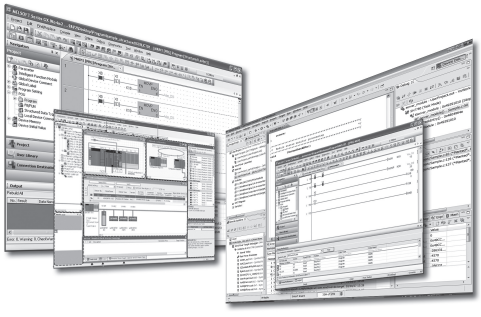
MELSOFT

MITSUBISHI ELECTRIC

Engineering Software

MT Developer2 Version 1 Setup Guidance

-SW1DND-MTW2-E



● SAFETY PRECAUTIONS ●

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly. The precautions given in this manual are concerned with this product only. Refer to the user's manual of the CPU module to use for a description of the PLC system safety precautions. In this manual, the safety precautions are classified into two levels: "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.

Under some circumstances, failure to observe the precautions given under "CAUTION" may lead to serious consequences.
Observe the precautions of both levels because they are important for personal and system safety.
Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

For Safe Operations
[Design Precautions]

⚠WARNING

- Configure safety circuits external to the programmable controller to ensure that the entire system operates safely even when a fault occurs in the external power supply or the programmable controller.
  Failure to do so may result in an accident due to an incorrect output or malfunction.
  (1) Configure external safety circuits, such as an emergency stop circuit, protection circuit, and protective interlock circuit for forward/reverse operation or upper/lower limit positioning.
  (2) The programmable controller stops its operation upon detection of the following status, and the output status of the system will be as shown below.
    • Turned off if the overcurrent or overvoltage protection of the power supply module is activated.
    • Held or turned off according to the parameter setting if the self-diagnostic function of the CPU module detects an error such as a watchdog timer error.
  (3) Also, all outputs may be turned on if an error occurs in a part, such as an I/O control part, where the CPU module cannot detect any error. To ensure safety operation in such a case, provide a safety mechanism or a fail-safe circuit external to the programmable controller. For a fail-safe circuit example, refer to the user's manual of the CPU module to use.
  (4) Outputs may remain on or off due to a failure of a component such as a relay and transistor in an output circuit. Configure an external circuit for monitoring output signals that could cause a serious accident.
- In an output circuit, when a load current exceeding the rated current or an overcurrent caused by a load short circuit flows for a long time, it may cause smoke and fire.
  To prevent this, configure an external safety circuit, such as a fuse.
- Configure a circuit so that the programmable controller is turned on first and then the external power supply. If the external power supply is turned on first, an accident may occur due to an incorrect output or malfunction.
- For the operating status of each station after a communication failure, refer to manuals relevant to the network. Incorrect output or malfunction due to a communication failure may result in an accident.
- When connecting an external device with a CPU module or intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the program to ensure that the entire system will always operate safely. For other forms of control (such as program modification, parameter change, forced output, or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding. Improper operation may damage machines or cause accidents.
- Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure. To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.

⚠WARNING

- Do not write any data to the "system area" and "write-protect area" of the buffer memory in the module. Also, do not use any "use prohibited" signals as an output signal from the CPU module to each module. Doing so may cause malfunction of the programmable controller system. For the "system area", "write-protect area", and the "use prohibited" signals, refer to the user's manual for the module used.
- If a communication cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even if communications fail. Failure to do so may result in an accident due to an incorrect output or malfunction.
- To maintain the safety of the programmable controller system against unauthorized access from external devices via the network, take appropriate measures. To maintain the safety against unauthorized access via the Internet, take measures such as installing a firewall.
- Configure safety circuits external to the programmable controller to ensure that the entire system operates safely even when a fault occurs in the external power supply or the programmable controller.

  Failure to do so may result in an accident due to an incorrect output or malfunction.

  (1) Machine home position return is controlled by two kinds of data: a home position return direction and a home position return speed. Deceleration starts when the proximity dog signal turns on. If an incorrect home position return direction is set, motion control may continue without deceleration. To prevent machine damage caused by this, configure an interlock circuit external to the programmable controller.

  (2) When the module detects an error, the motion slows down and stops or the motion rapid stop, depending on the stop group setting in parameter. Set the parameter to meet the specifications of a positioning control system. In addition, set the home position return parameter and positioning data within the specified setting range.

  (3) Outputs may remain on or off, or become undefined due to a failure of a component such as an insulation element and transistor in an output circuit, where the module cannot detect any error. In a system that the incorrect output could cause a serious accident, configure an external circuit for monitoring output signals.
- If safety standards (ex., robot safety rules, etc.,) apply to the system using the module, servo amplifier and servo motor, make sure that the safety standards are satisfied.
- Construct a safety circuit externally of the module or servo amplifier if the abnormal operation of the module or servo amplifier differs from the safety directive operation in the system.
- Do not remove the SSCNET III cable while turning on the control circuit power supply of Multiple CPU system and servo amplifier. Do not see directly the light generated from SSCNET III connector of the module or servo amplifier and the end of SSCNET III cable. When the light gets into eyes, you may feel something wrong with eyes. (The light source of SSCNET III complies with class1 defined in JISC6802 or IEC60825-1.)

[Design Precautions]

⚠CAUTION

- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100 mm or more between them. Failure to do so may result in malfunction due to noise.
- During control of an inductive load such as a lamp, heater, or solenoid valve, a large current (approximately ten times greater than normal) may flow when the output is turned from off to on. Therefore, use a module that has a sufficient current rating.
- After the CPU module is powered on or is reset, the time taken to enter the execution status varies depending on the system configuration, parameter settings, and/or program size.
  Design circuits so that the entire system will always operate safely, regardless of the time.
- Do not power off the programmable controller or do not reset the CPU module during the setting registration. Doing so will make the data in the flash ROM undefined. The data need to be set in the buffer memory and to be written to the flash ROM again. Doing so may cause malfunction or failure of the module.
- Reset the CPU module after changing the parameters. Failure to do so may cause malfunction because the previous parameter settings remain in the module.
- When changing the operating status of the CPU module from external devices (such as remote RUN/STOP), select "Do Not Open by Program" for "Opening Method" in the module parameters. If "Open by Program" is selected, an execution of remote STOP causes the communication line to close.
  Consequently, the CPU module cannot reopen the communication line, and external devices cannot execute the remote RUN.

[Installation Precautions]

⚠WARNING

- Shut-off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may result in electric shock or cause the module to fail or malfunction.

[Installation Precautions]

⚠CAUTION

- Use the programmable controller in an environment that meets the general specifications in the manual "Safety Guidelines" included in the base unit. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- To mount a module, place the concave part(s) located at the bottom onto the guide(s) of the base unit, and push in the module until the hook(s) located at the top snaps into place. Incorrect mounting may cause malfunction, failure, or drop of the module.
- When using the programmable controller in an environment of frequent vibrations, fix the module with a screw.
- Tighten the screws within the specified torque range. Undertightening can cause drop of the screw, short circuit, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- When using an extension cable, connect it to the extension cable connector of the base unit securely. Check the connection for looseness. Poor contact may cause incorrect input or output.
- When using an SD memory card, fully insert it into the memory card slot. Check that it is inserted completely. Poor contact may cause malfunction.
- Securely insert an extended SRAM cassette into the cassette connector of a CPU module. After insertion, close the cassette cover and check that the cassette is inserted completely. Poor contact may cause malfunction.
- Do not directly touch any conductive parts and electronic components of the module, SD memory card, extended SRAM cassette, or connector. Doing so may cause malfunction or failure of the module.

[Wiring Precautions]

⚠WARNING

- Shut-off the external power supply (all phases) used in the system before installation and wiring. Failure to do so may result in electric shock or damage to the product.
- After installation and wiring, attach the included terminal cover to the module before turning it on for operation. Failure to do so may result in electric shock.

[Wiring Precautions]

⚠CAUTION

- Individually ground the FG and LG terminals of the programmable controller with a ground resistance of 100 ohm or less. Failure to do so may result in electric shock or malfunction.
- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Check the rated voltage and signal layout before wiring to the module, and connect the cables correctly. Connecting a power supply with a different voltage rating or incorrect wiring may cause fire or failure.
- Connectors for external devices or coaxial cables must be crimped or pressed with the tool specified by the manufacturer, or must be correctly soldered. Incomplete connections may cause short circuit, fire, or malfunction.
- Securely connect the connector to the module. Poor contact may cause malfunction.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100 mm or more between them. Failure to do so may result in malfunction due to noise.
- Place the cables in a duct or clamp them. If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact. Do not clamp the extension cables with the jacket stripped.
- Check the interface type and correctly connect the cable. Incorrect wiring (connecting the cable to an incorrect interface) may cause failure of the module and external device.
- Tighten the terminal screws or connector screws within the specified torque range. Undertightening can cause drop of the screw, short circuit, fire, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, fire, or malfunction.
- When disconnecting the cable from the module, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. For the cable connected to the terminal block, loosen the terminal screw. Pulling the cable connected to the module may result in malfunction or damage to the module or cable.
- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- A protective film is attached to the top of the module to prevent foreign matter, such as wire chips, from entering the module during wiring. Do not remove the film during wiring. Remove it for heat dissipation before system operation.
- Mitsubishi programmable controllers must be installed in control panels. Connect the main power supply to the power supply module in the control panel through a relay terminal block. Wiring and replacement of a power supply module must be performed by qualified maintenance personnel with knowledge of protection against electric shock. For wiring, refer to the MELSEC iQ-R Module Configuration Manual.

[Wiring Precautions]

⚠CAUTION

- For Ethernet cables to be used in the system, select the ones that meet the specifications in the MELSEC iQ-R Ethernet/CC-Link IE User's Manual (Startup). If not, normal data transmission is not guaranteed.

[Startup and Maintenance Precautions]

⚠WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
- Correctly connect the battery connector. Do not charge, disassemble, heat, short-circuit, solder, or throw the battery into the fire. Also, do not expose it to liquid or strong shock. Doing so may cause the battery to generate heat, explode, ignite, or leak, resulting in injury or fire.
- Shut-off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal screws, connector screws, or module fixing screws. Failure to do so may result in electric shock or cause the module to fail or malfunction.

[Startup and Maintenance Precautions]

⚠CAUTION

- When connecting an external device with a CPU module or intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the program to ensure that the entire system will always operate safely. For other forms of control (such as program modification, parameter change, forced output, or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding. Improper operation may damage machines or cause accidents.
- Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure. To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.
- Do not disassemble or modify the modules. Doing so may cause failure, malfunction, injury, or a fire.
- Use any radio communication device such as a cellular phone or PHS (Personal Handyphone System) more than 25 cm away in all directions from the programmable controller.
  Failure to do so may cause malfunction.
- Shut-off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may cause the module to fail or malfunction.

[Startup and Maintenance Precautions]

⚠CAUTION

- Tighten the screws within the specified torque range. Undertightening can cause drop of the component or wire, short circuit, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- After the first use of the product, do not mount/remove the module to/from the base unit, and the terminal block to/from the module, and do not insert/remove the extended SRAM cassette to/from the CPU module more than 50 times (IEC 61131-2 compliant) respectively.
  Exceeding the limit of 50 times may cause malfunction.
- After the first use of the product, do not insert/remove the SD memory card to/from the CPU module more than 500 times. Exceeding the limit may cause malfunction.
- Do not touch the metal terminals on the back side of the SD memory card. Doing so may cause malfunction or failure.
- Do not touch the integrated circuits on the circuit board of an extended SRAM cassette.
  Doing so may cause malfunction or failure.
- Do not drop or apply shock to the battery to be installed in the module. Doing so may damage the battery, causing the battery fluid to leak inside the battery.
  If the battery is dropped or any shock is applied to it, dispose of it without using.
- Startup and maintenance of a control panel must be performed by qualified maintenance personnel with knowledge of protection against electric shock. Lock the control panel so that only qualified maintenance personnel can operate it.
- Before handling the module, touch a conducting object such as a grounded metal to discharge the static electricity from the human body.
  Failure to do so may cause the module to fail or malfunction.
- Before testing the operation, set a low speed value for the speed limit parameter so that the operation can be stopped immediately upon occurrence of a hazardous condition.
- Confirm and adjust the program and each parameter before operation.
  Unpredictable movements may occur depending on the machine.
- When using the absolute position system function, on starting up, and when the module or absolute value motor has been replaced, always perform a home position return.
- Before starting the operation, confirm the brake function.
- Do not perform a megger test (insulation resistance measurement) during inspection.
- After maintenance and inspections are completed, confirm that the position detection of the absolute position detection function is correct.
- Lock the control panel and prevent access to those who are not certified to handle or install electric equipment.

[Operating Precautions]

⚠CAUTION

- When changing data and operating status, and modifying program of the running programmable controller from an external device such as a personal computer connected to an intelligent function module, read relevant manuals carefully and ensure the safety before operation. Incorrect change or modification may cause system malfunction, damage to the machines, or accidents.
- Do not power off the programmable controller or reset the CPU module while the setting values in the buffer memory are being written to the flash ROM in the module. Doing so will make the data in the flash ROM undefined. The values need to be set in the buffer memory and written to the flash ROM again. Doing so also can cause malfunction or failure of the module.
- Note that when the reference axis speed is specified for interpolation operation, the speed of the partner axis (2nd, 3rd, or 4th axis) may exceed the speed limit value.
- Do not go near the machine during test operations or during operations such as teaching. Doing so may lead to injuries.

[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. For details on battery regulations in EU member states, refer to the MELSEC iQ-R Module Configuration Manual.

[Transportation Precautions]

⚠CAUTION

- When transporting lithium batteries, follow the transportation regulations. For details on the regulated models, refer to the MELSEC iQ-R Module Configuration Manual.
- The halogens (such as fluorine, chlorine, bromine, and iodine), which are contained in a fumigant used for disinfection and pest control of wood packaging materials, may cause failure of the product.
  Prevent the entry of fumigant residues into the product or consider other methods (such as heat treatment) instead of fumigation.
  The disinfection and pest control measures must be applied to unprocessed raw wood.

REVISIONS

The manual number is given on the bottom left of the back cover.

Print Date	Manual Number	Revision
Jan., 2008	IB(NA)-0300142-A	First edition
Jul., 2008	IB(NA)-0300142-B	[Correction] SAFETY PRECAUTIONS, ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, WARRANTY
Jan., 2009	IB(NA)-0300142-C	[Correction] SAFETY PRECAUTIONS, ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, PRECAUTIONS, TROUBLESHOOTING, APPENDICES, WARRANTY
Jul., 2009	IB(NA)-0300142-D	[Correction] ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, TROUBLESHOOTING
May, 2010	IB(NA)-0300142-E	[Correction] SAFETY PRECAUTIONS, OPERATING ENVIRONMENT, PRECAUTIONS, TROUBLESHOOTING, APPENDICES
Sep., 2010	IB(NA)-0300142-F	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES
Nov, 2011	IB(NA)-0300142-G	[Correction] SAFETY PRECAUTIONS, ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES
Apr., 2012	IB(NA)-0300142-H	[Correction] ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, APPENDICES
May, 2012	IB(NA)-0300142-J	[Correction] SAFETY PRECAUTIONS, APPENDICES, WARRANTY
Sep., 2012	IB(NA)-0300142-K	[Correction] ABOUT MANUALS, APPENDICES
Oct., 2012	IB(NA)-0300142-L	[Correction] TROUBLESHOOTING, APPENDICES
Mar., 2013	IB(NA)-0300142-M	[Correction] OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, APPENDICES
Jun., 2013	IB(NA)-0300142-N	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES

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Sep., 2013	IB(NA)-0300142-P	[Correction] OVERVIEW, OPERATING ENVIRONMENT, TROUBLESHOOTING, APPENDICES
Feb., 2014	IB(NA)-0300142-Q	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES
Jun., 2014	IB(NA)-0300142-R	[Correction] OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES
Oct., 2014	IB(NA)-0300142-S	[Correction] ABOUT MANUALS, OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, TROUBLESHOOTING
Feb., 2015	IB(NA)-0300142-T	[Correction] APPENDICES
Apr., 2015	IB(NA)-0300142-U	[Correction] OPERATING ENVIRONMENT, APPENDICES
Jul., 2015	IB(NA)-0300142-V	[Correction] PRECAUTIONS, APPENDICES, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION
Oct., 2015	IB(NA)-0300142-W	[Correction] OVERVIEW, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, APPENDICES, WARRANTY
Jan., 2016	IB(NA)-0300142-X	[Correction] APPENDICES
Apr., 2016	IB(NA)-0300142-Y	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, PRECAUTIONS, TROUBLESHOOTING, APPENDICES
Jul., 2016	IB(NA)-0300142-Z	[Correction] APPENDICES
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Jul., 2017	IB(NA)-0300142-AC	[Correction] APPENDICES

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Oct., 2017	IB(NA)-0300142-AD	[Correction] OPERATING ENVIRONMENT, TROUBLESHOOTING, APPENDICES
Apr., 2018	IB(NA)-0300142-AE	[Correction] OPERATING ENVIRONMENT, APPENDICES
Oct., 2018	IB(NA)-0300142-AF	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, APPENDICES
Oct., 2019	IB(NA)-0300142-AG	[Correction] TROUBLESHOOTING, APPENDICES
Apr., 2020	IB(NA)-0300142-AH	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES, TRADEMARKS
Jan., 2021	IB(NA)-0300142-AJ	[Correction] TROUBLESHOOTING, APPENDICES
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Apr., 2022	IB(NA)-0300142-AL	[Correction] OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, PRECAUTIONS, TROUBLESHOOTING, APPENDICES
Oct., 2022	IB(NA)-0300142-AM	[Correction] APPENDICES, TRADEMARKS
Apr., 2023	IB(NA)-0300142-AN	[Correction] CONTENTS, OPERATING ENVIRONMENT, SYSTEM CONFIGURATION, SETTING THE SSC INTERFACE BOARD, COMMUNICATION DRIVER INSTALLATION PROCEDURE, TROUBLESHOOTING, APPENDICES, TRADEMARKS
Jul., 2023	IB(NA)-0300142-AP	APPENDICES
Apr., 2024	IB(NA)-0300142-AQ	APPENDICES
Oct., 2024	IB(NA)-0300142-AR	APPENDICES

CONTENTS

ABOUT MANUALS

The following manuals are related to this product.
Referring to this list, please request the necessary manuals.

Related Manuals | Motion controller

Manual Name	Manual Number (Model Code)
MELSOFT MT Works2 Installation Instructions This document explains how to install and uninstall MT Developer2.	— (MTW2-I-INS2E)
MELSEC iQ-R Motion Controller User's Manual This manual explains specifications of the Motion CPU modules, SSCNET III cables and Synchronous encoder, and trouble shooting and others.	IB-0300235 (1XB002)
MELSEC iQ-R Motion Controller Programming Manual (Common) This manual explains the Multiple CPU system configuration, performance specifications, common parameters, auxiliary/applied functions, error lists and others.	IB-0300237 (1XB004)
MELSEC iQ-R Motion Controller Programming Manual (Program Design) This manual explains the functions, programming, debugging and others for Motion SFC.	IB-0300239 (1XB006)
MELSEC iQ-R Motion Controller Programming Manual (Positioning Control) This manual explains the servo parameters, positioning instructions, device lists and others.	IB-0300241 (1XB008)
MELSEC iQ-R Motion Controller Programming Manual (Advanced Synchronous Control) This manual explains the dedicated instructions to use the synchronous control by synchronous control parameters, device lists and others.	IB-0300243 (1XB010)
MELSEC iQ-R Motion Controller Programming Manual (Machine Control) This manual explains the dedicated instructions to use machine control by machine control parameters, machine positioning data, device lists and others.	IB-0300309 (1XB024)
Q173D(S)CPU/Q172D(S)CPU Motion controller User's Manual This manual explains specifications of the Motion CPU modules, Q172DLX Servo external signal interface module, Q172DEX Serial absolute synchronous encoder interface module, Q173DPX Manual pulse generator interface module, Power supply modules, Servo amplifiers, SSCNET III cables and Synchronous encoder cable, and the maintenance/inspection for the system, trouble shooting and others.	IB-0300133 (1XB927)
Q170MSCPU Motion controller User's Manual This manual explains specifications of the Q170MSCPU Motion controller, Q172DLX Servo external signal interface module, Q173DPX Manual pulse generator interface module, Servo amplifiers, SSCNET III cables, and the maintenance/inspection for the system, trouble shooting and others.	IB-0300212 (1XB962)
Q170MCPU Motion controller User's Manual This manual explains specifications of the Q170MCPU Motion controller, Q172DLX Servo external signal interface module, Q173DPX Manual pulse generator interface module, Servo amplifiers, SSCNET III cables, and the maintenance/inspection for the system, trouble shooting and others.	IB-0300156 (1XB941)

Manual Name	Manual Number (Model Code)
Q173D(S)CPU/Q172D(S)CPU Motion controller Programming Manual (COMMON) This manual explains the Multiple CPU system configuration, performance specifications, common parameters, auxiliary/applied functions, error lists and others.	IB-0300134 (1XB928)
Q173D(S)CPU/Q172D(S)CPU Motion controller (SV13/SV22) Programming Manual (Motion SFC) This manual explains the functions, programming, debugging, error lists for Motion SFC and others.	IB-0300135 (1XB929)
Q173D(S)CPU/Q172D(S)CPU Motion controller (SV13/SV22) Programming Manual (REAL MODE) This manual explains the servo parameters, positioning instructions, device lists, error lists and others.	IB-0300136 (1XB930)
Q173D(S)CPU/Q172D(S)CPU Motion controller (SV22) Programming Manual (VIRTUAL MODE) This manual explains the dedicated instructions to use the synchronous control by virtual main shaft, mechanical system program create mechanical module, servo parameters, positioning instructions, device lists, error lists and others.	IB-0300137 (1XB931)
Q173DSCPU/Q172DSCPU Motion controller (SV22) Programming Manual (Advanced Synchronous Control) This manual explains the dedicated instructions to use the synchronous control by synchronous control parameters, device lists, error lists and others.	IB-0300198 (1XB953)
Q173D(S)CPU/Q172D(S)CPU Motion controller Programming Manual (Safety Observation Function) This manual explains the details, safety parameters, safety sequence program instructions, device lists and error lists and others for safety observation function by Motion controller.	IB-0300183 (1XB945)
Q173HCPU/Q172HCPU Motion controller User's Manual This manual explains specifications of the Motion CPU modules, Q172LX Servo external signal interface module, Q172EX Serial absolute synchronous encoder interface module, Q173PX Manual pulse generator interface module, Teaching units, Power supply modules, Servo amplifiers, SSCNET III cables, synchronous encoder cables and others.	IB-0300110 (1XB910)
Q173HCPU/Q172HCPU Motion controller Programming Manual (COMMON) This manual explains the Multiple CPU system configuration, performance specifications, common parameters, auxiliary/applied functions and others.	IB-0300111 (1XB911)
Q173HCPU/Q172HCPU Motion controller (SV13/SV22) Programming Manual (Motion SFC) This manual explains the functions, programming, debugging, error codes and others of the Motion SFC.	IB-0300112 (1XB912)
Q173HCPU/Q172HCPU Motion controller (SV13/SV22) Programming Manual (REAL MODE) This manual explains the servo parameters, positioning instructions, device list, error list and others.	IB-0300113 (1XB913)

Manual Name	Manual Number (Model Code)
Q173HCPU/Q172HCPU Motion controller (SV22) Programming Manual (VIRTUAL MODE) This manual explains the dedicated instructions use to the synchronous control by virtual main shaft, mechanical system program create mechanical module. This manual explains the servo parameters, positioning instructions, device list, error list and others.	IB-0300114 (1XB914)
Q173HCPU/Q172HCPU Motion controller (SV43) Programming Manual This manual explains the dedicated instructions to execute the positioning control by Motion program of EIA language (G-code), the servo parameters, positioning instructions, device list, error list and others.	IB-0300115 (1XB915)
Q173CPU(N)/Q172CPU(N) Motion controller User's Manual This manual explains specifications of the Motion CPU modules, Q172LX Servo external signal interface module, Q172EX Serial absolute synchronous encoder interface module, Q173PX Manual pulse generator interface module, Teaching units, Power supply modules, Servo amplifiers, SSCNET cables, synchronous encoder cables and others.	IB-0300040 (1XB780)
Q173CPU(N)/Q172CPU(N) Motion controller (SV13/SV22) Programming Manual (Motion SFC) This manual explains the Multiple CPU system configuration, performance specifications, functions, programming, error codes and others of the Motion SFC.	IB-0300042 (1XB781)
Q173CPU(N)/Q172CPU(N) Motion controller (SV13/SV22) Programming Manual (REAL MODE) This manual explains the servo parameters, positioning instructions, device list, error list and others.	IB-0300043 (1XB782)
Q173CPU(N)/Q172CPU(N) Motion controller (SV22) Programming Manual (VIRTUAL MODE) This manual explains the dedicated instructions use to the synchronous control by virtual main shaft, mechanical system program create mechanical module. This manual explains the servo parameters, positioning instructions, device list, error list and others.	IB-0300044 (1XB783)
Q173CPU(N)/Q172CPU(N) Motion controller (SV43) Programming Manual This manual explains the dedicated instructions to execute the positioning control by Motion program of EIA language (G-code). This manual explains the Multiple CPU system configuration, performance specifications, functions, programming, debugging, servo parameters, positioning instructions device list and error list and others.	IB-0300070 (1XB784)

1. OVERVIEW

1.1 Overview

This manual describes those items related to the setup of the Motion controller programming software MELSOFT MT Works2.

In this manual, the following abbreviations are used.

Generic term/Abbreviation	Description
MELSOFT MT Works2	Package product of the Motion controller engineering environment
MT Developer2	Programming software included in MELSOFT MT Works2
MR Configurator2	Servo support software included in MELSOFT MT Works2
MT Developer	Integrated start-up support software package for the Q series Motion controller SW6RNC-GSVE
SW6RNC-GSVE	Integrated start-up support software package for the Q series Motion controller MT Developer
SW3RNC-GSVE	Integrated start-up support software package for the A series Motion controller
SW6RN-SNETP	Communication system software package included in SW6RNC-GSVE
SW3RN-SNETP	Communication system software package included in SW3RNC-GSVE
MR Configurator	Servo support software package MRZJW3-SETUP221E
Motion CPU or Motion controller	R64MTCPU/R32MTCPU/R16MTCPU/ Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1 Q173DCPU/Q172DCPU/Q173DCPU-S1/Q172DCPU-S1/Q170MCPU Q173HCPU/Q172HCPU/Q173HCPU-T/Q172HCPU-T/ Q173CPU/Q172CPU/Q173CPUN/Q172CPUN/Q173CPUN-T/Q172CPUN-T Motion CPU module
R64MTCPU/R32MTCPU/R16MTCPU	R64MTCPU/R32MTCPU/R16MTCPU MELSEC iQ-R Series Motion CPU module
Q173D(S)CPU/Q172D(S)CPU/ Q170MSCPU/Q170MSCPU-S1/ Q170MCPU	Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1 Q173DCPU/Q172DCPU/Q173DCPU-S1/Q172DCPU-S1/Q170MCPU Q Series Motion CPU module
Q173HCPU/Q172HCPU	Q173HCPU/Q172HCPU/Q173HCPU-T/Q172HCPU-T Q Series Motion CPU module
Q173CPU(N)/Q172CPU(N)	Q173CPU/Q172CPU/Q173CPUN/Q172CPUN/Q173CPUN-T/Q172CPUN-T Q Series Motion CPU module
Operating System software	General name for " SW10DNC-RMTFW, SW□DNC-SV□Q□, SW□RN-SV□Q□"
SV13	Operating system software for conveyor assembly use: SW8DNC-SV13Q□ /SW6RN-SV13Q□
SV22	Operating system software for automatic machinery use: SW8DNC-SV22Q□ /SW6RN-SV22Q□
SV43	Operating system software for the peripheral of machine tools: SW7DNC-SV43Q□ /SW5RN-SV43Q□
SV54	Operating system software for the dedicated robot: SW5RN-SV54Q□
SSCNET	High speed serial communication between the Motion CPU and servo amplifier
A10BD-PCF	A10BD-PCF SSC I/F board
A30CD-PCF	A30CD-PCF SSC I/F card

1.2 Features

MELSOFT MT Works2 is programming software for configuring and maintaining a system using the Motion controllers.
Offering the program design environment and maintenance environment, the software can be used for various applications in all the phases of configuring a Motion controller system (system design → program development → debugging → startup → operation and maintenance).
In addition, work efficiency is increased, by the expanded functions and improved operability, in all the system configuration phases.

2. OPERATING ENVIRONMENT

2.1 Operating Environment

<table>
<tr><th colspan="2">Item</th><th colspan="2">Contents</th></tr>
<tr><td rowspan="8">Personal computer</td><td>Personal computer</td><td colspan="2">A personal computer on which Windows® operates</td></tr>
<tr><td>OS</td><td colspan="2">Microsoft® Windows® 10 (32-bit/64-bit)
Windows® 10 Education,
Windows® 10 Enterprise,
Windows® 10 Pro,
Windows® 10 Home
Microsoft® Windows® 10 IoT Enterprise 2016 LTSB Operating System (64-bit)(Note-1)
Microsoft® Windows® 11 (32-bit/64-bit)
Windows® 11 Education,
Windows® 11 Enterprise,
Windows® 11 Pro,
Windows® 11 Home</td></tr>
<tr><td rowspan="2">CPU</td><td>Windows® 11</td><td>2 or more cores on a compatible 64-bit processor or System on a Chip (SoC)</td></tr>
<tr><td>Other than Windows® 11</td><td>Intel® Core™ 2 Duo 2 GHz or faster recommended</td></tr>
<tr><td rowspan="2">Required memory</td><td>Windows® 11</td><td>4 GB or more recommended</td></tr>
<tr><td>Other than Windows® 11</td><td>For 64-bit edition: 2 GB or more
For 32-bit edition: 1 GB or more</td></tr>
<tr><td>Video card</td><td colspan="2">Video card supporting Microsoft® DirectX® 9.0c or higher</td></tr>
<tr><td colspan="2">Available hard disk capacity</td><td colspan="2">For installation: 13 GB or more free hard disk capacity
For operation: 512 MB or more free virtual memory capacity</td></tr>
<tr><td colspan="2">Monitor</td><td colspan="2">Resolution 1024 x 768 pixels or higher</td></tr>
</table>

(Note-1): Only the 64-bit edition is supported.

2. OPERATING ENVIRONMENT

POINT

MR Configurator2 is also installed simultaneously.
For the details of the MR Configurator2, refer to the "MR Configurator2 SW1DNC-MRC2 INSTALLATION GUIDE".

CAUTION

(1) For Windows® 11, if .NET Framework 3.5 (includes .NET 2.0 and 3.0) and .NET Framework 4.8 Advanced Services have been disabled, you need to enable them.

(2) For Windows® 10, if .NET Framework 3.5 (includes .NET 2.0 and 3.0) has been disabled, you need to enable it.

(3) This product may not perform properly when any of the following functions are used.
- Activating the application with Windows® compatible mode
- Simplified user switch-over
- Remote desktop
- Font sizes other than small font sizes (Advanced setting of Display Properties)
- DPI setting other than 100%
  (set the size of text and illustration other than [smaller-100%])
- Windows XP Mode
- Windows Touch or Touch
- Modern UI
- Client Hyper-V
- Tablet mode
- Virtual Desktops
- Unified Write Filter
- Text cursor indicator

(4) In the following cases, the screen of this product may not work properly.
- The size of text and other items on the screen is other than 100% (96 DPI, 9pt, etc.).
  For details, refer to "7. TROUBLESHOOTING".
- The resolution of the screen is changed in operation
- The multi-display is set

(5) Use the product as a standard user or an administrator for Windows® 10 and Windows® 11.
Also, you should have the administrator privilege to link with SoftGOT.

(6) If the Windows firewall setting is enabled, the "Find Module function" and "Direct connection function" may not operate correctly. Disable the Windows firewall setting.

2. OPERATING ENVIRONMENT

2.2 Use Conditions

(1) Supported Motion CPU/Motion controller OS list

Motion CPU module	Operating system software			
	SV13	SV22	SV43	SV54
R64MTCPU/R32MTCPU/ R16MTCPU	○			
Q173DSCPU/ Q172DSCPU	○	○	×	
Q170MSCPU/ Q170MSCPU-S1	○	○	×	
Q173DCPU(-S1)/ Q172DCPU(-S1)	○	○	○	
Q170MCPU	○	○	○	
MR-MQ100		○		
Q173HCPU(-T)/ Q172HCPU(-T)	○	○	○	○
Q173CPUN-T/ Q173CPU(N)/ Q172CPUN-T/ Q172CPU(N)	○	○	○	○

○ : Supported × : Unsupported

(Note-1): The A series Motion CPUs are not supported by MT Developer2.

(Note-2): There is no OS class for R64MTCPU/R32MTCPU/R16MTCPU.
This document explains them in the SV13/22 columns for convenience.

(2) Coexistence with SW6RNC-GSVE and SW3RNC-GSVE

The Operation availability when MT Developer2 is used (coexisted) with other applications is shown in the table below. For the "Cannot be operated" start and use either application. Do not start and use both applications.

Application		MT Developer2		
	Operation	Edit	Communication (RS-232 and USB)	Communication (SSCNET)
SW6RNC-GSVE	Edit	○	○	○
	Communication (RS-232 and USB)	○	○(Note-2)	×(Note-1)
	Communication (SSCNET)	○	○(Note-2)	×(Note-1)
SW3RNC-GSVE	Edit	○	○	○
	Communication (RS-232)	○	×(Note-1)	×(Note-1)
	Communication (SSCNET)	○	×(Note-1)	×(Note-1)

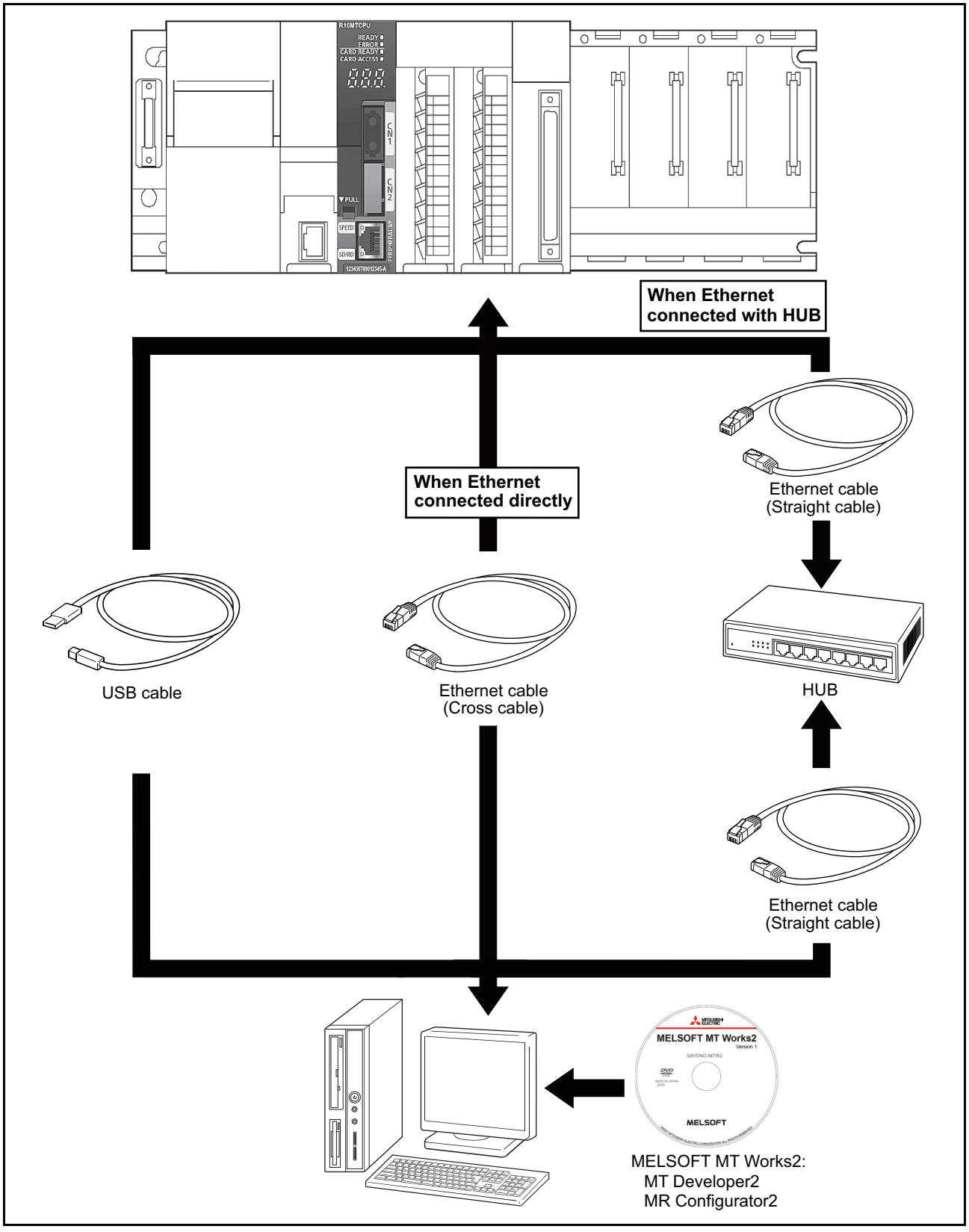
○ : Can be operated × :Cannot be operated

(Note-1): Both one-way communication and two-way simultaneous communication cannot be operated.
(Note-2): Simultaneous communication can be operated.

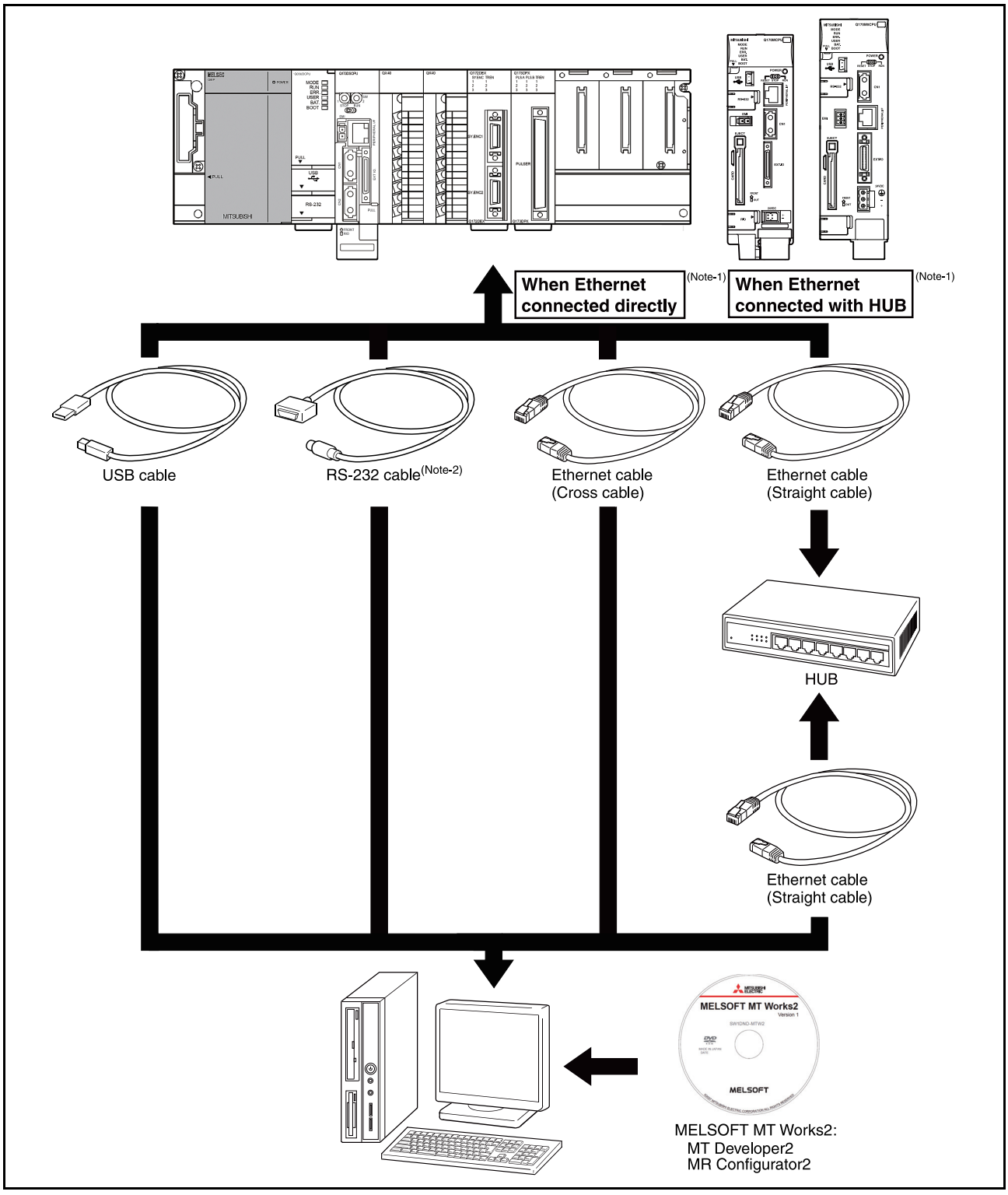
3. SYSTEM CONFIGURATION

3.1 System Configuration

3.1.1 When using R64MTCPU/R32MTCPU/R16MTCPU



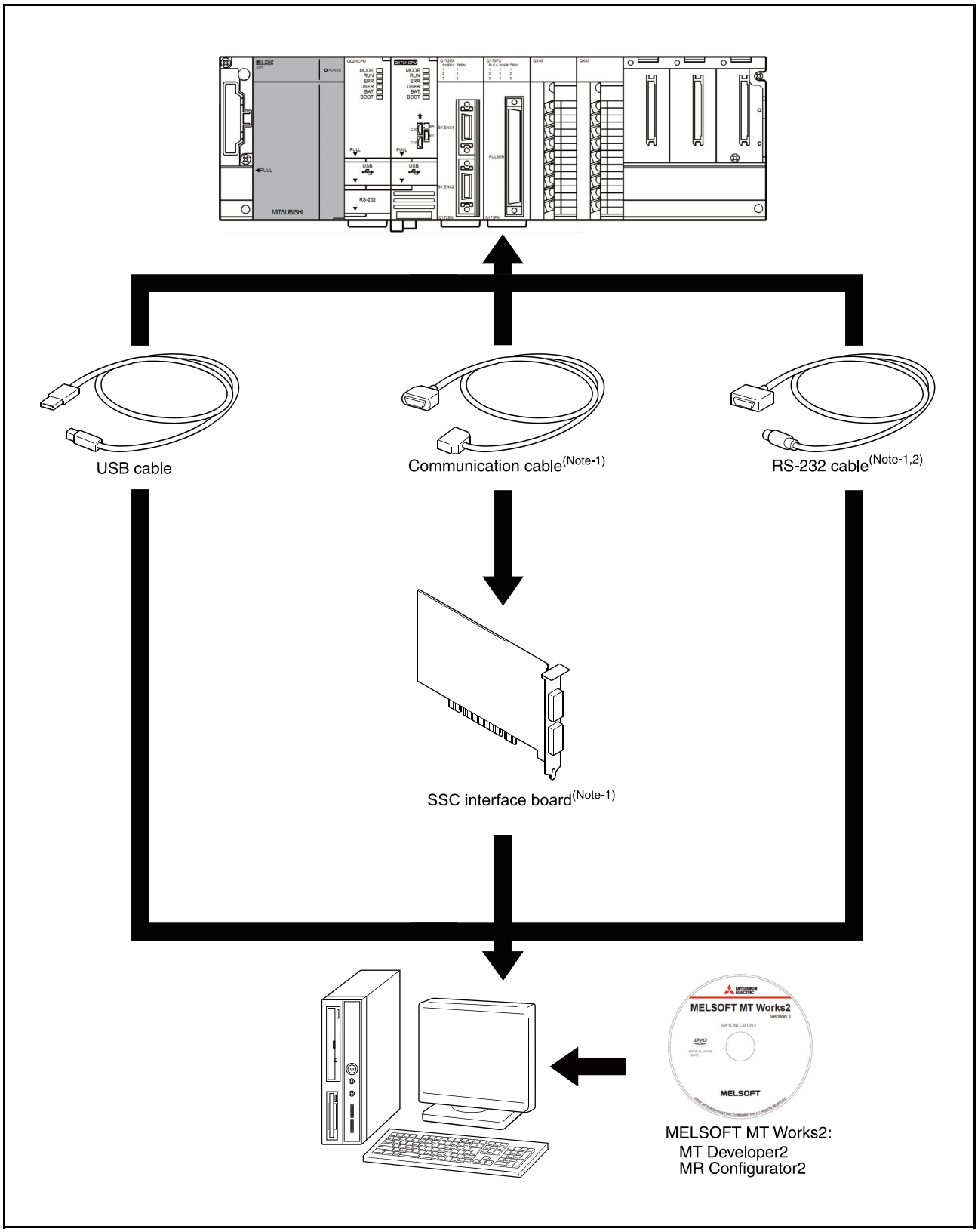
3.1.2 When using Q173D(S)CPU/Q172D(S)CPU/Q170MSCPU/Q170MSCPU-S1/Q170MCPU



(Note-1): Q173DCPU/Q172DCPU is not available.
(Note-2): For details, refer to "3.2 Component List".

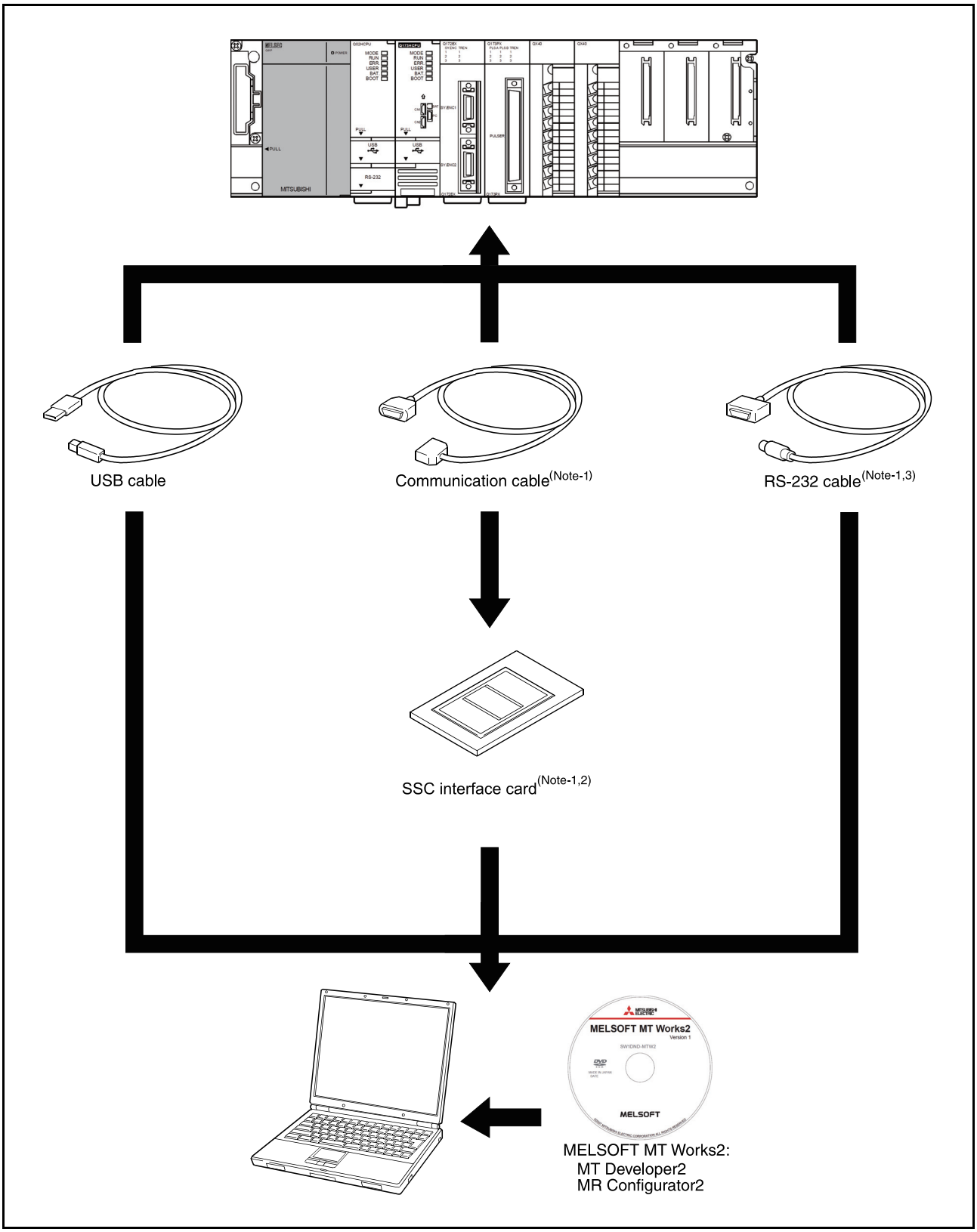
3.1.3 When using Q173HCPU/Q172HCPU/Q173CPU(N)/Q172CPU(N)

(1) Precautions for using a desktop personal computer



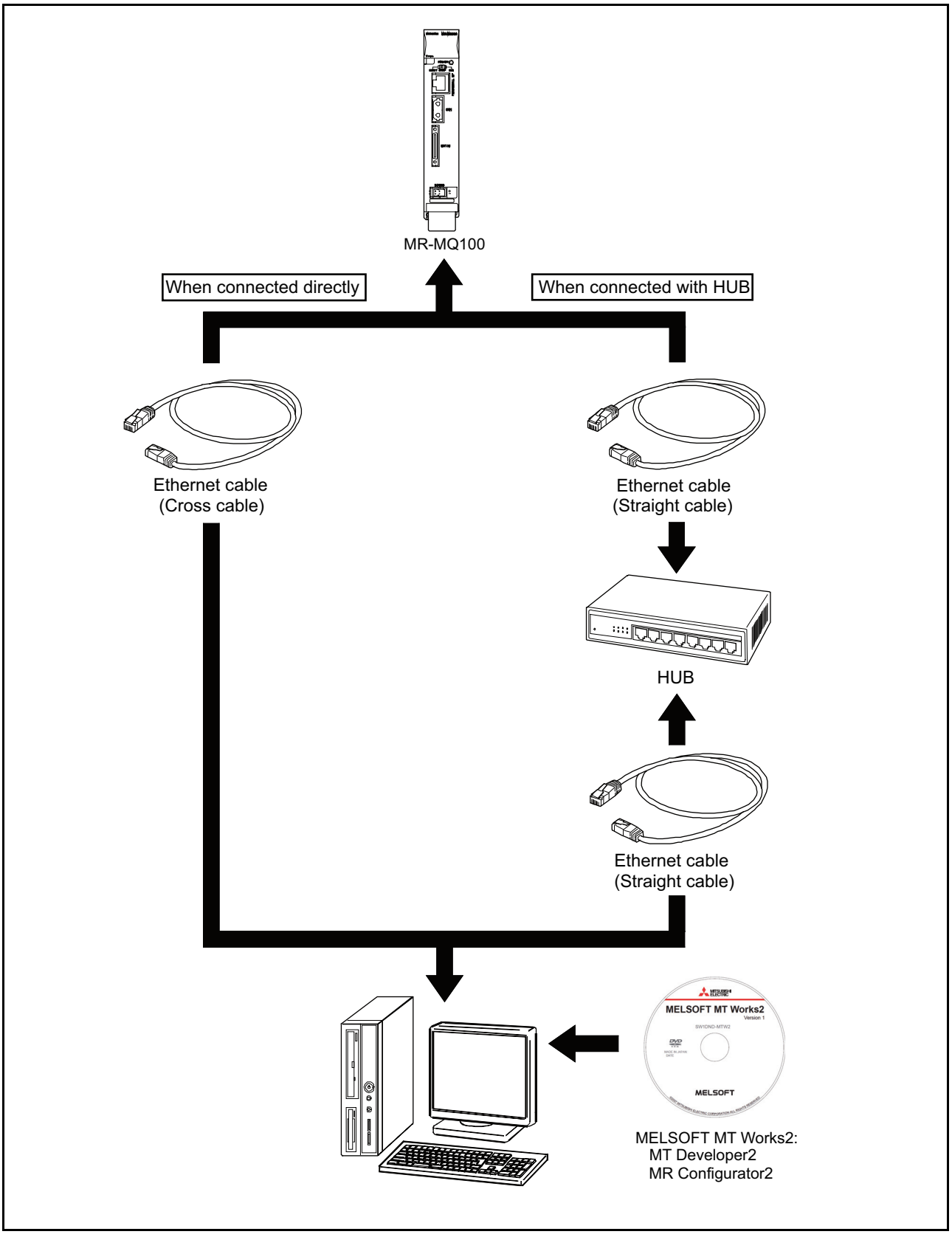
(Note-1): For details, refer to "3.2 Component List".
(Note-2): Q173HCPU/Q172HCPU is not available.

(2) Precautions for using a laptop computer



(Note-1): For details, refer to "3.2 Component List".
(Note-2): We do not guarantee the proper operation of A30CD-PCF on all types of laptop personal computers.
(Note-3): Q173HCPU/Q172HCPU is not available.

3.1.4 When using MR-MQ100



POINT

<When using USB/RS-232>

(1) If the USB cable is connected or disconnected or the multiple CPU system is reset (or turned off and on) frequently during communication of the Motion CPU, an unrecoverable communication error may occur.
Disconnect MELSOFT MT Works2 from the line(Note-1) whenever possible when disconnecting or connecting the USB cable or resetting or turning on or off the multiple CPU system.
If a communication error is not removed, disconnect the USB cable completely and, after five seconds, connect it again. (Though an error may occur during the first communication session after this operation, the correct function is recovered at and after the second session.)
However, a communication error may not be removed even after the above operation with some personal computer models. In this case, reset the personal computer.

(2) A communication error may occur according to some combination of the model of the personal computers and the USB cable and so on.
If this happens, repeat operation while referring to the displayed message.

(3) If the baud rate of the serial port of the personal computer (interface on the personal computer side) is changed for high speed communication, communication may be unsuccessful or communication retries may occur to result in slow communication, according to certain PC performance.
If high-speed transmission is unsuccessful, decrease the baud rate.

(4) USB cable
- The USB cable can be used with a USB driver.
- If the USB cable is used, only one Motion CPU can be connected.

(Note-1): Disconnection from line (Offline state)

State where there is no communication with the Motion CPU (Program or parameter reading/writing, monitoring and testing are made in the online state.)

POINT

<When using Ethernet>

(1) We do not guarantee the operation in the following connections.
- Connection via the Internet (general public line)
- Connection via a firewall device
- Connection via the broadband rooter
- Connection via the wireless LAN

(2) If the resume function, suspension setting, power-saving function or stand-by mode is set in the personal computer used for communication with the CPU, a communication error may occur. Do not use these functions at the personal computer used for communication with the CPU.

When using a direct connection

(1) Communication can be made only by selecting the direct connection (default) on the Transfer Setup screen of MELSOFT MT Works2.
It is not necessary to set the IP address, IP address input format, or protocol.

When using a HUB connection

(1) It is necessary to set the parameters using MELSOFT MT Works2 for the connection with HUB.
- IP address: Set the IP address at the CPU side.
- Protocol: Select from TCP and UDP in accordance with the other device.

Resetting or turning on again the CPU after writing the parameters to the CPU makes the set parameters valid.
If parameters are written with no IP address set, they must be written in the direct connection first.

(2) Communication with the CPU with the IP address set can be made by setting the IP address/host name and protocol on the Transfer Setup screen of MELSOFT MT Works2 after performing the operations described in (1).
- IP address/host name: Set the IP address or host name.
(For the host name, use the name set with the hosts file of Windows.)
- Protocol: Select from TCP and UDP in accordance with the other device.

POINT

<When using an SSC I/F board or SSC I/F card>

(1) The SSC I/F board and SSC I/F card cannot be used together.

(2) Insert the SSC I/F card into the personal computer after installing MELSOFT MT Works2 and setting up the SSCNET communication drivers. (MELSOFT MT Works2 can be reinstalled with the SSC I/F card loaded.)

(3) If the resume function, suspension setting, power-saving function or stand-by mode is set in the personal computer used for communication with the Motion CPU, a communication error may occur.
Do not use these functions at the personal computer used for communication with the Motion CPU.

(4) If the USB cable is connected or disconnected or the multiple CPU system is reset (or turned off and on) frequently during communication of the Motion CPU, an unrecoverable communication error may occur.
Disconnect MELSOFT MT Works2 from the line(Note-1) whenever possible when disconnecting or connecting the USB cable or resetting or turning on or off the multiple CPU system.
If a communication error is not removed, disconnect the USB cable completely and, after five seconds, connect it again. (Though an error may occur during the first communication session after this operation, the correct function is recovered at and after the second session.)
However, a communication error may not be removed even after the above operation with some personal computer models. In this case, reset the personal computer.

(5) A communication error may occur according to some combination of the model of the personal computers and the USB cable and so on.
If this happens, repeat operation while referring to the displayed message.

(6) If the baud rate of the serial port of the personal computer (interface on the personal computer side) is changed for high speed communication, communication may be unsuccessful or communication retries may occur to result in slow communication, according to certain personal computer performance.
If high-speed transmission is unsuccessful, decrease the baud rate.

(7) USB cable
- The USB cable can be used with a USB driver.
- If the USB cable is used, only one Motion CPU can be connected.

(Note-1): Disconnection from line (Offline state)

State where there is no communication with the Motion CPU (Program or parameter reading/writing, monitoring and testing are made in the online state.)

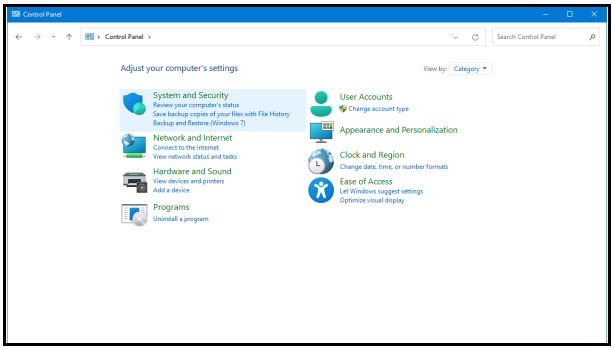
4. COMMUNICATION DRIVER INSTALLATION PROCEDURE

4.1 USB Driver Installation Procedure

4.1.1 Precautions for using USB communication in Windows® 10 and Windows® 11

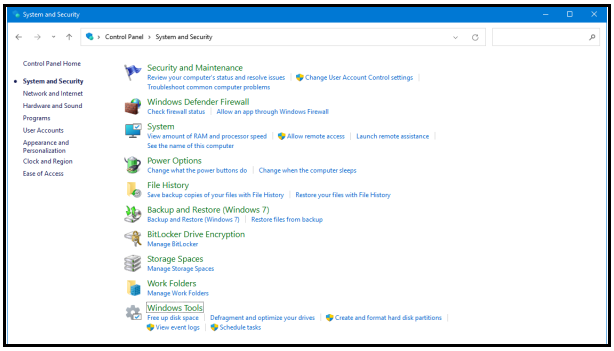
When Windows® 10 or Windows® 11 is used, the USB driver must be installed to make USB communication with the Motion CPU for the first time.

The following is a USB driver installation procedure.



1) Connect the personal computer and Motion CPU with a USB cable.

2) Select "System and Security" from the Control Panel.
To display the Control Panel, select [Start] - [Control Panel].



3) The screen on the left appears.
Select "Windows Tools".

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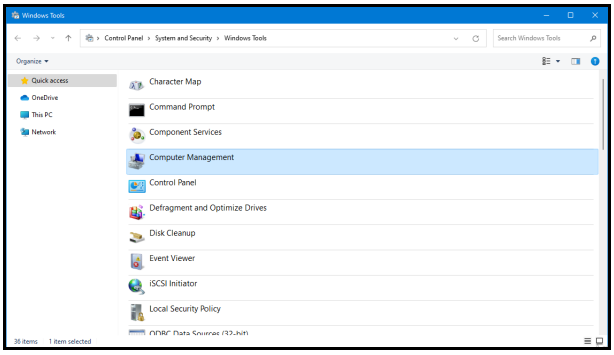
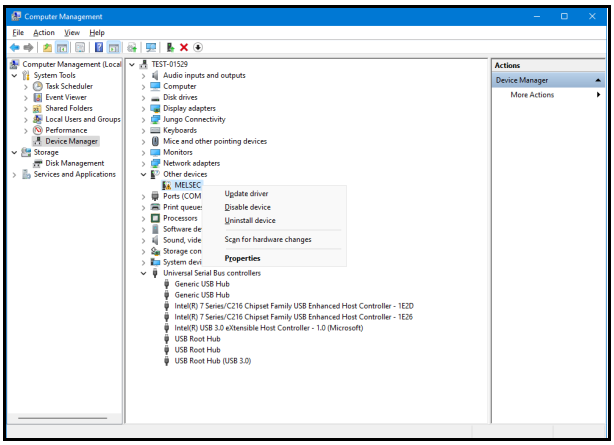
4. COMMUNICATION DRIVER INSTALLATION PROCEDURE

From preceding page



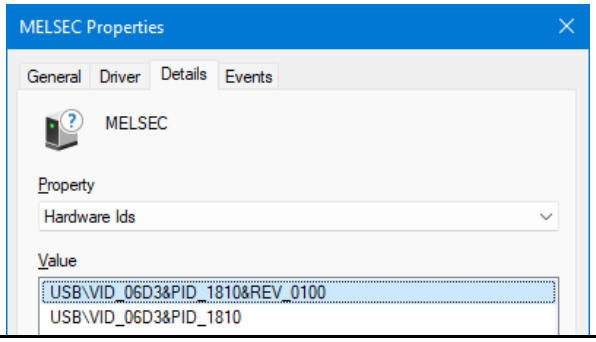
4) The screen on the left appears.
Select "Computer Management" and double-click it.



5) The screen on the left appears when you select Device Manager from Windows Tools and right-click "Unknown device".
Select "Update driver".

Remarks

If multiple "Unknown devices" exist and you are not sure which device is the one you are looking for, right-click each "Unknown device" and select "Properties".
The "Unknown device" whose "Hardware ID" is "USB\VID_06D3&PID_1810" on the "Details" tab of the properties screen is the update target.



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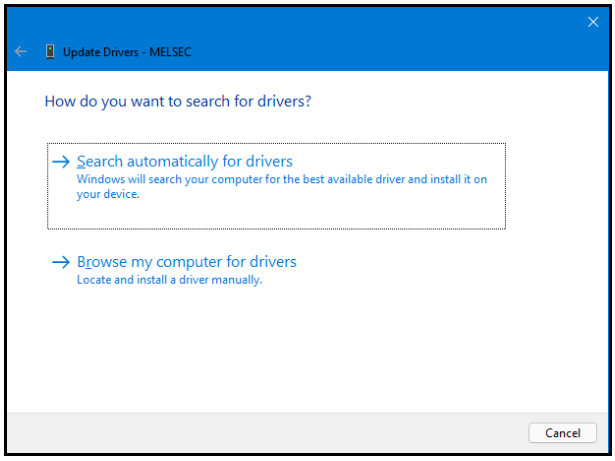
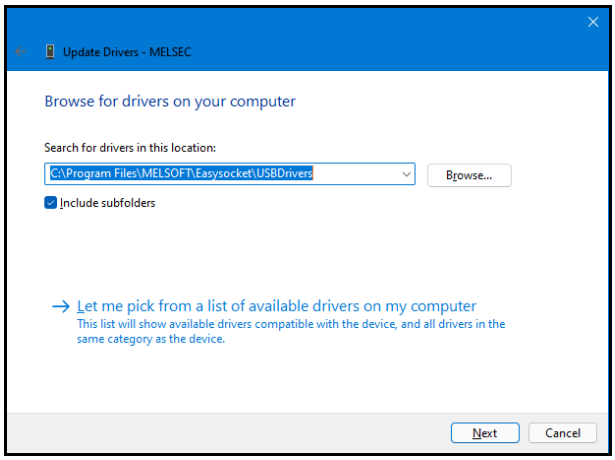
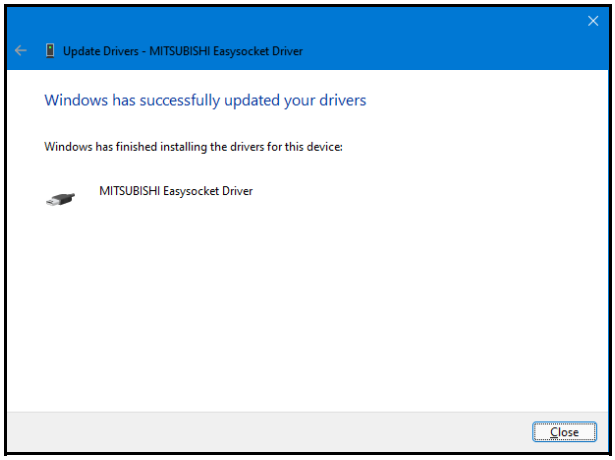


6) The screen on the left appears.
Click [Browse my computer for drivers].



7) The screen on the left appears.
Set the location to the "Easysocket\USBDrivers" folder on the same drive where MT Developer2 was installed and then click Next.
The left screen is an example when C:\Program Files\MELSOFT\Easysocket\USBDrivers is specified.
If multiple MELSOFT products have been installed, specify the installation location of the first installed product.
For 64-bit edition: C:\Program Files (x86)\MELSOFT\Easysocket\USBDrivers



8) The screen on the left appears.
Click Close.

4.2 Updating the USB Driver

In Windows® 10 and Windows® 11, after installing an incompatible MELSOFT and then upgrading it to a compatible version, updating the USB driver is required.

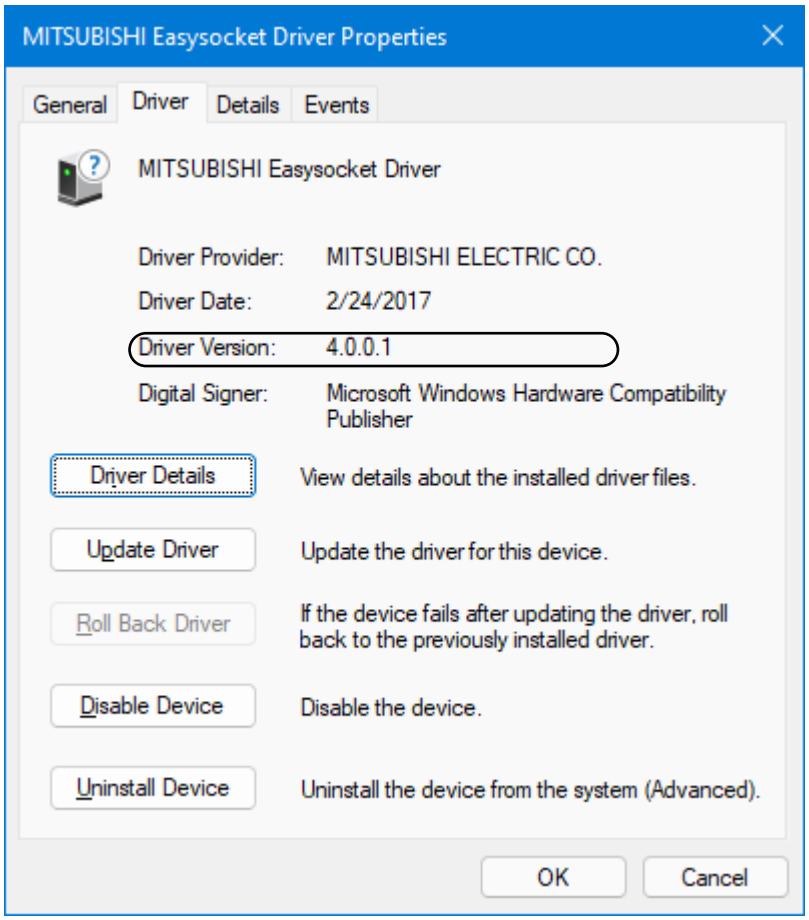
(1) Procedure for updating the USB driver for programmable controller connection

(a) Checking method

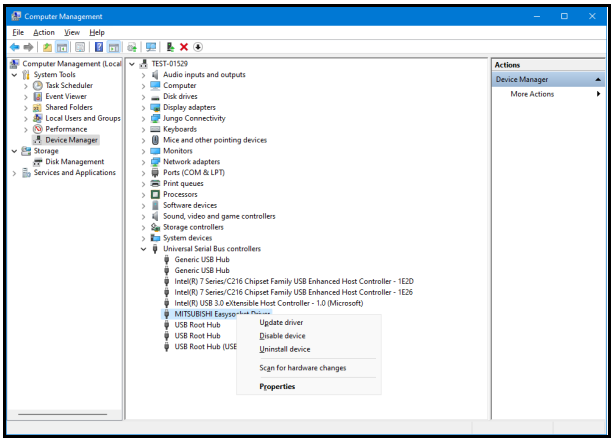
Start the Device Manager while the personal computer is connected to the motion CPU with USB, right-click "MITSUBISHI Easysocket Driver", and select "Properties".

Update is necessary if the "Version" shown in the "Driver" tab of the properties screen is as follows.

• When Windows® 10 or Windows® 11 is used : "4.0.0.0" or earlier

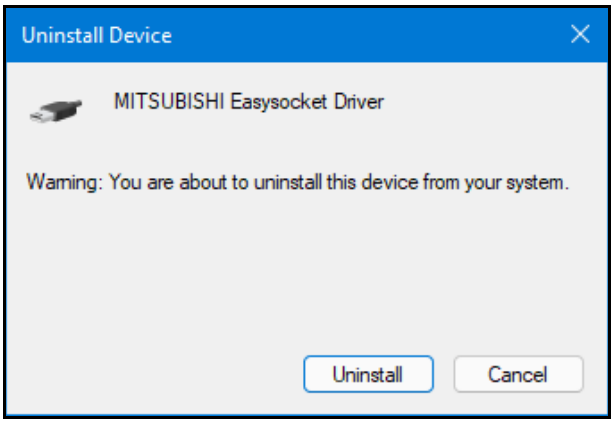


(b) Procedure for update



1) The screen on the left appears when the personal computer and the motion CPU are connected with a USB cable.

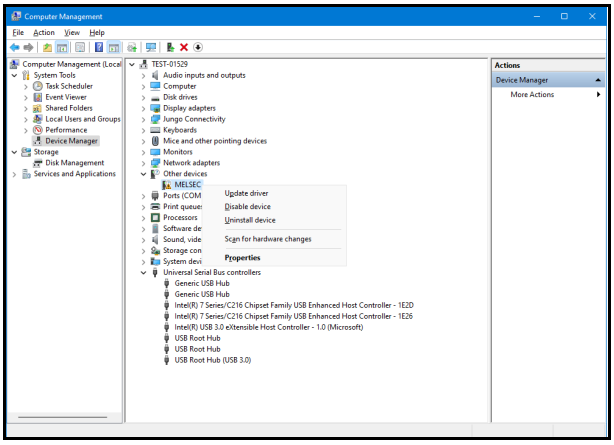
2) Start the Windows Device Manager, right-click "MITSUBISHI Easysocket Driver" as shown on the left, and select "Uninstall device".



3) The warning dialog box as shown on the left appears. Click Uninstall.

To next page

From preceding page

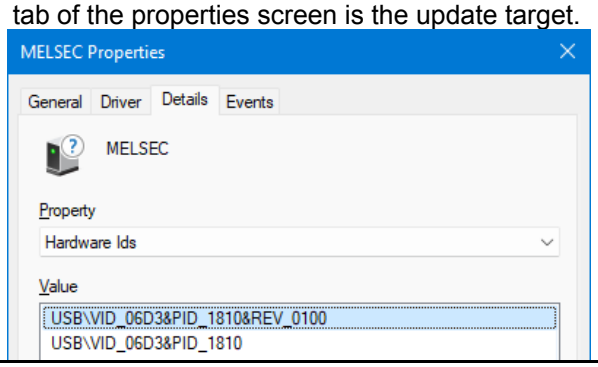


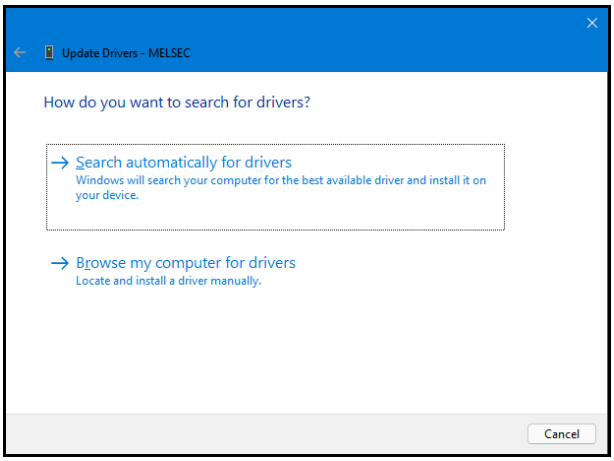
4) Disconnect the USB cable and reconnect it to the same USB port after 5 seconds.

5) The screen on the left appears when you select Device Manager from Windows Tools and right-click "Unknown device".
Select "Update driver".

Remarks

If multiple "Unknown devices" exist and you are not sure which device is the one you are looking for, right-click each "Unknown device" and select "Properties".
The "Unknown device" whose "Hardware ID" is "USB\VID_06D3&PID_1810" on the "Details" tab of the properties screen is the update target.

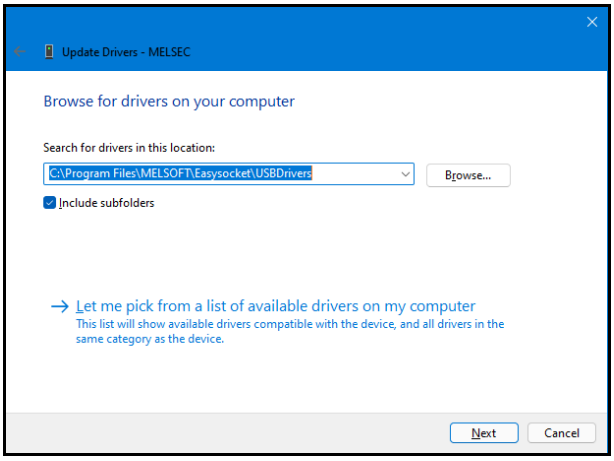




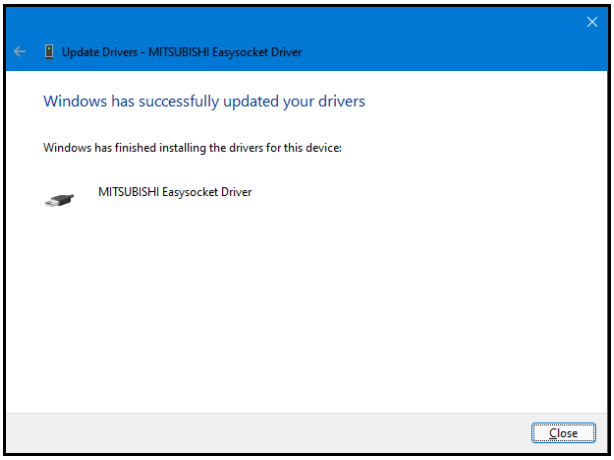
6) The screen on the left appears.
Select "Browse my computer for drivers".

To next page

From preceding page



7) The screen on the left appears.
Set the location to the "Easysocket\USBDrivers" folder on the same drive where MT Developer2 was installed and then click Next.
The left screen is an example when C:\Program Files\MELSOFT\Easysocket\USBDrivers is specified.
If multiple MELSOFT products have been installed, specify the installation location of the first installed product.



8) The screen on the left appears.
Click Close.
The update is complete.

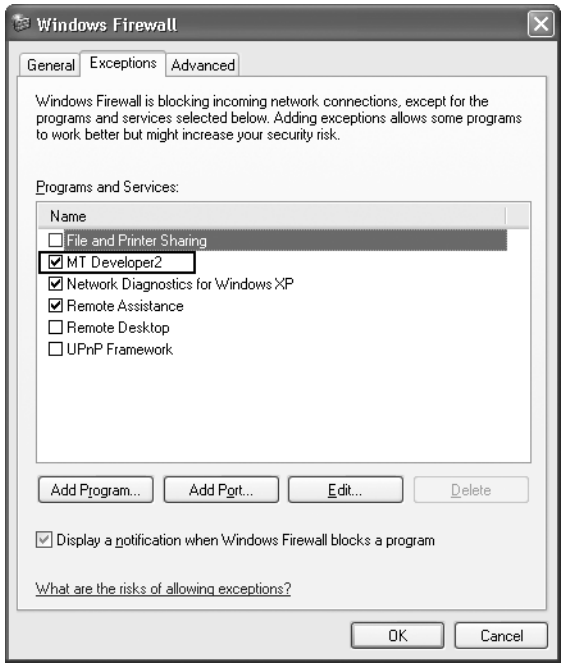
5. PRECAUTIONS

5.1 Uninstallation of SW6RN-SNETP or SW3RN-SNETP

Do not uninstall "SSCNET Communication Driver" when uninstalling the SW6RN-SNETP (Ver.00B or later) or SW3RN-SNETP (Ver.00G or later) in a personal computer where multiple MT Developer2 and SW6RNC-GSVE (MT Developer) or SW3RNC-GSVE are installed.
If the SSCNET communication driver is uninstalled, reinstall MT Developer2.

5.2 Finding Ethernet Built-in Type CPU on the Network

When "Find Ethernet Built-in Type CPU on the Network" is executed at the CPU side I/F CPU module detail setting in the transfer setup, the "Windows Security Alert" dialog box may appear.
If this dialog box appears, select "Unblock".



When selecting "Block", operate as follows.
Mark the checkbox of "MT Developer2" in the "Programs and Services" list on the "exceptions" tag of Windows Firewall.

The image of the dialog box differs depending on Windows you use.
For details of the Windows Firewall settings, refer to Windows Help.

5.3 Adding Shortcuts to the Start Menu

The shortcut folder on the Start menu, which was "MELSOFT Application", has changed to "MELSOFT" since Ver. 1.118Y.

5.4 Display Language Switching

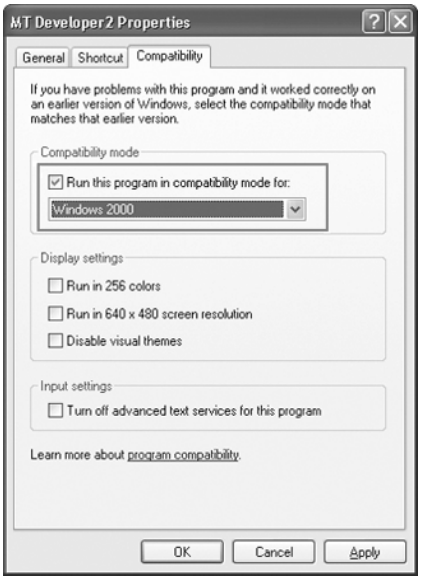
To switch the display language in Windows® 10 or Windows® 11, supplemental fonts of the target language are required. Supplemental fonts can be added according to the following procedure.
Click button (Start) in Windows® Taskbar → [Settings] → [System] → [Apps & features] → [Manage optional features] → [Add a feature]

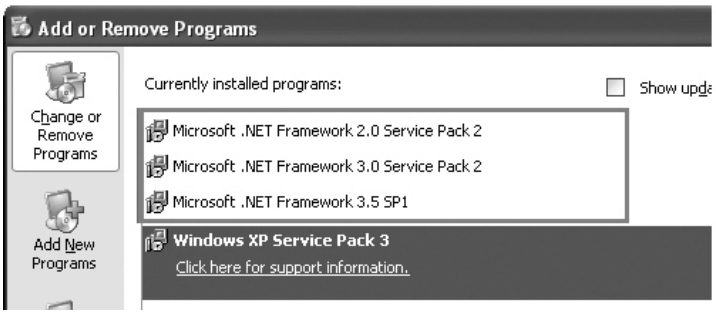
6. TROUBLESHOOTING

6.1 During USB Communication, Communication Error Occurred and Communication Is Not Recovered from Error

No.	Phenomenon	Cause and remedy
1	A communication error occurred during USB communication with the Motion CPU, and communication is not recovered from the error.	Any of operations 1) to 3) was performed during USB communication with the Motion CPU. 1) The USB cable was disconnected and connected during communication with the Motion CPU or connected after communication started. 2) The Motion CPU was reset. 3) The Motion CPU was cycled on/off. Do not perform any of operations 1) to 3) during USB communication. Doing so may cause a communication error, from which communication cannot be recovered. If any of operations of 1) to 3) is to be performed, it is recommended to put MELSOFT MT Works2 in an offline status(Note-1). If communication is not recovered from the error, disconnect the USB cable once, and after 5 or more seconds have elapsed, reconnect it. (The communication error may occur at the first time after the above operation is performed, but communication will return to normal at the second time and later.) Depending on the personal computer model, however, communication may not be recovered from the error if the above operation is performed. In that case, reset the personal computer. (Note-1): Offline status: Status in which communication is not made with the Motion CPU (In an online status, program/parameter read/write, monitoring, test or like is in execution.)

6.2 Project Cannot Be Saved or Read

No.	Phenomenon	Cause and remedy
1	A project cannot be saved or read. (Example) The following message may appear.  To next page	<Cause 1)> The item "Execute this program in compatibility mode" is selected in the application properties. <Remedy 1)> Remove the check mark from "Execute this program in compatibility mode". 

No.	Phenomenon	Cause and remedy
	From preceding page ⬇	<Cause 2)> A part of the Microsoft .NET Framework may be corrupted. <Remedy 2)> Uninstall the Microsoft .NET Framework from the personal computer, download the latest Microsoft .NET Framework from the web site of Microsoft and install it. Uninstall all the programs displayed with the name "Microsoft .NET Framework". When multiple programs are required to uninstall, uninstall them in descending order. (Example) The following shows the order of uninstalling of the figure below.  1) Microsoft .NET Framework 3.5 SP1 2) Microsoft .NET Framework 3.0 Service Pack 2 3) Microsoft .NET Framework 2.0 Service Pack 2

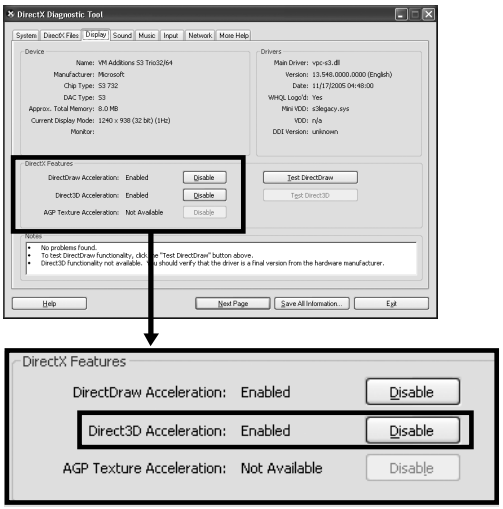
(Note-1): The following shows the latest version in November, 2009.
Microsoft .NET Framework 3.5 SP1

6.3 Sampling Omission May Occur on the Digital Oscilloscope

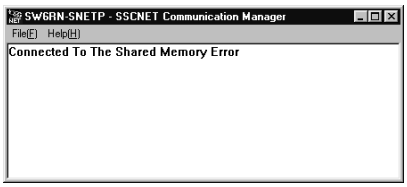
No.	Phenomenon	Cause and remedy
1	On the digital oscilloscope, a sampling omission may occur during sampling of data by SSCNET communication (PC real-time read method).	If other operation is performed during sampling, a sampling failure may occur.

6. TROUBLESHOOTING

6.4 Digital Oscilloscope Cannot Be Started

No.	Phenomenon	Cause and remedy
1	When the digital oscilloscope is started, the following message appears and the digital oscilloscope cannot be started. 	Check whether DirectX® can be operated by the DirectX Diagnostic Tool. Choose the [Display] tab in the DirectX® Diagnostic Tool. Check whether "DirectDraw Acceleration" of the "DirectX Features" is "Enabled". 

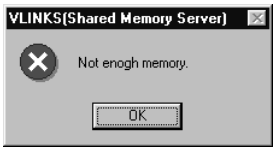
6.5 The SSCNET Communication Manager of SW6RN-SNETP Displays "Shared Memory Connection Error"

No.	Phenomenon	Cause and remedy
1	The SSCNET communication manager of SW6RN-SNETP displays "Connected To The Shared Memory Error" and SW6RN-SNETP is not started properly.  If SSCNET communication is started in this status, communication error "51" occurs. 	With MT Developer2 and SW6RN-SNETP started simultaneously, operation to start SW6RN-SNETP or to execute communication may cause a phenomenon shown on the left. To start SSCNET communication by SW6RN-SNETP, exit from MT Developer2 and SW6RN-SNETP once and restart only SW6RN-SNETP. To execute SSCNET communication, make communication with only either one of MT Developer2 or SW6RN-SNETP started.

6.6 During Communication, "Can not allocate Share memory" Error Occurs

No.	Phenomenon	Cause and remedy
1	During communication, "Can not allocate Share memory" error occurs. 	The following operations may cause the phenomenon given on the left. • When the communication is forcibly shut down, during communication, by the CPU power turning off or an unplugged communication cable. • The communication is made at MT Developer2 side while SW3RN-SNETP is started (including the online status). When this error occurs, exit from all MELSOFT applications once, and start MT Developer2 again.

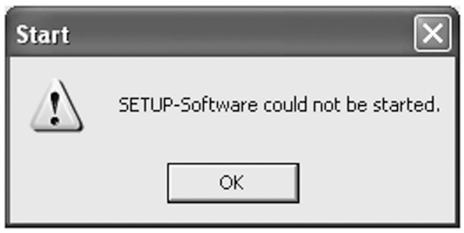
6.7 When SW3RN-SNETP Is Started, "Not enough memory" Error Occurs

No.	Phenomenon	Cause and remedy
1	When SW3RN-SNETP is started, "Not enough memory" error occurs. 	With MT Developer2 and SW3RN-SNETP started simultaneously, operation to start SW3RN-SNETP or to execute communication may cause a phenomenon shown on the left. To start SSCNET communication by SW3RN-SNETP, exit from MT Developer2 and SW6RN-SNETP once and restart only SW3RN-SNETP. To execute SSCNET communication, make communication with only either one of MT Developer2 or SW3RN-SNETP started.

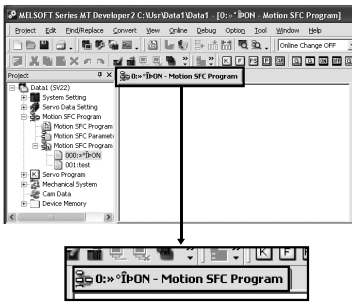
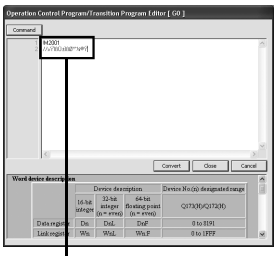
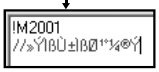
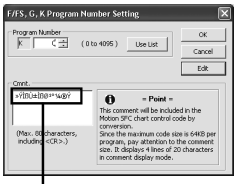
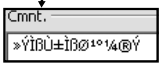
6.8 During USB Communication, the USB Driver Cannot Be Installed or Communication Error Occurs

No.	Phenomenon	Cause and remedy
1	An error occurs and the USB driver cannot be installed when USB communication is performed with the Motion CPU.	When USB communication is performed in normal mode with a Motion CPU on which the Operating system software has not been installed, the USB driver cannot be installed, and the phenomenon given on the left occurs. If the Operating system software has not been installed, change the Motion CPU to installation mode, and perform USB communication again. The USB driver will be installed. However, when USB communication is performed for the first time on Windows® 10 or Windows® 11, it is necessary to install the USB driver. Refer to the following for the setting procedure. "4.1.1 Precautions for using USB communication in Windows® 10 and Windows® 11" (Note-1): Refer to the user manual of each Motion CPU regarding how to deal with the Motion CPU.
2	The following communication error occurs and communication with the CPU cannot be done when USB communication is performed with the Motion CPU. (Error Code = 0x1808502) 	

6.9 MR Configurator Fails to Be Started from MT Developer2 (Linkage Function)

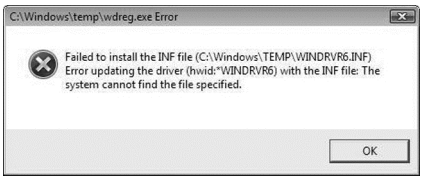
No.	Phenomenon	Cause and remedy
1	When MR Configurator is started from MT Developer2, the following error occurs and the starting fails. (linkage function) 	An MR Configuration version which does not support MT Developer2 is installed. Update the version of MR Configurator to Ver.C1 or later.
2	When MR Configurator is started from MT Developer2, the following error occurs and the starting fails. (linkage function) 	MR Configurator version which does not support Q170MCPU is installed. Update the version of MR Configurator to Ver.C2 or later.

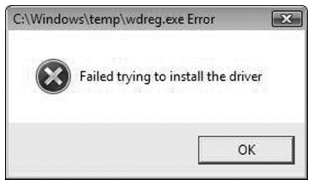
6.10 Operation When Using Program Data, Created with the Japanese Edition(Note-1), in the English Edition(Note-2)

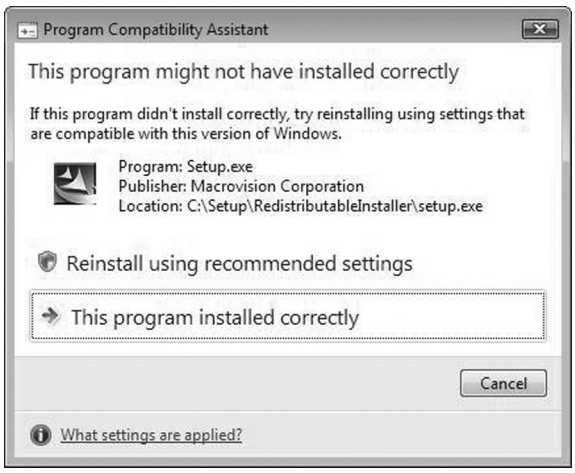
No.	Phenomenon	Cause and remedy
1	The Motion SFC Program Name Is Not Displayed Correctly.  	This situation occurs when Japanese characters are used. Change the Japanese characters to the ASCII characters with the Japanese edition before opening the project with the English edition. The project may also be opened by deleting the garbled characters and entering characters in the English edition.
2	The motion SFC chart (symbols) comments, or comments in the F/G program are not displayed correctly.    	

(Note-1): MT Developer (SW6RNC-GSVE), MT Developer2
(Note-2): MT Developer2

6.11 When Installation Does Not Complete or Warning Dialog Boxes Are Displayed

<table>
<tr><th>No.</th><th>Phenomenon</th><th>Cause and remedy</th></tr>
<tr><td>1</td><td>The following warning dialog boxes may appear on a Windows® 10- or Windows® 11-based personal computer.
 

CAUTION
The warning dialog boxes shown above may be hidden behind the screen of MELSOFT installer.
Press Alt + Tab to bring them to front.</td><td>The warning dialog boxes appear when Windows® 10- or Windows® 11-incompatible driver software is installed on Windows® 10 or Windows® 11 in either of the following conditions.
<Occurrence condition 1)>
When a Windows® 10- or Windows® 11-incompatible MELSOFT is installed.
<Occurrence condition 2)>
When "Reinstall using recommended settings" is selected on the "Program Compatibility Assistant" screen by mistake after installing MELSOFT.
 

<Corrective action>
Press OK on each warning dialog box and complete the installation.
Perform either of the following corrective actions corresponding to the occurrence condition.

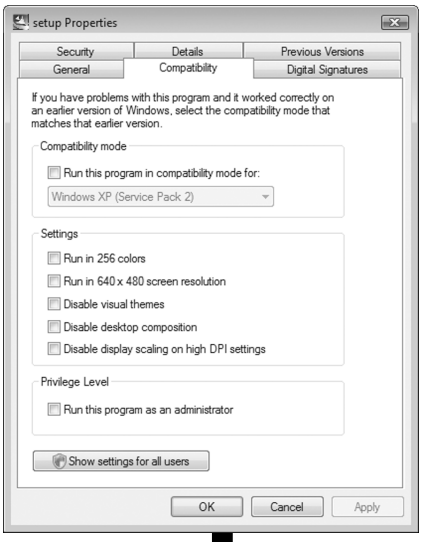
Corrective action for occurrence condition 1):
Install a Windows® 10- or Windows® 11-compatible software update version following the procedures below.
"4.1.1 Precautions for using USB communication in Windows® 10 and Windows® 11"
Corrective action for occurrence condition 2):
Reinstall the MELSOFT product.
Be sure to select "This program installed correctly" on the "Program Compatibility Assistant" screen.
Corrective action is described below.
To next page</td></tr>
</table>

No.	Phenomenon	Cause and remedy
		From preceding page ⬇

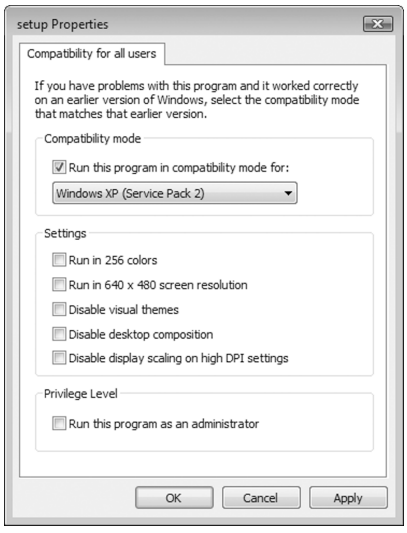
CAUTION

Note the following when the installer is started from the internal hard disk drive.
If "Reinstall using recommended settings" on the "Program Compatibility Assistant" screen is selected by mistake, 'Windows XP compatibility mode' is set automatically. Disable "Windows XP compatibility mode" by the following procedure, and perform the reinstallation.

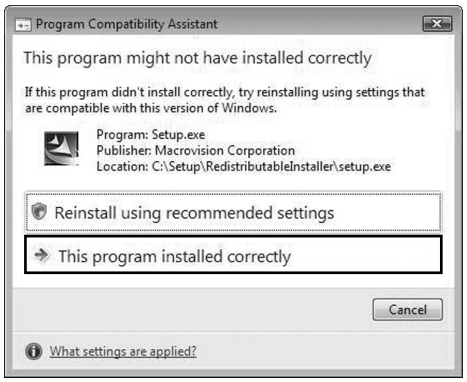
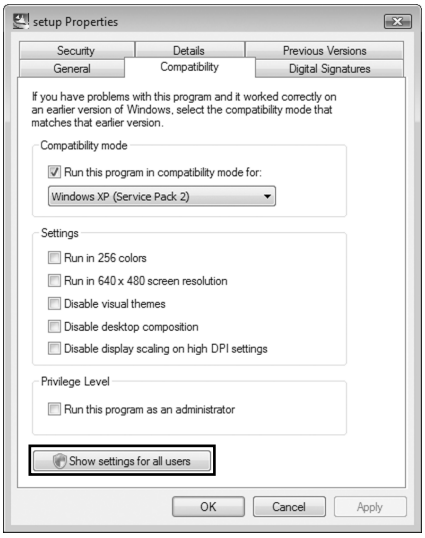
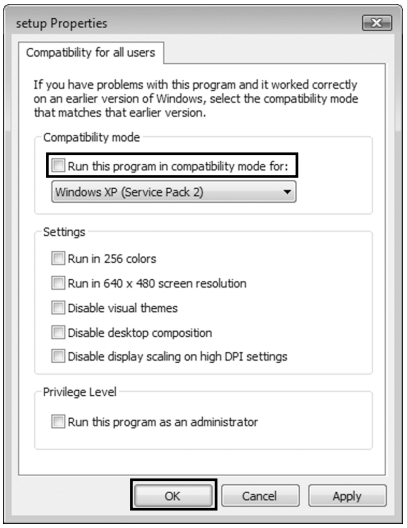
1). Right-click on the setup.exe icon of the installation target in the Windows explorer, and open the "setup Properties" screen.
2). Select the "Compatibility" tab and click Show settings for all users.
3). Uncheck the "Run this program in compatibility mode for: "check box of compatibility mode in the "Compatibility for all users" tab and click OK.
4). Click OK on the "setup Properties" screen.



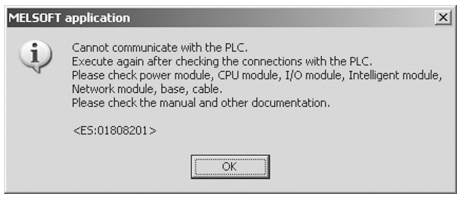
⬇



6.12 A Dialog Box Is Displayed After an Installer Ends

No.	Phenomenon	Cause and remedy
1	The following warning dialog boxes may appear on a Windows® 10- or Windows® 11-based personal computer.  **CAUTION** The warning dialog boxes shown above may be hidden behind the screen of MELSOFT installer. Press Alt + Tab to bring them to front.	<Corrective action> Be sure to select "This program installed correctly". If "Reinstall using recommended settings" is selected by mistake, "Windows XP compatibility mode" is set automatically. Disable "Windows XP compatibility mode" by the following procedure, and perform the reinstallation. 1). Right-click on the setup.exe icon of the installation target in the Windows explorer, and open the "setup Properties" screen. 2). Select the "Compatibility" tab and click Show settings for all users.  3). Uncheck the "Run this program in compatibility mode for: "check box of compatibility mode in the "Compatibility for all users" tab and click OK.  4). Click OK on the "setup Properties" screen.

6.13 When the TCP/IP Communication Cannot Be Established or the Simulation Function Cannot Be Started

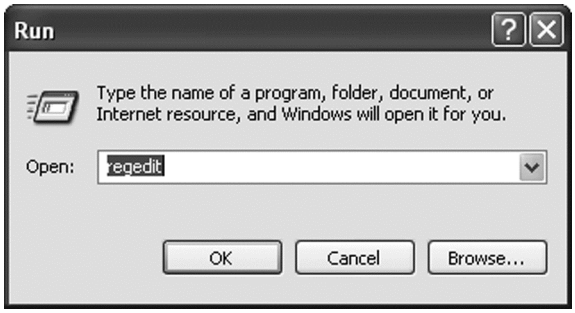
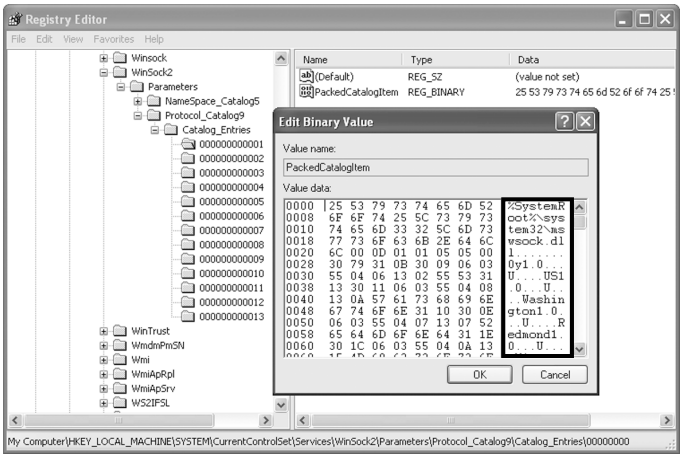
<table>
<tr><th>No.</th><th>Phenomenon</th><th>Cause and remedy</th></tr>
<tr><td>1</td><td>As the TCP/IP communication with the Motion CPU is established or the simulation function is started on MELSOFT MT Works2, the following dialog box may be displayed and the operation may not be able to be performed even if corrective actions against the message are taken.
(Error Code <ES:01808201>)
 
</td><td>The TCP/IP communication function and simulation function of MELSOFT MT Works2 are based on the standard TCP/IP communication provided by Microsoft Corporation. In cases where these functions cannot be started, the communication function of a software product made by another company may adversely affect the standard TCP/IP communication.

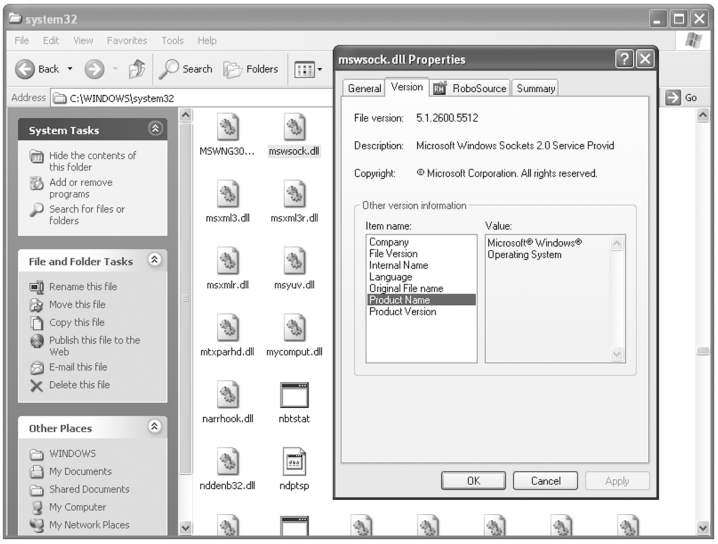
<Corrective action>
This problem can be workarounded by upgrading another company's software product to the latest version or uninstalling it.
For the corresponding software products, refer to the following "Corresponding other companies' software products".

<Corresponding other companies' software products>
(1) Other companies' software products that have been confirmed as causes of this problem
<table>
<tr><th>Manufacturer</th><th>Product name</th><th>Confirmed by (version)</th><th>Corrective action</th></tr>
<tr><td>WILLCOM, Inc.</td><td>Venturi Client for AIR-EDGE</td><td>3.1.2</td><td>Upgrade</td></tr>
<tr><td>Digital Arts Inc.</td><td>i-FILTER</td><td>4.01.08</td><td>Upgrade</td></tr>
<tr><td>SOURCENEXT CORPORATION</td><td>Virus Security ZERO</td><td>9.5.0072</td><td>Uninstall</td></tr>
<tr><td>Sprint Inc.</td><td>Sprint SmartView</td><td>2.25.0046</td><td>Uninstall</td></tr>
</table>
(2) Other companies' software products other than above
In cases where this problem occurs on a personal computer on which any of these software products mentioned above is not installed, follow the following procedure to identify which software product adversely affects the standard TCP/IP communication, and perform upgrade or uninstallation of the software product.

POINT
Registry values are referred in <Checking method> described below.
Be sure not to edit registry values when referring them. The registry is an important component for the operating system. If registry values are erroneously changed, the computer may not work properly.

To next page</td></tr>
</table>

No.	Phenomenon	Cause and remedy
		From preceding page ⬇ <Checking method> 1) Start the Registry Editor on Windows. Click [Run] via [Start], type "regedit" on the displayed dialog box, and click OK.  2) In the Registry Editor, perform the following operation. Under "HKEY_LOCAL_MACHINE¥SYSTEM¥CurrentControlSet¥Services¥WinSock2¥Parameters¥Protocol_Catalog9¥Catalog_Entries", double-click "PackedCatalogItem" in sequentially-numbered registry keys starting from "000000000001", such as "000000000001", "000000000002", "000000000003", and so on.  If a displayed dll file name is other than "mswsock.dll" and "rsvpsp.dll", the dll file likely affects the standard TCP/IP communication. When more than one sequentially-numbered registry key exists, check a dll file name in every registry key. ⬇ To next page

No.	Phenomenon	Cause and remedy
		From preceding page ⬇ 3) Identify a software product made by another company. Identify the product name by opening the properties of the dll file checked in the above step 2 and confirming its "Product Name" and "Description" etc. or by searching for the dll file name on the web. 

6.14 Contents in the Screen May Not Be Displayed Properly (for Example, Overlapping of Icons, Text Overflowing from the Frame of a Button, Etc.)

No.	Phenomenon	Cause and remedy
1	Contents in the screen may not be displayed properly. (For example, overlapping of icons, text overflowing from the frame of a button, etc.) The same phenomenon may occur in the Install, Digital Oscilloscope, and Test screens.	<Cause> Is the size of text and other items on the screen changed to a value other than 100% (96 DPI, 9pt, etc.) in Windows settings? <Remedy> • Return the setting to 100% (96 DPI, 9pt, etc.). • For Windows 10 (version 1703 or later)(Note-1) and Windows 11, the display of MT Works2 can be enlarged with high DPI scaling by using a Windows 10 or Windows 11 function(Note-2). <Corrective action> 1). Select and right-click the corresponding application file (MT2.exe/MT2Inst.exe/ MTD2Test.exe/OSC2.exe)(Note-3) according to the improperly displayed screen, then select [Properties] from the right-click menu. 2). Select "Override high DPI scaling behavior. Scaling performed by:" in the [Compatibility] tab, then select "System" from the pull-down list. 3). Click the [OK] button. <Cam graph display> The display area of cam graph may be reduced on a display with very high resolution. In this case, edit the cam data in the table. To improve the size of display area, change the display settings of personal computer.

(Note-1): The Windows version can be checked by the following procedure.
1. Press Windows key + [R] button, or select [Windows System] ⇨ [Run] from the Start menu of Windows.
2. Enter 'winver' in the "Run" screen.
3. Check the version in the displayed screen.

(Note-2): The display of MT Works2 will be blurred by enlarging.
The following lists the setting values for "Change the size of text, apps, and other items" in Windows 10 and Windows 11 and the recommended display resolution for each setting value.
Setting value: 100%, resolution of the display: 1024 x 768 dots or more
Setting value: 125%, resolution of the display: 1900 x 1200 dots or more
Setting value: 150%, resolution of the display: 1900 x 1200 dots or more
Setting value: 175%, resolution of the display: 2880 x 1620 dots or more
Setting value: 200%, resolution of the display: 2880 x 1620 dots or more
Setting value: 225%, resolution of the display: 3840 x 2160 dots or more
Setting value: 250%, resolution of the display: 3840 x 2160 dots or more

(Note-3): The application files (MT2.exe/MT2Inst.exe/MTD2Test.exe/OSC2.exe) can each be found in specific locations under the folder where MT Works2 has been installed.
The following are examples of storage locations.
• MT2.exe/MT2Inst.exe/MTD2Test.exe
64-bit version operating system: C:\Program Files (x86)\MELSOFT\MTD2
32-bit version operating system: C:\Program Files\MELSOFT\MTD2
• OSC2.exe
64-bit version operating system: C:\Program Files (x86)\MELSOFT\MTD2\Servom
32-bit version operating system: C:\Program Files\MELSOFT\MTD2\Servom

APPENDIX 1 Added Functions

The following table shows the functions that are added to MT Developer2 (Version 1.70Y or earlier).

No.	Description	SV13	SV22	SV43	SV54	Supported version
1	The help jump function by the F1 key is added.	○	○	○	○	1.03D
2	The import multiple CPU parameter function is added.	○	○	○	○	
3	The operability of the monitor function is improved.	○	○	○	○	
4	The operability of the mechanical system program function is improved.	–	○	–	–	
5	The safety signal comparison function is supported. (iQ Platform compatible motion controller with the safety signal comparison function)	○	○	–	–	
6	Q173DCPU/Q172DCPU /Q173HCPU/Q172HCPU/Q173CPU/Q172CPU is supported.	–	–	○	–	
7	The expression and input of decimal comma is supported. (Note-1): Except for motion program of SV43/SV54.	○	○	○	○	
8	Windows® XP Service Pack 3 and Windows Vista® Service Pack 1 are supported.	○	○	○	○	
9	The save function of current value history monitor is added.	○	○	○	○	1.05F
10	The operability of the system setting function is improved.	○	○	○	○	
11	The operability of the motion SFC program function is improved.	○	○	–	–	
12	Q170MCPU is supported.	○	○	–	–	
13	The servo programs CHGA-E/CHGA-C instructions and motion dedicated PLC instruction D (P).CHGA can be displayed on the scroll monitor screen for the Q173DCPU/Q172DCPU. (Note-1): Q170MCPU is supported by Ver.1.05F.	○	○	–	–	1.06G
14	The 0.4ms event task is supported for the Q173DCPU/Q172DCPU.	○	○	–	–	
15	The MR-J3-B DD motor is supported for the Q173DCPU/Q172DCPU. (Note-1): Q170MCPU is supported by Ver.1.05F.	○	○	○	–	
16	The CPU built-in I/F (I/O signal (DI/DO)) function is supported for the Q170MCPU.	○	○	–	–	
17	The CPU built-in I/F (manual pulse generator/INC synchronous encoder) function is supported for the Q170MCPU.	○	○	–	–	
18	The mark detected function is supported for the Q170MCPU.	○	○	–	–	
19	The MC protocol communication is supported for the Q170MCPU.	○	○	–	–	
20	The advanced S-curve acceleration/deceleration function is supported for the Q173DCPU/Q172DCPU/Q170MCPU. (Note-1): Except for constant speed control of the servo program (CPSTART instruction).	○	○	–	–	
21	The message displayed when rewriting the data processing processor OS of Q173HCPU/Q172HCPU/Q173CPU/Q172CPU, which supports the data processing processor OS, is improved.	○	○	○	○	
22	The CPU information screen is added. When connecting CPU, you can start from the menu [Help] → [CPU Information].	○	○	○	○	
23	The label input assist function is added for the Q173DCPU/Q172DCPU/ Q170MCPU projects. Target: Motion SFC Program, Servo Program, Mechanical System Program	○	○	–	–	
24	The cross reference function is added for the Q173DCPU/Q172DCPU/ Q170MCPU projects. Target: Label Editor, Motion SFC Program, Servo Program, Mechanical System Program	○	○	–	–	
25	The find device function is added for the mechanical system program.	–	○	–	–	
26	The label specification is enabled for the mechanical system program of the Q173DCPU/Q172DCPU/Q170MCPU projects.	–	○	–	–	
27	Copying between projects is enabled for the limit switch data.	○	○	○	○	
28	Changing CPU type and diverting are enabled from Q173DCPU/Q172DCPU/ Q170MCPU projects to Q173HCPU/Q172HCPU/Q173CPU/Q172CPU projects.	○	○	–	–	

○: Supported –: Not supported

No.	Description	SV13	SV22	SV43	SV54	Supported version
29	The simulation function is added for the Q173DCPU/Q172DCPU.	○	○	–	–	
30	Q173HCPU/Q172HCPU/Q173CPU/Q172CPU is supported.	–	–	–	○	
31	The GOT transparent function via Ethernet module is supported for Q170MCPU. (Note-1): PERIPHERAL I/F connector of Q170MCPU is not supported.	○	○	–	–	
32	The GOT transparent function via Ethernet is supported for Q173DCPU/ Q172DCPU.	○	○	○	–	
33	The advanced S-curve acceleration/deceleration function in the servo program (constant speed control: CPSTART instruction) is supported for Q173DCPU/ Q172DCPU/Q170MCPU.	○	○	–	–	
34	The Division setting function is added for the digital oscilloscope.	○	○	○	○	
35	The writing to/reading from CPU function of the cam edit data is added for Q173DCPU/Q172DCPU/Q170MCPU projects, and editing cam data in MT Developer2 by the cam data read from the motion CPU is enabled.	–	○	–	–	
36	The system label function of MELSOFT iQ Works is supported for the Q173DCPU/Q172DCPU projects.	○	○	–	–	1.09K
37	The parameter interaction function of MELSOFT iQ Works is supported.	○	○	○	–	
38	MELSOFT iQ Works (Ver.1.05F) is supported.	○	○	○	–	
39	The compress/unpack function of the project data is added.	○	○	○	○	
40	The screen style and toolbar icon are changed.	○	○	○	○	
41	The backup and load of the motion error history with the CPU backup function are enabled for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
42	The motion controller dedicated device help is added for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
43	Unpacking by dragging and dropping project compressed files is supported.	○	○	○	○	
44	The interaction function with MR Configurator2 is supported.	○	○	○	○	
45	Windows Vista® Service Pack 2 is supported.	○	○	○	○	
46	The organization of HELP contents was modified as to improve its visualization.	○	○	○	○	
47	The setup guidance is added to the start menu.	○	○	○	○	
48	Data for GX Works2 is added as a sample data of Q170MCPU.	○	○	–	–	
49	The movement average is added to the operation setting of the device dump for the digital oscilloscope.	○	○	○	○	
50	The assistant function is added for the digital oscilloscope.	○	○	○	○	
51	The motion controller dedicated device help is added for the Q173HCPU/ Q172HCPU/Q173CPU/Q172CPU.	○	○	○	○	
52	The motion controller dedicated device help is added for the Q173DCPU/ Q172DCPU. (Note-1): This is added in Ver.1.09K for Q173DCPU/Q172DCPU/Q170MCPU SV13/SV22.	○	○	○	–	
53	The changing of the system setting (except automatic refresh setting) and servo data setting is supported for changing CPU type and diverting from Q173DCPU/ Q172DCPU/Q170MCPU projects to Q173HCPU/Q172HCPU projects.	○	○	○	–	1.15R
54	The backup and load of the motion error history with the CPU backup function are enabled for the Q173DCPU/Q172DCPU. (Note-1): This is added in Ver.1.09K for the Q173DCPU/Q172DCPU/Q170MCPU SV13/SV22.	○	○	○	–	
55	The DFLT instruction and SFLT instruction are added to the operation control program and transition program of the motion SFC program for the Q173DCPU/ Q172DCPU/Q170MCPU.	○	○	–	–	
56	Labels can be used at the motion SFC parameter execution flag for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
57	The count method home position return method using the external signals of amplifier is enabled for the Q173DCPU/Q172DCPU.	○	○	–	–	
58	The scale home position signal detection method is added to the home position return method for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
59	The operability of the servo data setting function is improved.	○	○	○	○	
60	Connection with the AC servo driver (VC II Series) for DD motor made by CKD NIKKI DENSO Co., Ltd. is supported for the Q173DCPU/Q172DCPU/ Q170MCPU.	○	○	○	–	

○: Supported –: Not supported

No.	Description	SV13	SV22	SV43	SV54	Supported version
61	FR-A700 is supported for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	1.15R
62	The GOT transparent function via CPU built-in PERIPHERAL I/F is supported for the Q173DCPU-S1/Q172DCPU-S1/Q170MCPU.	○	○	–	–	
63	The Ethernet transfer setting and MC protocol in the CPU built-in PERIPHERAL I/F is supported for the Q173DCPU-S1/Q172DCPU-S1.	○	○	–	–	
64	Connection with the vision system made by Cognex Corporation is supported.	○	○	–	–	
65	Microsoft® Windows® 7 is supported.	○	○	○	○	1.17T
66	The real-time display function of Digital Oscilloscope is added for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
67	Capacity calculation function of labels/structure data to be written in the memory card is added for the Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
68	Device Comment function is added. (Note-1): Device comment data cannot be written to the Motion CPU. It is available only on project data.	○	○	–	–	
69	Option to display all folders is added in the "Open Project" dialog box, which enables to open projects not controlled in the workspace.	○	○	○	○	
70	Microsoft® Windows® 7 (For 64-bit edition) is supported. Microsoft® Windows® 7 Service Pack 1 is supported.	○	○	○	–	1.19V
71	The GOT transparent function for connecting GOT and a personal computer by the Ethernet is supported.	○	○	○	○	
72	The multiple CPU high speed main base unit with 5-slot (Q35DB) is supported for the Q173DCPU/Q172DCPU.	○	○	○	–	
73	A project of the motion controller A series created in SW3RNC-GSVE can be diverted to a project of the motion controller Q series.	○	○	–	–	1.39R
74	Q170MCPU is supported. (Note-1): SV13 and SV22 are already supported by Ver.1.05F.	○	○	○	–	
75	Q173DSCPU and Q172DSCPU are supported.	○	○	–	–	
76	The simulation function is added for the Q173DSCPU/Q172DSCPU.	○	○	–	–	
77	The axis label function is added for the Q173DSCPU/Q172DSCPU.	○	○	–	–	
78	The software security key function is added for the Q173DSCPU/Q172DSCPU.	○	○	–	–	
79	The electronic gear setting function is added for the Q173DSCPU/Q172DSCPU/ Q173DCPU/Q172DCPU/Q170MCPU/Q173HCPU/Q172HCPU.	○	○	○	–	
80	The project verification function is added.	○	○	○	○	
81	The verification function with the motion CPU is improved.	○	○	○	○	
82	The operability of the servo program editing is improved.	○	○	–	–	
83	The operability of the project tree is improved.	○	○	–	–	
84	The cross reference function can be used for all CPU projects.	○	○	○	–	
85	The program control instructions (IF to ELSE to IEND, SELECT to CASE to SEND, FOR to NEXT, BREAK) are added to the operation control program and transition program of the motion SFC program for the Q173DSCPU/Q172DSCPU/Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
86	The vision system dedicated function, MVOUT instruction, is added to the operation control program and transition program of the motion SFC program for the Q173DSCPU/Q172DSCPU/Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
87	The operability of the device batch monitor is improved.	○	○	○	○	
88	The operability of the device test is improved.	○	○	○	○	
89	The watch function is added.	○	○	○	○	
90	The operability of the execute step monitor and specified step monitor is improved.	○	○	–	–	
91	The single file format project is supported in addition to the conventional workspace format project in the project opening/saving function.	○	○	○	○	
92	The revision function is added.	○	○	○	○	
93	The project batch conversion function is added.	○	○	○	–	

○: Supported –: Not supported

No.	Description	SV13	SV22	SV43	SV54	Supported version
94	The operability of label editor in the Q173DSCPU/Q172DSCPU/Q173DCPU/ Q172DCPU/Q170MCPU was improved. • Added sort function. • Added undo/redo function. • Added CSV file import/export function. • Hold the structure member status when changing the label name which used structure.	○	○	–	–	1.39R
95	Added the function which batch-replaces program device No. to label name in the Q173DSCPU/Q172DSCPU/Q173DCPU/Q172DCPU/Q170MCPU.	○	○	–	–	
96	The operability of optional data monitor in the Q173DSCPU/Q172DSCPU/ Q173DCPU/Q172DCPU/Q170MCPU/ Q173HCPU/Q172HCPU was improved.	○	○	○	○	
97	The target parameter converting function below is added when executing the following operation for the Q173DSCPU/Q172DSCPU/Q173DCPU/Q172DCPU/ Q170MCPU/Q173HCPU/Q172HCPU. • File diversion, CPU/OS type changing and basic setting (SSCNET setting) changing [Target parameter] • Electronic gear (Number of pulses per revolution, movement amount per revolution) • Servo parameter (from MR-J2S-B to MR-J3-B, from MR-J2S-B to MR-J4-B, or from MR-J3-B to MR-J4-B)	○	○	○	–	1.42U
98	The MR-J4(W)-B fully closed is supported for the Q173DSCPU/Q172DSCPU.	○	○	–	–	1.47Z
99	The monitor function is improved.	○	○	○	–	
100	The advanced synchronous control method is supported for the Q173DSCPU/Q172DSCPU.	–	○	–	–	
101	MELSOFT iQ Works (Ver.1.43V) is supported.	○	○	○	–	1.52E
102	The simulation function in the advanced synchronous control method is added for the Q173DSCPU/Q172DSCPU.	–	○	–	–	
103	The unused operation control programs and transition programs in Motion SFC program can be displayed in project tree.	○	○	–	–	
104	The operability of the mark detection function is improved.	○	○	–	–	
105	While executing Motion SFC program monitor, cross reference can be executed.	○	○	–	–	
106	The initial mode while executing Motion SFC program monitor was changed to the specified step monitor mode.	○	○	–	–	
107	The display can jump to the corresponding part from the verification result of cam in advanced synchronous control method.	–	○	–	–	
108	Q170MSCPU/Q170MSCPU-S1 is supported.	○	○	–	–	1.56J
109	Universal model high speed type (Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU) is supported.	○	○	–	–	
110	SSCNET III/H head module (LJ72MS15) is supported in Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
111	The intelligent function module is supported for the Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
112	Acceleration/deceleration time specification at speed changing is supported in Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
113	Dogless home position signal reference method is added to home position return method for the Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
114	Connection with the AC servo driver (VC II Series) for DD motor made by CKD NIKKI DENSO Co., Ltd. via SSCNET III/H is supported for the Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
115	The setting range of backlash compensation is extended for the Q173DSCPU/Q172DSCPU/Q170MSCPU/Q170MSCPU-S1.	○	○	–	–	
116	Multiple CPU synchronous control is supported for the Q173DSCPU/Q172DSCPU (advanced synchronous control method).	–	○	–	–	
117	Operation method per cycle is added to pulse input simulator function for the simulator of Q173DSCPU/Q172DSCPU.	○	○	–	–	
118	It has been improved that mechanical system program, synchronous control parameter and cam data can be copied (drag and drop) between projects.	–	○	–	–	

○: Supported –: Not supported

No.	Description	SV13	SV22	SV43	SV54	Supported version
119	The cross reference function support the system setting and servo data setting.	○	○	○	–	1.56J
120	It has been improved that multiple digital oscilloscope can be started at one time.	○	○	○	○	
121	The characters can be input is extended up to 256 when save digital oscilloscope file.	○	○	○	○	
122	The register method of optional device in probe setting for digital oscilloscope has been improved.	○	○	○	○	
123	It is supported for Microsoft® Windows® 8 (32-bit /64-bit)	○	○	○	○	1.62Q
124	It has been improved that the cam data which created by imported CSV file can be displayed in the program tree after writing the cam data that created by imported CSV file to CPU during the CPU reading.	–	○	–	–	
125	Clutch mode is supported in the mechanical system program.	–	○	–	–	
126	The operability of the find/replace function is improved.	○	○	–	–	1.68W
127	It has been improved that the mechanical system program of virtual mode switching method can be converted/diverted to the synchronous control parameter of advanced synchronous control method.	–	○	–	–	
128	Free curve is added in the cam data for advanced synchronous control method of Q173DSCPU/Q172DSCPU/Q170MSCPU (-S1).	–	○	–	–	
129	Synchronous encoder via servo amplifier is supported in the advanced synchronous control method of Q173DSCPU/Q172DSCPU/Q170MSCPU (-S1).	–	○	–	–	
130	Data type conversion function (SHORT, LONG, DFLOAT) is added in the motion program of Q173DCPU/Q172DCPU/Q170MCPU.	–	–	○	–	
131	Fixed position stop instruction (G34, G35) is added in the motion program of Q173DCPU/Q172DCPU/Q170MCPU.	–	–	○	–	
132	Stop position can be specified by high-speed oscillation instruction (G26) of motion program in Q173DCPU/Q172DCPU/Q170MCPU.	–	–	○	–	
133	Residual movement amount can be monitored in Q173DCPU/Q172DCPU/Q170MCPU.	–	–	○	–	
134	Residual travel value can be specified in probe of digital oscilloscope in Q173DCPU/Q172DCPU/Q170MCPU.	–	–	○	–	
135	GOT transparent that GOT2000 has been used is supported.	○	○	○	○	
136	Microsoft® Windows® 8.1 (32-bit/64-bit edition) is supported.	○	○	○	○	1.70Y

○: Supported –: Not supported

The following table shows the functions that are added to MT Developer2 (Version 1.100E or later).

No.	Description	CPU	SV13	SV22	SV43	SV54	Supported version
137	MELSEC iQ-R series R32MTCPU/R16MTCPU is supported.	R	○(Note-1)		–	–	1.100E
138	The interaction function with MR Configurator2 is improved.	R/QDS/ QMS/QD/ QM/QH	○	○	○	–	
139	Safety communication parameter is added in safety observation function.	QDS	○	○	–	–	
140	Language switching (Japanese/English) is enabled.	All	○	○	○	○	
141	The operability of the list of used device is improved.	R	○(Note-1)		–	–	
142	The operability of the output window is improved.	All	○	○	–	–	
143	The operability of the file in digital oscilloscope is improved.	All	○	○	○	○	
144	The system label interaction function is supported.	R	○(Note-1)		–	–	1.105K
145	The "parameter reflection" and "parameter input" of MELSOFT Navigator are supported.	R	○(Note-1)		–	–	
146	Display format of memory capacity calculation function is improved.	R	○(Note-1)		–	–	
147	Language switching (Simplified Chinese) is enabled.	All	○	○	○	○	
148	Two-dimensional trajectory can be displayed in digital oscilloscope.	All	○	○	○	○	
149	Module synchronous master setting is enabled in system parameter.	R	○(Note-1)		–	–	
150	Change PX/PY to X/Y when project diverted to R32MTCPU/R16MTCPU from Q series.	R	○(Note-1)		–	–	
151	The setting items of servo program can be batch deleted.	All	○	○	–	–	
152	The motion SFC program printing is improved to be manifest.	All	○	○	–	–	
153	The access setting from external device of label data is added.	R	○(Note-1)		–	–	
154	The project save format is changed with the label function extension. (The R32MTCPU/R16MTCPU project saved after version 1.105K can only be opened by version 1.105K or later.)	R	○(Note-1)		–	–	
155	Pressure control compatible servo amplifier (MR-J4-B-LL) is supported.	R	○(Note-1)		–	–	1.111R
156	Advanced synchronous control 1 screen display is supported.	R/QDS/ QMS	–	○	–	–	
157	Multiple CPU advanced synchronous control setting is supported.	R	○(Note-1)		–	–	
158	The editing of IP filter setting is supported.	R	○(Note-1)		–	–	
159	File transmission function during booting is supported.	R	○(Note-1)		–	–	
160	Communication route via CC-Link IE field network, etc. is extended.	R	○(Note-1)		–	–	
161	The monitor function of event history is supported.	R	○(Note-1)		–	–	
162	Add-on function is supported.	R	○(Note-1)		–	–	
163	The file password function of label/structure setting and device comment is supported.	R	○(Note-1)		–	–	
164	The operability of two-dimensional trajectory display is improved in digital oscilloscope.	All	○	○	○	○	
165	Multiple axes selection is supported according to the probe setting of digital oscilloscope.	All	○	○	○	○	
166	The connected destination setting number of vision system is increased.	R	○(Note-1)		–	–	
167	The system parameter diverting of CW Configurator project is supported.	R	○(Note-1)		–	–	
168	The transient command of optional data monitor function is supported.	R	○(Note-1)		–	–	
169	The encoder type of safety communication parameter is added.	QDS	○	○	–	–	

○: Supported –: Not supported

(Note-1): There is no OS class for the MELSEC iQ-R series. This document explains it in OS columns for convenience.

No.	Description	CPU	SV13	SV22	SV43	SV54	Supported version
170	The operability of the system label interaction function is improved.	R/QDS/ QMS/QD /QM	○	○	–	–	1.111R
171	Advanced synchronous control clutch smoothing method is added.	R	○(Note-1)		–	–	
172	ABS direction setting in degree axis is supported.	R	○(Note-1)		–	–	
173	Vibration command filter data setting is enabled.	R	○(Note-1)		–	–	1.115V
174	Dogless home position signal reference method is added as home position return method when pulse conversion unit is connected.	R	○(Note-1)		–	–	
175	Multiple axes adjustment function is supported.	R	○(Note-1)		–	–	
176	Writing to SD memory card of label assignment information is enabled.	R	○(Note-1)		–	–	
177	The input module, analogue input module, analogue output module and temperature input module which can be set are added.	R	○(Note-1)		–	–	
178	The operability of the toolbar in digital oscilloscope is improved.	All	○	○	○	○	
179	Registering from motion SFC edit window to probe setting of digital oscilloscope is enabled.	All	○	○	–	–	
180	Multiple comments display setting of label is supported.	R	○(Note-1)		–	–	
181	Registering the label from motion SFC edit window is enabled.	R/QDS/ QMS/QD /QM	○	○	–	–	
182	Override function is supported.	R	○(Note-1)		–	–	
183	The scale linking setting is supported in digital oscilloscope.	All	○	○	○	○	1.118Y
184	Simulation function is supported in R32MTCPU/R16MTCPU.	R	○(Note-1)		–	–	
185	The connection with stepping motor module (αSTEP/5-Phase) made by ORIENTAL MOTOR Co., Ltd is supported.	R/QDS/ QMS	○	○	–	–	
186	The connection with driver for electric actuator made by IAI Co., Ltd is supported.	QDS/ QMS	○	○	–	–	
187	The connection with AC servo driver (VPH series) for DD Motor made by CKD NIKKI DENSO Co., Ltd is supported.	QDS/ QMS	○	○	–	–	
188	Array is usable in label.	R	○(Note-1)		–	–	1.120A
189	Multiple comments display setting of device is supported.	R	○(Note-1)		–	–	
190	There is no restriction on the number of operator which can be used in the indirect specification of the device number in Motion SFC Program.	R	○(Note-1)		–	–	
191	MELSEC iQ-R series R64MTCPU is supported.	R	○(Note-1)		–	–	
192	The setting of device assignment method is supported.	R	○(Note-1)		–	–	
193	The setting number of mark detection function is increased.	R	○(Note-1)		–	–	
194	Machine control function is supported.	R	○(Note-1)		–	–	
195	The connection with FR-A800 is supported.	R/QDS/ QMS	○	○	–	–	
196	The connection with AC servo driver (VPH series) for DD Motor made by CKD NIKKI DENSO Co., Ltd and error code 3-digit display are supported.	R/QDS/ QMS	○	○	–	–	
197	The color change function is added in digital oscilloscope.	All	○	○	○	○	1.123D
198	The verification function of add-on module is supported.	R	○(Note-1)		–	–	
199	The output module which can be set is added.	R	○(Note-1)		–	–	
200	Microsoft® Windows® 10 (32-bit/64-bit edition) is supported.	All	○	○	○	○	1.125F
201	The waveform display of auto-generation cam is supported.	R	○(Note-1)		–	–	
202	The external file exporting of motion program is enabled.	QD/QM/ QH/Q	–	–	○	–	
203	The tag file outputting for MELSOFT iQ AppPortal is supported.	All	○	○	○	○	

○: Supported –: Not supported

(Note-1): There is no OS class for the MELSEC iQ-R series. This document explains it in OS columns for convenience.

No.	Description	CPU	SV13	SV22	SV43	SV54	Supported version
204	The memory card saving to the PLC CPU (CPU 1) of device comment is supported.	QDS/QM /QD/QM	○	○	–	–	1.125F
205	The writing of cam conversion data is supported.	R	○(Note-1)		–	–	
206	The bit-specification of indirect designation device in Motion SFC Program is supported.	R	○(Note-1)		–	–	
207	The data set method 3 is added to home position return method.	R	○(Note-1)		–	–	
208	The connection with driver for electric actuator made by IAI Co., Ltd is supported.	R	○(Note-1)		–	–	
209	The diverting language selection function is added in motion controller dedicated device comment diversion.	All	○	○	–	–	1.128J
210	The connection with sensing module (MR-MT2000 Series) is supported.	R	○(Note-1)		–	–	
211	The extension of Motion SFC Program multi active step number is supported.	R	○(Note-1)		–	–	
212	The functions below are supported by simulation function. • Multiple CPU simulation by interaction with GX Works3 • Simulation of R64MTCPU	R	○(Note-1)		–	–	1.130L
213	The parameter that can be set is extended for the module of PLC which can be handled by motion CPU.	R	○(Note-1)		–	–	
214	The SSCNET III communication condition monitor is supported.	R	○(Note-1)		–	–	
215	The parameter setting screen of advanced synchronous control is integrated into one screen.	R/QDS/ QMS	○(Note-1)		–	–	
216	The history management function of digital oscilloscope is supported.	All	○	○	○	○	
217	The usable number for motion SFC program and servo program is extended. (The extended project can only be used in version 1.130L or later)	R	○(Note-1)		–	–	
218	The operation cycle mix function is supported.	R	○(Note-1)		–	–	
219	The input module and analog input module which can be set are added.	R	○(Note-1)		–	–	
220	The write to/read from memory card function is added.	R	○(Note-1)		–	–	1.135R
221	The monitor item of real coordinate value is added in machine control function.	R	○(Note-1)		–	–	
222	The batch setting of operation cycle selection is added in operation cycle mix function.	R	○(Note-1)		–	–	
223	When printing motion SFC program, the print color selection of Color/Monochrome is enabled.	All	○	○	–	–	
224	The limit check for the number of amplifiers on SSCNET III line is added.	All	○	○	–	–	
225	The virtual servo amplifier function is added.	R	○(Note-1)		–	–	1.137T
226	The modules of MELSEC iQ-R series below are supported. • CPU modules (R00CPU, R01CPU, R02CPU)	R	○(Note-1)		–	–	1.140W
227	The functions below are supported by simulation function. • Extend the maximum number of Motion SFC Program multi active step to 1024 • Extend the maximum number of Motion SFC Program that can be registered to 512 • Extend the maximum number of Servo Program that can be registered to 8192 • Operation cycle mix function • Sensing module (MR-MT2000 series)	R	○(Note-1)		–	–	
228	The GOT transparent function for connecting GOT and a personal computer/a CPU module by the Ethernet is supported.	R	○(Note-1)		–	–	
229	The operations below can be executed by using MELSOFT Navigator. • Reflecting label information to the labels of MT Works2 from an electric CAD file imported to MELSOFT Navigator. • Exporting label information as an electric CAD file after setting the labels of MT Works2 into MELSOFT Navigator.	R	○(Note-1)		–	–	
230	FA application package iQ Monozukuri HANDLING is supported.	R	○(Note-1)		–	–	

○: Supported –: Not supported

(Note-1): There is no OS class for the MELSEC iQ-R series. This document explains it in OS columns for convenience.

No.	Description	CPU	SV13	SV22	SV43	SV54	Supported version
231	The monitor items of each module are added and it has been improved that the machine image is always updated in the monitor function of advanced synchronous control.	R/QDS	○(Note-1)		–	–	1.145B
232	It has been improved that the control code can be written independently for Motion SFC Program writing.	R	○(Note-1)		–	–	
233	The variable command of G-code control add-on library is supported.	R	○(Note-1)		–	–	
234	The monitor items (WAIT-ON/OFF, Arrival Rate) of machine monitor are added.	R	○(Note-1)		–	–	
235	It has been improved that the device value can be changed directly in watch window.	All	○(Note-1)		–	–	
236	Editing the profile settings after connecting to motion simulator is enabled for pressure profile test function.	R	○(Note-1)		–	–	
237	The program name can be pasted to program copy screen of Motion SFC Program.	All	○(Note-1)		–	–	
238	The option of making the bit-specification of word device as replacing target too when a word device name is specified in searching field is added for replace device function.	R/QDS/ QMS/QD	○(Note-1)		–	–	
239	For the type change and project diversion, it has been improved that the motion dedicated device and multiple CPU high-speed transmission area device can be replaced with the device in MELSEC iQ-R Motion Device assignment when a Q series project is changed to MELSEC iQ-R Motion Device assignment project of iQ-R series.	All	○(Note-1)		–	–	1.150G
240	For the conversion function of servo amplifier, it has been improved that the type of connected servo motor can be selected from MR-J3 series/MR-J4 series when the servo amplifier is converted from MR-J3 series to MR-J4 series.	R/QDS/ QMS/QD/ QM/QH	○(Note-1)		–	–	
241	For the Motion SFC Program, it has been improved that the parts of a program used in SFC chart can be duplicated with the increment of their No.	All	○(Note-1)		–	–	
242	The diversion of a GX Works3 project with compressed file size is supported for system parameter diversion.	R	○(Note-1)		–	–	
243	The macro call function and local variables of G-code control add-on library are supported.	R	○(Note-1)		–	–	
244	The functions below are supported by simulation function. • MR-J4-B virtual servo amplifier setting • WAIT-ON/OFF function of machine control • Point arrival notification of machine control	R	○(Note-1)		–	–	
245	It has been improved that you can jump from the execution result of cross reference in the monitor mode of Motion SFC Program.	All	○(Note-1)		–	–	
246	It has been improved that axis labels can be displayed in the monitor function of advanced synchronous control.	R/QDS	○(Note-1)		–	–	
247	It has been improved that a composite gear can now be monitored regardless of its combination in the synchronous control monitor screen.	R/QDS/ QMS	○(Note-1)		–	–	1.155M
248	It has been improved that when target output axis does not exist, an image without output axis will be displayed in the synchronous control image/monitor screen, to help the user judge whether the target output axis exists.	R/QDS/ QMS	○(Note-1)		–	–	
249	Magnification display of machine components in the synchronous control parameter screen is supported.	R/QDS/ QMS	○(Note-1)		–	–	
250	It has been improved that a bit-specified word device can now be searched for by using word device name in the device search.	All	○(Note-1)		–	–	
251	It has been improved that when a bit-specified word device is used, it can now be displayed in the list of used devices.	R	○(Note-1)		–	–	
252	It has been improved that for the IntelliSense function of labels, device name and comment can now be displayed in the tooltip that appears when a label is selected.	R/QDS/ QMS/QD/ QM	○(Note-1)		–	–	
253	It has been improved that for motion SFC programs, program No. can now be displayed before a program name.	All	○(Note-1)		–	–	
254	It has been improved that in a motion SFC program, F/FS, G, and servo programs can now be duplicated while incrementing device numbers inside.	All	○(Note-1)		–	–	1.160S
255	It has been improved that cancel instruction can now be used in a servo program.	R	○(Note-1)		–	–	
256	Support for Microsoft Windows XP/Windows Vista has ended.	All	○(Note-1)		–	–	

○: Supported –: Not supported

(Note-1): There is no OS class for the MELSEC iQ-R series. This document explains it in OS columns for convenience.

No.	Description	CPU	SV13	SV22	SV43	SV54	Supported version
257	MELSOFT Update Manager is supported.	All	○(Note-1)		○	○	1.165X
258	Settings for connection with the MR-J5-B series are supported.	QDS	○		–	–	1.170C
259	Measures against vulnerabilities are improved.	All	○		○	○	
260	Windows® 11 (32-bit/64-bit edition) is supported.	All	○		○	○	1.175H
261	The servo system recorder function is supported.	R	○(Note-1)		–	–	
262	Settings for connection with the MR-J5-B series are supported.	R	○(Note-1)		–	–	
263	In the simulator of Q173DSCPU/Q172DSCPU, settings for connection with the MR-J5-B series are supported.	QDS	○		–	–	
264	The co-recording function is supported.	R	○(Note-1)		–	–	1.180N
265	Support for Microsoft Windows® 7/ Windows® 8/ Windows® 8.1 has ended.	All	○(Note-1)		–	–	1.185T
266	1-word setting for acceleration/deceleration time, command torque time constant, etc. is supported for iQ-R series Motion CPUs.	R	○(Note-1)		–	–	
267	The setting for connecting with the MR-J5-B series is supported for the Q170MSCPU.	Q	○		–	–	1.187V
268	Pressure control compatible servo amplifier (MR-J5-B-LL) is supported.	R	○(Note-1)		–	–	1.190Y
269	In the simulator of 64MTCPU/R32MTCPU/R16MTCPU, settings for connection with the MR-J5-B series are supported.	R	○(Note-1)		–	–	
270	The amplifier-less operation of partner products is supported for the R64MTCPU/R32MTCPU/R16MTCPU.	R	○(Note-1)		–	–	
271	An option for automatically saving the project during conversion and writing is added.	All	○(Note-1)		○	○	
272	For Motion SFC program, an option indicating that there are multiple F/FS programs, G programs, and servo programs with the same program No. is added.	All	○(Note-1)		–	–	
273	The functions below are supported by Motion SFC program. • Addition/deletion of indents • Program automatic indent • Making the selected range a comment • Clearing the state where the selected range is made a comment	All	○(Note-1)		–	–	
274	The mark detection import method is supported for the Q173DSCPU/Q172DSCPU/Q170MSCPU(-S1).	QDS/QMS	○		–	–	
275	For editing SFC programs, the batch replacement function of the jump/pointer number has been added.	All	○(Note-1)		–	–	1.195D
276	The system has been improved so that the communication can be performed by specifying the Ethernet board on the personal computer side in the connection destination setting.	All	○(Note-1)		○	○	

○: Supported –: Not supported

(Note-1): There is no OS class for the MELSEC iQ-R series. This document explains it in OS columns for convenience.

CPU abbreviations in the table of new functions added in MT Developer2 (Version 1.100E or later) are as follows.

Abbr.	CPU name
R	R64MTCPU/R32MTCPU/R16MTCPU
QDS	Q173DSCPU/Q172DSCPU
QD	Q173DCPU(-S1)/Q172DCPU(-S1)
QMS	Q170MSCPU(-S1)
QM	Q170MCPU
QH	Q173HCPU/Q172HCPU
Q	Q173CPU(N)/Q172CPU(N)
All	All CPUs

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WARRANTY

Please confirm 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.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year 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 eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

(1) 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.
(2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
2. Failure caused by unapproved modifications, etc., to the product by the user.
3. 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.
4. Failure that could have been avoided if consumable parts (battery, fan, etc.) designated in the instruction manual had been correctly serviced or replaced.
5. 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.
6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
7. 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) Product supply (including repair parts) is not available 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

Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

6. Precautions for Choosing the Products

(1) For the use of our Motion controller, its applications should be those that may not result in a serious damage even if any failure or malfunction occurs in Motion controller, and a backup or fail-safe function should operate on an external system to Motion controller when any failure or malfunction occurs.

(2) Our Motion controller is designed and manufactured as a general purpose product for use at general industries. Therefore, applications substantially influential on the public interest for such as atomic power plants and other power plants of electric power companies, and also which require a special quality assurance system, including applications for railway companies and government or public offices are not recommended, and we assume no responsibility for any failure caused by these applications when used.
In addition, applications which may be substantially influential to human lives or properties for such as airlines, medical treatments, railway service, incineration and fuel systems, man-operated material handling equipment, entertainment machines, safety machines, etc. are not recommended, and we assume no responsibility for any failure caused by these applications when used.
We will review the acceptability of the abovementioned applications, if you agree not to require a specific quality for a specific application. Please contact us for consultation.

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