

GT15 Ethernet communication unit


User's Manual

GT15-J71E71-100

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).

Prior to use, please read both this manual and detailed manual thoroughly to fully understand the product.

MODEL	GT15-J71E71-100-U
MODEL CODE	1D7M29
IB(NA)-0800314-M(2011)MEE	



© 2005 MITSUBISHI ELECTRIC CORPORATION

SAFETY PRECAUTIONS

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly. The precautions given in this manual are concerned with this product. In this manual, the safety precautions are ranked as "WARNING" and "CAUTION".

WARNING Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

CAUTION Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the CAUTION level may lead to a serious accident according to the circumstances. Always follow the precautions of both levels because they are important to personal safety. Please save this manual to make it accessible when required and always forward it to the end user.

DESIGN PRECAUTIONS

WARNING

- To maintain the security (confidentiality, integrity, and availability) of the GOT and the system against unauthorized access, DoS¹ attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions. Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks. ¹ DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

CAUTION

- Do not bunch the control wires or communication cables with the main circuit or power wires, or lay them close to each other. As a guide, separate the lines by a distance of at least 100mm (3.94 inches) otherwise malfunctions may occur due to noise.

INSTALLATION PRECAUTIONS

WARNING

- Be sure to shut off all phases of the external power supply used by the system before mounting or removing this unit to/from the GOT. Not doing so can cause a unit failure or malfunction.
- Before connecting the Bus connection cable to this unit, always shut off GOT power and PLC CPU power externally in all phases. Not doing so can cause a malfunction.

CAUTION

- Use this unit in the environment that satisfies the general specifications described in the User's Manual for the GOT used. Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- When installing this unit to the GOT, fit it to the connection interface of the GOT and tighten the mounting screws in the specified torque range. Undertightening can cause a drop, failure or malfunction. Overtightening can cause a drop, failure or malfunction due to screw or unit damage.

WIRING PRECAUTIONS

WARNING

- Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage or malfunctions.

CAUTION

- Use crimp-contact, pressure-displacement or soldering to wire the connectors for external connections properly using the manufacturer-specified tools. If the connection is incomplete, it may cause the module to short circuit, catch fire, or malfunction.
- Connect the connectors to the unit securely.
- Always secure the cables connected to the unit, e.g. run them in conduits or clamp them. Not doing so can cause unit or cable damage due to dangling, moved or accidentally pulled cables or can cause a malfunction due to a cable contact fault.

STARTUP AND MAINTENANCE PRECAUTIONS

WARNING

- Before starting cleaning, always shut off GOT power externally in all phases. Not doing so can cause a unit failure or malfunction.

CAUTION

- Do not disassemble or modify any unit. This will cause failure, malfunction, injuries, or fire.
- Do not touch the conductive areas and electronic parts of this unit directly. Doing so can cause a unit malfunction or failure.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the unit. Not doing so can cause a fire, failure or malfunction.
- Do not hold the cable part when unplugging any cable connected to the unit. Doing so can cause unit or cable damage or a malfunction due to a cable contact fault.
- Always make sure to touch the grounded metal to discharge the electricity charged in the body, etc., before touching the unit. Failure to do so may cause a failure or malfunctions of the unit.

DISPOSAL PRECAUTIONS

CAUTION

- Dispose of this product as industrial waste.

TRANSPORTATION PRECAUTIONS

CAUTION

- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of the User's Manual for the GOT used, as they are precision devices. Failure to do so may cause the unit to fail. Check if the unit operates correctly after transportation.

Manual

The following shows manuals relevant to this product.

Manual name	Manual number (Model code)
GT15 User's Manual (Sold separately)	SH-080528ENG (1D7M23)
GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3 (Sold separately)	SH-080868ENG (1D7MC2)

Relevant Manuals

For relevant manuals, refer to the PDF manuals stored in the DVD-ROM for the drawing software used.

Compliance with the EMC and Low Voltage Directives

To configure a system meeting the requirements of the EMC and Low Voltage Directives when incorporating the Mitsubishi GOT (EMC and Low Voltage Directives compliant) into other machinery or equipment, refer to "EMC AND LOW VOLTAGE DIRECTIVES" of the General Description included with the GOT used. The CE mark, indicating compliance with the EMC and Low Voltage Directives, is printed on the rating plate of the GOT.

Compliance with the new China RoHS directive

GOT 相关的基于“电器电子产品有害物质限制使用管理办法”要求的表示方法



Note: This symbol mark is for China only.

含有有害6物质的名称、含有量、含有部件
本产品中所含的有害6物质的名称、含有量、含有部件如下表所示。
产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件	○	○	○	○	○	○
树脂壳体、电缆、线材	○	○	○	○	○	○
钣金部件、螺栓等金属部件	○	○	○	○	○	○

本表格依据 SJ/T11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在 GB/T26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572 规定的限量要求。

Packing List

The following items are included.

Model	Product	Quantity
GT15-J71E71-100	Ethernet communication unit	1
	Mounting screw set (2 screws, 2 stickers)	1
	GT15 Ethernet communication unit User's Manual (This manual)	1

1. OVERVIEW

This User's Manual describes the GT15 Ethernet communication unit (hereinafter referred to as the Ethernet communication unit). The GT15-J71E71-100 is required for the operations such as the Ethernet connection or Gateway function with GOT. For attachable GOTs, the User's Manual for the GOT used.

When using the Ethernet connection, make the communication settings to perform communication between the GOT and PLC. Refer to GOT1000 Series Connection Manual for details of Ethernet connection.

For information concerning necessary OS in case of using GT15-J71E71-100, refer to GOT 1000 Series Connection Manual.

2. SPECIFICATIONS

2.1 Performance Specifications

The performance specifications of the Ethernet communication unit are indicated below. The general specifications of the Ethernet communication unit are the same as those of the GOT. Refer to the User's Manual for the GOT used for the general specifications of the GOT.

Item	Specification		
Transmission specifications	Data transfer method	10BASE-T	100BASE-TX
	Transmission method	Base band	Base band
	Maximum node to mode distance	200m	200m
	Maximum segment length	100m	100m
	Maximum number of cascade connection ¹	4 steps	2 steps
Number of units mounted to GOT	Only 1 unit can be mounted to the extension unit interface.		

Item	Specification
Connecting condition	Number of GOTs connected: 128 (Recommend 16 or less)*2*3 GOT placing distance: 100m*2
Internal current consumption (5VDC)	0.224A
Weight	0.09kg (0.20lb)

*1 Maximum number of connectable nodes when a repeater hub is used. For the details, refer to the manual of Ethernet module of connected PLC.

*2 This depends on the specifications of the Ethernet network system to which the GOT is connected. For the details, refer to the manual of Ethernet module of connected PLC.

*3 If multiple network equipments (including GOT) are connected within a segment, the network load would increase. In such condition, the communication performance between GOT and PLC may be declined. The decline of the communication performance may be improved by the following measures.
• Using switching hubs.
• Reducing the number of monitoring devices of the GOT.

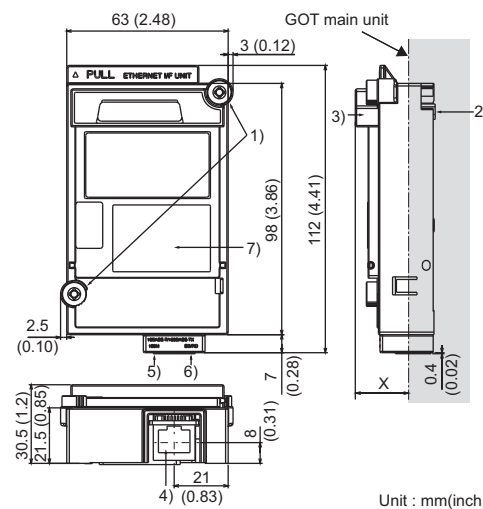
2.2 Specifications of the related devices

Use the connection cable and the hub which meet the IEEE802.3 10BASE-T/100BASE-TX standard.

Item	Specifications	
	10BASE-T	100BASE-TX
Cable	Non-shielded twisted pair wire (UTP cable) (category3(4, 5))	Shielded twisted pair wire (STP cable) (category5)
Connector	RJ45jack	RJ45jack
Hub	10Mbps hub	100Mbps hub

See the "List of valid devices applicable for GOT1000 series" (GOT-A-0010) for information about models whose operations have been confirmed. For technical documents, please contact your local Mitsubishi representative. When using any model not mentioned in the "List of valid devices applicable for GOT1000 series", the model may not work normally.

3. PART NAMES AND EXTERNAL DIMENSIONS



Dimensions of X when the Ethernet communication unit is mounted to the GOT.

15", 10.4"	21 (0.83)
12.1"	18 (0.71)
8.4", 5.7"	23 (0.91)

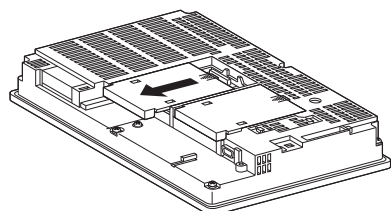
Unit: mm (inch)

No.	Name	Description
1)	Mounting screw	Mounting screws fixed with a front extension unit or GOT
2)	Interface connector	Extension connector installed to a front extension unit or the GOT
3)	Extension connector	Extension connector to which a back extension unit is installed
4)	Ethernet connector	Connector to which Ethernet cable is connected
5)	100M LED	It lights up during 100 Mbps transmission.
6)	SD/RD LED	It blinks during data sending/receiving.
7)	Rating plate	-

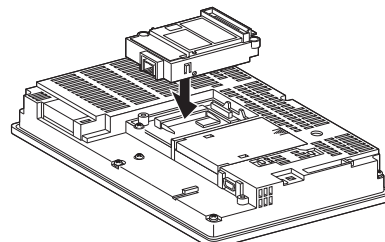
4. INSTALLATION PROCEDURE

The installation procedure for the Ethernet communication unit is explained using the GT1575.

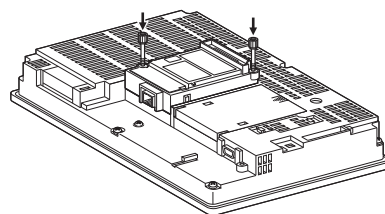
- Power off the GOT.
- Remove one extension unit cover of the GOT.



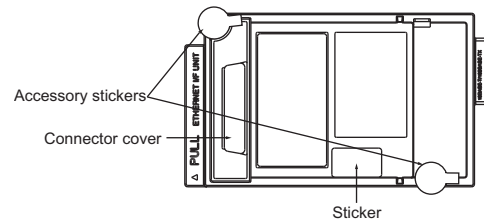
- Fit the Ethernet communication unit in the GOT case.



- Fasten the Ethernet communication unit by tightening its mounting screws (2 places) with tightening torque 0.36 to 0.48 N·m.



- When installing an extension unit on the unit that has been installed, remove the connector cover and the sticker. When not installing an extension unit on the unit that has been installed, in order to avoid receiving electrostatic, stick accessory stickers to cover the top of mounting screws (2 places). Keep the connector cover fixed. Keep the sticker stuck as it is.



Point

- Grounding work for the 10BASE-T and 100BASE-TX requires appropriate safety measures. Consult professionals for work details including terminal of connection cables and other plant work such as laying of main cables.
- If you remove the Ethernet unit, detach it from specified direction (shown PULL) so as not to break a connector.

Ethernet is a registered trademark of Xerox Corporation, U.S. Other business or product names mentioned herein are a trademark or registered trademark of each company.

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODAKU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA, JAPAN

When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.

Specifications subject to change without notice. Printed in Japan, November 2020.