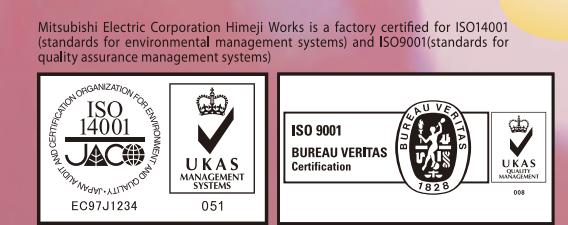


MITSUBISHI ELECTRIC
 GRAPHIC OPERATION TERMINAL
GOT1000
GT1665HS-VTBD



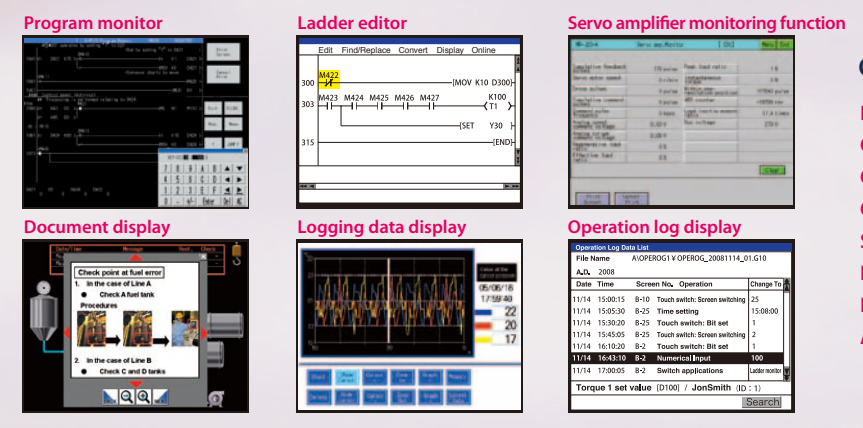
6.5-inch high-resolution Handy GOT
GT1665HS-VTBD

- 65,536 vivid colors
- TFT type LCD screen with a greater intensity and wider viewing angle
- Ethernet interface standard

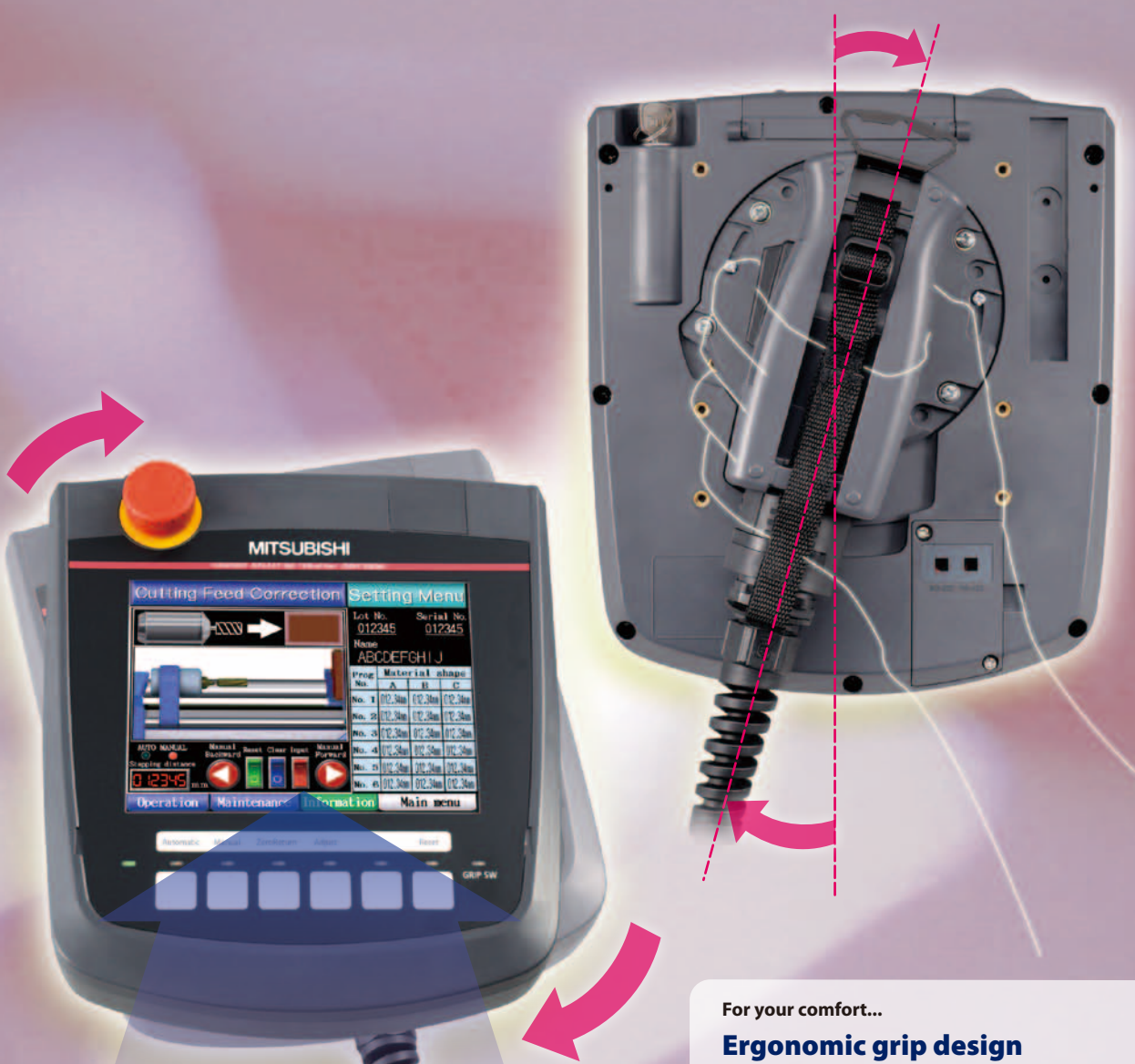


Empowering Industries

Convenient GT16 functions :

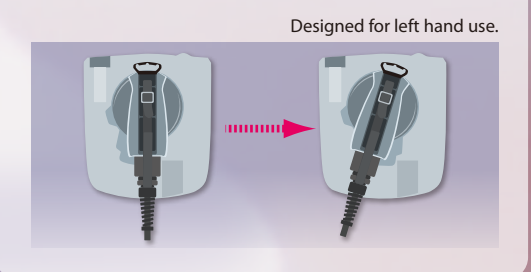


- Other functions :**
- Backup restoration
 - Operator authentication function
 - Q motion monitoring function
 - Q SFC monitoring function
 - System monitoring function
 - Network monitoring function
 - Intelligent unit monitoring function
 - A/FX list editing function and more



Turn the screen instead of your head!

For your comfort... Ergonomic grip design
 The ergonomic grip design enables the GT16 to be held at natural wrist angle, as well as making the screen easier to read.



Power supply specifications

Item	Specifications
Input power supply voltage	24 VDC (+10%, -15%)
Power consumption	11.6 W or less (480 mA, 24 VDC)
When back light is OFF	8.2 W or less (340 mA, 24 VDC)
Rush current	30 A or less (2 ms, at max. load)
Allowable momentary power failure period	Within 5 ms

Performance specifications

Item	Specifications		
Display area	Type	TFT type color LCD (high-brightness wide viewing angle)	
	Resolution (dots)	640 x 480	
	Display size (mm)	132.5 W x 99.4 H (6.5 inch)	
	Number of displayed characters	16-dot font: 40 characters x 30 lines 12-dot font: 53 characters x 40 lines	
	Display colors	65,536 colors	
	View angle (degrees)	80° leftward and rightward, 60° upward, and 80° downward	
	Intensity (cd/m ²)	550	
	Intensity adjustment	8 steps, adjustable	
	Life expectancy	Approximately 41,000 hours (Ambient operating temperature: 25 °C)	
	Back light	LED (not replaceable) Back light OFF time and screen save time can be set.	
Touch panel	Type	Analog resistive film type	
	Key size (dots)	2 x 2 minimum (per key)	
	Simultaneous pressing (2 touch keys)	Not permitted	
	Life expectancy	1,000,000 times or more (operation force: 0.98 N or less)	
Buzzer output	C drive	Single tone (adjustable between long, short, and none)	
	Life expectancy	Built-in flash memory for storing project data (15 MB) and OS 100,000 times (number of writes to the memory)	
Battery	Backup target	Lithium battery GT15-BAT Clock data, maintenance time notification data, system log data, and SRAM user area (500KB)	
	Life expectancy	Replacement timing: Approximately 5 years (Ambient temperature: 25 °C)	
Built-in interface	RS-422/485, RS-232	Type	1 channel each (When using, select one of the channels.) Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps
		Connector shape	Square, 42-pin type (male)
	Ethernet	Type	Communication with connected devices
		Connector shape	Data transmission system: 100BASE-TX, 10BASE-T, 1 channel Square, 42-pin type (male)
	USB host	Type	Communication with connected devices, gateway function, connection to personal computer (project data upload/download, OS installation)
		Connector shape	USB (full speed: 12 Mbps), host 1 channel A (receptacle)
	USB device	Type	Data transfer and storage
		Connector shape	USB (full speed: 12 Mbps), device 1 channel Mini-B (receptacle)
	CF card	Type	Communication with personal computer (Screen data upload and download, OS installation and FA transparent function)
		Connector shape	In conformance to PCMCIA, compact flash slot, 1 channel Dedicated to Type I
Applicable software packages	Screen design software	Data transfer and data storage, GOT	
	Simulation software	Dedicated to Type I	

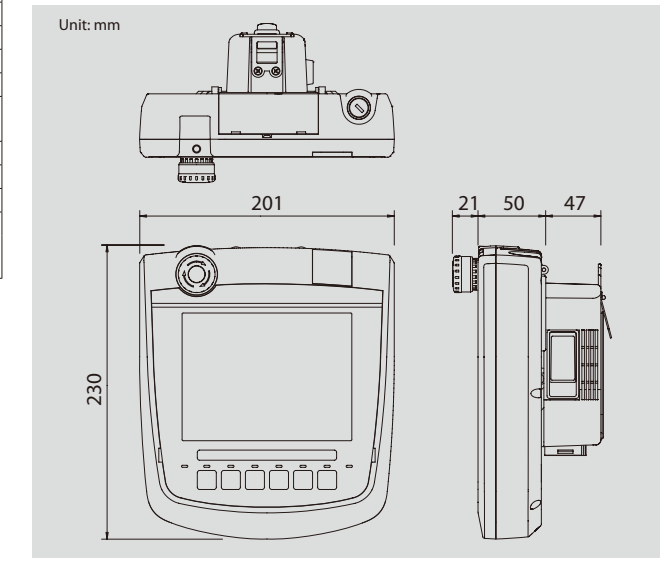
General specifications

Item	Specifications
Ambient operating temp.	0 to 40 °C
Ambient storage temp.	-20 to +60 °C
Ambient operating/storage humidity	10 to 90 %RH (non condensing)
Vibration resistance	In conformance to JIS B3502 and IEC 61131-2
Impact resistance	In conformance to JIS B3502 and IEC 61131-2 (147 m/s ² , 3 times in each of the X, Y and Z directions)
Noise resistance	Noise voltage: 1000 Vp-p, noise width: 1 μs (Tested using a noise simulator whose noise frequency is 30 to 100 Hz)
Dielectric withstand voltage	500 VAC for 1 minute (between all power terminals and ground)
Insulation resistance	10 MΩ or more using 500 VDC megger (Between all power terminals and ground)
Working atmosphere	Not corrosive
Protection structure	Equivalent to IP65f (except when external connection cable is disconnected or when environmental protection cover is removed)
Weight	Approximately 1.2 kg (main unit)

Switch/indicator LED specifications

Item	Specifications
Operation switch	Connected with external connection cable. 6 switches (6 contacts/common) N/O contact, 10 mA /24 V DC
	Life expectancy
Grip switch	Connected with external connection cable. 3-position (OFF <-> ON <-> OFF) type enable switch (Deadman switch) 2 N/O contacts, Conforms with IEC60204-1:9.2.5.8
	Emergency stop switch
Selector switch with key	Connected with external connection cable. 2-position, 1 A / 24 V DC (resistive load), 0.3 A / 24 V DC (inductive load)
	LED
Operation switch status indicator LED	6 LEDs, green (operation controlled by the display area)
	Grip switch status indicator LED

External dimensions



⚠ 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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GT16

Handy GOT

GT1665HS-VTBD

The GT1665HS-VTBD Handy GOT incorporates various functions in a compact body with a 6.5-inch TFT type liquid crystal display that's easily held in one hand!

GT16 functions controllable at your fingertips!

- VGA 640x480
- 65,536 colors
- Analog type touch panel
- RS-232-RS-422/485
- Ethernet
- CF card, USB host, and USB device



Convenient and comfortable-
Easily held in one hand

1.2kg
(2.6 lbs)

Environmental protection class
IP65
when connected to the cable.



For improving safety
Emergency stop switch

This switch immediately activates a connected safety device. A "normally-closed contact" is adopted to assure safety. In addition, the switch guard cover is offered as an optional attachment to prevent accidental operation.

When the emergency stop switch guard cover is attached.

For intuitive machine operation
Operation switches with LEDs

Pushbutton switches with (green) LEDs for operation status monitoring are provided for inputs to external equipment. These switches can be used to start and stop a machine. The button names can be easily changed using the insertable name sheet.

The operation switch name sheet can be inserted above the operation switches.

For assuring safe operation
Grip switch

The three-position (OFF-ON-OFF) type deadman switch is adopted as an interlock 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.

Interlock is reset when the switch is pressed or released.

For a variety of connection options
RS-232 and RS-422/485 interface

RS-232 or RS-422/485 can be selected for communication with the connected equipment.

Connector selectable between RS-232 and RS-422/485

Battery

For storage of large amounts of various types of data
CF card interface

In addition to the built-in memory (15 MB), the (optional) CF card inserted into this interface can a large amount of data such as documents, logging data, and backup restoration data.

Boot OS, OS, project data, recipes, manuals, alarms, logging data, operation logs, etc.

For transferring data and setting up multiple units
USB interface (host)

This interface can directly connect the (optional) USB memory to upgrade the OS, project data, etc. of the GT16 Handy GOT. The operator can transfer data collected in the GOT, analyze it in a personal computer, and then feed it back as recipes.

Boot OS, OS, project data, logging data, recipes, etc.

For connecting to equipment easier and faster
USB interface (device)

This interface supports the FA transparent function to connect a cable from a personal computer without opening the unit or panel. This interface can then connect the PC transparently to a Mitsubishi programmable controller, inverter, servo unit, or robot.

USB host, USB device, CF card

Connection cables between the GT16 Handy GOT and FA equipment

There are several possible connection options available using different combinations of cable and connector conversion boxes.

GT16 Handy GOT (GT1665HS-VTBD)

External connection cable: GT16H-C-42P (30(3m), 60(6m), 100(10m))

Connector conversion box: GT16H-CNB-42S

Connection cable*: RS-232-RS-422/485, Ethernet

FA equipment: LQ Series, FX Series, FA equipment of other companies

Refer to the GOT1000 Series Comprehensive Catalog for connection cables.

Connector conversion box

The connector conversion box is essential if serial communication or Ethernet is to be used with the GT16 Handy GOT.

GT16H-CNB-42S

24 VDC power supply
Terminal block for wiring emergency stop switch
ID number setting
RS-232
RS-422/485
Terminal block for wiring operation switches
Connector for GOT external connection cable
Ethernet (RJ-45 modular jack)

The power switch disables the GOT's emergency stop switch so that the cable and GOT can be disconnected without tripping the emergency stop signal.

An example of a system configuration with Ethernet connection

The Ethernet interface for the GT16 Handy GOT

Emergency stop circuit I/Os for operation display etc.

Connector conversion box GT16H-CNB-42S

External connection cable GT16H-CP-42P

HUB, Ethernet, QCPU, FX3u Ethernet special function block

- The maximum Ethernet communication distance is 100m in total length
- The maximum connection distance between the connector conversion box and the GOT is 10m.
- Four types of equipment can be connected at the maximum.

A direct connection is possible to FX, Q PLC etc. via RS-422/485 or RS-232 in parallel with Ethernet.