

MITSUBISHI *Changes for the Better*

GT14-RS2T4-9P
RS-232/485 Signal Conversion Adapter
User's Manual

Manual Number	JY997D44401
Revision	C
Date	Jan. 2012

GRAPHIC OPERATION TERMINAL
GOT1000

This manual describes the part names, external dimensions, 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.

Registration
 The company name and the product name to be described in this manual are the registered trademarks or trademarks of each company.

Effective Jan. 2012
 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 **⚠DANGER** and **⚠CAUTION**.

⚠DANGER 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.

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 usage.

MOUNTING PRECAUTIONS **⚠CAUTION**

- Use the RS-232/485 signal conversion adapter 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.

OPERATION PRECAUTIONS **⚠CAUTION**

- Power OFF the GOT, and then connect securely the RS-232/485 signal conversion adapter to the specified connector in the GOT. Poor connection may cause malfunction.
- Remove static electricity charged in the human body before handling the RS-232/485 signal conversion adapter. Static electricity may damage the stored data and elements.

DISPOSAL PRECAUTIONS **⚠CAUTION**

- When disposing of the product, handle it as industrial waste.

Related Manuals

The following manuals are relevant to this product. When these loose manuals are required please consult with our local distributor.

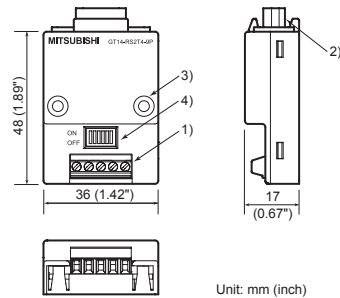
Manual name	Manual Number (Model Code)	Contents
GT14 User's Manual	JY997D44801 (09R823)	Describes the GT14 hardware-relevant content such as part names, external dimensions, mounting, wiring, specifications, and introduction to option devices. (sold separately)
GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3	SH-080868ENG (1D7MC2)	Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (sold separately)
GOT1000 Series Connection Manual (Non-Mitsubishi Products) 1) for GT Works3	SH-080869ENG (1D7MC3)	Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (sold separately)
GOT1000 Series Connection Manual (Non-Mitsubishi Products) 2) for GT Works3	SH-080870ENG (1D7MC4)	Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (sold separately)
GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3	SH-080871ENG (1D7MC5)	Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (sold separately)

1. Overview

The GT14-RS2T4-9P RS-232/485 signal conversion adapter (hereinafter referred to as "RS-232/485 signal conversion adapter") converts the RS-232 communication interface of the GOT into the RS-485 communication interface. Applicable GOT units are shown below.

GOT
GT1455-QTBDE, GT1450-QLBDE, GT1455-QTBD, GT1450-QLBD

2. Part Names and External Dimensions



No.	Name	Contents
1)	RS-485 terminal block	5-pin (Fixed type)
2)	GOT connector	D-Sub 9-pin female
3)	Fixing screw hole	M3 tapping screws (accessory)
4)	1pair/2pair/ Terminating resistor setting switch	<ul style="list-style-type: none"> 1Pair/2Pair Terminating resistor (110Ω, OPEN, 330Ω) (At factory shipment: 2Pair, Terminating resistor 330Ω)

3. Specifications

3.1 General Specifications
 (Other specifications are the same as the GT14 main unit.)

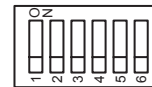
Item	Specifications
Operating ambient temperature	0 to 55°C
Storage ambient temperature	-20 to 60°C
Operating/Storage ambient humidity	10 to 90% RH, non-condensing
Operating atmosphere	Must be free of lamp black, corrosive gas, flammable gas, or excessive amount of electro conductive dust particles and must not be exposed to direct sunlight (during operation and storage).
Power consumption	0.5W or less (100mA/5VDC), supplied from the GOT

4. Pin assignment

Pin No.	Signal name
1	SG
2	SDB
3	SDA
4	RDB
5	RDA

Tightening torque: 0.22 to 0.25N·m

5. 1pair/2pair/Terminating resistor setting switch



Setting item	Set value	Switch No.					
		1	2	3	4	5	6
1pair/2pair	1pair	ON	ON	-	-	-	OFF
	2pair	OFF	OFF	-	-	-	OFF
Terminating resistor	110Ω	-	-	ON	OFF	OFF	OFF
	OPEN	-	-	OFF	OFF	OFF	OFF
	330Ω	-	-	OFF	ON	ON	OFF

- Set "1 pair" or "2 pairs" using the switches Nos. 1 and 2, and set the terminating resistor value using the switches Nos. 3 to 6.
- Do not manipulate the setting switches while power is supplied to the RS-232/485 signal conversion adapter.

<Setting example>

Format	Terminating resistor	Switch No.					
		1	2	3	4	5	6
1pair	110Ω	ON	ON	ON	OFF	OFF	OFF
	OPEN	ON	ON	OFF	OFF	OFF	OFF
2pair	330Ω	OFF	OFF	OFF	ON	ON	OFF
	OPEN	OFF	OFF	OFF	OFF	OFF	OFF

6. Wiring

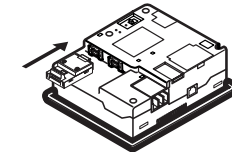
- For the detail, refer to GOT1000 Series Connection Manual.

Cable jacket to remove	5mm (0.19")
Tightening torque	0.22 to 0.25 N·m
Recommended Tool (Screwdriver)	SZS 0.4×2.5 (Phoenix Contact Inc.)

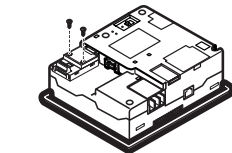
- Refer to the table below for applicable wire sizes.

No. of wire per terminal	Electrical wire size		
	Solid wire	Stranded wire	Ferrules with plastic sleeve
1	0.14 to 1.5mm ² AWG26 to AWG16	0.14 to 1.0mm ² AWG26 to AWG16	0.25 to 0.5 mm ² AWG24 to AWG20
2	0.14 to 0.5mm ² AWG26 to AWG20	0.14 to 0.2mm ² AWG26 to AWG24	-

7. Installation



- Turn off the GOT power.
- Connect the RS-232/485 signal conversion adapter to the GOT using the provided M3 tapping screws on the GOT.



- Fix the RS-232/485 signal conversion adapter to the GOT using the provided M3 tapping screws. Tightening torque: 0.3 to 0.6 N·m

8. Cautions on use of RS-232/485 signal conversion adapter

- When using the RS-232/485 signal conversion adapter, select [Communication setting] → [5V power supply] → [YES] on the utility screen in the GT14 main unit.

For details, refer to the following.

→ **GT14 User's Manual (8.2 Utility Function List)**

- The GT14 main unit whose hardware version is B or later supports the setting whether or not 5V power is supplied. In the hardware version A, the setting operation about 5V power supply is invalid because 5V power is always supplied.

- When using the RS-232/485 signal conversion adapter, make sure that the core OS version is V05.28.00AP or later and the standard monitor OS version is V05.28.00 or later in the GT14 main unit.

For details, refer to the following.

→ **GT14 User's Manual (12.1.2 OS version confirmation)**

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

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; opportunity loss or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ 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.