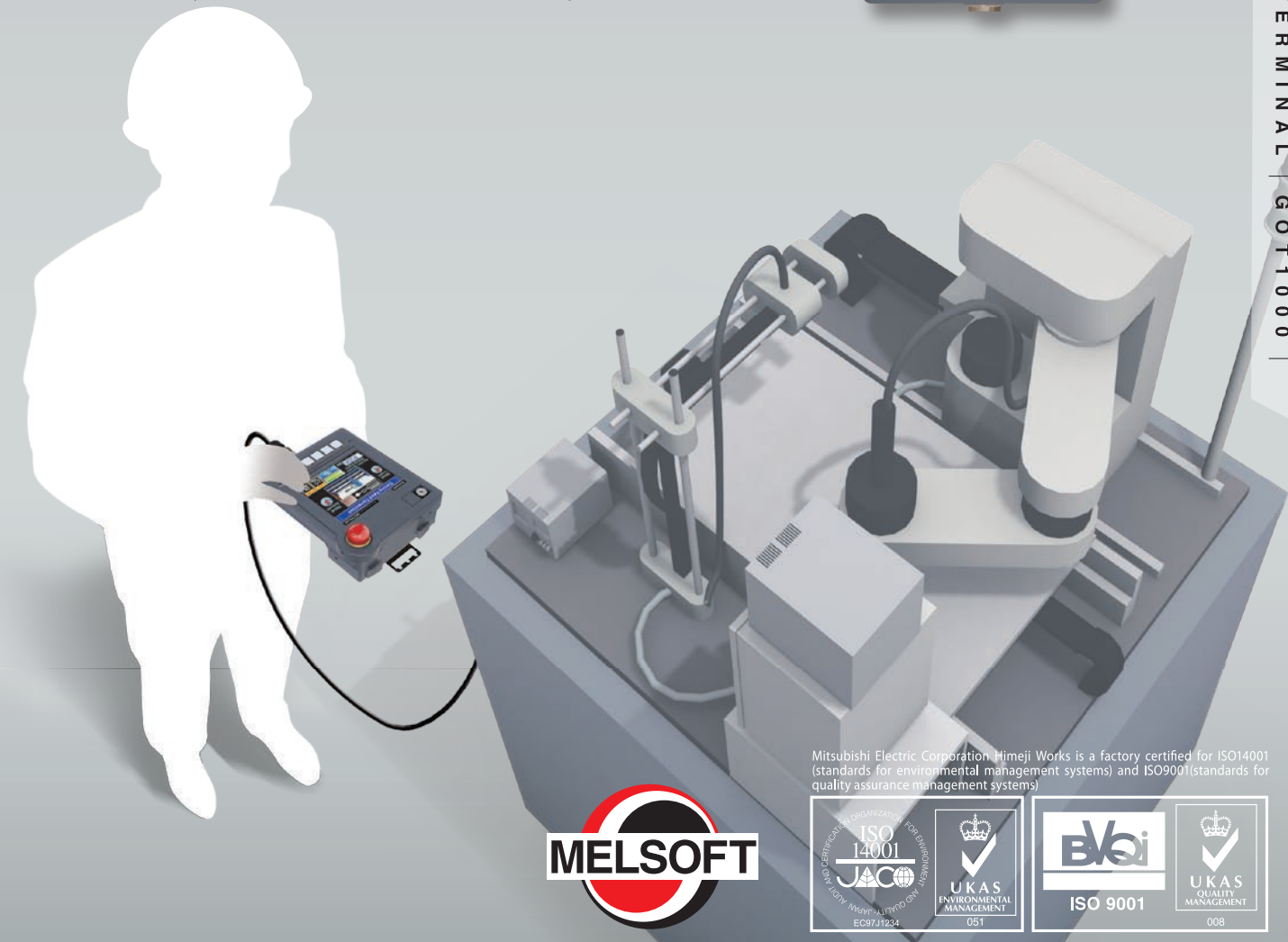




MITSUBISHI ELECTRIC
GRAPHIC OPERATION TERMINAL
GT1155HS-QSBD
GT1150HS-QLBD

GRAPHIC OPERATION TERMINAL
GOT1000 Series

Handy Control GOT Operation box at your fingertips! Newly launched handy terminals



GRAPHIC OPERATION TERMINAL GOT1000



Starting new user communication ...

Faster and more comfortable



Improved response time in all of drawing, operation and communication

- The GOT is equipped with the 64-bit RISC processor at the top level in the field. Operation processing at higher speed results in more comfortable operations and smoother drawing.
- The mounted USB interface* and serial communication ports provide higher speed and an improved response time.*1

Expansive 3MB user memory for multiple configuration screens

- Using BMP images and outline fonts, a large variety of operation screens can be created. Complicated layouts are achieved with the layer function.

5.7-inch STN type liquid crystal display with higher intensity and wider view angle

- The 5.7-inch STN type LCD offers 320 x 240 dot resolution.
- The maximum brightness of 350 cd/m² offers clear images in a range of lighted environments.
- The wide view angle* of 50° leftward and rightward, 50° upward and 60° downward improves the workability.*2
- Adoption of 256 colors (BMP images) has realized rich expressions in the medium size GOT. With the monochrome type, the gray display with 16 tones has enabled excellent expressions not available in conventional units.



Globally flexible and more convenient

Creation of only one startup screen

- Image screens can be set using GT Designer2, and an arbitrary screen can be displayed when the GOT1000 is booted.*3

A variety of fonts allowing rich expressions

- True type fonts enable beautiful display from small characters to large characters.
- Character decorations (italic, underline, and italic with underline) enable various expressions.
- The Mincho font and Gothic font are mounted as standard.

For people all over the world

- Compatibility with Unicode2.1 enables display of languages in many countries and areas, and contributes to the export of units.

Simple creation of language changeover screen

- The language changeover screen (for Japanese, English and Chinese, for example) can be easily created.
- Ten types of changeover screens can be set for one comment. Without regard to the language, changeover screens can be set in accordance with the application.
- Comment groups are available.



Easily maintainable and more extendable.

System monitoring function enabling monitoring and change of devices in the PLC CPU

- Devices in the PLC CPU can be monitored and changed.
- Specified devices can be monitored.
- Current values and set values of timers and counters can be changed.
- The buffer memory in special function units can be monitored and changed.
- The display format (decimal or hexadecimal) and device comments (displayed or hidden) can be changed.

Reduced load in the system, improved maintainability, and mounted script function

- The load applied on the PLC CPU, micro computer, etc. is reduced when the GOT display is controlled by a script. Scripts are unique to the GOT and similar to the C language, allowing programmers to use their favorite commercial editors.

Extended communication protocols and extended applicability enabling connection to various equipment

- Not only Mitsubishi PLCs but also PLC connection drivers manufactured by other companies can be connected.
- Not only connection to servo units and inverters but also connection to various temperature controllers and micro computers is enhanced.

Compatible with GT Simulator2 Ver. 2 and GT Designer2 Ver. 2

- Screens can be created using the GT Designer2 Ver. 2 in the same way as conventional units.
- The screen data for the GOT900 can be converted for the GOT1000.*4
- The GT Simulator2 Ver. 2 is available. Touch switch inputs can be simulated in the personal computer. Because the system alarm information and script error information can be checked, programs can be debugged without using the actual machine.



Performance specifications

Item	Specifications	
	GT1155HS-QSBD	GT1150HS-QLBD
Display area	Type	STN type color LCD / STN type monochrome LCD
	Resolution (dots)	320 x 240
	Display size (mm)	115 W x 86 H (5.7 inch)
	Number of displayed characters	16-dot font: 40 characters x 15 lines 12-dot font: 53 characters x 20 lines
	Display color	256 colors / Monochrome with 16 tones
	View angle (degrees)	50° leftward and rightward, 50° upward and 60° downward / 45° leftward and rightward, 20° upward and 40° downward
	Contrast adjustment	Adjustable in 16 steps
Individual liquid crystal intensity (cd/m ²)	280 to 350	160 to 220
	(Adjustable in 8 steps, adjusted to maximum value at shipment)	
	Life: Approximately 50,000 hours (Ambient operating temperature: 25 °C), guarantee: 1 year *1	
Back light	Cold cathode (not replaceable) Back light OFF time and screen save time can be set. Back light bulb blow detection function is provided.	
	Life	Approximately 75,000 hours or more, guarantee: 1 year *1 / Approximately 54,000 hours or more, guarantee: 1 year *1 (Intensity: 50%) (ambient operating temperature: 25 °C)
Touch panel	Number of touch points	300 maximum/screen (matrix configuration: 20 x 15) (Number of points allowing simultaneous touch: 2 maximum)
	Key size (dots)	16 x 16 minimum (per key) 1,000,000 times or more (operation force: 0.98 N or less)
Buzzer output	Single tone (adjustable among long, short and none)	
	Memory	C drive *2: Built-in flash memory for storing project data (3 MB) and OS Life: 100,000 times (number of times of write) D drive type: Built-in SRAM of 512 kB (backed up by battery) Battery: Lithium battery GT11-50BAT
Backup target	Clock data, alarm history and recipe data	
	Life	Replacement timing: Approximately 5 years (Ambient temperature: 25 °C), guarantee: 1 year *1
Built-in interface	RS-422 Type	1 channel Each (Either channel should be selected for operation. RS-422 is selected at shipment.) Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps
	Connector shape	Round 32-pin type (male)
	Application	Communication with connected equipment (Only either RS-422 or RS-232 can be used at one time.)
RS-232	Type	1 channel Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps
	Connector shape	Mini-DIN 6-pin type (female)
Application	Communication with personal computer (Screen data upload and download, OS installation and FA transparent function)	
	USB	Type: USB (full speed: 12 Mbps), 1 slave channel Connector shape: Mini-B (receptacle) Application: Communication with personal computer (Screen data upload and download, OS installation and FA transparent function)
CF card	Type	In conformance to PCMCIA, compact flash slot, 1 channel
	Connector shape	Dedicated to Type I
Application	Data transfer and data storage	

*1: The charge-free guarantee period for the product is 1 year after the product is purchased by the customer or delivered to a designated place. The distribution period after shipment is set to 6 months maximum, and the period of 18 months is regarded as the upper limit of the charge-free guarantee. The charge-free guarantee period of a repaired product does not exceed the charge-free guarantee period before repair.
*2: The memory ROM allows overwrite of new data without deletion of existing data.

Power supply specifications

Item	Specifications	
	GT1155HS-QSBD	GT1150HS-QLBD
Supply voltage	24 V DC (+10% -15%)	
Fuse	1.0 A (built in and not replaceable)	
Power consumption	9.84 W or less (410 mA, 24 V DC)	9.36 W or less (390 mA, 24 V DC)
While back light is OFF	4.32 W or less (180 mA, 24 V DC)	
Rush current	15 A or less (26.4 V DC), 2 ms	
Allowable momentary power failure period	Within 5 ms	

⚠ Safety Warning
To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

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*1 The USB cable can only be used between GT Designer2 and the GOT.
*2 The view angle is 45° leftward and rightward, 20° upward and 40° downward in the monochrome type.
*3 BMP images are available.
*4 Some data and functions cannot be converted.
For details on the GOT1000 Series, refer to the GOT1000 catalog.

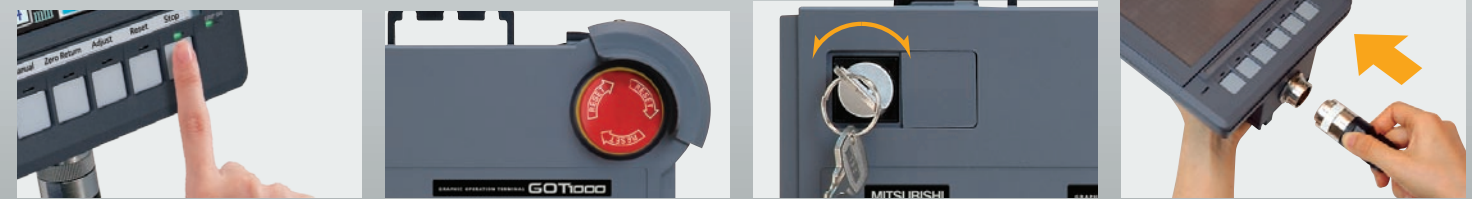
GT11

Handy Terminal
GT1155HS-QSBD / GT1150HS-QLBD

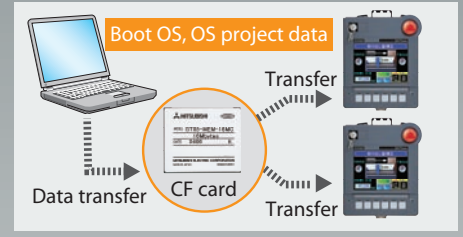
The handy graphic operation terminals GT1155HS-QSBD and GT1150HS-QLBD boast top level quality for medium sized terminals and share the same functions as those of the GT11 Series. Along with a clear display and high functionality, the handy terminals inherit the safety and functionality required for a diverse range of industries. For convenient and comfortable control at your fingertips, the handy graphic operation terminals are the product of choice.



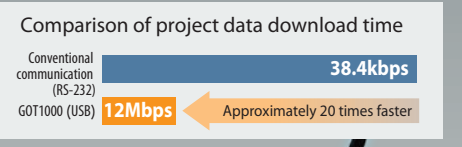
- For starting and stopping a machine**
[Operation switches with LED]
Pushbutton switches with (green) LED for operation status check are provided for inputs to the external equipment. These switches can be used to start and stop a machine. The button names can be easily changed using the name sheet.
- For improving unit safety**
[Emergency stop switch]
This switch immediately stops the unit in an emergency. A "Normally closed" contact is adopted to assure the safety. In addition, the switch guard is offered as an optional device to prevent operation mistakes.
- For assuring high level security**
[Selector switch with key]
The operator can be limited for each type of operation such as mode changeover (between manual and automatic), mode selection and setup change. While the key is removed, no one can manipulate the handy GOT.
- For easy connection and disconnection**
[One-touch connector]
The handy GOT can be easily connected to and disconnected from an external connection cable by one-touch operation. No tool is required for connecting or disconnecting the cable.



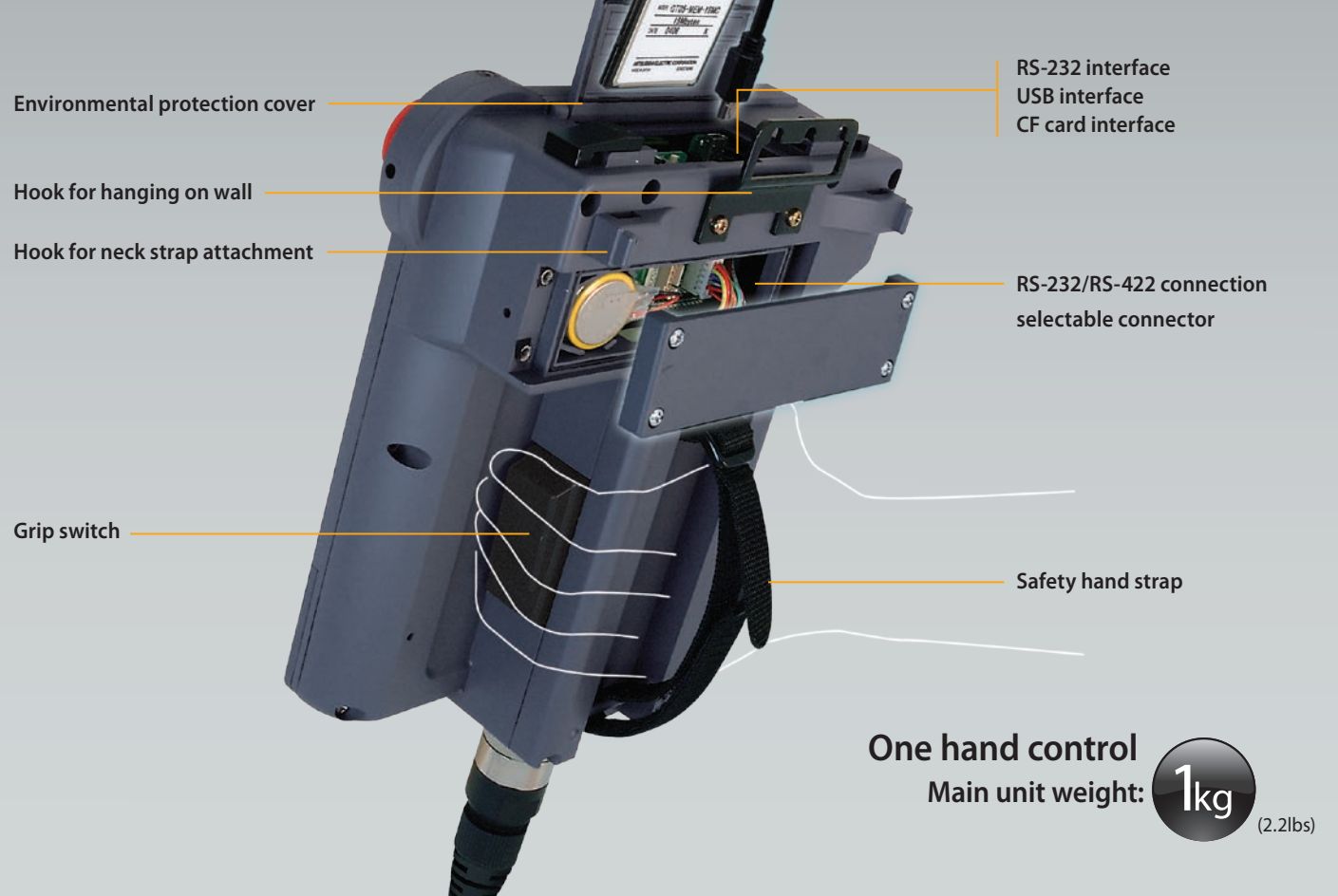
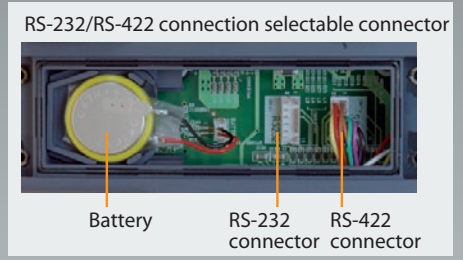
For data transfer and multi-unit setup
[CF card interface]
The Compact Flash (CF) card enables fast data transfer in the handy GOT without a personal computer connection. When two or more GOT units are used, data can easily be set up with a single CF card.



Faster and more comfortable
[USB interface]
The USB interface reduces data transfer time to approximately 1/20th of the conventional RS-232 communication speed. The startup time and adjustment time are considerably reduced.

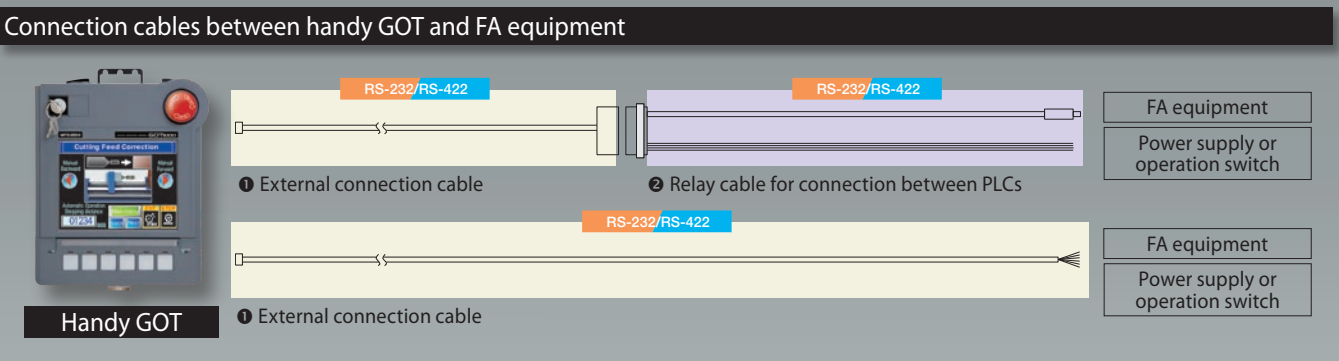
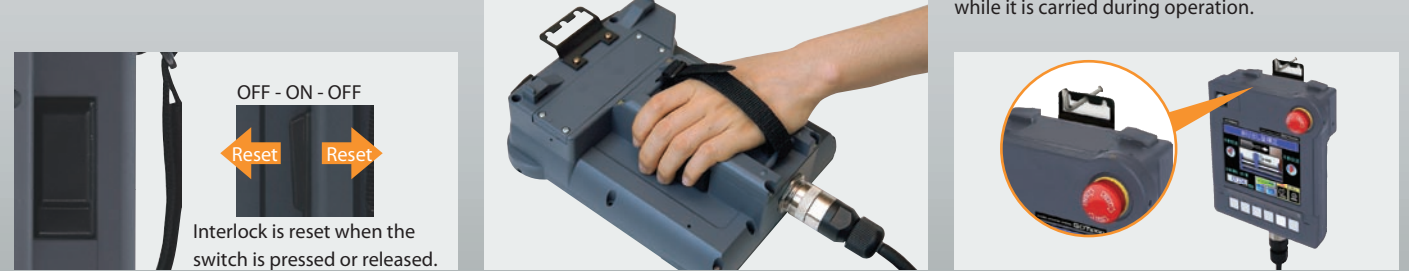


More connectable equipment
[RS-232/RS-422 interface]
RS-232 or RS-422 communication can be selected for the communication type depending on the connected equipment.



One hand control
Main unit weight: **1kg** (2.2lbs)

- For assuring safety in every situation**
[Three-position grip switch]
The three-position (OFF-ON-OFF) type deadman switch is adopted for preventing operation mistakes and prohibiting operation of a machine. The switch can directly control external equipment to give immediate stop commands to a machine.
- For supporting handheld operation**
[Hand strap]
The hand strap on the rear face offers protection from accidents where the GOT may be dropped. The added protection aids in extending the lifetime of the GOT.
- For flexible use in many ways**
[Hanging on wall, shoulder or neck]
The GOT can be hung on the wall using the hook located on the backside of the unit. When a neck or shoulder strap (arranged by the user) is attached to the hook for strap attachment, the GOT can be hung on an operator's shoulder while it is carried during operation.



Model name	Connection type	External connection cable	Relay cable for connection between FA equipment	Connected FA equipment	Connection port		
GT1155HS-QSBD GT1150HS-QLBD	RS-422	GT11H-C***-37P	GT11H-C15R4-8P(1.5m)	FX3U	CPU programming port or FX3U-422-BD		
				FX2N	CPU programming port or FX2N-422-BD		
				FX1S, FX1N	CPU programming port or FX1N-422-BD		
				FX1NC, FX2NC	CPU programming port		
GT1155HS-QSBD GT1150HS-QLBD	RS-232	GT11H-C15R4-25P(1.5m)	GT11H-C15R4-25P(1.5m)	A/QnA/A motion controller	CPU programming port		
				Prepared by user	Any connectable FA equipment	—	
				GT11H-C***	—	A computer link unit, QnA/Q serial communication unit, Mitsubishi inverter, separate manufactured PLC, micro computer, servo, CNC or temperature controller	Use the end of the GT11H-C*** according to the connected equipment specification.
				GT11H-C30-37P	GT11H-C15R2-6P(1.5m)	Q	CPU programming port
GT1155HS-QSBD GT1150HS-QLBD	RS-232	GT11H-C30-37P	Prepared by user	Any connectable FA equipment	—		
						GT11H-C***	—

***: 30 (3 m) / 60 (6 m) / 100 (10 m)

For RS-422 connection
The connection distance between the handy GOT and the PLC should not exceed 11.5 meters.

For RS-232 connection
The connection distance between the handy GOT and the PLC should not exceed 6 meters. When the connection distance between the handy GOT and the PLC is longer than the cable length shown in the table above, the user should prepare a relay cable for connection between FA equipment. For details on connection cables types, refer to the Handy GOT General Description Manual.

Useful Accessory Devices

- Emergency stop switch guard
GT11H-50ESCOV
- Protection sheet
GT11H-50PSC
- Replacement battery
GT11-50BAT
- External connection cables
GT11H-C30-37P
GT11H-C60-37P
GT11H-C100-37P
GT11H-C30
GT11H-C60
GT11H-C100
- Relay cables for FA equipment
GT11H-C15R4-8P
GT11H-C15R4-25P
GT11H-C15R2-6P
• RS-232 cable
GT01-C30R2-6P
• USB cable
GT09-C30USB-5P