

Graphic Operation Terminal  
GOT SIMPLE Series

# GOT SIMPLE

## Graphic Operation Terminal





Simple, high functioning,  
and user friendly model for a reliable system.

# GOT SIMPLE



10 inch GS2110-WTBD

## Superior performance

### [ Beautiful high resolution display ]

Resolution WVGA 800×480 dots

### [ Rich, vivid colors ]

TFT 65536 colors

### [ Plentiful data capacity ]

User memory 9MB

### [ Industrial environment tolerance ]

IP65F front face protection



7 inch GS2107-WTBD



## Reduce design, setup, and maintenance cost!

Increase production efficiency with Mitsubishi.

P4~7

## Add value to your installation and machine!

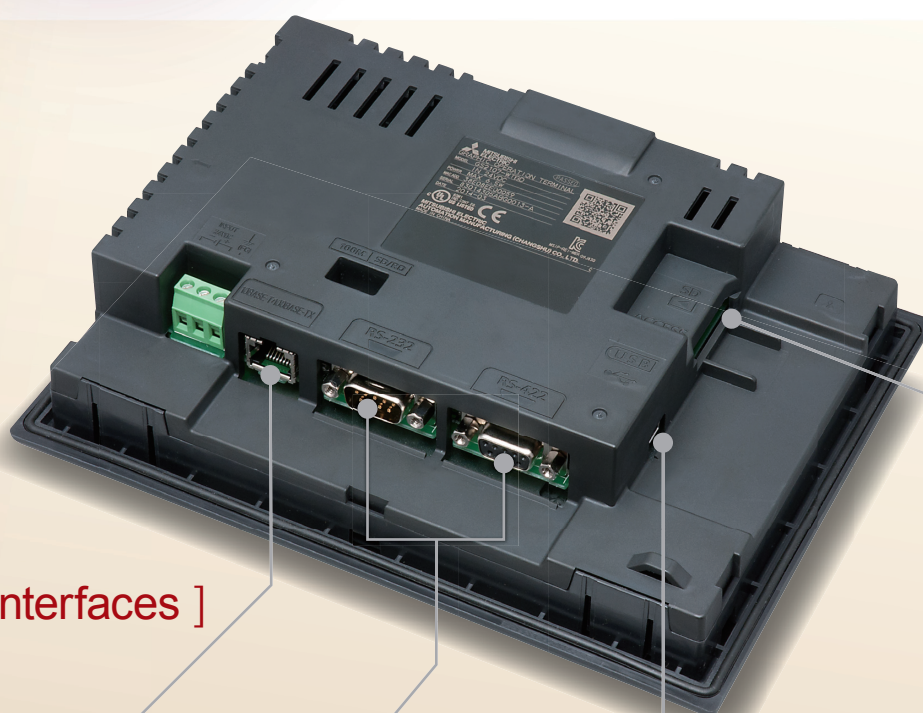
Utilize superior functionality to increase system value.

P8

## Streamlined screen design!

Intuitive operation is easy even for beginners.

P9



[ Standard interfaces ]

### Ethernet port

For connection with various equipment

RS-232,  
RS-422  
Communication  
ports

### USB device

For connection with PC

### SD memory card slot

For carrying data



# Reduce design, setup, and maintenance cost

## ● Reduce mass production installation setup costs

### Start from SD memory card

Transfer the screen data and all the necessary system data to make a GOT operate to a SD memory card in advance.

Then the GOT can be used just by inserting the SD memory card.

Useful for replacement or maintenance of GOT.

SD memory card slot

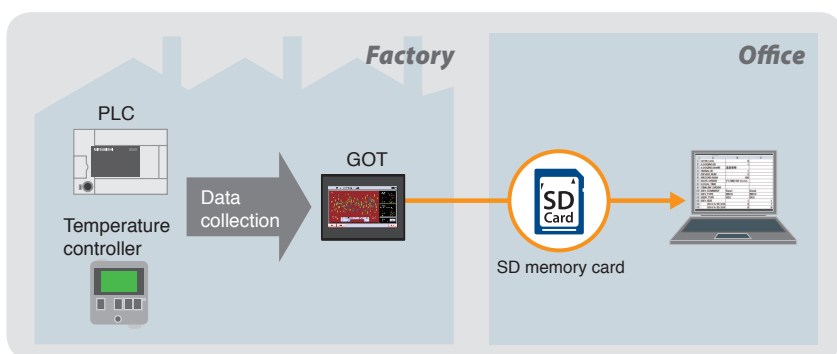


## ● Device data collection

### Logging function

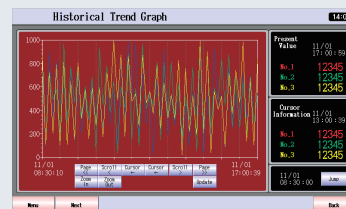
GOT manages the data of all connected industrial devices. The data can be collected at any arbitrary timing and can be used for data analysis and feedback.

SD memory card slot



### Point!

Logged data can be displayed on the GOT as a graph, so status change such as temperature change can be understood in a single glance.



Historical trend graph display

Date	Time	No. 1	No. 2	No. 3	No. 4
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345
2014/07/28	17:00:30	12345	12345	12345	12345

Historical data list display

## ● Backup of important programs

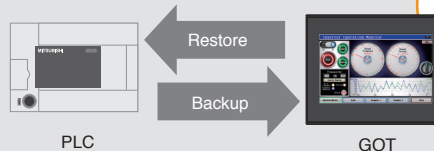
### Backup/Restore

Using backup/restore function, PLC program can be replaced even without a PC. When PLC program is backed up to GOT\*, PLC program and machine operation can instantly be restored even if an unexpected failure occurs.

\*1: Separate SD memory card required

SD memory card slot

SD memory card  
SD Card

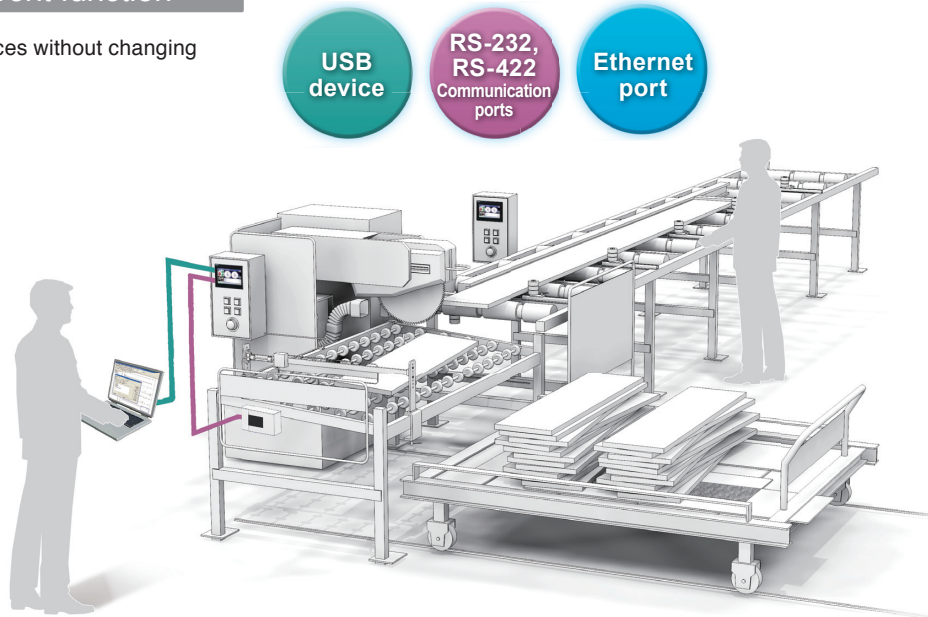




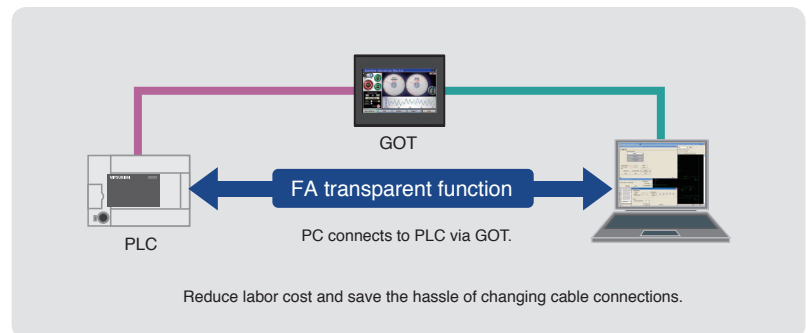
## ● Setup and modification on-site

### FA transparent function

Set up and modify devices without changing cable connections.



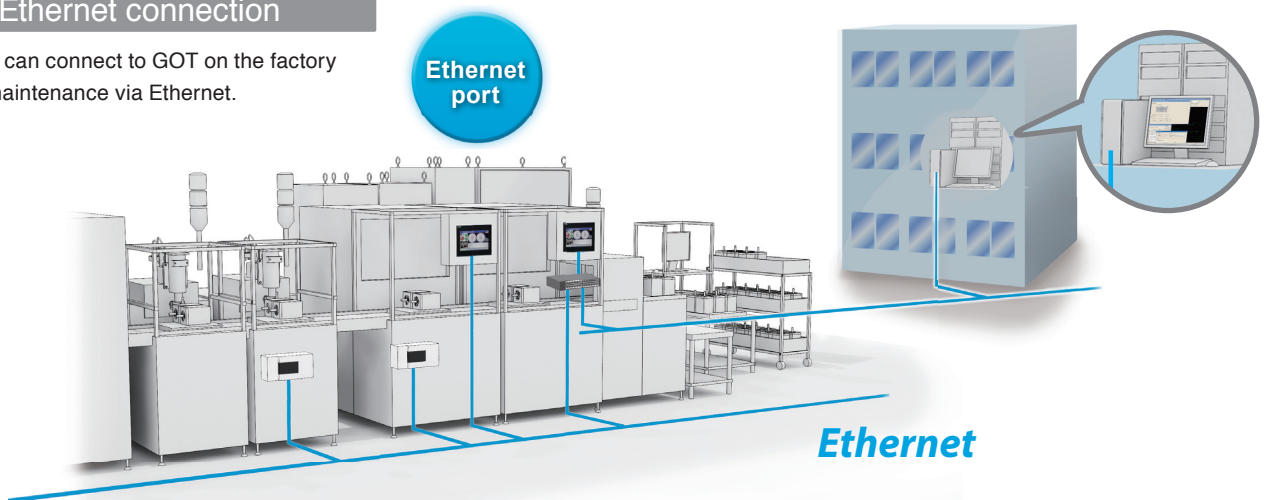
The GOT acts as a transparent gateway to enable programming, start up, and adjustment of Mitsubishi industrial devices.



## ● Remote maintenance

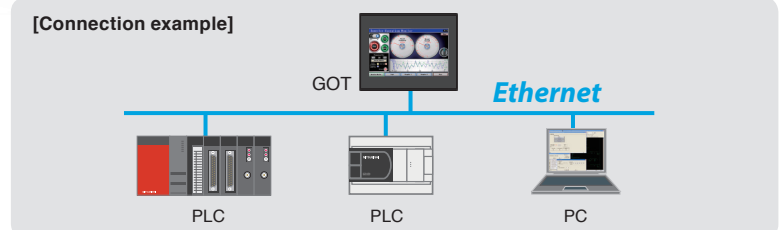
### Ethernet connection

Office PC can connect to GOT on the factory floor for maintenance via Ethernet.



With Ethernet, it is possible to connect a system of mixed vendors and models, expanding the possibilities at the factory floor.

#### [Connection example]

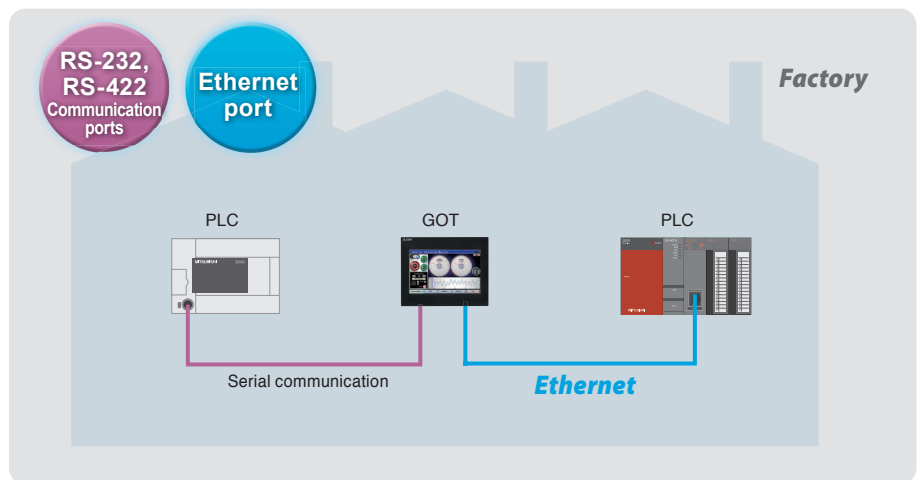


# Reduce design, setup, and maintenance cost

## Use GOT SIMPLE to control industrial devices!

### Multi-channel function

Up to 2 channels of industrial device can be controlled with one GOT. The data can be easily transferred between devices with just simple settings in GT Works3.



## Direct connection to inverters

### Inverter connection

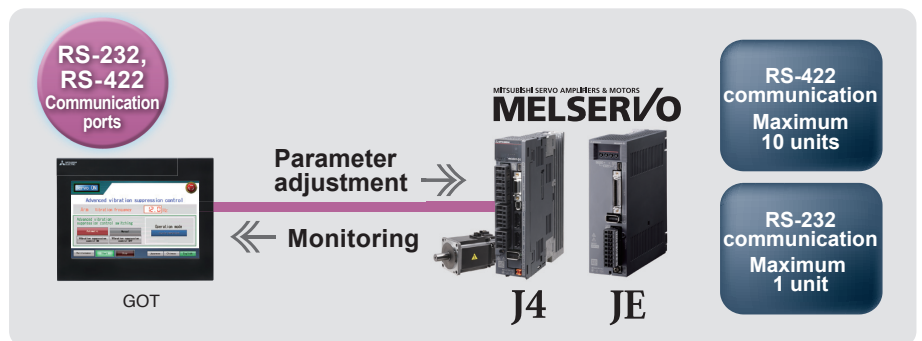
Inverter can be directly connected to GOT. Just by connecting them together, communication parameters can automatically be set. GOT can also monitor PLC function devices, and even when multiple inverters are connected, one GOT can manage them all.



## Easy monitoring of servo operation status

### Servo connection

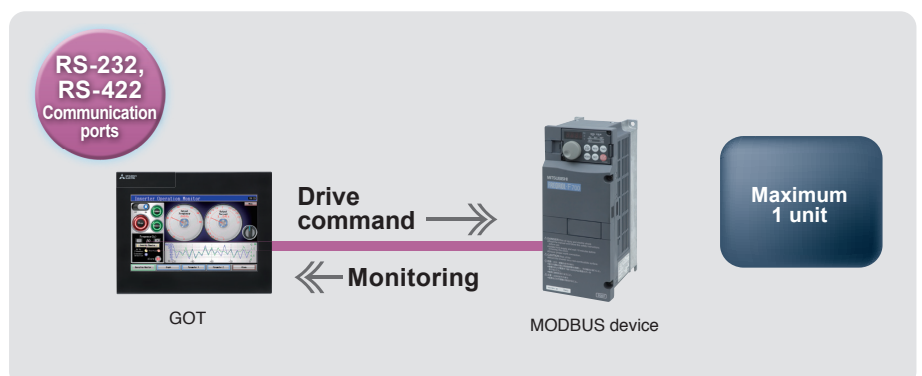
Easy setup, monitoring, adjusting alarms, diagnosis, parameter settings, and test operation.



## MODBUS® communication also supported

### MODBUS communication

As a master station, GOT can communicate with a MODBUS/RTU slave device. 1 device can be connected for monitoring of production line, etc.

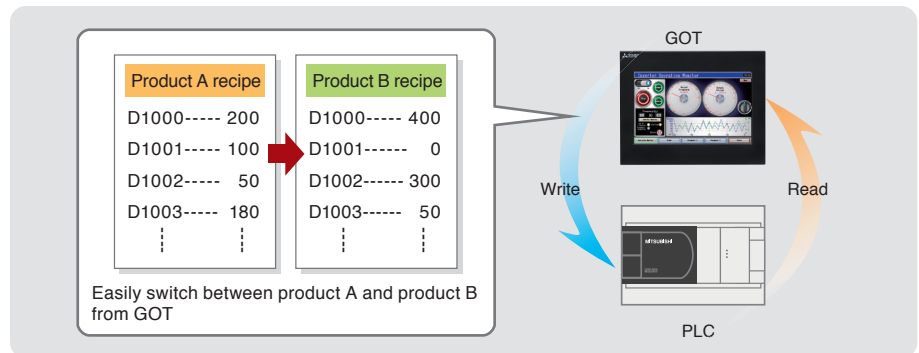




## Convenient for frequent changeover

### Recipe function

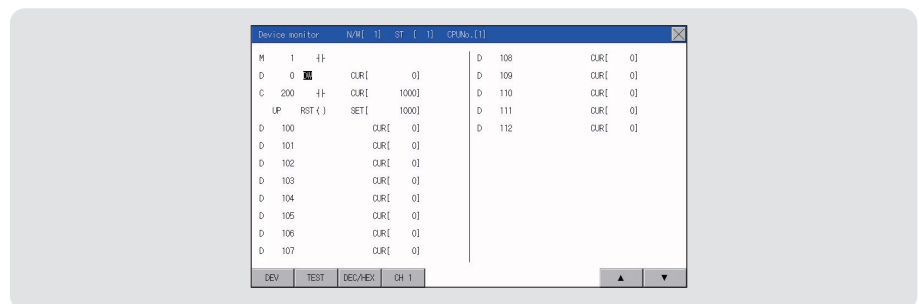
Recipe information such as material blend and machine conditions can be saved in the GOT. This information can be written from the GOT to the PLC, enabling changeover without changing the PLC program. Adjusted data can also be read and stored in the GOT.



## Monitor device value and set values for timer, etc.

### Device monitor function

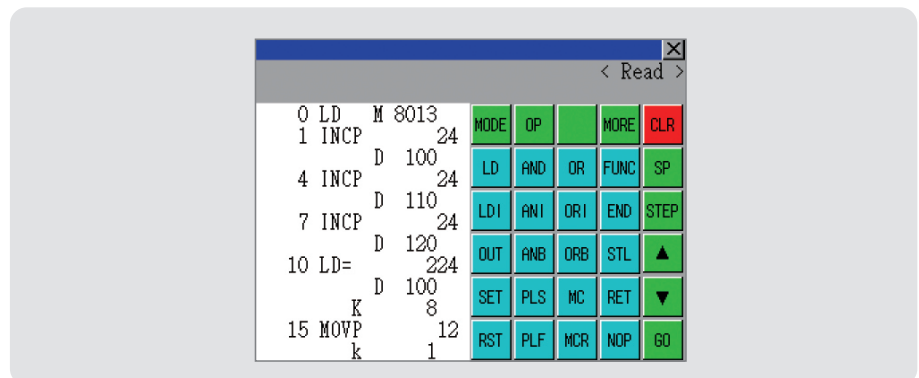
Monitor and change FX/L/Q series internal device ON/OFF status, word values, timer and counter values.



## Program change without a PC on-site

### MELSEC-FX list editor

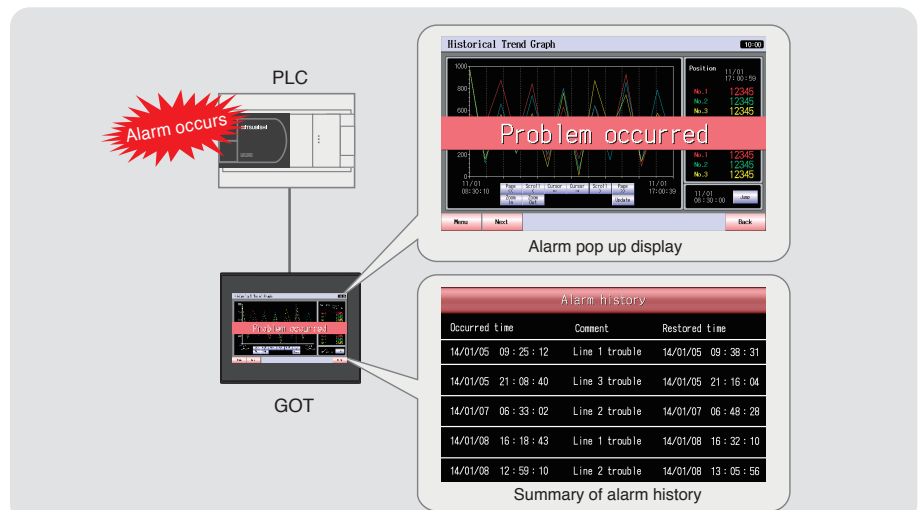
Convenient for minor on-site program changes.



## Alarm status identification

### Alarm function

Alarm functions such as alarm display, alarm history, and alarm pop up display are included, and display settings can be made on each screen. Language switching functionality is also supported.

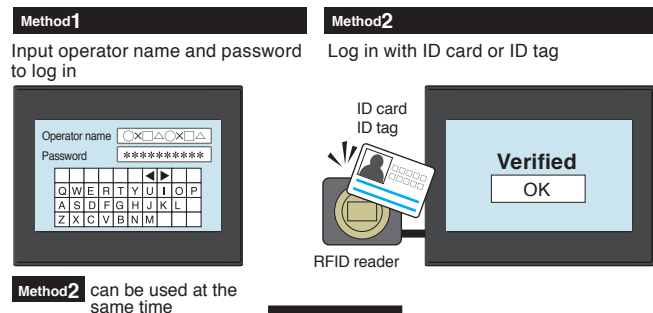


# Add value to your installation and machine

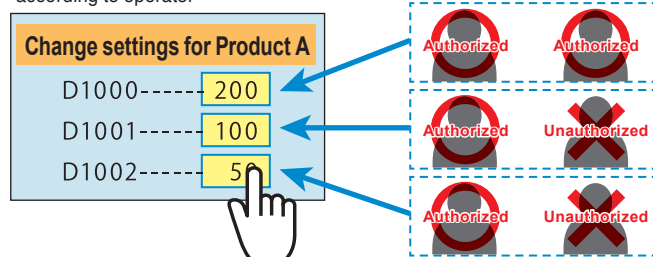
## Strengthened security with operator based authorization

### Operator authentication function

Setting the level (authority) of operation and display for each operator can strengthen security and prevent operation errors. There are two methods for operator authentication at startup or when changing screens.



Make settings for switch operability according to operator



## Easily installed on compact equipment

### Vertical display

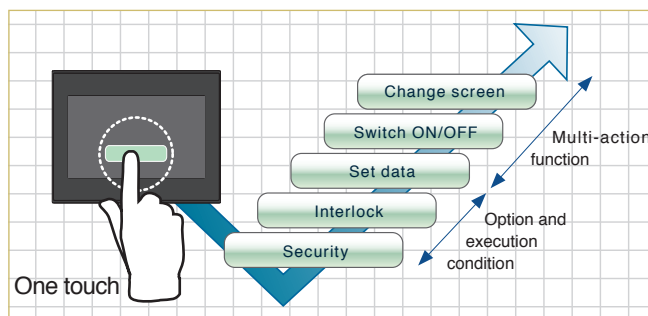
By using a GOT vertically, it can be easily installed on compact equipment and can neatly display vertical letters. Less scrolling is needed when displaying lists.



## Setting multiple functions with one switch

### Multi-action switch

Multiple functions can be set to one switch, so there is no need for multiple switches for separate functions. By setting execution sequence and conditions, delay, repeat, interlock settings can be combined, reducing the burden of PLC programming.

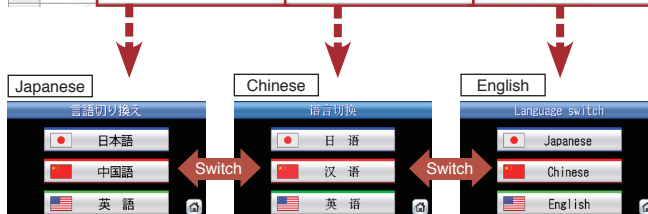


## Language change according to country of the operator

### Language switching

Screen can be easily made for switching between Japanese, Chinese, English, etc. 30 languages can be set for each comment. Screens, not only languages, can be switched based on purpose.

Column No.	Japan	China(GB)-Mincho	Japan
Comment No. (DEC)			
	1 Japanese	2 Chinese	3 English
113	言語切り換え	语言切换	Language switching
114	日本語	日语	Japanese
115	中国語	汉语	Chinese
116	英語	英语	English



## Saving energy when operator is not present

### Screen saver

Screen save time can be set from 1 to 60 minutes. By setting the backlight ON/OFF, energy can be saved when no operator is present. PLC can also control the ON/OFF status, so the backlight will turn ON and alarm screen will display when an alarm occurs.

## GOT SIMPLE function list

### Screen design

#### Figure/object functions

- Figure
- Logo text
- Touch switch
- Lamp
- Numerical display, Numerical input
- Text display, Text input
- Date display, Time display
- Comment display
- Parts display
- Parts movement
- Simple alarm display
- Alarm display (user)
- Level

### Panel meter

- Line graph
- Trend graph
- Bar graph
- Statistic bar graph
- Statistic pie graph
- Scatter graph
- Historical trend graph
- Historical data list display

#### Functions performed on background of GOT

- Logging
- Recipe
- Device data transfer
- Trigger action

### Time action

- Hard copy (File output/Serial printer output)
- Project/screen script

#### Functions used with peripheral devices

- Barcode function
- RFID function
- Report function (Serial printer output)

### GOT functions

- Base screen
- Overlap window
- Superimpose window
- Dialog window
- Key window

### Language switching

- System information
- Operator authentication
- Startup logo
- FA transparent
- Multi-channel function
- Station No. switching
- Backup/Restore

### Debug functions

- Device monitor
- MELSEC-FX list editor



## Screen design software

# GOT Screen Design Software MELSOFT GT Works3+plus

Streamlined efficiency and screen management  
Creative freedom with intuitive operation



Pick and place intuitive screen design is easy even for beginners



Using parts is simple. Just select a part and place on the screen! Design your screen with intuitive pick and place operation.

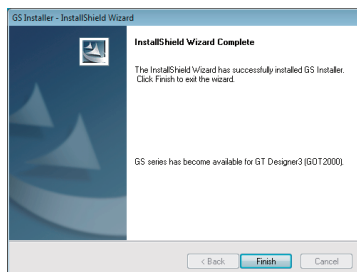
Reduce design time by registering frequently used parts to 'My Favorites' or 'My Library'. Import/export is also possible.



### Required installation before using GOT SIMPLE ■ GS installer installation procedure

1. Double click the GS Installer (GS Installer.exe) in the folder of GT Works3 Ver. 1.105K or later. Operate the personal computer in accordance with instructions given on the screen.
2. When the completion screen appears, click the [Finish] button to finish installing the GS Installer.

\* : The functions described here are available in GT Designer3 Version 1.118Y and later.

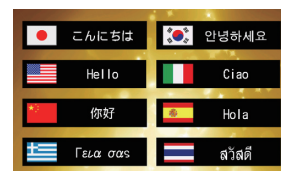
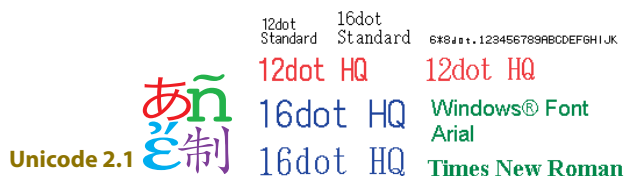


[Storage place]  
DVD-ROM : <Root>\Disk1\Tool\GS\GS Installer.exe

For more details, please refer to the included manual.

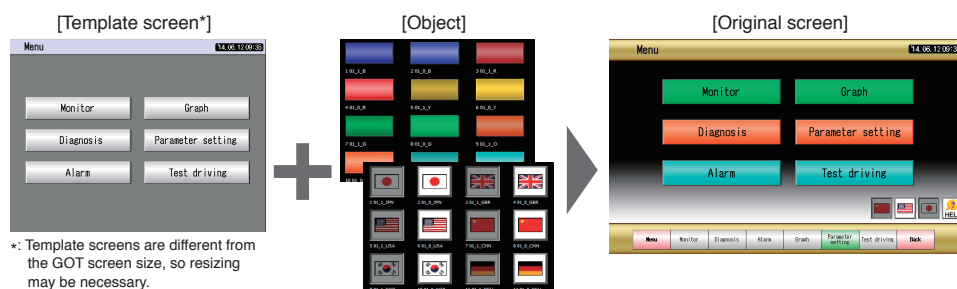
## Variety of fonts full of expression

All kinds of fonts can be used, from standard font to Windows® fonts. All fonts support Unicode2.1, displayed clearly on the screen in any language.



## Complete parts library

Lamp, switch, and other objects can be selected from the library. Library images are available in several colors, so screens can easily be made with a sense of unity.



\*: Template screens are different from the GOT screen size, so resizing may be necessary.

## ● Interaction with various industrial devices

In addition to various built-in functions, direct connection between Mitsubishi industrial devices will improve productivity and reduce costs.

### PLC

MELSEC **iQ-R** MELSEC **Q** series MELSEC **L** series MELSEC-F



### Servo

MITSUBISHI SERVO AMPLIFIER & MOTOR  
**MELSERVO**



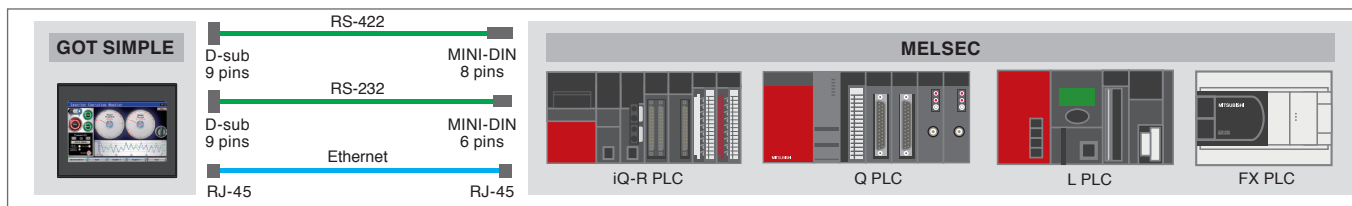
### Inverter

**FREQROL**



## ● Connection to PLCs

A cable is required to connect GOT and PLC. Please prepare the appropriate cable.



## ● Options

### ■ Cables

	Product name	Model	Cable length	Description
RS-422 Cable	FXCPU direct connection cable, FXCPU expansion board connection cable	GT01-C10R4-8P	1m	FXCPU <=> GOT FXCPU expansion board <=> GOT [MINI-DIN 8 pins <=> D-sub 9 pins]
		GT01-C30R4-8P	3m	
		GT01-C100R4-8P	10m	
		GT01-C200R4-8P	20m	
		GT01-C300R4-8P	30m	
		GT01-C30R4-25P	3m	
	QnA/A/FXCPU direct connection cable, Computer link connection cable	GT01-C100R4-25P	10m	QnA/ACPU/motion controller CPU[A series]/FXCPU <=> GOT RS-422 converter cable [FA-CNV CBL] <=> GOT Serial communication unit <=> GOT [D-sub 25 pins <=> D-sub 9 pins]
		GT01-C200R4-25P	20m	
		GT01-C300R4-25P	30m	
		GT09-C30R4-6C	3m	
	Computer link connection cable	GT09-C100R4-6C	10m	Serial communication unit <=> GOT Computer link unit <=> GOT [Stranded wire <=> D-sub 9 pins]
		GT09-C200R4-6C	20m	
		GT09-C300R4-6C	30m	
RS-232 Cable	Q/LCPU direct connection cable	GT01-C30R2-6P	3m	Q/LCPU <=> GOT [MINI-DIN 6 pins <=> D-sub 9 pins]
	FXCPU expansion board connection cable, FXCPU special adapter connection cable	GT01-C30R2-9S	3m	FXCPU expansion board <=> GOT FXCPU special adapter <=> GOT [D-sub 9 pins <=> D-sub 9 pins]
		GT01-C30R2-25P	3m	FXCPU special adapter <=> GOT [D-sub 25 pins <=> D-sub 9 pins]
	Computer link connection cable	GT09-C30R2-9P	3m	Serial communication unit <=> GOT Computer link unit <=> GOT [D-sub 9 pins <=> D-sub 9 pins]
		GT09-C30R2-25P	3m	Serial communication unit <=> GOT Computer link unit <=> GOT [D-sub 25 pins <=> D-sub 9 pins]
USB Cable	Data transfer cable	GT09-C30USB-5P	3m	PC[Screen design software] <=> GOT [USB-A <=> USB Mini-B]

### ■ Other options

Product name	Model	Description
SD memory card	L1MEM-2GBSD	SD memory card 2GB
	L1MEM-4GBSD	SDHC memory card 4GB

## ● Connectable third-party PLCs

Manufacturer	Series/model name	Computer link connection		CPU direct connection	
		RS-422	RS-232	RS-422	RS-232
Omron	SYSMAC CJ1	○*2		×	○
	SYSMAC CJ2				○*3
					×
	SYSMAC CP1	○			○
Keyence	KV-700	○		×	○
	KV-1000				
	KV-3000				
	KV-5000				
	KV-5500				×

Manufacturer	Series/model name	Computer link connection		CPU direct connection	
		RS-422	RS-232	RS-422	RS-232
Panasonic Industrial Devices SUNX	FP0	×		×	○
	FP-M				
	FP-Σ				
	FP-X	○			
Siemens AG*4	SIMATIC S7-200 series	×		×	○
	SIMATIC S7-300 series				
	SIMATIC S7-400 series				
	SIMATIC S7-1200 series				×

\*1: Among CP1E (N type), only direct connection is possible for CPU units of 20 I/O points or less.

\*2: RS-422 or RS-232 can be selected

\*3: Only CJ2M-CPU1□ can be connected

\*4: Use GT09-C30R20801-9S to connect to Siemens PLCs



For connection details, see the GOT2000 series connection manuals below.

- Mitsubishi Product (SH-081197ENG)
- Non Mitsubishi Product 1 (SH-081198ENG)
- Non Mitsubishi Product 2 (SH-081199ENG)
- Microcomputer, MODBUS Products, Peripherals (SH-0811200ENG)



## Specifications

### General Specifications

Item	Specifications						
Operating ambient temperature	0 to 50°C						
Storage ambient temperature	-20 to 60°C						
Operating/Storage ambient humidity	10 to 90%RH, non-condensing (The wet bulb temperature is 39°C) When the ambient temperature exceeds 40°C, maintain the absolute humidity at 40°C and 90%.						
Vibration resistance	Conforms to IEC 61131-2		Frequency	Acceleration	Half amplitude	Sweep Count	
		Under intermittent vibration	5 to 8.4Hz	—	3.5mm	10times each in X, Y and Z directions	
			8.4 to 150Hz	9.8m/s <sup>2</sup>	—		
		Under continuous vibration	5 to 8.4Hz	—	1.75mm		—
			8.4 to 150Hz	4.9m/s <sup>2</sup>	—		
Shock resistance	Conforms to IEC 61131-2 (147m/s <sup>2</sup> , 3times each in the X, Y, and Z directions)						
Operating atmosphere	Must be free of lamp black, corrosive gas, flammable gas, or excessive amount of electro conductive dust particles. Must be no direct sunlight. (Same as for saving)						
Operating altitude <sup>*1</sup>	2000m (6562ft) max.						
Installation location	Inside control panel						
Overvoltage category <sup>*2</sup>	II or less						
Pollution degree <sup>*3</sup>	2 or less						
Cooling method	Self-cooling						
Grounding	Class D grounding (100Ω or less), To be connected to the panel when grounding is not possible.						

- \*1 : Do not use or store the GOT under pressures higher than the atmospheric pressure of altitude 0m (0ft). Failure to observe this instruction may cause a malfunction.  
When the air inside the control panel is purged by pressurization, the surface sheet may be lifted by high pressure. As a result, the touch panel may be difficult to press, and the sheet may be peeled off.
- \*2 : 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 surge voltage withstand level for up to the rated voltage of 300V is 2500V.
- \*3 : This index indicates the degree to which conductive pollution is generated in the environment where the equipment is used. In pollution degree 2, only non-conductive pollution occurs but temporary conductivity may be produced due to condensation.

### Power Supply Specifications

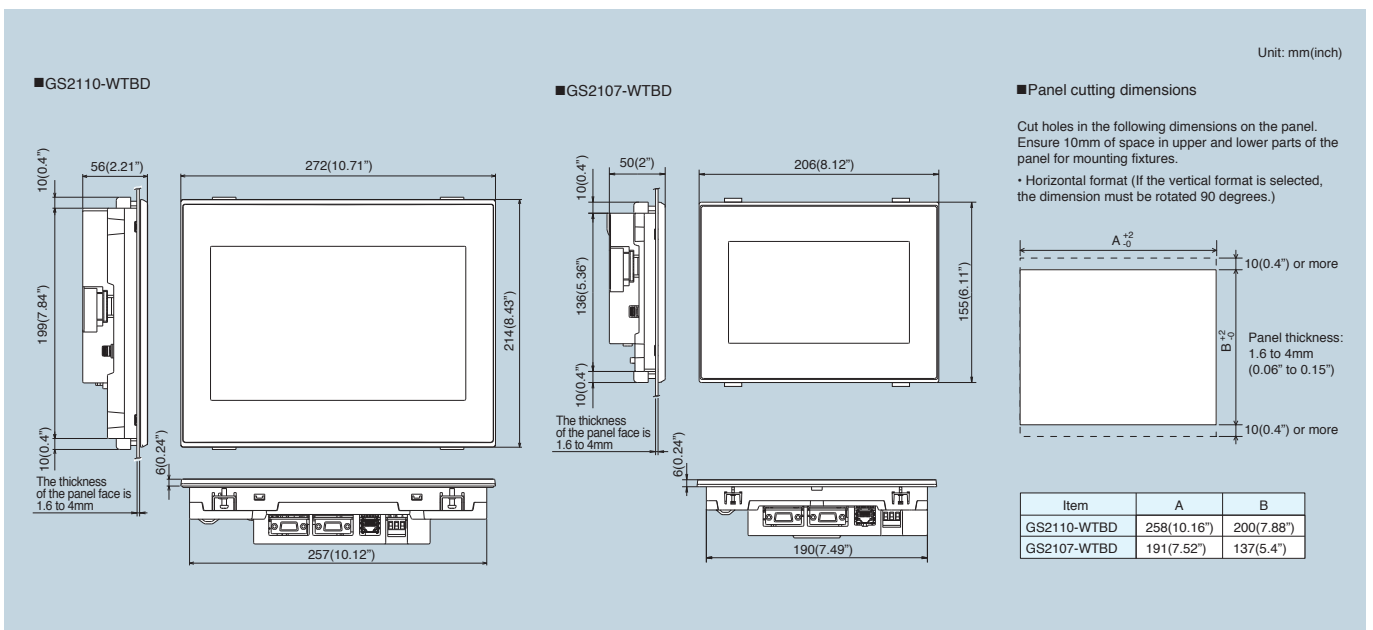
Item	Specifications	
	GS2110-WTBD	GS2107-WTBD
Input power supply voltage	24VDC (+10%, -15%), ripple voltage 200mV or less	
Power consumption	7.6W (317mA/24V) or less	6.5W (271mA/24V) or less
	At backlight off	3.8W (158mA/24V) or less
Inrush current	17A or less (6ms, 25°C ambient temperature, maximum load)	
Permissible instantaneous power failure time	Within 5ms	
Noise immunity	Conforms to IEC61000-4-4, 2kV (power supply line)	
Dielectric withstand voltage	350VAC for 1 minute (across power supply terminals and earth)	
Insulation resistance	500VDC across power terminals and earth, 10 MΩ or more by an insulation resistance tester	

### Function Specifications

Item	Specifications	
	GS2110-WTBD	GS2107-WTBD
Display	Type	TFT color liquid crystal display
	Screen size	10" 7"
	Resolution	800 × 480 [dots]
	Display size	W222 (8.74) × H132.5 (5.22) [mm](inch) W154 (6.06) × H85.9 (3.38) [mm](inch) (Horizontal format) (Horizontal format)
	Display character	16-dot standard font : 50 characters 30 lines (2-byte) (Horizontal format)
	Display color	65536 colors
Backlight	Brightness	32-level adjustment
		LED-type (no replacement required) Backlight off/screen saving time can be set.
Touch panel	Type	Analog-resistive film type
	Key size	Minimum 2 × 2 [dots] (per key)
	Number of points touched simultaneously	Simultaneous 2-point presses prohibited (Only one point can be touched.)
	Life	1 million times (operating force 0.98N max.)
Memory	C drive	Flash memory (Internal) (9Mbytes), for storing project data, OS Life (Number of write times) 100,000times
Built-in interface	RS-422	RS-422, 1ch Transmission speed : 115200/57600/38400/19200/9600/4800bps Connector shape : D-sub 9 pins (Female) Application : For communicating with controllers Terminating resistor : 330Ω fixed
	RS-232	RS-232, 1ch Transmission speed : 115200/57600/38400/19200/9600/4800bps Connector shape : D-sub 9 pins (Male) Application : For communication with controller, bar code reader and printer For PC connection (FA transparent function)
	Ethernet	Data Transfer method : 100BASE-TX, 10BASE-T, 1ch Connector shape : RJ-45 (modular jack) Application : For communication with controllers For PC connection (Project data read/write, FA transparent function)
	USB	USB (Full Speed 12Mbps) 1ch Connector shape : Mini-B Application : For PC connection (Project data read/write, FA transparent function)
	SD memory card	Conforms to the SD standard, 1ch Supported memory card : SDHC memory card, SD memory card Application : Project data read/write, logging data save
Buzzer output	Single tone (LONG/SHORT/OFF adjustable)	
Protective structure	IP65F (only the front part of the panel)	
External dimensions	W272 (10.71) × H214 (8.43) × D56 (2.21) [mm] (inch)	W206 (8.11) × H155 (6.11) × D50 (1.97) [mm] (inch)
Panel cutting dimensions	W258 (10.16) × H200 (7.88) [mm] (inch) (Horizontal format)	W191 (7.52) × H137 (5.40) [mm](inch) (Horizontal format)
Weight	Approx. 1.3kg (Excluding mounting fixtures)	Approx. 0.9kg (Excluding mounting fixtures)
Compatible software package (Version of GT Designer3)	Version 1.105K or later*	

- \* : Installation of GS installer is required.  
The functions described here are available in GT Designer3 Version 1.118Y and later.

## External dimensions



# Graphic Operation Terminal

## GOT SIMPLE Series

### ⚠ Safety Warning

- To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

### ⚠ Conditions of use

- The after sales support for this product differs from other Mitsubishi GOT products. Contact your local sales outlet for details.

### Registration

- Windows is a registered trademark of Microsoft Corporation in the United States and other countries.
- Ethernet is a trademark of Xerox Corporation in the United States.
- SD and SDHC Logos are registered trademarks or trademarks of SD-3C, LLC.
- MODBUS is a registered trademark of Schneider Electric SA.
- All other company names and product names used in this document are trademarks or registered trademarks of their respective companies.

Actual screen may appear different from this catalog.

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