







CHINESE

GT2103-PMBD GT2103-PMBDS GT2103-PMBDS2. GT2103-PMBLS

GT21 General Description



Manual Number	JY997D61901C	
Date	Sep. 2016	

This manual describes the part names, dimensions, mounting, and specifications of the product. Before use read this manual and manuals of relevant products fully to acquire proficiency in handling and operating the product. Make sure to learn all the product information, safety information, and precautions

And, store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

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Effective Sep. 2016

Specifications are subject to change without notice

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Safety Precaution (Read these precautions before using.)

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

∴ WARNING **∴**CAUTION

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

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

Depending on circumstances, procedures indicated by "CAUTION" may also be linked to serious results. In any case, it is important to follow the directions for

DESIGN PRECAUTIONS

↑ WARNING

- Some failures of the GOT or cable may keep the outputs on or off. Som failures of a touch panel may cause malfunction of the input objects such as a touch switch. An external monitoring circuit should be provided to check fo output signals which may lead to a serious accident. Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a seriou accident. An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning Not doing so can cause an accident due to false output or malfunction.
- When the GOT detects its backlight failure, the GOT disables the inpuroperation on the touch switch(s). Thus, operators cannot operate the GOT with touches. The GOT backlight failure can be checked with a system signal
- Even when the display section has dimmed due to a failure of the liquid crystal section or the backlight on the GOT, the input operation of the touch switches may still be enabled. This may cause an incorrect operation of the touch switches. For example, if an operator assumes that the display section has dimmed because of the screen save function and touches the display section to cancel the screen save, a touch switch may be activated. touches. The GOT backlight failure can be checked with a system signal of the GOT.
- The display section of the GOT is an analog-resistive type touch panel Simultaneous pressing of two or more areas on the display section may activate the switch between those areas. Do not press two or more areas simultaneously on the display section. Doing so may cause an accident due to incorrect output or malfunction.
- When programs or parameters of the controller (such as a PLC) that is monitored by the GOT are changed, be sure to shut off the power of the GOT promptly and power on the GOT again. Not doing so can cause an acciden due to false output or malfunction.
- a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative. A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur. Not doing so can cause an accider due to false output or malfunction

DESIGN PRECAUTIONS

M WARNING

When the security of the GOT and relevant information need to be protected against illegal access from an external device via the Internet, take measures a Failure to do so may cause the configured information to be read out illegally.

DESIGN PRECAUTIONS **↑** CAUTION

- Do not bundle the control and communication cables with main-circuit, power or other wiring. Run the above cables separately from such wiring and keep them minimum of 100 mm apart. Not doing so noise can cause a malfunction
- Do not press the GOT display section with a pointed material as a pen or drive Doing so can result in a damage or failure of the display section.
- When the GOT is connected to the Ethernet network, the available IP address is restricted according to the system configuration.
- When multiple GOTs are connected to the Ethernet network: Do not set the IP address (102 168 3 18) for the GOTs and the controllers in the network
- When a single GOT is connected to the Ethernet network: Do not set the IP address (192.168.3.18) for the controllers except the GOT in the network. Doing so can cause the IP address duplication. The duplication can negatively affect the communication of the device with the IP address (192.168.3.18). The operation at the IP address duplication depends on the devices and the
- Turn on the controllers and the network devices to be ready for communication before they communicate with the GOT. Failure to do so can cause a communication error on the GOT.
- When the GOT is subject to shock or vibration, or some colors appear on the screen of the GOT the screen of the GOT might flicker

MOUNTING PRECAUTIONS

M WARNING

Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel. Not doing so can cause the unit to fail or malfunction

MOUNTING PRECAUTIONS ! CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual. Not doing so can cause an electric shock, fire malfunction or product damage or deterioration.
- When mounting the GOT to the control panel, tighten the mounting screws in the specified torque range (0.20 N·m to 0.25 N·m) with a Phillips-head screwdriver Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or the GOT
- When mounting the SD card unit to the GOT, mount it on the side of the GOT, and tighten the tapping screws in the specified torque range (0.3 N·m to 0.6 N·m) with a Phillips-head screwdriver No. 2.
- Remove the protective film of the GOT. When the user continues using the GO with the protective film, the film may not be removed.
- Operate and store the GOT in environments without direct sunlight, high temperature, dust, humidity, and vibrations.
- Do not use the GOT in an environment with oil or chemicals. Doing so may cause failure or malfunction due to the oil or chemical entering into the GOT

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 of malfunctions

WIRING PRECAUTIONS

CAUTION

- Please make sure to ground FG terminal of the GOT power supply section by applying 100 Ω or less which is used exclusively for the GOT. Not doing so may cause an electric shock or malfunction.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product. Not doing so can cause a fire or failure
- Tighten the terminal screws of the GOT power supply section in the specified torque range (0.22 N·m to 0.25 N·m). Undertightening can cause a short circuit or malfunction. Overtightening can cause a short circuit or malfunction due to th damage of the screws or the GOT.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering th GOT. Not doing so can cause a fire, failure or malfunction.
- Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws in the specified torque range. Undertightening can cause a short circuit or malfunction Overtightening can cause a short circuit or malfunction due to the damage of th

TEST OPERATION DECVITIONS

↑ WARNING

Before performing the test operations of the user creation monitor screen (such as turning ON or OFF bit device, changing the word device current value changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and mak vourself familiar with the operation method. During test operation, never change the data of the devices which are used to perform significant operation for the system. False output or malfunction can cause an accident.

STARTUP/MAINTENANCE PRECAUTIONS

↑ WARNING

- When power is on, do not touch the terminals. Doing so can cause an electric
- Before starting cleaning or terminal screw retightening, always switch off tr power externally in all phases. Not doing so can cause the unit to fail of malfunction. Undertightening can cause a short circuit or malfunction Overtightening can cause a short circuit or malfunction due to the damage of the ecrowe or unit

STARTUP/MAINTENANCE PECALITIONS

↑ CAUTION

- Do not disassemble or modify the unit. Doing so can cause a failure malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly. Doing so can cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped. Not doing so can cause the unit or cable to be damaged due to the dangling, motion o accidental pulling of the cables or can cause a malfunction due to a cable
- When unplugging the cable connected to the unit, do not hold and pull from the cable portion. Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock. A module damage may
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc. Not doing so can cause the unit to fail or malfunction

TOUCH PANEL PRECAUTIONS

⚠CAUTION

- For the analog-resistive film type touch panels, normally the adjustment is no required. However, the difference between a touched position and the object position may occur as the period of use elapses. When any difference between a touched position and the object position occurs, execute the touch pane
- When any difference between a touched position and the object position occurs other object may be activated. This may cause an unexpected operation due to incorrect output or malfunction.

RECAUTIONS WHEN THE DATA STORAGE IS IN USE

⚠ WARNING

If the SD card mounted on drive A of the GOT is removed while the GOT is accessed, processing for the GOT might be interrupted about for 20 seconds The GOT cannot be operated during this period. The functions that run in the background including a screen updating, alarm, logging, scripts, and others are also interrupted. Since this interruption makes an impact to the system operation, it might cause failure. After inhibiting access to the SD card on the GOT utility screen, check that the SD card access LED is off and remove the SE card

DDECAUTIONS WHEN THE DATA STORAGE IS IN USE

∴CAUTION

- If the data storage mounted on the GOT is removed while the GOT is accessed. the data storage and files are damaged. To remove the data storage from the GOT, check that the access to the data storage in SD card access LED, the system signal, and others is not performed.
- When removing the SD card from the GOT, make sure to support the SD card by hand as it may pop out. Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break.
- Before removing the SD card from the GOT, follow the procedure for removal of the utility screen of the GOT. After the successful completion dialog is displayed remove the SD card by hand carefully. Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break

↑CAUTION

DISPOSAL PRECAUTIONS

When disposing of this product, treat it as industrial waste

TRANSPORTATION RECAUTIONS

↑ CAUTION

- Make sure to transport the GOT main unit and/or relevant unit(s) in the manne they will not be exposed to the impact exceeding the impact resistance described in the general energications of this manual as they are precision devices. Failure to do so may cause the unit to fail. Check if the unit operate correctly after transportation.
- When fumigants that contain halogen materials such as fluorine, chlorine bromine, and iodine are used for disinfecting and protecting wooden packaging from insects, they cause malfunction when entering our products. Please tak necessary precautions to ensure that remaining materials from fumigant do no enter our products, or treat packaging with methods other than fumigation (hea method). Additionally, disinfect and protect wood from insects before packing

Certification of UL, cUL standards

Using GOT

GOT is for use on a Flat Surface of a Type 1 Enclosure

Notification of CE marking

The following products have shown compliance through direct testing (to the identified standards) and design analysis (forming a technical construction file) to the European Directive for Electromagnetic Compatibility (2004/108/EC) when used as directed by the appropriate documentation

- This product is designed for use in industrial applications
- Type: Graphic Operation Terminal
- Models: GOT series

Standard		Remark
EN61131-2 : 2007	EMI	Compliance with all relevant aspects of the standard. (Radiated Emissions)
Programmable controllers - Equipment, requirements and tests	EMS	Compliance with all relevant aspects of the standard. (ESD, RF electromagnetic field, EFTB, Surge, RF conducted disturbances and Power frequency magnetic field)

For more details please contact your local Mitsubishi Electric sales site. For details of CE marking, refer to the following.

→GOT2000 series User's Manual

The following shows manuals relevant to this product

Detailed Manual

Manual name	Manual number (Model code)
GOT2000 Series User's Manual (Hardware)	SH-081194ENG-A (1D7MJ5)
GOT2000 Series User's Manual (Utility)	SH-081195ENG-A (1D7MJ6)

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

Relevant Manuals

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

The latest manuals are also available from MITSUBISHI ELECTRIC FA Global Website (http://www.MitsubishiElectric.co.jp/fa).

Before using the GOT

Connect the connector of the GOT to the connector of the battery.

Refer to the GOT2000 Series User's Manual (Hardware) for the connection

For details on the GOT specifications, installing instructions, wiring, maintenance and inspection, or checking procedure for the version and the compatible standard refer to the GOT2000 Series User's Manual (Hardware).

Bundled Items

Model name	Remark
GT2103-PMBD/PMBDS/PMBDS2/PMBLS	GOT main unit (The maintenance supplies below are packed with the product.)

Model name	Remark
PLC Communication Connector	1
Panel Mounting Bracket (with M4 × 20 screws)	4
Panel Mounting Packing	1
GT21 General Description (This manual)	1

1. GOT series User's Manual Specifications

1.1 General Specification

Item		Specifications				
Operating ambient temperature*1	0 to 55°C (When m	0 to 55°C (When mounted horizontally), 0 to 50°C (When mounted vertically)				
Storage ambient temperature	-20 to 60°C	-20 to 60°C				
Operating ambient humidity	10% RH to 90% RH	10% RH to 90% RH, non-condensing *2				
Storage ambient humidity	10% RH to 90% RH	10% RH to 90% RH, non-condensing ¹²				
			Frequency	Acceleration	Half amplitude	Sweep Count
	Compliant with	Under intermittent vibration	5 to 8.4 Hz	-	3.5 mm	10 times in each X, Y, or Z direction
Vibration resistance	JIS B3502		8.4 to 150 Hz	9.8m/s ²	-	
	and IEC61131-2	Under continuous vibration	5 to 8.4 Hz	-	1.75 mm	
			8.4 to 150 Hz	4.9m/s ²	-] -
Shock resistant	Compliant with JIS	Compliant with JIS B3502 and IEC61131-2 147m/s ² (15G) Three times in each X, Y, or Z direction				
Operating atmosphere	No greasy fumes, of	No greasy fumes, corrosive gas, flammable gas, excessive conductive dust, and direct sunlight (as well as at storage)				
Operating altitude*3	2000 m or less	2000 m or less				
Installation location	Inside control pane	Inside control panel				
Overvoltage category*4	II or less	II or less				
Pollution degree*5	2 or less	2 or less				
Cooling method	Self-cooling	Self-cooling				
Grounding	Grounding with a ground resistance of 100 Ω or less by using a ground cable that has a cross-sectional area of 0.14 to 1.5 mm ² (solid wire), 0.14 to 1.0 mm ² (stranded wire), or 0.25 to 0.5 mm ² (rod terminal with an insulation sleeve). If impossible, connect the ground cable to the control panel.					

- *1 The operating ambient temperature indicates the temperature inside the enclosure of the control panel to which the GOT is installed.
- *2 If the ambient temperature exceeds 40°C, the absolute humidity must not exceed 90% at 40°C.
- *3 Do not use or store the GOT under pressure higher than the atmospheric pressure of altitude 0 m. Doing so may cause a malfunction. When an air purge is made inside the control panel by adding pressure, there may be a clearance between the surface sheet and the screen, making you difficult to use the touch panel, or the sheet may come off
- *4 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within the premises. Category II applies to equipment for which electrical power is supplied from fixed facilities. The withstand surge voltage for the equipment with the rated voltage up to 300 V is 2500 V.
- *5 This indicates the occurrence rate of conductive material in an environment where a device is used. Pollution degree 2 indicates an environment where only non-conductive pollution occurs normally and a temporary conductivity caused by condensation shall be expected depending on the conditions.
- *6 Except 5 V power supply type.

1.2 Performance Specifications

Item		Specifications					
	item	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS		
	Display device	TFT monochrome display					
	Screen size	3.8"					
	Resolution	320 × 128 dots					
	Display size	89.0(3.51) (W) × 35.6(1.41) (H) mm	, ,				
Display section*1*2	tion *1*2 trial acters 12-dot standard form: 26 characters * 10 lines (two-byte characters)						
3600011	Display color	Monochrome (black and white) 32 s	cales				
	Brightness Adjustment	levels					
	Backlight	5 colors LED (white, green, pink, ora	ange, red) (Not replaceable)				
	Backlight life*3	Approx. 50000 h (operating ambient	temperature: 25°C, display intensity:	: 50%)			
	Туре	Analog resistive film					
Touch	Key size	Minimum 2 × 2 dots (per a key)					
panel*4	Simultaneous press	Simultaneous press prohibited*5 (on	ly 1 point can be pressed)				
	Life	1 million times or more (Operating for	orce: 0.98 N or less)				
User	User memory capacity	Memory for storage (ROM): 3 MB					
capacity	Life (number of write times)	100000 times					
	RS-232 (rear face)	-	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: MINI-DIN6-pin (female)	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: MINI-DIN6-pin (female)	-		
	RS-232 (side face)	-	-	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: 9-pin terminal block	-		
Built-in interface	RS-422/485	4800 bps Connector shape: terminal block 5-pin Terminating resistor *6 : OPEN/110 Ω /330 Ω	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: terminal block 9-pin Terminating resistor* GPEN/110 0/330 \(\text{(Switched with the terminating resistor setting switch)} \)	-			
	RS-422	-	-	-	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: 9-pin terminal block		
	Ethernet	1 channel Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)	-	-	-		

Item		Specifications				
		GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS	
	USB (Device)	1 ch				
Built-in interface		Maximum transfer rate: Full-Speed 12 Mbps Connector shape: USB Mini-B				
interiace	SD card*7	1 channel SDHC card supported (max. 32 GB) -				
Buzzer output		Single tone (tone length adjustable)				
Productive structure		Outside the enclosure: IP67F*8 Inside the enclosure: IP2X				
External dimensions		113(4.45) (W) × 74(2.92) (H) × 32(1.26) (D) mm	(W) × 74(2.92) (H) × 113(4.45) (W) × 74(2.92) (H) × 27(1.07) (D) mm*9		113(4.45) (W) × 74(2.92) (H) × 27(1.07) (D) mm	
Panel cut dimensions		105(4.14) (W) × 66(2.6) (H) mm				
Weight (excluding a fitting)		0.2 kg		0.18 kg		
Compatible software package		GT Works3 Version1.112S or later		GT Works3 Version1.119Z or later		

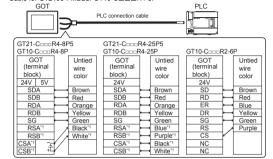
- *1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. In addition, color tone difference, unevenness of brightness, or flickers may occur due to individual differences of liquid crystal display analysis. Please note that these symptoms occur due to GOT's characteristic and are not caused by product defect.
- *2 Flicker may occur due to vibration, shock, or display color.
- *3 Settings the screen saving backlight to OFF prevents the display screen from burn-in and enables the backlight to lengthen its life.
- *4 When using a stylus pen, it will be 100,000 times. (The specifications must be satisfied the following condition.)
- Material: Polyacetal resin
- Tip radius: 0.8 mm or more
- *5 If you touch two or more points on the touch panel simultaneously and a switch is placed between the two points, the switch may be activated. Do not touch two or more points on the touch panel simultaneously.
- *6 Set the terminating resistor selector switch of the GOT in accordance with the connection type when adopting GOT multidrop connection.
- *7 It is necessary to mount the separately sold SD card unit (GT21-03SDCD).
- *8 Note that this does not guarantee all users' operation environment. In addition, the GOT may not be usable in the environment where oil or chemicals are splashed over for a long time or where oil mist is filled.
- *9 113 (W) × 74 (H) × 32 (D) mm when the SD card unit (GT21-03SDCD) is mounted

1.3 Power Supply Specifications

16	a.m	Specifications				
Item		GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS	
Input power sup	pply voltage	DC24 V (+10%, -15%)			5VDC (±5%), supplied from the PLC	
Power consumption	Under the maximum load	2.6 W or less	1.9 W or less	2.2 W or less	1.1 W or less	
consumption	At backlight off	2.0 W	1.3 W	1.6 W	0.7 W	
Inrush current	•	30 A or less (1ms, 25°C, at the max	imum load)		-	
Permissible power failure tin	instantaneous ne	Within 5ms			-	
Noise immunity		Noise voltage: 1000 Vp-p, Noise width: 1 μs (by noise simulator of 30 to 100 Hz noise frequency)				
Dielectric withst	and voltage	500 VAC for 1 minute (between the GOT's power supply terminals and the GOT's grounding terminal)			-	
Insulation resistance		10 M Ω or larger by insulation resistance tester (between the GOT's power supply terminals and the GOT's grounding terminal)			-	
Electrical wire size		No. of wire per terminal: 1 Solid wire 0.14 to 1.5 mm² AWG26 to AWG16, Stranded wire 0.14 to 1.0 mm² AWG26 to AWG16, Ferrules with plastic sleeve 0.25 to 0.5 mm² AWG24 to AWG20 No. of wire per terminal: 2 Solid wire 0.14 to 0.5 mm² AWG26 to AWG20, Stranded wire 0.14 to 0.2 mm² AWG26 to AWG24				
Ferrules with pla	astic sleeve	AI 0.25-6BU (AWG24), AI 0.34-6TQ (AWG22), AI 0.5-6WH (AWG20) (Phoenix Contact Inc.)				
Crimper type		CRIMPFOXZA3 (Phoenix Contact Inc.)				
Tightening torque (terminal screws)		0.22 to 0.25 N·m				

2. Wiring of connection cable

The diagram below shows cable assignment for GOT port. Cable for GT2103-PMBD: GT21-CDIDIR4-8P5, GT21-CDIDIR4-25P5 Cable for GT2103-PMBDS: GT10-CDIDIR4-8P, GT10-CDIDIR2-8P Cable for GT2103-PMBDS2: GT10-CDIDIR2-8P Cable for GT2103-PMBLS: GT10-CDIDIR4-8P



*1 The cable for GT2103-PMBD does not have connections to the signals (RSA, RSB, CSA,CSB).

User-made cable is necessary, depending on the PLC. For the detail, refer to GOT2000 Series Connection Manual

 Cable jacket to remove
 7 mm (0.27")

 Tightening torque
 0.22 to 0.25 N·m

 Recommended Tool (Screwdriver)
 SZS 0.4 × 2.5 (Phoenix Contact Inc.)

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

Warranty

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.

♠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi Electric.
- This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN



GT2103-PMBD, GT2103-PMBDS, GT2103-PMBDS2, GT2103-PMBLS

GT21 General Description



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 When programs or parameters of the controller (such as a PLC) that is monitored by the GOT are changed, be sure to shut off the power of the GOT promptly and power on the GOT again. Not doing so can cause an acciden due to false output or malfunction.
- uue to raise output or mattunction. If a communication fault (including cable disconnection) occurs durin monitoring on the GOT, communication between the GOT and PLC CPU i suspended and the GOT becomes inoperative. A system where the GOT used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption tha a GOT communication fault will occur. Not doing so can cause an accider due to false output or malfunction.

DESIGN PRECAUTIONS **MARNING**

When the security of the GOT and relevant information need to be protecte against illegal access from an external device via the Internet, take measures at the user's discretion. Failure to do so may cause the configured information to be read out illegally.

DESIGN PRECAUTIONS **⚠CAUTION**

- Do not bundle the control and communication cables with main-circuit, power o other wiring. Run the above cables separately from such wiring and keep them a minimum of 100 mm apart. Not doing so noise can cause a malfunction.
- Do not press the GOT display section with a pointed material as a pen or drive Doing so can result in a damage or failure of the display section.
- Doing so can result in a damage or failure of the display section.

 When the GOT is connected to the Ethernet network, the available IP address is restricted according to the system configuration.

 When multiple GOTs are connected to the Ethernet network: Do not set the IP address (192.168.3.18) for the GOTs and the controllers in the network.

 When a single GOT is connected to the Ethernet network: Do not set the IP address (192.168.3.18) for the controllers except the GOT in the network. Doing so can cause the IP address duplication. The duplication can negatively affect the communication of the device with the IP address (192.168.3.18). The operation at the IP address duplication depends on the devices and the system.
- Turn on the controllers and the network devices to be ready for communicatio before they communicate with the GOT. Failure to do so can cause communication error on the GOT.
- When the GOT is subject to shock or vibration, or some colors appear on th screen of the GOT, the screen of the GOT might flicker.

MOUNTING PRECAUTIONS MARNING

Be sure to shut off all phases of the external power supply used by the syste before mounting or removing the GOT main unit to/from the panel. Not doing a can cause the unit to fail or malfunction.

MOUNTING PRECAUTIONS ____CAUTION

- Use the GOT in the environment that satisfies the general specification described in this manual. Not doing so can cause an electric shock, fir malfunction or product damage or deterioration.
- When mounting the GOT to the control panel, tighten the mounting screws in the specified torque range (0.20 N·m to 0.25 N·m) with a Phillips-head screwdrive No.2. Undertightening can cause the GOT to drop, short circuit or malfunction Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or the GOT.
- When mounting the SD card unit to the GOT, mount it on the side of the GOT, and tighten the tapping screws in the specified torque range (0.3 N·m to 0.6 N·m) with a Phillips-head screwdriver No. 2.
- Remove the protective film of the GOT. When the user continues using the GO with the protective film, the film may not be removed.
- Operate and store the GOT in environments without direct sunlight, high temperature, dust, humidity, and vibrations.
- Do not use the GOT in an environment with oil or chemicals. Doing so may ca failure or malfunction due to the oil or chemical entering into the GOT.

WIRING PRECAUTIONS **MARNING**

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

WIRING PRECAUTIONS **⚠CAUTION**

- Please make sure to ground FG terminal of the GOT power supply section by applying 100 Ω or less which is used exclusively for the GOT. Not doing so maintains a electric shock or malfunction.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product. Not doing so can cause a fire or failure Tighten the terminal screws of the GOT power supply section in the specified torque range (0.22 N·m to 0.25 N·m). Undertightening can cause a short circuit or malfunction. Overtightening can cause a short circuit or malfunction due to the damage of the screws or the GOT.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT. Not doing so can cause a fire, failure or malfunction.

 Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws in the specified torque range. Undertightening can cause a short circuit or malfunction Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

TEST OPERATION MARNING

Before performing the test operations of the user creation monitor screen (such as turning ON or OFF bit device, changing the word device current value changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully code mixture. or the spring wise settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and mask yourself familiar with the operation method. During test operation, never change the date of the devices which are used to perform significant operation for the system. False output or malfunction can cause an accident.

STARTUP/MAINTENANCE **MARNING**

- When power is on, do not touch the terminals. Doing so can cause an electri
- Before starting cleaning or terminal screw retightening, always switch off th power externally in all phases. Not doing so can cause the unit to fail or malfunction. Undertightening can cause a short circuit or malfunction Overtightening can cause a short circuit or malfunction due to the damage of th screws or unit.

⚠CAUTION

- Do not disassemble or modify the unit. Doing so can cause a failure malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly. Doing s can cause a unit malfunction or failure.
- The cables a unin influentiation of influer.

 The cables connected to the unit must be run in ducts or clamped. Not doing so can cause the unit or cable to be damaged due to the dangling, motion o accidental pulling of the cables or can cause a malfunction due to a cable connection fault.

 When unplugging the cable connected to the unit, do not hold and pull from the cable portion. Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- inection radii.
 en unplugging the cable connected to the unit, do not hold and pull from the le portion. Doing so can cause the unit or cable to be damaged or can cause laffunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock. A module damage ma
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc. Not doing so can cause the unit to fail or malfunction.

⚠CAUTION

- For the analog-resistive film type touch panels, normally the adjustment is no required. However, the difference between a touched position and the obje-position may occur as the period of use elapses. When any difference between a touched position and the object position occurs, execute the touch pan
- When any difference between a touched position and the object position occur other object may be activated. This may cause an unexpected operation due incorrect output or malfunction.

PRECAUTIONS WHEN THE MARNING

If the SD card mounted on drive A of the GOT is removed while the GOT is If the SD card mounted on drive A of the GOT is removed while the GOT is accessed, processing for the GOT might be interrupted about for 20 seconds. The GOT cannot be operated during this period. The functions that run in the background including a screen updating, alarm, logging, scripts, and others are also interrupted. Since this interruption makes an impact to the system operation, it might cause failure. After inhibiting access to the SD card on the GOT utility screen, check that the SD card access LED is off and remove the SD.

PRECAUTIONS WHEN THE ACAUTION

- If the data storage mounted on the GOT is removed while the GOT is accessed the data storage and files are damaged. To remove the data storage from the GOT, check that the access to the data storage in SD card access LED, the system signal, and others is not performed.
- When removing the SD card from the GOT, make sure to support the SD card by hand as it may pop out. Failure to do so may cause the SD card to drop fror the GOT, resulting in a failure or break.
- Before removing the SD card from the GOT, follow the procedure for removal of the utility screen of the GOT. After the successful completion dialog is displayed remove the SD card by hand carefully. Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break.

When disposing of this product, treat it as industrial waste.

TRANSPORTATION PRECAUTIONS **ACAUTION**

- Make sure to transport the GOT main unit and/or relevant unit(s) in the manne they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices. Failure to do so may cause the unit to fail. Check if the unit operate correctly after transportation.
- when fumigants that contain halogen materials such as fluorine, chlorine bromine, and iodine are used for disinfecting and protecting wooden packagin from insects, they cause malfunction when entering our products. Please tak necessary precautions to ensure that remaining materials from furnigant do no enter our products, or treat packaging with methods other than furnigation (hea method). Additionally, disinfect and protect wood from insects before packing products.

Certification of UL, cUL standards

Using GOT GOT is for use on a Flat Surface of a Type 1 Enclosure.

Notification of CE marking

The following products have shown compliance through direct testing (to the identified standards) and design analysis (forming a technical construction file) to the European Directive for Electromagnetic Compatibility (2004/108/EC) when used as directed by the appropriate documentation.

- . This product is designed for use in industrial applications
- Type: Graphic Operation Terminal Models: GOT series

Standard		Remark		
EN61131-2 : 2007	EMI	Compliance with all relev standard. (Radiated Emission		

ant aspects of the Compliance with all relevant aspects of the standard. (ESD, RF electromagnetic field, EFTB, Surge, RF conducted disturbances and Power Programmable controllers - Equipment, requirements and tests EMS

For more details please contact your local Mitsubishi Electric sales site.
For details of CE marking, refer to the following.

→GOT2000 series User's Manual

The following shows manuals relevant to this product.

Manual name	Manual number (Model code)
GOT2000 Series User's Manual (Hardware)	SH-081194ENG-A (1D7MJ5)
GOT2000 Series User's Manual (Utility)	SH-081195ENG-A (1D7MJ6)

For detailed manuals, refer to the PDF manuals stored in the DVD-ROM for the

Relevant Manuals

For relevant manuals, refer to the Help or the PDF manuals stored in the DVD-ROM for the drawing software used The latest manuals are also available from MITSUBISHI ELECTRIC FA Global Website (http://www.MitsubishiElectric.co.jp/fa).

Before using the GOT

Panel Mounting Packing

Connect the connector of the GOT to the connector of the battery.

Refer to the GOT2000 Series User's Manual (Hardware) for the connection

For details on the GOT specifications, installing instructions, wiring, maintenance and inspection, or checking procedure for the version and the compatible standard, refer to the GOT2000 Series User's Manual (Hardware).

Bundled Items

Panel Mounting Bracket (with M4 × 20 screws)

GT21 General Description (This manual)

Widder Haille	Remark		
GT2103-PMBD/PMBDS/PMBDS2/PMBLS	GOT main unit (The maintenance supplies below are packed with the product.)		
Model name		Remark	
PLC Communication Connector		1	

1. GOT series User's Manual Specifications

Item		Specifications Specification Speci							
Operating ambient temperature*1	0 to 55°C (When m	0 to 55°C (When mounted horizontally), 0 to 50°C (When mounted vertically)							
Storage ambient temperature	-20 to 60°C	-20 to 60°C							
Operating ambient humidity	10% RH to 90% RH	10% RH to 90% RH, non-condensing*2							
Storage ambient humidity	10% RH to 90% RH	H, non-condensing*2							
			Frequency	Acceleration	Half amplitude	Sweep Count			
	Compliant with	Under intermittent	5 to 8.4 Hz	-	3.5 mm	10 times in each X			
Vibration resistance	JIS B3502	vibration	8.4 to 150 Hz	9.8m/s ²	-	Y, or Z direction			
	and IEC61131-2	Under continuous vibration	5 to 8.4 Hz	-	1.75 mm	-			
			8.4 to 150 Hz	4.9m/s ²	-				
Shock resistant	Compliant with JIS	Compliant with JIS B3502 and IEC61131-2 147m/s ² (15G) Three times in each X, Y, or Z direction							
Operating atmosphere	No greasy fumes, o	corrosive gas, flammable	gas, excessive condi	uctive dust, and direc	t sunlight (as well as	at storage)			
Operating altitude*3	2000 m or less								
Installation location	Inside control pane								
Overvoltage category*4	II or less								
Pollution degree*5	2 or less								
Cooling method	Self-cooling								
Grounding	(solid wire), 0.14 to	round resistance of 100 1.0 mm ² (stranded wire) nect the ground cable to	, or 0.25 to 0.5 mm ²	rod terminal with an	s a cross-sectional a insulation sleeve).	rea of 0.14 to 1.5 mm			

- *2 If the ambient temperature exceeds 40°C, the absolute humidity must not exceed 90% at 40°C
- 3 Do not use or store the GOT under pressure higher than the atmospheric pressure of altitude 0 m. Doing so may cause a malfunction. When an air purge is made inside the control panel by adding pressure, there may be a clearance between the surface sheet and the screen, making you difficult to use the touch panel, or the sheet may
- *4 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within the premises. Category II applies to equipment for which electrical power is supplied from fixed facilities. The withstand surge voltage for the equipment with the rated voltage up to 300 V is 2500 V.
- *5 This indicates the occurrence rate of conductive material in an environment where a device is used. Pollution degree 2 indicates an environment where only non-conductive pollution occurs normally and a temporary conductivity caused by condensation shall be expected depending on the conditions.

*6 Except 5 V power supply type.

	14	Specifications								
	Item	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS					
	Display device	TFT monochrome display		•						
	Screen size	3.8"								
	Resolution	320 × 128 dots								
	Display size	89.0(3.51) (W) × 35.6(1.41) (H) mm(inch)								
Display section*1*2	Displayed number of characters	16-dot standard font: 20 characters × 8 lines (two-byte characters) 12-dot standard font: 26 characters × 10 lines (two-byte characters)								
Section	Display color	Monochrome (black and white) 32 scales								
	Brightness Adjustment	32 levels								
	Backlight	5 colors LED (white, green, pink, orange, red) (Not replaceable)								
	Backlight life*3	Approx. 50000 h (operating ambient temperature: 25°C, display intensity: 50%)								
	Туре	Analog resistive film								
Touch	Key size	Minimum 2 × 2 dots (per a key)								
panel*4	Simultaneous press	Simultaneous press prohibited*5 (only 1 point can be pressed)								
	Life	1 million times or more (Operating force: 0.98 N or less)								
User memory	User memory capacity	Memory for storage (ROM): 3 MB								
capacity	Life (number of write times)	100000 times								
	RS-232 (rear face)	-	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: MINI-DIN6-pin (female)	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: MINI-DIN6-pin (female)	-					
	RS-232 (side face)	-	-	1 channel Transmission speed: 115200/57600/38400/19200/9600/ 4800 bps Connector shape: 9-pin terminal block	-					
Built-in interface	RS-422/485	4800 bps Connector shape: terminal block 5- pin	1 channel Transmission speed: 115200/3500/38400/19200/9600/ 4800 bps Connector shape: terminal block 9-pin Terminating resistor *6 : OPEN/110 Ω /330 Ω (Switched with the terminating resistor setting switch)	-	-					
	RS-422	-	-	-	1 channel Transmission sp 115200/57600/38400/19200/s 4800 bps Connector shape: 9-pin terr block					
	Ethernet	1 channel Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)	-	-	-					

GT2103-PMBD GT2103-PMBDS GT2103-PMBDS2 GT2103-PMBLS USB (Device) Built-in SD card*7 1 channel SDHC card supported (max. 32 GB) Buzzer outpu Single tone (tone length adjustable) Productive structure Outside the enclosure: IP67F*8 Inside the enclosure: IP2X 113(4.45) (W) × 74(2.92) (H) × 27(1.07) (D) mm 113(4.45) (W) × 74(2.92) (H) × 32(1.26) (D) mm 113(4.45) (W) × 74(2.92) (H) × 27(1.07) (D) mm^{*9} External dimensions 105(4.14) (W) × 66(2.6) (H) mm Panel cut dimensions GT Works3 Version1.112S or late GT Works3 Version1.119Z or late

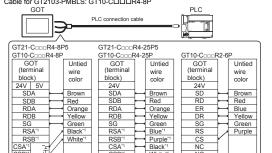
- *1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. In addition, color tone difference, unevenness of hightness, or flickers may occur due to individual differences of liquid crystal display panels. Please note that these symptoms occur due to GOT's characteristic and are not caused by product defect.
- *2 Flicker may occur due to vibration, shock, or display color. *3 Settings the screen saving backlight to OFF prevents the display screen from burn-in and enables the backlight to lengthen its life.
- *4 When using a stylus pen, it will be 100,000 times. (The specifications must be satisfied the following condition.)
- *5 If you touch two or more points on the touch panel simultaneously and a switch is placed between the two points, the switch may be activated. Do not touch two or more points on the touch panel simultaneously.
 *6 Set the terminating resistor selector switch of the GOT in accordance with the connection type when adopting GOT multidrop connection.
- *7 It is necessary to mount the separately sold SD card unit (GT21-03SDCD). *Note that this does not guarantee all users' operation environment. In addition, the GOT may not be usable in the environment where oil or chemicals are splashed over for a long time or where oil mist is filled.

 *9 113 (W) × 74 (H) × 32 (D) mm when the SD card unit (GT21-03SDCD) is mounted

lt.	em	Specifications							
10	eiii	GT2103-PMBD	GT2103-PMBD GT2103-PMBDS GT2103-PMBDS2		GT2103-PMBLS				
Input power supply voltage		DC24 V (+10%, -15%)			5VDC (±5%), supplied from the PLC				
Power consumption	Under the maximum load	2.6 W or less	1.9 W or less	2.2 W or less	1.1 W or less				
consumption	At backlight off	2.0 W	1.3 W	1.6 W	0.7 W				
Inrush current	•	30 A or less (1ms, 25°C, at the	e maximum load)		-				
Permissible instantaneous power failure time		Within 5ms	-						
Noise immunity		Noise voltage: 1000 Vp-p, Noise width: 1 µs (by noise simulator of 30 to 100 Hz noise frequency)							
Dielectric withst	and voltage	500 VAC for 1 minute (betwee	-						
Insulation resist	ance	10 MΩ or larger by insulation (between the GOT's power su	-						
Electrical wire s	ize	AWG24 to AWG20 No. of wire per terminal: 2	NG26 to AWG16, Stranded wire 0.14		errules with plastic sleeve 0.25 to 0.5 mm				
Ferrules with pla	astic sleeve	AI 0.25-6BU (AWG24), AI 0.34	I-6TQ (AWG22), AI 0.5-6WH (AWG20) (Phoenix Contact Inc.)					
Crimper type		CRIMPFOXZA3 (Phoenix Con	tact Inc.)						
Tightening to	rque (terminal	0.22 to 0.25 N·m							

2. Wiring of connection cable

The diagram below shows cable assignment for GOT port. Cable for GT2103-PMBD: GT21-C□□□R4-8P5, GT21-C□□□R4-25P5 Cable for GT2103-PMBDS: GT10-C□□□R4-8P, GT10-C□□□R4-25P Cable for GT2103-PMBDS2: GT10-C□□□R2-8P



User-made cable is necessary, depending on the PLC For the detail, refer to GOT2000 Series Connection M

. 0. 1.10 401411, 10101 10 00 12000 001100 01	- Introducti Mariaali
Cable jacket to remove	7 mm (0.27")
Tightening torque	0.22 to 0.25 N·m
Recommended Tool (Screwdriver)	SZS 0.4 × 2.5 (Phoenix Contact Inc.)

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vvarranty
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: pensation to:
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

for safe use

This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.

Before using the product for special purposes such as nuclear power, electri power, aerospace, medicine or passenger movement vehicles, consult with This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occu product fails, install appropriate backup or failsafe functions in the syste

MITSUBISHI ELECTRIC CORPORATION





GT2103-PMBD, GT2103-PMBDS. GT2103-PMBDS2, GT2103-PMBLS

GT21 概述



手册号	JY997D61901C
日期	2016年9月

非常咸谢洗陶太公司产品。

格讲行说明。关于外部线路,请参照GOT SIMPLE系列 主机使用说明书。因此,有关 GOT的设计和施工以及作图等项请分别参照GT Designer3相关手册。在使用本产品 之前, 请务必熟读本手册以及各相关手册, 了解机器本身的功能和安全信息以及 注音車面后伸田

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安全注意事项 (使用前请务必任细阅读)

在使用本产品时, 请务必熟读本手册以及本手册中介绍的相关手册。同时请务必充 分注意安全事官, 正确使用。

本手册中所述注意事项仅为本产品直接相关内容。

在本手册中,用"警告"和"注意"对●安全注意事项●进行等级区分。



错误操作可能引起危险情况发生,造成人员重伤或死亡。



错误操作可能引起危险情况发生,造成人员中等程度的伤 宝, 轻伤或物品损坏,

此外,即使是 1注意的事项,因具体情况不同,也可能引发重大事故。 由于记载的都是重要的内容, 所以请务必遵守。

设计注意事项

- GOT、电缆的故障,可能会导致输出保持为ON的状态或保持为OFF的状态。触模 面板的故障,可能会导致触摸开关等输入对象发生误动作。对于有可能引起重 大事故的输出信号,应设置外部监控电路。误输出或误动作可能导致事故发
- · 请不要将GOT作为报警装置使用,这样有可能导致重大事故。显示重要的报警 或者输出报警的装置, 请使用独立并具有冗余性的硬件或者机械互锁的构成。 误输出、误动作有可能导致事故发生。
- GOT检测出背光灯故障时, GOT将触摸开关的输入变为无效, 操作人员将无法对 GOT进行触摸操作。GOT检测出背光灯故障时,可通过GOT的系统信号进行确
- 当GOT的液晶部/背光灯由于故障等原因显示部分变暗时,触模开关的输入可 能仍处于有效状态,从而造成触摸开关的误操作。例如,操作人员可能会误认 为是屏幕处于保护状态, 想要解除屏保而去触摸显示部位, 从而导致触摸开关
- GOT的显示屏采用的是模拟电阻膜方式。在显示屏上同时按压2点以上时,如果 按压点的中心附近有开关,该开关将可能动作。请勿在显示屏上同时按压2点 以上。同时按压2点以上有可能因误输出、误动作而导致事故发生。
- 更改由GOT执行监控的连接设备(PLC等)的程序或参数等时,请快速切断GOT 电源后重新启动。误输出或误动作有可能导致事故发生。
- · GOT在执行监控时,如果发生通讯故障(包括电缆脱落),GOT与可编程控制器 CPU的通讯将被中断, GOT无法动作。在构建使用了GOT的系统时, 考虑到可能 全发生GOT通讯故障时,对系统进行重大动作的开关操作请设定通过GOT以外 的装置进行。否则可能会因为误输出、误动作而导致事故发生。
- 针对经由互联网的外部机器的非法访问,需要对GOT及相关信息的安全给予保 护时, 请制定针对不同用户的对策。 否则,设置信息可能会被非法读取

设计注意事项

- ∧ 注章 请勿将控制线及通讯电缆与主电路及动力线等拥扎在一起或相互靠得太近。应相 距100mm以上距离。因为噪声可能导致误动作。
- 请勿用钢笔及螺丝刀等尖物按压GOT的显示屏。有可能导致破损及故障发生。
- GOT连接以太网使用时,根据系统配置,可使用的IP地址会有所限制。
 - 在以太网网络中连接多台GOT时:请勿将GOT以及连接设备的IP地址设置为 192 168 3 18
 - 在以大网网络中连接1台GOT时·请勿将除GOT以外的连接设备的IP抽址设置为 192 168 3 18
- 如果上述系统配置中将IP地址设置为192, 168, 3, 18, GOT启动时将会发生IP地址重 复,可能会对IP地址设置为192,168,3,18的设备的通讯产生不良影响。IP地址重复 时的动作因设备和系统而异。
- 在与GOT连接前, 请接通连接设备以及网络设备的由源, 使其处于可通讯状态, 连接 设备以及通讯线路为不可通讯状态时,GOT可能会发生通讯报警,
- GOT受到振动和撞击时,或GOT上显示特定的颜色时,GOT的画面有时全出现闪烁现象

安装注意事项

在格COT木体完装到挖制板上或从挖制板上拆卸时,必须将系统由正在使用的所有 外部供应电源全部断开之后再进行操作。如未全部断开,可能导致产品故障或误动

安装注意事项

⚠注意

- 请在符合本说明书中所规定的一般规格环境下使用GOT。在不符合说明书中规定的 一般规格环境下使用GOT, 可能会引起触由、火灾、误动作、产品损坏或使产品性能 **布**差和 象
- 将GOT安装到控制柜上时,应使用No.2十字螺丝刀在规定的扭矩范围内(0.20N·m ~0.25N·m) 拧紧安装螺栓。如果螺栓拧得讨松,有可能导致脱落、短路、误动作。 如果螺栓拧得讨紧,有可能导致螺栓及产品损坏而导致脱落、短路、误动作。
- 将SD卡模块安装到GOT时,应安装到GOT侧面,用螺丝刀在规定扭矩范围内 (0.3N • m~0.6N • m) 坚固白攻螺栓
- 使用时请将保护膜揭下。如果不揭下就使用, 目后可能无法将其揭下。
- 请勿在阳光直射的场所、高温、粉尘、湿气或振动大的场所使用以及保管本产品。
- 不要将GOT在含油、药品的环境下使用。如果有油、药品浸入设备,会导致故障、误 7111/1:

配线注意事项

在进行接线作业时,必须将系统中正在使用的所有外部供应由源全部断开之后再 讲行操作。如果未全部断开,可能会引起触电、产品损坏、误动作

配线注意事项

⚠注意

- 必须将GOT电源部分的FG端子与GOT的专用接地线连接。否则,可能引起触电、误动
- GOT的电源线路,应在确认了产品的额定电压及端子排列之后进行正确安装。连接 了与额定电压不匹配的电源、或者错误接线,可能导致火灾、故障。
- 应在规定的扭矩范围内(0,22N·m~0,25N·m)紧固GOT电源部分的端子螺栓。如果 端子螺栓拧得过松,有可能导致短路、误动作。如果端子螺栓拧得过紧,有可能导 致螺栓及模块的损坏而引起短路、误动作。
- 应注意防止切屑及线头等杂物掉入产品内。否则可能导致火灾、故障、误动作
- 通讯电缆安装在GOT的接口或与GOT连接的产品的连接器上,应在规定的扭矩范围 内拧紧安装螺栓和端子螺栓。如果安装螺栓和端子螺栓拧得过松,有可能导致短 路、误动作。如果安装螺栓和端子螺栓拧得过紧,有可能导致螺栓及模块的损坏而 引起镇路, 误动作

测试操作注意事项

 应在熟读用户操作手册,充分理解操作方法后,进行用户创建的监控画面的测试操 作(位软元件的ON/OFF、字软元件的当前值更改、定时器、计数器的设置值·当前 值更改、缓冲存储器的当前值更改)。此外,对于那些对系统有重大影响的软元件 请勿通过测试操作更改其数据。否则可能导致误输出、误动作

启动/维护注意事项



- 通电时请勿触摸端子。可能引起触电。
- 清洁或者紧固端子螺栓时,必须从外部将电源全部断开之后再进行操作。如果没有 全部断开,可能导致设备故障或者误动作。如果螺栓拧得过松,有可能导致短路、 误动作。如果螺栓拧得过紧,有可能由于螺栓或模块损坏引起短路、误动作。

启动/维护注意事项

⚠注意

- 请勿拆解或改造产品。可能导致故障、误动作、人身伤害、火灾。
- 请勿直接触碰产品的导电部分或电子部件。可能导致产品的误动作、故障。
- 与产品连接的由维必须收入套管中或者用夹具进行固定处理。如果未将由维收入 套管或未用夹具进行固定处理,可能出现电缆的晃动及移动、不经意的拉拽等造 成产品及电缆损坏、电缆接触不良而导致误动作。
- 在抵卸与产品连接的由缴时, 请勿用手拉扯由缴部分, 如果在与连接产品的状态 下拉扯电缆,可能造成产品或电缆的损坏、电缆接触不良从而导致误动作。
- 请勿使产品掉落或受到强烈撞击。否则可能造成模块损坏。
- 在触碰产品前,必须先与接地的金属物等接触,释放掉人体等所携带的静电。如 果不释放掉静电,可能导致产品故障或者误动作,

触摸面板的注意事项

- 使用模拟电阻膜方式的触摸面板时, 通常不需要调整, 但是经讨长时间使用, 对 象位置和触摸位置有可能错离。对象位置和触摸领域如发生错离, 请调整触摸面
- 对象位置和触摸位置发生错离时,有可能导致其他对象动作、或由于误输出、误 动作导致其他意料之外的动作

数据存储设备使用时 的注意事项

如在GOT访问过程中拔下安装在GOT的A驱动器上的SD卡,GOT的处理将会停止约20 秒左右。在此期间,将无法操作GOT,且画面的更新、报警、日志、脚本等在后台 动作的功能也会停止。卸下SD卡时,请在GOT应用程序画面操作中将SD卡访问设 为禁止状态后。确认SD卡访问I FD 处于恒亚状态后进行

数据存储设备使用时 的注意事项

- 如在GOT访问过程中拔下安装在GOT上的SD卡,可能会导致SD卡或文件损坏。如需 从GOT上拔下SD卡,请在通过SD卡存取LED或系统信号等确认当前未对数据存储器 进行访问之后再拔下。
- 取出SD卡时,由于SD卡可能会弹出,请用手抵住SD卡将其取出。否则可能会因为 脱落而导致SD卡损坏或故障。
- 取出SD卡时,请在GOT的实用菜单画面进行SD卡的取出操作,在弹出正常结束通知 对话框后, 再用手抵住SD卡格其取出。否则可能会因为脱落而导致SD卡提坏或故 暗。

报废处理注意事项

产品报废时,应作为工业废弃物处理。

运输注意事项

- 产品本身为精密设备,所以在运输时应避免使其受到超过本体使用说明书中记载 的一般规格值的撞击。否则可能会导致产品故障。运输后,应进行产品的动作确
- 如果木质包装材料的消毒 除虫用熏蒸剂中所含的卤素类物质 (氟、氯、溴、碘 等)混入本公司产品,可能会导致故障。请注意防止残留的熏蒸成分混入本公司 产品,或采用熏蒸以外的方法(热处理等)进行处理。另外,消毒·除虫措施请在 包装前的木材加工阶段实施

CE标记通知

通过直接测试(已认证标准)和设计分析(形成工程技术文件)证实,下述产品在相应 文件指导下使用时可对应电磁兼容性的欧洲指令(2004/108/EC)。

- 本产品设计符合工业应用
- 类型:图形操作终端
- 型号:GOT2000系列

	1911 E.		田江		
EN61	EN61131-2 :2007	EMI	对应所有相关联标准。 (射频辐射测量)		
	可编程控制器 - 设备、 要求和测试	EMS	对应所有相关联标准。 (ESD、RF电磁场、EFTB、浪涌、RF传导干扰和电源 频率磁场)		

关于更多详细内容, 请向当地三菱电机销售商垂询。

关于CF标记详细内容, 请参照以下内容。

→GOT2000系列 主机使用说明书

关于操作手册

本产品相关的手册加下所示。

详细手册

手册名称	手册编号(型号代码)
GOT2000系列本体使用说明书(硬件篇)	SH-081202CHN (1D7MK4)
GOT2000系列本体使用说明书(实用菜单篇)	SH-081203CHN (1D7MK5)

详细的手册内容请参阅存储于所使用绘图软件的DVD-ROM或CD-ROM中的PDF手册,

相关操作手册请参阅存储于所使用绘图软件的DVD-ROM或CD-ROM中的HELP或PDF手册。 可具二菜中和的网络

(http://www.MitsubishiElectric.co. ip/fa) 获取最新手册。

请在使用GOT之前将GOT的连接器与电池(另售GT11-50BAT)的连接器连接。

连接方法请参阅GOT2000系列本体使用说明书(硬件篇)

关于GOT的详细规格、安装方法、接线、维护与检查、版本以及话台的规格的确认方法 等, 请参阅GOT2000系列本体使用说明书(硬件篇)。

随机配件

型 号	备注
GT2103-PMBD/PMBDS/PMBDS2/PMBLS	GOT主机 (以下配件随主机附送)

随机配件	数量
PLC通讯连接器	1
面板安装支架(配M4×20螺丝)	4
面板安装包	1
GT21概述(本手册)	1

「电器电子产品有害物质限制使用标识要求 | 的表示方式



Note: This symbol mark is for China only.

含有有害6物质的名称,含有量,含有部品

本产品中所含有的有害6物质的名称,含有量,含有部品如下表所

产品中有害物质的名称及含量

	有害物质								
部件	‡名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴 二苯醚 (PBDE)		
	外壳	0	0	0	0	0	0		
显示器	印刷基板	×	0	0	0	0	0		
业小品 GOT	背光灯 (CCFL)	0	×	0	0	0	0		
	电缆	×	0	0	0	0	0		

本表格依据SJ/T 11364的规定编制。

- 〇:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 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/T 26572规定的限量要求。

. 规格

1 1 一般规格

項目		规格								
使用环境温度*1	0~55℃(水平放置)、	0~55℃(水平放置)、0~50℃(垂直放置)								
保存环境温度	-20°C ~60°C	-20°C∼60°C								
使用环境湿度	10%RH~90%RH, 无凝露	10%RH~90%RH, 无凝露* ²								
保存环境湿度	10%RH~90%RH, 无凝露	*2								
			频率	加速度	单侧振幅	扫描次数				
	适用JIS B 3502、 IEC 61131-2	有断续的振动时	5∼8.4Hz	_	3.5mm	X、Y、Z各方向10次				
抗振		有断线的1版初时	8.4~150Hz	9.8m/s ²	_					
		有连续的振动时	5∼8.4Hz	-	1.75mm	_				
		有足续的派列 问	8.4~150Hz	4.9m/s ²	_	<u> </u>				
抗冲击	适用JIS B 3502、IEC	61131-2 147m/s ² (15G)	X、Y、Z方向各3次							
使用环境	无油烟、腐蚀性气体、 无阳光直射(保存时也	可燃性气体,一般尘埃不 .相同)	严重							
使用海拔*3	2000m以下									
安装场所	控制柜内	控制柜内								
过电压类别*4	Ⅱ以下									
污染度*5	2以下									
冷却方式	自冷									

以接地电阻100Ω以下,接地线截面积 单线0.14~1.5mm², 绞线0.14~1.0mm², 带绝缘套管的棒状端子0.25~0.5mm²进行接地。

- *1 使用环境温度为设置了GOT的控制柜内部的温度。
- *2 境温度超过40℃时,不可超过40℃90%的绝对湿度。
- *3 勿在海拔0m的大气压以上的气压环境下使用或保存。如在上述环境中使用,可能会出现误动作。
 - 向控制柜内加压进行吹气清扫后,气压可能会导致表面的保护膜浮起从而影响到触摸面板的灵敏度,甚至保护膜可能会脱落。
- *4 表示假定该机器连接在公共配电网到内部机械装置的哪一处配电部。Ⅱ类,适用于由固定设备供电的机器等。

无法接地时连接至控制柜上*6

- 额定电压不超过300V的机器的抗浪涌电压为2500V。
- 表示该机器使用环境中的导电性物质的发生率的指标。污染度2是指,只发生非导电性污染,根据条件可能会因凝结而发生暂时性导电的环境。
- *6 5V 电源型不需要接地。

1.2 性能规格

接地

项目			390	ATT				
hi hi	州日	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS			
	显示软元件	TFT单色液晶						
	画面尺寸	3.84						
	分辨率	320×128点						
	显示尺寸	89.0 (W) ×35.6 (H) mm						
显示部*1*2	显示字符数	16点阵标准字体时:20字×8行(全角) 12点阵标准字体时:26字×10行(全角)						
	显示颜色	单色(白/黑)32灰阶						
	亮度调节	32级						
	背景灯	5色LED(白、绿、粉、橙、红)(不能	(更换)					
	背景灯寿命*3	约50000小时(使用环境温度25℃,	显示亮度50%时的时间)					
	方式	模拟电阻膜方式						
	键尺寸	最小2×2点(每键)						
触摸屏*4	同时按下	不可同时按下*5(只可触摸1点)						
	寿命	100万次以上(操作为度0.98)以下)						
	用户存储器容量	存储用存储卡 (ROM): 3MB						
用户存储器容量	寿命(写入次数)	10万次						
	RS-232(背面)	-	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:MINI-DIN6针(母)	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:MINI-DIN6针(母)	-			
	RS-232(側面)	-	-	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:9针接口端子排	-			
内置接口	RS-422/485	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:5针接口端子排 终端电阻* ⁶ :0PEN/110Ω/330Ω (使用终端电阻设置用开关切 换)	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:9针接口端子排 终端电阻* ⁶ :0PEN/110Ω/330Ω (使用终端电阻设置用开关切 换)	_	-			
	RS-422	-	-	_	1ch 传送速度:115200/57600 38400/19200/9600/4800bps 接口形状:9针接口端子排			
	以太网	1ch 数据传送方式:10BASE-T/ 100BASE-TX 接口形状:RJ-45(模块插头)	-	-	_			
	USB(设备)	1ch 最大传送速度:Full-Speed 12Mbps	接口形状:USB Mini-B					
	SD-₺*7	1ch 支持SDHC(最大32GB)			_			

项目		规格					
坝日	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS			
蜂鸣器输出	单音(音长可调整)						
保护结构	正面: IP67F*8 柜内: IP2X						
外形尺寸	$113~(\text{W})~\times 74~(\text{H})~\times 32~(\text{D})~\text{mm}$	113 (W) ×74 (H) ×32 (D) mm 113 (W) ×74 (H) ×27 (D) mm*9					
面板开口尺寸	105 (W) × 66 (H) mm	105 (W) ×66 (H) mm					
重量(安装配件除外)	0. 2kg			0. 18kg			
对应软件包	GT Works3 Version1.112S以后	GT Works3 Version1.112S以后 GT Works3 Version1.119Z以后					

- *1 基于液晶面板的特性,有时会出现亮点(常亮的点)和暗点(常暗的点)。
 - 液晶面板由大量显示元件构成,无法100%确保不发生亮点和暗点。
 - 而且,由于液晶面板的个体差异,可能会出现色调不同、亮度不均匀、闪烁等现象。 这些现象由产品的特性所决定,并非产品不良或故障,敬请谅解。
- 2 受到震动、撞击、或在特定显示颜色下有时会出现闪烁。
- *3 将屏幕保护背景灯设置为0FF,可以防止烧损显示部分,延长背景灯的寿命。
- *4 使用触控笔时的寿命为10万次。请使用符合以下规格的产品。
 - 材质:聚缩醛树脂
 - 前端半径:0.8mm以上
- *5 同时按压触摸屏2点或以上时,如果按压点的中心附近有开关,该开关可能动作。因此,请勿同时按压触摸屏2点或以上。

PLC

- *6 进行GOT多点连接时,请配合GOT主机的终端电阻切换开关的连接形式切换。
- *7 需要安装另售的SD卡模块(GT21-03SDCD)。
- *9 不促证活合室自的所有环榜
- 此外,在长时间有油、化学品的环境中或充满油雾的环境中可能会无法使用。
- 9 SD卡模块(GT21-03SDCD)安装时为113(W)×74(H)×32(D)mm。

1.3 電源规格

项目		规格					
		GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS		
电源电压		DC24V (+10%, -15%)			DC5V(±5%) 由可编程控制器供电		
耗电量	最大负载时	2. 6W以下	1.9W以下	2. 2W以下	1.1W以下		
和电里	背景灯熄灭时	2. OW	1.3W	1.6W	0. 7W		
冲击电流	ii	30A以下(3ms、环境温度25℃、最大负	(载时)		_		
容许瞬停时间		5ms以内			_		
噪声耐量		噪声电压1000Vp-p、噪声幅度1μs、i					
耐电压		电源端子总括⇔地线间 AC500V 1分	_				
绝缘电阻	1	电源端子总括⇔地线间 DC500V 通过	t绝缘电阻表10MΩ以上		_		
电线尺寸		1根电线:1 单芯线0.14~1.5mm ² (AWG26~AWG16)、绞线0.14~1.0mm ² (AWG26 to AWG16)、带绝缘套管的棒状端子0.25~0.5mm ² (AWG24~AWG20) 1根电线:2 单芯线0.14~0.5mm ² (AWG26~AWG20)、绞线0.14~0.2mm ² (AWG26 to AWG24)					
带绝缘套管的棒状端子 AI 0.25-6BU(AWG24)、AI 0.34-6TQ(AWG22)、AI 0.5-6WH(AWG20) (Phoenix • CONTACT公司)							
铆接工具 CRIMPFOXZA3 (Phoenix • CONTACT公司)							
适合的緊固扭矩(端子 排端子螺栓) 0.22~0.25N・m							

2. 连接电缆

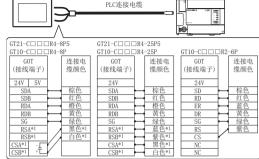
GOT接口电缆分配如下图所示。

GT2103-PMBD用电缆:GT21-C□□□R4-8P5、GT21-C□□□R4-25P5

GT2103-PMBDS用电缆:GT10-C□□□R4-8P、GT10-C□□□R4-25P

GT2103-PMBDS2用电缆:GT10-C□□□R2-6P

GT2103-PMBLS用电缆:GT10-C□□□R4-8P GOT



*1 GT2103-PMBD用电缆没有向信号名 (RSA、RSB、CSA、CSB) 的连接。 连接某些PLC时需要自制电缆。 详情请参考G0T2000系列连接手册。

剥线直径	7mm(0.27")
拧紧力矩	0. 22∼0. 25N • m
推荐工具(螺丝刀)	SZS 0.4×2.5(Phoenix公司)

在本书中,并没有对工业知识产权及其它权利的执行进行保证,也没有对 执行权进行承诺。对于因使用本书中所记载的内容而引起的工业知识产权 上的各种问题,本公司将不负任何责任。

关于质保

机会损失和间接损失不在质保责任范围内

无论是否在免费质保期内,凡以下事由三菱电机将不承担责任。

(1)任何非三菱电机责任原因而导致的损失。

(2) 因三菱电机产品故障而引起的用户机会损失、利润损失。

- (3) 无论三菱电机能否预测,由特殊原因而导致的损失和间接损失、事故赔偿、 以及三菱电机产品以外的损伤。
- (4) 对于用户更换设备、现场机械设备的再调试、运行测试及其它作业等的补偿

♠ 安全使用注意事项

- 本产品是以一般工业为对象,作为通用产品所制造的产品,不可以用于关系 到人身安全的状况下所使用的设备或者系统为目的而设计、制造的产品。
- 在计划将本产品应用于原子能、电力、航空航天、医疗、载人运载工具的 设备或者系统等的特殊用途时,在对此进行研究商讨之际,请照会本公司 的营业窗口。
- 虽然本产品是在严格的质量管理体制下进行制造的,但是在计划将本产品应用于由于本产品的故障有可能导致重大事故或者损失的设备上时,请在系统上设置备用及失效安全系统。

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN



GT2103-PMBD, GT2103-PMBDS, GT2103-PMBDS2, GT2103-PMBLS

JY997D61901C 學習

GT21 概述



手册号	JY997D61901C
日期	2016年9月

非常感谢洗胸本公司产品。

本手册只对GT2103-PMBD,GT2103-PMBDS人机界面(以下简称GOT)的安全须知和规格进行说明。关于外部线路,请参照GOT SIMPLE系列 主机使用说明书。因此,有关 OT的设计和施工以及作图等项请分别参照GT Desig 请务必熟读本手册以及各相关手册,了解机器本身的功能和安全信息以及 et是美国Xerox Corporation的注册商标。在本手册出现的各种商标分别对

应各公司的名称,产品名称

该印刷品发行于2016年9月

在未告之的情况下产品的规格可能有所变更,请预先了解。 © 2014 Mitsubishi Electric Corporation

安全注意事项 (使用前请务必仔细阅读)

在使用本产品时,请务必熟读本手册以及本手册中介绍的相关手册。同时请务必充 分注意安全事宜,正确使用。 本手册中所注意事项仅为本产品直接相关内容。 在本手册中,用"警告"和"注意"对●安全注意事项●进行等级区分。

⚠警告 ⚠注意

错误操作可能引起危险情况发生,造成人员重伤或死亡。 错误操作可能引起危险情况发生,造成人员中等程度的代

此外,即使是. 注意的事项,因具体情况不同,也可能引发重大事故。 由于记载的都是重要的内容, 所以请务必遵守。

害、轻伤或物品损坏

设计注意事项

- GOT、电缆的故障,可能会导致输出保持为ON的状态或保持为OFF的状态。触摸 面板的故障,可能会导致触摸开关等输入对象发生误动作。对于有可能引起重大事故的输出信号,应设置外部监控电路。误输出或误动作可能导致事故发
- 一 请不要将GOT作为报警装置使用,这样有可能导致重大事故。显示重要的报警 或者输出报警的装置,请使用独立并具有冗余性的硬件或者机械互锁的构成 误输出、误动作有可能导致事故发生。
- GOT检测出背光灯故障时,GOT将触摸开关的输入变为无效,操作人员将无法对 GOT进行触摸操作。GOT检测出背光灯故障时,可通过GOT的系统信号进行确
- 当GOT的液晶部/背光灯由于故障等原因显示部分变暗时, 触摸开关的输入可 能仍处于有效状态,从而造成触摸开关的误操作。例如,操作人员可能会误认为是屏幕处于保护状态,想要解除屏保而去触摸显示部位,从而导致触摸开涉
- GOT的显示屏采用的是模拟电阻膜方式。在显示屏上同时按压2点以上时,如果 GOID的源小州·米州印度快铁电阻版了功。任业小州上同时农店之品以上时,到次 按压点的中心附近有开关,该开关将可能动作。请勿在显示屏上同时按压2点 以上。同时按压2点以上有可能因误输出、误动作而导致事故发生。 更改由GOT执行监控的连接设备(PLC等)的程序或参数等时,请快速切断GOT
- 电源后重新启动。误输出或误动作有可能导致事故发生。
- GOT在执行监控时,如果发生通讯故障(包括电缆脱落),GOT与可编程控制器 CPU的通讯将被中断。GOT无法动作。在构建使用了GOT的系统时,考虑到可能会发生GOT通讯故障时,对系统进行重大动作的开关操作请设定通过GOT以外的装置进行。否则可能会因为误输出、误动作而导致事故发生。
- 针对经由互联网的外部机器的非法访问,需要对GOT及相关信息的安全给予保 护时,请制定针对不同用户的对策。 否则,设置信息可能会被非法读取。

设计注意事项

⚠注意

- 请勿将控制线及通讯电缆与主电路及动力线等捆扎在一起或相互靠得太近。应相
- · GOT连接以太网使用时,根据系统配置,可使用的IP地址会有所限制。
- 在以太网网络中连接多台GOT时:请勿将GOT以及连接设备的IP地址设置为
- 722.100.3.100。 在以太网网络中连接1台GOT时: 请勿将除GOT以外的连接设备的IP地址设置为 192.168.3.18。
- 如果上述系统配置中将IP地址设置为192.168.3.18,GOT启动时将会发生IP地址重
- 复,可能会对IP地址设置为192. 168. 3. 18的设备的通讯产生不良影响。IP地址重复时的动作因设备和系统而异。 在与GOT连接前,请接通连接设备以及网络设备的电源,使其处于可通讯状态。连接
- 设备以及通讯线路为不可通讯状态时,GOT可能会发生通讯报警。
- GOT受到振动和撞击时,或GOT上显示特定的颜色时,GOT的画面有时会出现闪烁现象

安装注意事项 <u>♪</u>警告

在将GOT本体安装到控制柜上或从控制柜上拆卸时,必须将系统中正在使用的所有 外部供应电源全部断开之后再进行操作。如未全部断开,可能导致产品故障或误动 作现象

安装注意事项 <u>小</u>注意

- 请在符合本说明书中所规定的一般规格环境下使用GOT。在不符合说明书中规定的 一般规格环境下使用GOT,可能会引起触电、火灾、误动作、产品损坏或使产品性能 变差现象。
- 将GOT安装到控制柜上时,应使用No. 2十字螺丝刀在规定的扭矩范围内(0. 20N ~0.25N • m) 拧紧安装螺栓。如果螺栓拧得过松,有可能导致脱落、短路、误动作。如果螺栓拧得过紧,有可能导致螺栓及产品损坏而导致脱落、短路、误动作。
- 格SD卡模块安装到GOT时,应安装到GOT侧面,用螺丝刀在规定扭矩范围内(0.3N•m~0.6N•m)紧固自攻螺栓。
- 使用时请将保护膜揭下。如果不揭下就使用, 日后可能无法将其揭下。
- 请勿在阳光直射的场所、高温、粉尘、湿气或振动大的场所使用以及保管本产品。 不要将GOT在含油、药品的环境下使用。如果有油、药品浸入设备,会导致故障、误

配线注意事项

҈Λ警告

在进行接线作业时, 必须将系统中正在使用的所有外部供应电源全部断开之后再 进行操作。如果未全部断开,可能会引起触电、产品损坏、误动作

配线注意事项 <u>/</u>||注意

- 必须将GOT电源部分的FG端子与GOT的专用接地线连接。否则,可能引起触电、误动
- GOT的电源线路,应在确认了产品的额定电压及端子排列之后进行正确安装。连接
- 端子螺栓拧得过松,有可能导致短路、误动作。如果端子螺栓拧得过紧,有可能导致螺栓及模块的损坏而引起短路、误动作。 应注意防止切屑及线头等杂物掉入产品内。否则可能导致火灾、故障、误动作。

通讯电缆安装在60T的接口或与60T连接的产品的连接器上,应在规定的扭矩范围 内拧紧安装螺栓和端子螺栓,如果安装螺栓和端子螺栓拧得过松,有可能导致短 筋、误动作。如果安装螺栓和端子螺栓拧得过紧,有可能导致螺栓及模块的损坏而 引起短矫、误动作。

⚠警告

测试操作注意事项

应在熟读用户操作手册,充分理解操作方法后,进行用户创建的监控画面的测试操 Sutangerin 床户河,况乃至解床户对允利,及日时 保(位软元件的ON/OFF、多软元件的当前值更改、定时器、计数器的设置值、当前 值更改、缓冲存储器的当前值更改)。此外、对于那些对系统有重大影响的软元件 请勿通过测试操作更改其数据。否则可能导致误输出、误动作。

启动/维护注意事项

- ⚠警告 诵申时请勿触摸端子。可能引起触电。
- 清洁或者紧固端子螺栓时,必须从外部将电源全部断开之后再进行操作。如果没有 全部断开,可能导致设备故障或者误动作。如果螺栓拧得过松,有可能导致短路、 误动作。如果螺栓拧得过紧,有可能由于螺栓或模块损坏引起短路、误动作。

启动/维护注意事项 ⚠注意

- 请勿拆解或改造产品。可能导致故障、误动作、人身伤害、火灾。
- 请勿直接触碰产品的导电部分或电子部件。可能导致产品的误动作、故障。
- 与产品连接的电缆必须收入套管中或者用夹具进行固定处理。如果未将电缆收入 套管或未用夹具讲行固定处理,可能出现电缆的晃动及移动、不经意的拉拽等造 成产品及电缆损坏、电缆接触不良而导致误动作。
- 在拆卸与产品连接的电缆时,请勿用手拉扯电缆部分。如果在与连接产品的状态 下拉扯电缆,可能造成产品或电缆的损坏、电缆接触不良从而导致误动作。
- 请勿使产品掉落或受到强烈撞击。否则可能造成模块损坏。 在触碰产品前,必须先与接地的金属物等接触,释放掉人体等所携带的静电。如

果不释放掉静电,可能导致产品故障或者误动作 ⚠注意

- 使用模拟电阻膜方式的触摸面板时,通常不需要调整,但是经过长时间使用,对 象位置和触摸位置有可能错离。对象位置和触摸领域如发生错离,请调整触摸面
- 对象位置和触摸位置发生错离时,有可能导致其他对象动作、或由于误输出、误 动作导致其他意料之外的动作

数据存储设备使用时

触摸面板的注意事项

<u>/</u>【警告

 如在GOT访问过程中拔下安装在GOT的A驱动器上的SD卡,GOT的处理将会停止约20 SULTOOL (1) 可以在下放了,从来在OUT ID ASA-2014。LISTS 下,OUT DE AST TA LISTS 下, 处左右。在此时间,将无法操作OUT 且面面的更新,报警、日志、脚本等在后台 动作的功能也会停止。卸下SD卡时,请在GOT应用程序画面操作中将SD卡访问设 为禁止状态后,确认SD卡访问LED处于熄灭状态后进行。

数据存储设备使用时 的注意事项

的注意事项

⚠注意

- 如在GOT访问过程中拔下安装在GOT上的SD卡,可能会导致SD卡或文件损坏。如需 从GOT上拔下SD卡,请在通过SD卡存取LED或系统信号等确认当前未对数据存储器 进行访问之后再拔下。
 - 取出SD卡时,由于SD卡可能会弹出,请用手抵住SD卡将其取出。否则可能会因为 脱落而导致SD卡损坏或故障。
- 取出SD卡时,请在60T的实用菜单画面进行SD卡的取出操作,在弹出正常结束通线对话框后,再用手抵住SD卡将其取出。否则可能会因为脱落而导致SD卡损坏或故

报废处理注意事项 <u>//</u>注意

产品报废时,应作为工业废弃物处理

运输注意事项

⚠注意

- 品本身为精密设备,所以在运输时应避免使其受到超过本体使用说明书中记载 的一般规格值的撞击。否则可能会导致产品故障。运输后,应进行产品的动作确
- 如果木质包装材料的消毒。除虫用熏蒸剂中所含的卤素类物质(氟、氯、溴、碘 34.木への (2家で付加市等・除工用無熱の下形 自 10 18 東大の成 (水、駅、駅・駅・等) 混入本公司产品,可能会导致故障。请注意防止残留的熏蒸成分混入本公司产品,或采用熏蒸以外的方法(热处理等)进行处理。另外,消毒・除虫措施请召包装前的木材加工阶段实施。

CE标记通知

通过直接测试(已认证标准)和设计分析(形成工程技术文件)证实,下述产品在相应 文件指导下使用时可对应电磁兼容性的欧洲指令(2004/108/EC)。 • 本产品设计符合工业应用

- 类型:图形操作终端
- 型号:GOT2000系列
- 标准

EN61131-2 :2007 可编程控制器 - 设备

付应所有相关联标准。 (射频辐射測量) 对应所有相关联标准。 (ESD、RF 电磁场、EFTB、浪涌、RF 传导干扰和电源 频率磁场)

备注

关于更多详细内容, 请向当抽三萘由机销售商垂询。

关于CE标记详细内容, 请参照以下内容 →GOT2000系列 主机使用说明书

关于操作手册

本产品相关的手册如下所示。

71 - 17 - 17 - 17 - 17 - 17 - 17 - 17 -	
手册名称	手册编号(型号代码)
GOT2000系列本体使用说明书(硬件篇)	SH-081202CHN(1D7MK4)
COT2000至列末体体用沿明井(空用装单管)	CH 001000CHN(1D7MVE)

详细的手册内容请参阅存储于所使用绘图软件的DVD-ROM或CD-ROM中的PDF手册

相关操作手册

相关操作手册请参阅存储于所使用绘图软件的DVD-ROM或CD-ROM中的HELP或PDF手册 可从三菱电机FA网站

(http://www.MitsubishiElectric.co.jp/fa) 获取最新手册。

使用之前

返出之册 请在使用GOT之前将GOT的连接器与电池(另售GT11-50BAT)的连接器连接。 连接方法请参阅GOT2000系列本体使用说明书(硬件篇)。 关于GOT的详细规格、安装方法、接线、维护与检查、版本以及适合的规格的确认方法 等,请参阅GOT2000系列本体使用说明书(硬件篇)。

随机配件

- 1		
	型号	备注
	GT2103-PMBD/PMBDS/PMBDS2/PMBLS	GOT主机 (以下配件随主机附送)

随机配件	数量
PLC通讯连接器	1
面板安装支架(配M4×20螺丝)	4
面板安装包	1
GT21概述(本手冊)	1

「电器电子产品有害物质限制使用标识要求」的表示方式



Note: This symbol mark is for China only.

含有有害6物质的名称,含有量,含有部品

本产品中所含有的有害6物质的名称,含有量,含有部品如下表所

产品中有害物质的名称及含量

	有							
部件	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴 二苯醚 (PBDE)		
	外壳	0	0	0	0	0	0	
显示器	印刷基板	×	0	0	0	0	0	
GOT	背光灯 (CCFL)	0	×	0	0	0	0	
	电缆	×	0	0	0	0	0	

本表格依据SJ/T 11364的规定编制。

- 〇:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572
- 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/T 26572规定的限量要求。

规格 一般规格

- 只日		75C 1117					
使用环境温度*1	0~55℃(水平放置)。	~55℃(水平放置)、0~50℃(垂直放置)					
保存环境温度	-20°C ~60°C	-20℃~60℃					
使用环境湿度	10%RH~90%RH, 无凝露	10%RH~90%RH, 无凝露* ²					
保存环境湿度	10%RH~90%RH, 无凝露	10%RH~90%RH, 无凝露* ²					
			频率	加速度	单侧振幅	扫描次数	
	适用JIS B 3502、 IEC 61131-2	有断续的振动时	5~8.4Hz	-	3.5mm	X、Y、Z各方向10次	
抗振			8. 4∼150Hz	9.8m/s^2	_		
		有连续的振动时	5∼8.4Hz	ı	1.75mm	_	
			8.4∼150Hz	4.9m/s^2	_		
抗冲击	适用JIS B 3502、IEC	61131-2 147m/s ² (15G)	X、Y、Z方向各3次				
使用环境		无油烟、腐蚀性气体、可燃性气体,一般尘埃不严重 无阳光直射 (保存时也相同)					
使用海拔*3	2000m以下	2000m以下					
安装场所	控制柜内	控制柜内					
过电压类别*4	Ⅱ以下		•			•	

- 以接地电阻 $100\,\Omega$ 以下,接地线截面积 单线 $0.\,14\sim1.\,5$ mm²,绞线 $0.\,14\sim1.\,0$ mm²,带绝缘套管的棒状端子 $0.\,25\sim0.\,5$ mm²进行接地。 接地 无法接地时连接至控制柜上*6
- 使用环境温度为设置了60T的控制柜内部的温度。 境温度超过40℃时,不可超过40℃9%的绝对湿度。 勿在海拔0m的大气压以上的气压环境下使用或保存。如在上述环境中使用,可能会出现误动作。 向控制柜内加压进行吹气清扫后,气压可能会导致表面的保护膜浮起从而影响到触摸面板的灵敏度,甚至保护膜可能会脱落。
- 表示假定该机器连接在公共配电网到内部机械装置的哪一处配电部。Ⅱ类,适用于由固定设备供电的机器等。 獨完由E不超过300V的相異的結追通由E为9500V
- 表示该机器使用环境中的导电性物质的发生率的指标。污染度2是指,只发生非导电性污染,根据条件可能会因凝结而发生暂时性导电的环境。 5V 电源型不需要接地。

污染度

10	Di El	规格							
4	ИН	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS				
	显示软元件	TFT单色液晶							
	画面尺寸	3.84							
	分辨率	320×128点							
	显示尺寸	89.0 (W) ×35.6 (H) mm							
显示部*1*2	显示字符数	16点阵标准字体时:20字×8行(全 12点阵标准字体时:26字×10行(全							
	显示颜色	单色(白/黑)32灰阶							
	亮度调节	32级							
	背景灯	5色LED(白、绿、粉、橙、红)(不能	能更换)						
	背景灯寿命*3	约50000小时(使用环境温度25℃,	显示亮度50%时的时间)						
	方式	模拟电阻膜方式							
**	键尺寸	最小2×2点(每键)							
触摸屏* ⁴	同时按下	不可同时按下* ⁵ (只可触摸1点)							
	寿命	100万次以上(操作力度0.98N以下)							
	用户存储器容量	存储用存储卡(ROM):3MB							
用户存储器容量	寿命(写入次数)	10万次							
	RS-232(背面)	-	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:MINI-DIN6针(母)	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:MINI-DIN6针(母)	-				
	RS-232(側面)	-	-	1ch 传送速度:115200/57600/ 38400/19200/9600/4800bps 接口形状:9针接口端子排	-				
内置接口	RS-422/485	1ch 传送速度: $115200/57600/38400/19200/9600/4800bps$ 接口形状: 54 转日端子排终端电阻 *6 : 0 PEN/ $110\Omega/330\Omega$ (使用终端电阻设置用开关切换)	1ch 传送速度: $115200/57600/$ 38400/19200/9600/4800bps 接口形状: 9 针接口端子排 终端电阻* 6 : 0 PEN/ $110\Omega/330\Omega$ (使用终端电阻设置用开关切换)	-	-				
	RS-422	-	-	_	1ch 传送速度:115200/57600 38400/19200/9600/4800bps 接口形状:9针接口端子排				
	以太网	1ch 数据传送方式:10BASE-T/ 100BASE-TX 接口形状:RJ-45(模块插头)	-	-	-				
	USB(设备)	1ch 最大传送速度:Full-Speed 12Mbps	:接口形状:USB Mini-B						
	SD卡*7	1ch 支持SDHC(最大32GB)	-		_				

GT2103-PMBD 保护结构 正面:IP67F*8 柜内:IP2X 外形尺寸 113 (W) ×74 (H) ×32 (D) mm 113 (W) ×74 (H) ×27 (D) mm $113\,(\mathrm{W}) \times 74\,(\mathrm{H}) \times 27\,(\mathrm{D})\,\mathrm{mr}$ 面板开口戶 重量(安装配件除外) 0.18kg 0.2kg GT Works3 Version1.112S以

- 基于液晶面板的特性,有时会出现亮点(常亮的点)和暗点(常暗的点)。 液晶面板由大量显示记件构成、无法10%确保不发生亮点和暗点。 而且,由于滤晶面板的个体差异,可能会出现色调不同、完度不均匀、闪烁等现象。 这些现象由产品的特性所决定,并非产品不良或故障,敬请谅解。
- 受到震动、撞击、或在特定显示颜色下有时会出现闪烁。 将屏幕保护背景灯设置为0FF,可以防止烧损显示部分,延长背景灯的寿命。 使用触控笔时的寿命为10万次。请使用符合以下规格的产品。

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- 同时按压触摸屏2点或以上时,如果按压点的中心附近有开关,该开关可能动作。因此,请勿同时按压触摸屏2点或以上。
- 进行GOT多点连接时,请配合GOT主机的终端电阻切换开关的连接形式切换。 需要安装另售的SD卡模块(GT21-03SDCD)。
- 不保证适合客户的所有环境。 此外,在长时间有油、化学品的环境中或充满油雾的环境中可能会无法使用。
- SD卡模块(GT21-03SDCD)安装时为113(W)×74(H)×32(D)mm

1.3 貫	電源规格					
	v6 H			规格		
	项目	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS	
电源电压	K	DC24V (+10%、-15%)			DC5V(±5%) 由可编程控制器供电	
****	最大负载时	2.6W以下	1.9W以下	2. 2W以下	1.1W以下	
耗电量	背景灯熄灭时	2. OW	1. 3W	1.6W	0.7W	
冲击电流		30A以下(3ms、环境温度25℃、最大负载时)			_	
容许瞬体	亭时间	5ms以内			_	
噪声耐量	量	噪声电压1000Vp-p、噪声幅度1μs、通过噪声频率为30~100Hz的噪声模拟器				
耐电压		电源端子总括⇔地线间 AC500V 1分钟			_	
绝缘电阻		电源端子总括⇔地线间 DC500V 通过绝缘电阻表10MΩ以上			_	
电线尺寸		1根电线:1 单芯线0.14~1.5mm ² (AWG26~AWG16))、绞线0.14~1.0mm ² (AWG26 to AWG	G16)、带绝缘套管的棒状端子0.25~0.5	5mm ² (AWG24~AWG20)	

2. 连接电缆

铆接工具

GOT接口电缆分配如下图所示

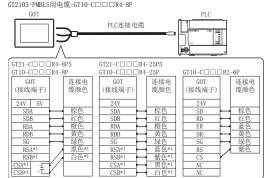
推荐工具(螺丝刀)

GT2103-PMBD用电缆:GT21-C□□□R4-8P5、GT21-C□□□R4-25P5 GT2103-PMBDS用电缆:GT10-C□□□R4-8P、GT10-C□□□R4-25P GT2103-PMBDS2用电缆:GT10-C□□□R2-6P

1根电线:2

0.22~0.25N · m

带绝缘套管的棒状端子 AI 0.25-6BU(AWG24)、AI 0.34-6TQ(AWG22)、AI 0.5-6WH(AWG20)(Phoenix · CONTACT公司)



GT2103-PMBD用电缆没有向信号名(RSA、RSB、CSA、CSB)的连接 连接某些PLC时需要自制电缆。 详情请参考GOT2000系列连接手册

剥线直径 7mm(0, 27") 拧紧力矩 0.22~0.25N·m

SZS 0.4×2.5(Phoenix公司)

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MITSUBISHI ELECTRIC CORPORATION HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN