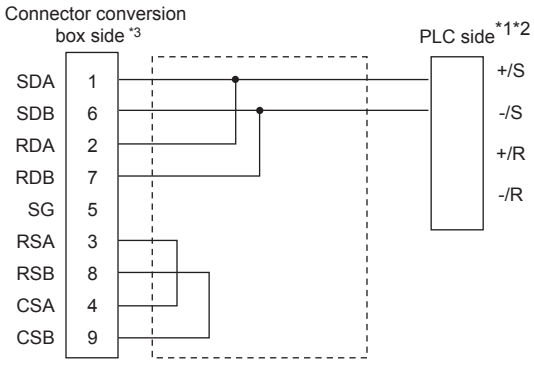
For details of terminating resistor settings, refer to the following.

☞ Page 89 Terminating resistors of GOT

# RS-485 cable

## Connection diagram

### ■RS-485 connection diagram 1)




*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1 ([RS-485] is selected), AFP7CCM2 of CH1([RS-485] is selected), AFP7CCM2 of CH2 ([RS-485] is selected)

*2 Set the terminating resistor of the PLC to [ON].

*3 Set the terminating resistor of the GOT as follows.
For GT2506HS-V: Set the terminating resistor to "Disable".

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connector for Panasonic Industrial Devices SUNX PLC

Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

## Connecting terminating resistors

### ■GOT side

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

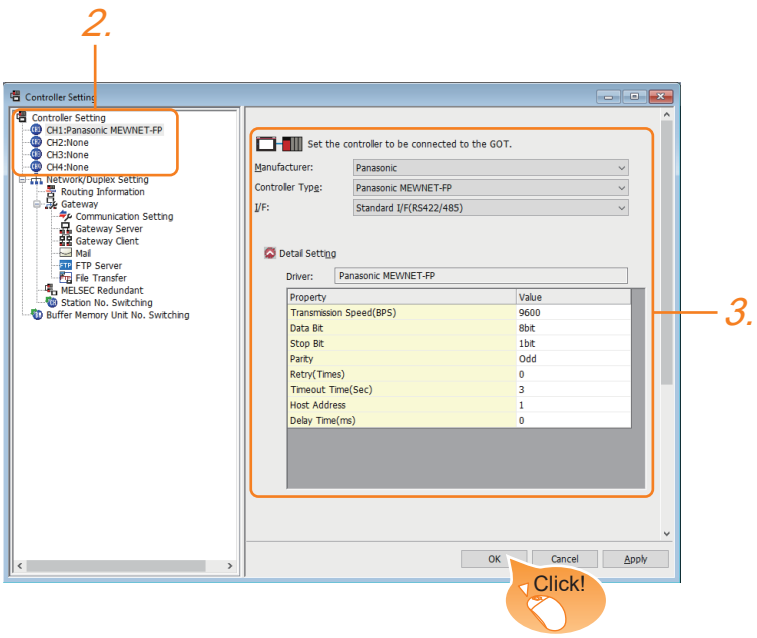
For details of terminating resistor settings, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 27.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.




***1.*** Select [Common] → [Controller Setting] from the menu.

***2.*** In the [Controller Setting] window, select the channel No. to be used from the list menu.

***3.*** Set the following items.

- [Manufacturer]: [Panasonic]
- [Controller Type]: Select one of the following items according to the controller to be connected.

When connecting to FP0/1/2/3/5, FP0H, FP-M, FPΣ, or FP-X: [Panasonic MEWNET-FP]

When connecting to FP7: [Panasonic FP7]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1351 Communication detail settings

***4.*** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## [Panasonic MEWNET-FP]

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 1) | 1 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

## [Panasonic MEWTOCOL-7]

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8bit |
| Stop Bit | 1bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 27.5 PLC Side Setting

**Point**

Panasonic Industrial Devices SUNX PLC

For details of the Panasonic Industrial Devices SUNX PLC, refer to the following manual.

Panasonic Industrial Devices SUNX PLC user's Manual



## Connecting to FP0/1/2/3/5, FP0H, FP-M, FPΣ, FP-X

### Connecting to the tool port of the PLC CPU

| Item | Set value |
|---|---|
| Transmission speed*1 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 7bit, 8bit |
| Stop bit | 1bit |
| Parity bit | Odd |
| Modem connection | No |
| Module No. | 1 |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1350 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

### Connecting to the RS232C and COM port of the PLC CPU

| Item | Set value |
|---|---|
| Transmission speed*1 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 7bit, 8bit |
| Stop bit | 1bit |
| Parity bit | Odd |
| Modem connection | No |
| Serial port action selection*2 | 1 (Computer link) |
| Module No. | 1 |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1350 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

*2 Set when connecting to FP0, FP1, FP2 or FP-M.

## Connecting to the computer communication unit

| Item | Set value |
|---|---|
| Transmission speed*1 | 4800bps, 9600bps, 19200bps |
| Data bit | 7bit, 8bit |
| Stop bit | 1bit |
| Parity bit | Odd |
| Parity check | Yes |
| Control signal | Invalidate CS, CD |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1350 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

## Connecting to the communication cassette

### ■Communication settings

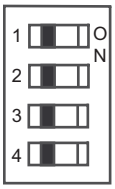
Set the commnumication settings for the COM 1 port and COM2 port to connect GOT.

| Item | Set value |
|---|---|
| Communication mode | Computer link |
| Transmission speed*1 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Modem connection | No |
| Data bit | 7bit, 8bit |
| Parity check | Odd |
| Stop bit | 1bit |
| Unit No. | 1 |
| Port selection*2 | Communication cassette |

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1350 Setting communication interface (Communication settings)
*2 Set the COM2 port only.

### ■Switch setting on the Communication cassette (AFPX-COM3)

Set the switch on the back.




| Switch No. | Setting | Setting details |
|---|---|---|
| 1 | OFF | RS422 |
| 2 | OFF | |
| 3 | OFF | |
| 4 | OFF | Terminating resistor OFF |

# Connecting to FP7

Set the communication using the ladder software "FPWIN GR7".
Assign COM numbers to the CPU module's built-in SCU and communication cassette, and then set the communication settings.

| Item | Set value |
|---|---|
| Communication mode | MEWTOCOL7-COM |
| Station No. | 1 |
| Transmission speed*1 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit*1 | 7bit, 8bit |
| Parity bit*1 | Odd |
| Stop bit*1 | 1bit |
| RS/CS | Invalid |
| Send wait time (Set value × 0.01ms) | 0 |
| Terminator code STX | Invalid |
| Termination setting | CR |
| Modem initialization | Do not initialize |

*1 Adjust the settings with GOT settings.
For the setting on the GOT side, refer to the following.
☞ Page 1350 Setting communication interface (Communication settings)

# 27.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

PANASONIC IDS equipment ([Panasonic MEWNET-FP])

PANASONIC IDS equipment ([Panasonic FP7])

# 28 HITACHI IES PLC


- Page 1357 Connectable Model List
- Page 1358 Serial Connection
- Page 1374 Ethernet Connection
- Page 1383 Settable Device Range


## 28.1 Connectable Model List

The following table shows the connectable models.



| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Large-sized H Series | H-302 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1358 Connection to large-sized H series |
| | H-702 | | | | |
| | H-1002 | | | | |
| | H-2002 | | | | |
| | H-4010 | | | | |
| | H-300 | × | | | |
| | H-700 | | | | |
| | H-2000 | | | | |
| H-200 to 252 Series | H-200 | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1362 Connecting to H-200 to 252, H series board type, or EH-150 |
| | H-250 | | | | |
| | H-252 | | | | |
| | H-252B | | | | |
| | H-252C | | | | |
| H Series board type | H-20DR | ○ | RS-232 | GT2506HS GT2505HS | ☞ Page 1362 Connecting to H-200 to 252, H series board type, or EH-150 |
| | H-28DR | | | | |
| | H-40DR | | | | |
| | H-64DR | | | | |
| | H-20DT | | | | |
| | H-28DT | | | | |
| | H-40DT | | | | |
| | H-64DT | | | | |
| | HL-40DR | | | | |
| | HL-64DR | | | | |
| EH-150 series | EH-CPU104 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1362 Connecting to H-200 to 252, H series board type, or EH-150 |
| | EH-CPU208 | ○ | | | |
| | EH-CPU308 | | | | |
| | EH-CPU316 | | | | |
| | EH-CPU516 | | | | |
| | EH-CPU548 | | | | |
| EHV series | EHV-CPU08 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 1374 Connecting to EHV or MICRO-EHV series |
| | EHV-CPU16 | | | | |
| | EHV-CPU32 | | | | |
| | EHV-CPU64 | | | | |
| | EHV-CPU128 | | | | |
| MICRO-EHV series | MVH-A40□□□ | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 1374 Connecting to EHV or MICRO-EHV series |
| | MVH-D40□□□ | | | | |
| | MVH-A64□□□ | | | | |
| | MVH-D64□□□ | | | | |

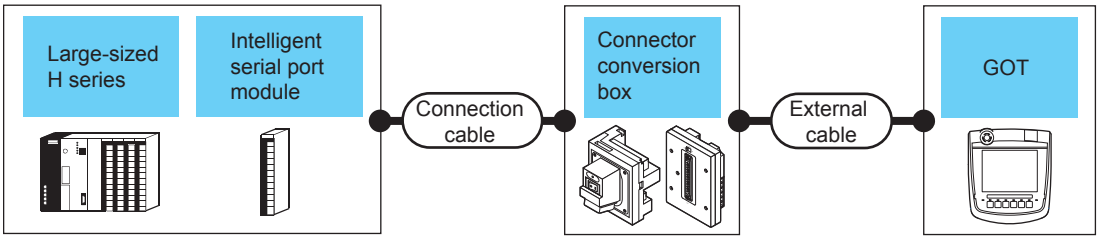
# 28.2 Serial Connection

## Connection to large-sized H series

Communication driver

· HITACHI IES HIDIC H
· HITACHI IES HIDIC H(Protocol2)

### When using the connector conversion box




To use transmission control procedure 2 as a protocol, select [HITACHI IES HIDIC H(Protocol2)] for the communication driver.

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Intelligent serial port module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| H-302*2<br>H-702*2<br>H-1002*2<br>H-2002*2<br>H-300<br>H-700<br>H-2000 | - | RS-232 | GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| H-4010 | | | • Specified transmission speed: 4800bps<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>• Specified transmission speed: 19200bps<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4)<br>• Specified transmission speed: 38400bps*3<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4)<br>• Transmission speed other than the above<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

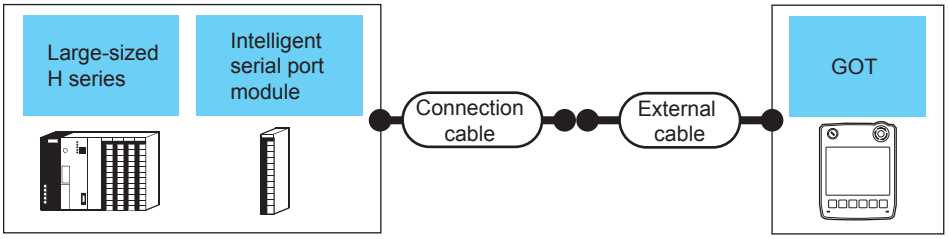
| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Intelligent serial port module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| H-302<br>H-702<br>H-1002<br>H-2002<br>H-4010<br>H-300<br>H-700<br>H-2000 | COMM-H<br>COMM-2H | RS-232 | GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 intelligent serial port module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | GT09-C30R40401-7T(3m)<br>GT09-C100R40401-7T(10m)<br>or<br>User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Connect to the peripheral port of the CPU module.

*3 Can be specified with the CPU software of revision "J" or later.

## When using the external cable (GT11H-C□□□-37P)



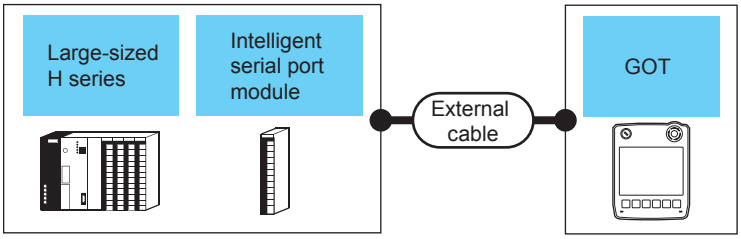

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Intelligent serial port module*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| H-302*2<br>H-702*2<br>H-1002*2<br>H-2002*2<br>H-300<br>H-700<br>H-2000 | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| H-4010 | - | RS-232 | • Specified transmission speed: 4800bps<br>User preparing RS-232 connection diagram 2)<br>• Specified transmission speed: 19200bps<br>User preparing RS-232 connection diagram 5)<br>• Specified transmission speed: 38400bps*3<br>User preparing RS-232 connection diagram 5)<br>• Transmission speed other than the above<br>User preparing RS-232 connection diagram 2)<br>User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| H-302<br>H-702<br>H-1002<br>H-2002<br>H-4010<br>H-300<br>H-700<br>H-2000 | COMM-H<br>COMM-2H | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 intelligent serial port module |
| | | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Connect to the peripheral port of the CPU module.

*3 Can be specified with the CPU software of revision "J" or later.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Intelligent serial port module*1 | Communication Type | | | | |
| H-302*2<br>H-702*2<br>H-1002*2<br>H-2002*2<br>H-300<br>H-700<br>H-2000 | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| H-4010 | - | RS-232 | • Specified transmission speed: 4800bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>• Specified transmission speed: 19200bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6)<br>• Specified transmission speed: 38400bps*3<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6)<br>• Transmission speed other than the above<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| H-302<br>H-702<br>H-1002<br>H-2002<br>H-4010<br>H-300<br>H-700<br>H-2000 | COMM-H<br>COMM-2H | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 intelligent serial port module |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |

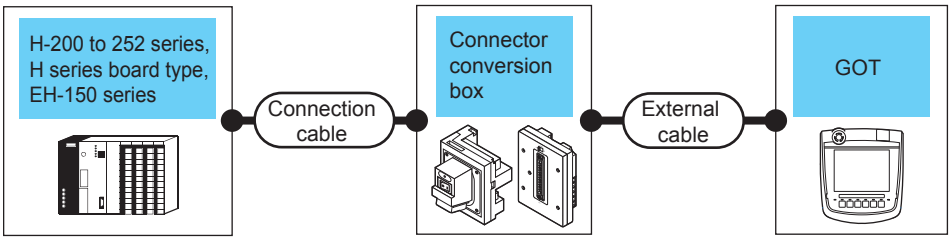
*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.
*2 Connect to the peripheral port of the CPU module.
*3 Can be specified with the CPU software of revision "J" or later.

# Connecting to H-200 to 252, H series board type, or EH-150

Communication driver

- HITACHI IES HIDIC H
- HITACHI IES HIDIC H(Protocol2)

## When using the connector conversion box




To use transmission control procedure 2 as a protocol, select [HITACHI IES HIDIC H(Protocol2)] for the communication driver.

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| H-200*1, H-250*1<br>H-252*1, H-252B*1<br>H-20DR, H-28DR<br>H-40DR, H-64DR<br>H-20DT, H-28DT<br>H-40DT, H-64DT<br>HL-40DR, HL-64DR | RS-232 | GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| H-252C*1*2 | | • Specified transmission speed: 4800bps<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>• Specified transmission speed: 19200bps<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4)<br>• Transmission speed other than the above<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

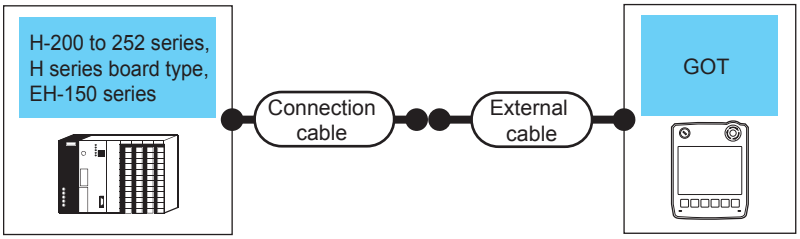
| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| EH-CPU104*3<br>EH-CPU208*3<br>EH-CPU308*3<br>EH-CPU316*3<br>EH-CPU516*3<br>EH-CPU548*3 | RS-232 | • Specified transmission speed: 4800bps<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>• Specified transmission speed: 19200bps<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4)<br>• Specified transmission speed: 38400bps<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4)<br>• Transmission speed other than the above<br>GT09-C30R20401-15P(3m)<br>or<br>User preparing RS-232 connection diagram 1)<br>GT09-C30R20402-15P(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

## When using the external cable (GT11H-C□□□-37P)



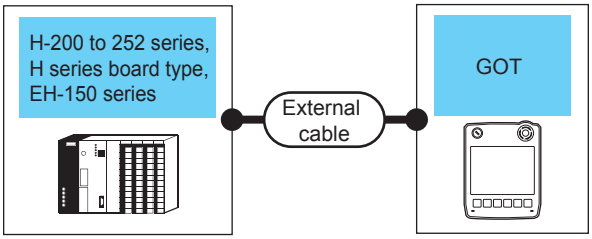

| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| H-200*1, H-250*1<br>H-252*1, H-252B*1<br>H-20DR, H-28DR<br>H-40DR, H-64DR<br>H-20DT, H-28DT<br>H-40DT, H-64DT<br>HL-40DR, HL-64DR | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC7 |
| H-252C*1*2 | | • Specified transmission speed: 4800bps<br>User preparing RS-232 connection diagram 2)<br>• Specified transmission speed: 19200bps<br>User preparing RS-232 connection diagram 5)<br>• Transmission speed other than the above<br>User preparing RS-232 connection diagram 2)<br>User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| EH-CPU104*3<br>EH-CPU208*3<br>EH-CPU308*3<br>EH-CPU316*3<br>EH-CPU516*3<br>EH-CPU548*3 | RS-232 | • Specified transmission speed: 4800bps<br>User preparing RS-232 connection diagram 2)<br>• Specified transmission speed: 19200bps<br>User preparing RS-232 connection diagram 5)<br>• Specified transmission speed: 38400bps<br>User preparing RS-232 connection diagram 5)<br>• Transmission speed other than the above<br>User preparing RS-232 connection diagram 2)<br>User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| **Model name** | **Communication Type** | | | | |
| H-200[*1], H-250[*1]<br>H-252[*1], H-252B[*1]<br>H-20DR, H-28DR<br>H-40DR, H-64DR<br>H-20DT, H-28DT<br>H-40DT, H-64DT<br>HL-40DR, HL-64DR | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| H-252C[*1*2] | | • Specified transmission speed: 4800bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>• Specified transmission speed: 19200bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6)<br>• Transmission speed other than the above<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>☞ RS-232 connection diagram 6) | GT 2505HS | | |
| EH-CPU104[*3]<br>EH-CPU208[*3]<br>EH-CPU308[*3]<br>EH-CPU316[*3]<br>EH-CPU516[*3]<br>EH-CPU548[*3] | RS-232 | • Specified transmission speed: 4800bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>• Specified transmission speed: 19200bps<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6)<br>• Specified transmission speed: 38400bps[*3]<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6)<br>• Transmission speed other than the above<br>GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

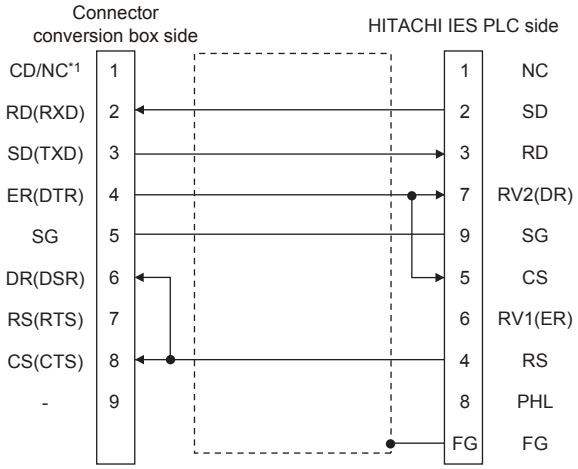
# Connection diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

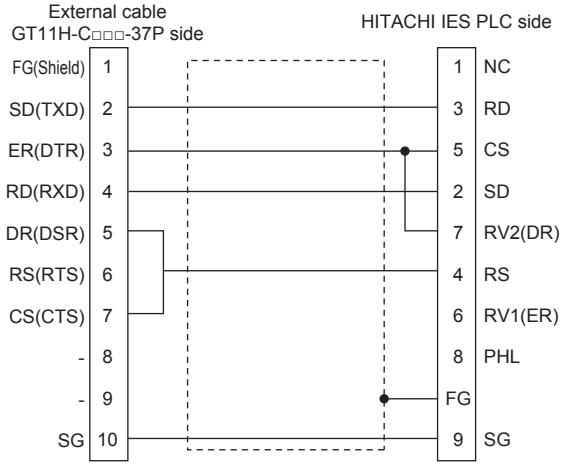
### ■Connection diagram

• RS-232 connection diagram 1)

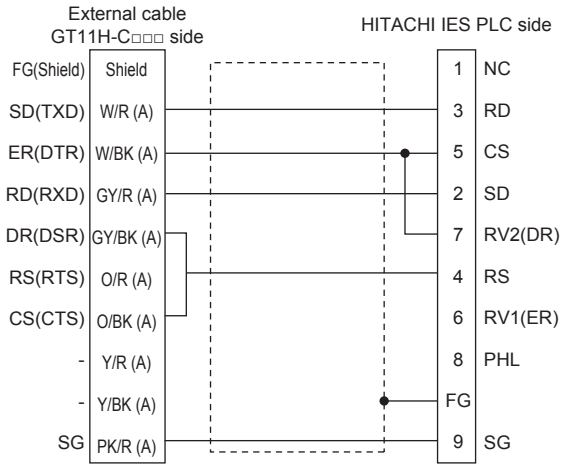



*1 GT2506HS-V: CD, GT2505HS-V: NC

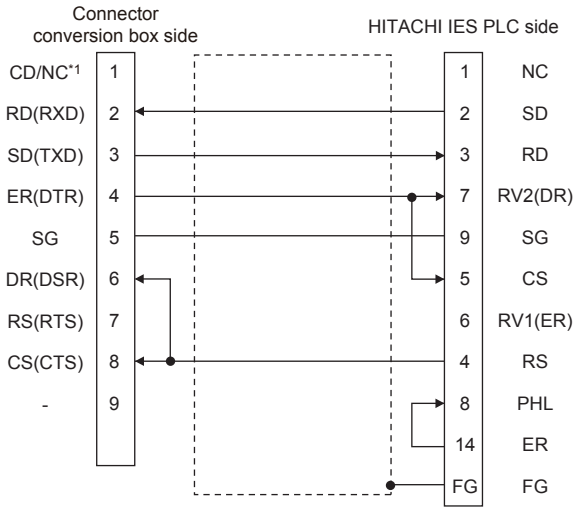
• RS-232 connection diagram 2)




• RS-232 connection diagram 3)

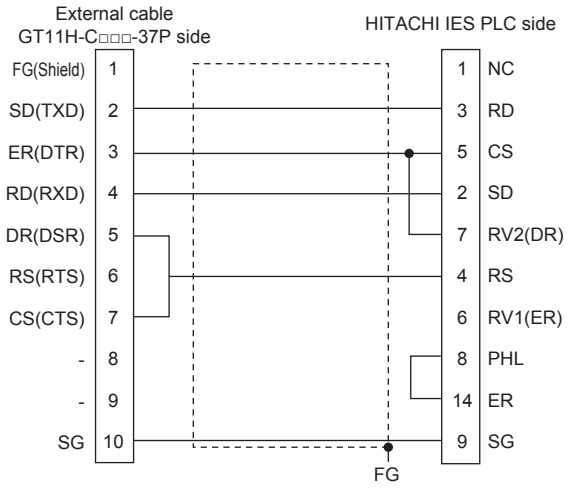


• RS-232 connection diagram 4)

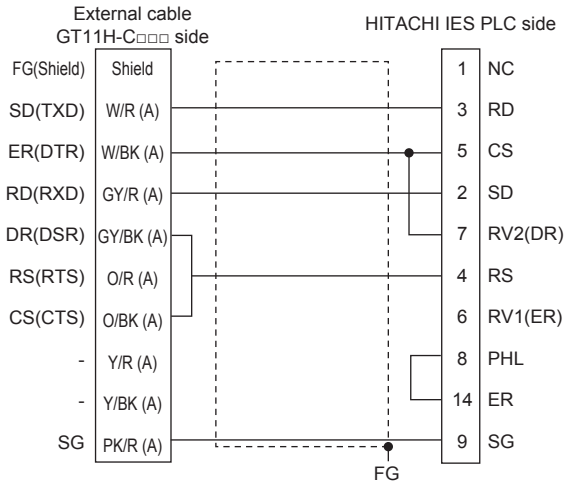



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)




• RS-232 connection diagram 6)



### ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• HITACHI IES PLC side connector

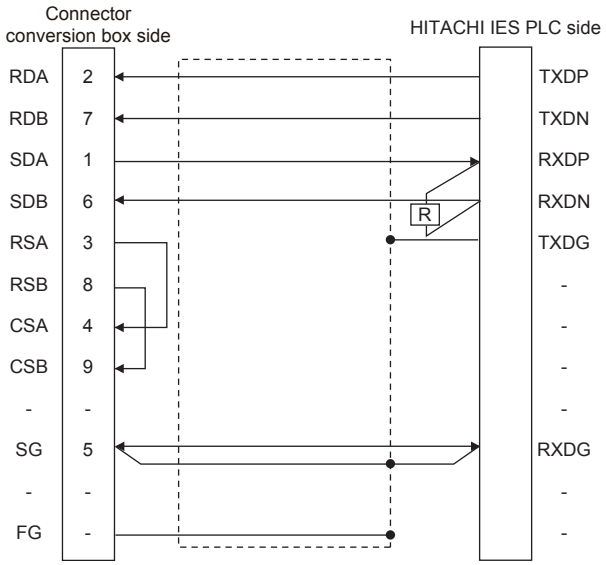
Use the connector compatible with the HITACHI IES PLC side module.

For details, refer to the HITACHI IES PLC user's manual.

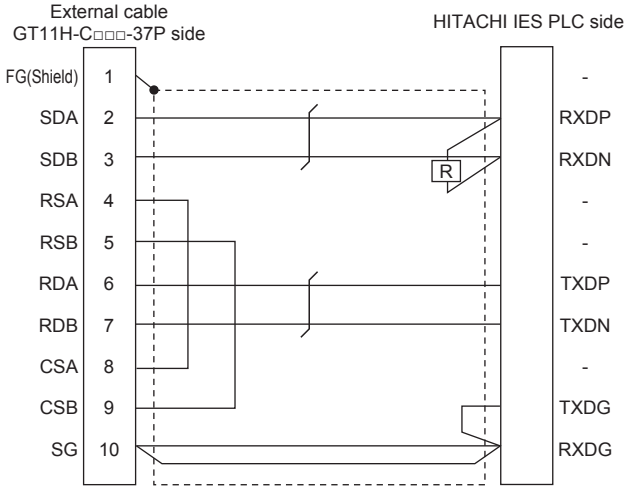
## RS-422 cable

### ■Connection diagram

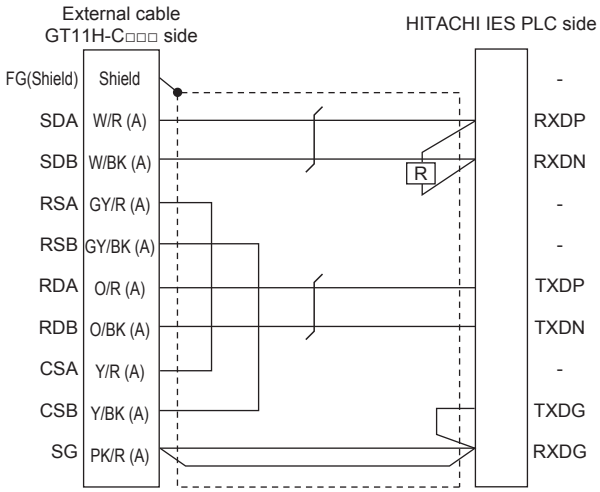
• RS-422 connection diagram 1)




• RS-422 connection diagram 2)



• RS-422 connection diagram 3)




## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• HITACHI IES PLC side connector

Use the connector compatible with the HITACHI IES PLC side module.

For details, refer to the HITACHI IES PLC user's manual.

## ■Connecting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

• HITACHI IES PLC side

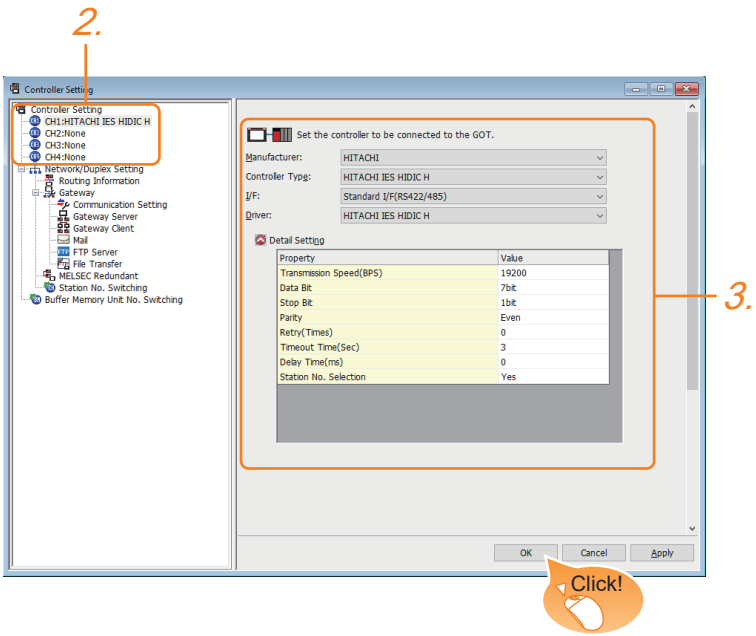
When connecting an intelligent serial port module to a GOT, a terminating resistor has to be connected to the intelligent serial port module.

📖HITACHI IES PLC user's Manual

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI IES HIDIC H]
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[HITACHI IES HIDIC H]

[HITACHI IES HIDIC H(Protocol2)]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1371 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

### ■HITACHI IES HIDIC H

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Station No. Selection | Yes |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bit) | 7bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |
| Station No. Selection*1 | Specify whether to use the station No. during communication.<br>If [Yes] is selected, the station No. is fixed to "0".<br>(Default: Yes) | Yes or No |

*1 By PLC port that is connected to the GOT, different [Station No. Selection] of the set as follows.
When a PLC port is RS422 port: [Yes]
When a PLC port is S232C port: [No]

## ■HITACHI IES HIDIC H(Protocol2)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Station No. Selection | Yes |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bit) | 7bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |
| Station No. Selection*1 | Specify whether to use the station No. during communication.<br>If [Yes] is selected, the station No. is fixed to "0".<br>(Default: Yes) | Yes or No |

*1 By PLC port that is connected to the GOT, different [Station No. Selection] of the set as follows.
When a PLC port is RS422 port: [Yes]
When a PLC port is S232C port: [No]

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC side setting

**Point**

HITACHI IES PLC

For details of the HITACHI IES PLC, refer to the following manual.

HITACHI IES PLC user's Manual

## Direct CPU connection (serial)

| Item | Set value |
|---|---|
| Transmission speed*1*2*3 | 4800bps, 9600bps, 19200bps, 38400bps |
| Station No. | 0 |
| Data bit | 7bit |
| Stop bit | 1bit |
| Parity bit | Even |
| Control Method | DTR control |
| Communication format | RS-232 |
| Sum check | Done |
| Protocol | transmission control procedure 1 |

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1371 Communication detail settings

*3 The setting range varies with the connected PLC.

## Connecting to the intelligent serial port module

### ■For transmission control procedure1

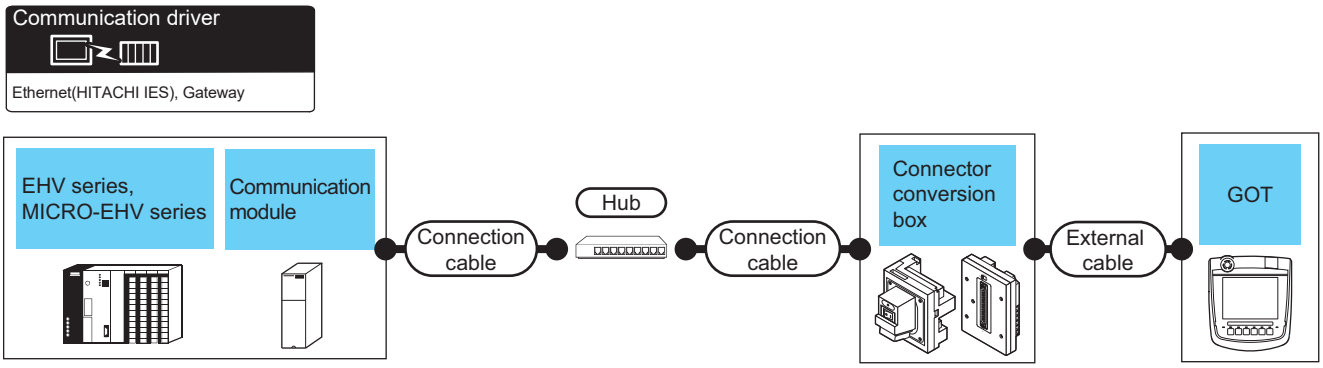
| Item | Set value |
|---|---|
| Transmission speed | 19200bps |
| Station No. | 0 |
| Data bit | 7bit |
| Stop bit | 1bit |
| Parity bit | Even |
| Control Method | None |
| Communication format | For RS-232 communication: RS-232 MODE switch 2<br>For RS-422 communication: RS-422 MODE switch 2 |
| Sum check | Done |

### ■For transmission control procedure2

| Item | Set value |
|---|---|
| Transmission speed | 19200bps |
| Station No. | 0 |
| Data bit | 7bit |
| Stop bit | 1bit |
| Parity bit | Even |
| Control Method | None |
| Communication format | For RS-232 communication: RS-232 MODE switch 9<br>For RS-422 communication: RS-422 MODE switch 9 |
| Sum check | Done |

# 28.3 Ethernet Connection

## Connecting to EHV or MICRO-EHV series




| PLC | | Connection cable *2 | Maximum segment length *3 | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module *1 | | | | | | |
| EHV-CPU08<br>EHV-CPU16<br>EHV-CPU32<br>EHV-CPU64<br>EHV-CPU128 | - | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N:1<br>128 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N<br>4 GOTs or less for 1 PLC |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |
| | EH-ETH<br>EH-ETH2<br>EH-ELK<br>EH-ORML<br>EH-R2LH<br>EH-OR2LH | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N:1<br>128 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N<br>36 GOTs or less for 1 PLC *5 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |
| MVH-A40□□□<br>MVH-D40□□□<br>MVH-A64□□□<br>MVH-D64□□□ | - | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N:1<br>128 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N<br>4 GOTs or less for 1 PLC |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd. For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

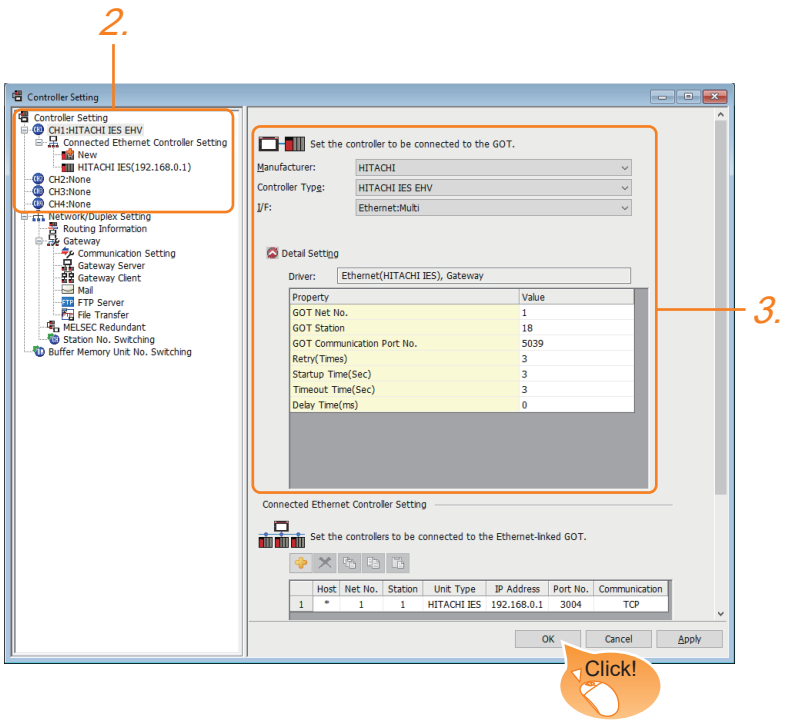
*5 The number of connectable GOTs differs depending on the communication module to be used.
The number of GOTs connectable to one PLC can be calculated as follows.
[Number of logical port] × ([Built-in Ethernet port of PLC] + [Communication module])

| Model name | Description | Number of logical ports | Number of communication modules that can be used together for one PLC |
|---|---|---|---|
| EH-ETH | Ethernet module | 4 | 2 |
| EH-ETH2 | Ethernet module | 4 | 8 |
| EH-ELK | Ethernet large capacity CPU link module | 2 | 2 |
| EH-ORML | Optical remote module (Slave station) | 4 | 1 |
| EH-R2LH | H series compatible coaxial remote module (Slave station) | 4 | 1 |
| EH-OR2LH | H series compatible optical remote module (Slave station) | 4 | 1 |

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI IES EHV]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1377 Communication detail settings

**4.** When you have completed the setting, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5039 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station *1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5039 *2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1379 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port
- Extension port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

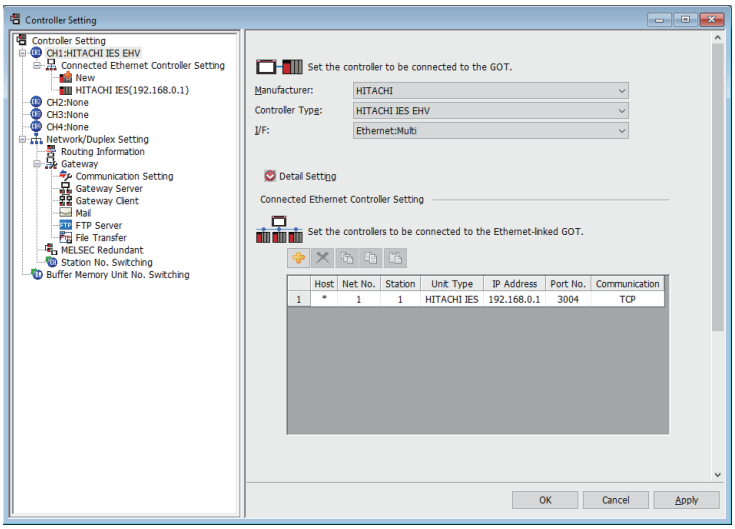
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet controller setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. *3 | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *2*3 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 254 |
| Unit Type | HITACHI IES (fixed) | HITACHI IES (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet equipment.<br>(Default: 192.168.0.1) | PLC side IP address |
| Port No. *4 | Set the port No. of the connected Ethernet equipment.<br>(Default: 3004) | 1024 to 65534 |
| Communication format | Select a communication protocol.<br>(Default: TCP) | UDP, TCP |

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1377 Communication detail settings

*3 It is used to identify the connected Ethernet equipment, but not used for the actual communication with the connected Ethernet equipment.

*4 Four communication ports can be set for the PLC and communication module.
Since a piece of equipment can be connected to one port, set the port No. for each controller.

# PLC side setting

**Point**

For details of the HITACHI IES PLC, refer to the following manual.

HITACHI IES PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| EHV series (built-in Ethernet interface)<br>MICRO-EHV series (built-in Ethernet interface) | | Page 1380 When connecting to EHV series and MICRO-EHV series (built-in Ethernet interface) |
| Ethernet module | EH-ETH2 | Page 1381 When connecting to Ethernet module (EH-ETH2) |

## When connecting to EHV series and MICRO-EHV series (built-in Ethernet interface)

Configure the settings using the engineering tool for the EHV series.

The following shows examples of settings.

| Item | | Set value | Range |
|---|---|---|---|
| IP Address *1 | | [ ].[ ].[ ].[ ] | PLC side IP address |
| Subnet Mask | | [ ].[ ].[ ].[ ] | PLC side setting |
| Default Gateway | | [ ].[ ].[ ].[ ] | |
| Transmission speed/method | | AUTO | AUTO, 100M/Full duplex, 10M/Half duplex |
| Port 1 | Valid / Invalid | Valid | PLC side setting |
| | Port No. | 3004 | |
| | Protocol | TCP/IP | |
| Port 2 | Valid / Invalid | Valid | |
| | Port No. | 3005 | |
| | Protocol | TCP/IP | |
| Port 3 | Valid / Invalid | Valid | |
| | Port No. | 3006 | |
| | Protocol | TCP/IP | |
| Port 4 | Valid / Invalid | Valid | |
| | Port No. | 3007 | |
| | Protocol | TCP/IP | |
| Time out *2 | | 30(sec) | |

*1 Adjust the settings with GOT settings.
Page 1379 Connected Ethernet controller setting

*2 Set a value greater than 3 seconds.
When it is set to three seconds or less, a timeout may occur even when there is no network failure due to cable disconnection.

## When connecting to Ethernet module (EH-ETH2)

### ■Setting DIP switches

Set the operation mode using DIP switches.

| Setting DIP switches | Operation mode | Description |
|---|---|---|
| All switches OFF<br>  | Normal operation mode | Normal operation is performed. |
| No.5, 6 ON<br>  | Utility mode | A transmission/reception test is performed. |
| No.4, 6 ON<br>  | | Set the Ethernet information using a ladder program. |
| No.1 ON<br>No.4 to 8: Fourth octet of IP address<br>  | Communication parameter setting mode | Set the Ethernet information and ASR information using the engineering tool for EH-ETH2.<br>Nos. 4 to 8 are assigned as the temporary IP address for the communication parameter setting mode.<br>For details, refer to the following.<br>☞ Page 1381 Communication parameter setting mode |

### ■Communication parameter setting mode

When the DIP switch No.1 of EH-ETH2 is ON and Nos.2 and 3 are OFF, Nos. 4 to 8 are assigned as the temporary IP address for the communication parameter setting mode.

Up to the third octet of the temporary IP address is fixed to [192.168.0.**], and the forth octet (lower 5 bits) is determined with by the ON or OFF status of Nos.4 to 8.

The values that can be set are [192.168.0.1] to [192.168.0.31]. [192.168.0.0] cannot be set.

After changing the DIP switches, turn on and then off the PLC.

When an IP address that can be connected to a personal computer has already been set, setting the temporary IP address is not required.

The following describes the IP address for communication parameter setting mode corresponding to the ON or OFF status of the DIP switch Nos.4 to 8.

| DIP switch status | | | | | Binary | Hexadecimal | Decimal | IP address for communication parameter setting mode |
|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | | | | |
| OFF | OFF | OFF | OFF | ON | b'00001 | H'01 | 1 | 192.168.0.1 |
| ON | OFF | ON | ON | ON | b'10110 | H'16 | 22 | 192.168.0.22 |
| ON | ON | ON | ON | ON | b'11111 | H'1F | 31 | 192.168.0.31 |

## ■Network setting using the engineering tool for EH-ETH2

Use the engineering tool for EH-ETH2 to set the IP address, subnet mask, and others.

When the temporary IP address has been set, input the temporary IP address when starting the engineering tool for EH-ETH2.

After the network setting, when the temporary IP address has been set, return all DIP switches to their original positions and turn on and then off the PLC again.

The following shows examples of settings.

| Item | | Set value | Range |
|---|---|---|---|
| IP address setting | IP Address *1 | [ ].[ ].[ ].[ ] | PLC side IP address |
| | Subnet Mask | [ ].[ ].[ ].[ ] | PLC side setting |
| | Default Gateway | [ ].[ ].[ ].[ ] | |
| | Communication speed/mode | Auto Negotiation | Auto Negotiation, 100Mbps/Full Duplex, 10Mbps/Half Duplex |
| Connection destination setting for communication check | IP address | [ ].[ ].[ ].[ ] | Connection destination setting |
| | Port No. | 4000 | |
| Task code communication port setting | Task code port timeout | Enable | Enable, Disable |
| | Timeout time *2 | 30(sec) | PLC side setting |
| Port 1 | Port No. | 3004 | |
| | Protocol | TCP/IP | |
| Port 2 | Port No. | 3005 | |
| | Protocol | TCP/IP | |
| Port 3 | Port No. | 3006 | |
| | Protocol | TCP/IP | |
| Port 4 | Port No. | 3007 | |
| | Protocol | TCP/IP | |

*1 Adjust the settings with GOT settings.
☞ Page 1379 Connected Ethernet controller setting

*2 Set a value greater than 3 seconds.
When it is set to three seconds or less, a timeout may occur even when there is no network failure due to cable disconnection.

# 28.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
HITACHI IES equipment ([HITACHI IES EHV])
HITACHI IES equipment ([HITACHI IES HIDIC H])

# MEMO

# 29 HITACHI PLC


- Page 1385 Connectable Model List
- Page 1386 Serial connection
- Page 1398 Ethernet Connection
- Page 1404 Settable Device Range


## 29.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| S10V | LQP510 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1386 Connecting to S10V |
| | LQP520 | | | | |
| S10mini | LQP800 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1388 Connecting to S10mini |
| | LQP000 | | | | |
| | LQP010 | | | | |
| | LQP011 | | | | |
| | LQP120 | | | | |
| S10VE | LQP600 | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 1398 Connecting to S10VE |

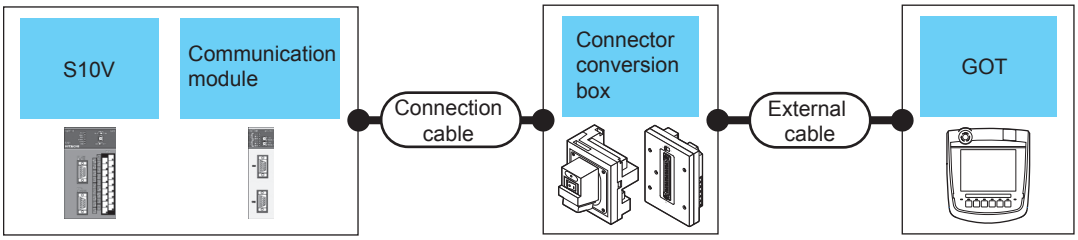
# 29.2 Serial connection

## Connecting to S10V

Communication driver

HITACHI S10mini/S10V

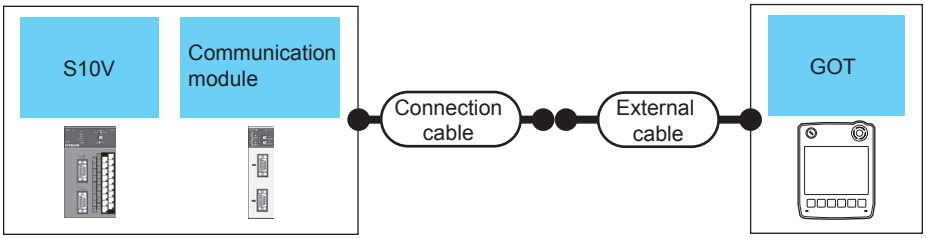
### When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| LQP510 LQP520 | LQE560 | RS-232 | GT09-C30R21301-9S (3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | LQE565 | RS-422 | GT09-C30R41301-9S (3m) GT09-C100R41301-9S(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| LQP510 | - | | GT09-C30R41301-9S (3m) GT09-C100R41301-9S(10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

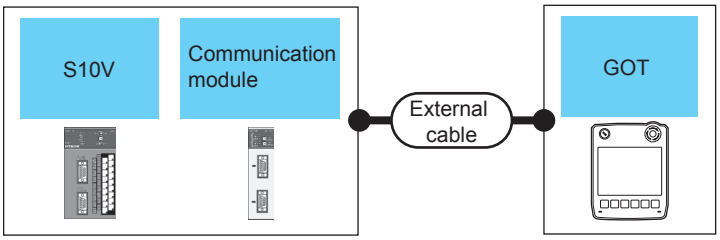
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| LQP510 LQP520 | LQE560 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | LQE565 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| LQP510 | - | | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 1 GOT for 1 PLC |

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | | | | |
| LQP510 LQP520 | LQE560 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>User preparing RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | LQE565 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>User preparing RS-422 connection diagram 3) | GT 2505HS | 13m | |
| LQP510 | - | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>User preparing RS-422 connection diagram 3) | GT 2505HS | | 1 GOT for 1 PLC |

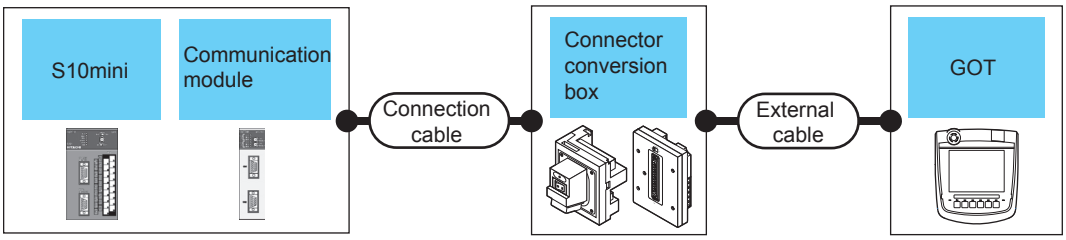
*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

# Connecting to S10mini

Communication driver

HITACHI S10mini/S10V

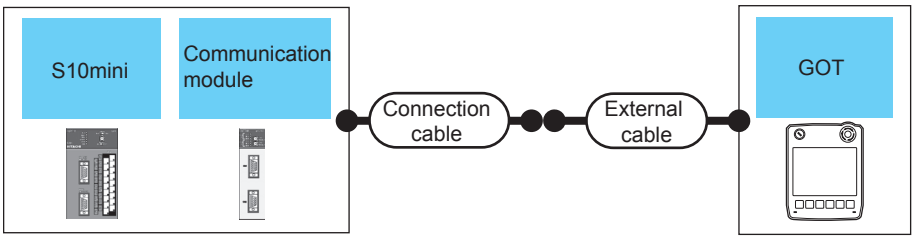
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| S10mini | LQE560<br>LQE060<br>LQE160 | RS-232 | GT09-C30R21301-9S (3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | LQE565<br>LQE165 | RS-422 | GT09-C30R41301-9S (3m)<br>GT09-C100R41301-9S(10m)<br>or<br>User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

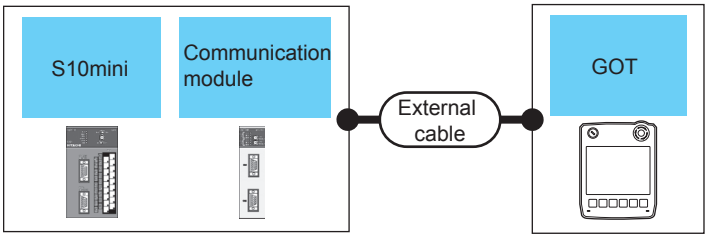
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| S10mini | LQE560<br>LQE060<br>LQE160 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | LQE565<br>LQE165 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication module*1 | Communication Type | | | | |
| S10mini | LQE560<br>LQE060<br>LQE160 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>(User preparing) RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | LQE565<br>LQE165 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>(User preparing) RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

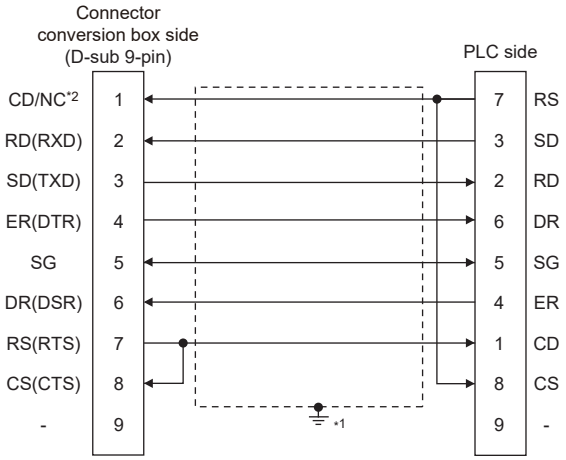
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

### ■Connection diagram

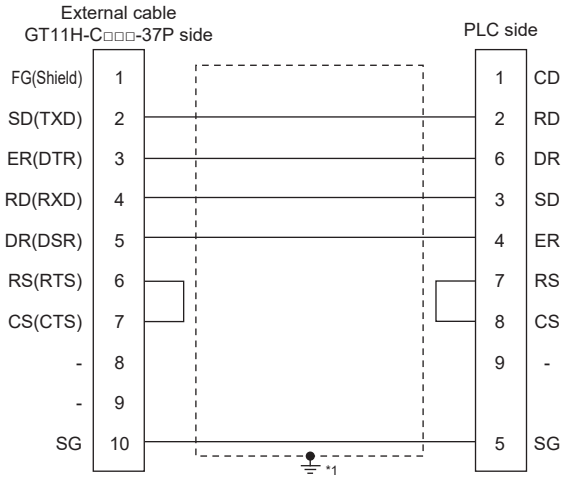
• RS-232 connection diagram 1)




*1 Connect FG grounding to the appropriate part of a cable shield line.

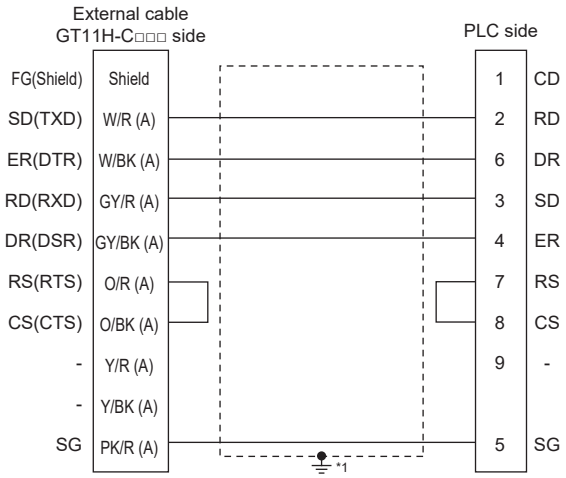
*2 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-232 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• HITACHI PLC side connector

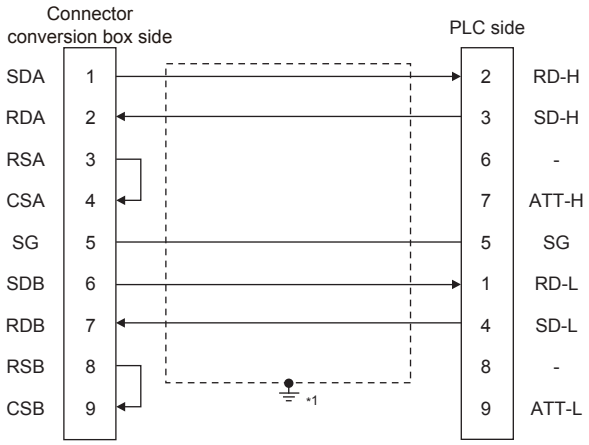
Use the connector supporting the HITACHI PLC side module.

For details, refer to the HITACHI PLC user's manual.

## RS-422 cable

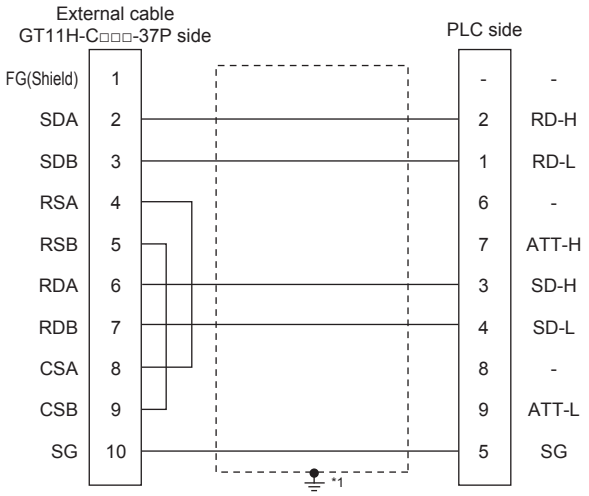
### ■Connection diagram

• RS-422 connection diagram 1)



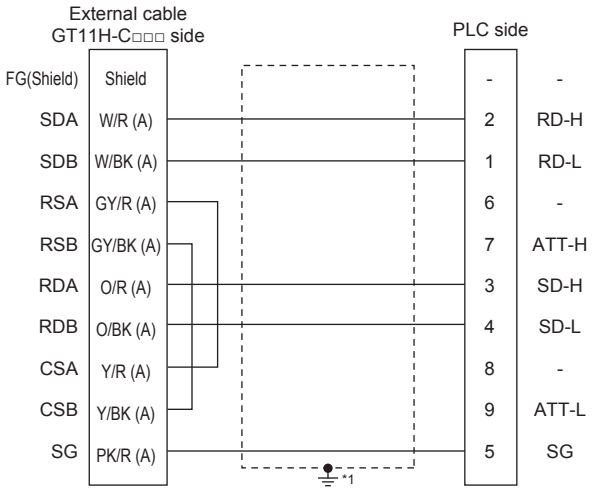

*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-422 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-422 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• HITACHI PLC side connector

Use the connector compatible with the HITACHI PLC side module.

For details, refer to the HITACHI PLC user's manual.

## ■Connecting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

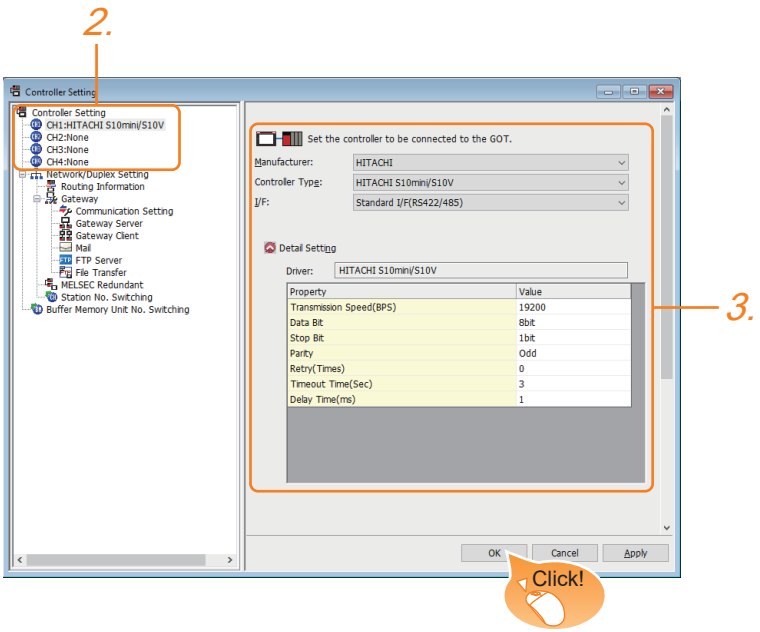
The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI S10mini/S10V]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1395 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 8bits) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300(ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

HITACHI PLC

For details of HITACHI PLCs, refer to the following manuals.

HITACHI PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| Communication module | LQE560 | ☞ Page 1396 Connecting to communication module |
| | LQE060 | |
| | LQE160 | |
| | LQE565 | |
| | LQE165 | |

## Connecting to communication module

### ■Communication settings

Make the communication settings of the Communication module.

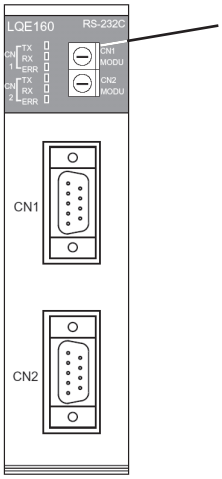
| Item | Set value |
|---|---|
| Channel No. setting*1*2 | #0 to #3 |
| Protocol setting | H-7338 protocol |
| Transmission speed | 19200bps (fixed) |
| Data bit | 8bits (fixed) |
| Parity bit | Odd (fixed) |
| Start bit | 1 bit (fixed) |
| Stop bit | 1 bit (fixed) |

*1 The ranges of available channel No. differ depending on the model of communication module.

*2 Avoid duplication of the channel No.

## ■Settings by switch

Make the communication settings using each setting switch.




Setting switches for the channel No. and the protocol
CN1 MODU, CN2 MODU

- Settings of the channel No. and the protocol



CN1
MODU



CN2
MODU

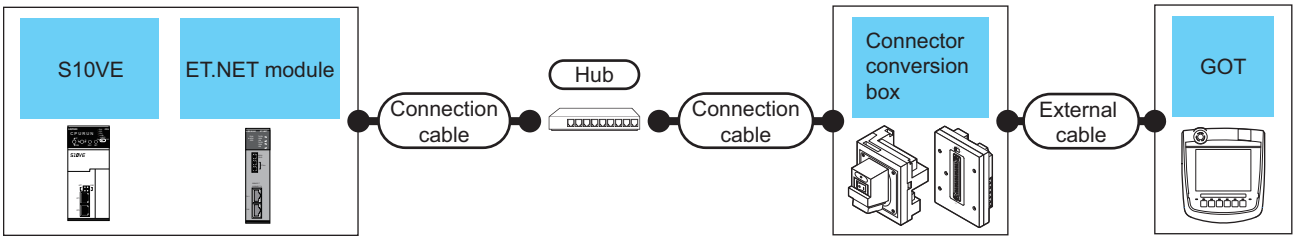
| Switch position | Protocol | Channel No. |
|---|---|---|
| 8 | H-7338 | #0 |
| 9 | | #1 |
| A | | #2 |
| B | | #3 |

# 29.3 Ethernet Connection

## Connecting to S10VE

Communication driver

Ethernet(HITACHI), Gateway




| PLC | | Connection cable *2 | Max. distance | Connector conversion box | External cable *3 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | ET.NET module *1 | | | | | | |
| LQP600 | - | • 100BASE-TX<br>Unshielded twisted pair cable (UTP): Category 5e or higher<br>• 10BASE-T<br>Unshielded twisted pair cable (UTP): Category 5e or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 CPU for up to 2 GOTs |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| | LQE260-E | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 module for up to 2 GOTs |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Product manufactured by Hitachi, Ltd. For details of the product, contact Hitachi, Ltd.

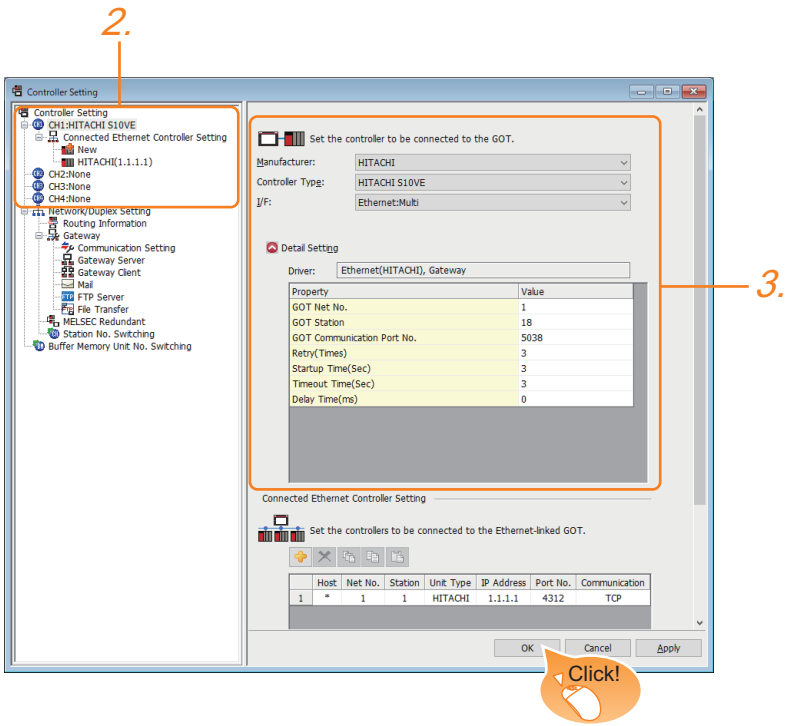
*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.
When the GOT is directly connected to the CPU with an Ethernet cable, use a cross cable.

*3 Use C or later version of GT11H-C□□-37P.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI S10VE]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1400 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5038 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station *1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5038*2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1401 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port
- Extension port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

### ■IP filter setting

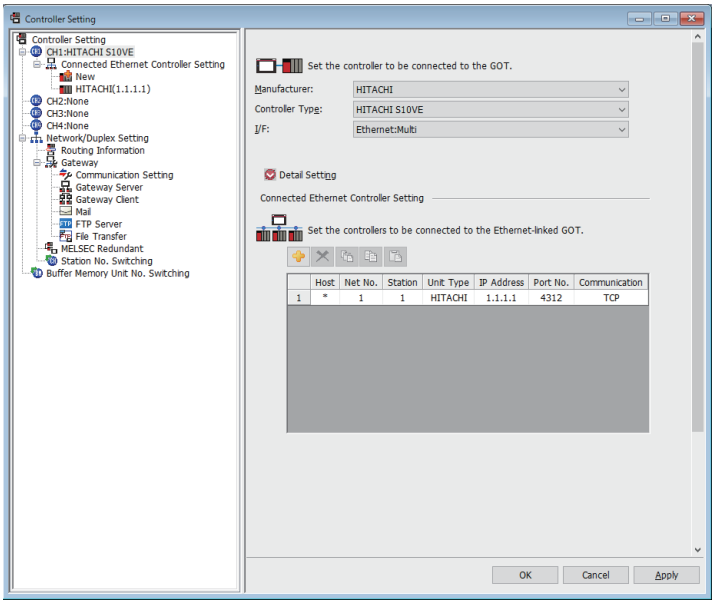
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting



## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *2 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 254 |
| Unit Type | HITACHI (fixed) | HITACHI (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet equipment.<br>(Default: 4312) | 4311 to 4315 *3 |
| Communication format | TCP (fixed) | TCP (fixed) |

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1400 Communication detail settings

*3 When the GOT is directly connected to the CPU, 4311 cannot be set.

# PLC side setting

**Point**

HITACHI PLC

For details of HITACHI PLCs, refer to the following manuals.

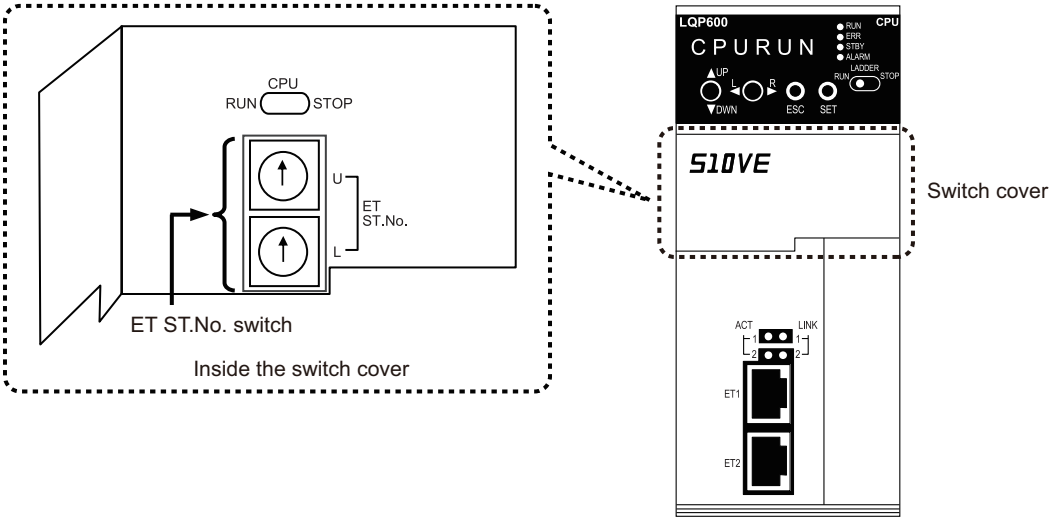
HITACHI PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| LQP600 (built-in Ethernet interface) | | Page 1402 When connecting to LQP600 (built-in Ethernet interface) |
| ET.NET module | LQE260-E | Page 1403 When connecting to the ET.NET module (LQE260-E) |

## When connecting to LQP600 (built-in Ethernet interface)

### ■ET ST.No. switch setting

Set the IP address.




| Setting value | | Description |
|---|---|---|
| U | L | |
| F | F | ET1: 192.192.192.1 (fixed)<br>ET2: 192.192.193.1 (fixed) |
| Other than the above combination | | Set the IP address using the engineering tool for S10VE. |

### ■Network setting using the engineering tool for S10VE

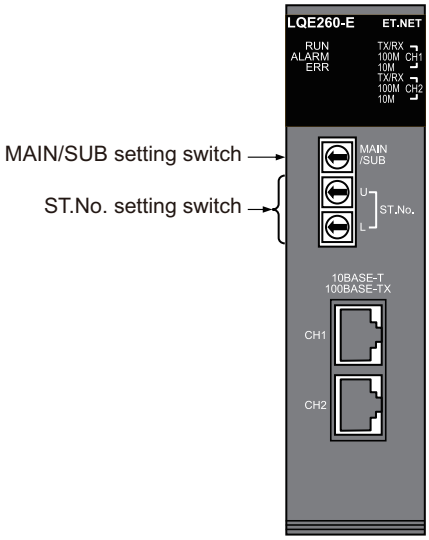
Use the engineering tool for S10VE to set the station No., IP address, and others.

For the station No., set the same value as the setting value of the ET ST.No. switch of the CPU module.

## When connecting to the ET.NET module (LQE260-E)

### ■Switch setting

Set the switches accordingly.




- MAIN/SUB setting switch

Set MAIN or SUB.

| Setting value | Description |
|---|---|
| 0 | MAIN setting (normal mode) *1 |
| 1 | SUB setting (normal mode) *1 |
| 2 | MAIN setting (port open mode) *2 |
| 3 | SUB setting (port open mode) *2 |
| 4 to F | Setting prohibited |

*1 Configure different settings for MAIN and SUB in the same module.

*2 In this mode, port No. 5000 or later is opened.
When the port open mode is set, connection to the ET.NET module using a tool is not available.

- ST.No. setting switch

Set the IP address.

| Setting value | | Description |
|---|---|---|
| U | L | |
| 0 | 0 | Set the IP address using the engineering tool for S10VE. |
| F | F | CH1: 192.192.192.1 (fixed)<br>CH2: 192.192.193.1 (fixed) |
| Other than the above combination | | Setting prohibited |

### ■Network setting using the engineering tool for S10VE

Use the engineering tool for S10VE to set the station No., IP address, and others.

# 29.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
HITACHI equipment ([HITACHI S10VE])
HITACHI equipment ([HITACHI S10mini/S10V])

# 30 FUJI PLC


- Page 1405 Connectable Model List
- Page 1406 Serial connection
- Page 1445 Ethernet Connection
- Page 1450 Settable Device Range
- Page 1450 Precautions


## 30.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| MICREX-F | F55 | × | RS-232<br>RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 1406 Connecting to MICREX-F55 |
| | F70 | × | RS-232<br>RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 1411 Connecting to MICREX-F70 |
| | F120S | × | RS-232<br>RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 1418 Connecting to MICREX-F120S/140S/15□S |
| | F140S | | | | |
| | F15□S | | | | |
| MICREX-SX SPH | SPH200 | × | RS-232<br>RS-485 | GT 2506 HS GT 2505 HS | ☞ Page 1424 Connecting to MICREX-SX SPH |
| | SPH300 | | | | |
| | SPH2000 | | | | |
| | SPH3000 | | | | |
| | SPH200 | × | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 1445 Connecting to MICREX-SX SPH |
| | SPH300 | | | | |
| | SPH2000 | | | | |
| | SPH3000 | | | | |

# 30.2 Serial connection

## Connecting to MICREX-F55

Communication driver

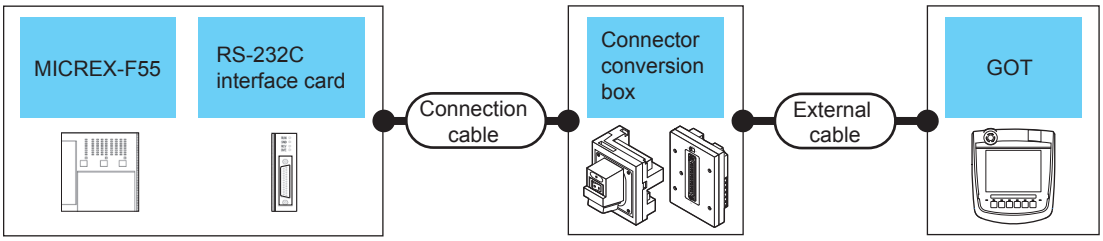
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following section.

☞ Page 1450 Precautions

### When using the RS-232 interface card

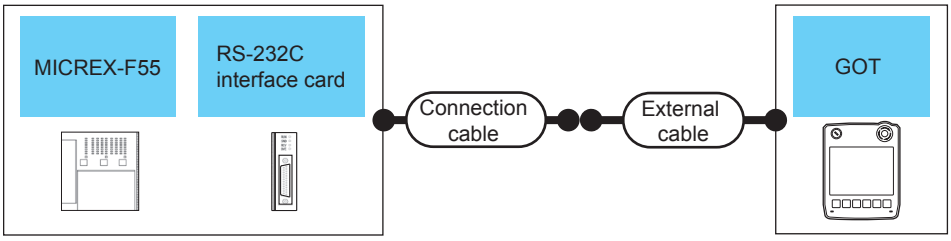
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C interface card*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F55 | NV1L-RS2 | RS-232 | GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C interface card |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

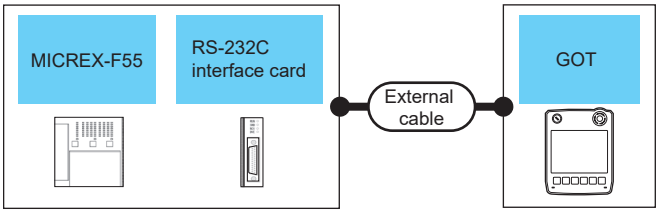
#### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C interface card*1 | Communication Type | Cable model Connection diagram number | | | | |
| F55 | NV1L-RS2 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS-232C interface card |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

### ■When using the external cable (GT11H-C□□□)

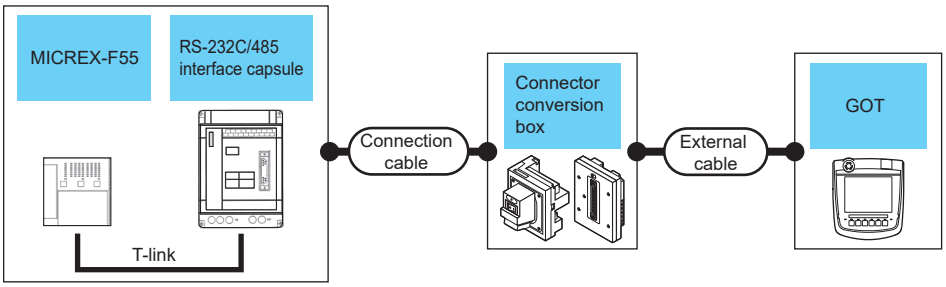



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C interface card*1 | Communication Type | | | | |
| F55 | NV1L-RS2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS-232C interface card |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

## When using the RS-232C/485 interface capsule

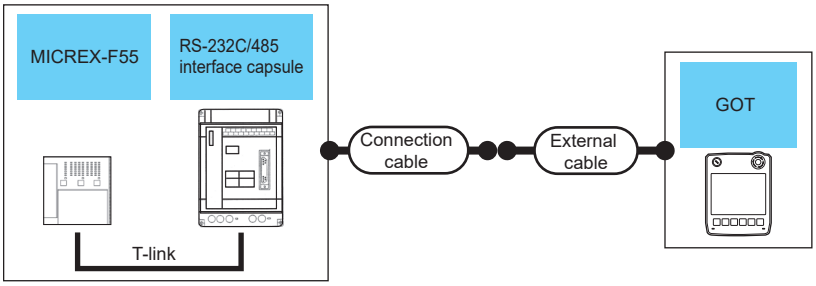
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F55 | FFK120A-C10 | RS-232 | GT09-C30R21003-25P(3m) or (User preparing) RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

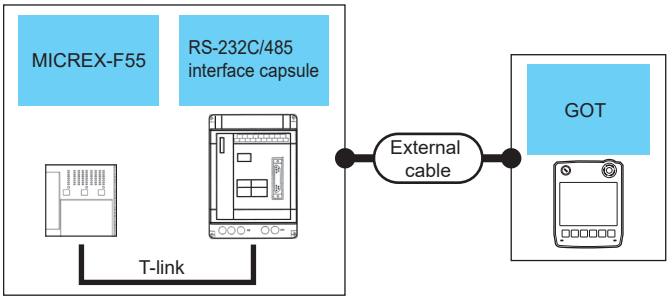



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F55 | FFK120A-C10 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)



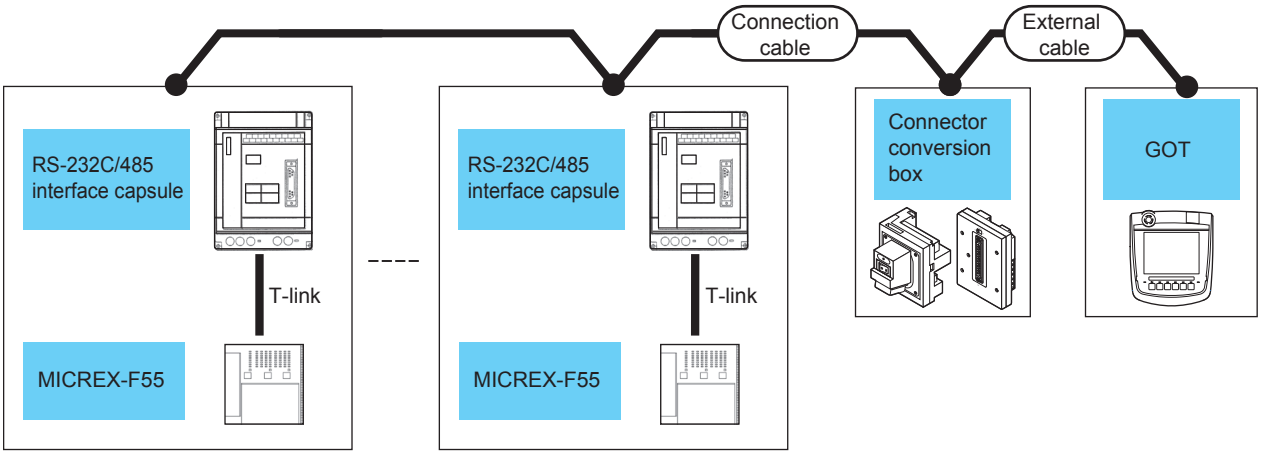

| PLC | | | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F55 | FFK120A-C10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

## When connecting to multiple PLCs

### ■When using the connector conversion box

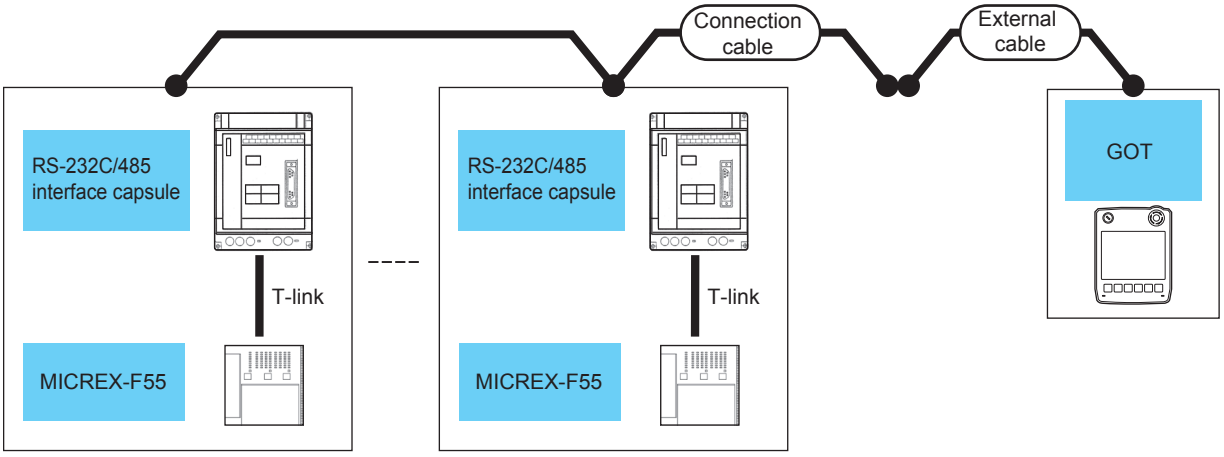



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F55 | FFK120A-C10 | RS-485 | GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

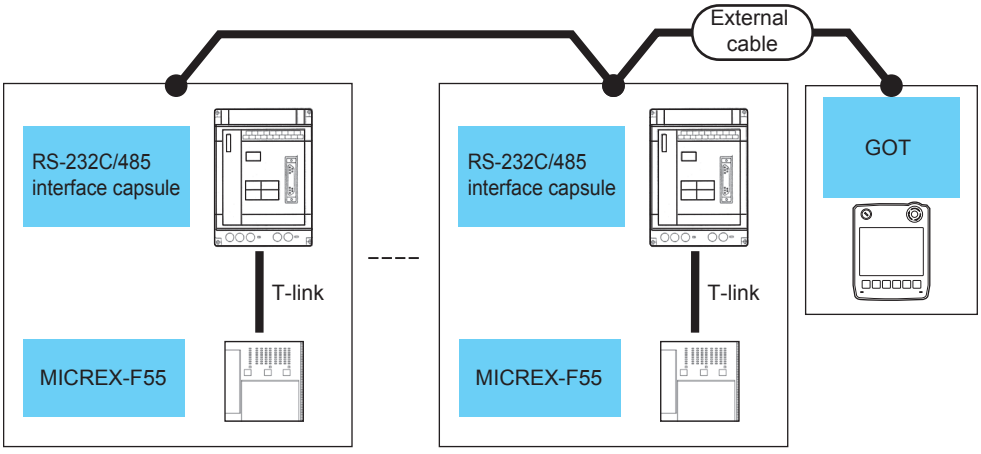



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F55 | FFK120A-C10 | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F55 | FFK120A-C10 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

# Connecting to MICREX-F70

Communication driver

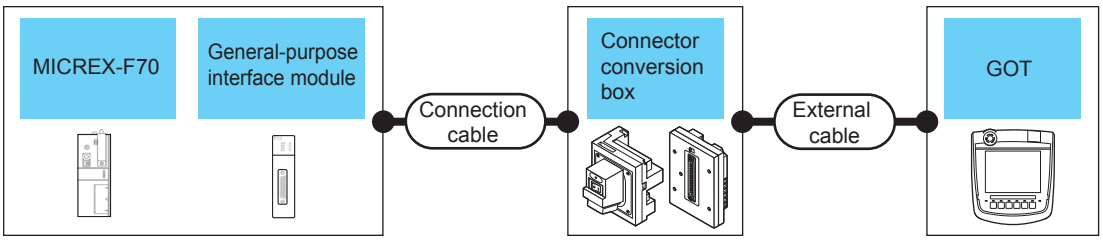
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following.

☞ Page 1450 Precautions

## When using general-purpose interface modules

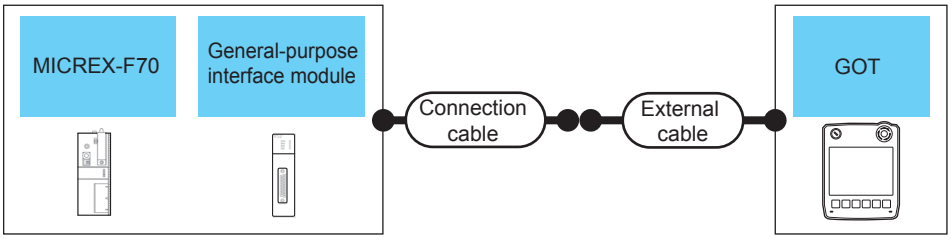
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F70 | NC1L-RS2 | RS-232 | GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 general-purpose interface module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

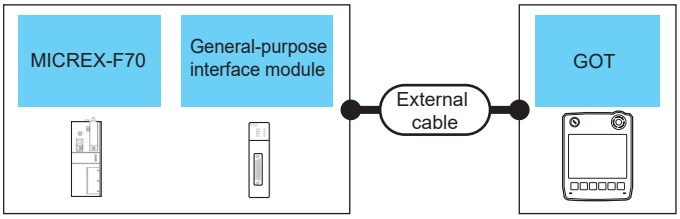
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | |
| F70 | NC1L-RS2 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 general-purpose interface module |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

### ■When using the external cable (GT11H-C□□□)

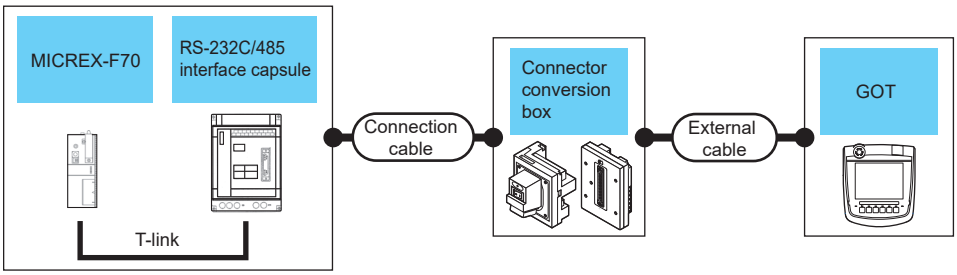



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | | | | |
| F70 | NC1L-RS2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 general-purpose interface module |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

## When using the RS-232C/485 interface capsule

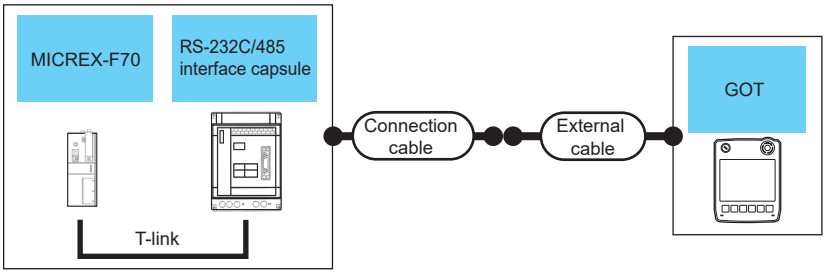
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F70 | FFK120A-C10 | RS-232 | GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

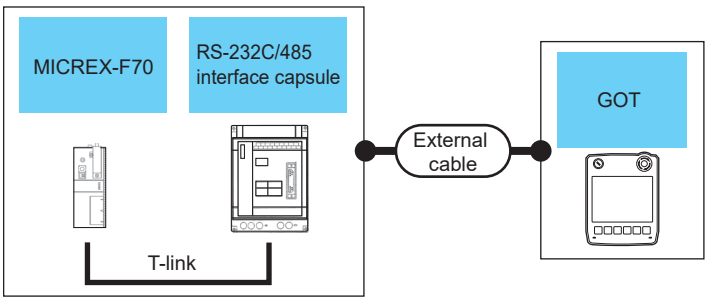



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F70 | FFK120A-C10 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)



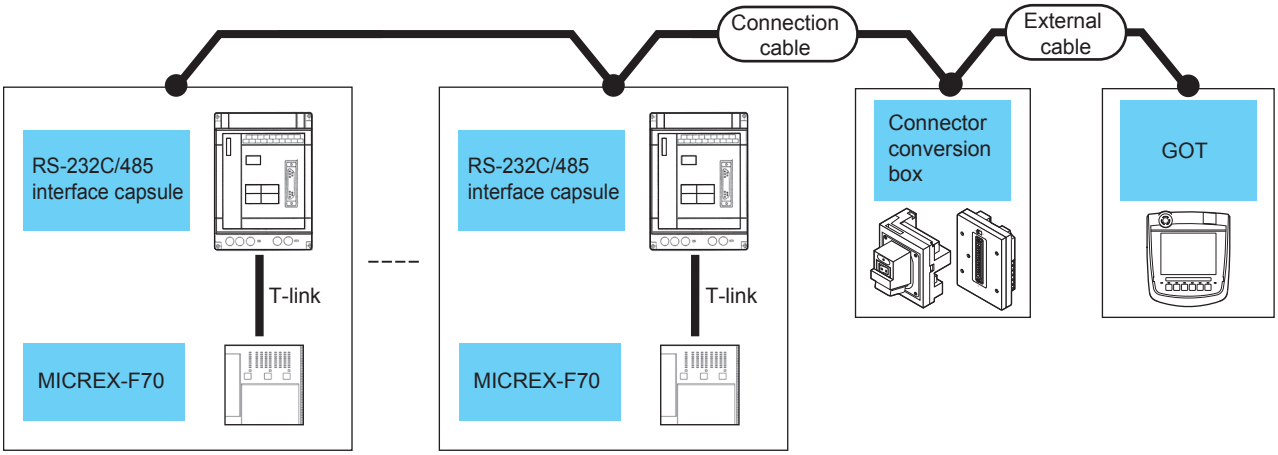

| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F70 | FFK120A-C10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

## When connecting to multiple PLCs (using RS-232C/485 interface capsules)

### ■When using the connector conversion box

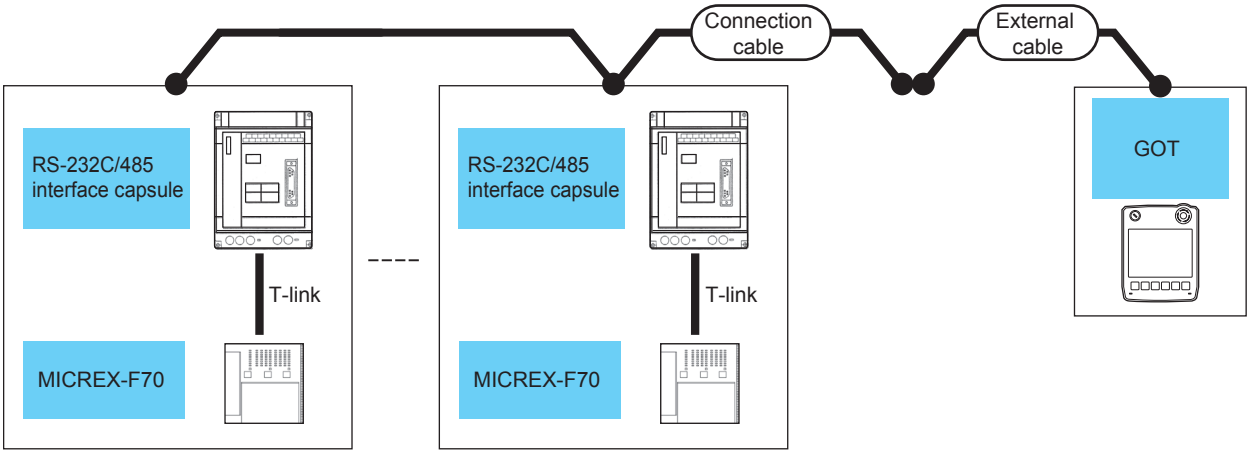



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F70 | FFK120A-C10 | RS-485 | GT09-C30R41001-6T(3m)<br>GT09-C100R41001-6T(10m)<br>or<br>User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

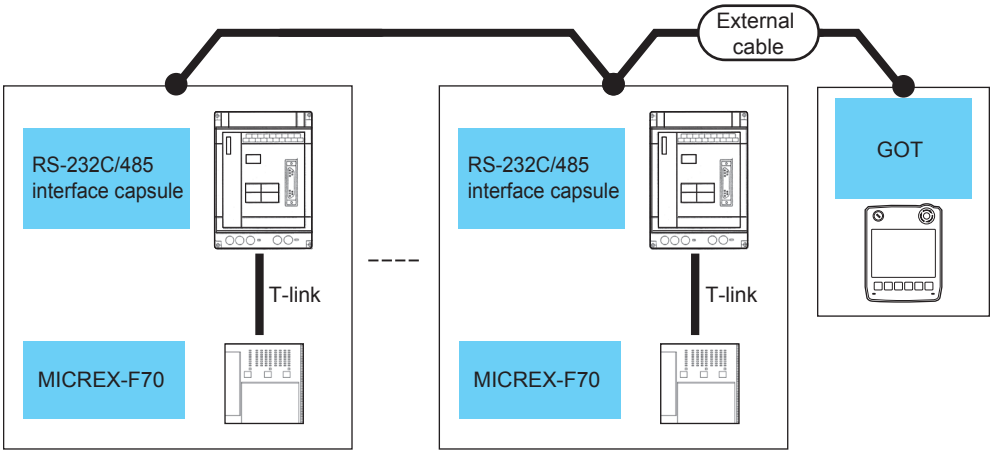



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F70 | FFK120A-C10 | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)



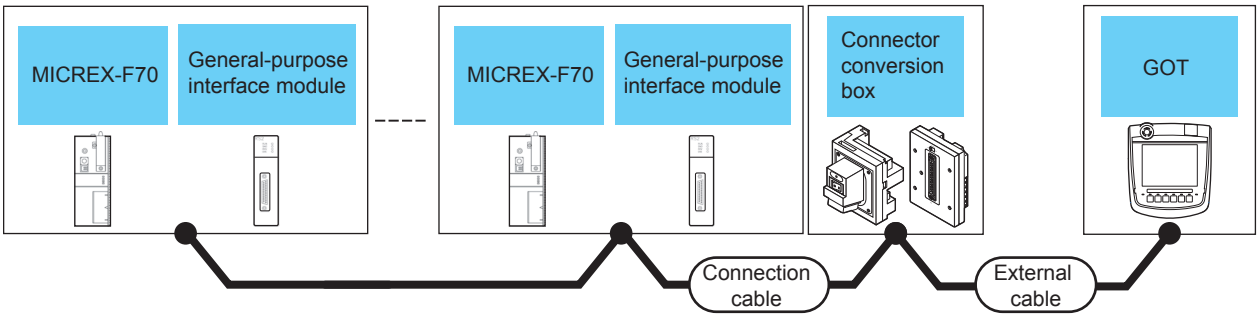

| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F70 | FFK120A-C10 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

## When connecting to multiple PLCs (using general-purpose interface modules)

### ■When using the connector conversion box

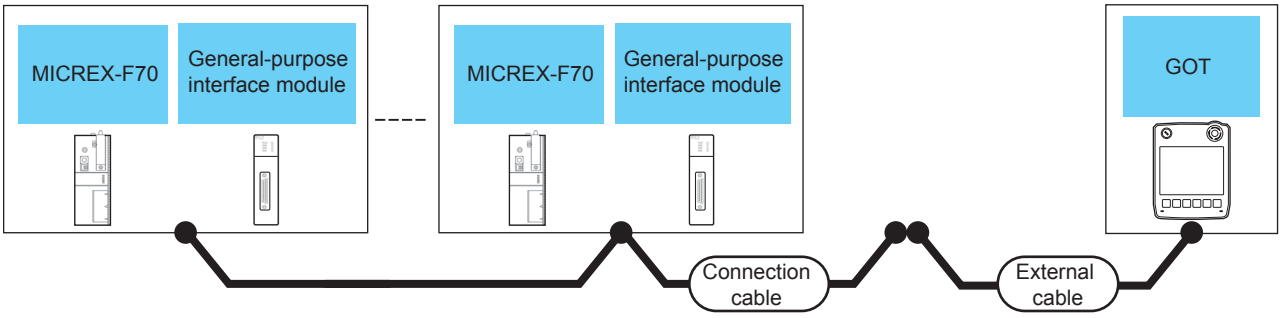



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F70 | NC1L-RS4 | RS-485 | GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for up to 31 PLCs (general-purpose interface modules) |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

### ■When using the external cable (GT11H-C□□□-37P)

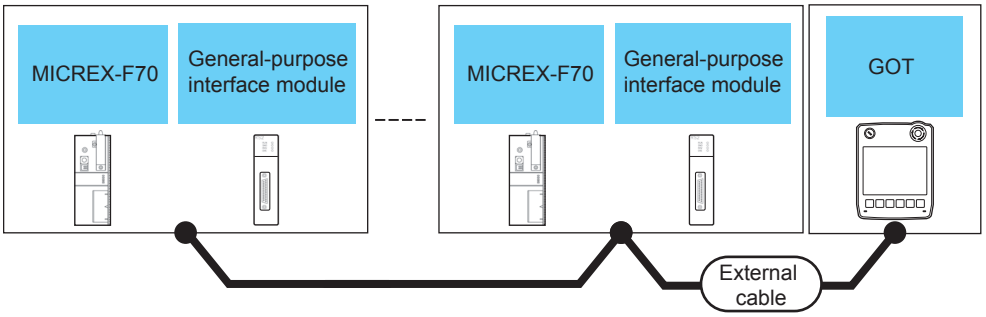



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | |
| F70 | NC1L-RS4 | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for up to 31 PLCs (general-purpose interface modules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | | | | |
| F70 | NC1L-RS4 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | 13m | 1 GOT for up to 31 PLCs (general-purpose interface modules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

# Connecting to MICREX-F120S/140S/15□S

Communication driver

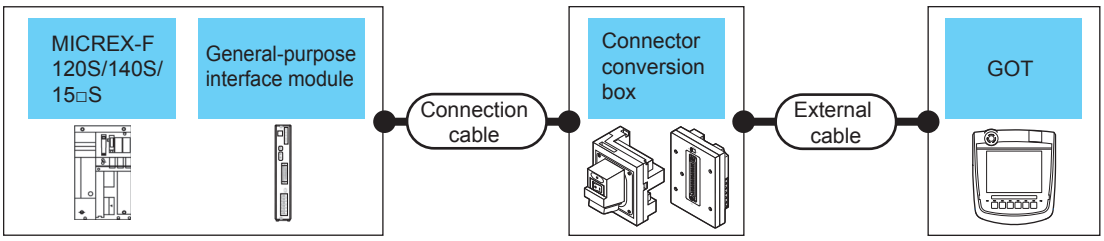
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following.

☞ Page 1450 Precautions

## When using general-purpose interface modules

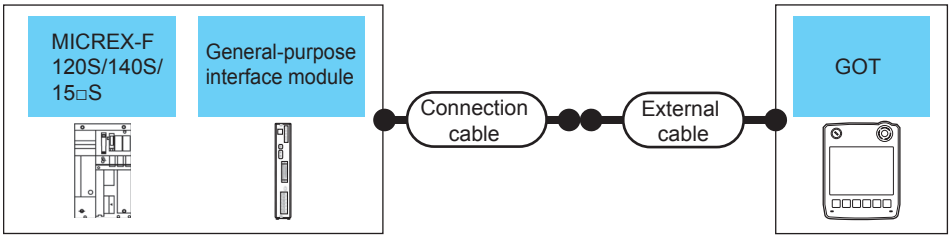
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F120S F140S F15□S | FFU120B | RS-232 | GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 general-purpose interface module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

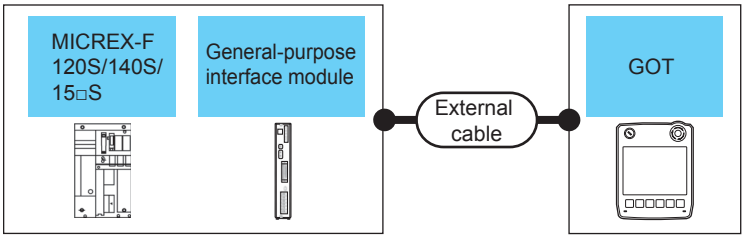
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | |
| F120S F140S F15□S | FFU120B | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 general-purpose interface module |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

### ■When using the external cable (GT11H-C□□□)

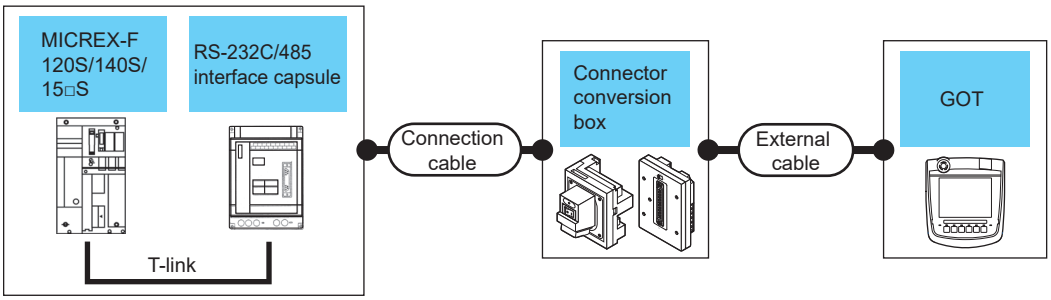



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | | | | |
| F120S<br>F140S<br>F15□S | FFU120B | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 general-purpose interface module |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

## When using the RS-232C/485 interface capsule

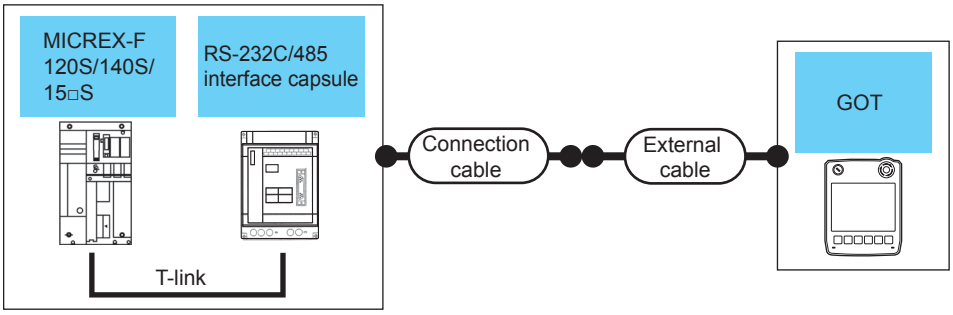
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| F120S<br>F140S<br>F15□S | FFK120A-C10 | RS-232 | GT09-C30R21003-25P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

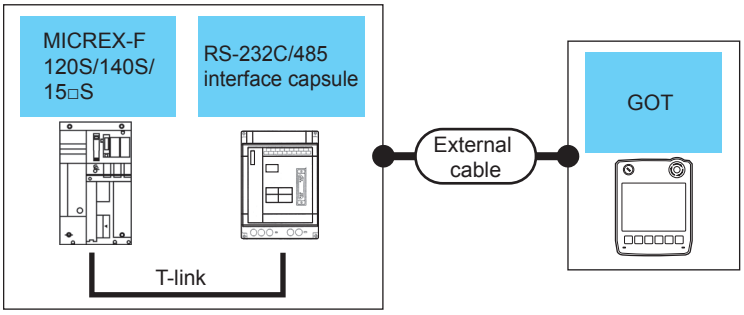



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F120S<br>F140S<br>F15□S | FFK120A-C10 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)



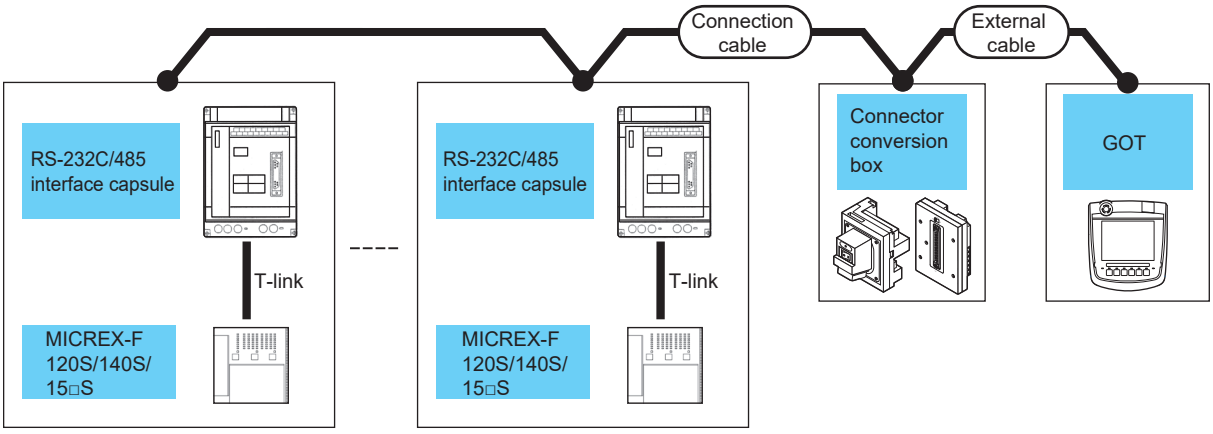

| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F120S<br>F140S<br>F15□S | FFK120A-C10 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 RS-232C/485 interface capsule |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

## When connecting to multiple PLCs (using RS-232C/485 interface capsules)

### ■When using the connector conversion box

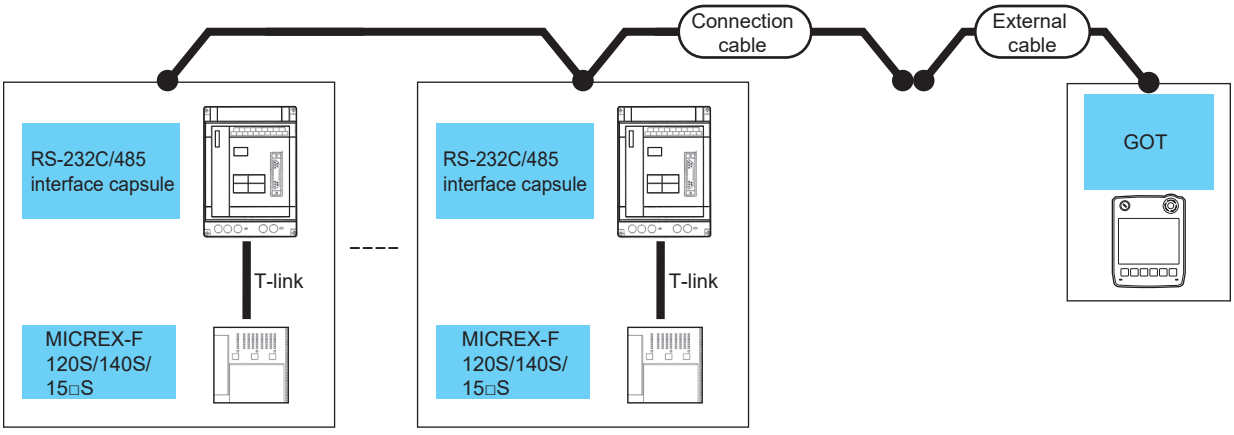



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F120S F140S F15□S | FFK120A-C10 | RS-485 | GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

### ■When using the external cable (GT11H-C□□□-37P)

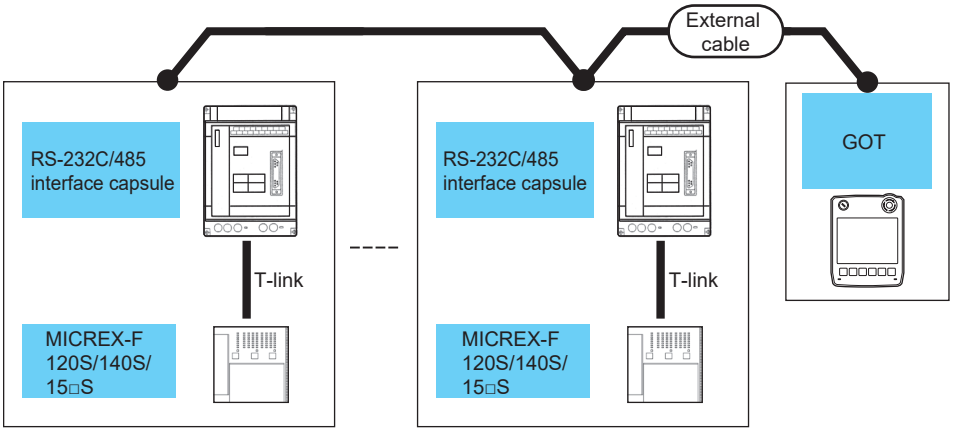



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | Cable model Connection diagram number | | | | |
| F120S F140S F15□S | FFK120A-C10 | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

### ■When using the external cable (GT11H-C□□□)



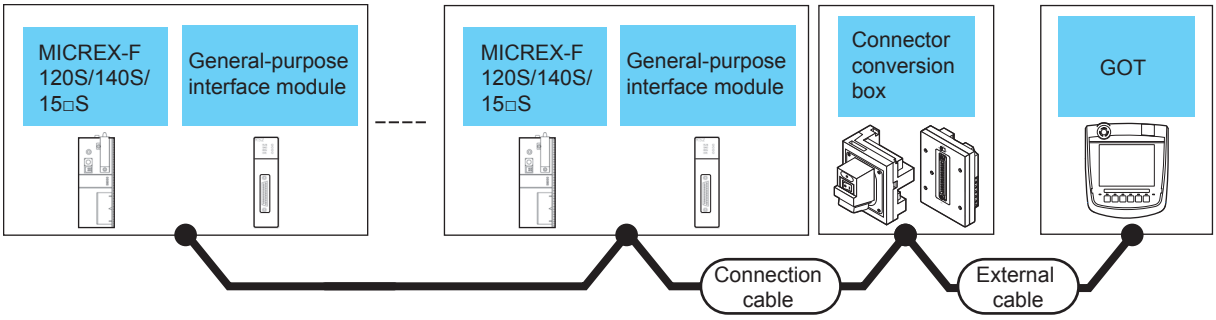

| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | RS-232C/485 interface capsule*1 | Communication Type | | | | |
| F120S<br>F140S<br>F15□S | FFK120A-C10 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | 13m | 1 GOT for up to 6 PLCs (RS-232C/485 interface capsules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

## When connecting to multiple PLCs (using general-purpose interface modules)

### ■When using the connector conversion box

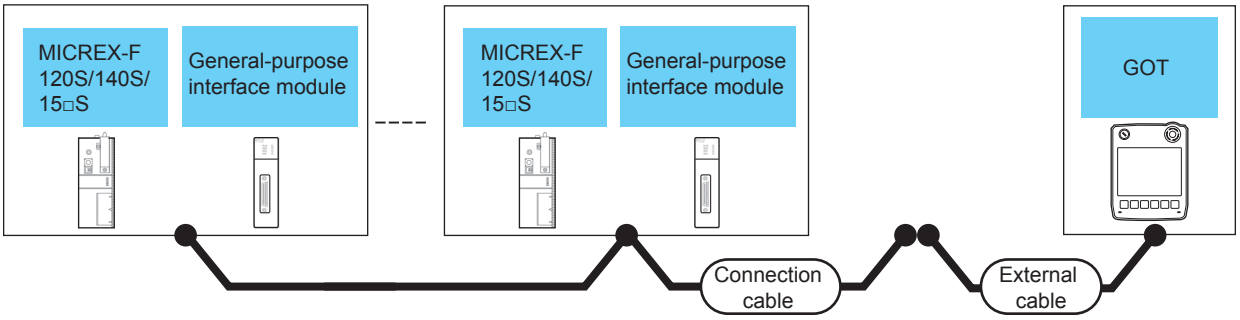



| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| F120S<br>F140S<br>F15□S | FFU120B | RS-485 | GT09-C30R41001-6T(3m)<br>GT09-C100R41001-6T(10m)<br>or<br>User preparing RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for up to 31 PLCs (general-purpose interface modules) |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□-37P)

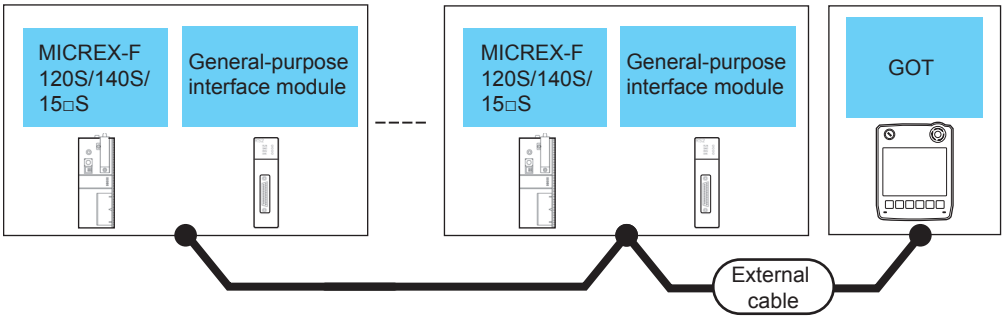



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | |
| F120S<br>F140S<br>F15□S | FFU120B | RS-485 | User preparing RS-485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for up to 10 PLCs (general-purpose interface modules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | | | | |
| F120S<br>F140S<br>F15□S | FFU120B | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 3) | GT 2505HS | 13m | 1 GOT for up to 10 PLCs (general-purpose interface modules) |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

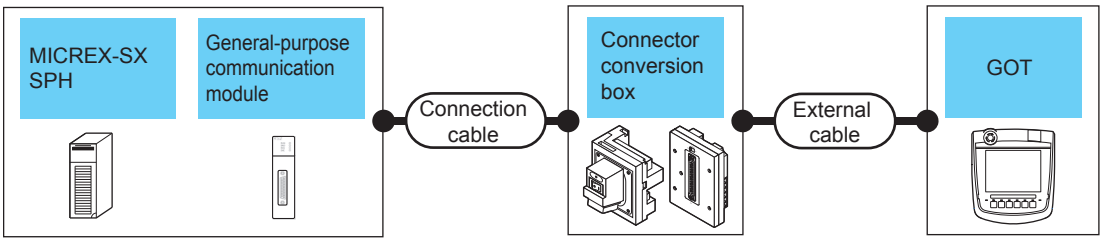
*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

# Connecting to MICREX-SX SPH

Communication driver

FUJI MICREX-SX SPH

## When using the connector conversion box



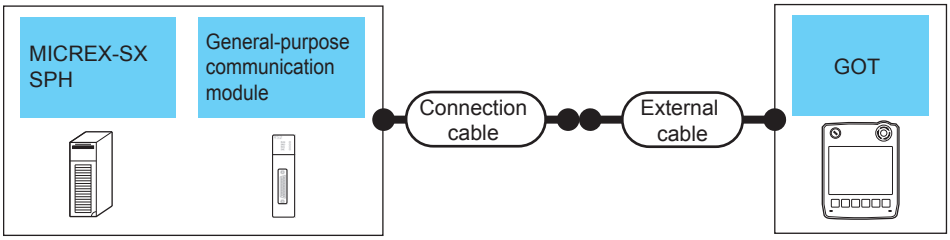

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| MICREX-SX SPH *2 | - | RS-232 | NP4H-CB2*1 + NW0H-CNV*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | NP4H-CB2(2m) *1 + NW0H-CNV*1 | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | 5m | 1 GOT for 1 General-purpose communication module |
| MICREX-SX SPH | NP1L-RS1 NP1L-RS2 NP1L-RS3 | | User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for Communication port of general-purpose communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | NP1L-RS1 NP1L-RS4 | RS-485 | User preparing RS-485 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | NP1L-RS5 | | User preparing RS-485 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 Depending on the hardware version of the PLC, the GOT cannot be connected.
The following shows the hardware versions of the PLCs that can be connected.

| Model | Type | Hardware version |
|---|---|---|
| SPH200 | NP1PH-08<br>NP1PH-16 | V21 or earlier |
| SPH300 | NP1PS-32<br>NP1PS-32R<br>NP1PS-74R<br>NP1PS-117R | V25 or earlier |
| | NP1PS-245R | V22 or earlier |
| SPH2000 | NP1PM-48R<br>NP1PM-48E<br>NP1PM-256E<br>NP1PM-256H | V24 or earlier |
| SPH3000 | NP1PU-048E<br>NP1PU-128E<br>NP1PU-256E | V21 or earlier |

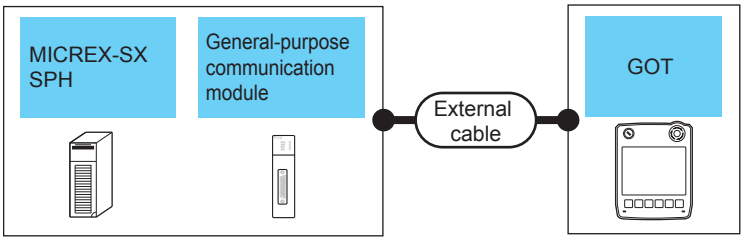
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | Cable model Connection diagram number | | | | |
| MICREX-SX SPH | NP1L-RS1<br>NP1L-RS2<br>NP1L-RS3 | RS-232 | User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for Communication port of general-purpose communication module |
| | NP1L-RS1<br>NP1L-RS4 | RS-485 | User preparing RS-485 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |
| | NP1L-RS5 | RS-485 | User preparing RS-485 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | General-purpose interface module*1 | Communication Type | | | | |
| MICREX-SX SPH | NP1L-RS1<br>NP1L-RS2<br>NP1L-RS3 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for Communication port of general-purpose communication module |
| | NP1L-RS1<br>NP1L-RS4 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 6) | GT 2505HS | 13m | |
| | NP1L-RS5 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-485 connection diagram 9) | GT 2505HS | | |

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

# Connection Diagram

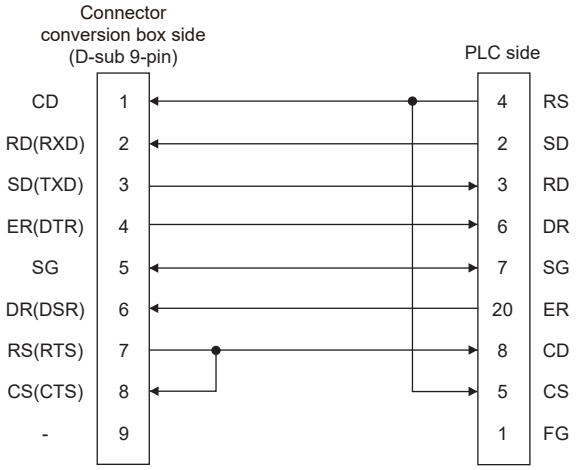
The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

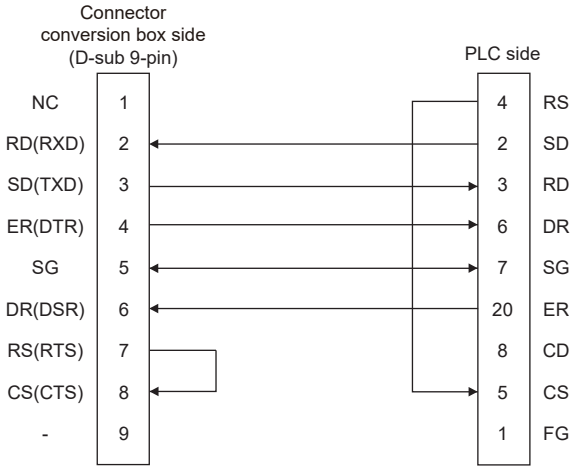
### ■Connection diagram

• RS-232 connection diagram 1)

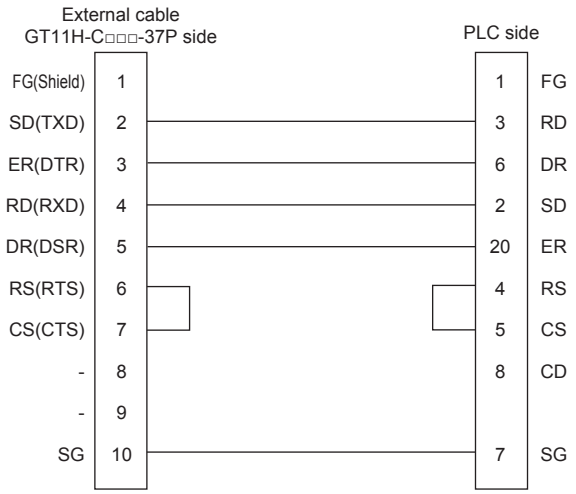
For GT2506HS-VTBD



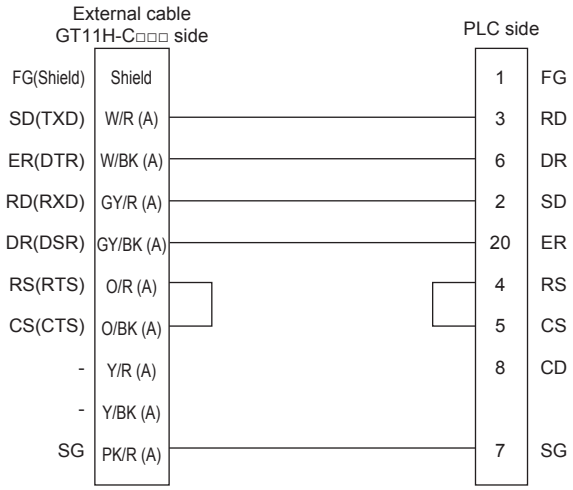

For GT2505HS-VTBD



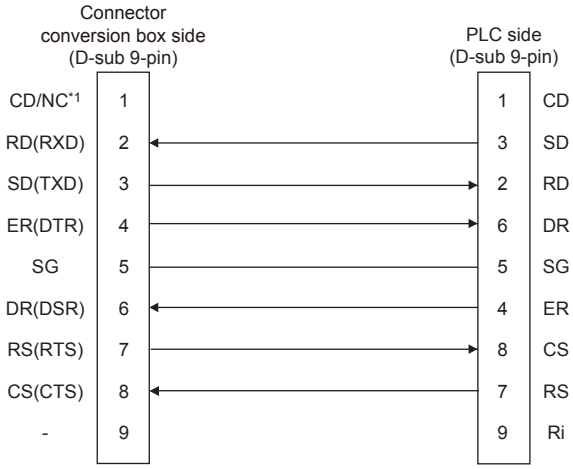

• RS-232 connection diagram 2)



• RS-232 connection diagram 3)

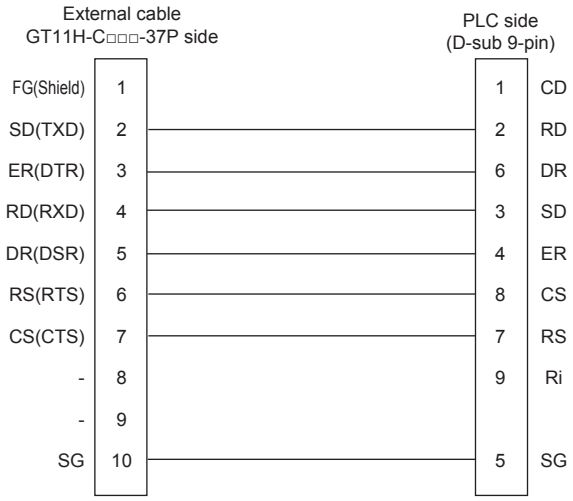



• RS-232 connection diagram 4)

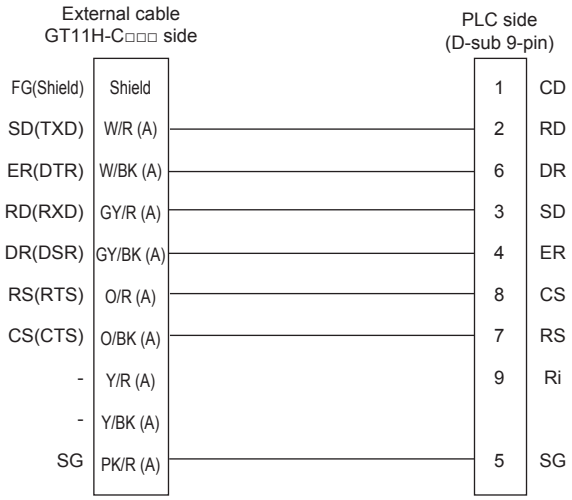



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)



• RS-232 connection diagram 6)




## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• FUJI PLC side connector

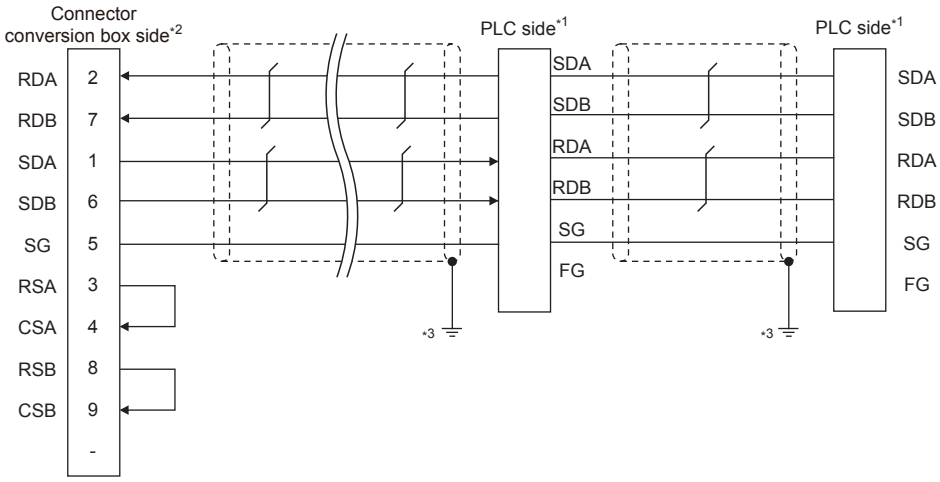
Use the connector compatible with the FUJI PLC side module.

For details, refer to the user's FUJI PLC manual.

# RS-485 cable

## ■Connection diagram

• RS-485 connection diagram 1)



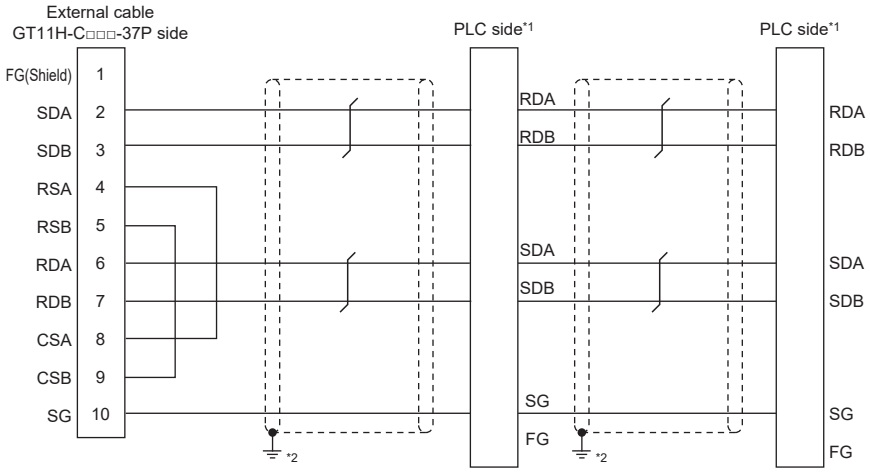

*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1432 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

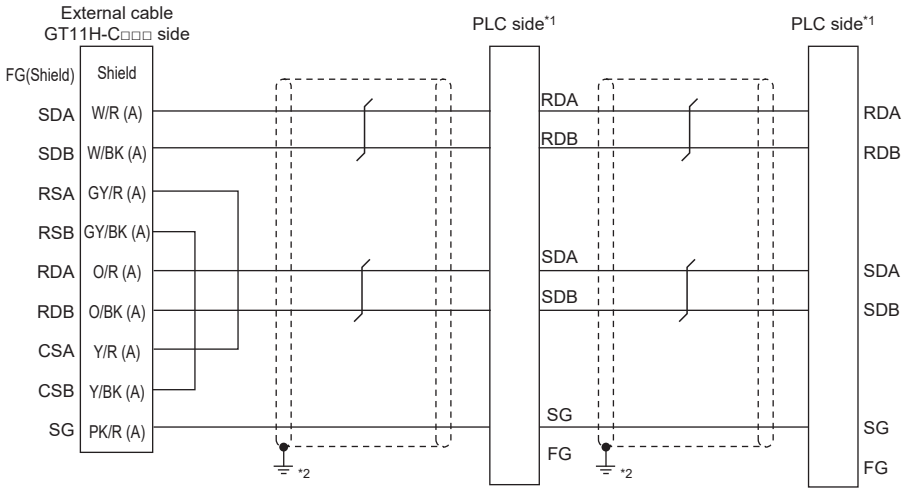
• RS-485 connection diagram 2)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

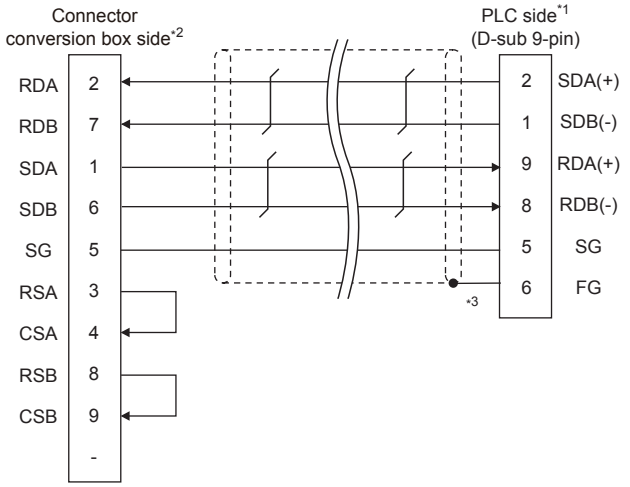
• RS-485 connection diagram 3)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

• RS-485 connection diagram 4)



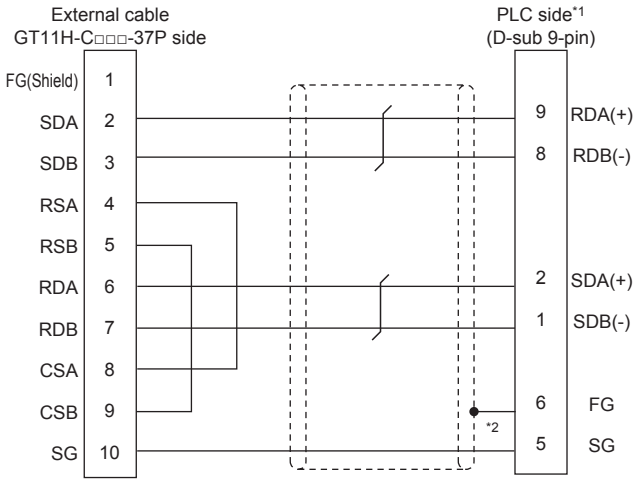

*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1432 Connecting terminating resistors

*3 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

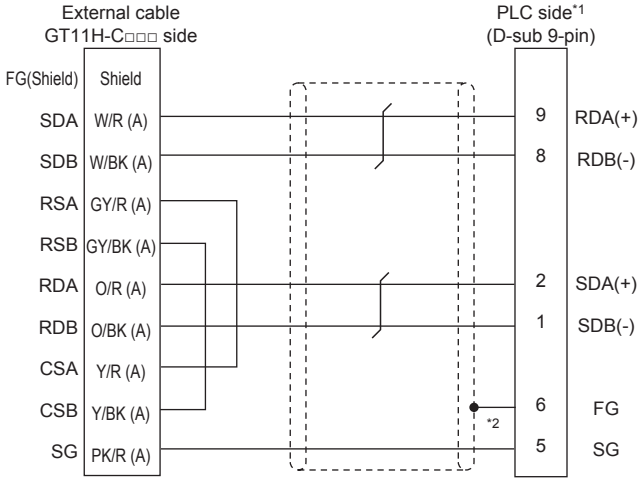
• RS-485 connection diagram 5)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

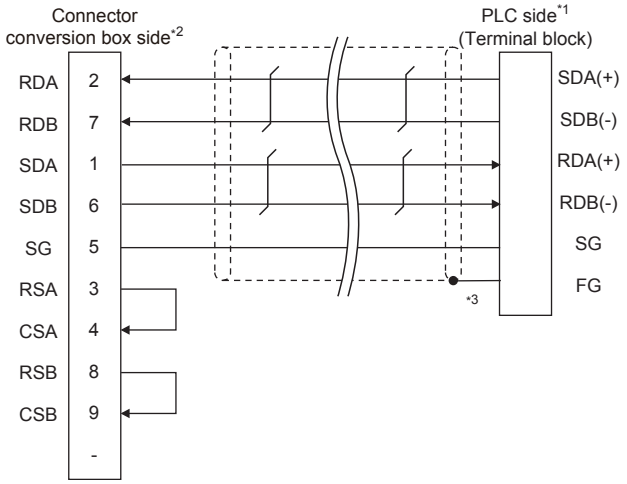
• RS-485 connection diagram 6)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

• RS-485 connection diagram 7)



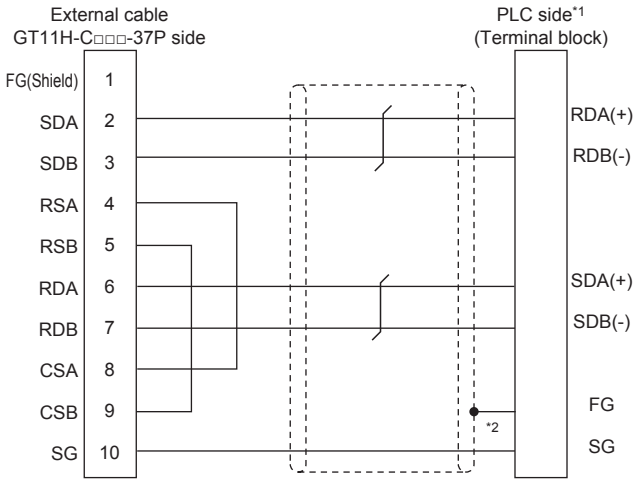

*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1432 Connecting terminating resistors

*3 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

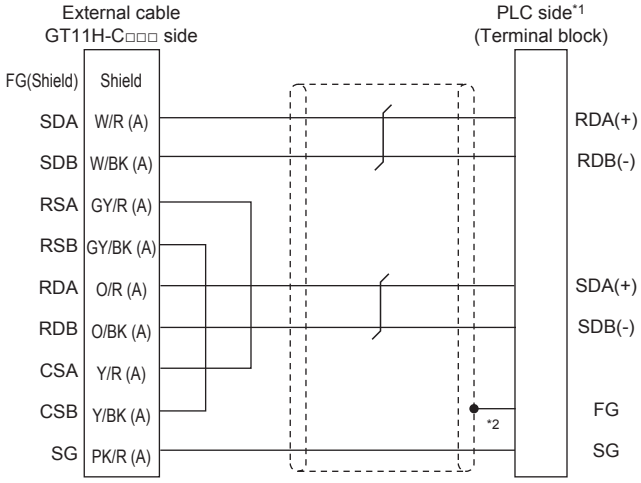
• RS-485 connection diagram 8)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

• RS-485 connection diagram 9)




*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• FUJI PLC side connector

Use the connector compatible with the FUJI PLC side module.

For details, refer to the user's FUJI PLC manual.

## ■Connecting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

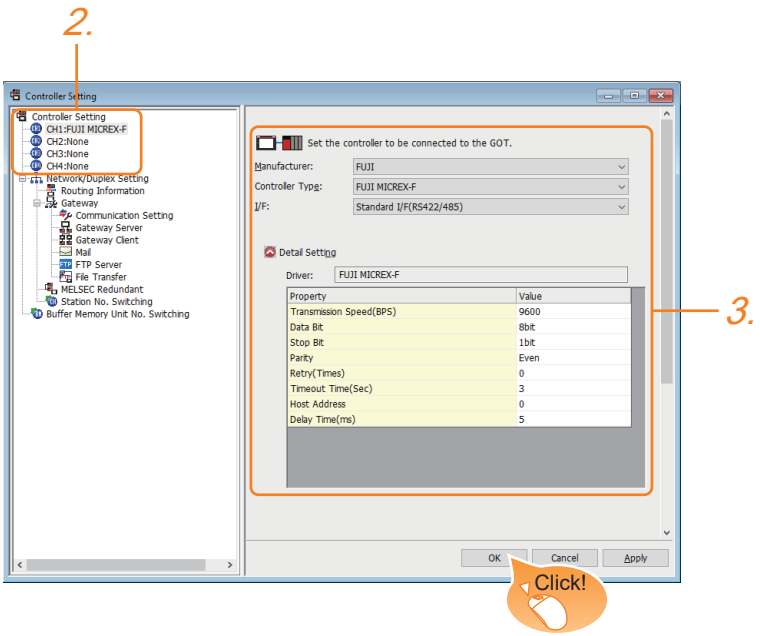
• FUJI PLC side

When connecting a FUJI PLC to the GOT, a terminating resistor must be connected.

☞ Page 1436 PLC Side Setting

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: Select one of the following items.

[FUJI MICREX-F]

[FUJI MICREX-SX SPH]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1434 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

(For FUJI MICREX-F)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 5 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network.<br>(Default: 0) | 0 to 99 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |

(For FUJI MICREX-SX SPH)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 38400 |
| Data Bit | 8bit |
| Stop Bit | 1bit |
| Parity | Even |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed*1 | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 38400bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit*1 | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit*1 | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity*1 | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |

*1 Leave the setting as default. If the set value is changed, communication with the PLC is disabled.

**Point**

• Host address

When connecting to PLC by RS-232 communication, set the Host Address to "0".

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

FUJI PLC

For details of FUJI PLCs, refer to the following manuals.

FUJI PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| RS-232C interface card | NV1L-RS2 | ☞ Page 1436 Connecting to NV1L-RS2, NC1L-RS2 |
| General-purpose interface module | NC1L-RS2 | |
| | NC1L-RS4 | ☞ Page 1437 Connecting to NC1L-RS4 |
| | FFU120B | ☞ Page 1439 Connecting to FFU120B |
| RS-232C/485 interface capsule | FFK120A-C10 | ☞ Page 1441 Connecting to FFK120A-C10 |

## Connecting to NV1L-RS2, NC1L-RS2

### ■Communication settings

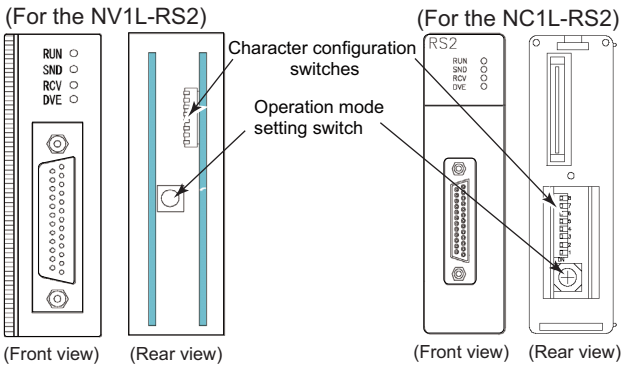
Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| MODE | Command-setting-type start-stop synchronization, nonsequence format |
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits or 7bits |
| Parity bit*1 | Even or Odd |
| | Done, None |
| Stop bit*1 | 1bit, 2bits |
| Initializing method | By switch |

*1 Adjust the settings with GOT settings.

### ■Settings by switch

Make the communication settings using each setting switch.




• Setting of the MODE

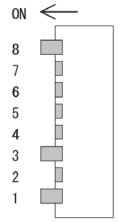
Make the MODE settings using the MODE switch.




| MODE | Switch position | |
|---|---|---|
| | NV1L-RS2 | NC1L-RS2 |
| Command-setting-type start-stop synchronization, nonsequence format | 1 | 1 |

• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

For the NV1L-RS2




For the NC1L-RS2




| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Transmission speed | 9600bps | ON | OFF | ON | | | | | |
| | 19200bps | OFF | ON | ON | | | | | |
| Stop bit | 1bit | | | | ON | | | | |
| | 2bits | | | | OFF | | | | |
| Data bit | 7bits | | | | | ON | | | |
| | 8bits | | | | | OFF | | | |
| Parity bit | Even | | | | | | ON | | |
| | Odd | | | | | | OFF | | |
| | Done | | | | | | | ON | |
| | None | | | | | | | OFF | |
| Initializing method | By switch | | | | | | | | ON |

## Connecting to NC1L-RS4

### ■Communication settings

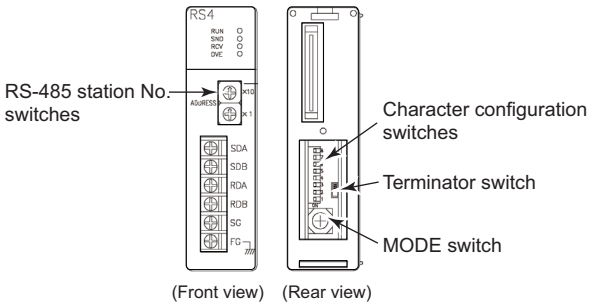
Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| MODE | Command-setting-type start-stop synchronization, nonsequence format |
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits or 7bits |
| Parity bit*1 | Even or Odd |
| | Done, None |
| Stop bit*1 | 1bit, 2bits |
| Initializing method | By switch |
| Station No.*1*2 | 0 to 99 |
| Terminating resistor*3 | ON or OFF |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.

## ■Settings by switch

Make the communication settings using each setting switch.




- Setting of the MODE

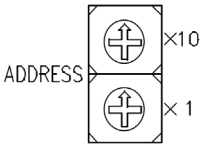
Make the MODE settings using the MODE switch.




| MODE | Switch position |
|---|---|
| Command-setting-type start-stop synchronization, nonsequence format | 3 |

- Setting of the station No.

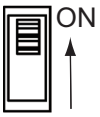
Make the station No. using RS-485 station No. switches.




| Station No. |
|---|
| 0 to 99 |

- Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

Make the settings using the character configuration switches.




| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Transmission speed | 9600bps | ON | OFF | ON | | | | | |
| | 19200bps | OFF | ON | ON | | | | | |
| Stop bit | 1bit | | | | ON | | | | |
| | 2bits | | | | OFF | | | | |
| Data bit | 7bits | | | | | ON | | | |
| | 8bits | | | | | OFF | | | |
| Parity bit | Even | | | | | | ON | | |
| | Odd | | | | | | OFF | | |
| | Done | | | | | | | ON | |
| | None | | | | | | | OFF | |
| Initializing method | By switch | | | | | | | | ON |

## Connecting to FFU120B

### ■Communication settings

Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| MODE | Command-setting-type start-stop synchronization, nonsequence format |
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits or 7bits |
| Parity bit*1 | Even or Odd |
| | Done, None |
| Stop bit*1 | 1bit, 2bits |
| Initializing method | By switch |
| Station No.*1*2 | 0 to 99 |
| Terminating resistor*3 | ON or OFF |

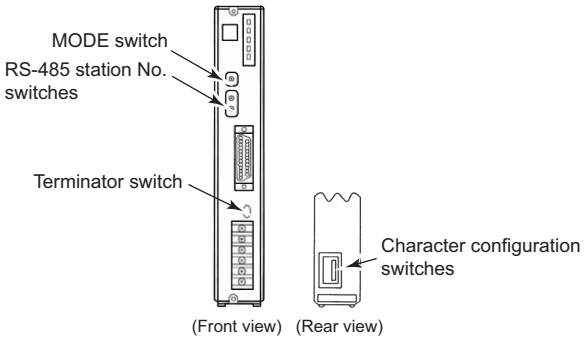
*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the station No. with any of the other units.

*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.

## ■Settings by switch

Make the communication settings using each setting switch.




• Setting of the MODE

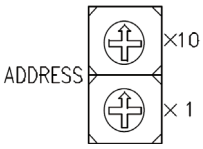
Make the MODE settings using the MODE switch.




| MODE | Switch position |
|---|---|
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-232C 1:1 | 1 |
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-232C 1:1,<br>and RS-485 1:N | 2 |
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-485 1:N | 3 |

• Setting of the station No.

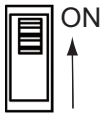
Make the station No. using RS-485 station No. switches.




| Station No. |
|---|
| 0 to 99 |

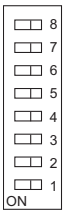
• Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

Make the settings using the character configuration switches.




| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Transmission speed | 9600bps | ON | OFF | ON | | | | | |
| | 19200bps | OFF | ON | ON | | | | | |
| Stop bit | 1bit | | | | ON | | | | |
| | 2bits | | | | OFF | | | | |
| Data bit | 7bits | | | | | ON | | | |
| | 8bits | | | | | OFF | | | |
| Parity bit | Even | | | | | | ON | | |
| | Odd | | | | | | OFF | | |
| | Done | | | | | | | ON | |
| | None | | | | | | | OFF | |
| Initializing method | By switch | | | | | | | | ON |

## Connecting to FFK120A-C10

### ■Communication settings

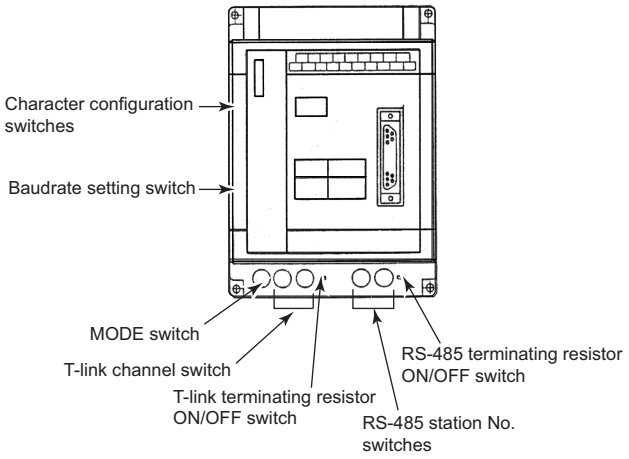
Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| MODE*4 | Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1 |
| | Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1, and RS-485 1:N |
| | Command-setting-type start-stop synchronization, nonsequence format RS-485 1:N |
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit*1 | 8bits or 7bits |
| Parity bit*1 | Even or Odd |
| | Done, None |
| Stop bit*1 | 1bit, 2bits |
| Initializing method | By switch |
| Station No.*1*2 | 0 to 99 |
| Terminating resistor*3 | ON or OFF |
| T-link channel switch | FUJI PLC user's Manual |
| T-link terminating resistor | |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.
*4 Set as necessary.

## ■Settings by switch

Make the communication settings using each setting switch.




- Setting of the MODE

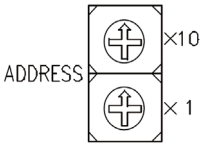
Make the MODE settings using the MODE switch.




| MODE | Switch position |
|---|---|
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-232C 1:1 | 1 |
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-232C 1:1,<br>and RS-485 1:N | 2 |
| Command-setting-type start-stop synchronization, nonsequence format<br>RS-485 1:N | 3 |

- Setting of the station No.

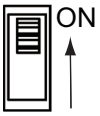
Make the station No. using RS-485 station No. switches.




| Station No. |
|---|
| 0 to 99 |

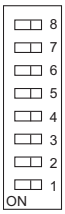
- Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Stop bit, Data bit, Parity bit, Initializing method

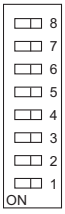
Make the settings using the character configuration switches.




| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| disable | | OFF | OFF | OFF | | | | | |
| Stop bit | 1bit | | | | ON | | | | |
| | 2bits | | | | OFF | | | | |
| Data bit | 7bits | | | | | ON | | | |
| | 8bits | | | | | OFF | | | |
| Parity bit | Even | | | | | | ON | | |
| | Odd | | | | | | OFF | | |
| | Done | | | | | | | ON | |
| | None | | | | | | | OFF | |
| Initializing method | By switch | | | | | | | | ON |

• Transmission speed settings

Make the settings using the baudrate setting switches.

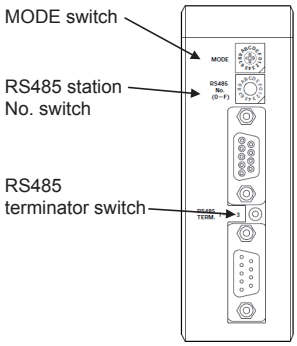



| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Transmission speed | 9600bps | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF |
| | 19200bps | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF |

## Connecting to NP1L-RS1, NP1L-RS2, NP1L-RS3, NP1L-RS4, NP1L-RS5

### ■Communication settings

Make the communication settings using setting switches.




| Switch | Item | Set value |
|---|---|---|
| MODE switch | MODE | 1 to 3*1 |
| RS485 station No. switch | Station No. | *2 |
| RS485 terminator switch | Terminator | *3 |

*1 Set the MODE switch so that the communication port of the general communication module to be connected to the GOT operates as a loader.

*2 The switch is not used for connection with the GOT.

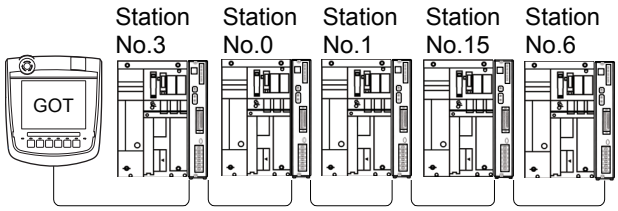
*3 Turn ON the terminating switch of the general communication module which will be a terminal.

# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

Specify the station No. of the PLC to be changed when setting device.

| Specification range |
|---|
| 0 to 99 |

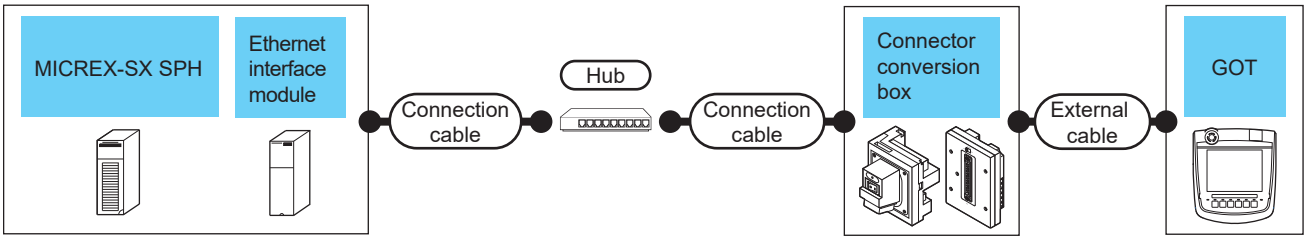
# 30.3 Ethernet Connection

## Connecting to MICREX-SX SPH

Communication driver

Ethernet(FUJI), Gateway

### When using the connector conversion box




| PLC | | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Ethernet interface module*3 | Cable model*1 Connection diagram number | Max. distance *2 | | | | |
| SPH200<br>SPH300<br>SPH2000<br>SPH3000 | NP1L-ET1 | • 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP):<br>Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP):<br>Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is 1: N<br>128 GOTs or less for 1 PLC<br>When PLC: GOT is 1: N<br>8 GOTs or less for 1 PLC |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| SPH2000<br>SPH3000 | - | • 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP):<br>Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP):<br>Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is 1: N<br>128 GOTs or less for 1 PLC<br>When PLC: GOT is 1: N<br>10 GOTs or less for 1 PLC |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

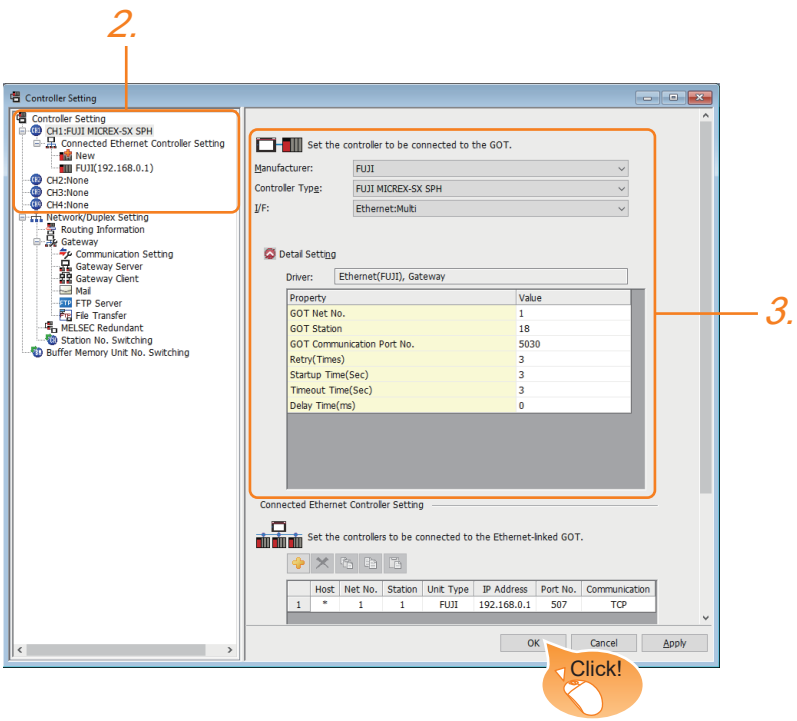
*3 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*4 Use C or later version of GT11H-C□□-37P.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: [FUJI MICREX-SX SPH]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1447 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5030 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 1) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5030 *2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1448 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

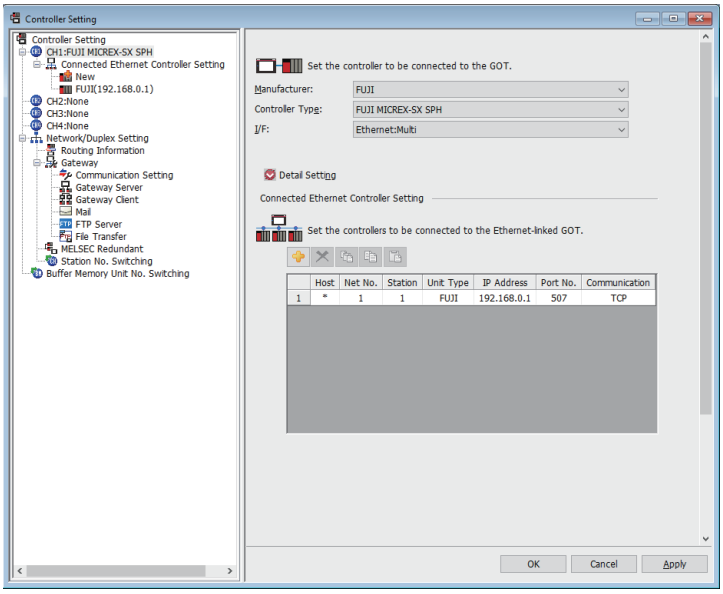
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *2 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 254 |
| Unit Type | FUJI (fixed) | FUJI (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet equipment.<br>(Default: 192.168.0.1 | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet equipment.<br>(Default: 507) | 251 to 65531 |
| Communication format | TCP (fixed) | TCP (fixed) |

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1447 Communication detail settings

# PLC side setting (MICREX-SX SPH)

**Point**

FUJI PLC

For details of FUJI PLCs, refer to the following manuals.

FUJI PLC user's Manual

## Setting the IP address and self port reference No.

Set the IP address and self port reference No. using a peripheral tool of the PLC.

| Item | Set value | Range |
|---|---|---|
| IP Address*1 | [ ].[ ].[ ].[ ] | PLC side IP address |
| Subnet Mask | [ ].[ ].[ ].[ ] | PLC side setting |
| Default Gateway IP Address | [ ].[ ].[ ].[ ] | |
| Self port reference No.*2 | 0 to 65280 | |

*1 Adjust the settings with GOT settings.
Page 1448 Connected Ethernet Controller Setting

*2 Make sure that "Self port reference No. + 251" is equivalent to the port No. in the GOT.
Page 1448 Connected Ethernet Controller Setting

# 30.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

FUJI equipment ([FUJI MICREX-F])

FUJI equipment ([FUJI MICREX-SX SPH])

# 30.5 Precautions

## Station No. settings of the PLC side

In the system configuration, the PLC with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1434 Communication detail settings

## System configuration of the PLC side

GOT can communicate in a system configuration where NC1L-PS4, FFU120B and FFK120A-C10 are mixed.

When using FFK120A-C10, the number of PLCs that can communicate is at most 6 units.

## GOT clock control

The GOT clock function is available only for the PLC with the station number set with the host address.

For details of host address setting, refer to the following.

☞ Page 1434 Communication detail settings

# 31 FUJI TEMPERATURE CONTROLLER


- Page 1451 Connectable Model List
- Page 1452 System Configuration
- Page 1464 Connection Diagram
- Page 1471 GOT Side Settings
- Page 1473 Temperature Controller Side Setting
- Page 1481 Settable Device Range
- Page 1481 Precautions


## 31.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Temperature controller | PXR3 | × | RS-232 | GT2506-HS GT2505-HS | ☞ Page 1452 Connecting to PXR3, PXR4, PXR5 or PXR9 |
| | PXR4 | | | | |
| | PXR5 | | | | |
| | PXR9 | | | | |
| | PXG4 | × | RS-232<br>RS-485 | GT2506-HS GT2505-HS | ☞ Page 1455 Connecting to PXG4, PXG5, PXG9 or PXH9 |
| | PXG5 | | | | |
| | PXG9 | | | | |
| | PXF4 | × | RS-232<br>RS-485 | GT2506-HS GT2505-HS | ☞ Page 1459 Connecting to PXF4, PXF5 or PXF9 |
| | PXF5 | | | | |
| | PXF9 | | | | |
| Digital indication controller | PXH9 | × | RS-232<br>RS-485 | GT2506-HS GT2505-HS | ☞ Page 1455 Connecting to PXG4, PXG5, PXG9 or PXH9 |
| Multi-loop/module type temperature controller | PUMA | × | RS-232<br>RS-485 | GT2506-HS GT2505-HS | ☞ Page 1461 Connecting to PUMA or PUMB |
| | PUMB | | | | |

# 31.2 System Configuration

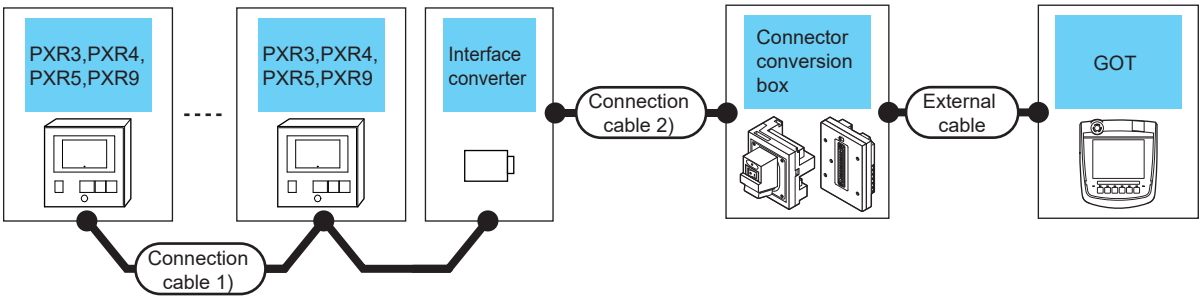
## Connecting to PXR3, PXR4, PXR5 or PXR9

Communication driver

FUJITemperature controller/Digital indication controller

### When connecting via the RS-232 communication

#### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PXR3<br>PXR4<br>PXR5<br>PXR9 | Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | Page 1464 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | Page 1468 RS-485 connection diagram 2) | | SI-30A*2 | | Page 1465 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |
| | Page 1469 RS-485 connection diagram 3) | | KS-485*3 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT2505HS | | |

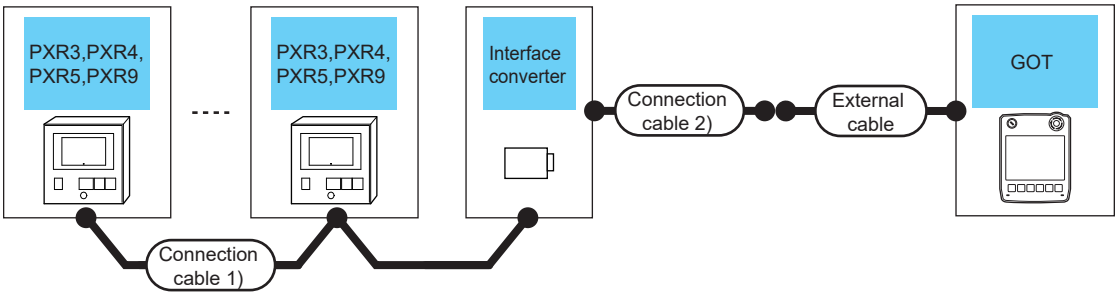
*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.

*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.

*4 The distance from the converter to the GOT.

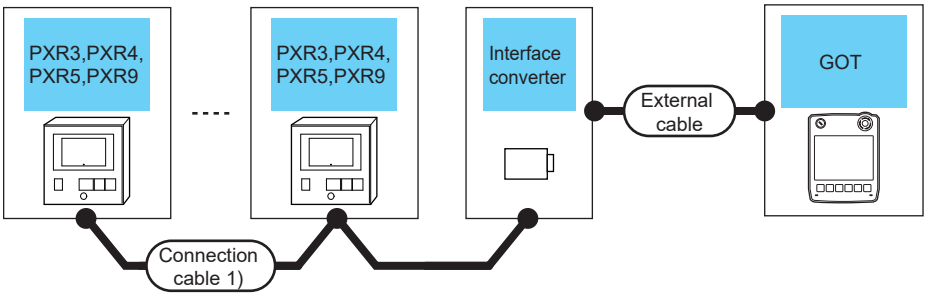
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PXR3<br>PXR4<br>PXR5<br>PXR9 | User preparing Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | User preparing Page 1464 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | User preparing Page 1468 RS-485 connection diagram 2) | | SI-30A*2 | | User preparing Page 1465 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |
| | User preparing Page 1469 RS-485 connection diagram 3) | | KS-485*3 | | | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.
*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.
*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.
*4 The distance from the converter to the GOT.

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Interface converter | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PXR3<br>PXR4<br>PXR5<br>PXR9 | User preparing Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1465 RS-232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | User preparing Page 1468 RS-485 connection diagram 2) | | SI-30A*2 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1466 RS-232 connection diagram 6) | GT 2505HS | 6m | |
| | User preparing Page 1469 RS-485 connection diagram 3) | | KS-485*3 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1466 RS-232 connection diagram 6) | GT 2505HS | 6m | |

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.
*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.
*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.
*4 The distance from the converter to the GOT.

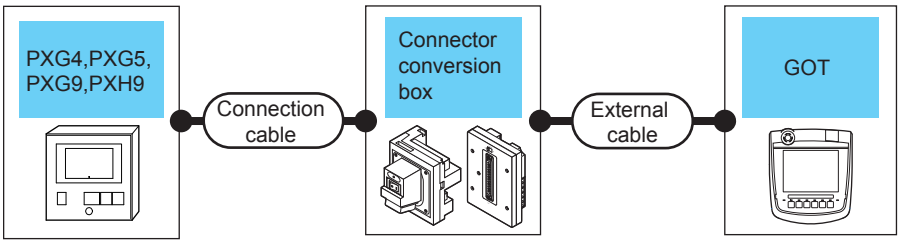
# Connecting to PXG4, PXG5, PXG9 or PXH9

Communication driver

FUJITemperature controller/Digital indication controller

## When connecting to one Temperature controller/Digital indication controller

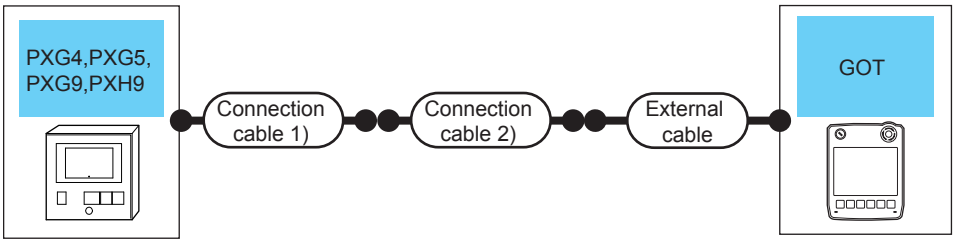
### ■When using the connector conversion box




| Temperature controller/ Digital indication controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | RS-232 | ZZPPXH1*TK4H4563*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 Temperature controller/Digital indication controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

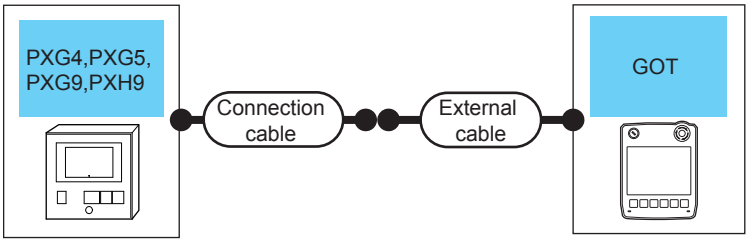
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller/ Digital indication controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | Connection diagram number | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | RS-232 | ZZPPXH1*TK4H4563*1 | (User preparing) Page 1467 RS-232 connection diagram 10) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 Temperature controller/ Digital indication controller for 1 GOT |

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

### ■When using the external cable (GT11H-C□□□)

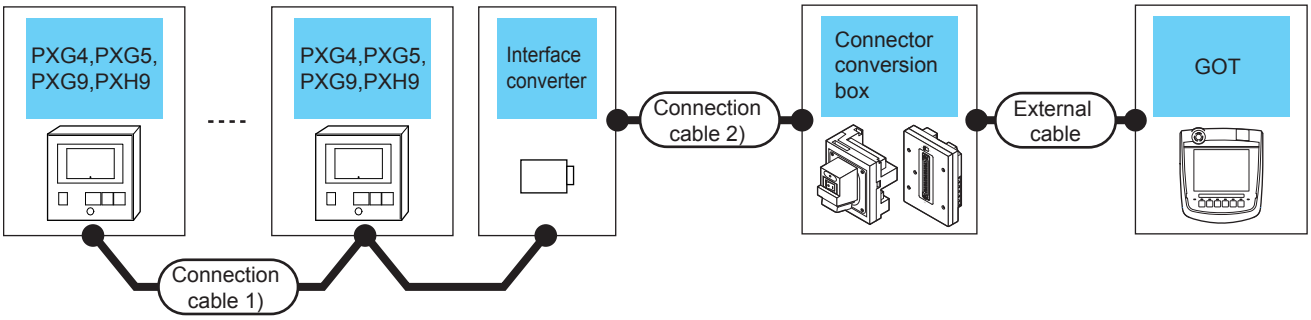



| Temperature controller/Digital indication controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | RS-232 | ZZPPXH1*TK4H4563*1 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1467 RS-232 connection diagram 11) | GT 2505HS | 6m | 1 Temperature controller/ Digital indication controller for 1 GOT |

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

## When connecting to multiple Temperature controllers/Digital indication controllers (RS-232 communication)

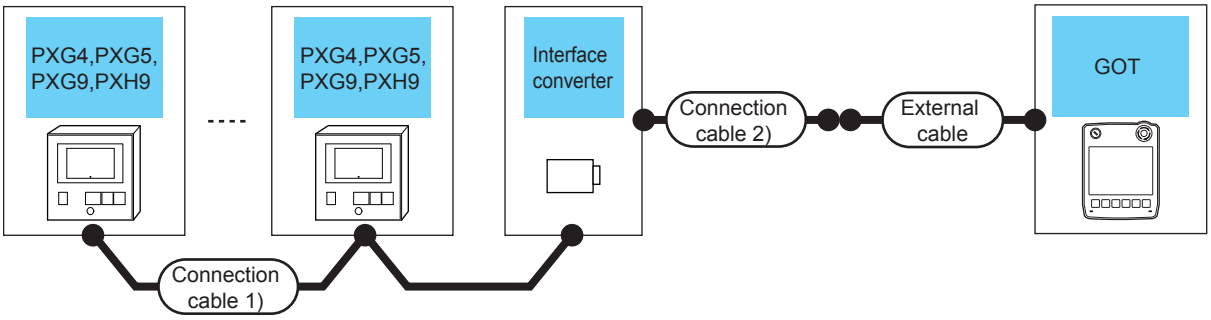
### ■When using the connector conversion box




| Temperature controller/ Digital indication controller | Connection cable 1) | | Interface converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Model name | Cable model Connection diagram number | | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | User preparing Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | User preparing Page 1464 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 Temperature controllers/ Digital indication controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | User preparing Page 1469 RS-485 connection diagram 4) | | K3SC-10*2 | | User preparing Page 1466 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.
*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□-37P)

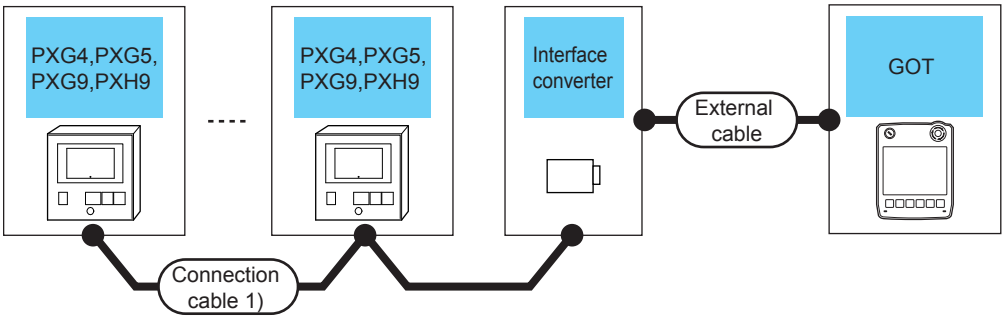



| Temperature controller/ Digital indication controller | Connection cable 1) | | Interface converter | | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Model name | Cable model Connection diagram number | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | User preparing Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | User preparing Page 1464 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 Temperature controllers/ Digital indication controllers for 1 GOT |
| | User preparing Page 1469 RS-485 connection diagram 4) | | K3SC-10*2 | | User preparing Page 1466 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

### ■When using the external cable (GT11H-C□□□)



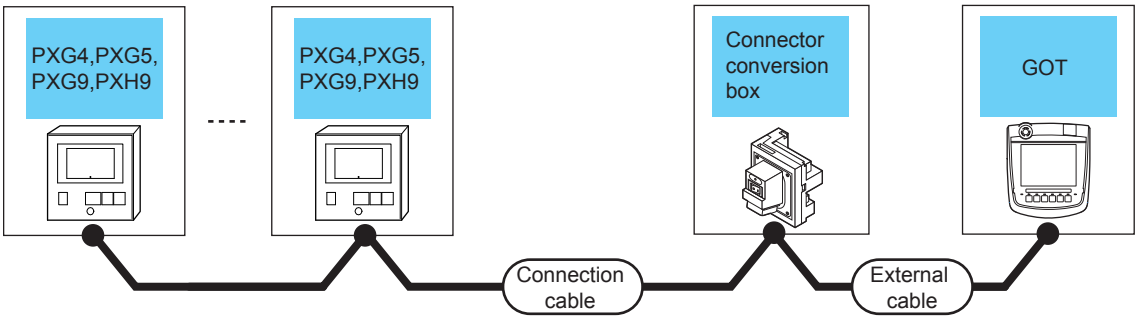

| Temperature controller/Digital indication controller | Connection cable 1) | | Interface converter | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Model name | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | User preparing Page 1468 RS-485 connection diagram 1) | 500m | RC-77*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1465 RS-232 connection diagram 3) | GT 2505HS | 6m | Up to 31 Temperature controllers/Digital indication controllers for 1 GOT |
| | User preparing Page 1469 RS-485 connection diagram 4) | | K3SC-10*2 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1467 RS-232 connection diagram 9) | GT 2505HS | 6m | |

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

## When connecting to multiple Temperature controllers/Digital indication controllers (RS-485 communication)

### ■When using the connector conversion box




| Temperature controllers/ Digital indication controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PXG4<br>PXG5<br>PXG9<br>PXH9 | RS-485 | User preparing Page 1470 RS-485 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 Temperature controllers/Digital indication controllers for 1 GOT |

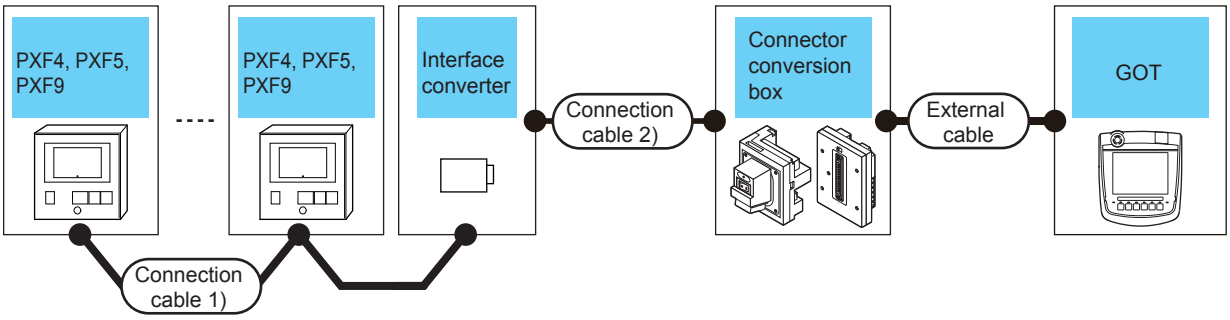
# Connecting to PXF4, PXF5 or PXF9

Communication driver

FUJITemperature controller/Digital indication controller

## When connecting via the RS-232 communication

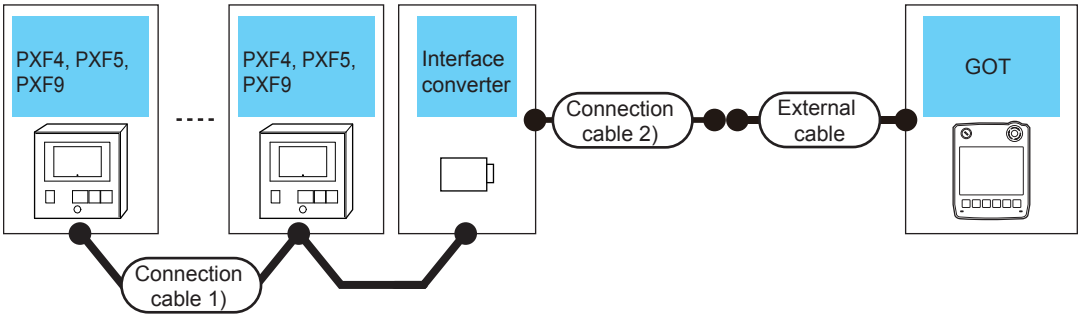
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PXF4<br>PXF5<br>PXF9 | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | User preparing Page 1466 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6 m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

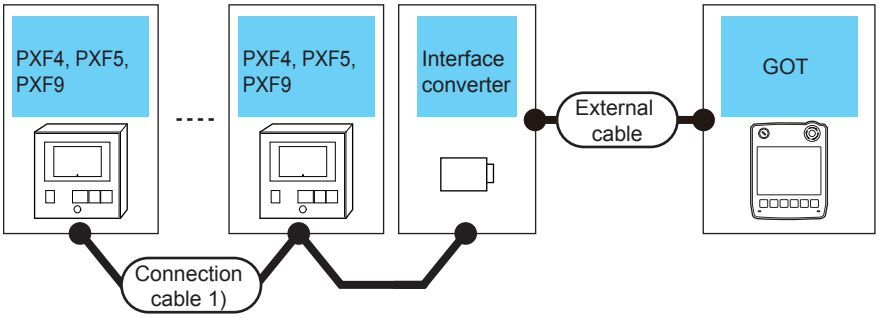
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PXF4<br>PXF5<br>PXF9 | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | User preparing Page 1466 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6 m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

### ■When using the external cable (GT11H-C□□□)

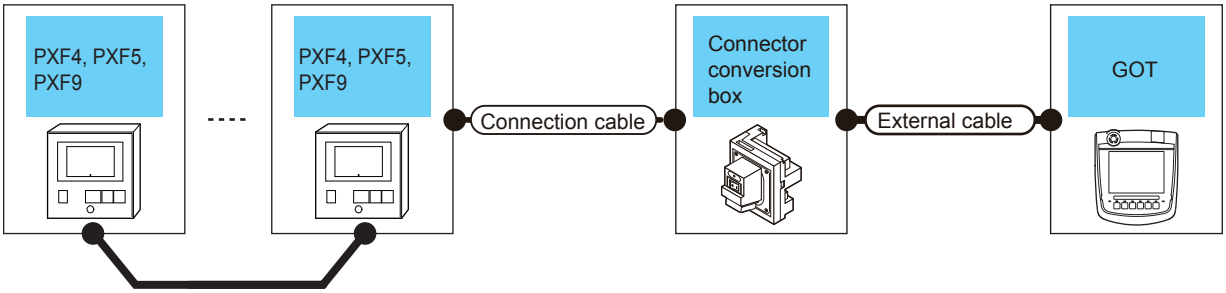



| Temperature controller | Connection cable 1) | | Interface converter | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PXF4<br>PXF5<br>PXF9 | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | GT11H-C30(3m)<br>☞ Page 1467 RS-232 connection diagram 9) | GT 2505HS | 6 m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

## When connecting via RS-485 communication

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PXF4<br>PXF5<br>PXF9 | RS-485 | User preparing Page 1470 RS-485 connection diagram 5) | GT16HCNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13 m | Up to 31 temperature controllers for 1 GOT |

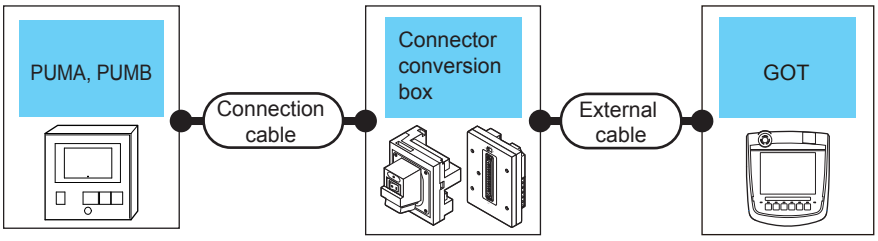
# Connecting to PUMA or PUMB

Communication driver

FUJITemperature controller/Digital indication controller

## When connecting to one Multi-loop/module type temperature controller

### ■When using the connector conversion box

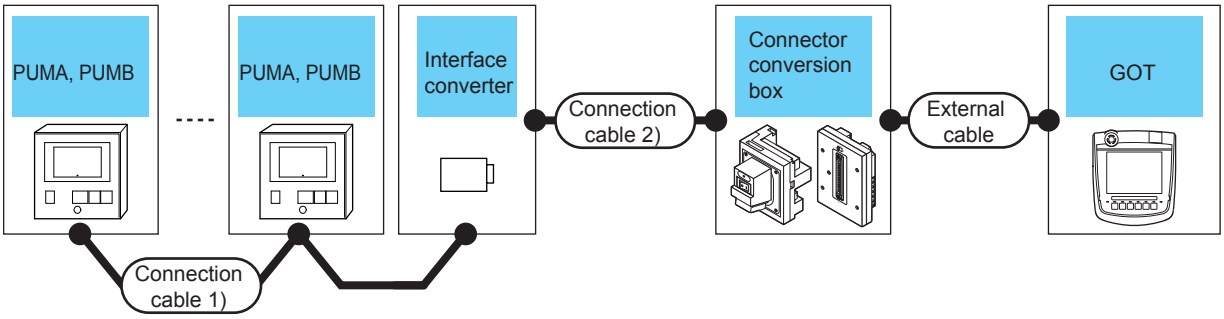



| Multi-loop/module type temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PUMA PUMB | RS-232 | PUMZ*L01*1 (ZPC loader communication cable (RS232)) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6 m | 1 Multi-loop/module type temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

## When connecting to multiple temperature controllers (RS-232 communication)

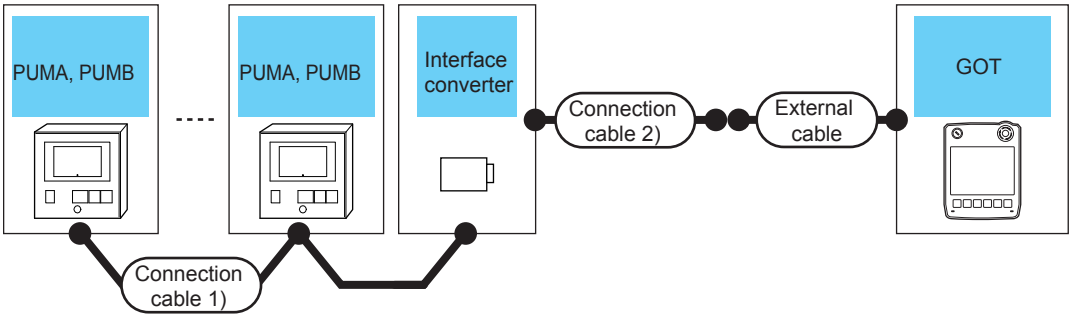
### ■When using the connector conversion box




| Multi-loop/module type temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PUMA PUMB | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | User preparing Page 1466 RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P (3m) | GT 2506HS | 6 m | Up to 31 Multi-loop/module type temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

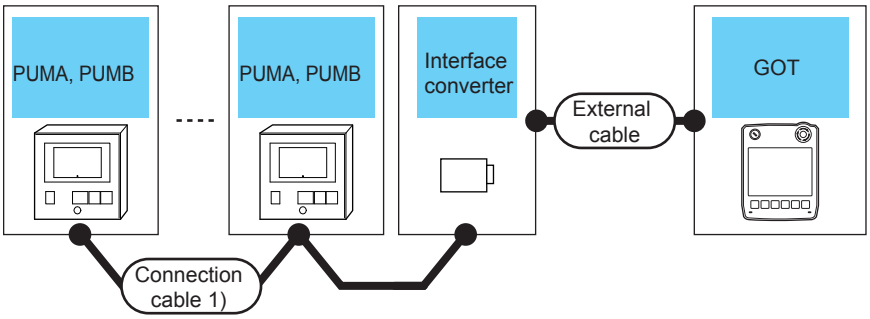
## ■When using the external cable (GT11H-C□□□-37P)




| Multi-loop/ module type temperature controller | Connection cable 1) | | Interface converter | | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PUMA PUMB | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | User preparing Page 1466 RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6 m | Up to 31 Multi-loop/module type temperature controllers for 1 GOT |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

## ■When using the external cable (GT11H-C□□□)

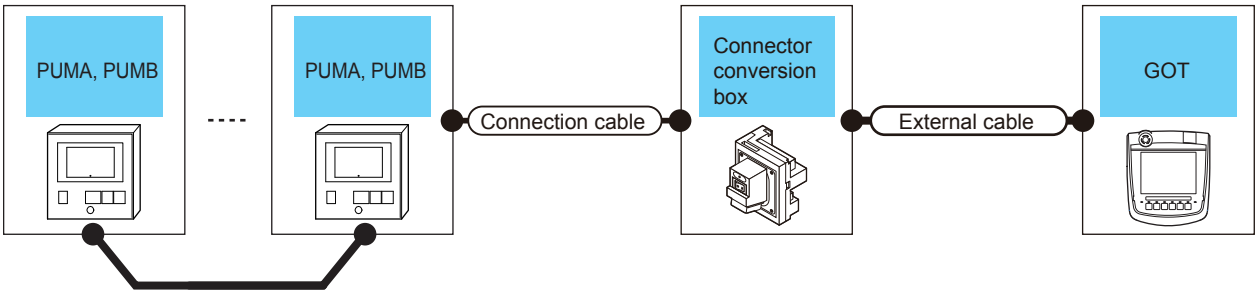



| Multi-loop/ module type temperature controller | Connection cable 1) | | Interface converter | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PUMA PUMB | User preparing Page 1469 RS-485 connection diagram 4) | 500 m | K3SC-10*1 | RS-232 | GT11H-C30(3m) ☞ Page 1467 RS-232 connection diagram 9) | GT 2505HS | 6 m | Up to 31 Multi-loop/ module type temperature controllers for 1 GOT |

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

## When connecting to multiple temperature controllers (RS-485 communication)

### ■When using the connector conversion box




| Multi-loop/module type temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PUMA PUMB | RS-485 | User preparing Page 1470 RS-485 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m) | GT 2506HS | 13m | Up to 31 Multi-loop/ module type temperature controllers for 1 GOT |

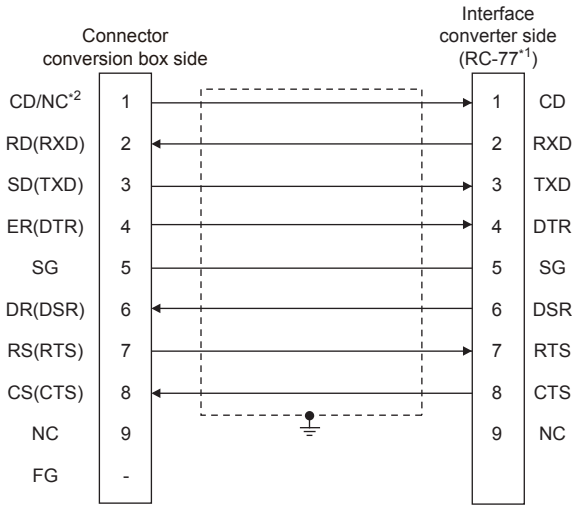
# 31.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

## RS-232 cable

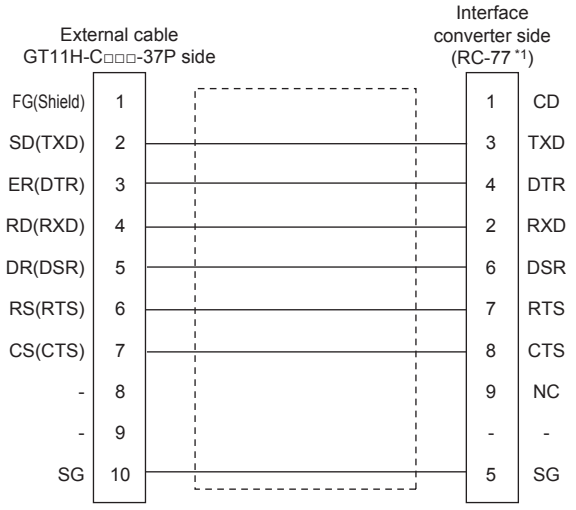
### Connection diagram

#### ■RS-232 connection diagram 1)



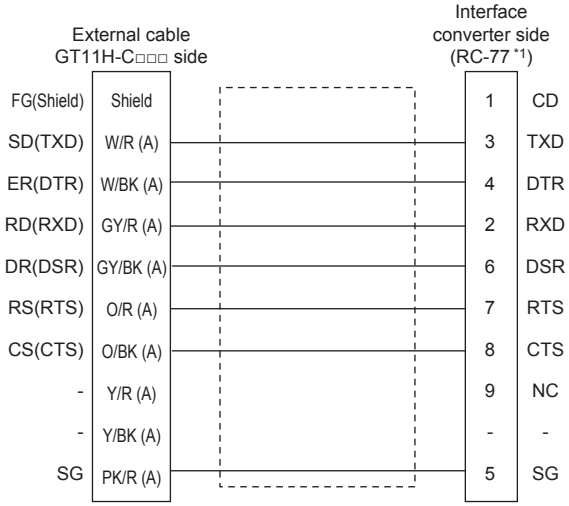

*1 Use the interface converter in the DCE mode.
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)



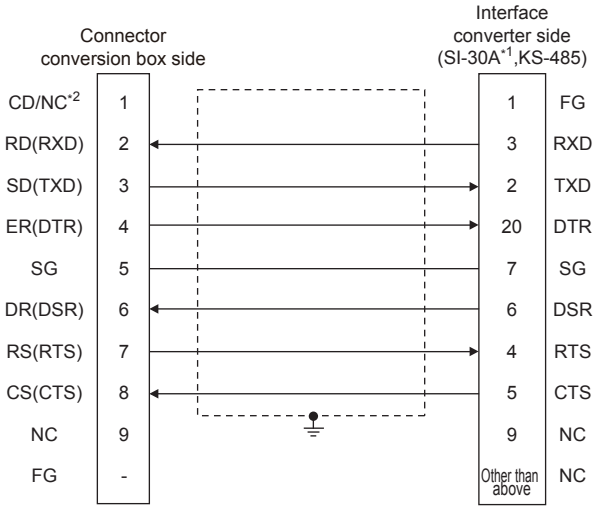

*1 Use the interface converter in the DCE mode.

## ■RS-232 connection diagram 3)



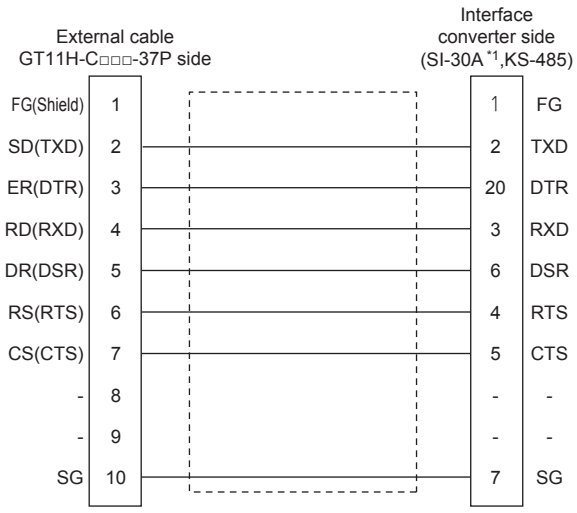

*1 Use the interface converter in the DCE mode.

## ■RS-232 connection diagram 4)



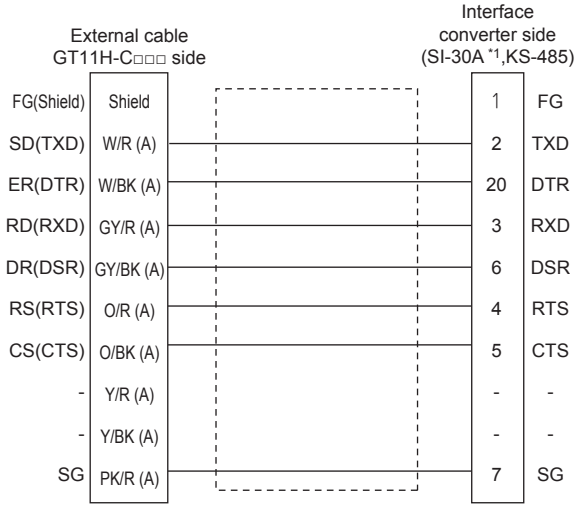

*1 Use the interface converter in the DCE mode.
*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 5)



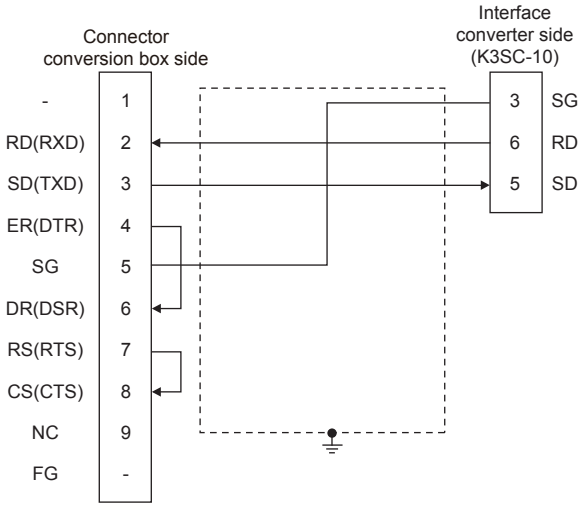

*1 Use the interface converter in the DCE mode.

## ■RS-232 connection diagram 6)

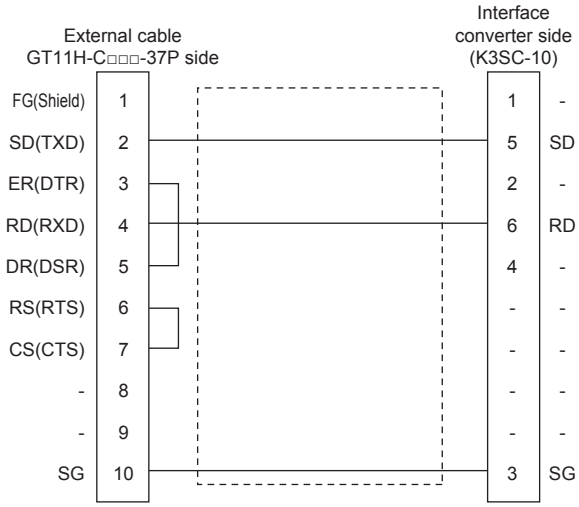



*1 Use the interface converter in the DCE mode.

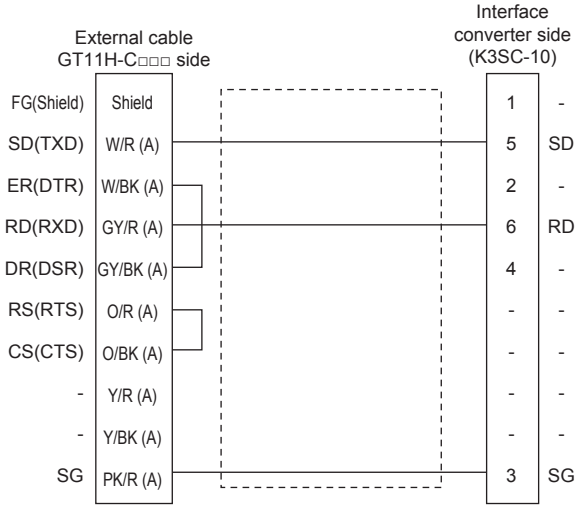
## ■RS-232 connection diagram 7)



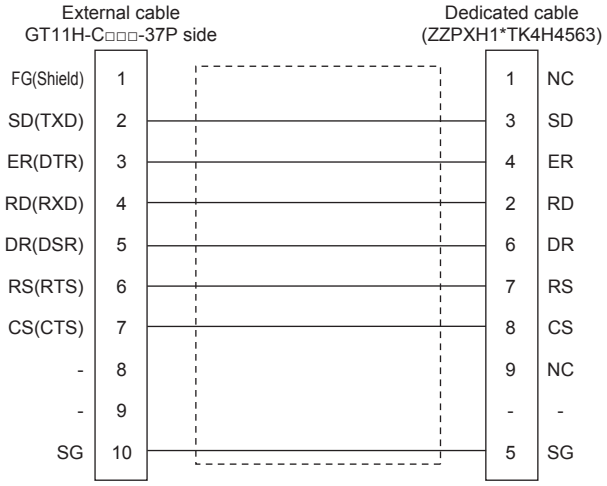

## ■RS-232 connection diagram 8)



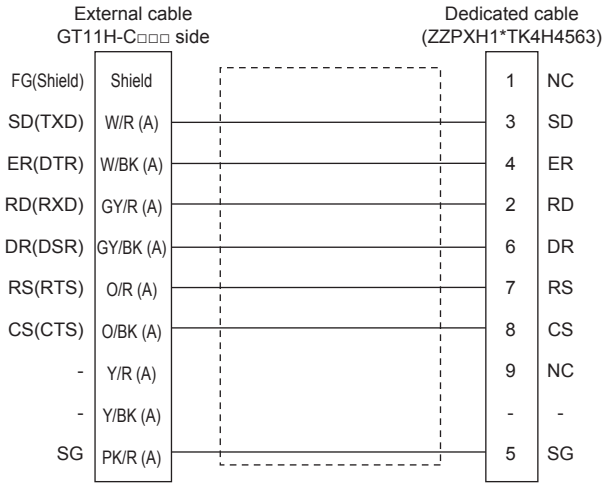
## ■RS-232 connection diagram 9)




## ■RS-232 connection diagram 10)




## ■RS-232 connection diagram 11)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■FUJI temperature controller side connector

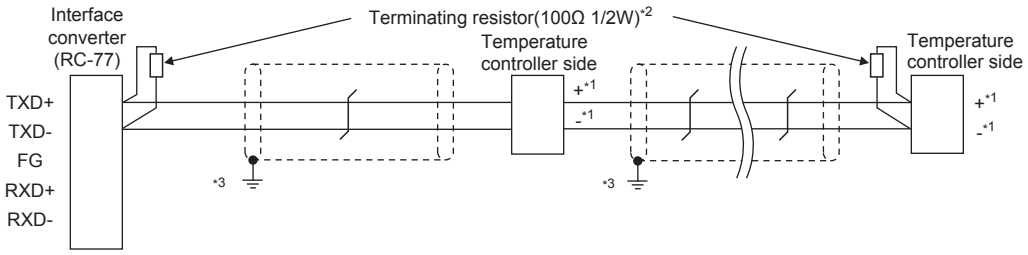
Use the connector compatible with the FUJI temperature controller side.

For details, refer to the user's manual of the FUJI temperature controller.

# RS-485 cable

## Connection diagram

### ■RS-485 connection diagram 1)



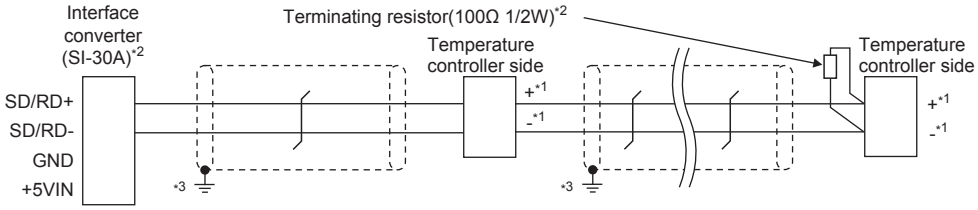

*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | PXR3 | PXR4 | PXR5/9 | PXG4 | PXG5/9 | PXH9 |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| + | 15 | 7 | 1 | 7 | 1 | 14 |
| - | 14 | 8 | 2 | 8 | 2 | 16 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Terminating resistor should be provided outside for a interface converter which will be a terminal, with the terminating switch turned OFF.

*3 Connect FG grounding to the appropriate part of a cable shield line.

### ■RS-485 connection diagram 2)



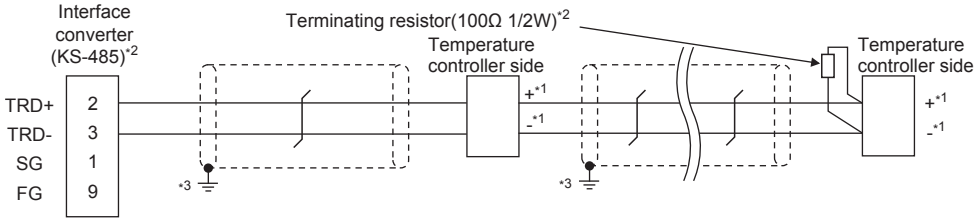

*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | PXR3 | PXR4 | PXR5/9 | PXG4 | PXG5/9 | PXH9 |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| + | 15 | 7 | 1 | 7 | 1 | 14 |
| - | 14 | 8 | 2 | 8 | 2 | 16 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Turn ON the terminating switch of an interface converter which will be a terminal.

*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 3)



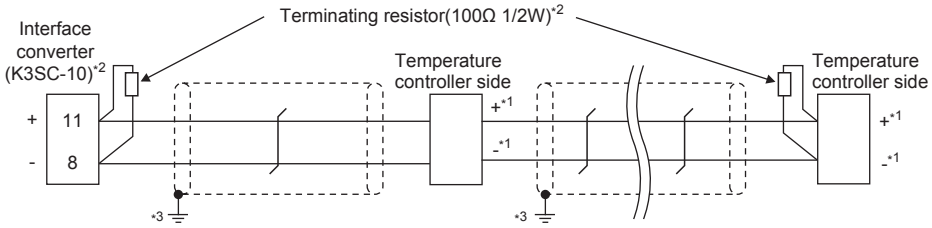

*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | PXR3 | PXR4 | PXR5/9 | PXG4 | PXG5/9 | PXH9 |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| + | 15 | 7 | 1 | 7 | 1 | 14 |
| - | 14 | 8 | 2 | 8 | 2 | 16 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Turn ON the terminating switch of an interface converter which will be a terminal.

*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 4)



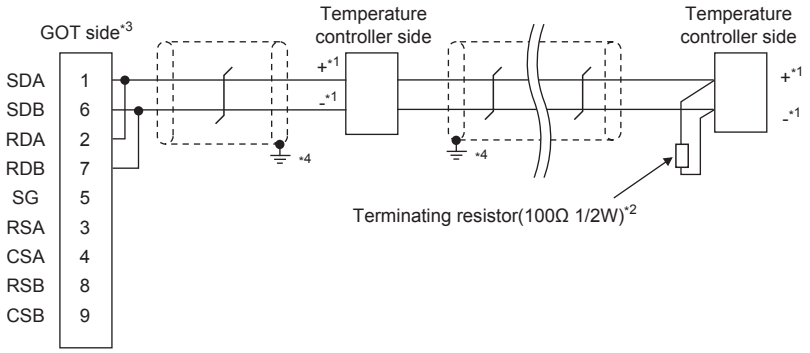

*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | PXR3 | PXR4 | PXR5/9 | PXG4 | PXG5/9 | PXH9 | PXF4 | PXF5/9 | PUMA/B |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| + | 15 | 7 | 1 | 7 | 1 | 14 | 7 | 25 | 3 |
| - | 14 | 8 | 2 | 8 | 2 | 16 | 8 | 26 | 4 |

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminals.

*3 Connect FG grounding to the appropriate part of a cable shield line.

### ■RS-485 connection diagram 5)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | PXR3 | PXR4 | PXR5/9 | PXG4 | PXG5/9 | PXH9 | PXF4 | PXF5/9 | PUMA/B |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| + | 15 | 7 | 1 | 7 | 1 | 14 | 7 | 25 | 3 |
| - | 14 | 8 | 2 | 8 | 2 | 16 | 8 | 26 | 4 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1470 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

## Precautions when preparing a cable

### ■Cable length

The length of the RS-485 cable must be within 13m (the total distance between the GOT and a controller).

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■FUJI temperature controller side connector

Use the connector compatible with the FUJI temperature controller side.

For details, refer to the user's manual of the FUJI temperature controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■FUJI temperature controller side

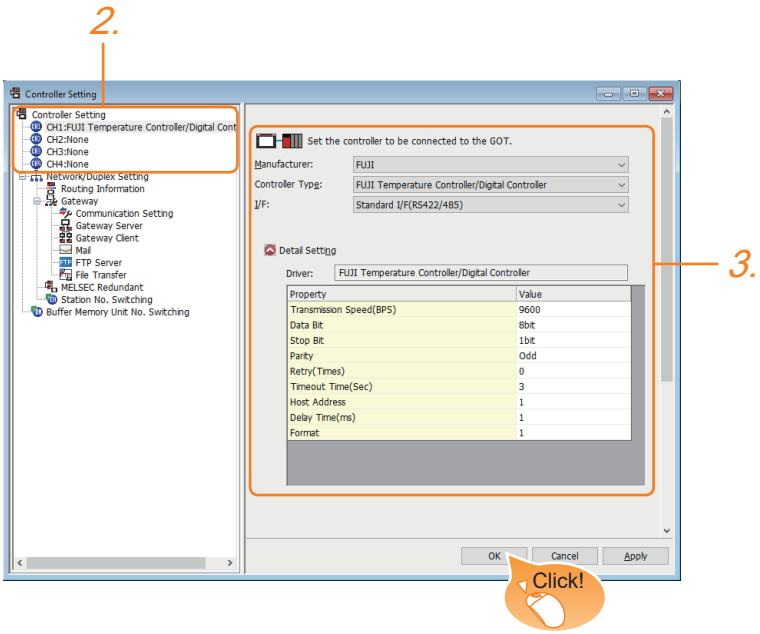
When connecting a FUJI temperature controller to the GOT, a terminating resistor must be connected.

☞ Page 1473 Temperature Controller Side Setting

# 31.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: [FUJI Temperature Controller/Digital Controller]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1472 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 1 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network.<br>(Default: 1) | 1 to 255 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |
| Format | Select the communication format.<br>(Default: 1)<br>Format 1: Accessible to PXF/PXR/PXG/PXH/PUM<br>Format 2: Accessible to PXF/PXR/PXG, Not accessible to PXH/PUM<br>Format 3: Accessible to PXF, Not accessible to PXR/PXG/PXH/PUM | 1/2/3 |

**Point**

• Host address

Do not specify a number between 200 and 215.

• Format

When connecting to PXH/PUM specify the [Format 1].

When connecting to only PXR/PXG specifying the [Format 2] is recommended.

When connecting to only PXF specifying the [Format 3] is recommended.

• Delay Time

Set the delay time to 5ms or more.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 31.5 Temperature Controller Side Setting

**Point**

• FUJI temperature controller

For details of FUJI temperature controller, refer to the following manual.

User's Manual of the FUJI temperature controller

• Interface converter

For details on communication settings of the interface converter, refer to the following manual.

User's Manual of interface converter

| Model name | | Refer to |
|---|---|---|
| Temperature controller | PXR3, PXR4, PXR5, PXR9 | ☞ Page 1473 Connecting to PXR3/4/5/9 |
| | PXG4, PXG5, PXG9 | ☞ Page 1474 Connecting to PXG4, PXG5 or PXG9 |
| | PXF4, PXF5, PXF9 | ☞ Page 1475 Communication settings |
| Digital indication controller | PXH9 | ☞ Page 1474 Connecting to PXH9 |
| Multi-loop/module type temperature controller | PUMA, PUMB | ☞ Page 1475 Connecting to PUMA or PUMB |
| Interface converter | RC-77 | ☞ Page 1476 Connecting to interface converter (RC-77) |
| | SI-30A | ☞ Page 1477 Connecting to interface converter (SI-30A) |
| | KS-485 | ☞ Page 1478 Connecting to interface converter (KS-485) |
| | K3SC-10 | ☞ Page 1478 Connecting to interface converter (K3SC-10) |

## Connecting to PXR3/4/5/9

### Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed | 9600bps (fixed) |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit | 1bit (fixed) |
| Station No.*2 | 1 to 255 |
| Communication protocol | MODBUS |

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the station No. with any of the other units.

# Connecting to PXG4, PXG5 or PXG9

## Communication settings

Make the communication settings by operating the key of the temperature controller.

### ■RS-485 communication settings

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit*1 | 1bit (fixed) |
| Station No.*2 | 1 to 255 |
| Communication permissions*3 | Read only permission or read and overwrite permission |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Set as necessary.

### ■RS-232 communication settings (PC loader communication)

| Item | Set value |
|---|---|
| Transmission speed | 9600bps (fixed) |
| Data bit | 8bits (fixed) |
| Parity bit | None (fixed) |
| Stop bit | 1bit (fixed) |

# Connecting to PXH9

## Communication settings

Make the communication settings by operating the key of the temperature controller.

### ■RS-485 communication settings

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit | 1bit (fixed) |
| Station No.*2 | 1 to 255 |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.

### ■RS-232 communication settings (PC loader communication)

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit | 1bit (fixed) |
| Station No. | 1 (fixed) |

*1 Adjust the settings with GOT settings.

# Communication settings

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps, 115200bps |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit*1 | 1bit (fixed) |
| Station No.*2 | 1 to 255 |
| Communication permissions*3 | Read only permission or read and overwrite permission |
| Communication type selection | MODBUS RTU |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Set as necessary.

# Connecting to PUMA or PUMB

## Communication settings

Make the communication settings by the PC loader software for PUM series.

### ■RS-485 communication settings

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps, 115200bps |
| Data bit | 8bits (fixed) |
| Parity bit*1 | Even, Odd, None |
| Stop bit*1 | 1bit (fixed) |
| Station No.*2*3 | 1 to 16 |
| Communication permissions*4 | Read only permission or read and overwrite permission |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Cannot be set by the PC loader software for PUM series. Set the station number by operating the key of the temperature controller.
*4 Set as necessary.

### ■RS-232 communication settings (PC loader communication)

| Item | Set value |
|---|---|
| Transmission speed | 19200bps (fixed) |
| Data bit | 8bits (fixed) |
| Parity bit | None (fixed) |
| Stop bit | 1bit (fixed) |
| Station No.*1 | 1 to 16 |

*1 Avoid duplication of the station No. with any of the other units.

# Connecting to interface converter (RC-77)

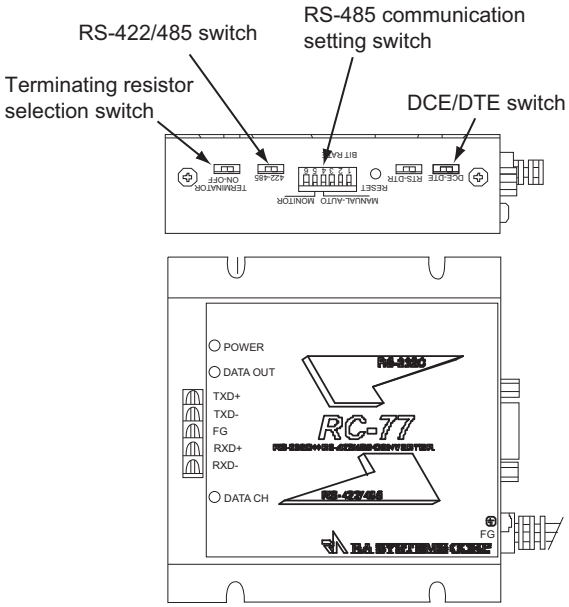
## Communication settings

Make the communication settings using setting switches.

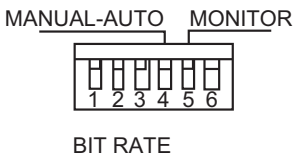
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| MANUAL-AUTO | AUTO |
| DCE/DTE switching | DCE |
| RS-422/485 switching | RS-485 |
| Terminating resistor selection | OFF |

*1 Adjust with GOT and temperature controller settings.

## Settings by switch




### ■Settings of transmission speed and MANUAL-AUTO




| Setting item | Set value | Switch No. | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Transmission speed | 9600bps | ON | ON | OFF | |
| | 19200bps | OFF | OFF | ON | |
| | 38400bps | ON | OFF | ON | |
| MANUAL-AUTO | AUTO | | | | ON |

### ■Settings of DCE/DTE, RS-422/485 and terminating resistor selection




| Setting item | Set value |
|---|---|
| DCE/DTE | DCE |
| RS-422/485 | RS-485 |
| Terminating resistor selection | OFF |

# Connecting to interface converter (SI-30A)

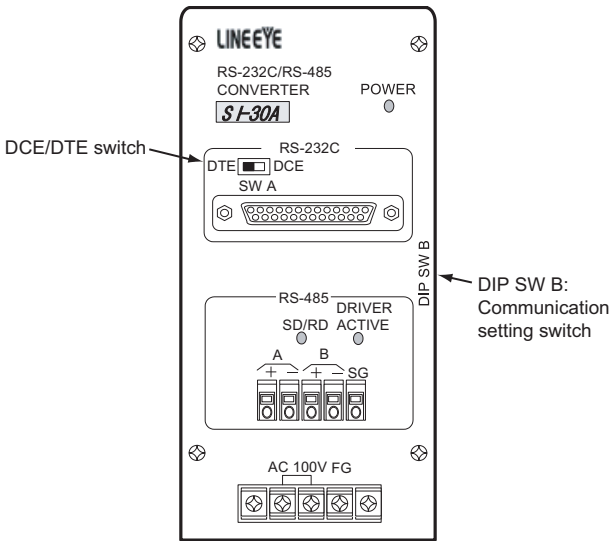
## Communication settings

Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| Transmission speed | 9600bps |
| MANUAL-AUTO | AUTO |
| DCE/DTE switching | DCE |
| Terminating resistor selection*1 | ON/OFF |

*1 Set as necessary.

## Settings by switch




### ■Settings of transmission speed, MANUAL-AUTO and terminating resistor selection

| Setting item | Set value | Switch No. of DIP SWB | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Transmission speed | 9600bps | ON | ON | OFF | | |
| MANUAL-AUTO | AUTO | | | | ON | |
| Terminating resistor selection*1 | Enable | | | | | ON |
| | Disable | | | | | OFF |

*1 Set as necessary.

### ■Setting of DCE/DTE switching

DTE ▬ DCE
SW A

| Setting item | Set value |
|---|---|
| DCE/DTE | DCE |

# Connecting to interface converter (KS-485)

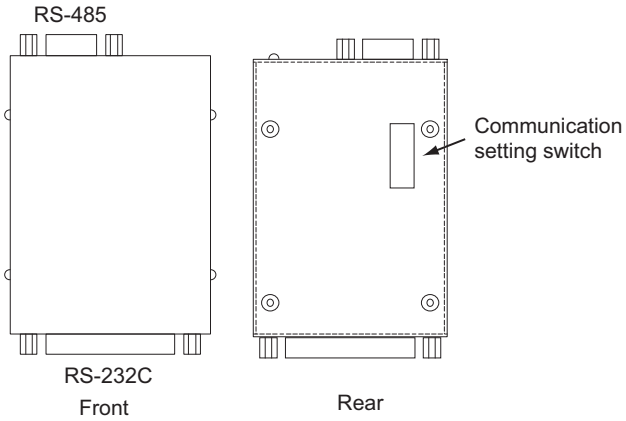
## Communication settings

Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| Transmission speed | 9600bps |
| Terminating resistor selection*1 | ON/OFF |

*1 Set as necessary.

## Settings by switch




### ■Settings of transmission speed and terminating resistor selection

| Setting item | Set value | Switch No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4*2 | 5 | 6*2 | 7 | 8 |
| Transmission speed | 9600bps | ON | OFF | ON | — | ON | — | | |
| Terminating resistor selection*1 | Enable | | | | | | | ON | ON |
| | Disable | | | | | | | OFF | OFF |

*1 Set as necessary.
*2 Disabled.

# Connecting to interface converter (K3SC-10)

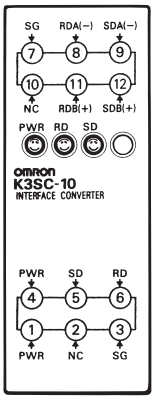
## Communication settings

Make the communication settings by operating the DIP switch of the temperature controller.

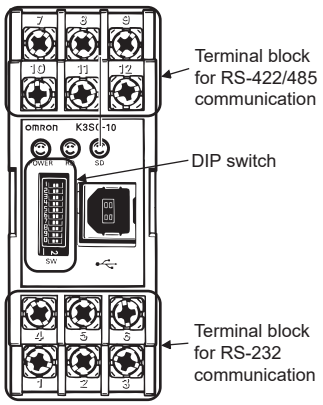
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits |
| Parity bit*1 | Odd, even, none |
| Stop bit | 1bit |
| Communication Type | RS-232C ↔ RS-485 |
| Echo back | Without |

*1 Make the same setting as that of GOT side.

## Settings by DIP switch

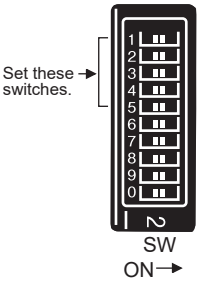



Front of K3SC-10 body



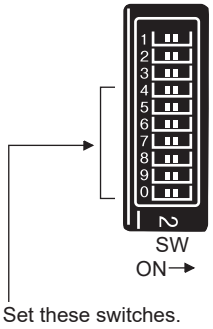

Inside of K3SC-10 body
(When removing the front cover)

### ■Transmission speed settings




| Transmission speed (bps) | Switch No. | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 9600 | OFF | OFF | OFF |
| 19200 | ON | OFF | ON |
| 38400 | OFF | ON | ON |

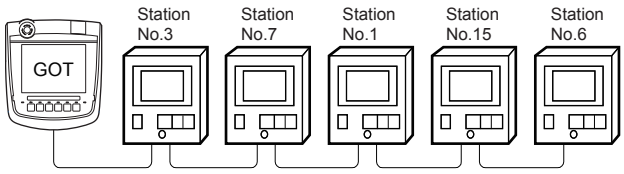
### ■Settings of data length, parity bit, stop bit, master/slave device and echoback




| Setting item | Set value | Switch No. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Stop bit | 1bit | | ON | | | | | |
| Parity bit | Even | | | OFF | OFF | | | |
| | Odd | | | ON | OFF | | | |
| | None | | | OFF | ON | | | |
| Communication Type | RS-232C ↔ RS-485 | | | | | OFF | OFF | |
| Echo back | Without | | | | | | | OFF |

# Station number setting

Set each station number so that no station number overlaps.
The station number can be set without regard to the cable connection order.
There is no problem even if station numbers are not consecutive.



Examples of station number setting

## Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

| Specification range |
|---|
| 1 to 199 |
| 216 to 255 |

**Point**

Specifying a station No. between 200 and 215
(Example of specifying the station No. 215)
Step.1 Set the station No. to "200".
Step.2 Input "215" to the internal device GD10.
Step.3 The station No. 215 is specified.
For details, refer to (2) Indirect specification shown below.

## Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).
When specifying the station No. from 200 to 215 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 200 | GD10 | 1 to 255<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 201 | GD11 | |
| 202 | GD12 | |
| 203 | GD13 | |
| 204 | GD14 | |
| 205 | GD15 | |
| 206 | GD16 | |
| 207 | GD17 | |
| 208 | GD18 | |
| 209 | GD19 | |
| 210 | GD20 | |
| 211 | GD21 | |
| 212 | GD22 | |
| 213 | GD23 | |
| 214 | GD24 | |
| 215 | GD25 | |

# 31.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

FUJI equipment ([FUJI Temperature Controller/Digital Controller])

# 31.7 Precautions

## Station number settings of temperature controller

In the system configuration, the temperature controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1472 Communication detail settings

## FIX processing of temperature controller

The temperature controller power must not be turned off during the FIX processing.

Otherwise, data within the non-volatile memory will corrupt and the temperature controller will be unavailable.

## GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

## Writing multiple points

If the GOT writes multiple points simultaneously, a system alarm may occur and writing cannot be executed correctly.

In this case, take the following corrective action.

**■Refer to the manual of temperature controller to be used, set the points to be written by the GOT simultaneously up to " The maximum numbers of words to be written per 1 message" specified depending on the temperature controllers.**

**■Set the delay time of communication detail settings.**

☞ Page 1472 Communication detail settings

# MEMO

# 32 YASKAWA PLC


- Page 1483 Connectable Model List
- Page 1484 Serial Connection
- Page 1514 Ethernet Connection
- Page 1537 Settable Device Range


## 32.1 Connectable Model List

The following table shows the connectable models.

| Model name*1 | Clock | Communication | Connectable model | Refer to |
|---|---|---|---|---|
| GL120<br>GL130 | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1484 Connecting to GL120 or GL130 |
| GL60S<br>GL60H<br>GL70H | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1486 Connecting to GL60S, GL60H, or GL70H |
| MP920<br>MP930 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1488 Connecting to MP920/930, CP-9300MS/9200(H), or PROGIC-8 |
| CP-9300MS<br>CP-9200(H)<br>PROGIC-8 | × | RS-232 | GT2506HS GT2505HS | |
| MP940 | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1491 Connecting to MP940 |
| CP-9200SH<br>CP-317 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1492 Connecting to CP-9200SH or CP-317 |
| MP2200<br>MP2300<br>MP2300S | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1494 Connecting to MP2200, MP2300, or MP2300S |
| MP920<br>MP2200<br>MP2300<br>MP2300S | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1514 Connecting to MP920, MP2200, MP2300, or MP2300S |
| CP-9200SH<br>CP-312<br>CP-317 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1514 Connecting to MP920, MP2200, MP2300, or MP2300S |
| MP3200<br>MP3300 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1518 Connecting to MP3200 or MP3300 |

*1 GOT is not applicable to the multiple CPU system configuration of YASKAWA PLC.

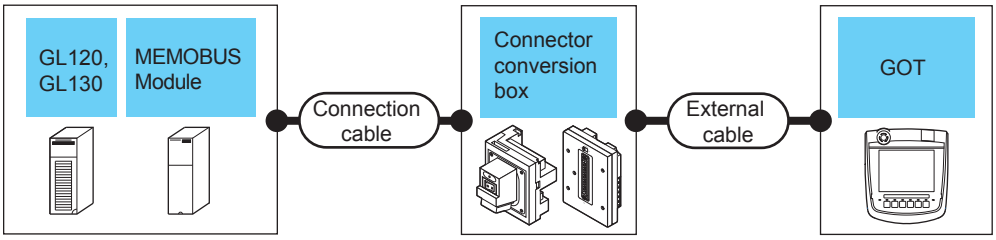
# 32.2 Serial Connection

## Connecting to GL120 or GL130

Communication driver

YASKAWA GL

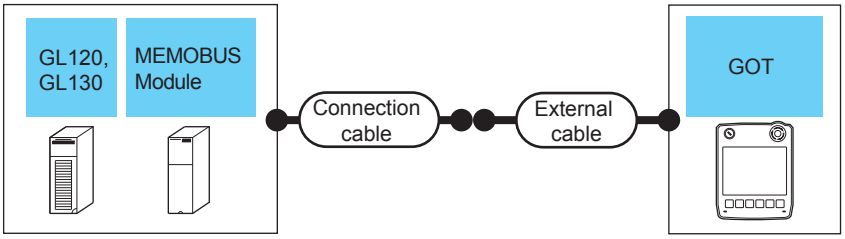
### When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| GL120 GL130 | - | RS-232 | GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | JAMSC-120NOM27100 | RS-422 | GT09-C30R40201-9P (3m) GT09-C100R40201-9P (10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | 1 GOT for 1 MEMOBUS module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

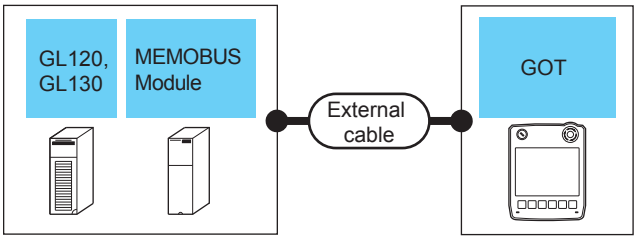
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | Cable model Connection diagram number | | | | |
| GL120 GL130 | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | JAMSC-120NOM27100 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 1 GOT for 1 MEMOBUS module |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | | | | |
| GL120 GL130 | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | JAMSC-120NOM27100 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | 1 GOT for 1 MEMOBUS module |

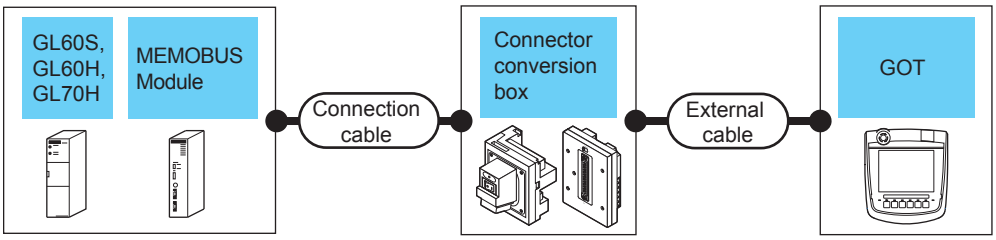
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

# Connecting to GL60S, GL60H, or GL70H

Communication driver

YASKAWA GL

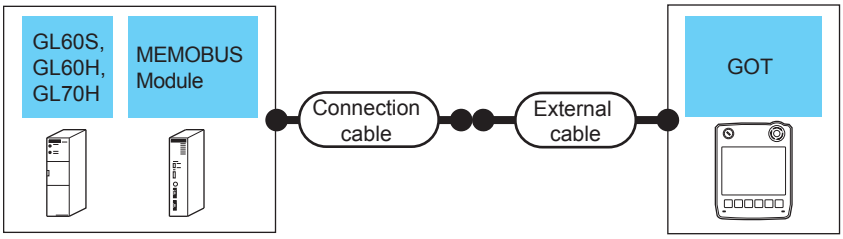
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| GL60S GL60H GL70H | JAMSC-IF60 JAMSC-IF61 | RS-232 | GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 MEMOBUS module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | JAMSC-IF612 | RS-422 | GT09-C30R40201-9P (3m) GT09-C100R40201-9P (10m) or User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

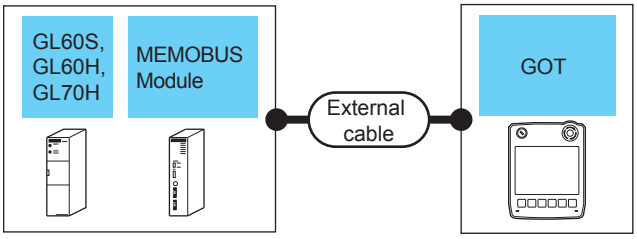
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | Cable model Connection diagram number | | | | |
| GL60S GL60H GL70H | JAMSC-IF60 JAMSC-IF61 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 MEMOBUS module |
| | JAMSC-IF612 | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | MEMOBUS module*1 | Communication Type | | | | |
| GL60S<br>GL60H<br>GL70H | JAMSC-IF60<br>JAMSC-IF61 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 MEMOBUS module |
| | JAMSC-IF612 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

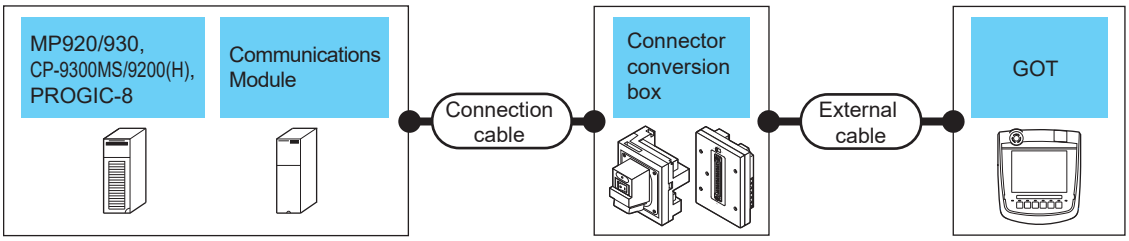
# Connecting to MP920/930, CP-9300MS/9200(H), or PROGIC-8

Communication driver
YASKAWA MP2000/MP900/CP9200SH

Communication driver
YASKAWA CP9300MS(MC compatible)

Communication driver
YASKAWA GL

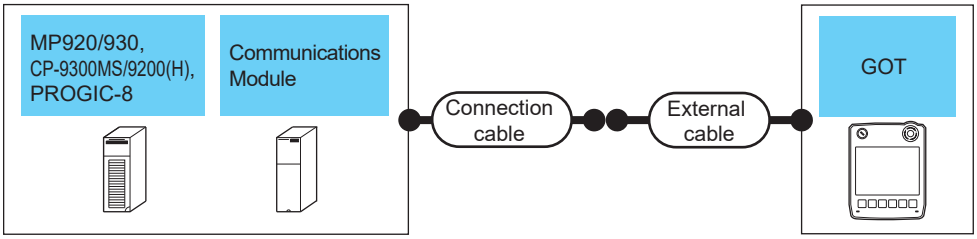
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication module *1 | Communication Type | Cable model Connection diagram number | | | | | |
| MP920 MP930 | - | RS-232 | GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CP-9200(H) PROGIC-8 (connecting to port1) | | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| PROGIC-8 (connecting to port2) | | | GT09-C30R20202-15P (3m) or User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| CP-9300MS (CP-9300MC compatible/ non-compatible) | | | GT09-C30R20203-9P (3m) or User preparing RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| MP920 (connecting to 217IF) | 217IF | RS-232 | GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | RS-422 | User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

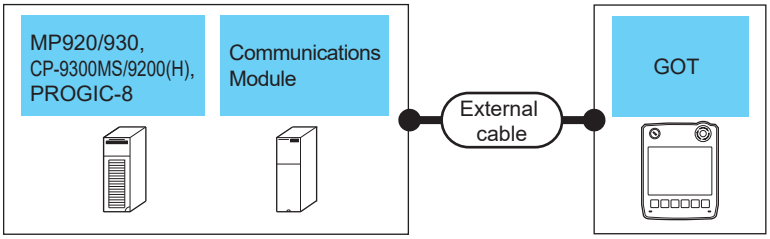
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module *1 | Communication Type | Cable model Connection diagram number | | | | |
| MP920 MP930 | - | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CP-9200(H) PROGIC-8 (connecting to port1) | | | | GT11H-C30-37P(3m) | GT 2505HS | | |
| PROGIC-8 (connecting to port2) | | | User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | | |
| CP-9300MS (CP-9300MC compatible/ non-compatible) | | | User preparing RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | | |
| MP920 (connecting to 217IF) | 217IF | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication module *1 | Communication Type | | | | |
| MP920<br>MP930 | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| CP-9200(H) PROGIC-8 (connecting to port1) | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | | |
| PROGIC-8 (connecting to port2) | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6) | GT 2505HS | | |
| CP-9300MS (CP-9300MC compatible/non-compatible) | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 9) | GT 2505HS | | |
| MP920 (connecting to 217IF) | 217IF | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 6) | GT 2505HS | 13m | |

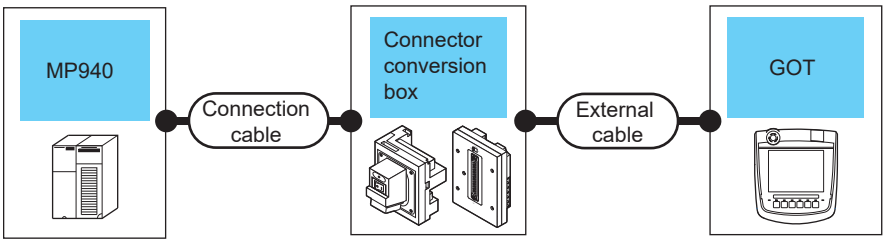
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

# Connecting to MP940

Communication driver

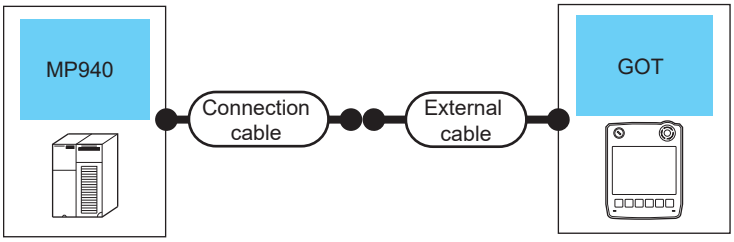
YASKAWA MP2000/MP900/CP9200SH

## When using the connector conversion box



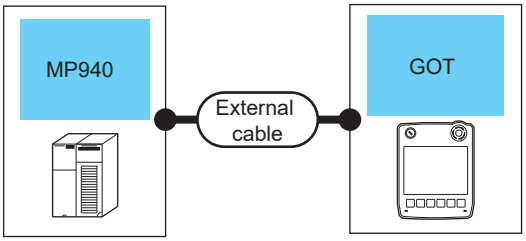

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | | |
| MP940 | RS-232 | GT09-C30R20204-14P (3m)<br>or<br>User preparing RS-232 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | GT09-C30R40202-14P (3m)<br>GT09-C100R40202-14P (10m)<br>or<br>User preparing RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| MP940 | RS-232 | User preparing RS-232 connection diagram 11) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | User preparing RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## When using the external cable (GT11H-C□□□)

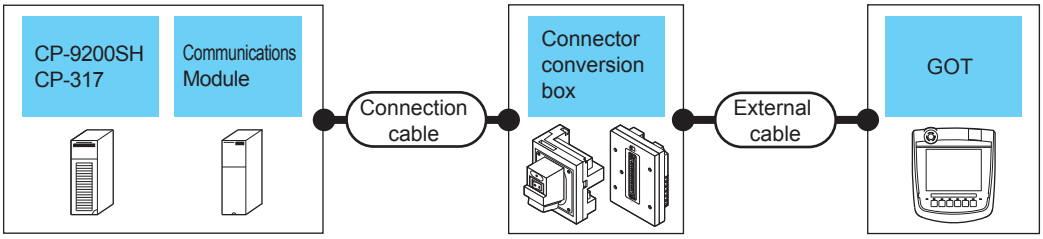



| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| MP940 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 12) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 9) | GT 2505HS | 13m | |

# Connecting to CP-9200SH or CP-317



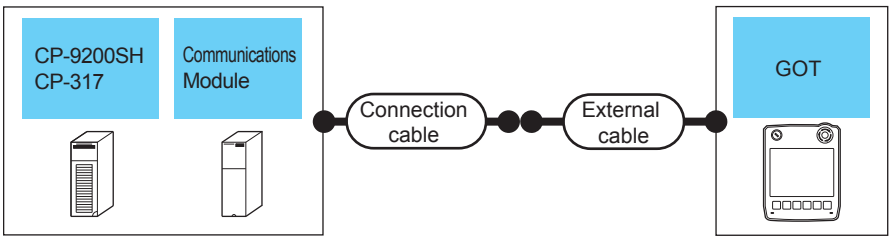

## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| CP-9200SH<br>CP-317 | CP-217IF<br>(CN1 connection) | RS-232 | GT09-C30R20203-9P(3m)<br>or<br>User preparing RS-232 connection diagram 16) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | CP-217IF<br>(CN2 connection) | | GT09-C30R20205-25P (3m)<br>or<br>User preparing RS-232 connection diagram 13) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

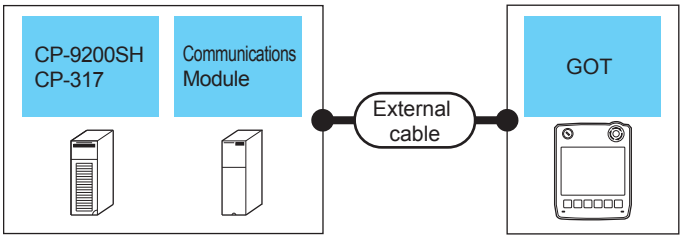
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| CP-9200SH CP-317 | CP-217IF (CN1 connection) | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | CP-217IF (CN2 connection) | | User preparing RS-232 connection diagram 14) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | | | | |
| CP-9200SH CP-317 | CP-217IF (CN1 connection) | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | CP-217IF (CN2 connection) | | GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 15) | GT 2505HS | | |

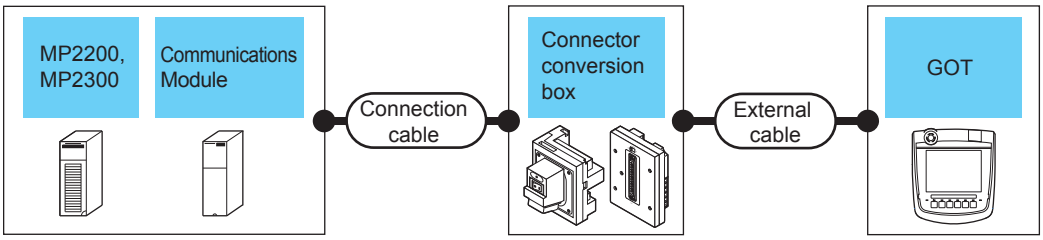
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

# Connecting to MP2200, MP2300, or MP2300S

Communication driver

YASKAWA MP2000/MP900/CP9200SH

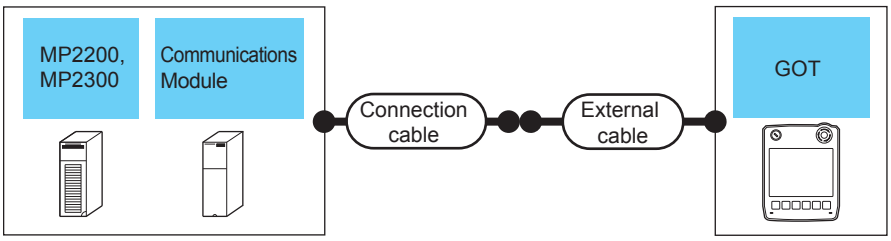
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| MP2200<br>MP2300<br>MP2300S | 217IF-01<br>218IF-01<br>218IF-02 | RS-232 | GT09-C30R20201-9P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 communication module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | 217IF-01 | RS-422 | User preparing RS-422 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

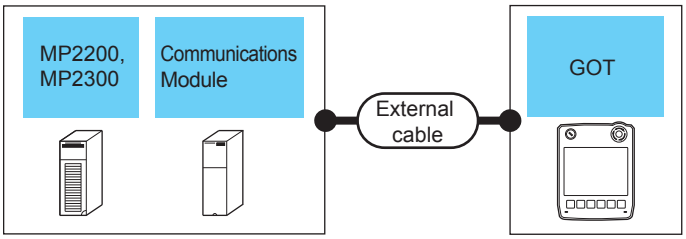
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | Cable model Connection diagram number | | | | |
| MP2200<br>MP2300<br>MP2300S | 217IF-01<br>218IF-01<br>218IF-02 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | 217IF-01 | RS-422 | User preparing RS-422 connection diagram 11) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication module*1 | Communication Type | | | | |
| MP2200<br>MP2300<br>MP2300S | 217IF-01<br>218IF-01<br>218IF-02 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 communication module |
| | 217IF-01 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 12) | GT 2505HS | 13m | |

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

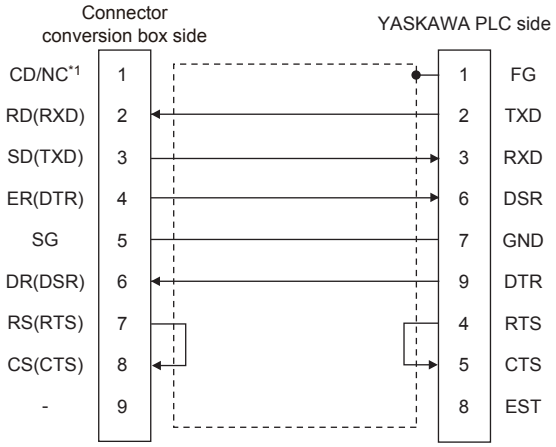
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

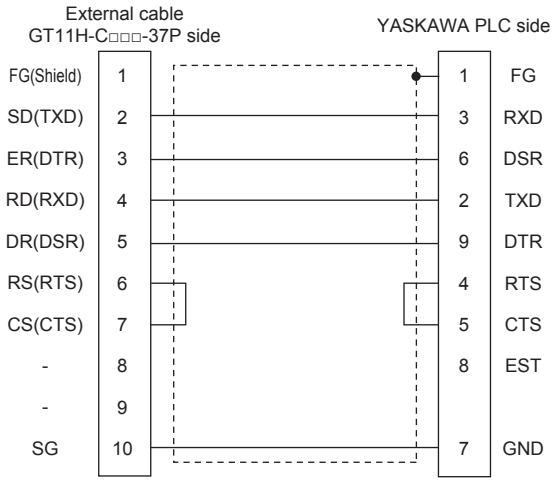
### ■Connection diagram

• RS-232 connection diagram 1)

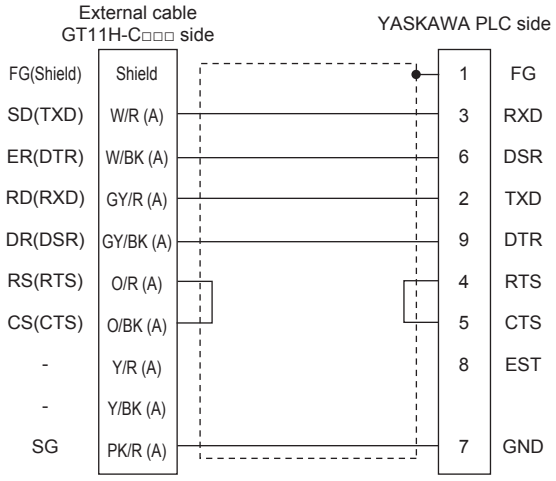



*1 GT2506HS-V: CD, GT2505HS-V: NC

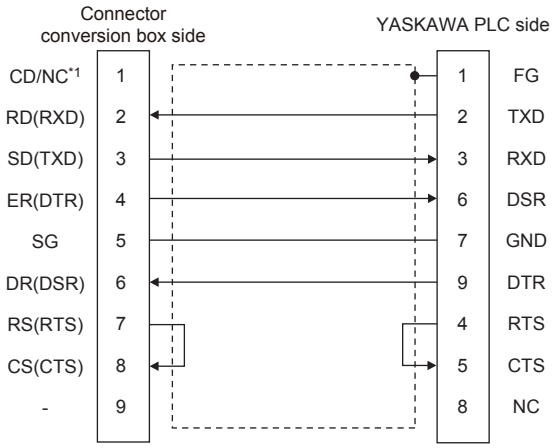
• RS-232 connection diagram 2)




• RS-232 connection diagram 3)

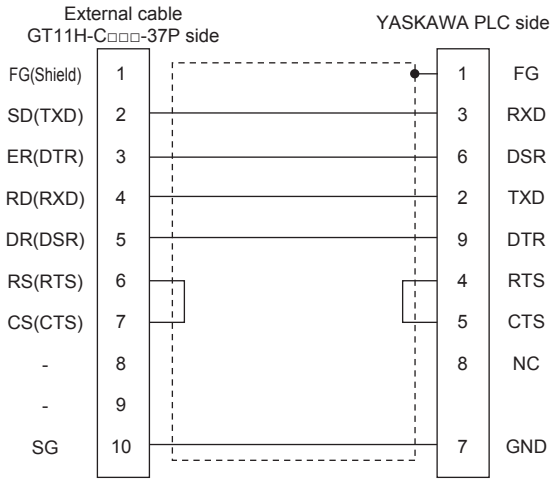


• RS-232 connection diagram 4)

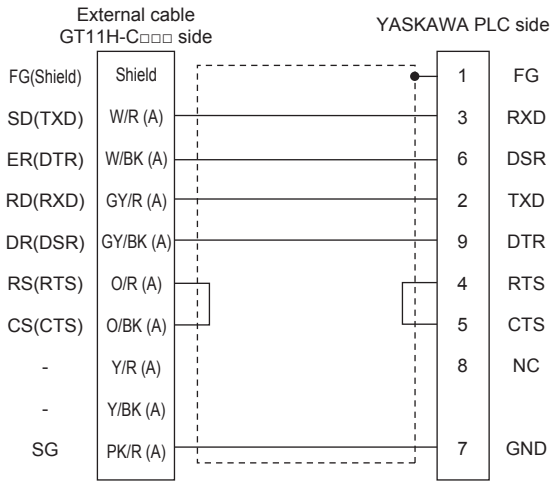



*1 GT2506HS-V: CD, GT2505HS-V: NC

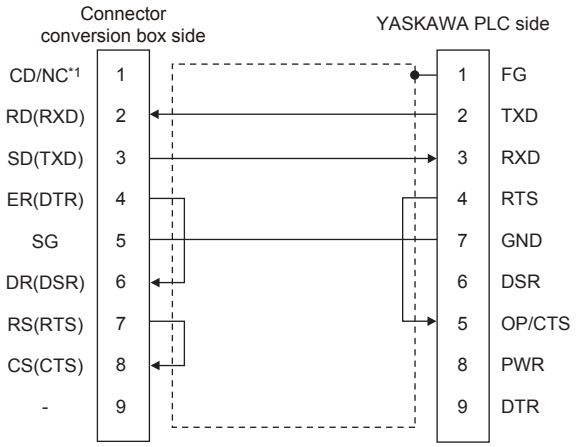
• RS-232 connection diagram 5)




• RS-232 connection diagram 6)

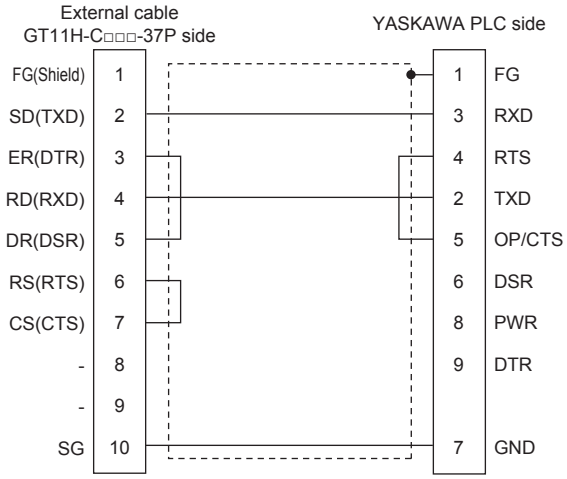


• RS-232 connection diagram 7)

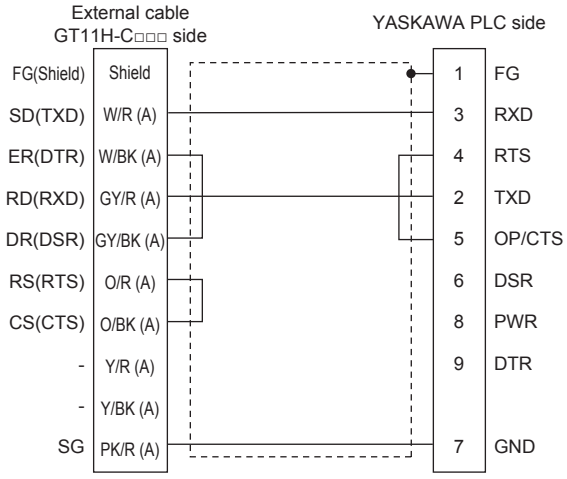



*1 GT2506HS-V: CD, GT2505HS-V: NC

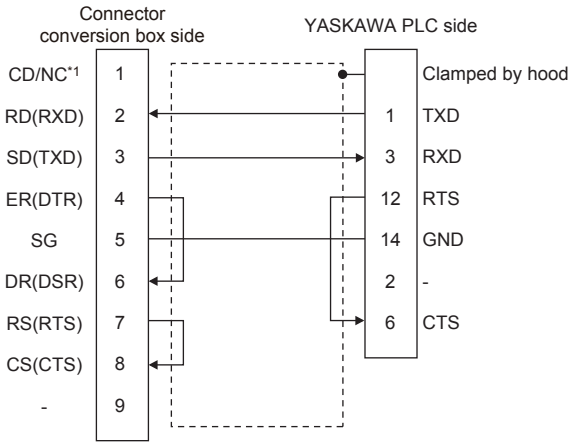
• RS-232 connection diagram 8)




• RS-232 connection diagram 9)

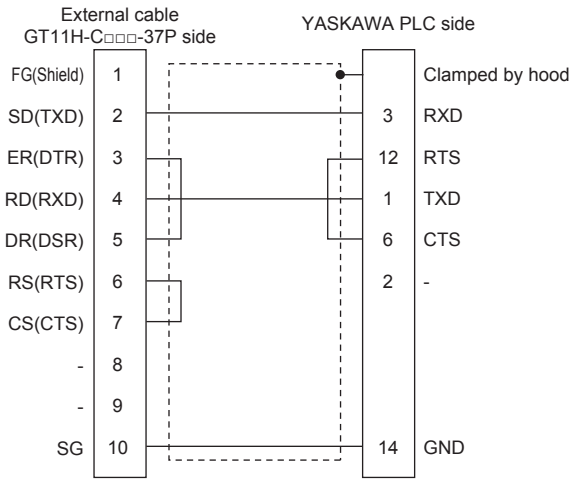


• RS-232 connection diagram 10)

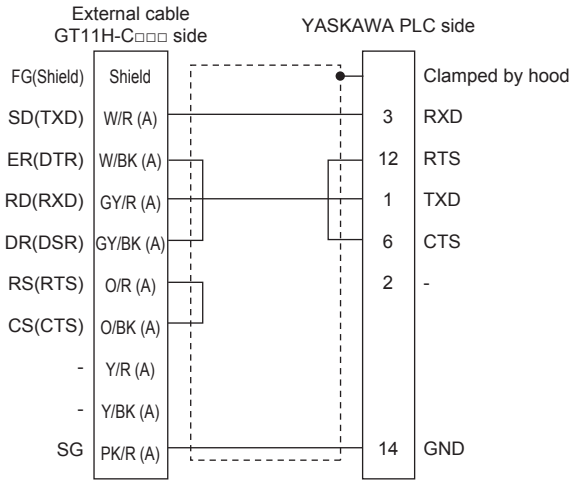



*1 GT2506HS-V: CD, GT2505HS-V: NC

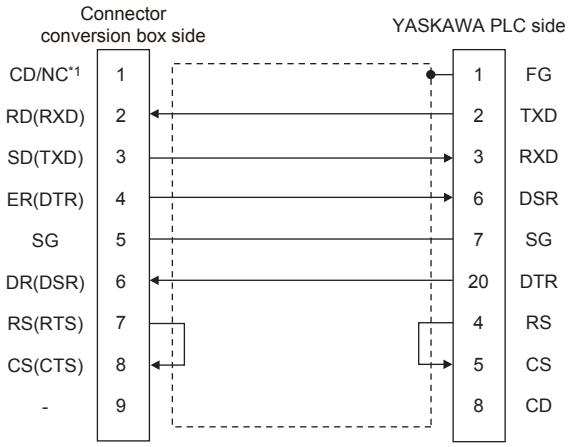
• RS-232 connection diagram 11)




• RS-232 connection diagram 12)

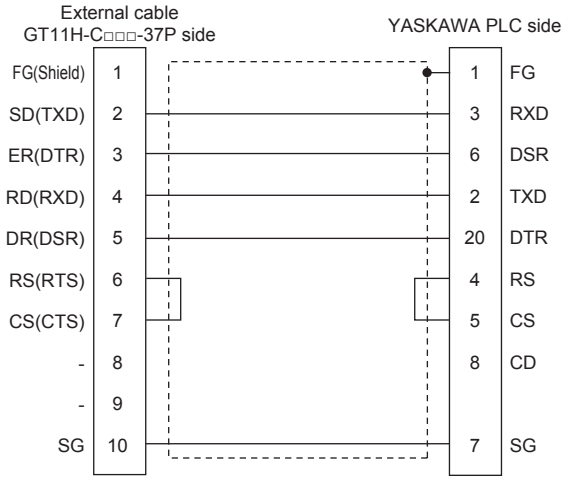


• RS-232 connection diagram 13)

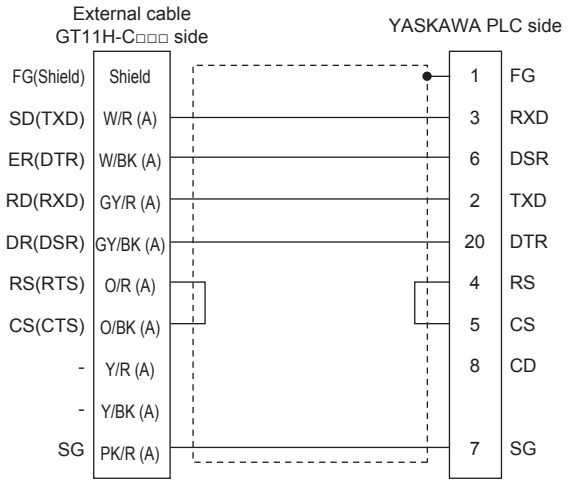



*1 GT2506HS-V: CD, GT2505HS-V: NC

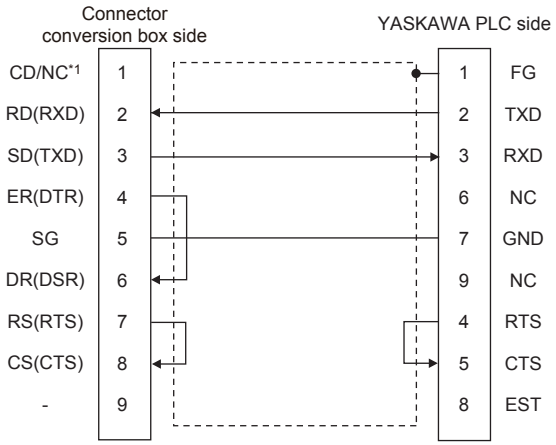
• RS-232 connection diagram 14)




• RS-232 connection diagram 15)

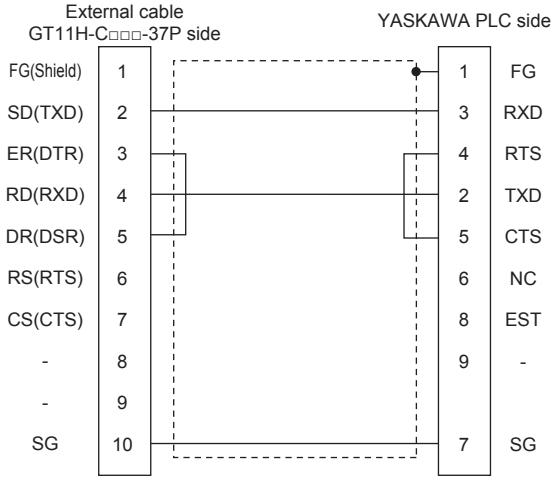


• RS-232 connection diagram 16)

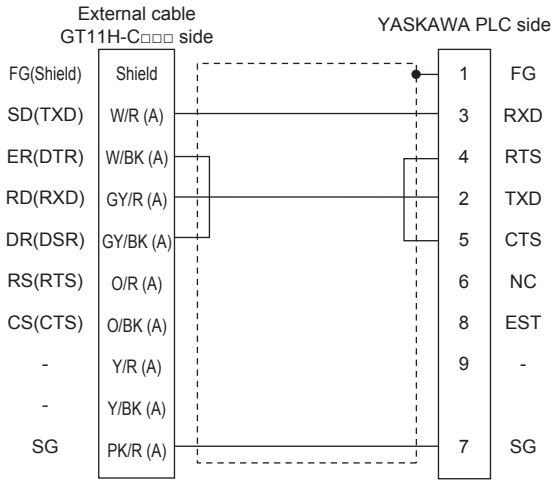



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 17)




• RS-232 connection diagram 18)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• YASKAWA PLC side connector

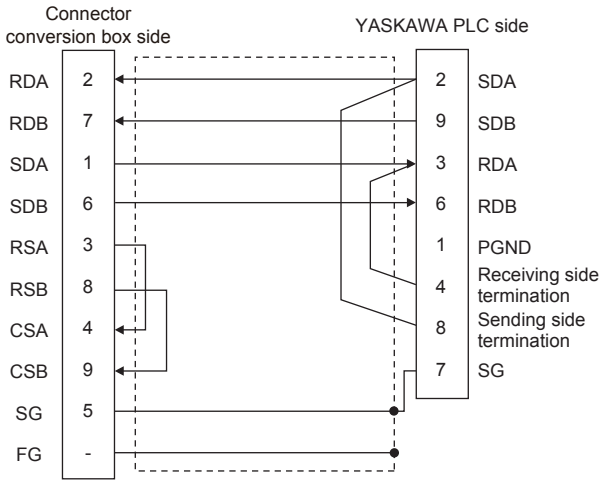
Use the connector compatible with the YASKAWA PLC side module.

For details, refer to the YASKAWA PLC user's manual.

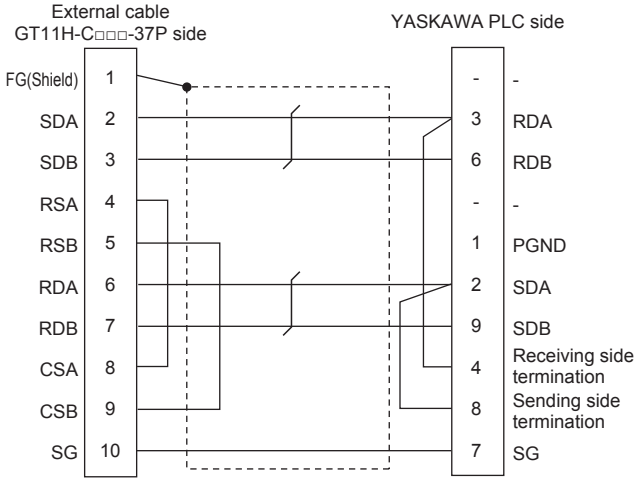
## RS-422 cable

### ■Connection diagram

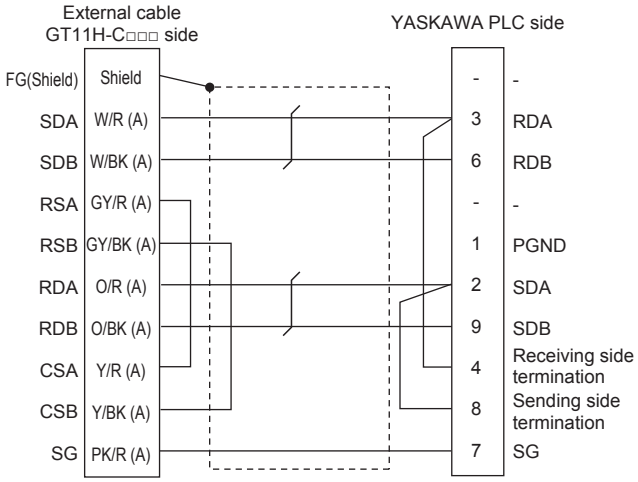
• RS-422 connection diagram 1)



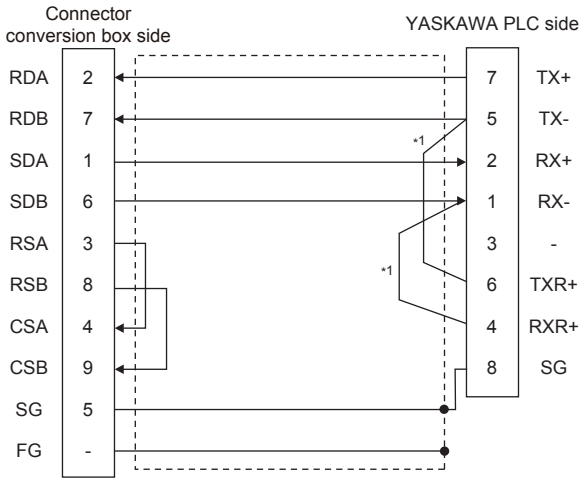

• RS-422 connection diagram 2)




• RS-422 connection diagram 3)

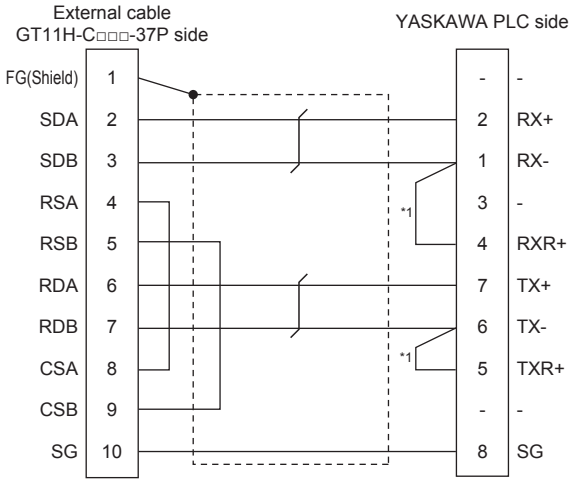


• RS-422 connection diagram 4)



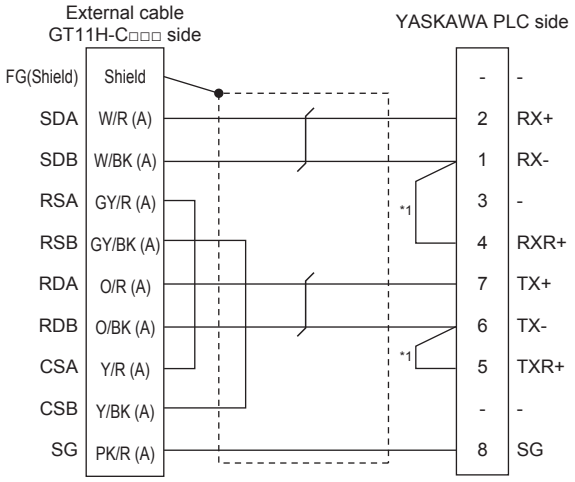

*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

• RS-422 connection diagram 5)



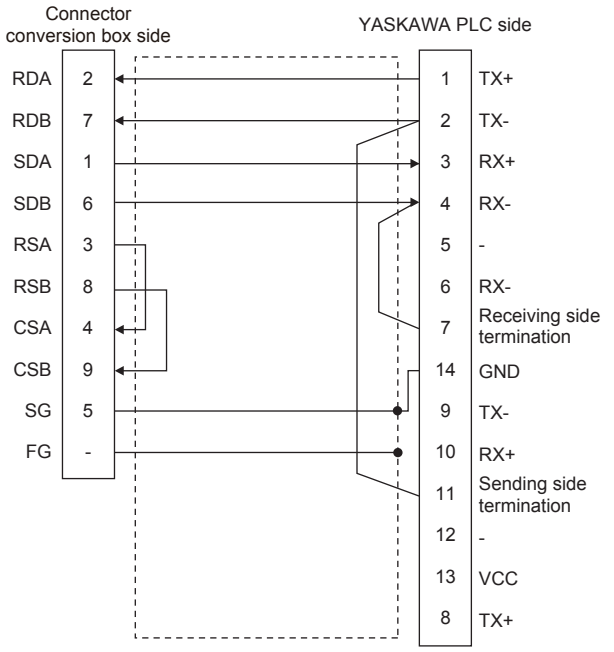

*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

• RS-422 connection diagram 6)

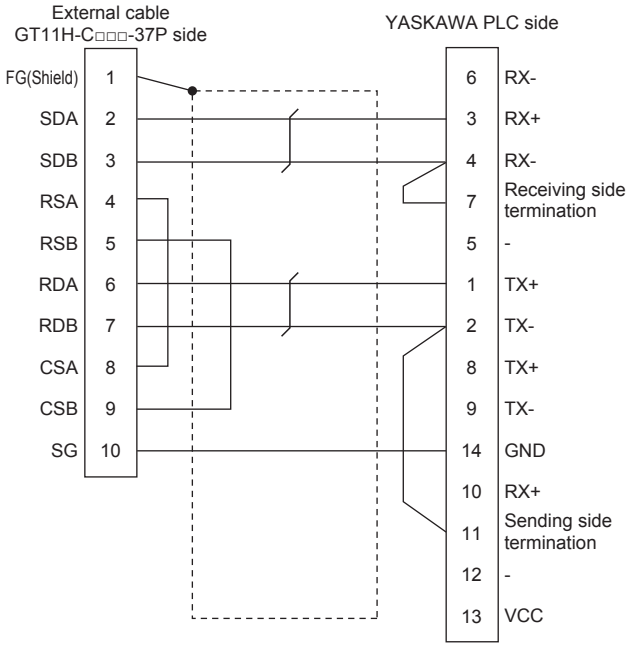



*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

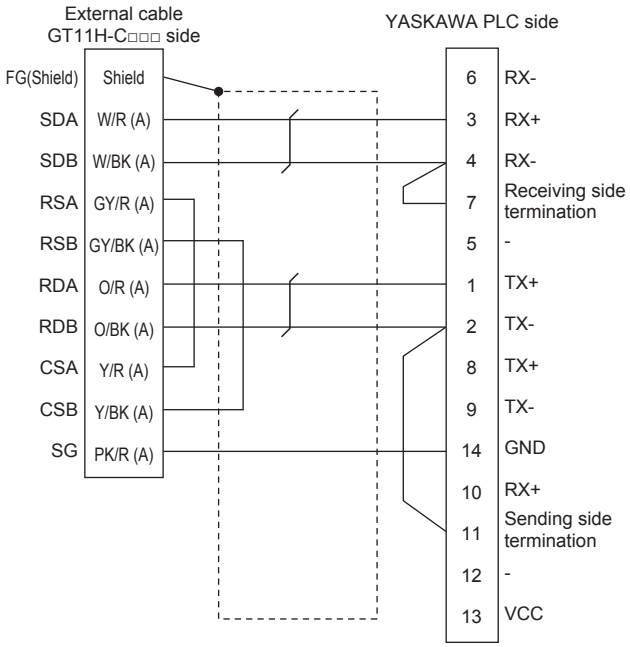
• RS-422 connection diagram 7)



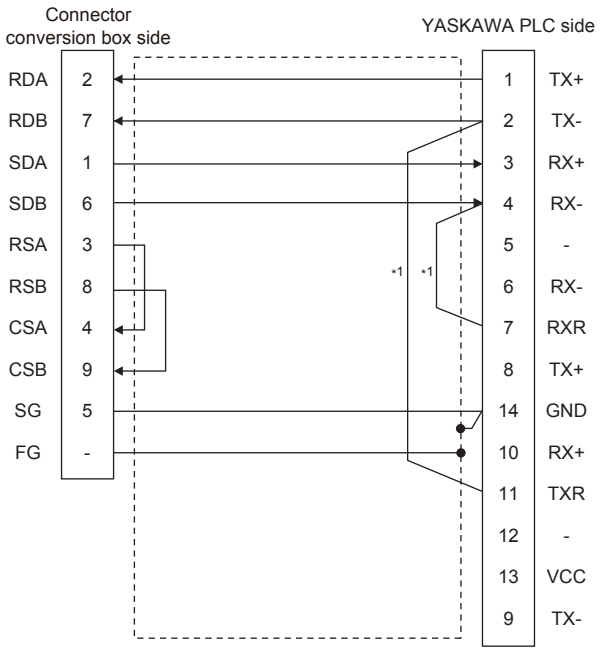

• RS-422 connection diagram 8)



• RS-422 connection diagram 9)

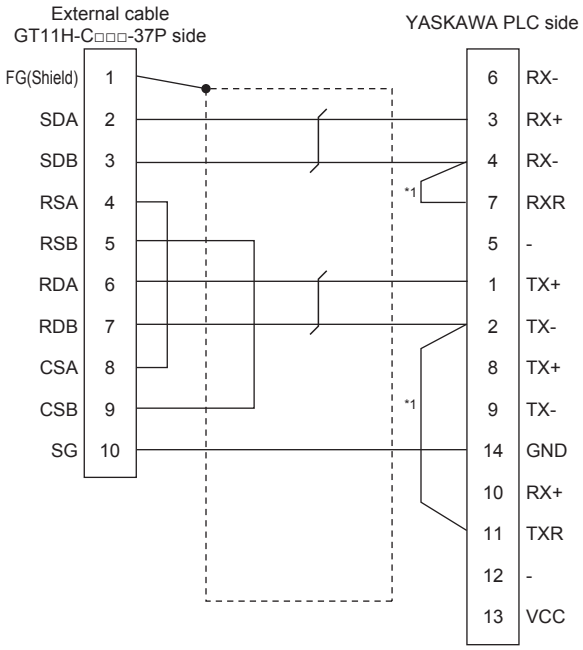



• RS-422 connection diagram 10)



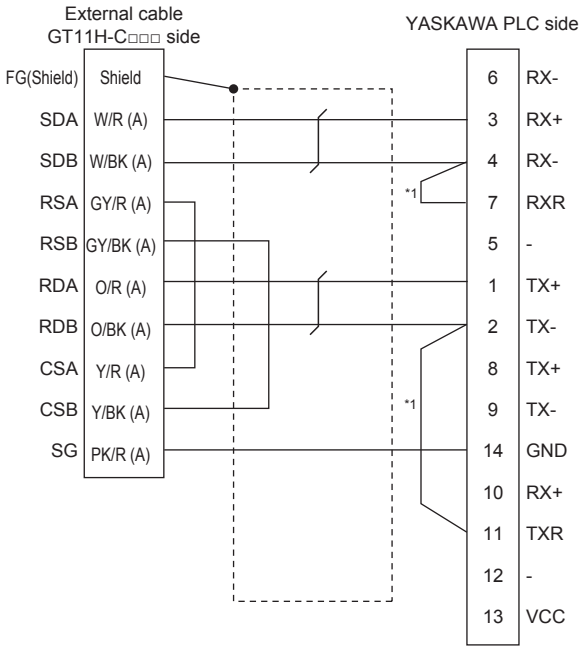

*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

• RS-422 connection diagram 11)




*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

• RS-422 connection diagram 12)




*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• YASKAWA PLC side connector

Use the connector compatible with the YASKAWA PLC side module.

For details, refer to the YASKAWA PLC user's manual.

## ■Connecting terminating resistors

• GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

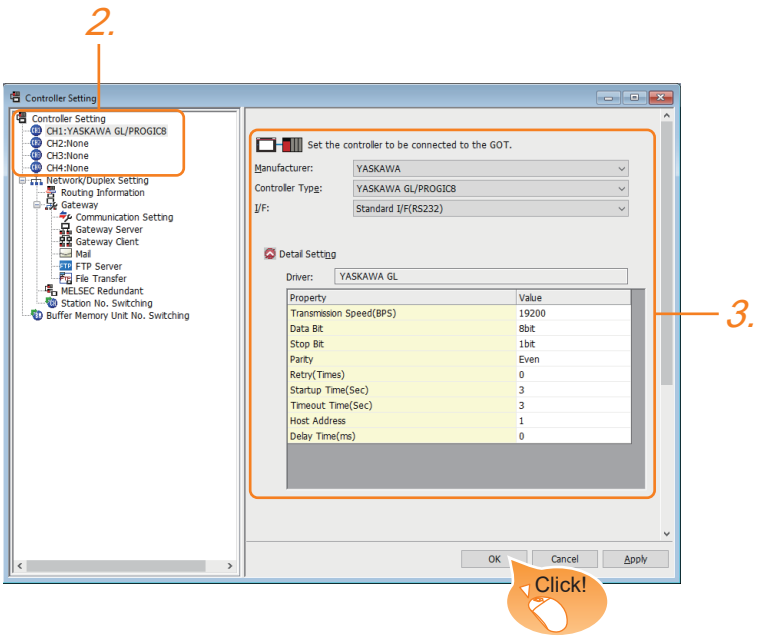
• YASKAWA PLC side

When connecting a YASKAWA PLC to a GOT, connect a terminating resistor to the YASKAWA PLC if required.

📖YASKAWA PLC user's Manual

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [YASKAWA]
- [Controller Type]: Select one of the following items.

[YASKAWA GL/PROGIC8]
[YASKAWA CP9200(H)]
[YASKAWA CP9300MS(MC compatible)]
[YASKAWA MP2000/MP900/CP9200SH]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1510 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Retry(Times) | 0 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | Even (fixed) |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 30sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 1) | 1 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300(ms) |

**Point**

• Delay Time

When connecting to PLC CP-9200(H) and CP-9300MS, set the following.

| Model name | | Delay Time |
|---|---|---|
| CP-9200(H) | | 30ms or more |
| CP-9300MS | port:0 | 10ms or more |
| | port:1 | 30ms or more |

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Settings

**Point**

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

## Communication and port settings

Make the communication and port settings with a peripheral tool.

| Device name | Set value |
|---|---|
| Address*1 | 1 to 31 |
| Protocol | MEMOBUS |
| Mode | RTU |
| Transmission speed*2*3 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps |
| Data bit | 8bits |
| Stop bit | 1bit |
| Parity bit | Even |
| Error check | CRC16 |

*1 Set the address according to the Host Address setting on the GOT side.
For the Host Address setting on the GOT side, refer to the following.
Page 1510 Communication detail settings

*2 Only transmission speeds available on the GOT side are shown.
Also, the setting range differs depending on the YASKAWA PLC model.

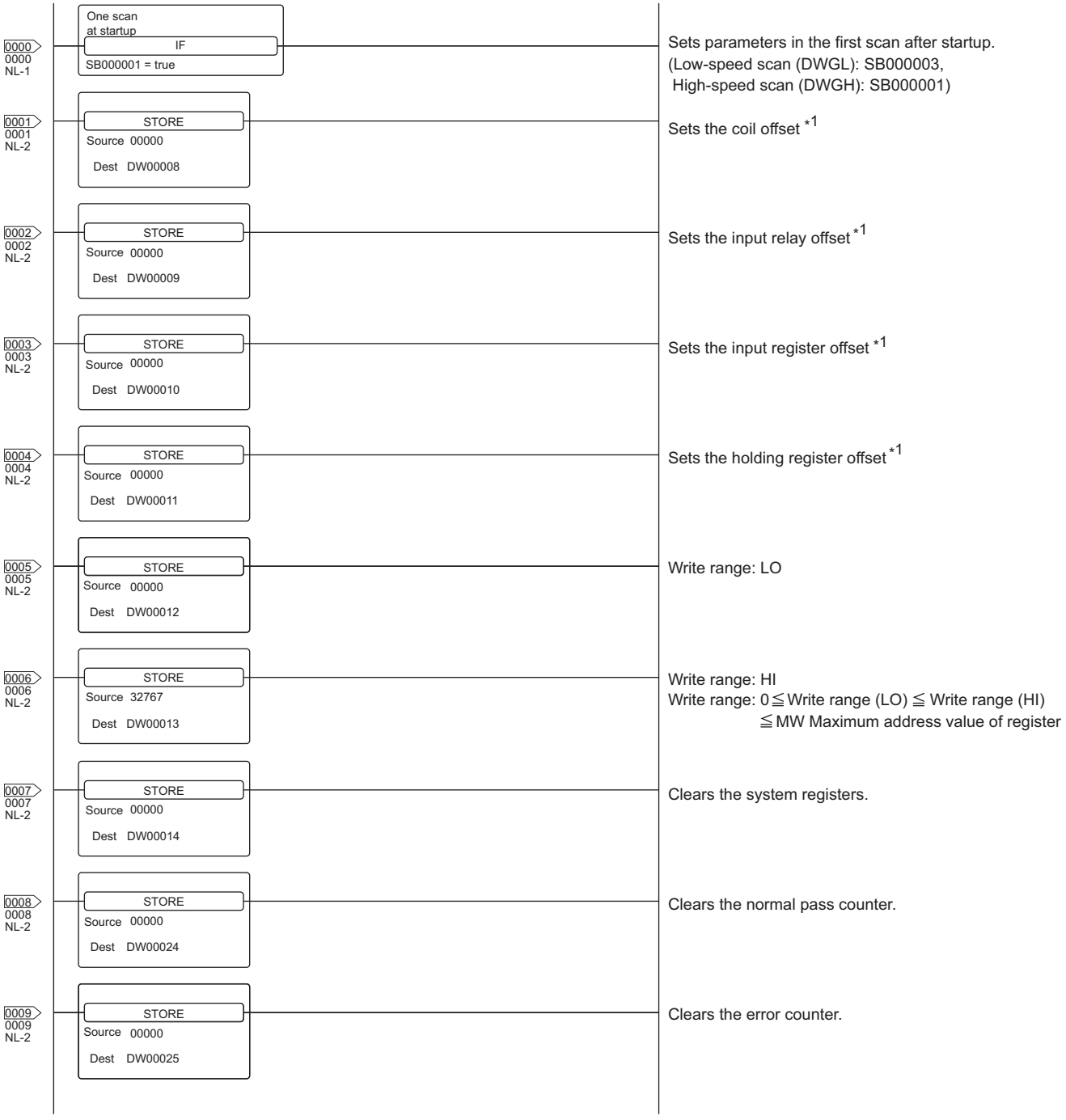
*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1510 Communication detail settings

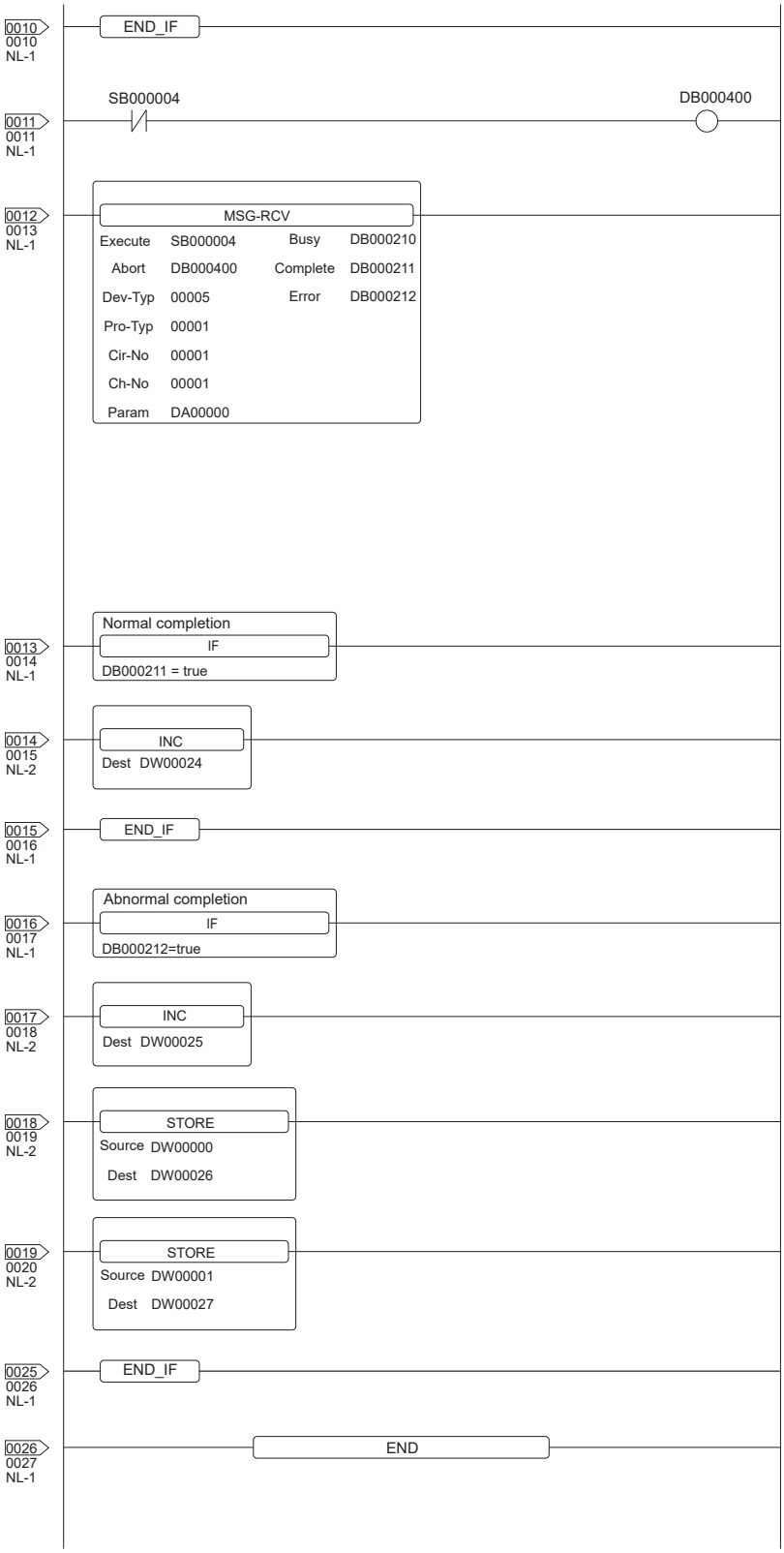
## Sequence program

To communicate the MP2000 series with the GOT2000 series, the ladder program to receive messages is required.

The following shows an example ladder program for MP2000 series.

ladder program to receive messages

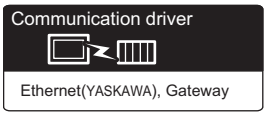


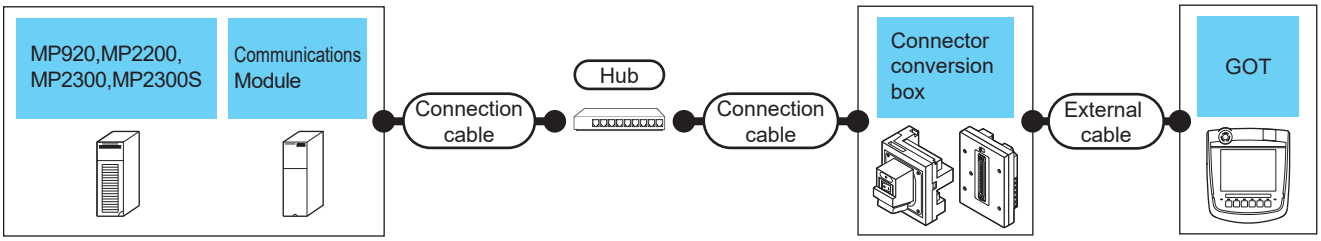



*1 Set 0 to the PARAM08 to 11 of the MSG_RCV (input relay, input register, coil, holding register offset). (Do not make the offset settings.) When the offset is needed, set [Option] → [Offset] to each object or make a setting added the offset value to the device.

# 32.3 Ethernet Connection

## Connecting to MP920, MP2200, MP2300, or MP2300S






| PLC | | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| MP920 | 218IF | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC (module): GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC (module): GOT is 1: N<br>The following shows the number of GOTs for 1 PLC (module)<br>TCP/UDP: 10 or less |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| MP2200<br>MP2300 | 218IF-01<br>218IF-02 | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| MP2300S | 218IF-01<br>218IF-02 | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| | - | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

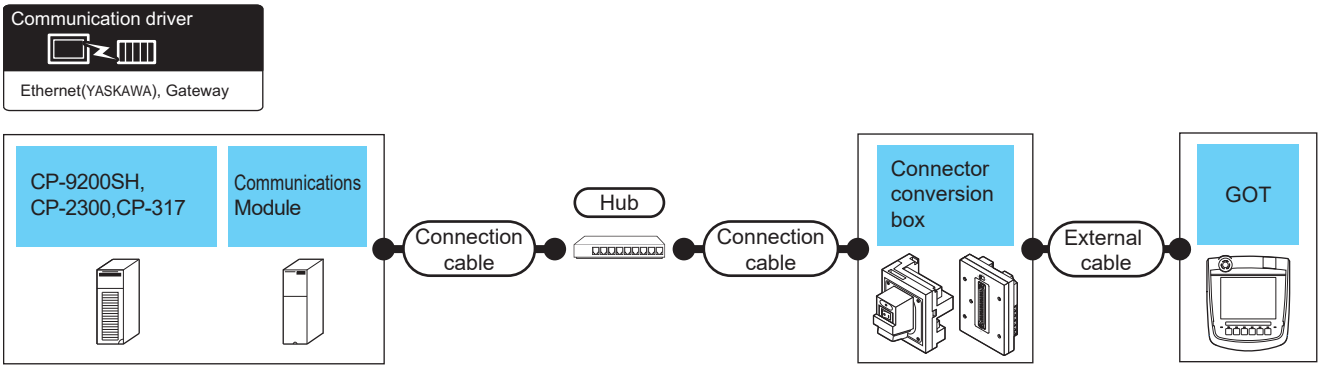
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

*4 Use C or later version of GT11H-C□□-37P.

# Connecting to CP-9200SH, CP-312, or CP-317




| PLC | | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module*3 | Cable model*1 | Maximum segment length*2 | | | | |
| CP-9200SH<br>CP-312 | CP-218IF | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC (module): GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC (module): GOT is 1: N<br>The following shows the number of GOTs for 1 PLC (module)<br>TCP/UDP: 10 or less |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CP-317 | 218TXB | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

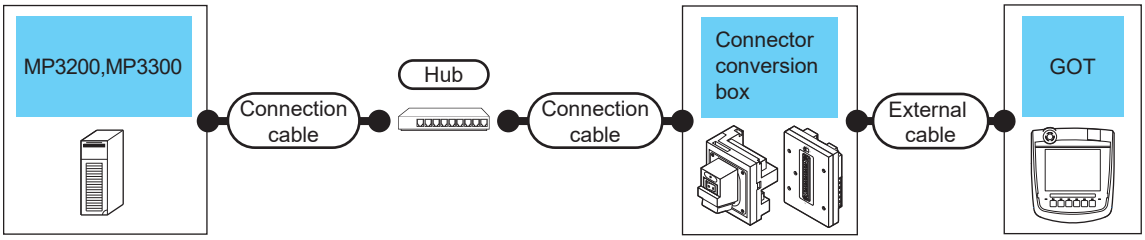
*4 Use C or later version of GT11H-C□□-37P.

# Connecting to MP3200 or MP3300

Communication driver

Ethernet(YASKAWA MP3000), Gateway

## When using the connector conversion box




| PLC | Connection cable | | Connector conversion box | External cable *3 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Cable model*1 | Maximum segment length*2 | | | | |
| MP3200<br>MP3300 | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC (module): GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC (module): GOT is 1: N The following shows the number of GOTs for 1 PLC (module)<br>TCP/UDP: 10 or less |
| | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

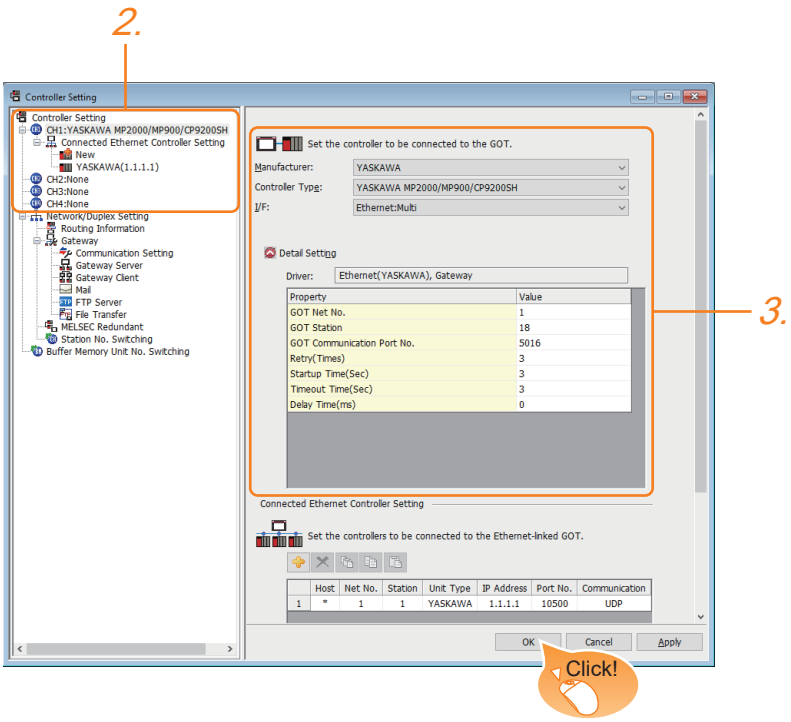
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use C or later version of GT11H-C□□-37P.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [YASKAWA]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[YASKAWA MP2000/MP900/CP9200SH]

[YASKAWA MP3000]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1520 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5016 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 1) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5016 *2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(10ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1521 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

• Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

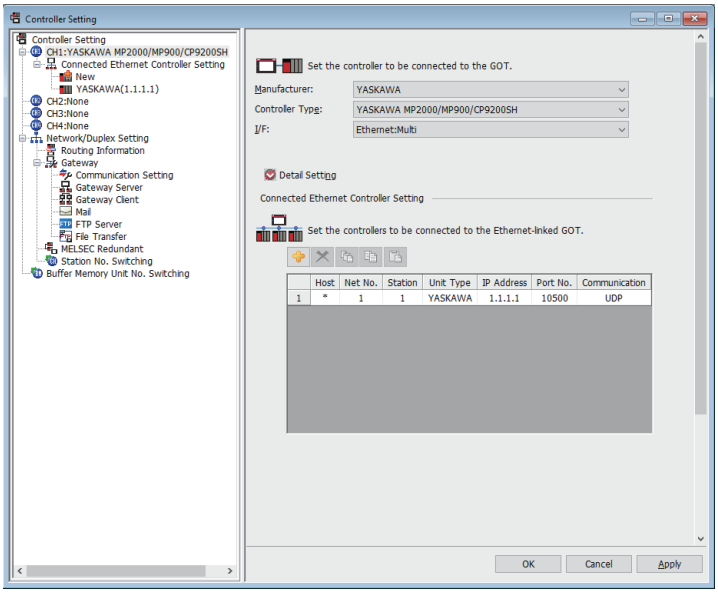
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *2 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 |
| Unit Type | YASKAWA (fixed) | YASKAWA (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet equipment.<br>(Default: 10500) | 256 to 65534 |
| Communication format | Select a communication protocol.<br>(Default: UDP) | UDP, TCP |

*1 Connection with the PLC is unavailable if the IP address is the default value. Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1520 Communication detail settings

# PLC side setting (MP2000 or MP920 series)

**Point**

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

## Parameter settings

Make the parameter settings with a peripheral tool.

### ■Settings for 218IF-01

| Item | | Set value | Range |
|---|---|---|---|
| Parameter setting | Local IP Address | [ ].[ ].[ ].[ ] | PLC side IP address |
| | Response Time | 0 | Not required for communication with GOT |
| | Count of Retry (Number of Retries) | 0 | Not required for communication with GOT |
| | CNO *1 (Connection Number) | 1 | 1 to 20 |
| | Local Port (Local Station's Port Number) | 10500 | 256 to 65534 |
| | Node IP Address (Remote Station's IP Address)*2 | [ ].[ ].[ ].[ ] | IP address of GOT |
| | Node Port (Remote Station's Port Number)*2 | [ ] | Port No. of GOT |
| | Connection Type | UDP (recommended) | UDP/TCP |
| | Protocol Type | Extended MEMOBUS | Extended MEMOBUS |
| | Code | BIN | BIN |
| | Node Name (Remote Station's Name) | GOT2000 | Name of GOT |
| Local Port: TCP/IP Setting | Subnet Mask | [ ].[ ].[ ].[ ] | PLC side setting |
| | Gateway IP Address | [ ].[ ].[ ].[ ] | |
| | System Port No. (Diagnostic/Engineering Port No.) | 10000 | |
| | TCP (Transmission Control Protocol) Zero Window Timer Value | 3 sec | |
| | TCP Retry Time | 500ms | |
| | TCP Close Time | 60 sec | |
| | IP Assemble Time | 30 sec | |
| | MAX. Packet Length | 1500 bytes | |

*1 When MITSUBISHI PLC and YASKAWA PLC are used together in the same network, do not set the same value for the Station of MITSUBISHI PLC and the CNO (Connection number) of YASKAWA PLC.

*2 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1520 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1520 Communication detail settings

## ■Setting for the built-in MP2300S Ethernet and 218IF-02

| Item | | Set value | Range |
|---|---|---|---|
| Transmission parameter setting | IP Address | [ ].[ ].[ ].[ ] | PLC side IP address |
| | Subnet Mask | [ ].[ ].[ ].[ ] | PLC side setting |
| | Gateway IP Address | [ ].[ ].[ ].[ ] | |
| | Device name | Arbitrary | Up to 16 one-byte characters |
| Transmission parameter detailed setting | Engineering Port | 256 to 65535 | For a connection with software MPE720 |
| | Response Time | 0 | Not required for communication with GOT |
| | Count of Retry (Number of Retries) | 0 | |
| Message communication of connection parameter setting | Connection Number | 1 | • Range of built-in MP2300S Ethernet: 1 to 4<br>• Range of 218IF-02: 1 to 20 |
| | Local Port | 10500 | 256 to 65534 |
| | Node IP Address*1 | [ ].[ ].[ ].[ ] | IP address of GOT |
| | Node Port *1 | [ ] | Port No.<br>of GOT |
| | Connection Type | UDP (recommended) | TCP/UDP |
| | Protocol Type | Extended MEMOBUS | Extended MEMOBUS |
| | Code | BIN | BIN |
| | Node Name | Arbitrary | Up to 32 one-byte characters (16 two-byte characters) |

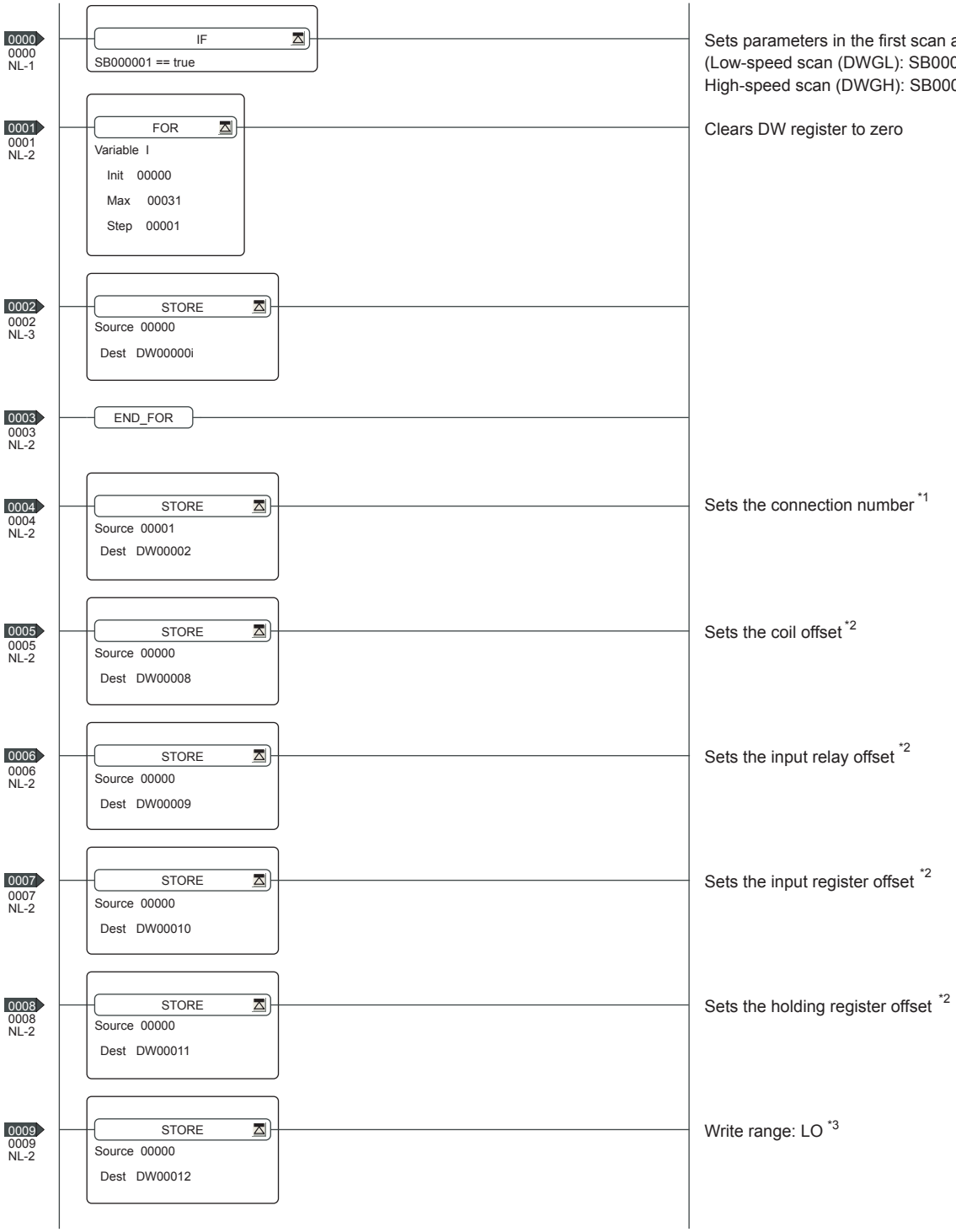
*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1520 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1520 Communication detail settings

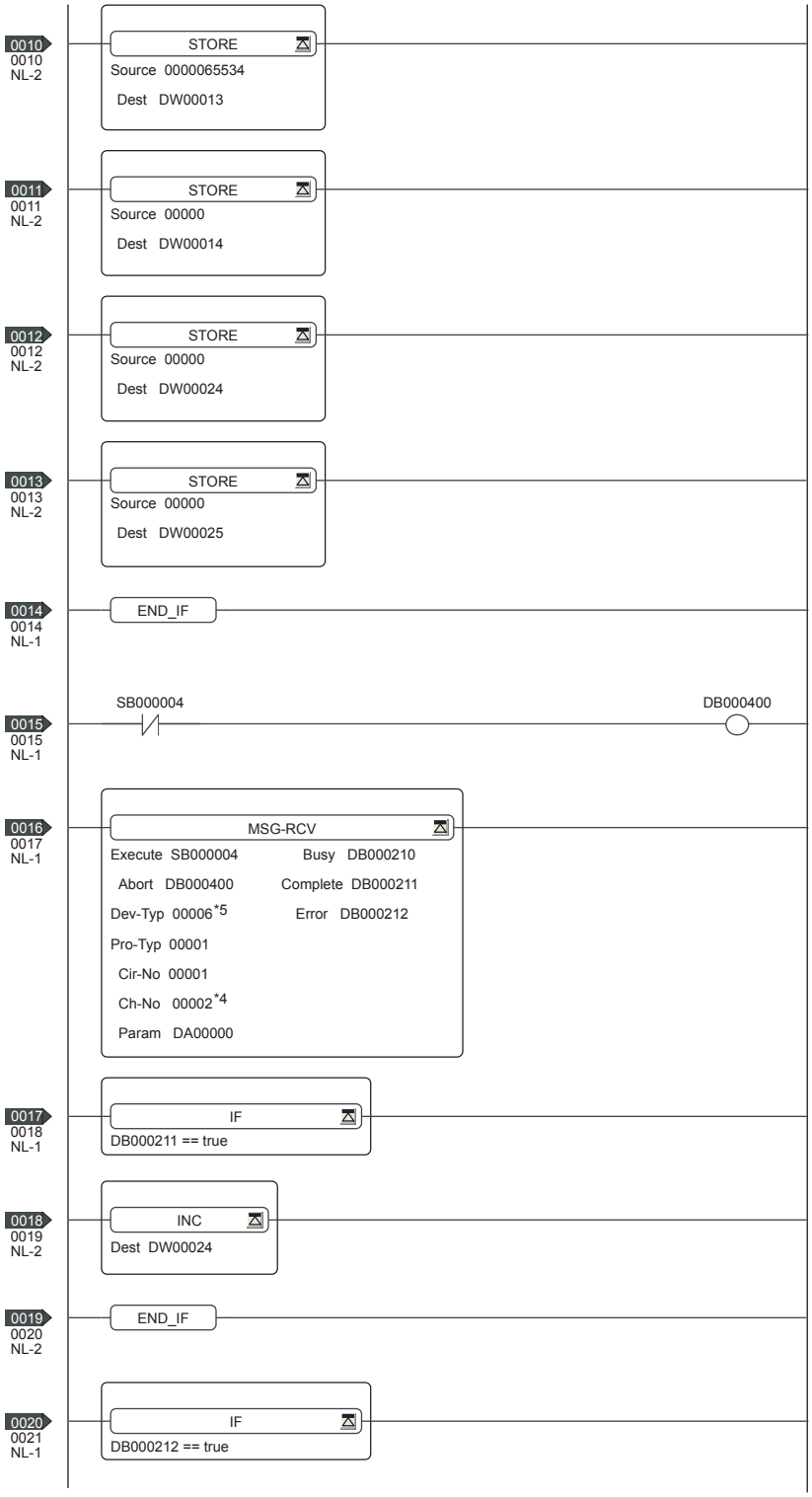
## Sequence program

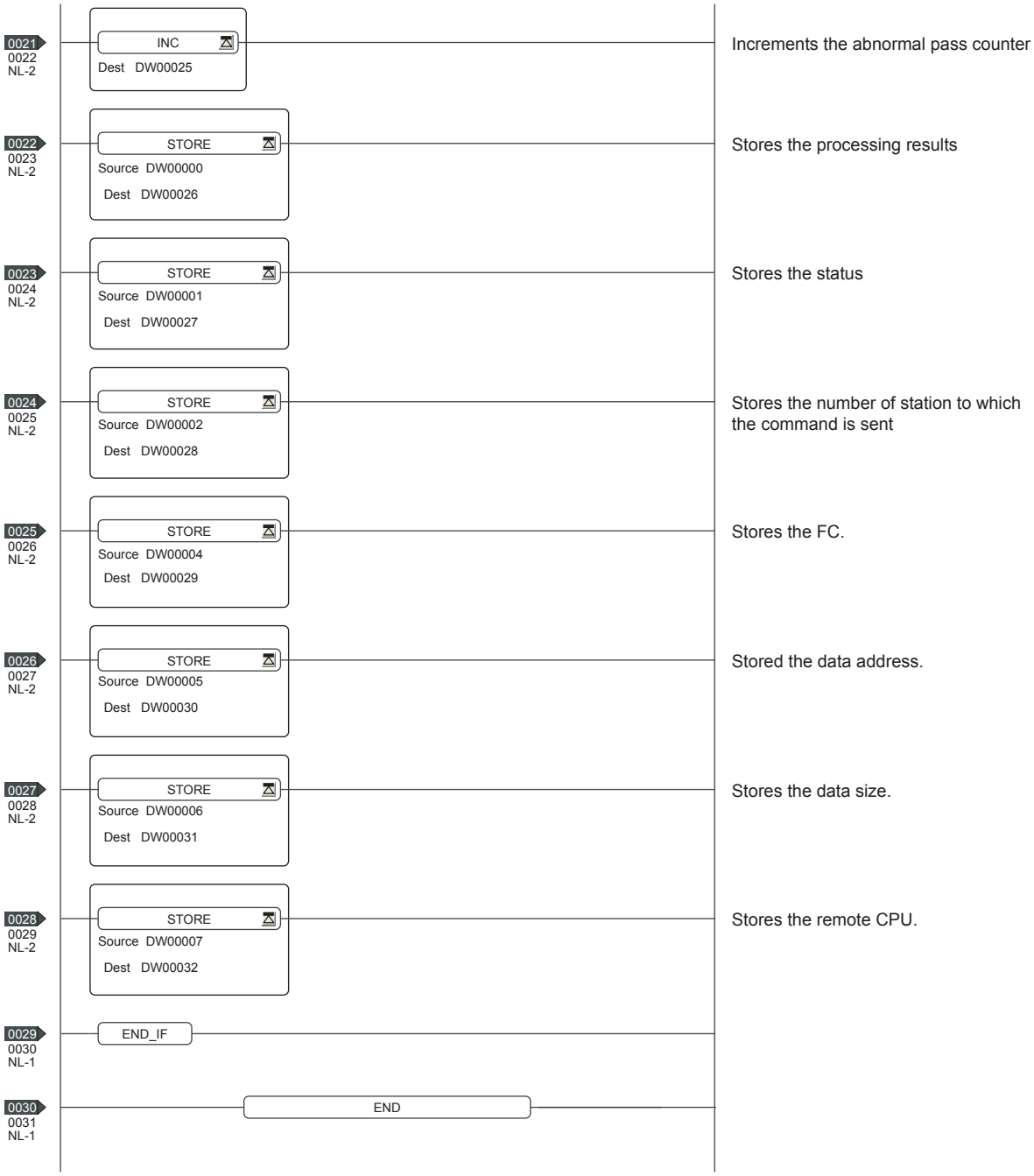
To communicate the MP2000 series or MP920 series with the GOT2000 series, the ladder program to receive messages is required.

When connecting the MP2000 series or MP920 series with multiple GOTs, ladder programs to receive messages for each GOT are required.

ladder program to receive messages




0010
0010
NL-2
STORE
Source 0000065534
Dest DW00013
Write range: HI *3
0011
0011
NL-2
STORE
Source 00000
Dest DW00014
Clears the system registers
0012
0012
NL-2
STORE
Source 00000
Dest DW00024
Clears the normal pass counter
0013
0013
NL-2
STORE
Source 00000
Dest DW00025
Clears the error counter
0014
0014
NL-1
END_IF
Parameter settings completed
SB000004
DB000400
0015
0015
NL-1
Sends a Message Receive instruction
0016
0017
NL-1
MSG-RCV
Execute SB000004
Busy DB000210
Abort DB000400
Complete DB000211
Dev-Typ 00006 *5
Error DB000212
Pro-Typ 00001
Cir-No 00001
Ch-No 00002 *4
Param DA00000
The executing coil turns ON when the CPU receives the command.
The normal or abnormal completion coil turns ON at the completion of processing.
Pro-Type: 1 for extended MEMOBUS or MELSEC.
2 for non-procedure.
0017
0018
NL-1
IF
DB000211 == true
The normal completion coil turns ON at normal completion
0018
0019
NL-2
INC
Dest DW00024
Increments the normal pass counter
0019
0020
NL-2
END_IF
0020
0021
NL-1
IF
DB000212 == true
The abnormal completion coil turns ON at abnormal completion




*1: When connecting to multiple GOTs, set connection numbers individually for each GOT.
*2: Set the offset for each device.
*3: Set the available write range for the holding registers.
*4: When connecting to multiple GOTs, set channel numbers individually for each GOT.
*5: Set the Dev-Typ of the message receive function <MSG-RCV> to [00016] for the built-in MP2300S Ethernet connection or the Ethernet port connection of 218IF-02.

# PLC side setting (CP-9200SH, CP-312, or CP-317 series)

**Point**

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

## Parameter settings

Make the parameter settings with a peripheral tool.

The following shows an example of parameter settings.

### ■Settings for CP-218IF

| Item | Set value |
|---|---|
| Module Type | CP-218 |
| CPU Number | 01 |
| Circuit Number | 01 |
| Hot Swapping | ○ |

To configure settings for multiple GOTs, settings are required for each GOT.

| Item | | Set value | Range |
|---|---|---|---|
| Transmission parameter setting | IP Address | Set the IP address of CP-218IF. | 0.0.0.1 to 255.255.255.254 |
| | Response Time | Not required | — |
| | Count of Retry (Number of Retries) | Not required | — |
| Connection parameter setting | Connection Number | 1 | 1 to 20 |
| | Local Port | 10500 | 256 to 65534 |
| | Node IP Address*1 | Set the IP address of the GOT. | 0.0.0.0 to 255.255.255.254 |
| | Node Port*1 | Set the port No. of the GOT. | 0, 256 to 65535 |
| | Connection Type | UDP | TCP/UDP |
| | Protocol Type | Extended MEMOBUS | Extended MEMOBUS |
| | Code | BIN | BIN |
| | Node Name | Any string | — |

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.

For how to set the IP address on the GOT, refer to the following.

Page 1520 GOT IP address setting

For how to set the port number on the GOT, refer to the following.

Page 1520 Communication detail settings

## ■Settings for 218TXB

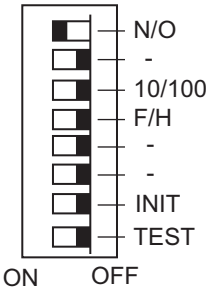
| Item | | Set value | Range |
|---|---|---|---|
| Transmission parameter setting | IP Address | Set the IP address of 218TXB. | 0.0.0.1 to 255.255.255.254 |
| | Response Time | Not required | — |
| | Count of Retry (Number of Retries) | Not required | — |
| Connection parameter setting | Connection Number | 1 | 1 to 20 |
| | Local Port | 10500 | 256 to 65534 |
| | Node IP Address*1 | Set the IP address of the GOT. | 0.0.0.0 to 255.255.255.254 |
| | Node Port*1 | Set the port No. of the GOT. | 0, 256 to 65535 |
| | Connection Type | UDP | TCP/UDP |
| | Protocol Type | Extended MEMOBUS | Extended MEMOBUS |
| | Code | BIN | BIN |
| | Node Name | Any string | — |

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1520 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1520 Communication detail settings

## Settings by DIP switch

### ■Settings for 218TXB

Set the DIP switch (SW2) as follows.




| Setting Item | | Set value | Setting range |
|---|---|---|---|
| N/O | Mode Selection | ON | ON: Extended mode (13 channels, up to 1024 words)<br>OFF: Basic mode (10 channels, up to 512 words) |
| -*1 | Not used | OFF | - |
| 10/100 | Transmission Speed | OFF | ON: 10Mbps<br>OFF: 100Mbps |
| F/H | Transmission Mode | OFF | ON: Full duplex mode<br>OFF: Half duplex mode |
| INIT | Initial Startup | OFF | ON: Start up by the default IP address and the engineering port No.<br>OFF: Start up by the IP address and the engineering port No. set for CP-717 |
| TEST*2 | Test | OFF | ON: The module starts the self-diagnosis when the PLC is started.<br>OFF: The module does not start the self-diagnosis when the PLC is started. |

*1 Turn off all the unused switches.
When even one of those switches is on, the PLC may not normally operate.

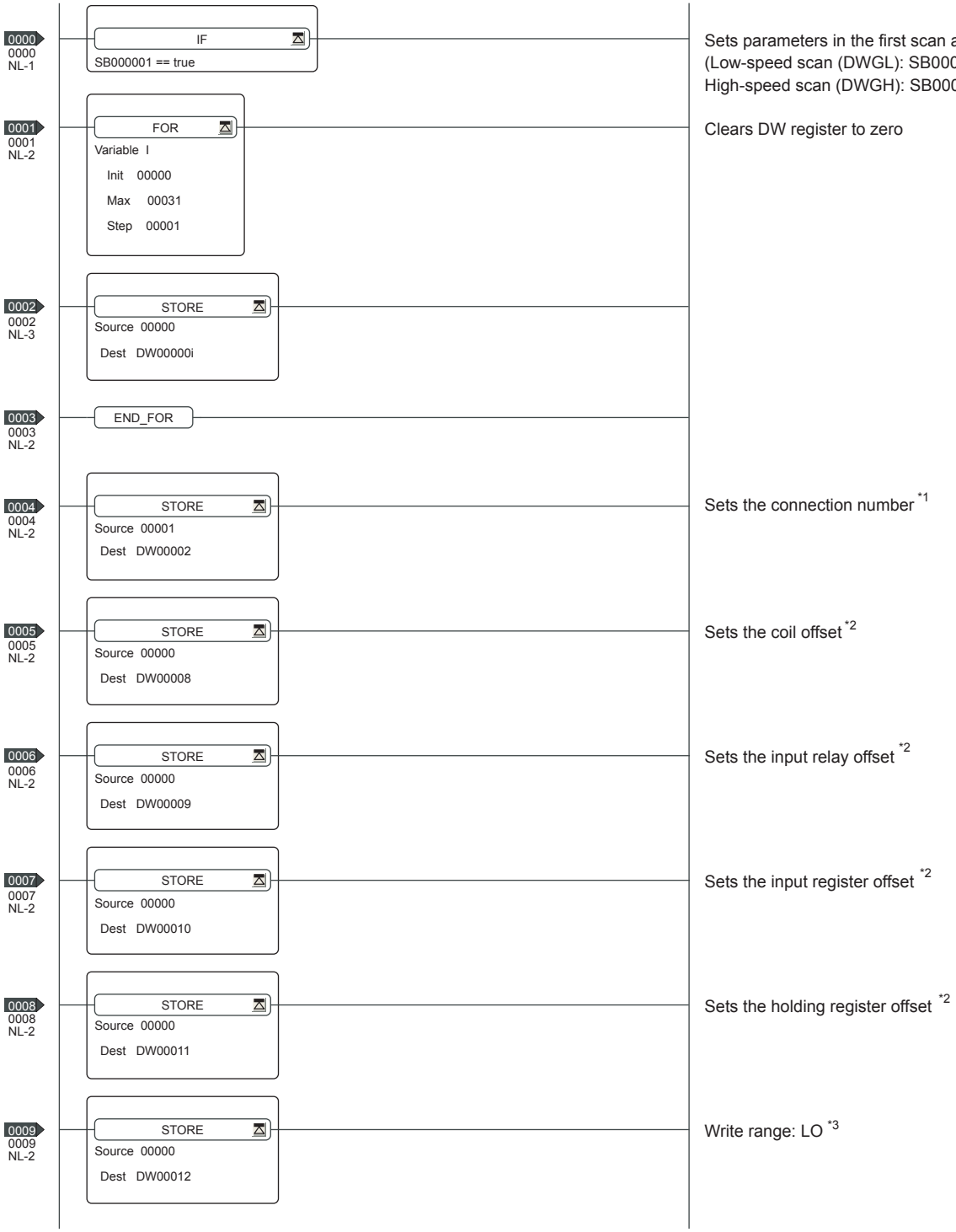
*2 When the PLC is started with the TEST switch on, the module starts the self-diagnosis and may not perform the communication.
Turn off the switch before the communication is started.

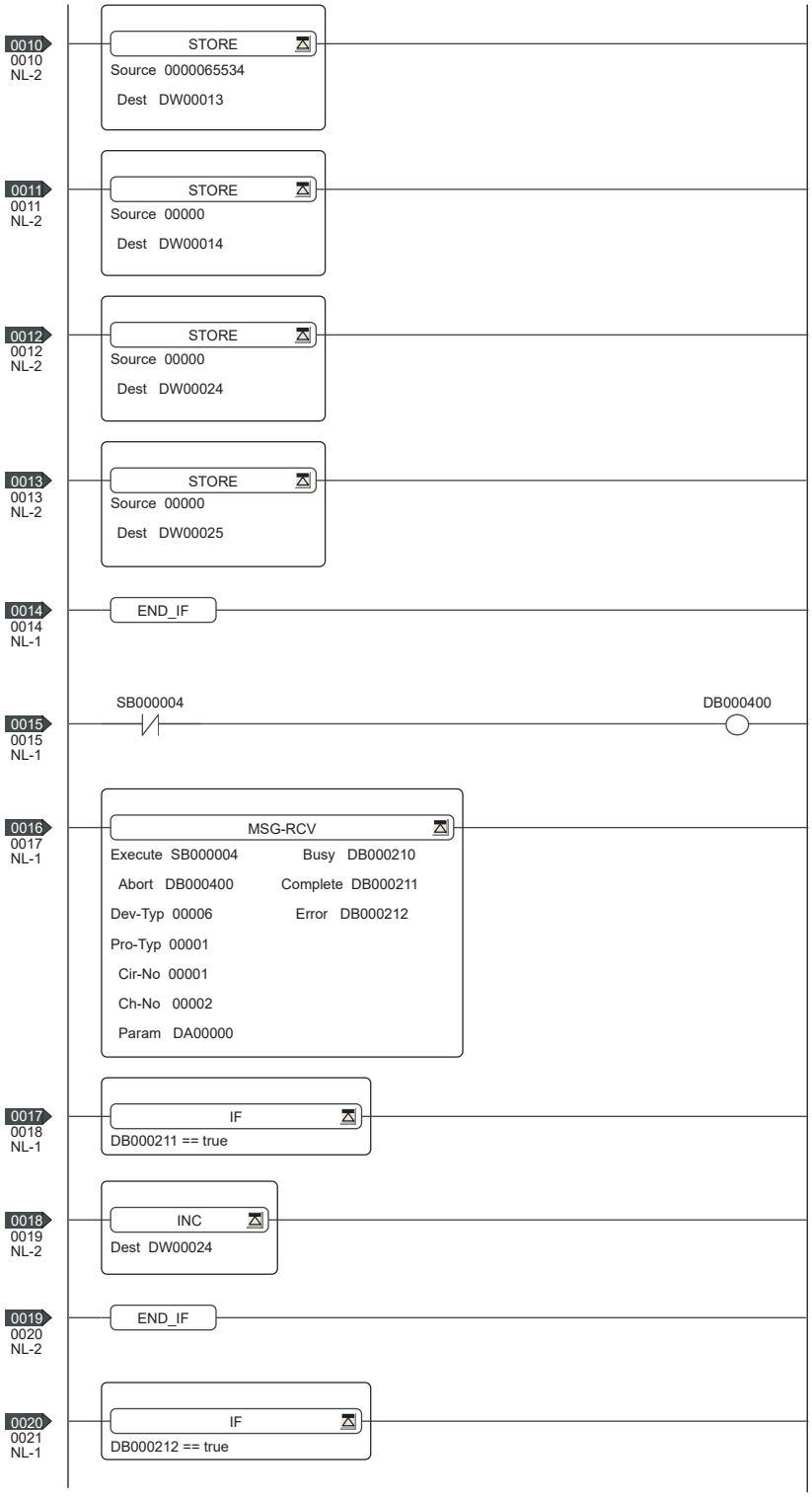
## Sequence program

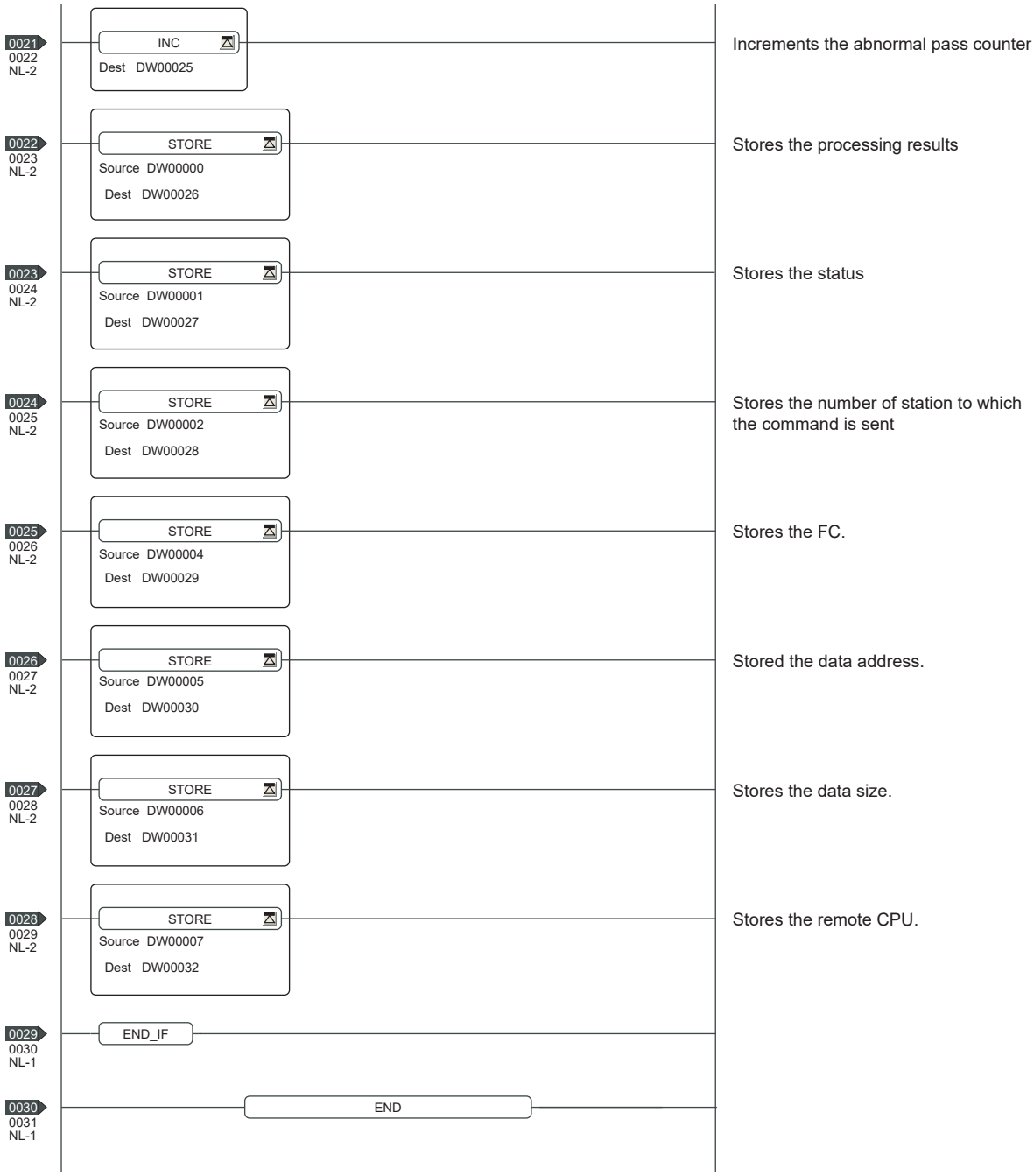
To establish connection between the CP-9200SH series, CP-312 series, or CP-317 series and the GOT2000 series, a ladder program to receive messages is required.

When multiple GOTs are connected to the CP-9200SH series, CP-312 series, or CP-317 series, ladder programs to receive messages for each GOT are required.

ladder program to receive messages




0010
0010
NL-2
STORE
Source 0000065534
Dest DW00013
Write range: HI
0011
0011
NL-2
STORE
Source 00000
Dest DW00014
Clears the system registers
0012
0012
NL-2
STORE
Source 00000
Dest DW00024
Clears the normal pass counter
0013
0013
NL-2
STORE
Source 00000
Dest DW00025
Clears the error counter
0014
0014
NL-1
END_IF
Parameter settings completed
SB000004
DB000400
0015
0015
NL-1
Sends a Message Receive instruction
0016
0017
NL-1
MSG-RCV
Execute SB000004
Busy DB000210
Abort DB000400
Complete DB000211
Dev-Typ 00006
Error DB000212
Pro-Typ 00001
Cir-No 00001
Ch-No 00002
Param DA00000
The executing coil turns ON when the CPU receives the command.
The normal or abnormal completion coil turns ON at the completion of processing.
Pro-Type: 1 for extended MEMOBUS or MELSEC.
2 for non-procedure.
0017
0018
NL-1
IF
DB000211 == true
The normal completion coil turns ON at normal completion
0018
0019
NL-2
INC
Dest DW00024
Increments the normal pass counter
0019
0020
NL-2
END_IF
0020
0021
NL-1
IF
DB000212 == true
The abnormal completion coil turns ON at abnormal completion




*1 When connecting to multiple GOTs, set connection numbers individually for each GOT.

*2 Set 0 to PARAM08 to 11 of MSG_RCV (input relay, input register, coil, holding register offset).
(Do not make the offset settings.) When the offset is needed, set [Option] → [Offset] to each object or make a setting added the offset value to the device.

*3 Set the available write range for the holding registers.

# PLC side setting (MP3000 series)

**Point**

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

## Parameter settings

Make the parameter settings with a peripheral tool.

### ■Settings for the built-in MP3000 series Ethernet

| Item | | Set value | Range |
|---|---|---|---|
| Transmission parameter setting | IP Address | [ ].[ ].[ ].[ ] | PLC side IP address |
| | Subnet Mask | [ ].[ ].[ ].[ ] | PLC side setting |
| | Gateway IP Address | [ ].[ ].[ ].[ ] | |
| | Device name | Arbitrary | Up to 16 one-byte characters |
| Transmission parameter detailed setting | Engineering Port | 256 to 65535 | For a connection with software MPE720 |
| | Response Time | 0 | Not required for communication with GOT |
| | Count of Retry | 0 | |
| Message communication of connection parameter setting | Connection Number | 1 | Range: 1 to 20 |
| | Local Port | 10500 | 256 to 65534 |
| | Node IP Address*1 | [ ].[ ].[ ].[ ] | IP address of GOT |
| | Node Port*1 | [ ] | Port No. of GOT |
| | Connection Type | UDP (recommended) | TCP/UDP |
| | Protocol Type | Extended MEMOBUS | Extended MEMOBUS |
| | Code | BIN | BIN |
| | Detail | ☞ • Auto receive function | |
| | Node Name | Arbitrary | Up to 32 one-byte characters (16 two-byte characters) |

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1520 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1520 Communication detail settings

- Auto receive function

Set the following items.

| Item | Set value | Range |
|---|---|---|
| Auto receive | <When auto receive function><br>Valid<br><When using ladder program to receive messages><br>Invalid | Valid / Invalid |
| Transmission buffer channel | Set as necessary | 1 to 10 |
| Setting the slave I/F register | Default | - |

## Sequence program

To communicate the MP3000 series with the GOT2000 series, the ladder program to receive messages is required.

When connecting the MP3000 series with multiple GOTs, ladder programs to receive messages for each GOT are required.

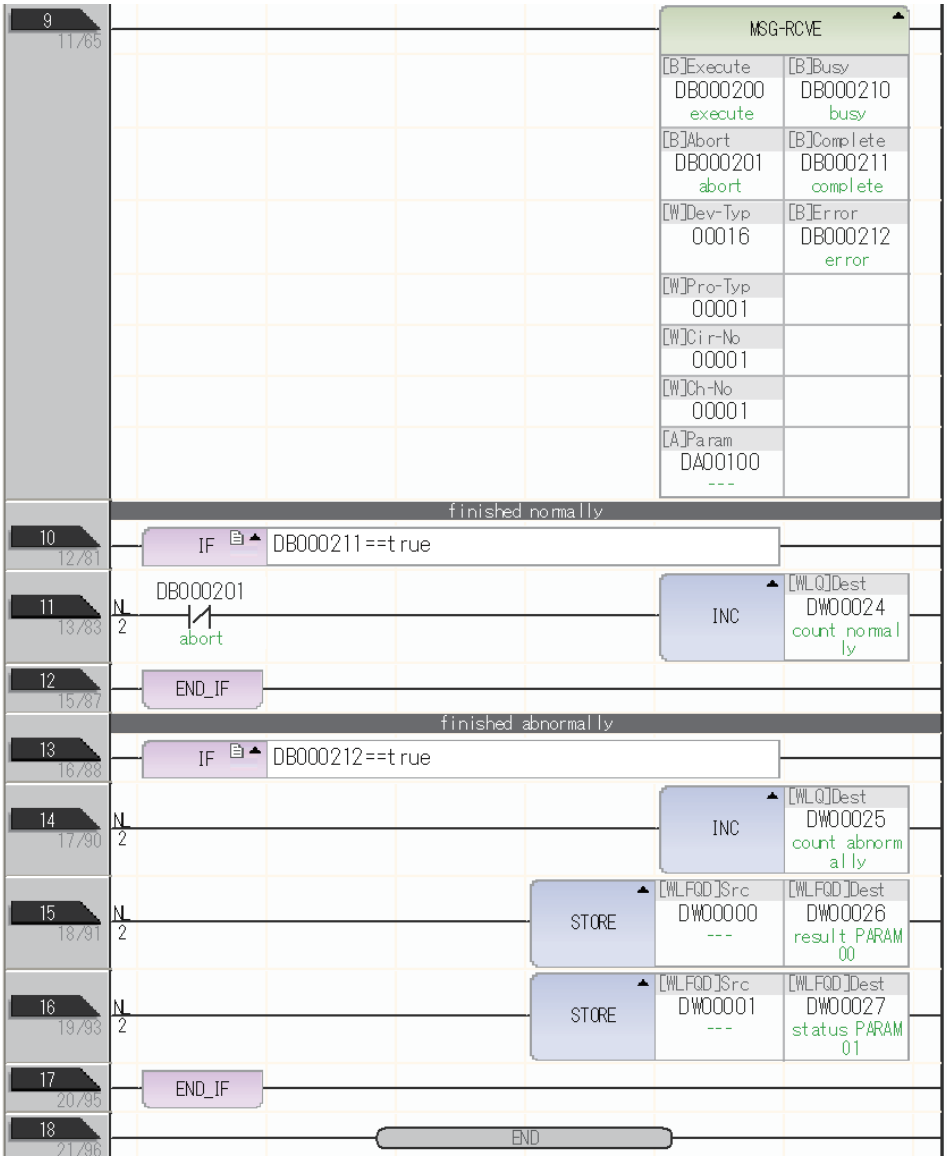
The example program using the MSG-RCVE function is shown below.

For details of ladder program, refer to the following manuals.

📖YASKAWA PLC user's Manual

ladder program to receive messages




9
11/65
MSG-RCVE
[B]Execute
DB000200
execute
[B]Busy
DB000210
busy
[B]Abort
DB000201
abort
[B]Complete
DB000211
complete
[W]Dev-Typ
00016
[B]Error
DB000212
error
[W]Pro-Typ
00001
[W]Cir-No
00001
[W]Ch-No
00001
[A]Param
DA00100
---
finished normally
10
12/81
IF
DB000211==true
11
13/83
N
2
DB000201
abort
INC
[WLQ]Dest
DW00024
count normal ly
12
15/87
END_IF
finished abnormally
13
16/88
IF
DB000212==true
14
17/90
N
2
INC
[WLQ]Dest
DW00025
count abnorm al ly
15
18/91
N
2
STORE
[WLFQD]Src
DW00000
---
[WLFQD]Dest
DW00026
result PARAM 00
16
19/93
N
2
STORE
[WLFQD]Src
DW00001
---
[WLFQD]Dest
DW00027
status PARAM 01
17
20/95
END_IF
18
21/96
END

# Precautions

## When connecting to multiple GOTs

### ■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1521 Connected Ethernet Controller Setting

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

# 32.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi  Electric Products 2) For GT Works3 Version1

YASKAWA equipment ([YASKAWA GL/PROGIC8])

YASKAWA equipment ([YASKAWA CP9200(H)])

YASKAWA equipment ([YASKAWA CP9300MS(MC compatible)])

YASKAWA equipment ([YASKAWA MP2000/MP900/CP9200SH])

YASKAWA equipment ([YASKAWA MP3000])

# MEMO

# 33 YASKAWA ROBOT CONTROLLER




- Page 1539 Connectable Model List
- Page 1540 System Configuration
- Page 1541 GOT side settings
- Page 1545 Robot Controller Settings
- Page 1546 Settable Device Range
- Page 1547 Precautions


## 33.1 Connectable Model List

The following shows the connectable model.

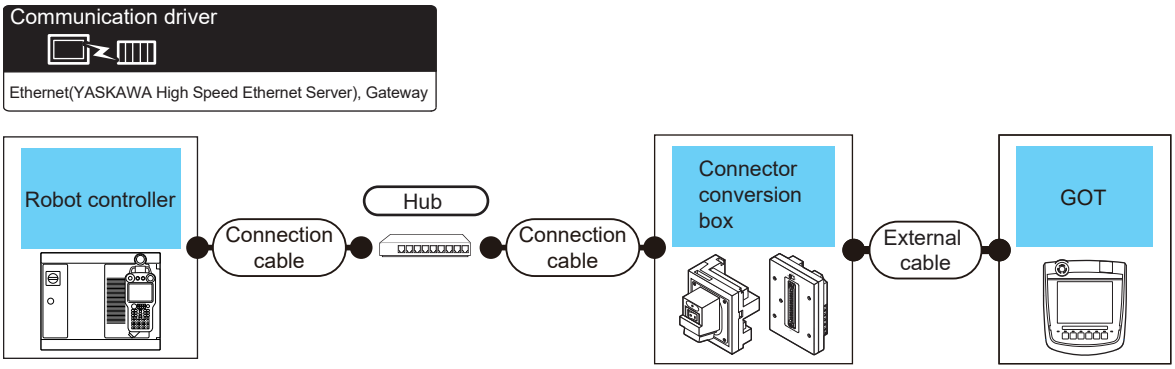
| Model name | Clock | Communication type | Connectable model | Refer to |
|---|---|---|---|---|
| YRC1000 | ×*1 | Ethernet*2 | GT2506HS GT2505HS | ☞ Page 1540 Connecting to a robot controller |
| YRC1000micro | | | | |

*1 The YRC1000 and YRC1000micro have the clock function but cannot acquire clock information from the GOT.

*2 The high speed Ethernet server function (option) of the YRC1000 or YRC1000micro is required.
For details, contact YASKAWA Electric Corporation.

# 33.2 System Configuration

## Connecting to a robot controller




| Robot controller | | Connection cable | | Connector conversion box | External cable *3 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication type | Cable model*1 | Max. distance*2 | | | | |
| YRC1000*4 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | Use one-to-one connection for GOT and robot controller. |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |
| YRC1000micro | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100 m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | Use one-to-one connection for GOT and robot controller. |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |

*1 The destination device connected with the twisted pair cable varies with the configuration of the Ethernet network system used.
Connect the cable to the Ethernet module, hub, transceiver or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the controller and hub, use a cable according to the configuration of the controller.

*2 Length between a hub and a node
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: Up to 2 nodes for a cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit or not, contact the switching hub manufacturer.

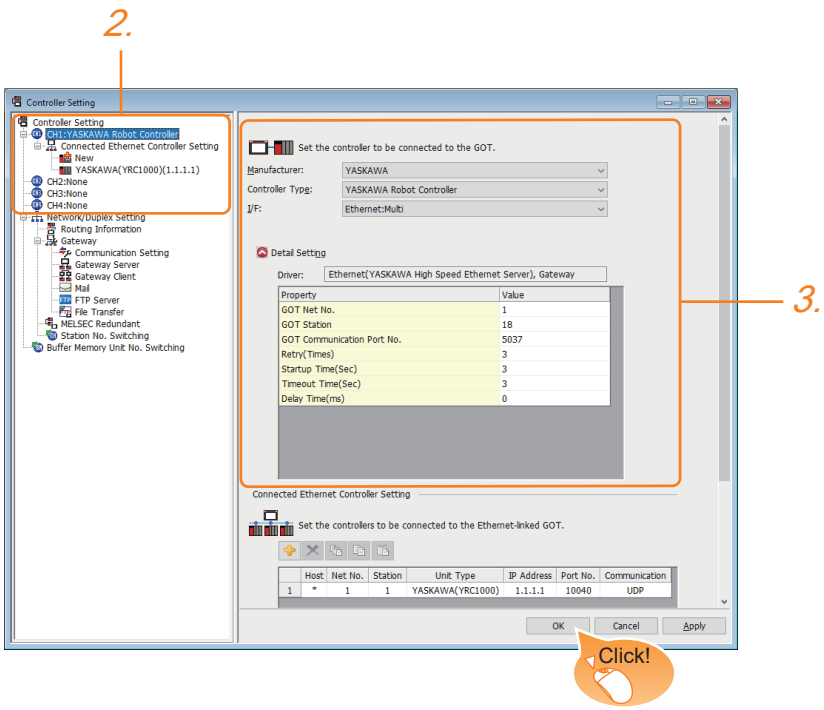
*3 Use C or later version of GT11H-C□□-37P.

*4 Connect the GOT to a LAN connector that can be used for the YRC1000's Ethernet function.
Do not connect the GOT to a LAN connector dedicated to the programming pendant.
For details, refer to the manual of the YASKAWA robot controller.

# 33.3 GOT side settings

## Setting the communication interface (Controller setting)

Set the channel of the connected controller.




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel number to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [YASKAWA]
- [GOT Type]: [YASKAWA Robot Controller]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the use environment.

☞ Page 1542 Communication detail settings

4. When you have completed the settings, click the [OK] button.

**Point**

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

Configure the settings according to the use environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5037 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network number of the GOT. (Default: 1) | 1 (fixed) |
| GOT Station*1 | Set the station number of the GOT.<br>(Default: 18) | 1 to 120 |
| GOT Communication Port No. | Set the port number used by the GOT for connection with the Ethernet module.<br>(Default: 5037*2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When no response is received after retries, the communication times out.<br>(Default: 3 times) | 0 to 5 times |
| Startup Time | Set the time period from when the GOT starts up until when the GOT starts communication with the robot controller.<br>(Default: 3 sec) | 3 to 255 sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3 sec) | 1 to 90 sec |
| Delay Time | Set the delay time for reducing the load of the network/destination robot controller.<br>(Default: 0 ms) | 0 to 10000 (ms) |

*1 Set different values for [GOT Station] in [Detail Setting] and [Station] in [Connected Ethernet Controller Setting].
☞ Page 1544 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# GOT Ethernet setting

Configuring the following settings enables the GOT to connect to different networks.

## GOT IP address setting

Configure the following communication port settings.

- Standard port

## GOT Ethernet common setting

Configure the following settings which are common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

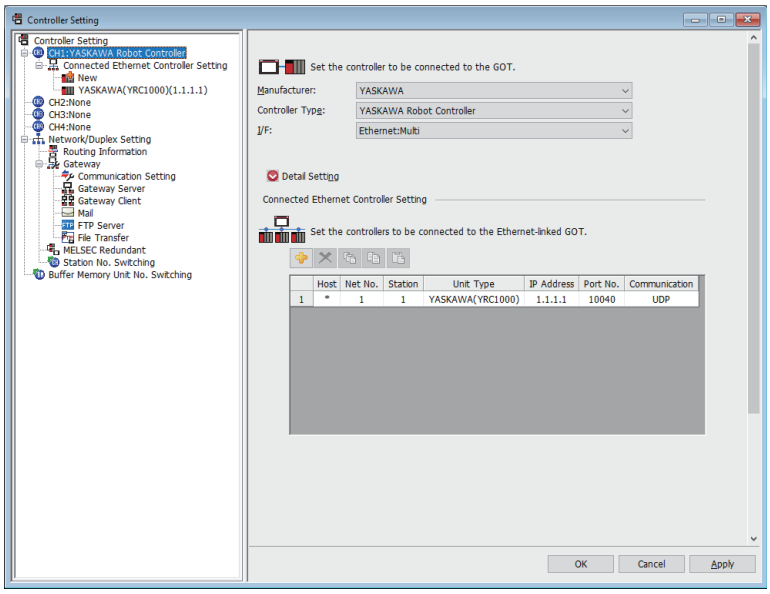
## IP filter setting

Configuring the IP filter settings allows or blocks access from specific IP addresses.

For details on the settings, refer to the following.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet controller setting




| Item | Description | Setting value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 (fixed) |
| Station No. *2 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 120 |
| Unit Type | YASKAWA(YRC1000) (fixed) | YASKAWA(YRC1000) (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet module.<br>(Default: 1.1.1.1) | IP address of the robot controller |
| Port No. | Set the port No. of the connected Ethernet module.<br>(Default: 10040) | 10040 (fixed) |
| Communication | Select a communication format.<br>(Default: UDP) | UDP (fixed) |

*1 Connection with the robot controller is unavailable if the IP address is the default value.
Set the value to the IP address of the robot controller to be connected.

*2 Set different values for [GOT Station] in [Detail Setting] and [Station] in [Connected Ethernet Controller Setting].
☞ Page 1542 Communication detail settings

# 33.4 Robot Controller Settings

**Point**

For details on the YASKAWA robot controller, refer to the following.

Manual of the YASKAWA robot controller

## Connecting to a robot controller

Configure the settings by using the programming pendant.

- YRC1000
- YRC1000micro

### Wireless LAN interface settings

Set the following items in the LAN interface settings.

| Item | Description |
|---|---|
| IP address | IP address of the robot controller*1 |
| Subnet Mask | Subnet mask of the robot controller |

*1 Ensure that it is consistent with the GOT setting.

Page 1544 Connected Ethernet controller setting

# 33.5 Settable Device Range

For the device setting dialog and range of devices usable in the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
YASKAWA equipment ([YASKAWA ROBOT CONTROLLER])

# 33.6 Precautions



## When connecting to multiple GOTs

### ■GOT station number setting

When connecting multiple GOTs in the Ethernet network, set a different GOT station number to each GOT.

☞ Page 1541 Setting the communication interface (Controller setting)

### ■IP address setting

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT1000 series mixed.

A communication error may occur on the GOT with the IP address.

## IP address setting

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## Connecting multiple pieces of network equipment (including GOT) in a segment

Connecting multiple pieces of network equipment (including GOT) in a segment will increase the network load. This may decrease the transmission speed between the GOT and robot controller.

The following actions may improve the communication performance.

- Using a switching hub
- Using the high speed 100BASE-TX (100 Mbps) transmission
- Reducing the number of monitored devices in the GOT

# MEMO

# 34 YOKOGAWA PLC


- Page 1549 Connectable Model List
- Page 1550 Serial Connection
- Page 1577 Ethernet Connection
- Page 1586 Settable Device Range




## 34.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| FA-M3 | F3SP05 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1550 Connecting to FA-M3 or FA-M3V |
| | F3SP08 | | | | |
| | F3SP10 | | | | |
| | F3SP20 | | | | |
| | F3SP30 | | | | |
| | F3FP36 | | | | |
| | F3SP21 | | | | |
| | F3SP22-0S | | | | |
| | F3SP25 | | | | |
| | F3SP35 | | | | |
| | F3SP28 | | | | |
| | F3SP38 | | | | |
| | F3SP53 | | | | |
| | F3SP58 | | | | |
| | F3SP59 | | | | |
| | F3SP66 | | | | |
| | F3SP67 | | | | |
| FA-M3V | F3SP76-7S | | | | |
| | F3SP71-4S | | | | |
| FA500 | FA500 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1555 Connecting to FA500 |
| STARDOM | NFCP100 | × | RS-232 | GT 2506 HS GT 2505 HS | ☞ Page 1557 Connecting to STARDOM |
| | NFJT100 | | | | |
| FA-M3 | F3SP05 | ○ | Ethernet | GT 2506 HS GT 2505 HS | ☞ Page 1577 Connecting to FA-M3 or FA-M3V |
| | F3SP08 | | | | |
| | F3FP36 | | | | |
| | F3SP21 | | | | |
| | F3SP25 | | | | |
| | F3SP35 | | | | |
| | F3SP28 | | | | |
| | F3SP38 | | | | |
| | F3SP53 | | | | |
| | F3SP58 | | | | |
| | F3SP59 | | | | |
| | F3SP66 | | | | |
| | F3SP67 | | | | |
| FA-M3V | F3SP71-4N | | | | |
| | F3SP71-4S | | | | |
| | F3SP76-7S | | | | |

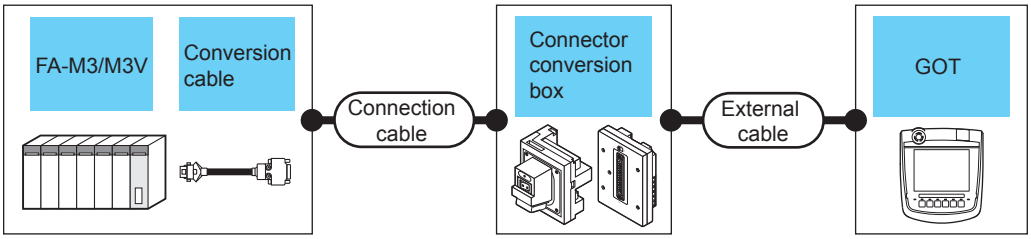
# 34.2 Serial Connection

## Connecting to FA-M3 or FA-M3V

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM

### When using the conversion cable

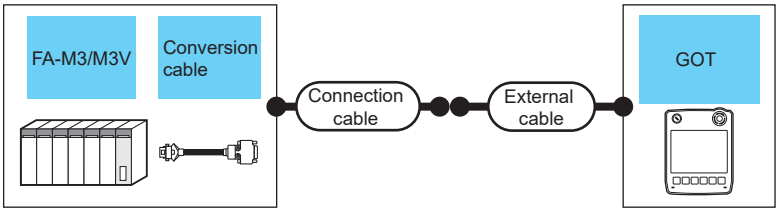
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Conversion cable*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F3SP05<br>F3SP08<br>F3SP21<br>F3SP22-0S<br>F3SP25<br>F3SP28<br>F3SP35<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59 | KM10-0C*2 | RS-232 | GT09-C30R20301-9P(3m)<br>or<br>User preparing RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| F3SP66<br>F3SP67 | KM10-0S*3 | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

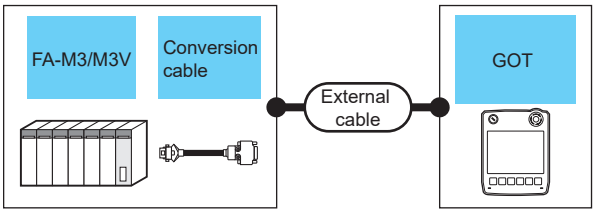
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Conversion cable*1 | Communication Type | Cable model Connection diagram number | | | | |
| F3SP05<br>F3SP08<br>F3SP21<br>F3SP22-0S<br>F3SP25<br>F3SP28<br>F3SP35<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59 | KM10-0C*2 | RS-232 | User preparing RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| F3SP66<br>F3SP67 | KM10-0S*3 | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

## ■When using the external cable (GT11H-C□□□)

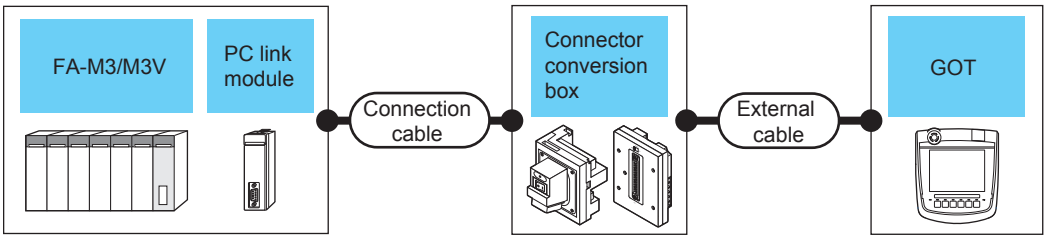



| PLC | | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Conversion cable*1 | Communication Type | | | | |
| F3SP05<br>F3SP08<br>F3SP21<br>F3SP22-0S<br>F3SP25<br>F3SP28<br>F3SP35<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59 | KM10-0C*2 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| F3SP66<br>F3SP67 | KM10-0S*3 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

## When using the PC link module

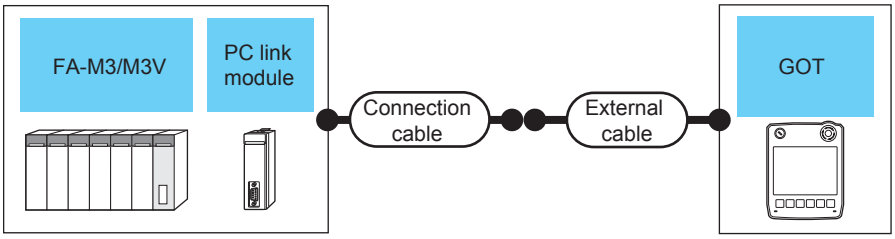
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | PC link module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| F3SP05<br>F3SP08<br>F3SP10<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67 | F3LC01-1N<br>F3LC11-1N<br>F3LC11-1F<br>F3LC12-1F | RS-232 | GT09-C30R20302-9P(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PC link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| F3SP76-7S<br>F3SP71-4S | F3LC12-1F | | | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| F3SP05<br>F3SP08<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67<br>F3SP71-4S | F3LC11-2N<br>F3LC11-2F | RS-422 | GT09-C30R40301-6T(3m)<br>GT09-C100R40301-6T(10m)<br>or<br>User preparing RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

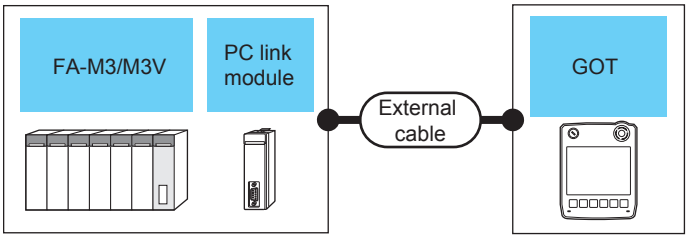
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | PC link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| F3SP05<br>F3SP08<br>F3SP10<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67 | F3LC01-1N<br>F3LC11-1N<br>F3LC11-1F<br>F3LC12-1F | RS-232 | User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PC link module |
| F3SP76-7S | F3LC12-1F | | | | | | |
| F3SP05<br>F3SP08<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67 | F3LC11-2N<br>F3LC11-2F | RS-422 | User preparing RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | PC link module*1 | Communication Type | | | | |
| F3SP05<br>F3SP08<br>F3SP10<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67 | F3LC01-1N<br>F3LC11-1N<br>F3LC11-1F<br>F3LC12-1F | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PC link module |
| F3SP76-7S | F3LC12-1F | | | | | |
| F3SP05<br>F3SP08<br>F3SP20<br>F3SP30<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP66<br>F3SP67 | F3LC11-2N<br>F3LC11-2F | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 3) | GT 2505HS | 13m | |

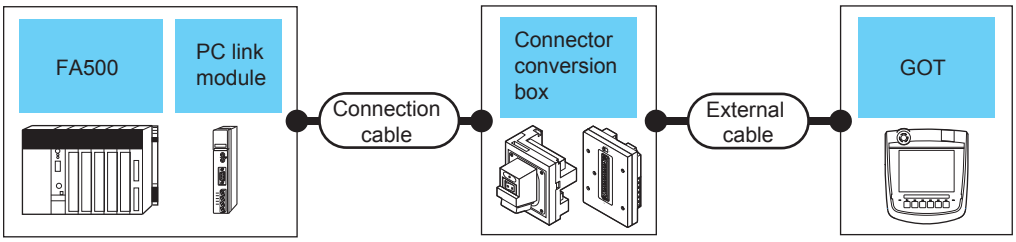
*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

# Connecting to FA500

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM



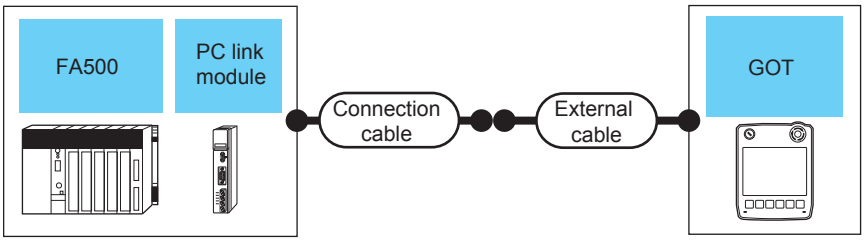
## When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | PC link module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| FA500 | LC01-0N LC02-0N | RS-232 | GT09-C30R20205-25P(3m) or User preparing RS-232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PC link module |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | LC02-0N | RS-422 | GT09-C30R40302-6T(3m) GT09-C100R40302-6T(10m) or User preparing RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

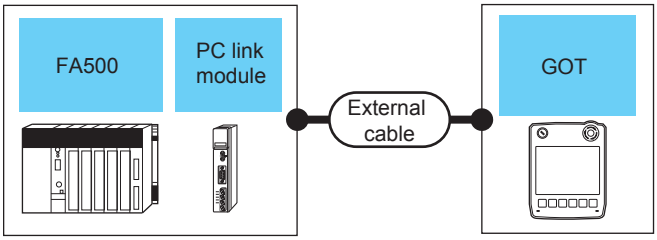
## When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | PC link module*1 | Communication Type | Cable model Connection diagram number | | | | |
| FA500 | LC01-0N LC02-0N | RS-232 | User preparing RS-232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PC link module |
| | LC02-0N | RS-422 | User preparing RS-422 connection diagram 5) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

## When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | PC link module*1 | Communication Type | | | | |
| FA500 | LC01-0N<br>LC02-0N | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 9) | GT 2505HS | 6m | 1 GOT for 1 PC link module |
| | LC02-0N | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ RS-422 connection diagram 6) | GT 2505HS | 13m | |

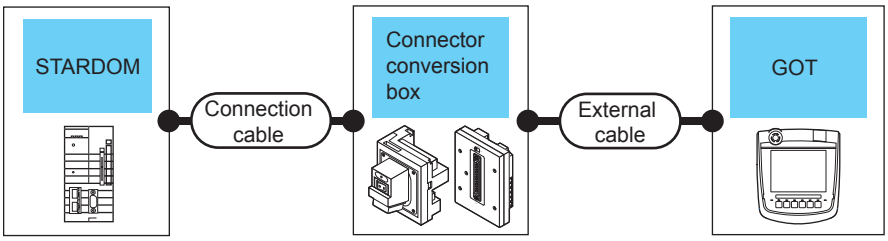
*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

# Connecting to STARDOM

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM



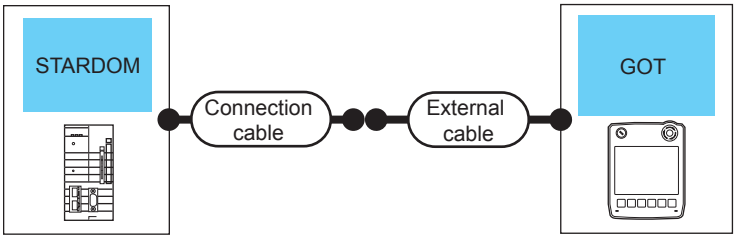
## When using the connector conversion box




| PLC | | Connection cable*1 | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | | |
| STARDOM | RS-232 | GT09-C30R20305-9S(3m)<br>or<br>User preparing RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Connect the connection cable to the COM port of the PLC.

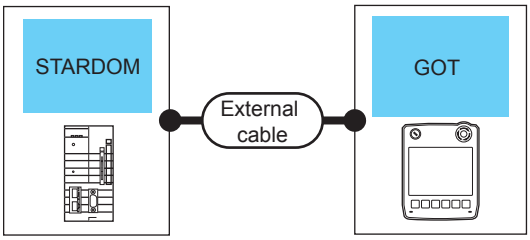
## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | |
| STARDOM | RS-232 | User preparing RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Connect the connection cable to the COM port of the PLC.

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| STARDOM | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS-232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 PLC |

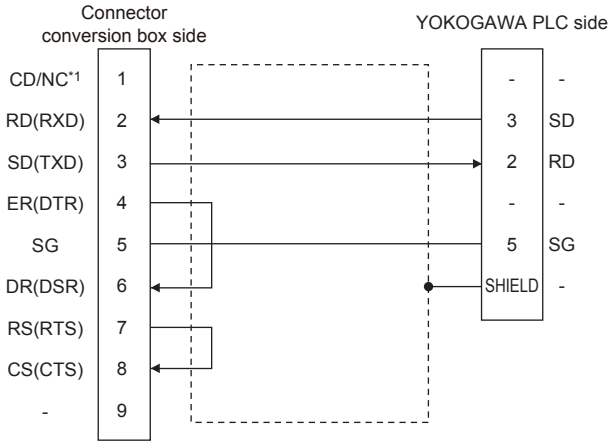
# Connection diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

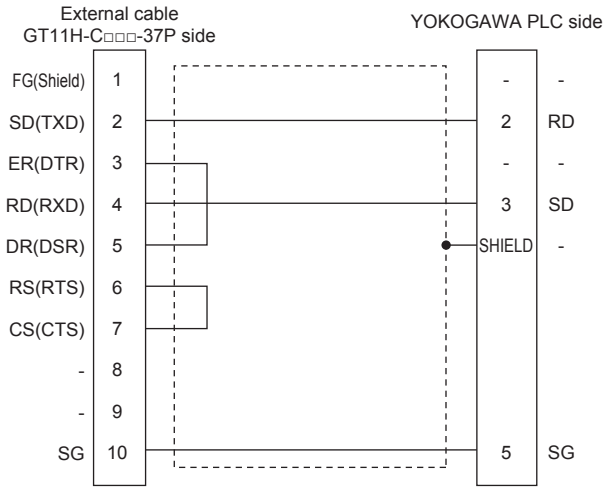
### ■Connection diagram

• RS-232 connection diagram 1)

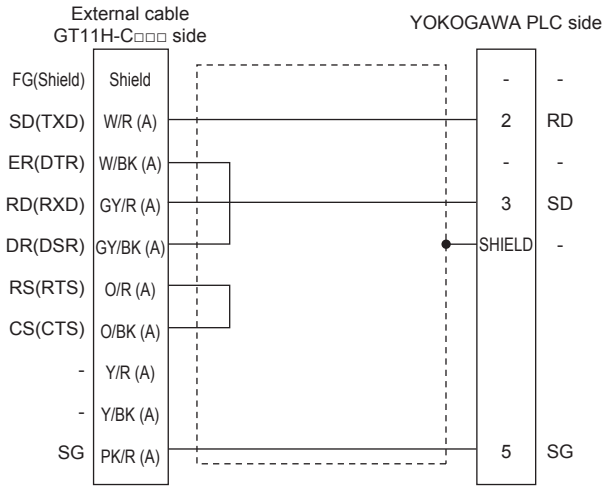



*1 GT2506HS-V: CD, GT2505HS-V: NC

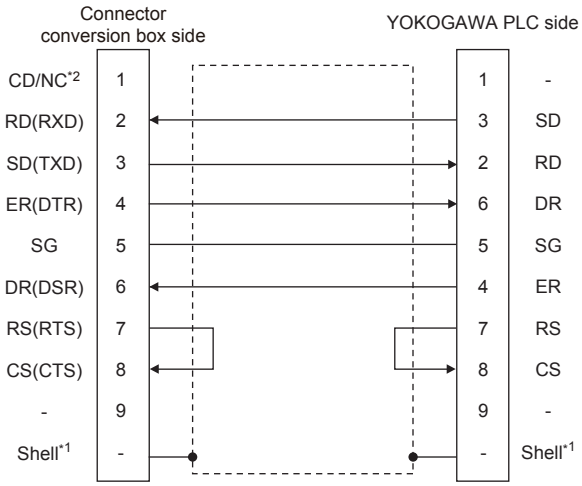
• RS-232 connection diagram 2)




• RS-232 connection diagram 3)



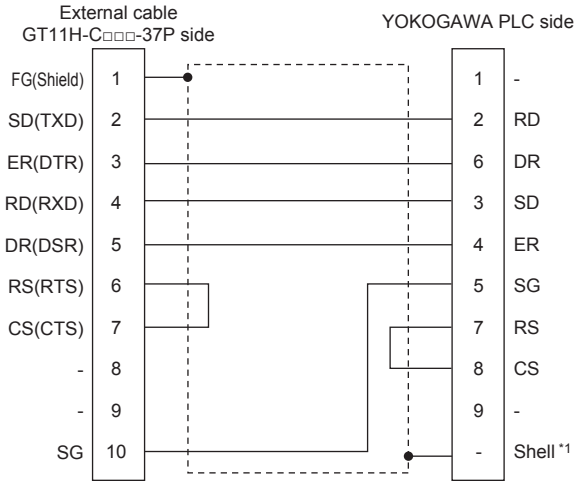
• RS-232 connection diagram 4)




*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

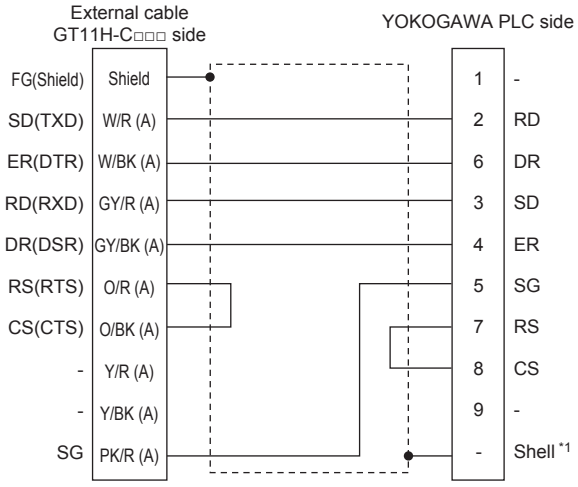
*2 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)



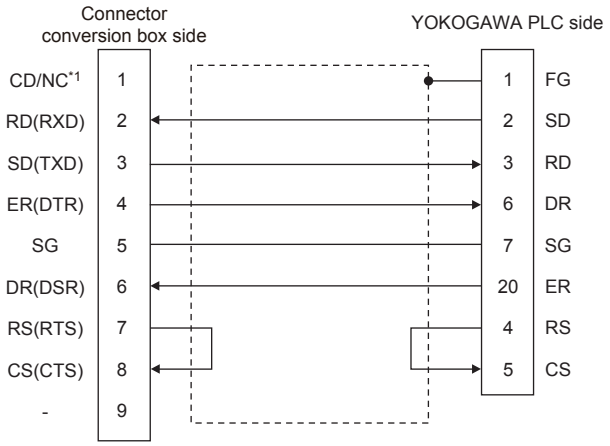

*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

• RS-232 connection diagram 6)



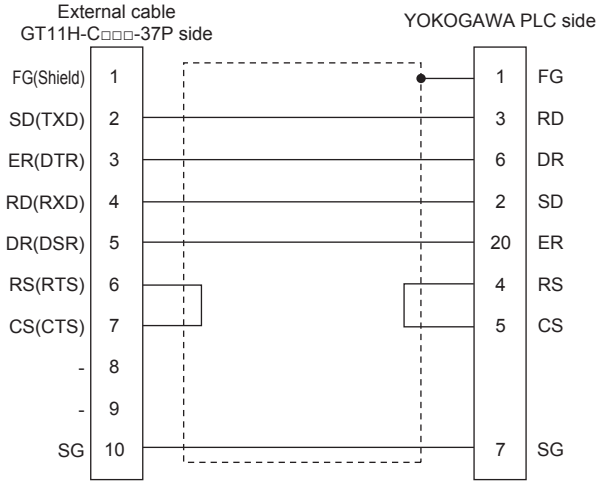

*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

• RS-232 connection diagram 7)

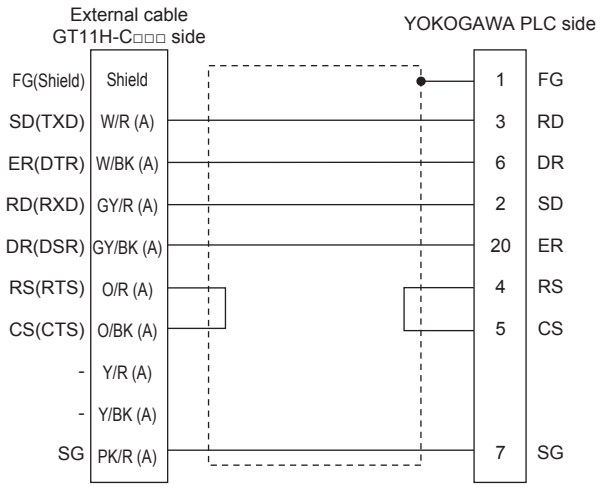



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 8)




• RS-232 connection diagram 9)



### ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• YOKOGAWA PLC side connector

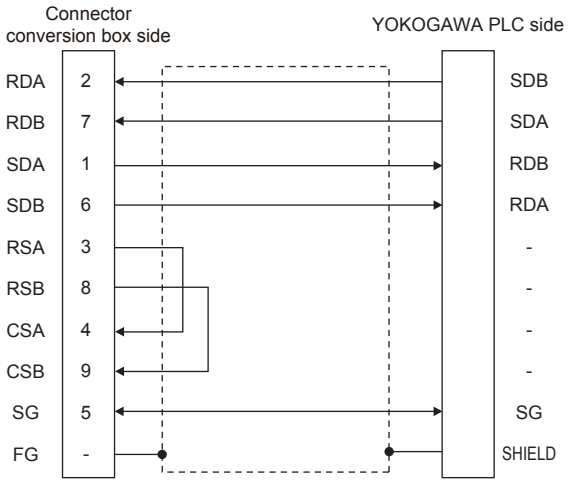
Use the connector compatible with the YOKOGAWA PLC side module.

For details, refer to the YOKOGAWA PLC user's manual.

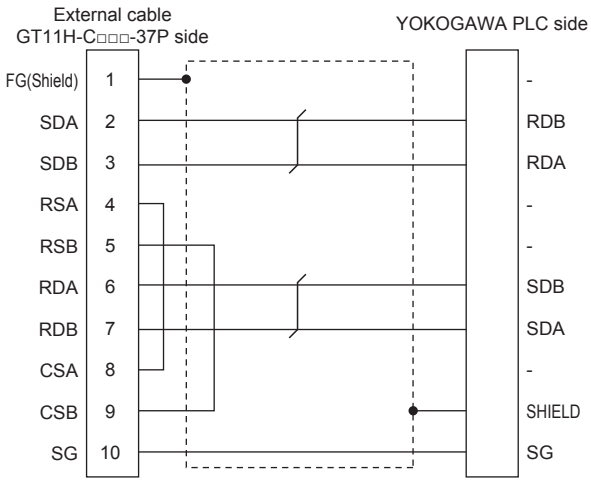
## RS-422 cable

### ■Connection diagram

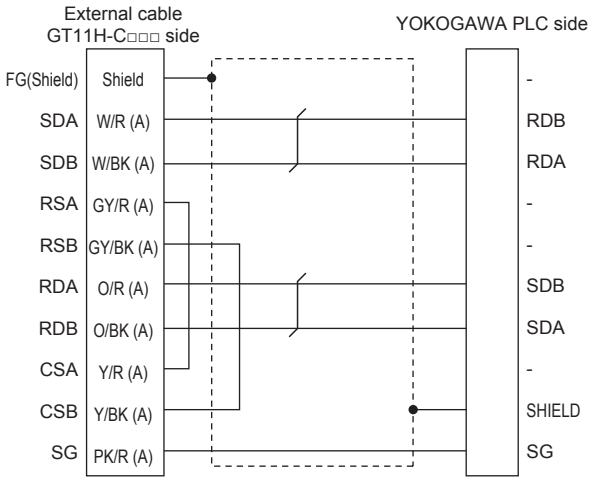
• RS-422 connection diagram 1)



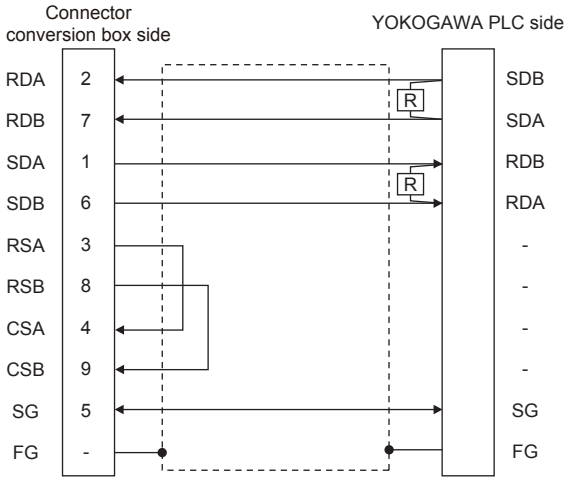

• RS-422 connection diagram 2)



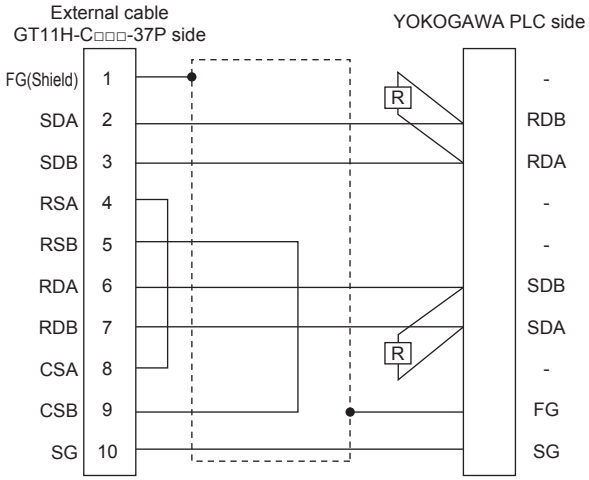
• RS-422 connection diagram 3)



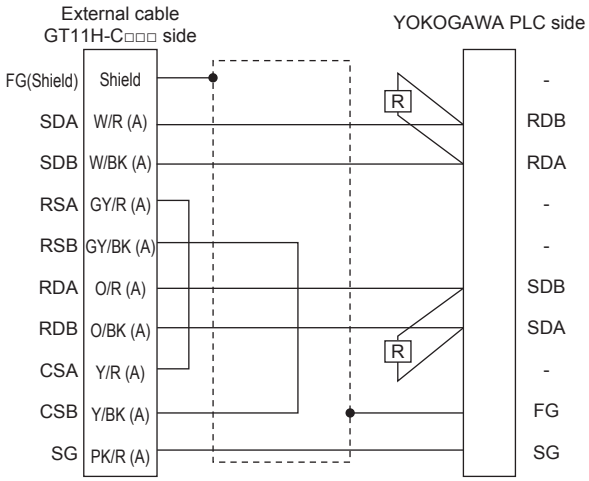

• RS-422 connection diagram 4)




• RS-422 connection diagram 5)



• RS-422 connection diagram 6)




## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• YOKOGAWA PLC side connector

Use the connector compatible with the YOKOGAWA PLC side module.

For details, refer to the YOKOGAWA PLC user's manual.

## ■Connecting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

• YOKOGAWA PLC side

When connecting a PLC link module to a GOT, a terminating resistor must be connected to the PC link module.

The following describes how to connect it on the PC link module.

F3LC11-2N

Set the terminator switch (TERMINATOR) on the front panel of F3LC11-2N to the "4-WIRE" side to enable the terminator.

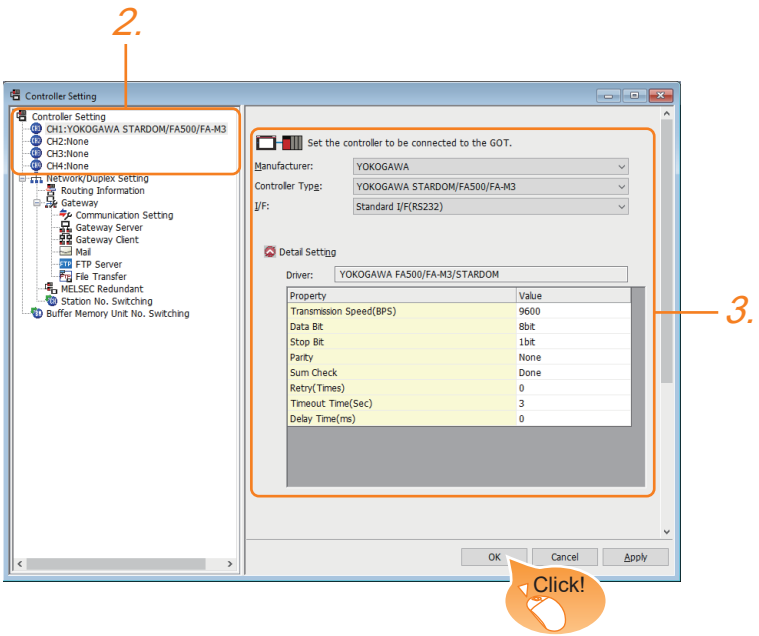
LC02-0N

Connect the terminating resistor provided with the LC02-0N across SDA and SDB, and across RDA and RDB on the terminal block.

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA STARDOM/FA500/FA-M3]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1565 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Sum Check | Done |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: No) | None<br>Even<br>Odd |
| Sum Check | Set whether or not to perform a sum check during communication.<br>(Default: Yes) | Yes or No |
| Retry | Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300(ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC side setting

**Point**

YOKOGAWA PLC

For details of YOKOGAWA PLCs, refer to the following manuals.

YOKOGAWA PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| CPU port/D-Sub 9-pin conversion cable | KM10-0C | ☞ Page 1567 Connecting a conversion cable |
| SIO port adapter cable | KM10-0S | |
| PC link module | F3LC01-1N | ☞ Page 1568 Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F) |
| | F3LC11-1N | |
| | F3LC11-2N | |
| | F3LC11-2F | |
| | F3LC11-1F | ☞ Page 1570 Switch setting on the PC link module (F3LC11-1F, F3LC12-1F) |
| | F3LC12-1F | |
| | LC01-0N | ☞ Page 1572 Switch setting on the PC link module (LC01-0N, LC02-0N) |
| | LC02-0N | |
| STARDOM | | ☞ Page 1574 Connecting to STARDOM |

# Connecting a conversion cable

The following describes the settings for connecting a CPU port/D-sub 9-pin conversion cable or SIO port adapter cable.

## Setting of PLC CPU



Make the PLC CPU settings, displaying [Configuration] → [Communication Settings] with the program development tool or the ladder-programming tool.

<table>
<tr><th>Item</th><th colspan="5">Set value</th></tr>
<tr><td>Communication mode*1</td><td colspan="5">Set the communication mode of the CPU (transmission speed and data format).<br>Set the transmission speed and data format according to settings of the transmission speed, data length, parity and stop bit on the GOT side.<br>For details on these GOT side settings, refer to the following.<br>☞ Page 1564 Setting communication interface (Communication settings)</td></tr>
<tr><td rowspan="12"></td><td rowspan="2">Item</td><td colspan="4">Transmission speed and data format</td></tr>
<tr><td>Transmission speed</td><td>Data bit</td><td>Parity</td><td>Stop bit</td></tr>
<tr><td>Communication mode 0</td><td>9600 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 1</td><td>9600 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 2</td><td>19200 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 3</td><td>19200 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 4</td><td>38400 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 5</td><td>38400 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 6</td><td>57600 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 7</td><td>57600 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 8</td><td>115200 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 9</td><td>115200 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>CPU PC link function settings</td><td colspan="5">Set the following when using the CPU programming port as the PC link function.<br>Make the checksum setting according to the sum check setting on the GOT side.<br>For the sum check setting on the GOT side, refer to the following.<br>☞ Page 1564 Setting communication interface (Communication settings)</td></tr>
<tr><td rowspan="5"></td><td colspan="2">Item</td><td colspan="3">Set value</td></tr>
<tr><td colspan="2">Use of PC link function</td><td colspan="3">Mark. (Use enabled)</td></tr>
<tr><td colspan="2">Checksum</td><td colspan="3">Mark. (ON)<br>Do not mark. (OFF)</td></tr>
<tr><td colspan="2">End character</td><td colspan="3">Do not mark. (OFF)</td></tr>
<tr><td colspan="2">Protect function</td><td colspan="3">Do not mark. (OFF)</td></tr>
</table>

*1 The communication mode that can be selected differs according to the CPU.

# Connecting to PC link module

For the settings for connecting to the PC link module, refer to the following.

☞ Page 1568 Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F)
☞ Page 1570 Switch setting on the PC link module (F3LC11-1F, F3LC12-1F)
☞ Page 1572 Switch setting on the PC link module (LC01-0N, LC02-0N)

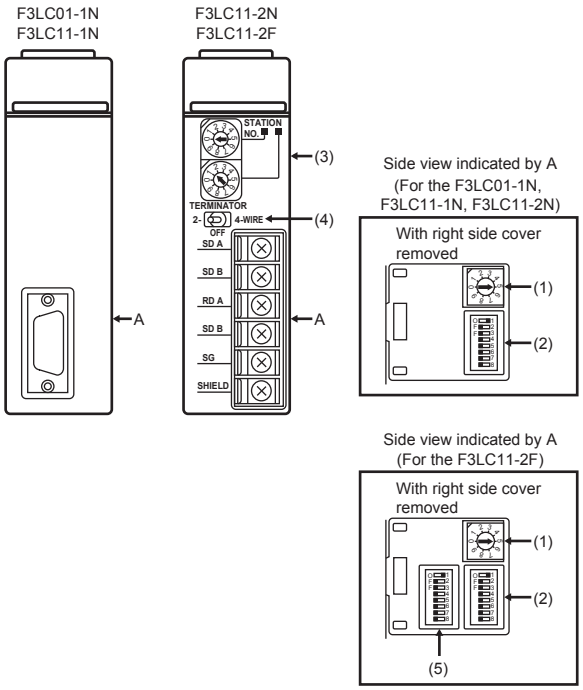
## Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F)

Set the switches accordingly.

**Point**

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.

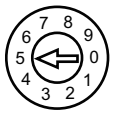



### ■Transmission speed setting switch

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings




| Setting*1 | Transmission speed |
|---|---|
| 4 | 4800bps |
| 5 | 9600bps |
| 6 | 19200bps |

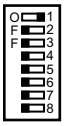
*1 Only transmission speeds available on the GOT side are shown.

## ■Data format setting switch

Set the data length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

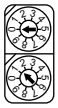
For the settings on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings



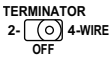

| Switch No. | Description | Settings |
|---|---|---|
| 1 | Data bit | ON (8bits), OFF (7bits) |
| 2 | Parity | ON (done), OFF (none) |
| 3 | | ON (even), OFF (odd) |
| 4 | Stop bit | ON (2bits), OFF (1bit) |
| 5 | Checksum | ON (done), OFF (none) |
| 6 | End character specification | OFF (none) |
| 7 | Protect function | OFF (disabled) |
| 8 | — | OFF |

## ■Station No. switch (F3LC11-2N only)



| Rotary switch | Description | Settings |
|---|---|---|
| 1) | Station No.<br>(10's digit) | 0 |
| 2) | Station No.<br>(1's digit) | 1 |

## ■Terminator switch (F3LC11-2N only)




| Settings | Description |
|---|---|
| 4-WIRE | Resistor connected (4-wire type) |

## ■SW3 switch (F3LC11-2F only)

Unused switch.Turn off all the unused switches.

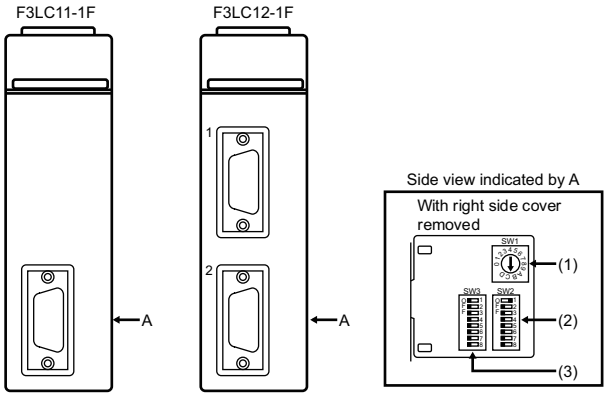
## Switch setting on the PC link module (F3LC11-1F, F3LC12-1F)

Set the switches accordingly.

**Point**

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.




### ■Transmission speed switch (SW1)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings




| Setting*1 | Transmission speed |
|---|---|
| 4 | 4800bps |
| 5 | 9600bps |
| 7 | 19200bps |
| 9 | 38400bps |
| A | 57600bps |
| C | 115200bps |

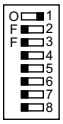
*1 Only transmission speeds available on the GOT side are shown.

## ■Data format switch (SW2)

Set the character length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

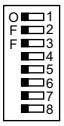
For the settings on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings




| Switch No. | Description | Settings |
|---|---|---|
| 1 | Character length | ON (8bits), OFF (7bits) |
| 2 | Parity | ON (done), OFF (none) |
| 3 | | ON (even), OFF (odd) |
| 4 | Stop bit | ON (2bits), OFF (1bit) |
| 5 | Checksum | ON (done), OFF (none) |
| 6 | End character specification | OFF (none) |
| 7 | Protect function | OFF (disabled) |
| 8 | Security function | OFF (disabled) |

## ■Module function switch (SW3)




| Switch No. | Description | Settings |
|---|---|---|
| 1 to 6 | User setting inhibited | OFF |
| 7 | Modem compatibility | OFF (not compatible) |
| 8 | External modem | OFF (none) |

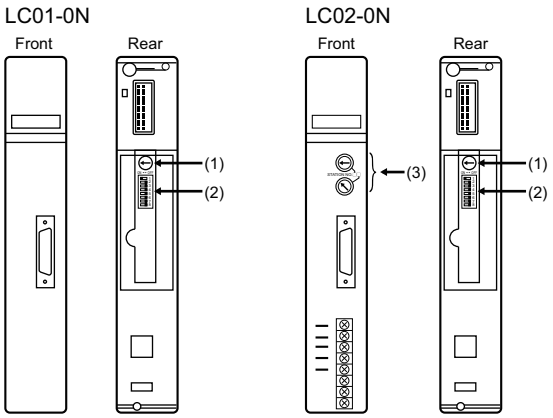
## Switch setting on the PC link module (LC01-0N, LC02-0N)

Set the switches accordingly.

**Point**

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.




### ■Transmission speed setting switch

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings




| Setting*1 | Transmission speed |
|---|---|
| 4 | 4800bps |
| 5 | 9600bps |
| 6 | 19200bps |

*1 Only transmission speeds available on the GOT side are shown.

## ■Data format setting switch

Set the data length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

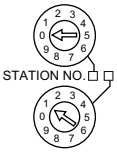
For the settings on the GOT side, refer to the following.

☞ Page 1565 Communication detail settings




| Switch No. | Description | Settings |
|---|---|---|
| 1 | Data bit | ON (8bits), OFF (7bits) |
| 2 | Parity | ON (done), OFF (none) |
| 3 | | ON (even), OFF (odd) |
| 4 | Stop bit | ON (2bits), OFF (1bit) |
| 5 | Checksum | ON (done), OFF (none) |
| 6 | End character specification | OFF (none) |
| 7 | Protect function | OFF (disabled) |
| 8 | — | OFF |

## ■Station No. switch (LC02-0N only)




| Rotary switch | Description | Settings | |
|---|---|---|---|
| | | For RS-232 communication | For RS-422 communication |
| 1) | Station No. (10's digit) | 0 | 0 |
| 2) | Station No. (1's digit) | 1 | 2 |

# Connecting to STARDOM

Make the communication settings as shown below.
For details of the communication settings, refer to the following manual.
Peripheral Software Manual for YOKOGAWA PLC

**Point**

Connection between STARDOM and the PC for communication settings
For the communication settings of STARDOM, STARDOM and the PC for communication settings must be connected to Ethernet using the Resource Configurator (peripheral software).

## COM port setting

Make the settings on the FCX Maintenance Page for STARDOM.

1. Select [Reboot (Maintenance Mode)] on the Reboot screen of the FCX Maintenance Page to set the maintenance mode.
2. Set the COM1 port driver to be used.Execute [JEROS Basic Setting File] from the [Edit System Setting File] screen on the FCX Maintenance Page.

Confirm that the line of [Com1SioDriver] is as follows.
Com1SioDriver=DUONUS_SIO

3. Set the COM1 port to be used.Execute [COM1 Port Setting File] from the [Edit System Setting Files] screen on the FCX Maintenance Page.Make the settings as follows according to the communication specifications on the setting screen.

Leave the settings as default if not listed on the communication setting items.
(Communication setting items) ( ) in the table shows the names on the FCX Maintenance Page.

| Item | Set value |
|---|---|
| Transmission speed (Baudrate)*1 | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data length (DataBitLength)*1 | 8bits, 7bits |
| Stop bit (StopBitLength)*1 | 1bit, 2bits |
| Parity bit (Parity)*1 | none/odd/even |

Baudrate = *1
DataBitLength = *1
StopBitLength = *1
Parity = *1
FifoMode = YES
InitialDTRState = ON
SendFlowControlMode = CTS
ReceiveFlowControlMode = DTR

*1 Adjust the settings with GOT communication settings.
Page 1565 Communication detail settings

4. Select "Reboot (Online Mode)" on the "Reboot" screen of the FCX Maintenance Page to set the online mode.

## Defining Logic POU

Define Logic POU using Logic Designer (peripheral software), and download the project to STARDOM.

***1.*** Start Logic Designer and create a new project using a template.

Use [STARDOM Serial Communication] template.

***2.*** Insert FA-M3 Emulator Firmware Library to the new project.

- Right-click [Library] under the project tree in Logic Designer.
- Right-click [Insert] and select [Firmware Library].
- Double-click the [SD_FCXPLCR_LIB] folder and double-click [SD_FCXPLCR_LIB.fwl] to select it.
- The library path inserted in the procedures above is as follows.

{Install Folder}\LogicDesigner\Mwt\Plc\Fw_lib\SD_FCXPLCR_LIB\SD_FCXPLCR_LIB.fwl

***3.*** Insert FA-M3 Emulator User Library to the new project.

- Right-click [Library] under the project tree in Logic Designer.
- Right-click [Insert] and select [User Library].
- Double-click [SD_CFAM3R_PF.mwt] to select it.
- The library path inserted in the procedures above is as follows.

{Install Folder}\LogicDesigner\Libraries\SD_CFAM3R_PF.mwt

***4.*** Copy a sample project POU to the new project.

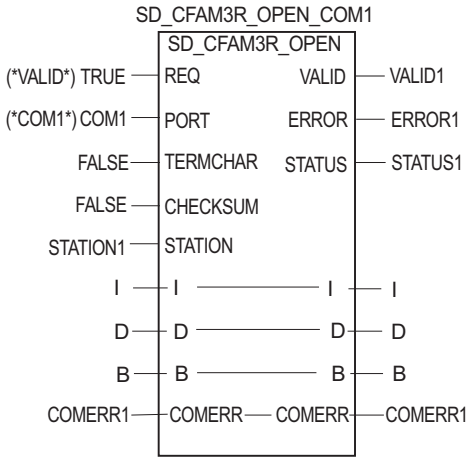
- Open C{Install Folder}\LogicDesigner\Projects\EXAMPLE_J.mwt.
- Right-click [FAM3_Emulator] in the Logic POU under the project tree in the Example_J project, and select [Copy].
- Right-click the [Logic POU] under the project tree in the created new project, and select [Paste].
- Double-click the [FAM3_Emulator*] file in the [FAM3_Emulator*] folder.
- For the following terminals, set as shown below.

REQ terminal: TRUE

TERMCHAR terminal: FALSE

PORT terminal: COM1

STATION terminal: STATION1




(Definition example of Logic POU)

***5.*** Defining the instance

Instantiate Logic POU. Define an already defined instance to Task0.

- Right-click the [Physical hardware] [Configuration:IPC_33/FCX01:FCX/Tasks/Task0:CYCLIC] and select [Insert] - [Program instance].
- Define the program instance name and select FAM3_Emulator for the program type.

***6.*** Defining Target Setting

Define the IP address or host name of STARDOM for which the communication settings are made.

Double-click [Physical hardware] [Configuration:IPC_33/FCX01:FCX/Target Setting] and input the IP address or the host name.

*7.* Downloading the project

- Execute [Build] - [Make]. (Same as when pressing the function key F9).
- Download after confirming that the compile error does not occur. Select [Download] in the project control dialog displayed when [Online] - [Project control] is selected.
- When the download is completed, select [Cold] and start STARDOM.

# Precautions

## Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

☞ Page 1586 Settable Device Range

## Connecting to STARDOM

### ■Redundant system

When STARDOM is configured with a redundant system, the connection is not supported.

### ■System alarm

The PLC error does not appear in the system alarm.

### ■GOT clock control

Since the STARDOM does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

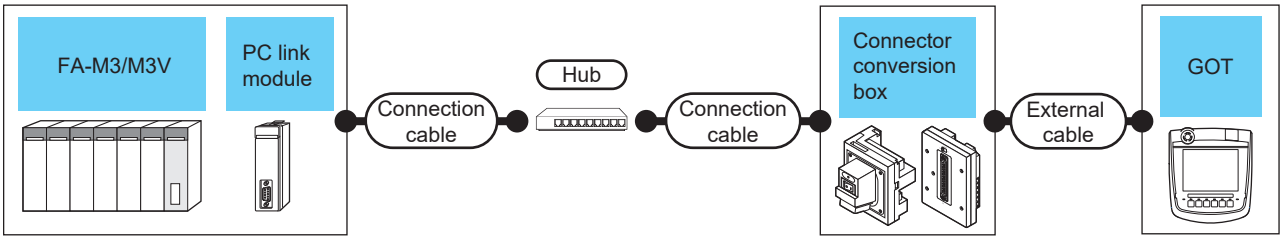
# 34.3 Ethernet Connection

## Connecting to FA-M3 or FA-M3V



Communication driver

Ethernet(YOKOGAWA), Gateway




| PLC | | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Ethernet interface module*1 | Cable model*2 Connection diagram number | Maximum segment length*3 | | | | |
| F3SP05<br>F3SP08<br>F3FP36<br>F3SP21<br>F3SP25<br>F3SP35<br>F3SP28<br>F3SP38<br>F3SP53<br>F3SP58<br>F3SP59<br>F3SP76-7S | F3LE01-5T<br>F3LE11-0T<br>F3LE12-0T | • 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>TCP: 128 or less<br>UDP: 128 or less<br>When PLC: GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>TCP: 8 or less<br>UDP: 128 or less<br>(recommended to 16 or less) |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| F3SP71-4S | F3LE11-0T | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| F3SP66<br>F3SP67<br>F3SP71-4N<br>F3SP71-4S<br>F3SP76-7S | - | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

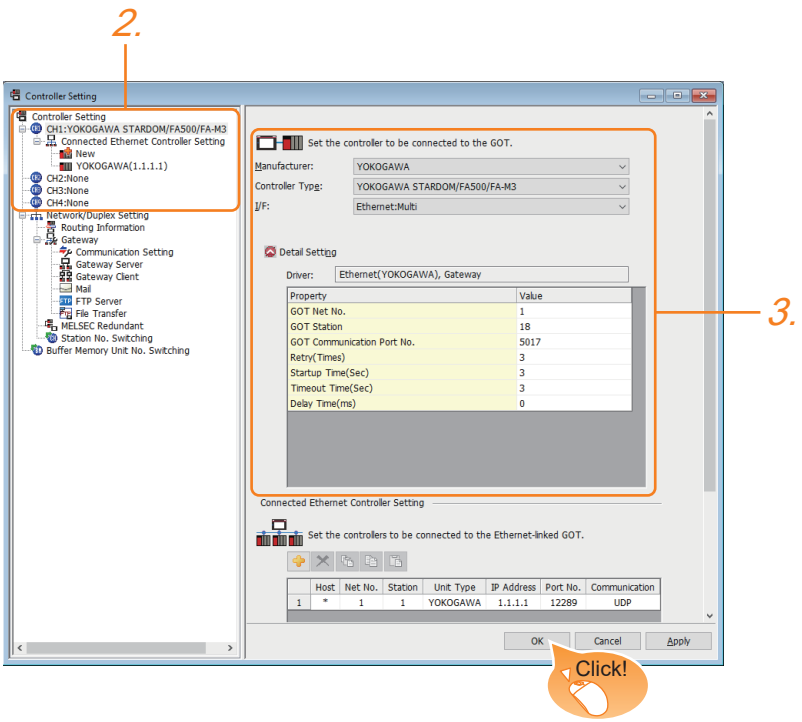
*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA STARDOM/FA500/FA-M3]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1579 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5017 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 1) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5017 *2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1580 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

• Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

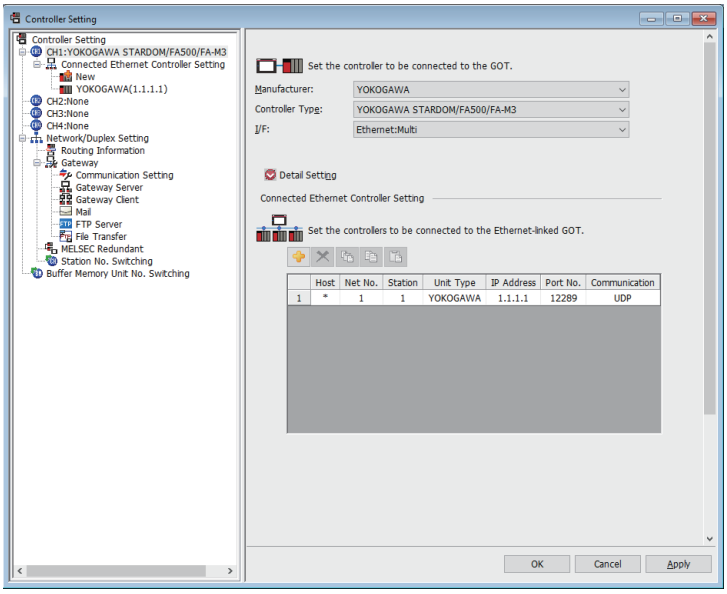
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *3 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 |
| Unit Type | YOKOGAWA (fixed) | YOKOGAWA (fixed) |
| IP address *1 | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. *2 | Set the port No. of the connected Ethernet equipment.<br>(Default: 12289) | 12289, 12291 |
| Communication format *1 | Select a communication protocol.<br>(Default: UDP) | UDP, TCP |

*1 Set the same IP address and communication format as those of the PLC side.

*2 Set the port No. of the host link service used on the PLC side.

*3 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1579 Communication detail settings

# PLC side setting

**Point**

YOKOGAWA PLC

For details of YOKOGAWA PLCs, refer to the following manuals.

YOKOGAWA PLC user's Manual



| Model name | | Refer to |
|---|---|---|
| Ethernet interface module | F3LE01-5T | ☞ Page 1582 Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T) |
| | F3LE11-0T | |
| | F3LE12-0T | ☞ Page 1583 Switch setting on the Ethernet Interface Module (F3LE12-0T) |
| FA-M3 | F3SP66 (built-in Ethernet interface)<br>F3SP67 (built-in Ethernet interface) | ☞ Page 1584 Connecting to FA-M3, FA-M3V (built-in Ethernet interface) |
| FA-M3V | F3SP71-4N (built-in Ethernet interface)<br>F3SP71-4S (built-in Ethernet interface)<br>F3SP76-7S (built-in Ethernet interface) | |

# Connecting to Ethernet Interface Module

For the settings for connecting to the Ethernet Interface Module, refer to the following.

☞ Page 1582 Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T)
☞ Page 1583 Switch setting on the Ethernet Interface Module (F3LE12-0T)

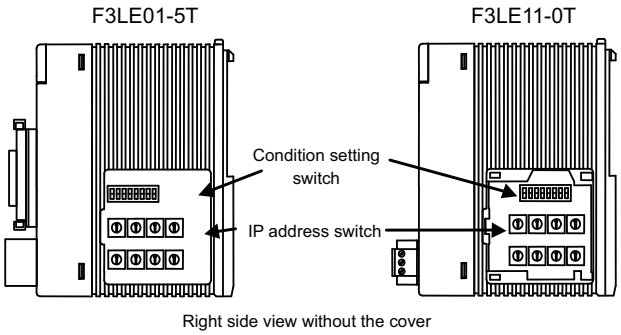
## Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T)

Set the switches accordingly.

**Point**

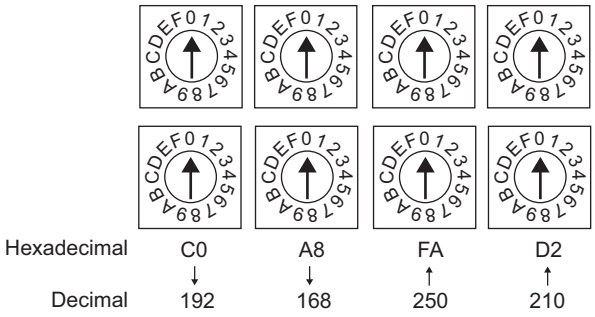
Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.



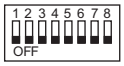

### ■IP address switch

Set the IP address with eight Hex rotary switches on the side of the base unit




### ■Condition setting switch

Set the data format, write protection, line processing at TCP timeout error or operation mode with the DIP switch on the side of the base unit.




| Switch No. | Description | Set value |
|---|---|---|
| 1 | Data code | OFF (ASCII) |
| 2 | Write protect | OFF (not protect) |
| 3 | Reserved | ON (not available), OFF (always) |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | Line processing on TCP timeout*1 | OFF (close the line) |
| 8 | Operation mode | OFF (normal operation) |

*1 Applicable to only F3LE01-5T.

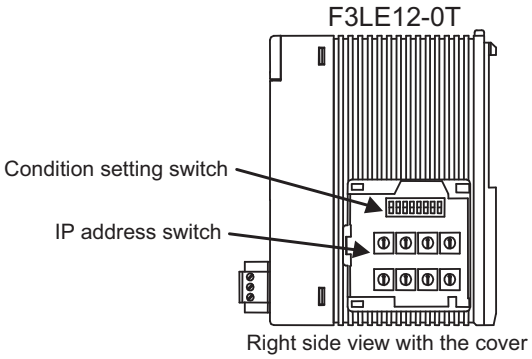
## Switch setting on the Ethernet Interface Module (F3LE12-0T)

Set the switches accordingly.

**Point**

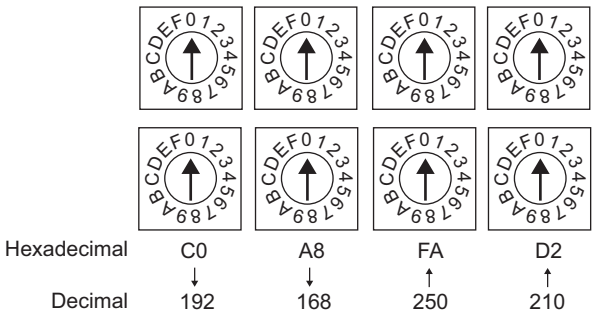
Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.



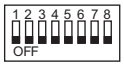

### ■IP address switch

Set the IP address with eight Hex rotary switches on the side of the base unit.




### ■Condition setting switch

Set the data format, write protection, or operation mode with the DIP switch on the side of the base unit.




| Switch No. | Description | Set value |
|---|---|---|
| 1 | Data code | OFF (ASCII) |
| 2 | Write protect | OFF (not protect) |
| 3 | Reserved | ON (not available), OFF (always) |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | Operation mode | OFF (normal operation) |

# Connecting to FA-M3, FA-M3V (built-in Ethernet interface)

In this section, FA-M3 and FA-M3V series represent F3SP66, F3SP67, F3SP71-4N, F3SP71-4S, and F3SP76-7S.

## Project setting/configuration setting

Set the setting with software for programming apparatus.

| Item | Set value | Description |
|---|---|---|
| IP address*1 | 0.0.0.0 to 255.255.255.255 | Set the IP address of the connected Ethernet module. |
| Host link service A protocol*2<br>Port No.: 12289 | 0=TCP/IP*1<br>1=UDP/IP*1 | Select the protocol to be used in the port A of the host link service via Ethernet. |
| Host link service A protocol command data type*2<br>Port No.: 12289 | 0=ASCII format | Select the command data type to be used in the port A of the host link service via Ethernet. |
| Host link service B protocol*2<br>Port No.: 12291 | 0=TCP/IP*1<br>1=UDP/IP*1 | Select the protocol to be used in the port B of the host link service via Ethernet. |
| Host link service B protocol command data type*2<br>Port No.: 12291 | 0=ASCII format | Select the command data type to be used in the port B of the host link service via Ethernet. |
| Write protection*3 | 0 = Not protected<br>1 = Protected | Disables the write command to this module with the host link service via Ethernet. |

*1 Adjust the settings with GOT settings.
☞ Page 1580 Connected Ethernet Controller Setting

*2 For the port No. of the GOT, set the port No. of the host link service to be used.
☞ Page 1580 Connected Ethernet Controller Setting

*3 Set this as necessary.

# Precautions



## Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

☞ Page 1586 Settable Device Range

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to multiple GOTs

### ■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1580 Connected Ethernet Controller Setting

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

# 34.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
YOKOGAWA equipment ([YOKOGAWA STARDOM/FA500/FA-M3])

# 35 YOKOGAWA TEMPERATURE CONTROLLER


- Page 1587 Connectable Model List
- Page 1588 System Configuration
- Page 1608 Connection Diagram
- Page 1621 GOT Side Settings
- Page 1623 Temperature Controller Side Setting
- Page 1629 Settable Device Range
- Page 1629 Precautions




## 35.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| GREEN | UT320 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1588 Connecting to GREEN Series |
| | UT321 | | | | |
| | UT350 | | | | |
| | UT351 | | | | |
| | UT420 | | | | |
| | UT450 | | | | |
| | UT520 | | | | |
| | UT550 | | | | |
| | UT551 | | | | |
| | UT750 | | | | |
| | UP350 | | | | |
| | UP351 | | | | |
| | UP550 | | | | |
| | UP750 | | | | |
| | UM330 | | | | |
| | UM331 | | | | |
| | UM350 | | | | |
| | UM351 | | | | |
| | US1000 | | | | |
| UT100 | UT130 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1594 Connecting to UT100 Series |
| | UT150 | | | | |
| | UT152 | | | | |
| | UT155 | | | | |
| | UP150 | | | | |
| UT2000 | UT2400 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1597 Connecting to UT2000 Series |
| | UT2800 | | | | |
| UTAdvanced | UT32A | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1601 Connecting to UTAdvanced Series |
| | UT35A | | | | |
| | UT52A | | | | |
| | UT55A | | | | |
| | UT75A | | | | |
| | UP32A | | | | |
| | UP35A | | | | |
| | UP55A | | | | |
| | UM33A | | | | |

# 35.2 System Configuration

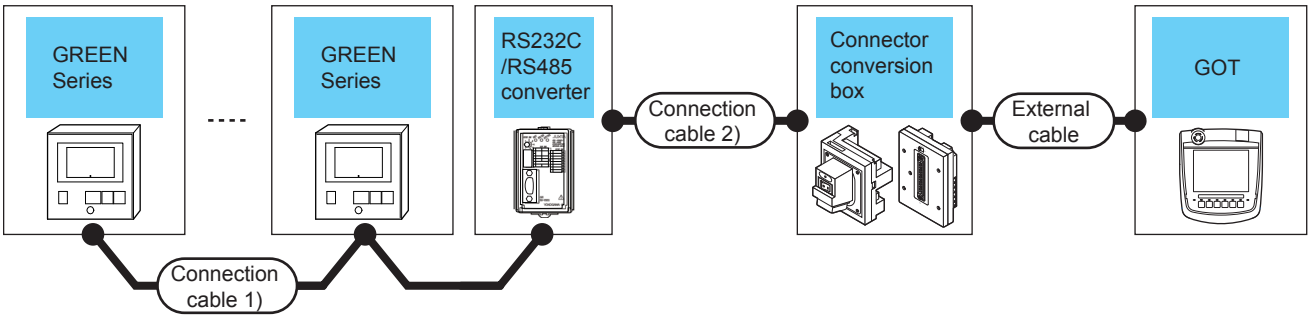
## Connecting to GREEN Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

### When using the RS232C/RS485 converter

#### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420<br>UT450<br>UT520<br>UT550<br>UT551<br>UT750*2<br>UP350<br>UP351<br>UP550<br>UP750*2<br>UM330<br>UM331<br>UM350<br>UM351<br>US1000 | User preparing Page 1610 RS-485 connection diagram 1) (4-wire type) | 1200m | ML2-□ | RS-232 | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | User preparing Page 1614 RS-485 connection diagram 5) (2-wire type) | | | | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| UP750*3<br>UT750*3 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

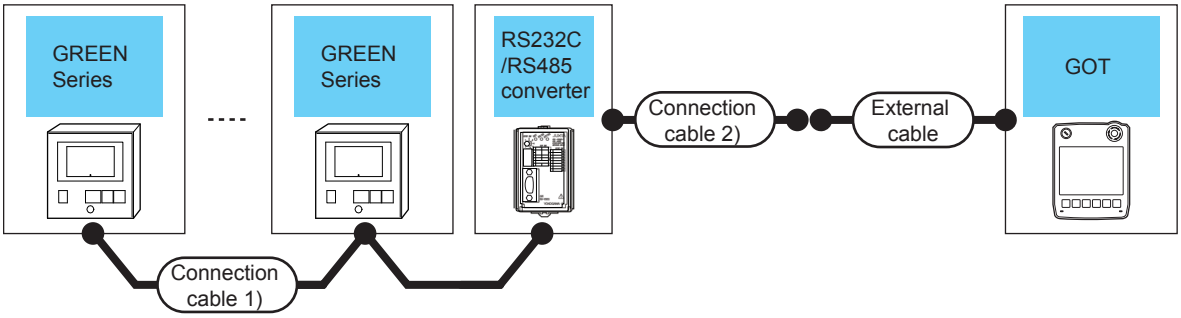
*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Connect the connection cable 1) to the standard RS-485 communication interface.

*3 Connect the connection cable 1) to the high performance RS-485 communication interface.

*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

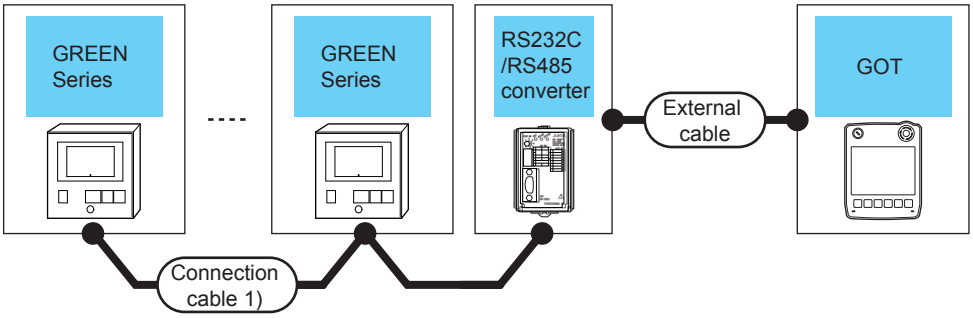
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420 | User preparing Page 1610 RS-485 connection diagram 1) (4-wire type) | 1200m | ML2-□ | RS-232 | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| UT450<br>UT520<br>UT550<br>UT551<br>UT750*2<br>UP350<br>UP351<br>UP550<br>UP750*2<br>UM330<br>UM331<br>UM350<br>UM351<br>US1000 | User preparing Page 1614 RS-485 connection diagram 5) (2-wire type) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |
| UP750*3<br>UT750*3 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 Connect the connection cable 1) to the standard RS-485 communication interface.
*3 Connect the connection cable 1) to the high performance RS-485 communication interface.
*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

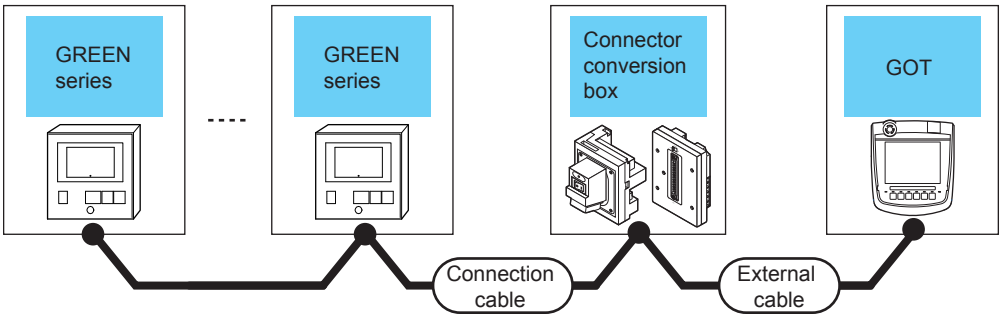



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420<br>UT450<br>UT520<br>UT550<br>UT551<br>UT750*2<br>UP350<br>UP351<br>UP550<br>UP750*2<br>UM330<br>UM331<br>UM350<br>UM351<br>US1000 | User preparing Page 1610 RS-485 connection diagram 1) (4-wire type) | 1200m | ML2-□ | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | User preparing Page 1614 RS-485 connection diagram 5) (2-wire type) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | | |
| UP750*3<br>UT750*3 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 Connect the connection cable 1) to the standard RS-485 communication interface.
*3 Connect the connection cable 1) to the high performance RS-485 communication interface.
*4 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box

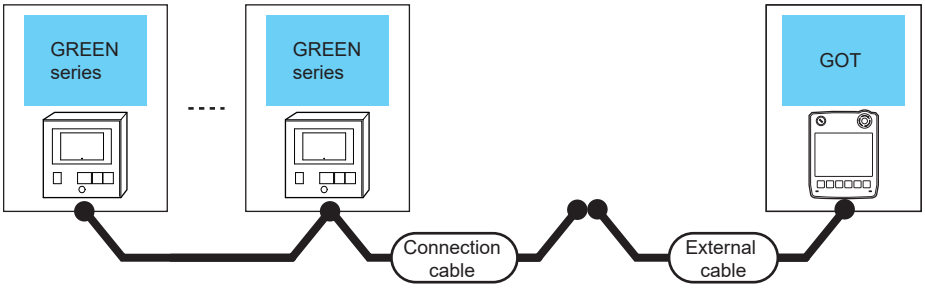



| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420<br>UT450<br>UT520<br>UT550<br>UT551<br>UT750*1<br>UP350<br>UP351<br>UP550<br>UP750*1<br>UM330<br>UM331<br>UM350<br>UM351<br>US100 | RS-485 | GT09-C30R40303-6T (3m)<br>GT09-C100R40303-6T (10m)<br>or<br>User preparing Page 1611 RS-485 connection diagram 2) (4-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| | | User preparing Page 1618 RS-485 connection diagram 13) (2-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |
| UP750*2<br>UT750*2 | | User preparing Page 1619 RS-485 connection diagram 14) (2-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

*1 Connect the connection cable to the standard RS-485 communication interface.

*2 Connect the connection cable to the high performance RS-485 communication interface.

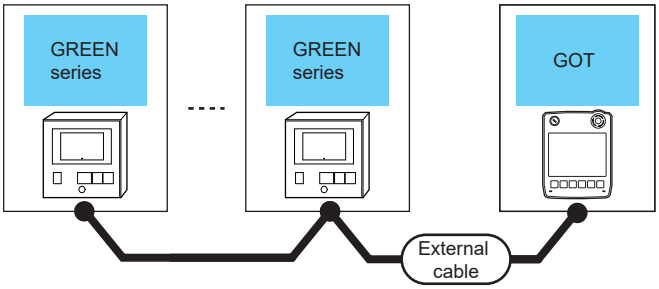
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420<br>UT450<br>UT520<br>UT550<br>UT551<br>UT750*1<br>UP350<br>UP351<br>UP550<br>UP750*1<br>UM330<br>UM331<br>UM350<br>UM351<br>US100 | RS-485 | User preparing Page 1612 RS-485 connection diagram 3)<br>(4-wire type) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 Connect the connection cable to the standard RS-485 communication interface.

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| UT320<br>UT321<br>UT350<br>UT351<br>UT420<br>UT450<br>UT520<br>UT550<br>UT551<br>UT750*1<br>UP350<br>UP351<br>UP550<br>UP750*1<br>UM330<br>UM331<br>UM350<br>UM351<br>US100 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1613 RS-485 connection diagram 4) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 Connect the connection cable to the standard RS-485 communication interface.

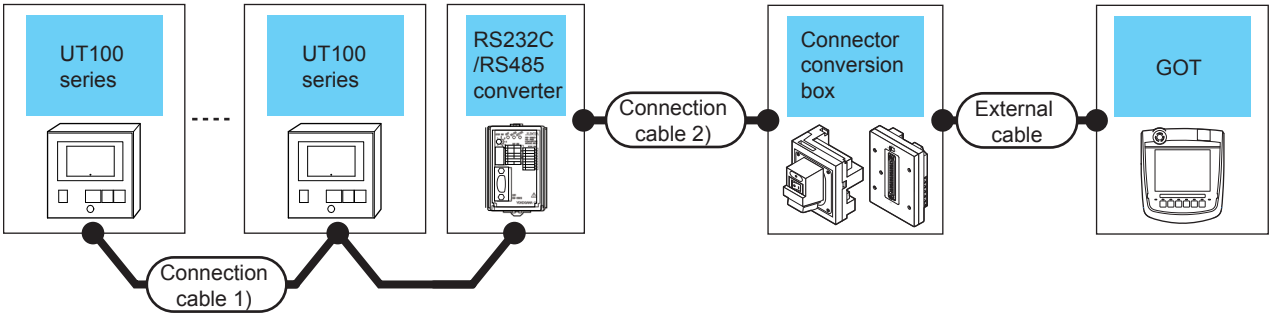
# Connecting to UT100 Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

## When using the RS232C/RS485 converter

### ■When using the connector conversion box

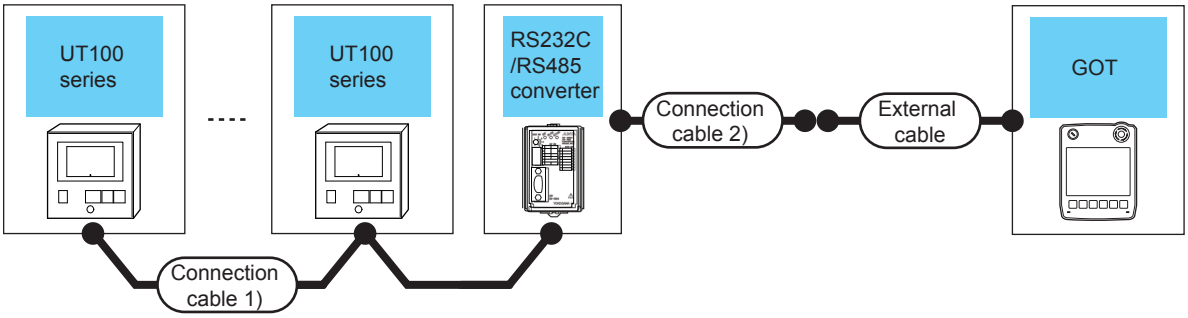



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| UT100 | User preparing Page 1614 RS-485 connection diagram 6) | 1200m | ML2-□ | RS-232 | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

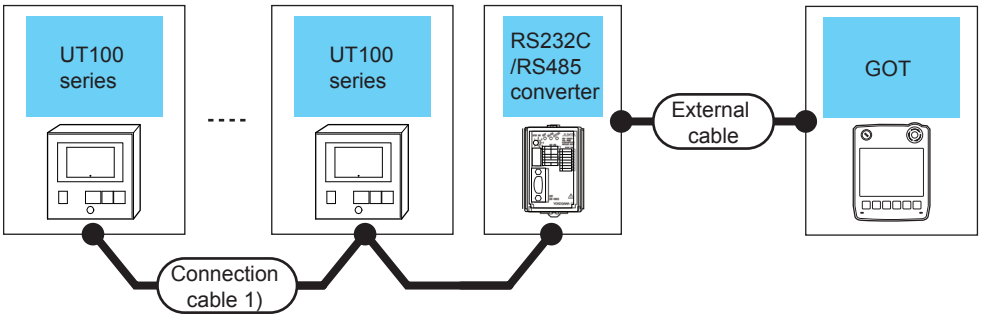



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| UT100 | User preparing Page 1614 RS-485 connection diagram 6) | 1200m | ML2-□ | RS-232 | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 31 temperature controllers for 1 GOT |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



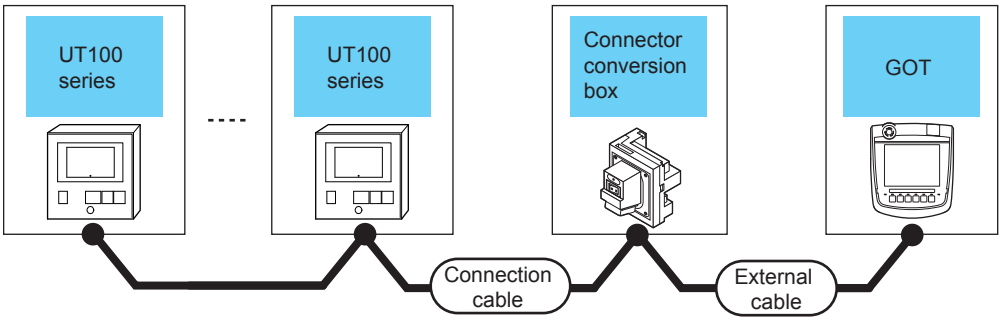

| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| UT100 | User preparing Page 1614 RS-485 connection diagram 6) | 1200m | ML2-□ | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | 6m | 31 temperature controllers for 1 GOT |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | | |
| UT100 | RS-485 | User preparing Page 1619 RS-485 connection diagram 14) (2-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

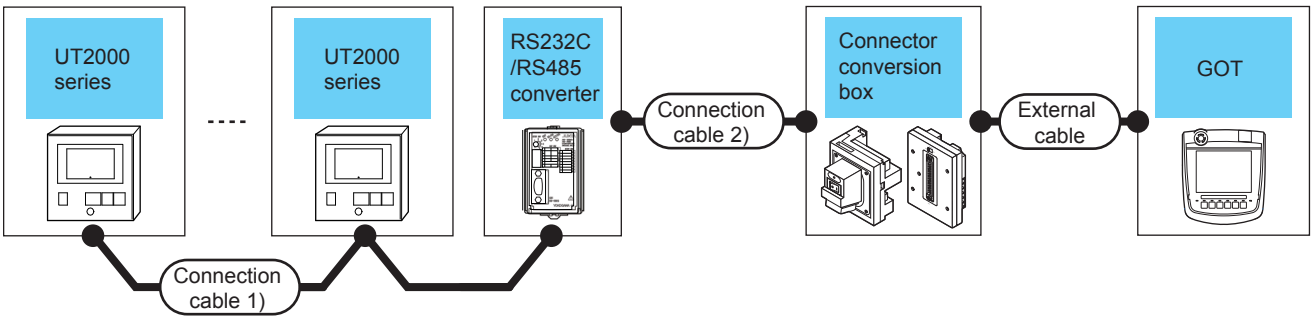
# Connecting to UT2000 Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

## When using the RS232C/RS485 converter

### ■When using the connector conversion box

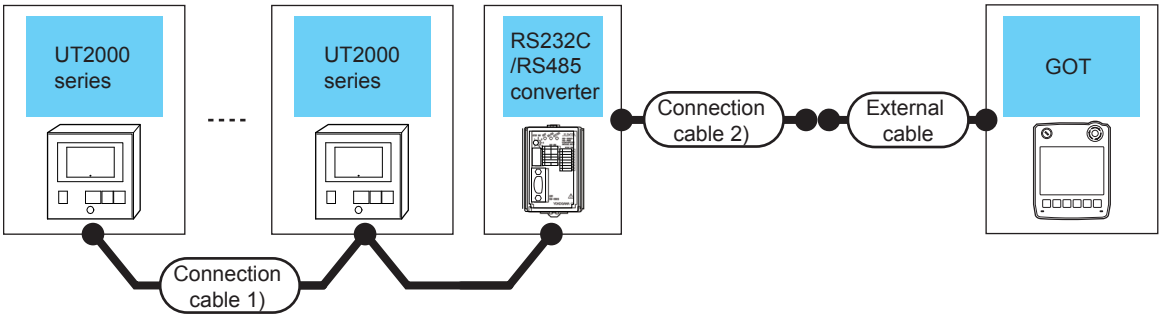



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| UT2000 | User preparing Page 1615 RS-485 connection diagram 7) | 1200m | ML2-□ | RS-232 | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 16 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

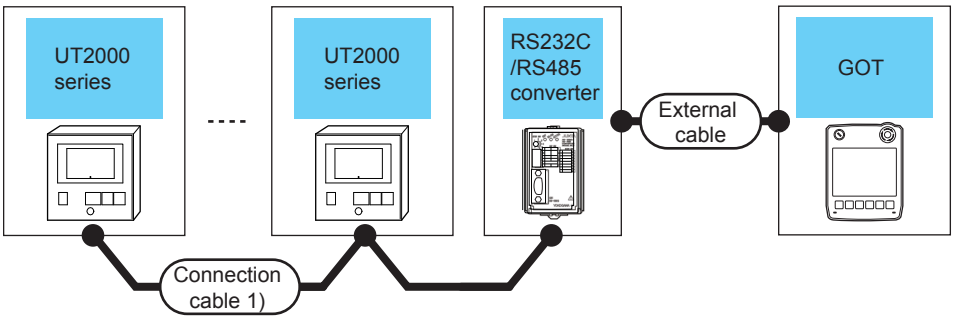



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| UT2000 | User preparing Page 1615 RS-485 connection diagram 7) | 1200m | ML2-□ | RS-232 | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 16 temperature controllers for 1 GOT |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



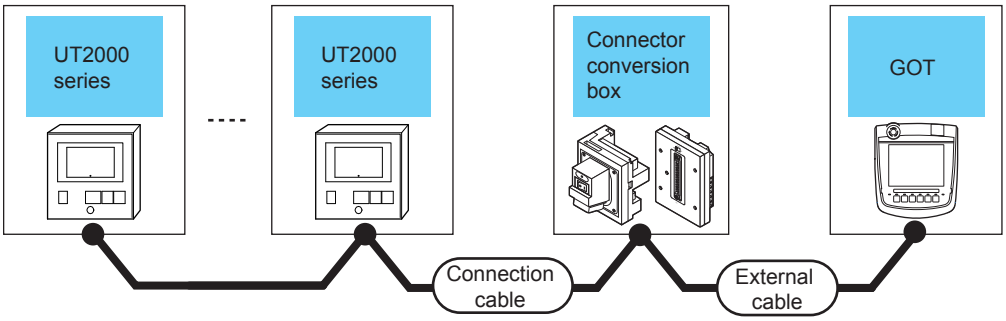

| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| UT2000 | User preparing Page 1615 RS-485 connection diagram 7) | 1200m | ML2-□ | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | 6m | Up to 16 temperature controllers for 1 GOT |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (External cable)

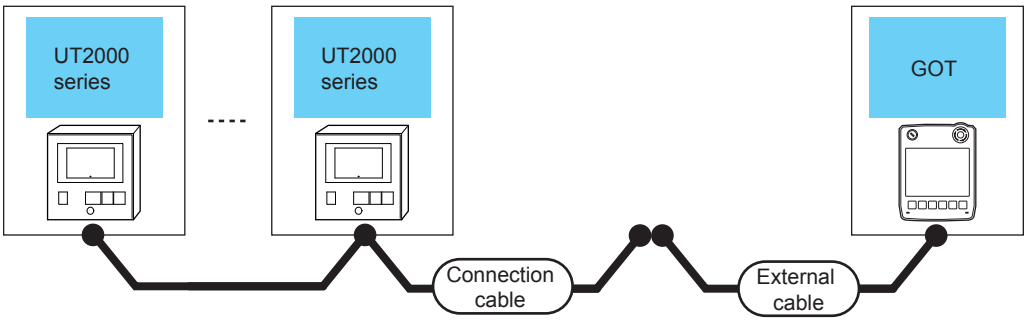
## When connecting directly

### ■When using the connector conversion box



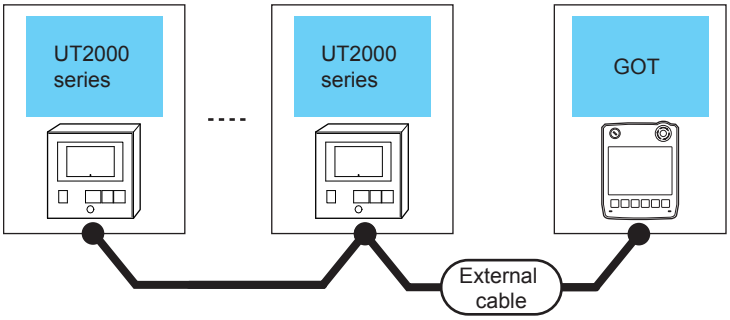

| Temperature controller | | Connection cable | | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | Max. distance | | | | | |
| UT2000 | RS-485 | GT09-C30R40304-6T (3m)<br>GT09-C100R40304-6T (10m)<br>or<br>User preparing Page 1615 RS-485 connection diagram 8)<br>(4-wire type) | 1200m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 16 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | | | | |
| UT2000 | RS-485 | User preparing Page 1615 RS-485 connection diagram 9)<br>(4-wire type) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| UT2000 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1616 RS-485 connection diagram 10) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

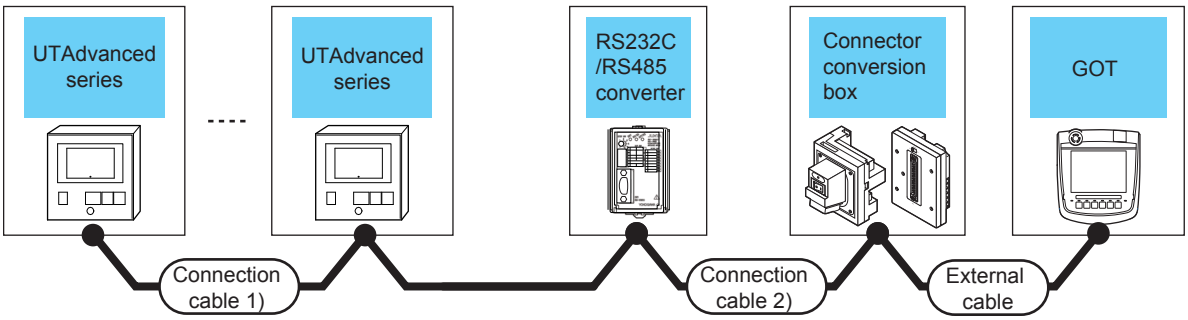
# Connecting to UTAdvanced Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

## When using the RS232C/RS485 converter

### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | RS232C/RS485 converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| UT32A<br>UT35A<br>UT55A *2<br>UT75A<br>UP32A<br>UP35A<br>UP55A *2<br>UM33A *2 | User preparing Page 1616 RS-485 connection diagram 11) (4-wire type) | 1200m | ML2-□ | RS-232 | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | User preparing Page 1617 RS-485 connection diagram 12) (2-wire type) | | | | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| UT52A<br>UT55A *3<br>UP55A *3<br>UM33A *3 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | GT09-C30R20304-9S (3m) or User preparing Page 1608 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Only the products that meet the following conditions can be connected.

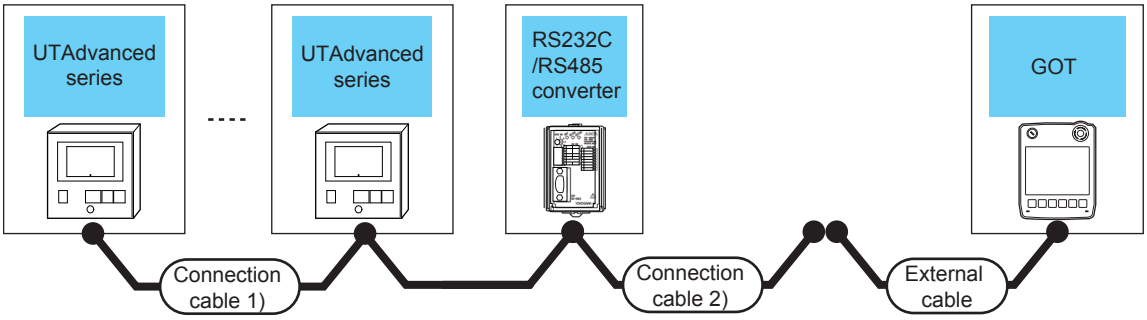
| Model | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|
| | Function | Open network | | |
| UT55A | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor |
| | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| UP55A | 2 | - | - | Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model) |
| | Other than 3 | - | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| UP55A | - | - | With "/CH3" | Product with RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |
| UM33A | 1 | - | Without "/LP" | Product with the RS-485 communication port (4- wire type/2-wire type) and without the power supply for 24 V DC sensor |

*3 Only the products that meet the following conditions can be connected.

| Model | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|
| | Function | Open network | | |
| UT55A | 1 or 2 | - | With "/LP" | Product with two RS-485 communication ports (4- wire type/2-wire type) and with the power supply for 24 V DC sensor |
| UP55A | 2 | - | - | Product with two RS-485 communication ports (4- wire type/2-wire type) (Standard code model) |
| | - | - | With "/C4" | Product with the RS-485 communication port (4- wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |
| UM33A | 1 | - | With "/LP" | Product with the RS-485 communication port (2- wire type) and with the power supply for 24 V DC sensor |

*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

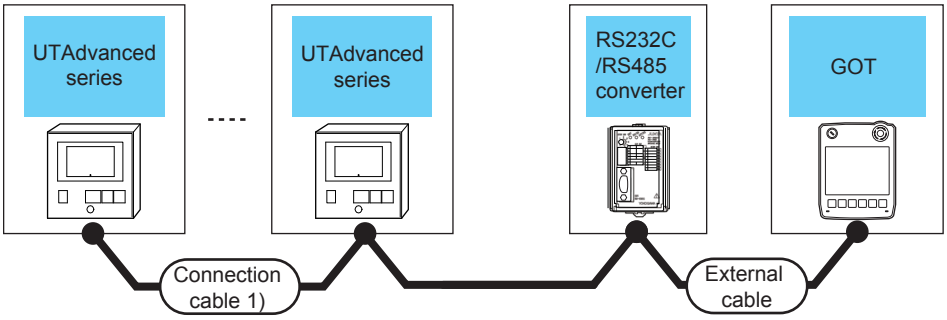
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *5 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| UT32A<br>UT35A<br>UT55A<br>UT75A<br>UP32A<br>UP35A<br>UP55A<br>UM33A | User preparing Page 1616 RS-485 connection diagram 11) (4-wire type) | 1200m | ML2-□ | RS-232 | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | User preparing Page 1617 RS-485 connection diagram 12) (2-wire type) | | | | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |
| UT52A<br>UT55A*2<br>UP55A*3<br>UM33A*4 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | User preparing Page 1608 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 When the suffix code is "1" or "2" in type 2 with the optional suffix code "/LP"
*3 (For standard) when the suffix code is "2" in type 2, (for detail) when the optional suffix code is "/C4"
*4 When the suffix code is "1" in type 2 with the optional suffix code "/LP"
*5 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

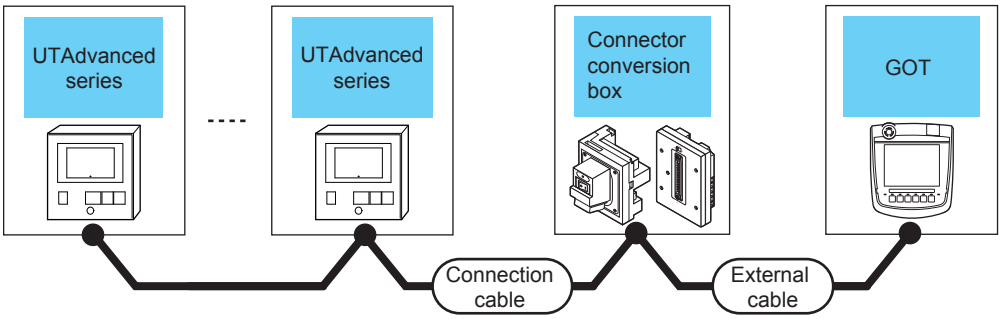



| Temperature controller | Connection cable 1) | | RS232C/RS485 converter*1 | | External cable | GOT Model | Total distance *5 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| UT32A<br>UT35A<br>UT55A<br>UT75A<br>UP32A<br>UP35A<br>UP55A<br>UM33A | User preparing Page 1616 RS-485 connection diagram 11) (4-wire type) | 1200m | ML2-□ | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | User preparing Page 1617 RS-485 connection diagram 12) (2-wire type) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | | |
| UT52A<br>UT55A*2<br>UP55A*3<br>UM33A*4 | User preparing Page 1614 RS-485 connection diagram 6) (2-wire type) | | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1609 RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 When the suffix code is "1" or "2" in type 2 with the optional suffix code "/LP"
*3 (For standard) when the suffix code is "2" in type 2, (for detail) when the optional suffix code is "/C4"
*4 When the suffix code is "1" in type 2 with the optional suffix code "/LP"
*5 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| **Model** | **Communication Type** | **Cable model Connection diagram number** | | | | | |
| UT32A<br>UT35A<br>UT55A *1<br>UT75A<br>UP32A<br>UP35A<br>UP55A *1 | RS-485 | GT09-C30R40303-6T(3m)<br>GT09-C100R40303-6T(10m)<br>or<br>User preparing Page 1611 RS-485 connection diagram 2)<br>(4-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| | | User preparing Page 1618 RS-485 connection diagram 13)<br>(2-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |
| UM33A *1 | RS-485 | GT09-C30R40303-6T(3m)<br>GT09-C100R40303-6T(10m)<br>or<br>User preparing Page 1611 RS-485 connection diagram 2)<br>(4-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| UT52A<br>UT55A *2<br>UP55A *2<br>UM33A *2 | RS-485 | User preparing Page 1619 RS-485 connection diagram 15)<br>(2-wire type) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

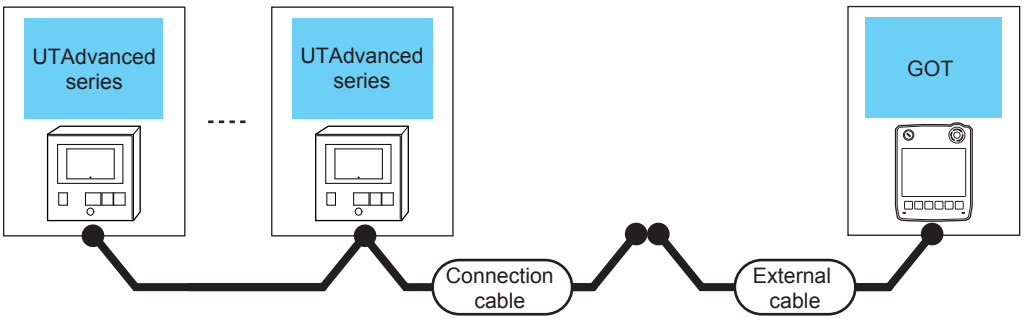
*1 Only the products that meet the following conditions can be connected.

| Model | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|
| | Function | Open network | | |
| UT55A | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor |
| | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| UP55A | 2 | - | - | Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model) |
| | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | - | - | With "/CH3" | Product with RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| UP55A | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |
| UM33A | 1 | - | Without "/LP" | Product with the RS-485 communication port (4- wire type/2-wire type) and without the power supply for 24 V DC sensor |

*2 Only the products that meet the following conditions can be connected.

| Model | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|
| | Function | Open network | | |
| UT55A | 1 or 2 | - | With "/LP" | Product with two RS-485 communication ports (4-wire type/2-wire type) and with the power supply for 24VDC sensor |
| UP55A | 2 | - | - | Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model) |
| | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |
| UM33A | 1 | - | With "/LP" | Product with the RS-485 communication port (2-wire type) and with the power supply for 24 V DC sensor |

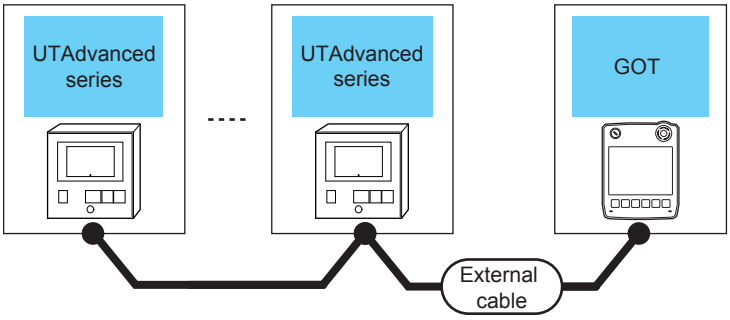
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | |
| UT32A<br>UT35A<br>UT55A<br>UT75A<br>UP35A<br>UP55A<br>UM33A*1 | RS-485 | User preparing Page 1612 RS-485 connection diagram 3)<br>(4-wire type) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 When the suffix code is "1" in type 2 without the optional suffix code "/LP"

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| UT32A<br>UT35A<br>UT55A*1<br>UT75A<br>UP35A<br>UP55A<br>UM33A*2 | RS-485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1613 RS-485 connection diagram 4) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 When the suffix code is "1" in type 2 without the optional suffix code "/LP"

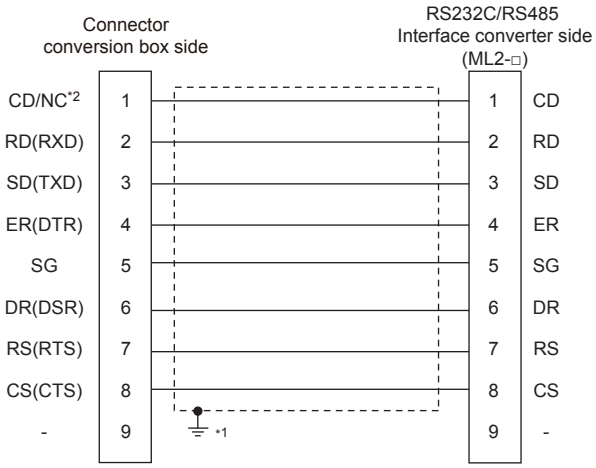
# 35.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

## RS-232 cable

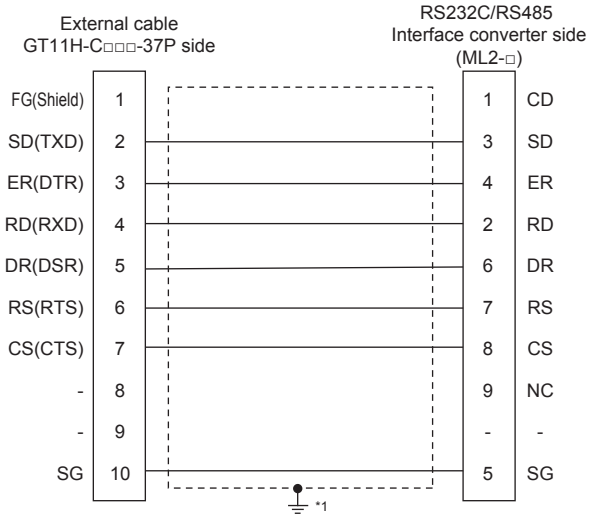
### Connection diagram

#### ■RS-232 connection diagram 1)



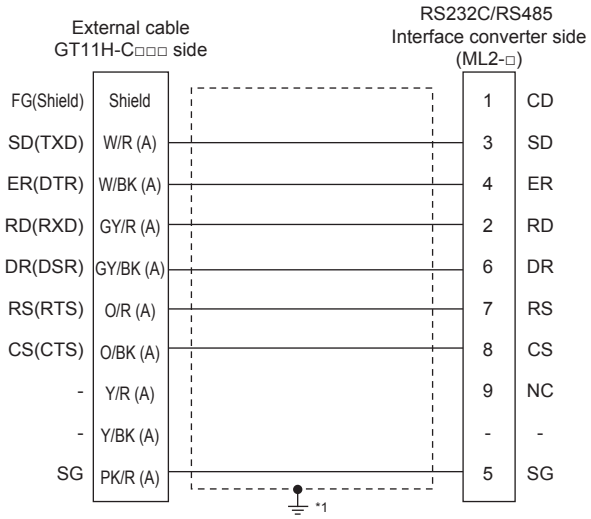

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.

### ■RS-232 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■YOKOGAWA temperature controller side connector

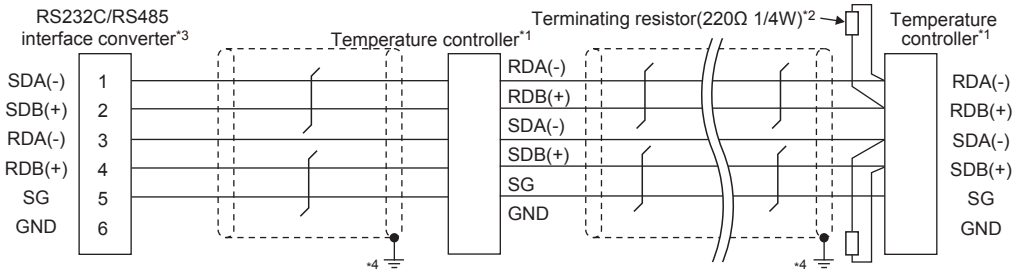
Use the connector compatible with the YOKOGAWA temperature controller side.

For details, refer to the user's manual of the YOKOGAWA temperature controller.

# RS-485 cable

## Connection diagram

### ■RS-485 connection diagram 1)

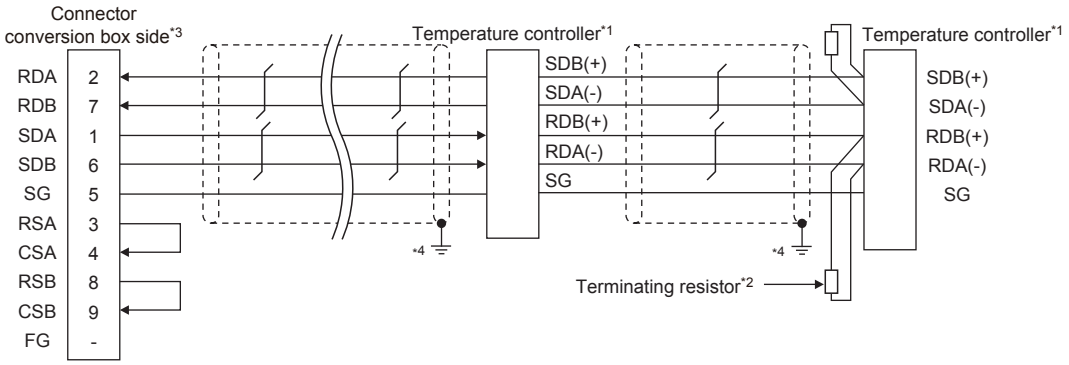



*1 Pin No. of temperature controller differs depending on the model. Refer to the following table.

| Signal name | Model of temperature controller | |
|---|---|---|
| | GREEN Series<br>UT/UP/UM | GREEN Series<br>US |
| | Pin No. | Pin No. |
| RDA (-) | 26 | 24 |
| RDB (+) | 25 | 23 |
| SDB (+) | 23 | 21 |
| SDA (-) | 24 | 22 |
| SG | 27 | 25 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 2)




*1 Pin No. of temperature controller differs depending on the model.Refer to the following table.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | GREEN Series UT/UP/UM | GREEN Series US | UTAdvanced Series | | | |
| | | | UT32A/UP32A/ UM33A | UT35A/UP35A/T55A (product condition A)/UP55A (product condition A) | UT55A (product condition B)/ UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 23 | 21 | 301 | 407 | 501 | 1 |
| SDA (-) | 24 | 22 | 302 | 408 | 502 | 2 |
| RDB (+) | 25 | 23 | 304 | 410 | 504 | 4 |
| RDA (-) | 26 | 24 | 305 | 411 | 505 | 5 |
| SG | 27 | 25 | 303 | 409 | 503 | 3 |

• For the product condition of UTAdvanced series, refer to the following table.

| Model | Product condition | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|---|
| | | Function | Open network | | |
| UT55A | A | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| | B | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor |
| UP55A | A | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/CH3" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | B | 2 | - | - | Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model) |
| | | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |

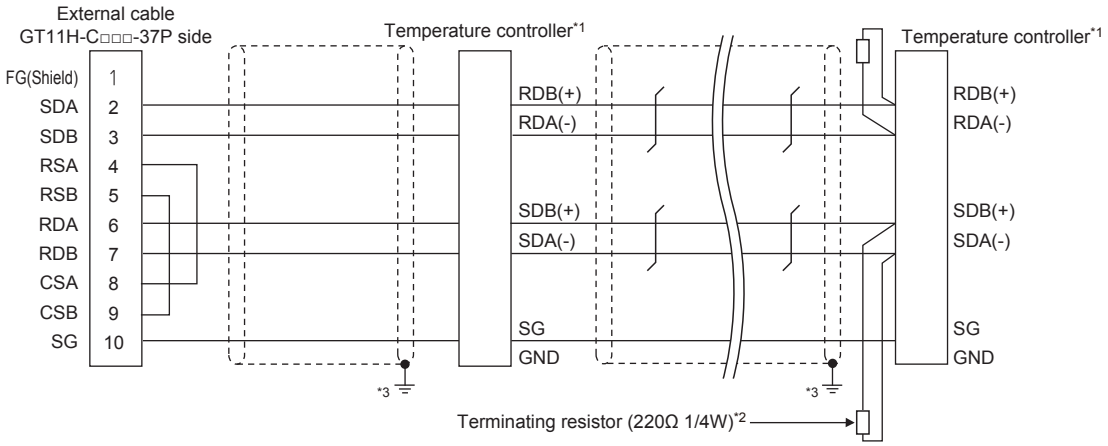
*2 Terminating resistor having 220 Ω 1/4W should be provided for a temperature controller which will be a terminal.

*3 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1620 Connecting terminating resistors

*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 3)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

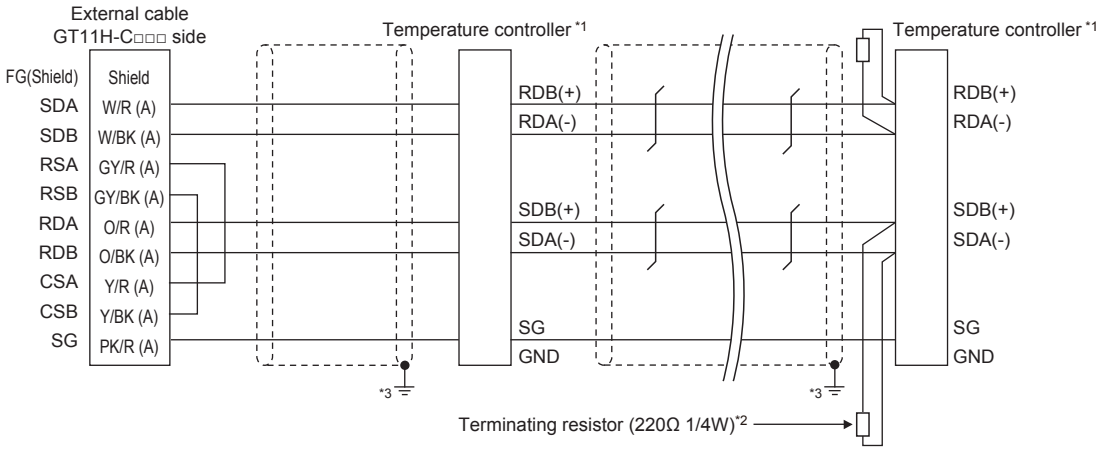
| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | GREEN Series UT/UP/UM | GREEN Series US | UTAdvanced Series | | | |
| | | | UT32A/UP32A/ UM33A | UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A) | UT55A (product condition B)/ UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 23 | 21 | 301 | 407 | 501 | 1 |
| SDA (-) | 24 | 22 | 302 | 408 | 502 | 2 |
| RDB (+) | 25 | 23 | 304 | 410 | 504 | 4 |
| RDA (-) | 26 | 24 | 305 | 411 | 505 | 5 |
| SG | 27 | 25 | 303 | 409 | 503 | 3 |

• For the product condition of UTAdvanced series, refer to the following table.

| Model | Product condition | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|---|
| | | Function | Open network | | |
| UT55A | A | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| | B | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor |
| UP55A | A | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/CH3" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | B | 2 | - | - | Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model) |
| | | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 4)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

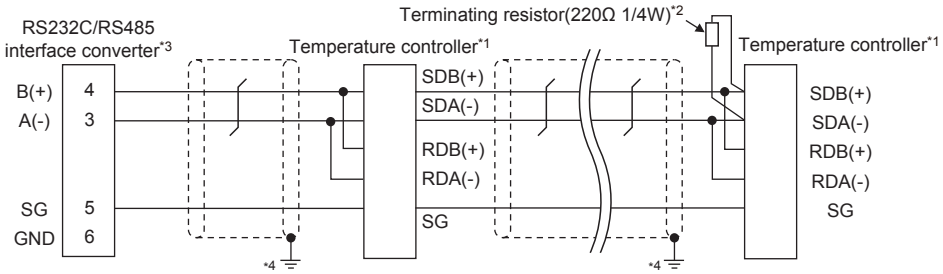
| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | GREEN Series UT/UP/UM | GREEN Series US | UTAdvanced Series | | | |
| | | | UT32A/UP32A/ UM33A | UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A) | UT55A (product condition B)/ UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 23 | 21 | 301 | 407 | 501 | 1 |
| SDA (-) | 24 | 22 | 302 | 408 | 502 | 2 |
| RDB (+) | 25 | 23 | 304 | 410 | 504 | 4 |
| RDA (-) | 26 | 24 | 305 | 411 | 505 | 5 |
| SG | 27 | 25 | 303 | 409 | 503 | 3 |

• For the product condition of UTAdvanced series, refer to the following table.

| Model | Product condition | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|---|
| | | Function | Open network | | |
| UT55A | A | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| | B | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor |
| UP55A | A | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/CH3" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | B | 2 | - | - | Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model) |
| | | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 5)

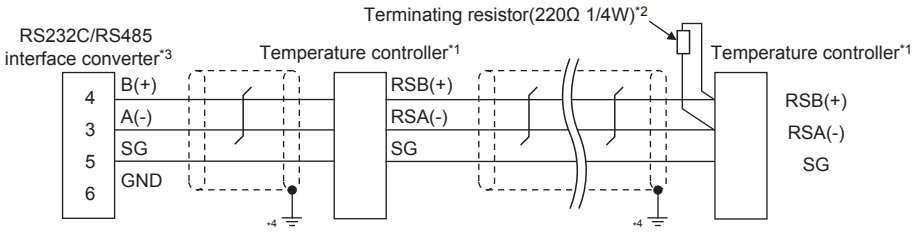



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | |
|---|---|---|
| | GREEN Series<br>UT/UP/UM | GREEN Series<br>US |
| | Pin No. | Pin No. |
| SDB (+) | 23 | 21 |
| SDA (-) | 24 | 22 |
| RDB (+) | 25 | 23 |
| RDA (-) | 26 | 24 |
| SG | 27 | 25 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 6)

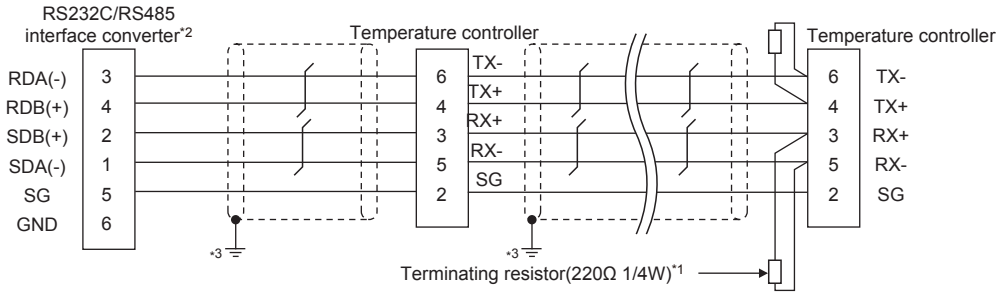



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | |
|---|---|---|---|---|---|
| | GREEN Series<br>UT750/UP750 | UT100 Series<br>UT130/UT150/UP150 | UT100 Series<br>UT152/UT155 | UTAdvanced Series<br>UT52A/UM33A | UTAdvanced Series<br>UT55A/UP55A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RSB (+) | 28 | 3 | 26 | 301 | 501 |
| RSA (-) | 29 | 4 | 27 | 302 | 502 |
| SG | 30 | 5 | 28 | 303 | 503 |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 7)

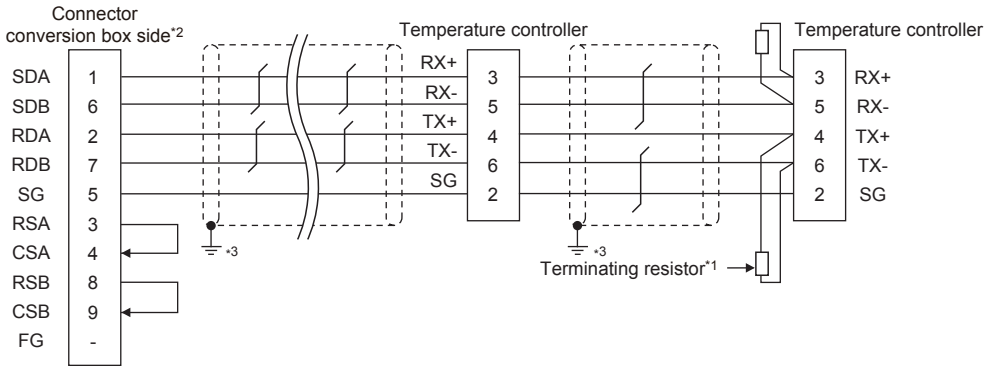



*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Turn on the terminating switch on the RS232C/RS485 converter at the end.

*3 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 8)



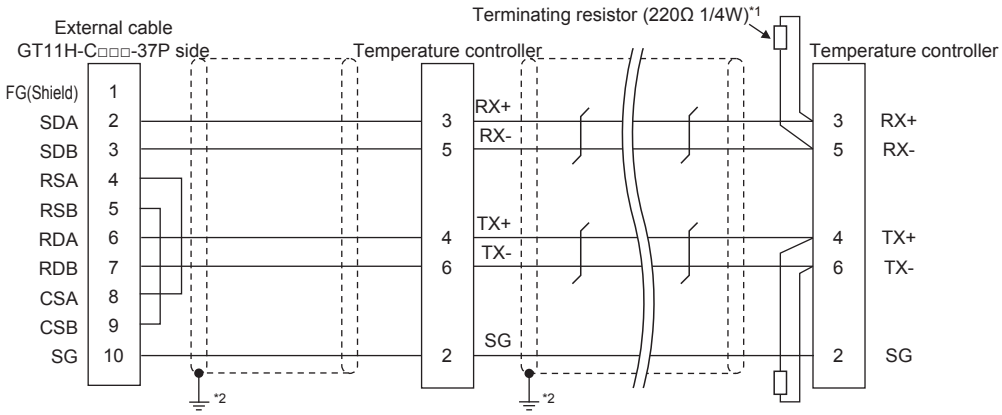

*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1620 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

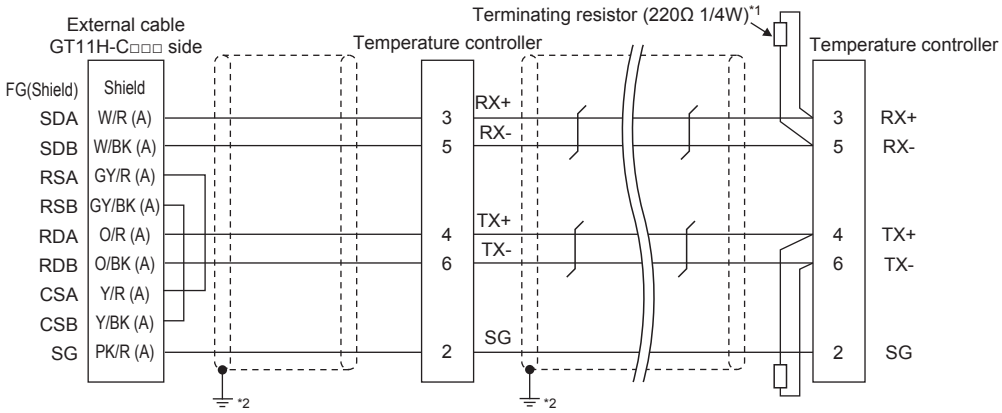
## ■RS-485 connection diagram 9)




*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

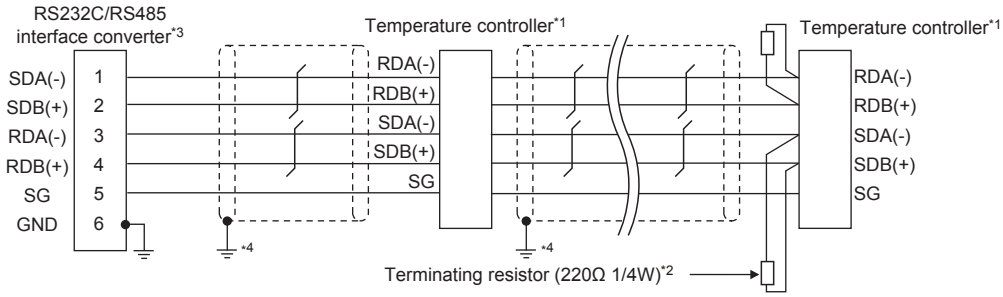
## ■RS-485 connection diagram 10)




*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 11)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

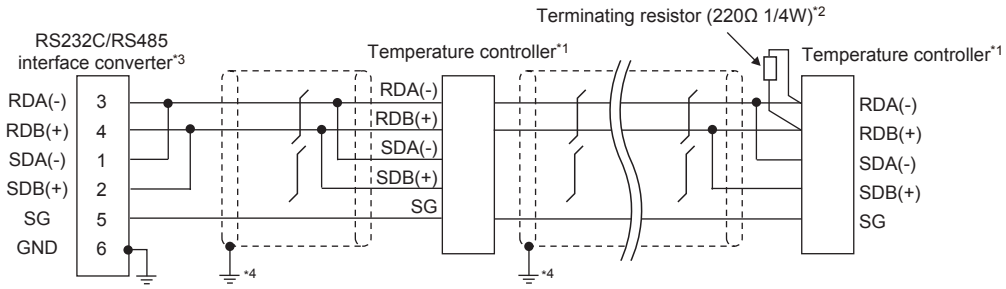
| Signal name | Model of temperature controller | | | |
|---|---|---|---|---|
| | UTAdvanced Series | | | |
| | UT32A/ UP35A/ UM33A | UT35A/UT55A (product condition A)/UP55A (product condition A) | UT55A (product condition B)/UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 301 | 407 | 501 | 1 |
| SDA (-) | 302 | 408 | 502 | 2 |
| RDB (+) | 304 | 410 | 504 | 4 |
| RDA (-) | 305 | 411 | 505 | 5 |
| SG | 303 | 409 | 503 | 3 |

• For the product condition of UTAdvanced series, refer to the following table.

| Model | Product condition | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|---|
| | | Function | Open network | | |
| UT55A | A | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| | B | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor |
| UP55A | A | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/CH3" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | B | 2 | - | - | Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model) |
| | | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 12)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

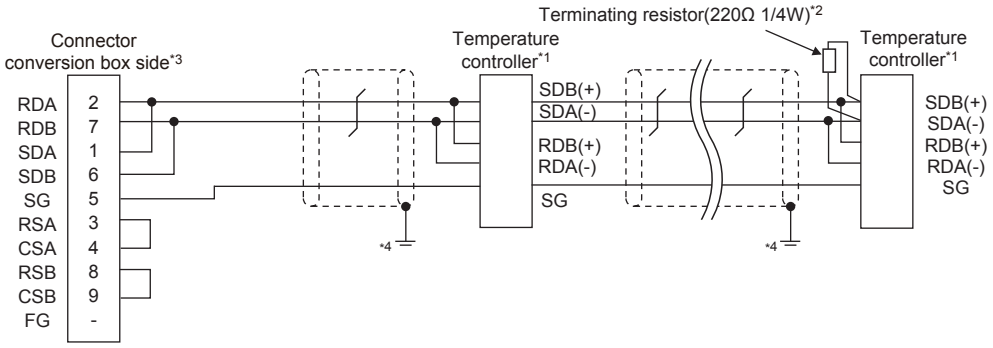
| Signal name | Model of temperature controller | | | |
|---|---|---|---|---|
| | UTAdvanced Series | | | |
| | UT32A/UP32A/UM33A | UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A) | UT55A (product condition B)/UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 301 | 407 | 501 | 1 |
| SDA (-) | 302 | 408 | 502 | 2 |
| RDB (+) | 304 | 410 | 504 | 4 |
| RDA (-) | 305 | 411 | 505 | 5 |
| SG | 303 | 409 | 503 | 3 |

• For the product condition of UTAdvanced series, refer to the following table.

| Model | Product condition | Suffix code | | Optional suffix code | Remark |
|---|---|---|---|---|---|
| | | Function | Open network | | |
| UT55A | A | - | 1 | - | Product with the open network port of RS-485 communication (4-wire type/2-wire type) |
| | B | 1 or 2 | - | Without "/LP" | Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor |
| UP55A | A | Other than 3 | 1 | - | Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/CH3" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model) |
| | B | 2 | - | - | Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model) |
| | | - | - | With "/C4" | Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model) |

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 13)

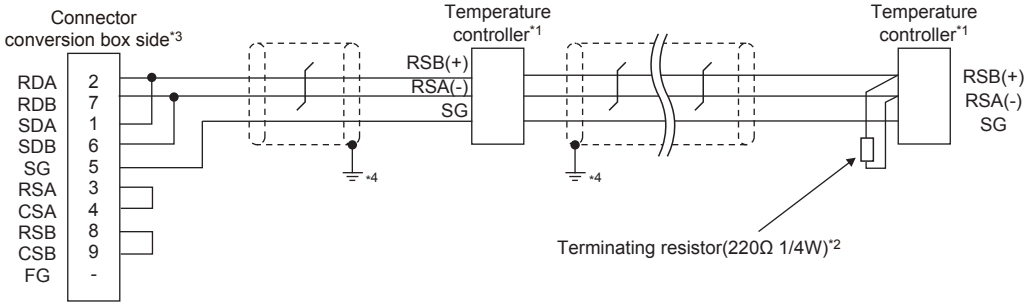



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | | |
|---|---|---|---|---|---|---|
| | GREEN Series UT/UP/UM | GREEN Series US | UTAdvanced Series | | | |
| | | | UT32A/UP32A/ UM33A | UT35A/UP35A/UT55A (product condition A)/ UP55A (product condition A) | UT55A (product condition B)/UP55A (product condition B) | UT75A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| SDB (+) | 23 | 21 | 301 | 407 | 501 | 1 |
| SDA (-) | 24 | 22 | 302 | 408 | 502 | 2 |
| RDB (+) | 25 | 23 | 304 | 410 | 504 | 4 |
| RDA (-) | 26 | 24 | 305 | 411 | 505 | 5 |
| SG | 27 | 25 | 303 | 409 | 503 | 3 |

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1620 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 14)

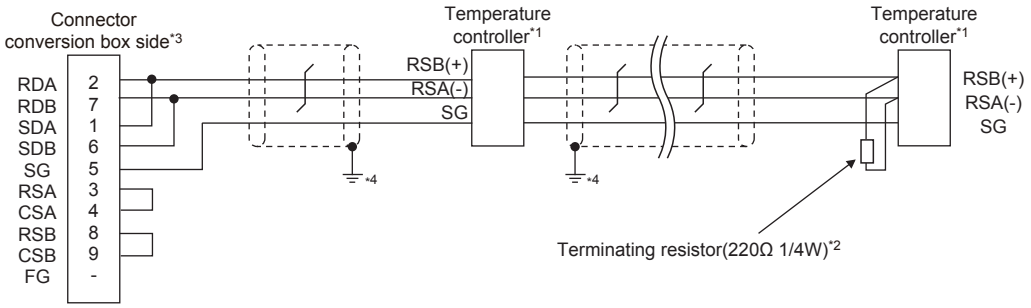



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | |
|---|---|---|---|
| | GREEN Series UT750/UP750 | UT100 Series UT130/UT150/UP150 | UT100 Series UT152/UT155 |
| | Pin No. | Pin No. | Pin No. |
| RSB (+) | 28 | 3 | 26 |
| RSA (-) | 29 | 4 | 27 |
| SG | 30 | 5 | 28 |

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1620 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

## ■RS-485 connection diagram 15)




*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

| Signal name | Model of temperature controller | | | | |
|---|---|---|---|---|---|
| | GREEN Series UT750/UP750 | UT100 Series UT130/UT150/UP150 | UT100 Series UT152/UT155 | UTAdvanced Series UT52A/UM33A | UTAdvanced Series UT55A/UP55A |
| | Pin No. | Pin No. | Pin No. | Pin No. | Pin No. |
| RSB (+) | 28 | 3 | 26 | 301 | 501 |
| RSA (-) | 29 | 4 | 27 | 302 | 502 |
| SG | 30 | 5 | 28 | 303 | 503 |

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1620 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

## Precautions when preparing a cable

### ■Cable length

The total length (between GOT and controllers) of the RS-485 cable must be 13 m or shorter.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■YOKOGAWA temperature controller side connector

Use the connector compatible with the YOKOGAWA temperature controller side.

For details, refer to the user's manual of the YOKOGAWA temperature controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■YOKOGAWA temperature controller side

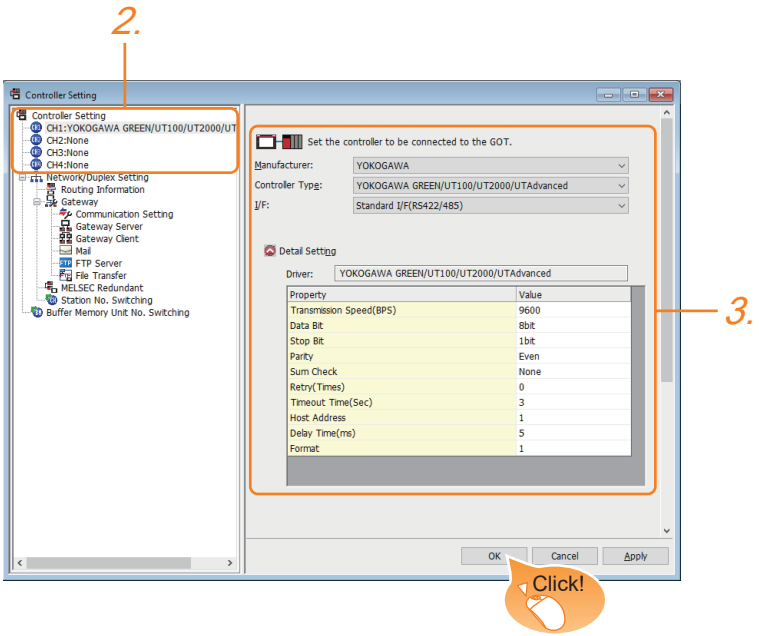
When connecting a YOKOGAWA temperature controller to the GOT, a terminating resistor must be connected.

☞ Page 1623 Temperature Controller Side Setting

# 35.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA GREEN/UT100/UT2000/UTAdvanced]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1622 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

# Communication detail settings

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Sum Check | None |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 5 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Sum Check | Set whether or not to perform a sum check during communication.<br>(Default: No) | Done, None |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network.<br>(Default: 1) | 1 to 99 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |
| Format | Select the communication format.<br>(Default: 1)<br>Format 1:<br>Accessible to GREEN/UT100/UT2000/UTAdvanced Series<br>Format 2:<br>Accessible to GREEN/UT2000/UTAdvanced Series, Not accessible to UT100 Series. | 1/2 |

**Point**

- Format
- When connecting to UT100 Series, specify the format 1.
- When connecting to only GREEN/UT2000/UTAdvanced Series, specifying the format 2 is recommended.
- Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

- Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 35.5 Temperature Controller Side Setting

**Point**

• YOKOGAWA temperature controller

For details of YOKOGAWA temperature controller, refer to the following manual.

User's Manual of the YOKOGAWA temperature controller

• RS232C/RS485 converter

For details on communication settings of the RS232C/RS485 converter, refer to the following manual.

User's Manual of RS232C/RS485 converter



| Model name | | Refer to |
|---|---|---|
| Temperature controller | GREEN | ☞ Page 1623 Connecting to GREEN Series |
| | UT100 | ☞ Page 1624 Connecting to UT100 Series |
| | UT2000 | ☞ Page 1624 Connecting to UT2000 Series |
| | UTAdvanced | ☞ Page 1625 Connecting to UTAdvanced Series |
| RS232C/RS485 converter | ML2-○ | ☞ Page 1626 Connecting to RS232C/RS485 converter (ML2-□) |

## Connecting to GREEN Series

### Communication settings

Make the communication settings by operating the key of the temperature controller.

#### ■For the UT□/UP□/UM□/US1000 (except UT750, UP750)

| Item | Set value |
|---|---|
| Transmission speed | 9600bps (fixed) |
| Data bit*1 | 7bits, 8bits |
| Parity bit*1 | Even, odd, none |
| Stop bit*1 | 1bit, 2bits |
| Address*1*2 | 1 to 99 |
| Protocol selection*1 | 0: PC link communication (without sum check)<br>1: PC link communication (with sum check) |

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the address with any of the other units.

#### ■For the UT750, UP750

| Item | Set value | |
|---|---|---|
| Transmission speed*1 | RS-485 communication | 9600bps (fixed) |
| | High performance RS-485 communication | 9600bps, 19200bps, 38400bps |
| Data bit*1 | 7bits, 8bits | |
| Parity bit*1 | Even, odd, none | |
| Stop bit*1 | 1bit, 2bits | |
| Address*1*2 | 1 to 99 | |
| Protocol selection*1 | RS-485 communication | 0: PC link communication (without sum check)<br>1: PC link communication (with sum check) |
| | High performance RS-485 communication | 0: PC link communication (without sum check)<br>1: PC link communication (with sum check) |

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the address with any of the other units.

# Connecting to UT100 Series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed | 9600bps |
| Data bit*1 | 7bits, 8bits |
| Parity bit*1 | Even, odd, none |
| Stop bit*1 | 1bit, 2bits |
| Address*1*2 | 1 to 99 |
| Protocol selection*1 | 0: PC link communication (without sum check)<br>1: PC link communication (with sum check) |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the address with any of the other units.

# Connecting to UT2000 Series

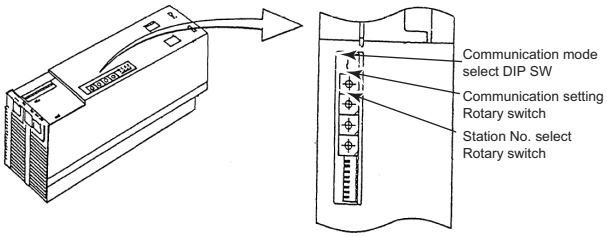
## Communication settings

Make the communication settings using setting switches.

| Item | Set value |
|---|---|
| Transmission speed | 9600bps |
| Data bit*1 | 8bits (fixed) |
| Parity bit*1 | Even, odd, none |
| Stop bit*1 | 1bit (fixed) |
| Station No.*1*2 | 1 to 16 |
| Communication mode | PC link communication mode |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.

## Settings by switch




### ■Settings of the transmission speed and the parity

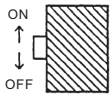
Make those settings by operating the communication setting Rotary switch.




| Switch position | Transmission speed | Parity bit |
|---|---|---|
| 0 | 9600bps | None |
| 1 | | Odd |
| 2 | | Even |

### ■Communication mode settings

Make this setting by operating the communication mode select DIP SW.




| Switch position | Communication mode |
|---|---|
| ON | PC link communication mode |

### ■A setting of the station No.

Make this setting by operating the station No. select Rotary switch.



| Switch position | Station No. |
|---|---|
| 0 | 1 |
| 1 | 2 |
| 2 | 3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 6 |
| 6 | 7 |
| 7 | 8 |
| 8 | 9 |
| 9 | 10 |
| A | 11 |
| B | 12 |
| C | 13 |
| D | 14 |
| E | 15 |
| F | 16 |

# Connecting to UTAdvanced Series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit*1 | 7bits, 8bits |
| Parity bit*1 | Even, odd, none |
| Stop bit*1 | 1bit, 2bits |
| Address*1*2 | 1 to 99 |
| Minimum response time | 0 to 10 (x 10ms) |
| Protocol selection*1 | 0: PC link communication (without sum check)<br>1: PC link communication (with sum check) |

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the address with any of the other units.

# Connecting to RS232C/RS485 converter (ML2-□)

## Communication settings

Make the communication settings using setting switches.

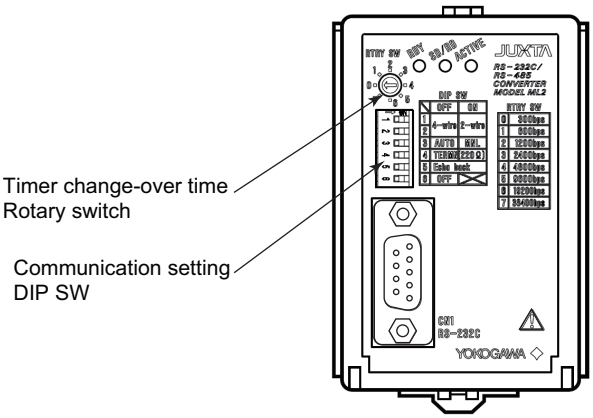
| Item | Set value |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Setting (2-wire/4-wire)*2 | 2-wire type or 4-wire type |
| Terminating resistor*2 | With, Without |
| Echo back | OFF |
| RS-485 driver-active control | AUTO |

*1 Adjust the settings with GOT settings.

*2 Refer to the following connection diagram for setting.

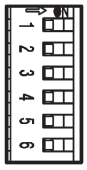
☞ Page 1610 RS-485 cable

## Settings by switch




### ■Settings of the setting (2-wire/4-wire), the RS-485 driver-active control, the terminating resistor, the echo back

Make those settings by operating the communication setting DIP SW.




| Setting item | Set value | Switch position | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| Setting(2-wire/4-wire) | 4-wire type | OFF | OFF | | | | — |
| | 2-wire type | ON | ON | | | | |
| RS-485 driver-active control | AUTO | | | OFF | | | |
| Terminating resistor | with | | | | ON | | |
| | without | | | | OFF | | |
| Echo back | OFF | | | | | OFF | |

### ■A setting of the transmission speed

Make this setting by operating the timer change-over time Rotary switch.




| Switch position | Transmission speed |
|---|---|
| 5 | 9600bps |
| 6 | 19200bps |
| 7 | 38400bps |

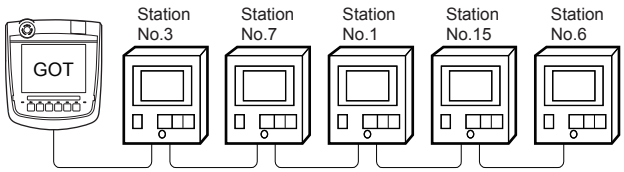


## Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

### Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

| Specification range |
|---|
| 1 to 99 |

### Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 99<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

## All station specification

Target station differs depending on write-in operation or read-out operation.

• For write-in operation, all station will be a target.

In the WORD BIT write-in operation, only the temperature controller whose station No. is the same as host address is applicable.

☞ Page 1622 Communication detail settings

• In the read-out operation, only the temperature controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1622 Communication detail settings

**Point**

The all station specification can be set for the following temperature controllers only.
UT420, UT450, UT520, UT550, T551, UT750,
UP550, UP750,
US1000

# 35.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
YOKOGAWA equipment ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

# 35.7 Precautions



## Station number settings of temperature controller

In the system configuration, the temperature controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1622 Communication detail settings

## GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

# MEMO

# 36 RKC TEMPERATURE CONTROLLER


- Page 1631 Connectable Model List
- Page 1633 System Configuration
- Page 1703 Connection Diagram
- Page 1716 GOT Side Settings
- Page 1718 Temperature Controller Side Setting
- Page 1740 Settable Device Range
- Page 1740 Precautions




## 36.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name*1 | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| SR Mini HG | H-PCP-J | × | RS-232<br>RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1633 Connecting to SR Mini HG series (HGH-PCP-J) |
| | H-PCP-A | × | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1637 Connecting to SR Mini HG series (H-PCP-A, H-PCP-B) |
| | H-PCP-B | | | | |
| SRZ | Z-TIO | × | RS-232<br>RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1640 Connecting to SRZ series |
| | Z-DIO | | | | |
| | Z-CT | | | | |
| | Z-COM | | | | |
| SRJ | J-TI-A/B | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1646 Connecting to SRJ Series |
| CB | CB100 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1649 Connecting to CB series |
| | CB400 | | | | |
| | CB500 | | | | |
| | CB700 | | | | |
| | CB900 | | | | |
| FB | FB100 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 1652 Connecting to FB series |
| | FB400 | × | RS-232<br>RS-422<br>RS-485 | | |
| | FB900 | | | | |
| RB | RB100 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 1658 Connecting to RB series |
| | RB400 | | | | |
| | RB500 | | | | |
| | RB700 | | | | |
| | RB900 | | | | |
| PF | PF900<br>PF901 | × | RS-232<br>RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1661 Connecting to PF, HA, RMC, MA, AG, or SA series |
| HA | HA400/401<br>HA900/901 | × | RS-232<br>RS-422<br>RS-485 | | |
| RMC | RMC500 | × | RS-485 | | |
| MA | MA900<br>MA901 | × | RS-232<br>RS-422<br>RS-485 | | |
| AG | AG500 | × | RS-422<br>RS-485 | | |
| THV | THV-A1 | × | RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1669 Connecting to THV series |
| SA | SA100<br>SA200 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1661 Connecting to PF, HA, RMC, MA, AG, or SA series |

| Series | Model name*1 | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| SRX | X-TIO | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1675 Connecting to SRX series |
| SB1 | SB1 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1678 Connecting to SB1 series |
| B400 | B400 | × | RS-232<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1680 Connecting to B400 series |
| FZ | FZ110 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 1682 Connecting to FZ series |
| | FZ400 | × | RS-422<br>RS-485 | GT2506HS GT2505HS | |
| | FZ900 | | | | |
| RZ | RZ100 | × | RS-485 | GT2506HS GT2505HS | ☞ Page 1688 Connecting to RZ series |
| | RZ400 | | | | |
| PZ | PZ400 | × | RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1691 Connecting to PZ series |
| | PZ900 | | | | |
| GZ | GZ400 | × | RS-422<br>RS-485 | GT2506HS GT2505HS | ☞ Page 1697 Connecting to GZ series |
| | GZ900 | | | | |

*1 From the models of temperature controller, select the detailed model name which supports each communication type and communication protocol (MODBUS).
For details of RKC temperature controller detailed model names, refer to the following catalog.
☞ Catalog of RKC temperature controllers

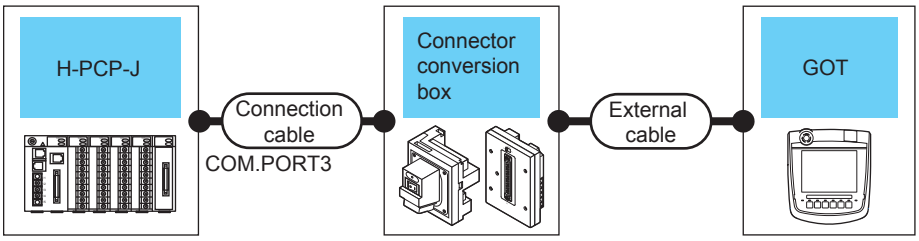
# 36.2 System Configuration

## Connecting to SR Mini HG series (HGH-PCP-J)

Communication driver
RKC
SR Mini HG(MODBUS)

### When connecting to one temperature controller

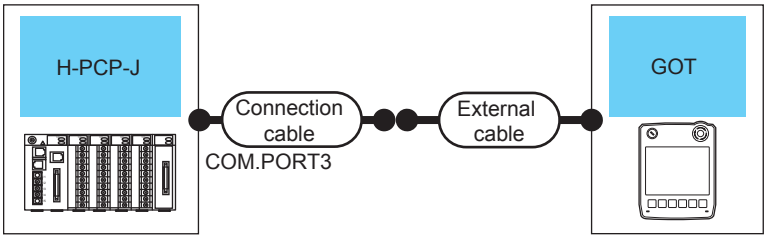
#### ■When using the connector conversion box




| Temperature controller | | Connection cable | Conversion connector*1 | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Model name | | | | | |
| H-PCP-J | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1703 RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | FAX067*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | User preparing Page 1708 RS-422 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |
| | RS-485 | User preparing Page 1712 RS-485 connection diagram 1) | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

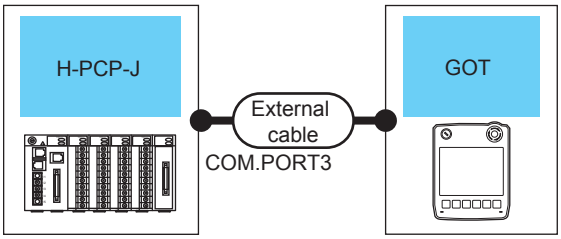
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | Conversion connector*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Model name | | | | |
| H-PCP-J | RS-232 | User preparing Page 1703 RS-232 connection diagram 2) | - | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1 | FAX067*1 | GT11H-C30-37P(3m)<br>☞ Page 1707 RS-232 connection diagram 11) | GT 2505HS | | |
| | RS-422 | User preparing Page 1708 RS-422 connection diagram 2) | - | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

## ■When using the external cable (GT11H-C□□□)

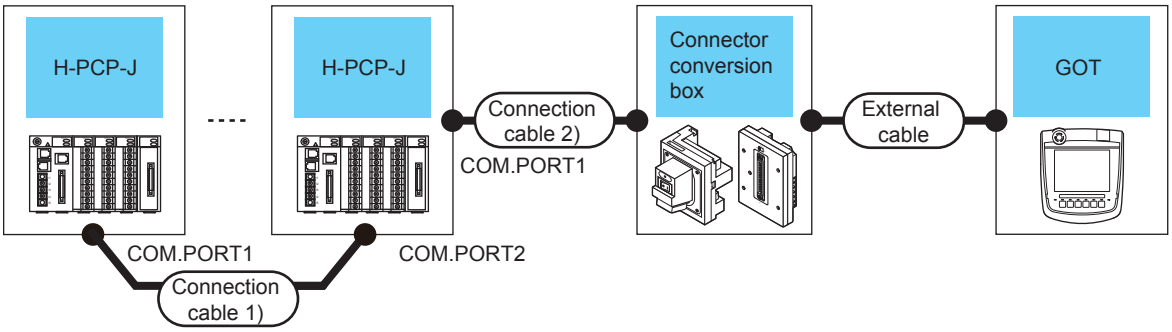



| Temperature controller | | Conversion connector*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Model name | | | | |
| H-PCP-J | RS-232 | FAX067*1 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1707 RS-232 connection diagram 12) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

## When connecting to multiple temperature controllers

### ■When using the connector conversion box

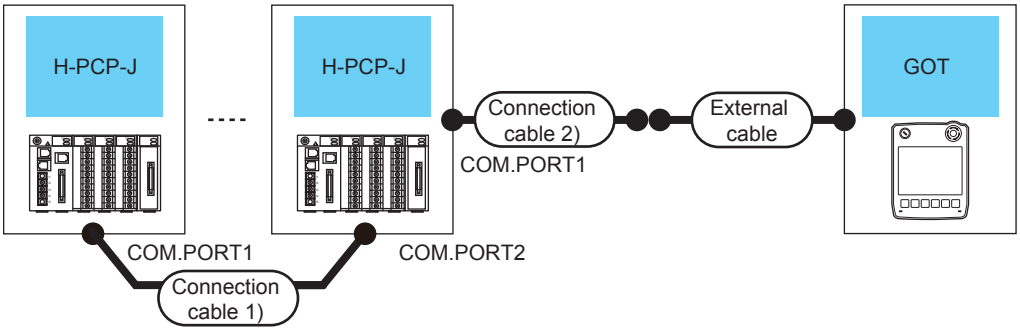



| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| H-PCP-J | RS-422 | W-BF-02-0500(0.5m)*2<br>W-BF-02-1000(1m)*2<br>W-BF-02-3000(3m)*2 | User preparing Page 1708 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 16 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| | RS-485 | W-BF-02-0500(0.5m)*2<br>W-BF-02-1000(1m)*2<br>W-BF-02-3000(3m)*2 | User preparing Page 1712 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 16 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

*2 Product manufactured by RKC.
For details of the product, contact RKC.

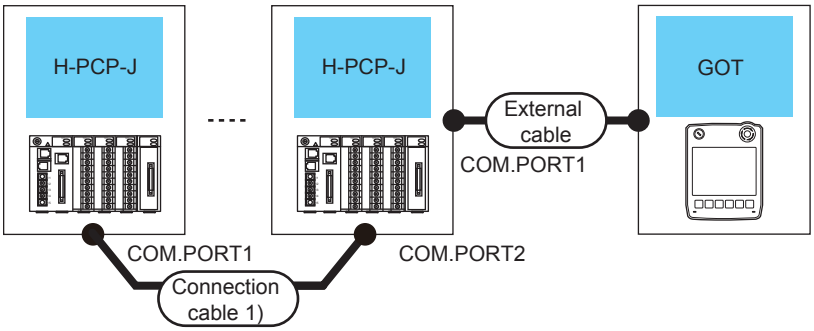
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| H-PCP-J | RS-422 | W-BF-02-0500(0.5m)*2<br>W-BF-02-1000(1m)*2<br>W-BF-02-3000(3m)*2 | User preparing Page 1708 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)
*2 Product manufactured by RKC.
For details of the product, contact RKC.

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| H-PCP-J | RS-422 | W-BF-02-0500(0.5m)*2<br>W-BF-02-1000(1m)*2<br>W-BF-02-3000(3m)*2 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)
*2 Product manufactured by RKC.
For details of the product, contact RKC.

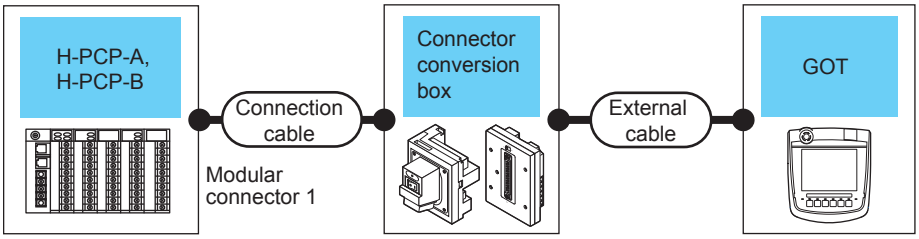
# Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to one temperature controller

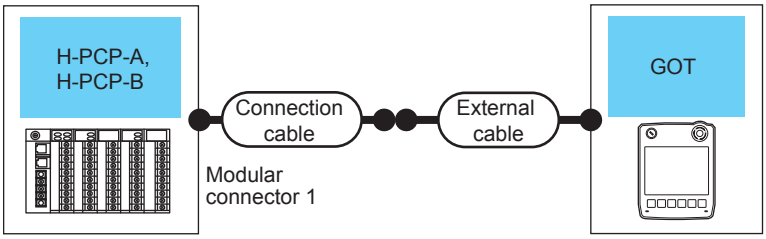
### ■When using the connector conversion box




| Temperature controller | | Connection cable | Conversion connector*1 | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | | |
| H-PCP-A H-PCP-B | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1703 RS-232 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | FAX067 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | User preparing Page 1708 RS-422 connection diagram 1) | - | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

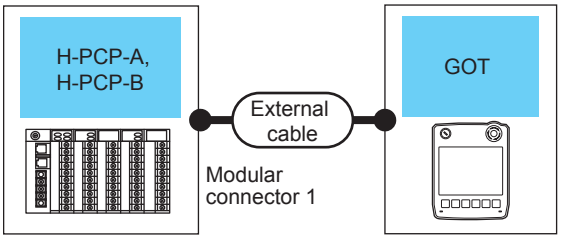
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | Conversion connector*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| H-PCP-A<br>H-PCP-B | RS-232 | User preparing Page 1703 RS-232 connection diagram 2) | - | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1 | FAX067 | GT11H-C30-37P(3m)<br>☞ Page 1707 RS-232 connection diagram 11) | GT 2505HS | | |
| | RS-422 | User preparing Page 1708 RS-422 connection diagram 2) | - | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

## ■When using the external cable (GT11H-C□□□)

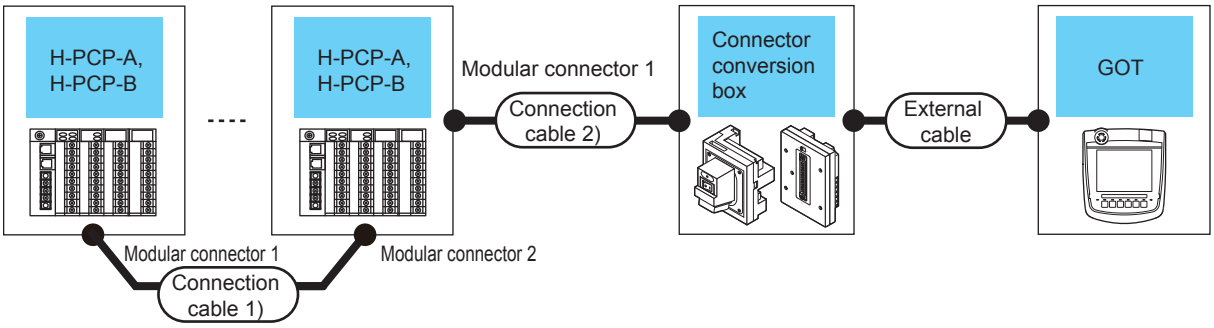



| Temperature controller | | Conversion connector*1 | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | | | | | |
| H-PCP-A<br>H-PCP-B | RS-232 | FAX067 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1707 RS-232 connection diagram 12) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

## When connecting to multiple temperature controllers

### ■When using the connector conversion box

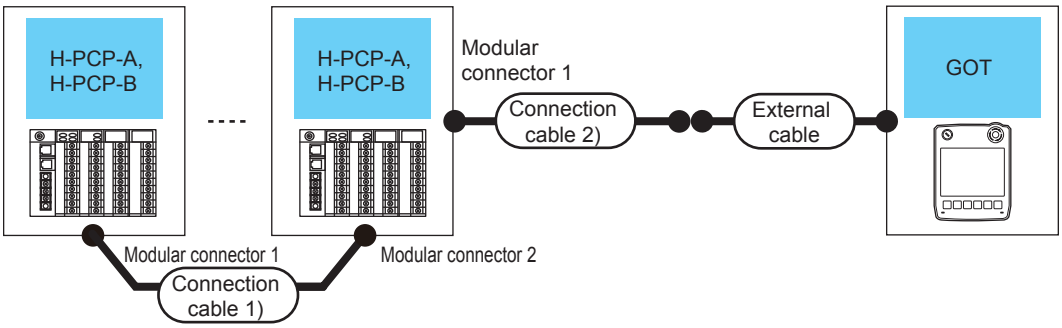



| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| H-PCP-A H-PCP-B | RS-422 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | User preparing Page 1708 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 16 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| H-PCP-A H-PCP-B | RS-422 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | User preparing Page 1708 RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

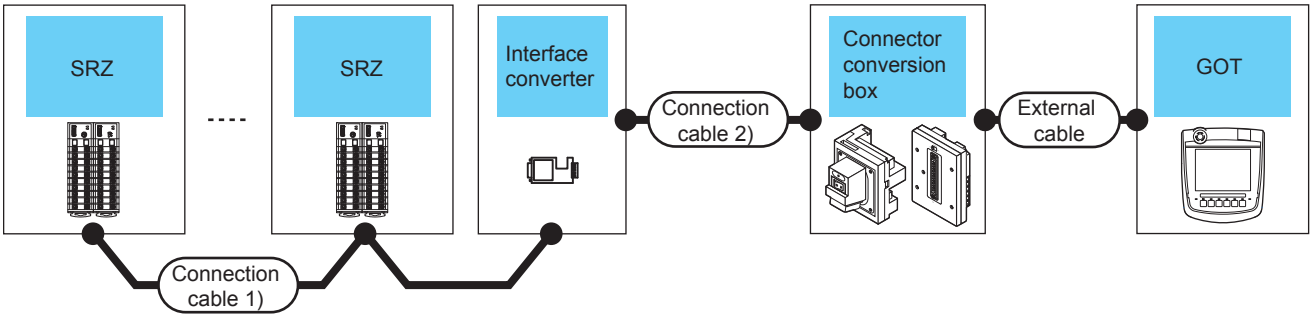
# Connecting to SRZ series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to Z-TIO and Z-CT with a converter

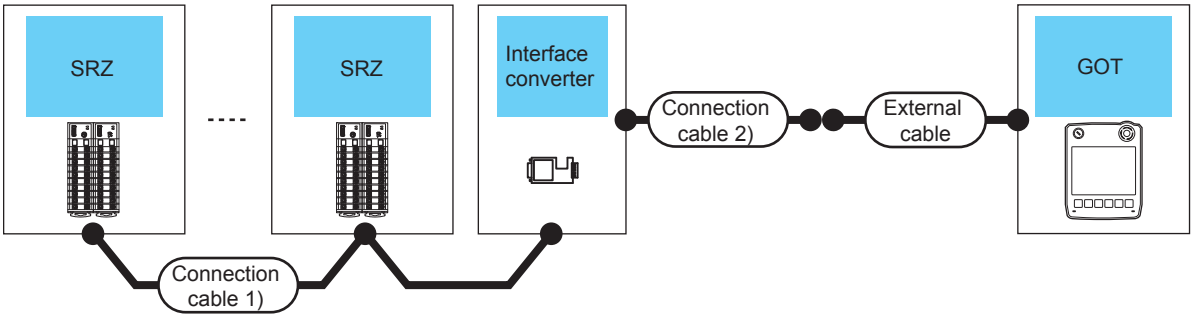
### ■When using the connector conversion box




| Module | Connection cable 1) | | Converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| Z-TIO Z-CT | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16 *3<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)
*3 Use them with Z-TIO and Z-CT.

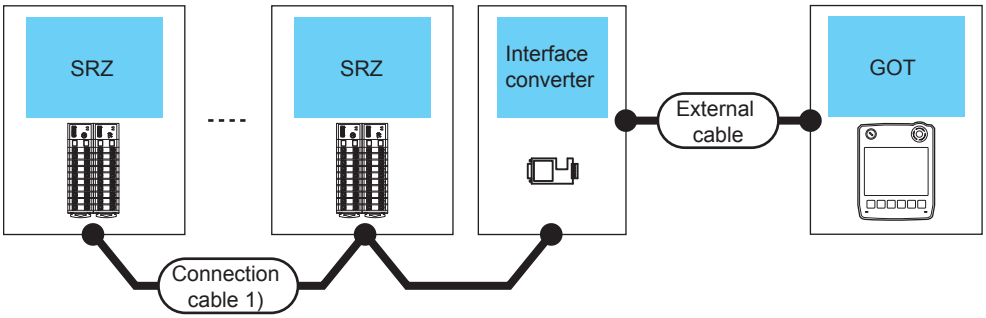
## ■When using the external cable (GT11H-C□□□-37P)




| Module | Connection cable 1) | | Converter | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| Z-TIO<br>Z-CT | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16 *3<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)
*3 Use them with Z-TIO and Z-CT.

## ■When using the external cable (GT11H-C□□□)

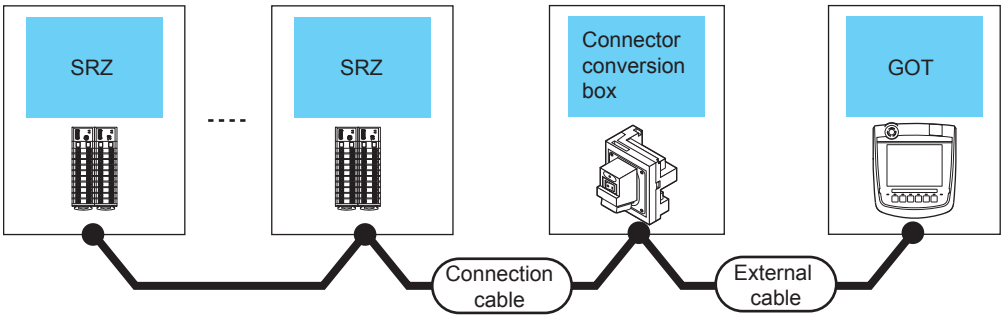



| Module | Connection cable 1) | | Converter | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| Z-TIO<br>Z-CT | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16 *3<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)
*3 Use them with Z-TIO and Z-CT.

## When connecting directly to Z-TIO and Z-CT

### ■When using the connector conversion box

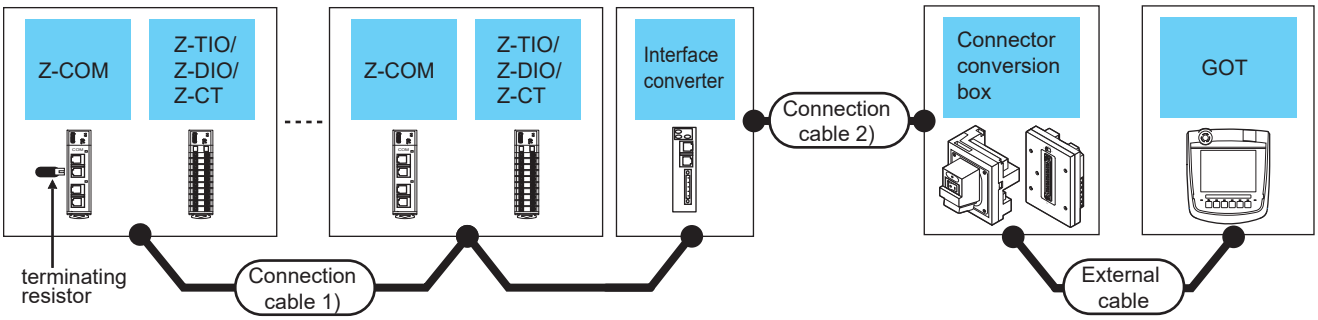



| Module | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| Z-TIO<br>Z-CT | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16 *1<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT |

*1 Use them with Z-TIO and Z-CT.

## When connecting to Z-COM with a converter

### ■When using the connector conversion box

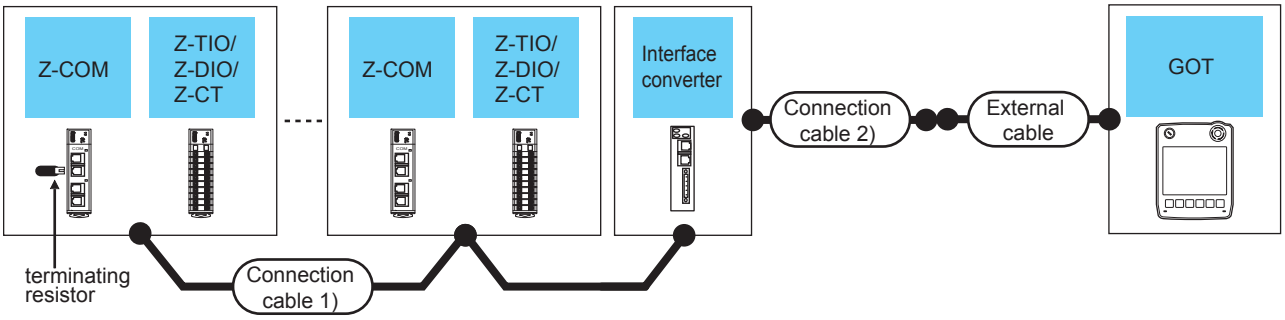



| Z-COM | | Connection cable 1) | | Converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Terminating resistor*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| Z-COM | W-BW-02 | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1<br>or<br>User preparing Page 1708 RS-422 connection diagram 3) | 1200m | COM-A | RS-232 | W-BF-28-0500(0.5m)*1<br>W-BF-28-1000(1m)*1<br>W-BF-28-3000(3m)*1<br>or<br>User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 16 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)



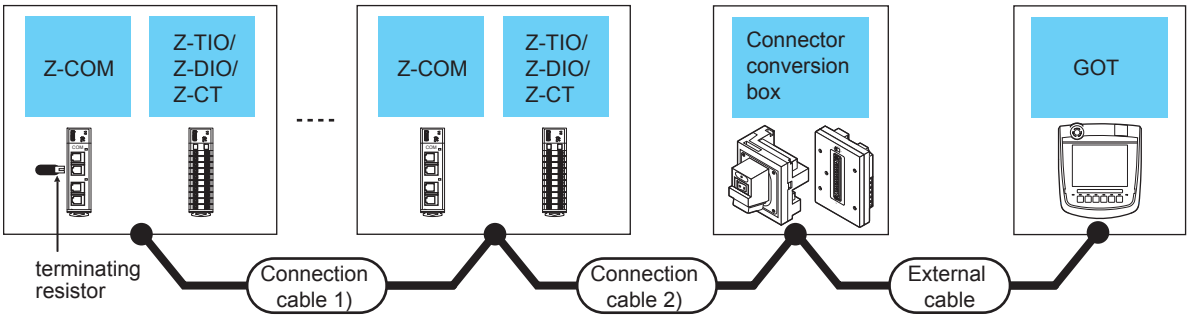

| Z-COM | | Connection cable 1) | | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Terminating resistor*1 | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| Z-COM | W-BW-02 | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1<br>or<br>User preparing Page 1708 RS-422 connection diagram 3) | 1200m | COM-A | RS-232 | User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 16 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## When connecting directly to Z-COM

### ■When using the connector conversion box

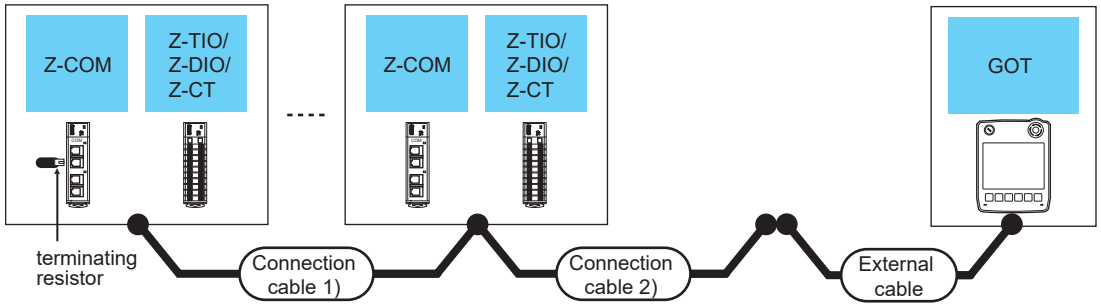



| Z-COM | | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Terminating resistor*1 | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| Z-COM | RS-422 | W-BW-02 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1708 RS-422 connection diagram 3) | User preparing Page 1708 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 16 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |
| | RS-485 | W-BW-01 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1715 RS-485 connection diagram 4) | User preparing Page 1712 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | Up to 16 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Z-COM | | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Terminating resistor*1 | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| Z-COM | RS-422 | W-BW-02 | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1<br>or<br>User preparing Page 1708 RS-422 connection diagram 3) | User preparing Page 1708 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 Z-COMs for 1 GOT<br>Z-TIO: Up to 16<br>Z-CT: Up to 16<br>Z-DIO: Up to 16<br>Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

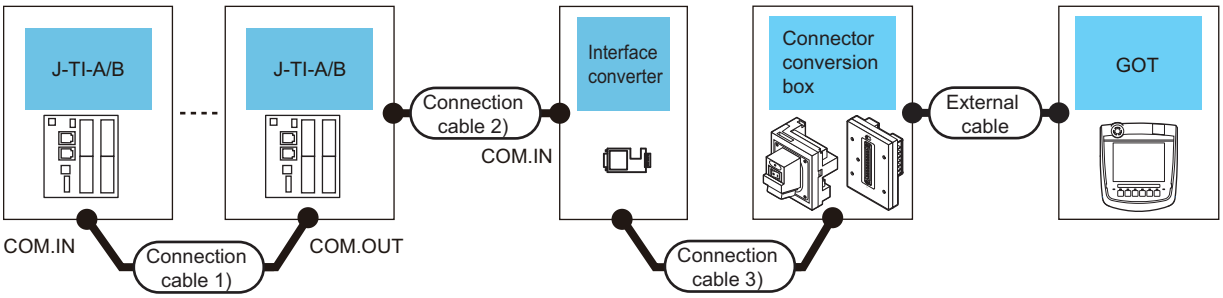
# Connecting to SRJ Series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

### ■When using the connector conversion box



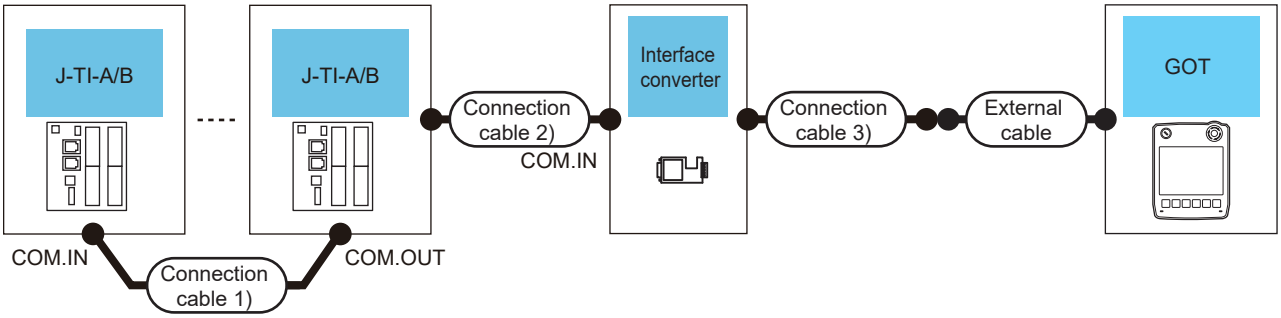

| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| J-TI-A/B | User preparing Page 1714 RS-485 connection diagram 3) | | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 16 temperature controllers for 1 GOT*3 |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
- Up to 4 master stations and 12 slave stations are connectable to a GOT.
- Up to three slave stations are connectable to a master station.

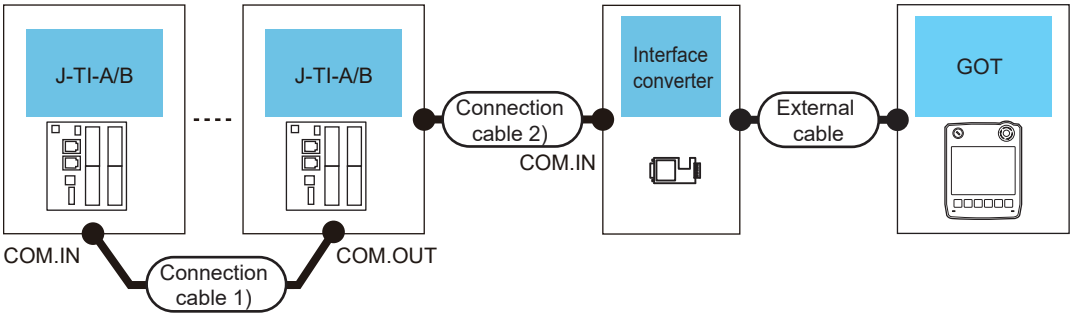
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| J-TI-A/B | User preparing Page 1714 RS-485 connection diagram 3) | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 16 temperature controllers for 1 GOT*3 |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the converter to the GOT (Connection cable 3) + External cable)
*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
• Up to 4 master stations and 12 slave stations are connectable to a GOT.
• Up to three slave stations are connectable to a master station.

## ■When using the external cable (GT11H-C□□□)

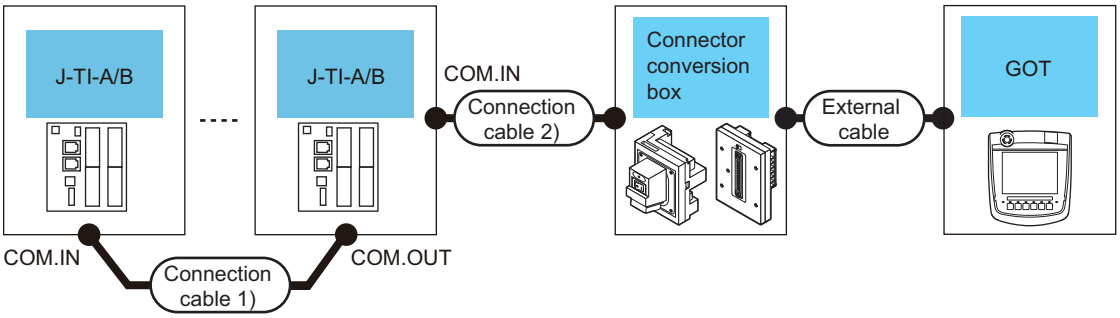



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| J-TI-A/B | User preparing Page 1714 RS-485 connection diagram 3) | | 1200m | CD485/V | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 16 temperature controllers for 1 GOT*3 |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the converter to the GOT (External cable)
*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
• Up to 4 master stations and 12 slave stations are connectable to a GOT.
• Up to three slave stations are connectable to a master station.

## When connecting to multiple temperature controllers

### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| J-TI-A/B | RS-485 | W-BF-02-0500(0.5m)*1<br>W-BF-02-1000(1m)*1<br>W-BF-02-3000(3m)*1 | W-BF-01-0500(0.5m)*1<br>W-BF-01-1000(1m)*1<br>W-BF-01-3000(3m)*1<br>or<br>User preparing Page 1715 RS-485 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 6m | Up to 16 temperature controllers for 1 GOT*3 |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The total length of the connection cable 1) + connection cable 2) + External cable

*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
- Up to 4 master stations and 12 slave stations are connectable to a GOT.
- Up to three slave stations are connectable to a master station.

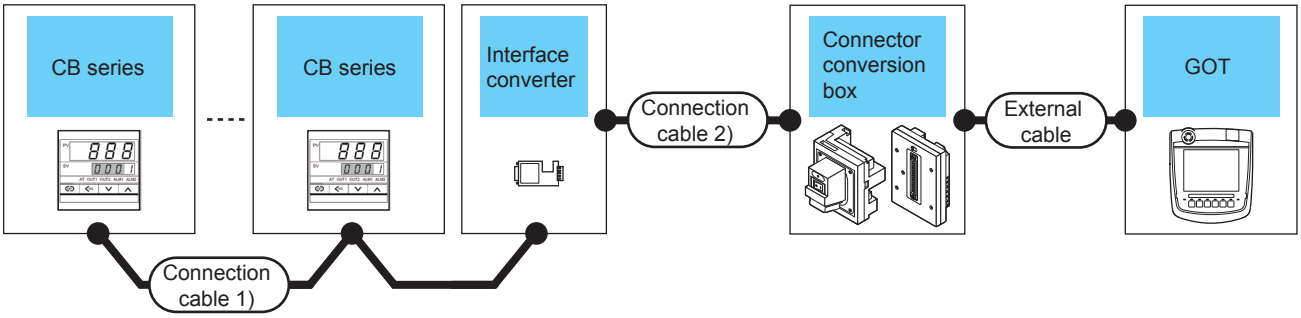
# Connecting to CB series

Communication driver

RKC
SR Mini HG(MODBUS)

## When using the converter

### ■When using the connector conversion box

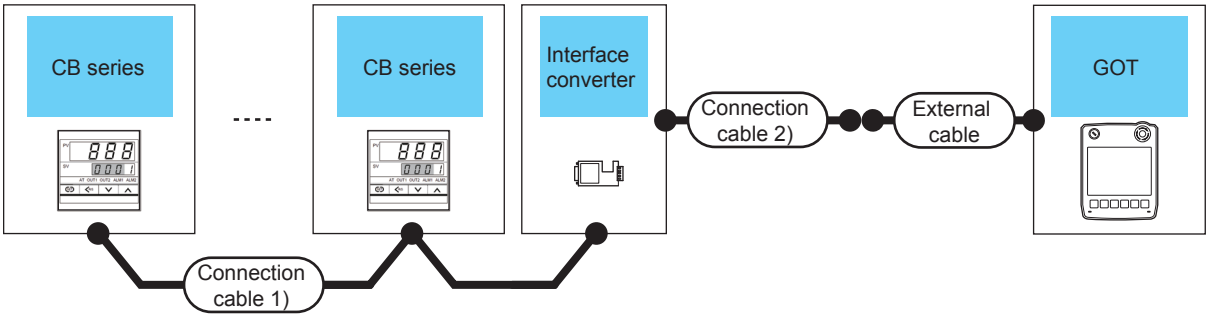



| Temperature controller | Connection cable 1) | | Converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CB100<br>CB400<br>CB500<br>CB700<br>CB900 | User's manual Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User's manual Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

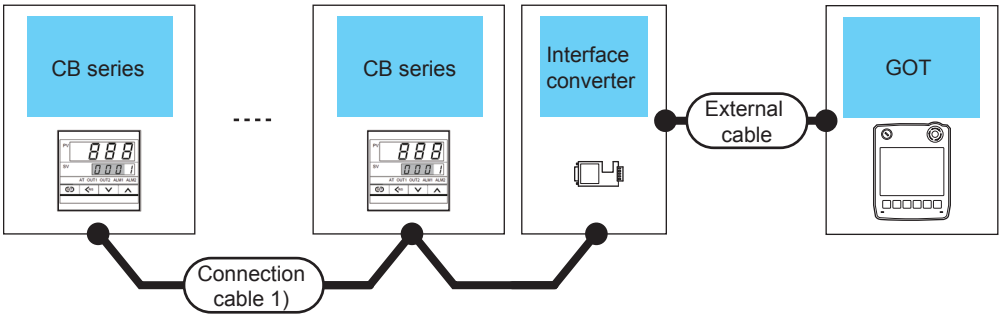
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Converter | | Connection cable 2) | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| CB100<br>CB400<br>CB500<br>CB700<br>CB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

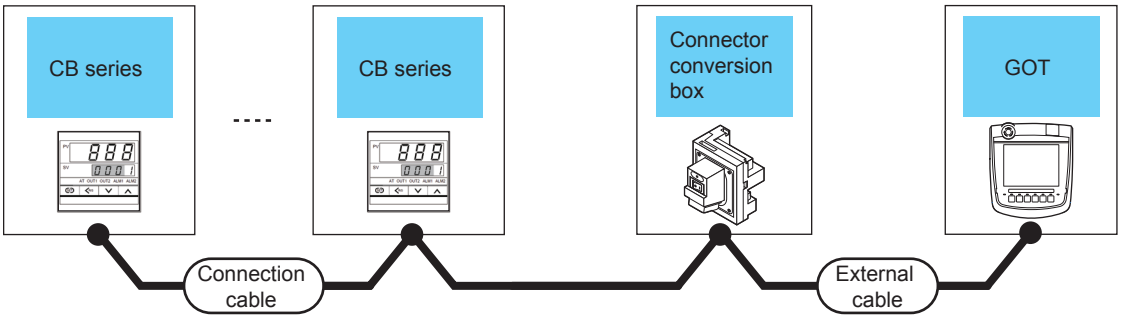



| Temperature controller | Connection cable 1) | | Converter | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| CB100<br>CB400<br>CB500<br>CB700<br>CB900 | User preparing Page 1712 RS-485 connection diagram 1) | 1200m | CD485/V*1 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 1) + External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| CB100<br>CB400<br>CB500<br>CB700<br>CB900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

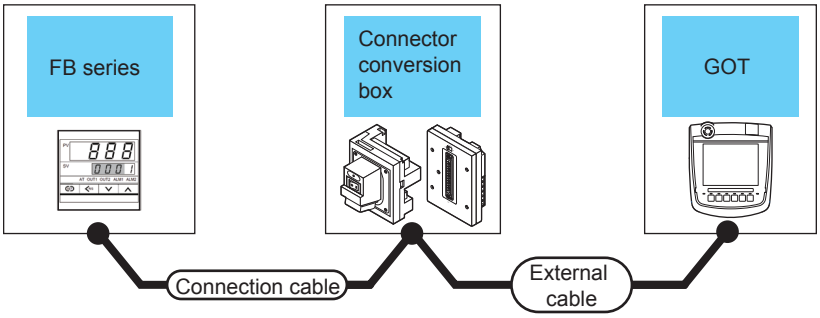
# Connecting to FB series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to one temperature controller

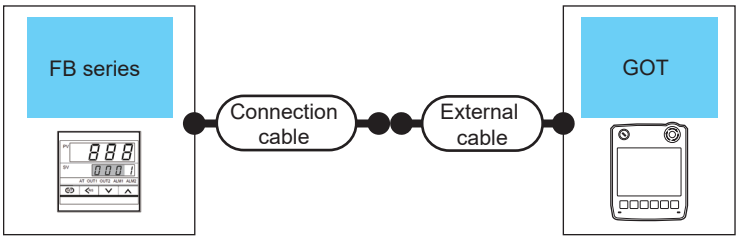
### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FB400 FB900 | RS-232*1 | User preparing Page 1705 RS-232 connection diagram 8) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (Connection cable + External cable)

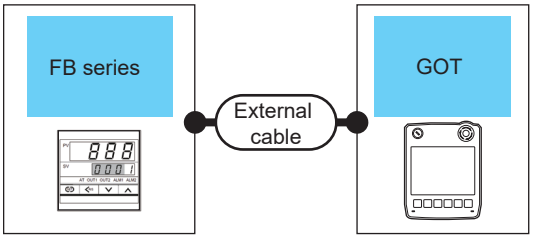
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FB400 FB900 | RS-232*1 | User preparing Page 1706 RS-232 connection diagram 9) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (Connection cable + External cable)

### ■When using the external cable (GT11H-C□□□)

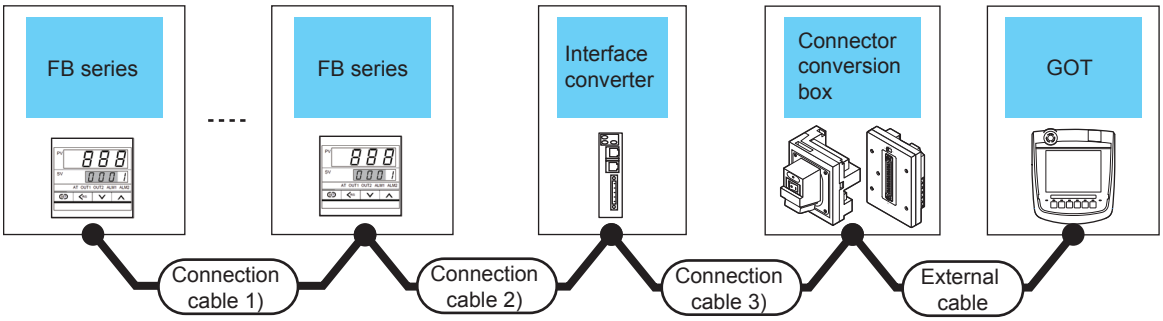



| Temperature controller | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| FB400<br>FB900 | RS-232*1 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1706 RS-232 connection diagram 10) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (External cable)

## When connecting to multiple temperature controllers with interface converter (COM-A)

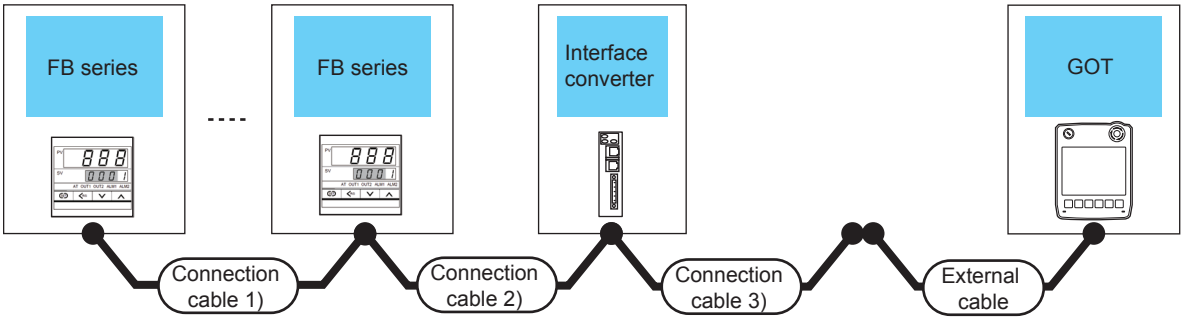
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance *3 | Converter *2 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FB400<br>FB900 | User preparing Page 1709 RS-422 connection diagram 4)*1 | W-BF-01-0500(0.5m)*2<br>W-BF-01-1000(1m)*2<br>W-BF-01-300(3m)*2 | 1000m | COM-A | RS-232 | W-BF-28-0500(0.5m)*2<br>W-BF-28-1000(1m)*2<br>W-BF-28-3000(3m)*2<br>or<br>User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Use communication 1 for the communication format.
*2 Product manufactured by RKC.
For details of the product, contact RKC.
*3 The total length of the connection cable 1) + connection cable 2)
*4 The distance from the converter to the GOT (Connection cable 3) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

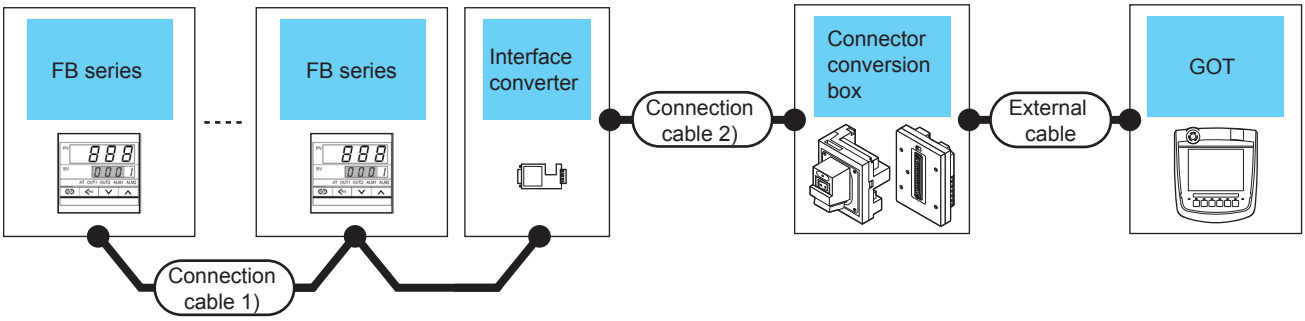



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance *3 | Converter *2 | | Connection cable 3) | External cable | GOT Model | Total distance *4 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| FB400 FB900 | User preparing Page 1709 RS-422 connection diagram 4) *1 | W-BF-01-0500(0.5m) *2 W-BF-01-1000(1m) *2 W-BF-01-300(3m) *2 | 1000m | COM-A | RS-232 | User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Use communication 1 for the communication format.
*2 Product manufactured by RKC.
For details of the product, contact RKC.
*3 The total length of the connection cable 1) + connection cable 2)
*4 The distance from the converter to the GOT (Connection cable 3) + External cable)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

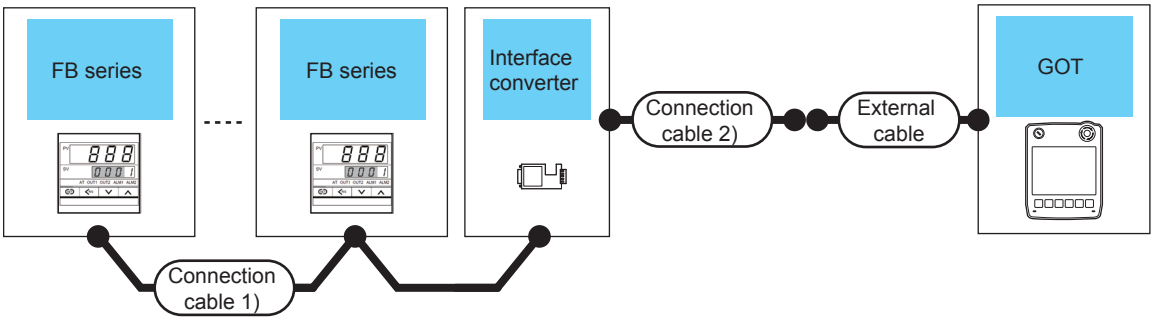
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FB100 FB400 FB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

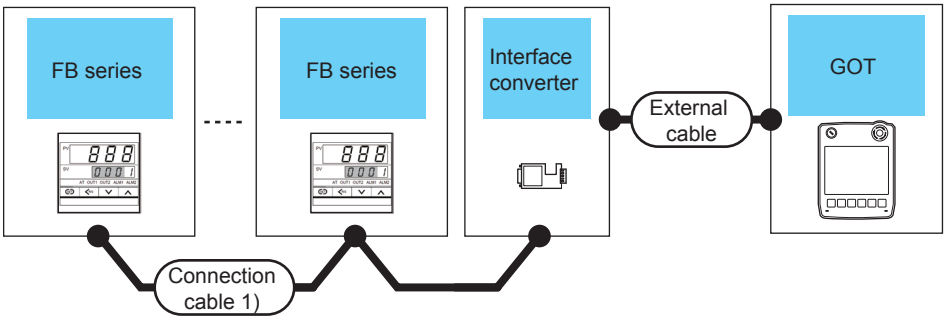



| Temperature controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| FB100<br>FB400<br>FB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



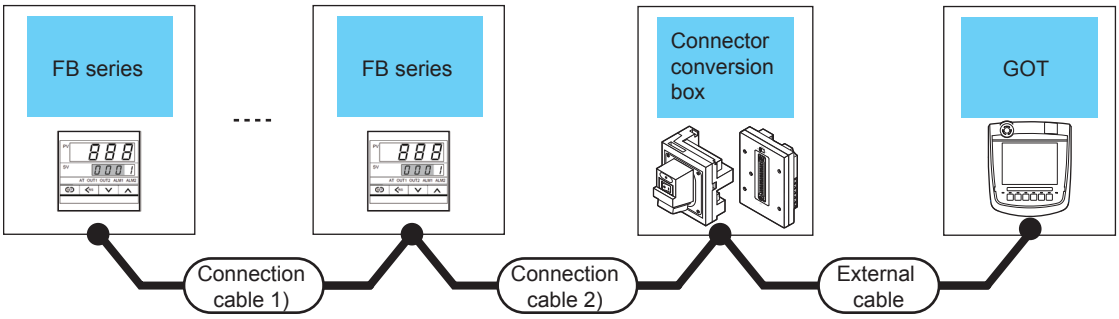

| Temperature controller | Connection cable 1) | | Converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| FB100<br>FB400<br>FB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly to a temperature controller by RS-422

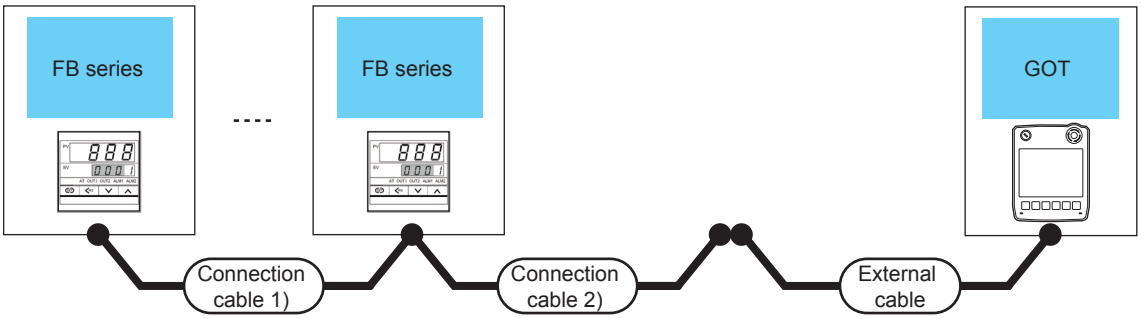
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| FB400 FB900 | RS-422*1 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

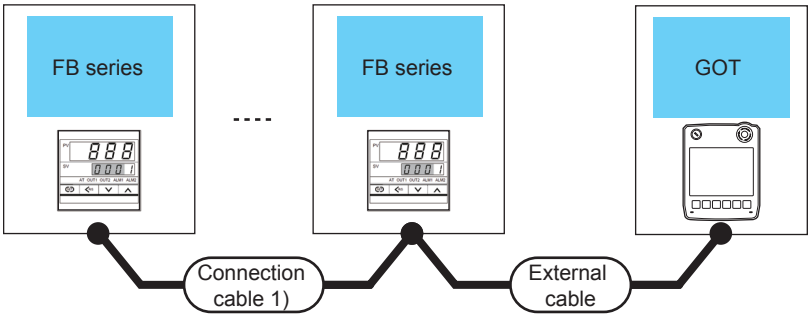
### ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| FB400 FB900 | RS-422*1 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

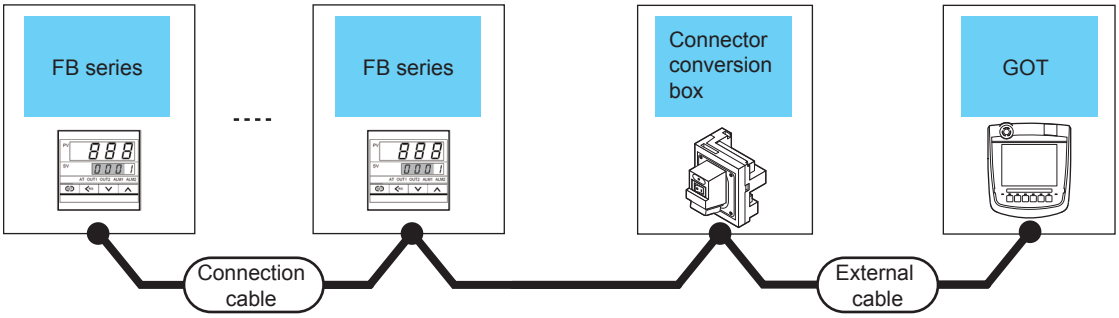



| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FB400 FB900 | RS-422*1 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting directly to a temperature controller by RS-485

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FB100 FB400 FB900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

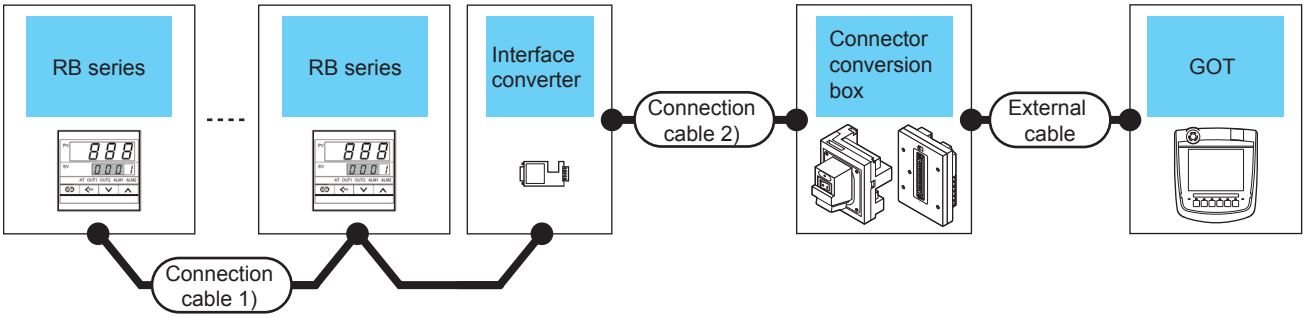
# Connecting to RB series

Communication driver

RKC
SR Mini HG(MODBUS)

## When using the converter

### ■When using the connector conversion box

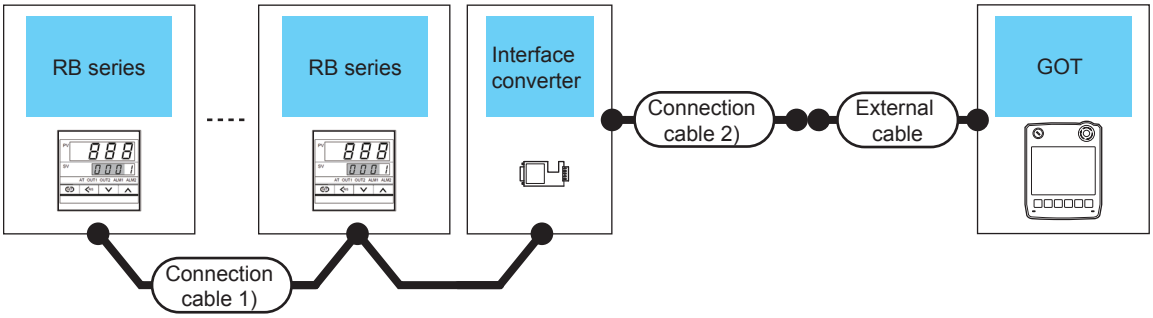



| Temperature controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| RB100<br>RB400<br>RB500<br>RB700<br>RB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

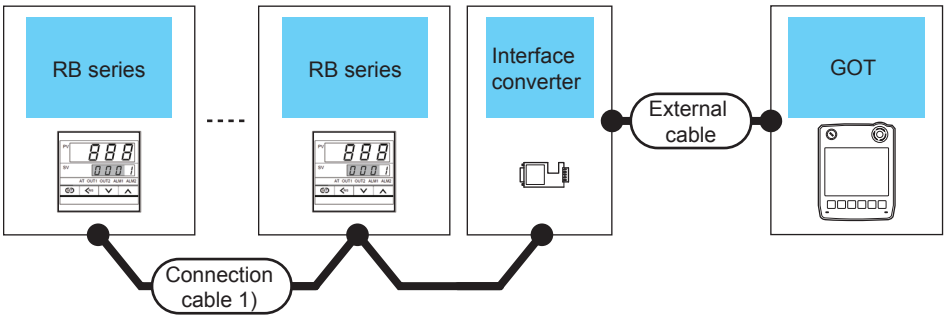



| Temperature controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| RB100<br>RB400<br>RB500<br>RB700<br>RB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



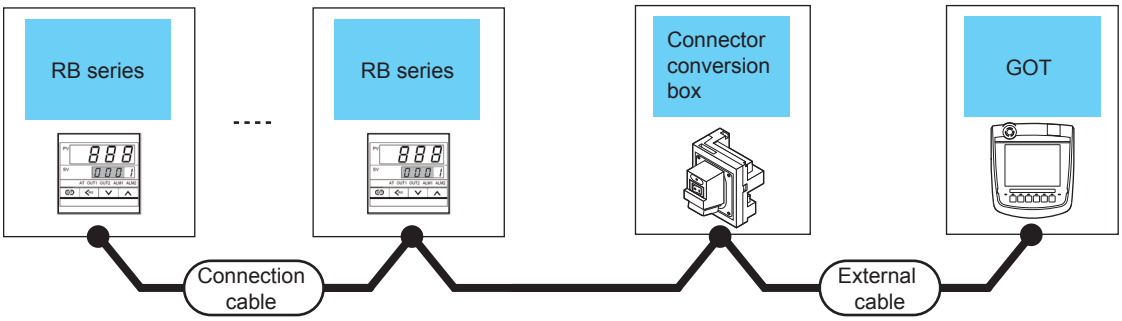

| Temperature controller | Connection cable 1) | | Converter*1 | | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| RB100<br>RB400<br>RB500<br>RB700<br>RB900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| RB100<br>RB400<br>RB500<br>RB700<br>RB900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

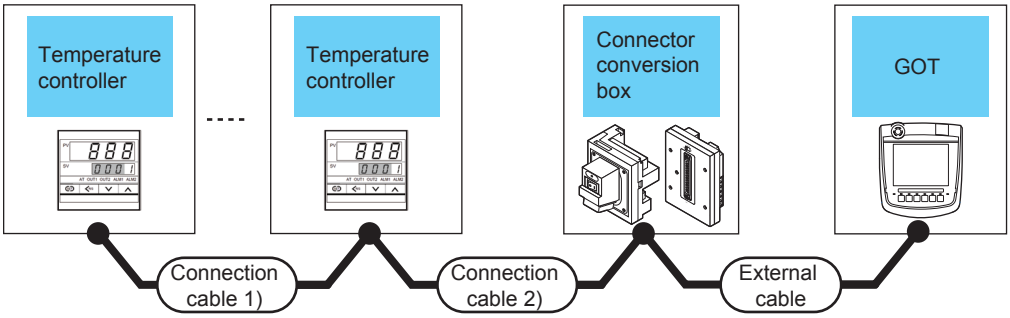
# Connecting to PF, HA, RMC, MA, AG, or SA series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers

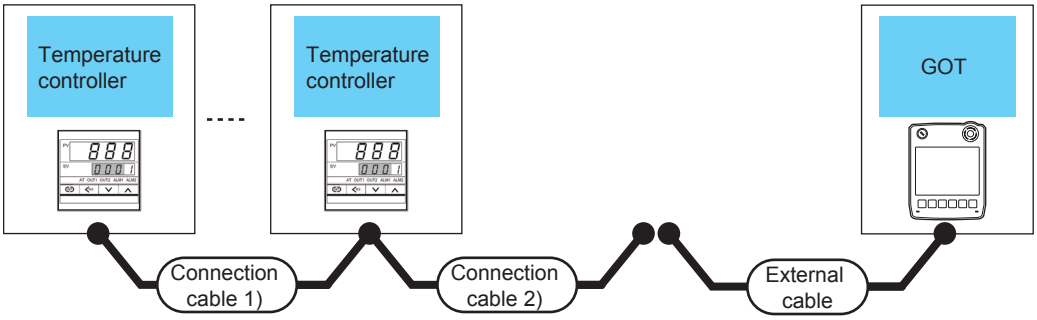
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901 | RS-232 | - | User preparing Page 1705 RS-232 connection diagram 8) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 1 temperature controller for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901<br>AG500 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901<br>AG500<br>RMC500<br>SA100<br>SA200 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

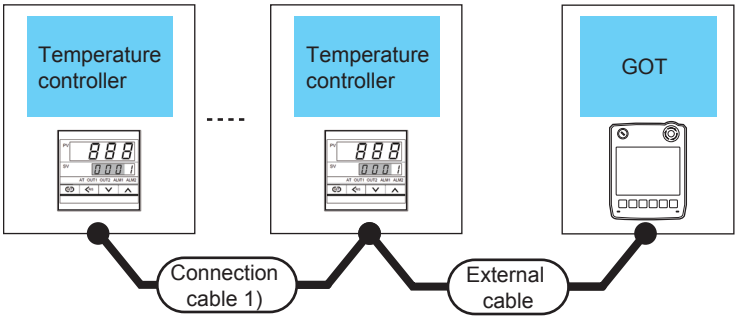
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901 | RS-232 | - | User preparing Page 1706 RS-232 connection diagram 9) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901<br>AG500 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

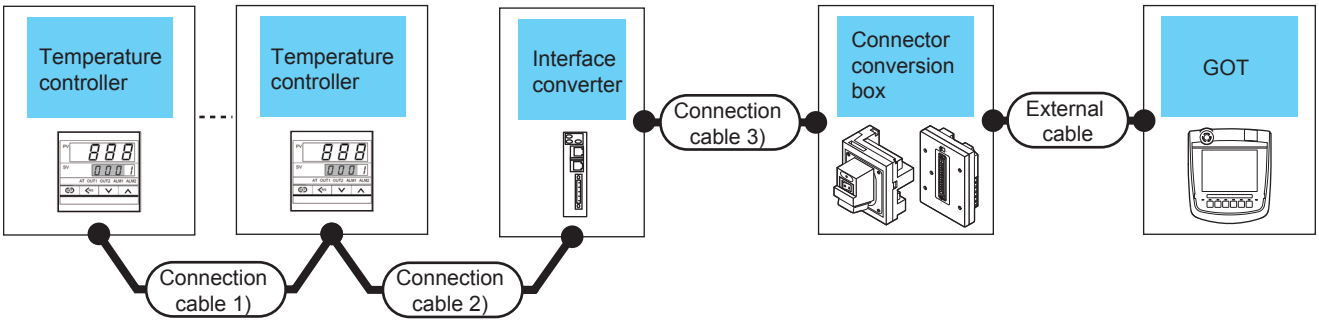



| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901 | RS-232 | - | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1706 RS-232 connection diagram 10) | GT 2505HS | 6m | Up to 1 temperature controller for 1 GOT |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>MA900<br>MA901<br>AG500 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting to multiple temperature controllers with interface converter (COM-A)

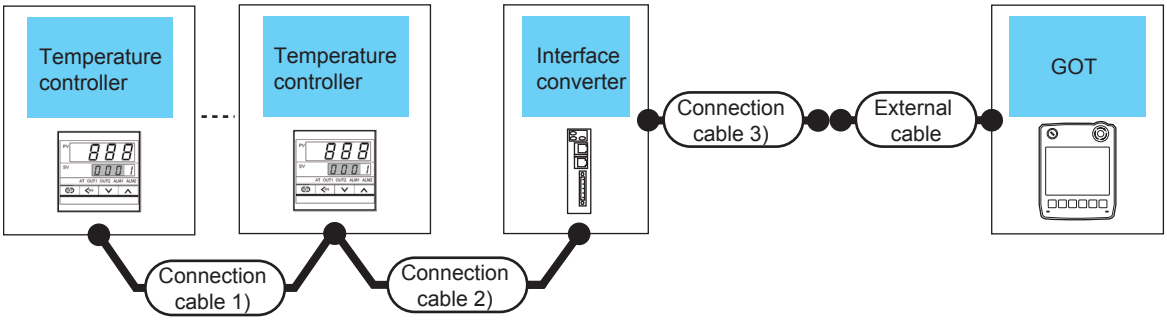
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance*2 | Interface converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PF900 PF901 | (User preparing) Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or (User preparing) Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance *2 | Interface converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PF900 PF901 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1 | 1000m | COM-A | RS-232 | User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

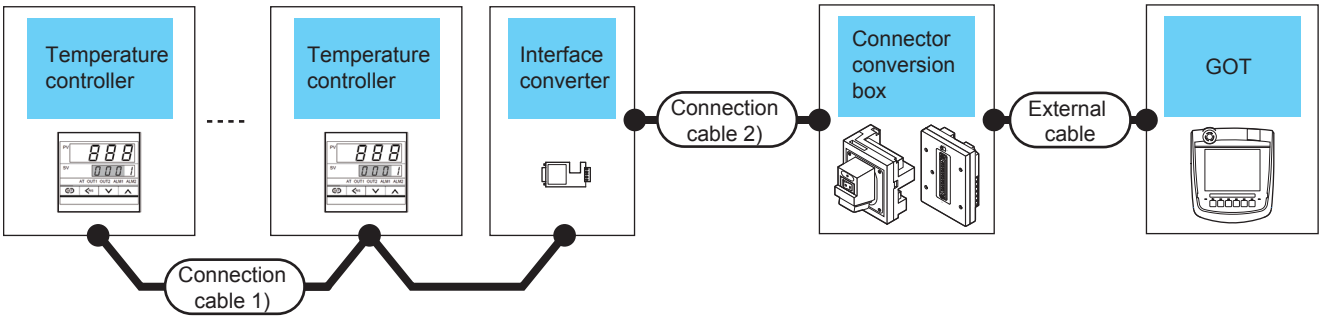
*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))

*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

### ■When using the connector conversion box

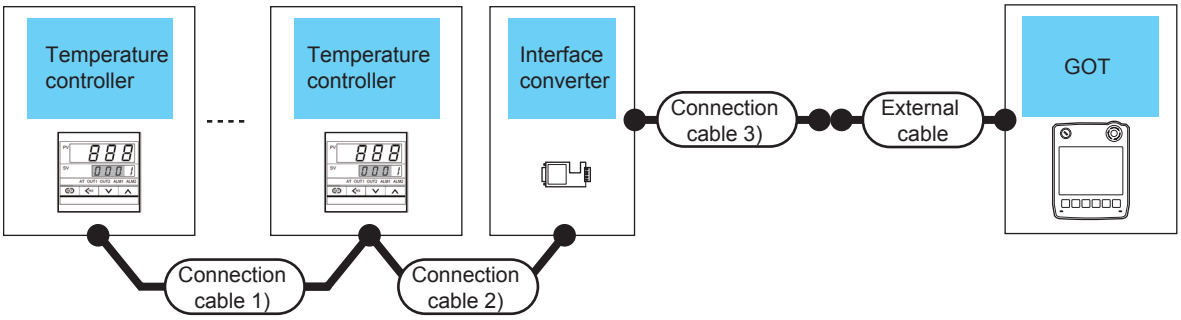



| Temperature controller | Connection cable 1) | Max. distance | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>RMC500<br>SA100<br>SA200 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

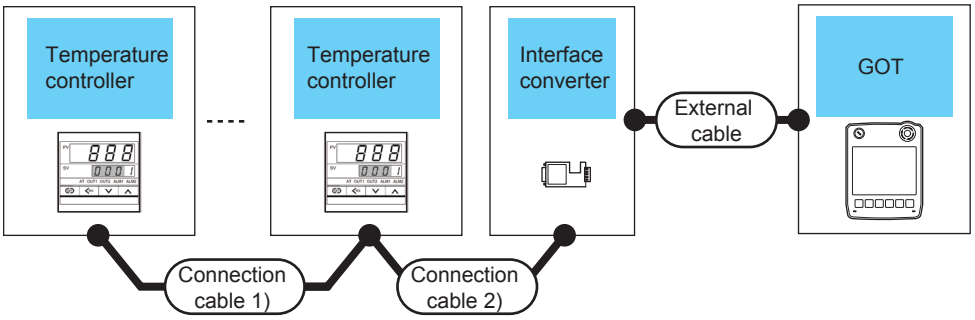



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Interface converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>RMC500<br>THV-A1<br>SA100<br>SA200 | User preparing Page 1714 RS-485 connection diagram 3) | | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | | | | |
| PF900<br>PF901<br>HA400<br>HA401<br>HA900<br>HA901<br>RMC500<br>THV-A1<br>SA100<br>SA200 | User preparing Page 1714 RS-485 connection diagram 3) | | 1200m | CD485/V | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (External cable)

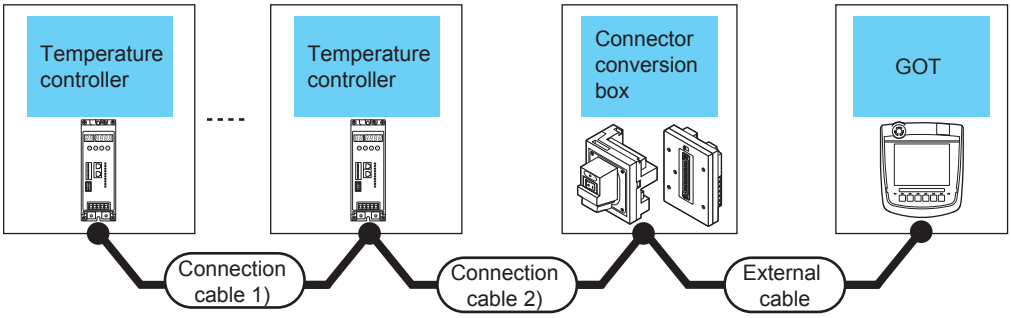
# Connecting to THV series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers

### ■When using the connector conversion box

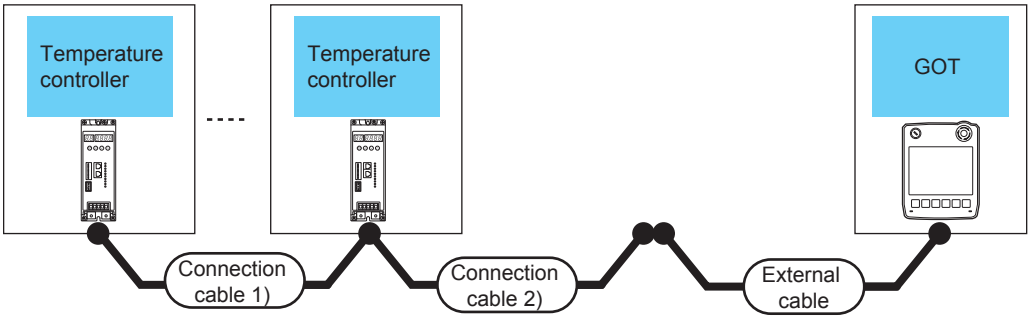



| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | Cable model Connection diagram number | | | | | |
| THV-A1 | RS-422 | W-BF-02-0500 (0.5m)<br>W-BF-02-1000 (1m)<br>W-BF-02-3000 (3m) | User preparing Page 1708 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for GOT |
| | RS-485 | W-BF-02-0500 (0.5m)<br>W-BF-02-1000 (1m)<br>W-BF-02-3000 (3m) | User preparing Page 1712 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

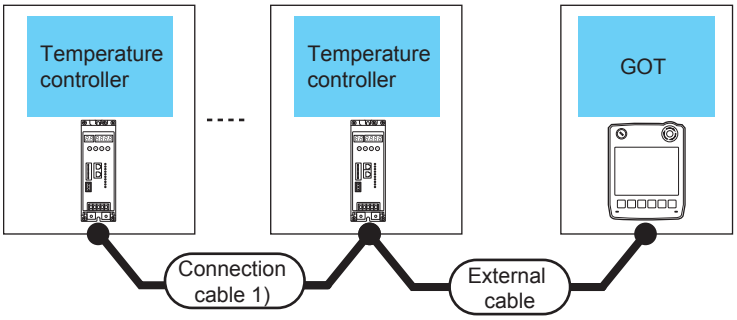



| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | Cable model Connection diagram number | | | | |
| THV-A1 | RS-422 | W-BF-02-0500 (0.5m)<br>W-BF-02-1000 (1m)<br>W-BF-02-3000 (3m) | User preparing Page 1708 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



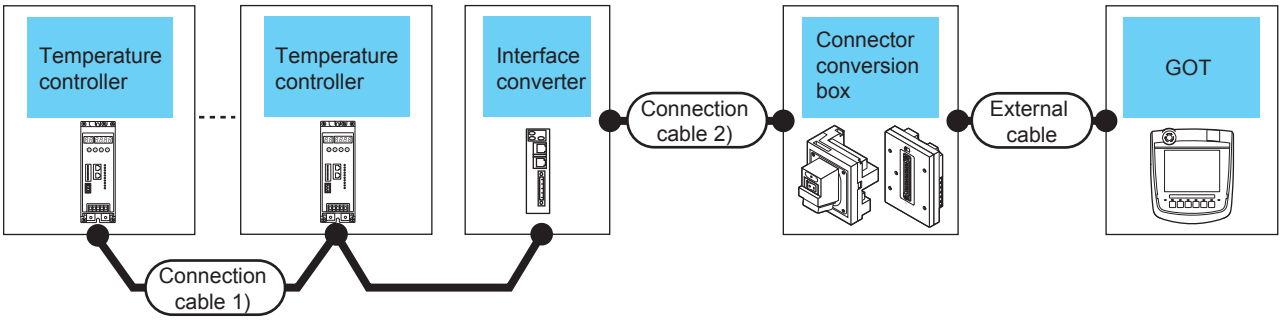

| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model*1 Connection diagram number | | | | |
| THV-A1 | RS-422 | W-BF-02-0500 (0.5m)<br>W-BF-02-1000 (1m)<br>W-BF-02-3000 (3m) | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1708 RS-422 connection diagram 3) | GT 2505HS | 13m | Up to 10 temperature controllers for GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting to multiple temperature controllers with interface converter (COM-A)

### ■When using the connector conversion box

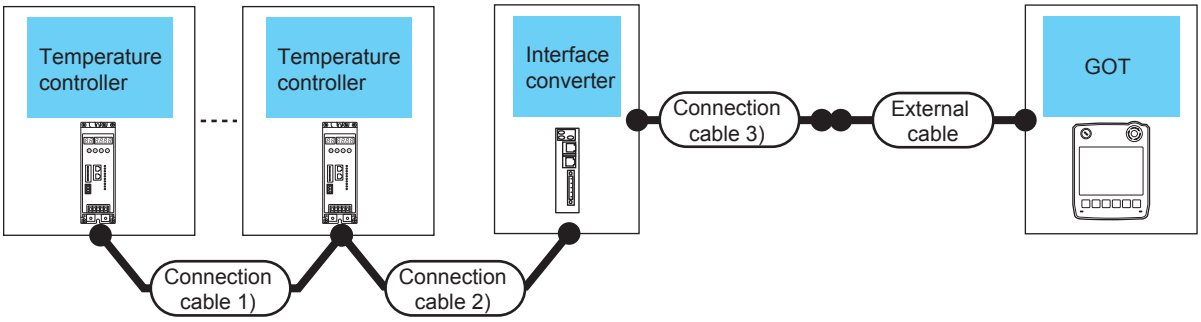



| Temperature controller | Connection cable 1) | Max. distance | Interface converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| THV-A1 | W-BF-02-0500(0.5m)<br>W-BF-02-1000(1m)<br>W-BF-02-3000(3m) | 1000m | COM-A | RS-232 | W-BF-28-0500(0.5m)*1<br>W-BF-28-1000(1m)*1<br>W-BF-28-3000(3m)*1<br>or<br>User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

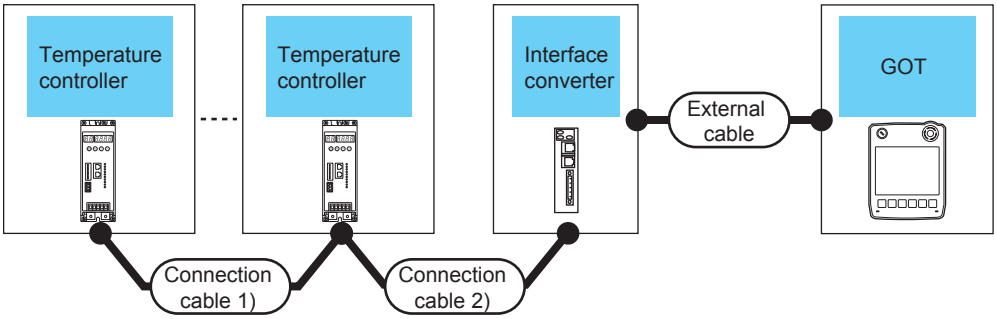
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance *2 | Interface converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| THV-A1 | W-BF-02-0500(0.5m)<br>W-BF-02-1000(1m)<br>W-BF-02-3000(3m) | | 1000m | COM-A | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)

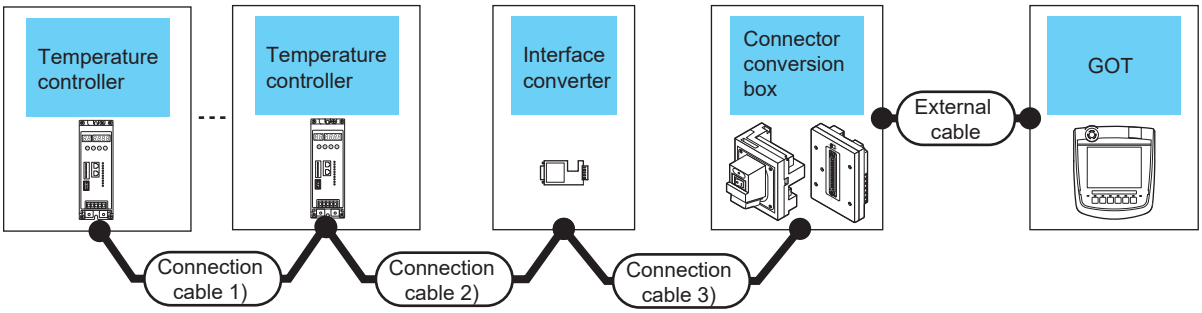



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance *2 | Interface converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model*1 Connection diagram number | Cable model*1 Connection diagram number | | Model name | Communication Type | | | | |
| THV-A1 | W-BF-02-0500(0.5m)<br>W-BF-02-1000(1m)<br>W-BF-02-3000(3m) | | 1000m | COM-A | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (External cable)

## When connecting to multiple temperature controllers with interface converter (CD485V)

### ■When using the connector conversion box

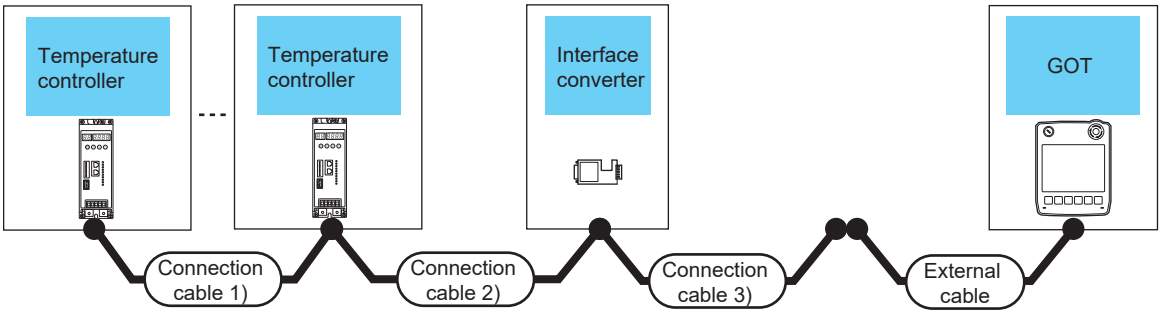



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Interface converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| THV-A1 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | User preparing Page 1714 RS-485 connection diagram 3) | | | | | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

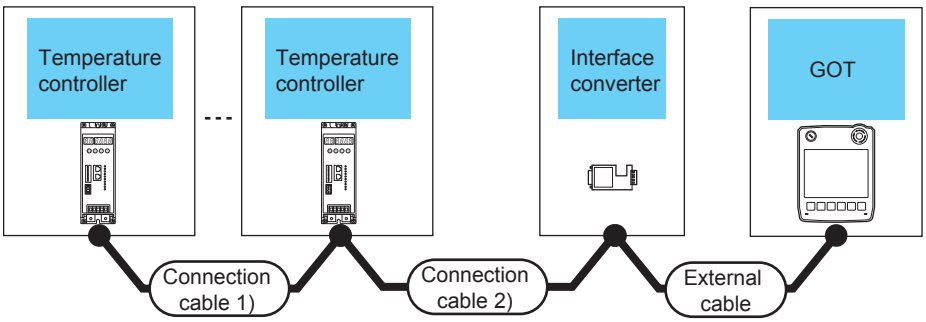



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Interface converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| THV-A1 | W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Interface converter*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| THV-A1 | W-BF-02-0500 (0.5m)*1 W-BF-02-1000 (1m)*1 W-BF-02-3000 (3m)*1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (External cable)

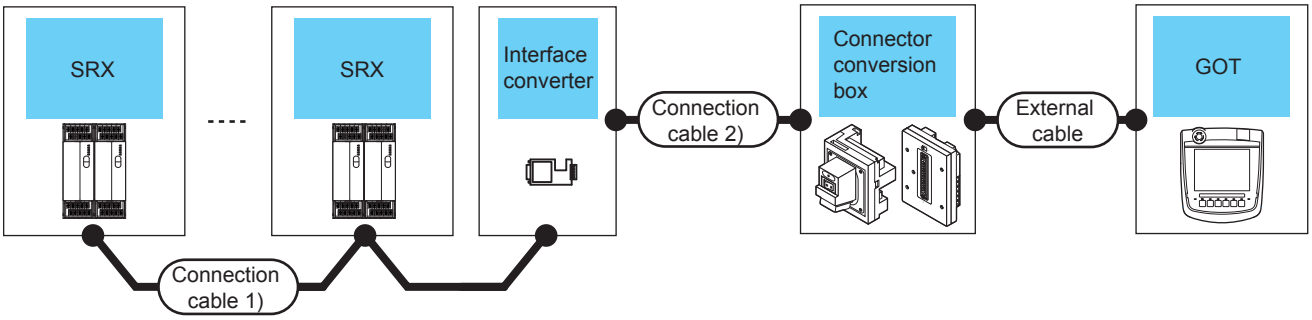
# Connecting to SRX series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to temperature control module (X-TIO) with a converter

### ■When using the connector conversion box

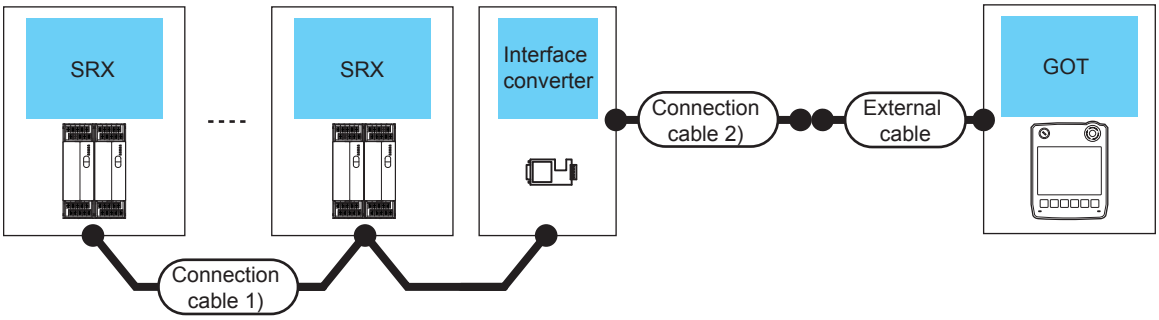



| Temperature controller | Connection cable 1) | | Interface Converter | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance*2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| X-TIO | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

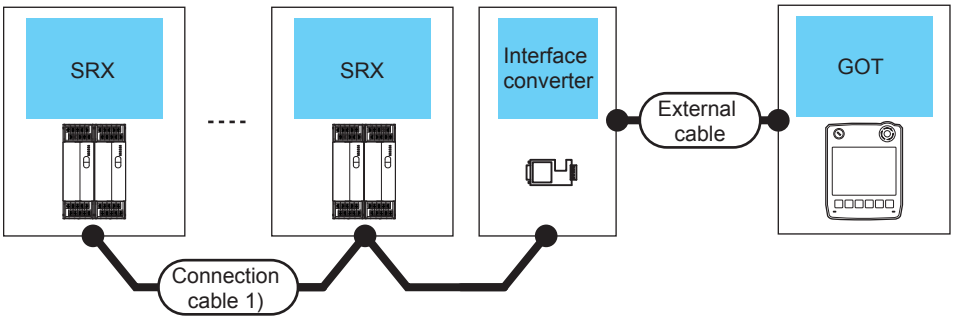



| Temperature controller | Connection cable 1) | | Interface Converter | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| X-TIO | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)



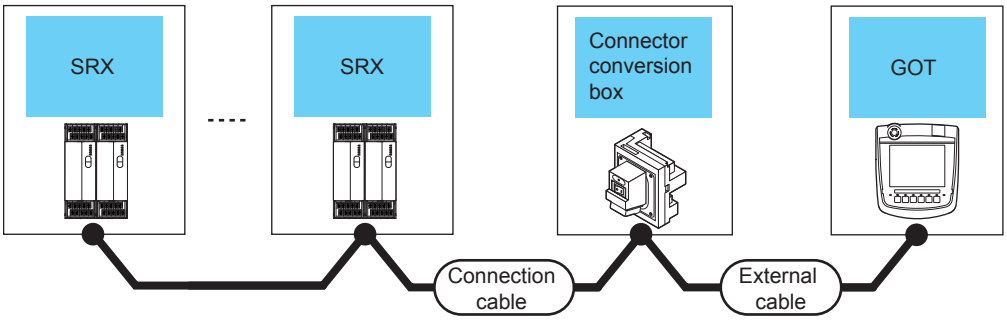

| Temperature controller | Connection cable 1) | | Interface Converter | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| X-TIO | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*1 | RS-232 | GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (External cable)

## When connecting directly to temperature control module (X-TIO)

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| X-TIO | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | X-TIO: Up to 31<br>Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT |

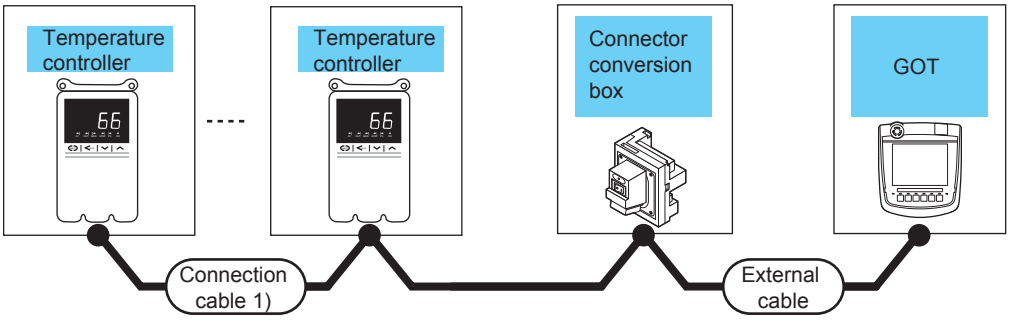
# Connecting to SB1 series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers

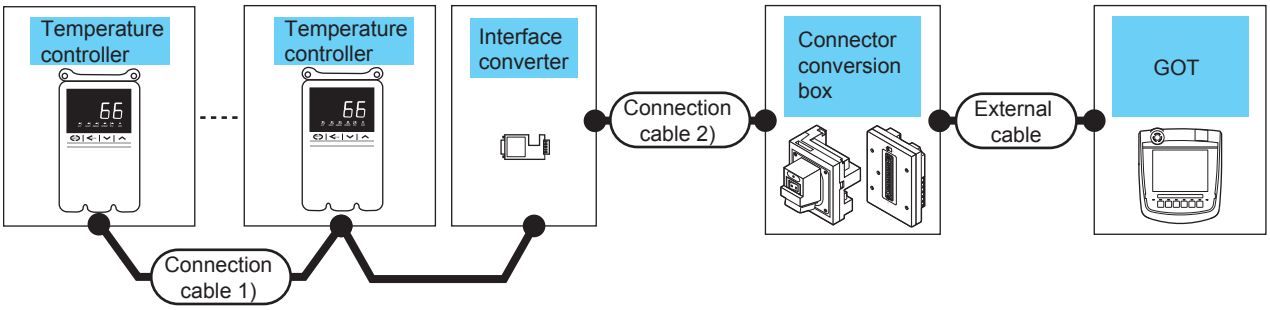
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SB1 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

## When connecting to multiple temperature controllers with interface converter (CD485V)

### ■When using the connector conversion box



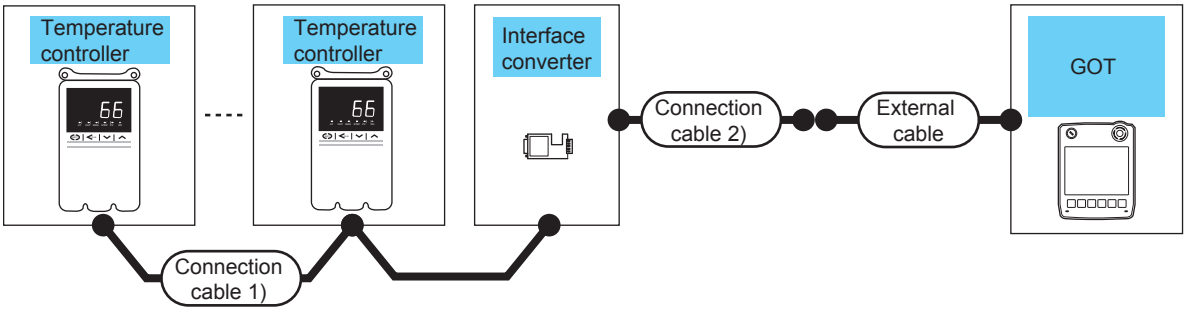

| Temperature controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| SB1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*2 | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

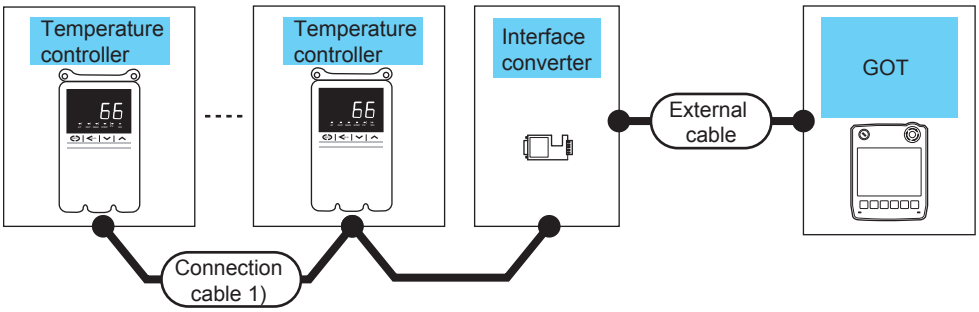
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Converter*1 | | Connection cable 2) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| SB1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*2 | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| Temperature controller | Connection cable 1) | | Converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| SB1 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V*2 | RS-232 | GT11H-C30(3m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

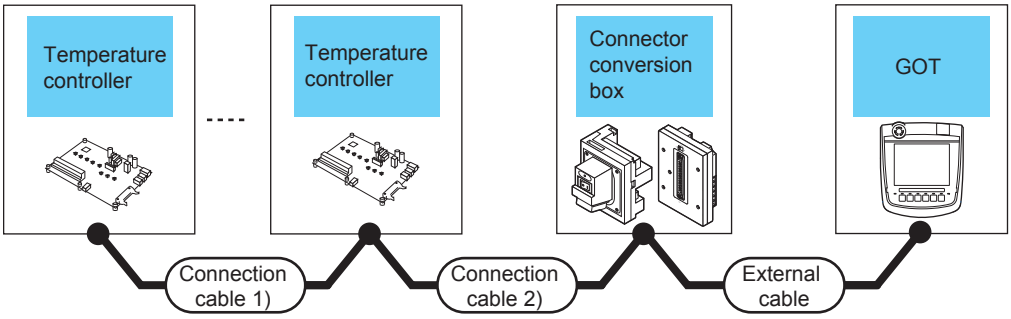
*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*3 The distance from the converter to the GOT (External cable)

# Connecting to B400 series

Communication driver

RKC
SR Mini HG(MODBUS)

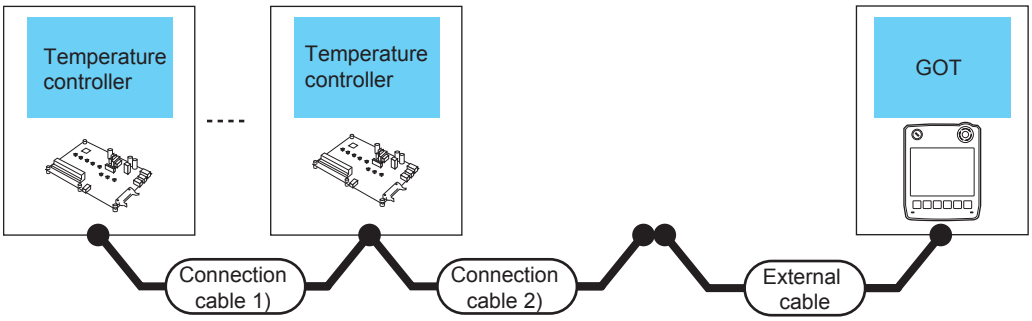
## When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| B400 (RS-422 specifications) | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |
| B400 (RS-485 specifications) | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | | Up to 31 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

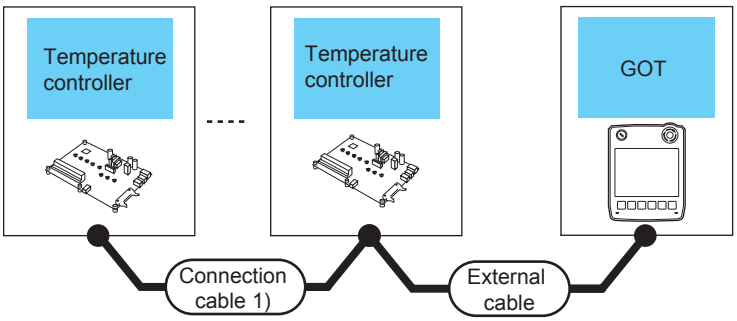
## When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| B400 (RS-422 specifications) | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## When using the external cable (GT11H-C□□□)




| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| B400 (RS-422 specifications) | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

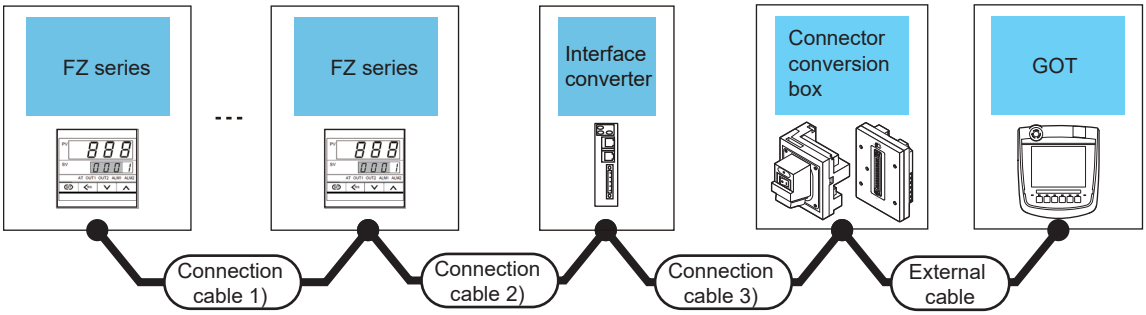
# Connecting to FZ series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers with interface converter (COM-A)

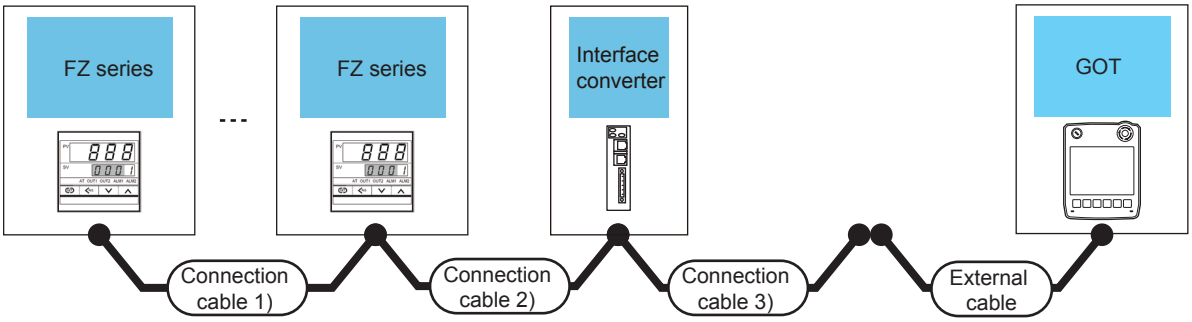
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*2 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FZ400<br>FZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m)*1<br>W-BF-01-1000(1m)*1<br>W-BF-01-3000(3m)*1 | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1<br>W-BF-28-1000(1m)*1<br>W-BF-28-3000(3m)*1<br>or<br>User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

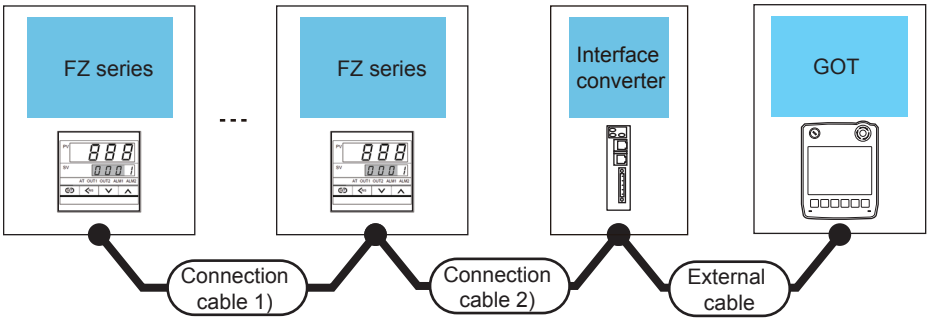
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*2 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| FZ400 FZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1 | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)

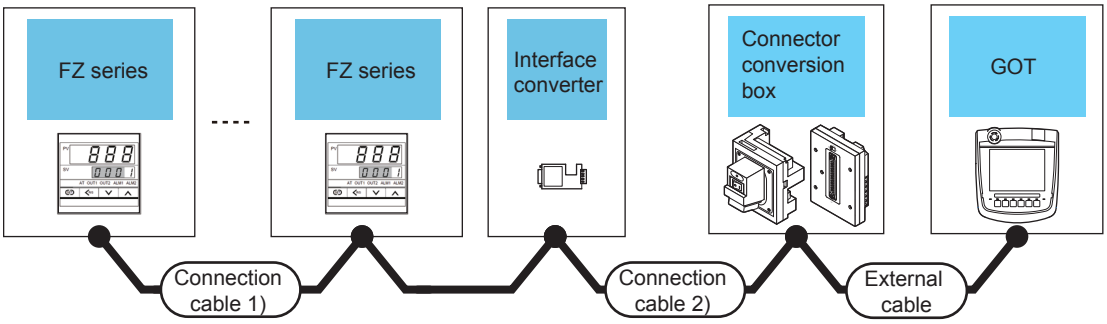



| Temperature controller | Connection cable 1) | Connection cable 2) | Max. distance | Converter*2 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| FZ400 FZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1 | 1000m*2 | COM-A | RS-232 | GT11H-C30(3m) ☞ Page 1704 RS-232 connection diagram 5) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

### ■When using the connector conversion box

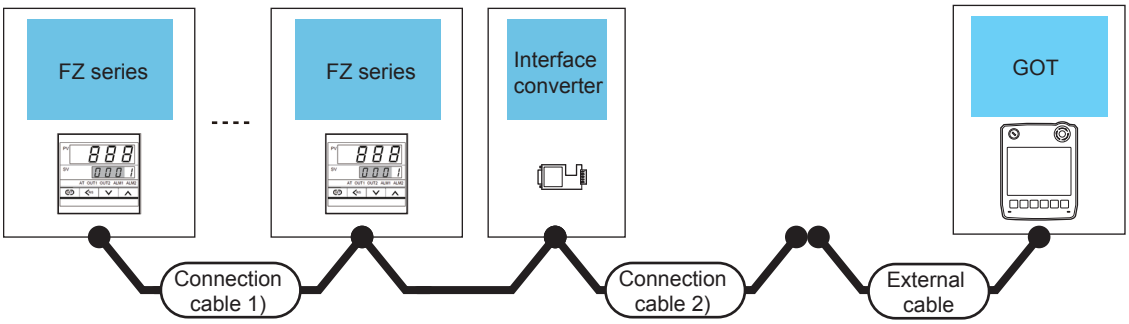



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FZ110<br>FZ400<br>FZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

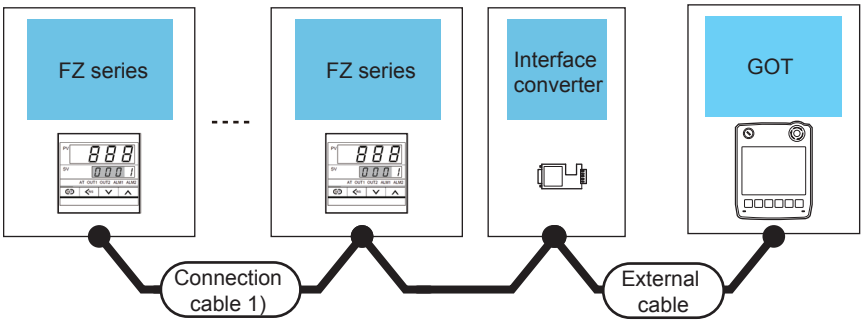



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| FZ110<br>FZ400<br>FZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

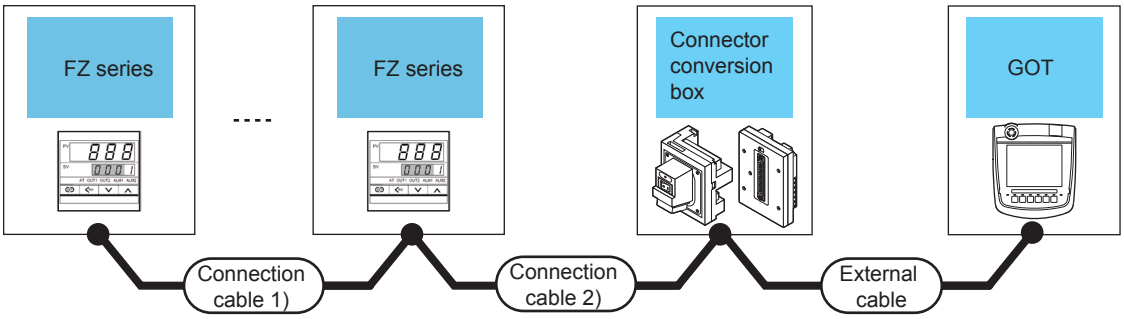



| Temperature controller | | Connection cable 1) | | Converter *1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| FZ110<br>FZ400<br>FZ900 | | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m)<br>☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

## When connecting directly to a temperature controller by RS-422

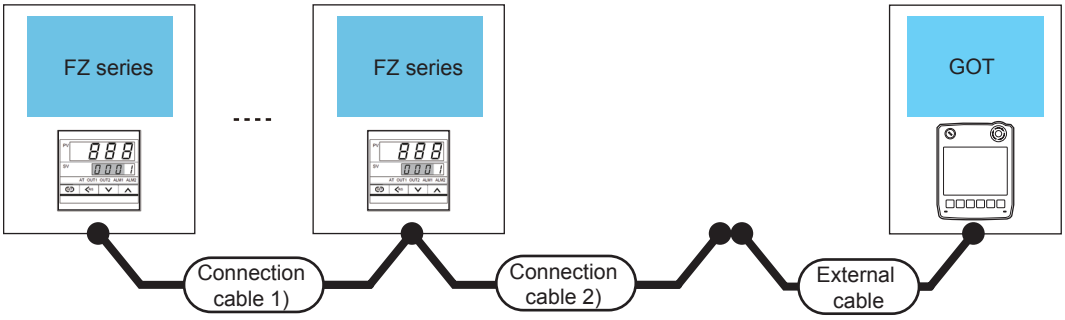
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| FZ400<br>FZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

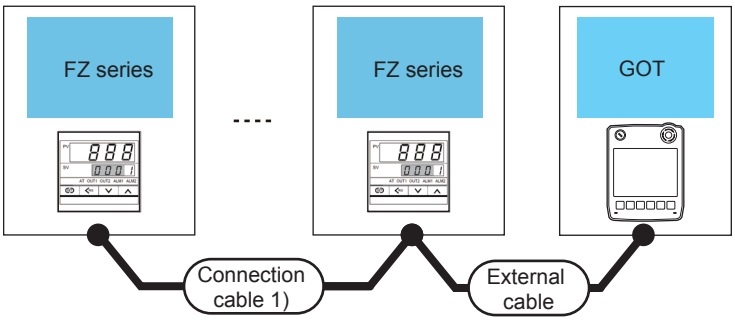
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| FZ400 FZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

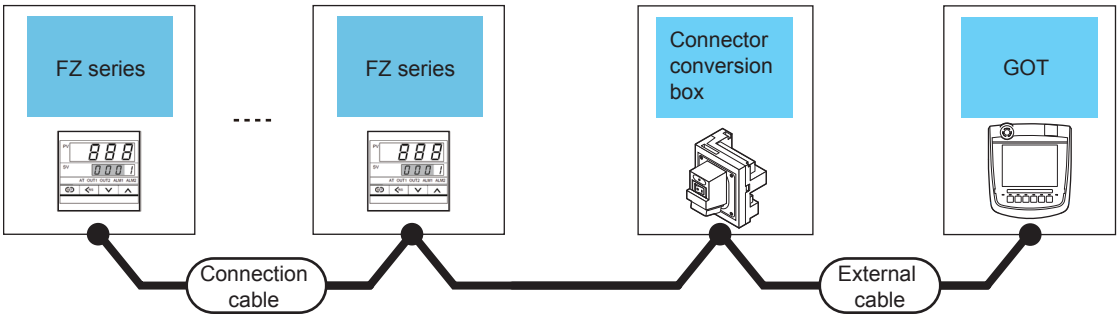



| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| FZ400 FZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting directly to a temperature controller by RS-485

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| FZ110<br>FZ400<br>FZ900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

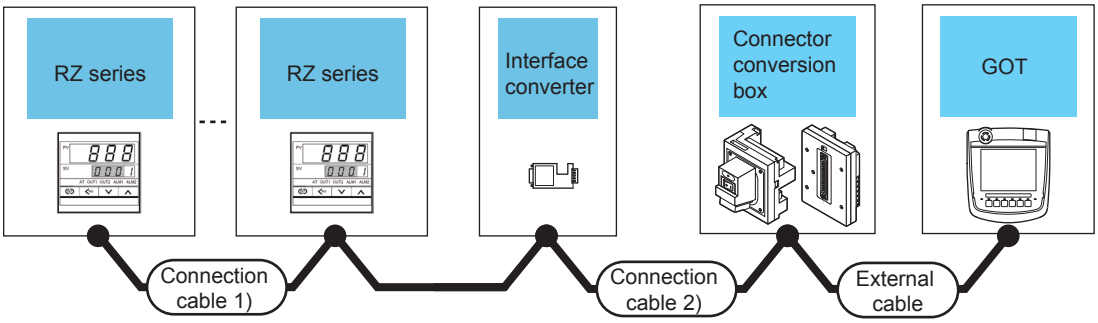
# Connecting to RZ series

Communication driver

RKC
SR Mini HG(MODBUS)

## When using the converter

### ■When using the connector conversion box

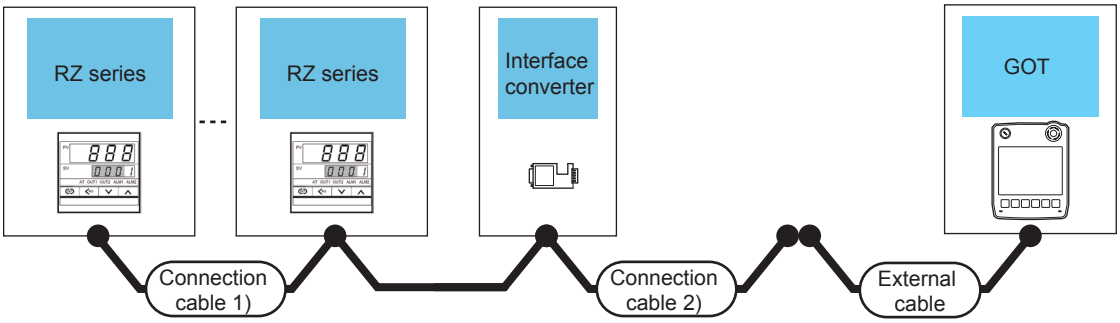



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| RZ100 RZ400 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

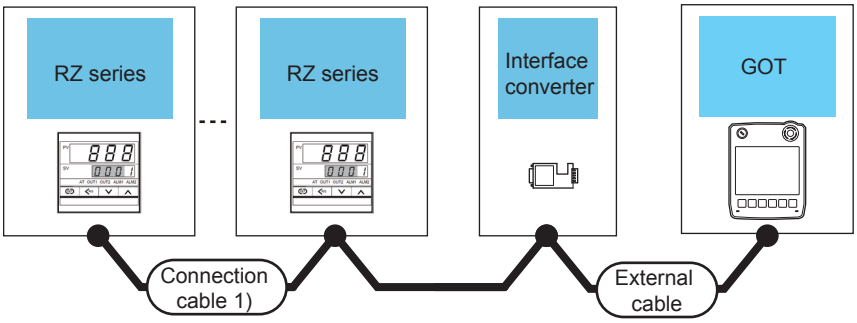
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| RZ100<br>RZ400 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

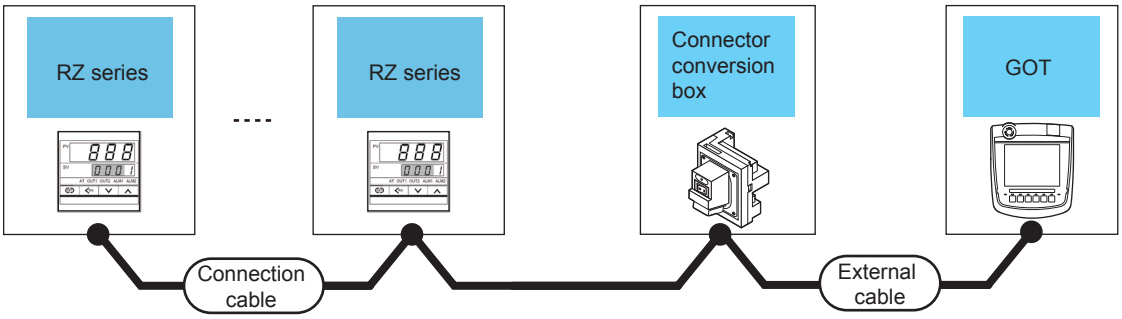



| Temperature controller | Connection cable 1) | | Converter *1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| RZ100<br>RZ400 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

## When connecting directly

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| RZ100<br>RZ400 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

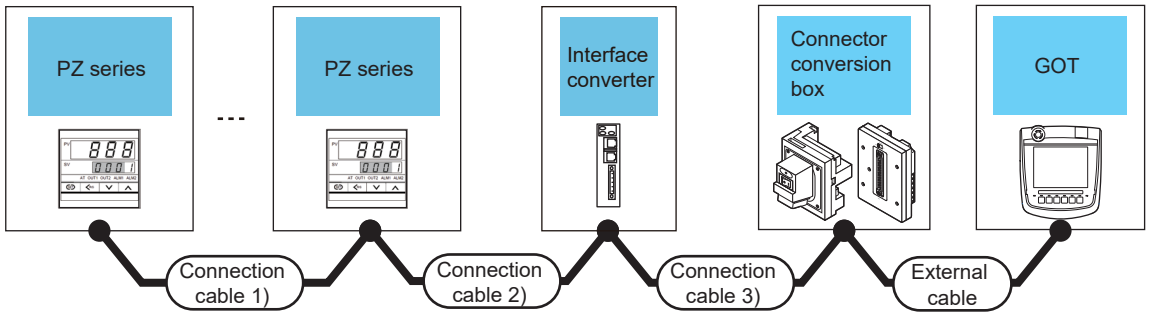
# Connecting to PZ series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers with interface converter (COM-A)

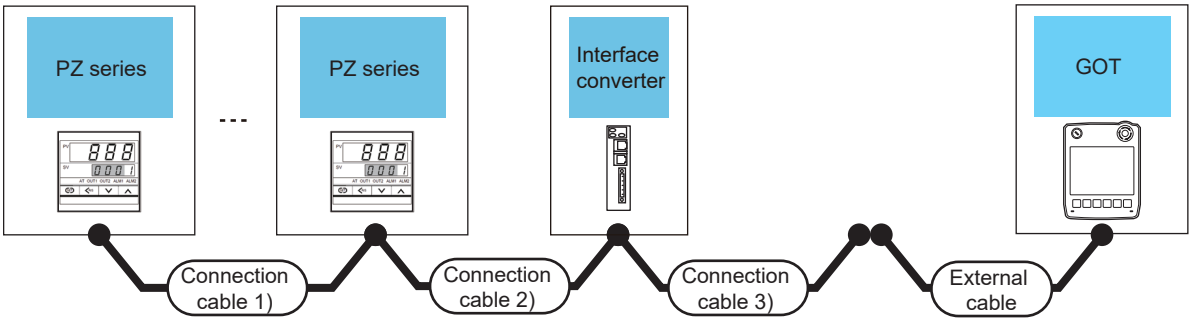
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PZ400 PZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

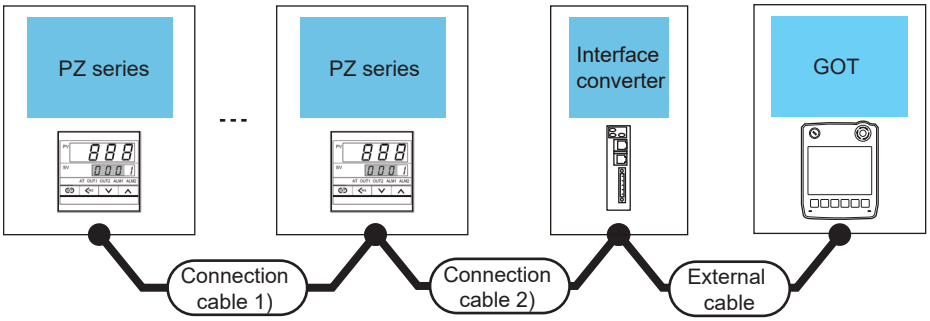
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PZ400 PZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)

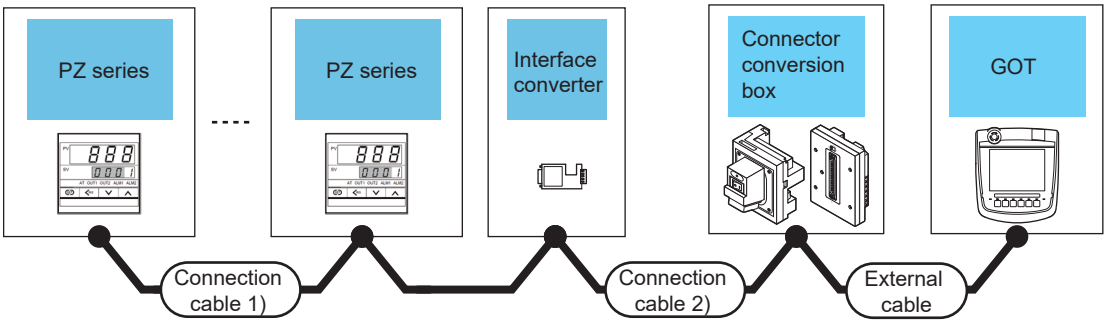



| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| PZ400 PZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | GT11H-C30(3m) ☞ Page 1704 RS-232 connection diagram 5) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

### ■When using the connector conversion box

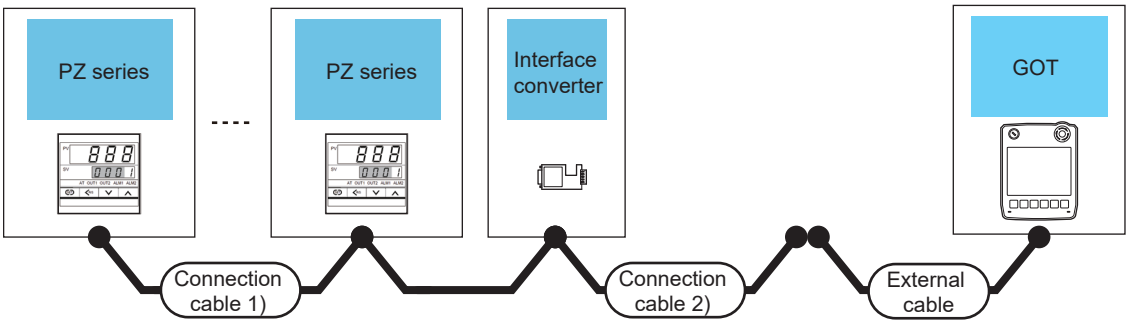



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PZ400 PZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

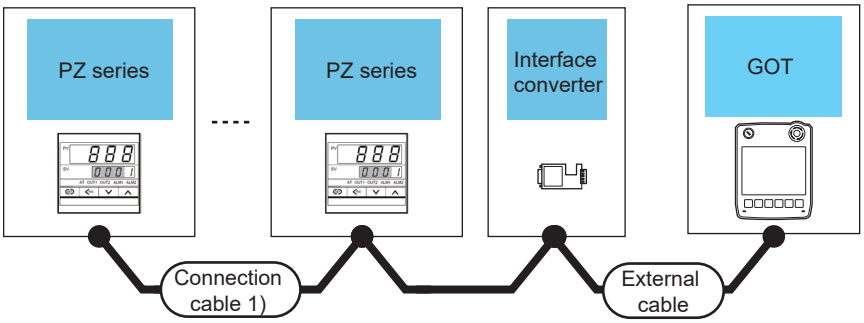



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| PZ400 PZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

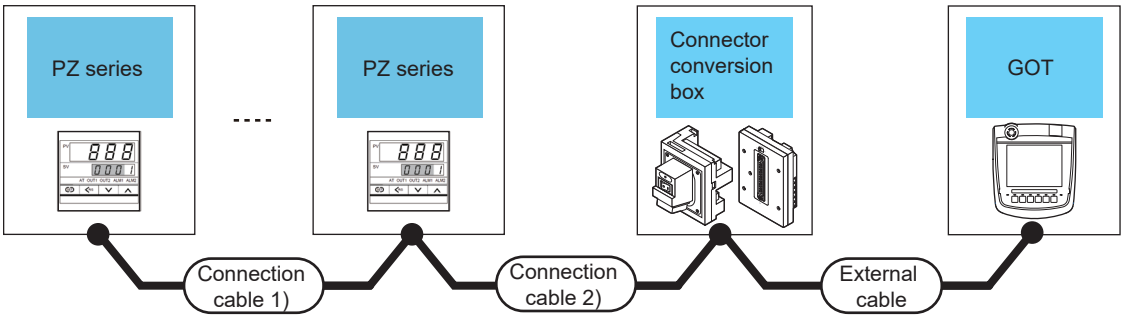



| Temperature controller | | Connection cable 1) | | Converter *1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| PZ400 PZ900 | | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

## When connecting directly to a temperature controller by RS-422

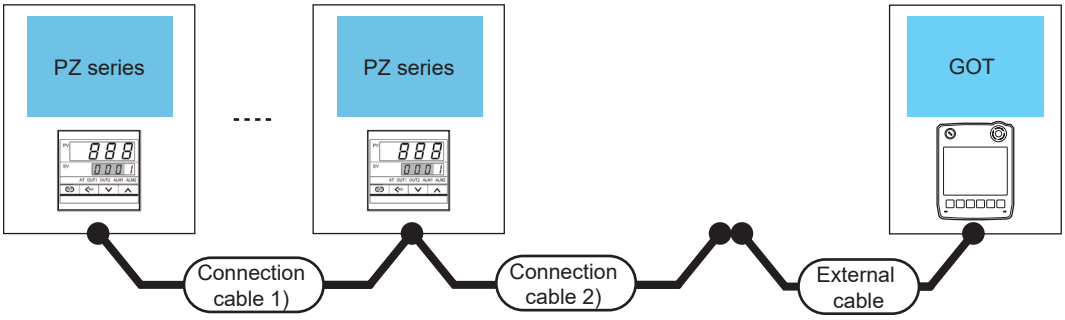
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| PZ400 PZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

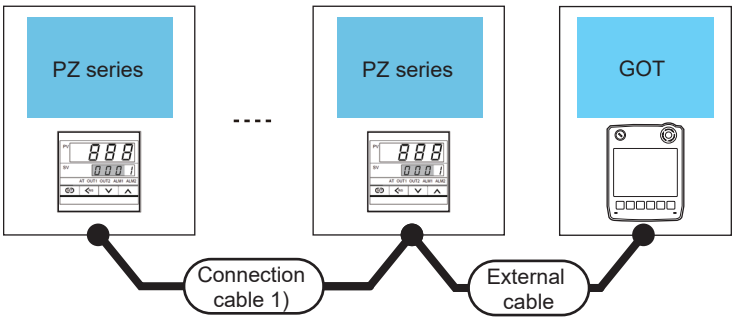
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| PZ400 PZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

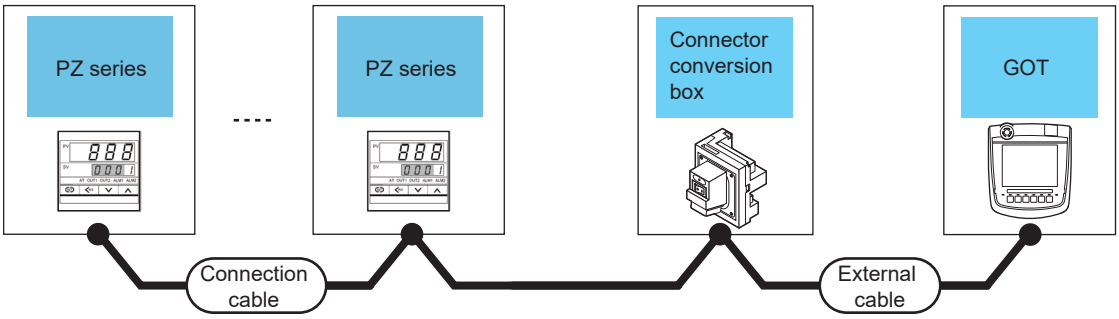



| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| PZ400 PZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting directly to a temperature controller by RS-485

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| PZ400<br>PZ900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable + External cable)

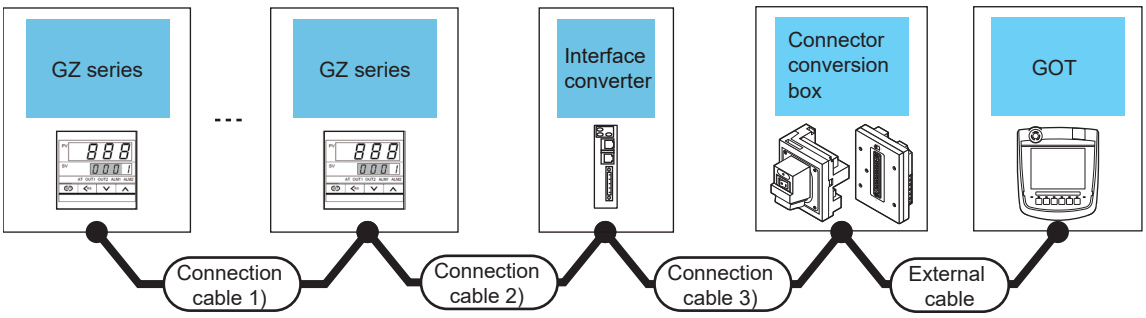
# Connecting to GZ series

Communication driver

RKC
SR Mini HG(MODBUS)

## When connecting to multiple temperature controllers with interface converter (COM-A)

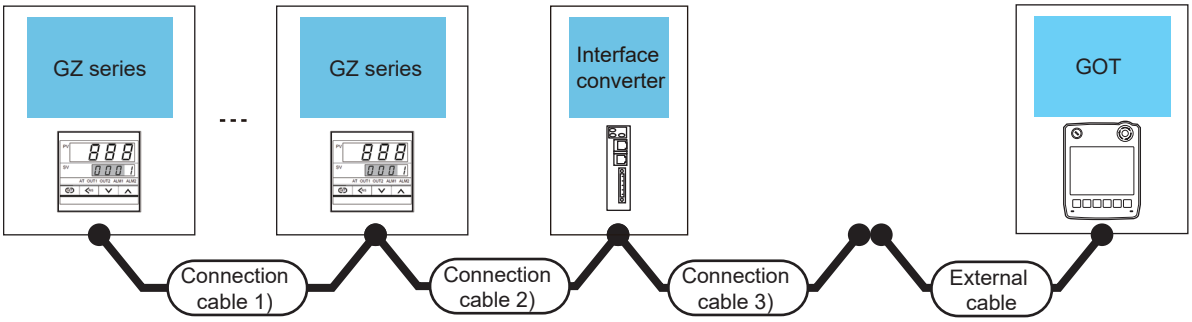
### ■When using the connector conversion box




| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | Connection cable 3) | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| GZ400 GZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1704 RS-232 connection diagram 3) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

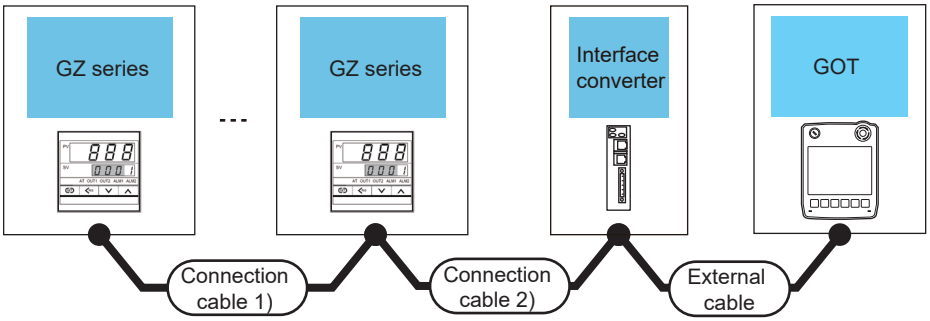
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | Connection cable 3) | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | Cable model Connection diagram number | | | | |
| GZ400 GZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1704 RS-232 connection diagram 4) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

## ■When using the external cable (GT11H-C□□□)

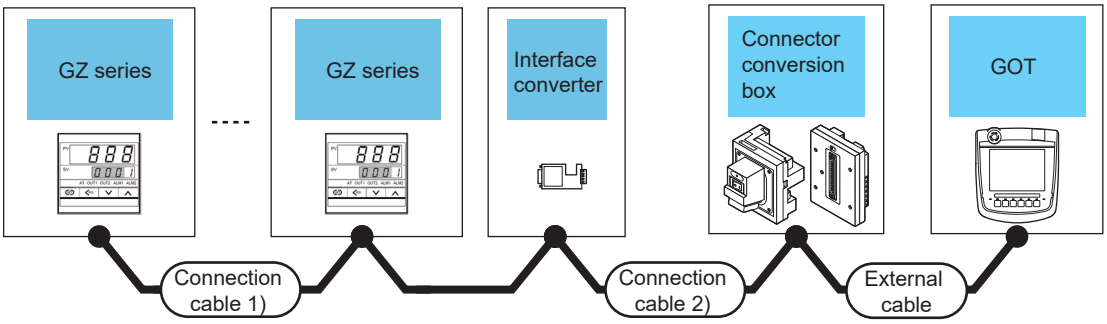



| Temperature controller | Connection cable 1) | Connection cable 2)*1 | Max. distance | Converter*1 | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Cable model Connection diagram number | | Model name | Communication Type | | | | |
| GZ400 GZ900 | User preparing Page 1709 RS-422 connection diagram 4) | W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m) | 1000m*2 | COM-A | RS-232 | GT11H-C30(3m) ☞ Page 1704 RS-232 connection diagram 5) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

## When connecting to multiple temperature controllers with interface converter (CD485/V)

### ■When using the connector conversion box

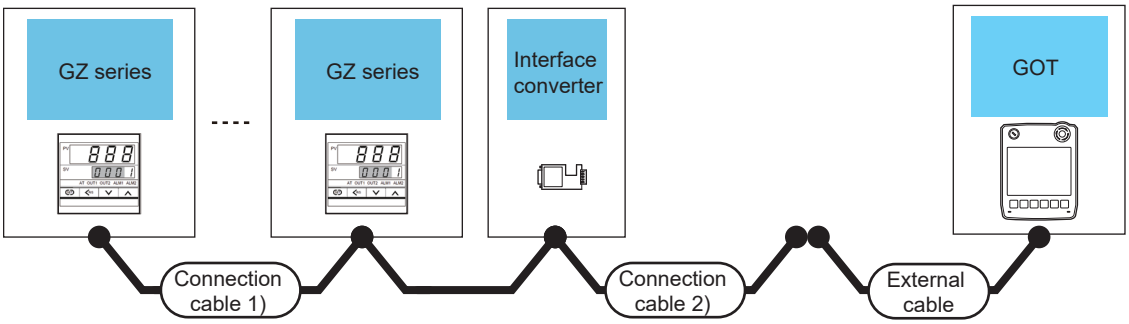



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| GZ400 GZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1704 RS-232 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | Up to 31 temperature controllers for 1 GOT |
| | | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

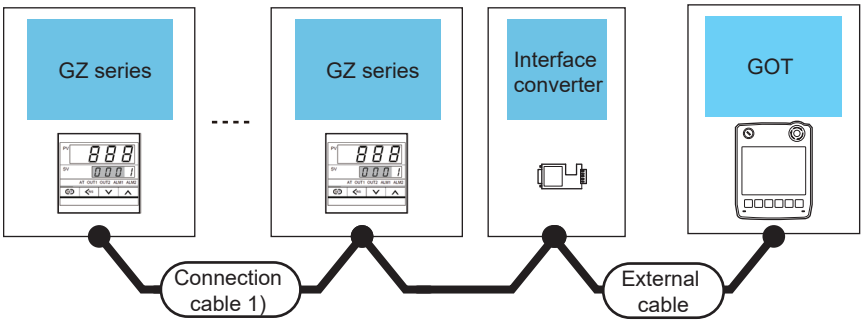



| Temperature controller | Connection cable 1) | | Converter *1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | Cable model Connection diagram number | Max. distance | Model name | Communication Type | Cable model Connection diagram number | | | | |
| GZ400 GZ900 | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | User preparing Page 1705 RS-232 connection diagram 6) | GT11H-C30-37P(3m) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)

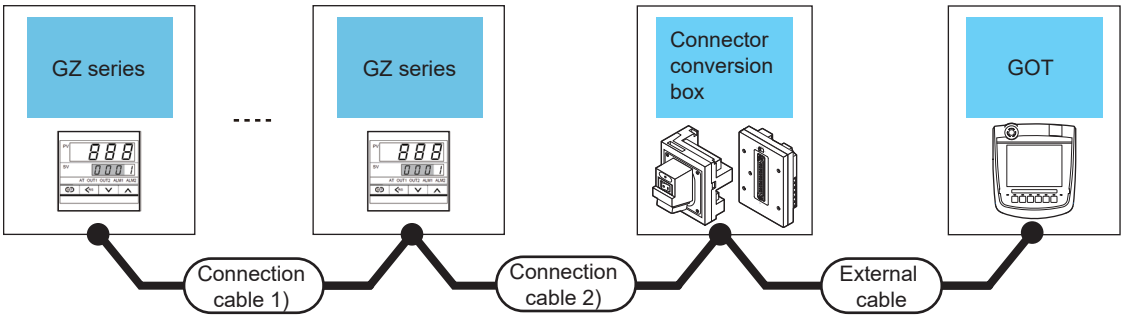



| Temperature controller | | Connection cable 1) | | Converter *1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Model name | | Cable model Connection diagram number | Max. distance | Model name | Communication Type | | | | |
| GZ400 GZ900 | | User preparing Page 1714 RS-485 connection diagram 3) | 1200m | CD485/V | RS-232 | GT11H-C30(3m) ☞ Page 1705 RS-232 connection diagram 7) | GT 2505HS | 6m | Up to 31 temperature controllers for 1 GOT |

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

## When connecting directly to a temperature controller by RS-422

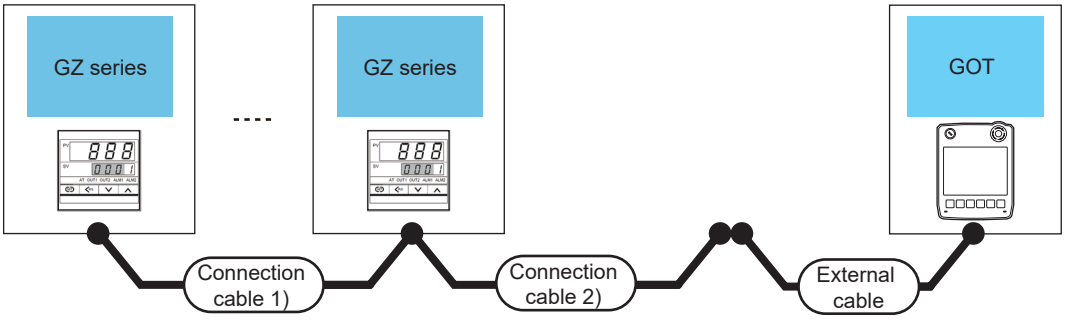
### ■When using the connector conversion box




| Temperature controller | | Connection cable 1) | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | | |
| GZ400 GZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1709 RS-422 connection diagram 5) | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

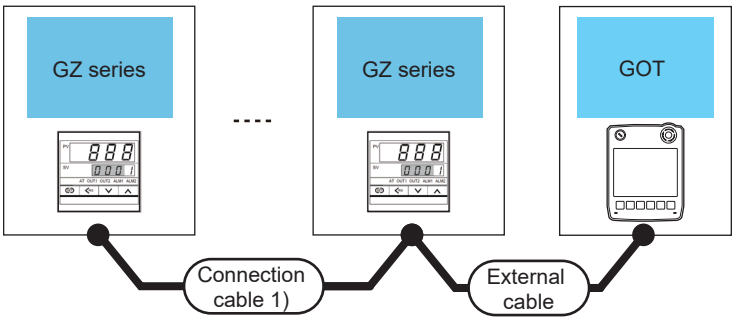
## ■When using the external cable (GT11H-C□□□-37P)




| Temperature controller | | Connection cable 1) | Connection cable 2) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | Cable model Connection diagram number | | | | |
| GZ400 GZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | User preparing Page 1710 RS-422 connection diagram 6) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)

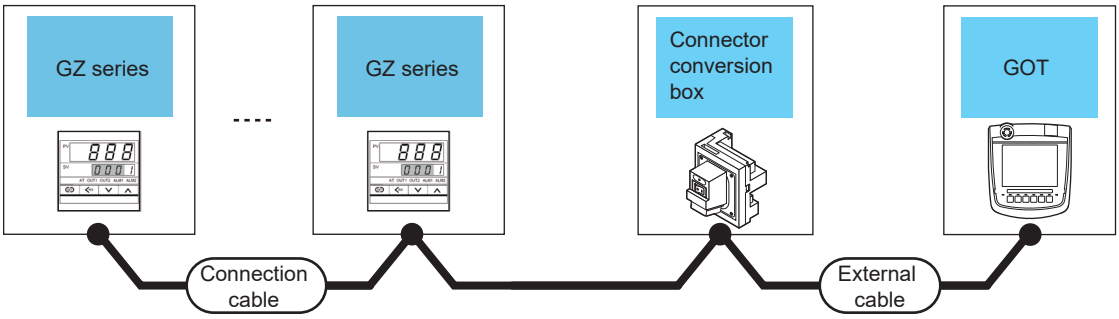



| Temperature controller | | Connection cable 1) | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | |
| GZ400 GZ900 | RS-422 | User preparing Page 1709 RS-422 connection diagram 4) | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1711 RS-422 connection diagram 7) | GT 2505HS | 13m | Up to 10 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

## When connecting directly to a temperature controller by RS-485

### ■When using the connector conversion box




| Temperature controller | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| GZ400<br>GZ900 | RS-485 | User preparing Page 1713 RS-485 connection diagram 2) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 temperature controllers for 1 GOT |

*1 The distance from the GOT to the temperature controller (Connection cable + External cable)

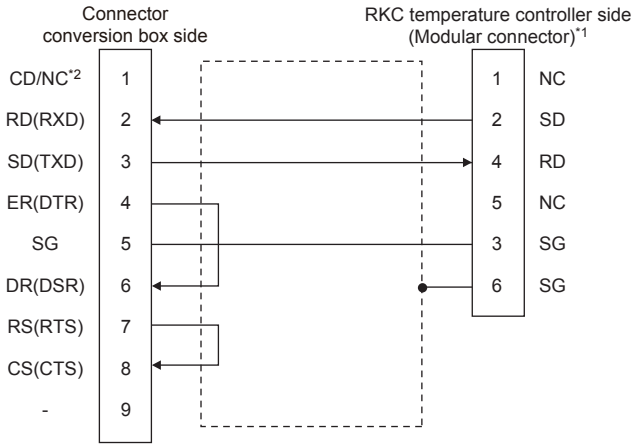
# 36.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

## RS-232 cable

### Connection diagram

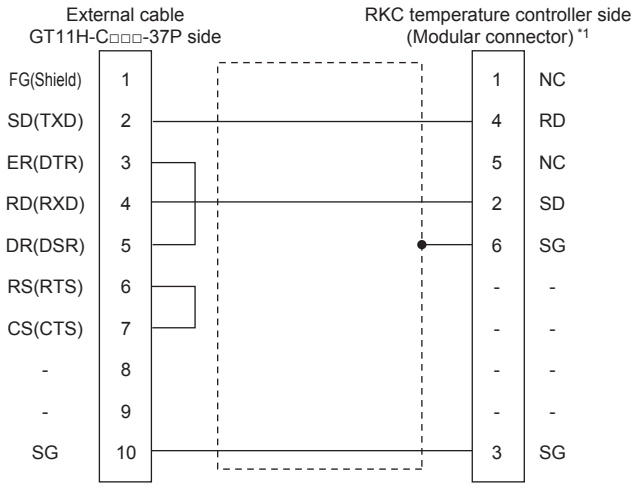
#### ■RS-232 connection diagram 1)




*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

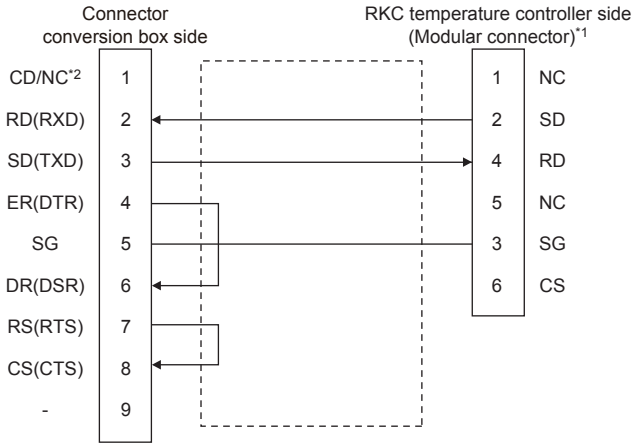
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

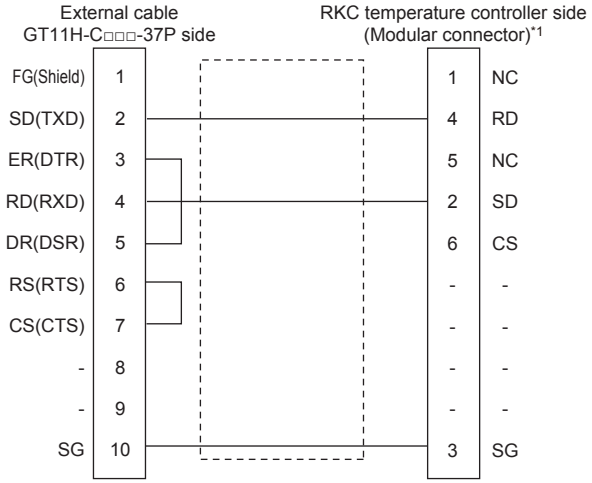
## ■RS-232 connection diagram 3)




*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

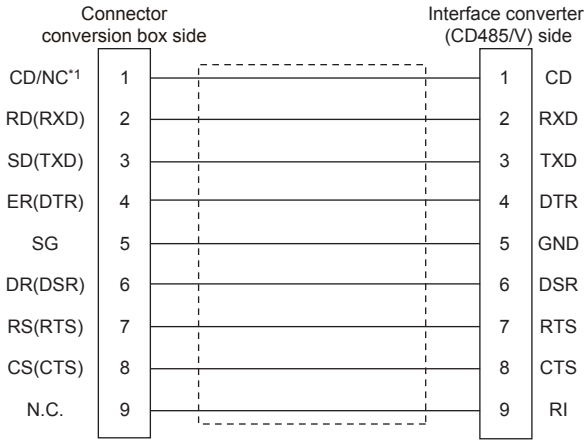
*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 4)



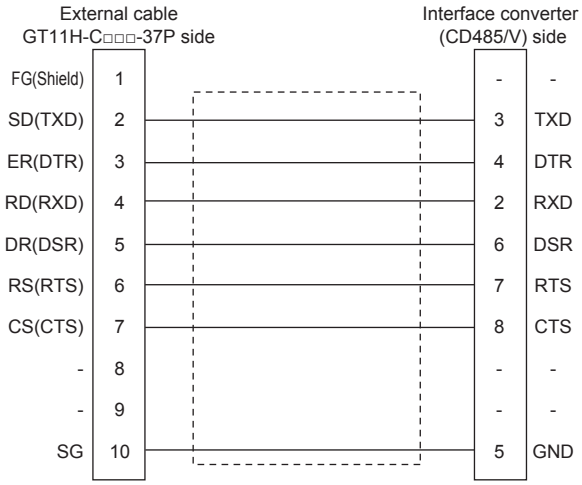

*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

## ■RS-232 connection diagram 5)

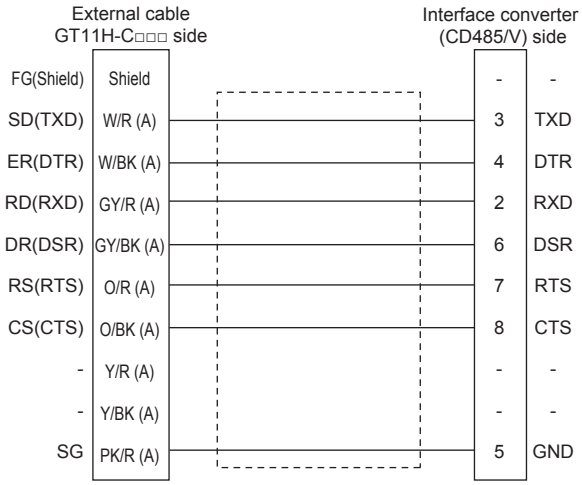



*1 GT2506HS-V: CD, GT2505HS-V: NC

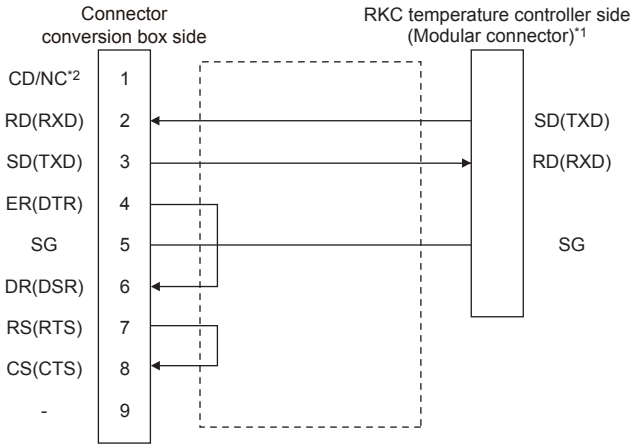
## ■RS-232 connection diagram 6)




## ■RS-232 connection diagram 7)




## ■RS-232 connection diagram 8)

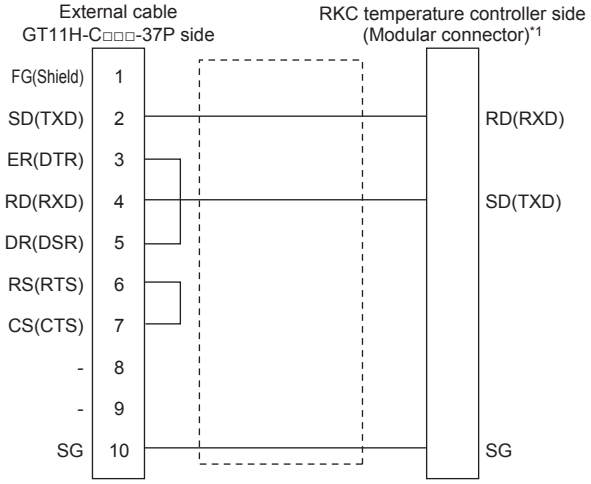



*1 For the terminal number of the temperature controller, refer to the following table.

| Signal name | Terminal No. | | | | |
|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900<br>PF901 | HA400/401<br>HA900/901 | | MA900<br>MA901 |
| | | | Communication 1 | Communication 2 | |
| SG | 25 | 25 | 13 | 25 | 44 |
| SD(TXD) | 26 | 26 | 14 | 26 | 45 |
| RD(RXD) | 27 | 27 | 15 | 27 | 46 |

*2 GT2506HS-V: CD, GT2505HS-V: NC

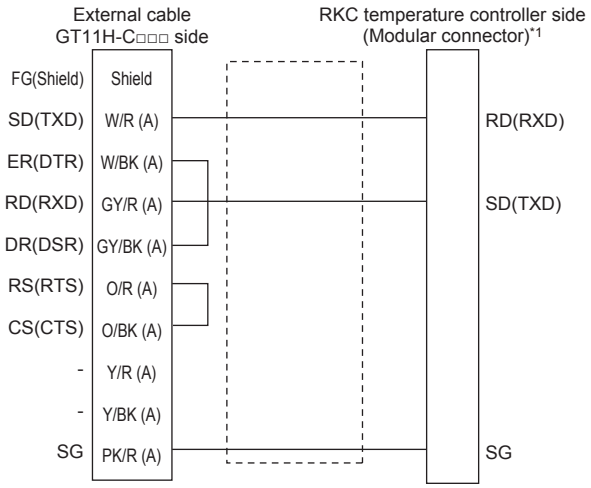
## ■RS-232 connection diagram 9)




*1 For the terminal number of the temperature controller, refer to the following table.

| Signal name | Terminal No. | | | | |
|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900<br>PF901 | HA400/401<br>HA900/901 | | MA900<br>MA901 |
| | | | Communication 1 | Communication 2 | |
| SG | 25 | 25 | 13 | 25 | 44 |
| SD(TXD) | 26 | 26 | 14 | 26 | 45 |
| RD(RXD) | 27 | 27 | 15 | 27 | 46 |

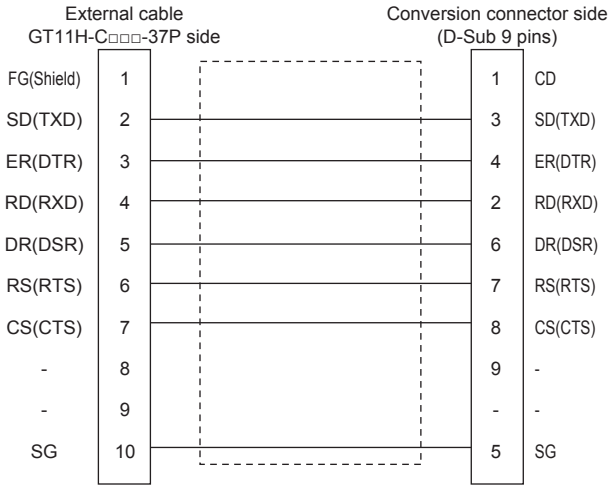
## ■RS-232 connection diagram 10)



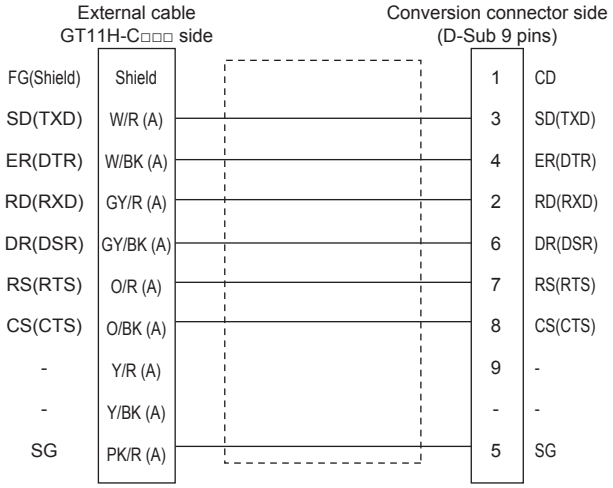

*1 For the terminal number of the temperature controller, refer to the following table.

| Signal name | Terminal No. | | | | |
|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900<br>PF901 | HA400/401<br>HA900/901 | | MA900<br>MA901 |
| | | | Communication 1 | Communication 2 | |
| SG | 25 | 25 | 13 | 25 | 44 |
| SD(TXD) | 26 | 26 | 14 | 26 | 45 |
| RD(RXD) | 27 | 27 | 15 | 27 | 46 |

### ■RS-232 connection diagram 11)




### ■RS-232 connection diagram 12)




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller side.

# RS-422 cable

**Point**

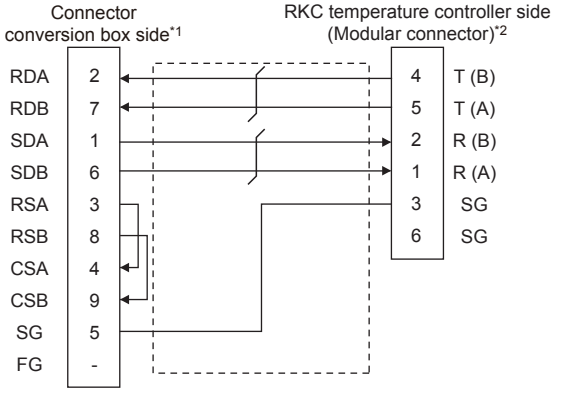
Differences in polarity between GOT and RKC temperature controllers

The polarity of poles A and B in signal names is reversed between GOT and RKC temperature controllers.

Connect a cable according to the following connection diagrams.

## Connection diagram

### ■RS-422 connection diagram 1)



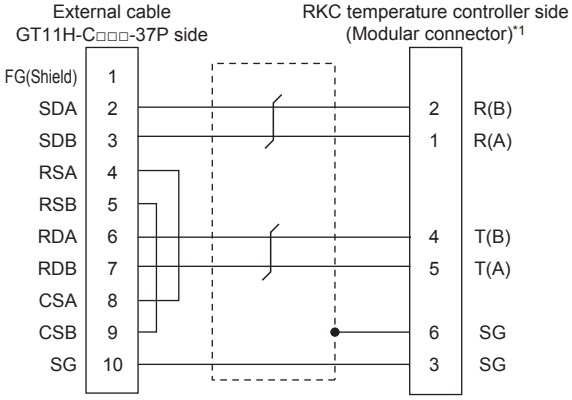

*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".

☞ Page 1715 Connecting terminating resistors

*2 For details of the pin assignment, refer to the following manual.

User's Manual of the RKC temperature controller

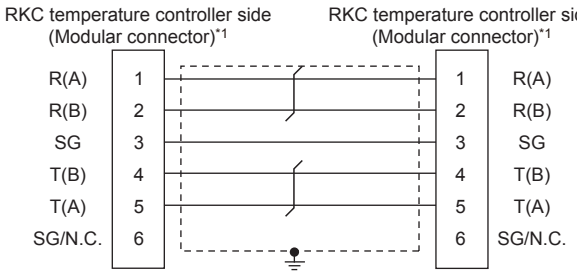
### ■RS-422 connection diagram 2)




*1 For details of the pin assignment, refer to the following manual.

User's Manual of the RKC temperature controller

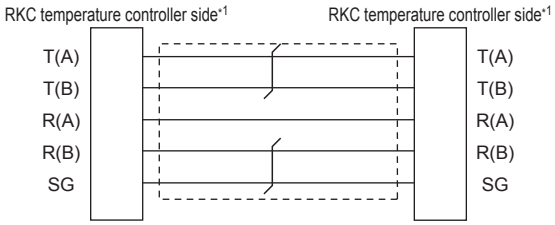
### ■RS-422 connection diagram 3)




*1 For details of the pin assignment, refer to the following manual.

User's Manual of the RKC temperature controller

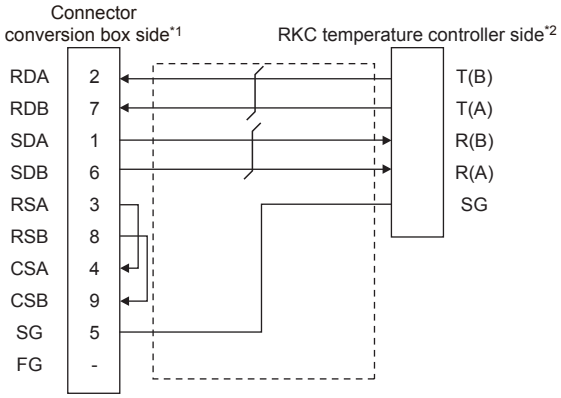
## ■RS-422 connection diagram 4)




*1 For the terminal number of the temperature controller, refer to the following table

| Signal name | Terminal No. | | | | |
|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900/901<br>AG500<br>HA400/401<br>HA900/901 | MA900<br>MA901 | B400<br>(RS-422 specifications) | FZ400<br>FZ900<br>PZ400<br>PZ900<br>GZ400<br>GZ900 |
| SG | 25 | 25 | 44 | 3/6 | 34 |
| T(A) | 26 | 26 | 45 | 5 | 35 |
| T(B) | 27 | 27 | 46 | 4 | 36 |
| R(A) | 28 | 28 | 47 | 1 | 32 |
| R(B) | 29 | 29 | 48 | 2 | 33 |

## ■RS-422 connection diagram 5)

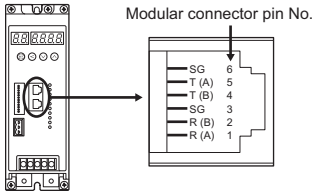



*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1715 Connecting terminating resistors

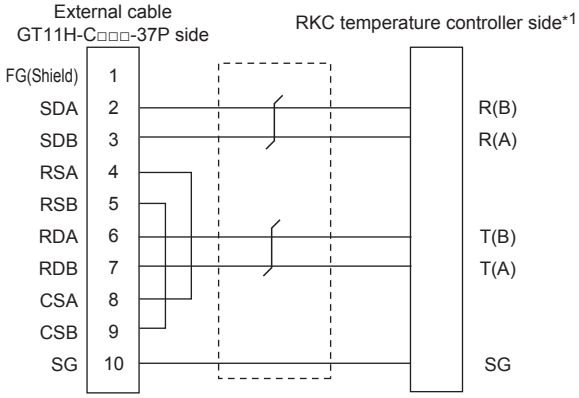
*2 For the terminal number of the temperature controller, refer to the following table

| Signal name | Terminal No. | | | | | |
|---|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900/901<br>AG500<br>HA400/401<br>HA900/901 | MA900<br>MA901 | THV-A1*3 | B400<br>(RS-422 specifications) | FZ400<br>FZ900<br>PZ400<br>PZ900<br>GZ400<br>GZ900 |
| SG | 25 | 25 | 44 | 3 | 3/6 | 34 |
| T(A) | 26 | 26 | 45 | 5 | 5 | 35 |
| T(B) | 27 | 27 | 46 | 4 | 4 | 36 |
| R(A) | 28 | 28 | 47 | 1 | 1 | 32 |
| R(B) | 29 | 29 | 48 | 2 | 2 | 33 |

*3 The following shows the pin assignment of the modular connector.



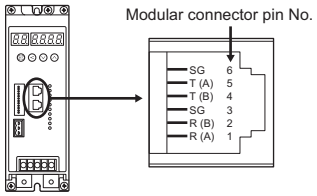
## ■RS-422 connection diagram 6)



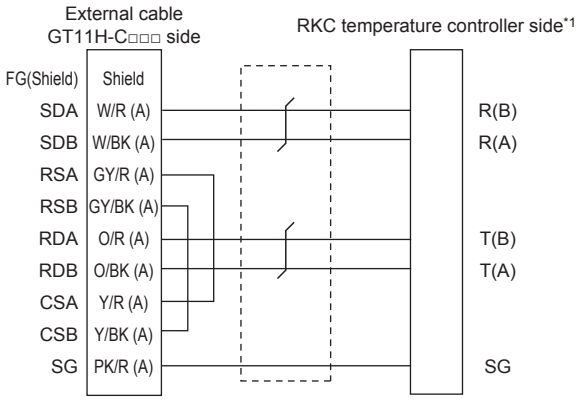

*1 For the terminal number of the temperature controller, refer to the following table

| Signal name | Terminal No. | | | | | |
|---|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900/901<br>AG500<br>HA400/401<br>HA900/901 | MA900<br>MA901 | THV-A1*2 | B400<br>(RS-422 specifications) | FZ400<br>FZ900<br>PZ400<br>PZ900<br>GZ400<br>GZ900 |
| SG | 25 | 25 | 44 | 3 | 3/6 | 34 |
| T(A) | 26 | 26 | 45 | 5 | 5 | 35 |
| T(B) | 27 | 27 | 46 | 4 | 4 | 36 |
| R(A) | 28 | 28 | 47 | 1 | 1 | 32 |
| R(B) | 29 | 29 | 48 | 2 | 2 | 33 |

*2 The following shows the pin assignment of the modular connector.



### ■RS-422 connection diagram 7)




*1 For the terminal number of the temperature controller, refer to the following table

| Signal name | Terminal No. | | | | |
|---|---|---|---|---|---|
| | FB400<br>FB900 | PF900/901<br>AG500<br>HA400/401<br>HA900/901 | MA900<br>MA901 | B400<br>(RS-422 specifications) | FZ400<br>FZ900<br>PZ400<br>PZ900<br>GZ400<br>GZ900 |
| SG | 25 | 25 | 44 | 3/6 | 34 |
| T(A) | 26 | 26 | 45 | 5 | 35 |
| T(B) | 27 | 27 | 46 | 4 | 36 |
| R(A) | 28 | 28 | 47 | 1 | 32 |
| R(B) | 29 | 29 | 48 | 2 | 33 |

## Precautions when preparing a cable

### ■Cable length

The length of the RS-422 cable must be within 13m (the total distance between the GOT and a controller).

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

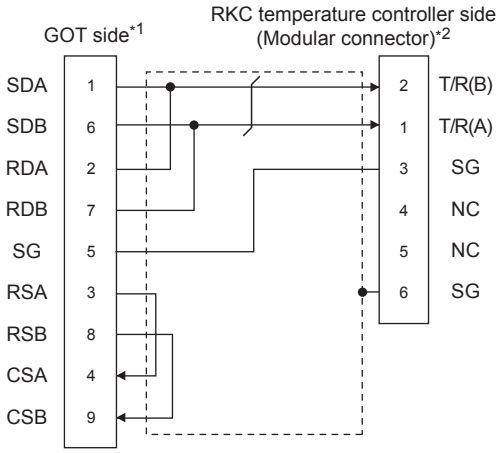
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# RS-485 cable

## Connection diagram

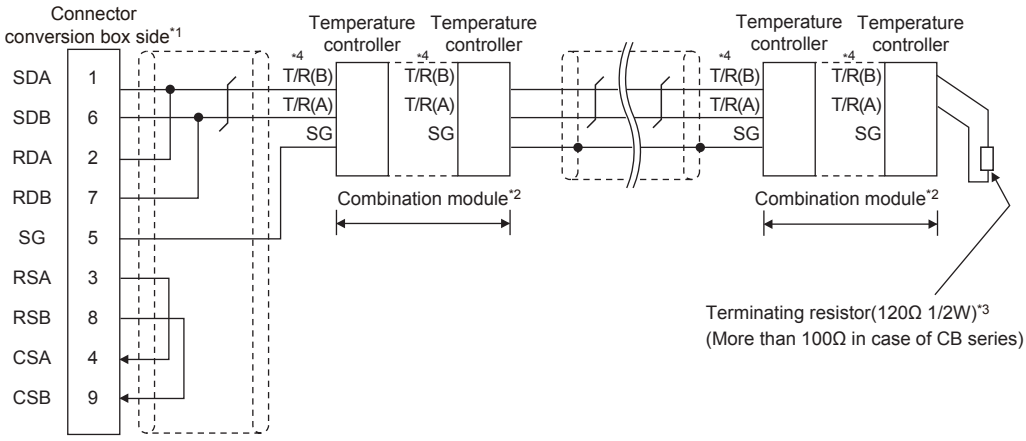
### ■RS-485 connection diagram 1)




*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1715 Connecting terminating resistors

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

## ■RS-485 connection diagram 2)




*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1715 Connecting terminating resistors

*2 When combining the module, because the communication line is connected between the modules with each other, wire only the communication terminal on the both end of the combination module.

*3 Terminating resistor should be provided for a temperature controller which will be a terminal.
When using X-TIO, turn ON the terminating resistor selector in the terminal base.
When combining the module, provide the terminating resistor to the end of the combination module (the one that is far from the converter).

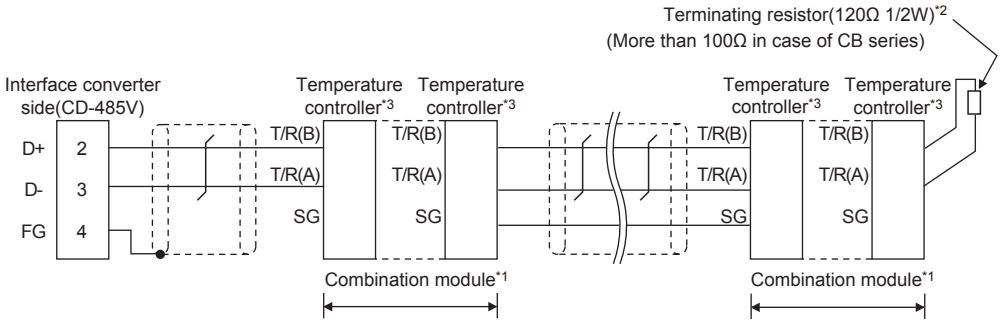
*4 For the terminal number of the temperature controller, refer to the following table.

| Signal name | Terminal No. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Z-TIO/ Z-CT | CB100/ CB400/ CB500/ CB900 | CB700 | FB100 | | FB400/FB90 | | RB100/ RB400/ RB500/ RB900 | RB700 |
| | | | | Communication 1 | Communication 2 | Communication 1 | Communication 2 | | |
| SG | 5 | 13 | 7 | 13 | 16 | 25 | 25 | 13 | 25 |
| T/R(A) | 3 | 14 | 8 | 14 | 17 | 26 | 28 | 14 | 26 |
| T/R(B) | 4 | 15 | 9 | 15 | 18 | 27 | 29 | 15 | 27 |

| Signal name | Terminal No. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PF900 PF901 AG500 | HA400/401 HA900/901 | | MA900/ MA901 | RMC500 | X-TIO | SA100 | SA200 | SB1 | B400 (RS-485 specifications) |
| | | Communication 1 | Communication 2 | | | | | | | |
| SG | 25 | 13 | 25 | 44 | 13 | 17 | 1 | 10 | 1 | 3/6 |
| T/R(A) | 26 | 14 | 26 | 45 | 14 | 16 | 2 | 11 | 2 | 1/5 |
| T/R(B) | 27 | 15 | 27 | 46 | 15 | 15 | 3 | 12 | 3 | 2/4 |

| Signal name | Terminal No. | | |
|---|---|---|---|
| | FZ110 | FZ400 FZ900 PZ400 PZ900 GZ400 GZ900 | RZ100 RZ400 |
| SG | 16 | 34 | 13 |
| T/R(A) | 17 | 35 | 14 |
| T/R(B) | 18 | 36 | 15 |

## ■RS-485 connection diagram 3)




*1 When combining the module, because the communication line is connected between the modules with each other, wire only the communication terminal on the both end of the combination module.

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
When using X-TIO, turn ON the terminating resistor selector in the terminal base.
When combining the module, provide the terminating resistor to the end of the combination module (the one that is far from the converter).

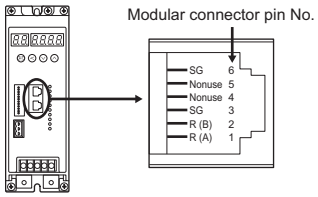
*3 For the terminal number of the temperature controller, refer to the following table.

| Signal name | Terminal No. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Z-TIO/ Z-CT | CB100/ CB400/ CB500/ CB900 | CB700 | FB100 | | FB400/FB90 | | RB100/ RB400/ RB500/ RB900 | RB700 |
| | | | | Communication 1 | Communication 2 | Communication 1 | Communication 2 | | |
| SG | 5 | 13 | 7 | 13 | 16 | 25 | 25 | 13 | 25 |
| T/R(A) | 3 | 14 | 8 | 14 | 17 | 26 | 28 | 14 | 26 |
| T/R(B) | 4 | 15 | 9 | 15 | 18 | 27 | 29 | 15 | 27 |

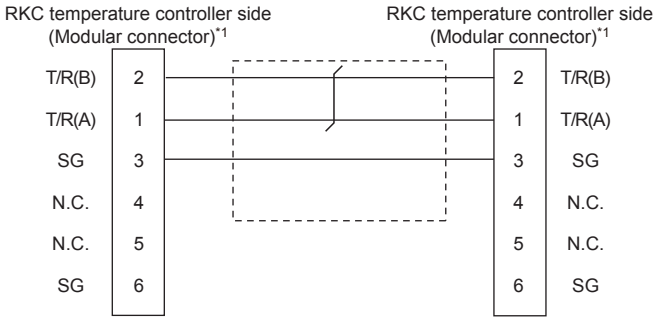
| Signal name | Terminal No. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | PF900 PF901 AG500 | HA400/401 HA900/901 | | MA900/ MA901 | RMC500 | THV-A1*4 | X-TIO | SA100 | SA200 |
| | | Communication 1 | Communication 2 | | | | | | |
| SG | 25 | 13 | 25 | 44 | 13 | 3 | 17 | 1 | 10 |
| T/R(A) | 26 | 14 | 26 | 45 | 14 | 1 | 16 | 2 | 11 |
| T/R(B) | 27 | 15 | 27 | 46 | 15 | 2 | 15 | 3 | 12 |

| Signal name | Terminal No. | | | |
|---|---|---|---|---|
| | FZ110 | FZ400 FZ900 PZ400 PZ900 GZ400 GZ900 | RZ100 RZ400 | SRJ |
| SG | 16 | 34 | 13 | 3 |
| T/R(A) | 17 | 35 | 14 | 5 |
| T/R(B) | 18 | 36 | 15 | 4 |

*4 The following shows the pin assignment of the modular connector.

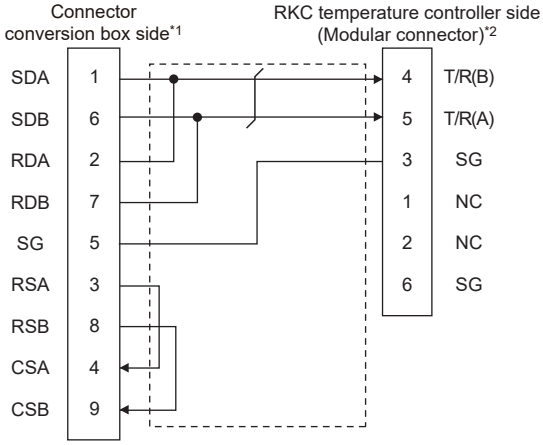


### ■RS-485 connection diagram 4)




*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

### ■RS-485 connection diagram 5)




*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1715 Connecting terminating resistors
*2 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

## Precautions when preparing a cable

### ■Cable length

The total length (between GOT and controllers) of the RS-485 cable must be 13m or shorter.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller.

## Connecting terminating resistors

### ■GOT side

- For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

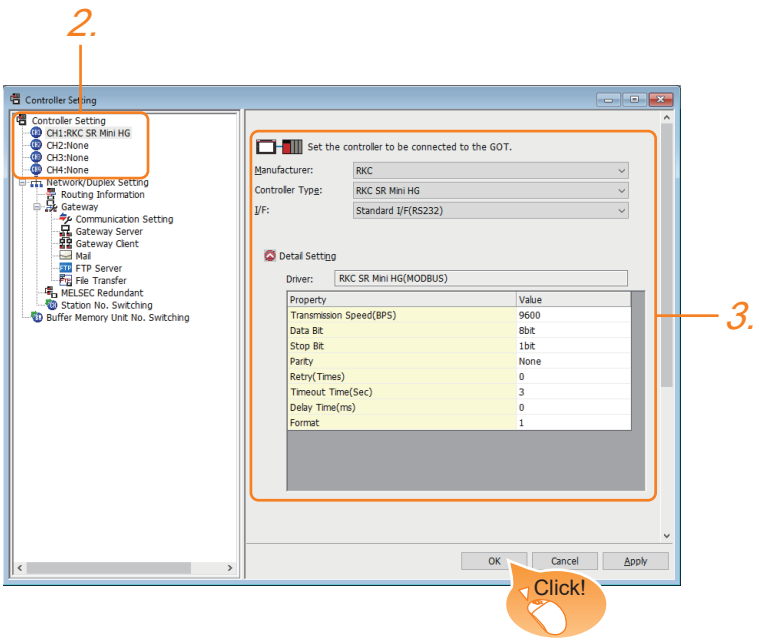
For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 36.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [RKC]
- [Controller Type]: [RKC SR Mini HG]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1717 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Retry(Times) | 0 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Format | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps<br>19200bps<br>38400bps<br>57600bps<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits<br>8bits |
| Stop Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 1bit) | 1bit<br>2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 0time) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |
| Format | Select the communication format.<br>(Default: 1)<br>Format 1: Accessible to H-PCP-J, H-PCP-A, H-PCP-B, SRZ, FB, PF, HA, MA, RMC, SRX, B400AG, THV, FZ, RZ, PZ, GZ series<br>Format 2: Accessible to CB series, RB, SA, SB1 series | 1<br>2 |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 36.5 Temperature Controller Side Setting

**Point**

YOKOGAWA temperature controller

For details of RKC temperature controller, refer to the following manual.

User's Manual of the RKC temperature controller

| Model name | | Refer to |
|---|---|---|
| Temperature controller | H-PCP-J | ☞ Page 1718 Connecting to SR Mini HG series (HGH-PCP-J) |
| | H-PCP-A, H-PCP-B | ☞ Page 1721 Connecting to SR Mini HG series (H-PCP-A, H-PCP-B) |
| | Z-TIO module, Z-DIO module, Z-CT module | ☞ Page 1722 Connecting to Z-TIO, Z-DIO, Z-CT |
| | Z-COM module | ☞ Page 1723 Connecting to Z-COM module |
| | SRJ Series | ☞ Page 1725 Connecting to SRJ Series |
| | CB Series | ☞ Page 1726 Connecting to CB Series |
| | FB Series | ☞ Page 1726 Connecting to FB Series |
| | RB Series | ☞ Page 1727 Connecting to RB Series |
| | PF900/901 | ☞ Page 1727 Connecting to PF series |
| | HA400/401, HA900/901 | ☞ Page 1728 Connecting to HA series |
| | AG500 | ☞ Page 1728 Connecting to AG series |
| | RMC500 | ☞ Page 1729 Connecting to RMC series |
| | MA900, MA901 | ☞ Page 1729 Connecting to MA series |
| | THV-A1 | ☞ Page 1730 Connecting to THV series |
| | SA100<br>SA200 | ☞ Page 1730 Connecting to SA series |
| | X-TIO module | ☞ Page 1731 Connecting to X-TIO Module |
| | SB1 | ☞ Page 1678 Connecting to SB1 series |
| | B400 | ☞ Page 1733 Connecting to B400 series |
| | FZ Series | ☞ Page 1735 Connecting to FZ Series |
| | RZ Series | ☞ Page 1736 Connecting to RZ Series |
| | PZ Series | ☞ Page 1737 Connecting to PZ Series |
| | GZ Series | ☞ Page 1738 Connecting to GZ Series |

## Connecting to SR Mini HG series (HGH-PCP-J)

### Communication settings

Make the communication settings of the temperature controller.

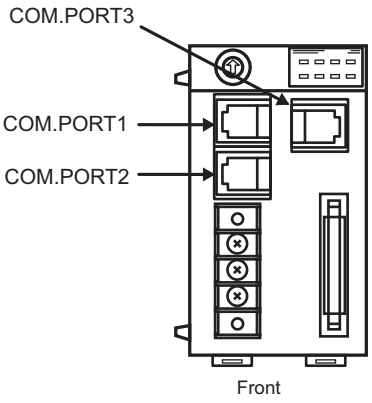
| Item | Setting range |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps, 38400bps |
| Communication mode | MODBUS |
| Data bit | 8bits |
| Parity bit | None |
| Stop bit*1 | 1bit |
| Unit address*2 | 0 to F |

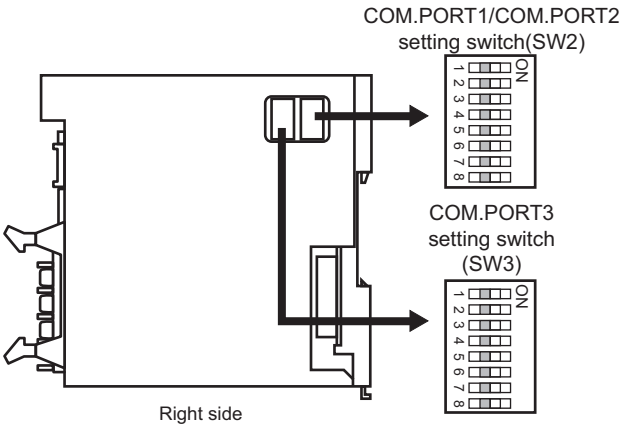
*1 Adjust the settings with GOT settings.

*2 Select the unit address without overlapping with that of other units.

## Setting DIP switches

Make the settings of transmission speed, communication mode, data length, parity bit and stop bit.




### ■Transmission speed settings

• COM.PORT1/COM.PORT2

| SW2 | | Communication speed |
|---|---|---|
| 3 | 4 | |
| OFF | OFF | 9600bps |
| ON | OFF | 19200bps |
| OFF | ON | 38400bps |

• COM.PORT3

| SW3 | | Communication speed |
|---|---|---|
| 3 | 4 | |
| OFF | OFF | 9600bps |
| ON | OFF | 19200bps |
| OFF | ON | 38400bps |

## ■Communication mode settings

• COM.PORT1/COM.PORT2

| SW2 | | | | Communication protocol |
|---|---|---|---|---|
| 5 | 6 | 7 | 8 | |
| ON | OFF | OFF | OFF | MODBUS protocol |

• COM.PORT3

| SW3 | Communication protocol |
|---|---|
| 5 | |
| ON | MODBUS protocol |

## ■Settings of data length, parity bit, and stop bit

• COM.PORT1/COM.PORT2

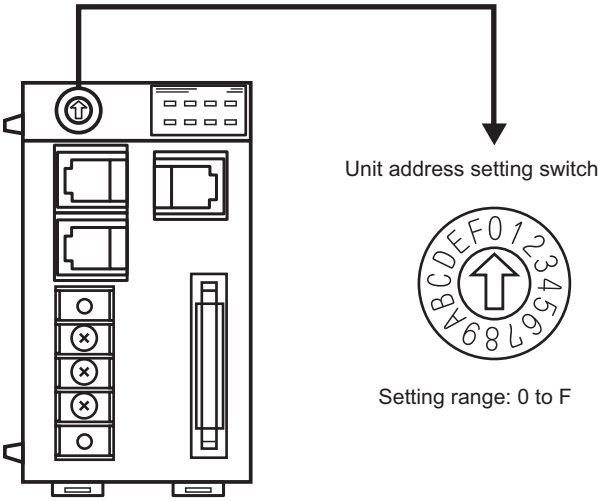
| SW2 | | Data bit configuration |
|---|---|---|
| 1 | 2 | |
| OFF | OFF | Data 8-bit, Non parity, Stop 1bit |

• COM.PORT3

| SW3 | | Data bit configuration |
|---|---|---|
| 1 | 2 | |
| OFF | OFF | Data 8-bit, Non parity, Stop 1bit |

# Unit address settings

Set the unit address using the unit address setting switch.



# Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)

## Communication settings

Make the communication settings of the temperature controller.

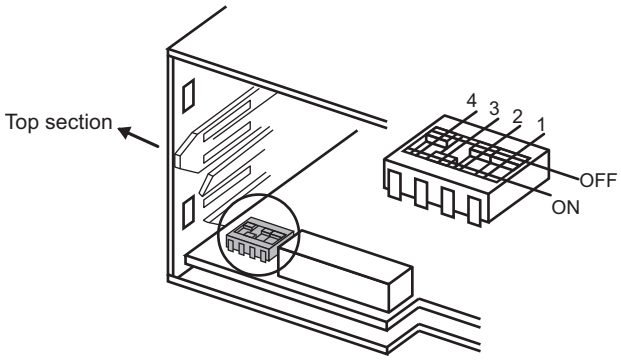
| Item | Setting range |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit | 8bits |
| Parity bit | None |
| Unit address*2 | 0 to F |

*1 Adjust the settings with GOT settings.
*2 Select the unit address without overlapping with that of other units.



## Setting DIP switches

Make the settings of transmission speed, data length, parity bit, and stop bit.




Rear view of module mainframe with mother block removed

### ■Transmission speed settings

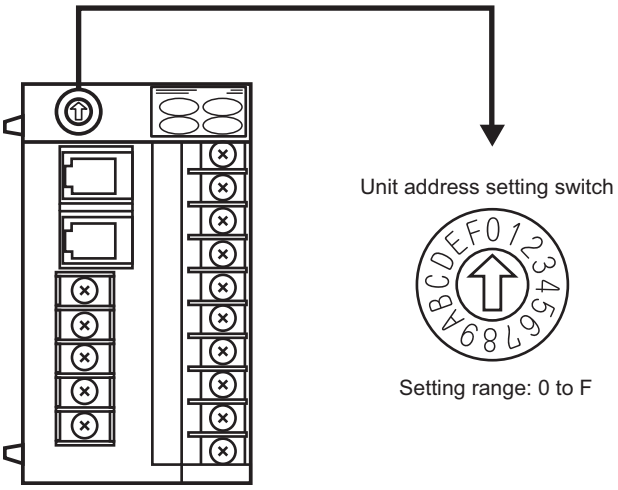
| 3 | 4 | Communication speed |
|---|---|---|
| OFF | ON | 9600bps |
| ON | ON | 19200bps |

### ■Settings of data length and parity bit

| 1 | 2 | Data bit configuration |
|---|---|---|
| OFF | OFF | Data 8-bit, Non parity |

## Unit address settings

Set the unit address using the unit address setting switch.



# Connecting to Z-TIO, Z-DIO, Z-CT

## Communication settings

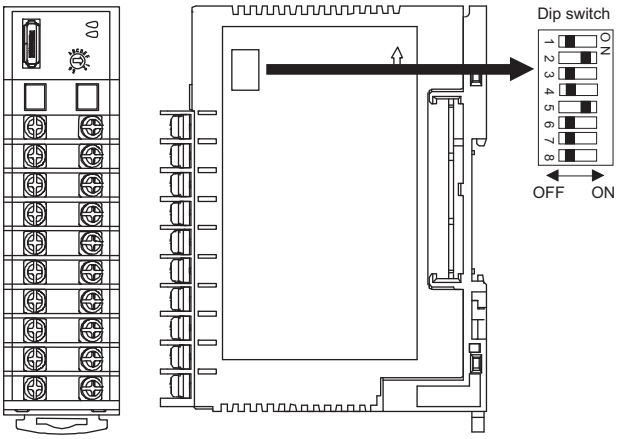
Make the communication settings of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps |
| Communication protocol | MODBUS |
| Data bit configuration | Data bit: 8bits, Parity: None |
| | Data bit: 8bits, Parity: Even |
| | Data bit: 8bits, Parity: Odd |
| | Stop bit: 1bit (fixed) |
| Unit address*2 | 0 to F |
| Interval time | 0 to 250ms |

*1 Adjust the settings with GOT settings.
*2 Select the module address without overlapping with that of other units.

## Setting DIP switches

Make the settings of transmission speed, data bit configuration, communication protocol

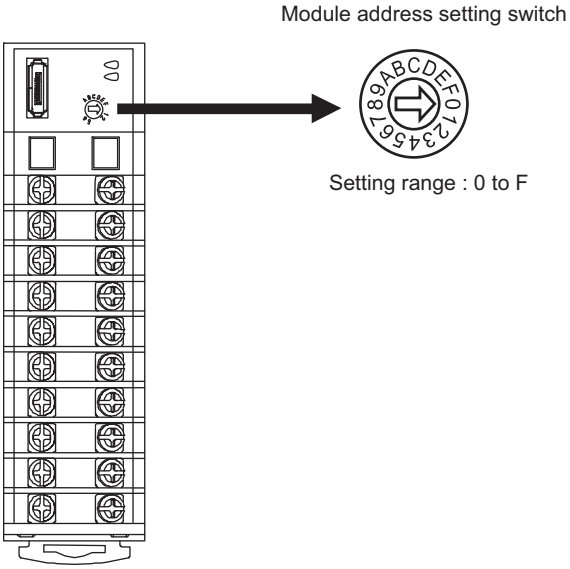



Front side Right side

| Setting item | Set value | Switch position | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| Communication speed | 9600bps | ON | OFF | | | | |
| | 19200bps | OFF | ON | | | | |
| | 38400bps | ON | ON | | | | |
| Data bit configuration | Data bit: 8bits, Parity: None | | | OFF | OFF | ON | |
| | Data bit: 8bits, Parity: Even | | | OFF | ON | ON | |
| | Data bit: 8bits, Parity: Odd | | | ON | ON | ON | |
| Communication protocol | MODBUS | | | | | | ON |

## Unit address settings

Set the unit address using the unit address setting switch.




## Interval time settings

Configure the interval time setting using the RKC communication setting tool (WinPCI).

After the communication is started, set as follows.

| Setting item | Set value |
|---|---|
| Instrument | 0 |
| CFG file | ZTIO_rkc.cfg |
| Interval time | 0 to 250ms |

For the using method of RKC communication setting tool, refer to the following.

📖RKC communication setting tool user's manual

# Connecting to Z-COM module

## Communication settings

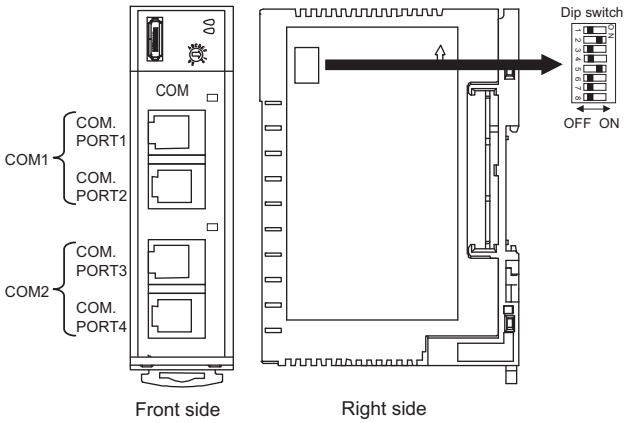
| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps |
| Communication protocol | Host (MODBUS) |
| Data bit | 8bits (fixed) |
| Parity | None (fixed) |
| Stop bit | 1bit (fixed) |
| Unit address*2 | 0 to F |
| Interval time | 0 to 250ms |
| Dip switch settings valid / invalid | valid |

*1 Adjust the settings with GOT settings.

*2 Select the unit address without overlapping with that of other units.

## Setting DIP switches

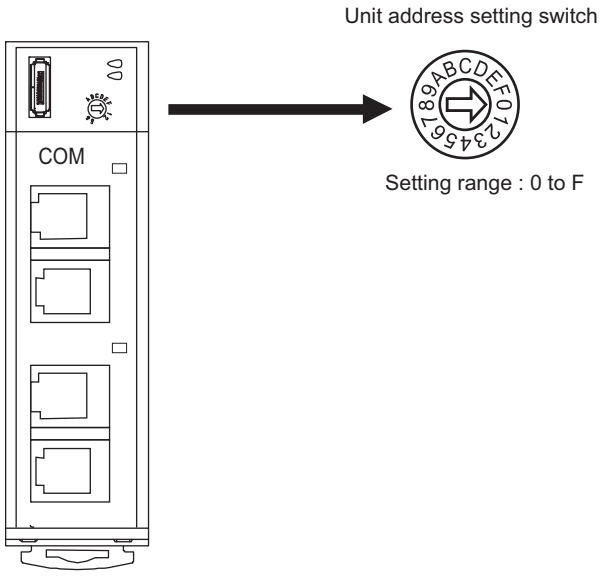
Make the settings of transmission speed, data bit configuration, communication protocol.




| Setting item | Set value | Switch position | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Communication speed (COM1) | 9600bps | ON | OFF | | | | | | |
| | 19200bps | OFF | ON | | | | | | |
| | 38400bps | ON | ON | | | | | | |
| Communication protocol (COM1) | Host (MODBUS) | | | ON | | | | | |
| Communication speed (COM2) | 9600bps | | | | OFF | | | | |
| | 19200bps | | | | ON | | | | |
| Communication protocol (COM2) | Host (MODBUS) | | | | | ON | OFF | OFF | |
| Dip switch settings valid / invalid | valid | | | | | | | | OFF |

## Unit address settings

Set the unit address using the unit address setting switch.



## Interval time settings

Configure the interval time setting using the RKC communication setting tool (WinPCI).

After the communication is started, set as follows.

| Setting item | Set value |
|---|---|
| Instrument | 0 |
| CFG file | ZCOM_rkc.cfg |
| Communication 1 interval time | 0 to 250ms |
| Communication 2 interval time | |

For the using method of RKC communication setting tool, refer to the following.

RKC communication setting tool user's manual



# Connecting to SRJ Series

## Communication settings

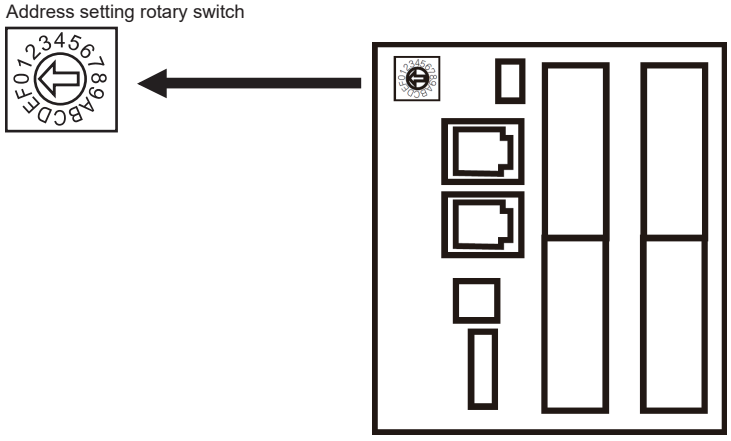
For the communication setting, use the RKC peripheral tool "PROTEM 2".

| Item | Setting range | Set value |
|---|---|---|
| Communication protocol | 0: RKC communication<br>1: MODBUS | 1: MODBUS |
| Communication speed | 0: 19200bps<br>1: 38400bps | Adjust the settings with GOT settings. |
| Interval time | 0 to 100ms | Set this as necessary. |

## Rotary switch setting

Set the station address using the address setting rotary switch.

Address setting rotary switch




Set the addresses of master stations and slave stations as shown below.

| Master station address | Slave station address range*1 |
|---|---|
| 0 | 1 to 3 |
| 4 | 5 to 7 |
| 8 | 9 to B |
| C | D to F |

*1 For J-TI-A/B, up to three slave stations are connectable to a master station.

# Connecting to CB Series

## Communication settings

| Item | Setting range |
|---|---|
| Device address*1 | 1 to 99 |
| Communication speed*2 | 2: 9600bps<br>3: 19200bps |
| Data bit configuration | 0: 8/1/None<br>6: 8/1/Even<br>7: 8/1/Odd |
| Interval time | 0 to 150 |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

## Communication setting mode

Set the communication setting mode using the operation panel of the CB series main unit.
For details of the communication setting mode, refer to the following.
CB series "Communication Instruction Manual"

# Connecting to FB Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS |
| Device address<br>(Slave address)*1 | 1 to 99 |
| Communication speed*2 | 96: 9600bps<br>19.2: 19200bps<br>38.4: 38400bps |
| Data bit configuration | Page 1726 Data bit configuration |
| Interval time | 0 to 250 |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

## Data bit configuration

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 8n1 | 8 | None | 1 |
| 8n2 | 8 | None | 2 |
| 8E1 | 8 | Even | 1 |
| 8E2 | 8 | Even | 2 |
| 8o1 | 8 | Odd | 1 |
| 8o2 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the FB series main unit.
For details of the communication setting mode, refer to the following.
FB series "Communication Instruction Manual"

# Connecting to RB Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS |
| Device address (Slave address)*1 | 1 to 99 |
| Communication speed*2 | 2: 9600bps<br>3: 19200bps |
| Data bit configuration | ☞ Page 1727 Data bit configuration |
| Interval time | 0 to 250 |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.



## Data bit configuration

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 2 | 8 | Even | 1 |
| 3 | 8 | Even | 2 |
| 4 | 8 | Odd | 1 |
| 5 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the RB series main unit.
For details of the communication setting mode, refer to the following.
RB series "Communication Instruction Manual"

# Connecting to PF series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed 1*1 | 9600bps, 19200bps, 38400bps, 57600bps |
| Communication protocol 1 | MODBUS |
| Data bit configuration 1*1 (Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address 1*2(Slave address 1) | 1 to 99*4 |
| Interval time*3 | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to HA series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

(Communication 1)

| Item | Setting range |
|---|---|
| Communication speed 1[*1] | 9600bps, 19200bps, 38400bps |
| Data bit configuration 1[*1]<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address 1[*2]<br>(Slave address 1) | 1 to 99[*4] |
| Interval time[*3] | 0 to 250 (ms) |

(Communication 2)

| Item | Setting range |
|---|---|
| Communication speed 2[*1] | 9600bps, 19200bps, 38400bps |
| Data bit configuration 2[*1]<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address 2[*2]<br>(Slave address 2) | 1 to 99[*4] |
| Interval time[*3] | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Select the device address1/2 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to AG series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed[*1] | 9600bps, 19200bps, 38400bps |
| Communication protocol | MODBUS |
| Data bit configuration[*1]<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address[*2]<br>(Slave address) | 1 to 99[*4] |
| Interval time[*3] | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to RMC series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps |
| Communication protocol | MODBUS |
| MODBUS data*2<br>Extension time | 0 to 255 (ms) |
| Data bit configuration*1<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address*3<br>(Slave address) | 1 to 99*4 |
| Interval time*5 | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Set the extension time for the data interval time in the MODBUS communication (which is lower than 24 bit time).
Set when the data time interval exceeds 24 bit time.
*3 Select the device address without overlapping with that of other units.
*4 When the setting value is set to 0, a communication is not made.
*5 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.

# Connecting to MA series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps |
| Data bit configuration*1<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address*2<br>(Slave address) | 1 to 99*4 |
| Interval time*3 | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to THV series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps (fixed) |
| Data bit configuration*1 | Data bit: 8bit (fixed)<br>Parity bit: None (fixed)<br>Stop bit: 1bit (fixed) |
| Device address*2<br>(Slave address) | 1 to 99*4 |
| Interval time*3 | 0 to 250 (ms) |

*1 Adjust the settings of the GOT side with the temperature controller settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to SA series

## Communication settings

Make the communication settings by operating the key of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps |
| Data bit configuration*1<br>(Data bit, Parity bit, Stop bit) | [8N1]: 8bit, None, 1bit<br>[8N2]: 8bit, None, 2bit<br>[8E1]: 8bit, Even, 1bit<br>[8E2]: 8bit, Even, 2bit<br>[8O1]: 8bit, Odd, 1bit<br>[8O2]: 8bit, Odd, 2bit |
| Device address*2<br>(Slave address) | 1 to 99*4 |
| Interval time*3 | 0 to 250 (ms) |

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

# Connecting to X-TIO Module

## Communication settings

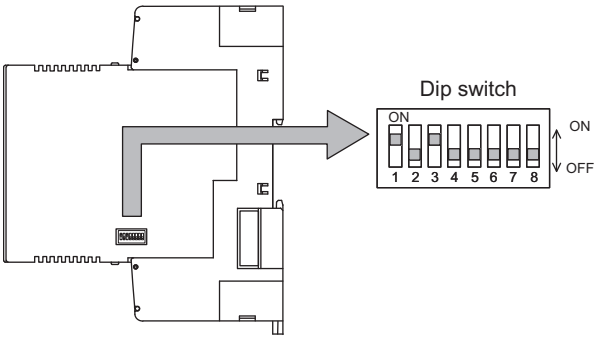
Make the communication settings of the temperature controller.

| Item | Setting range |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps |
| Communication protocol | MODBUS |
| Data bit configuration | Data bit: 8bit, Parity: None |
| | Data bit: 8bit, Parity: Even |
| | Data bit: 8bit, Parity: Odd |
| | Stop bit: 1bit (fixed) |
| Module address*2 | 1 to 99 |
| Internal data bus terminating resistor | When combining the module, turn ON the internal data bus terminating resistor at both ends of the module. |
| Data interval extension time | 0 to 99ms |

*1 Adjust the settings with GOT settings.
*2 When the setting value is set to 0, a communication is not made.

## Setting DIP switches

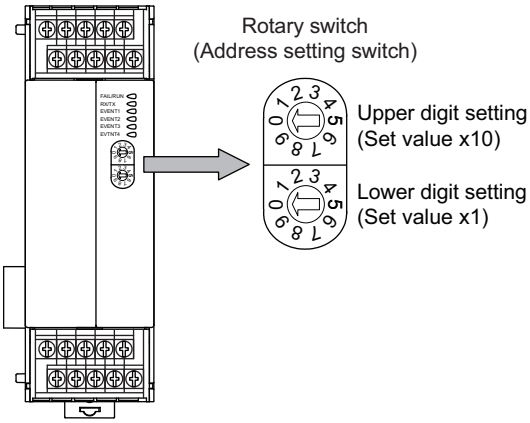
Make the settings of transmission speed, data bit configuration, communication protocol.




| Setting item | Set value | Switch position | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Communication speed | 9600bps | ON | OFF | | | | | | |
| | 19200bps | OFF | ON | | | | | | |
| | 38400bps | ON | ON | | | | | | |
| Data bit configuration | Data bit: 8bit, Parity: None | | | ON | OFF | OFF | | | |
| | Data bit: 8bit, Parity: Even | | | ON | OFF | ON | | | |
| | Data bit: 8bit, Parity: Odd | | | ON | ON | ON | | | |
| Communication protocol | MODBUS | | | | | | ON | | |
| Internal data bus termination resistor setting | OFF | | | | | | | | OFF |
| | ON | | | | | | | | ON |
| Data interval extension time | 0 to 99ms | | | | ON | OFF | ON | | |

## Module address settings

Set the unit address using the rotary switch (address setting switch).




**Point**

The rotary switch (address setting switch) is also used for the data interval extension time setting.
The setting method is the same as that of the module address.
For the data interval extension time, refer to the following.
☞ Page 1732 Data interval extension time settings

## Data interval extension time settings

Set the data interval extension time as the following procedure.

***1.*** Turn the power of the module OFF.

***2.*** Set the DIP switch 4 and 6 to ON and 5 to OFF.

***3.*** Set the data interval extension time using the rotary switch (address setting switch).

For the setting method, refer to the following.
☞ Page 1732 Module address settings

***4.*** Turn the power of the module ON.

The FAIL/RUN lamp lights in green and the set time becomes valid.

***5.*** Turn the power of the module OFF again and set the DIP switches and rotary switch to the original position.

# Connecting to SB1 series

## Communication settings

Make the communication settings of SB1 using the switch key on the front surface.

For the operation procedure, refer to the SB1 manual.

| Item | Setting range |
|---|---|
| Communication protocol*2 | 0: RKC communication<br>1: MODBUS |
| Device address*1*3<br>(Slave address) | 0 to 99 |
| Communication speed*1*4 | 0: 2400bps<br>1: 4800bps<br>2: 9600bps<br>3: 19200bps |
| Data bit configuration*1*5 | 0 to 5 |
| Interval time*6 | 0 to 250ms |

*1 Adjust the settings with GOT settings.

*2 Select 1: MODBUS.

*3 When the setting value is 0, communication is not performed.

*4 The communication speed cannot be set to 2400bps or 4800bps on the GOT side. Select 2 or 3.

*5 For details on the data bit configuration, refer to the following.

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 2 | 8 | Even | 1 |
| 3 | 8 | Even | 2 |
| 4 | 8 | Odd | 1 |
| 5 | 8 | Odd | 2 |

*6 Set the maximum time from when the last character stop bit is sent from the GOT side until the transmission cable becomes ready to receive.

# Connecting to B400 series

## Communication settings

Make the communication settings of B400 using the rotary switch key and the DIP switch.

For the operation procedure, refer to the B400 manual.

| Item | Setting range | Settings |
|---|---|---|
| Unit address setting<br>(CH1 to CH8) | 0 to 99*1 | Page 1734 Rotary switch setting (SW1, SW2) |
| Communication speed | 4800bps, 9600bps, 19200bps, 38400bps | Page 1734 DIP switch setting (SW3) |
| Data bit configuration | 0 to 5 | |
| Communication specification setting | RS-422A, RS-485 | Page 1735 DIP switch settings (SW4) |
| Termination resistor setting | Enable, Disable | |

*1 When the setting value is 98 or 99, the communication address is the same as for 97.

## ■Rotary switch setting (SW1, SW2)

Set the unit address using the rotary switch.

Rotary switch
(Address setting switch)



SW1: Lower digit setting
(Set value x1)



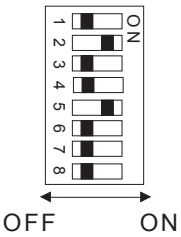
SW2: Upper digit setting
(Set value x10)

| Item | Setting range |
|---|---|
| Unit address setting<br>(CH1 to CH4) | The communication address is the rotary switch setting value + 1. |
| Unit address setting<br>(CH5 to CH8) | The communication address is the rotary switch setting value + 2. |

## ■DIP switch setting (SW3)

Set the communication speed and the data bit configuration using the DIP switch (SW3).

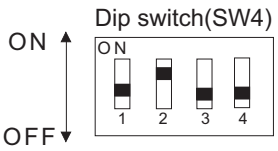
Dip switch(SW3)




| Setting item | Set value | Switch position | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Communication speed | 4800bps | OFF | OFF | - | | | | | |
| | 9600bps | ON | OFF | | | | | | |
| | 19200bps | OFF | ON | | | | | | |
| | 38400bps | ON | ON | | | | | | |
| Data bit configuration | Data bit:<br>8 bits,<br>Parity:<br>None, Stop: 2 bits | - | | OFF | OFF | - | | | |
| | Data bit:<br>8 bits,<br>Parity:<br>None, Stop: 1 bit | - | | ON | OFF | - | | | |
| | Data bit:<br>8 bits,<br>Parity:<br>Even, Stop: 1 bit | - | | OFF | ON | - | | | |
| | Data bit:<br>8 bits,<br>Parity:<br>Odd, Stop: 1 bit | - | | ON | ON | - | | | |

### ■DIP switch settings (SW4)

Set the communication specifications and the termination resistor using the DIP switch (SW4).




| Setting item | Set value | Switch position | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Communication specification setting | RS-422A | OFF | OFF | - | |
| | RS485 | ON | ON | - | |
| Termination resistor setting | Enable | - | | | ON |
| | Disable | - | | | OFF |



# Connecting to FZ Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS (Data transfer order: Higher → Lower) |
| Device address (Slave address)*1 | 1 to 99 |
| Communication speed*2 | 0: 2400bps<br>1: 4800bps<br>2: 9600bps<br>3: 19200bps<br>4: 38400bps<br>5: 57600bps |
| Data bit configuration | ☞ Page 1735 Data bit configuration |
| Interval time | 0 to 250 |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

## Data bit configuration

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 2 | 8 | Even | 1 |
| 3 | 8 | Even | 2 |
| 4 | 8 | Odd | 1 |
| 5 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the FZ series main unit.

For details of the communication setting mode, refer to the following.

📖FZ Series User's Manual

# Connecting to RZ Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS |
| Device address (Slave address)*1 | 1 to 99 |
| Communication speed*2 | 0: 2400bps<br>1: 4800bps<br>2: 9600bps<br>3: 19200bps<br>4: 38400bps |
| Data bit configuration | ☞ Page 1736 Data bit configuration |
| Interval time | 0 to 150 |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

## Data bit configuration

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 6 | 8 | Even | 1 |
| 7 | 8 | Odd | 1 |
| 8 | 8 | Even | 2 |
| 9 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the RZ series main unit.

For details of the communication setting mode, refer to the following.

📖RZ Series User's Manual

# Connecting to PZ Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS (Data transfer order: Higher→Lower) |
| Device address (Slave address) *1 | 1 to 99 |
| Communication speed *2 | 0:2400bps<br>1:4800bps<br>2:9600bps<br>3:19200bps<br>4:38400bps<br>5:57600bps |
| Data bit configuration | 0 to 5<br>For details on the setting value, refer to the following.<br>☞ Page 1737 Data bit configuration |
| Interval time | 0 to 250ms |

*1 When the setting value is set to 0, a communication is not made.

*2 Adjust the settings with GOT settings.

## Data bit configuration

| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 2 | 8 | Even | 1 |
| 3 | 8 | Even | 2 |
| 4 | 8 | Odd | 1 |
| 5 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the PZ series main unit.

For details of the communication setting mode, refer to the following.

📖PZ Series User's Manual

# Connecting to GZ Series

## Communication settings

| Item | Setting range |
|---|---|
| Communication protocol | 1: MODBUS (Data transfer order: Higher→Lower) |
| Device address (Slave address) *1 | 1 to 99 |
| Communication speed *2 | 0:2400bps<br>1:4800bps<br>2:9600bps<br>3:19200bps<br>4:38400bps<br>5:57600bps<br>6:115200bps |
| Data bit configuration | 0 to 5<br>For details on the setting value, refer to the following.<br>☞ Page 1738 Data bit configuration |
| Interval time | 0 to 250ms |

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

## Data bit configuration

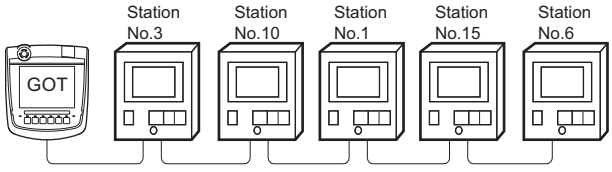
| Set value | Data bit | Parity bit | Stop bit |
|---|---|---|---|
| 0 | 8 | None | 1 |
| 1 | 8 | None | 2 |
| 2 | 8 | Even | 1 |
| 3 | 8 | Even | 2 |
| 4 | 8 | Odd | 1 |
| 5 | 8 | Odd | 2 |

## Communication setting mode

Set the communication setting mode using the operation panel of the GZ series main unit.
For details of the communication setting mode, refer to the following.
GZ Series User's Manual

# Station number setting

Set each station number so that no station number overlaps.
The station number can be set without regard to the cable connection order.
There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

The station number setting range of the temperature controller side differs from that of the GOT side.

Specify the station No. of the temperature controller to be changed when setting devices referring the following table.

| Temperature controller | Module address setting of temperature controller side | GOT side station number setting | Remark |
|---|---|---|---|
| H-PCP-J<br>H-PCP-A<br>H-PCP-B<br>Z-TIO<br>Z-COM | 0 to F<br>(Hexadecimal) | 1 to 16<br>(Decimal) | The GOT side station number setting is the module address setting value +1. |
| Z-DIO | 0 to F<br>(Hexadecimal) | 17 to 32<br>(Decimal) | The GOT side station number setting is the module address setting value +17. |
| Z-CT | 0 to F<br>(Hexadecimal) | 33 to 48<br>(Decimal) | The GOT side station number setting is the module address setting value +33. |
| X-TIO | 1 to 99<br>(Decimal) | 2 to 100<br>(Decimal) | The GOT side station number setting is the module address setting value +1. |
| CB, FB, RB, PF, AG, HA, MA, RMC, THV, SA, SB1 | 1 to 99<br>(Decimal) | 1 to 99<br>(Decimal) | The GOT side station number setting is the same as the module address setting value. |
| B400 | 1 to 99<br>(Decimal) | 1 to 99<br>(Decimal) | The GOT side station number is the module address setting value +1 or +2. |

## Indirect specification

When setting the device, indirectly specify the station number of the temperature controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 100 | GD10 | 1 to 99<br>For the setting other than the above, error (dedicated device is out of range) will occur. |
| 101 | GD11 | |
| 102 | GD12 | |
| 103 | GD13 | |
| 104 | GD14 | |
| 105 | GD15 | |
| 106 | GD16 | |
| 107 | GD17 | |
| 108 | GD18 | |
| 109 | GD19 | |
| 110 | GD20 | |
| 111 | GD21 | |
| 112 | GD22 | |
| 113 | GD23 | |
| 114 | GD24 | |
| 115 | GD25 | |

# 36.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

RKC equipment ([RKC SR Mini HG])

# 36.7 Precautions

## Station number setting of the temperature controller system

Make sure to establish temperature controller system with No.01 station.

## GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

## Disconnecting some of multiple connected equipment

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

## Precautions for using 32-bit data

The storage order of 32-bit data of the RKC temperature controller is from lower-order bits by default.

Configure the following settings according to the temperature controller to be used.

### ■FZ, PZ and GZ series

Set the communication protocol from the higher-order bit to the lower-order bit on the temperature controller side.

For the details, refer to the following.

☞ Page 1735 Connecting to FZ Series
☞ Page 1737 Connecting to PZ Series
☞ Page 1738 Connecting to GZ Series

### ■Other than FZ, PZ and GZ series

Use [MODBUS/RTU Master] for the communication driver.

Configure the following settings in the [Controller Setting] window in GT Designer3.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [Detail Setting]: [LH Order] for [32bit Order]

For details on the MODBUS/RTU master connection, refer to the following manual.

📖GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

# 37 ALLEN-BRADLEY PLC


- Page 1741 Connectable Model List
- Page 1744 Serial Connection
- Page 1761 Ethernet Connection
- Page 1774 Settable Device Range


## 37.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| SLC500 | SLC500-20 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1744 Connecting to SLC500 series |
| | SLC500-30 | | | | |
| | SLC500-40 | | | | |
| | SLC5/01 | | | | |
| | SLC5/02 | | | | |
| | SLC5/03 | ○ | RS-232 | GT2506HS GT2505HS | |
| | SLC5/04 | | | | |
| | SLC5/05 | | | | |
| MicroLogix1000 (Digital CPU) | 1761-L10BWA | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1746 Connecting to MicroLogix series |
| | 1761-L10BWB | | | | |
| | 1761-L16AWA | | | | |
| | 1761-L16BWA | | | | |
| | 1761-L16BWB | | | | |
| | 1761-L16BBB | | | | |
| | 1761-L32AWA | | | | |
| | 1761-L32BWA | | | | |
| | 1761-L32BWB | | | | |
| | 1761-L32BBB | | | | |
| | 1761-L32AAA | | | | |
| MicroLogix1000 (Analog CPU) | 1761-L20AWA-5A | × | RS-232 | GT2506HS GT2505HS | |
| | 1761-L20BWA-5A | | | | |
| | 1761-L20BWB-5A | | | | |
| MicroLogix1100 | 1763-L16BWA | × | RS-232 | GT2506HS GT2505HS | |
| MicroLogix1200 | 1762-L24BWA | × | RS-232 | GT2506HS GT2505HS | |
| MicroLogix1400 | 1766-L32AWA | × | RS-232 | GT2506HS GT2505HS | |
| MicroLogix1500 | 1764-LSP | × | RS-232 | GT2506HS GT2505HS | |
| | 1764-LRP | | | | |

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| ControlLogix | 1756-L | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1749 Connecting to ControlLogix, CompactLogix, or FlexLogix series |
| | 1756-L1M1 | | | | |
| | 1756-L1M2 | | | | |
| | 1756-L1M3 | | | | |
| | 1756-L61 | | | | |
| | 1756-L62 | | | | |
| | 1756-L63 | | | | |
| | 1756-L64 | | | | |
| | 1756-L55M12 | | | | |
| | 1756-L55M13 | | | | |
| | 1756-L55M14 | | | | |
| | 1756-L55M16 | | | | |
| | 1756-L55M22 | | | | |
| | 1756-L55M23 | | | | |
| | 1756-L55M24 | | | | |
| CompactLogix | 1769-L31 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1749 Connecting to ControlLogix, CompactLogix, or FlexLogix series |
| | 1769-L32C | | | | |
| | 1769-L35CR | | | | |
| FlexLogix | 1794-L33 | × | RS-232 | GT2506HS GT2505HS | ☞ Page 1749 Connecting to ControlLogix, CompactLogix, or FlexLogix series |
| | 1794-L34 | | | | |
| MicroLogix1000 (Digital CPU) | 1761-L10BWA | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1762 Ethernet connection type: Connecting to Ethernet (AB) |
| | 1761-L10BWB | | | | |
| | 1761-L16AWA | | | | |
| | 1761-L16BWA | | | | |
| | 1761-L16BWB | | | | |
| | 1761-L16BBB | | | | |
| | 1761-L32AWA | | | | |
| | 1761-L32BWA | | | | |
| | 1761-L32BWB | | | | |
| | 1761-L32BBB | | | | |
| | 1761-L32AAA | | | | |
| MicroLogix1000 (Analog CPU) | 1761-L20AWA-5A | × | Ethernet | GT2506HS GT2505HS | |
| | 1761-L20BWA-5A | | | | |
| | 1761-L20BWB-5A | | | | |
| MicroLogix1100 | 1763-L16BWA | × | Ethernet | GT2506HS GT2505HS | |
| MicroLogix1200 | 1762-L24BWA | × | Ethernet | GT2506HS GT2505HS | |
| MicroLogix1400 | 1766-L32AWA | × | Ethernet | GT2506HS GT2505HS | |
| MicroLogix1500 | 1764-LSP | × | Ethernet | GT2506HS GT2505HS | |
| | 1764-LRP | | | | |

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| ControlLogix | 1756-L | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1762 Ethernet connection type: Connecting to Ethernet (AB)<br>☞ Page 1764 Ethernet connection type: Connecting to Ethernet (AB Tag) |
| | 1756-L1M1 | | | | |
| | 1756-L1M2 | | | | |
| | 1756-L1M3 | | | | |
| | 1756-L61 | | | | |
| | 1756-L62 | | | | |
| | 1756-L63 | | | | |
| | 1756-L64 | | | | |
| | 1756-L55M12 | | | | |
| | 1756-L55M13 | | | | |
| | 1756-L55M14 | | | | |
| | 1756-L55M16 | | | | |
| | 1756-L55M22 | | | | |
| | 1756-L55M23 | | | | |
| | 1756-L55M24 | | | | |
| ControlLogix | 1756-L72S | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1762 Ethernet connection type: Connecting to Ethernet (AB)<br>☞ Page 1764 Ethernet connection type: Connecting to Ethernet (AB Tag) |
| | 1756-L71 | | | | |
| | 1756-L72 | | | | |
| | 1756-L73 | | | | |
| | 1756-L74 | | | | |
| | 1756-L75 | | | | |
| | 1756-L81E | | | | |
| | 1756-L82E | | | | |
| | 1756-L83E | | | | |
| | 1756-L84E | | | | |
| | 1756-L85E | | | | |
| CompactLogix | 1769-L31 *1 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1762 Ethernet connection type: Connecting to Ethernet (AB)<br>☞ Page 1764 Ethernet connection type: Connecting to Ethernet (AB Tag) |
| | 1769-L32C *1 | | | | |
| | 1769-L35CR *1 | | | | |
| | 1769-L32E | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1762 Ethernet connection type: Connecting to Ethernet (AB)<br>☞ Page 1764 Ethernet connection type: Connecting to Ethernet (AB Tag) |
| | 1769-L35E | | | | |
| FlexLogix | 1794-L33 *2 | × | Ethernet | GT2506HS GT2505HS | ☞ Page 1764 Ethernet connection type: Connecting to Ethernet (AB Tag) |
| | 1794-L34 *2 | | | | |

*1 1769-L31, 1769-L32C, and 1769-L35CR do not support Ethernet connection type: Ethernet (AB Tag).

*2 1794-L33 and 1794-L34 do not support Ethernet connection type: Ethernet (AB).

# 37.2 Serial Connection

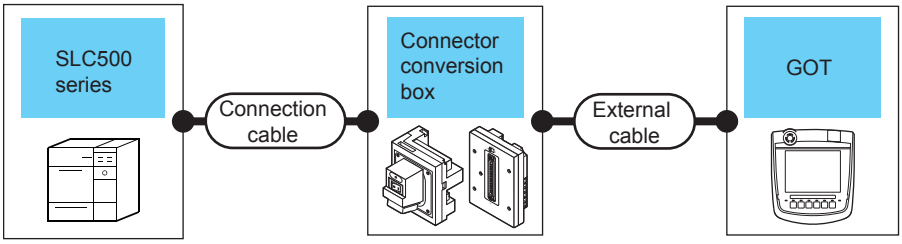
## Connecting to SLC500 series

Communication driver

AB SLC500, AB 1:N

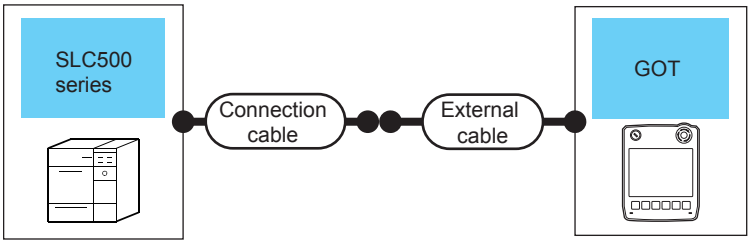
### When connecting to one PLC

#### ■When using the connector conversion box



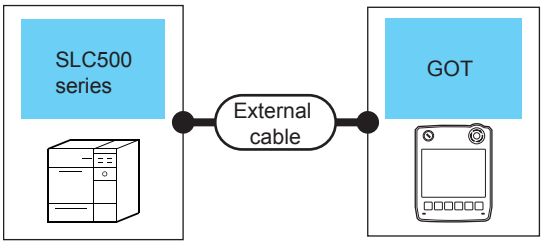

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | | |
| SLC500 | RS-232 | GT09-C30R20701-9S(3m)<br>or<br>User preparing RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

#### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | |
| SLC500 | RS-232 | User preparing RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

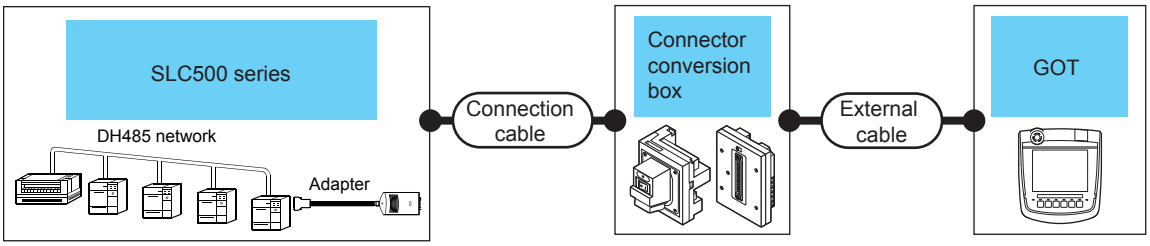
#### ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| SLC500 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 PLC |

## When connecting to multiple PLCs

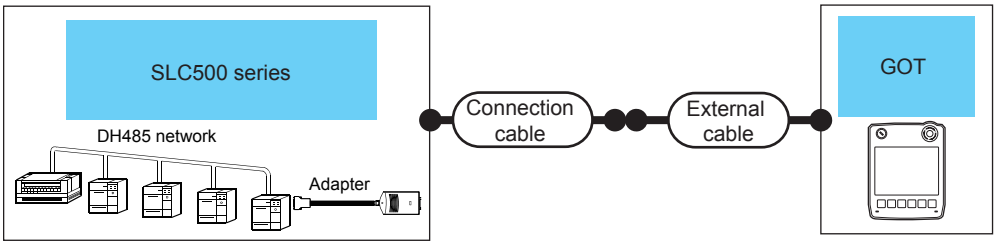
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SLC500 | 1770-KF3 | RS-232 | User preparing RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (Connection cable + External cable)

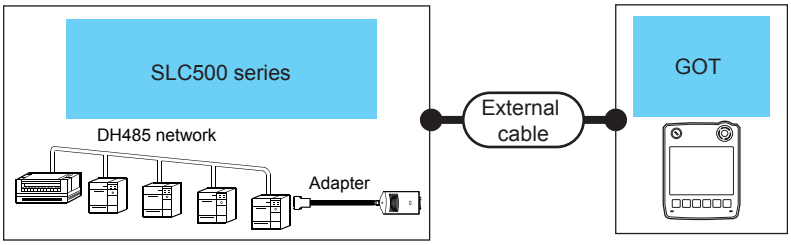
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| SLC500 | 1770-KF3 | RS-232 | User preparing RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 adapter |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (Connection cable + External cable)

### ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Adapter*1 | Communication Type | | | | |
| SLC500 | 1770-KF3 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 adapter |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (External cable)

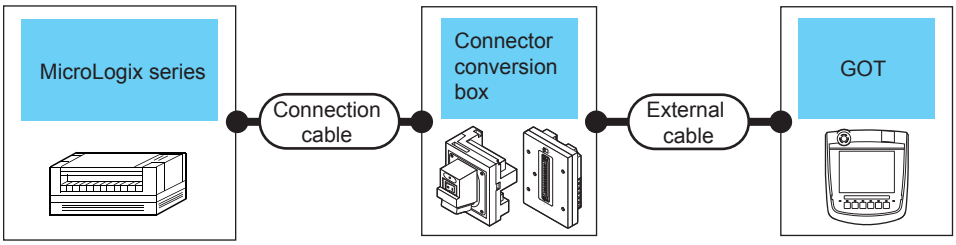
# Connecting to MicroLogix series

Communication driver

AB MicroLogix

## When connecting to one PLC

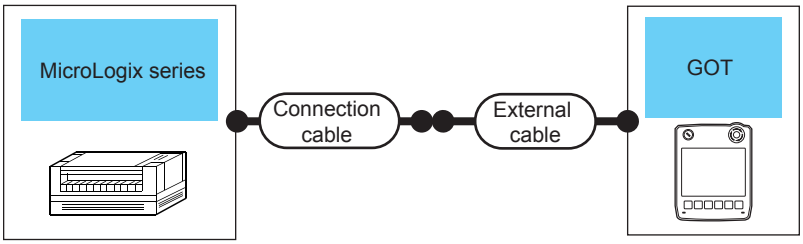
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series*2 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| MicroLogix1000 *3<br>MicroLogix1100 *3<br>MicroLogix1200 *3<br>MicroLogix1400 *3<br>MicroLogix1500 *3 | RS-232 | 1761-CBL-PM02*1<br>(Series C or later)<br>or<br>User preparing RS232 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| MicroLogix1400 *4 | | GT09-C30R20701-9S(3m)<br>or<br>User preparing RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

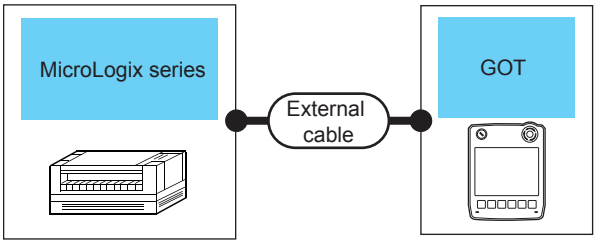
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series*2 | Communication Type | Cable model<br>Connection diagram number | | | | |
| MicroLogix1000 *3<br>MicroLogix1100 *3<br>MicroLogix1200 *3<br>MicroLogix1400 *3<br>MicroLogix1500 *3 | RS-232 | User preparing RS232 connection diagram 8) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| MicroLogix1400 *4 | RS-232 | User preparing RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

### ■When using the external cable (GT11H-C□□□)

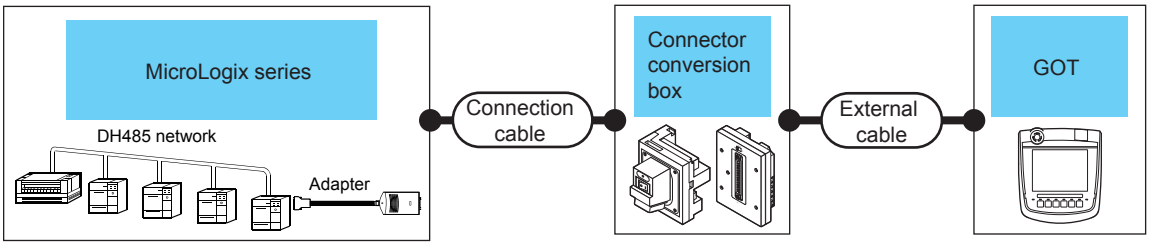



| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series*2 | Communication Type | | | | |
| MicroLogix1000 *3<br>MicroLogix1100 *3<br>MicroLogix1200 *3<br>MicroLogix1400 *3<br>MicroLogix1500 *3 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 9) | GT 2505HS | 6m | 1 GOT for 1 PLC |
| MicroLogix1400 *4 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 3) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

## When connecting to multiple PLCs

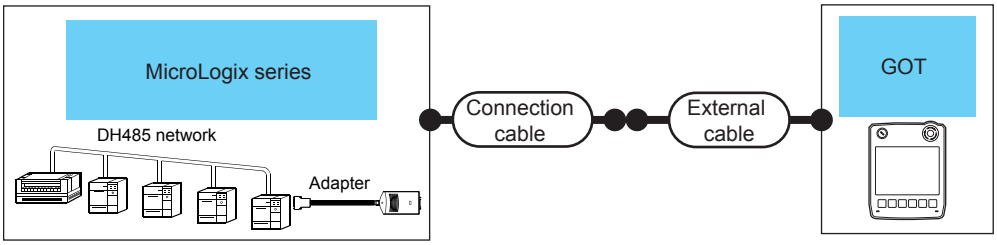
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series*2 | Adapter*1 | Communication Type | Cable model<br>Connection diagram number | | | | | |
| MicroLogix1000<br>MicroLogix1100<br>MicroLogix1200<br>MicroLogix1400<br>MicroLogix1500 | 1770-KF3 | RS-232 | User preparing RS232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (Connection cable + External cable)

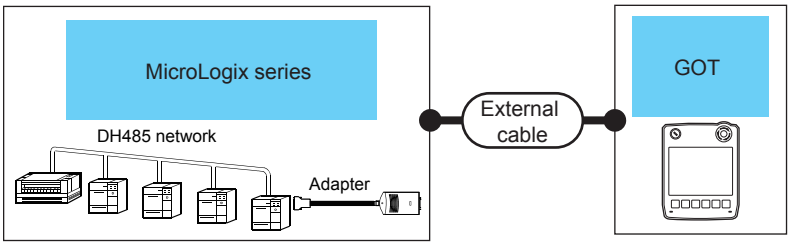
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series*2 | Adapter*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| MicroLogix1000<br>MicroLogix1100<br>MicroLogix1200<br>MicroLogix1400<br>MicroLogix1500 | 1770-KF3 | RS-232 | User preparing RS232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 adapter |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (Connection cable + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance *3 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series*2 | Adapter*1 | Communication Type | | | | |
| MicroLogix1000<br>MicroLogix1100<br>MicroLogix1200<br>MicroLogix1400<br>MicroLogix1500 | 1770-KF3 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 6) | GT 2505HS | 6m | 1 GOT for 1 adapter |

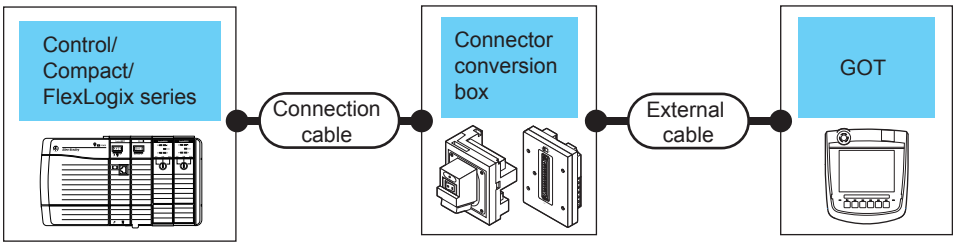
*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (External cable)

# Connecting to ControlLogix, CompactLogix, or FlexLogix series

Communication driver

AB Control/CompactLogix

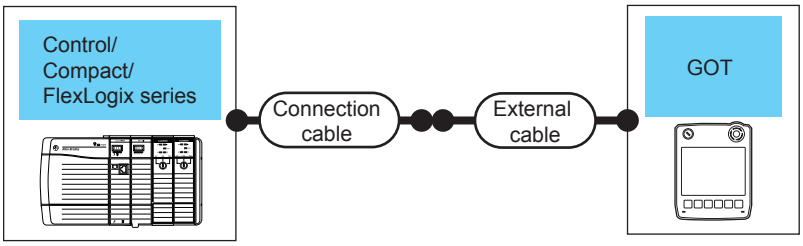
## When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | | | | | |
| ControlLogix CompactLogix FlexLogix | RS-232 | 1747-CP3*1 1756-CP3*1 or User preparing RS232 connection diagram 10) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

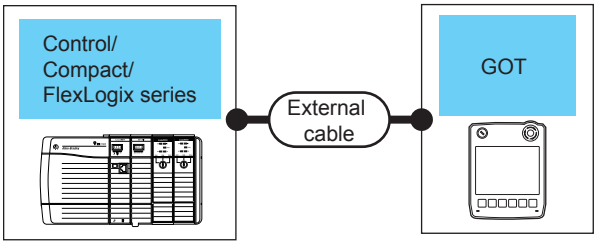
## When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | | | | |
| ControlLogix CompactLogix FlexLogix | RS-232 | 1747-CP3*1 1756-CP3*1 or User preparing RS232 connection diagram 11) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

## When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Series | Communication Type | | | | |
| ControlLogix<br>CompactLogix<br>FlexLogix | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 12) | GT 2505HS | 6m | 1 GOT for 1 PLC |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

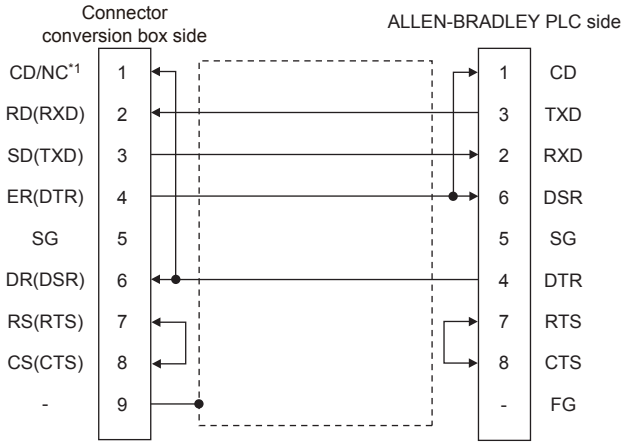
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

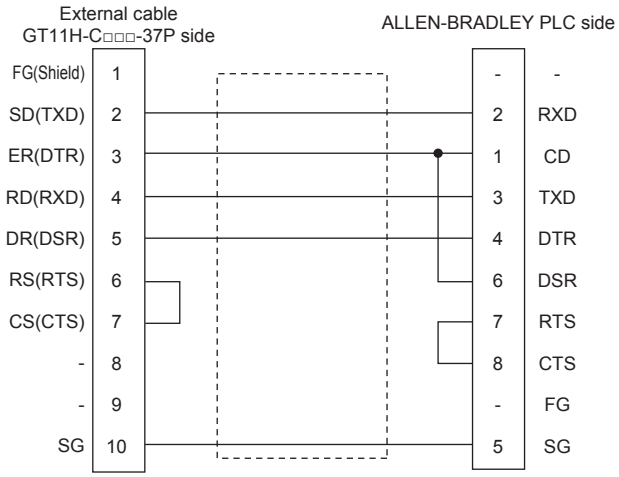
### ■Connection diagram

• RS232 connection diagram 1)

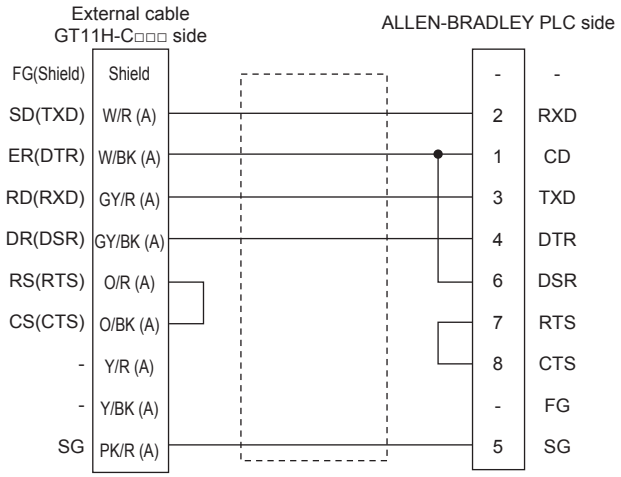



*1 GT2506HS-V: CD, GT2505HS-V: NC

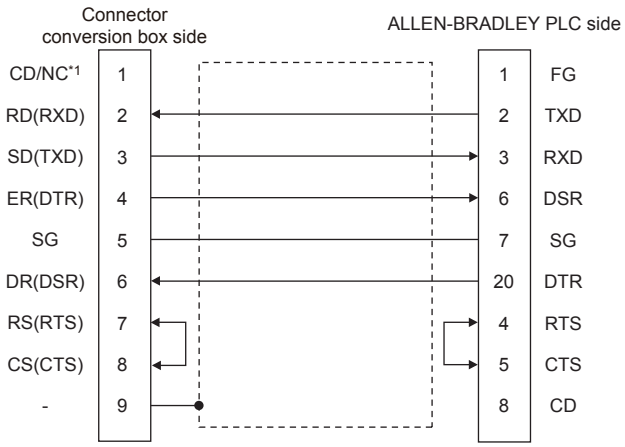
• RS232 connection diagram 2)



• RS232 connection diagram 3)

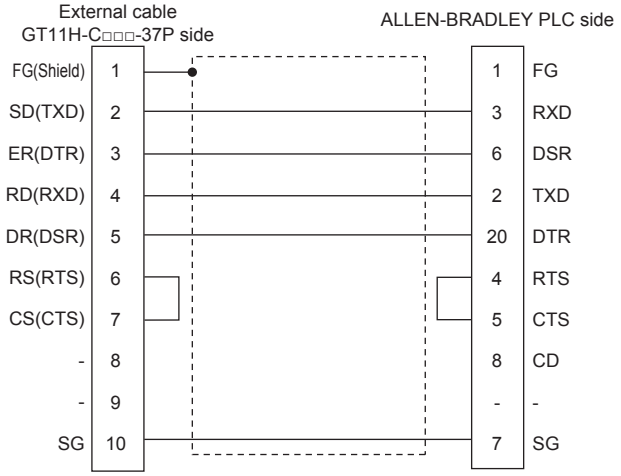



• RS232 connection diagram 4)

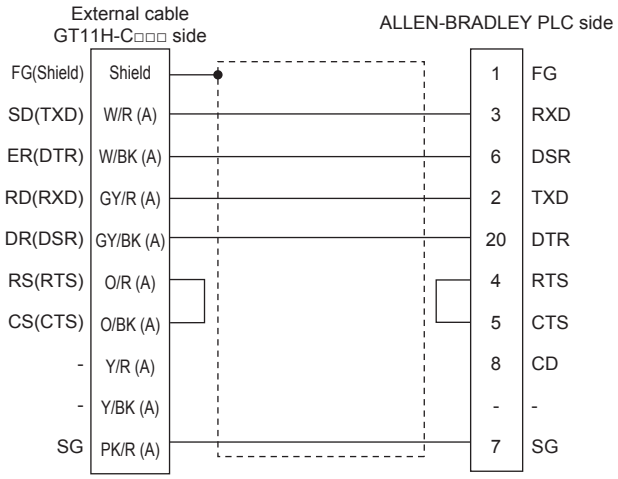



*1 GT2506HS-V: CD, GT2505HS-V: NC

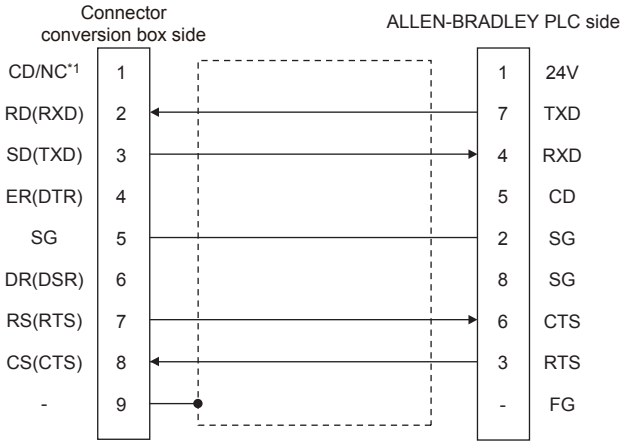
• RS232 connection diagram 5)



• RS232 connection diagram 6)

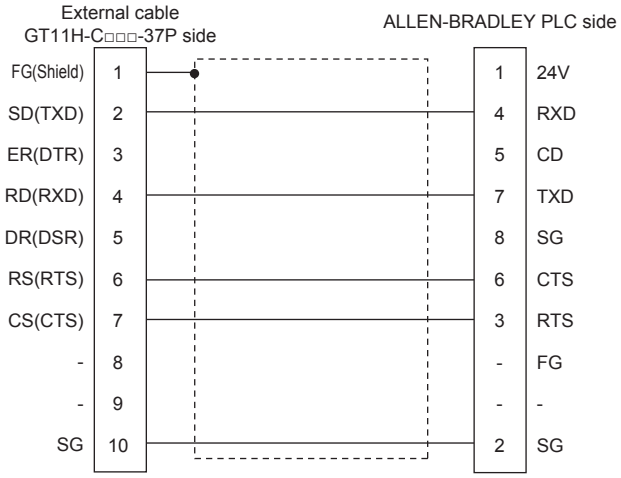



• RS232 connection diagram 7)

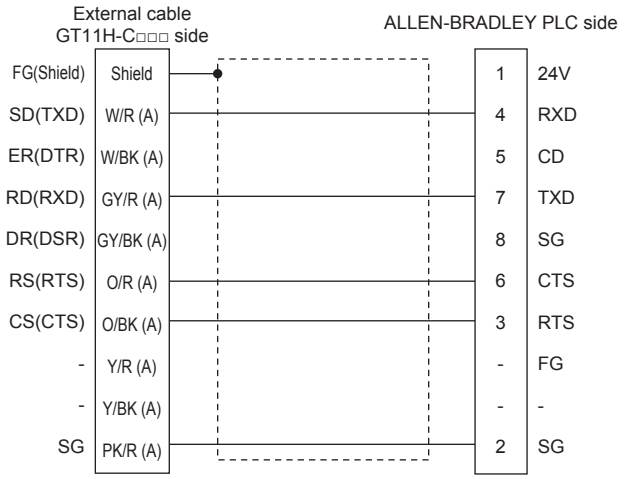



*1 GT2506HS-V: CD, GT2505HS-V: NC

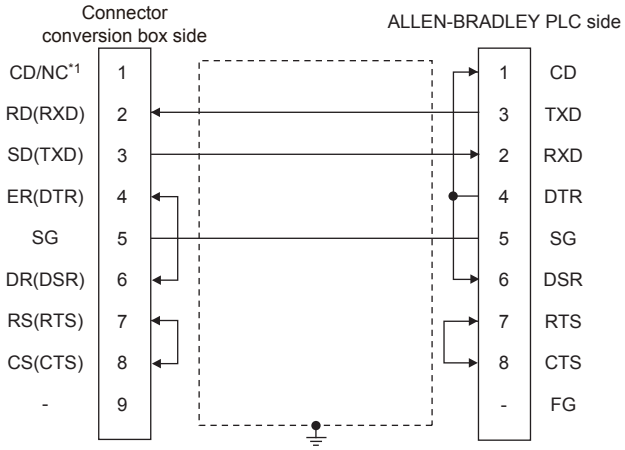
• RS232 connection diagram 8)



• RS232 connection diagram 9)

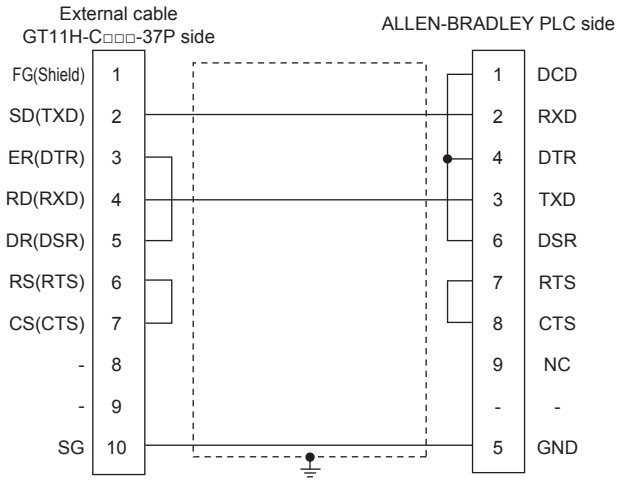



• RS232 connection diagram 10)

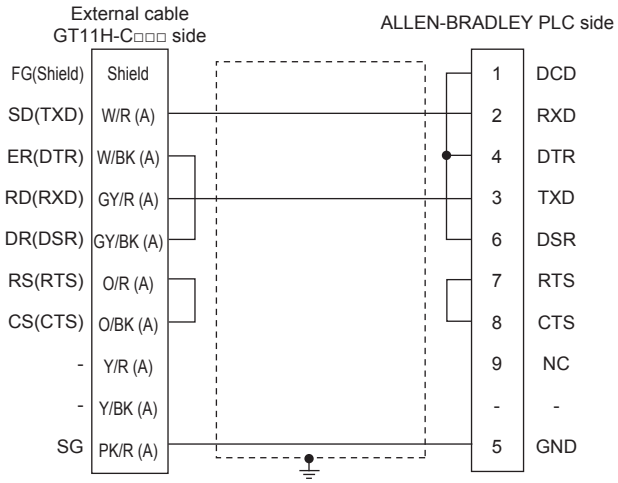



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 11)



• RS232 connection diagram 12)




## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• ALLEN-BRADLEY PLC side connector

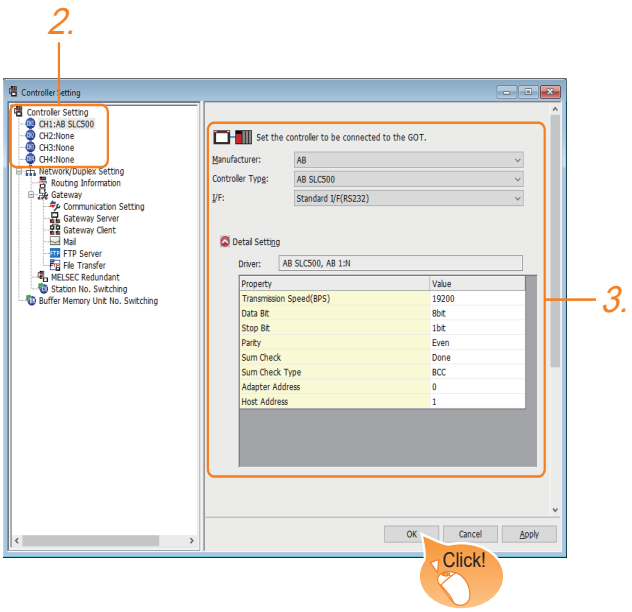
Use the connector compatible with the ALLEN-BRADLEY PLC side module.

For details, refer to the ALLEN-BRADLEY PLC user's manual.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [AB]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[AB SLC500]

[AB MicroLogix]

[AB Control/CompactLogix]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1757 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

### ■AB SLC500, AB 1: Ns

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Sum Check | Done |
| Sum Check Type | BCC |
| Adapter Address | 0 |
| Host Address | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps |
| Adapter Address*1 | The adapter address is to be specified depending on the connection type.<br><In direct CPU connection (serial)><br>The address of the connected PLC<br><In connection via Adapter(1770-K3)><br>The address of the adapter<br>(Default: 0) | 0 to 31 |
| Host Address*1 | The host address is to be specified depending on the connection type.<br><In direct CPU connection (serial)><br>Optional address<br><In connection via Adapter(1770-K3)><br>The address of the PLC of the system configuration<br>(Default: 1) | 1 to 31 |

*1 Do not specify the same value for the adapter address and host address.

## ■AB MicroLogix

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Sum Check | Done |
| Sum Check Type | BCC |
| Adapter Address | 0 |
| Host Address | 1 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps,<br>9600bps,<br>19200bps,<br>38400bps |
| Sum Check Type | Specify the format in which the sum check is performed during communication when performing sum check.<br>(Default: BCC) | BCC, CRC16 |
| Adapter Address*1 | The adapter address is to be specified depending on the connection type.<br><In direct CPU connection (serial)><br>The address of the connected PLC<br><In connection via Adapter(1770-K3)><br>The address of the adapter<br>(Default: 0) | 0 to 63 |
| Host Address*1 | The host address is to be specified depending on the connection type.<br><In direct CPU connection (serial)><br>Optional address<br><In connection via Adapter(1770-K3)><br>The address of the PLC of the system configuration<br>(Default: 1) | 0 to 63 |

*1 Do not specify the same value for the adapter address and host address.

## ■AB Control/CompactLogix

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Sum Check Type | BCC |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Adapter Address | 0 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Sum Check Type | Specify the format in which the sum check is performed during communication when performing sum check.<br>(Default: BCC) | BCC,<br>CRC16 |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Adapter Address | Specify the adapter address (station No. of the PLC that the GOT will monitor) in the connected network.<br>(Default: 0) | 0 to 254 |
| Host Address | Specify the host address (station No. of the adapter to which the GOT is connected) in the connected network.<br>(Default: 0) | 0 to 254 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

ALLEN-BRADLEY PLC

For details of ALLEN-BRADLEY PLCs, refer to the following manuals.

ALLEN-BRADLEY PLC user's Manual

## Direct CPU connection (serial)

| Item | Setting details | | |
|---|---|---|---|
| | SLC500 Series | MicroLogix 1000/1200/1500 Series | Control/Compact/FlexLogix Series |
| Baud Rate*1 | 4800bps, 9600bps, 19200bps | 4800bps, 9600bps, 19200bps, 38400bps | 4800bps, 9600bps, 19200bps, 38400bps |
| Parity | EVEN | NONE | NONE |
| Control Line | NO HANDSHAKING | | |
| Communication Driver | DF1 HALF-DUPLEX SLAVE | | |
| Duplicate Packet Detection | DISABLE | | |
| Station Address | 0 | | |
| Error Detection | BCC | BCC, CRC*2 | BCC, CRC*2 |

*1 Set the Baud Rate according to the transmission speed setting on the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1757 Communication detail settings

*2 Set the Error Detection according to the sum check format setting on the GOT side.
For the sum check format setting on the GOT side, refer to the following.
☞ Page 1757 Communication detail settings

## Connecting to DH485 network via adapter (1770-KF3)

### ■Setting of the adapter side

| Item | Setting details |
|---|---|
| RS232 Baud Rate*1 | 4800bps, 9600bps, 19200bps |
| Parity | SLC500 series: EVEN, MicroLogix series: NONE |
| Flow Control | Disable (No Handshaking) |
| DF1 Device Category | DF1 half-duplex slave, local mode |
| Error Detection*2 | SLC500 series: BCC, MicroLogix series: BCC/CRC |
| DH-485 Baud Rate*5 | 9600bps, 19200bps |
| Maximum Node Address | 1 to 31*3 |
| DH-485 Node Address | 0 to 31*4 |

*1 Set the RS232 Baud Rate according to the transmission speed setting on the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1757 Communication detail settings

*2 Set the Error Detection according to the sum check format setting on the GOT side.
For the sum check format setting on the GOT side, refer to the following.
☞ Page 1757 Communication detail settings

*3 For the Maximum Node Address, set the same address as the Maximum Node Address on the DH-485 network.

*4 Set the DH-485 Node Address according to the Host Address on the GOT side.
Set a unique DH-485 Node Address so that it does not conflict with the Node Address of the PLC CPU on the DH-485 network.
For the Host Address setting on the GOT side, refer to the following.
☞ Page 1757 Communication detail settings

*5 Set the DH-485 baud rate according to the baud rate on the CPU side.

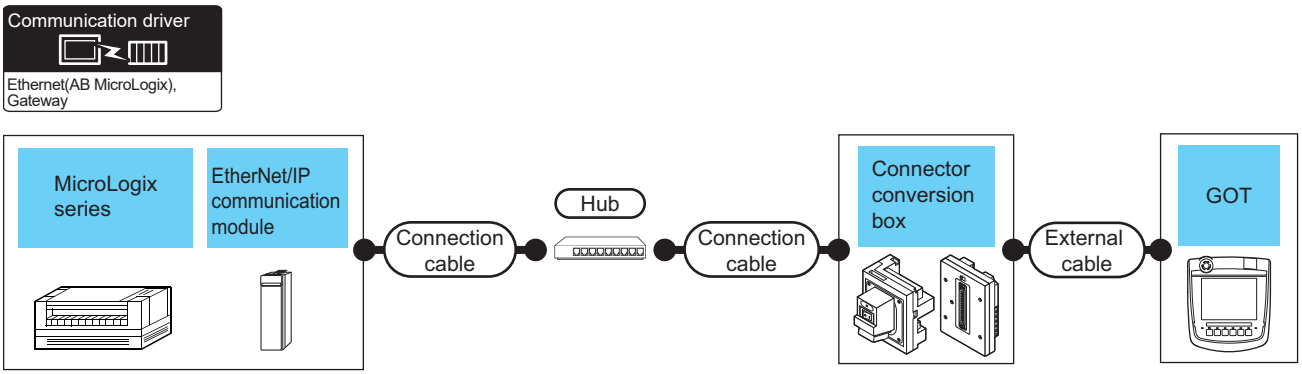
### ■Setting of the CPU side

| Item | Setting details |
|---|---|
| Baud Rate*1 | 9600bps, 19200bps |
| Communication Driver | DH485 |
| Node Address | 1 to 31 |

*1 Set the baud rate according to the DH-485 baud rate on the Adapter side.

# 37.3 Ethernet Connection

## Ethernet connection type: Connecting to Ethernet (AB MicroLogix)




| PLC | | | Connection cable | | Connector conversion box | External cable *4 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | EtherNet/IP communication module *1 | Communication Type | Cable model *2 | Maximum segment length *3 | | | | |
| MicroLogix 1000<br>MicroLogix 1100<br>MicroLogix 1200<br>MicroLogix 1400<br>MicroLogix 1500 | 1761-NET-ENI | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N:1<br>TCP: 16 PLCs or less for 1 GOT<br>When PLC:GOT is 1:N<br>TCP: 32 GOTs or less for 1 PLC |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| MicroLogix 1100<br>MicroLogix 1400 | - | | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

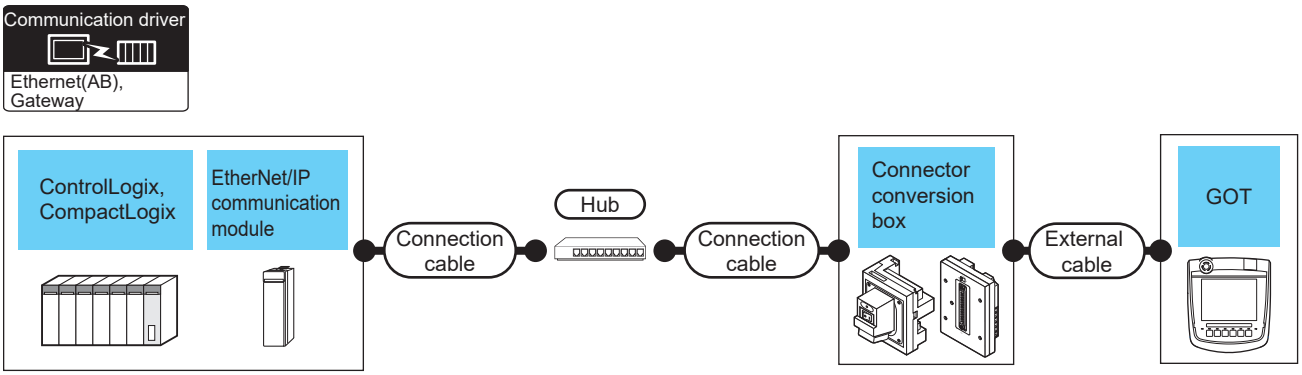
*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

# Ethernet connection type: Connecting to Ethernet (AB)




| PLC | | | Connection cable | | Connector conversion box | External cable *6 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | EtherNet/IP communication module*1 | Communication Type | Cable model*2 | Maximum segment length*3 | | | | |
| ControlLogix | *4 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | *5 |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| Compact Logix | - | | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC:GOT is N: 1<br>TCP: 128 PLCs or less for 1 GOT<br>When PLC:GOT is 1: N<br>TCP: 32 GOTs or less (recommended to 16 or less) for 1 PLC |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 The connectable EtherNet/IP communication module differs depending on the PLC model name.

| PLC model name | Connectable EtherNet/IP communication module |
|---|---|
| 1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L61, 1756-L62, 1756-L63 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L64 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps), 1756-EN2T(10/100Mbps) |
| 1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L72S | 1756-EN2T(10/100Mbps) |
| 1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75 | 1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E | 1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps), 1756-EN2TSC(10/100Mbps) |

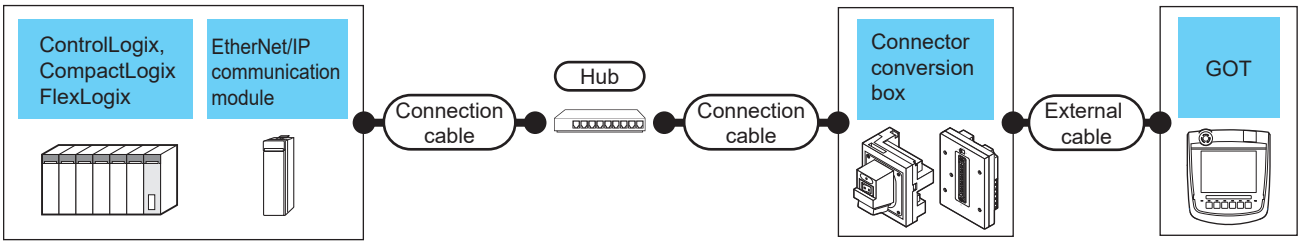
*5 The number of the connectable GOTs for 1 PLC differs depending on the PLC series.
(ControlLogix5550/5555/5560)
• When PLC:GOT is N:1, the following number of the PLCs can be connected to 1 GOT.
TCP: 128 or less
When PLC:GOT is 1:N, the following number of the GOTs can be connected to 1 PLC.
TCP: 64 or less (recommended to 16 or less)
(ControlLogix5570/ControlLogix5580)
• When PLC:GOT is N:1, the following number of the PLCs can be connected to 1 GOT.
TCP: 128 or less
When PLC:GOT is 1:N, the following number of the GOTs can be connected to 1 PLC.
TCP: 128 or less (recommended to 16 or less)

*6 Use C or later version of GT11H-C□□-37P.

# Ethernet connection type: Connecting to Ethernet (AB Tag)

Communication driver

Ethernet(AB Tag), Gateway




| PLC | | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | EtherNet/IP communication module*1 | Communication Type | Cable model*2 | Maximum segment length*3 | | | | |
| ControlLogix | *4 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N TCP: 32 GOTs or less (recommended to 16 or less) for 1 PLC |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| CompactLogix | - | Ethernet | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N TCP: 20 GOTs or less (recommended to 16 or less) for 1 PLC |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| FlexLogix | 1788-ENBT/A | Ethernet | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N TCP: 20 GOTs or less (recommended to 16 or less) for 1 PLC |
| | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

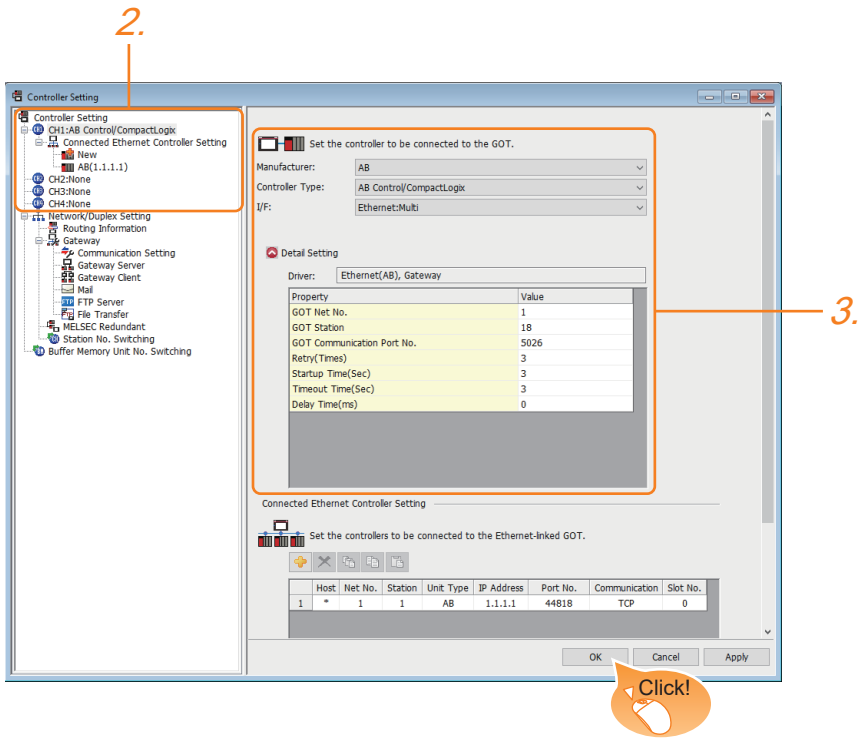
*4 The connectable EtherNet/IP communication module differs depending on the PLC model name.

| PLC model name | Connectable EtherNet/IP communication module |
|---|---|
| 1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L61, 1756-L62, 1756-L63 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L64 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps), 1756-EN2T(10/100Mbps) |
| 1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24 | 1756-ENET(10Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L72S | 1756-EN2T(10/100Mbps) |
| 1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75 | 1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps) |
| 1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E | 1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps), 1756-EN2TSC(10/100Mbps) |

*5 Use C or later version of GT11H-C□□-37P.

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [AB]
- [Controller Type]: Depends on the Ethernet connection type.

Ethernet (AB MicroLogix): [AB MicroLogix]

Ethernet (AB): [AB Control/CompactLogix]

Ethernet (AB Tag): [AB Control/CompactLogix (Tag)]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5026 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 1) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5026*2*3) | 1024 to 5010, 5014 to 44817, 44819 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 1 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000 (ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1768 Connected Ethernet Controller Setting

*2 When the communication driver is set to [Ethernet(AB Tag), Gateway], the default is 5028.

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

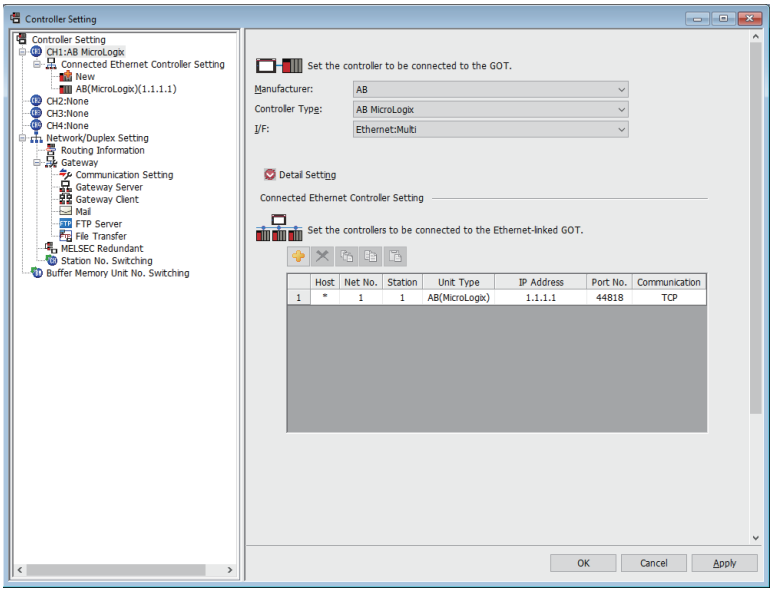
For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting

### ■Ethernet connection type: Ethernet (AB MicroLogix)

The following describes [Connected Ethernet Controller Setting] when [AB MicroLogix] is selected for [Controller Type].



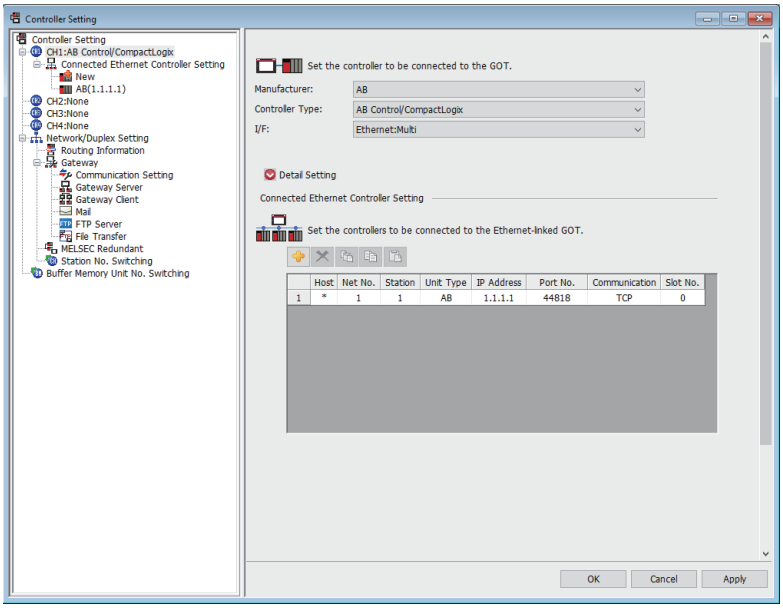

| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 |
| Unit Type | AB(MicroLogix) (fixed) | AB(MicroLogix) (fixed) |
| IP address | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | 44818 (fixed) | 44818 (fixed) |
| Communication format | TCP (fixed) | TCP (fixed) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1767 Communication detail settings

## ■Ethernet connection type: Ethernet (AB)

The following describes [Connected Ethernet Controller Setting] when [AB Control/CompactLogix] is selected for [Controller Type].

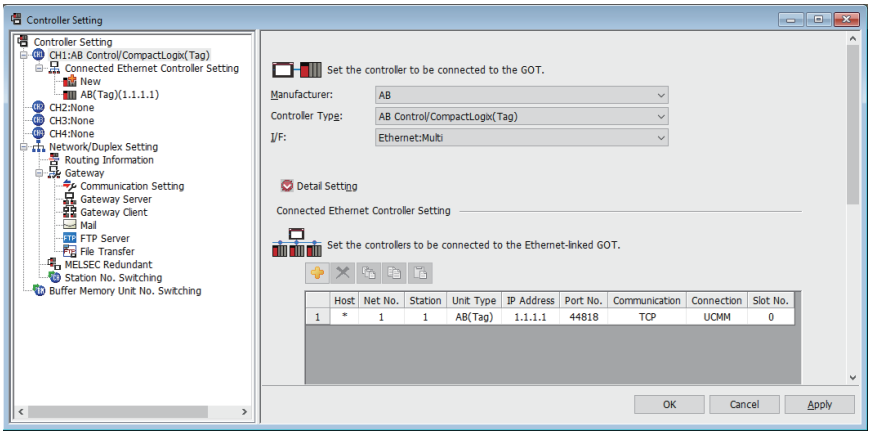



| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 |
| Unit Type | AB (fixed) | AB (fixed) |
| IP address | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | 44818 (fixed) | 44818 (fixed) |
| Communication format | TCP (fixed) | TCP (fixed) |
| Slot No. | Set the slot No. connected to the CPU module in the PLC module.<br>(Default: 0) | 0 to 16 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1767 Communication detail settings

## ■Ethernet connection type: Ethernet (AB Tag)

The following describes [Connected Ethernet Controller Setting] when [AB Control/CompactLogix(Tag)] is selected for [Controller Type].




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 |
| Unit Type | AB (Tag) (fixed) | AB (Tag) (fixed) |
| IP Address | Set the IP address of the connected Ethernet equipment.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | 44818 (fixed) | 44818 (fixed) |
| Communication | TCP (fixed) | TCP (fixed) |
| Connection | Set the message communication type according to the connected Ethernet equipment.<br>(Default: UCMM) | UCMM<br>Class3 |
| Slot No. | Set the slot No. connected to the CPU module in the PLC module.<br>(Default: 0) | 0 to 20 |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1767 Communication detail settings

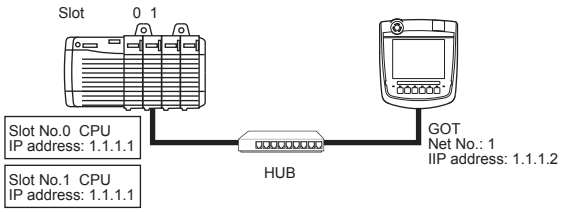
**Point**

[Connected Ethernet Controller Setting] for a multiple CPU system

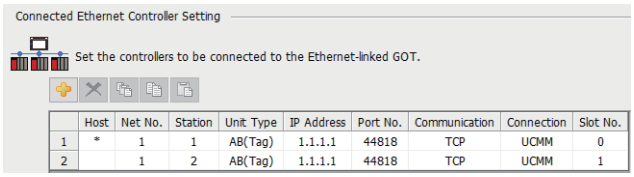
When the Ethernet connection type is Ethernet (AB Tag), monitoring in the multiple CPU system is possible by setting a different [Slot No.] for one module with the same IP address in [Connected Ethernet Controller Setting].

The following shows [Connected Ethernet Controller Setting] for configuring a system.

(Example: System configuration)




(Example: Settings in [Connected Ethernet Controller Setting])




| | Host | Net No. | Station | Unit Type | IP Address | Port No. | Communication | Connection | Slot No. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | * | 1 | 1 | AB(Tag) | 1.1.1.1 | 44818 | TCP | UCMM | 0 |
| 2 | | 1 | 2 | AB(Tag) | 1.1.1.1 | 44818 | TCP | UCMM | 1 |

In the above settings, the GOT monitors the CPU as follows.

- When [Net No.] is set to 1 and [Station No.] is set to 1 for an object, the GOT monitors the CPU whose slot No. is 0.
- When [Net No.] is set to 1 and [Station No.] is set to 2 for an object, the GOT monitors the CPU whose slot No. is 1.

**Point**

- Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

- Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

- Setting IP address and port No

The same IP address cannot be set for the same port No.The same IP address can be set for the different port No.

# PLC side setting

**Point**

ALLEN-BRADLEY PLC

For details of ALLEN-BRADLEY PLCs, refer to the following manuals.

📖ALLEN-BRADLEY PLC user's Manual

## Parameter setting

Set the following parameters with the software package manufactured by the Allen-Bradley.

| Item | Setting details |
|---|---|
| Name | Sets the name. |
| IP Address | IP address of the connected module*1 |
| Slot | Slots No. for installing the EtherNet/IP communication module*2 |

*1 For the IP address, make the same setting as that of each Ethernet module set on GT Designer3.
Do not set the same IP Address as those of GOT and controller on the Ethernet network.
For the address setting on GT Designer3, refer to the following.
☞ Page 1767 Communication detail settings

*2 The EtherNet/IP communication module cannot be connected to the slot [0].
Set the slot No. to [1] or later.

## Rotary switch setting

In EtherNet/IP communication module (1756-EN2T, 1756-EN2TR, 1756-EN3TR, and 1756-EN2TSC only), IP address can be set by rotary switches.

EtherNet/IP communication module have 3 rotary switches named X, Y, and Z.

The following shows the procedure to set IP address using the rotary switches X, Y, and Z.

For details of these rotary switches, refer to the following manual.

📖Manual of EtherNet/IP communication module to be used

| Rotary switch setting value | Description |
|---|---|
| 1 to 254 | The fourth octet of the IP address is the value set by the rotary switches.<br>*The network address part is fixed to [192.168.1.***].<br>(Setting example)<br>If the switches are set to X=0, Y=3, Z=1, IP address of EtherNet/IP communication module will be [192.168.1.31].<br>Adjust the settings with the GOT settings.<br>☞ Page 1768 Connected Ethernet Controller Setting |
| 888 | The setting value which sets EtherNet/IP communication module to initial setting.<br>When the setting value is [888], the EtherNet/IP communication module cannot be connected with the GOT. |
| Other than above | To set the IP address with a peripheral tool, set the values on left for the rotary switches. |

# Precautions

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to multiple GOTs

### ■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1768 Connected Ethernet Controller Setting

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)Reduction of the monitoring points on GOT

## AB native tag name

When you use multiple AB native tags whose names are long, the monitoring process may take a longer time.

For the details, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 37.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
ALLEN-BRADLEY equipment ([AB SLC500])
ALLEN-BRADLEY equipment ([AB MicroLogix])
ALLEN-BRADLEY equipment ([AB MicroLogix (Extended)])
ALLEN-BRADLEY equipment ([AB Control/CompactLogix])
ALLEN-BRADLEY equipment ([AB Control/CompactLogix(Tag)])

# 38 GE PLC


- Page 1775 Connectable Model List
- Page 1777 System Configuration
- Page 1792 Connection Diagram
- Page 1799 GOT Side Settings
- Page 1801 PLC Side Setting
- Page 1804 Settable Device Range
- Page 1804 Precautions


## 38.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Series90-30 | IC693CPU311 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1777 Connecting to Series90-30 |
| | IC693CPU313 | | | | |
| | IC693CPU323 | | | | |
| | IC693CPU350 | | | | |
| | IC693CPU360 | | | | |
| | IC693CPU363 | | | | |
| | IC693CPU366 | | | | |
| | IC693CPU367 | | | | |
| | IC693CPU374 | | | | |
| Series90-70 | IC697CPU731 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1783 Connecting to Series90-70 |
| | IC697CPX772 | | | | |
| | IC697CPX782 | | | | |
| | IC697CPX928 | | | | |
| | IC697CPX935 | | | | |
| | IC697CPU780 | | | | |
| | IC697CGR772 | | | | |
| | IC697CGR935 | | | | |
| | IC697CPU788 | | | | |
| | IC697CPU789 | | | | |
| | IC697CPM790 | | | | |

| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| VersaMax Micro | IC200UAA003 | × | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1787 Connecting to VersaMax Micro |
| | IC200UAL004 | | | | |
| | IC200UAL005 | | | | |
| | IC200UAL006 | | | | |
| | IC200UAA007 | | | | |
| | IC200UAR028 | | | | |
| | IC200UDD110 | | | | |
| | IC200UDD120 | | | | |
| | IC200UDD212 | | | | |
| | IC200UDR005 | | | | |
| | IC200UDR006 | | | | |
| | IC200UDR010 | | | | |
| | IC200UDD064 | | | | |
| | IC200UDD164 | | | | |
| | IC200UDR164 | | | | |
| | IC200UDR064 | | | | |
| | IC200UAR014 | | | | |
| | IC200UDD104 | | | | |
| | IC200UDD112 | | | | |
| | IC200UDR001 | | | | |
| | IC200UDR002 | | | | |
| | IC200UDR003 | | | | |

# 38.2 System Configuration

## Connecting to Series90-30

**Point**

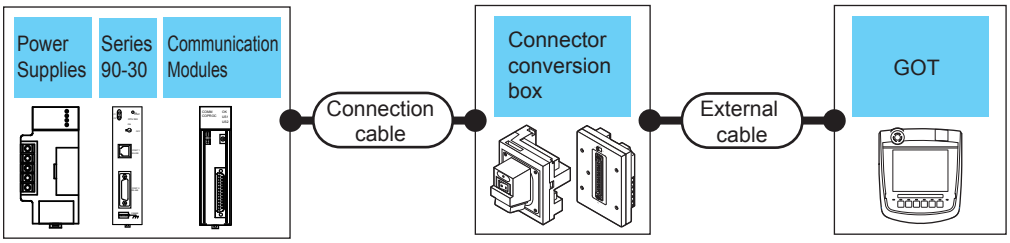
Connectable model

Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

### When using the connector conversion box




#### ■For the RS-232 connection

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-232 | User preparing Page 1792 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | User preparing Page 1792 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | User preparing Page 1792 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Communication Modules)

| PLC | | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-422 | User preparing Page 1795 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 8 PLCs for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | User preparing Page 1795 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | User preparing Page 1795 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Power Supplies)

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | RS-422 | User preparing Page 1796 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 8 PLCs for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | User preparing Page 1796 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

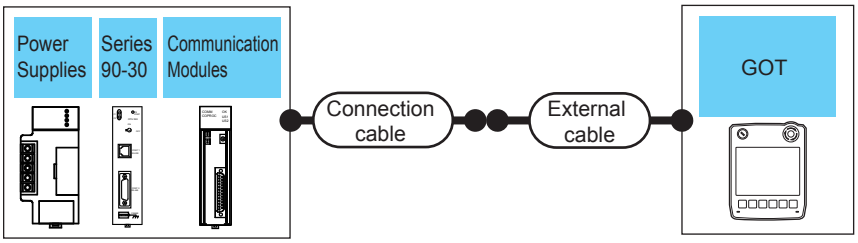
*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

### ■For the RS-422 connection (connecting to the PLC)

| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 (CPU port 2) | RS-422 | User preparing Page 1796 RS-422 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 8 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## When using the external cable (GT11H-C□□□-37P)




### ■For the RS-232 connection

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-232 | User preparing Page 1792 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | User preparing Page 1792 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | User preparing Page 1792 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Communication Modules)

| PLC | | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-422 | User preparing Page 1795 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 8 PLCs for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | User preparing Page 1795 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | User preparing Page 1795 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Power Supplies)

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | Cable model Connection diagram number | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | RS-422 | User preparing Page 1796 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 8 PLCs for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | User preparing Page 1796 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

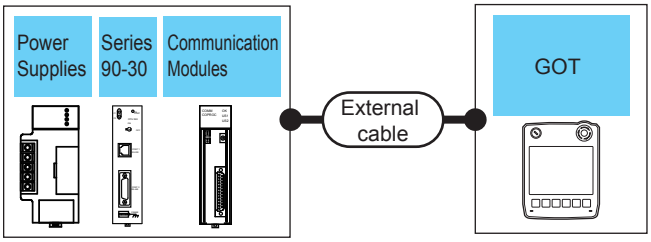
*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the PLC)

| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | Cable model Connection diagram number | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363<br>(CPU port 2) | RS-422 | User preparing Page 1796 RS-422 connection diagram 5) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 8 PLC for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## When using the external cable (GT11H-C□□□)




### ■For the RS-232 connection

| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1793 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1793 RS-232 connection diagram 3) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1793 RS-232 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Communication Modules)

| PLC | | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Modules*1 | Communication Type | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU311<br>IC693CPU313<br>IC693CPU323 | IC693CMM311 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1796 RS-422 connection diagram 3) | GT 2505HS | 13m | 8 PLCs for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1796 RS-422 connection diagram 3) | GT 2505HS | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1796 RS-422 connection diagram 3) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the Power Supplies)

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU350<br>IC693CPU360<br>IC693CPU366<br>IC693CPU367<br>IC693CPU374 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1797 RS-422 connection diagram 6) | GT 2505HS | 13m | 8 PLCs for 1 GOT |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1797 RS-422 connection diagram 6) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■For the RS-422 connection (connecting to the PLC)

| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Power Supplies*1 | Model name | Communication Type | | | | |
| IC693PWR321<br>IC693PWR330<br>IC693PWR331<br>IC693PWR332<br>IC693PWR328 | IC693CPU363<br>(CPU port 2) | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1797 RS-422 connection diagram 6) | GT 2505HS | 13m | 8 PLC for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

# Connecting to Series90-70

**Point**

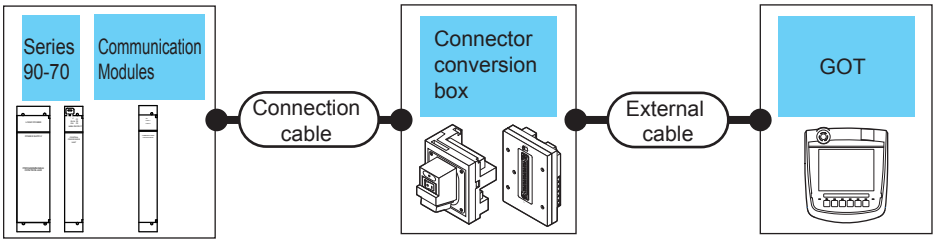
Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

## For the RS-232 connection

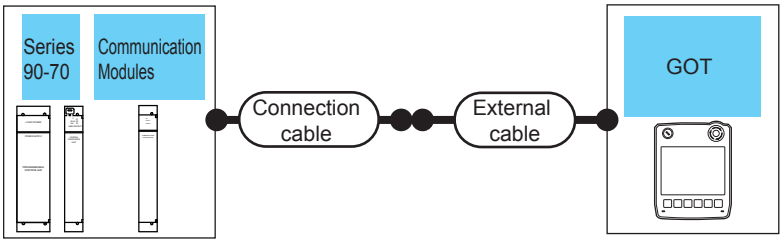
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-232 | User preparing Page 1792 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

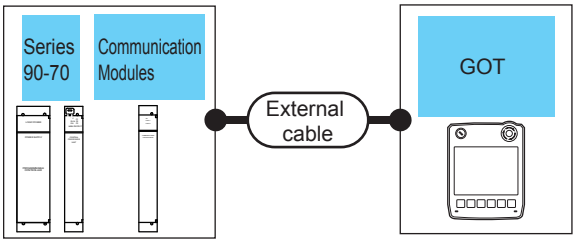
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-232 | User preparing Page 1792 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■When using the external cable (GT11H-C□□□)

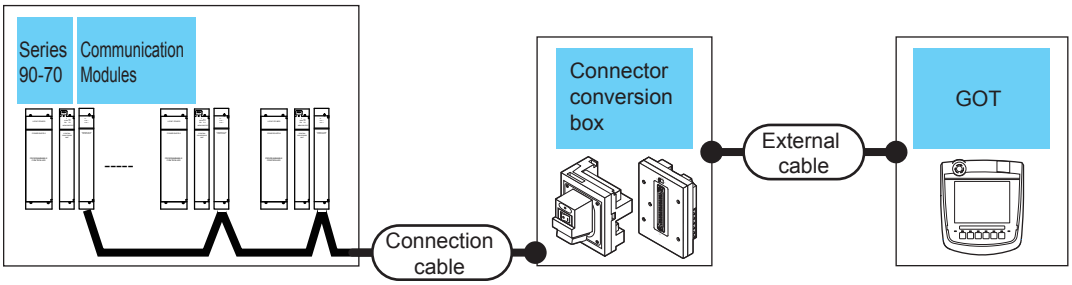



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Modules*1 | Communication Type | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1793 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## For the RS-422 connection

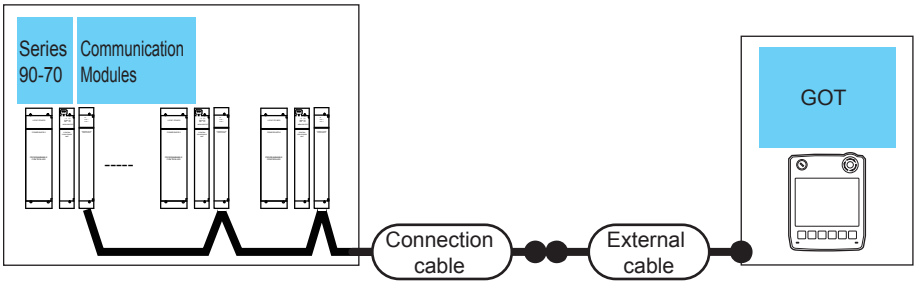
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| PLC | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-422 | User preparing Page 1795 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 8 PLCs for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

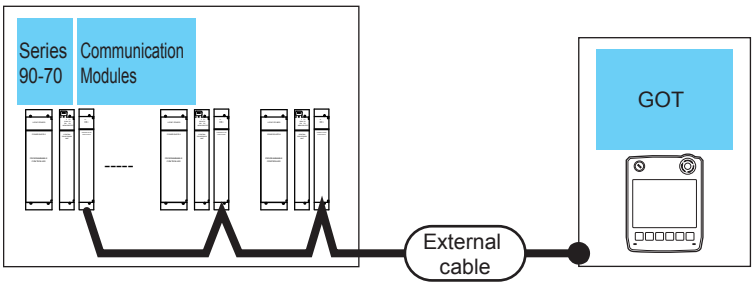
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| PLC | Communication Modules*1 | Communication Type | Cable model Connection diagram number | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-422 | User preparing Page 1795 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 8 PLCs for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

## ■When using the external cable (GT11H-C□□□)




| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| PLC | Communication Modules*1 | Communication Type | | | | |
| IC697CPX772<br>IC697CPX782<br>IC697CPX928<br>IC697CPX935<br>IC697CPU780<br>IC697CPU788<br>IC697CPU789<br>IC697CPU731<br>IC697CGR772<br>IC697CGR935<br>IC697CPM790 | IC697CMM711 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1796 RS-422 connection diagram 3) | GT 2505HS | 13m | Up to 8 PLCs for 1 GOT |

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

# Connecting to VersaMax Micro

**Point**

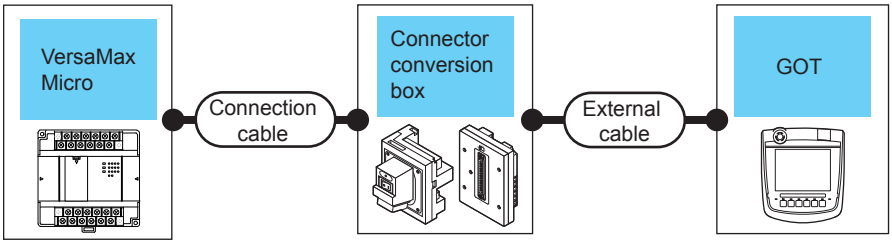
Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

## For the RS-232 connection

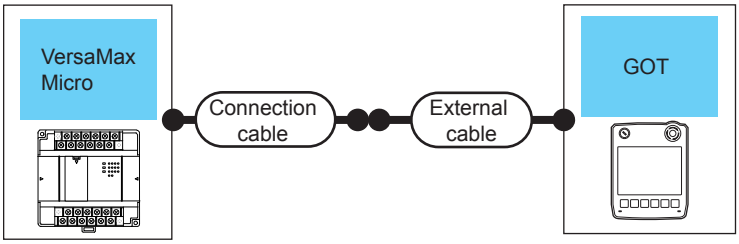
### ■When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model Connection diagram number | | | | | |
| IC200UAA003<br>IC200UAR014<br>IC200UDD104<br>IC200UDD112<br>IC200UDR001<br>IC200UDR002<br>IC200UDR003 | RS-232 | User preparing Page 1793 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | | User preparing Page 1793 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

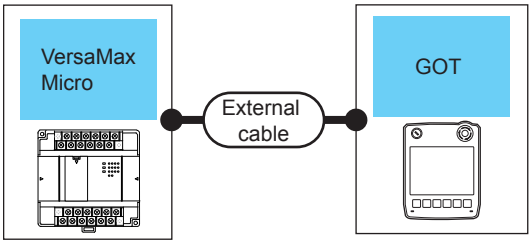
38

## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model name | Communication Type | Cable model<br>Connection diagram number | | | | |
| IC200UAA003<br>IC200UAR014<br>IC200UDD104<br>IC200UDD112<br>IC200UDR001<br>IC200UDR002<br>IC200UDR003 | RS-232 | User programming Page 1793 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | | User programming Page 1793 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | | |

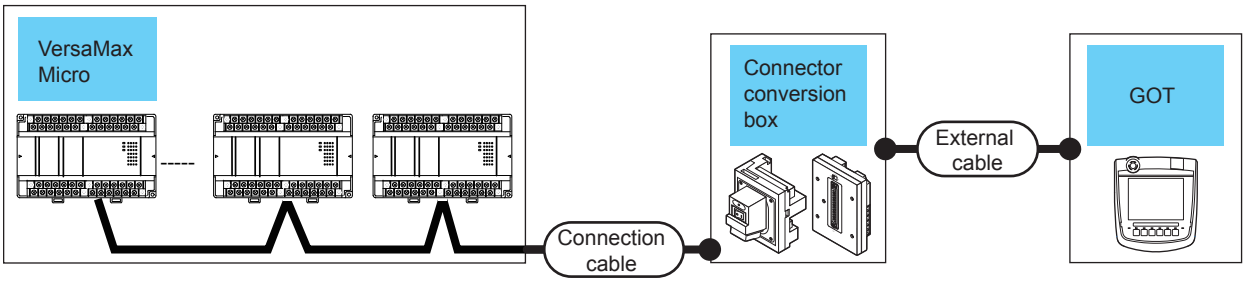
## ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Model name | Communication Type | | | | |
| IC200UAA003<br>IC200UAR014<br>IC200UDD104<br>IC200UDD112<br>IC200UDR001<br>IC200UDR002<br>IC200UDR003 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1794 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1794 RS-232 connection diagram 6) | GT 2505HS | | |

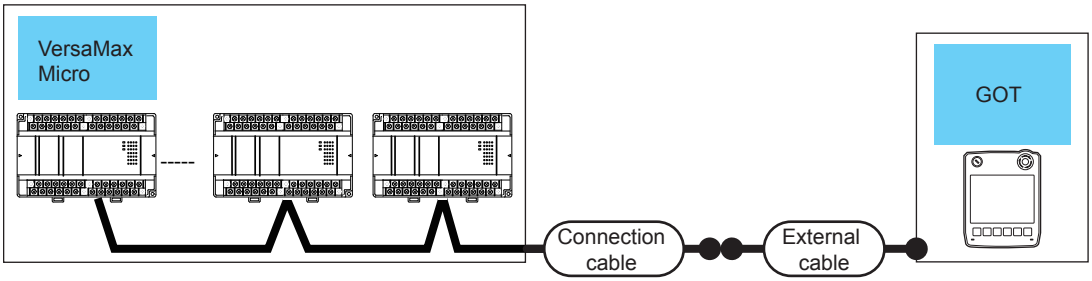
## For the RS-422 connection

### ■When using the connector conversion box



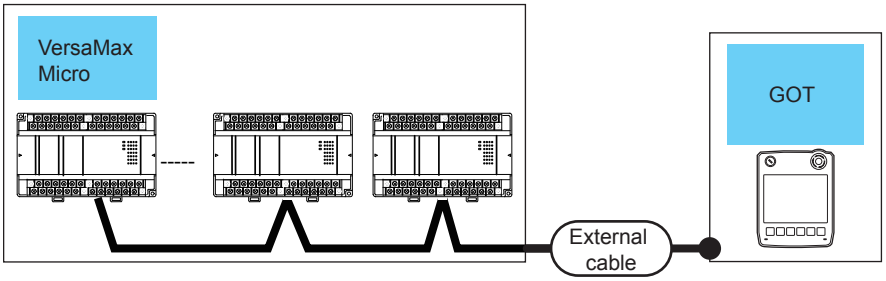

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| PLC | Communication Type | Cable model Connection diagram number | | | | | |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | RS-422 | User preparing Page 1797 RS-422 connection diagram 7) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 8 PLCs for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| PLC | Communication Type | Cable model<br>Connection diagram number | | | | |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | RS-422 | User preparing Page 1797 RS-422 connection diagram 8) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 8 PLCs for 1 GOT |

## ■When using the external cable (GT11H-C□□□)




| PLC | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| PLC | Communication Type | | | | |
| IC200UAL004<br>IC200UAL005<br>IC200UAL006<br>IC200UAA007<br>IC200UAR028<br>IC200UDD110<br>IC200UDD120<br>IC200UDD212<br>IC200UDR005<br>IC200UDR006<br>IC200UDR010<br>IC200UDD064<br>IC200UDD164<br>IC200UDR164<br>IC200UDR064 | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1798 RS-422 connection diagram 9) | GT 2505HS | 13m | Up to 8 PLCs for 1 GOT |

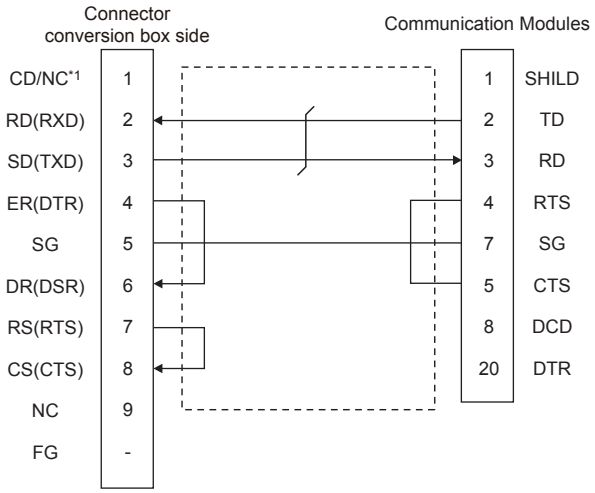
# 38.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

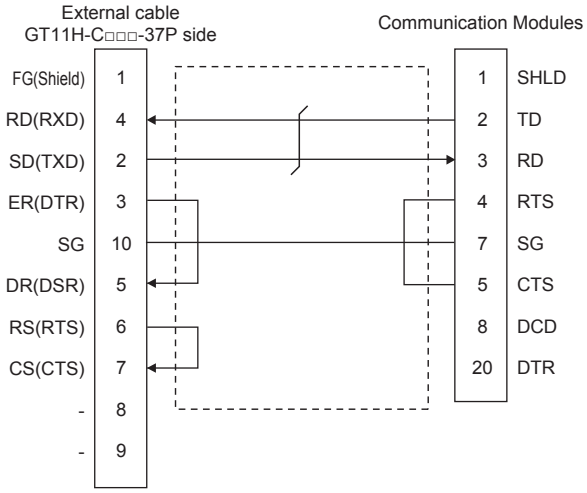
### Connection diagram

#### ■RS-232 connection diagram 1)

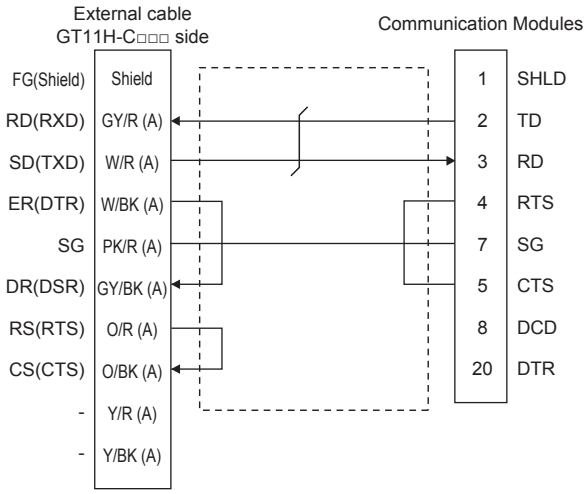



*1 GT2506HS-V: CD, GT2505HS-V: NC

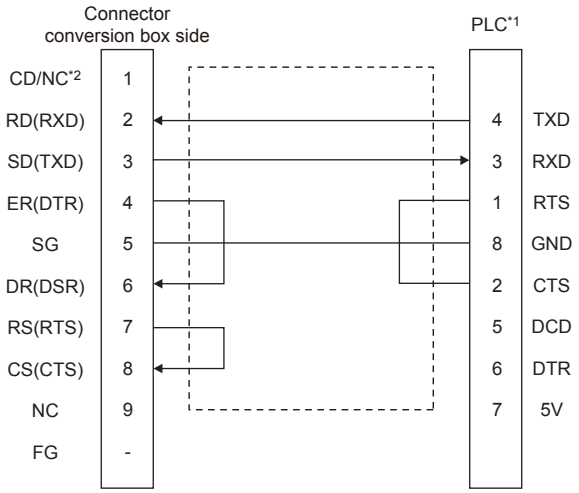
#### ■RS-232 connection diagram 2)



## ■RS-232 connection diagram 3)



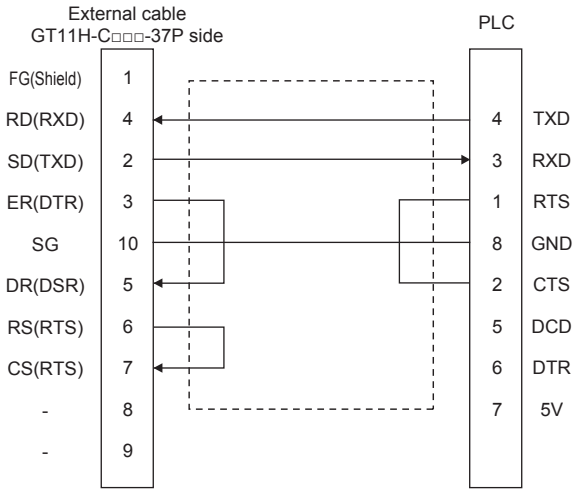

## ■RS-232 connection diagram 4)



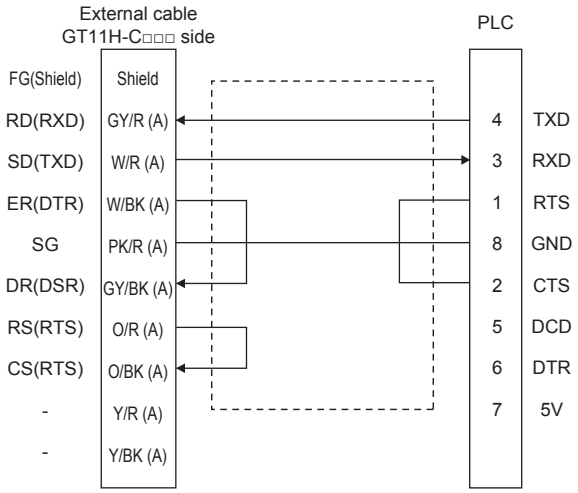

*1 For details of the pin assignment, refer to the following manual.
GE PLC user's Manual

*2 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 5)



### ■RS-232 connection diagram 6)




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■GE PLC side connector

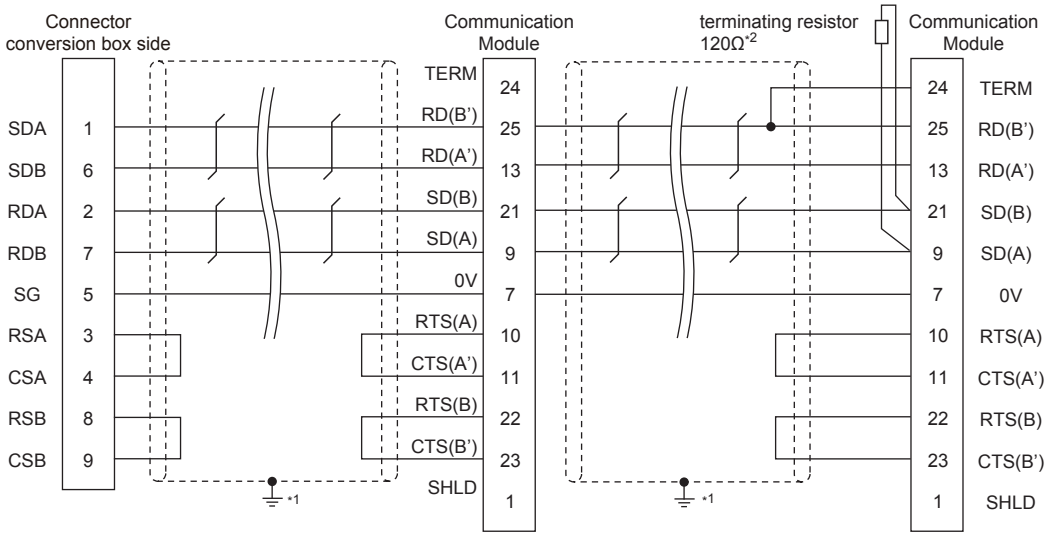
Use the connector compatible with the GE PLC side module.

For details, refer to the GE PLC user's manual.

# RS-422 cable

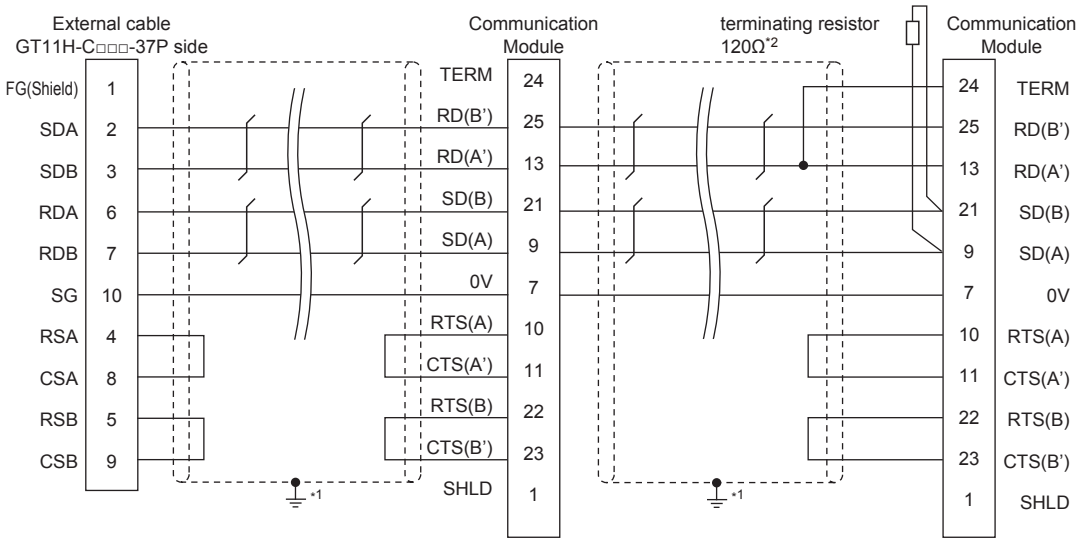
## Connection diagram

### ■RS-422 connection diagram 1)



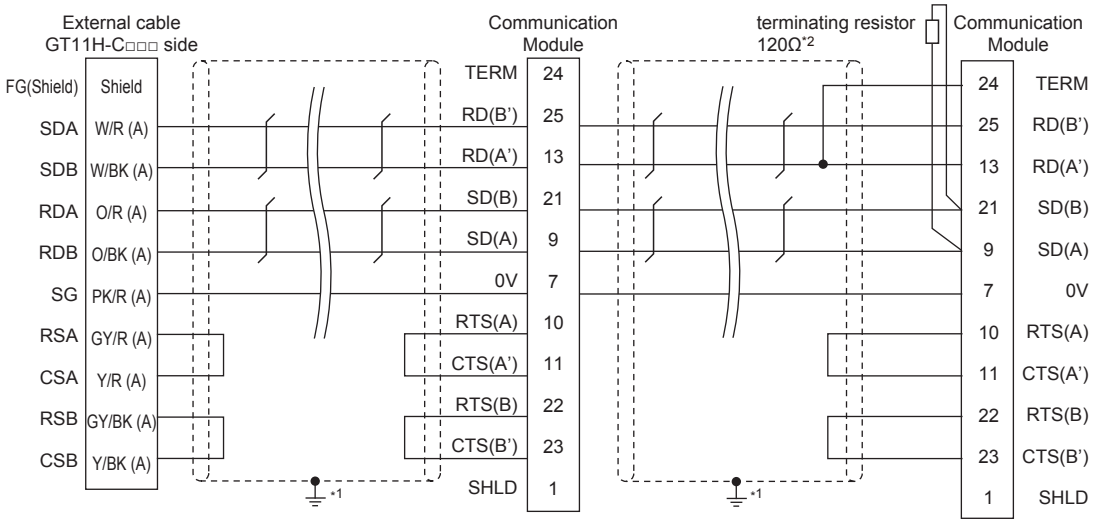

*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 A terminating resistor should be connected to communication module at a terminal station.

### ■RS-422 connection diagram 2)




*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Terminating resistor should be provided for a PLC which will be a terminal.

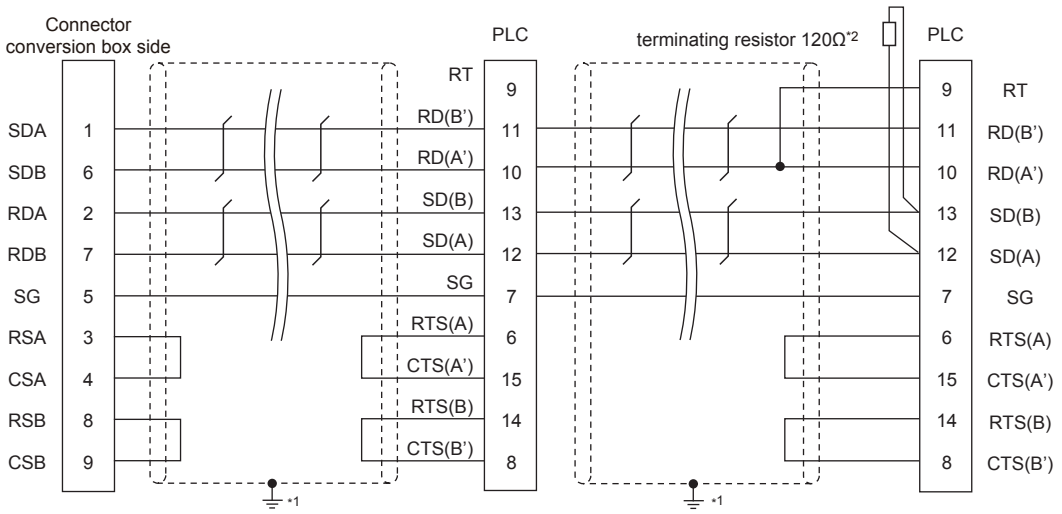
## ■RS-422 connection diagram 3)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

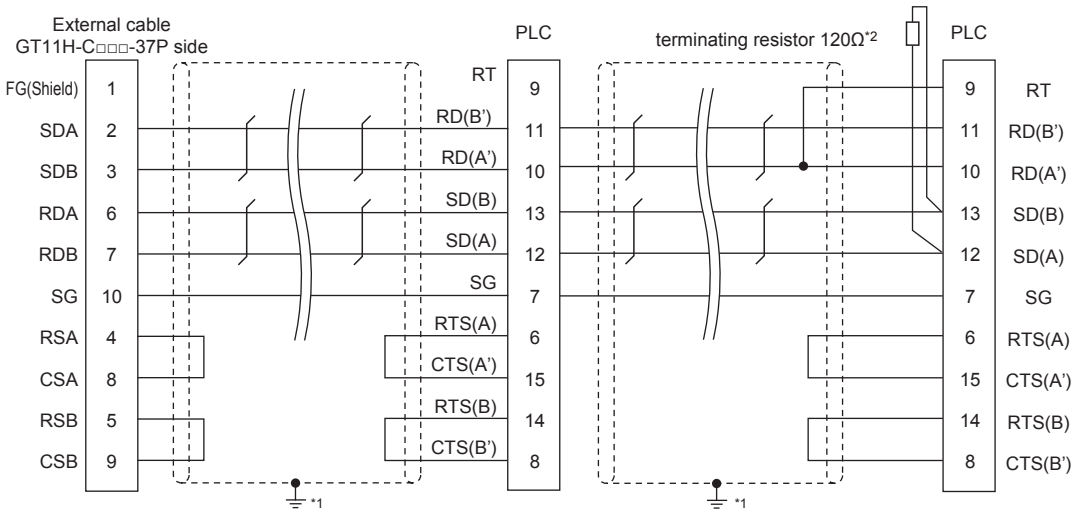
## ■RS-422 connection diagram 4)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

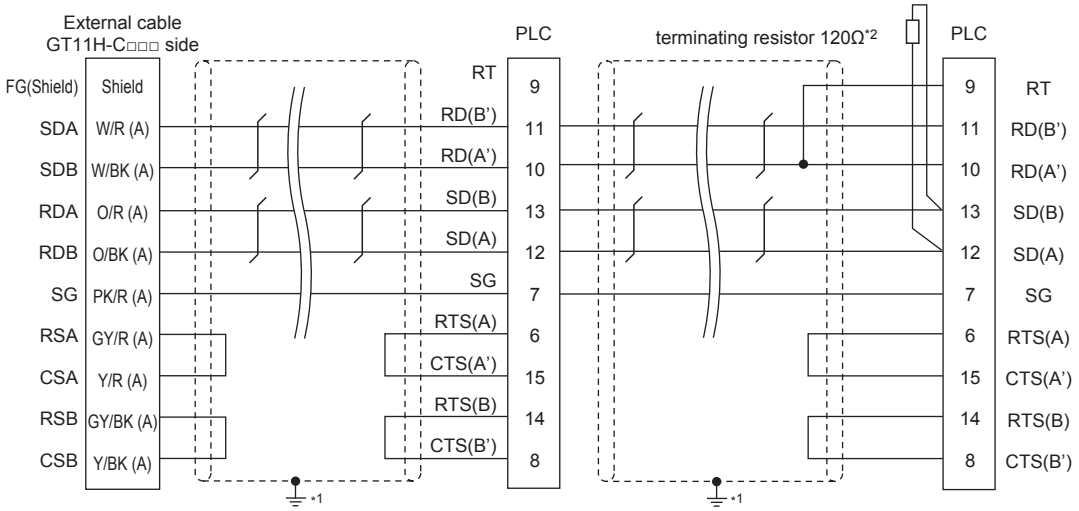
## ■RS-422 connection diagram 5)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

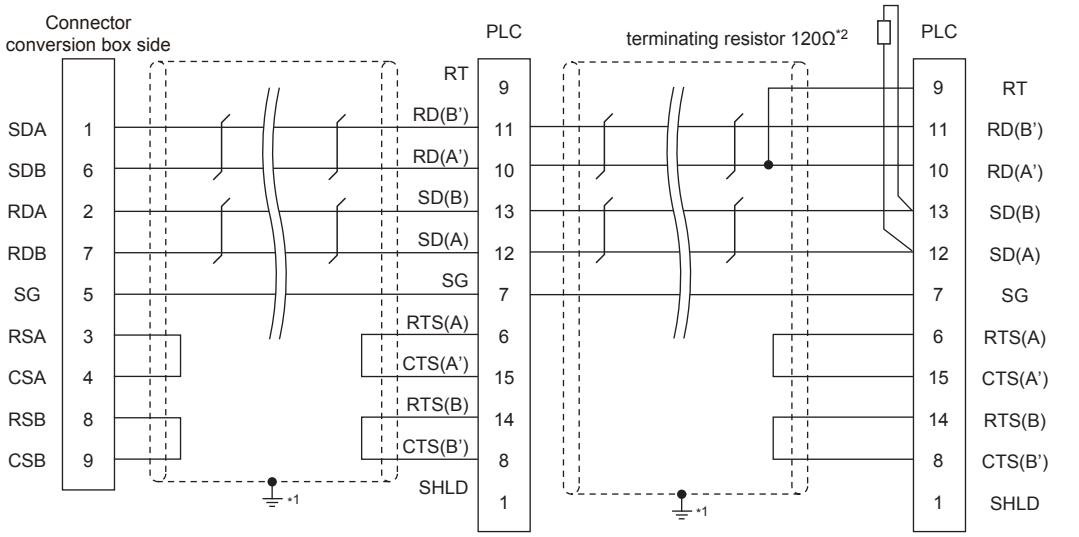
## ■RS-422 connection diagram 6)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

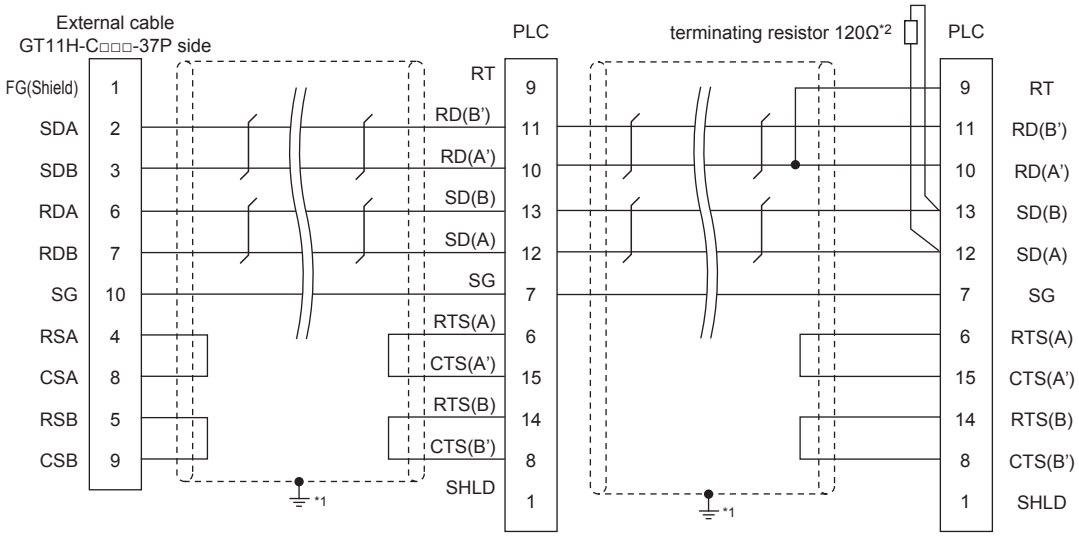
## ■RS-422 connection diagram 7)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

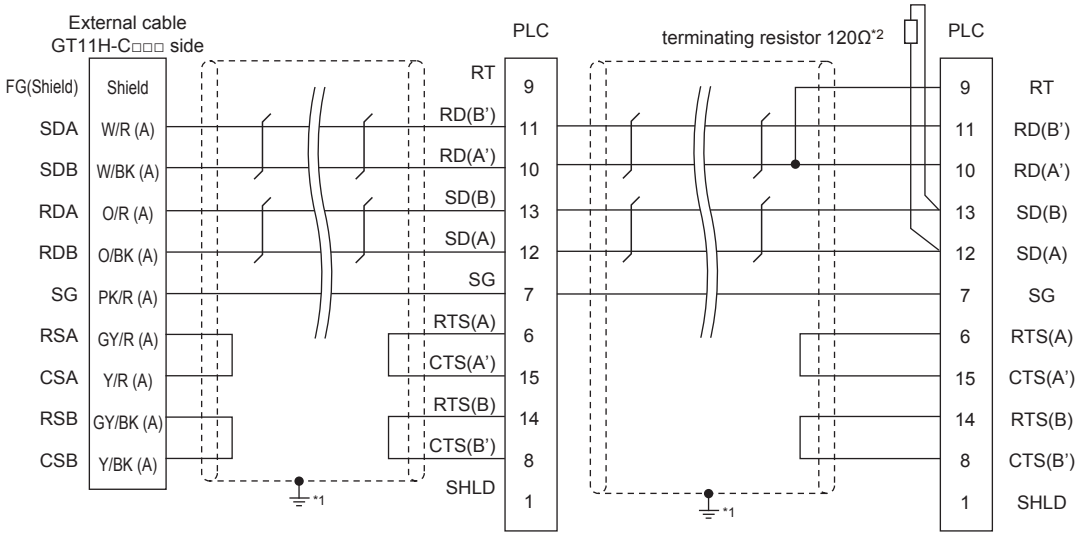
## ■RS-422 connection diagram 8)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

### ■RS-422 connection diagram 9)




*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

## Precautions when preparing a cable

### ■Cable length

The total length (between GOT and controllers) of the RS-422 cable must be 13 m or shorter.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■GE PLC side connector

Use the connector compatible with the GE PLC side module.

For details, refer to the GE PLC user's manual.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■GE PLC side

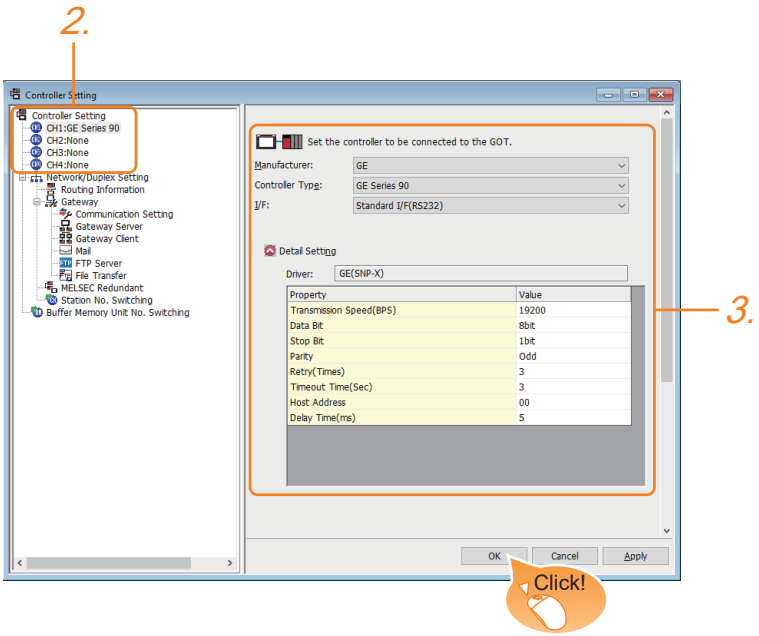
When connecting a GE PLC to the GOT, a terminating resistor must be connected.

📖GE PLC user's Manual

# 38.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [GE]
- [Controller Type]: [GE Series 90]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1800 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## GE (SNP-X)

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 00 |
| Delay Time(ms) | 5 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit*1 | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network.<br>(Default: 00) | 00 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300ms |

*1 If no setting is provided for the data length for the controller, set "8 bits".
If the setting is provided for the data length for the controller, set the same set value for the data length for the GOT as that for the PLC.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 38.5 PLC Side Setting

**Point**

GE PLC

For details of GE PLCs, refer to the following manuals.

GE PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| PLC CPU | Series 90-30 | ☞ Page 1801 Connecting to Series 90-30 |
| | VersaMaxMicro | ☞ Page 1802 Connecting to VersaMaxMicro |
| Communication Modules | IC693CMM311 | ☞ Page 1802 Connecting to IC693CMM311 |
| | IC697CMM711 | ☞ Page 1803 Connecting to IC697CMM711 |

## Connecting to Series 90-30

### Communication settings

Make the communication settings using the engineering tool.

When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

| Setting item | PLC side setting |
|---|---|
| Port Mode*1 | SNP |
| Port Type*2 | Slave |
| Data Rate | 9600bps, 19200bps |
| Flow Control | NONE |
| Parity | EVEN, ODD, NONE |
| Stop Bits | 1bit, 2bits |
| Timeout*3 | Long |
| Turn Around Delay*4 | 0 |
| SNP ID*5 | 00 to 31 |
| Converter Power Consumption*6 | 0 |

*1 Set to SNP.

*2 Set to Slave.

*3 Set to Long.

*4 Set to 0.

*5 Set within the range of 00 to 31.
When specifying the station No. from 0 to 9, add "0" before the number and set it as 00 to 09.

*6 Set to 0.(only when connecting to Port2)

# Connecting to VersaMaxMicro

## Communication settings

Make the communication settings using the engineering tool.

| Setting item | PLC side setting |
|---|---|
| Data Rate | 9600bps, 19200bps, 38400bps |
| Bits / Character*6 | 7bits, 8bits |
| Parity | EVEN, ODD, NONE |
| Stop Bits | 1bit, 2bits |
| Port Mode*1 | SNP |
| Port Type*2 | Slave |
| Flow Control | NONE |
| Timeout*3 | Long |
| Turn Around Delay*4 | 0 |
| SNP ID*5 | 00 to 31 |

*1 Set to the SNP protocol.
*2 Set to Slave.
*3 Set to Long.
*4 Set to 0.
*5 Set within the range of 00 to 31.
When specifying the station No. from 0 to 9, add "0" before the number and set it as 00 to 09.
*6 Set the same set value for the data length for the GOT and PLC.

# Connecting to IC693CMM311

## Communication settings

Make the communication settings using the engineering tool.
When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

| Setting item | PLC side setting |
|---|---|
| SNP Enable*1 | YES |
| SNP Mode*2 | Slave |
| Interface*3 | RS232, RS485 |
| Data Rate | 9600bps, 19200bps |
| Parity | ODD, NONE, EVEN |
| Stop Bits | 1bit, 2bits |
| Flow Control*4 | NONE |
| Turn Around Delay*5 | NONE |
| Timeout*6 | Long |

*1 Set to YES.
*2 Set to SLAVE.
*3 Set the communication format to be used.
(only when connecting to Port2)
*4 Set to NONE.
*5 Set to NONE.
*6 Set to LONG.

# Connecting to IC697CMM711

## Communication settings

Make the communication settings using the engineering tool.

When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

| Setting item | PLC side setting |
|---|---|
| SNP Enable*1 | YES |
| SNP Mode*2 | Slave |
| Interface*3 | RS232, RS485 |
| Data Rate | 9600bps, 19200bps |
| Parity | ODD, NONE, EVEN |
| Stop Bits | 1bit, 2bits |
| Flow Control*4 | NONE |
| Turn Around Delay*5 | NONE |
| Timeout*6 | Long |

*1 Set to YES.
*2 Set to SLAVE.
*3 Set the communication format to be used.
(only when connecting to Port2)
*4 Set to NONE.
*5 Set to NONE.
*6 Set to LONG.

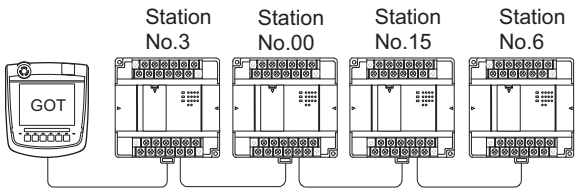


# Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

## Direct specification

Specify the station No. of the PLC to be changed when setting device.

| Specification range |
|---|
| 00 to 31 |

**Point**

PLC Station No. settings

Make sure to set a 2-digit number for the station No. of the PLC to be monitored by the GOT.

# 38.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
GE equipment ([GE Series 90])

# 38.7 Precautions

## GOT clock control

The PLC clock data cannot be written to or read from the GOT.

The settings of "time adjusting" or "time broadcast" made on the GOT will be disabled on the PLC.

# 39 LS INDUSTRIAL SYSTEMS PLC


- Page 1805 Connectable Model List
- Page 1806 Serial Connection
- Page 1823 Ethernet Connection
- Page 1831 Settable Device Range


## 39.1 Connectable Model List

The following table shows the connectable models.

| Series | | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|---|
| MASTER-K | K80S | K7M-D□□□S(/DC) | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1806 Connecting to K80S or K120S |
| | K120S | K7M-D□□□U | | | | |
| | K200S | K3P-07□S | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1809 Connecting to K200S |
| | K300S | K4P-15AS | ○ | RS-232<br>RS-422 | GT2506HS GT2505HS | ☞ Page 1812 Connecting to K300S |
| XGT | XGK | XGK-CPUU<br>XGK-CPUH<br>XGK-CPUA<br>XGK-CPUS<br>XGK-CPUE<br>XGK-CPUUN<br>XGK-CPUHN<br>XGK-CPUSN | ○ | Ethernet | GT2506HS GT2505HS | ☞ Page 1823 Connecting to XGK |

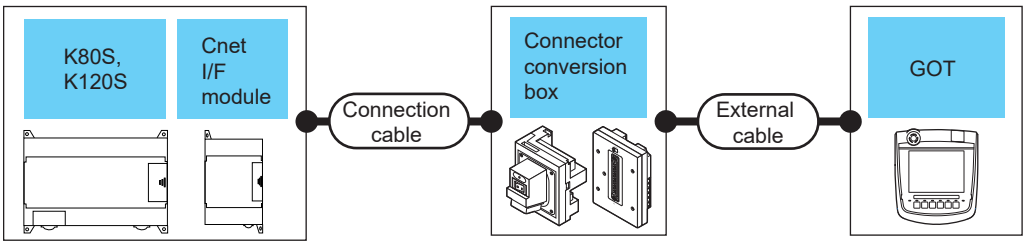
# 39.2 Serial Connection

## Connecting to K80S or K120S

Communication driver
LS Industrial Systems
MASTER-K

### When connecting to one PLC

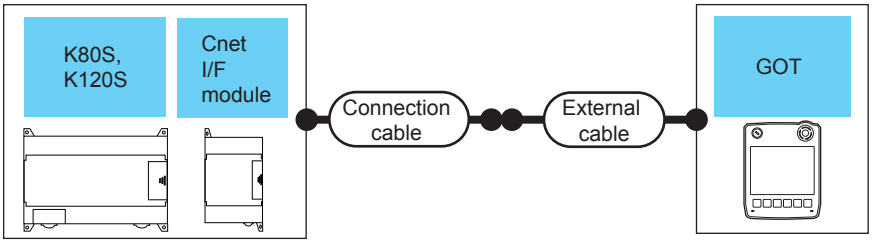
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| K80S K120S | - | RS-232 | User preparing Page 1816 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | G7L-CUEB | | User preparing Page 1817 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | | |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

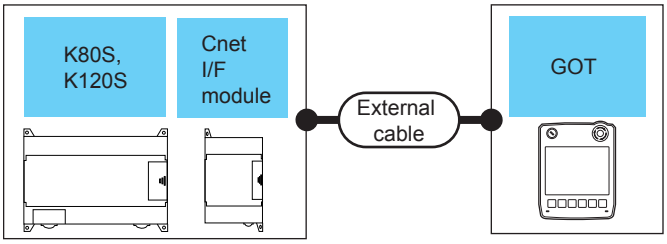
#### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | |
| K80S K120S | - | RS-232 | User preparing Page 1816 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | G7L-CUEB | | User preparing Page 1817 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

### ■When using the external cable (GT11H-C□□□)

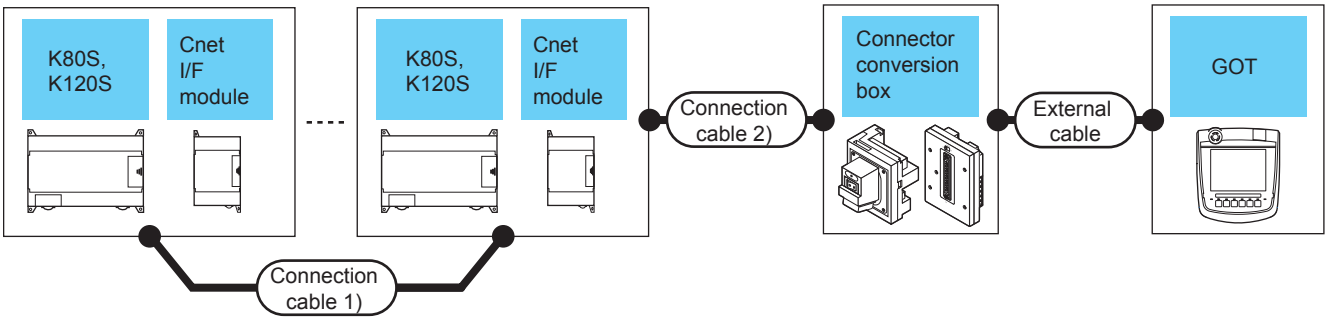



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | | | | |
| K80S<br>K120S | - | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1816 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | G7L-CUEB | | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1817 RS-232 connection diagram 6) | GT 2505HS | 6m | |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

## When connecting to multiple PLCs

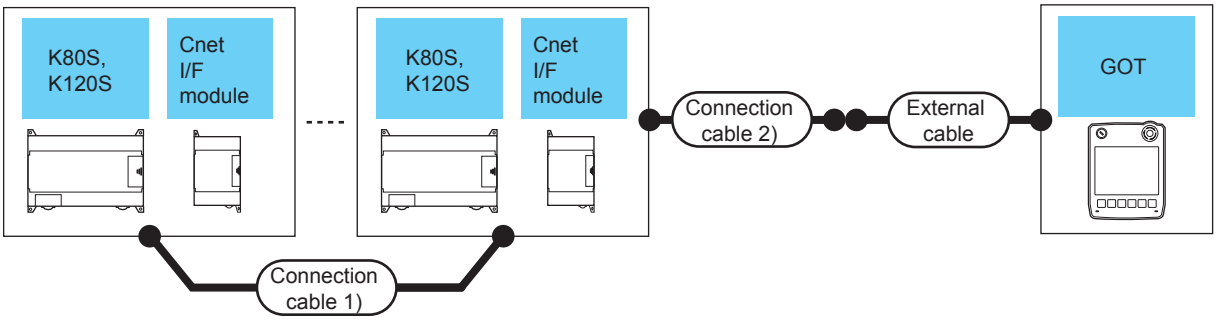
### ■When using the connector conversion box




| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| K80S<br>K120S | User preparing Page 1819 RS-422 connection diagram 4) | G7L-CUEC | RS-422 | User preparing Page 1818 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 PLCs for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.
*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

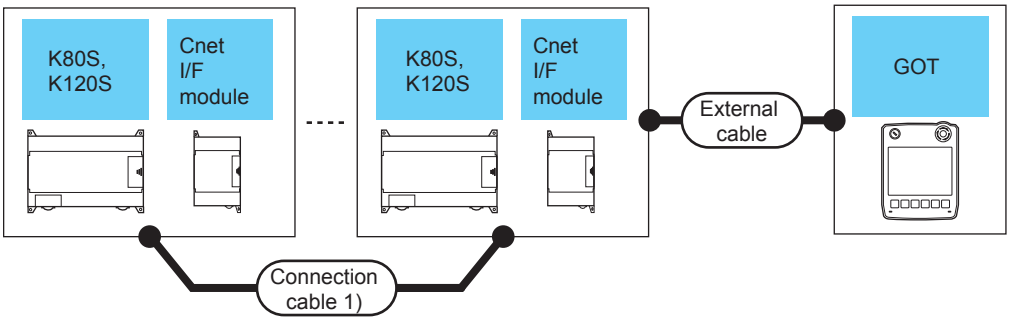



| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | Cable model Connection diagram number | | | | |
| K80S K120S | User preparing Page 1819 RS-422 connection diagram 4) | G7L-CUEC | RS-422 | User preparing Page 1818 RS-422 connection diagram 2) | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | Connection cable 1) | Cnet I/F module*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | | | | |
| K80S K120S | User preparing Page 1819 RS-422 connection diagram 4) | G7L-CUEC | RS-422 | GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1819 RS-422 connection diagram 3) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

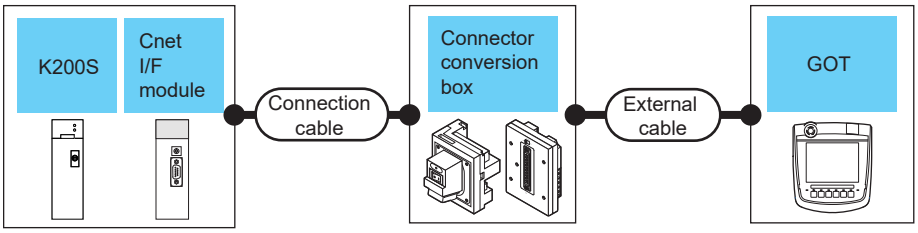
*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

# Connecting to K200S

Communication driver
LS Industrial Systems MASTER-K

## When connecting to one PLC

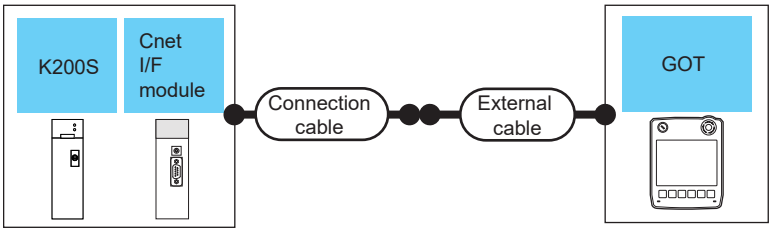
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| K200S | G6L-CUEB | RS-232 | User preparing Page 1817 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

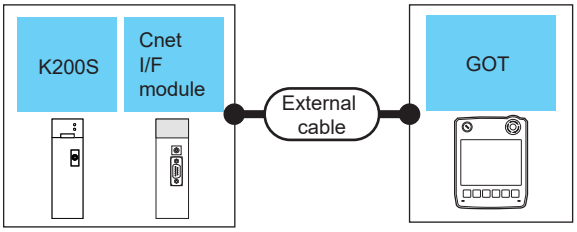
### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | |
| K200S | G6L-CUEB | RS-232 | User preparing Page 1817 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

## ■When using the external cable (GT11H-C□□□)

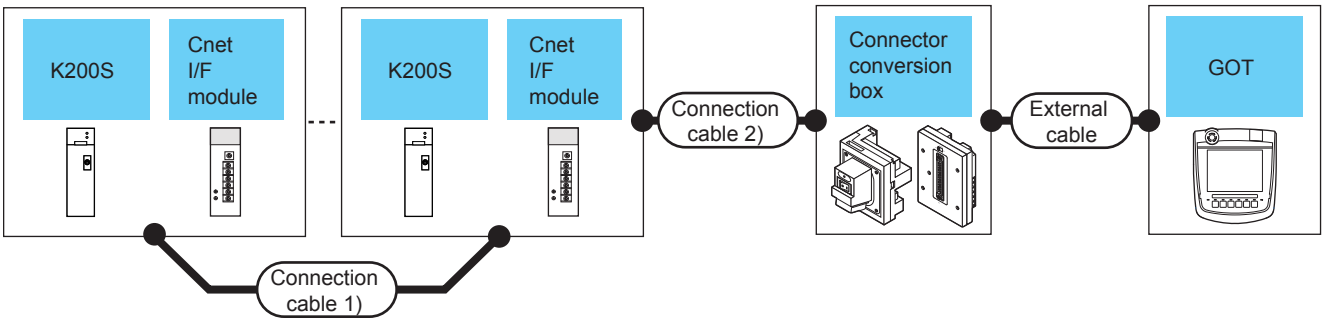



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | | | | |
| K200S | G6L-CUEB | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1817 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

## When connecting to multiple PLCs

### ■When using the connector conversion box

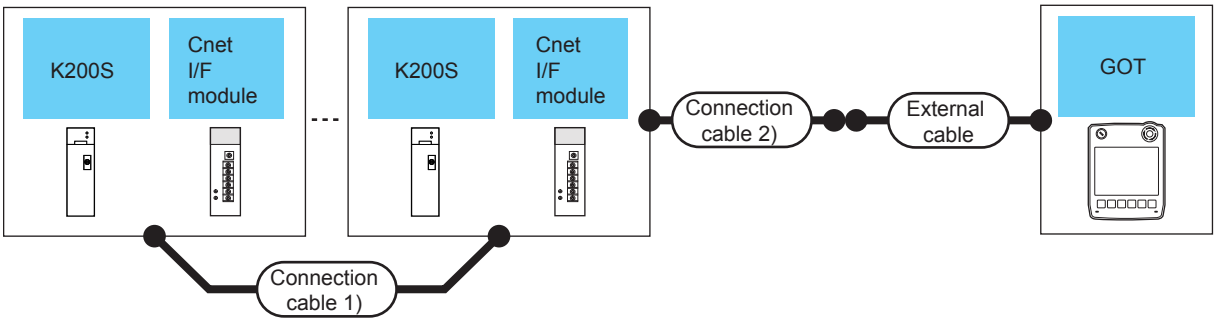



| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | Cable model Connection diagram number | | | | | |
| K200S | User preparing Page 1819 RS-422 connection diagram 4) | G6L-CUEC | RS-422 | User preparing Page 1818 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 PLCs for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

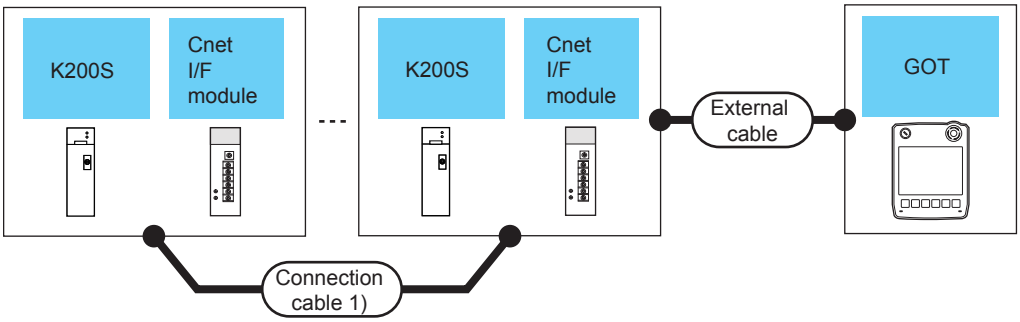



| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | Cable model Connection diagram number | | | | |
| K200S | User preparing Page 1819 RS-422 connection diagram 4) | G6L-CUEC | RS-422 | User preparing Page 1818 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□)




| PLC | Connection cable 1) | Cnet I/F module*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Model name | Communication Type | | | | |
| K200S | (User preparing) Page 1819 RS-422 connection diagram 4) | G6L-CUEC | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1819 RS-422 connection diagram 3) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

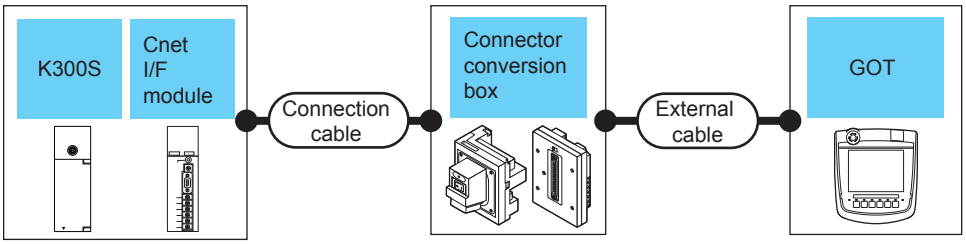
*2 The distance from the GOT to the PLC (Connection cable 1) +External cable)

# Connecting to K300S

Communication driver
LS Industrial Systems MASTER-K

## When connecting to one PLC

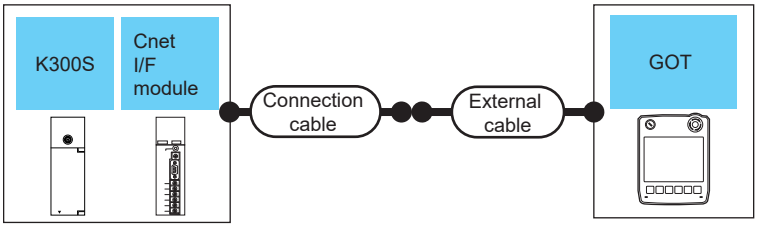
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| K300S | G4L-CUEA | RS-232 | (User preparing) Page 1817 RS-232 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

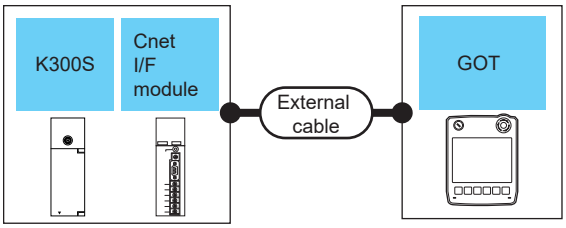
## ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | Cable model<br>Connection diagram number | | | | |
| K300S | G4L-CUEA | RS-232 | User preparing Page 1817 RS-232 connection diagram 5) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

## ■When using the external cable (GT11H-C□□□)

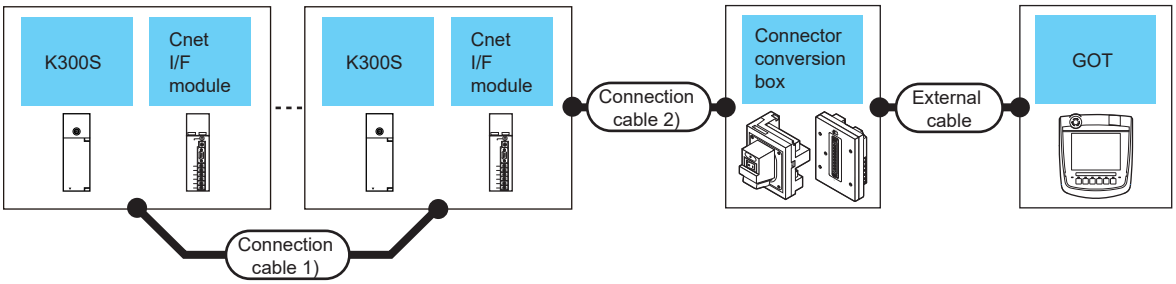



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | Cnet I/F module*1 | Communication Type | | | | |
| K300S | G4L-CUEA | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1817 RS-232 connection diagram 6) | GT 2505HS | 6m | 1 PLC for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

## When connecting to multiple PLCs

### ■When using the connector conversion box

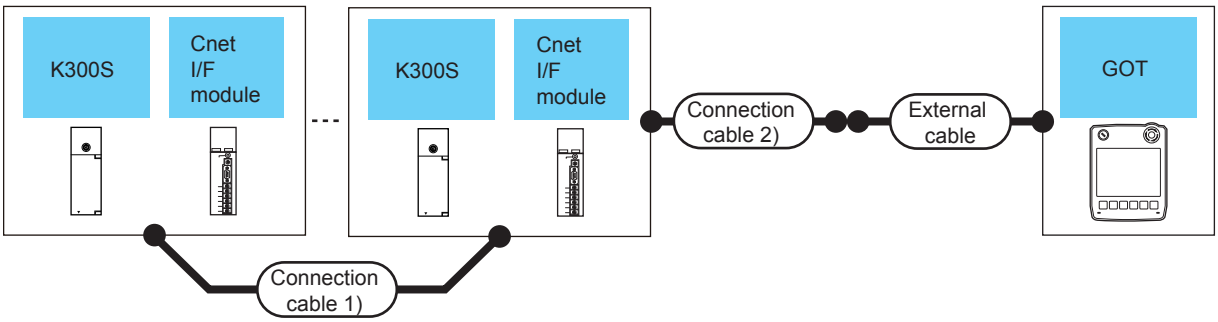



| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | | |
| K300S | User preparing Page 1819 RS-422 connection diagram 4) | G4L-CUEA | RS-422 | User preparing Page 1818 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | 31 PLCs for 1 GOT |
| | | | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

### ■When using the external cable (GT11H-C□□□-37P)

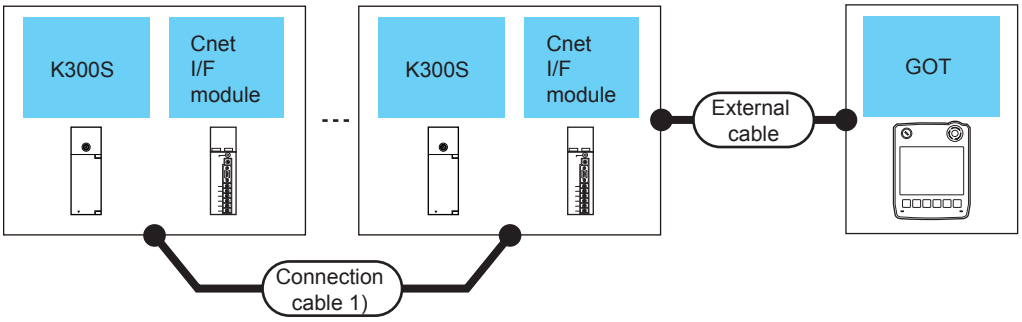



| PLC | Connection cable 1) | Cnet I/F module*1 | | Connection cable 2) | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Cnet I/F module*1 | Communication Type | Cable model Connection diagram number | | | | |
| K300S | User preparing Page 1819 RS-422 connection diagram 4) | G4L-CUEA | RS-422 | User preparing Page 1818 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

## ■When using the external cable (GT11H-C□□□)




| PLC | Connection cable 1) | Cnet I/F module*1 | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Cable model Connection diagram number | Cnet I/F module*1 | Communication Type | | | | |
| K300S | User preparing Page 1819 RS-422 connection diagram 4) | G4L-CUEA | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1819 RS-422 connection diagram 3) | GT 2505HS | 13m | 10 PLCs for 1 GOT |

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

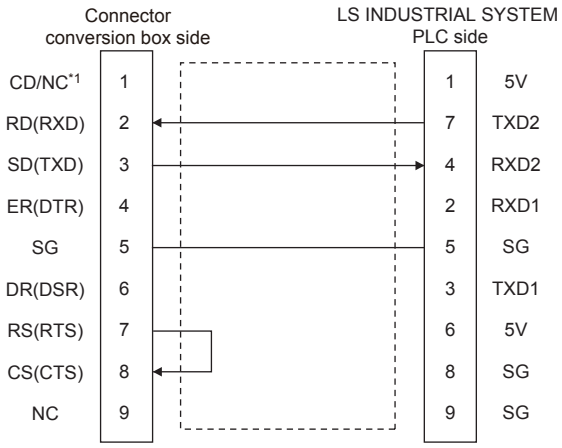
*2 The distance from the GOT to the PLC (Connection cable 1) +External cable)

# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

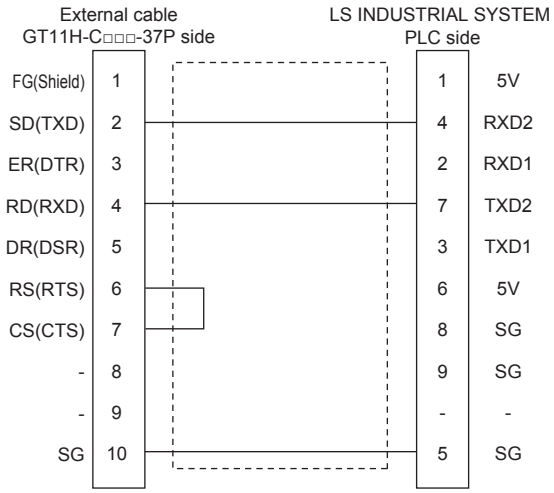
## RS-232 cable

### ■RS-232 connection diagram 1)

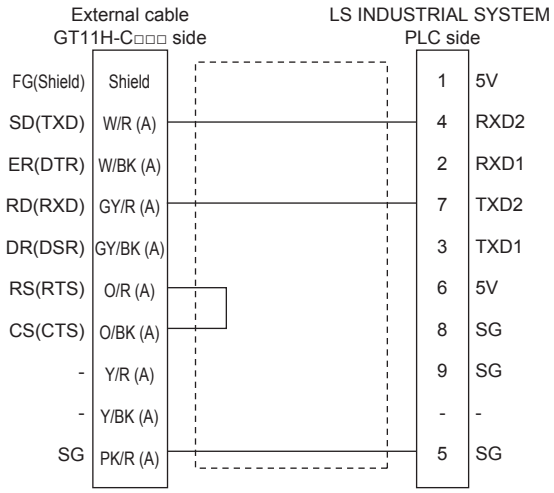



*1 GT2506HS-V: CD, GT2505HS-V: NC

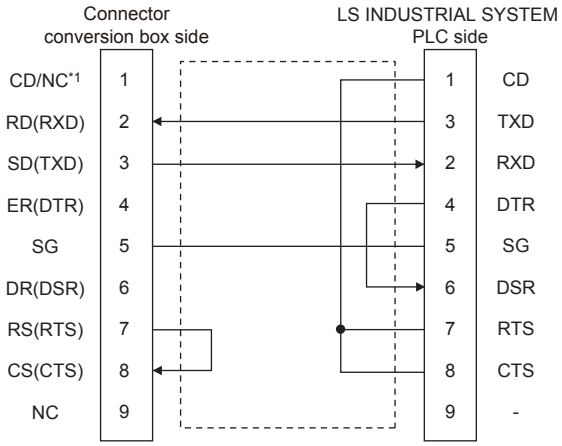
### ■RS-232 connection diagram 2)




### ■RS-232 connection diagram 3)

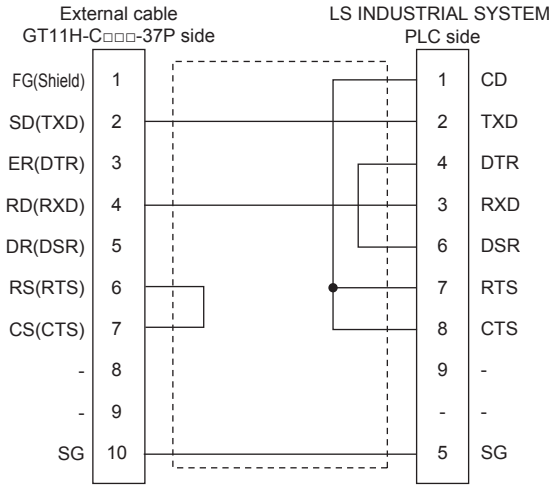


## ■RS-232 connection diagram 4)

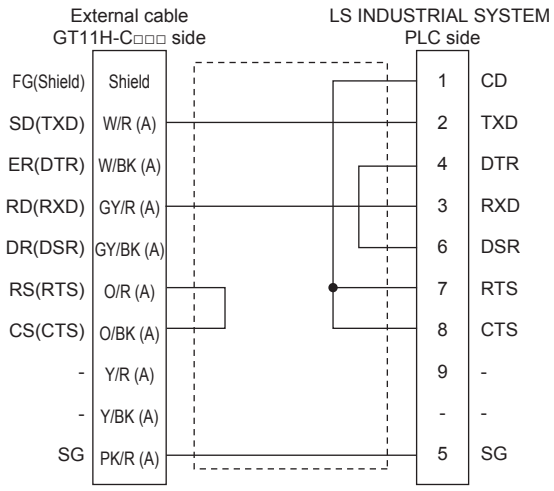



*1 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 5)




## ■RS-232 connection diagram 6)



### ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

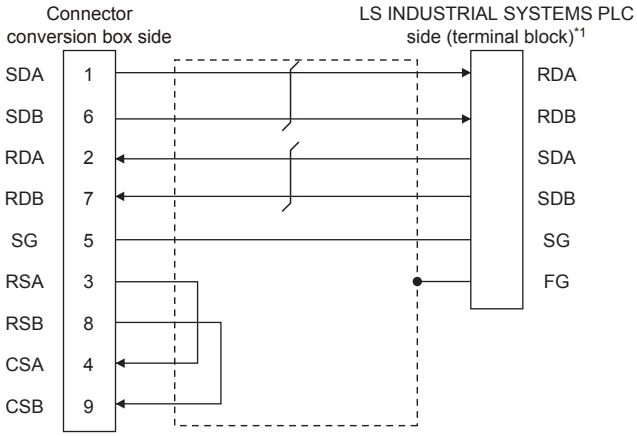
• LS INDUSTRIAL SYSTEMS PLC side connector

Use the connector compatible with the LS INDUSTRIAL SYSTEMS PLC side module.

For details, refer to the user's manual of the LS INDUSTRIAL SYSTEMS PLC.

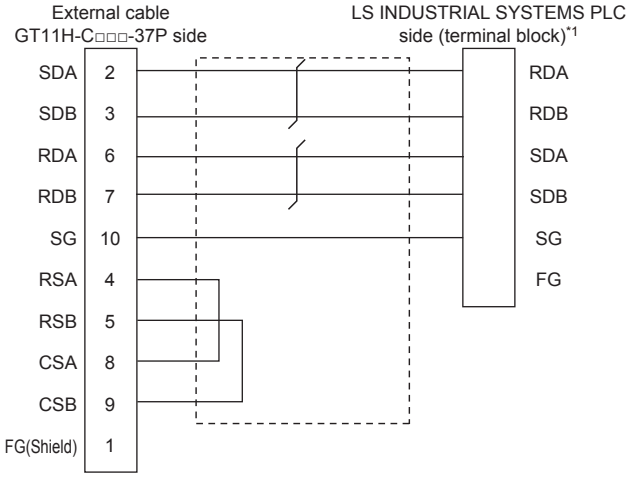
## RS-422 cable

### ■RS-422 connection diagram 1)



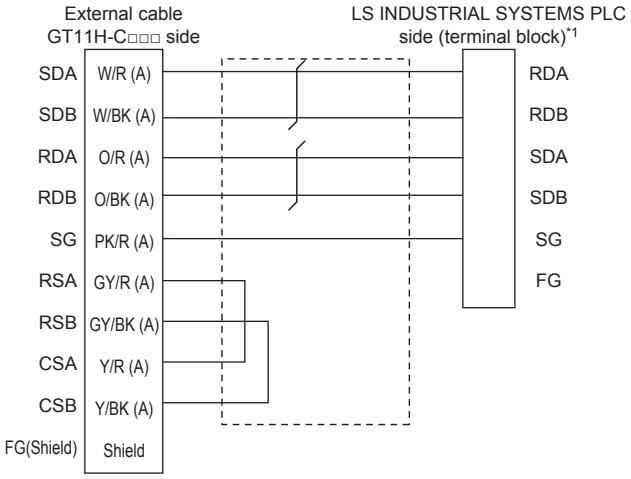

*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

### ■RS-422 connection diagram 2)



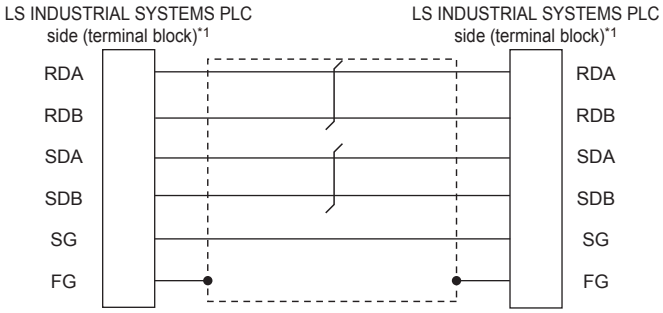

*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

## ■RS-422 connection diagram 3)




*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

## ■RS-422 connection diagram 4)




*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

## ■Precautions when preparing a cable

• Cable length

The total length (between GOT and controllers) of the RS-422 cable must be 13 m or shorter.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• LS INDUSTRIAL SYSTEMS PLC side connector

Use the connector compatible with the LS INDUSTRIAL SYSTEMS PLC side module.

For details, refer to the user's manual of the LS INDUSTRIAL SYSTEMS PLC.

## ■Connecting terminating resistors

• GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

• LS INDUSTRIAL SYSTEMS PLC side

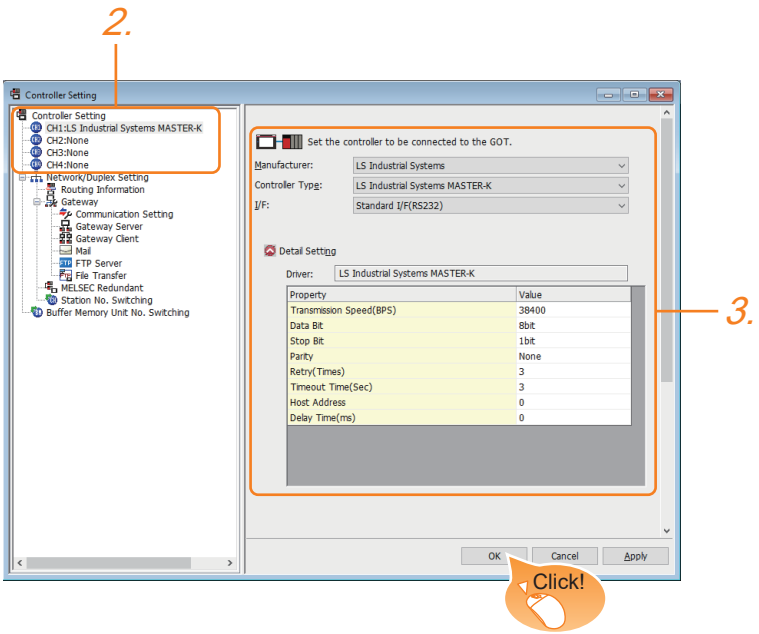
When connecting an LS INDUSTRIAL SYSTEMS PLC to the GOT, a terminating resistor must be connected.

☞ Page 1818 RS-422 cable

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [LS Industrial Systems]
- [Controller Type]: [LS Industrial Systems MASTER-K]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1821 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 38400 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 0 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 38400bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: None) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 30sec |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 0) | 0 to 31 |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

LS INDUSTRIAL SYSTEMS PLC

For details of LS INDUSTRIAL SYSTEMS PLCs, refer to the following manual.

User's Manual of the LS INDUSTRIAL SYSTEMS PLC

| Model name | | Refer to |
|---|---|---|
| PLC CPU | K80S<br>K120S | ☞ Page 1822 Connecting to PLC CPU |
| | K200S | |
| | K300S | |
| Cnet I/F module | G7L-CUEB | ☞ Page 1822 Connecting to Cnet I/F module |
| | G7L-CUEC | |
| | G6L-CUEB | |
| | G6L-CUEC | |
| | G4L-CUEA | |

## Connecting to PLC CPU

### ■Settings of the communication specifications

There is no item to be set using the hardware.

Set the items using the engineering software for MASTER-K.

| Item | Setting details |
|---|---|
| Station No. | 0 to 31 |
| Communication speed | 1200, 2400, 4800, 9600, 19200, 38400, 57600bps |
| Data bit | 7 or 8 |
| Parity bit | None, Even, Odd |
| Stop bit | 1 or 2 |

*1 For the setting method of the engineering software, refer to the following.
User's Manual of the LS INDUSTRIAL SYSTEMS PLC

## Connecting to Cnet I/F module

### ■Settings of the communication specifications

There is no item to be set using the hardware.

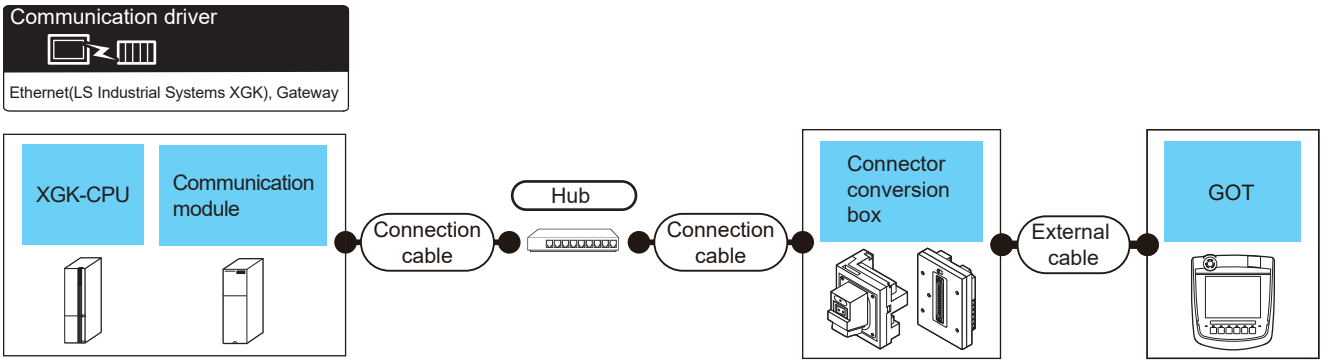
Set the items using the engineering software for MASTER-K.

| Item | | Setting details |
|---|---|---|
| Communication protocol | | Dedicated protocol |
| Communication format | Data bit | 7 or 8 |
| | Stop bit | 1 or 2 |
| | Start bit | 1 |
| | Parity bit | Even/Odd/None |
| Channel selection | | Stand-alone mode/Interlocking mode |
| Synchronization | | Asynchronous |
| Transmission speed (bps) | RS-232C | 300/600/1200/2400/4800/9600/19200/38400 |
| | RS-422/485 | 300/600/1200/2400/4800/9600/19200/38400/76800 |

*1 For the setting method of the engineering software, refer to the following.
User's Manual of the LS INDUSTRIAL SYSTEMS PLC

# 39.3 Ethernet Connection

## Connecting to XGK




| PLC | | Connection cable | | Connector conversion box | External cable*5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Model name | Communication module *1*2 | Cable model *3 | Maximum segment length *4 | | | | |
| XGK-CPUU<br>XGK-CPUH<br>XGK-CPUA<br>XGK-CPUS<br>XGK-CPUE | XGL-EFMT(B) | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | • 63 PLCs or less for 1 GOT<br>• 16 GOTs or less for 1 XGL-EFMT(B) when connecting to the communication module*6<br>• 4 GOTs or less for 1 XGK-CPU when connecting to the Ethernet port built in the CPU*6 |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |
| XGK-CPUUN<br>XGK-CPUHN<br>XGK-CPUSN | XGL-EFMT(B) | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |
| | -(Ethernet port built in the CPU) | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |

*1 Product manufactured by LS Industrial Systems Co., Ltd. For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 Select one of the following for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
• When connecting to the communication module: [XGL-EFMT(B)]
• When connecting to the Ethernet port built in the CPU: [XGK-CPU]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 1828 Connected Ethernet controller setting

*3 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target device configuration

*4 A length between a hub and a node.
The maximum distance differs depending on the Ethernet device to be used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Max. 4 nodes for a cascade connection (500m)
• 100BASE-TX: Max. 2 nodes for a cascade connection (205m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

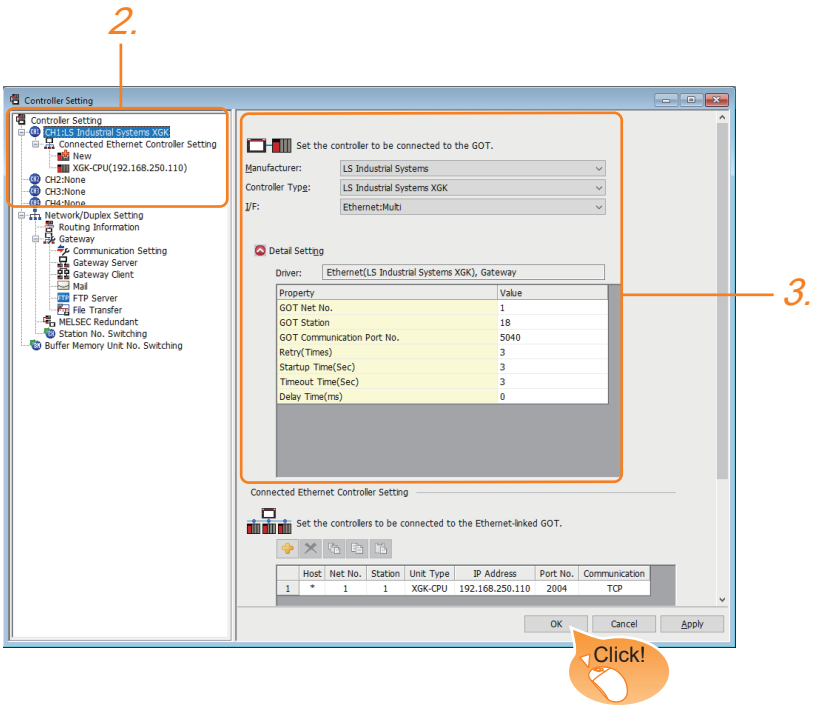
*5 Use C or later version of GT11H-C□□-37P.

*6 Set the number of connected GOTs in the engineering software for the PLC.
☞ Page 1829 PLC Side Setting

# GOT side settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [LS Industrial Systems]
- [Controller Type]: [LS Industrial Systems XGK]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1826 Communication detail settings

**4.** When you have completed the setting, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5040 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station *1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default: 5040 *2) | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1828 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

- Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

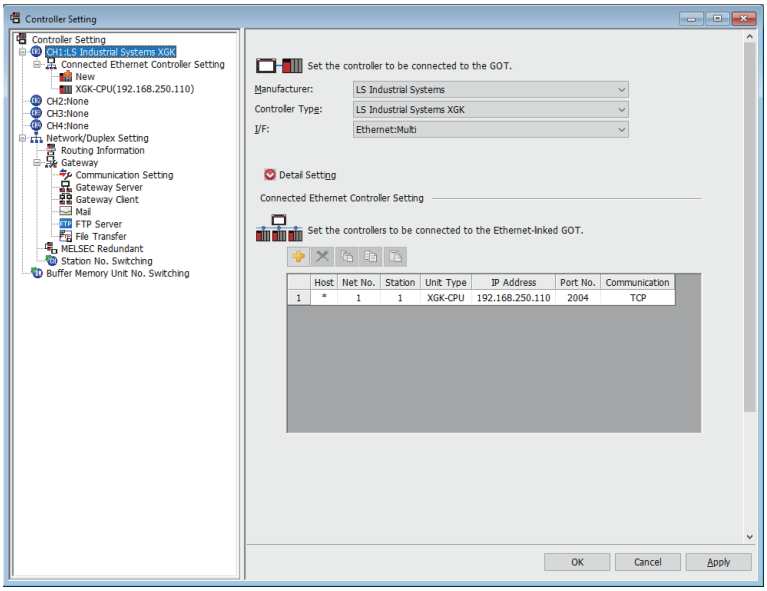
### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet controller setting




| Item | Description | Set value | |
|---|---|---|---|
| | | XGK-CPU | XGL-EFMT(B) |
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | - | |
| Net No. | Set the network No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 239 | |
| Station *1 | Set the station No. of the connected Ethernet equipment.<br>(Default: 1) | 1 to 64 | |
| Unit Type | Select one according to the connected unit.<br>When connecting to the Ethernet port built in the CPU: [XGK-CPU]<br>When connecting to the communication module: [XGL-EFMT(B)]<br>(Default: XGK-CPU) | XGK-CPU, XGL-EFMT(B) | |
| IP address | Set the IP address of the connected Ethernet equipment.<br>(Default: 192.168.250.110) | PLC side IP address | |
| Port No. *2 | Set the port No. of the connected Ethernet equipment.<br>(Default: 2004) | 2004 | 2004 (TPC),<br>2005 (UDP) |
| Communication format *2 | Select a communication protocol.<br>(Default: TCP) | TCP | TCP, UDP |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1826 Communication detail settings

*2 The setting range depends on the selection for [Unit Type].

# PLC Side Setting

**Point**

LS INDUSTRIAL SYSTEMS PLC

For details of LS INDUSTRIAL SYSTEMS PLCs, refer to the following manual.

User's Manual of the LS INDUSTRIAL SYSTEMS PLC

## Standard settings

Configure the settings in the XGT series engineering software.

| Item | Setting details |
|---|---|
| IP Adress | PLC side IP Adress*1 |
| Reception waiting time | Time period from when communication with the controller stops until when communication is disconnected (Five seconds or longer is recommended.) |
| Number of Dedicated Connections | Set the number of TCP devices connected to the PLC. |
| Driver | Select XGT Server. |

*1 Adjust the settings with GOT settings.

Page 1828 Connected Ethernet controller setting

# Precautions

## When connecting to multiple GOTs

### ■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1825 Setting communication interface (Communication settings)

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

# 39.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
LS IS equipment ([LS Industrial Systems XGK])
LS IS equipment ([LS Industrial Systems MASTER-K])

# MEMO

# 40 MITSUBISHI ELECTRIC INDIA PLC


- Page 1833 Connectable Model List
- Page 1834 System Configuration
- Page 1836 Connection Diagram
- Page 1840 GOT Side Settings
- Page 1842 PLC Side Settings
- Page 1842 Settable Device Range


## 40.1 Connectable Model List

The following table shows the connectable models.

| Series | Model name*1 | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Nexgenie 1000 PLC | NG16DL | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1834 Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC |
| | NG16ADL | | | | |
| | NG14RL | | | | |
| | NG16DN | | | | |
| | NG16ADN | | | | |
| | NG14RN | | | | |
| | NG16DL | ○ | RS-485 | GT 2506 HS | |
| | NG16ADL | | | | |
| | NG14RL | | | | |
| | NG16DN | | | | |
| | NG16ADN | | | | |
| | NG14RN | | | | |
| Nexgenie 2000 PLUS PLC | P2210 | ○ | RS-232<br>RS-422 | GT 2506 HS GT 2505 HS | ☞ Page 1834 Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC |
| | P2211 | | | | |
| | P2213A | | | | |
| | P2214 | | | | |
| | P2210 | ○ | RS-485 | GT 2506 HS | |
| | P2211 | | | | |
| | P2213A | | | | |
| | P2214 | | | | |

*1 Use the PLC versions listed below.

| Model | Applicable Library | | Applicable Target | |
|---|---|---|---|---|
| | Library name | Version | Target name | Version |
| NG16DL | GOT2000_NG_1000.lib | Ver. 1.0 or later | Installable_Target_Nexgenie_T2.7 | Ver. 2.7 or later |
| NG16ADL | | | | |
| NG14RL | | | | |
| NG16DN | | | | |
| NG16ADN | | | | |
| NG14RN | | | | |
| P2210 | GOT2000_NG_P2210.lib | Ver. 1.0 or later | Installable_Target_Nexgenie2210_T1.8 | Ver. 1.8 or later |
| P2211 | | | | |
| P2213A | GOT2000_NG_P2213A.lib | Ver. 1.0 or later | Installable_Target_Nexgenie2213A_T1.5 | Ver. 1.5 or later |
| P2214 | GOT2000_NG_P2214.lib | Ver. 1.0 or later | Installable_Target_Nexgenie2214_T1.5 | Ver. 1.5 or later |

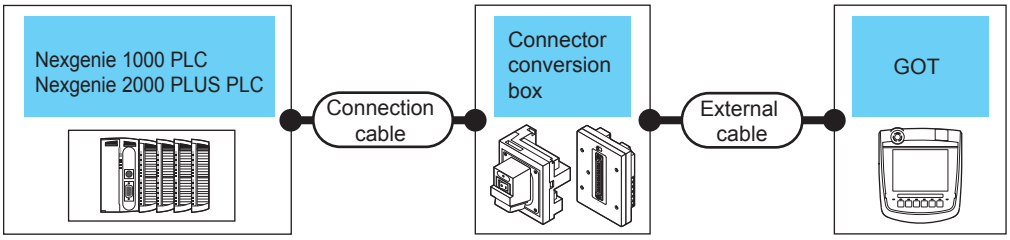
# 40.2 System Configuration

## Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC

Communication driver

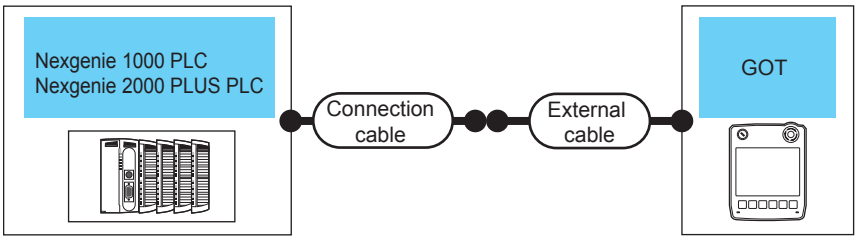
MEI Nexgenie

### When using the connector conversion box



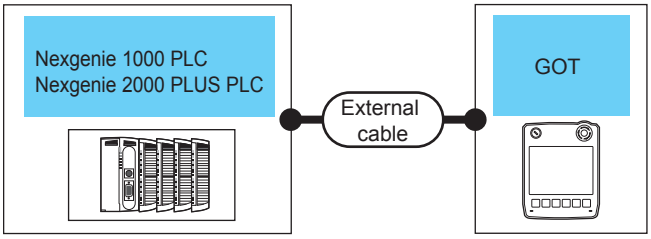

| Communication unit | Communication Type | Connection cable<br>Cable model<br>Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Nexgenie 1000 PLC<br>Nexgenie 2000 PLUS PLC | RS-232 | User preparing Page 1836 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422 | User preparing Page 1837 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 PLC for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |
| Nexgenie 1000 PLC<br>Nexgenie 2000 PLUS PLC | RS-485 | User preparing Page 1839 RS-485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | | |

### When using the external cable (GT11H-C□□□-37P)




| Communication unit | Communication Type | Connection cable<br>Cable model<br>Connection diagram number | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Nexgenie 1000 PLC<br>Nexgenie 2000 PLUS PLC | RS-232 | User preparing Page 1836 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | RS-422 | User preparing Page 1837 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | Up to 31 PLC for 1 GOT |

## When using the external cable (GT11H-C□□□)




| Communication unit | Communication Type | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| Nexgenie 1000 PLC<br>Nexgenie 2000 PLUS PLC | RS-232 | GT11H-C30(3m)<br>☞ Page 1836 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 PLC for 1 GOT |
| | RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1838 RS-422 connection diagram 3) | GT 2505HS | 13m | Up to 31 PLC for 1 GOT |

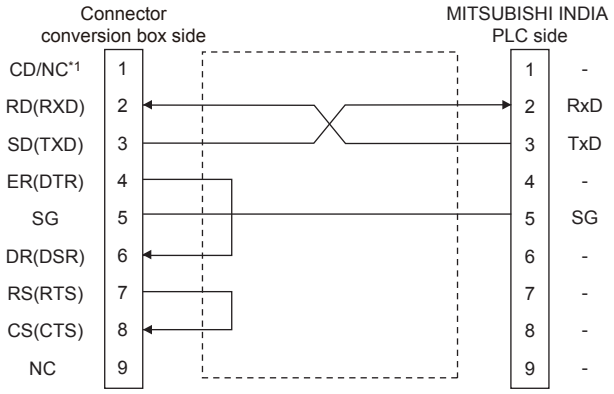
# 40.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

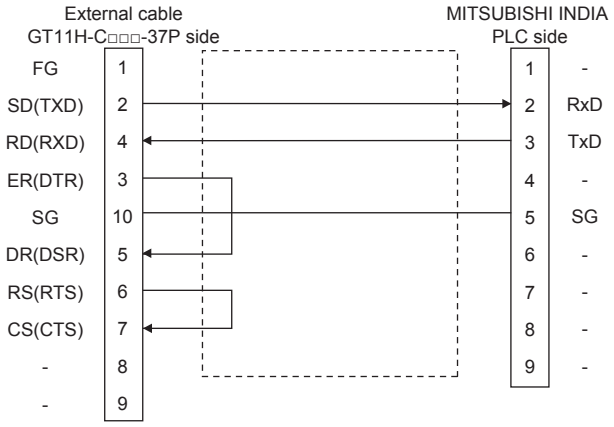
### Connection diagram

#### ■RS-232 connection diagram 1)

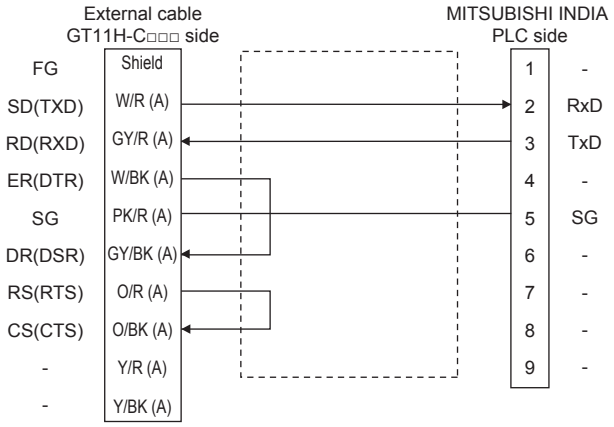



*1 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




#### ■RS-232 connection diagram 3)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■MITSUBISHI INDIA PLC side connector

Use the connector compatible with the MITSUBISHI INDIA PLC side module.

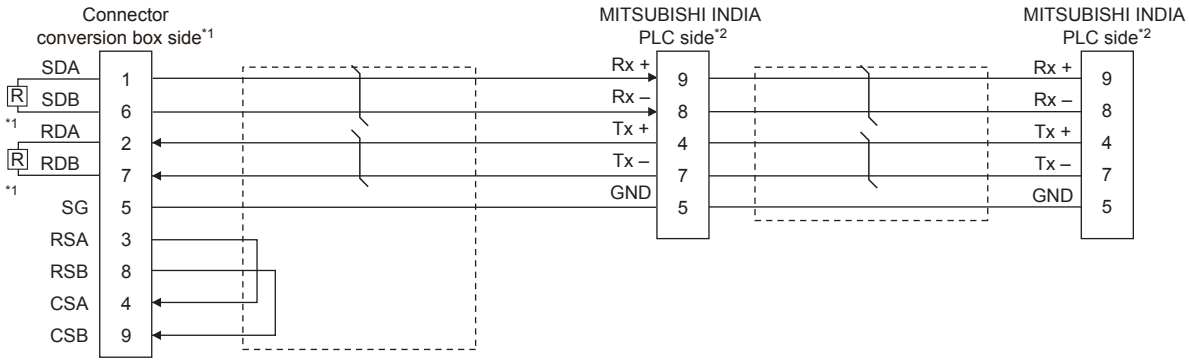
For details, refer to the user's manual of the MITSUBISHI INDIA PLC.

# RS-422 cable

The following diagram shows the connection between the GOT and the PLC.

## Connection diagram

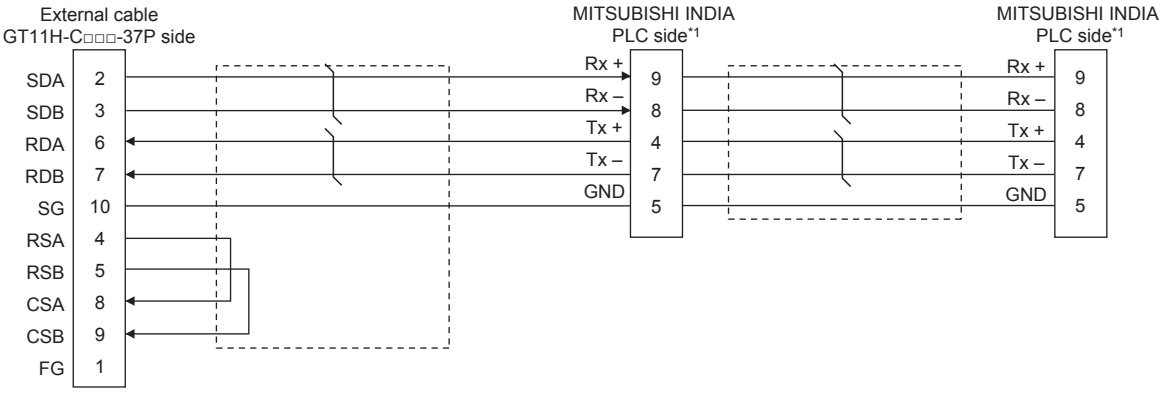
### ■RS-422 connection diagram 1)




*1 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 89 Terminating resistors of GOT

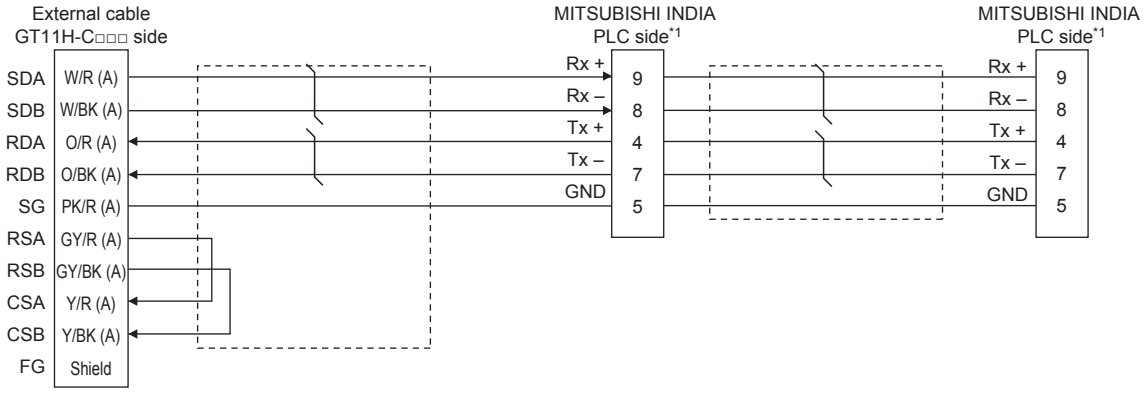
*2 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

### ■RS-422 connection diagram 2)




*1 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

### ■RS-422 connection diagram 3)




*1 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connectors on the MITSUBISHI INDIA PLC side

Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

## Connecting terminating resistors

### ■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■MITSUBISHI INDIA PLC side

It is necessary to set terminating resistors in the PLC manufactured by MITSUBISHI INDIA when connecting the GOT to the PLC manufactured by MITSUBISHI INDIA.

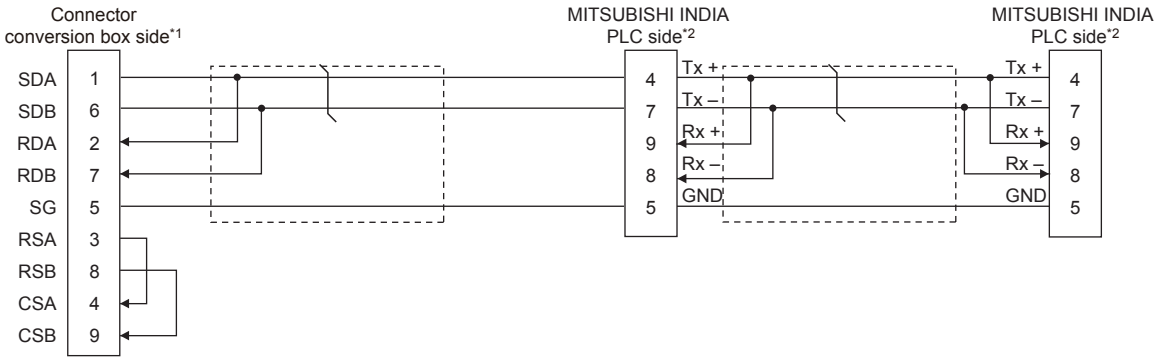
For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

# RS-485 cable

The following diagram shows the connection between the GOT and the PLC.

## Connection diagram

### ■RS-485 connection diagram 1)




*1 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 89 Terminating resistors of GOT

*2 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■Connectors on the MITSUBISHI INDIA PLC side

Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used MITSUBISHI INDIA PLC.

## Connecting terminating resistors

### ■GOT side

Set the terminating resistor using the terminating resistor setting switch.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■Connectors on the MITSUBISHI INDIA PLC side

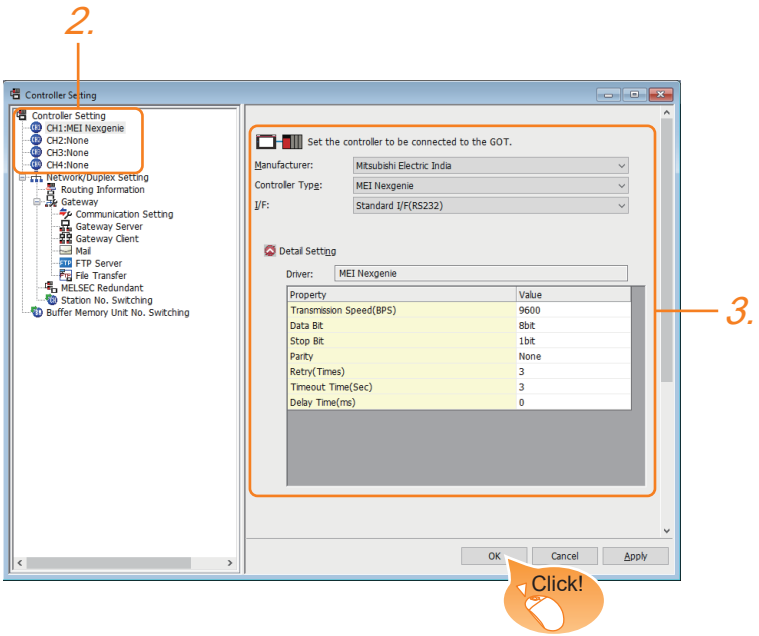
Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

# 40.4 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Mitsubishi Electric India]
- [Controller Type]: [MEI Nexgenie]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1841 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 9600 |
| Data Bit | 8bit |
| Stop Bit | 1bit |
| Parity | None |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 9600bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit*1 | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bit/8bit |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300(ms) |

*1 Set "8 bits".

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manuals.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 40.5 PLC Side Settings

**Point**

PLCs manufactured by MITSUBISHI INDIA

For the details of PLCs manufactured by MITSUBISHI INDIA, refer to the following manual.

PLCs manufactured by MITSUBISHI INDIA

## Communication settings

Make the communication settings using peripheral S/W of MITSUBISHI INDIA PLC.

### ■Nexgenie 1000 PLC

| Item | Setting details |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data bit | 8bits |
| Stop bit*1 | 1bit, 2bits |
| Parity bit*1 | None, Even, Odd |
| Full duplex/Half duplex | Half duplex |

*1 Adjust the settings with GOT settings.

### ■Nexgenie 2000 PLUS PLC

| Item | Setting details |
|---|---|
| Communication speed*1 | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits |
| Stop bit*1 | 1bit, 2bits |
| Parity bit*1 | None, Even, Odd |
| Full duplex/Half duplex | Half duplex |

*1 Adjust the settings with GOT settings.

# 40.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1 MITSUBISHI INDIA equipment ([MEI Nexgenie])

# 41 SICK SAFETY CONTROLLER


- Page 1843 Connectable Model List
- Page 1843 System Configuration
- Page 1844 GOT Side Settings
- Page 1846 PLC Side Setting
- Page 1846 Settable Device Range

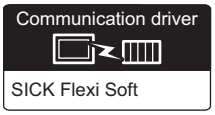

## 41.1 Connectable Model List

The following table shows the connectable models.

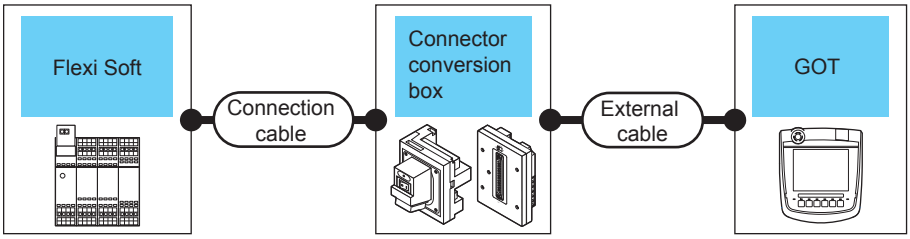
| Series | Model name | Clock | Communication Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| Flexi Soft | FX3-CPU000000 | × | RS-232 | GT 2506 HS GT 2505 HS | ☞ Page 1843 Connecting to Flexi Soft |
| | FX3-CPU130002 | | | | |
| | FX3-CPU320002 | | | | |

## 41.2 System Configuration

### Connecting to Flexi Soft




#### When using the connector conversion box



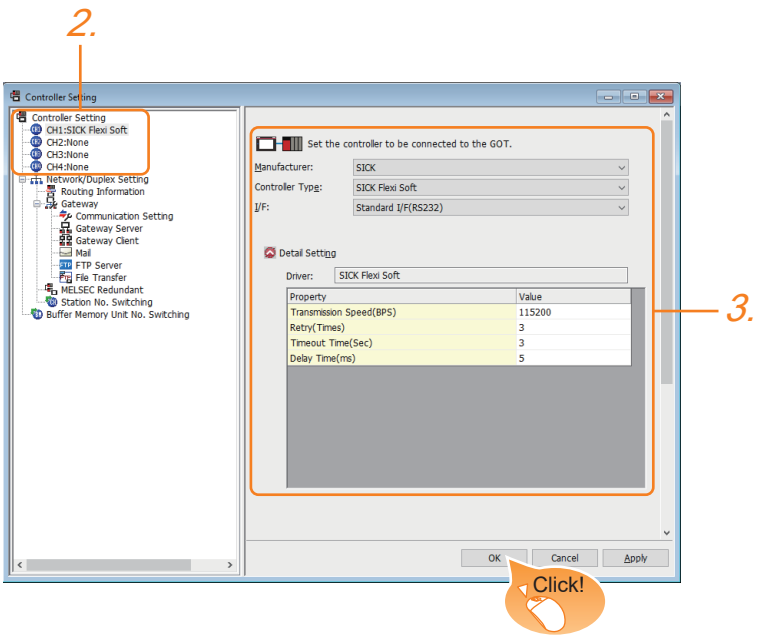

| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model Connection diagram number | | | | | |
| Flexi Soft | RS-232 | Part Number:6021195(2m)*1 Part Number:6036342(3m)*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 PLC for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by SICK Inc.
For details of the product, contact SICK Inc.

# 41.3 GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [SICK]
- [Controller Type]: [SICK Flexi Soft]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1845 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

## SICK Flexi Soft

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 115200 |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 5 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 115200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Delay Time | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 5ms) | 0 to 300 (ms) |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 41.4 PLC Side Setting

**Point**

SICK PLC

For details of SICK PLCs, refer to the following manual.

User's Manual of the SICK PLC

## Connecting to Flexi Soft

### Communication settings

Communication settings are not required, since the following contents are fixed.

| Setting item | Controller Side Settings |
|---|---|
| Communication speed | 115200bps (fixed) |
| Data bit | 8bits (fixed) |
| Parity bit | Without (fixed) |
| Stop bit | 1bit (fixed) |

# 41.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
SICK equipment ([SICK Flexi Soft])

# 42 SIEMENS PLC


- Page 1847 Connectable Model List
- Page 1848 Serial Connection
- Page 1858 Ethernet Connection
- Page 1869 Settable Device Range




## 42.1 Connectable Model List

The following table shows the connectable models.

| Series | Clock | Communication Type | Ethernet Connection Type | Connectable model | Refer to |
|---|---|---|---|---|---|
| SIMATIC S7-200 | × | RS-232 | - | GT2506HS GT2505HS | ☞ Page 1851 Connecting to SIMATIC S7-200 series |
| | | Ethernet | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |
| SIMATIC S7-200 SMART | ○ | Ethernet | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |
| SIMATIC S7-300 | ○*1 | RS-232 | - | GT2506HS GT2505HS | ☞ Page 1848 Connecting to SIMATIC S7-300 or SIMATIC S7-400 series |
| | | Ethernet | FETCH/WRITE | GT2506HS GT2505HS | ☞ Page 1858 Ethernet connection type: Connecting to FETCH/WRITE |
| | | | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |
| SIMATIC S7-400 | ○*1 | RS-232 | - | GT2506HS GT2505HS | ☞ Page 1848 Connecting to SIMATIC S7-300 or SIMATIC S7-400 series |
| | | Ethernet | FETCH/WRITE | GT2506HS GT2505HS | ☞ Page 1858 Ethernet connection type: Connecting to FETCH/WRITE |
| | | | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |
| SIMATIC S7-1200 | × | Ethernet | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |
| SIMATIC S7-1500 | × | Ethernet | OP communication | GT2506HS GT2505HS | ☞ Page 1859 Ethernet connection type: Connecting to OP communication |

*1 Only OP communication type can be used in an Ethernet connection.

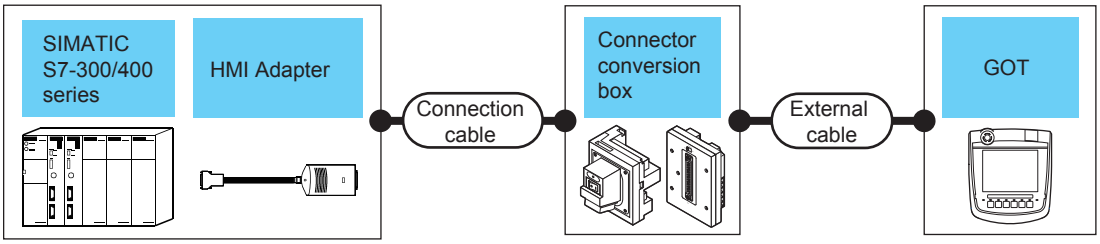
# 42.2 Serial Connection

## Connecting to SIMATIC S7-300 or SIMATIC S7-400 series

Communication driver
SIEMENS S7-300/400

### When connecting to one PLC

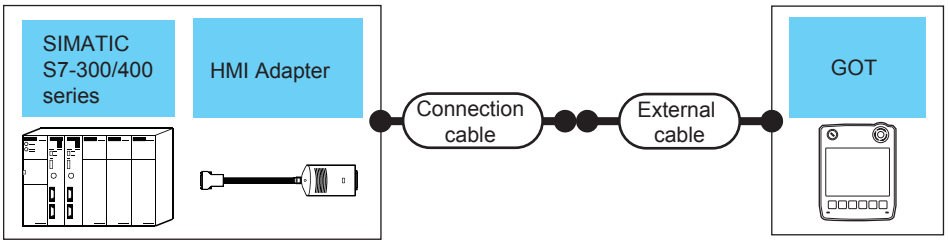
#### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | GT09-C30R20801-9S (3m)<br>or<br>User preparing RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 HMI Adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

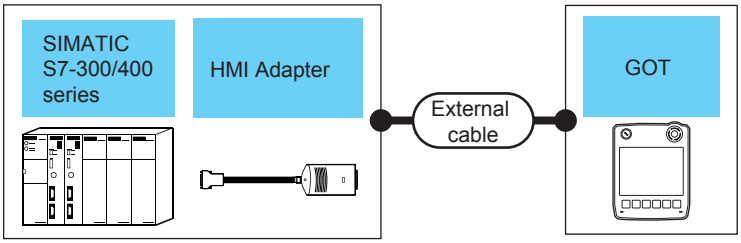
#### ■When using the external cable (GT11H-C□□□-37P)




| PLC | | | Connection cable | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | User preparing RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 HMI Adapter |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

### ■When using the external cable (GT11H-C□□□)

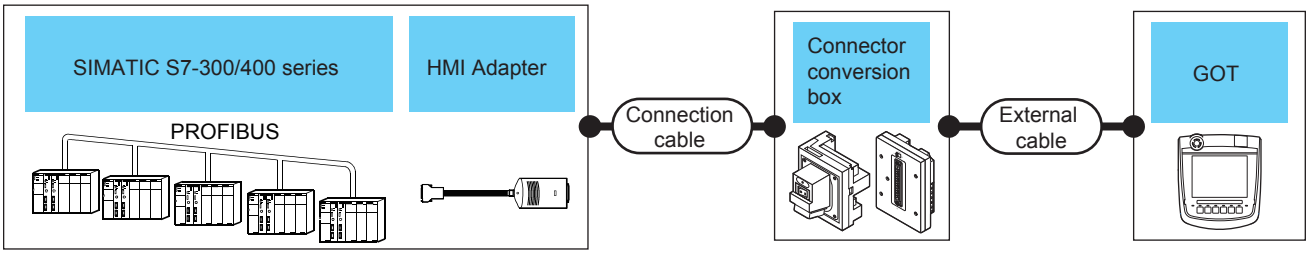



| PLC | | | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 HMI Adapter |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

## When connecting to multiple PLCs

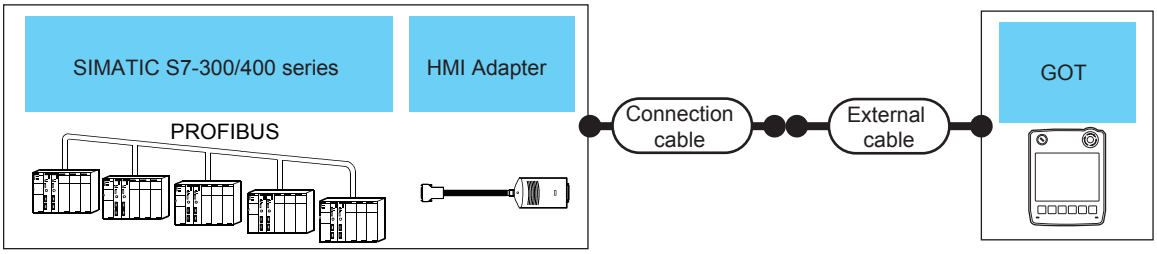
### ■When using the connector conversion box




| PLC | | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | Cable model Connection diagram number | | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | GT09-C30R20801-9S (3m)<br>or<br>User preparing RS232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 HMI Adapter |
| | | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.
*2 The distance from the GOT to the HMI Adapter (Connection cable + External cable)

## ■When using the external cable (GT11H-C□□□-37P)

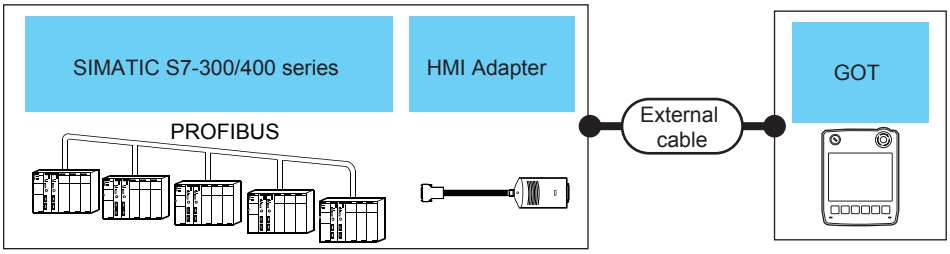



| PLC | | | Connection cable | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | Cable model Connection diagram number | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | User preparing RS232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 HMI Adapter |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

*2 The distance from the GOT to the HMI Adapter (Connection cable + External cable)

### ■When using the external cable (GT11H-C□□□)



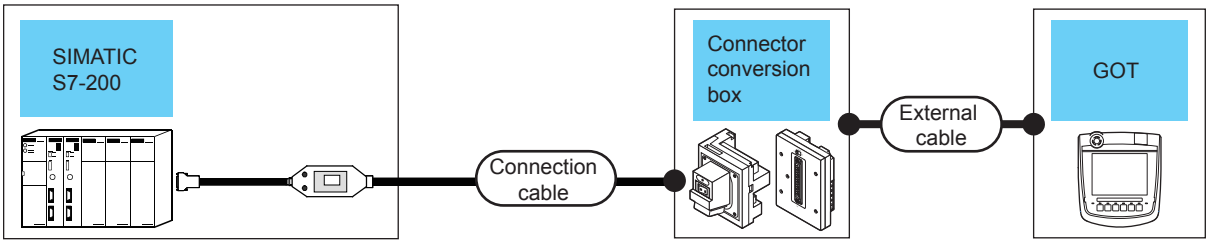

| PLC | | | External cable | GOT Model | Total distance *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Series | HMI Adapter*1 | Communication Type | | | | |
| SIMATIC S7-300<br>SIMATIC S7-400 | MLFB:<br>6ES7 972-0CA11-0XA0 | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ RS232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 HMI Adapter |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.
*2 The distance from the GOT to the HMI Adapter (External cable)

## Connecting to SIMATIC S7-200 series

Communication driver
SIEMENS S7-200

### When using the connector conversion box




| PLC | | Connection cable | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Communication Type | Cable model<br>Connection diagram number | | | | | |
| SIMATIC S7-200 | RS-232 | 6ES7 901-3BF20-0XA0*1<br>6ES7 901-3CB30-0XA0*1 | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 PLC |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

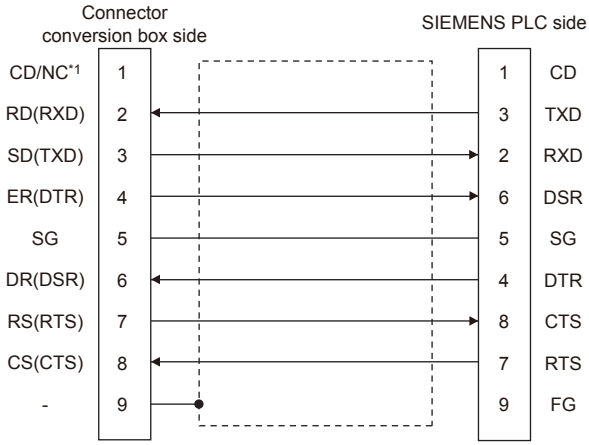
# Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

## RS-232 cable

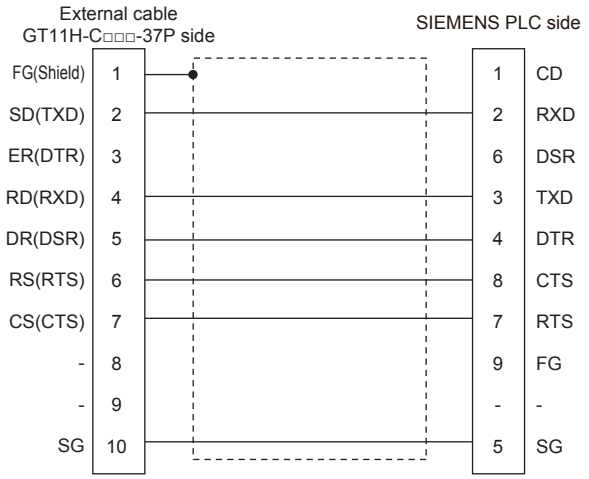
### ■Connection diagram

• RS232 connection diagram 1)

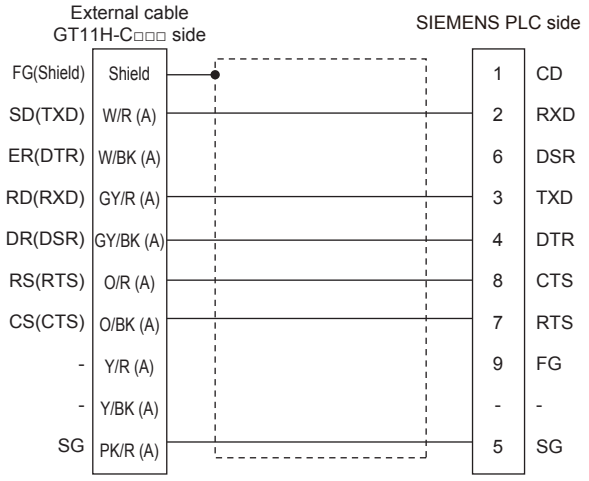



*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 2)




• RS232 connection diagram 3)



## ■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

• SIEMENS PLC side connector

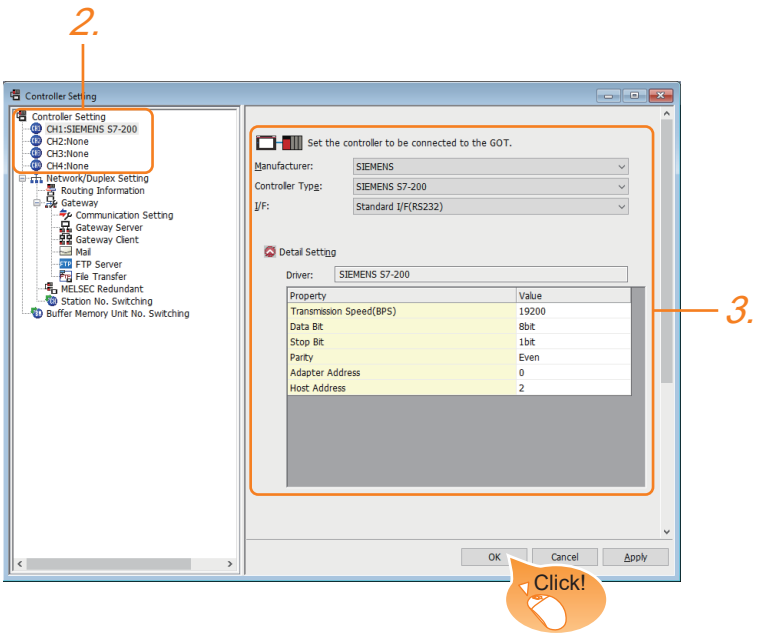
Use the connector compatible with the SIEMENS PLC side.

For details, refer to the SIEMENS PLC user's manual.

# GOT Side Settings

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [SIEMENS]
- [Controller Type]: Select one of the following items.

[SIEMENS S7-300/400]

[SIEMENS S7-200]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1855 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

### ■SIEMENS S7-300/400

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 38400 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Odd |
| Adapter Address | 1 |
| Host Address | 2 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed*2 | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 38400bps) | 9600bps,<br>19200bps,<br>38400bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bit) | 8bit (fixed) |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit (fixed) |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Odd) | Odd (fixed) |
| Adapter Address*1*2 | Specify the adapter address (station No. of the adapter to which the GOT is connected) in the connected network.<br>(Default: 1) | 1 to 31 |
| Host Address*1*2 | Specify the host address (station No. of the PLC that the GOT will monitor) in the connected network.<br>(Default: 2) | 1 to 31 |

*1 Set the address without overlapping the address of other units.

*2 The GOT automatically sets the values of Transmission Speed, Adapter Address, and Host Address to the HMI Adapter.

### ■SIEMENS S7-200

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Adapter Address | 0 |
| Host Address | 2 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Adapter Address | Specify the adapter address (station No. of the adapter to which the GOT is connected) in the connected network.<br>(Default: 0) | 0 to 31 |
| Host Address | Specify the host address (station No. of the PLC that the GOT will monitor) in the connected network.<br>(Default: 2) | 1 to 31 |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# PLC Side Setting

**Point**

SIEMENS PLC

For details of SIEMENS PLCs, refer to the following manuals.

SIEMENS PLC user's Manual

| Model name | | Refer to |
|---|---|---|
| PLC CPU | S7-200 | ☞ Page 1856 Connecting to SIMATIC S7-200 |
| HMI Adapter | 6ES7 972-0CA11-0XA0 | ☞ Page 1856 Connecting to HMI Adapter |
| PC/PPI cable | 6ES7 901-3BF20-0XA0<br>6ES7 901-3CB30-0XA0 | ☞ Page 1856 Connecting to SIMATIC S7-200 |

# Connecting to HMI Adapter

## Communication settings

The following communication settings are made at the communication detail settings of the GOT side.

For details, refer to the following.

☞ Page 1855 Communication detail settings

| Setting item | PLC side setting |
|---|---|
| Transmission speed | 9600bps, 19200bps, 38400bps |
| Data bit | 8bits (fixed) |
| Parity bit | Odd (fixed) |
| Stop bit | 1bit (fixed) |
| Adapter address | 1 to 31 |
| Host address | 1 to 31 |

# Connecting to SIMATIC S7-200

## Communication settings

Set the communication settings of PLC and PC/PPI cable.

### ■PLC settings

Set the communication settings of PLC by operating the SIEMENS programming tool(STEP7-WIN32).

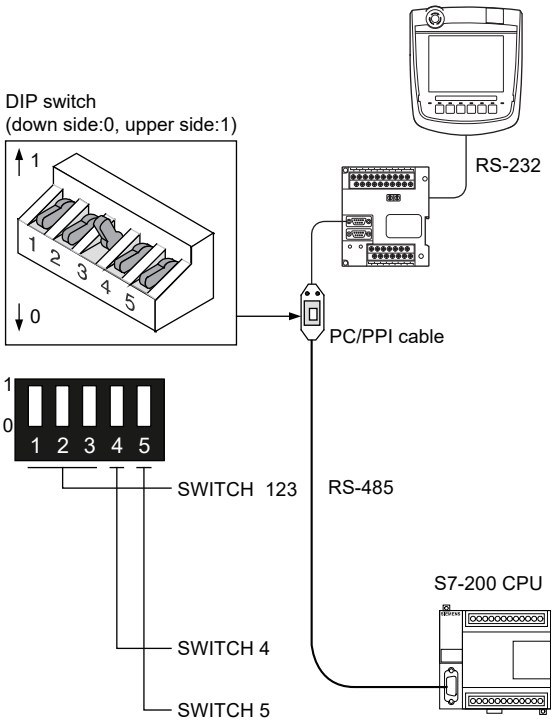
| Setting item | PLC Side Setting |
|---|---|
| Transmission speed*1 | 9600bps, 19200bps |
| Data bit | 8bits (fixed) |
| Parity bit | Even (fixed) |
| Stop bit | 1bit (fixed) |
| Host address*2 | 1 to 31 |

*1 Adjust the settings with GOT settings.

*2 Set the address without overlapping the address of other units.

### ■PC/PPI cable settings

Set the transmission speed by operating the DIP switch on the PC/PPI cable.




| SWITCH1 | SWITCH2 | SWITCH3 | SWITCH4 | SWITCH5 | Transmission speed |
|---|---|---|---|---|---|
| 0 | 0 | 1 | 0 | 0 | 19200bps*1 |
| 0 | 1 | 0 | 0 | 0 | 9600bps*1 |

*1 Adjust with GOT settings.

# Precautions

## GOT alarm list (system alarm) function

Error information cannot be monitored when the GOT is connected to a SIEMENS PLC.

(The error information on the PLC CPU side can be monitored.)

For details on the alarm list (system alarm), refer to the following manual:

GT Designer3 (GOT2000) Screen Design Manual

## When powering ON the system

### ■When powering ON the system

Turn ON all PLC CPUs before turning ON the GOT.

If the GOT is turned ON before power-up of the PLC CPUs, restart the GOT.

### ■When powering OFF a PLC CPU at another station

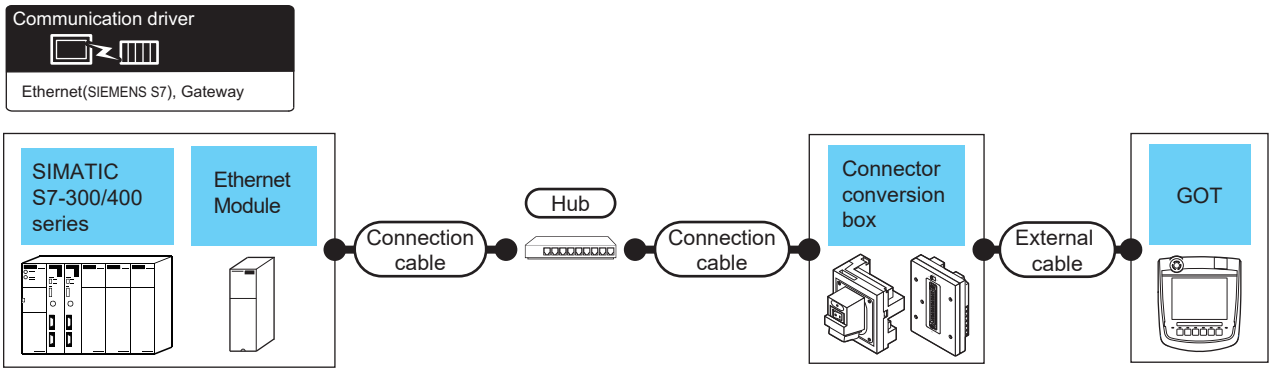
When a PLC CPU at another station (the PLC CPU to which the HMI Adapter is not connected) is turned OFF, monitoring by the GOT is stopped.

To resume the monitoring, restart the GOT.

(Monitoring will not be resumed on GOT even if the PLC CPU is turned ON again.)

# 42.3 Ethernet Connection

## Ethernet connection type: Connecting to FETCH/WRITE




| PLC | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet model*3 | Cable model*1 | Maximum segment length*2 | | | | |
| SIMATIC S7-300 | CP343-1 IT<br>CP343-1<br>CP343-1 Lean<br>CP343-1 Advanced | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1<br>16 PLCs or less for 1 GOT<br>When PLC: GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>32 or less*4<br>(recommended to 16 or less) |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| SIMATIC S7-400 | CP443-1 IT<br>CP443-1 | | | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

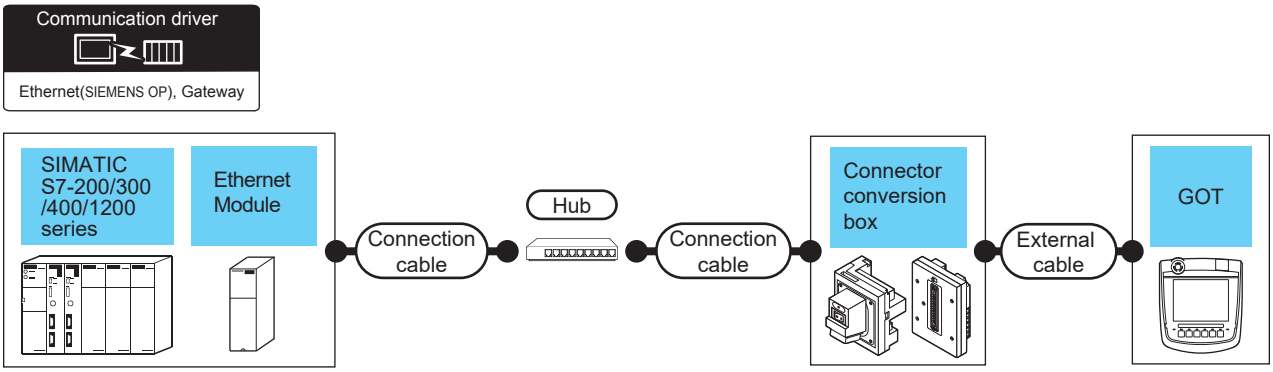
*3 Product manufactured by Siemens AG. For details of the product, contact Siemens AG.

*4 If the number of GOTs increases, the communication becomes highloaded, and it may affect the communication performance.

*5 Use C or later version of GT11H-C□□-37P.

# Ethernet connection type: Connecting to OP communication






| PLC | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet model*3 | Cable model*1 | Maximum segment length*2 | | | | |
| SIMATIC S7-200 | CP 243-1<br>CP 243-1 IT | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC: GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>32 or less*4<br>(recommended to 16 or less) |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| SIMATIC S7-200 SMART | - (Built into PLC) | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | |

| PLC | | Connection cable | | Connector conversion box | External cable [*5] | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet model[*3] | Cable model[*1] | Maximum segment length[*2] | | | | |
| SIMATIC S7-300 | CP 343-1<br>CP 343-1 Lean<br>CP 343-1 Advanced-IT | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC: GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>32 or less[*4]<br>(recommended to 16 or less) |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| | - (Built into PLC) | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| SIMATIC S7-400 | CP 443-1<br>CP 443-1 Advanced-IT | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| | - (Built into PLC) | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

| PLC | | Connection cable | | Connector conversion box | External cable *5 | GOT Model | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| Series | Ethernet model*3 | Cable model*1 | Maximum segment length*2 | | | | |
| SIMATIC S7-1200 | - (Built into PLC) | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When PLC: GOT is N: 1<br>The following shows the number of PLCs for 1 GOT<br>128 or less<br>When PLC: GOT is 1: N<br>The following shows the number of GOTs for 1 PLC<br>32 or less*4 (recommended to 16 or less) |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |
| SIMATIC S7-1500 | - (Built into PLC) | | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

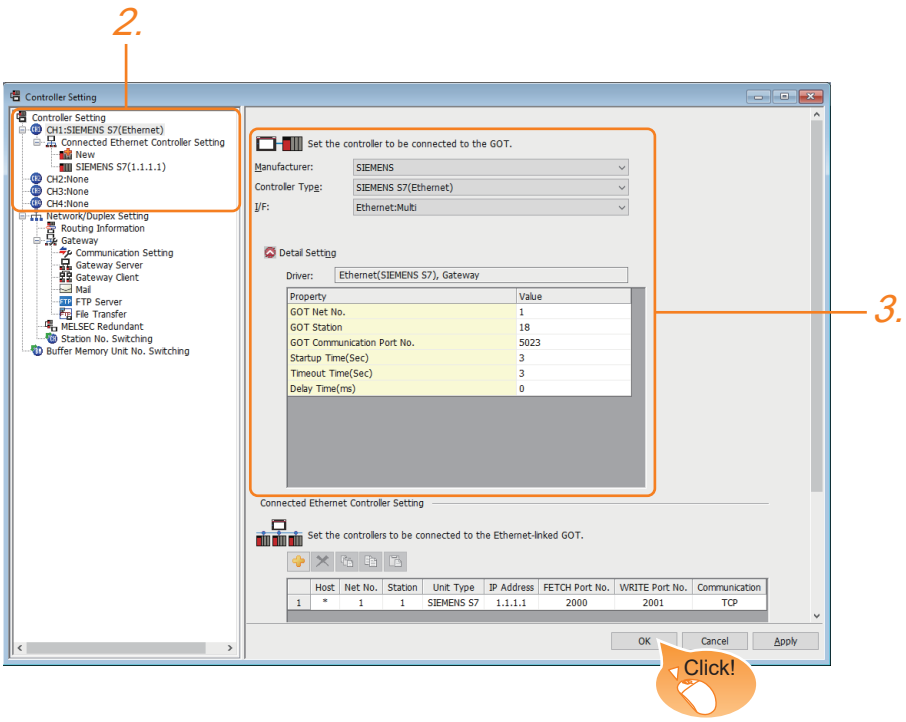
*3 Product manufactured by Siemens AG. For details of the product, contact Siemens AG.

*4 If the number of GOTs increases, the communication becomes highloaded, and it may affect the communication performance.

*5 Use C or later version of GT11H-C□□-37P.

## Setting communication interface (Communication settings)

Set the channel of the connected equipment.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [SIEMENS]
- [Controller Type]: Depends on the Ethernet connection type.

FETCH/WRITE: [SIEMENS S7(Ethernet)]

OP communication: [SIEMENS OP(Ethernet)]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1863 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 80 I/F communication setting

## Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5023 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 254 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet equipment.<br>(Default)<br>Ethernet (SIEMENS S7), Gateway: 5023 *2<br>Ethernet (SIEMENS OP), Gateway: 5024 *2 | 1024 to 5010, 5014 to 49152, 49171 to 65534 |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255 sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 90 sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000 (ms) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1864 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

## GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

### ■GOT IP address setting

Set the following communication port setting.

• Standard port

### ■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

### ■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

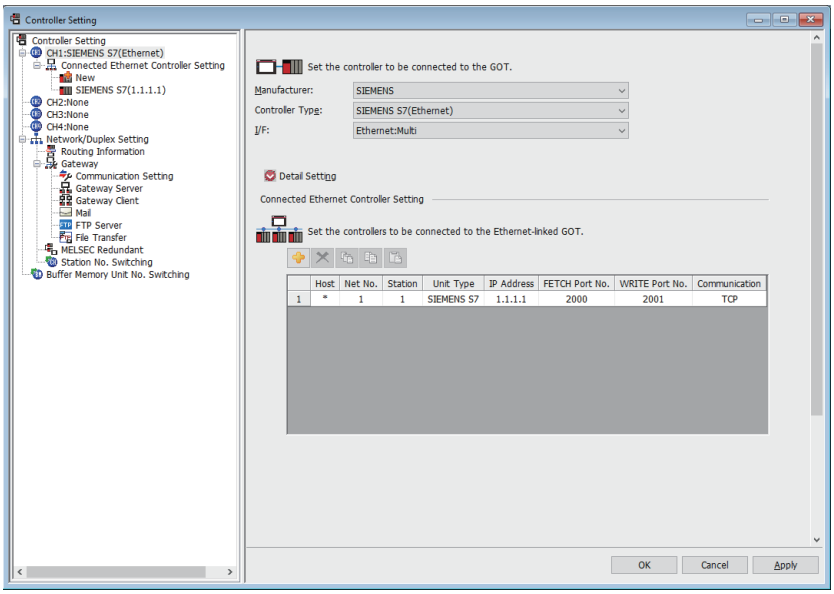
For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## Connected Ethernet Controller Setting

### ■Ethernet connection type: FETCH/WRITE

The following describes [Connected Ethernet Controller Setting] when [SIEMENS S7(Ethernet)] is selected for [Controller Type].

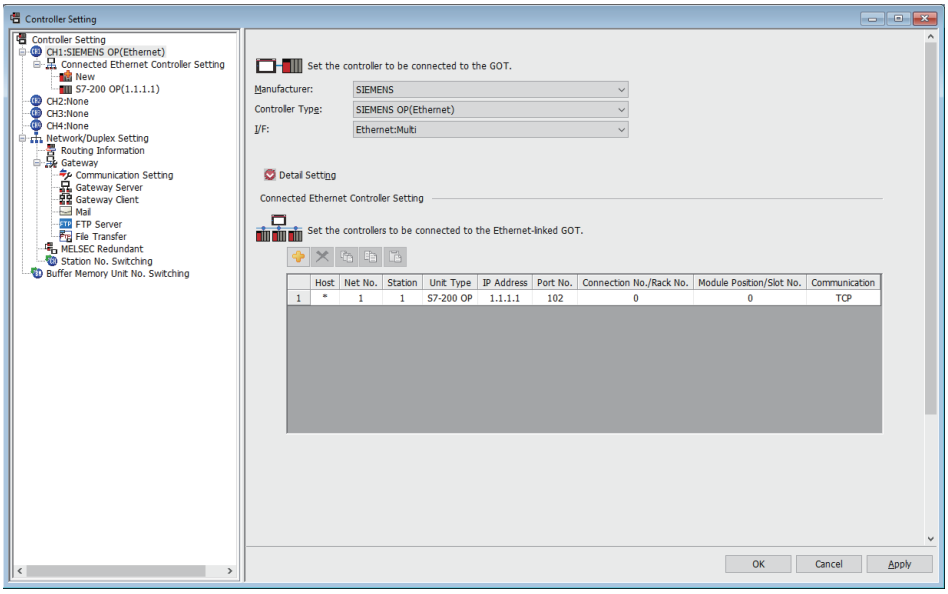



| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment. (Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet equipment. (Default: 1) | 1 to 64 |
| Unit Type | SIEMENS S7 (fixed) | SIEMENS S7<br>(fixed) |
| IP Address | Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1) | PLC side IP address |
| FETCH Port No. | Set the FETCH port No. of the connected Ethernet equipment. (Default: 2000) | 1024 to 65534 |
| WRITE Port No. | For the WRITE port No. of the connected Ethernet equipment, the value that the FETCH port No. is incremented by one is set automatically. (Default: 2001) | 1025 to 65535 |
| Communication | TCP<br>(fixed) | TCP<br>(fixed) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1863 Communication detail settings

## ■Ethernet connection type: OP communication

The following describes [Connected Ethernet Controller Setting] when [SIEMENS OP(Ethernet)] is selected for [Controller Type].




| Item | Description | Set value |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet equipment. (Default: 1) | 1 to 239 |
| Station *1 | Set the station No. of the connected Ethernet equipment. (Default: 1) | 1 to 254 |
| Unit Type | Set the PLC type to be connected. | S7-1500 OP<br>S7-200 OP<br>S7-200 SMART OP<br>S7-300/400 OP<br>S7-1200 OP |
| IP Address | Set the IP address of the connected Ethernet equipment. (Default: 0) | PLC side IP address |
| Port No. | 102<br>(fixed) | 102<br>(fixed) |
| Connection No./Rack No. | Set the Connection No./Rack No. set on the PLC side.<br>(Default: 0) | S7-1500 OP: 0 (fixed)<br>S7-200 OP: 0 to 7<br>S7-200 SMART OP:0 (fixed)<br>S7-300/400 OP: 0 to 7<br>S7-1200 OP: 0 (fixed) |
| Module Position/Slot No. | Set the module position/slot No. set on the PLC side. (Default: 0 unless the setting value is fixed) | S7-1500 OP: 0 to 31<br>S7-200 OP: 0 to 6<br>S7-200 SMART OP:1 (fixed)<br>S7-300/400 OP: 0 to 6<br>S7-1200 OP: 1 (fixed) |
| Communication | TCP<br>(fixed) | TCP<br>(fixed) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1863 Communication detail settings

# PLC side setting

**Point**

SIEMENS PLC

For details of SIEMENS PLCs, refer to the following manuals.

SIEMENS PLC user's Manual

## Parameter settings

Set the following parameters with the SIEMENS software package.

### ■Ethernet connection type: FETCH/WRITE

• Settings of IP address and subnet mask

| Item | | Setting details | |
|---|---|---|---|
| Parameters | | IP Address | PLC side IP address |
| | | Subnet mask | PLC side subnet mask |

• Fetch port setting

| Item | | Setting details | |
|---|---|---|---|
| Options | Mode | Select [Fetch passive]. | |
| Addresses | IP (dec) | Local | PLC side IP address |
| | | Remote | - (Default) |
| | PORT (dec) | Local | PLC side port No. |
| | | Remote | - (Default) |

• Write port setting

| Item | | Setting details | |
|---|---|---|---|
| Options | Mode | Select [Write passive]. | |
| Addresses | IP (dec) | Local | PLC side IP address |
| | | Remote | - (Default) |
| | PORT (dec) | Local | PLC side port No. |
| | | Remote | - (Default) |

• Precautions for setting

The Keep Alive function of the Siemens CP Module is not supported.

Specify 0 for [Keep Alive].

## ■Ethernet connection type: OP communication

• S7-200

Set the following parameters.

| Item | Setting details | |
|---|---|---|
| Module Position | Value in [Position] of the Ethernet module | |
| Module Address | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |
| Number of connections to configure for this module | Set "1" as the number of connected GOT. | |
| This is a Server connection: Servers respond to connection request from remote clients. | Mark the check box. | |
| Local Properties (Server) | Select [Accept all connection requests] | |
| Remote Properties (Client) | Set "10.00" in [TSAP]. | |
| Enable the Keep Alive function for this connection. | Unmark the check box. | |

• S7-200 SMART

Set the following parameters.

| Item | Setting details | |
|---|---|---|
| Ethernet addresses | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |

• S7-300/400

Set the following parameters.

• When using the Ethernet module

| Item | Setting details | |
|---|---|---|
| Properties | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |

• When using the built-in Ethernet port

| Item | Setting details | |
|---|---|---|
| Device name | Set [PN-IO] | |
| Properties | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |

• S7-1200

Set the following parameters.

| Item | Setting details | |
|---|---|---|
| Ethernet addresses | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |

• S7-1500

Set the following parameters.

| Item | Setting details | |
|---|---|---|
| Ethernet addresses | IP Address | PLC side IP address |
| | Subnet mask | PLC side subnet mask |

# Precautions

## When connecting to multiple GOTs

### ■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1864 Connected Ethernet Controller Setting

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

## When monitoring a nonexistent or turned-off station

If a time-out occurs with the initial communication by monitoring a nonexistent or turned-off station, the time-out can delay the communication with the normally operating station.

## Timing to start GOT communication

After the PLC starts up, start the GOT communication.

When the GOT starts communication before the PLC starts up, a communication timeout occurs.

## Operations during communication

During normal communication, any operation which makes the GOT restart (including writing a project and changing utility data)may display the system alarm, "402 Communication timeout.

Confirm communication pathway or modules.", when the GOT restarts.

## When Ethernet connection type is OP communication

To monitor a device, permit the access to the device in the PLC side setting.

For details of SIEMENS PLCs, refer to the following manuals.

📖SIEMENS PLC user's Manual

# 42.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

SIEMENS equipment ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

SIEMENS equipment ([SIEMENS S7-300/400])

SIEMENS equipment ([SIEMENS S7(Ethernet)])

SIEMENS equipment ([SIEMENS OP(Ethernet)])

# MEMO

# 43 HIRATA CORPORATION HNC CONTROLLER

For the connection to the HNC controller manufactured by Hirata Corporation, please contact our company.

# MEMO

# 44 MURATEC CONTROLLER

For the connection to the MURATEC controller, please contact our company.

# MEMO

# PART 8 MICROCOMPUTER

45 MICROCOMPUTER CONNECTION (SERIAL)

46 MICROCOMPUTER CONNECTION (ETHERNET)

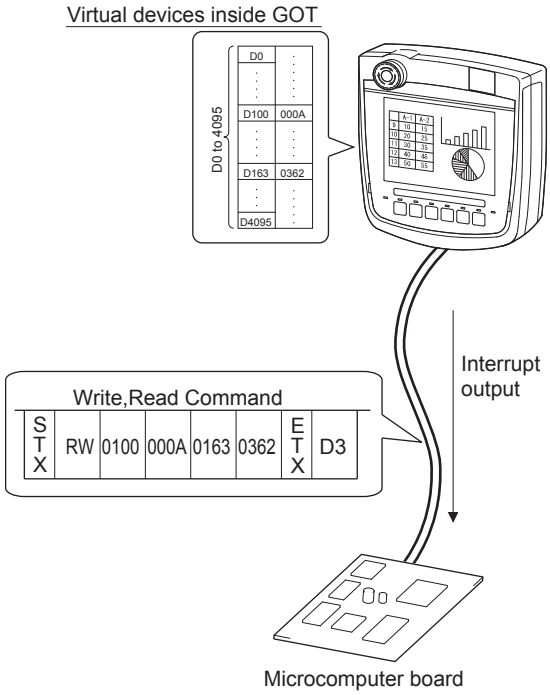
# 45 MICROCOMPUTER CONNECTION (SERIAL)


- Page 1876 Microcomputer Connection (Serial)
- Page 1879 System Configuration
- Page 1881 Connection Diagram
- Page 1886 Device Data Area
- Page 1898 Message Formats
- Page 1947 GOT Side Settings
- Page 1951 System Configuration Examples
- Page 1955 Settable Device Range
- Page 1956 Precautions


## 45.1 Microcomputer Connection (Serial)

The microcomputer connection (Ethernet) is a function by which data can be written or read from a personal computer, microcomputer board, PLC, and others (hereinafter, host) to the virtual devices of the GOT by connecting the host and the GOT by Ethernet.

Interrupt output is also available from the GOT to the host.




**Point**

Virtual devices inside the GOT

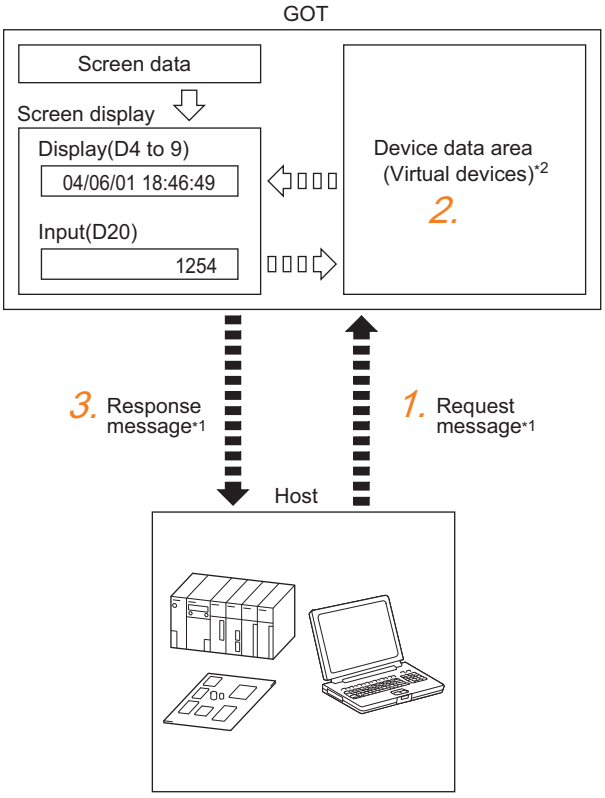
The devices inside the GOT are used in the microcomputer connection.

(PLC devices are not used)

☞ Page 1886 Device Data Area

## Flow of data processing

### ■When reading or writing data




**1.** The host sends a request message (the read or write command) to the GOT.

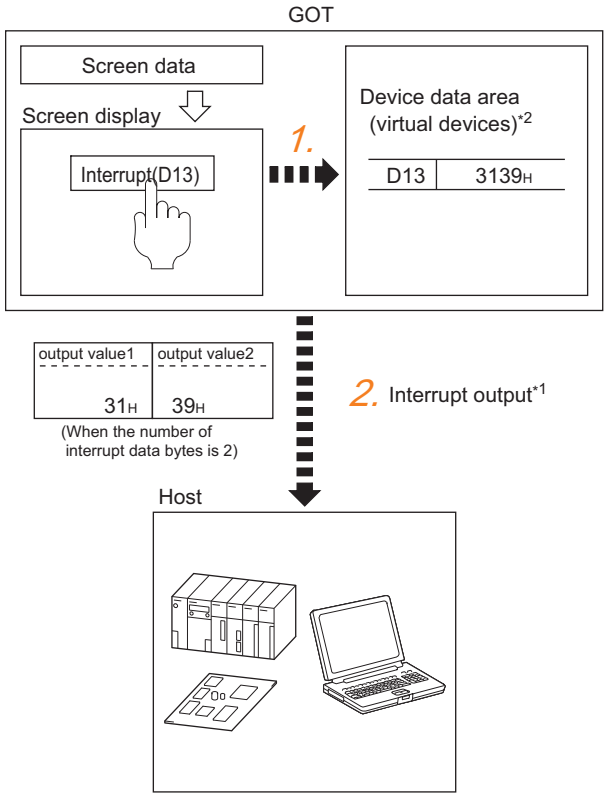
**2.** The GOT reads or writes data from or to its virtual devices according to the request from the host.

**3.** Upon completion of the processing, the GOT sends a response message (processing result) to the host.

Creating the following objects on the screen allows you to use the data read or written from or to the virtual devices.

- Numerical display object to display the data written by the write command
- Numerical input object to input data to be uploaded to the host

## ■When outputting interrupts




**1.** Data are written to the virtual devices for interrupt output from the touch switches on the GOT.

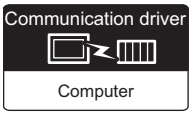
**2.** The GOT sends the written data (interrupt output) to the host.

*1 ☞ Page 1898 Message Formats

*2 ☞ Page 1886 Device Data Area

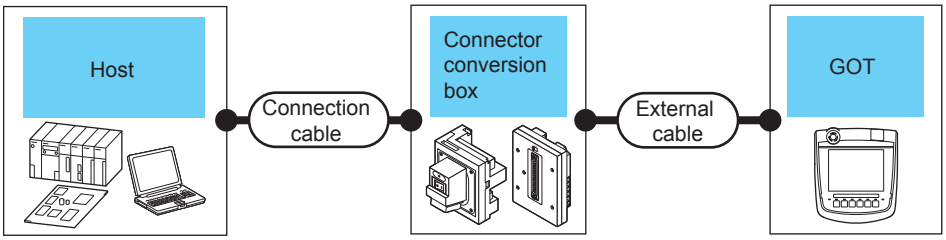
# 45.2 System Configuration

## For the microcomputer connection (serial)



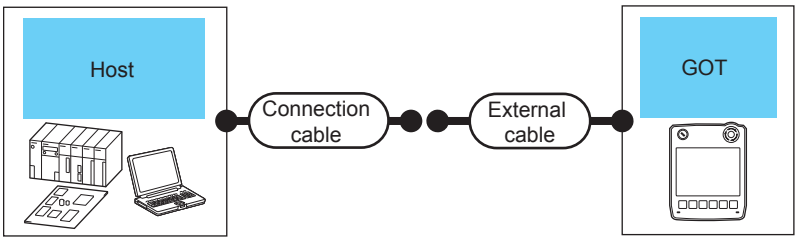

### When connecting one GOT

#### ■When using the connector conversion box



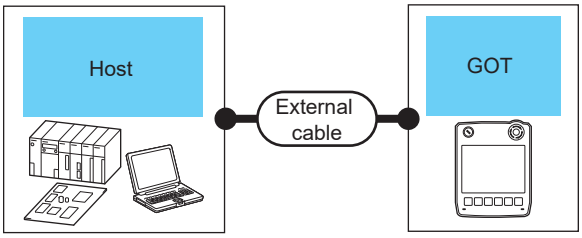

| Host<br>Communication Type | Connection cable<br>Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|---|
| RS-232 | User preparing Page 1881 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 GOT for 1 host |
| | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| RS-422 | User preparing Page 1884 RS-422 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | |
| | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | |

#### ■When using the external cable (GT11H-C□□□-37P)




| Host<br>Communication Type | Connection cable<br>Connection diagram number | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|---|
| RS-232 | User preparing Page 1882 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 GOT for 1 host |
| RS-422 | User preparing Page 1884 RS-422 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | 13m | |

## ■When using the external cable (GT11H-C□□□)




| Host<br>Communication Type | External cable | GOT Model | Total distance | Number of connectable equipment |
|---|---|---|---|---|
| RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 1882 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 GOT for 1 host |
| RS-422 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 1884 RS-422 connection diagram 3) | GT 2505HS | 13m | |

# 45.3 Connection Diagram

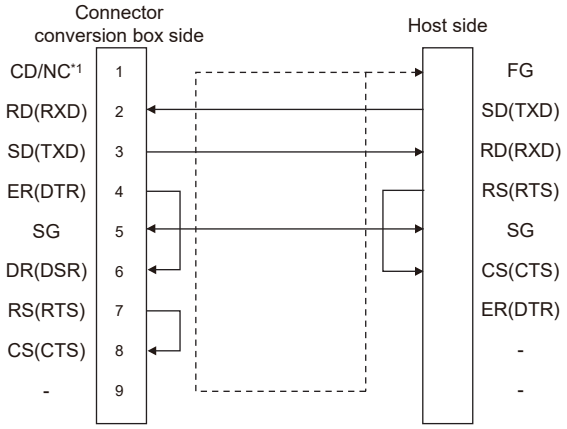
The following diagram shows the connection between the GOT and the microcomputer.

## RS-232 cable

### Connection diagram

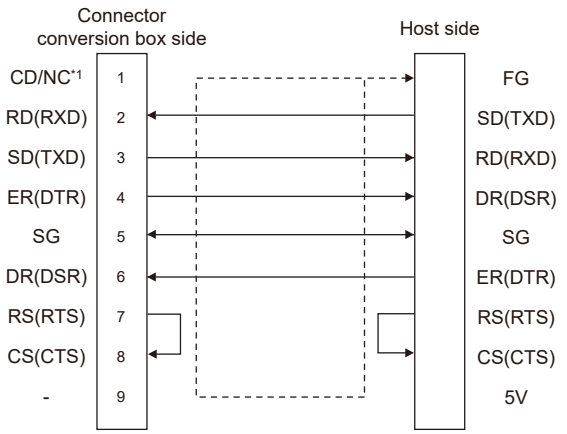
#### ■RS-232 connection diagram 1)

Example of the case where the DTR/DSR signal is not used




*1 GT2506HS-V: CD, GT2505HS-V: NC

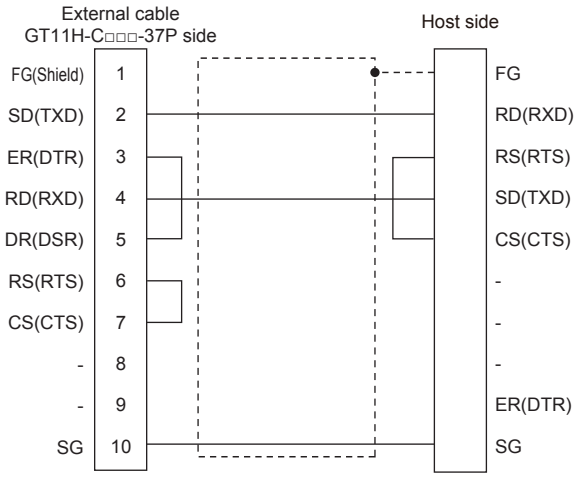
Example of the case where the DTR/DSR signal is used



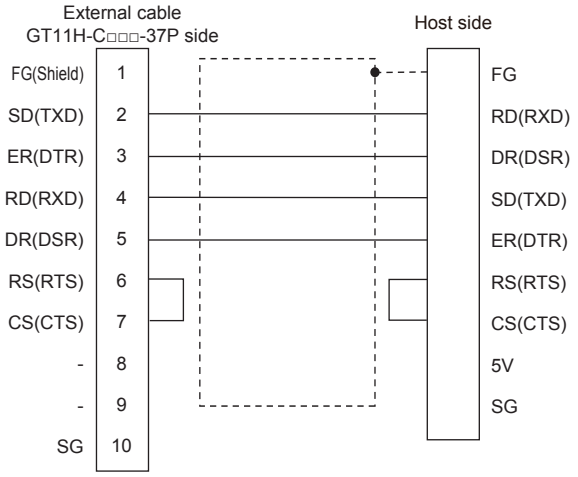

*1 GT2506HS-V: CD, GT2505HS-V: NC

## ■RS-232 connection diagram 2)

Example of the case where the DTR/DSR signal is not used

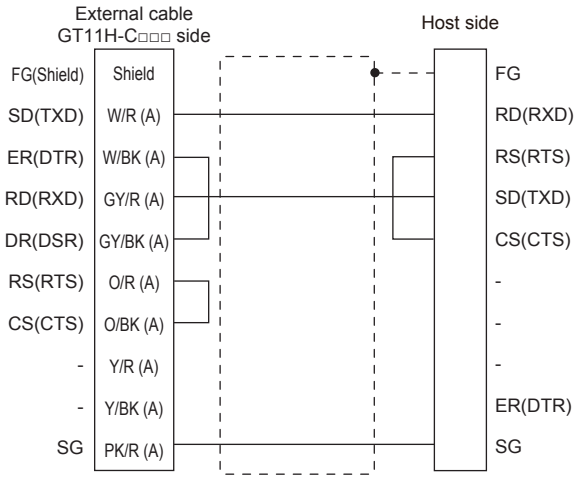



Example of the case where the DTR/DSR signal is used

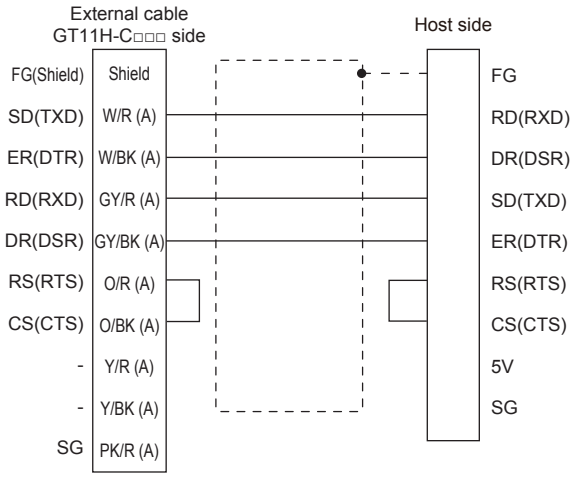



## ■RS-232 connection diagram 3)

Example of the case where the DTR/DSR signal is not used



Example of the case where the DTR/DSR signal is used




## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

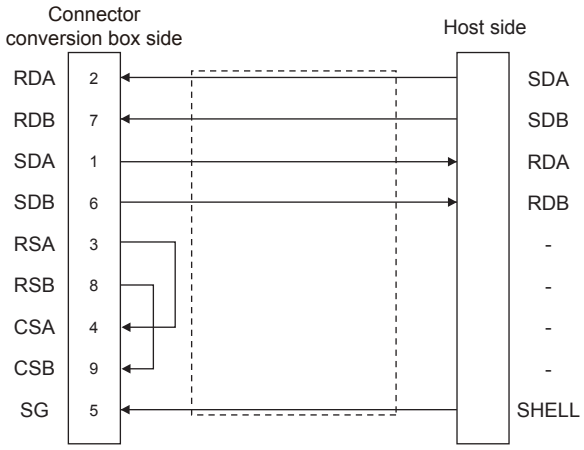
For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

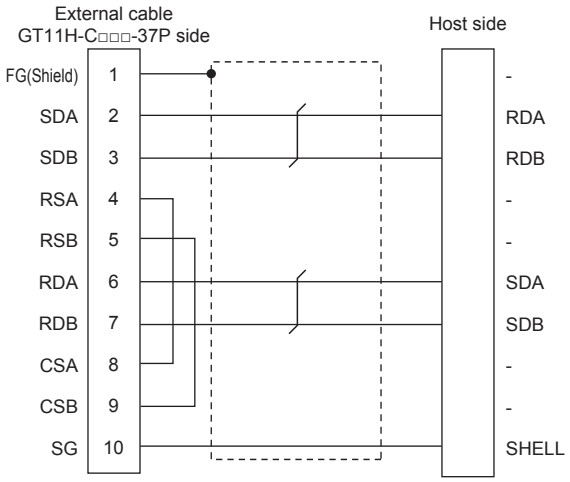
# RS-422 cable

## Connection diagram

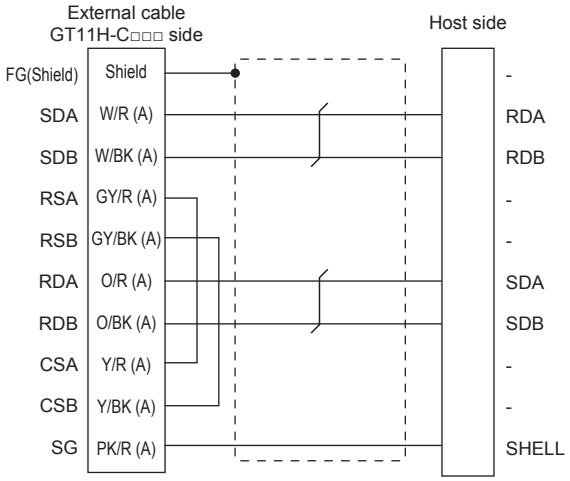
### ■RS-422 connection diagram 1)




### ■RS-422 connection diagram 2)




### ■RS-422 connection diagram 3)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

## Connecting terminating resistors

### ■GOT side

When connecting a microcomputer to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

# 45.4 Device Data Area

The following shows a list of virtual devices inside the GOT available in the microcomputer connection (serial), and the address specification values for each data format.
The address specification of the virtual devices differs depending on the data format.*1

| Model | Virtual device*2 | | | Address specification value | | | | | Refer to |
|---|---|---|---|---|---|---|---|---|---|
| | Name | Device range (decimal) | Device type | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 | |
| GT2506HS GT2505HS | D | 0 to 4095 | Word | 0 to 4095 | D0 to 4095 | D0 to 4095 | 0000 to 0FFFH | 8000 to 9FFFH | ☞ Page 1887 D devices |
| | R | 0 to 4095 | Word | 4096 to 8191 | R0 to 4095 | R0 to 4095 | 1000 to 1FFFH | 0000 to 1FFFH | ☞ Page 1891 R devices |
| | L | 0 to 2047 | Bit | 8192 to 8319 | L0 to 2047 | L0 to 2047 | 2000 to 207FH | A000 to A0FFH | ☞ Page 1892 L devices |
| | M | 0 to 2047 | Bit | 8320 to 8447 | M0 to 2047 | M0 to 2047 | 2080 to 20FFH | 2000 to 20FFH | ☞ Page 1892 M devices |
| | SD | 0 to 15 | Word | 8448 to 8463 | D9000 to 9015 | SD0 to 15 | 2100 to 210FH | 2100 to 211FH (3000 to 300DH)*3 | ☞ Page 1893 SD devices |
| | SM | 0 to 63 | Bit | 8464 to 8467 | M9000 to 9063 | SM0 to 63 | 2110 to 2113H | 2200 to 2207H | ☞ Page 1896 SM devices |

*1 For the address specification method for each data format, refer to the following.
☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 When reusing GOT900 Series project data
• GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.
• GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

| GOT2000 Series virtual devices | GOT-F900 Series virtual devices |
|---|---|
| D0 to 2047 | — |
| D2048 to 4095 | — |
| R0 to 4095 | D0 to 4095 |
| L0 to 2047 | — |
| M0 to 2047 | M0 to 2047 |
| SD0 to 15 | D8000 to 8015<br>GD0 to 6 |
| SM0 to 63 | M8000 to 8063 |

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

**Point**

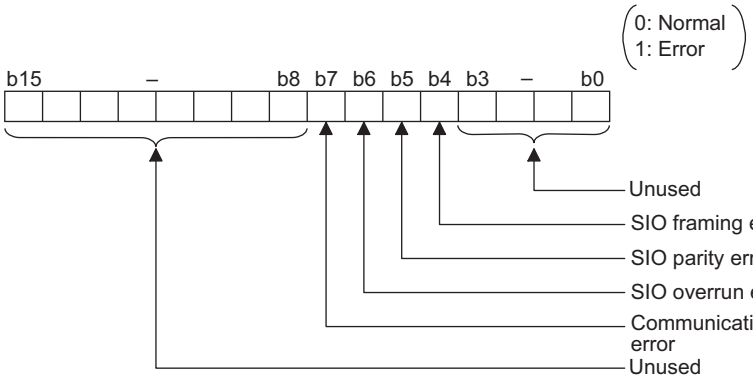
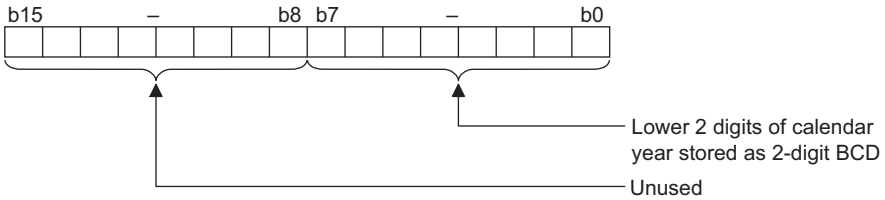
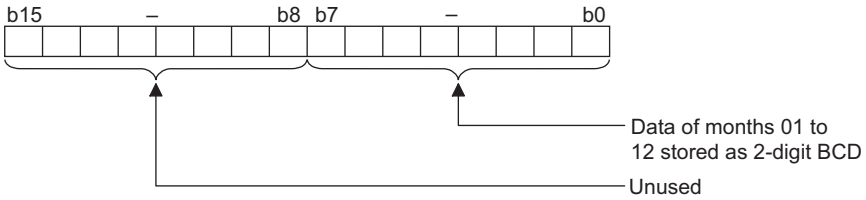
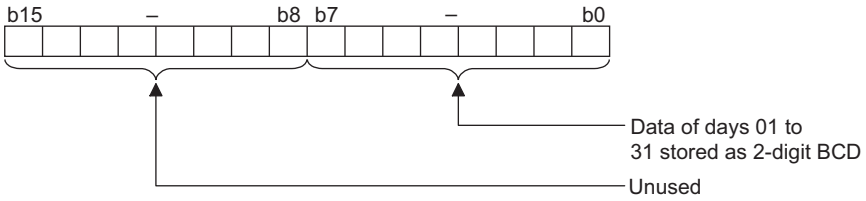
Values of virtual devices inside the GOT
When the GOT is turned OFF or reset, values are cleared to their defaults (bit devices: OFF, word devices: 0).
Values are held in the memory when project data are written to the GOT.

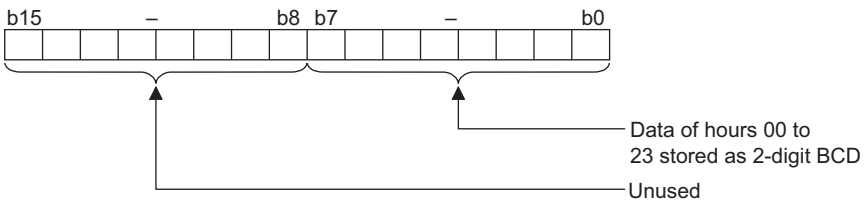
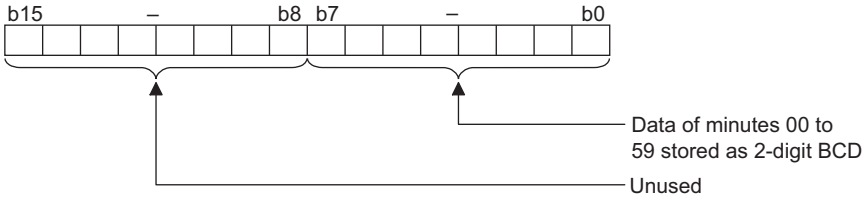
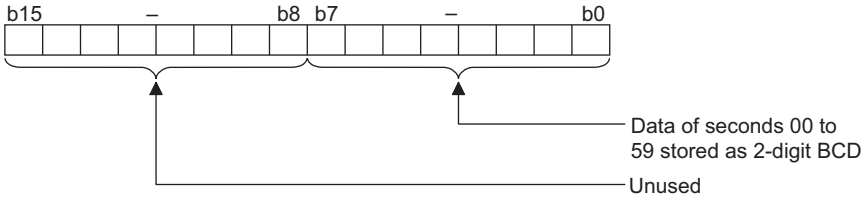
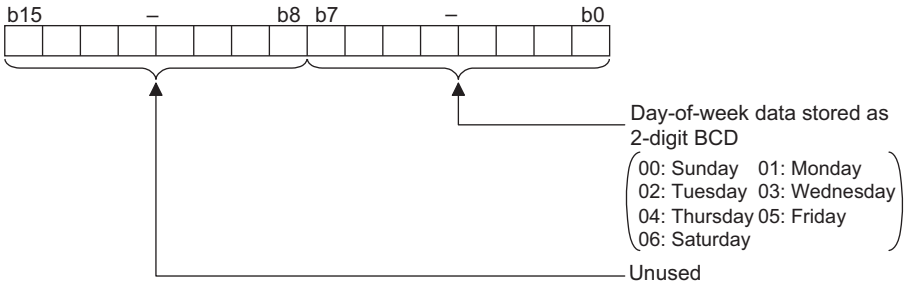
# D devices

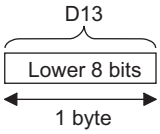
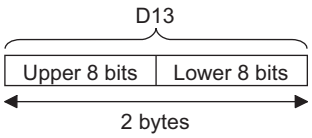
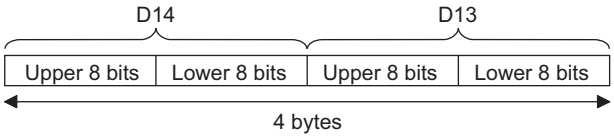
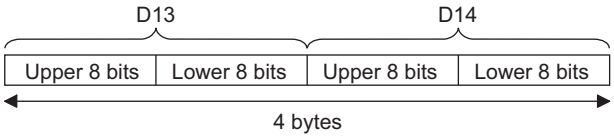
The D devices are word devices into which GOT communication errors, clock data or other information are stored.
The user can also store data using the user area.

## List of D devices

The following lists the D devices (virtual devices inside the GOT).

| Address | Description | Set side |
|---|---|---|
| D0 to 2 | Unused | — |
| D3 | Communication error status<br>Stores the communication error details of GOT.<br>  <br>• b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence.<br>• b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence. | System |
| D4 | Clock data (year)<br>  | |
| D5 | Clock data (month)<br>  | |
| D6 | Clock data (day)<br>  | |

| Address | Description | Set side |
|---|---|---|
| D7 | Clock data (hour)<br>  | System |
| D8 | Clock data (minute)<br>  | |
| D9 | Clock data (second)<br>  | |
| D10 | Clock data (day of the week)<br>  | |
| D11, D12 | Unused | — |

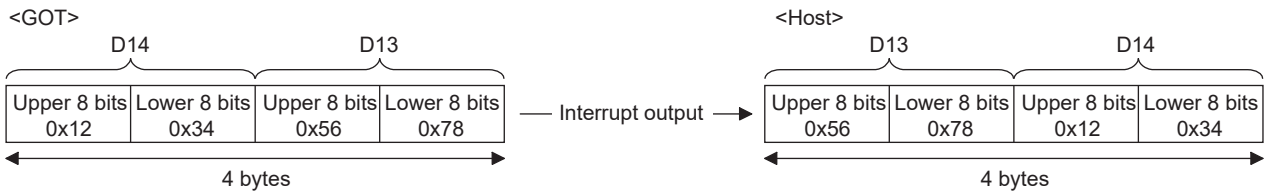
| Address | Description | Set side |
|---|---|---|
| D13<br>D14 | Interrupt output<br>When data are written to D13 and D14 from a GOT touch switch, for example, the data of D13 and D14 are transmitted (interrupt output) to the host side. *1*2<br>Set the data amount (bytes) for an interrupt output to [Interrupt Data Byte(Byte)] in the communication detail settings.<br>☞ Page 1947 Setting communication interface (Controller Setting)<br>• Output value when [1] is set to [Interrupt Data Byte(Byte)] in the communication detail settings<br>  <br>• Output value when [2] is set to [Interrupt Data Byte(Byte)] in the communication detail settings<br>  <br>• Output value when [4] is set to [Interrupt Data Byte(Byte)] in the communication detail settings*3<br>(1) When [32bit Storage] in the communication detail settings is set to [LH Order]<br>  <br>(2) When [32bit Storage] in the communication detail settings is set to [HL Order]<br>  | User |
| D15 to 19 | Unused | — |
| D20 to 2031 | User area | User |
| D2032 to 2034 | Unused | — |
| D2035 | 1-second binary counter<br>The counter is incremented at 1-second intervals after the GOT is turned ON.<br>(The time elapsed after GOT is turned ON is stored in 1-second units.)<br>Data are stored in binary format. | System |
| D2036 to 4095 | User area | User |

*1 After the interrupt data is written, the data is output within 1 to 10 ms.

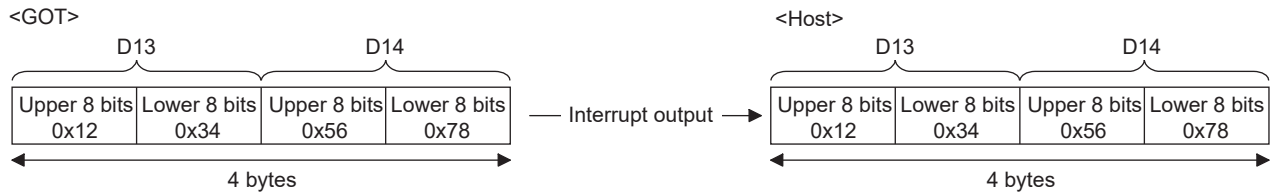
*2 When data are written to D13 and D14 from the host side, interrupt output is not performed.

*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the communication detail settings.
Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order




· HL Order



**Point**

• The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

• Interrupt output (D13, D14)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1896 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1947 Setting communication interface (Controller Setting)

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | Address specification value | | | | | |
|---|---|---|---|---|---|---|---|
| | | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 | |
| GT2506HS GT2505HS | D0 | 0 | D0 | D0 | 0000H | 8000H<br>8001H | 8000H 8001H<br>Upper 8 bits Lower 8 bits |
| | D1 | 1 | D1 | D1 | 0001H | 8002H<br>8003H | 8002H 8003H<br>Upper 8 bits Lower 8 bits |
| | : | : | : | : | : | : | |
| | D4095 | 4095 | D4095 | D4095 | 0FFFH | 9FFEH<br>9FFFH | 9FFEH 9FFFH<br>Upper 8 bits Lower 8 bits |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

# R devices

The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

## List of R devices and differences in address specification by data format

The following shows the R devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | Address specification value | | | | | |
|---|---|---|---|---|---|---|---|
| | | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 | |
| GT2506HS GT2505HS | R0 | 4096 | R0 | R0 | 1000H | 0000H<br>0001H | 0000H 0001H<br>Upper 8 bits Lower 8 bits |
| | R1 | 4097 | R1 | R1 | 1001H | 0002H<br>0003H | 0002H 0003H<br>Upper 8 bits Lower 8 bits |
| | : | : | : | : | : | : | |
| | R4095 | 8191 | R4095 | R4095 | 1FFFH | 1FFEH<br>1FFFH | 1FFEH 1FFFH<br>Upper 8 bits Lower 8 bits |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

# L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

## List of L devices and differences in address specification by data format

The following shows the L devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 |
| GT2506 HS GT2505 HS | L7 | L6 | L5 | L4 | L3 | L2 | L1 | L0 | 8192 | Same as address column on left*2 | | 2000H | A000H |
| | L15 | L14 | L13 | L12 | L11 | L10 | L9 | L8 | | | | | A001H |
| | L23 | L22 | L21 | L20 | L19 | L18 | L17 | L16 | 8193 | | | 2001H | A002H |
| | L31 | L30 | L29 | L28 | L27 | L26 | L25 | L24 | | | | | A003H |
| | : | | | | | | | | : | | | : | : |
| | L2039 | L2038 | L2037 | L2036 | L2035 | L2034 | L2033 | L2032 | 8319 | | | 207FH | A0FEH |
| | L2047 | L2046 | L2045 | L2044 | L2043 | L2042 | L2041 | L2040 | | | | | A0FFH |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: L0, L16, L32, etc.)

# M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

## List of M devices and differences in address specification by data format

The following shows the M devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 |
| GT2506 HS GT2505 HS | M7 | M6 | M5 | M4 | M3 | M2 | M1 | M0 | 8320 | Same as address column on left*2 | | 2080H | 2000H |
| | M15 | M14 | M13 | M12 | M11 | M10 | M9 | M8 | | | | | 2H001H |
| | M23 | M22 | M21 | M20 | M19 | M18 | M17 | M16 | 8321 | | | 2081H | 2002H |
| | M31 | M30 | M29 | M28 | M27 | M26 | M25 | M24 | | | | | 2003H |
| | : | | | | | | | | : | | | : | : |
| | M2039 | M2038 | M2037 | M2036 | M2035 | M2034 | M2033 | M2032 | 8447 | | | 20FFH | 20FEH |
| | M2047 | M2046 | M2045 | M2044 | M2043 | M2042 | M2041 | M2040 | | | | | 20FFH |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

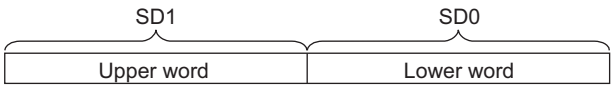
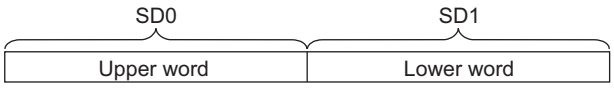
*2 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: M0, M16, M32, etc.)

# SD devices

The SD devices are word devices into which GOT communication errors (error codes), clock data and other information are stored.

## List of SD devices

The following lists the SD devices (virtual devices inside the GOT).

| Address | Description | Set side |
|---|---|---|
| SD0<br>SD1 | 100ms counter (32bits)<br>The counter is incremented at 100ms intervals after GOT is turned ON.<br>(The time elapsed after GOT is turned ON is stored in 100ms units.)<br>(1) When [32bit Storage] in the communication detail settings is set to [LH Order]<br>The lower and upper bits are stored in SD0 and SD1 respectively.<br>  <br>(2) When [32bit Storage] in the communication detail settings is set to [HL Order]<br>The upper and lower bits are stored in SD0 and SD1 respectively.<br>  | System |
| SD2*1 | Communication error status<br>An error data (error code) occurred during communication is stored.<br>• Host Address (Communication error that occurred on the request destination GOT)<br>0: No error<br>1: Parity error<br>2: Framing error<br>3: Overrun error<br>4: Communication message error<br>5: Command error<br>6: Clock data setting error | |
| SD3 | Clock data (second)<br>Second data of 00 to 59 is stored. | |
| SD4 | Clock data (minute)<br>Minute data of 00 to 59 is stored. | |
| SD5 | Clock data (hour)<br>Hour data of 00 to 23 is stored. | |
| SD6 | Clock data (day)<br>Day data of 00 to 31 is stored. | |
| SD7 | Clock data (month)<br>Month data of 01 to 12 is stored. | |
| SD8 | Clock data (year)<br>The last two digits of four-digit year data are stored. | |
| SD9 | Clock data (day of the week)<br>Day-of-the-week data is stored.<br>0: Sunday 1: Monday 2: Tuesday 3: Wednesday<br>4: Thursday 5: Friday 6: Saturday | |
| SD10 to 15 | Unused | — |

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 1894 Details and actions for errors (error codes) stored into SD2

**Point**

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

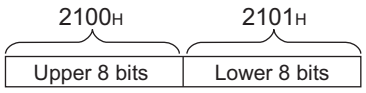
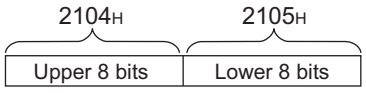
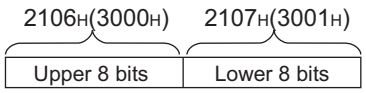
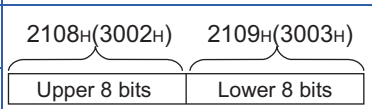
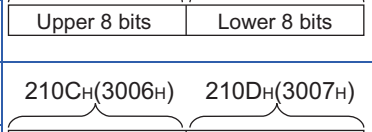
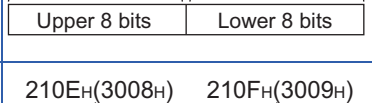
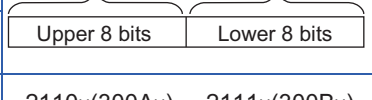
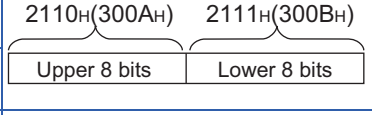
## Details and actions for errors (error codes) stored into SD2

| Error code | Description | Action |
|---|---|---|
| 0 | No error | — |
| 1, 101 | Parity error<br>The parity bit does not match. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Match the GOT and host transmission settings. |
| 2, 102 | Framing error<br>The data bit and/or stop bit are not correct. | |
| 3, 103 | Overrun error<br>The next data was transmitted from the host before GOT completes the processing of the data received. | • Check the settings of "Communication Detail Settings".<br>• Decrease the transmission speed. |
| 4, 104 | Communication message error<br>EXT/CR could not be found before the upper limit of the receive buffer was exceeded. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 5 | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1899 List of commands |
| 105 | Timeout error<br>There is no response from the GOT, or the station of the specified address does not exist. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 106 | Multiple units not connectable<br>The RS-232 port is occupied. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Check to see if the RS-232 port is occupied. |
| 6, 107 | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | Address specification value | | | | | |
|---|---|---|---|---|---|---|---|
| | | Formats 1, 2 | Formats 3 to 6 | Formats 7 to 10 | Formats 11 to 13 | Formats 14, 15*2 | |
| GT2506HS GT2505HS | SD0 | 8448 | D9000 | SD0 | 2100H | 2100H |   |
| | | | | | | 2101H | |
| | SD1 | 8449 | D9001 | SD1 | 2101H | 2102H |   |
| | | | | | | 2103H | |
| | SD2 | 8450 | D9002 | SD2 | 2102H | 2104H |   |
| | | | | | | 2105H | |
| | SD3 | 8451 | D9003 | SD3 | 2103H | 2106H (3000H) |   |
| | | | | | | 2107H (3001H) | |
| | SD4 | 8452 | D9004 | SD4 | 2104H | 2108H (3002H) |   |
| | | | | | | 2109H (3003H) | |
| | SD5 | 8453 | D9005 | SD5 | 2105H | 210AH (3004H) |   |
| | | | | | | 210BH (3005H) | |
| | SD6 | 8454 | D9006 | SD6 | 2106H | 210CH (3006H) |   |
| | | | | | | 210DH (3007H) | |
| | SD7 | 8455 | D9007 | SD7 | 2107H | 210EH (3008H) |   |
| | | | | | | 210FH (3009H) | |
| | SD8 | 8456 | D9008 | SD8 | 2108H | 2110H (300AH) |   |
| | | | | | | 2111H (300BH) | |
| | SD9 | 8457 | D9009 | SD9 | 2109H | 2112H (300CH) |   |
| | | | | | | 2113H (300DH) | |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

# SM devices

The SM devices are bit devices into which interrupt outputs and clock data that turn ON or OFF at 1-second cycles.

## List of SM devices

The following shows the SM devices (virtual devices inside the GOT).

<table>
<tr><th>Address</th><th>Description</th><th>Set side</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output<br>When the ON or OFF state of SM0 to 49 is changed by a touch switch on the GOT, for example, the interrupt codes shown below are transmitted (interrupt output) to the host side. *1*2<br>Set the data amount (bytes) for an interrupt output to [Interrupt Data Byte(Byte)] in the communication detail settings.<br>☞ Page 1947 Setting communication interface (Controller Setting)
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>≀</td><td>≀</td><td>≀</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock<br>Turns ON and OFF in 1-second cycles.<br> 
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock<br>Turns ON and OFF in 2-second cycles.<br> 
</td></tr>
<tr><td>SM52</td><td>Interrupt code output disable flag<br>Enables or disables the output of the interrupt code and special interrupt code.<br>OFF: Output enabled, ON: Output disabled<br>When the output is set to be disabled, no interrupt data are output to the host.<br>(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>—</td></tr>
</table>

*1 After the ON or OFF state is changed, the interrupt data is output within 1 to 10 ms.

*2 When the ON or OFF state of SM0 to 49 is changed from the host side, interrupt output is not performed.

**Point**

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

Interrupt outputs (SM0 to 49)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1896 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1947 Setting communication interface (Controller Setting)

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Format 1, 2 | Format 3 to 6 | Format 7 to 10 | Format 11 to 13 | Format 14, 15 |
| GT2506-HS GT2505-HS | SM7 | SM6 | SM5 | SM4 | SM3 | SM2 | SM1 | SM0 | 8464 | *2*4 | *3*4 | 2110H | 2200H |
| | SM15 | SM14 | SM13 | SM12 | SM11 | SM10 | SM9 | SM8 | | | | | 2201H |
| | SM23 | SM22 | SM21 | SM20 | SM19 | SM18 | SM17 | SM16 | 8465 | | | 2111H | 2202H |
| | SM31 | SM30 | SM29 | SM28 | SM27 | SM26 | SM25 | SM24 | | | | | 2203H |
| | SM39 | SM38 | SM37 | SM36 | SM35 | SM34 | SM33 | SM32 | 8466 | | | 2112H | 2204H |
| | SM47 | SM46 | SM45 | SM44 | SM43 | SM42 | SM41 | SM40 | | | | | 2205H |
| | Unused | | | SM52 | SM51 | SM50 | SM49 | SM48 | 8467 | | | 2113H | 2206H |
| | Unused | | | | | | | | — | | | | — |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1898 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 In formats 3 to 6, values are specified within a range of M9000 to 9052.

*3 In formats 7 to 10, values are specified within a range of SM0 to 52.

*4 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: SM0, SM16, SM32, etc.)

# 45.5 Message Formats

This section describes the format of messages that can be used in the microcomputer connection (serial).

## Data format type

Set the data format in the communication detail settings in GT Designer3.

For details of the data format setting method, refer to the following.

☞ Page 1947 Setting communication interface (Controller Setting)

### Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 1 | GOT-A900 Series microcomputer connection (format 1) | This format is used when the GOT is connected to the host in a 1:1 connection. | ☞ Page 1902 Formats 1, 2 |
| Format 2 | GOT-A900 Series microcomputer connection (format 2) | This is the appended format with error code at the error response of the GOT-A900 Series microcomputer connection (format 1). | |

### Formats 3 to 6 (A compatible 1C frame)

This is the same message format as when communication is performed using the dedicated protocol of the A series computer link module.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 3 | A compatible 1C frame (format 1) | This is the basic format of the dedicated protocols. | ☞ Page 1915 Formats 3 to 6 |
| Format 4 | A compatible 1C frame (format 2) | This is the appended format of the A compatible 1C frame (format 1) with a block No. | |
| Format 5 | A compatible 1C frame (format 3) | This is the enclosed format of the A compatible 1C frame (format 1) with STX and ETX. | |
| Format 6 | A compatible 1C frame (format 4) | This is the appended format of the A compatible 1C frame (format 1) with CR and LF. | |

### Formats 7 to 10 (QnA compatible 3C/4C frame)

This is the same message format as when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 7 | QnA compatible 3C/4C frame (format 1) | This is the basic format of the MC protocols. | ☞ Page 1920 Formats 7 to 10 |
| Format 8 | QnA compatible 3C/4C frame (format 2) | This is the appended format of the QnA compatible 3C/4C frame (format 1) with block No. | |
| Format 9 | QnA compatible 3C/4C frame (format 3) | This is the enclosed format of the QnA compatible 3C/4C frame (format 1) with STX and ETX. | |
| Format 10 | QnA compatible 3C/4C frame (format 4) | This is the appended format of the QnA compatible 3C/4C frame (format 1) with CR and LF. | |

### Formats 11 to 13 (SCHNEIDER EJH's memory link method)

This is the same message format as the protocol of the SCHNEIDER EJH's memory link method.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 11 | SCHNEIDER EJH's memory link method (compatible mode) | This is the basic format of the SCHNEIDER EJH's memory link method. | ☞ Page 1925 Formats 11 to 13 |
| Format 12 | SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1) | This is the format with sum check, CR, and LF appended to the SCHNEIDER EJH's memory link method (compatible mode). | |
| Format 13 | SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n) | This is the format with a station No. appended to the SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1). | |

### Formats 14, 15 (GOT-F900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-F900 Series.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 14 | GOT-F900 Series microcomputer connection (format 1) | Use this format when establishing a 1:1 or m:n connection between the GOT and the host.<br>The end code is CR. | ☞ Page 1933 Formats 14, 15 |
| Format 15 | GOT-F900 Series microcomputer connection (format 2) | Use this format when establishing a 1:1 or m:n connection between the GOT and the host.<br>The end code is ETX or sum check. | |

## List of commands

The following shows the list of commands available in each data format.

### List of commands for formats 1, 2 (GOT-A900 Series microcomputer connection)

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| RD | 52H 44H | Batch read in word units | Reads bit devices in 16-point units. | 99 words (1584 points) |
| | | | Reads word devices in 1-point units. | 99 points |
| WD | 57H 44H | Batch write in word units | Writes to bit devices in 16-point units. | 99 words (1584 points) |
| | | | Writes to word devices in 1-point units. | 99 points |
| RR | 52H 52H | Random read in word units *1 | Reads multiple different bit devices in 16-point units. | 256 words (4096 points) |
| | | | Reads multiple different word devices in 1-point units. | 256 points |
| RW | 52H 57H | Random write in word units *1 | Writes to multiple different word devices in 16-point units. | 128 words (2048 points) |
| | | | Writes to multiple different word devices in 1-point units. | 128 points |
| TR | 54H 52H | Read clock data | Reads the clock data of the GOT. | — |
| TS | 54H 53H | Set clock data | Sets the clock data of the GOT. | — |

*1 Mixed specification of bit devices and word devices is also possible.

### List of commands for formats 3 to 6 (A compatible 1C frame)

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| BR<br>JR | 42H 52H<br>4AH 52H | Batch read in bit units | Reads bit devices in 1-point units. | 64 points |
| WR<br>QR | 57H 52H<br>51H 52H | Batch read in word units | Reads bit devices in 16-point units.*2 | 64 words (1024 points) |
| | | | Reads word devices in 1-point units. | 64 points |
| BW<br>JW | 42H 57H<br>4AH 57H | Batch write in bit units | Writes to bit devices in 1-point units. | 64 points |
| WW<br>QW | 57H 57H<br>51H 57H | Batch write in word units | Writes to bit devices in 16-point units.*2 | 64 words (1024 points) |
| | | | Writes to word devices in 1-point units. | 64 points |
| BT<br>JT | 42H 54H<br>4AH 54H | Test in bit units (Random write) | Writes to multiple different bit devices in 1-point units. | 64 points |
| WT<br>QT | 57H 54H<br>51H 54H | Test in word units (Random write) | Writes to multiple different bit devices in 16-point units.*2 | 64 words (1024 points) |
| | | | Writes to multiple different word devices in 1-point units. | 64 points |
| TR*1 | 54H 52H | Read clock data | Reads the clock data of the GOT. | — |
| TS*1 | 54H 53H | Set clock data | Sets the clock data of the GOT. | — |

*1 This is a dedicated command of GOT for the microcomputer connection.

*2 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

## Command lists for formats 7 to 10 (QnA compatible 3C/4C frame)

| Command | Sub-command | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| 0401 | 0001 | Batch read in bit units | Reads bit devices in 1-point units. | 64 points |
| 0401 | 0000 | Batch read in word units | Reads bit devices in 16-point units.*3 | 64 words (1024 points) |
| | | | Reads word devices in 1-point units. | 64 points |
| 1401 | 0001 | Batch write in bit units | Writes to bit devices in 1-point units. | 64 points |
| 1401 | 0000 | Batch write in word units | Writes to bit devices in 16-point units.*3 | 64 words (1024 points) |
| | | | Writes to word devices in 1-point units. | 64 points |
| 0403 | 0000 | Random read in word units *1 | Reads multiple different bit devices in 16-point and 32-point units.*3 | 64 words (1024 points) |
| | | | Reads multiple different word devices in 1-point and 2-point units. | 64 points |
| 1402 | 0001 | Random write in bit units | Writes to multiple different bit devices in 1-point units. | 64 points |
| 1402 | 0000 | Random write in word units *1 | Writes to multiple different bit devices in 16-point and 32-point units.*3 | 64 words (1024 points) |
| | | | Writes to multiple different word devices in 1-point and 2-point units. | 64 points |
| 0406 | 0000 | Multiple block batch read | Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3 | 64 points |
| 1406 | 0000 | Multiple block batch write | Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3 | 64 points |
| 1901*2 | 0000 | Read clock data | Reads the clock data of the GOT. | — |
| 0901*2 | 0000 | Set clock data | Sets the clock data of the GOT. | — |

*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

## List of commands for formats 11 to 13 (SCHNEIDER EJH's memory link method)

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| R | 52H | Batch read in word units | Reads bit devices in 16-point units. | 256 words (4096 points) |
| | | | Reads word devices in 1-point units. | 256 points |
| W | 57H | Batch write in word units | Writes to bit devices in 16-point units. | Format 11: 496 words (7936 points)<br>Format 12: 256 words (4096 points)<br>Format 13: 256 words (4096 points) |
| | | | Writes to word devices in 1-point units. | Format 11: 496 points<br>Format 12: 256 points<br>Format 13: 256 points |
| I | 49H | Interrupt inquiry | Issues an interrupt inquiry. (format 13 only) | — |
| N*1 | 4DH | Read clock data | Reads the clock data of the GOT. | — |
| M*1 | 4EH | Set clock data | Sets the clock data of the GOT. | — |

*1 This is a dedicated command of GOT for the microcomputer connection.

## List of commands for formats 14, 15 (GOT-F900 series microcomputer connection)

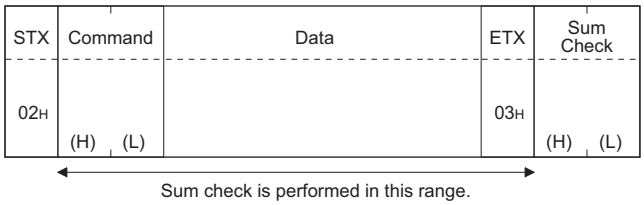
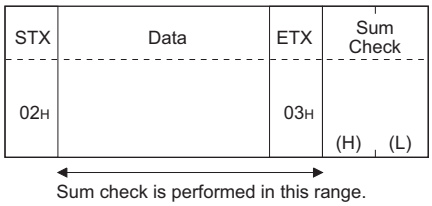
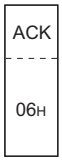
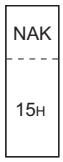
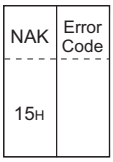
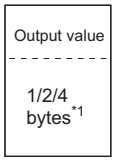
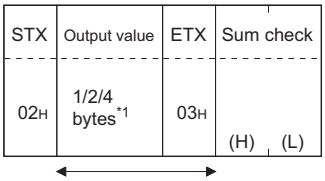
| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| 0 | 30H | Batch read (without the station No.) | Reads bit devices in byte units. | 255 bytes (2040 points) |
| | | | Reads word devices in byte units. | 255 bytes (127 points) |
| A | 41H | Batch read (with the station No.) | Reads bit devices in byte units. | 255 bytes (2040 points) |
| | | | Reads word devices in byte units. | 255 bytes (127 points) |
| 1 | 31H | Batch write (without the station No.) | Writes to bit devices in byte units. | 255 bytes (2040 points) |
| | | | Writes to word devices in byte units. | 255 bytes (127 points) |
| B | 42H | Batch write (with the station No.) | Writes to bit devices in byte units. | 255 bytes (2040 points) |
| | | | Writes to word devices in byte units. | 255 bytes (127 points) |
| 3 | 33H | Multi-point write in bit units (without the station No.) | Writes bit patterns (bit ON or OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device. | 70 bytes (560 points) |
| D | 44H | Multi-point write in bit units (with the station No.) | | |
| 4 | 34H | Fill command (without the station No.) | Writes the same value to a range of specified devices. | — |
| E | 45H | Fill command (with the station No.) | | |
| 5 | 35H | Set clock data (without the station No.) | Sets the clock data of the GOT. | — |
| F | 46H | Set clock data (with the station No.) | | |
| 6 | 36H | Read clock data (without the station No.) | Reads the clock data of the GOT. | — |
| G | 47H | Read clock data (with the station No.) | | |

# Formats 1, 2

The following describes the message formats 1 and 2 (GOT-A900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

## Basic format of data communication

| Item | Message format |
|---|---|
| Request message (host → GOT) |  |
| Response message during normal communication (GOT → host) | (1) During processing of read commands<br>  <br>(2) During processing of write commands<br>  |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>  <br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>  |
| During interrupt output *2 | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>  <br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>  |

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 1947 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 1887 D devices

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in ASCII code. (excluding interrupt output)

### ■Control codes

| Symbol | ASCII code | Description |
|---|---|---|
| STX | 02H | Start of Text (start marker of message frame) |
| ETX | 03H | End of Text (end marker of message frame) |
| EOT | 04H | End of Transmission |
| ENQ | 05H | Enquiry (start of enquiry) |
| NAK | 15H | Negative ACK (error response) |
| ACK | 06H | Acknowledge (write completion response) |
| LF | 0AH | Line Feed |
| CL | 0CH | Clear |
| CR | 0DH | Carriage Return |



### ■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1899 List of commands

### ■Address

Specifies the head No. of the device data to be read or written.

The address notated in decimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Number of points

Specify the number of device data points to be read and written. (Setting range: 1 to 99)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies year, month, day, hour, minute, second, and day of the week to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1910 Read clock data (TR) command

☞ Page 1911 Set clock data (TS) command

### ■Data

Specifies the data to read from or write to the specified device data. (word unit)

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Error code

This is the response message at faulty communication appended with error contents.

Error code is transmitted in 1 byte.

For details of the error codes generated in format 2 (GOT-A900 Series microcomputer connection (format 2)), refer to the following:

☞ Page 1914 Error code list

### ■Sum check code

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).

| STX | Command | | Address | | | | Number of points | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | D | 0 | 1 | 0 | 0 | 0 | 2 | | B | C |
| 02H | 52H | 44H | 30H | 31H | 30H | 30H | 30H | 32H | 03H | 42H | 43H |
| | (H) | (L) | (H) | — | — | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

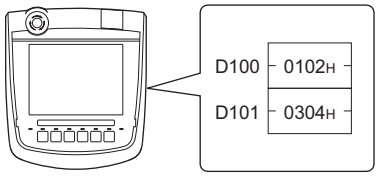
$52_H + 44_H + 30_H + 31_H + 30_H + 30_H + 30_H + 32_H + 03_H = 1BC_H$

## Message Formats

### ■Batch read in word units (RD) command

- When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

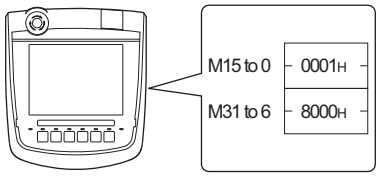



| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H; Command: R 52H (H), D 44H (L); Address: 0 30H (H), 1 31H, 0 30H, 0 30H (L); Number of points: 0 30H (H), 2 32H (L); ETX: 03H; Sum Check: B 42H (H), C 43H (L). Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | STX: 02H; Data 1 (D100): 0 30H (H), 1 31H, 0 30H, 2 32H (L); Data 2 (D101): 0 30H (H), 3 33H, 0 30H, 4 34H (L); ETX: 03H; Sum Check: 8 38H (H), D 44H (L). Sum check is performed in this range. |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H; Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

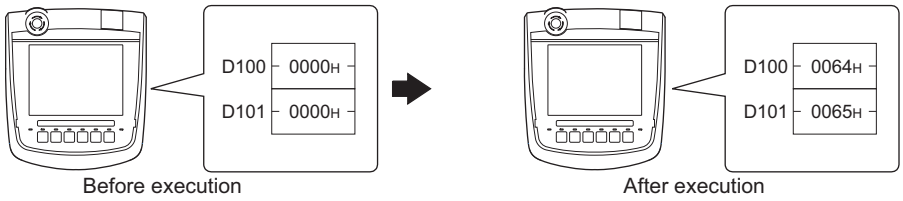



| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: R (52H) D (44H)<br>Address: 8 (38H) 3 (33H) 2 (32H) 0 (30H)<br>Number of points: 0 (30H) 2 (32H)<br>ETX: 03H<br>Sum Check: C (43H) 8 (38H)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | Sum check is performed in this range.<br>STX: 02H<br>Data 1 (M15 to 0): 0 (30H) 0 (30H) 0 (30H) 1 (31H)<br>Data 2 (M31 to 16): 8 (38H) 0 (30H) 0 (30H) 0 (30H)<br>ETX: 03H<br>Sum Check: 8 (38H) C (43H)<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<br>M M M M M M M M M M M M M M M M M M M M M M M M M M M M<br>1 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1<br>5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Batch write in word units (WD) command

• When writing to a word device

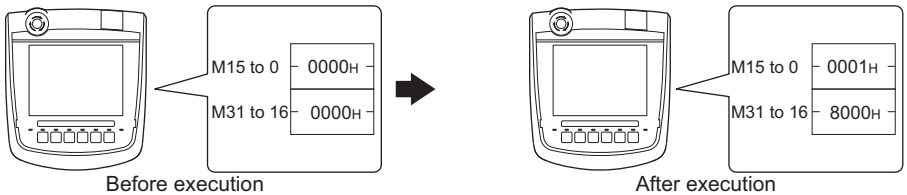
The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.




| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: W (57H) D (44H)<br>Address: 0 (30H) 1 (31H) 0 (30H) 0 (30H) (H) — — (L)<br>Number of points: 0 (30H) 2 (32H) (H) (L)<br>Data 1(D100): 0 (30H) 0 (30H) 6 (36H) 4 (34H) (H) — — (L)<br>Data 2 (D101): 0 (30H) 0 (30H) 6 (36H) 5 (35H) (H) — — (L)<br>ETX: 03H<br>Sum Check: 5 (35H) 6 (36H) (H) (L)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H, Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

• When writing to a bit device

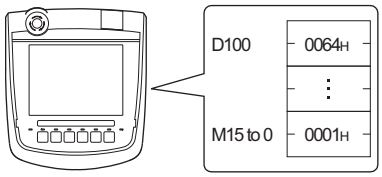
The following shows an example of writing "1"s to virtual devices M0 and M31.




| Item | Message format |
|---|---|
| Request message (host → GOT) | Sum check is performed in this range.<br>STX: 02H<br>Command: W 57H (H), D 44H (L)<br>Address: 8 38H (H), 3 33H, 2 32H, 0 30H (L)<br>Number of points: 0 30H (H), 2 32H (L)<br>Data 1 (M15 to 0): 0 30H (H), 0 30H, 0 30H, 1 31H (L)<br>Data 2 (M31 to 16): 8 38H (H), 0 30H, 0 30H, 0 30H (L)<br>ETX: 03H<br>Sum Check: 5 35H (H), 6 36H (L)<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<br>M M M M M M M M M M M M M M M M M M M M M M M M M M M M<br>1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1<br>5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H; Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Random read in word units (RR) command

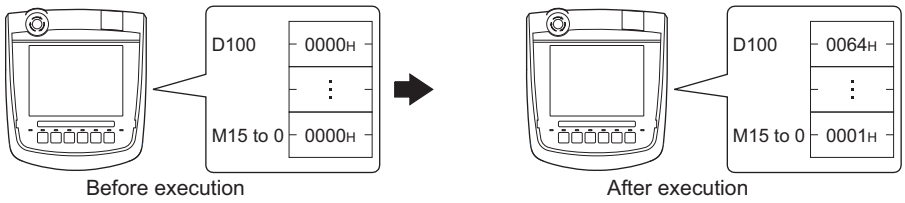
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)




| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: R R (52H 52H) (H) (L)<br>Address 1: 0 1 0 0 (30H 31H 30H 30H) (H) – – (L)<br>Address 2: 8 3 2 0 (38H 33H 32H 30H) (H) – – (L)<br>ETX: 03H<br>Sum Check: 3 5 (33H 35H) (H) (L)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | Sum check is performed in this range.<br>STX: 02H<br>Data 1 (D100): 0 0 6 4 (30H 30H 36H 34H) (H) – – (L)<br>Data 2 (M15 to 0): 0 0 0 0 0 0 0 1 (30H 30H 30H 31H) (H) – – (L)<br>ETX: 03H<br>Sum Check: 8 E (38H 45H) (H) (L)<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1<br>MMMMMMMMMMMMMMMM<br>1111111198765432 10<br>5432 10 |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.

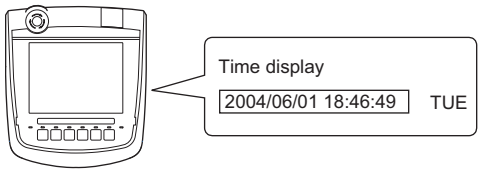



| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: R 52H (H), W 57H (L)<br>Following*1<br>ETX: 03H<br>Sum Check: C 43H (H), 5 35H (L)<br>Sum check is performed in this range.<br>*1<br>Address 1: 0 30H (H), 1 31H, 0 30H, 0 30H (L)<br>Data 1 (D100): 0 30H (H), 0 30H, 6 36H, 4 34H (L)<br>Address 2: 8 38H (H), 3 33H, 2 32H, 0 30H (L)<br>Data 2 (M15 to 0): 0 30H (H), 0 30H, 0 30H, 1 31H (L)<br>0000000000000001<br>MMMMMMMMMMMMMMMM<br>1111119876543210<br>5432100 |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H, Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)

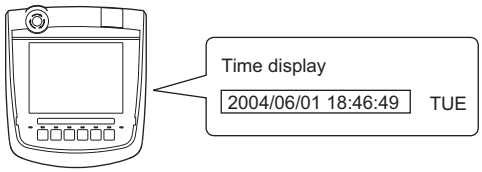



| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: T (54H) R (52H)<br>ETX: 03H<br>Sum Check: A (41H) 9 (39H)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | STX: 02H<br>Year data: 0 (30H) 4 (34H)<br>Month data: 0 (30H) 6 (36H)<br>Day data: 0 (30H) 1 (31H)<br>Hour data: 1 (31H) 8 (38H)<br>Minute data: 4 (34H) 6 (36H)<br>Second data: 4 (34H) 9 (39H)<br>Day-of-week data: 0 (30H) 2 (32H)<br>ETX: 03H<br>Sum Check: D (44H) 0 (30H)<br>Sum check is performed in this range. |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | STX: 02H<br>Command: T 54H (H), S 53H (L)<br>Year data: 0 30H (H), 4 34H (L)<br>Month data: 0 30H (H), 6 36H (L)<br>Day data: 0 30H (H), 1 31H (L)<br>Hour data: 1 31H (H), 8 38H (L)<br>Minute data: 4 34H (H), 6 36H (L)<br>Second data: 4 34H (H), 9 39H (L)<br>Day-of-week data: 0 30H (H), 2 32H (L)<br>ETX: 03H<br>Sum Check: 7 37H (H), 7 37H (L)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (format 1))<br>NAK: 15H<br>(format 2: GOT-A900 Series microcomputer connection (format 2))<br>NAK: 15H, Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, it will be corrected and a correct day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

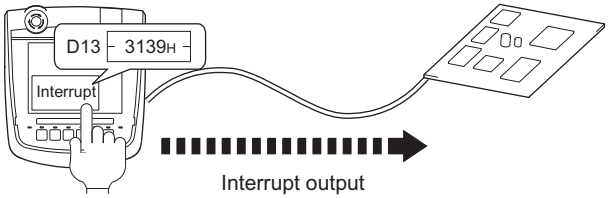
Tuesday (TUE) will be set.

## ■In the case of interrupt outputs

Write the data to the interrupt output devices (D13 and D14) to output to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [1] |

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

| Output value 1 |
|---|
| 39H |

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

| STX | Output value 1 | ETX | Sum check | |
|---|---|---|---|---|
| | | | 3 | C |
| 02H | 39H | 03H | 33H | 43H |
| | | | (H) | (L) |

Sum check is performed in this range.

(2) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [2]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

| STX | Output value 1 | Output value 2 | ETX | Sum check | |
|---|---|---|---|---|---|
| | | | | 6 | D |
| 02H | 31H | 39H | 03H | 36H | 44H |
| | | | | (H) | (L) |

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [4]

• When [32bit Storage] in the communication detail settings is set to [LH Order]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

| Output value1 | Output value2 | Output value3 | Output value4 |
|---|---|---|---|
| AAH | 55H | 31H | 39H |

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

| STX | Output value1 | Output value2 | Output value3 | Output value4 | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|
| | | | | | | 6 | C |
| 02H | AAH | 55H | 31H | 39H | 03H | 36H | 43H |
| | | | | | | (H) | (L) |

Sum check is performed in this range.

• When [32bit Storage] in the communication detail settings is set to [HL Order]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

| Output value1 | Output value2 | Output value3 | Output value4 |
|---|---|---|---|
| 31H | 39H | AAH | 55H |

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

| STX | Output value1 | Output value2 | Output value3 | Output value4 | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|
| | | | | | | 6 | C |
| 02H | 31H | 39H | AAH | 55H | 03H | 36H | 43H |
| | | | | | | (H) | (L) |

Sum check is performed in this range.

**Point**

Interrupt output

To set not to perform the interrupt output, turn ON SM52 (interrupt code output disable flag).

☞ Page 1896 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1947 Setting communication interface (Controller Setting)

## Error code list

In the case of format 2 (GOT-A900 series microcomputer connection (format 2)), the error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 06H | Sum check error<br>The sum check code created from received data differs from the sum check code in the receive data. | • Review the contents of the message to transmit. |
| 10H | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1899 List of commands |
| 11H | Message length error<br>The upper limit of the data length that can be received by the GOT has been exceeded. | • Review the contents of the message to transmit.<br>• Check the data length of the message.(data length of the data section, etc.) |
| 12H | Communication message error<br>EXT was not found within the upper limit of the receive buffer. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 15H | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |
| 7AH | Address error<br>The start address of the read or write device is out of range. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area |
| 7BH | Exceeded number of points error<br>The read or write range exceeded the device range. | |

## Precautions

### ■Storage order for 32-bit data

When the program of the GOT-A900 series is used and 32-bit data is set, set [HL Order] for [32bit Order] in the communication detail settings.

With setting [LH Order], the order of upper bits and lower bits are reversed when the GOT displays and writes 32-bit data.

# Formats 3 to 6

The following describes the message formats 3 to 6 (A compatible 1C frame).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same message format as when communication is performed using the dedicated protocol (A compatible 1C frame) of the A Series computer link module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the dedicated protocol of the A Series computer link modules, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read in word units (QR) command in format 4 (A compatible 1C frame (format 2))

Character A section

| ENQ | Block No. | | Station No. | | PLC No. | | Command | | Wait | Address | | | | | | | Number of points | | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | Q | R | 0 | D | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | B | A |
| 05H | 30H | 30H | 30H | 30H | 30H | 30H | 51H | 52H | 30H | 44H | 30H | 30H | 30H | 31H | 30H | 30H | 30H | 32H | 42H | 41H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | – | – | – | – | – | (L) | (H) | (L) | (H) | (L) |

Sum check is performed in this range.

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in ASCII code.

### ■Block No, PLC No.

Ignored in a microcomputer connection of the GOT.

Specify "00".

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1947 Setting communication interface (Controller Setting)

### ■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1899 List of commands

### ■Message wait

Ignored in a microcomputer connection of the GOT.

Specify "0".

"0" is converted to a 1-digit ASCII code (hexadecimal) and transmitted.

### ■Address

Specifies the head No. of the device data to be read or written.

The data annotated in decimal is converted to a 5- or 7-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Number of points

Specifies the device data points to be read or written. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and the day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1917 Read clock data (TR) command

☞ Page 1918 Set clock data (TS) command

### ■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details on error codes generated in formats 3 to 6 (A compatible 1C frame), refer to the following.

☞ Page 1919 Error code list

**Point**

When connecting a microcomputer, etc. that uses the dedicated protocol of the A series computer link module with the GOT

When connecting a microcomputer, etc. that uses the dedicated protocol of the A series computer link module with the GOT, correct the commands to use and the device range according to the specifications of GOT.

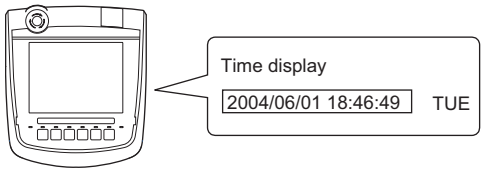
## Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)

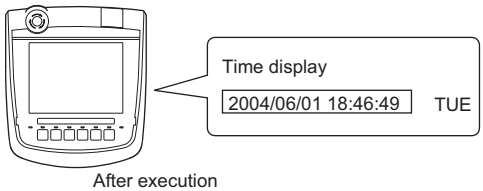



| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 3 (A compatible 1C frame (format 1))<br>ENQ: 05H<br>Station No.: 0 0 (30H 30H) (H) (L)<br>PLC No.: 0 0 (30H 30H) (H) (L)<br>Command: T R (54H 52H) (H) (L)<br>Wait: 0 (30H)<br>Sum Check: 9 6 (39H 36H) (H) (L)<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | Example: Format 3 (A compatible 1C frame (format 1))<br>Character B section<br>STX: 02H<br>Station No.: 0 0 (30H 30H) (H) (L)<br>PLC No.: 0 0 (30H 30H) (H) (L)<br>Following*1<br>ETX: 03H<br>Sum Check: 9 0 (39H 30H) (H) (L)<br>Sum check is performed in this range.<br>*1<br>Year data: 0 4 (30H 34H) (H) (L)<br>Month data: 0 6 (30H 36H) (H) (L)<br>Day data: 0 1 (30H 31H) (H) (L)<br>Hour data: 1 8 (31H 38H) (H) (L)<br>Minute data: 4 6 (34H 36H) (H) (L)<br>Second data: 4 9 (34H 39H) (H) (L)<br>Day-of-week data: 0 2 (30H 32H) (H) (L) |
| Response message during faulty communication (GOT → host) | Example: Format 3 (A compatible 1C frame (format 1))<br>NAK: 15H<br>Station No.: 0 0 (30H 30H) (H) (L)<br>PLC No.: 0 0 (30H 30H) (H) (L)<br>Error code: 0 5 (30H 35H) (H) (L)<br>The above is the case where an overrun error (05H) has occurred. |

## ■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 3 (A compatible 1C frame (format 1)) |
| Response message during normal communication (GOT → host) | Example: Format 3 (A compatible 1C frame (format 1)) |
| Response message during faulty communication (GOT → host) | Example: Format 3 (A compatible 1C frame (format 1)) |

Character C section

| ENQ | Station No. | | PLC No. | | Command | | Wait | Following*1 | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | T | S | 0 | | 6 | 4 |
| 05H | 30H | 30H | 30H | 30H | 54H | 53H | 30H | | 36H | 34H |
| | (H) | (L) | (H) | (L) | (H) | (L) | | | (H) | (L) |

Sum check is performed in this range.

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| ACK | Station No. | | PLC No. | |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |
| 06H | 30H | 30H | 30H | 30H |
| | (H) | (L) | (H) | (L) |

| NAK | Station No. | | PLC No. | | Error code | |
|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 5 |
| 15H | 30H | 30H | 30H | 30H | 30H | 35H |
| | (H) | (L) | (H) | (L) | (H) | (L) |

The above is the case where an overrun error (05H) has occurred.

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

## Error code list

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 01H | Parity error<br>The parity bit does not match. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Match the GOT and host transmission settings. |
| 02H | Sum check error<br>The sum check code created from received data differs from the sum check code in the receive data. | • Review the contents of the message to transmit. |
| 03H | Protocol error<br>Received a message that does not follow the control procedure of the format set at "Communication Detail Settings". | • Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 05H | Overrun error<br>The next data was transmitted from the host before GOT completes the processing of the data received. | • Check the settings of "Communication Detail Settings".<br>• Decrease the transmission speed. |
| 06H | Character section error<br>The character section specification error.<br>• The method of specifying the character section is wrong.<br>• The specified command has error.<br>• The number of points of the processing requests exceeds the allowable range.<br>• A non-existent device has been specified.<br>• The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1899 List of commands<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |
| 07H | Character error<br>A character other than "A to Z", "0 to 9", space, and control codes has been received. | • Review the contents of the message to transmit. |

# Formats 7 to 10

The following describes the message formats 7 to 10 (QnA compatible 3C/4C frame).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3C/4C frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

📖MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read in word units (0401) command in format 8 (QnA compatible 4C frame (format 2))

| ENQ | Block No. | | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Host Address No. | | Following *1 | Sum check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 5 | 4 |
| 05H | 30H | 30H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | | 35H | 34H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

*1 Character A section

| Command | | | | Sub-command | | | | Device code | | Head Device | | | | | | Device points | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | D | * | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 30H | 34H | 30H | 31H | 30H | 30H | 30H | 30H | 44H | 2AH | 30H | 30H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 32H |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | – | – | (L) | (H) | – | – | (L) |

**Point**

QnA compatible 4C frame (format 5)

GOT cannot use the QnA compatible 4C frame (format 5).

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in ASCII code.

### ■Block No., network No., PLC No., request destination module I/O No. and station No.

Ignored in a microcomputer connection of the GOT.

Specify "00". (The request destination module I/O No. is "0000".)

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

(The request destination module I/O No. is 4-digit.)

### ■Station No.

Station No. is used to identify the GOT with which the host communicates.(Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1947 Setting communication interface (Controller Setting)

### ■Command, sub-command

Specifies the contents to access from the host to GOT.

The command is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1899 List of commands

### ■Device code

Specifies the code by which the device data to be read or written is recognized.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Head device

Specifies the head No. of the device data to be read or written.

The address notated in decimal is converted to a 6-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Device points

Specifies the device data points to be read or written. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

When specifying multiple devices as follows, limit the total device points to within 64 points.

• When using random read or write command

When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points

• When using multiple block batch read or write commands

When setting multiple blocks, limit the total number of points of all blocks to within 64 points.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1922 Read clock data (1901) command

☞ Page 1923 Set clock data (0901) command

### ■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details on error codes that are generated in formats 7 to 10 (QnA compatible 3C/4C frame), refer to the following.

☞ Page 1924 Error code list

**Point**

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

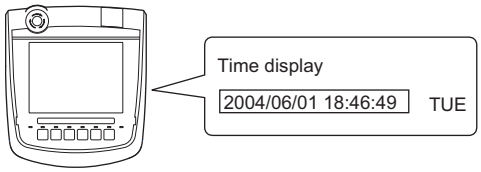
## Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)




| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 7 (QnA compatible 4C frame (format 1)) |

| ENQ | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 | Sum check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A | 9 |
| 05H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | | 41H | 39H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

*1

Character A section

| Host Address No. | | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| 30H | 30H | 31H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

| Response message during normal communication (GOT → host) | Example: Format 7 (QnA compatible 4C frame (format 1)) |
|---|---|

| STX | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 | ETX | Sum check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | E | E |
| 02H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | | 03H | 43H | 43H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | | (H) | (L) |

Sum check is performed in this range.

*1

Character B section

| Host Address No. | | Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 30H | 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| Response message during faulty communication (GOT → host) | Example: Format 7 (QnA compatible 4C frame (format 1)) |
|---|---|

| NAK | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Host Address No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

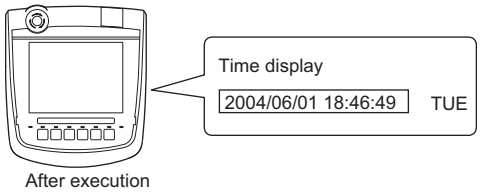
| Error code | | | |
|---|---|---|---|
| 7 | F | 6 | 9 |
| 37H | 46H | 36H | 39H |
| (H) | – | – | (L) |

The above is the case where a parity error (7F69H) has occurred.

## ■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 7 (QnA compatible 4C frame (format 1)) |

| ENQ | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Host Address No. | | Following *1 | Sum check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 7 | 5 |
| 05H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | | 37H | 35H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

*1

Character C section

| Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|
| 0 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| 30H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| (H) | – | – | (L) | (H) | – | – | (L) |

→ 1)

Character C section

1) →

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| Response message during normal communication (GOT → host) | Example: Format 7 (QnA compatible 4C frame (format 1)) |
|---|---|

| ACK | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Host Address No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) |

| Response message during faulty communication (GOT → host) | Example: Format 7 (QnA compatible 4C frame (format 1)) |
|---|---|

| NAK | Frame ID No. | | Station No. | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Host Address No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15H | 46H | 38H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Error code | | | |
|---|---|---|---|
| 7 | F | 6 | 9 |
| 37H | 46H | 36H | 39H |
| (H) | – | – | (L) |

The above is the case where a parity error (7F69H) has occurred.

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

## Error code list

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 7E40H | Command error<br>An unsupported command or sub-command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1899 List of commands |
| 7E41H | Data length error<br>Specified the data points exceeding those that can be communicated during random read or write. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area |
| 7E42H | Number of data error<br>The number of requests exceeds the command range. | |
| 7E43H | Device error<br>A non-existent device has been specified. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area |
| 7E46H | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |
| 7E4FH | Exceeded number of points error<br>The read or write range has exceeded the device range. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area |
| 7F20H | Character error<br>A character other than "A to Z", "0 to 9", space, and control codes has been received. | • Review the contents of the message to transmit. |
| 7F23H | Communication message error<br>EXT or CR+LF was not found within the upper limit of the receive buffer. | • Check the communication cable and communication module attachment.<br>• Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |
| 7F24H | Sum check error<br>The sum check code created from received data differs from the sum check code in the receive data. | • Review the contents of the message to transmit. |
| 7F67H | Overrun error<br>The next data was transmitted from the host before GOT completes the processing of the data received. | • Check the settings in the communication detail settings.<br>• Decrease the transmission speed. |
| 7F68H | Framing error<br>The data bit and/or stop bit are not correct. | • Check the communication cable and communication module attachment.<br>• Check the settings in the communication detail settings.<br>• Match the GOT and host transmission settings. |
| 7F69H | Parity error<br>The parity bit does not match. | |
| 7F6AH | Buffer full error<br>The receive buffer overflowed. | • Check the communication cable and communication module attachment.<br>• Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |

# Formats 11 to 13

The following describes the message formats 11 to 13 (SCHNEIDER EJH's (former Digital Electronics Corporation) memory link method).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same format as the protocol of the SCHNEIDER EJH's memory link method.

For details of the basic format of data communication, refer to the following manual:

The connection manual of the device manufactured by SCHNEIDER EJH

This section describes items whose settings differ from the protocols of the SCHNEIDER EJH's memory link method and dedicated commands for a microcomputer connection of the GOT.

Example: Request message for the batch read in word units (R) command in format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

| ENQ | Station No. | | ESC | Com-mand | Address | | | | Number of points | | | | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | R | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 2 | 5 | E | | |
| 05H | 30H (H) | 30H (L) | 1BH | 52H | 30H (H) | 30H – | 36H – | 34H (L) | 30H (H) | 30H – | 30H – | 32H (L) | 35H (H) | 45H (L) | 0DH | 0AH |

Sum check is performed in this range.

**Point**

Compatibility with the SCHNEIDER EJH's memory link method

In the case of formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), a communication error may occur since some communication packets are not compatible with the SCHNEIDER EJH's memory link method in the communication.

To give the compatibility, turn on the digital compatible signals (GS580 to GS583) of the GOT internal device and communicate in the fully compatible message format.

| Device | Function | Bit | Bit position | Settings |
|---|---|---|---|---|
| GS580 | Microcomputer connection extended setting (CH1) | Digital compatible signal | b0 | 0: Partly compatible (Default)<br>1: Fully compatible |
| GS581 | Microcomputer connection extended setting (CH2) | Digital compatible signal | b0 | 0: Partly compatible (Default)<br>1: Fully compatible |
| GS582 | Microcomputer connection extended setting (CH3) | Digital compatible signal | b0 | 0: Partly compatible (Default)<br>1: Fully compatible |
| GS583 | Microcomputer connection extended setting (CH4) | Digital compatible signal | b0 | 0: Partly compatible (Default)<br>1: Fully compatible |

When the digital compatible signal turns on, interrupt outputs (D13 to D14, SM0 to SM49) are invalid.

To use interrupt outputs, turn off the digital compatible signal.

For the GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in ASCII code.

### ■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 1899 List of commands

### ■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1949 Communication detail settings

### ■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Number of points

Specify the number of device data points to be read and written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

The setting range depends on the format and command.

| Format | Command | Command name | Setting range |
|---|---|---|---|
| 11 | R | Batch read in word units | 1 to 100H |
| | W | Batch write in word units | 1 to 1F0H |
| 12 | R | Batch read in word units | 1 to 100H |
| | W | Batch write in word units | |
| 13 | R | Batch read in word units | 1 to 100H |
| | W | Batch write in word units | |

### ■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1927 Read clock data (N) command

☞ Page 1928 Set clock data (M) command

### ■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details on the error codes generated in formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), refer to the following.

☞ Page 1932 Error code list

**Point**

When connecting a microcomputer or others that uses the protocol of the SCHNEIDER EJH's memory link method with the GOT

To do so, correct the commands to be used and the device ranges to match the specifications of the GOT.

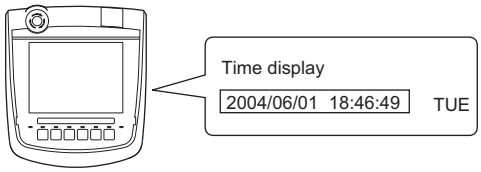
## Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Read clock data (N) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)




| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))<br>• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)<br>• Digital compatible signal (GS580 to GS583): ON (Fully compatible) |
| Response message during normal communication (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))<br>• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)<br>• Digital compatible signal (GS580 to GS583): ON (Fully compatible) |

Request message (host → GOT) — Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

| ENQ | Station No. | | ESC | Com-mand | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | N | C | E | | |
| 05H | 30H | 30H | 1BH | 4EH | 43H | 45H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | | |

This range Sum check

Request message (host → GOT) — Digital compatible signal (GS580 to GS583): ON (Fully compatible)

| ENQ | Station No. | | ESC | Com-mand | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | N | C | 9 | | |
| 05H | 30H | 30H | 1BH | 4EH | 43H | 39H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | | |

This range Sum check

Response message during normal communication (GOT → host) — Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

| STX | Station No. | | ESC | Com-mand | Following*1 | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | A | | | 8 | E | | |
| 02H | 30H | 30H | 1BH | 41H | | 03H | 38H | 45H | 0DH | 0AH |
| | (H) | (L) | | | | | (H) | (L) | | |

This range Sum check

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

Response message during normal communication (GOT → host) — Digital compatible signal (GS580 to GS583): ON (Fully compatible)

| STX | Station No. | | ESC | Com-mand | Following*1 | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | A | | | 8 | C | | |
| 02H | 30H | 30H | 1BH | 41H | | 03H | 38H | 43H | 0DH | 0AH |
| | (H) | (L) | | | | | (H) | (L) | | |

This range Sum check

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| Item | Message format |
|---|---|
| Response message during faulty communication (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

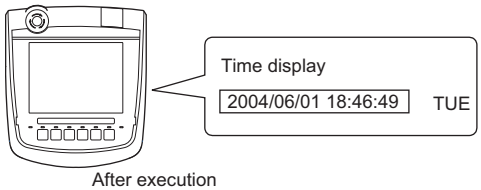
| NAK | Station No. | | Error code | | CR | LF |
|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 6 | | |
| 15H | 30H (H) | 30H (L) | 30H (H) | 36H (L) | 0DH | 0AH |

The above is a case where the sum check error (06H) has occurred.

## ■Set clock data (M) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

| ENQ | Station No. | | ESC | Com-mand | | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | M | Following*1 | 9 | A | | |
| 05H | 30H (H) | 30H (L) | 1BH | 4DH | | 39H (H) | 41H (L) | 0DH | 0AH |

Sum check is performed in this range.

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H (H) | 34H (L) | 30H (H) | 36H (L) | 30H (H) | 31H (L) | 31H (H) | 38H (L) | 34H (H) | 36H (L) | 34H (H) | 39H (L) | 30H (H) | 32H (L) |

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

| ENQ | Station No. | | ESC | Com-mand | | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | M | Following*1 | 9 | 5 | | |
| 05H | 30H (H) | 30H (L) | 1BH | 4DH | | 39H (H) | 35H (L) | 0DH | 0AH |

Sum check is performed in this range.

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H (H) | 34H (L) | 30H (H) | 36H (L) | 30H (H) | 31H (L) | 31H (H) | 38H (L) | 34H (H) | 36H (L) | 34H (H) | 39H (L) | 30H (H) | 32H (L) |

| Item | Message format |
|---|---|
| Response message during normal communication (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

| ACK | Station No. | | CR | LF |
|---|---|---|---|---|
| | 0 | 0 | | |
| 06H | 30H (H) | 30H (L) | 0DH | 0AH |

| Item | Message format |
|---|---|
| Response message during faulty communication (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

| NAK | Station No. | | Error code | | CR | LF |
|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 6 | | |
| 15H | 30H (H) | 30H (L) | 30H (H) | 36H (L) | 0DH | 0AH |

The above is a case where the sum check error (06H) has occurred.

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

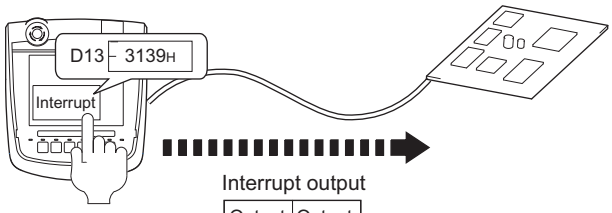
45

## ■In the case of interrupt inquiry

The following shows the example of an interrupt inquiry when data are written to the interrupt output devices (D13 and D14).

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example: When [Interrupt Data Byte(Byte)] is set to [2] in format 11




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

| Item | Message format |
|---|---|
| Request message (host → GOT) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

| ENQ | Station No. | | ESC | Com-mand | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | C | 9 | | |
| 05H | 30H (H) | 30H (L) | 1BH | 49H | 43H (H) | 39H (L) | 0DH | 0AH |

This range Sum check

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

| ENQ | Station No. | | ESC | Com-mand | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | C | 4 | | |
| 05H | 30H (H) | 30H (L) | 1BH | 49H | 43H (H) | 34H (L) | 0DH | 0AH |

This range Sum check

| Item | Message format |
|---|---|
| Interrupt inquiry (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))<br>(1) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [1] |

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 1 | 3 | 9 | | 9 | 4 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 31H | 33H | 39H | 03H | 39H | 44H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | | (H) | (L) | | |

This range Sum check is performed.

(2) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2]

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | Output value 2 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 1 | 3 | 1 | 3 | 9 | | F | 9 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 31H | 33H | 31H | 33H | 39H | 03H | 46H | 39H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) | | |

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [4]

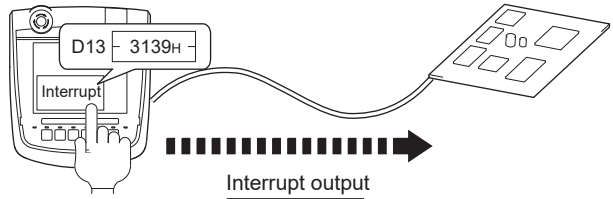
| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | Output value 2 | | Output value 3 | | Output value 4 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 1 | A | A | 5 | 5 | 3 | 1 | 3 | 9 | | E | 7 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 31H | 41H | 41H | 35H | 35H | 33H | 31H | 33H | 39H | 03H | 45H | 37H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) | | |

Sum check is performed in this range.

## ■In the case of interrupt outputs

Write the data to the interrupt output devices (D13 and D14) to output to the host.
(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |



| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) |

(1) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [1]

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 1 | 3 | 9 | | 9 | 4 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 31H | 33H | 39H | 03H | 39H | 44H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | | (H) | (L) | | |

This range Sum check is performed.

(2) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [2]

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | Output value 2 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 2 | 3 | 1 | 3 | 9 | | F | 9 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 32H | 33H | 31H | 33H | 39H | 03H | 46H | 39H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) | | |

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [4]

• When [32bit Storage] in the communication detail settings is set to [LH Order]

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | Output value 2 | | Output value 3 | | Output value 4 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 4 | A | A | 5 | 5 | 3 | 1 | 3 | 9 | | E | 7 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 34H | 41H | 41H | 35H | 35H | 33H | 31H | 33H | 39H | 03H | 45H | 37H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) | | |

Sum check is performed in this range.

• When [32bit Storage] in the communication detail settings is set to [HL Order]

| STX | Station No. | | ESC | Com-mand | Data quantity | | Output value 1 | | Output value 2 | | Output value 3 | | Output value 4 | | ETX | Sum Check | | CR | LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | | I | 0 | 4 | 3 | 1 | 3 | 9 | A | A | 5 | 5 | | E | 7 | | |
| 02H | 30H | 30H | 1BH | 49H | 30H | 34H | 33H | 31H | 33H | 39H | 41H | 41H | 35H | 35H | 03H | 45H | 37H | 0DH | 0AH |
| | (H) | (L) | | | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) | | |

Sum check is performed in this range.

**Point**

Interrupt output

To set not to perform the interrupt output, turn ON SM52 (interrupt code output disable flag).

☞ Page 1896 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1947 Setting communication interface (Controller Setting)

## Error code list

In the case of formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), the details (error code) of the error are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 06H | Sum check error<br>The sum check code created from received data differs from the sum check code in the receive data. | • Review the contents of the message to transmit. |
| 10H | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1899 List of commands |
| 12H | Message length error<br>The upper limit of the data length that can be received by the GOT has been exceeded. | |
| 16H | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |
| FAH | Address error<br>The start address of the read or write device is out of range. | • Review the contents of the message to transmit.<br>• Check the data length of the message.(data length of the data section, etc.) |
| FBH | Exceeded number of points error<br>The read or write range has exceeded the device range. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1886 Device Data Area |
| FCH | Message format error<br>The format of the received message has error. | • Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |
| FFH | Timeout error<br>There is no response from the GOT, or the station of the specified address does not exist. | • Check the communication cable and communication module attachment.<br>• Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |

## Precautions

### ■Storage order for 32-bit data

To use the program of the SCHNEIDER EJH's memory link method by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

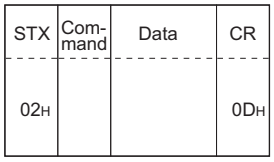
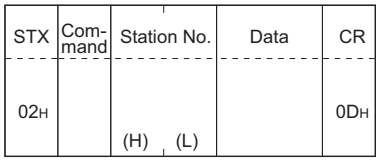
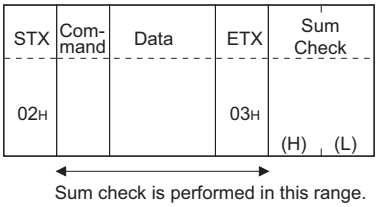
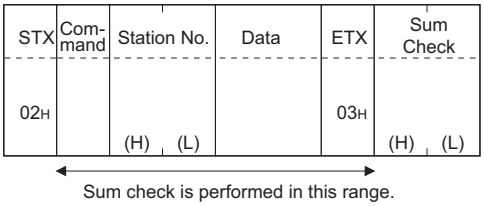
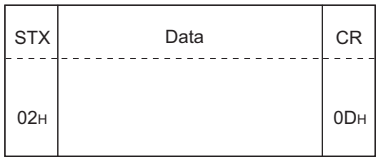
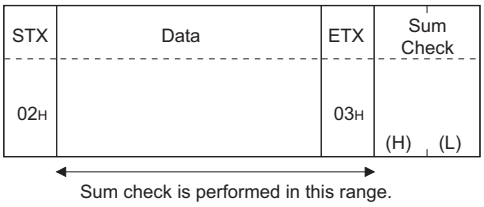
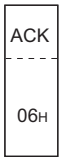
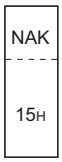
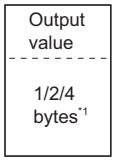
If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

# Formats 14, 15

The following describes the message formats 14 and 15 (GOT-F900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

## Basic format of data communication

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1))<br>(1) w/out station No.<br>  <br><br>(2) w/station No.<br>  <br> |
| | (format 15: GOT-F900 Series microcomputer connection (format 2))<br>(1) w/out station No.<br>  <br><br>(2) w/station No.<br>  <br> |
| Response message during normal communication (GOT → host) | (1) During processing of read commands<br>(format 14: GOT-F900 Series microcomputer connection (format 1))<br>  <br> |
| | (format 15: GOT-F900 Series microcomputer connection (format 2))<br>  <br> |
| | (2) During processing of write commands<br>  <br> |
| Response message during faulty communication (GOT → host) |  <br> |
| During interrupt output *2 |  <br> |

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 1947 Setting communication interface (Controller Setting)

*2 Write data to the interrupt devices (D13 and D14) to enable an interrupt output.
☞ Page 1887 D devices

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in ASCII code. (excluding interrupt output)

### ■Control codes

| Symbol | ASCII code | Description |
|---|---|---|
| STX | 02H | Start of Text (start marker of message frame) |
| ETX | 03H | End of Text (end marker of message frame) |
| EOT | 04H | End of Transmission |
| ENQ | 05H | Enquiry (start of enquiry) |
| NAK | 15H | Negative ACK (error response) |
| ACK | 06H | Acknowledge (write completion response) |
| LF | 0AH | Line Feed |
| CL | 0CH | Clear |
| CR | 0DH | Carriage Return |

### ■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 1899 List of commands

### ■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1947 Setting communication interface (Controller Setting)

### ■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1886 Device Data Area

### ■Bit pattern

Specifies the pattern of the bits to change.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1940 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

### ■Write specification

Specifies how to change the data of the specified address by bit pattern.

(Setting range: 0 to 3)

Data notated in decimal is converted to a 1-digit ASCII code (Hex) and transmitted.

☞ Page 1940 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

### ■Number of bytes

Specifies the number of bytes of the device data to be batch read or written. (Setting range: 0 to FFH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Number of points

Specifies the number of device data to be written to multiple points in bit units. (Setting range: 0 to 70)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1943 Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

☞ Page 1944 Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

### ■Data

Specifies the data to be read or written from or to the specified device data. (word unit)

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

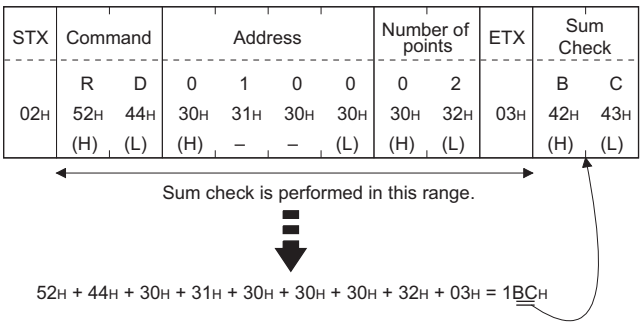
### ■Write data

Specifies the data to be written to the specified device data.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

### ■Sum check code (for format 15: GOT-F900 series microcomputer connection (format 2) only)

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).

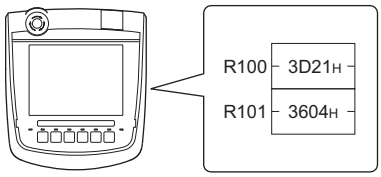


## Message format

### ■Batch read (0) command (without station No.), batch read (A) command (with station No.)

• When reading a word device

The following shows an example of reading four bytes of virtual devices R100 to R101 from the GOT at station No.15.
(Assuming R100=3D21H, R101=3604H are stored.)




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | CR |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 5 | 0 | 0 | C | 8 | 0 | 4 | |
| 02H | 41H | 31H | 35H | 30H | 30H | 43H | 38H | 30H | 34H | 0DH |
| | | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 5 | 0 | 0 | C | 8 | 0 | 4 | | E | 9 |
| 02H | 41H | 31H | 35H | 30H | 30H | 43H | 38H | 30H | 34H | 03H | 45H | 39H |
| | | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

| | |
|---|---|
| Response message during normal communication (GOT → host) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Data 1 (R100 upper) | | Data 2 (R100 lower) | | Data 3 (R101 upper) | | Data 4 (R101 lower) | | CR |
|---|---|---|---|---|---|---|---|---|---|
| | 3 | D | 2 | 1 | 3 | 6 | 0 | 4 | |
| 02H | 33H | 44H | 32H | 31H | 33H | 36H | 30H | 34H | 0DH |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Data 1 (R100 upper) | | Data 2 (R100 lower) | | Data 3 (R101 upper) | | Data 4 (R101 lower) | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | D | 2 | 1 | 3 | 6 | 0 | 4 | | A | A |
| 02H | 33H | 44H | 32H | 31H | 33H | 36H | 30H | 34H | 03H | 41H | 41H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

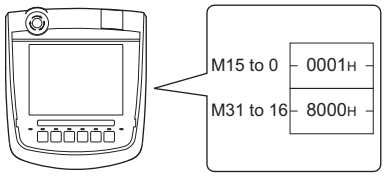
| | |
|---|---|
| Response message during faulty communication (GOT → host) | |

| NAK |
|---|
| 15H |

• When reading a bit device

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | CR |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 4 | |
| 02H | 41H | 31H (H) | 35H (L) | 32H (H) | 30H – | 30H – | 30H (L) | 30H (H) | 34H (L) | 0DH |

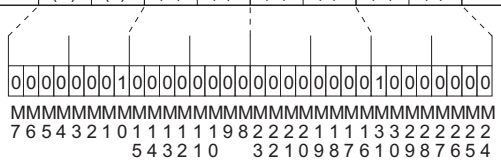
(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 4 | | D | 0 |
| 02H | 41H | 31H (H) | 35H (L) | 32H (H) | 30H – | 30H – | 30H (L) | 30H (H) | 34H (L) | 03H | 44H (H) | 30H (L) |

Sum check is performed in this range.

| | |
|---|---|
| Response message during normal communication (GOT → host) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

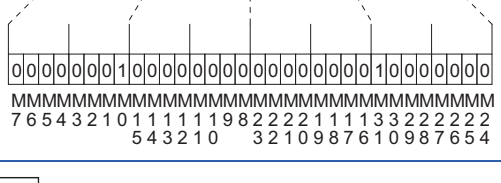
| STX | Data 1 (M7 to 0) | | Data 2 (M15 to 8) | | Data 3 (M23 to 16) | | Data 4 (M31 to 24) | | CR |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | |
| 02H | 30H (H) | 31H (L) | 30H (H) | 30H (L) | 30H (H) | 30H (L) | 38H (H) | 30H (L) | 0DH |




(format 15: GOT-F900 Series microcomputer connection (format 2))

Sum check is performed in this range.

| STX | Data 1 (M7 to 0) | | Data 2 (M15 to 8) | | Data 3 (M23 to 16) | | Data 4 (M31 to 24) | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | | 8 | C |
| 02H | 30H (H) | 31H (L) | 30H (H) | 30H (L) | 30H (H) | 30H (L) | 38H (H) | 30H (L) | 03H | 38H (H) | 43H (L) |



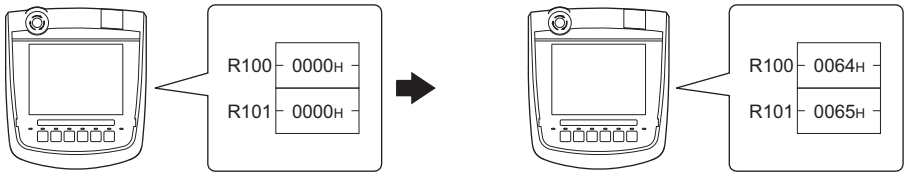

| | |
|---|---|
| Response message during faulty communication (GOT → host) | |

| NAK |
|---|
| 15H |

## ■Batch write (1) command (without station No.), batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing "0064H" and "0065H" to virtual devices R100 and R101 on the GOT at station No.15.




Before execution　　After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | Following*1 | CR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1 | 5 | 0 | 0 | C | 8 | 0 | 4 | | |
| 02H | 42H | 31H | 35H | 30H | 30H | 43H | 38H | 30H | 34H | | 0DH |
| | | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | Following*1 | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1 | 5 | 0 | 0 | C | 8 | 0 | 4 | | | 9 | 1 |
| 02H | 42H | 31H | 35H | 30H | 30H | 43H | 38H | 30H | 34H | | 03H | 39H | 31H |
| | | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | | (H) | (L) |

Sum check is performed in this range.

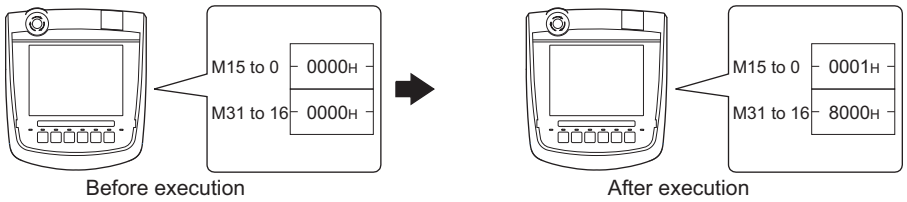
*1

| Data 1 (R100 upper) | | Data 2 (R100 lower) | | Data 3 (R101 upper) | | Data 4 (R101 lower) | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 6 | 4 | 0 | 0 | 6 | 5 |
| 30H | 30H | 36H | 34H | 30H | 30H | 36H | 35H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

• When writing to a bit device

The following shows an example of writing "1"s to virtual devices M0 and M31 on the GOT at station No.15.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Address | | | | Number of bytes | | Following*1 | CR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 4 | | |
| 02H | 42H | 31H (H) | 35H (L) | 32H (H) | 30H – | 30H – | 30H (L) | 30H (H) | 34H (L) | | 0DH |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Address | | | | Byte Number | | Following*1 | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 4 | | | 5 | A |
| 02H | 42H | 31H (H) | 35H (L) | 32H (H) | 30H – | 30H – | 30H (L) | 30H (H) | 34H (L) | | 03H | 35H (H) | 41H (L) |

Sum check is performed in this range.

*1

| Data 1 (M7 to 0) | | Data 2 (M15 to 8) | | Data 3 (M23 to 16) | | Data 4 (M31 to 24) | |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 0 | 0 | 8 | 0 |
| 30H (H) | 31H (L) | 30H (H) | 30H (L) | 30H (H) | 30H (L) | 38H (H) | 30H (L) |

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M7 | M6 | M5 | M4 | M3 | M2 | M1 | M0 | M15 | M14 | M13 | M12 | M11 | M10 | M9 | M8 | M23 | M22 | M21 | M20 | M19 | M18 | M17 | M16 | M31 | M30 | M29 | M28 | M27 | M26 | M25 | M24 |

| Response message during normal communication (GOT → host) | ACK: 06H |
|---|---|
| Response message during faulty communication (GOT → host) | NAK: 15H |

## ■Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

The following shows an example of turning OFF the virtual device M31 and turning ON the virtual device M2038 on the GOT at station No.31.

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Number of points | | Following*1 | CR |
|---|---|---|---|---|---|---|---|
| | D | 3 | 1 | 0 | 2 | | |
| 02H | 44H | 33H (H) | 31H (L) | 30H (H) | 32H (L) | | 0DH |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Number of points | | Following*1 | ETX | Sum check | |
|---|---|---|---|---|---|---|---|---|---|
| | D | 3 | 1 | 0 | 2 | | | E | C |
| 02H | 44H | 33H (H) | 31H (L) | 30H (H) | 32H (L) | | 03H | 45H (H) | 43H (L) |

Sum check is performed in this range.

*1

| Write specification 1 | Address1 | | | | Bit pattern1 | | Write specification 2 | Address2 | | | | Bit pattern2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 0 | 0 | 3 | 8 | 0 | 0 | 2 | 0 | F | E | 4 | 0 |
| 31H | 32H (H) | 30H – | 30H – | 33H (L) | 38H (H) | 30H (L) | 30H | 32H (H) | 30H – | 46 – | 45H (L) | 34H (H) | 30H (L) |

*2 (write specification1=1)

| | MM33 | MM32 | MM31 | MM30 | MM29 | MM28 | MM27 | MM26 |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |

*2 (write specification2=0)

| | MM2033 | MM2032 | MM2031 | MM2030 | MM2029 | MM2028 | MM2027 | MM2026 |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |

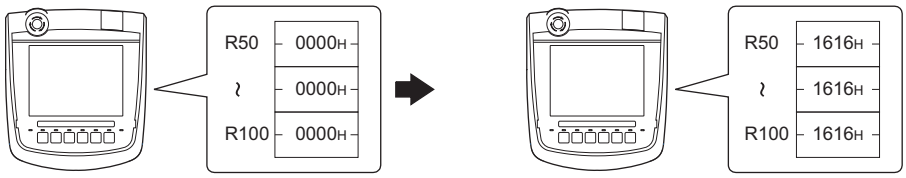
| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK 06H |
| Response message during faulty communication (GOT → host) | NAK 15H |

*1 The write specification specifies how the data of the specified address is changed in the bit pattern.

| Write specification | Function | Description | Action example |
|---|---|---|---|
| 0 | ON specification | Bits set to "1" by the bit pattern are turned ON. | Original data 1010<br>Bit pattern 1100 |
| | | | Result 1110 |
| 1 | OFF specification | Bits set to "1" by the bit pattern are turned OFF. | Original data 1010<br>Bit pattern 1100 |
| | | | Result 0010 |
| 2 | Invert specification | Bits set to "1" by the bit pattern are inverted. | Original data 1010<br>Bit pattern 1100 |
| | | | Result 0110 |
| 3 | Write specification | The numerical values to write by the bit pattern are specified directly. | Original data 1010<br>Bit pattern 1100 |
| | | | Result 1100 |

## ■Fill command (4) (w/out station No.), fill command (E) (w/station No.)

The following shows an example of writing "16"s to virtual devices R50 to R100 on the GOT at station No.27.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Start address | | | | End address | | | | Write Data | | CR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | 2 | 7 | 0 | 0 | 6 | 4 | 0 | 0 | C | 9 | 1 | 6 | |
| 02H | 45H | 32H (H) | 37H (L) | 30H (H) | 30H – | 36H – | 34H (L) | 30H (H) | 30H – | 43H – | 39H (L) | 31H (H) | 36H (L) | 0DH |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Start address | | | | End address | | | | Write Data | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | 2 | 7 | 0 | 0 | 6 | 4 | 0 | 0 | C | 9 | 1 | 6 | | B | E |
| 02H | 45H | 32H (H) | 37H (L) | 30H (H) | 30H – | 36H – | 34H (L) | 30H (H) | 30H – | 43H – | 39H (L) | 31H (H) | 36H (L) | 03H | 42H (H) | 45H (L) |

Sum check is performed in this range.

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

**Point**

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

Either of the start address or end address exceeds the device range that can be specified.

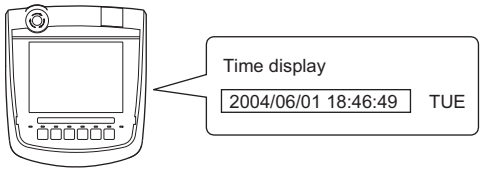
• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

## ■Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

The following shows an example of reading the clock data of GOT at station No.27.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)

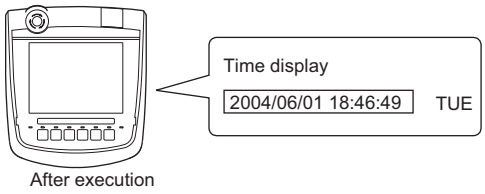



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1))<br>STX: 02H<br>Command: G (47H)<br>Station No.: 27 (32H (H), 37H (L))<br>CR: 0DH<br>(format 15: GOT-F900 Series microcomputer connection (format 2))<br>STX: 02H<br>Command: G (47H)<br>Station No.: 27 (32H (H), 37H (L))<br>ETX: 03H<br>Sum Check: B3 (42H (H), 33H (L))<br>Sum check is performed in this range. |
| Response message during normal communication (GOT → host) | (format 14: GOT-F900 Series microcomputer connection (format 1))<br>STX: 02H<br>Year data: 04 (30H (H), 34H (L))<br>Month data: 06 (30H (H), 36H (L))<br>Day data: 01 (30H (H), 31H (L))<br>Hour data: 18 (31H (H), 38H (L))<br>Minute data: 46 (34H (H), 36H (L))<br>Second data: 49 (34H (H), 39H (L))<br>Day-of-week data: 02 (30H (H), 32H (L))<br>CR: 0DH<br>(format 15: GOT-F900 Series microcomputer connection (format 2))<br>STX: 02H<br>Year data: 04 (30H (H), 34H (L))<br>Month data: 06 (30H (H), 36H (L))<br>Day data: 01 (30H (H), 31H (L))<br>Hour data: 18 (31H (H), 38H (L))<br>Minute data: 46 (34H (H), 36H (L))<br>Second data: 49 (34H (H), 39H (L))<br>Day-of-week data: 02 (30H (H), 32H (L))<br>ETX: 03H<br>Sum Check: D0 (44H (H), 30H (L))<br>Sum check is performed in this range. |
| Response message during faulty communication (GOT → host) | NAK: 15H |

## ■Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

The following shows an example of setting clock data of GOT at station No.27.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 14: GOT-F900 Series microcomputer connection (format 1)) |

| STX | Com-mand | Station No. | | Year data | | Month data | | Day Data | | Hour data | | Minute data | | Second data | | Day-of-week data | | CR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 2 | 7 | 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 | |
| 02H | 46H | 32H | 37H | 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H | 0DH |
| | | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | |

(format 15: GOT-F900 Series microcomputer connection (format 2))

| STX | Com-mand | Station No. | | Following*1 | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|
| | F | 2 | 7 | | | 7 | F |
| 02H | 46H | 32H | 37H | | 03H | 37H | 46H |
| | | (H) | (L) | | | (H) | (L) |

Sum check is performed in this range.

*1

| Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 0 | 6 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 2 |
| 30H | 34H | 30H | 36H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

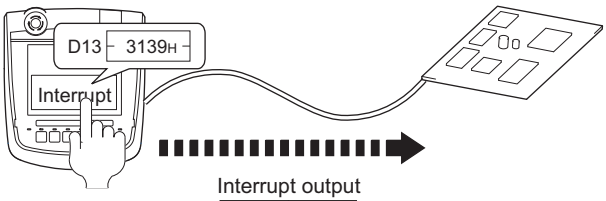
Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

## ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.
(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |



| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [1]<br>Output value 1: 39H<br>(2) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2]<br>Output value 1: 31H; Output value 2: 39H<br>(3) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [4]<br>• When [32bit Storage] in the communication detail settings is set to [LH Order]<br>Output value 1: AAH; Output value 2: 55H; Output value 3: 31H; Output value 4: 39H<br>• When [32bit Storage] in the communication detail settings is set to [HL Order]<br>Output value 1: 31H; Output value 2: 39H; Output value 3: AAH; Output value 4: 55H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1896 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1947 Setting communication interface (Controller Setting)

## Error code list

When faulty, the error code is stored in SD2.

For details on error code stored in SD2, the error contents, cause and measures, refer to the following.

☞ Page 1894 Details and actions for errors (error codes) stored into SD2

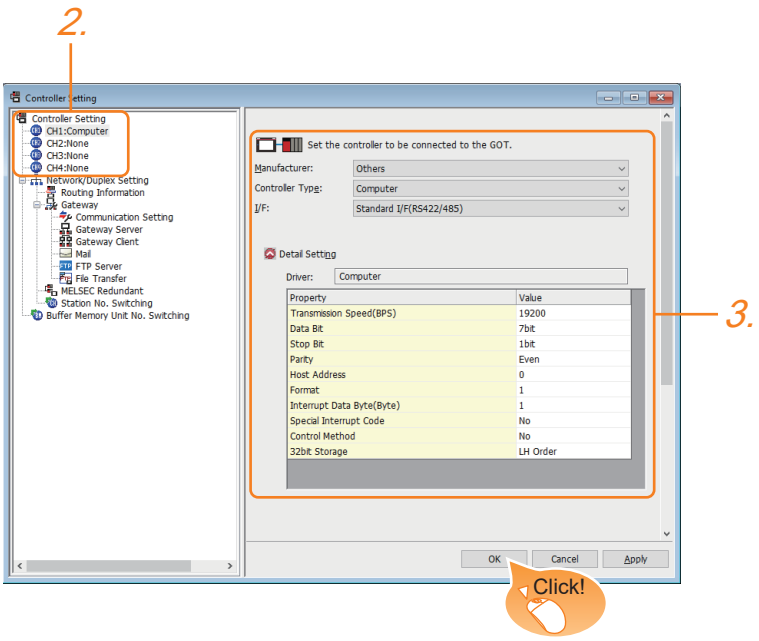
When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

# 45.6 GOT Side Settings

## Setting communication interface (Controller Setting)

### Controller setting

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Others]
- [Controller Type]: [Computer]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1949 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

## Extension setting for microcomputer

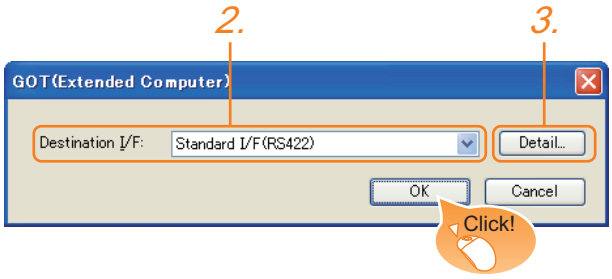
Set the GOT interface connecting to the n+1th GOT.

No setting is required for a terminal GOT.

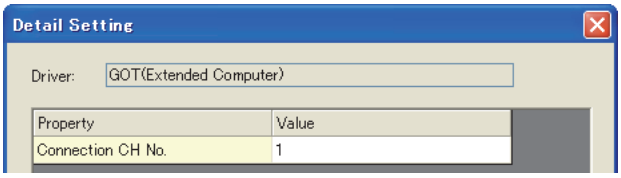
**Point**

Microcomputer connection extension

The setting is required when connecting multiple GOTs for one microcomputer.




1. Select [Common] → [Peripheral Setting] → [GOT (Extended Computer)] from the menu.
2. Set the interface to which the n+1th GOT is connected.
3. Clicking the detail setting button displays the Communication Detail Settings dialog box for the communication driver.




| Item | Description | Range |
|---|---|---|
| Connection CH No. | This CH No. is used for the connection with a microcomputer or n-1th GOT. (Default: 1) | 1 fixed |

4. When you have completed the settings, click the [OK] button.

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 7 bit |
| Stop Bit | 1 bit |
| Parity | Even |
| Host Address | 0 |
| Format | 1 |
| Interrupt Data Byte(Byte) | 1 |
| Special Interrupt Code | No |
| Control Method | No |
| 32bit Storage | LH Order |

| Item | Description | Range |
|---|---|---|
| Transmission Speed(BPS) | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 7bits) | 7bits, 8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit, 2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Host Address | Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT.<br>(Default: 0) | 0 to 31 |
| Format | Select the communication format.<br>(Default: 1) | 1 to 15 |
| Interrupt Data Byte(Byte) | Specify the number of bytes of interrupt data.<br>(Default: 1) | 1, 2, 4 |
| Special Interrupt Code | Set whether or not to output the special interrupt code.<br>(Default: No) | Yes, No |
| Control Method | Set this item when selecting the XON/XOFF control for the control method.<br>(Default: No) | XON/XOFF, No |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order, HL Order |

**Point**

• Special Interrupt Code

The special interrupt codes are output at event occurrences.

If multiple events occur simultaneously, the special interrupt codes may not be output.

The following shows the special interrupt codes and the event types.

| Special Interrupt Code (Hex) | Event type |
|---|---|
| 20H | Base Screen, Overlap Window 1 to 5<br>Special interrupt codes are output at the timing when the screen is switched by the screen switching device.<br>Base Screen or each Overlap Window switches independently without being interlocked.<br>(Example of output)<br>When all the values of screen switching devices of the Base Screen and Overlap Window 1 to 2 are changed, 3 special interrupt codes are output. |
| 21H | This code is output when a numerical or ASCII input is completed. |
| 22H | This code is output when reading or writing of the recipe data is completed. |
| 23H | This code is output when a barcode or RFID data is read. |

• Communication detail setting when connecting multiple GOTs

For the following items, set the same settings to the n+1th GOT interface as the CH No.1 of n-th GOT.

Transmission Speed

Data Bit

Stop Bit

Parity

Set each [Host Address] for the GOT.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

User's Manual of GOT used.

• Precedence in communication settings

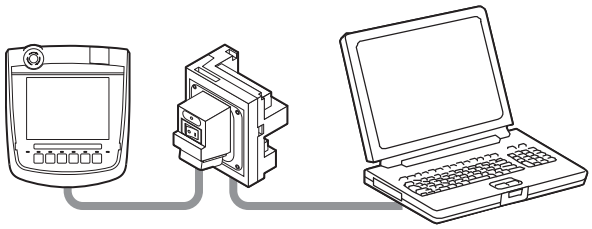
When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 45.7 System Configuration Examples

The following shows a system configuration example in the case of the microcomputer connection (serial).

## System configuration

The system configuration example illustrated below is explained in this section.



IBM-PC/AT-compatible PC
(Microsoft Visual C++ Ver.6.0)



## Communication settings on GOT side and monitor screen settings

### ■Transmission settings

Set the transmission settings of the GOT.

Configure the transmission settings for the microcomputer connection (serial) in the communication detail settings in GT Designer3.

☞ Page 1949 Communication detail settings

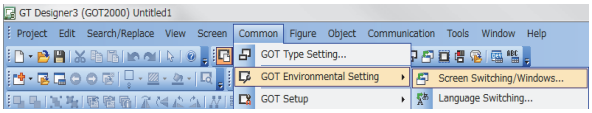
| Setting item | Setting details |
|---|---|
| Transmission Speed(BPS) | 38400bps |
| Data bit | 8bits |
| Stop bit | 1bit |
| Parity | Even |
| Host address (0 to 31) | 0 |
| Format | 1 |
| Interrupt Data Byte(Byte) | 1 |
| Special Interrupt Code | None |
| Control Method | None |
| 32bit Storage | LH Order |

### ■Monitor screen settings

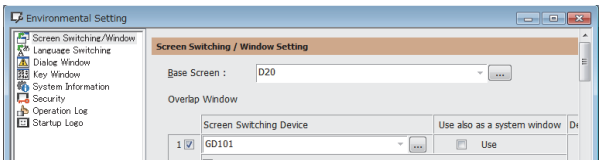
The following shows the monitor screen settings in this system configuration example.

- Common settings

Set D20 to the screen switching device (base screen).




1. Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window] to display [Environment Setup] on GT Designer3.

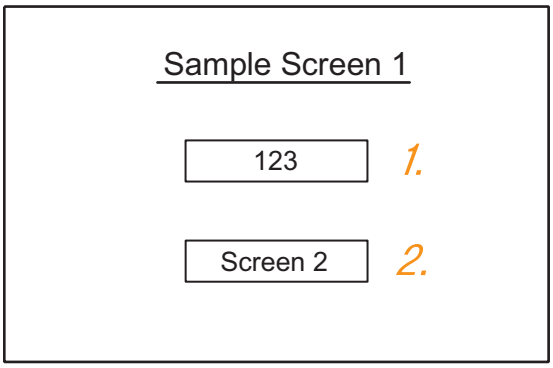



2. Set D20 to the screen switching device (base screen).

• Monitor screen image

Create the following screens by GT Designer3.

Base screen 1




**1.** Numerical display

By setting this with the numerical display, the device value of D21 can be monitored.

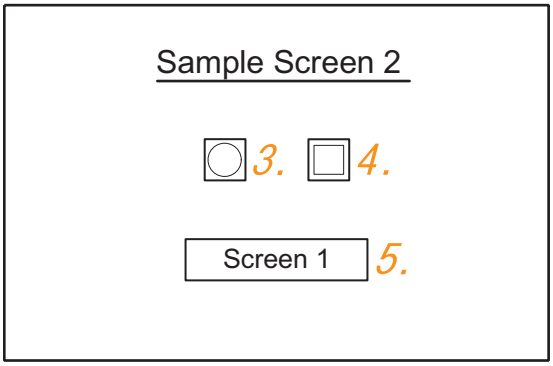
The device value is incremented only while [Sample Screen 1] is displayed.

**2.** Switch 1

This is the screen switching switch to [Sample Screen 2].

Touching this changes the base screen to [Sample Screen 2].

Base screen 2




**3.** Bit lamp

The device status of D22.b0 is displayed as a lamp.

**4.** Switch 2

This is an alternate switch for changing the state of D22.b0.

**5.** Switch 3

This is the screen switching switch to [Sample Screen 1].

Touching this changes the base screen to [Sample Screen 1].

Numerical display

| No. | Basic Settings | | | | |
|---|---|---|---|---|---|
| | Device/Style | | | | |
| | Device | Data Type | Format | Number Size | Digits |
| 1. | D21 | Unsigned BIN16 | Signed Decimal | Arbitrary | 4 |

Touch switch

| No. | Basic Settings | | | | | |
|---|---|---|---|---|---|---|
| | Action | | | | | |
| | Action | Next Screen | Device | Data Type | Setting Value | Action Type |
| 2. | Screen Switching<br>Base | Fixed<br>Screen No.2 | — | — | — | — |
| | Word | — | D13 | Signed<br>BIN16 | Constant<br>1 | — |
| 4. | Bit | — | D22.b0 | — | — | Alternate |
| 5. | Screen Switching<br>Base | Fixed<br>Screen No.1 | — | — | — | — |
| | Word | — | D13 | Signed<br>BIN16 | Constant<br>255 | — |

Bit lamp

| No. | Basic Settings | | | |
|---|---|---|---|---|
| | Device/Style | | | |
| | Lamp Type | Device | Shape | Shape Attribute |
| 3. | Bit | D22.b0 | Arbitrary | Arbitrary |



## Outline of system operation

The following describes the processing on the host side, display or processing on the GOT side, and data transfer packets. (Assuming that host side programs use programs which perform the processing on host side shown below.)

| Processing | Processing on the host side | | Packet used for data transfer | Display or processing on the GOT side |
|---|---|---|---|---|
| Initial processing | Opens the port. | | —— | —— |
| | Writes "1" to the screen switching device (D20). | | Screen 1 batch switching Write packet*1 | Displays base screen 1. |
| | Receives a response from the GOT. | | —— | —— |
| | Judges whether or not there is an error in the response from the GOT. | | —— | —— |
| | Writes an initial value to device (D21). | | Batch numerical value display write packet*2 | Displays "0" on the numerical value display on base screen 1. |
| Reception of response or interrupt from GOT | When receiving a response to writing to device (D21) from the GOT | Issues the current value acquisition request to device (D21). | Batch numerical value display read packet*3 | Increments the numerical value displayed on base screen 1. (The host side repeats the processing on the left as long as base screen 1 is displayed.)) |
| | When receiving a response to reading of device (D21) from the GOT | Creates the next device value (D21). | —— | |
| | | Calculates the sum check of the send packet. | —— | |
| | | Issues the update request of device (D21). | Batch numerical value display write packet*2 | |
| | When receiving an interrupt requesting the base screen switching from 1 to 2 | Sets the state of the base screen to base screen 2. | Interrupt receive packet *6 | Touch touch switch 1 to switch to base screen 2. Notify the host by an interrupt. |
| | When receiving an interrupt requesting the base screen switching from 2 to 1 | Sets the state of the base screen to base screen 1. | Interrupt receive packet *6 | Touch touch switch 3 to switch to base screen 1. Notify the host by an interrupt. |
| End processing (only when receiving an error response) | Close the port. | | —— | —— |

*1 Displays the send packet structure of the screen 1 batch switching write packet.

| STX | Command | | Address | | | | Number of points | | Data 1 (D20) | | | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | D | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | | 8 | 2 |
| 02H | 57H | 44H | 30H | 30H | 32H | 30H | 30H | 31H | 30H | 30H | 30H | 31H | 03H | 38H | 32H |
| | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | | (H) | (L) |

Sum check is performed in this range.

*2 Displays the send packet structure of the numerical value display batch write packet.

| STX | Command | | Address | | | | Number of points | | Data 1 (D21) | | | | ETX | Sum check | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | D | 0 | 0 | 2 | 1 | 0 | 1 | (any value) | | | | | (Changes according to data section.) | |
| 02H | 57H | 44H | 30H | 30H | 32H | 31H | 30H | 31H | | | | | 03H | | |
| | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | | (H) | (L) |

Sum check is performed in this range.

*3 Displays the send packet structure of the numerical value display batch read packet.

| STX | Command | | Address | | | | Number of points | | ETX | Sum Check | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | D | 0 | 0 | 2 | 1 | 0 | 1 | | B | D |
| 02H | 52H | 44H | 30H | 30H | 32H | 31H | 30H | 31H | 03H | 42H | 44H |
| | (H) | (L) | (H) | – | – | (L) | (H) | (L) | | (H) | (L) |

Sum check is performed in this range.

*4 Displays the receive packet structure of the batch write response packet.

When normally operated

| ACK |
|---|
| 06H |

When an error occurred

| NAK |
|---|
| 15H |

*5 Displays the receive packet structure of the batch read response packet.

When normally operated

| STX | Data | | | | ETX | Sum check | |
|---|---|---|---|---|---|---|---|
| 02H | (any data) | | | | 03H | (Changes according to data section.) | |
| | (H) | – | – | (L) | | (H) | (L) |

Sum check is performed in this range.

When an error occurred

| NAK |
|---|
| 15H |

*6 Displays the receive packet structure of the interrupt receive packet.

| Output value |
|---|
| Interrupt data (value of D13) |

# 45.8 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
Microcomputer ([Computer])

# 45.9 Precautions

## GOT clock control

Even though the time setting function and time notification function are set in the GOT time setting, the settings are disabled.
When reading from or writing to the clock data between the GOT and microcomputer, use the dedicated command.

## Operation in which the GOT shifts to the offline mode

Before performing operation in which the GOT shifts to the offline mode such as writing the package data, stop the communication between the GOT and the host.
After shifting to the offline mode, the GOT cannot respond to the requests from the host.
Even after the GOT returns from the offline mode, the communication may not be performed until the timeout time of the host side elapses.

# 46 MICROCOMPUTER CONNECTION (ETHERNET)


- Page 1957 Microcomputer connection (Ethernet)
- Page 1958 System Configuration
- Page 1959 Device Data Area
- Page 1972 Message Formats
- Page 2024 GOT Side Settings
- Page 2027 System Configuration Examples
- Page 2028 Settable Device Range
- Page 2028 Precautions


## 46.1 Microcomputer connection (Ethernet)

The microcomputer connection (Ethernet) is a function by which data can be written or read from a personal computer, microcomputer board, PLC, and others (hereinafter, host) to the virtual devices of the GOT by connecting the host and the GOT by Ethernet.

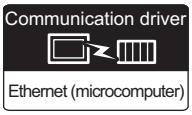
Interrupt output is also available from the GOT to the host.

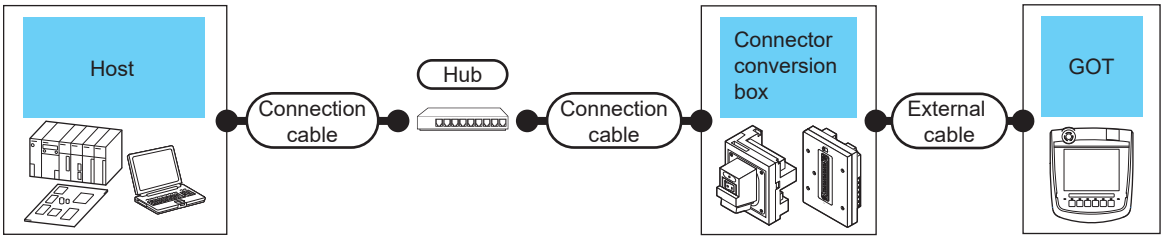
For the flow of the data processing, such as reading or writing data and interrupt output, refer to the following.

☞ Page 1876 Microcomputer Connection (Serial)

# 46.2 System Configuration

## For the microcomputer connection (Ethernet)




| Host | Connection cable | | Connector conversion box | External cable*3 | GOT Model | Number of connectable equipment | | | |
|---|---|---|---|---|---|---|---|---|---|
| Communication Type | Cable model | Maximum segment length*2 | | | | Per GOT channel*4 | | Per host*5 | |
| | | | | | | UDP | TCP | UDP | TCP |
| Ethernet | Twisted pair cable*1<br>• 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | Unlimited | 1 | Unlimited | Unlimited |
| | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | | | |
| | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | | | | |
| | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Use C or later version of GT11H-C□□-37P.

*4 The number of connectable controllers per GOT channel is indicated.

*5 The number of GOTs connectable to one host is indicated.

# 46.3 Device Data Area

The following shows a list of virtual devices inside the GOT available in the microcomputer connection (Ethernet), and the address specification values for each data format.

The address specification of the virtual devices differs depending on the data format.*1

| Model | Virtual device*2 | | | Address specification value | | | | Refer to |
|---|---|---|---|---|---|---|---|---|
| | Name | Device range (decimal) | Device type | Format 1, 2 | Format 3, 4 | Format 5 | Format 6 to 9 | |
| GT2506-HS GT2505-HS | D | 0 to 4095 | Word | 0 to 4095 | 8000 to 9FFFH | 0000 to 0FFFH | D0 to D4095 | ☞ Page 1960 D devices |
| | R | 0 to 4095 | Word | 4096 to 8191 | 0000 to 1FFFH | 1000 to 1FFFH | R0 to R4095 | ☞ Page 1964 R devices |
| | L | 0 to 2047 | Bit | 8192 to 8319 | A000 to A0FFH | 2000 to 207FH | L0 to L2047 | ☞ Page 1965 L devices |
| | M | 0 to 2047 | Bit | 8320 to 8447 | 2000 to 20FFH | 2080 to 20FFH | M0 to M2047 | ☞ Page 1966 M devices |
| | SD | 0 to 15 | Word | 8448 to 8463 | 2100 to 211FH (3000 to 300DH)*3 | 2100 to 210FH | SD0 to SD15 | ☞ Page 1967 SD devices |
| | SM | 0 to 63 | Bit | 8464 to 8467 | 2200 to 2207H | 2110 to 2113H | SM0 to SM63 | ☞ Page 1970 SM devices |

*1 For the address specification method for each data format, refer to the following.
☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 When reusing GOT900 Series project data

• GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.

• GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

| GOT2000 Series virtual devices | GOT-F900 Series virtual devices |
|---|---|
| D0 to 2047 | — |
| D2048 to 4095 | — |
| R0 to 4095 | D0 to 4095 |
| L0 to 2047 | — |
| M0 to 2047 | M0 to 2047 |
| SD0 to 15 | D8000 to 8015<br>GD0 to 6 |
| SM0 to 63 | M8000 to 8063 |

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

**Point**

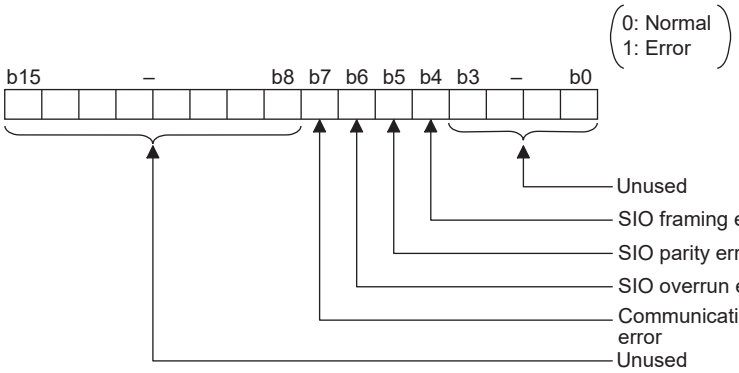
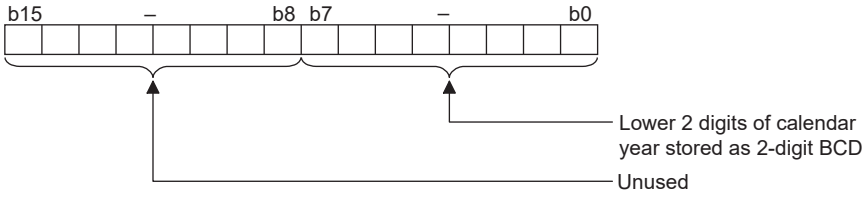
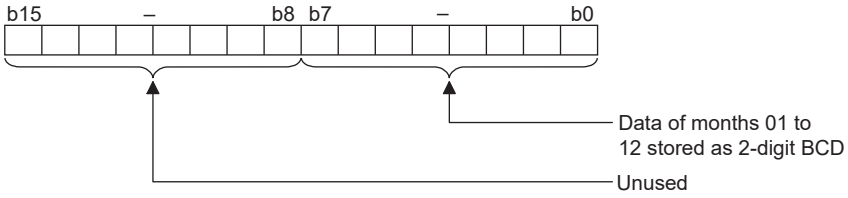
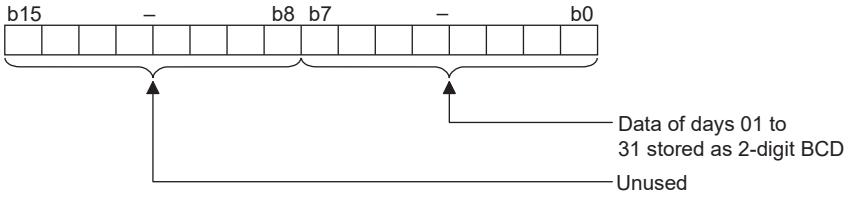
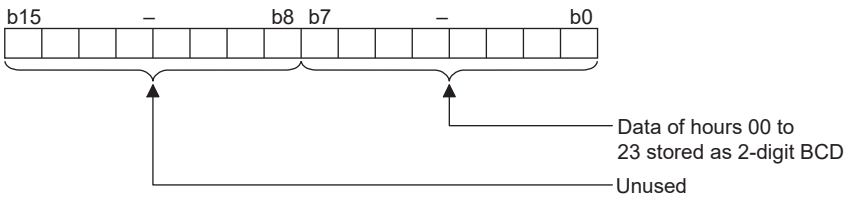
Values of virtual devices inside the GOT
When the GOT is turned OFF or reset, values are cleared to their defaults (bit devices: OFF, word devices: 0).
Values are held in the memory when project data are written to the GOT.

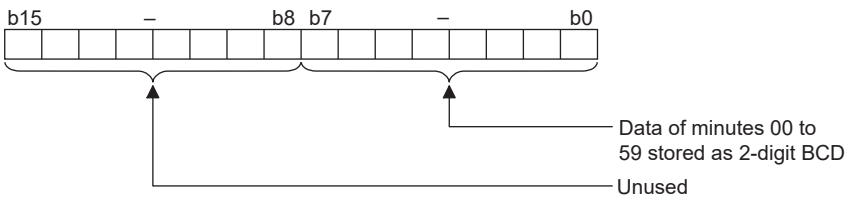
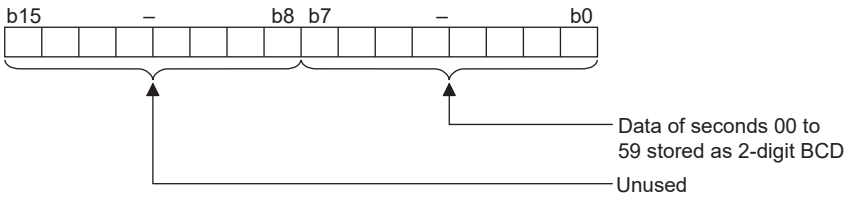
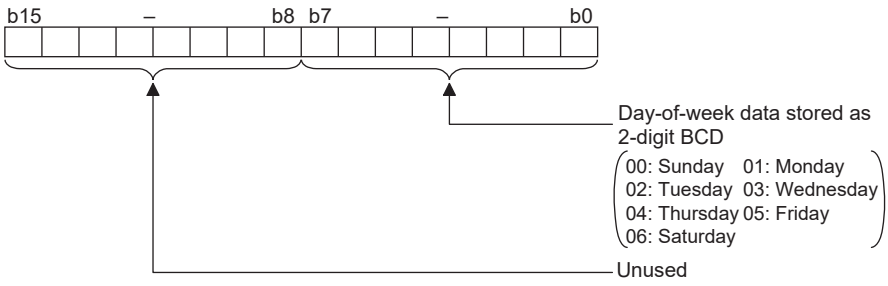
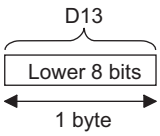
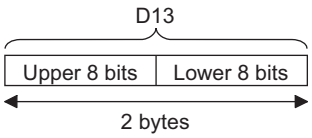
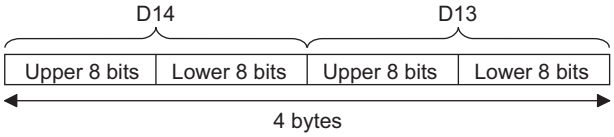
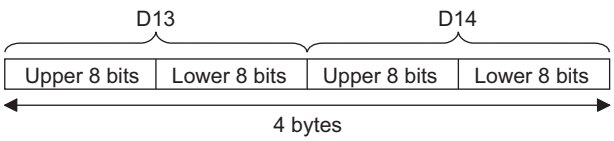
# D devices

The D devices are word devices into which GOT communication errors, clock data or other information are stored.
The user can also store data using the user area.

## List of D devices

The following lists the D devices (virtual devices inside the GOT).

| Address | Description | Set side |
|---|---|---|
| D0 to 2 | Unused | — |
| D3 | Communication error status<br>Stores the communication error details of GOT.<br>  <br>• b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence.<br>• b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence. | System |
| D4 | Clock data (year)<br>  | |
| D5 | Clock data (month)<br>  | |
| D6 | Clock data (day)<br>  | |
| D7 | Clock data (hour)<br>  | |

| Address | Description | Set side |
|---|---|---|
| D8 | Clock data (minute)<br>  | System |
| D9 | Clock data (second)<br>  | |
| D10 | Clock data (day of the week)<br>  | |
| D11, D12 | Unused | — |
| D13<br>D14 | Interrupt output<br>When data are written to D13 and D14 from a GOT touch switch, for example, the data of D13 and D14 are transmitted (interrupt output) to the host side. *1*2<br>Set the data amount (number of bytes) to execute an interrupt output for [Interrupt Data Byte] in the communication detail settings.<br>☞ Page 2024 Setting communication interface (Controller Setting)<br>• Output value when [1] is set to [Interrupt Data Byte] in the communication detail settings.<br>  <br>• Output value when [2] is set to [Interrupt Data Byte] in the communication detail settings.<br>  <br>• Output value when [4] is set to [Interrupt Data Byte] in the communication detail settings.*3<br>(1) When [32bit Storage] in the communication detail settings is set to [LH Order]<br>  <br>(2) When [32bit Storage] in the communication detail settings is set to [HL Order]<br>  | User |
| D15 to 19 | Unused | — |
| D20 to 2031 | User area | User |
| D2032 to 2034 | Unused | — |

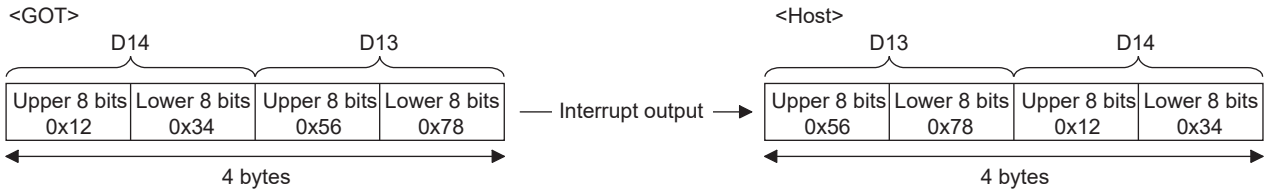
| Address | Description | Set side |
|---|---|---|
| D2035 | 1-second binary counter<br>The counter is incremented at 1-second intervals after the GOT is turned ON.<br>(The time elapsed after GOT is turned ON is stored in 1-second units.)<br>Data are stored in binary format. | System |
| D2036 to 4095 | User area | User |

*1 After writing data, the interrupt data is output within a period of 1 to 10 ms.

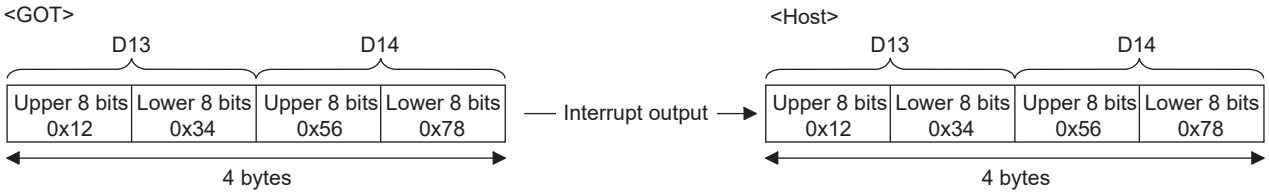
*2 When data are written to D13 and D14 from the host side, interrupt output is not performed.

*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the communication detail settings.
Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order




· HL Order




**Point**

• The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

• Interrupt output (D13, D14)

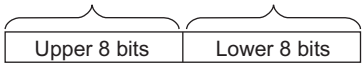
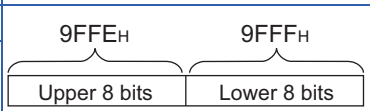
To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | Address specification value | | | | |
|---|---|---|---|---|---|---|
| | | Format 1, 2 | Format 3, 4 | | Format 5 | Format 6 to 9 |
| GT2506HS GT2505HS | D0 | 0 | 8000H<br>8001H |  | 0000H | D0 |
| | D1 | 1 | 8002H<br>8003H |  | 0001H | D1 |
| | : | : | | : | : | : |
| | D4095 | 4095 | 9FFEH<br>9FFFH |  | 0FFFH | D4095 |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

# R devices

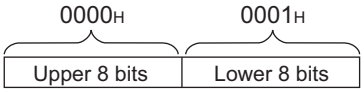
The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

## List of R devices and differences in address specification by data format

The following shows the R devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | Address specification value | | | | |
|---|---|---|---|---|---|---|
| | | Format 1, 2 | Format 3, 4 | | Format 5 | Format 6 to 9 |
| GT2506 HS GT2505 HS | R0 | 4096 | 0000H<br>0001H |  | 1000H | R0 |
| | R1 | 4097 | 0002H<br>0003H |  | 1001H | R1 |
| | : | : | | : | : | : |
| | R4095 | 8191 | 1FFEH<br>1FFFH |  | 1FFFH | R4095 |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

# L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

## List of L devices and differences in address specification by data format

The following shows the L devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Form at 1, 2 | Format 3, 4 | | Format 5 | Format 6 to 9 |
| | | | | | | | | | | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF | | |
| GT2506-HS GT2505-HS | L7 | L6 | L5 | L4 | L3 | L2 | L1 | L0 | 8192 | A000H | A001H | 2000H | Same as address column on left*2 |
| | L15 | L14 | L13 | L12 | L11 | L10 | L9 | L8 | | A001H | A000H | | |
| | L23 | L22 | L21 | L20 | L19 | L18 | L17 | L16 | 8193 | A002H | A003H | 2001H | |
| | L31 | L30 | L29 | L28 | L27 | L26 | L25 | L24 | | A003H | A002H | | |
| | : | | | | | | | | : | : | : | : | |
| | L2039 | L2038 | L2037 | L2036 | L2035 | L2034 | L2033 | L2032 | 8319 | A0FEH | A0FFH | 207FH | |
| | L2047 | L2046 | L2045 | L2044 | L2043 | L2042 | L2041 | L2040 | | A0FFH | A0FEH | | |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: L0, L16, L32, and others)

# M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

## List of M devices and differences in address specification by data format

The following shows the M devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Form at 1, 2 | Format 3, 4 | | Format 5 | Format 6 to 9 |
| | | | | | | | | | | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF | | |
| GT2506HS GT2505HS | M7 | M6 | M5 | M4 | M3 | M2 | M1 | M0 | 8320 | 2000H | 2001H | 2080H | Same as address column on left*2 |
| | M15 | M14 | M13 | M12 | M11 | M10 | M9 | M8 | | 2001H | 2000H | | |
| | M23 | M22 | M21 | M20 | M19 | M18 | M17 | M16 | 8321 | 2002H | 2003H | 2081H | |
| | M31 | M30 | M29 | M28 | M27 | M26 | M25 | M24 | | 2003H | 2002H | | |
| | : | | | | | | | | : | : | : | : | |
| | M2039 | M2038 | M2037 | M2036 | M2035 | M2034 | M2033 | M2032 | 8447 | 20FEH | 20FFH | 20FFH | |
| | M2047 | M2046 | M2045 | M2044 | M2043 | M2042 | M2041 | M2040 | | 20FFH | 20FEH | | |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

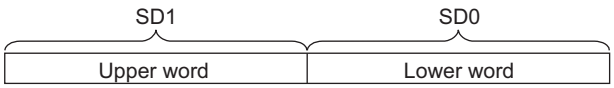
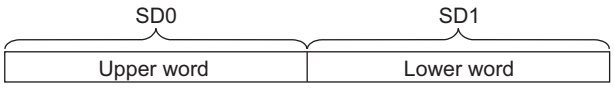
*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: M0, M16, M32, and others)

# SD devices

The SD devices are word devices into which GOT communication errors (error codes), clock data and other information are stored.

## List of SD devices

The following lists the SD devices (virtual devices inside the GOT).

| Address | Description | Set side |
|---|---|---|
| SD0<br>SD1 | 100ms counter (32bits)<br>The counter is incremented at 100ms intervals after GOT is turned ON.<br>(The time elapsed after GOT is turned ON is stored in 100ms units.)<br>(1) When [32bit Storage] in the communication detail settings is set to [LH Order]<br>The lower and upper bits are stored in SD0 and SD1 respectively.<br>  <br>(2) When [32bit Storage] in the communication detail settings is set to [HL Order]<br>The upper and lower bits are stored in SD0 and SD1 respectively.<br>  | System |
| SD2*1 | Communication error status<br>An error data (error code) occurred during communication is stored.<br>• Host Address (Communication error that occurred on the request destination GOT)<br>0: No error<br>1: Parity error<br>2: Framing error<br>3: Overrun error<br>4: Communication message error<br>5: Command error<br>6: Clock data setting error | |
| SD3 | Clock data (second)<br>Second data of 00 to 59 is stored. | |
| SD4 | Clock data (minute)<br>Minute data of 00 to 59 is stored. | |
| SD5 | Clock data (hour)<br>Hour data of 00 to 23 is stored. | |
| SD6 | Clock data (day)<br>Day data of 00 to 31 is stored. | |
| SD7 | Clock data (month)<br>Month data of 01 to 12 is stored. | |
| SD8 | Clock data (year)<br>The last two digits of four-digit year data are stored. | |
| SD9 | Clock data (day of the week)<br>Day-of-the-week data is stored.<br>0: Sunday 1: Monday 2: Tuesday 3: Wednesday<br>4: Thursday 5: Friday 6: Saturday | |
| SD10 to 15 | Unused | — |

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 1968 Details and actions for errors (error codes) stored into SD2

**Point**

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

## Details and actions for errors (error codes) stored into SD2

| Error code | Description | Action |
|---|---|---|
| 0 | No error | — |
| 1, 101 | Parity error<br>The parity bit does not match. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Match the GOT and host transmission settings. |
| 2, 102 | Framing error<br>The data bit and/or stop bit are not correct. | |
| 3, 103 | Overrun error<br>The next data was transmitted from the host before GOT completes the processing of the data received. | • Check the settings of "Communication Detail Settings".<br>• Decrease the transmission speed. |
| 4, 104 | Communication message error<br>EXT/CR could not be found before the upper limit of the receive buffer was exceeded. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 5 | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1973 List of commands |
| 105 | Timeout error<br>There is no response from the GOT, or the station of the specified address does not exist. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Review the contents of the message to transmit. |
| 106 | Multiple units not connectable<br>The RS-232 port is occupied. | • Check the communication cable and communication module attachment.<br>• Check the settings of "Communication Detail Settings".<br>• Check to see if the RS-232 port is occupied. |
| 6, 107 | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | Address specification value | | | | |
|---|---|---|---|---|---|---|
| | | Format 1, 2 | Format 3, 4*2 | | Format 5 | Format 6 to 9 |
| GT 2506 HS GT 2505 HS | SD0 | 8448 | 2100H<br>2101H | 2100H (Upper 8 bits) 2101H (Lower 8 bits) | 2100H | SD0 |
| | SD1 | 8449 | 2102H<br>2103H | 2102H (Upper 8 bits) 2103H (Lower 8 bits) | 2101H | SD1 |
| | SD2 | 8450 | 2104H<br>2105H | 2104H (Upper 8 bits) 2105H (Lower 8 bits) | 2102H | SD2 |
| | SD3 | 8451 | 2106H (3000H)<br>2107H (3001H) | 2106H(3000H) (Upper 8 bits) 2107H(3001H) (Lower 8 bits) | 2103H | SD3 |
| | SD4 | 8452 | 2108H (3002H)<br>2109H (3003H) | 2108H(3002H) (Upper 8 bits) 2109H(3003H) (Lower 8 bits) | 2104H | SD4 |
| | SD5 | 8453 | 210AH (3004H)<br>210BH (3005H) | 210AH(3004H) (Upper 8 bits) 210BH(3005H) (Lower 8 bits) | 2105H | SD5 |
| | SD6 | 8454 | 210CH (3006H)<br>210DH (3007H) | 210CH(3006H) (Upper 8 bits) 210DH(3007H) (Lower 8 bits) | 2106H | SD6 |
| | SD7 | 8455 | 210EH (3008H)<br>210FH (3009H) | 210EH(3008H) (Upper 8 bits) 210FH(3009H) (Lower 8 bits) | 2107H | SD7 |
| | SD8 | 8456 | 2110H (300AH)<br>2111H (300BH) | 2110H(300AH) (Upper 8 bits) 2111H(300BH) (Lower 8 bits) | 2108H | SD8 |
| | SD9 | 8457 | 2112H (300CH)<br>2113H (300DH) | 2112H(300CH) (Upper 8 bits) 2113H(300DH) (Lower 8 bits) | 2109H | SD9 |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

# SM devices

The SM devices are bit devices into which interrupt outputs and clock data that turn ON or OFF in 1-second cycles are stored.

## List of SM devices

The following shows the SM devices (virtual devices inside the GOT).

<table>
<tr><th>Address</th><th>Description</th><th>Set side</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output<br>When the ON or OFF state of SM0 to 49 is changed by a touch switch on the GOT, for example, the interrupt codes shown below are transmitted (interrupt output) to the host side. *1*2<br>Set the data amount (number of bytes) to execute an interrupt output for [Interrupt Data Byte] in the communication detail settings.<br>☞ Page 2024 Setting communication interface (Controller Setting)
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>≀</td><td>≀</td><td>≀</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock<br>Turns ON and OFF in 1-second cycles.<br> 
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock<br>Turns ON and OFF in 2-second cycles.<br> 
</td></tr>
<tr><td>SM52</td><td>Interrupt code output disable flag<br>Enables or disables the output of the interrupt code and special interrupt code.<br>OFF: Output enabled, ON: Output disabled<br>When the output is set to be disabled, no interrupt data are output to the host.<br>(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>—</td></tr>
</table>

*1 After the ON or OFF state is changed, the interrupt data is output within a period of 1 to 10 ms.

*2 When the ON or OFF state of SM0 to 49 is changed from the host side, interrupt output is not performed.

**Point**

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

## Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

| Model | Address | | | | | | | | Address specification value | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 | Format 1, 2 | Format 3, 4 | | Format 5 | Format 6 to 9 |
| | | | | | | | | | | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON | When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF | | |
| GT2506-HS GT2505-HS | SM7 | SM6 | SM5 | SM4 | SM3 | SM2 | SM1 | SM0 | 8464 | 2200H | 2201H | 2110H | *2*3 |
| | SM15 | SM14 | SM13 | SM12 | SM11 | SM10 | SM9 | SM8 | | 2201H | 2200H | | |
| | SM23 | SM22 | SM21 | SM20 | SM19 | SM18 | SM17 | SM16 | 8465 | 2202H | 2203H | 2111H | |
| | SM31 | SM30 | SM29 | SM28 | SM27 | SM26 | SM25 | SM24 | | 2203H | 2202H | | |
| | SM39 | SM38 | SM37 | SM36 | SM35 | SM34 | SM33 | SM32 | 8466 | 2204H | 2205H | 2112H | |
| | SM47 | SM46 | SM45 | SM44 | SM43 | SM42 | SM41 | SM40 | | 2205H | 2204H | | |
| | Unused | | | SM52 | SM51 | SM50 | SM49 | SM48 | 8467 | 2206H | 2207H | 2113H | |
| | Unused | | | | | | | | — | — | — | | |

*1 For the address specification method for each data format, refer to the following.

☞ Page 1972 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 In formats 6, 7, values are specified within a range of SM0 to 52.

*3 For reading or writing data in word units, specify the addresses in 16-point units. (Example: SM0, SM16, SM32, and others)

# 46.4 Message Formats

This section describes the format of messages that can be used in the microcomputer connection (Ethernet).

## Data format type

Set the data format in the communication detail settings in GT Designer3.

For details of the data format setting method, refer to the following.

☞ Page 2024 Setting communication interface (Controller Setting)

### Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 1 | GOT-A900 series microcomputer connection (ASCII) | This format is used when the GOT is connected to the host in a 1:1 connection. The data format is ASCII. | ☞ Page 1977 Formats 1, 2 |
| Format 2 | GOT-A900 series microcomputer connection (Binary) | This format is used when the GOT is connected to the host in a 1:1 connection. The data format is Binary. | |

### Formats 3, 4 (GOT-F900 series microcomputer connection)

This is the compatible message format with when a microcomputer connection is established with the GOT-F900 Series.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 3 | GOT-F900 series microcomputer connection (ASCII) | This format is used when the GOT is connected to the host in a 1:1 connection. The data format is ASCII. | ☞ Page 1989 Formats 3, 4 |
| Format 4 | GOT-F900 series microcomputer connection (Binary) | This format is used when the GOT is connected to the host in a 1:1 connection. The data format is Binary. | |

### Format 5 (SCHNEIDER EJH's memory link method)

This is the message format compatible with the protocol of the SCHNEIDER EJH's memory link method.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 5 | SCHNEIDER EJH's memory link method | This is the basic format of the SCHNEIDER EJH's memory link method. | ☞ Page 2002 Format 5 |

### Formats 6, 7 (4E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 6 | 4E frame (ASCII) | This is the basic format of the MC protocols. The data format is ASCII. | ☞ Page 2005 Formats 6, 7 |
| Format 7 | 4E frame (Binary) | This is the basic format of the MC protocols. The data format is Binary. | |

### Formats 8, 9 (QnA compatible 3E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

| Type | Name | Description | Refer to |
|---|---|---|---|
| Format 8 | QnA compatible 3E frame (ASCII) | This is the basic format of the MC protocols. The data format is ASCII. | ☞ Page 2015 Formats 8, 9 |
| Format 9 | QnA compatible 3E frame (Binary) | This is the basic format of the MC protocols. The data format is Binary. | |

# List of commands

The following shows the list of commands available in each data format.

Specify the number of devices within each device range in a request message.

If the specified number of devices exceeds the device range, the device value cannot be written or read by a command.

For the device range, refer to the following.

☞ Page 1959 Device Data Area

Interrupt output is available in all formats only when [Protocol] is set to [TCP/IP] in the communication detail settings.

## List of commands for format 1 (GOT-A900 series microcomputer connection (ASCII))

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| RD | 52H 44H | Batch read in word units | Reads bit devices in 16-point units. | 99 words (1584 points) |
| | | | Reads word devices in 1-point units. | 99 points |
| WD | 57H 44H | Batch write in word units | Writes to bit devices in 16-point units. | 99 words (1584 points) |
| | | | Writes to word devices in 1-point units. | 99 points |
| RR | 52H 52H | Random read in word units *1 | Reads multiple different bit devices in 16-point units. | 256 words (4096 points) |
| | | | Reads multiple different word devices in 1-point units. | 256 points |
| RW | 52H 57H | Random write in word units *1 | Writes to multiple different word devices in 16-point units. | 128 words (2048 points) |
| | | | Writes to multiple different word devices in 1-point units. | 128 points |
| TR | 54H 52H | Read clock data | Reads the clock data of the GOT. | — |
| TS | 54H 53H | Set clock data | Sets the clock data of the GOT. | — |

*1 Mixed specification of bit devices and word devices is also possible.

## List of commands for format 2 (GOT-A900 series microcomputer connection (Binary))

| Command | Command name | Description | Max. number of points processed |
|---|---|---|---|
| RD | Batch read in word units | Reads bit devices in 16-point units. | 255 words (4080 points) |
| | | Reads word devices in 1-point units. | 255 points |
| WD | Batch write in word units | Writes to bit devices in 16-point units. | 255 words (4080 points) |
| | | Writes to word devices in 1-point units. | 255 points |
| RR | Random read in word units *1 | Reads multiple different bit devices in 16-point units. | 512 words (8192 points) |
| | | Reads multiple different word devices in 1-point units. | 512 points |
| RW | Random write in word units *1 | Writes to multiple different word devices in 16-point units. | 256 words (4096 points) |
| | | Writes to multiple different word devices in 1-point units. | 256 points |
| TR | Read clock data | Reads the clock data of the GOT. | — |
| TS | Set clock data | Sets the clock data of the GOT. | — |

*1 Mixed specification of bit devices and word devices is also possible.

## List of commands for formats 3, 4 (GOT-F900 series microcomputer connection)

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| 0 | 30H | Batch read (without station No.) | Reads bit devices in byte units. | 255 bytes (2040 points) |
| | | | Reads word devices in byte units. | 255 bytes (127 points) |
| A | 41H | Batch read (with station No.) | Reads bit devices in byte units. | 255 bytes (2040 points) |
| | | | Reads word devices in byte units. | 255 bytes (127 points) |
| 1 | 31H | Batch write (without station No.) | Writes to bit devices in byte units. | 255 bytes (2040 points) |
| | | | Writes to word devices in byte units. | 255 bytes (127 points) |
| B | 42H | Batch write (with station No.) | Writes to bit devices in byte units. | 255 bytes (2040 points) |
| | | | Writes to word devices in byte units. | 255 bytes (127 points) |
| 3 | 33H | Multi-point write in bit units (without station No.) | Writes bit patterns (bit ON or OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device. | 99 points |
| D | 44H | Multi-point write in bit units (with station No.) | | |
| 4 | 34H | Fill command (without station No.) | Writes the same value to a range of specified devices. | — |
| E | 45H | Fill command (with station No.) | | |
| 5 | 35H | Set clock data (without station No.) | Sets the clock data of the GOT. | — |
| F | 46H | Set clock data (with station No.) | | |
| 6 | 36H | Read clock data (without station No.) | Reads the clock data of the GOT. | — |
| G | 47H | Read clock data (with station No.) | | |

## List of commands for format 5 (SCHNEIDER EJH's memory link method)

| Command | | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| Symbol | ASCII code | | | |
| R | 52H | Batch read in word units | Reads bit devices in 16-point units. | 512 words (8192 points) |
| | | | Reads word devices in 1-point units. | 512 points |
| W | 57H | Batch write in word units | Writes to bit devices in 16-point units. | 512 words (8192 points) |
| | | | Writes to word devices in 1-point units. | 512 points |
| I | 49H | Interrupt inquiry | Issues an interrupt inquiry. | — |

## List of commands for format 6 (4E frame (ASCII)), format 8 (QnA compatible 3E frame (ASCII))

| Command | Sub-command | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| 0401 | 0001 | Batch read in bit units | Reads bit devices in 1-point units. | 896 points |
| 0401 | 0000 | Batch read in word units | Reads bit devices in 16-point units.*3 | 256 words (4096 points) |
| | | | Reads word devices in 1-point units. | 256 points |
| 1401 | 0001 | Batch write in bit units | Writes to bit devices in 1-point units. | 896 points |
| 1401 | 0000 | Batch write in word units | Writes to bit devices in 16-point units.*3 | 244 words (3904 points) |
| | | | Writes to word devices in 1-point units. | 244 points |
| 0403 | 0000 | Random read in word units *1 | Reads multiple different bit devices in 16-point and 32-point units.*3 | 128 words (2048 points) |
| | | | Reads multiple different word devices in 1-point and 2-point units. | 128 points |
| 1402 | 0001 | Random write in bit units | Writes to multiple different bit devices in 1-point units. | 96 points |
| 1402 | 0000 | Random write in word units *1 | Writes to multiple different bit devices in 16-point and 32-point units.*3 | 64 words (1024 points) |
| | | | Writes to multiple different word devices in 1-point and 2-point units. | 64 points |
| 0406 | 0000 | Multiple block batch read | Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3 | 80 points |
| 1406 | 0000 | Multiple block batch write | Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3 | 64 points |
| 1901*2 | 0000 | Read clock data | Reads the clock data of the GOT. | — |
| 0901*2 | 0000 | Set clock data | Sets the clock data of the GOT. | — |

*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

## List of commands for format 7 (4E frame (Binary)), format 9 (QnA compatible 3E frame (Binary))

| Command | Sub-command | Command name | Description | Max. number of points processed |
|---|---|---|---|---|
| 0401 | 0001 | Batch read in bit units | Reads bit devices in 1-point units. | 896 points |
| 0401 | 0000 | Batch read in word units | Reads bit devices in 16-point units. *3 | 512 words (8192 points) |
| | | | Reads word devices in 1-point units. | 512 points |
| 1401 | 0001 | Batch write in bit units | Writes to bit devices in 1-point units. | 896 points |
| 1401 | 0000 | Batch write in word units | Writes to bit devices in 16-point units. *3 | 496 words (7936 points) |
| | | | Writes to word devices in 1-point units. | 496 points |
| 0403 | 0000 | Random read in word units *1 | Reads multiple different bit devices in 16-point and 32-point units. *3 | 255 words (4080 points) |
| | | | Reads multiple different word devices in 1-point and 2-point units. | 255 points |
| 1402 | 0001 | Random write in bit units | Writes to multiple different bit devices in 1-point units. | 188 points |
| 1402 | 0000 | Random write in word units *1 | Writes to multiple different bit devices in 16-point and 32-point units. *3 | 128 words (2048 points) |
| | | | Writes to multiple different word devices in 1-point and 2-point units. | 128 points |
| 0406 | 0000 | Multiple block batch read | Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3 | 160 points |
| 1406 | 0000 | Multiple block batch write | Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3 | 128 points |
| 1901 *2 | 0000 | Read clock data | Reads the clock data of the GOT. | — |
| 0901 *2 | 0000 | Set clock data | Sets the clock data of the GOT. | — |

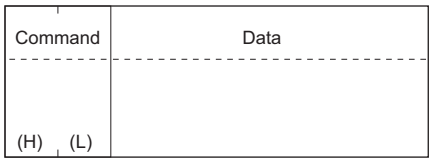
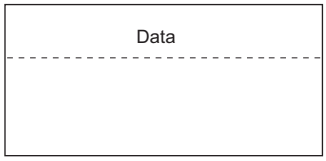
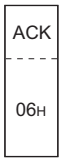
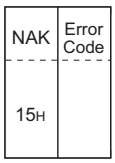
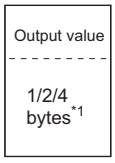
*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

# Formats 1, 2

The following describes the message formats 1 and 2 (GOT-A900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

## Basic format of data communication

| Item | Message format |
|---|---|
| Request message (host → GOT) |  |
| Response message during normal communication (GOT → host) | (1) During processing of read commands<br>  <br>(2) During processing of write commands<br>  |
| Response message during faulty communication (GOT → host) |  |
| During interrupt output *2 |  |

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 2024 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 1960 D devices

## Details of data items in message format

**Point**

Data code during communication
Communication of the format 1 is performed in ASCII code. (excluding interrupt output)
Communication of the format 2 is performed in Binary code.

### ■Control codes

| Symbol | ASCII code | Description |
|---|---|---|
| EOT | 04H | End of Transmission |
| ENQ | 05H | Enquiry (start of enquiry) |
| NAK | 15H | Negative ACK (error response) |
| ACK | 06H | Acknowledge (write completion response) |
| LF | 0AH | Line Feed |
| CL | 0CH | Clear |
| CR | 0DH | Carriage Return |

### ■Command

Specifies the contents to access from the host to GOT.
The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
For details of the commands that can be used, refer to the following.
☞ Page 1973 List of commands

### ■Address

Specifies the head No. of the device data to be read or written.
In the format 1, the address notated in decimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.
For details of the device range that can be accessed, refer to the following.
☞ Page 1959 Device Data Area

### ■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)
In the format 1, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.
In the format 1, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 1985 Read clock data (TR) command
☞ Page 1986 Set clock data (TS) command

### ■Data

Specifies the data to read from or write to the specified device data. (word unit)
In the format 1, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.

### ■Error code

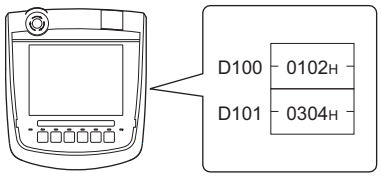
This is the response message at faulty communication appended with error contents.
Error code is transmitted in 1 byte.
For the error codes, refer to the following.
☞ Page 1988 Error code list

## Message Formats

### ■Batch read in word units (RD) command

• When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

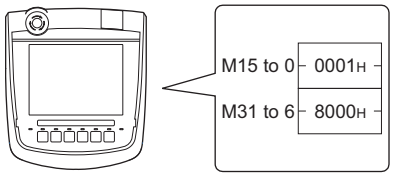



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Command: R (52H) D (44H)<br>Address: 0 (30H) 1 (31H) 0 (30H) 0 (30H) (H) — — (L)<br>Number of points: 0 (30H) 2 (32H) (H) (L)<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Command: R D<br>Address: 00H 64H<br>Number of points: 02H |
| Response message during normal communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Data 1 (D100): 0 (30H) 1 (31H) 0 (30H) 2 (32H) (H) — — (L)<br>Data 2 (D101): 0 (30H) 3 (33H) 0 (30H) 4 (34H) (H) — — (L)<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Data 1 (D100): 01H 02H<br>Data 2 (D101): 03H 04H |
| Response message during faulty communication (GOT → host) | NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

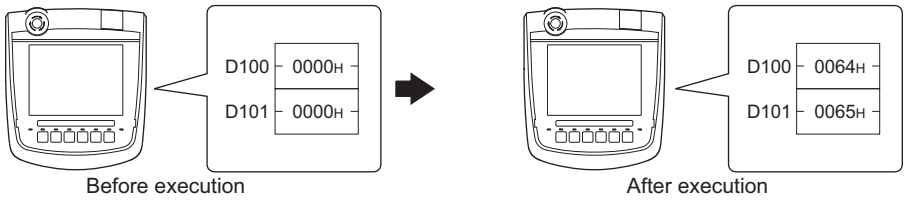



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Command: R D (52H 44H) (H) (L)<br>Address: 8 3 2 0 (38H 33H 32H 30H) (H) – – (L)<br>Number of points: 0 2 (30H 32H) (H) (L)<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Command: R D<br>Address: 83H 20H<br>Number of points: 02H |
| Response message during normal communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Data 1 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H) (H) – – (L)<br>Data 2 (M31 to 16): 8 0 0 0 (38H 30H 30H 30H) (H) – – (L)<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<br>MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM<br>111111198765432103322222222222211111<br>543210 1098765432109876<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Data 1 (M15 to 0): 00H 01H<br>Data 2 (M31 to 16): 80H 00H<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<br>MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM<br>111111198765432103322222222222211111<br>543210 1098765432109876 |
| Response message during faulty communication (GOT → host) | NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Batch write in word units (WD) command

• When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII)) |

| Command | | Address | | | | Number of points | | Data 1(D100) | | | | Data 2 (D101) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | D | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 4 | 0 | 0 | 6 | 5 |
| 57H | 44H | 30H | 31H | 30H | 30H | 30H | 32H | 30H | 30H | 36H | 34H | 30H | 30H | 36H | 35H |
| (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

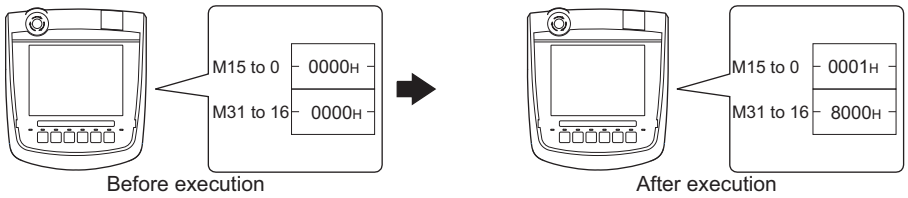
(format 2: GOT-A900 Series microcomputer connection (Binary))

| Command | | Address | | Number of points | Data1 (D100) | | Data 2 (D101) | |
|---|---|---|---|---|---|---|---|---|
| W | D | 00H | 64H | 02H | 00H | 64H | 00H | 65H |

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | NAK: 15H, Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

• When writing to a bit device

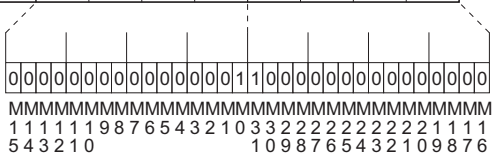
The following shows an example of writing "1"s to virtual devices M0 and M31.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>(format 2: GOT-A900 Series microcomputer connection (Binary)) |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | NAK: 15H, Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

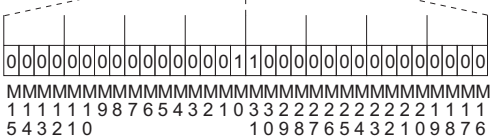
(format 1: GOT-A900 Series microcomputer connection (ASCII))

| Command | | Address | | | | Number of points | | Data 1 (M15 to 0) | | | | Data 2 (M31 to 16) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | D | 8 | 3 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 0 |
| 57H | 44H | 38H | 33H | 32H | 30H | 30H | 32H | 30H | 30H | 30H | 31H | 38H | 30H | 30H | 30H |
| (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |




(format 2: GOT-A900 Series microcomputer connection (Binary))

| Command | | Address | | Number of points | Data 1 (M15 to 0) | | Data 2 (M31 to 16) | |
|---|---|---|---|---|---|---|---|---|
| W | D | 20H | 80H | 02H | 00H | 01H | 80H | 00H |

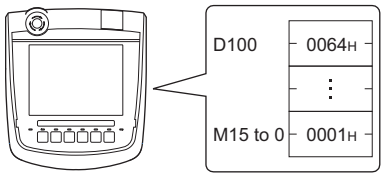



| ACK |
|---|
| 06H |

| NAK | Error code |
|---|---|
| 15H | 06H |

## ■Random read in word units (RR) command

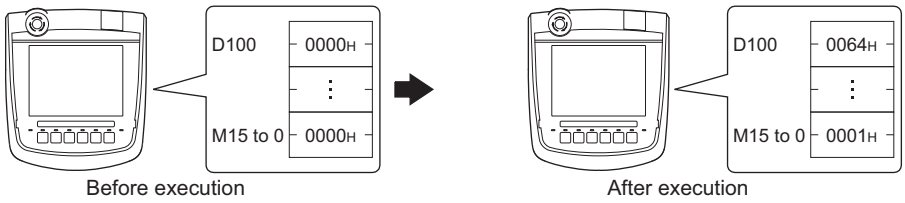
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Command: R R (52H 52H) (H) (L)<br>Address 1: 0 1 0 0 (30H 31H 30H 30H) (H) – – (L)<br>Address 2: 8 3 2 0 (38H 33H 32H 30H) (H) – – (L)<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Command: R R<br>Address 1: 00H 64H<br>Address 2: 20H 80H |
| Response message during normal communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Data 1 (D100): 0 0 6 4 (30H 30H 36H 34H) (H) – – (L)<br>Data 2 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H) (H) – – (L)<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1<br>MMMMMMMMMMMMMMMM<br>1111111987654321 0<br>5 4 3 2 1 0<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Data 1 (D100): 00H 64H<br>Data 2 (M15 to 0): 00H 01H<br>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1<br>MMMMMMMMMMMMMMMM<br>1111111987654321 0<br>5 4 3 2 1 0 |
| Response message during faulty communication (GOT → host) | NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII)) |

| Command | | Address 1 | | | | Data 1 (D100) | | | | Address 2 | | | | Data 2 (M15 to 0) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | W | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 4 | 8 | 3 | 2 | 0 | 0 | 0 | 0 | 1 |
| 52H | 57H | 30H | 31H | 30H | 30H | 30H | 30H | 36H | 34H | 38H | 33H | 32H | 30H | 30H | 30H | 30H | 31H |
| (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| 1 | 1 | 1 | 1 | 1 | 1 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 5 | 4 | 3 | 2 | 1 | 0 | | | | | | | | | | |

(format 2: GOT-A900 Series microcomputer connection (Binary))

| Command | | Address 1 | | Data 1 (D100) | | Address 2 | | Data 2 (M15 to 0) | |
|---|---|---|---|---|---|---|---|---|---|
| R | W | 00H | 64H | 00H | 00H | 20H | 80H | 00H | 01H |

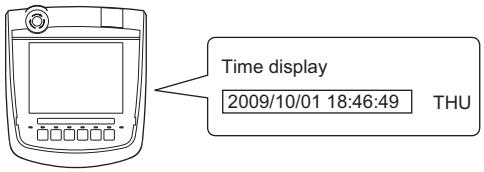
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| 1 | 1 | 1 | 1 | 1 | 1 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 5 | 4 | 3 | 2 | 1 | 0 | | | | | | | | | | |

| Item | Message format |
|---|---|
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | NAK: 15H; Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

## ■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)

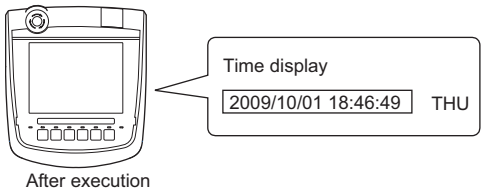



| Item | Message format |
|---|---|
| Request message (host → GOT) | Command: T (54H) R (52H) |
| Response message during normal communication (GOT → host) | (format 1: GOT-A900 Series microcomputer connection (ASCII)) Year data: 0 (30H) 9 (39H); Month data: 1 (31H) 0 (30H); Day data: 0 (31H) 1 (31H); Hour data: 1 (31H) 8 (38H); Minute data: 4 (34H) 6 (36H); Second data: 4 (34H) 9 (39H); Day-of-week data: 0 (30H) 4 (34H). (format 2: GOT-A900 Series microcomputer connection (Binary)) Year data: 09H; Month data: 0AH; Day data: 01H; Hour data: 12H; Minute data: 2EH; Second data: 31H; Day-of-week data: 04H |
| Response message during faulty communication (GOT → host) | NAK: 15H; Error code: 06H. The above is a case where the sum check error (06H) has occurred. |

## ■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 1: GOT-A900 Series microcomputer connection (ASCII))<br>Command: T S (54H 53H)<br>Year data: 0 9 (30H 39H)<br>Month data: 1 0 (31H 30H)<br>Day data: 0 1 (30H 31H)<br>Hour data: 1 8 (31H 38H)<br>Minute data: 4 6 (34H 36H)<br>Second data: 4 9 (34H 39H)<br>Day-of-week data: 0 4 (30H 34H)<br>(format 2: GOT-A900 Series microcomputer connection (Binary))<br>Command: T S<br>Year data: 09H<br>Month data: 0AH<br>Day data: 01H<br>Hour data: 12H<br>Minute data: 2EH<br>Second data: 31H<br>Day-of-week data: 04H |
| Response message during normal communication (GOT → host) | ACK: 06H |
| Response message during faulty communication (GOT → host) | NAK: 15H<br>Error code: 06H<br>The above is a case where the sum check error (06H) has occurred. |

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

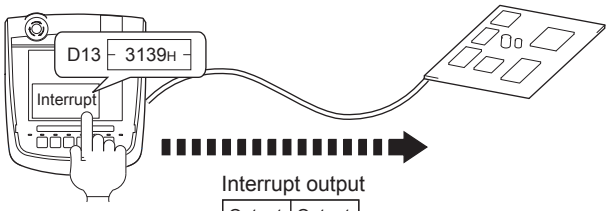
Tuesday (TUE) will be set.

## ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte] in the communication detail settings is set to [1]<br>Output value 1: 39H<br>(2) When [Interrupt Data Byte] in the communication detail settings is set to [2]<br>Output value 1: 31H; Output value 2: 39H<br>(3) When [Interrupt Data Byte] in the communication detail settings is set to [4]<br>• When [32bit Storage] in the communication detail settings is set to [LH Order]<br>Output value1: AAH; Output value2: 55H; Output value3: 31H; Output value4: 39H<br>• When [32bit Storage] in the communication detail settings is set to [HL Order]<br>Output value1: 31H; Output value2: 39H; Output value3: AAH; Output value4: 55H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Error code list

The error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 10H | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1973 List of commands |
| 11H | Message length error<br>The upper limit of the data length that can be received by the GOT has been exceeded. | • Review the contents of the message to transmit.<br>• Check the data length of the message. (data length of the data section, etc.) |
| 15H | Clock data setting error<br>The setting value of the clock data has error. | • Review the contents of the message to transmit.<br>• Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data. |
| 7AH | Address error<br>The start address of the read or write device is out of range. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1959 Device Data Area |
| 7EH | Exceeded number of points error<br>The read or write range has exceeded the device range. | |

## Precautions

### ■Storage order for 32-bit data

To use the program of the GOT-A900 series by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

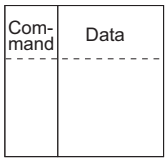
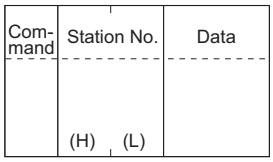
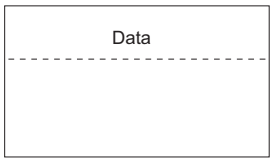
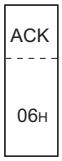
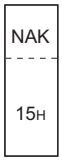
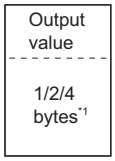
If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

# Formats 3, 4

The following describes the message formats 3 and 4 (GOT-F900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

## Basic format of data communication

| Item | Message format |
|---|---|
| Request message (host → GOT) | (1) w/out station No.<br>  <br>(2) w/station No.<br>  |
| Response message during normal communication (GOT → host) | (1) During processing of read commands<br>  |
| | (2) During processing of write commands<br>  |
| Response message during faulty communication (GOT → host) |  |
| During interrupt output *2 |  |

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 2024 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 1960 D devices

## Details of data items in message format

**Point**

Data code during communication
Communication of the format 3 is performed in ASCII code. (excluding interrupt output)
Communication of the format 4 is performed in Binary code.

### ■Control codes

| Symbol | ASCII code | Description |
|---|---|---|
| EOT | 04H | End of Transmission |
| ENQ | 05H | Enquiry (start of enquiry) |
| NAK | 15H | Negative ACK (error response) |
| ACK | 06H | Acknowledge (write completion response) |
| LF | 0AH | Line Feed |
| CL | 0CH | Clear |
| CR | 0DH | Carriage Return |

### ■Command

Specifies the contents to access from the host to GOT.
The command is converted to a 1-digit ASCII code (Hex) and transmitted.
For details of the commands that can be used, refer to the following.
☞ Page 1973 List of commands

### ■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2024 Setting communication interface (Controller Setting)

### ■Address

Specifies the head No. of the device data to be read or written.
In the format 3, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.
For details of the device range that can be accessed, refer to the following.
☞ Page 1959 Device Data Area

### ■Bit pattern

Specifies the pattern of the bits to change.
In the format 3, the address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 1996 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

### ■Write specification

Specifies how to change the data of the specified address by bit pattern.
(Setting range: 0 to 3)
Data notated in decimal is converted to a 1-digit ASCII code (Hex) and transmitted.
☞ Page 1996 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

### ■Number of bytes

Specifies the number of bytes of the device data to be batch read or written. (Setting range: 0 to FFH)
In the format 3, the address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 1-digit Binary code (binary) and transmitted.

### ■Number of points

Specifies the device data points to be written to multi-point in bit units. (Setting range: Range of the maximum number of points processed for each command)
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.

### ■Year, month, day, hour, minute, second and day of the week data

Specifies year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 1999 Read clock data (6) command (w/out station No.), read clock data (G) command (w/station No.)
☞ Page 2000 Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

### ■Data

Specifies the data to read from or write to the specified device data. (word unit)
In the format 3, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.

### ■Write data

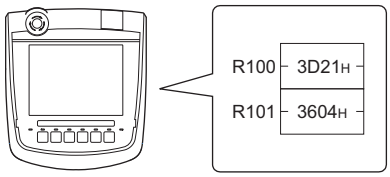
Specifies the data to write to the specified device data.
The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

## Message format

### ■Batch read (0) command (without station No.), batch read (A) command (with station No.)

• When reading a word device

The following shows an example of reading four bytes of virtual devices R100 to R101 from the GOT at station No.15.
(Assuming R100=3D21H, R101=3604H are stored.)

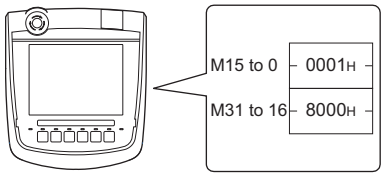



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Command: A (41H)<br>Station No.: 1 (31H) 5 (35H)<br>Address: 0 (30H) 0 (30H) C (43H) 8 (38H)<br>Number of bytes: 0 (30H) 4 (34H)<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Command: A<br>Station No.: 0FH<br>Address: 00H C8H<br>Number of bytes: 04H |
| Response message during normal communication (GOT → host) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Data 1 (R100 upper): 3 (33H) D (44H)<br>Data 2 (R100 lower): 2 (32H) 1 (31H)<br>Data 3 (R101 upper): 3 (33H) 6 (36H)<br>Data 4 (R101 lower): 0 (30H) 4 (34H)<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Data 1 (R100 upper): 3DH<br>Data 2 (R100 lower): 21H<br>Data 3 (R101 upper): 36H<br>Data 4 (R101 lower): 04H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

• When reading a bit device

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

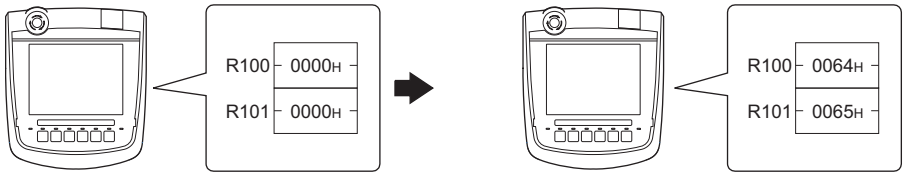



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Com-mand: A (41H)<br>Station No.: 15 (31H (H), 35H (L))<br>Address: 2000 (32H (H), 30H, 30H, 30H (L))<br>Number of bytes: 04 (30H (H), 34H (L))<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Com-mand: A<br>Station No.: 0FH<br>Address: 20H 00H<br>Number of bytes: 04H |
| Response message during normal communication (GOT → host) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Data 1 (M7 to 0): 01 (30H (H), 31H (L))<br>Data 2 (M15 to 8): 00 (30H (H), 30H (L))<br>Data 3 (M23 to 16): 00 (30H (H), 30H (L))<br>Data 4 (M31 to 24): 80 (38H (H), 30H (L))<br>M7 M6 M5 M4 M3 M2 M1 M0 M15 M14 M13 M12 M11 M10 M9 M8 M23 M22 M21 M20 M19 M18 M17 M16 M31 M30 M29 M28 M27 M26 M25 M24<br>0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Data 1 (M7 to 0): 01H<br>Data 2 (M15 to 8): 00H<br>Data 3 (M23 to 16): 00H<br>Data 4 (M31 to 24): 80H<br>M7 M6 M5 M4 M3 M2 M1 M0 M15 M14 M13 M12 M11 M10 M9 M8 M23 M22 M21 M20 M19 M18 M17 M16 M31 M30 M29 M28 M27 M26 M25 M24<br>0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

## ■Batch write (1) command (without station No.), batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing "3D21H" and "3604H" to virtual devices R100 and R101 on the GOT at station No.15.




Before execution　　After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII)) |

| Com-mand | Station No. | | Address | | | | Number of bytes | | Following*1 |
|---|---|---|---|---|---|---|---|---|---|
| B | 1 | 5 | 0 | 0 | C | 8 | 0 | 4 | |
| 42H | 31H | 35H | 30H | 30H | 43H | 38H | 30H | 34H | |
| | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

*1

| Data 1 (R100 upper) | | Data 2 (R100 lower) | | Data 3 (R101 upper) | | Data 4 (R101 lower) | |
|---|---|---|---|---|---|---|---|
| 3 | D | 2 | 1 | 3 | 6 | 0 | 4 |
| 33H | 44H | 32H | 31H | 33H | 36H | 30H | 34H |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

(format 4: GOT-F900 Series microcomputer connection (Binary))

| Com-mand | Station No. | Address | | Number of bytes | Following*2 |
|---|---|---|---|---|---|
| B | 0FH | 00H | C8H | 04H | |

*2

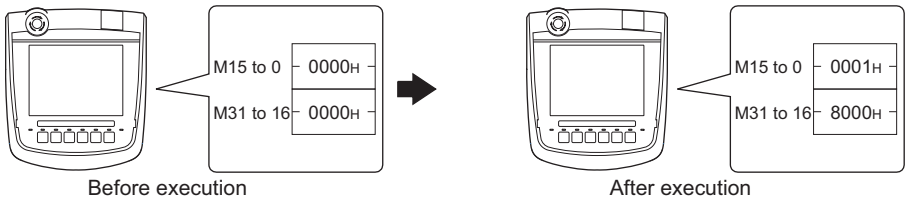
| Data 1 (R100 upper) | Data 2 (R100 lower) | Data 3 (R101 upper) | Data 4 (R101 lower) |
|---|---|---|---|
| 3DH | 21H | 36H | 04H |

| Response message during normal communication (GOT → host) | ACK<br>06H |
|---|---|

| Response message during faulty communication (GOT → host) | NAK<br>15H |
|---|---|

• When writing to a bit device

The following shows an example of writing "1"s to virtual devices M0 and M31 on the GOT at station No.15.

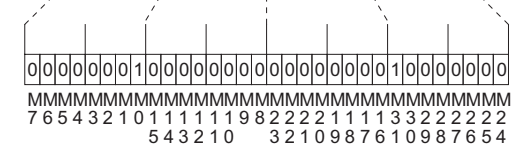



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII)) |

| Com-mand | Station No. | | Address | | | | Number of bytes | | Following*1 |
|---|---|---|---|---|---|---|---|---|---|
| B | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 4 | |
| 42H | 31H (H) | 35H (L) | 32H (H) | 30H – | 30H – | 30H (L) | 30H (H) | 34H (L) | |

*1

| Data 1 (M7 to 0) | | Data 2 (M15 to 8) | | Data 3 (M23 to 16) | | Data 4 (M31 to 24) | |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 0 | 0 | 8 | 0 |
| 30H (H) | 31H (L) | 30H (H) | 30H (L) | 30H (H) | 30H (L) | 38H (H) | 30H (L) |

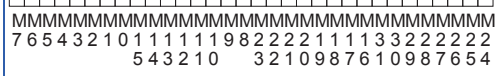



(format 4: GOT-F900 Series microcomputer connection (Binary))

| Com-mand | Station No. | Address | | Number of bytes | Following*2 |
|---|---|---|---|---|---|
| B | 0FH | 20H | 00H | 04H | |

*2

| Data 1 (M7 to 0) | Data 2 (M15 to 8) | Data 3 (M23 to 16) | Data 4 (M31 to 24) |
|---|---|---|---|
| 01H | 00H | 00H | 80H |




| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

## ■Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

The following shows an example of turning OFF the virtual device M31 and turning ON the virtual device M2038 on the GOT at station No.31.

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII)) |

| Com-mand | Station No. | | Number of points | | Following *2 |
|---|---|---|---|---|---|
| D | 3 | 1 | 0 | 2 | |
| 44H | 33H (H) | 31H (L) | 30H (H) | 32H (L) | |

*2

| Write specification 1 | Address1 | | | | Bit pattern1 | | Write specification 2 | Address2 | | | | Bit pattern2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 0 | 0 | 3 | 8 | 0 | 0 | 2 | 0 | F | E | 4 | 0 |
| 31H | 32H (H) | 30H – | 30H – | 33H (L) | 38H (H) | 30H (L) | 30H | 32H (H) | 30H – | 46 – | 45H (L) | 34H (H) | 30H (L) |

*1 (write specification1=1)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | M 3 1 | M 3 0 | M 3 9 | M 2 8 | M 2 7 | M 2 6 | M 2 5 | M 2 4 |

*1 (write specification2=0)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| | M 3 1 | M 3 0 | M 3 9 | M 3 8 | M 3 7 | M 3 6 | M 3 5 | M 3 4 |

(format 4: GOT-F900 Series microcomputer connection (Binary))

| Com-mand | Station No. | Number of points | Following *3 |
|---|---|---|---|
| D | 1FH | 02H | |

*3

| Write specification 1 | Address1 | | Bit pattern1 | Write specification 2 | Address2 | | Bit pattern2 |
|---|---|---|---|---|---|---|---|
| 1 | 20H | 03H | 80H | 0 | 20H | FEH | 40H |

*1 (write specification1=1)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | M 3 1 | M 3 0 | M 3 9 | M 2 8 | M 2 7 | M 2 6 | M 2 5 | M 2 4 |

*1 (write specification2=0)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Source data bit pattern | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Result | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| | M 3 1 | M 3 0 | M 3 9 | M 3 8 | M 3 7 | M 3 6 | M 3 5 | M 3 4 |

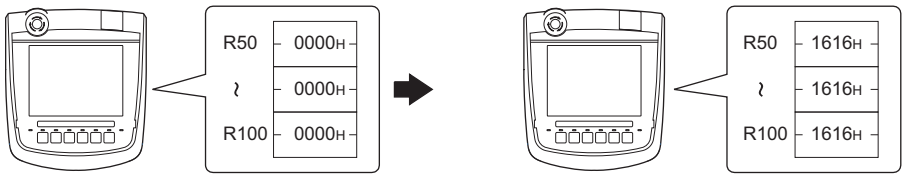
| Item | Message format |
|---|---|
| Response message during normal communication (GOT → host) | ACK 06H |
| Response message during faulty communication (GOT → host) | NAK 15H |

*1 The write specification specifies how the data of the specified address is changed in the bit pattern.

| Write specification | Function | Description | Action example |
|---|---|---|---|
| 0 | ON specification | Bits set to "1" by the bit pattern are turned ON. | Original data1010<br>Bit pattern1100 |
| | | | Result1110 |
| 1 | OFF specification | Bits set to "1" by the bit pattern are turned OFF. | Original data1010<br>Bit pattern1100 |
| | | | Result0010 |
| 2 | Invert specification | Bits set to "1" by the bit pattern are inverted. | Original data1010<br>Bit pattern1100 |
| | | | Result0110 |
| 3 | Write specification | The numerical values to write by the bit pattern are specified directly. | Original data1010<br>Bit pattern1100 |
| | | | Result1100 |

## ■Fill command (4) (without station No.), fill command (E) (with station No.)

The following shows an example of writing "16"s to virtual devices R50 to R100 on the GOT at station No.27.




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII)) |

| Com-mand | Station No. | | Start address | | | | End address | | | | Write Data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 2 | 7 | 0 | 0 | 6 | 4 | 0 | 0 | C | 9 | 1 | 6 |
| 45H | 32H | 37H | 30H | 30H | 36H | 34H | 30H | 30H | 43H | 39H | 31H | 36H |
| | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) |

(format 4: GOT-F900 Series microcomputer connection (Binary))

| Com-mand | Station No. | Start address | | End address | | Write Data |
|---|---|---|---|---|---|---|
| E | 1BH | 00H | 64H | 00H | C9H | 16H |

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

**Point**

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

Either of the start address or end address exceeds the device range that can be specified.

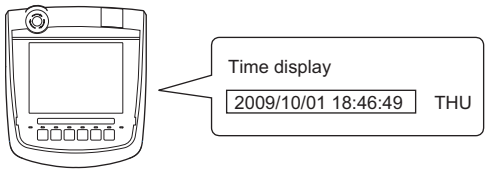
• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

## ■Read clock data (6) command (w/out station No.), read clock data (G) command (w/station No.)

The following shows an example of reading the clock data of GOT at station No.27.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)

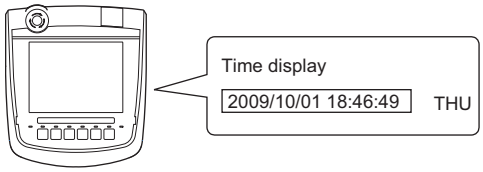



| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Com-mand: G (47H) / Station No.: 2 (32H) 7 (37H) (H) (L)<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Com-mand: G / Station No.: 1BH |
| Response message during normal communication (GOT → host) | (format 3: GOT-F900 Series microcomputer connection (ASCII))<br>Year data: 0 (30H) 9 (39H) (H) (L) / Month data: 1 (31H) 0 (30H) (H) (L) / Day data: 0 (30H) 1 (31H) (H) (L) / Hour data: 1 (31H) 8 (38H) (H) (L) / Minute data: 4 (34H) 6 (36H) (H) (L) / Second data: 4 (34H) 9 (39H) (H) (L) / Day-of-week data: 0 (30H) 4 (34H) (H) (L)<br>(format 4: GOT-F900 Series microcomputer connection (Binary))<br>Year data: 09H / Month data: 0AH / Day data: 01H / Hour data: 12H / Minute data: 2EH / Second data: 31H / Day-of-week data: 04H |
| Response message during faulty communication (GOT → host) | NAK (15H) |

## ■Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

The following shows an example of setting clock data of GOT at station No.27.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 3: GOT-F900 Series microcomputer connection (ASCII)) |

| Com-mand | Station No. | | Year data | | Month data | | Day Data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F | 2 | 7 | 0 | 9 | 1 | 0 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 4 |
| 46H | 32H | 37H | 30H | 39H | 31H | 30H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 34H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

(format 4: GOT-F900 Series microcomputer connection (Binary))

| Com-mand | Station No. | Year data | Month data | Day data | Hour data | Minute data | Second data | Day-of-week data |
|---|---|---|---|---|---|---|---|---|
| F | 1BH | 09H | 0AH | 01H | 12H | 2EH | 31H | 04H |

| | |
|---|---|
| Response message during normal communication (GOT → host) | ACK<br>06H |
| Response message during faulty communication (GOT → host) | NAK<br>15H |

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

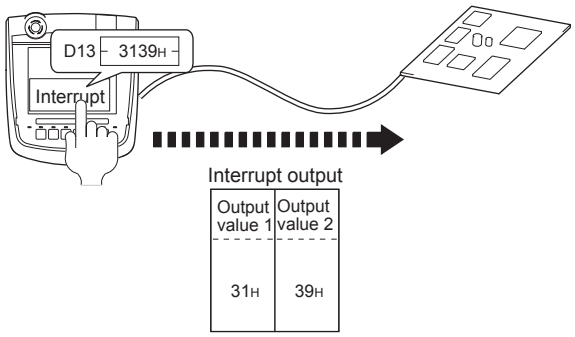
Tuesday (TUE) will be set.

### ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below




| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte] in the communication detail settings is set to [1]<br>Output value 1: 39H<br>(2) When [Interrupt Data Byte] in the communication detail settings is set to [2]<br>Output value 1: 31H; Output value 2: 39H<br>(3) When [Interrupt Data Byte] in the communication detail settings is set to [4]<br>• When [32bit Storage] in the communication detail settings is set to [LH Order]<br>Output value 1: AAH; Output value 2: 55H; Output value 3: 31H; Output value 4: 39H<br>• When [32bit Storage] in the communication detail settings is set to [HL Order]<br>Output value 1: 31H; Output value 2: 39H; Output value 3: AAH; Output value 4: 55H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Error code list

When faulty, the error code is stored in SD2.

For details on error code stored in SD2, the error contents, cause and measures, refer to the following.

☞ Page 1968 Details and actions for errors (error codes) stored into SD2

When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

# Format 5

The following describes the message format 5 (SCHNEIDER EJH's (former Digital Electronics Corporation) memory link method).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same format as the protocol of the SCHNEIDER EJH's memory link method.

For details of the basic format of data communication, refer to the following manual:

📖The connection manual of the device manufactured by SCHNEIDER EJH

This section describes items whose settings differ from the protocols of the SCHNEIDER EJH's memory link method and dedicated commands for a microcomputer connection of the GOT.

Example: Request message for the batch read in word units (R) command in format 5 (SCHNEIDER EJH's memory link method)

| | Data length | | ESC | Com-mand | Address | | Number of points | |
|---|---|---|---|---|---|---|---|---|
| B | | | | R | | | | |
| 42H 00H 00H 00H | 00H 00H 00H 06H | | 1BH | 52H | 00H 64H | | 00H 02H | |

## Details of data items in message format

**Point**

Data code during communication

Communication is performed in Binary code.

### ■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 1973 List of commands

### ■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit Binary code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1959 Device Data Area

### ■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)

The address notated in hexadecimal is converted to a 4-digit Binary code (Hex) and transmitted from the upper digit.

### ■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit Binary code (Hex) and transmitted from the upper digit.

For details on error code generated in format 5 (SCHNEIDER EJH's memory link method), refer to the following.

☞ Page 2004 Error code list

**Point**

When connecting a microcomputer or others that uses the protocol of the SCHNEIDER EJH's memory link method with the GOT

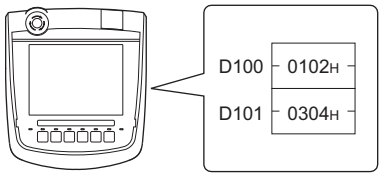
To do so, correct the commands to be used and the device ranges to match the specifications of the GOT.

## Message Formats

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Batch read in word units (R) command

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

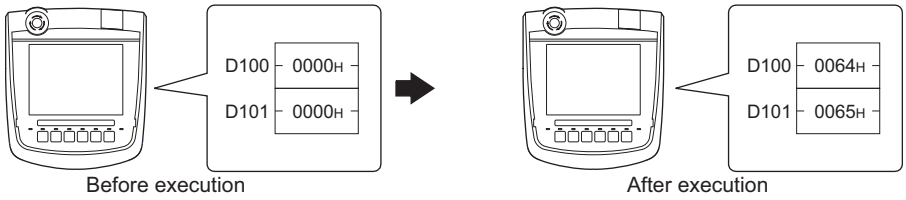



| Item | Message format |
|---|---|
| Request message (host → GOT) | B 42H 00H 00H 00H \| Data length 00H 00H 00H 06H \| ESC 1BH \| Command R 52H \| Address 00H 64H \| Number of points 00H 02H |
| Response message during normal communication (GOT → host) | b 42H 00H 00H 00H \| Data length 00H 00H 00H 06H \| ESC 1BH \| Command A 41H \| Address 01H 02H \| Number of points 03H 04H |

### ■Batch write in word units (WD) command

- When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.

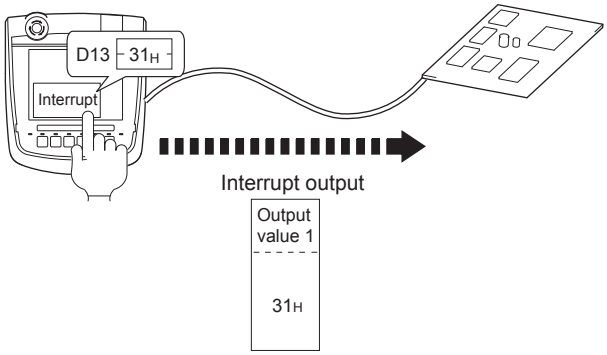



| Item | Message format |
|---|---|
| Request message (host → GOT) | B 42H 00H 00H 00H \| Data length 00H 00H 00H 0AH \| ESC 1BH \| Command W 57H \| Address 00H 64H \| Number of points 00H 02H \| Data 1 00H 64H \| Data 2 00H 65H |
| Response message during normal communication (GOT → host) | b 42H 00H 00H 00H \| Data length 00H 00H 00H 06H \| ACK 06H |

### ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.
(Assuming that "31H" is written to D13.)

Example: When [Interrupt Data Byte] is set to [1]




| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | When [Interrupt Data Byte] in the communication detail settings is set to [1]<br>Output value 1<br>31H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Error code list

In the case of format 5 (SCHNEIDER EJH's memory link method), the details (error code) of the error are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 10H | Command error<br>An unsupported command was used. | • Review the contents of the message to transmit.<br>• Check the commands in the message.<br>☞ Page 1973 List of commands |
| 12H | Message length error<br>The upper limit of the data length that can be received by the GOT has been exceeded. | |
| FAH | Address error<br>The start address of the read or write device is out of range. | • Review the contents of the message to transmit.<br>• Check the data length of the message. (data length of the data section, etc.) |
| FBH | Exceeded number of points error<br>The read or write range has exceeded the device range. | • Review the contents of the message to transmit.<br>• Check the devices that can be used and the device ranges.<br>☞ Page 1959 Device Data Area |
| FCH | Message format error<br>The format of the received message has error. | • Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |
| FFH | Timeout error<br>There is no response from the GOT, or the station of the specified address does not exist. | • Check the communication cable and communication module attachment.<br>• Check the settings in the communication detail settings.<br>• Review the contents of the message to transmit. |

## Precautions

### ■Storage order for 32-bit data

To use the program of the SCHNEIDER EJH's memory link method by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

# Formats 6, 7

The following describes the message formats 6 and 7 (4E frame).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (4E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name: D

Head device: 100

Device points: 2

Communication setting of GOT side: Network No.=1, PLC No.=1

(Format 6 (4E frame (ASCII))

| Request type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

*1

| Request data length | | | | CPU monitoring timer | | | | Command | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | → 1) |
| 30H | 30H | 31H | 38H | 30H | 30H | 30H | 30H | 30H | 34H | 30H | 31H | |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | |

Data length target range

Character A section

| 1) → | Sub-command | | | | Device code | | Head Device | | | | | | Device points | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | D | * | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 30H | 30H | 30H | 30H | 44H | 2AH | 30H | 30H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 32H |
| | (H) | – | – | (L) | (H) | (L) | (H) | – | – | – | – | (L) | (H) | – | – | (L) |

Data length target range

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | CPU monitoring timer | | Command | | Sub-command | | Head Device | | | Device code | Device points | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 0CH | 00H | 00H | 00H | 01H | 04H | 00H | 00H | 64H | 00H | 00H | A8H | 02H | 00H |

Data length target range

## Details of data items in message format

**Point**

Data code during communication

Communication of format 6 is performed in ASCII code.

Communication of the format 7 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 6</th><th>Format 7</th></tr>
<tr><td rowspan="2">Request type (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5400" (Fixed value)</td><td>Command message: 54H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Response type (GOT side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D400" (Fixed value)</td><td>Response message: D4H (Upper digit) (Fixed value)</td></tr>
<tr><td>Serial No.</td><td colspan="2">Arbitrary number for recognition of the message appended at the microcomputer side. GOT sends the response message appending this Serial No.</td></tr>
<tr><td>Fixed value</td><td>Should be ASCII "0000".</td><td>Should be "0000H".</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network No. set in the GOT.<br>For setting method of "Communication Detail Settings", refer to the following.<br>☞ Page 2024 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PLC No. set in the GOT.<br>For setting method of "Communication Detail Settings", refer to the following.<br>☞ Page 2024 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.<br>Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GOT. For details of the commands that can be used, refer to the following.<br>☞ Page 1973 List of commands</td></tr>
<tr><td>Transmit the command and sub-command converted to a 4-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>Device code</td><td colspan="2">Specifies the code by which the device data to be read or written is recognized. For the accessible device range, refer to the following.<br>☞ Page 1959 Device Data Area</td></tr>
<tr><td>Transmit the 2-digit ASCII code corresponding to the following device codes.<br><table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 2-digit binary code corresponding to the following device codes.<br><table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
</table>

| Data item name | Contents | |
|---|---|---|
| | Format 6 | Format 7 |
| Head device | Specifies the head No. of the device data to be read or written.<br>For details of the device range that can be accessed, refer to the following.<br>☞ Page 1959 Device Data Area | |
| | Transmit the data notated in decimal converted to a 6-digit ASCII code, from the upper digit. | Transmit the data converted to a 6-digit binary code from the lower two digits. |
| Device points | Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)<br><When using random read or write command><br>When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points.<br><When using multiple block batch read or write commands><br>When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command. | |
| | Transmit the data notated in decimal converted to a 4-digit ASCII code, from the upper digit. | Transmit the data converted to a 4-digit binary code from the lower two digits. |
| Year, month, day, hour, minute, second and day of the week data | Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.<br>☞ Page 2008 Read clock data (1901) command<br>☞ Page 2011 Set clock data (0901) command | |
| | Transmit the data notated in decimal converted to a 2-digit ASCII code, from the upper digit. | Transmit the data converted to a 2-digit binary code. |
| End code (Microcomputer side) | Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed.<br>☞ Page 2014 Error code list | |
| | Transmit the data notated in hexadecimal converted to a 4-digit ASCII code, from the upper digit. | Transmit the data converted to a 4-digit binary code from the lower two digits. |

**Point**

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

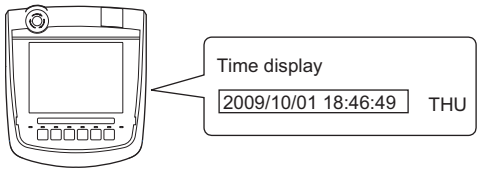
## Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 6:4E frame (ASCII)) |

| Request type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 35H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Request destination module I/O No. | | | | Request destination module station No. | | Request data length | | | | CPU monitoring timer | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | 0 | 0 | 0 | 0 | → 1) |
| 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 43H | 30H | 30H | 30H | 30H | |
| (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

Character A section

| 1) → | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 31H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| | (H) | – | – | (L) | (H) | – | – | (L) |

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 06H | 00H | |

Data length target range

*1

| CPU monitoring timer | | Command | | Sub-command | |
|---|---|---|---|---|---|
| 00H | 00H | 01H | 19H | 00H | 00H |

| Item | Message format |
|---|---|
| Response message during normal communication (GOT → host) | (format 6:4E frame (ASCII)) |

| Response type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 44H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | End code | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | → 1) |
| 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 32H | 30H | 30H | 30H | 30H | |
| (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

Character B section

| 1) → | Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 9 | 1 | 0 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 4 |
| | 30H | 39H | 31H | 30H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 34H |
| | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D4H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 09H | 00H | |

Data length target range

*1

| End code | | Year data | Month data | Day data | Hour data | Minute data | Second data | Day-of-week data |
|---|---|---|---|---|---|---|---|---|
| 00H | 00H | 09H | 0AH | 01H | 12H | 2EH | 31H | 04H |

| Item | Message format |
|---|---|
| Response message during faulty communication (GOT → host) | (format 6:4E frame (ASCII)) |

| Response type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | Following *1 |
| 44H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | End code | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 5 | 6 | → 1) |
| 30H | **30H** | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 36H | 30H | 30H | 35H | 36H | |
| (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

1) →

| Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| 30H | 30H | 30H | 30H | 30H | **30H** | 30H | 30H | 30H | 30H | 31H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D4H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 0BH | 00H | |

Data length target range

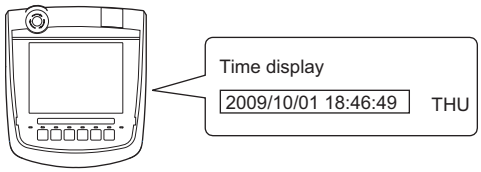
*1 ←→

| End code | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Command | | Sub-command | |
|---|---|---|---|---|---|---|---|---|---|---|
| 56H | 00H | 00H | 00H | 00H | 00H | 00H | 01H | 19H | 00H | 00H |

## ■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 6:4E frame (ASCII)) |

| Response type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 35H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| | Request destination module I/O No. | | | | Request destination module station No. | | Request data length | | | | CPU monitoring timer | | | | Command | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | → 1) |
| | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 41H | 30H | 30H | 30H | 30H | 31H | 39H | 30H | 31H | |
| | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

Character C section

| | Sub-command | | | | Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) → | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 4 |
| | 30H | 30H | 30H | 30H | 30H | 39H | 31H | 30H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 34H |
| | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 0DH | 00H | |

Data length target range

*1

| CPU monitoring timer | | Command | | Sub-command | | Year data | Month data | Day data | Hour data | Minute data | Second data | Day-of-week data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00H | 00H | 01H | 09H | 00H | 00H | 09H | 0AH | 01H | 12H | 2EH | 31H | 04H |

| Item | Message format |
|---|---|
| Response message during normal communication (GOT → host) | (format 6:4E frame (ASCII)) |

| Response type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 44H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | End code | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 34H | 30H | 30H | 30H | 30H |
| (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

(format 7:4E frame (Binary))

Data length target range

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | End code | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D4H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 02H | 00H | 00H | 00H |

| Response message during faulty communication (GOT → host) | (format 6:4E frame (ASCII)) |
|---|---|

| Response type | | | | Serial No. | | | | Fixed value | | | | Network No. | | PLC No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 44H | 34H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | |

*1

| Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | End code | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 5 | 6 | → 1) |
| 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 36H | 30H | 30H | 35H | 36H | |
| (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

1) →

| Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

(format 7:4E frame (Binary))

| Request type | | Serial No. | | Fixed value | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D4H | 00H | 00H | 00H | 00H | 00H | 01H | 01H | 00H | 00H | 00H | 0BH | 0H | |

Data length target range

*1

| End code | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Command | | Sub-command | |
|---|---|---|---|---|---|---|---|---|---|---|
| 56H | 00H | 00H | 00H | 00H | 00H | 00H | 01H | 09H | 00H | 00H |

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

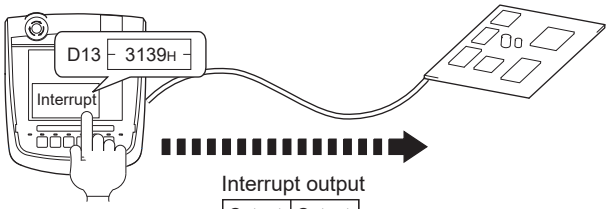
Tuesday (TUE) will be set.

## ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte] in the communication detail settings is set to [1]<br>Output value 1: 39H<br>(2) When [Interrupt Data Byte] in the communication detail settings is set to [2]<br>Output value 1: 31H; Output value 2: 39H<br>(3) When [Interrupt Data Byte] in the communication detail settings is set to [4]<br>• When [32bit Storage] in the communication detail settings is set to [LH Order]<br>Output value1: AAH; Output value2: 55H; Output value3: 31H; Output value4: 39H<br>• When [32bit Storage] in the communication detail settings is set to [HL Order]<br>Output value1: 31H; Output value2: 39H; Output value3: AAH; Output value4: 55H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Error code list

The following shows error code, error contents, cause, and measures.

| Error code | Description | Action |
|---|---|---|
| 0002H | Device point error<br>The specified device range to be read or written is incorrect | • Check the specified head device and number of points, and correct it.<br>☞ Page 1959 Device Data Area |
| 0050H | Request (command) type or response (response) type code error<br>A code other than the specified value is set for the command type or response type. | • Check and correct the command type or response type set in the microcomputer. |
| 0056H | Device error<br>A non-existent device has been specified. | • Check the devices that can be used and the device ranges.<br>☞ Page 1959 Device Data Area |
| 0057H | Device point error<br>• The command number of points specification from the microcomputer exceeds the maximum number of points processed at each process (number of points processed in one communication).<br>• The start address (head device number) to specified number of points exceeds the maximum address (device number, step number) for each process. | • Correct the specified number of points, or the start address (device number).<br>☞ Page 1959 Device Data Area |
| | When writing data which the command bit length is longer or shorter than the specification, the set number of write data points differs from the specified number of points value. | • Check the command data length and set the data again. |
| 0058H | • The command start address (head device number, start step number) specification from the microcomputer exceeds the range that can be specified.<br>• A value outside the GOT parameter setting range is specified for reading or writing the microcomputer program or file register (R). | • Correct the values to values that can be specified in each process. |
| | • Word device is specified in the command for bit device.<br>• In the command for word device, a bit device start number is specified in other than hexadecimal. | • Correct the command or the specified device. |
| 00A1H | Request content cannot be analyzed because the text length or request data length is too short. | • Review the text length or the head request data length. |
| 00A2H | Request cannot be processed. | • Correct the request content and command. |
| C0D6H | The specification of network No. and station No. have error. | • Review the network No., station No. specification method. |

# Formats 8, 9

The following describes the message formats 8 and 9 (QnA compatible 3E frame).

GT 2506 HS GT 2505 HS

## Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name: D

Head device: 100

Device points: 2

Communication setting of GOT side: Network No.=1, PLC No.=1

(Format 8: QnA compatible 3E frame (ASCII))

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Request data length | | | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | |
| 35H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 38H | |
| (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | (L) | |

*1

Character A section

| CPU monitoring timer | | | | Command | | | | Sub-command | | | | Device code | | Start Device | | | | | | Device points | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | D | * | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 30H | 30H | 30H | 30H | 30H | 34H | 30H | 31H | 30H | 30H | 30H | 30H | 44H | 2AH | 30H | 30H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 32H |
| (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | – | – | (L) | (H) | – | – | (L) |

Data length target data

(Format 9: QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | CPU monitoring timer | | Command | | Sub-command | | Start Device | | | Device code | Device points | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50H | 00H | 01H | 01H | 00H | 00H | 00H | 0CH | 00H | 00H | 00H | 01H | 04H | 00H | 00H | 64H | 00H | 00H | A8H | 02H | 00H |

Data length target data

## Details of data items in message format

**Point**

Data code during communication

Communication of format 8 is performed in ASCII code.

Communication of the format 9 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 8</th><th>Format 9</th></tr>
<tr><td rowspan="2">Subheader (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5000" (Fixed value)</td><td>Command message: 50H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Subheader (GOT side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D000" (Fixed value)</td><td>Response message: D0H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network No. set in the GOT.<br>For setting method of "Communication Detail Settings", refer to the following.<br>☞ Page 2024 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PLC No. set in the GOT.<br>For setting method of "Communication Detail Settings", refer to the following.<br>☞ Page 2024 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.<br>Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GOT. For details of the commands that can be used, refer to the following.<br>☞ Page 1973 List of commands</td></tr>
<tr><td>Transmit the command and sub-command converted to a 4-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Device code</td><td colspan="2">Specifies the code by which the device data to be read or written is recognized.<br>For details of the device range that can be accessed, refer to the following.<br>☞ Page 1959 Device Data Area</td></tr>
<tr><td>Transmit the 2-digit ASCII code corresponding to the following device codes.<br><table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 2-digit binary code corresponding to the following device codes.<br><table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
<tr><td rowspan="2">Head device</td><td colspan="2">Specifies the head No. of the device data to be read or written.<br>For details of the device range that can be accessed, refer to the following.<br>☞ Page 1959 Device Data Area</td></tr>
<tr><td>Transmit the data notated in decimal converted to a 6-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 6-digit binary code from the lower two digits.</td></tr>
</table>

| Data item name | Contents | |
|---|---|---|
| | Format 8 | Format 9 |
| Device points | Specifies the number of device data to be read or written. (Setting range: Range of the maximum number of points processed for each command)<br><When using random read or write command><br>When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points.<br><When using multiple block batch read or write commands><br>When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command. | |
| | Transmit the data notated in decimal converted to a 4-digit ASCII code, from the upper digit. | Transmit the data converted to a 4-digit binary code from the lower two digits. |
| Year, month, day, hour, minute, second and day of the week data | Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.<br>☞ Page 2018 Read clock data (1901) command<br>☞ Page 2020 Set clock data (0901) command | |
| | Transmit the data notated in decimal converted to a 2-digit ASCII code, from the upper digit. | Transmit the data converted to a 2-digit binary code. |
| End code (Microcomputer side) | Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed.<br>☞ Page 2023 Error code list | |
| | Transmit the data notated in hexadecimal converted to a 4-digit ASCII code, from the upper digit. | Transmit the data converted to a 4-digit binary code from the lower two digits. |

**Point**

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

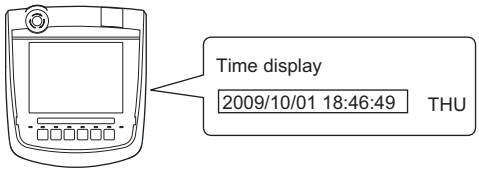
## Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

### ■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)




| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 8:QnA compatible 3E frame (ASCII)) |

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

*1

Character A section

| | Request data length | | | | CPU monitoring timer | | | | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | C | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 30H | 30H | 30H | 43H | 30H | 30H | 30H | 30H | 31H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| | (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | CPU monitoring timer | | Command | | Sub-command | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50H | 00H | 01H | 01H | 00H | 00H | 00H | 06H | 00H | 00H | 00H | 01H | 19H | 00H | 00H |

Data length target data

| | | |
|---|---|---|
| Response message during normal communication (GOT → host) | (format 8:QnA compatible 3E frame (ASCII)) | |

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | |
| 44H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 32H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | |

*1

Character B section

| | End code | | | | Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 4 |
| | 30H | 30H | 30H | 30H | 30H | 39H | 31H | 30H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 34H |
| | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | End code | | Year data | Month data | Day data | Hour data | Minute data | Second data | Day-of-week data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D0H | 00H | 01H | 01H | 00H | 00H | 00H | 09H | 00H | 00H | 00H | 09H | 0AH | 01H | 12H | 2EH | 31H | 04H |

Data length target data

| Item | Message format |
|---|---|
| Response message during faulty communication (GOT → host) | (format 8:QnA compatible 3E frame (ASCII)) |

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | |
| 44H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 36H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | |

*1

| | End code | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | → 1) |
| | 30H | 30H | 35H | 36H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | |
| | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

Data length target data

| 1) → | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 31H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| | (H) | – | – | (L) | (H) | – | – | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|
| D0H | 00H | 01H | 01H | 00H | 00H | 00H | 0BH | 00H | |

*1

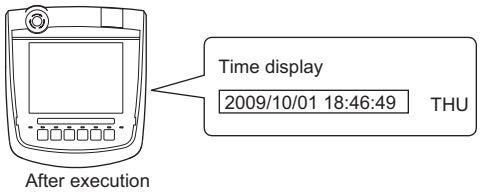
| | End code | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Command | | Sub-command | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 56H | 00H | 00H | 00H | 00H | 00H | 00H | 01H | 19H | 00H | 00H |

Data length target data

## ■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)




After execution

| Item | Message format |
|---|---|
| Request message (host → GOT) | (format 8:QnA compatible 3E frame (ASCII)) |

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

*1

| Response data length | | | | CPU monitoring timer | | | | Command | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | → 1) |
| 30H | 30H | 31H | 41H | 30H | 30H | 30H | 30H | 31H | 39H | 30H | 31H | |
| (H) | – | – | (L) | (H) | – | – | (L) | (H) | – | – | (L) | |

Data length target data

Character C section

| 1) → | Sub-command | | | | Year data | | Month data | | Day data | | Hour data | | Minute data | | Second data | | Day-of-week data | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 1 | 1 | 8 | 4 | 6 | 4 | 9 | 0 | 4 |
| | 30H | 30H | 30H | 30H | 30H | 39H | 31H | 30H | 30H | 31H | 31H | 38H | 34H | 36H | 34H | 39H | 30H | 34H |
| | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) | (H) | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Request data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|
| 50H | 00H | 01H | 01H | 00H | 00H | 00H | 0DH | 00H | |

*1

| CPU monitoring timer | | Command | | Sub-command | | Year data | Month data | Day data | Hour data | Minute data | Second data | Day-of-week data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00H | 00H | 01H | 09H | 00H | 00H | 09H | 0AH | 01H | 12H | 2EH | 31H | 04H |

Data length target data

| Item | Message format |
|---|---|

**Response message during normal communication (GOT → host)**

(format 8:QnA compatible 3E frame (ASCII))

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 44H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

*1

| | Response data length | | | | End code | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| | 30H | 30H | 30H | 34H | 30H | 30H | 30H | 30H |
| | (H) | – | – | (L) | (H) | – | – | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | End code | |
|---|---|---|---|---|---|---|---|---|---|---|
| D0H | 00H | 01H | 01H | 00H | 00H | 00H | 02H | 00H | 00H | 00H |

Data length target data

**Response message during faulty communication (GOT → host)**

(format 8:QnA compatible 3E frame (ASCII))

| Subheader | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | Response data length | | | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | |
| 44H | 30H | 30H | 30H | 30H | 31H | 30H | 31H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 31H | 36H | |
| (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | (H) | – | – | (L) | |

*1

| | End code | | | | Network No. | | PLC No. | | Request destination module I/O No. | | | | Request destination module station No. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | → 1) |
| | 30H | 30H | 35H | 36H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | 30H | |
| | (H) | – | – | (L) | (H) | (L) | (H) | (L) | (H) | – | – | (L) | (H) | (L) | |

Data length target data

| 1) → | Command | | | | Sub-command | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 9 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 30H | 39H | 30H | 31H | 30H | 30H | 30H | 30H |
| | (H) | – | – | (L) | (H) | – | – | (L) |

Data length target data

(format 9:QnA compatible 3E frame (Binary))

| Subheader | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Response data length | | Following *1 |
|---|---|---|---|---|---|---|---|---|---|
| D0H | 00H | 01H | 01H | 00H | 00H | 00H | 0BH | 00H | |

*1

| | End code | | Network No. | PLC No. | Request destination module I/O No. | | Request destination module station No. | Command | | Sub-command | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 56H | 00H | 00H | 00H | 00H | 00H | 00H | 01H | 09H | 00H | 00H |

Data length target data

**Point**

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

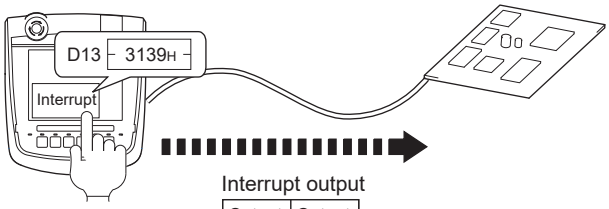
Tuesday (TUE) will be set.

## ■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below




Interrupt output

| Output value 1 | Output value 2 |
|---|---|
| 31H | 39H |

| Item | Message format |
|---|---|
| Interrupt output (GOT → host) | (1) When [Interrupt Data Byte] in the communication detail settings is set to [1]<br>Output value 1: 39H<br>(2) When [Interrupt Data Byte] in the communication detail settings is set to [2]<br>Output value 1: 31H; Output value 2: 39H<br>(3) When [Interrupt Data Byte] in the communication detail settings is set to [4]<br>• When [32bit Storage] in the communication detail settings is set to [LH Order]<br>Output value1: AAH; Output value2: 55H; Output value3: 31H; Output value4: 39H<br>• When [32bit Storage] in the communication detail settings is set to [HL Order]<br>Output value1: 31H; Output value2: 39H; Output value3: AAH; Output value4: 55H |

**Point**

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1970 SM devices

## Error code list

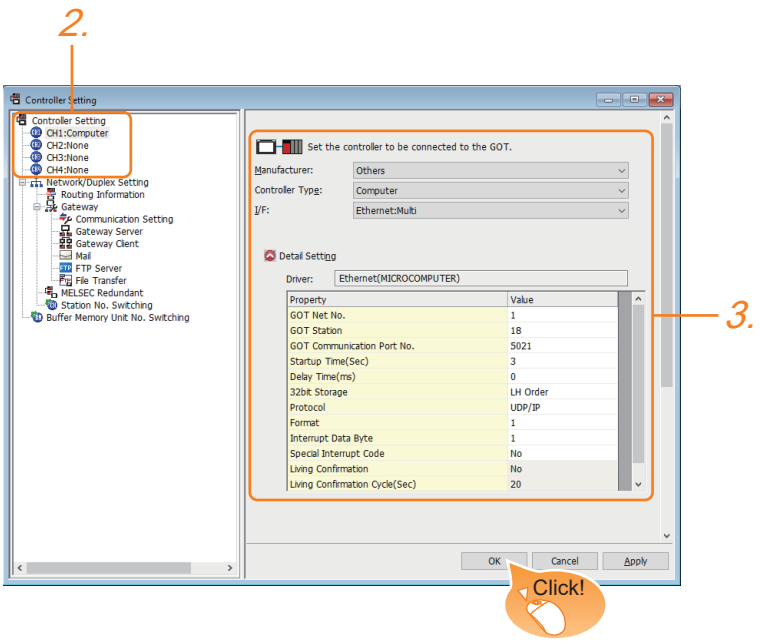
For the error codes, refer to the following.

☞ Page 2014 Error code list

# 46.5 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [Others]
- [Controller Type]: [Computer]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2025 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5021 |
| Startup Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| 32bit Storage | LH Order |
| Protocol | UDP/IP |
| Format | 1 |
| Interrupt Data Byte | 1 |
| Special Interrupt Code | No |
| Living Confirmation | No |
| Living Confirmation Cycle(Sec) | 20 |
| Destination module I/O number | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station | Set the station No. of the GOT.<br>(Default: 18) | 1 to 64 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5021 *4) | 1024 to 5010.<br>5014 to 65534<br>(Except for 5011, 5012, 5013 and 49153 to 49170) |
| Startup Time(sec) | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Delay Time(ms) | Set the send delay time to lower the load of the network and the connected PLCs.<br>(Default: 0ms) | 0 to 10000 (ms) |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order or HL Order |
| Protocol *1 | Select the communication protocol<br>(Default: UDP/IP) | TCP/IP<br>UDP/IP |
| Format | Select the communication format.<br>(Default: 1)*2 | 1 to 9 |
| Interrupt Data Length | Specify the number of bytes of interrupt data.<br>(Default: 1) | 1, 2 or 4 |
| Special Interrupt Code | Set whether or not to output the special interrupt code.<br>(Default: No) | Yes or No |
| Living Confirmation *2 | Set whether or not to perform a living confirmation.<br>(Default: No) | Yes or No |
| Living Confirmation Cycle *3 | Set the sampling to perform a living confirmation.<br>(Default: 20s) | 10 to 100s |
| Destination module I/O number | Set the values for the I/O number and the station number of the connection destination module that responds to the request from the controller.<br>Not available to GT21. (It operates with [Same as requested value].)<br>(Default: 0) | 0 or Same as requested value |

*1 For the interrupt output, select [TCP/IP].

*2 Select [Yes] only when [Protocol] is [TCP/IP].

*3 The setting value can be changed when the [Living Confirmation] is [Yes].

*4 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

Special Interrupt Code

The special interrupt codes are output at event occurrences.

If multiple events occur simultaneously, the special interrupt codes may not be output.

The following shows the special interrupt codes and the event types.

| Special Interrupt Code (Hex) | Event type |
|---|---|
| 20H | Base screen, overlap window 1 to 5<br>When the screen is switched by the screen switching device, the special interrupt code will be output.<br>The base screen and each overlap window are switched independently.<br>(Example of output)<br>When the values of the screen switching devices for the base screen and overlap window 1 and 2 are all changed, three special interrupt codes will be output. |
| 21H | This code is output when a numerical or ASCII input is completed. |
| 22H | This code is output when reading or writing of the recipe data is completed. |
| 23H | This code is output when a barcode or RFID data is read. |

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

• Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

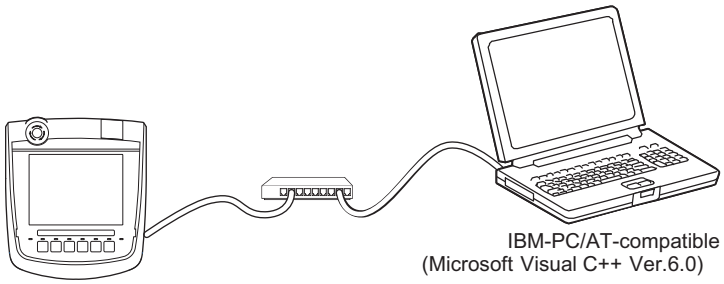
☞ Page 78 GOT Ethernet Setting

# 46.6 System Configuration Examples

The following shows a system configuration example in the case of the microcomputer connection (Ethernet).

## System configuration

The system configuration example illustrated below is explained in this section.



IBM-PC/AT-compatible PC
(Microsoft Visual C++ Ver.6.0)

## Communication settings on GOT side and monitor screen settings

### ■Transmission settings

Set the transmission settings of the GOT.

The transmission settings in the microcomputer connection (Ethernet) are made at [Detail Setting] on GT Designer3.

☞ Page 2025 Communication detail settings

### ■Monitor screen settings

For the monitor screen settings in this system configuration example, refer to the example of the system configuration of the microcomputer connection (serial).

☞ Page 1951 System Configuration Examples

# 46.7 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
Microcomputer ([Computer])

# 46.8 Precautions

## GOT clock control

Even though the time setting function and time notification function are set in the GOT time setting, the settings are disabled.
When reading from or writing to the clock data between the GOT and microcomputer, use the dedicated command.

## UDP/IP connection

When the commands are sent from multiple controllers simultaneously, the GOT may not receive all the commands.
Retry sending the commands on the controller, to receive them on the GOT again.

## Station monitoring function

The microcomputer connection (Ethernet) does not support the station monitoring function.

## Interrupt output

The interrupt output is available only for the TCP/IP connection.
The interrupt output cannot be executed in the UDP/IP connection.

# PART 9 MODBUS

47 MODBUS/RTU MASTER CONNECTION

48 MODBUS/TCP MASTER CONNECTION

49 MODBUS/RTU SLAVE CONNECTION

50 MODBUS/TCP SLAVE CONNECTION

# 47 MODBUS/RTU MASTER CONNECTION


- Page 2030 Connectable Model List
- Page 2031 System Configuration
- Page 2033 Connection Diagram
- Page 2038 GOT Side Settings
- Page 2041 MODBUS/RTU Slave Equipment Side Setting
- Page 2042 Function code
- Page 2042 MODBUS Communication Control Function
- Page 2042 Settable Device Range
- Page 2043 Precautions


## 47.1 Connectable Model List

GOT2000 Series products support the master function of MODBUS communication, the open FA network.
Thus, the GOT can be connected with each MODBUS slave.
For the MODBUS/RTU equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

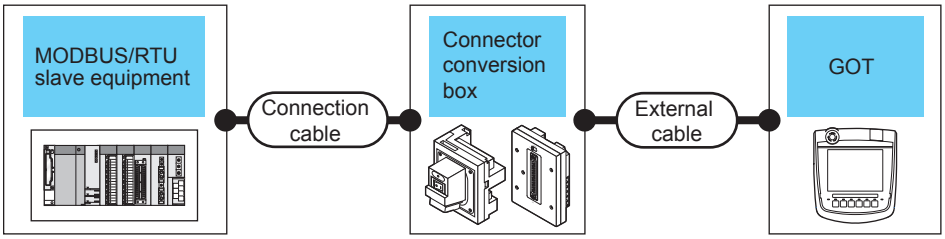
# 47.2 System Configuration

## Connecting to MODBUS/RTU slave equipment

Communication driver

MODBUS/RTU Master

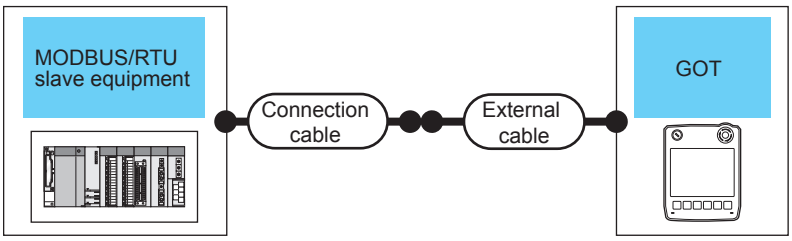
### When using the connector conversion box




| Controller | Communication Type | Connection cable<br>Cable model<br>Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| MODBUS/RTU equipment | RS-232 | User preparing Page 2033 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 MODBUS equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422/485 | User preparing Page 2035 RS-422/485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 MODBUS equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 10 MODBUS equipment for 1 GOT |
| | RS-422/485 | User preparing Page 2036 RS-422/485 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 MODBUS equipment for 1 GOT |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

## When using the external cable (GT11H-C□□□-37P)

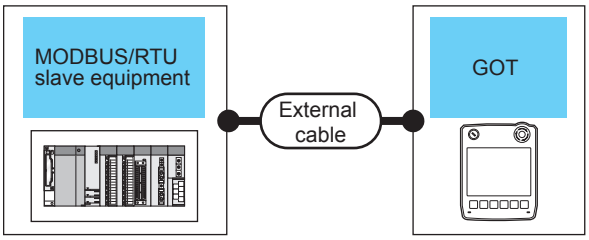



| Controller | | Connection cable | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model | Communication Type | Cable model Connection diagram number | | | | |
| MODBUS/RTU equipment | RS-232 | User preparing Page 2033 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 MODBUS equipment for 1 GOT |
| | RS-422/485 | User preparing Page 2035 RS-422/485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | Up to 10 MODBUS equipment for 1 GOT*2 |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

## When using the external cable (GT11H-C□□□)




| Controller | | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|
| Model | Communication Type | | | | |
| MODBUS/RTU equipment | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 2033 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 MODBUS equipment for 1 GOT |
| | RS-422/485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 2036 RS-422/485 connection diagram 3) | | 13m | Up to 10 MODBUS equipment for 1 GOT*2 |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

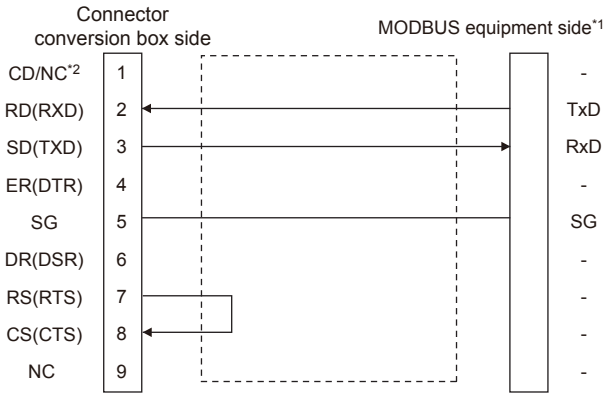
# 47.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

## RS-232 cable

### Connection diagram

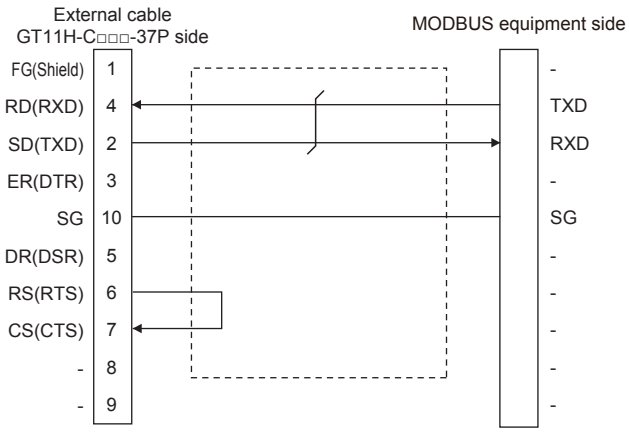
#### ■RS-232 connection diagram 1)



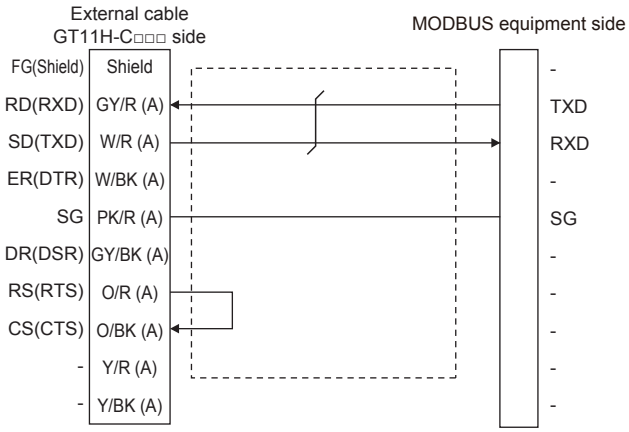

*1 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




#### ■RS-232 connection diagram 3)



## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■MODBUS equipment side connector

Use the connector compatible with the MODBUS/RTU equipment side module.

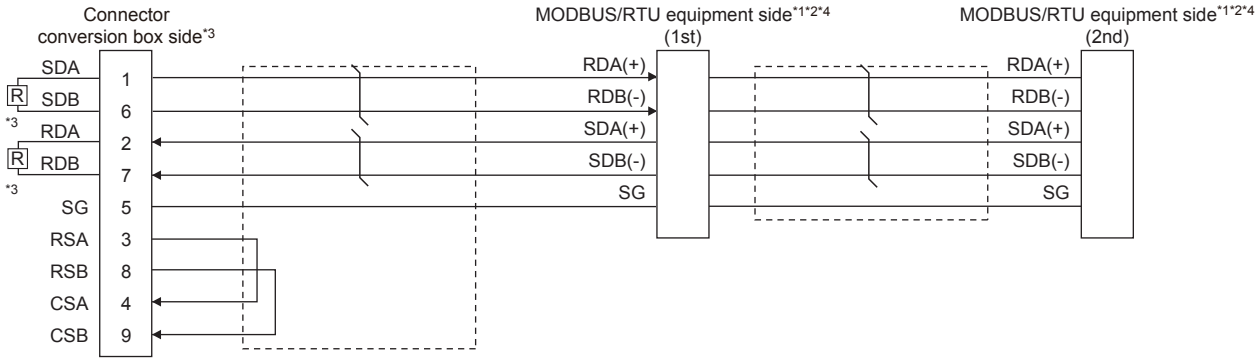
For details, refer to the MODBUS/RTU equipment user's manual.

# RS-422/485 cable

The following shows the connection diagrams and connector specifications of the RS-422/485 cable used for connecting the GOT to a PLC.

## Connection diagram

### ■RS-422/485 connection diagram 1)



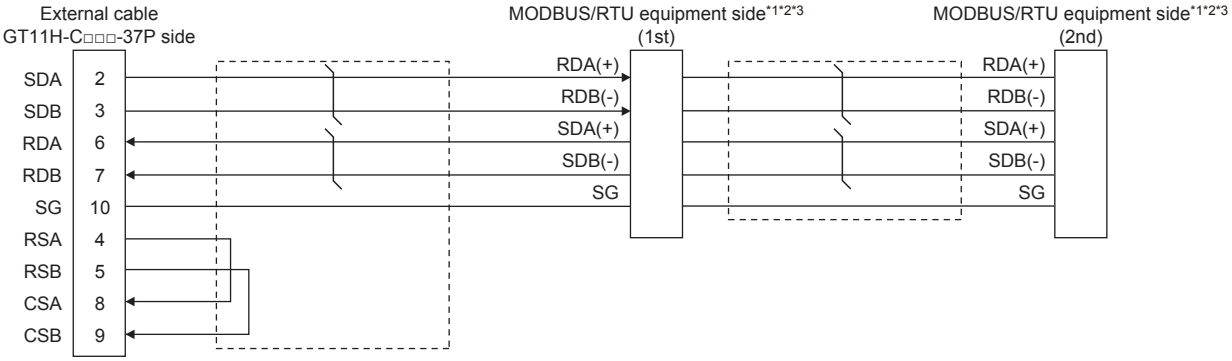

*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 89 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

### ■RS-422/485 connection diagram 2)

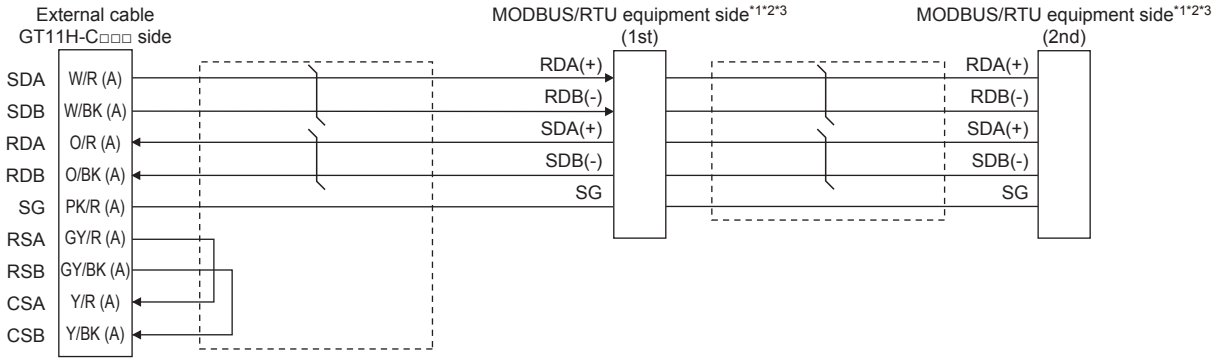



*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

## ■RS-422/485 connection diagram 3)

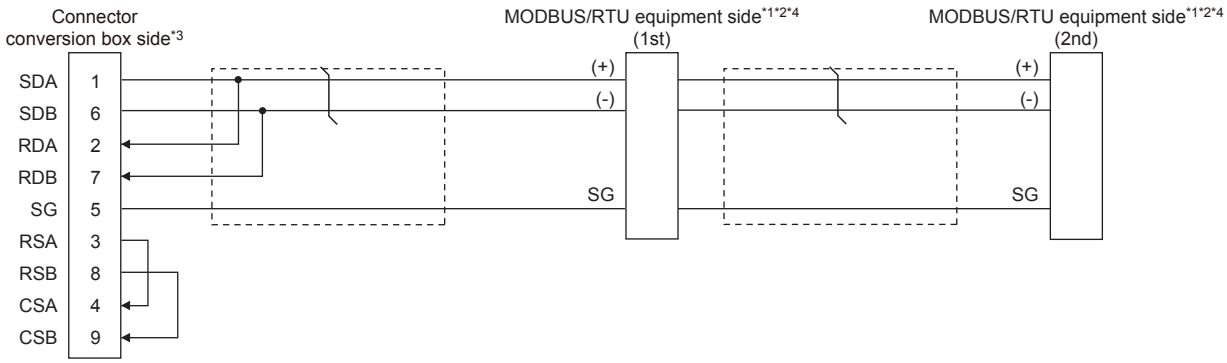



*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

## ■RS-422/485 connection diagram 4)




*1 The actual terminal layout on the MODBUS/RTU equipment may differ from the example shown above. SDA/B(+/-) and RDA/B(+/-) terminals can be separated from each other. Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*2 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*3 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 89 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422/485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■MODBUS/RTU equipment side connector

Use the connector compatible with the MODBUS/RTU equipment side module.

For details, refer to the MODBUS equipment user's manual.

## Connecting terminating resistors

### ■GOT side

When connecting a MODBUS/RTU equipment to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor using the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■MODBUS/RTU equipment side

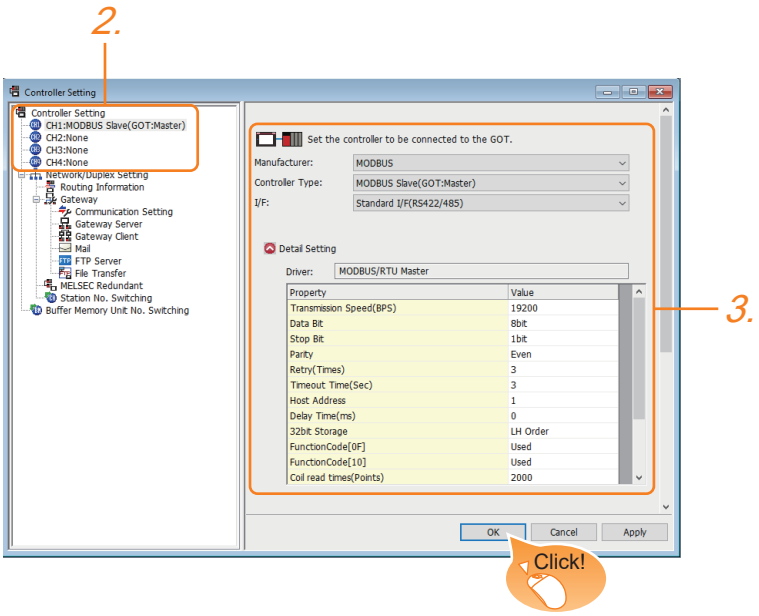
When connecting a MODBUS/RTU equipment to the GOT, a terminating resistor must be connected to the MODBUS/RTU equipment.

For details, refer to the MODBUS/RTU equipment user's manual.

# 47.4 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2039 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

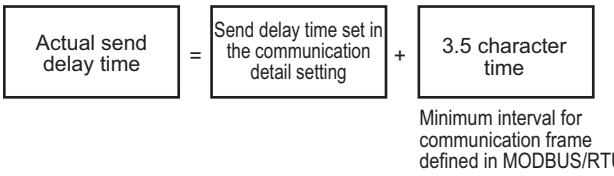
# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8bit |
| Stop Bit | 1bit |
| Parity | Even |
| Retry(Times) | 3 |
| Timeout Time(Sec) | 3 |
| Host Address | 1 |
| Delay Time(ms) | 0 |
| 32bit Storage | LH Order |
| FunctionCode[0F] | Used |
| FunctionCode[10] | Used |
| Coil read times(Points) | 2000 |
| Input relay read times(Points) | 2000 |
| Holding register read times(Points) | 125 |
| Input register read times(Points) | 125 |
| Coil write times(Points) | 800 |
| Holding register write times(Points) | 100 |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps, 19200bps, 38400bps, 57600bps, 115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bits/8bits |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bits |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Retry | Set the number of retries to be performed when a communication error occurs.<br>(Default: 3times) | 0 to 5times |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 30sec |
| Host Address | Specify the host address in the network of the GOT.<br>(Default: 1) | 1 to 247 |
| Delay Time*1 | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order/HL Order |
| FunctionCode[0F] | Select the FunctionCode[0F].<br>(Default: Used) | Used/Unused |
| FunctionCode[10] | Select the FunctionCode[10].<br>(Default: Used) | Used/Unused |
| Coil read times | Set the Coil read time.<br>(Default: 2000) | 1 to 2000 points |
| Input relay read time | Set the Input relay read time.<br>(Default: 2000) | 1 to 2000 points |
| Holding register read times | Set the Holding register read times.<br>(Default: 125) | 1 to 125 points |
| Input register read times | Set the Input register read times.<br>(Default: 125) | 1 to 125 points |
| Coil write times | Set the Coil write times.<br>(Default: 800) | 1 to 1968 points |
| Holding register write times | Set the Holding register write times.<br>(Default: 100) | 1 to 123 points |

*1 The GOT ensures in advance the minimum interval (3.5 characters time) for communication frame defined in the MODBUS/RTU. Therefore, the actual send delay time is as follows.




When connecting to MODBUS/RTU equipment which requires a delay longer than 3.5 character time, adjust the send delay time.

**Point**

If the communication with MODBUS/RTU equipment is not established, some equipment which requires a delay longer than 3.5 character time may be connected.
Adjust the send delay time in the communication detail setting.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.
For details on the Utility, refer to the following manual.
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 47.5 MODBUS/RTU Slave Equipment Side Setting

**Point**

MODBUS/RTU Slave equipment

For details of the MODBUS/RTU Slave equipment, refer to the manual of MODBUS/RTU Slave equipment to be used.

## Station number setting

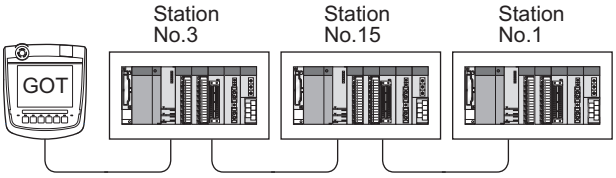
In the MODBUS network, a maximum of 31 MODBUS/RTU slave equipment can be connected to one GOT.

Assign a non-overlapped station number ranging from 1 to 247 arbitrarily to each MODBUS/RTU slave equipment.

In the system configuration, the MODBUS/RTU slave equipment with the station number set with the host address must be included.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.




Examples of station number setting

### Direct specification

When setting the device, specify the station number of the MODBUS/RTU slave equipment of which data is to be changed.

| Specification range |
|---|
| 1 to 247 |

### Indirect specification

When setting the device, indirectly specify the station number of the MODBUS/RTU slave equipment of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD16).

When specifying the station No. from 248 to 254 on GT Designer3, the value of GD10 to GD16 compatible to the station No. specification will be the station No. of the MODBUS/RTU slave equipment.

| Specification station NO. | Compatible device | Setting range |
|---|---|---|
| 248 | GD10 | 0 to 255:<br>0 : All station specification (broadcast)<br>255 : Host station access<br>For the setting other than the above, an error (dedicated device is out of range) will occur. |
| 249 | GD11 | |
| 250 | GD12 | |
| 251 | GD13 | |
| 252 | GD14 | |
| 253 | GD15 | |
| 254 | GD16 | |

### All station specification (broadcast)

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only the host station will be a target.

# 47.6 Function code

The following shows the message format for the MODBUS communication.

| Address | Function code | Data | CRC |
|---|---|---|---|

The GOT supports the following function codes.

| Function code | Function | Number of devices that are accessible with one message [Unit: point(s)] |
|---|---|---|
| 0x01 | Read Coils | 1 to 2000 |
| 0x02 | Read Discrete Inputs | 1 to 2000 |
| 0x03 | Read Holding Registers | 1 to 125 |
| 0x04 | Read Input Registers | 1 to 125 |
| 0x05 | Write Single Coil | 1 |
| 0x06 | Write Single Register | 1 |
| 0x0F | Write Multiple Coils | 1 to 1968 |
| 0x10 | Write Multiple Register | 1 to 123 |
| 0x14 | Read File Record | 1 to 124 |
| 0x15 | Write File Record | 1 to 122 |

# 47.7 MODBUS Communication Control Function

This function is to prevent a communication response delay by the equipment with different specifications in the MODBUS network.

The GOT special register (GS) controls available function codes.

Set this function when equipment applicable to the following conditions is used on the MODBUS network.

- Equipment that supports only some function codes
- Equipment whose maximum transfer size is small for function codes

The following lists the GOT special registers (GS) used for the MODBUS communication control function.

| GOT special register (GS) | Description |
|---|---|
| GS579 | Specification of the communication setting (common or individual) for each CH |
| GS570 to GS576 | Common communication settings |
| GS590 to GS596 | Individual communication settings for CH1 |
| GS597 to GS603 | Individual communication settings for CH2 |
| GS604 to GS610 | Individual communication settings for CH3 |
| GS611 to GS617 | Individual communication settings for CH4 |

For the details of the GOT special registers (GS), refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 47.8 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Slave(GOT:Master)])

# 47.9 Precautions

## Communication confirmation to connected equipment

The GOT reads the following devices for checking whether the GOT can communicate with the controller.

| GOT | Device |
|---|---|
| GT25 | The holding register (400001) is read. |

When the controller is a MODBUS/RTU equipment that does not have the holding register (400001), check whether the MODBUS/RTU equipment sends back a response to the request from the GOT.
Communication is available when the MODBUS/RTU equipment sends back a response, regardless of the message type (normal or abnormal).

## Station No. settings of the MODBUS/RTU slave equipment side

In the system configuration, the MODBUS/RTU slave equipment with the station number set with the host address must be included.For details of host address setting, refer to the following.
☞ Page 2038 Setting communication interface (Controller Setting)

## GOT clock control

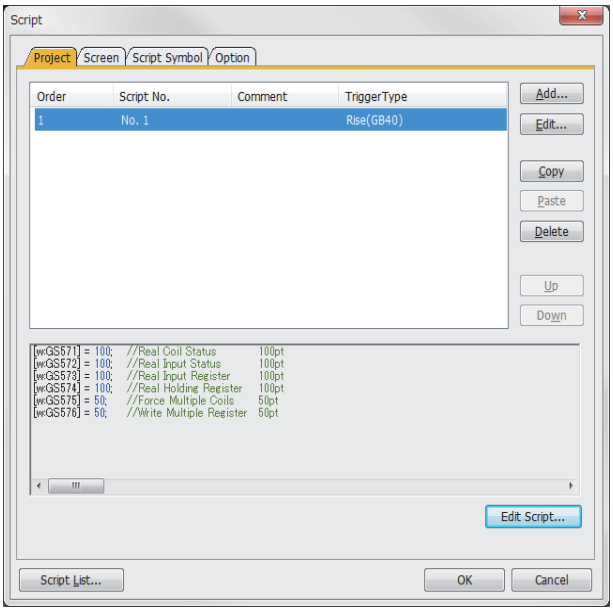
The settings of "time adjusting" or "time broadcast" made on the GOT will be disabled on the PLC.

## Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.
📖GT Designer3 (GOT2000) Screen Design Manual

## MODBUS communication control function on the GS device

At GOT startup, set MODBUS communication control function with project scripts, etc.
If settings are changed after communication start, a communication error may occur.



Setting example for project script

# MEMO

# 48 MODBUS/TCP MASTER CONNECTION

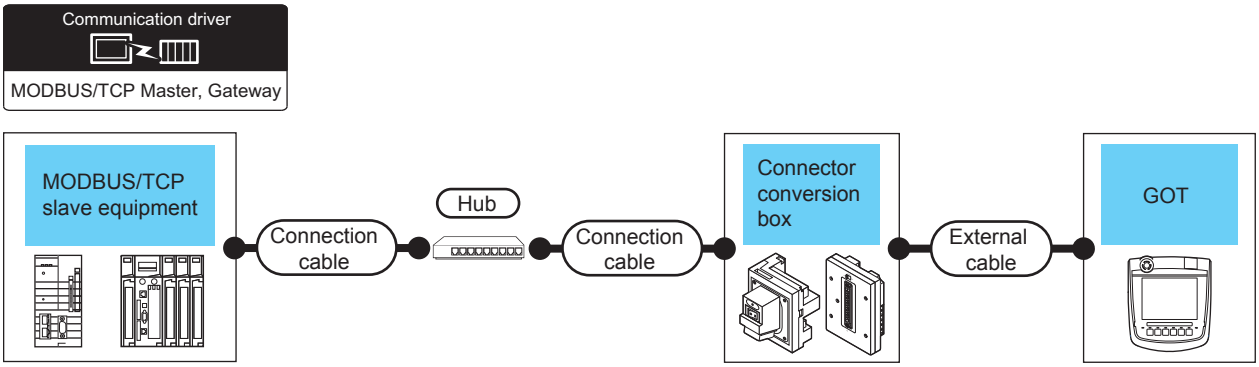

- Page 2045 Connectable Model List
- Page 2046 System Configuration
- Page 2047 GOT Side Settings
- Page 2051 MODBUS/TCP Slave Side Settings
- Page 2051 Function Code
- Page 2051 MODBUS Communication Control Function
- Page 2051 Settable Device Range
- Page 2052 Example of Connection
- Page 2058 Precautions


## 48.1 Connectable Model List

GOT2000 Series products support the master function of MODBUS/TCP communication, the open FA network.
Thus, the GOT can be connected with each MODBUS/TCP slave.
For the MODBUS/TCP equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

# 48.2 System Configuration

## Connecting to MODBUS/TCP slave equipment




| Controller | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model*4 | Maximum segment length*3 | | Cable model | Maximum segment length*3 | | | | |
| MODBUS/TCP equipment | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When controller: GOT is N: 1<br>The number of controllers for 1 GOT is TCP: 128 or less.<br>When controller: GOT is 1: N<br>The following shows the number of GOTs for 1 controller<br>Depends on the MODBUS/TCP equipment used.*5 |
| | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Connect the GOT to the MODBUS/TCP equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

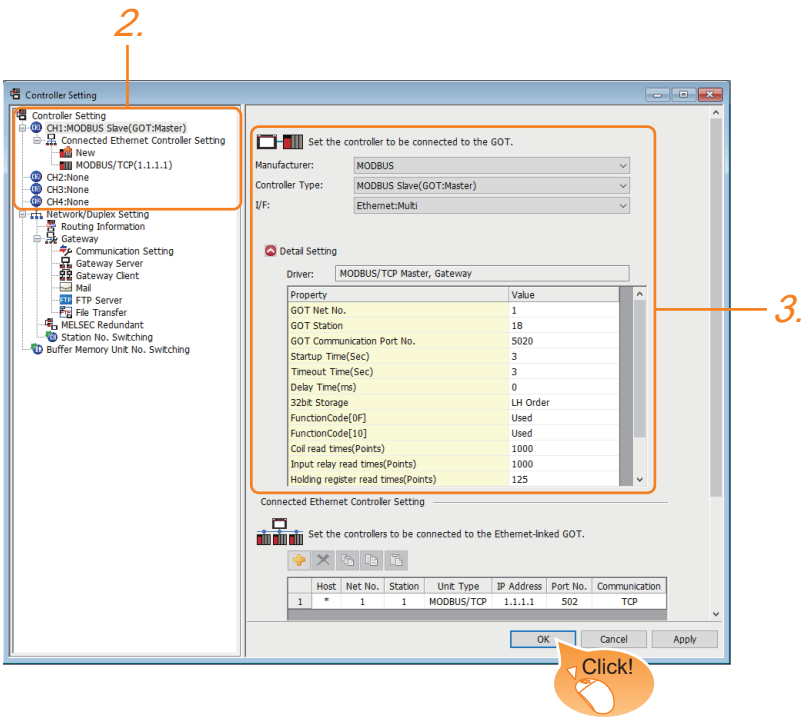
*5 For details, refer to the MODBUS/TCP equipment manual.

*6 Use C or later version of GT11H-C□□-37P.

# 48.3 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Set the following items.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2048 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5020 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| 32bit Storage | LH Order |
| FunctionCode[0F] | Used |
| FunctionCode[10] | Used |
| Coil read times(Points) | 1000 |
| Input relay read times(Points) | 1000 |
| Holding register read times(Points) | 125 |
| Input register read times(Points) | 125 |
| Coil write times(Points) | 800 |
| Holding register write times(Points) | 100 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 247 |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5020 *2) | 1024 to 5010, 5014 to 65534<br>(Except for 5011, 5012, 5013 and 49153 to 49170) |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 3 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000 (ms) |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order/HL Order |
| FunctionCode[0F] | Set whether to use the function code [0F].<br>(Default: Used) | Used/Unused |
| FunctionCode[10] | Set whether to use the function code [10].<br>(Default: Used) | Used/Unused |
| Coil read times | Set the read points of the coil.<br>(Default: 1000 points) | 1 to 2000 (points) |
| Input relay read times | Set the read points of the input relay.<br>(Default: 1000 points) | 1 to 2000 (points) |
| Holding register read times | Set the read points of the holding register.<br>(Default: 125 points) | 1 to 125 (points) |
| Input register read times | Set the read points of the input register.<br>(Default: 125 points) | 1 to 125 (points) |
| Coil write times | Set the write points of the coil.<br>(Default: 800 points) | 1 to 800(points) |
| Holding register write times | Set the write points of the holding register.<br>(Default: 100 points) | 1 to 100(points) |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2050 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

• Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

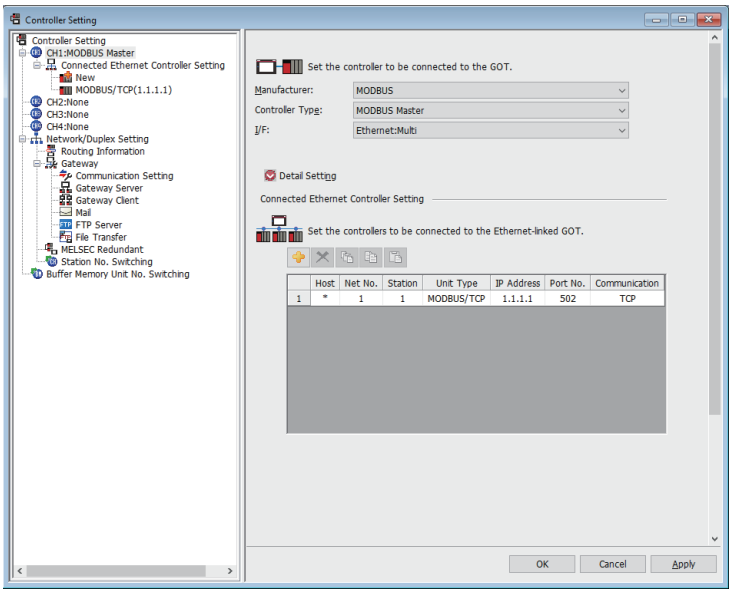
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet Controller Setting




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 to 239 |
| Station*2 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 247 |
| Unit Type *1 | Select the destination Ethernet module.<br>(Default: MODBUS/TCP) | MODBUS/TCP,<br>MODBUS/TCP(unit ID fixed) |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 1.1.1.1) | PLC side IP address |
| Port No. | Set the port No. of the connected Ethernet module.<br>(Default: 502) | 1 to 65535 |
| Communication format | TCP (fixed) | TCP (fixed) |

*1 When the module ID is required to be fixed to 255, select [MODBUS/TCP(unit ID fixed)].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

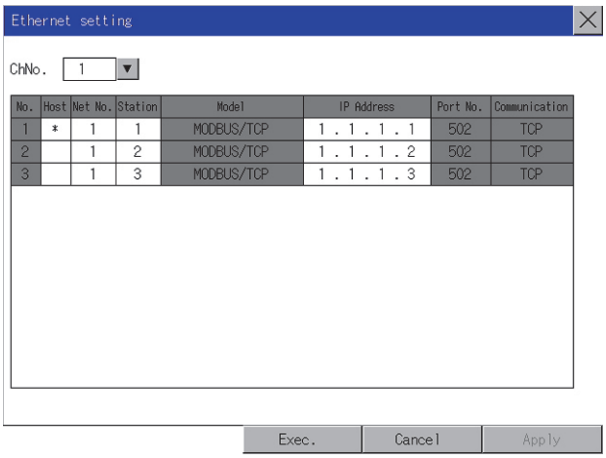
☞ Page 2048 Communication detail settings

**Point**

• Changing the host with GOT module

The host can be changed by the GOT module Utility. For details of settings, refer to the following.

GOT2000 Series User's Manual (Utility)



# 48.4 MODBUS/TCP Slave Side Settings

For details of the MODBUS/TCP equipment, refer to the manual of MODBUS/RTU equipment to be used.

# 48.5 Function Code

The following shows the message format for the MODBUS communication.

| Address | Function code | Data | CRC |
|---|---|---|---|

The GOT supports the following function codes.

| Function code | Function | Number of devices that are accessible with one message [Unit: point(s)] |
|---|---|---|
| 0x01 | Read Coils | 1 to 1000 |
| 0x02 | Read Discrete Inputs | 1 to 1000 |
| 0x03 | Read Holding Registers | 1 to 125 |
| 0x04 | Read Input Registers | 1 to 125 |
| 0x05 | Write Single Coil | 1 |
| 0x06 | Write Single Register | 1 |
| 0x0F | Write Multiple Coils | 1 to 800 |
| 0x10 | Write Multiple Register | 1 to 123 |
| 0x14 | Read File Record | 1 to 124 |
| 0x15 | Write File Record | 1 to 122 |

# 48.6 MODBUS Communication Control Function

This function is to prevent a communication response delay by the equipment with different specifications in the MODBUS network.

The GOT special register (GS) controls available function codes.

Set this function when equipment applicable to the following conditions is used on the MODBUS network.

- Equipment that supports only some function codes
- Equipment whose maximum transfer size is small for function codes

The following lists the GOT special registers (GS) used for the MODBUS communication control function.

| GOT special register (GS) | Description |
|---|---|
| GS579 | Specification of the communication setting (common or individual) for each CH |
| GS570 to GS576 | Common communication settings |
| GS590 to GS596 | Individual communication settings for CH1 |
| GS597 to GS603 | Individual communication settings for CH2 |
| GS604 to GS610 | Individual communication settings for CH3 |
| GS611 to GS617 | Individual communication settings for CH4 |

For the details of the GOT special registers (GS), refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 48.7 Settable Device Range

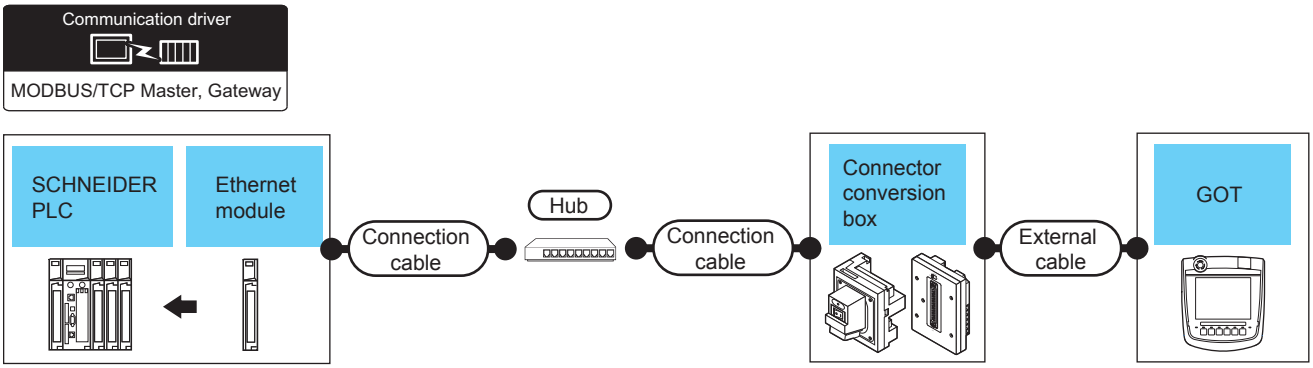
For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Slave(GOT:Master)])

# 48.8 Example of Connection

## Connecting to SCHNEIDER PLC

### System Configuration




| controller | Ethernet module*4 | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cable model*5 | Max. distance*3 | | Cable model | Max. distance*3 | | | | |
| Modicon Premium Series | TSX ETY 4102<br>TSX ETY 5102 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 64 GOTs for 1 PLC |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

| controller | Ethernet module*4 | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cable model*5 | Max. distance*3 | | Cable model | Max. distance*3 | | | | |
| Modicon Premium Series | 140 NOE 771 00<br>140 NOE 771 10<br>140 NWM 100 00 | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 64 GOTs for 1 PLC |
| | | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Connect the GOT to the Ethernet module via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Product manufactured by SCHNEIDER ELECTRIC SA.For details of the product, contact SCHNEIDER ELECTRIC SA.

*5 Use the straight cable.

*6 Use C or later version of GT11H-C□□-37P.

## PLC Side Setting

**Point**

SCHNEIDER ELECTRIC PLC

For details of SCHNEIDER PLC, refer to the following manual.

SCHNEIDER PLC user's Manual

### ■Parameter settings

Set the parameter settings with programming software for SCHNEIDER PLC.

- For Modicon Premium series

Set for PL7 Pro programming software.

| Item | Set value |
|---|---|
| Processors | Connected CPU module |
| Memory cards | Memory card to be used |
| Module | Connected Ethernet module |
| IP Address | IP address for Ethernet module |
| Size of global address fields | Setting for device points<br>Bits: Coil, Input<br>Words: Input register, Maintenance register |

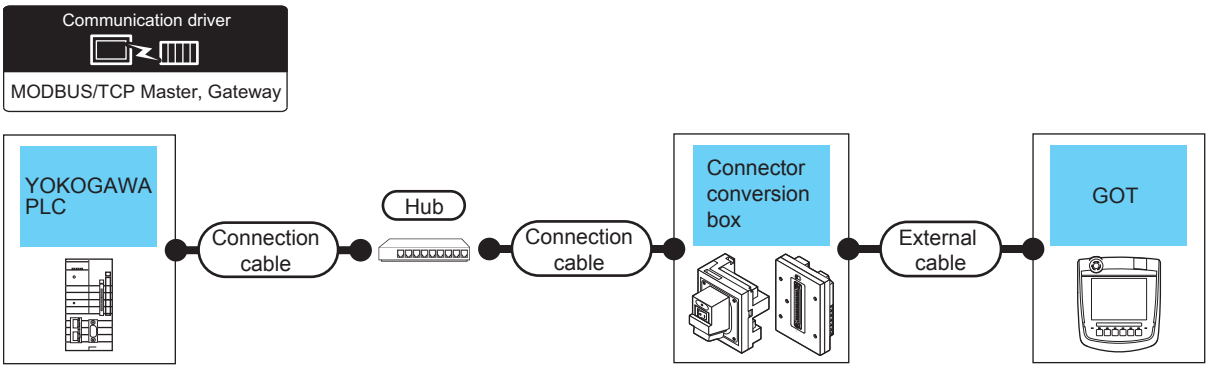
- For Modicon Quantum series

Set for Concept programming software.

| Item | Set value |
|---|---|
| PLC Selection | Connected CPU module |
| TCP/IP Ethernet | Numbers of unit |
| I/O Module Selection | Connected Ethernet module |
| Internet Address | IP address for Ethernet module |

# Connecting to YOKOGAWA PLC

## System Configuration




| controller | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model*5 | Max. distance *4 | | Cable model | Max. distance *4 | | | | |
| STARDOM*1 (NFCP100, NFJT100) | Ethernet | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | Hub*2 | Twisted pair cable<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5<br>• 100BASE-TX<br>Shielded twisted pair cable (STP): Category 5 and 5e | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 126 GOTs for 1 PLC |
| | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 When connecting STARDOM to MODBUS/TCP, Modbus Communication Portfolio License is required.
For details, refer to the following manual.
YOKOGAWA PLC user's Manual

*2 When connect a GOT to a PLC, connect to the PCL Ethernet port via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*3 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*4 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*5 Use the straight cable.

*6 Use C or later version of GT11H-C□□-37P.

## PLC Side Setting

Make the communication settings as shown below. For details of the communication settings, refer to the following manual.
📖Peripheral Software Manual for YOKOGAWA PLC

**Point**

Connection between STARDOM and the PC for communication settings
For the communication settings of STARDOM, STARDOM and the PC for communication settings must be connected to Ethernet using the Resource Configurator (peripheral software).

### ■Modbus Communication Portfolio License

To set the communication settings for STARDOM, an installation of Modbus Communication Portfolio License is required.
For details of the communication settings, refer to the following manual.
📖STARDOM FCN/FCJ Guide

### ■Defining Logic POU

Define Logic POU using Logic Designer (peripheral software), and download the project to STARDOM.

• Start Logic Designer and create a new project using a template.

Use [STARDOM Serial Communication] template.

• Insert Firmware Library to the new project.

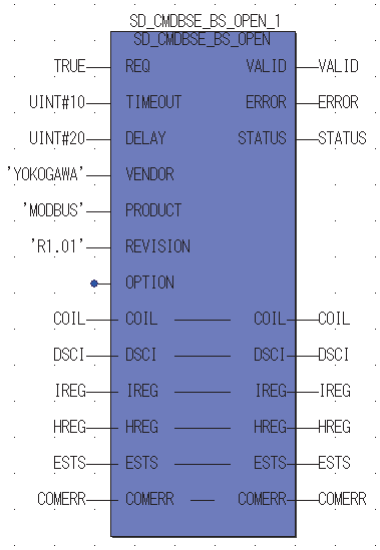
Right-click [Library] under the project tree in Logic Designer.
Right-click [Insert] and select [Firmware Library].
Double-click the [SD_FCXPLCE_LIB] folder and double-click [SD_FCXPLCE_LIB.fwl] to select it.
The library path inserted in the procedures above is as follows.
{Install Folder}\LogicDesigner\Mwt\Plc\Fw_lib\SD_FCXPLCE_LIB\SD_FCXPLCE_LIB.fwl

• Insert User Library to the new project.

Right-click [Library] under the project tree in Logic Designer.
Right-click [Insert] and select [User Library].
Double-click [SD_CMODBUSE_PF.mwt], [SD_CUTIL_PF.mwt] and [SD_CMODBUSS_PF.mwt] to select it.
(When [STARDOM Serial Communication] is used for the template, [SD_CUTIL_PF.mwt] is inserted as default.)
The library path inserted in the procedures above is as follows.
{Install Folder}\LogicDesigner\Libraries\SD_CMODBUSE_PF.mwt
{Install Folder}\LogicDesigner\Libraries\SD_CUTIL_PF.mwt
{Install Folder}\LogicDesigner\Libraries\SD_CMODBUSS_PF.mwt

• Copy a sample project POU to the new project.

Open "SD_CMODBUSE_Sample1.mwt".
Right-click [ComEServerModbus*] in the Logic POU under the project tree in the SD_CMODBUSE_Sample1 project, and select [Copy].
Right-click the [Logic POU] under the project tree in the previously created project, and select [Paste].
Double-click the [ComEServerModbus*] file in the [ComEServerModbus*] folder.
For the following terminals, set as shown below.




• Set devices to be monitored by a GOT.

Right-click the [ComEServerModbus*] file in the [ComEServerModbus*] folder in the logic POU under the project tree and select [Insert] - [Cord worksheet].

Set the variable devices to be monitored.

Instantiate Logic POU.

Define an already defined instance to Task0.

Right-click [Physical hardware] - [Configuration:IPC_33/FCX01:FCX/Tasks/Task0:CYCLIC] and select [Insert] - [Program instance].

Define the program instance name and select ComEServerModbus for the program type.

• Defining Target Setting

Define the IP address of STARDOM to set the communication settings.

Double-click [Physical hardware] - [Configuration:IPC_33/FCX01:FCX/Target Setting] and input the IP address or the host name.

• Downloading the project

Execute [Build] - [Make].

(Same as when pressing the function key F9).

Download after confirming that the compile error does not occur. Select [Download] in the project control dialog displayed when [Online] - [Project control] is selected.

When the download is completed, select [Cold] and start STARDOM.

## Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

YOKOGAWA PLC user's Manual

## Precautions

### ■For dual-redundant configuration

When STARDOM is configured with a redundant system, the connection is not supported.

### ■Not communicating with GOT and STARDOM in a specified period

When the GOT does not communicate with STARDOM in a specified period during the GOT is turned on, STARDOM disconnects the line for the GOT. As the line is disconnected, the GOT displays an error when the GOT monitors STARDAM after the disconnection.

After the error displayed as the system alarm (No.402: timeout error) on the GOT, the normal communication is recovered and the GOT can monitor STARDOM.

# 48.9 Precautions

## When connecting to multiple GOTs

### ■Setting PLC No.

When connecting two or more GOTs in the MODBUS/TCP network, set each [PLC No.] to the GOT.

☞ Page 2047 Setting communication interface (Controller Setting)

### ■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

## When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

## When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

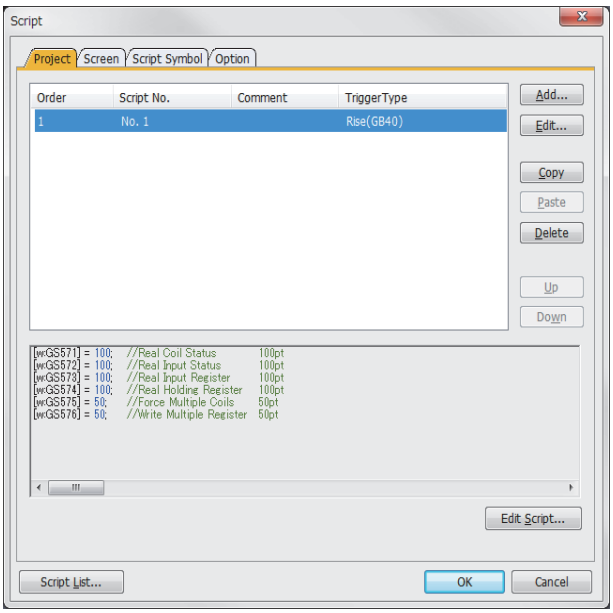
The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

## MODBUS communication control function on the GS device

At GOT startup, set MODBUS communication control function with project scripts, etc.

If settings are changed after communication start, a communication error may occur.




Setting example for project script

# 49 MODBUS/RTU SLAVE CONNECTION



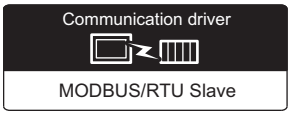

- Page 2059 Connectable Model List
- Page 2060 System Configuration
- Page 2062 Connection Diagram
- Page 2067 GOT Side Settings
- Page 2069 MODBUS/RTU master equipment Side Settings
- Page 2069 Function Code
- Page 2069 GOT (Slave) Operations for All Station Specification (Broadcast)
- Page 2069 Settable Device Range
- Page 2070 Precautions


## 49.1 Connectable Model List

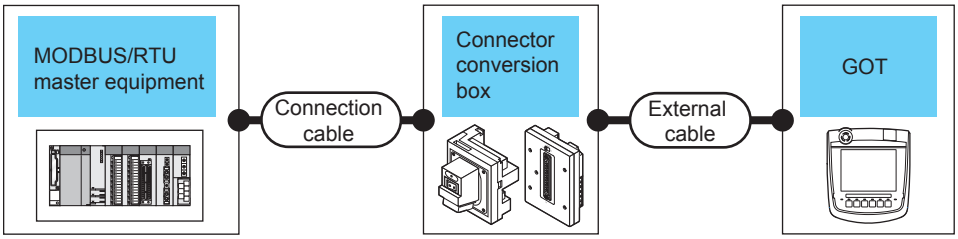
The GOT2000 series supports the slave function of the MODBUS communication that is the open FA network.
Thus, the GOT can be connected with each MODBUS master equipment.
For the MODBUS/RTU equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

# 49.2 System Configuration

## Connecting to MODBUS/RTU master equipment




### When using the connector conversion box

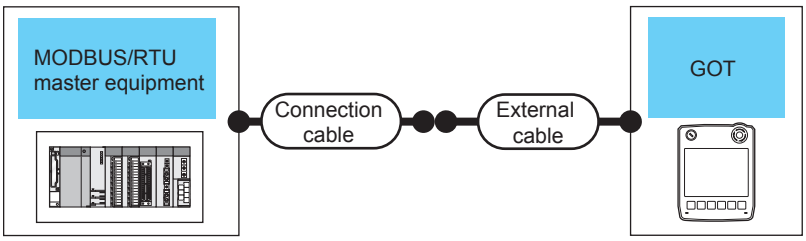



| Controller | Communication Type | Connection cable<br>Cable model<br>Connection diagram number | Connector conversion box | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| MODBUS/RTU master equipment | RS-232 | User preparing Page 2062 RS-232 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m) | GT 2506HS | 6m | 1 MODBUS/RTU master equipment for 1 GOT |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m) | GT 2505HS | | |
| | RS-422/485 | User preparing Page 2064 RS-422/485 connection diagram 1) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 GOTs for 1 MODBUS/RTU master equipment*2 |
| | | | GT11H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | GT 2505HS | | Up to 1 GOT for 1 MODBUS/RTU master equipment |
| | RS-422/485 | User preparing Page 2065 RS-422/485 connection diagram 4) | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 13m | Up to 31 GOTs for 1 MODBUS/RTU master equipment*2 |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 31 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

## When using the external cable (GT11H-C□□□-37P)

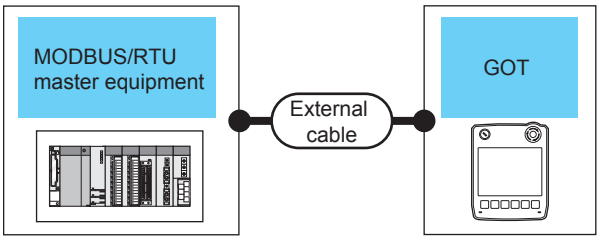



| Controller | | Connection cable | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|---|
| Model | Communication Type | Cable model Connection diagram number | | | | |
| MODBUS/RTU master equipment | RS-232 | User preparing Page 2062 RS-232 connection diagram 2) | GT11H-C30-37P(3m) | GT 2505HS | 6m | 1 MODBUS equipment for 1 GOT |
| | RS-422/485 | User preparing Page 2064 RS-422/485 connection diagram 2) | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | 13m | Up to 10 MODBUS equipment for 1 GOT*2 |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

## When using the external cable (GT11H-C□□□)




| Controller | | External cable | GOT Model | Total distance *1 | Number of connectable equipment |
|---|---|---|---|---|---|
| Model | Communication Type | | | | |
| MODBUS/RTU master equipment | RS-232 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>☞ Page 2063 RS-232 connection diagram 3) | GT 2505HS | 6m | 1 MODBUS equipment for 1 GOT |
| | RS-422/485 | GT11H-C30(3m)<br>GT11H-C60(6m)<br>GT11H-C100(10m)<br>☞ Page 2065 RS-422/485 connection diagram 3) | | 13m | Up to 10 MODBUS equipment for 1 GOT*2 |

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

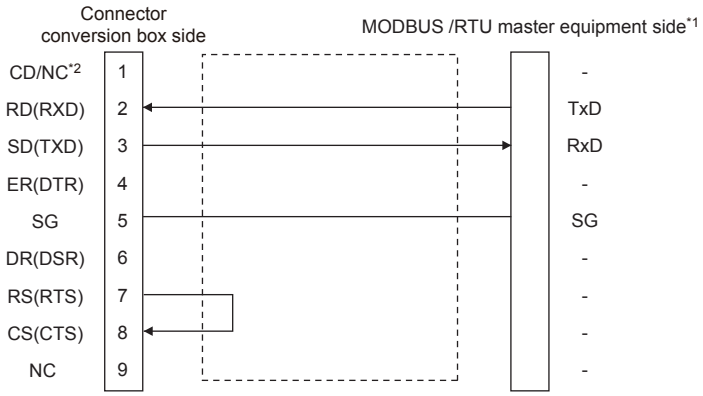
# 49.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

## RS-232 cable

### Connection diagram

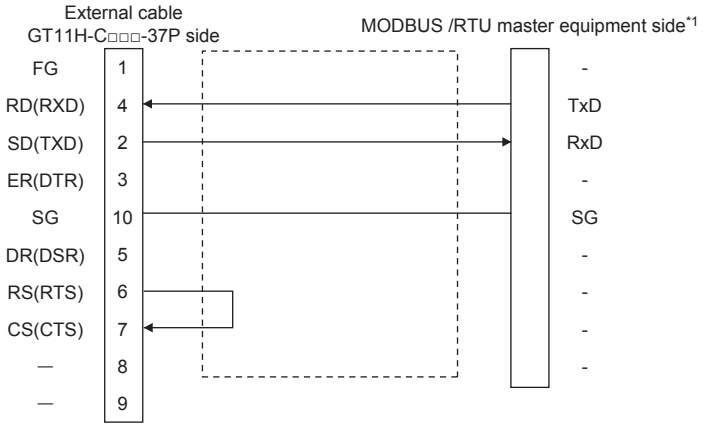
#### ■RS-232 connection diagram 1)




*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

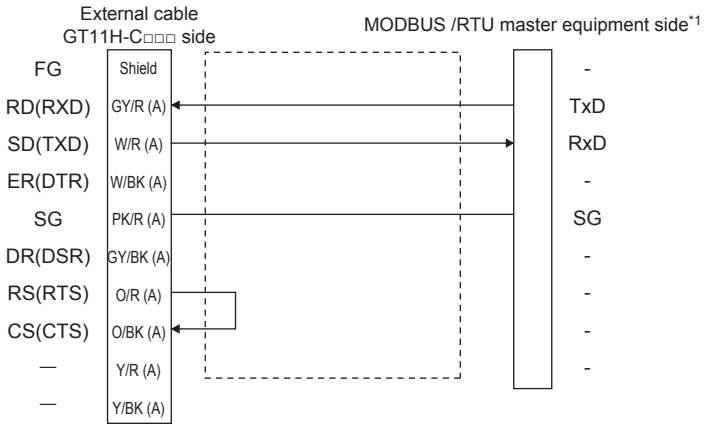
*2 GT2506HS-V: CD, GT2505HS-V: NC

#### ■RS-232 connection diagram 2)




*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

### ■RS-232 connection diagram 3)




*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■MODBUS equipment side connector

Use the connector compatible with the MODBUS/RTU master equipment side module.

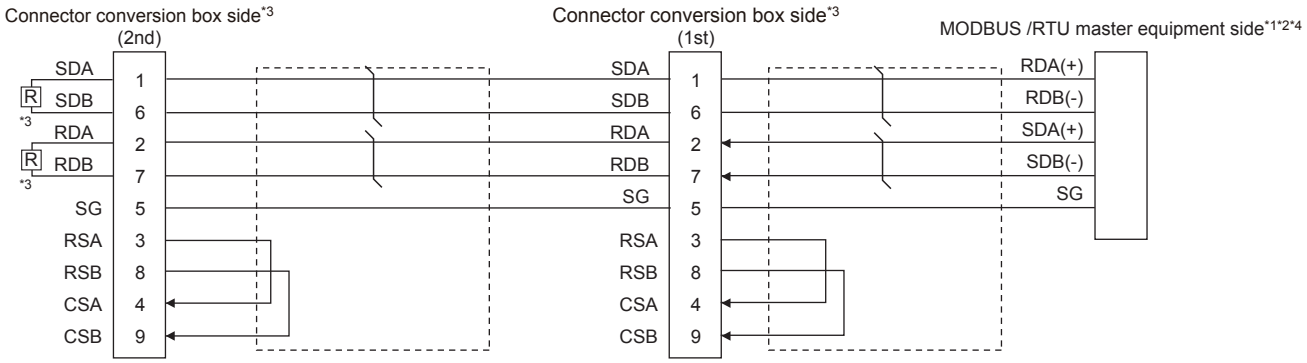
For details, refer to the MODBUS/RTU master equipment user's manual.

# RS-422/485 cable

The following shows the connection diagrams and connector specifications of the RS-422/485 cable used for connecting the GOT to a PLC.

## Connection diagram

### ■RS-422/485 connection diagram 1)



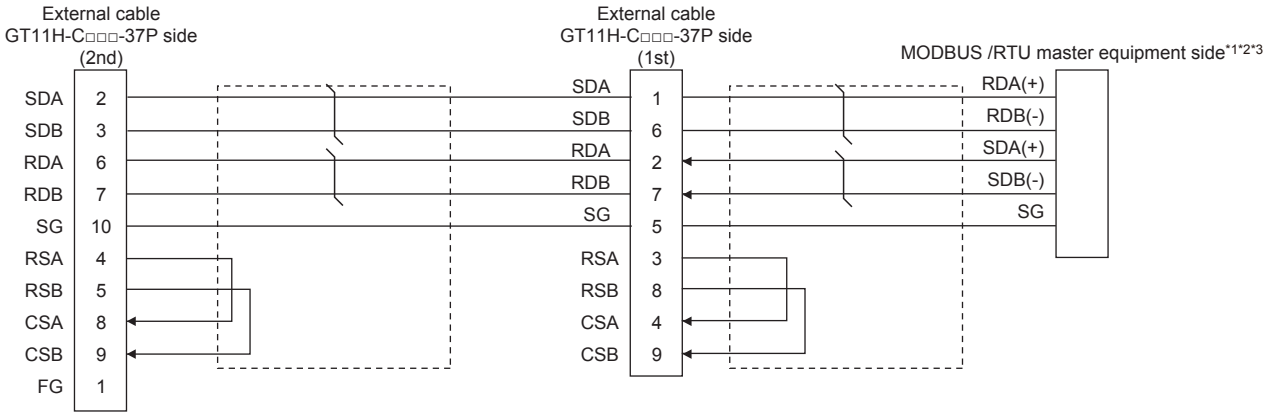

*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 89 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

### ■RS-422/485 connection diagram 2)

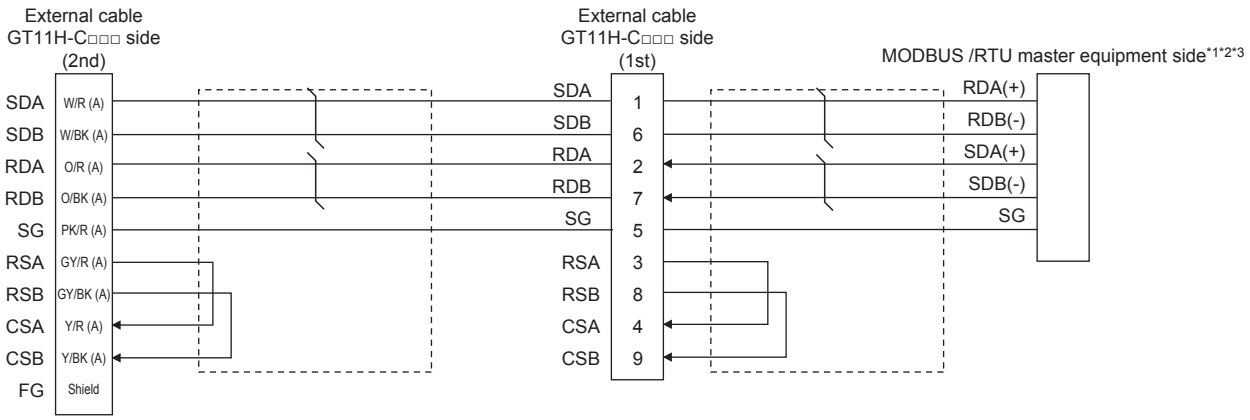



*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

## ■RS-422/485 connection diagram 3)

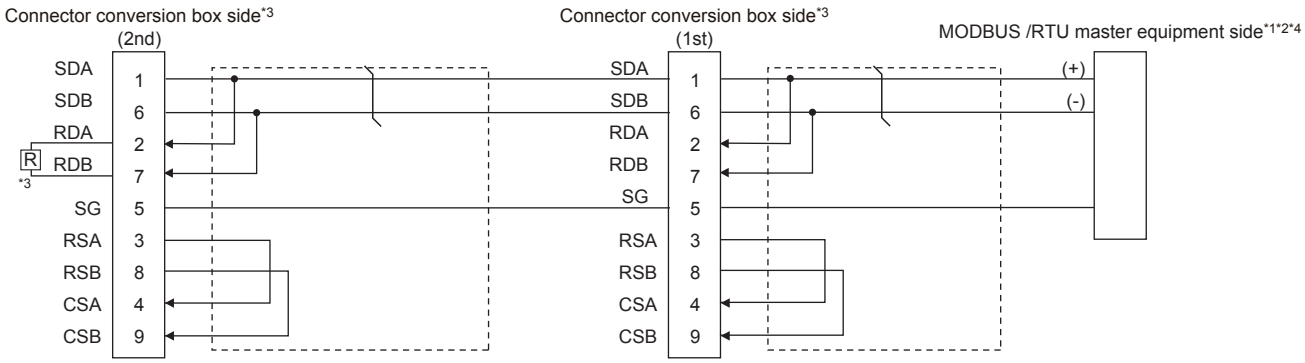



*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

## ■RS-422/485 connection diagram 4)




*1 The actual terminal layout on the MODBUS/RTU master equipment may differ from the example shown above.
SDA/B(+/-) and RDA/B(+/-) terminals can be separated from each other.
In such cases, make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*2 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*3 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 89 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment.

## Precautions when preparing a cable

### ■Cable length

The total distance (between GOT and controllers) of the RS-422/485 cable must be 13 m or less.

### ■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 87 GOT connector specifications

### ■MODBUS/RTU master equipment side connector

Use the connector compatible with the MODBUS/RTU master equipment side module.

For details, refer to the MODBUS/RTU master equipment user's manual.

## Connecting terminating resistors

### ■GOT side

When connecting a MODBUS/RTU master equipment to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor using the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 89 Terminating resistors of GOT

### ■MODBUS/RTU equipment side

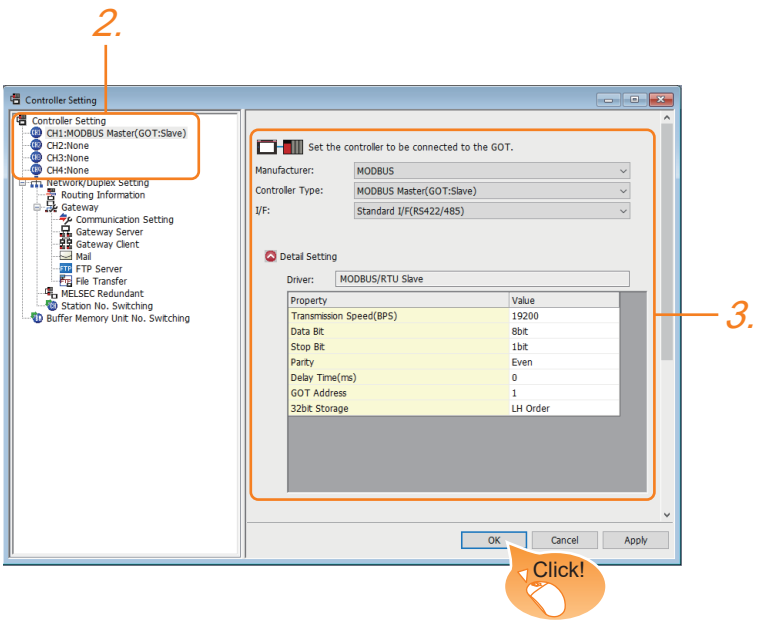
When connecting a MODBUS/RTU master equipment to the GOT, a terminating resistor must be connected to the MODBUS/RTU master equipment.

For details, refer to the MODBUS/RTU master equipment user's manual.

# 49.4 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Master(GOT:Slave)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2068 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| Transmission Speed(BPS) | 19200 |
| Data Bit | 8bit |
| Stop Bit | 1bit |
| Parity | Even |
| Delay Time(ms) | 0 |
| GOT Address | 1 |
| 32bit Storage | LH Order |

| Item | Description | Range |
|---|---|---|
| Transmission Speed | Set this item when change the transmission speed used for communication with the connected equipment.<br>(Default: 19200bps) | 9600bps,<br>19200bps,<br>38400bps,<br>57600bps,<br>115200bps |
| Data Bit | Set this item when change the data length used for communication with the connected equipment.<br>(Default: 8bits) | 7bit/8bit |
| Stop Bit | Specify the stop bit length for communications.<br>(Default: 1bit) | 1bit/2bit |
| Parity | Specify whether or not to perform a parity check, and how it is performed during communication.<br>(Default: Even) | None<br>Even<br>Odd |
| Delay Time*1 | Set this item to adjust the transmission timing of the communication request from the GOT.<br>(Default: 0ms) | 0 to 300ms |
| GOT Station | Set the station No. of the GOT.<br>(Default: 1) | 1 to 247 |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order/HL Order |

*1 The GOT ensures in advance the minimum interval (3.5 characters time) for communication frame defined in the MODBUS/RTU. Therefore, the actual send delay time is as follows.

Actual send delay time = Send delay time set in the communication detail setting + 3.5 character time

Minimum interval for communication frame defined in MODBUS/RTU

When connecting to MODBUS/RTU master equipment which requires a delay longer than 3.5 character time, adjust the send delay time.

**Point**

If the communication with MODBUS/RTU master equipment is not established, some equipment which requires a delay longer than 3.5 character time may be connected.
Adjust the send delay time in the communication detail setting.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting]after writing [Controller Setting] of project data.
For details on the Utility, refer to the following manual.
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# 49.5 MODBUS/RTU master equipment Side Settings

Point

MODBUS/RTU master equipment

For details of the MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

# 49.6 Function Code

The following shows the message format for the MODBUS communication.

| Address | Function code | Data | CRC |
|---|---|---|---|

The GOT (slave) supports the following function codes.

| Function code | Function | Number of devices that are accessible with one message [Unit: point(s)] |
|---|---|---|
| 0x01 | Read Coils | 1 to 2000 |
| 0x02 | Read Discrete Inputs | 1 to 2000 |
| 0x03 | Read Holding Registers | 1 to 125 |
| 0x04 | Read Input Registers | 1 to 125 |
| 0x05 | Write Single Coil | 1 |
| 0x06 | Write Single Register | 1 |
| 0x08 *1 | Diagnostics | - |
| 0x0F | Write Multiple Coils | 1 to 1968 |
| 0x10 | Write Multiple Register | 1 to 123 |

*1 Only available to the loopback (sub function code 0x0000).

# 49.7 GOT (Slave) Operations for All Station Specification (Broadcast)

The all station specification (broadcast) operates when [0] is specified as the slave address in the request packet.

The following describes the GOT (Slave) Operations for All Station Specification (Broadcast) from the MODBUS/RTU master equipment.

- The GOT (slave) will not respond to the read-out requests specifying all stations from the MODBUS/RTU master equipment (read-out disabled).
- The GOT (slave) will perform the write-in requests specifying all stations from the MODBUS/RTU master equipment but will not respond.
- The GOT (slave) will not respond to the diagnosis requests specifying all stations from the MODBUS/RTU master equipment (loopback disabled).

# 49.8 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Master(GOT:Slave)])

# 49.9 Precautions

## Errors that occur in the GOT at MODBUS/RTU slave connection

In MODBUS/RTU slave connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.

When the following errors occur, the GOT will generate a system alarm.

| Error code | Contents of the message display | Causes | Countermeasures |
|---|---|---|---|
| 309*1 | Device reading error. Correct device. | • An error occurred when reading consecutive devices.<br>• A device that is out of the monitor range is specified at a place where consecutive device is specified, such as graph function or system information. | Correct so that a device No. in the monitor range is specified. |
| 315*1 | Device writing error. Correct device. | • Writing was executed to a device No. that is out of the monitor range.<br>• Writing was executed to a write-prohibit device. | Review the write target device and the device No. |
| 322*1 | The specified device No. is out of range. Confirm the available device range. | • A device read error occurs.<br>• The GOT accesses the device that is out of range specified by the master station. | To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device. |

*1 This may occur even when the MODBUS/RTU slave is not connected.

## Error codes (MODBUS Exception Codes) returned from GOT (slave) to MODBUS master equipment

The GOT (slave) supports the following error codes (MODBUS Exception Codes) in respect to the request from the MODBUS master equipment.

When the following errors occur, the GOT will not generate a system alarm.

The description, causes and countermeasures for each error code are explained below.

### ■Error codes issued in common in respect to request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x01 | - | ILLEGAL FUNCTION | A function code not supported by the GOT was received. | Use only function codes supported by GOT.<br>Refer to the following for details on function codes supported by the GOT.<br>☞ Page 2069 Function Code |

### ■Error code issued in response to read request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x02 | Read/Write | ILLEGAL DATA ADDRESS | An out-of-range device was accessed. | Check that the device being accessed is correct. |

### ■Error code issued in response to write request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x02 | Read/Write | ILLEGAL DATA ADDRESS | An out-of-range device was accessed. | Check that the device being accessed is correct. |
| 0x03 | Write | ILLEGAL DATA VALUE | The request packet (number of write points, number of write data bytes, and number of write data items) is inconsistent. | Check that a correct packet is sent from the master equipment. |

### ■Error code issued when diagnosis occurs (function code 0x08)

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x01 | - | ILLEGAL FUNCTION | The GOT received an unsupported sub-function code. | Use only 0x0000 (loopback) for the sub-function codes. |

## Operation in which the GOT shifts to the offline mode

Before performing operation in which the GOT shifts to the offline mode such as writing the package data, stop the communication between the GOT and the MODBUS/RTU master equipment.
After shifting to the offline mode, the GOT cannot respond to the requests from the MODBUS/RTU master equipment.
Even after the GOT returns from the offline mode, the communication may not be performed until the timeout time of the MODBUS/RTU master equipment side elapses.

# MEMO

# 50 MODBUS/TCP SLAVE CONNECTION


- Page 2073 Connectable Model List
- Page 2074 System Configuration
- Page 2075 GOT Side Settings
- Page 2077 MODBUS/TCP Master Equipment Side Settings
- Page 2077 Function Code
- Page 2077 Settable Device Range
- Page 2078 Precautions

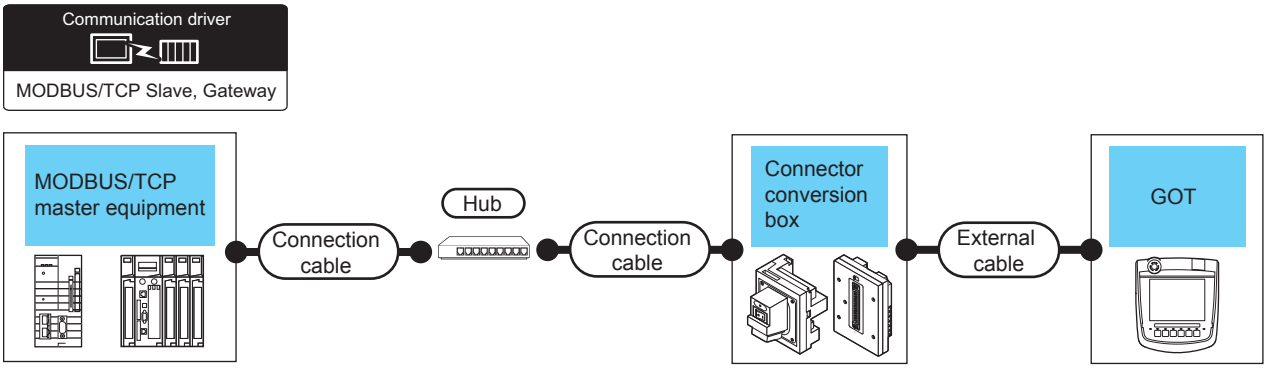



## 50.1 Connectable Model List

The GOT2000 series supports the slave function of the MODBUS/TCP communication that is the open FA network.
Thus, the GOT can be connected with each MODBUS master equipment.
For the MODBUS/TCP equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

# 50.2 System Configuration

## Connecting to MODBUS/TCP master equipment




| Controller | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model*4 | Maximum segment length*3 | | Cable model | Maximum segment length*3 | | | | |
| MODBUS/TCP master equipment | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | Hub*1 | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When the ratio of master equipment to the GOT is N:1 The number of master equipment for 1 GOT is 16 or less<br>When the ratio of master equipment to the GOT is N:1 The following shows the number of GOTs for 1 master equipment Depends on the MODBUS/TCP master equipment used*5. |
| | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Connect the GOT to the MODBUS/TCP master equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hub s has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

*5 For details, refer to the MODBUS/TCP master equipment manual.

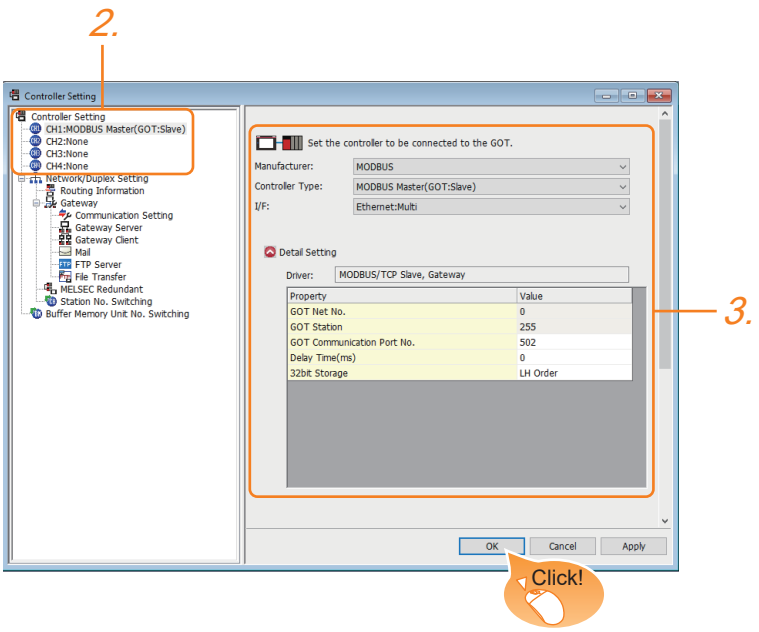
*6 Use C or later version of GT11H-C□□-37P.

# 50.3 GOT Side Settings

## Setting communication interface (Controller Setting)



Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Master(GOT:Slave)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2076 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 0 |
| GOT Station | 255 |
| GOT Communication Port No. | 502 |
| Delay Time(ms) | 0 |
| 32bit Storage | LH Order |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Not used | - |
| GOT Station | Not used | - |
| GOT Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 502 *1) | 502 to 65534<br>(Except for 503 to 1023, 5011 to 5013 and 49153 to 49170) |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000(ms) |
| 32bit Storage | Select the steps to store two words (32-bit data).<br>(Default: LH Order) | LH Order/HL Order |

*1 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

• Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# 50.4 MODBUS/TCP Master Equipment Side Settings

For details of the MODBUS/TCP master equipment, refer to the manual of MODBUS/TCP master equipment to be used.

# 50.5 Function Code



The following shows the message format for the MODBUS communication.

| Address | Function code | Data | CRC |
|---|---|---|---|

The GOT (slave) supports the following function codes (sub function codes).

| Function code | Function | Number of devices that are accessible with one message [Unit: point(s)] |
|---|---|---|
| 0x01 | Read Coils | 1 to 2000 |
| 0x02 | Read Discrete Inputs | 1 to 2000 |
| 0x03 | Read Holding Registers | 1 to 125 |
| 0x04 | Read Input Registers | 1 to 125 |
| 0x05 | Write Single Coil | 1 |
| 0x06 | Write Single Register | 1 |
| 0x0F | Write Multiple Coils | 1 to 1968 |
| 0x10 | Write Multiple Register | 1 to 123 |

# 50.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Master(GOT:Slave)])

# 50.7 Precautions

## Send delay

"Send delay" is a setting used for low-speed devices that cannot respond when the send response is too fast.
When "Send delay" is set with the GOT's communication devices detail settings, the "Send delay" is enabled for all master devices that are connected.

## Errors that occur in the GOT at MODBUS/TCP slave connection

In MODBUS/TCP slave connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.
When the following errors occur, the GOT will generate a system alarm.

| Error code | Contents of the message display | Causes | Countermeasures |
|---|---|---|---|
| 309*1 | Device reading error. Correct device. | • An error occurred when reading consecutive devices.<br>• A device that is out of the monitor range is specified at a place where consecutive device is specified, such as graph function or system information. | Correct so that a device No. in the monitor range is specified. |
| 315*1 | Device writing error. Correct device. | • Writing was executed to a device No. that is out of the monitor range.<br>• Writing was executed to a write-prohibit device. | Review the write target device and the device No. |
| 322*1 | The specified device No. is out of range. Confirm the available device range. | • A device read error occurs.<br>• The GOT accesses the device that is out of range specified by the master station. | To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device. |

*1 This may occur even when the MODBUS/TCP slave is not connected.

## Error codes (MODBUS Exception Codes) returned from GOT (slave) to MODBUS master equipment

The GOT (slave) supports the following error codes (MODBUS Exception Codes) in respect to the request from the MODBUS master equipment. When the following errors occur, the GOT will not generate a system alarm.
The description, causes and countermeasures for each error code are explained below.

### ■Error codes issued in common in respect to request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x01 | - | ILLEGAL FUNCTION | A function code not supported by the GOT was received. | Use only function codes supported by GOT.<br>Refer to the following for details on function codes supported by the GOT.<br>☞ Page 2077 Function Code |

### ■Error code issued in response to read request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x02 | Read/Write | ILLEGAL DATA ADDRESS | An out-of-range device was accessed. | Check that the device being accessed is correct. |

### ■Error code issued in response to write request from master equipment

| Error code (HEX) | Category | Description | Causes | Countermeasures |
|---|---|---|---|---|
| 0x02 | Read/Write | ILLEGAL DATA ADDRESS | An out-of-range device was accessed. | Check that the device being accessed is correct. |
| 0x03 | Write | ILLEGAL DATA VALUE | The request packet (number of write points, number of write data bytes, and number of write data items) is inconsistent. | Check that a correct packet is sent from the master equipment. |

# PART 10 CLPA

51 SLMP CONNECTION

52 CC-LINK IE FIELD NETWORK BASIC CONNECTION

# 51 SLMP CONNECTION

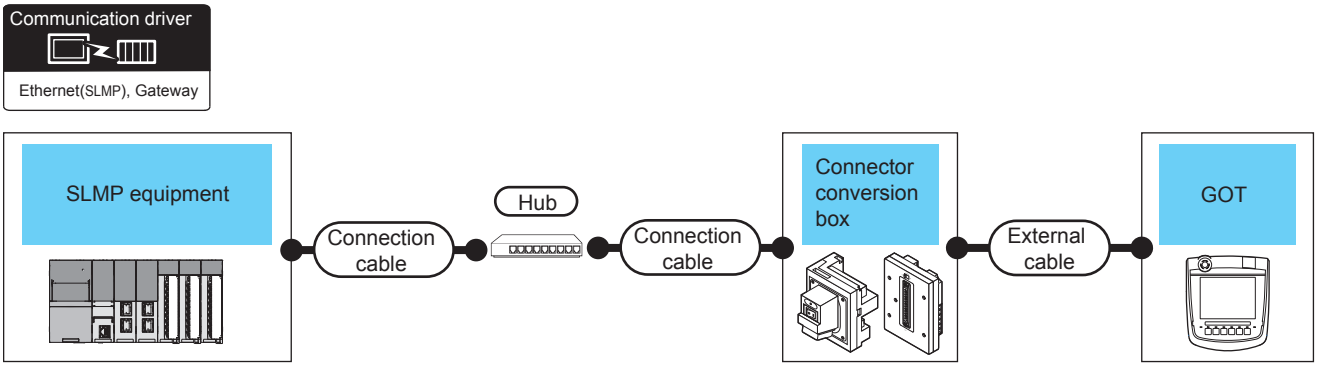

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- Page 2081 System Configuration
- Page 2082 GOT Side Settings
- Page 2087 SLMP Equipment Side Setting
- Page 2087 Settable Device Range
- Page 2088 Precautions


## 51.1 Connectable Model List

GOT2000 Series products support the master function of SLMP communication, the open FA network.
Thus, the GOT can be connected with each SLMP server.
For the SLMP-compatible equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

# 51.2 System Configuration

## Connecting to SLMP equipment




| Controller | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable *6 | GOT model *2 | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model*4 | Maximum segment length*3 | | Cable model | Maximum segment length*3 | | | | |
| SLMP equipment | Ethernet | • 1000BASE-T 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | Hub*1 | • 1000BASE-T 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | When SLMP equipment: GOT is N: 1<br>The number of SLMP equipment for 1 GOT is TCP: 128 or less.<br>When SLMP equipment: GOT is 1: N<br>The following shows the number of GOTs for 1 SLMP equipment<br>Depends on the SLMP equipment used.*5 |
| | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Connect the GOT to the SLMP equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX/1000BASE-T standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

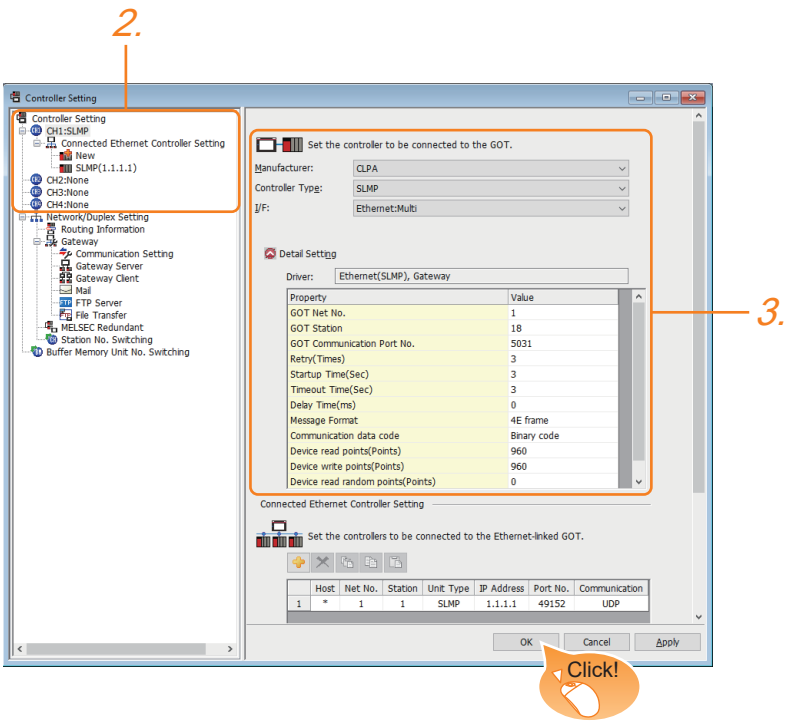
*5 For details, refer to the SLMP equipment manual.

*6 Use C or later version of GT11H-C□□-37P.

# 51.3 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] → [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [CLPA]
- [Controller Type]: [SLMP]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2083 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting].For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 1 |
| GOT Station | 18 |
| GOT Communication Port No. | 5031 |
| Retry(Times) | 3 |
| Startup Time(Sec) | 3 |
| Timeout Time(Sec) | 3 |
| Delay Time(ms) | 0 |
| Message Format | 4E frame |
| Communication data code | Binary code |
| Device read points(Points) | 960 |
| Device write points(Points) | 960 |
| Device read random points(Points) | 0 |
| Device write random points(Points) | 0 |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Set the network No. of the GOT.<br>(Default: 1) | 1 to 239 |
| GOT Station*1 | Set the station No. of the GOT.<br>(Default: 18) | 1 to 120 |
| GOT<br>Communication Port No. | Set the GOT port No. for the connection with the Ethernet module.<br>(Default: 5031 *3) | 1024 to 5010,<br>5014 to 49152,<br>49171 to 65534<br>(Except for 49153 to 49170) |
| Retry | Set the number of retries to be performed when a communication timeout occurs.<br>When receiving no response after retries, the communication times out.<br>(Default: 3times) | 0 to 5times |
| Startup Time | Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU.<br>(Default: 3sec) | 3 to 255sec |
| Timeout Time | Set the time period for a communication to time out.<br>(Default: 3sec) | 1 to 90sec |
| Delay Time | Set the delay time for reducing the load of the network/destination PLC.<br>(Default: 0ms) | 0 to 10000 (ms) |
| Message Format | Set the message format.<br>(Default: 4E frame) | QnA compatible 3E frame, 4E frame |
| Communication data code | Set the communication data code.<br>(Default: Binary code) | ASCII code, Binary code |
| Device read points*2 | Set the device read points.<br>(Default: 960 points) | 1 to 960 points |
| Device write points*2 | Set the device write points.<br>(Default: 960 points) | 1 to 960 points |
| Device read random points *2 | Device read random points<br>(Default: 0 point) | 0 to 192 points |
| Device write random points *2 | Device write random points<br>(Default: 0 point) | 0 to 160 points |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2085 Connected Ethernet Controller Setting

*2 Pay attention to the following items for read/write points.
- Set the points to be processed at one-time communication.
- The point is in word device units. The point is to be 16 times of the set value for the bit device.
- The points could be less than the set value when UDP protocol or ASCII code are used.
- Refer to the following Technical News for details.

List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153)

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

• Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

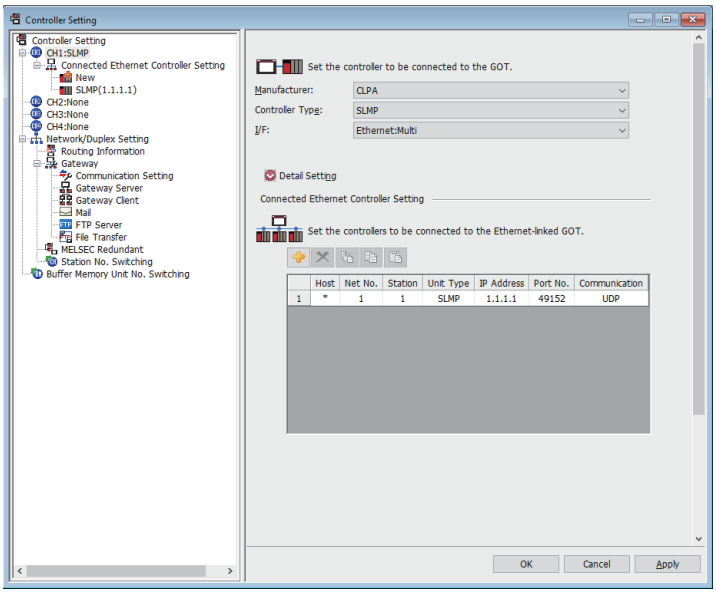
## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

# Connected Ethernet Controller Setting




| Item | Description | Range |
|---|---|---|
| Host | The host is displayed.<br>It refers to a station that can be connected without setting a station number.<br>(The host is indicated with an asterisk (*).) | — |
| Net No. | Set the network No. of the connected Ethernet module.<br>(Default: 1) | 1 to 239 |
| Station*1 | Set the station No. of the connected Ethernet module.<br>(Default: 1) | 1 to 120, 125 *2 |
| Unit Type | SLMP (fixed) | — |
| IP Address | Set the IP address of the connected Ethernet module.<br>(Default: 1.1.1.1) | SLMP equipment side IP address |
| Port No. | Set the port number of the SLMP compatible device.<br>(Default: 49152) | 1 to 65535 |
| Communication format | UDP, TCP<br>(Default: UDP) | Adjust the setting with the communication format of the SLMP compatible device. |

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2083 Communication detail settings

*2 Set 125 to [Station] to access the master station of the CC-Link IE TSN network.

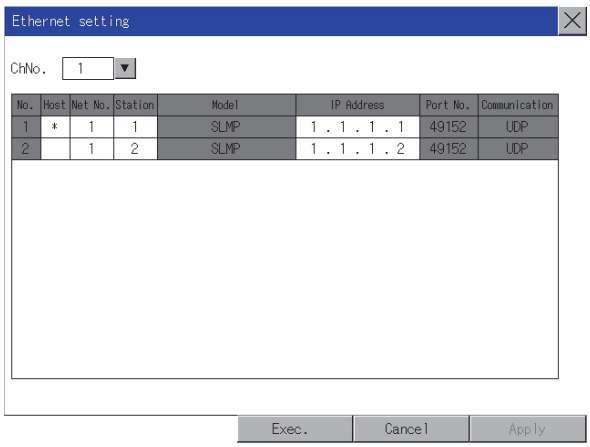
**Point**

Changing the host with GOT module

The host can be changed by the GOT module Utility.

For details of settings, refer to the following.

GOT2000 Series User's Manual (Utility)

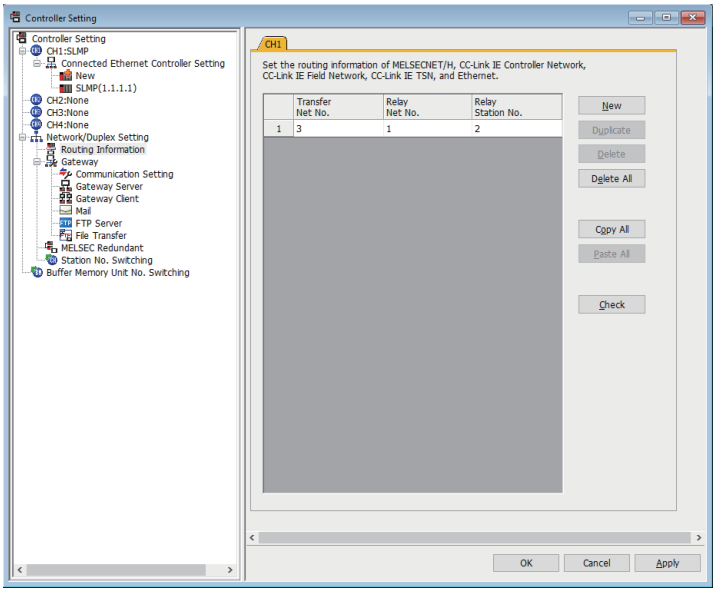


# Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.
However, the same transfer network number cannot be set twice or more (multiple times).
Therefore, the one that can access to other station from there quest source host GOT is 64 kinds of [Transfer NetworkNo.]s.

**Point**

Routing parameter setting
When communicating within the host network, routing parameter setting is unnecessary.
For details of routing parameters, refer to the following manual.
Manuals of SLMP equipment




| Item | Range |
|---|---|
| Transfer Network No. | 1 to 239 |
| Relay Network No. | 1 to 239 |
| Relay Station No. | 0 to 120, 125 *1 |

*1 When 125 is set to [Relay Station No.], the master station of CC-Link IE TSN can be accessed.

**Point**

• Routing parameter setting of relay station
Routing parameter setting may also be necessary for the relay station.
For the setting, refer to the following.
Manuals of SLMP equipment
• Parameter reflection function of MELSOFT Navigator
The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green.
Set items, which are displayed in green cells, from the MELSOFT Navigator.
When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added.
Items set in advance are not deleted.
However, if the target network No. overlaps, the item set in advance is overwritten.
The routing information is used manually by the user when the data is created.
Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again.
For details of the creation of the routing information, refer to the MELSOFT Navigator help.

## 51.4 SLMP Equipment Side Setting

Refer to the following manual for the setting of the SLMP compatible devices.

Manuals of SLMP equipment

## 51.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
CLPA ([SLMP])

# 51.6 Precautions

## Replacing SLMP compatible device

After replacing an external device or a SLMP compatible device due to failure and so on, the devices may not communicate by changing the MAC address. (When replaced with a device that has the same IP address)
When a device in the Ethernet network is replaced, restart all devices in the network.

## The deviation between MC protocol and SLMP protocol

When using our products used in MC protocol for SLMP protocol, there is a difference between the corresponding commands. Refer to the following manual and check if they are convertible.
📖SLMP Reference Manual

## Setting the message format

When the message format setting is not consistent with the communication frame type, monitoring may not be performed properly.
Set the message format according to the communication frame type of the SLMP-compatible equipment.

- ST type: QnA compatible 3E frame
- MT type: 4E frame

For details of the communication frame of the SLMP-compatible equipment, refer to the following.
📖Manuals of SLMP equipment
For setting the message format, refer to the following.
☞ Page 2083 Communication detail settings

# 52 CC-LINK IE FIELD NETWORK BASIC CONNECTION


- Page 2089 Connectable Model List
- Page 2090 System Configuration
- Page 2093 GOT Side Settings
- Page 2096 Master Station Side Settings
- Page 2096 Settable Device Range
- Page 2097 Precautions




## 52.1 Connectable Model List

The GOT2000 series supports the remote station function of the CC-Link IE Field Network Basic communication, which is an open FA network.

Therefore, the GOT2000 series can communicate with various CC-Link IE Field Network Basic master stations.

For the CC-Link IE Field Network Basic master stations validated by Mitsubishi Electric Corporation, refer to the following.

📖List of CC-Link IE Field Network Basic-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0149)

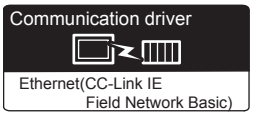
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.

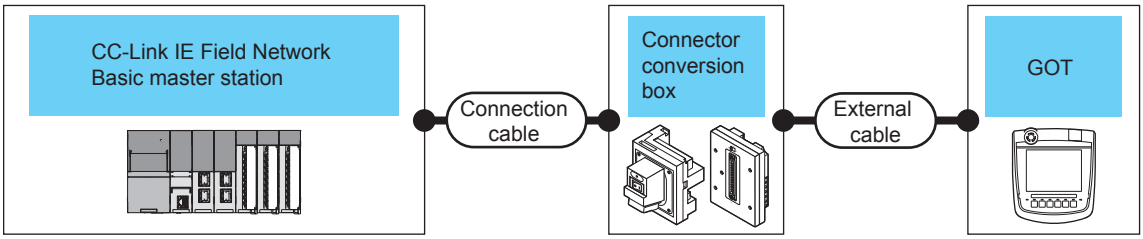
www.MitsubishiElectric.com/fa

# 52.2 System Configuration

## When connecting to the CC-Link IE Field Network Basic master station

### When connecting to one master station

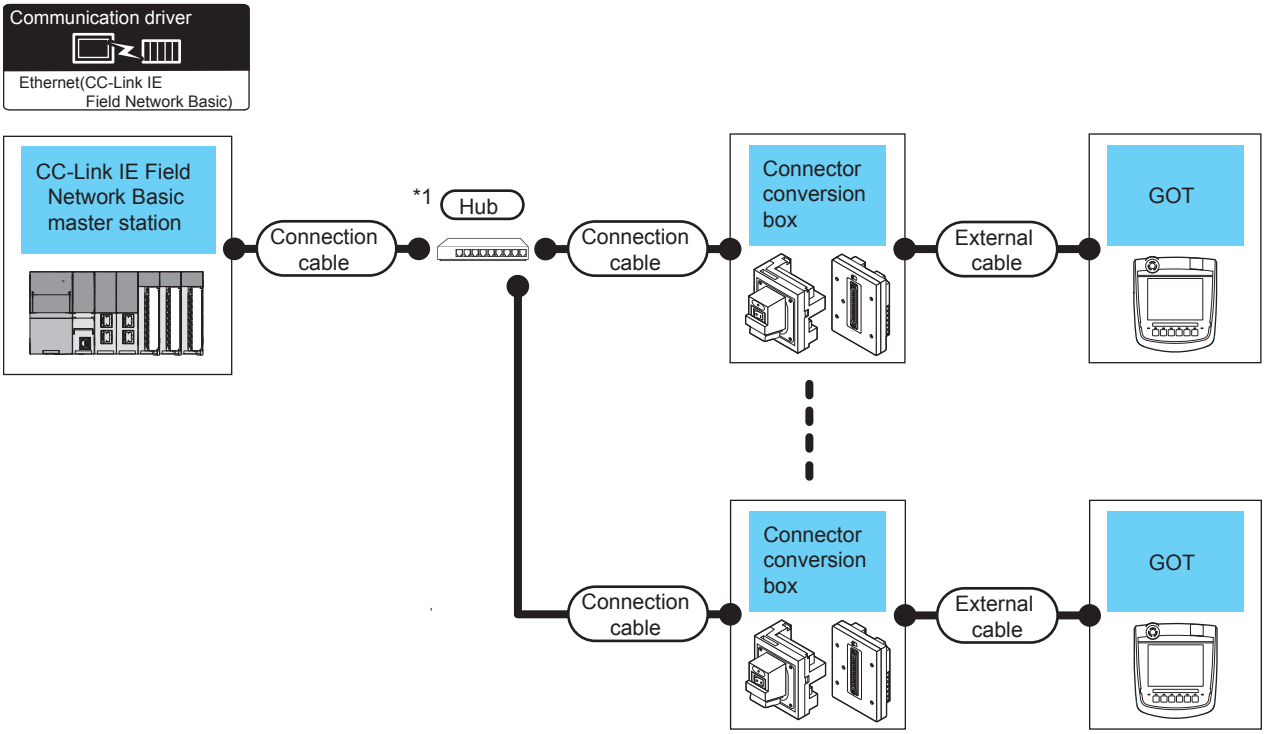



| Controller | Communication Type | Connection cable | | Connector conversion box | External cable *1 | GOT model (remote station) | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| | | Cable model | Maximum segment length | | | | |
| CC-Link IE Field Network Basic master station | Ethernet | 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | 1 GOT for 1 master station |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | |

*1 Use C or later version of GT11H-C□□-37P.

## When multiple GOTs (remote stations) are connected to one master station




*1 Use hubs that satisfy the following conditions.
- Conform to the IEEE802.3 (100BASE-TX) standard.
- Include Auto MDI/MDI-X.
- Include an automatic negotiation function.
- Switching hub (layer 2 switch) (Do not use repeater hubs)

| Controller | Communication Type | Connection cable | | External device | Connection cable | | Connector conversion box | External cable[*5] | GOT model (remote station) | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cable model[*3] | Maximum segment length[*2] | | Cable model | Maximum segment length[*2] | | | | |
| CC-Link IE Field Network Basic master station | Ethernet[*4] | 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher | 100m | Hub[*1] | 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m) | GT 2506HS | Up to 64 GOTs (remote stations) for 1 master station |
| | | | | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m) | | |
| | | | | | | | GT16H-CNB-42S | GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m) | GT 2505HS | |
| | | | | | | | GT16H-CNB-37S | GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m) | | |

*1 Connect the GOT to the CC-Link IE Field Network Basic master station via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standards.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use the straight cable.

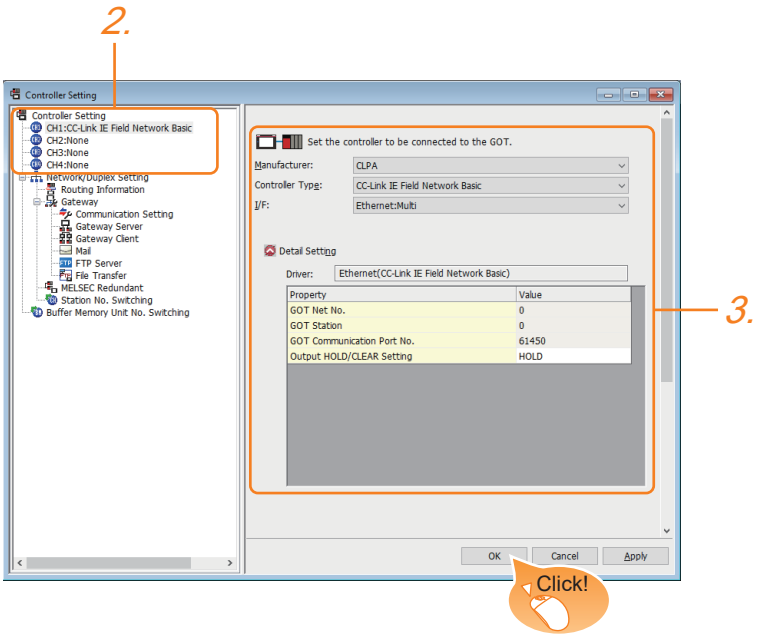
*4 CC-Link IE Field Network Basic communication does not support connection beyond routers.

*5 Use C or later version of GT11H-C□□-37P.

# 52.3 GOT Side Settings

## Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.




**1.** Select [Common] [Controller Setting] from the menu.

**2.** In the [Controller Setting] window, select the channel No. to be used from the list menu.

**3.** Select the following items and the detail setting is displayed.

- [Manufacturer]: [CLPA]
- [Controller Type]: [CC-Link IE Field Network Basic]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2094 Communication detail settings

**4.** When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting].For details, refer to the following.

☞ Page 80 I/F communication setting

# Communication detail settings

Make the settings according to the usage environment.

| Property | Value |
|---|---|
| GOT Net No. | 0 |
| GOT Station | 0 |
| GOT Communication Port No. | 61450 |
| Output HOLD/CLEAR Setting | HOLD |

| Item | Description | Range |
|---|---|---|
| GOT Net No. | Not used | - |
| GOT Station | Not used | - |
| GOT Communication Port No. | Displays the port No. that is used by cyclic transmission of CC-Link IE Field Network Basic for the GOT. | 61450 (fixed) |
| Output HOLD/CLEAR Setting | Select whether the GOT holds or clears its device value (output data of the master and remote stations(GOT)) when the master station stops running. (Default: HOLD) | HOLD, CLEAR |

**Point**

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

• Port No. [61451]

For CC-Link IE Field Network Basic, the port No. [61451] is used as a port for device detection.

When the port No. [61451] is used for other communication functions, CC-Link IE Field Network Basic connection cannot be used.

# GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

## GOT IP address setting

Set the following communication port setting.

- Standard port

## GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

## IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 78 GOT Ethernet Setting

## 52.4 Master Station Side Settings

For the settings of the CC-Link IE Field Network Basic master station, refer to the following manual.

Manual for CC-Link IE Field Network Basic master station

## 52.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

CLPA ([CC-Link IE Field Network Basic])

# 52.6 Precautions

## Port No. [61451]

For CC-Link IE Field Network Basic, the port No. [61451] is used as a port for device detection.
When the port No. [61451] is used for other communication functions, CC-Link IE Field Network Basic connection cannot be used.

## Errors that occurs in the GOT at CC-Link IE Field Network Basic connection

In CC-Link IE Field Network Basic connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.

| Error code | Contents of the message display | Causes | Countermeasures |
|---|---|---|---|
| 322*1 | The specified device No. is out of range. Confirm the available device range. | • A device read error occurs.<br>• The GOT accesses the device that is out of range specified by the master station. | To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device. |
| 402*1 | The specified device No. is out of range. Confirm the available device range. | When the GOT is turned on, the master station is powered off. | Start the master station, and then turn on the GOT. |
| 496*2 | Settings for the GOT is not satisfied operation conditions of the communication driver. | • Unusable IP address in CC-Link IE Field Network Basic is set.<br>• The port No. 61451 that is used in CC-Link IE Field Network Basic is used by other functions. | • Set the IP address within the range of 0.0.0.1 to 223.255.255.254.<br>• When setting the IP address and subnet mask to each Ethernet I/F, set the network differently from each other.<br>• Change the port No. of the function that uses the port No. 61451. |

*1 May occurs even if CC-Link IE Field Network connection is not used.
*2 Occurs only when CC-Link IE Field Network connection is used.

## Network errors that occurs in CC-Link IE Field Network Basic connection

In CC-Link IE Field Network Basic connection, contents of the message display, causes, and countermeasures for the following network errors are described below.

| Error code | Contents of the message display | Causes | Countermeasures |
|---|---|---|---|
| 854*1 | The master station is duplicated in the same network. | The master station is duplicated in the same network. | Correct it so that one master station is in the same network. |
| 855*1 | Parallel-off status. | Waiting for the request from the master station. | Confirm the status of the master station. |

*1 Occurs only when CC-Link IE Field Network connection is used.

## Response performance of the GOT

The GOT carries out many object functions as well as CC-Link IE Field Network Basic connection so that the response performance for the master station may deteriorate.
If this occurs, adjust the link scan time or timeout time at the master station side The following setting values are recommended.

| Model | Recommendation value of link scan time/timeout time |
|---|---|
| GT2506HS-V | 50 ms and more |

# MEMO

# PART 11 CONNECTIONS TO PERIPHERAL EQUIPMENT

53 GOT Mobile CONNECTION

54 VNC SERVER CONNECTION

55 PRINTER CONNECTION

# 53 GOT Mobile CONNECTION


- Page 2100 Connectable Model List
- Page 2101 System Configuration
- Page 2103 GOT Side Settings
- Page 2104 Precautions


## 53.1 Connectable Model List

The following table lists the GOT models that support the GOT Mobile connection.

- GT2506HS-V
- GT2505HS-V

For connectable devices and usable browsers as clients, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

**Point**

CoreOS version of the GOT

To use GOT Mobile connection, install CoreOS version L or later on the GOT.

For the procedure to check the CoreOS version and upgrade the version, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

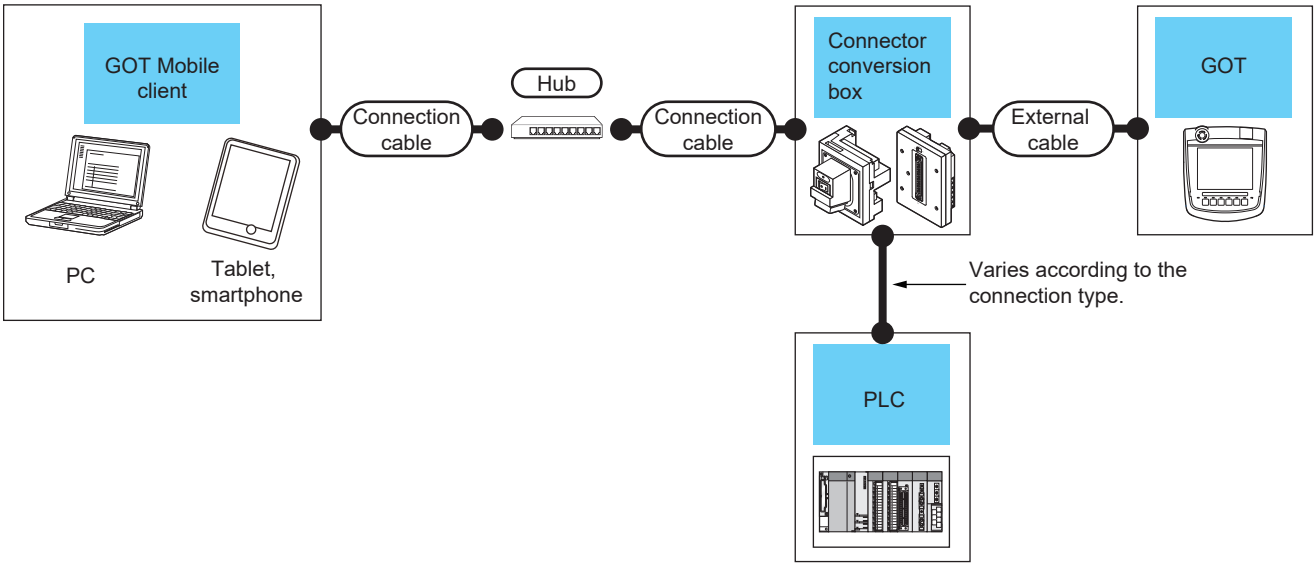
GOT2000 Series User's Manual (Utility)

# 53.2 System Configuration

Extended function OS | Communication driver

GOT Mobile | Connection type dependant

## For GT2506HS-V



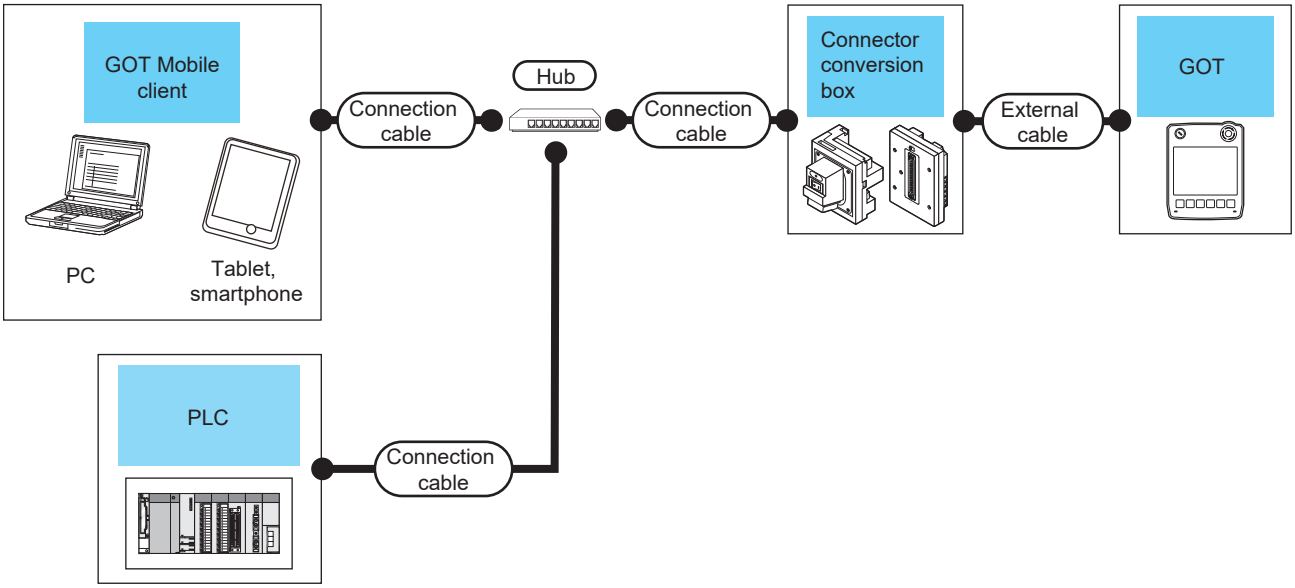

| PC, Tablet, smartphone (GOT Mobile client) | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable | GOT Model (GOT Mobile server) | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| To be selected by the user. | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | For the system configuration between the GOT and PLC, refer to each chapter. | 5 clients for 1 GOT |
| | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 When connecting the GOT and personal computer via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## For GT2505HS-V




| PC, Tablet, smartphone (GOT Mobile client) | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable*4 | GOT Model (GOT Mobile server) | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| To be selected by the user. | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | For the system configuration between the GOT and PLC, refer to each chapter. | 5 clients for 1 GOT |
| | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 A straight cable is available.
When connecting the GOT and PC directly with Ethernet cable, remember that the by cross cable is available.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

**Point**

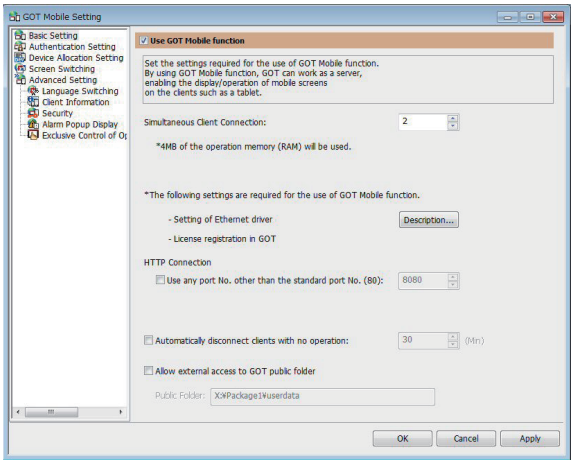
System configuration between the GOT and PLC

For the system configuration between the GOT and PLC, refer to each chapter.

☞ Mitsubishi Electric Products
☞ Non-Mitsubishi Electric Products 1, Non-Mitsubishi Electric Products 2
☞ Microcomputer, MODBUS/Fieldbus Products, Peripherals

# 53.3 GOT Side Settings

## GOT Mobile setting




1. Select [Common] → [GOT Mobile Setting] from the menu.
2. Check the [Use GOT Mobile function] of [GOT Mobile Setting] to set.

For details on the settings, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

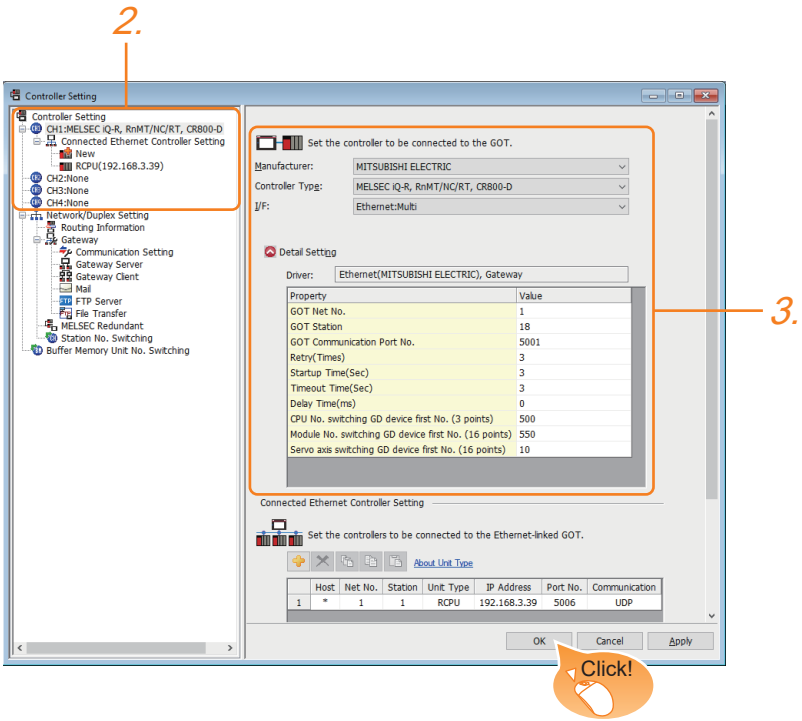
3. When you have completed the settings, click the [OK] button.

# Setting communication interface (Controller Setting)

## When using the Ethernet connection cable

Ethernet communication drivers must be set on the GOT, and set the Communication settings.

### ■Ethernet communication driver setting




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

# 53.4 Precautions

For cautions or troubleshooting of the GOT Mobile function, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

# 54 VNC SERVER CONNECTION

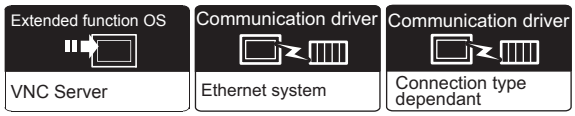

- Page 2105 Connectable Model List
- Page 2106 System Configuration
- Page 2108 GOT Side Settings
- Page 2110 Setting in Personal Computer


## 54.1 Connectable Model List

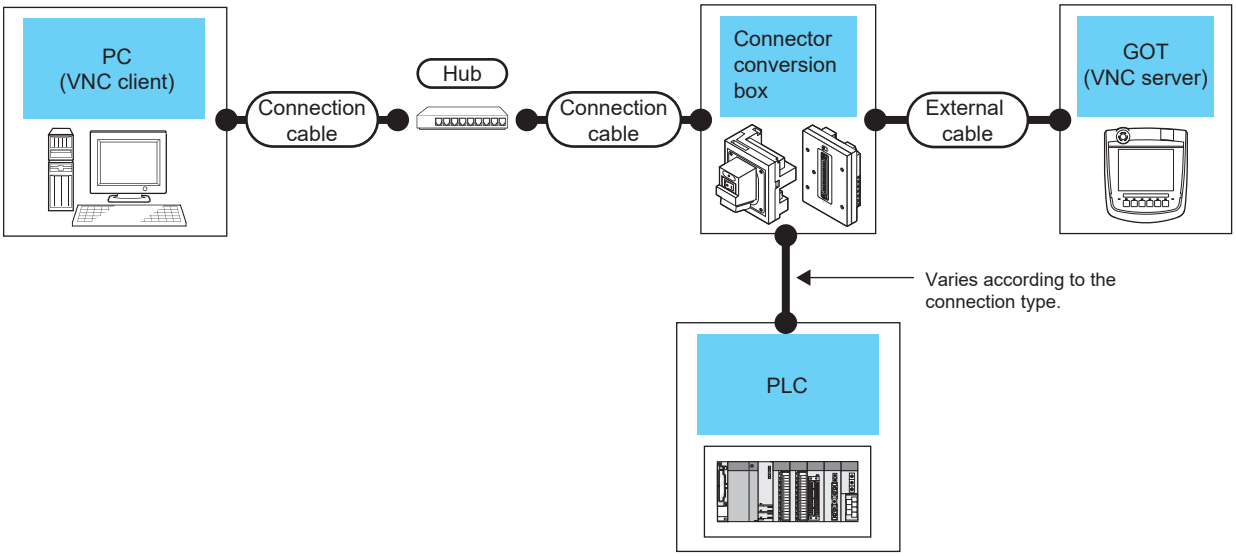
The VNC server can be connected to the following VNC client.

| CPU | Software |
|---|---|
| PC | Ultra VNC |

# 54.2 System Configuration




## For GT2506HS-V



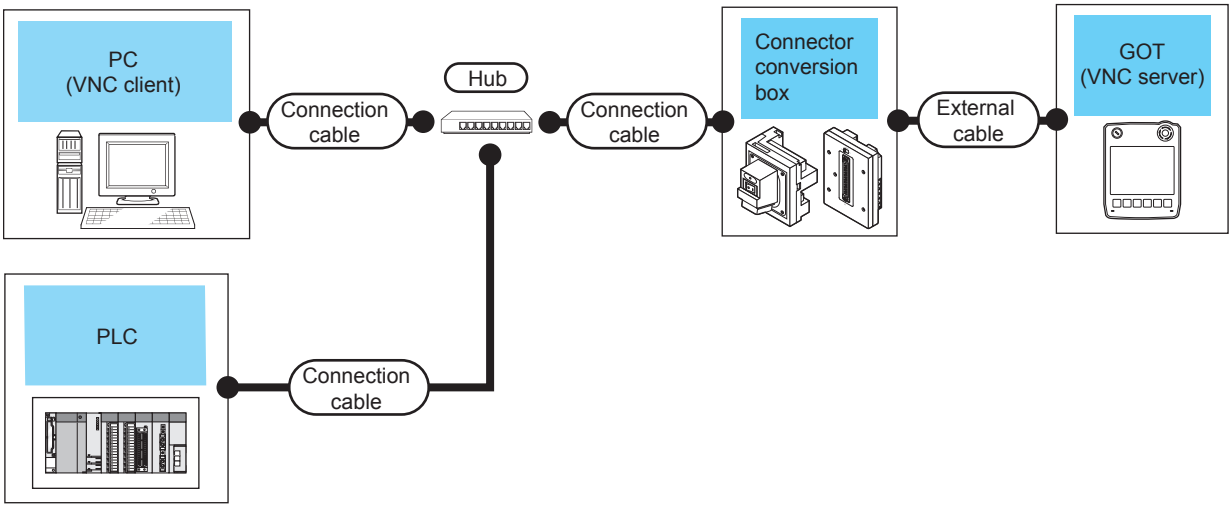

| Personal computer (VNC client) | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable | GOT Model (VNC server) | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| To be selected by the user. | • 100BASE-TX<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T<br>Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | For the system configuration between the GOT and PLC, refer to each chapter. | 1 personal computer for 1 GOT |
| | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 When connecting the GOT and personal computer (VNC client) via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

## For GT2505HS-V




| Personal computer (VNC client) | Connection cable*1*2 | Maximum segment length*3 | Connector conversion box | External cable*4 | GOT Model (VNC server) | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|
| To be selected by the user. | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2505HS | For the system configuration between the GOT and PLC, refer to each chapter. | 1 personal computer for 1 GOT |
| | | | GT16H-CNB-37S | GT11H-C30-37P(3m)<br>GT11H-C60-37P(6m)<br>GT11H-C100-37P(10m) | | | |

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

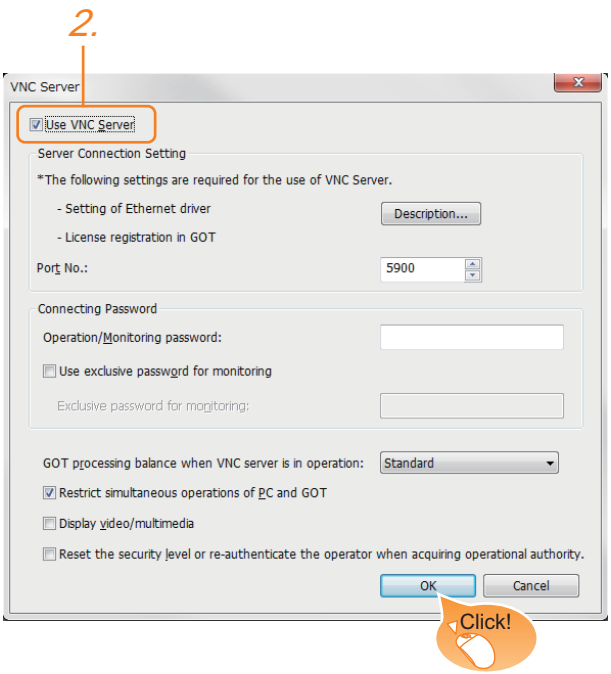
*2 When connecting the GOT and personal computer (VNC client) via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

# 54.3 GOT Side Settings

## VNC server function setting




**1.** Select [Common] → [Peripheral Setting] → [VNC Server] from the menu.

**2.** Check the [VNC Server] of [Use VNC Server] to set.

For details on the settings, refer to the following manual.

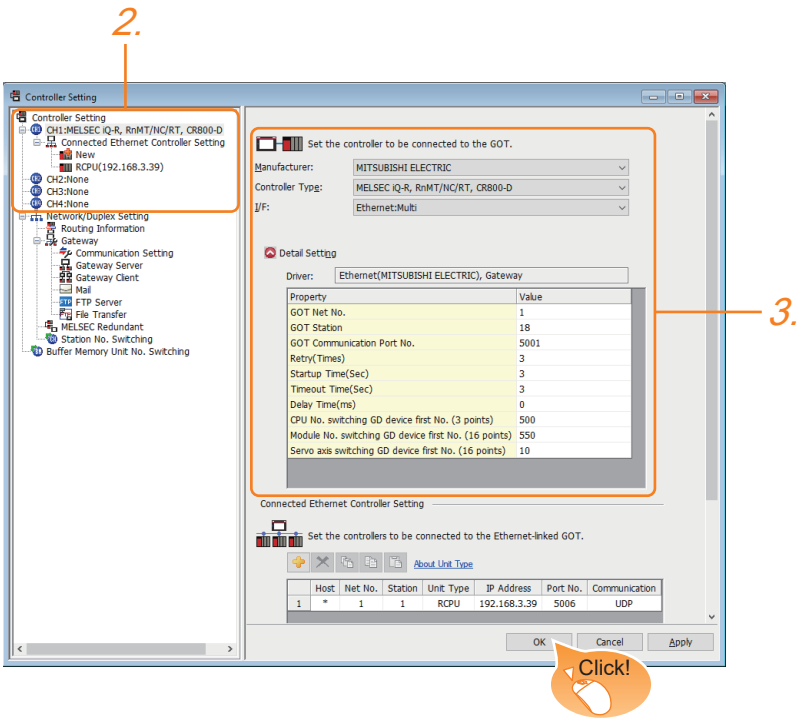
GT Designer3 (GOT2000) Screen Design Manual

**3.** Click the [OK] button when settings are completed.

# Setting communication interface (Controller Setting)

## When using the Ethernet connection cable

For using the VNC server, Ethernet communication drivers must be set on the GOT, and set the Communication settings




1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

# 54.4 Setting in Personal Computer

For connecting the VNC server to the personal computer (VNC client), it is necessary to install the VNC client software to the personal computer to be connected and set it.

Refer to the following for details of the VNC client software installation method and setting method.

GT Designer3 (GOT2000) Screen Design Manual

# 55 PRINTER CONNECTION


- Page 2111 Connectable Model List
- Page 2112 System Configuration
- Page 2115 GOT Side Settings
- Page 2117 Precautions


## 55.1 Connectable Model List

For connectable printers and system equipment, refer to the following Technical Bulletin.


List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)


For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.

www.MitsubishiElectric.com/fa

**Point**

BootOS version of the GOT

To use an Ethernet printer, install version AJ or later of BootOS on the GOT.

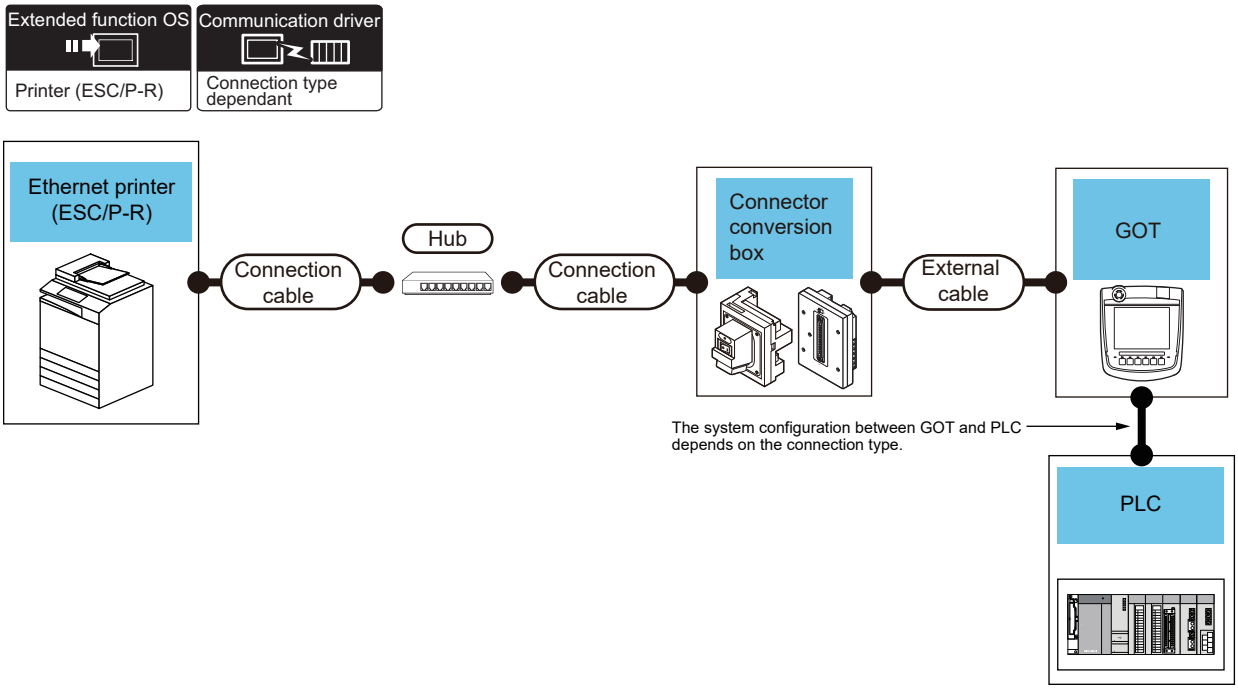
For the procedure to check the BootOS version and upgrade the version, refer to the following.


GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series User's Manual (Utility)

# 55.2 System Configuration

## Connecting an Ethernet printer (ESC/P-R)




| Printer | | Connection cable *1*2 | Maximum segment length *3 | Connector conversion box | External cable *4 | GOT model | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | | | | | | | |
| For connectable printers and system equipment, refer to the following Technical News. <br>List of valid devices applicable for GOT2000 series (GOT-A-0064) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher <br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m) <br>GT16H-C60-42P(6m) <br>GT16H-C100-42P(10m) | GT 2506HS | For the system configuration between the GOT and PLC, refer to each chapter. | 1 printer for 1 GOT |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m) <br>GT16H-C60-37PE(6m) <br>GT16H-C100-37PE(10m) | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m) <br>GT14H-C60-42P(6m) <br>GT14H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m) <br>GT11H-C60-37P (6m) <br>GT11H-C100-37P(10m) | | | |

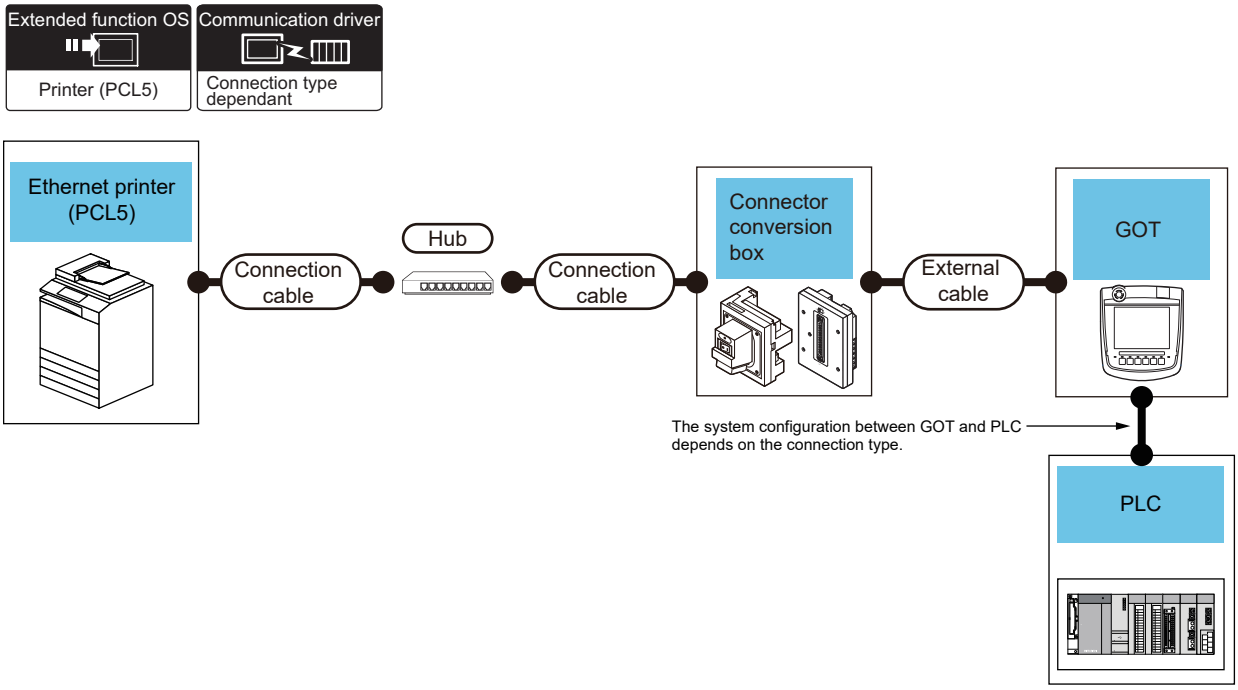
*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 When connecting the GOT and printer via a hub, use a cable according to the printer configuration.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 personal computers for a cascade connection (500m)
• 100BASE-TX: Up to 2 personal computers for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

# Connecting an Ethernet printer (PCL5)




| Printer | | Connection cable *1*2 | Maximum segment length *3 | Connector conversion box | External cable *4 | GOT model | PLC | Number of connectable equipment |
|---|---|---|---|---|---|---|---|---|
| Model name | Communication Type | | | | | | | |
| For connectable printers and system equipment, refer to the following Technical News. 📖List of valid devices applicable for GOT2000 series (GOT-A-0064) | Ethernet | • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher<br>• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher | 100m | GT16H-CNB-42S | GT16H-C30-42P(3m)<br>GT16H-C60-42P(6m)<br>GT16H-C100-42P(10m) | GT 2506HS | For the system configuration between the GOT and PLC, refer to each chapter. | 1 printer for 1 GOT |
| | | | | GT16H-CNB-37S | GT16H-C30-37PE(3m)<br>GT16H-C60-37PE(6m)<br>GT16H-C100-37PE(10m) | | | |
| | | | | GT16H-CNB-42S | GT14H-C30-42P(3m)<br>GT14H-C60-42P(6m)<br>GT14H-C100-42P(10m) | GT 2506HS | | |
| | | | | GT16H-CNB-37S | GT11H-C30-37P (3m)<br>GT11H-C60-37P (6m)<br>GT11H-C100-37P(10m) | | | |

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 When connecting the GOT and printer via a hub, use a cable according to the printer configuration.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 personal computers for a cascade connection (500m)
• 100BASE-TX: Up to 2 personal computers for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

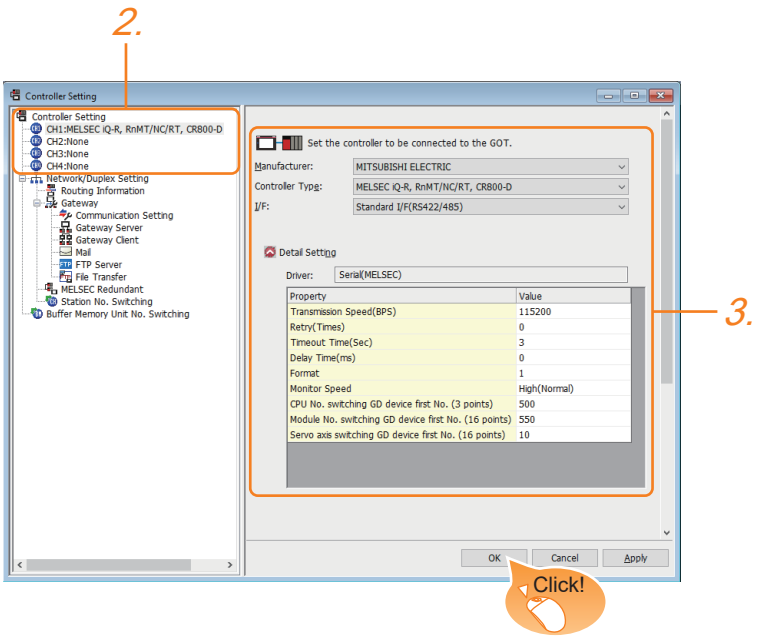
*4 Use C or later version of GT11H-C□□-37P.

# 55.3 GOT Side Settings

## Setting communication interface

### Controller setting

Set the channel of the equipment to be connected to the GOT.



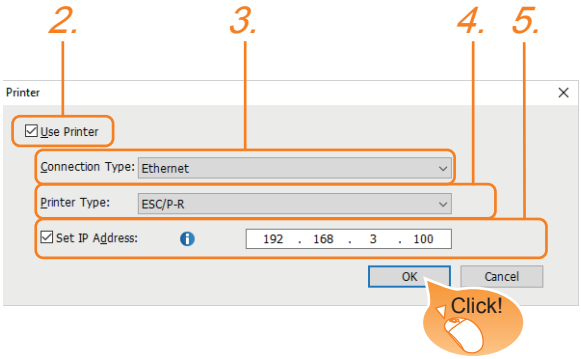

1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

**Point**

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 80 I/F communication setting

## Printer setting




1. Select [Common] → [Peripheral Setting] → [Printer] from the menu.
2. Select [Use Printer].
3. Select [Connection Type].
4. Select [Printer Type].
5. Select [Set IP Address] to set the IP address of the printer used.
6. When you have completed the settings, click the [OK] button.

**Point**

• Setting for the driver

Regardless of the printer type, multiple printers are cannot be set.

• Port number of the Ethernet printer

Use 515 for the port number of the Ethernet printer.

# 55.4 Precautions

## IP address setting

When the IP addresses of the Ethernet printer and the GOT are the same, a system alarm may occur.
Set different IP addresses for the Ethernet printer and the GOT.

# REVISIONS

* The manual number is given on the bottom left of the back cover.

| Revision date | * Manual Number | Revision |
|---|---|---|
| Jun. 2017 | SH(NA)-081867ENG-A | Compatible with GT Works3 Version1.180N |
| Oct. 2017 | SH(NA)-081867ENG-B | Compatible with GT Works3 Version1.185T<br>• MR-JE-C is supported.<br>• The use of the virtual device for manufacturer setting for MELSERVO-J4-A(-RJ), MELSERVO-JE-A by some users is supported.<br>• FUJI Temperature controller (PXF4, PXF5, PXF9, PUMA, PUMB) is supported.<br>• YOKOGAWA Temperature controller (UP32A) is supported.<br>• MURATEC controller connection is supported.<br>• Hirata Corporation HNC controller connection is supported.<br>• OMRON PLC NJ series is supported. |
| Dec. 2017 | SH(NA)-081867ENG-C | Compatible with GT Works3 Version 1.190Y<br>• Compatible with R00CPU, R01CPU, R02CPU<br>• Compatible with avoiding overlapping of [GOT Communication Port No.] |
| Apr. 2018 | SH(NA)-081867ENG-D | Compatible with GT Works3 Version 1.195D<br>• GT2505HS-V is supported.<br>• FR-A800 series (FR-A8□0-GF and FR-A8□2-GF) is supported.<br>• The MELIPC connection is supported.<br>• The FA transparent function is usable with MI Configurator.<br>• OMRON PLCs (NX series) are supported.<br>• The following devices of the ALLEN-BRADLEY PLC (MicroLogix series) are supported: I, O, and F devices.<br>• RKC temperature controllers (SR-J series) are supported.<br>• The following setting is available when the CC-Link IE Field Network Basic connection is used: [Output HOLD/CLEAR Setting]. |
| Jul. 2018 | SH(NA)-081867ENG-E | Compatible with GT Works3 Version1.200J<br>• R08PSFCPU, R16PSFCPU, R32PSFCPU, and R120PSFCPU are supported.<br>• FR-E700 series (FR-E7□0-NE) is supported.<br>• FA transparent function<br>Between the personal computer and the GOT: USB, between the GOT and the PLC: Ethernet<br>FR Configurator2 is supported.<br>• Compatible OMRON temperature controllers are added (E5□D series).<br>• ALLEN-BRADLEY PLC Ethernet connection (Ethernet (AB MicroLogix)) is supported.<br>• The connection to Ethernet printer is supported.<br>• In the communication detail settings of the microcomputer connection (Ethernet), setting the request destination module I/O number is supported.<br>• For the MODBUS/TCP master connection, the connection with the device where the module ID is fixed to 255. |
| Oct. 2018 | SH(NA)-081867ENG-F | Compatible with GT Works3 Version1.205P<br>• CR800-Q (Q172DSRCPU) is supported.<br>• Serial connection to FR-A800 series (FR-A8□0-GF and FR-A8□2-GF) is supported.<br>• FA transparent function<br>For R08PSFCPU, R16PSFCPU, R32PSFCPU, R120PSFCPU, GX Works3 supports the following communication path.<br>Between personal computer and GOT: USB, between GOT and PLC: Ethernet<br>For CR800-Q (Q172DSRCPU), RT ToolBox3 supports the following communication path.<br>Between personal computer and GOT: USB, between GOT and PLC: Direct CPU<br>Between personal computer and GOT: USB, between GOT and PLC: Ethernet<br>• Compatible OMRON PLCs are added (NX701).<br>• Compatible KEYENCE PLCs are added (KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T).<br>• Compatible TOSHIBA Unified Controller nv are added.<br><Controller type1 light><br>PUM11, PUM12, PUM14 |
| Jan. 2019 | SH(NA)-081867ENG-G | Compatible with GT Works3 Version1.210U<br>• Some corrections |
| Apr. 2019 | SH(NA)-081867ENG-H | Compatible with GT Works3 Version1.215Z<br>• Specifying CPU numbers with devices is supported.<br>• Specifying module numbers with devices is supported.<br>• Compatible OMRON PLCs are added (NX102).<br>• The connection to Ethernet printer (PCL5) is supported. |

| Revision date | * Manual Number | Revision |
|---|---|---|
| Jul. 2019 | SH(NA)-081867ENG-I | Compatible with GT Works3 Version1.220E<br>• Connection with CC-Link IE TSN master/local module (RJ71GN11-T2) by the Ethernet connection is supported.<br>• FR-A800 Plus series (FR-A8□0-E-CRN, FR-A8□2-E-CRN, FR-A8□0-E-R2R, and FR-A8□2-E-R2R) is supported.<br>• The manufacturer name has been changed. (Digital Electronics Corporation → Schneider Electric Japan Holdings Ltd.)<br>• For the SLMP connection, the connection with the CC-Link IE TSN master/local module (RJ71GN11-T2) is supported. |
| Oct. 2019 | SH(NA)-081867ENG-J | Compatible with GT Works3 Version1.225K<br>• FX5UJ is supported. |
| Jan. 2020 | SH(NA)-081867ENG-K | Compatible with GT Works3 Version1.230Q<br>• FR-A800 series (FR-A8□0-GN and FR-A8□2-GN) is supported.<br>• FR-E800 series is supported.<br>• FA transparent function<br>FR-E800 series is supported.<br>• IAI robot controller models (PCON-CB, PCON-CFB, ACON-CB, SCON-CB, EC) have been added.<br>• Devices used for connecting IAI robot controller have been added. |
| Apr. 2020 | SH(NA)-081867ENG-L | Compatible with GT Works3 Version1.235V<br>• Motion module is supported.<br>• Reading/writing data from/to 8-bit and 64-bit devices are supported.<br>• The time setting function of the GOT is supported for OMRON PLC NJ/NX Series by obtaining the clock data.<br>• SLMP-compatible devices have been added. |
| Jun. 2020 | SH(NA)-081867ENG-M | Compatible with GT Works3 Version1.240A<br>• The company name of TOSHIBA MACHINE CO., LTD. has been changed to SHIBAURA MACHINE CO., LTD.<br>• Motion module (RD78GHV, RD78GHW) is supported.<br>• FR-A800 Plus series (FR-A8□0-AWH, FR-A8□0-E-AWH, FR-A8□0-LC, FR-A8□0-E-LC) is supported.<br>• MR-J5 series (MR-J5-□G, MR-J5-□G-RJ, MR-J5W2-□G, and MR-J5W3-□G) is supported.<br>• Supported KEYENCE PLC (KV8000 series) has been added.<br>• Supported OMRON PLC (CP2E) has been added.<br>• Supported Panasonic IDS PLC (FP0H) has been added.<br>• RKC temperature controller (PZ/GZ series) are additionally supported. |
| Oct. 2020 | SH(NA)-081867ENG-N | Compatible with GT Works3 Version1.245F<br>• Connection with the CC-Link IE TSN master/local module (FX5-CCLGN-MS) using the Ethernet connection is supported.<br>• The MR-JET series (MR-JET-□G) is supported.<br>• HITACHI PLC S10VE is supported. |
| Jan. 2021 | SH(NA)-081867ENG-O | • Some corrections |
| Apr. 2021 | SH(NA)-081867ENG-P | Compatible with GT Works3 Version1.255R<br>• Connection with MELSEC iQ-R Series extension base unit for the redundant system is supported.<br>• Connection with MELSEC iQ-F Ethernet module (FX5-ENET, FX5-ENET/IP) is supported.<br>• The model names and communication driver name for connection to CHINO controllers have been changed.<br>• Connection to Panasonic IDS PLC (FP2, FP2SH) using the multi-communication unit and communication block is supported.<br>• HITACHI IES PLC and HITACHI IES EHV series are supported.<br>• The 8-bit and 64-bit tag communication for ALLEN-BRADLEY PLC AB Control/CompactLogix(Tag) connection is supported.<br>• The model name and communication driver name for connection to HITACHI IES PLC have been changed. |
| Jul. 2021 | SH(NA)-081867ENG-Q | Compatible with GT Works3 Version1.260W<br>• Connection with the C Controller module (MELSEC iQ-R series) using the CC-Link IE TSN connection is supported.<br>• Connection with the MR-J5 series or MR-JET series using the Ethernet connection is supported.<br>• IAI robot controller models (RCON) have been added.<br>• Panasonic IDS PLC (FP-XH) has been added.<br>• Extending the following device range in HITACHI IES HIDIC H series is supported.<br>TD, CU, SS, WDT, MS, TMR, RCU, CT, TC, WR<br>• Changed the name of the direct CPU connection to the direct CPU connection (serial). |
| Oct. 2021 | SH(NA)-081867ENG-R | Compatible with GT Works3 Version1.265B<br>• MELSEC iQ-F series Motion module (FX5-40SSC-G, FX5-80SSC-G) is supported.<br>• SHINKO indicating controller models (ACD-13A, ACR-13A, and BC□2) have been added.<br>• Connection to YASKAWA robot controller YRC1000 is supported.<br>• Connection to LS IS PLC XGT series is supported. |

| Revision date | * Manual Number | Revision |
|---|---|---|
| Jan. 2022 | SH(NA)-081867ENG-S | Compatible with GT Works3 Version1.270G<br>• FX3U-ENET is supported.<br>• MELSEC iQ-R series MELSECWinCPU module is supported.<br>• MR-J5(W)-□B(-RJ) and MR-J5D-□G4 are supported.<br>• FA transparent function<br>Connection with CW Configurator using the serial communication connection is supported.<br>FX Configurator-EN is supported.<br>• Connectable IAI robot controller models (EC series) have been added.<br>• Connectable JTEKT PLC model (PC10G) has been added. |
| Apr. 2022 | SH(NA)-081867ENG-T | Compatible with GT Works3 Version1.275M<br>• Connection with a PLC or MELIPC through a servo amplifier using Ethernet connection is supported.<br>• Connection with a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, or MR-JET-G) through a CC-Link IE TSN master/local module (RJ71GN11-T2) is supported.<br>• FX5S is supported. |
| Jul. 2022 | SH(NA)-081867ENG-U | Compatible with GT Works3 Version1.280S<br>• Connection with the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) via Ethernet is supported.<br>• Connection to YASKAWA robot controller YRC1000micro is supported. |
| Oct. 2022 | SH(NA)-081867ENG-V | Compatible with GT Works3 Version1.285X<br>• Connection with a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller (R16MTCPU, R32MTCPU, or R64MTCPU) or Simple Motion module (RD77MS2, RD77MS4, RD77MS8, or RD77MS16) is supported. |
| Jan. 2023 | SH(NA)-081867ENG-W | Compatible with GT Works3 Version1.290C<br>• The name of the communication driver for Ethernet connection to ALLEN-BRADLEY PLC has been changed.<br>• The name of the communication driver for Ethernet connection to OMRON PLC has been changed. |
| Apr. 2023 | SH(NA)-081867ENG-X | Compatible with GT Works3 Version1.295H<br>• Connection with a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, MR-J5D2-□G4, MR-J5D3-□G4, or MR-JET-□G) through a CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported.<br>• FA transparent function<br>For the RCPU, CPU Module Logging Configuration Tool supports the following communication paths.<br>Between a personal computer and the GOT: USB, between the GOT and PLC: Serial communication<br>Between a personal computer and the GOT: USB, between the GOT and PLC: Ethernet<br>Between a personal computer and the GOT: Ethernet, between the GOT and PLC: Serial communication<br>For FR-A800 series, FR-F800 series, and FR-E800, FR Configurator2 supports the following communication paths.<br>Between a personal computer and GOT: Ethernet, between the GOT and PLC: CPU direct communication (serial) |
| Jul. 2023 | SH(NA)-081867ENG-Y | Compatible with GT Works3 Version1.300N<br>• Ethernet connection with FX5UJ via the CC-Link IE TSN master/local module (FX5-CCLGN-MS) is supported. |
| Oct. 2023 | SH(NA)-081867ENG-Z | • Some corrections |
| Jan. 2024 | SH(NA)-081867ENG-AA | Compatible with GT Works3 Version1.310Y<br>• Connection with a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller (Q170MSCPU) is supported.<br>• Connection with a KEYENCE PLC (KV-8000 series or KV-7000 series) using the multi-communication unit (KV-XL402) is supported. |
| Oct. 2024 | SH(NA)-081867ENG-AB | Compatible with GT Works3 Version1.325P<br>• A supported OMRON PLC model (NX502) has been added.<br>• A supported IAI robot controller model (RSEL) has been added. |

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# WARRANTY

Please check the following product warranty details before using this product.

## ■1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.
However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion.
Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

### (1) Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.
Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months.
The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

### (2) Gratis Warranty Range

(a) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense.
The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.

(b) The range shall be limited to normal use within the usage state, usage methods, and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(c) Even within the gratis warranty term, repairs shall be charged in the following cases.
- Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
- Failure caused by unapproved modifications, etc., to the product by the user.
- When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
- Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
- Replacing consumable parts such as a battery, backlight, and fuse.
- Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
- Failure caused by reasons that could not be predicted by scientific technology standards at the time of shipment from Mitsubishi.
- Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

## ■2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Mitsubishi shall not accept a request for product supply (including spare parts) after production is discontinued.

## ■3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center.
Note that the repair conditions at each FA Center may differ.

## ■4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.

(2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.

(3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.

(4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

## ■5. Changes in product specifications

The specifications given in the catalogs, manuals, or technical documents are subject to change without prior notice.

## ■6. Product application

(1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc.
Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service shall be excluded from the graphic operation terminal applications.
In addition, applications in which human life or property could be greatly affected, such as in aircraft, medical, railway applications, incineration and fuel devices, manned transportation equipment, recreation and amusement devices, safety devices, shall also be excluded from the graphic operation terminal.
Even for the above applications, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required, after the user consults the local Mitsubishi representative.

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