



**mitsubishi**  
**ELECTRIC**

Mitsubishi Graphic Operation Terminal

GRAPHIC OPERATION TERMINAL

**GOT1000**

**August 2010**

GOT1000 General Catalog

*Changes for the Better*



## Looks Great, Saves Time

FOR PROGRAMLESS OPERATION  
FOR REDUCTION OF DOWNTIME  
**GOT1000**



**iQ** Platform

# The GOT1000 series keeps time on the operation side.

With new products coming and going very quickly in rapidly changing markets, "time" is the key to staying competitive and being successful. How about starting up equipment quickly without even bothering with programming? Or debugging and troubleshooting at worksites To make it happen, the GOT1000 offers cutting-edge solutions, leaving conventional HMIs far behind.

This is why the GOT1000 is all about saving time to reduce downtime?

## PROGRAMLESS OPERATION

PROGRAMLESS OPERATION

**Linking up with MELSEC process control**

Effectively creates process control screens without programming, enabling process control systems to start up quickly.

PROGRAMLESS OPERATION

**MES interface function**

Simply and conveniently enables "programless" connection between worksites and information systems. Easily adds or alters system from the user side.

PROGRAMLESS OPERATION

**Compatible with the iQ Platform**

Links GOTs with engineering environment, controllers, and networks without programming.

## REDUCTION OF DOWNTIME

REDUCTION OF DOWNTIME

**Backup/restoration function**

Backs up programs and data automatically, enabling efficient maintenance work.

REDUCTION OF DOWNTIME

**Document display/ motion images**

Enables viewing of equipment manuals at a worksite in case of trouble. Use of motion images makes restoration efficient.

REDUCTION OF DOWNTIME

**Monitor functions**

<Ladder monitor, SFC monitor, etc.>

Equipped with standard features to set and monitor Mitsubishi Electric's FA equipment. Combined with transparent functionality streamlines adjustment and debugging.



GRAPHIC OPERATION TERMINAL  
**GOT1000**

# GOTs evolve the face of control.



## Quick response to problems. Easy facility design with the GOT1000

## series. A comprehensive solution to production site problems.

### CASE 1

## Unexpected errors solved with a GOT. Quick and direct troubleshooting at the worksite.

**Before**

**GOT Solution**

**One-Touch Ladder Jump function**  
Just one touch to check what has caused an equipment breakdown or a halt in the operation. Reduce equipment downtime.  
<For more details, see page 32 of this catalog.>  
**When an error is detected, touch switch operations can search for and display the cause of the problem.**

<Error occurred in ST2 device>  
ST1 (Normal) ST2 (Error)  
Error indicator light: Y10

Touch the switch to find how Y10 is set

When errors occur, touch the Search switch to automatically start up the Ladder Monitor Screen.

<Display ladder blocks including Y10>  
ST1 error M10 Error indicator light: ON  
ST2 error M20 Touch normally open contact (M20) in on state. (Coil search function)

<Display ladder blocks including M20>  
Pusher LS error M31 Air pressure error M32 Oil pressure error M33  
Error is detected because oil pressure (M33) is on.

No need to go back to my desk to get my PC or check ladder programs!

### CASE 3

## Smooth debugging even when operation & control panels are separate.

**Before**

It may take several workers to debug programs and operate equipment at the same time if the operation and control panels are on different floors.

2F Electrical Room Control panel  
1F Equipment Floor Operation panel

It's difficult to perform debugging without watching the machine in operation.

I'm not sure how the program is changed and if it's operating correctly.

**GOT Solution**

**FA Transparent function**  
Use GOT to connect the PLC and PC. You can check the equipment and debug programs at the same time.  
<For more details, see page 27 of this catalog.>

2F Electrical Room Control panel  
1F Equipment Floor Operation panel

PLC debugging can be performed from a PC connected to the GOT!

Touch panel operation is enabled even when a PC is connected. Both the GOT and PLC can be debugged in one single, efficient operation!

### CASE 2

## Use GOT to correct simple ladder programs. Quick recovery! No need for PCs!

**Before**

Sensor malfunction!? Nothing is there under that sensor...

Check it with the ladder monitor function.

Sensor X10 M20 The device number is wrong.

Need to fix it now. I need a PC...

**GOT Solution**

**Ladder Editor function**  
It takes only a few touches to make minor ladder program corrections. It is easy and fast.  
<For more details, see page 33 of this catalog.>

Correct

Change the device number from X10 to X20.

Repair is made easy and quick without a PC!

### CASE 4

## Backup your sequence programs on the GOT. Keep your system safe in case of a PLC failure.

**Before**

Warehouse Office

I need to go to the warehouse to get another PLC!

I also need to go to the office to get a PC.

PLC failed! No battery!

**GOT Solution**

**Backup/Restoration function**  
You do not need your PC. Just use the GOT to write and save PLC programs.  
<For more details, see page 30 of this catalog.>

Change CPU

Restore

Speedy restoration! No need for a PC or locating the program.

It is OK, because the latest program was stored in the GOT.

## CASE 5

**View manuals on the GOT screen.**  
**It is so fast to find the information to fix a problem.**

**Before**

**GOT Solution**

**Document Display function/ Video Manual Playback**

You can save necessary documents such as manuals on the GOT. It is easy to view them.  
<For more details, see pages 20 and 21 of this catalog.>

With the Document Display function, it's easy to read the manual by changing and scrolling through pages.

The video manual is easy to understand.

Directly assign documents and image files to touch switches.

The manual describes how to deal with the error displayed.

<Document display>      <Video manual playback>

## CASE 7

**Quickly detect the cause of the problem.**  
**Minimize production loss when a problem occurs.**

**Before**

**GOT Solution**

**Operator Authentication function + Operation Log function**

Save operator information on a CF card along with operation records. You can find sources of trouble quickly.  
<For more details, see page 29 of this catalog.>

What is the cause of the defective product?

It is found that Jon Smith entered erroneous data.

The operation log including the operator information is shown for analysis.

We can determine the cause of the error and this will be helpful in improving operations and preventing a recurrence in the future.

## CASE 6

**Use the GOT to record and play back motion images of the production line. Clear pictures help analyze the source of problems!**

**Before**

**GOT Solution**

**Multimedia function**

Check the recorded view of the production line. You can find problem causes very quickly.  
<For more details, see page 20 of this catalog.>

Got it! This is the cause.

Attach a video camera on GOT. The view of the production line is recorded before and after the occurrence of a problem.

Play it on the GOT.

Play the video from the alarm display screen. High-resolution pictures are recorded and played in VGA resolution!

<120-second long video images are recorded before and after the occurrence of a problem.>

Trouble

## CASE 8

**Compact types are also available!**  
**Required space is minimal. You can use it just about anywhere.**

**Before**

Hardware switches and lamps may require large areas of boards.

Rearranging them and reconnecting cables may be inconvenient, as well, when specifications are changed.

**GOT Solution**

**GT10 models (GT1020/GT1030)**

For simple and small applications, GOT1000 compact type is just right.  
<For more details, see page 36 of this catalog.>

Compact, easy-to-use, simple wiring reduces assembly time.

Its operation is intuitive. Three backlight colors indicate different equipment statuses.

green orange red  
3-color display model  
(white pink red)  
3-color model is also available

Both horizontal and vertical mounting available to meet the needs of different applications.



## Four series of GOTs to fit demanding systems and tight budgets.

All-in-one models with a variety of communication and function features including Ethernet support

# GT16

GOT1000 GRAPHIC OPERATION TERMINAL

Multimedia Video RGB Network Bus Serial

15" type

**XGA TFT**(High-brightness, wide viewing angle)  
GT1695M-STBA AC type GT1695M-STBD DC type  
Resolution : 1024 x 768 Display colors : 65,536 colors  
Multimedia, video/RGB model

12.1" type

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1685M-STBA AC type GT1685M-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors  
Multimedia, video/RGB model

10.4" type

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1675M-STBA AC type GT1675M-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors  
Multimedia, video/RGB model

**VGA TFT**(High-brightness, wide viewing angle)  
GT1675M-VTBA AC type GT1675M-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors  
Multimedia, video/RGB model

**VGA TFT** **NEW**  
GT1675-VNBA AC type GT1675-VNBD DC type  
Resolution : 640 x 480 Display colors : 4,096 colors

**VGA TFT** **NEW**  
GT1672-VNBA AC type GT1672-VNBD DC type  
Resolution : 640 x 480 Display colors : 16 colors

8.4" type

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1665M-STBA AC type GT1665M-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors  
Multimedia, video/RGB model

**VGA TFT** **NEW**  
GT1662-VNBA AC type GT1662-VNBD DC type  
Resolution : 640 x 480 Display colors : 16 colors

**VGA TFT**(High-brightness, wide viewing angle)  
GT1665M-VTBA AC type GT1665M-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors  
Multimedia, video/RGB model

6.5" type

**VGA Handy GOT/TFT** **Coming soon**  
(High-brightness, wide viewing angle)  
GT1665HS-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors

Wide field of applicability in a network or standalone environment

# GT15

GOT1000 GRAPHIC OPERATION TERMINAL

Multimedia Video RGB Network Bus Serial

15" type

**XGA TFT**(High-brightness, wide viewing angle)  
GT1595V-STBA AC type GT1595V-STBD DC type  
Resolution : 1024 x 768 Display colors : 65,536 colors

12.1" type

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1585V-STBA AC type GT1585V-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors  
Video/RGB model

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1585S-STBA AC type GT1585S-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors

10.4" type

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1575V-STBA AC type GT1575V-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors  
Video/RGB model

**SVGA TFT**(High-brightness, wide viewing angle)  
GT1575S-STBA AC type GT1575S-STBD DC type  
Resolution : 800 x 600 Display colors : 65,536 colors

**VGA TFT**(High-brightness, wide viewing angle)  
GT1575-VTBA AC type GT1575-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors

**VGA TFT**  
GT1575-VNBA AC type GT1575-VNBD DC type  
Resolution : 640 x 480 Display colors : 256 colors

**VGA TFT**  
GT1572-VNBA AC type GT1572-VNBD DC type  
Resolution : 640 x 480 Display colors : 16 colors

8.4" type

**VGA TFT**(High-brightness, wide viewing angle)  
GT1565-VTBA AC type GT1565-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors

**VGA TFT**  
GT1562-VNBA AC type GT1562-VNBD DC type  
Resolution : 640 x 480 Display colors : 16 colors

5.7" type

**VGA TFT**(High-brightness, wide viewing angle)  
GT1555-VTBD DC type  
Resolution : 640 x 480 Display colors : 65,536 colors

**QVGA STN**  
GT1555-QSBD DC type  
Resolution : 320 x 240 Display colors : 4,096 colors

**QVGA STN**  
GT1550-QLBD DC type  
Resolution : 320 x 240 Display colors : 16 gray scales

Basic functions plus a range of advanced functionality in a standard size

# GT11

GOT1000 GRAPHIC OPERATION TERMINAL

Multimedia Video RGB Network Bus Serial

5.7" type

**QVGA TFT**  
GT1155-QTBD DC type  
GT1155-QTBDQ DC type Q bus connection  
GT1155-QTBDA DC type A bus connection  
Resolution : 320 x 240 Display colors : 256 colors

**QVGA STN**  
GT1155-QSBD DC type Q bus connection  
GT1155-QSBDQ DC type Q bus connection  
GT1155-QSBDA DC type A bus connection  
Resolution : 320 x 240 Display colors : 256 colors

**QVGA STN**  
GT1150-QLBD DC type Q bus connection  
GT1150-QLBDQ DC type Q bus connection  
GT1150-QLBDA DC type A bus connection  
Resolution : 320 x 240 Display colors : 16 gray scales

**QVGA Handy GOT/STN**  
GT1155HS-QSBD DC type  
Resolution : 320 x 240 Display colors : 256 colors

**QVGA Handy GOT/STN**  
GT1150HS-QLBD DC type  
Resolution : 320 x 240 Display colors : 16 gray scales

Including all the basic functions required for a HMI display

# GT10

GOT1000 GRAPHIC OPERATION TERMINAL

Multimedia Video RGB Network Bus Serial

5.7" type

**QVGA STN**  
GT1055-QSBD 24VDC type  
Resolution : 320 x 240  
Display colors : 256 colors

**QVGA STN**  
GT1050-QBBD 24VDC type  
Resolution : 320 x 240  
Display colors : Monochrome (blue/white) 16 gray scales

4.7" type

**QVGA STN**  
GT1045-QSBD 24VDC type  
Resolution : 320 x 240  
Display colors : 256 colors

**QVGA STN**  
GT1040-QBBD 24VDC type  
Resolution : 320 x 240  
Display colors : Monochrome (blue/white) 16 gray scales

4.5" type

**STN**  
GT1030-LBD (Black) 24VDC type RS-422 connection  
GT1030-LBD2 (Black) 24VDC type RS-232 connection  
GT1030-LBL (Black) 5VDC type RS-422 connection  
GT1030-LWD (White) 24VDC type RS-422 connection  
GT1030-LWD2 (White) 24VDC type RS-232 connection  
GT1030-LWL (White) 5VDC type RS-422 connection  
Resolution : 288 x 96  
Display colors : Monochrome (black/white)  
(Tricolor LED (green/orange/red))

**STN**  
GT1030-LBDW (Black) 24VDC type RS-422 connection  
GT1030-LBDW2 (Black) 24VDC type RS-232 connection  
GT1030-LBLW (Black) 5VDC type RS-422 connection  
GT1030-LLDW (White) 24VDC type RS-422 connection  
GT1030-LLDW2 (White) 24VDC type RS-232 connection  
GT1030-LLWL (White) 5VDC type RS-422 connection  
Resolution : 288 x 96  
Display colors : Monochrome (black/white)  
(Tricolor LED (white/pink/red))

3.7" type

**STN**  
GT1020-LBD (Black) 24VDC type RS-422 connection  
GT1020-LBD2 (Black) 24VDC type RS-232 connection  
GT1020-LBL (Black) 5VDC type RS-422 connection  
GT1020-LWD (White) 24VDC type RS-422 connection  
GT1020-LWD2 (White) 24VDC type RS-232 connection  
GT1020-LWL (White) 5VDC type RS-422 connection  
Resolution : 160 x 64  
Display colors : Monochrome (black/white)  
(Tricolor LED (green/orange/red))

**STN**  
GT1020-LBDW (Black) 24VDC type RS-422 connection  
GT1020-LBDW2 (Black) 24VDC type RS-232 connection  
GT1020-LBLW (Black) 5VDC type RS-422 connection  
GT1020-LLDW (White) 24VDC type RS-422 connection  
GT1020-LLDW2 (White) 24VDC type RS-232 connection  
GT1020-LLWL (White) 5VDC type RS-422 connection  
Resolution : 160 x 64  
Display colors : Monochrome (black/white)  
(Tricolor LED (white/pink/red))

The lineup that fits in with any production line. Find your GOT with the right functions, size, and features.

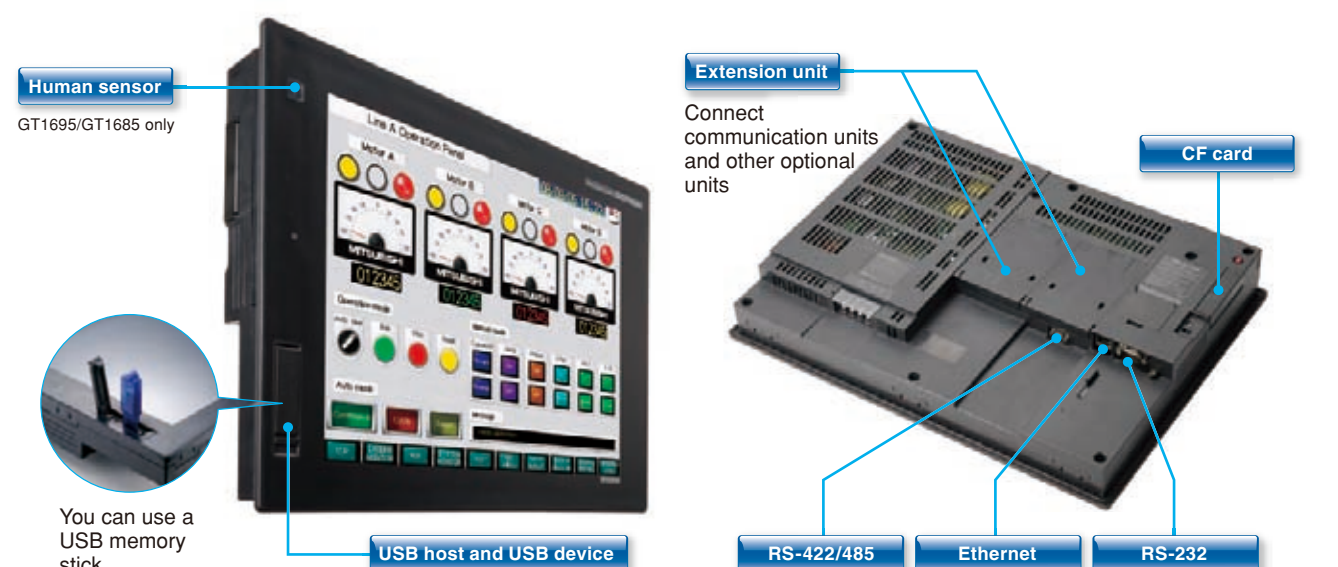
## GT16

All-in-one models with a variety of communication and function features including Ethernet support.

\* See page 12 for GT16 Handy.

- User memory capacity: 15MB (GT16□□-VNB□ : 11MB)
- USB host and USB device ports are included.
- Ethernet, RS-422/485, and RS-232 interfaces are supported as standard interfaces.
- A multimedia unit and a video/RGB unit are supported.\*
- Featuring an analog touch panel

\* : Excluding GT16□□-VNB□

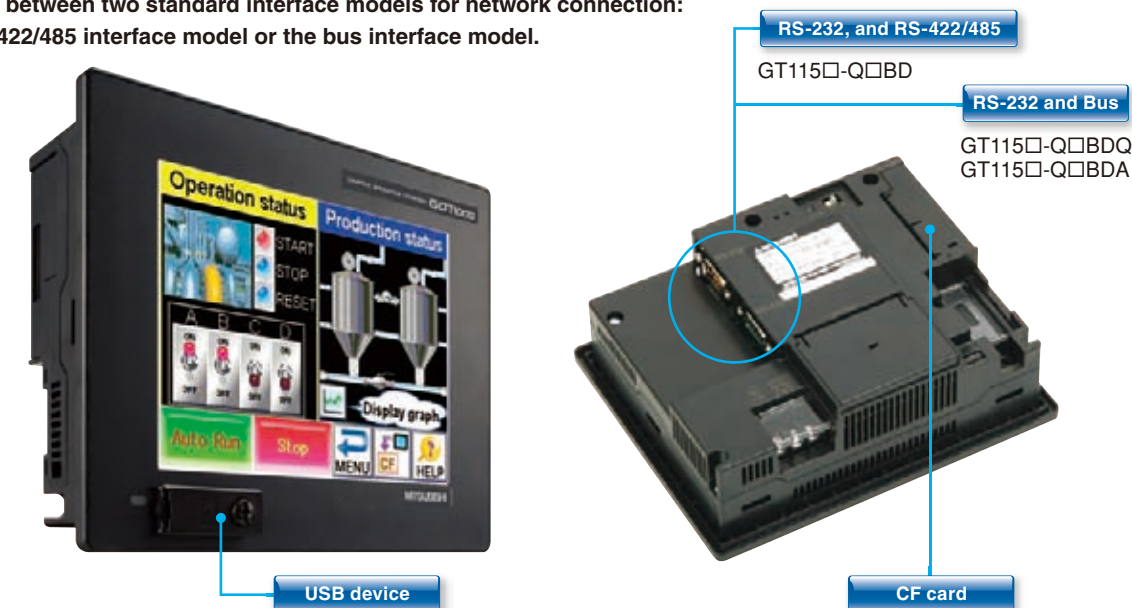


## GT11

Basic functions plus a range of advanced functionality in a standard size

\* See page 13 for GT11 Handy.

- User memory capacity: 3MB
- USB device port is included.
- The RS-232 interface is supported as a standard interface.
- Choose between two standard interface models for network connection: the RS-422/485 interface model or the bus interface model.

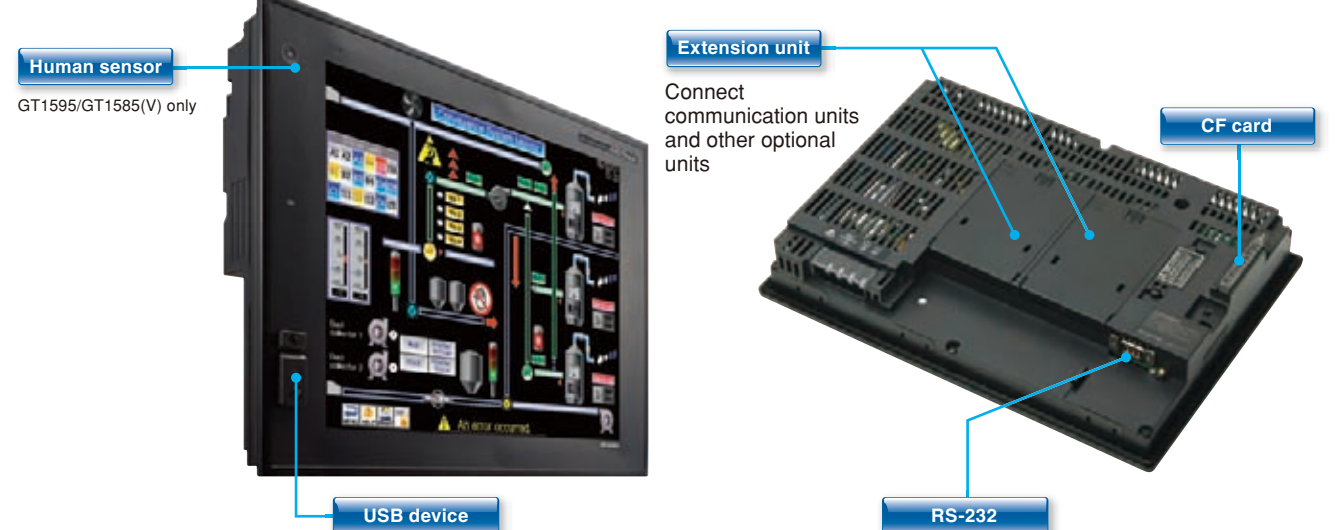


## GT15

Wide field of applicability in a network or standalone environment

- User memory capacity: 9MB (GT15□□-VNB□: 5MB)
- USB device port is included.
- The RS-232 interface is supported as a standard interface.
- A video/RGB unit is supported.\*

\* : GT1585V/GT1575V only

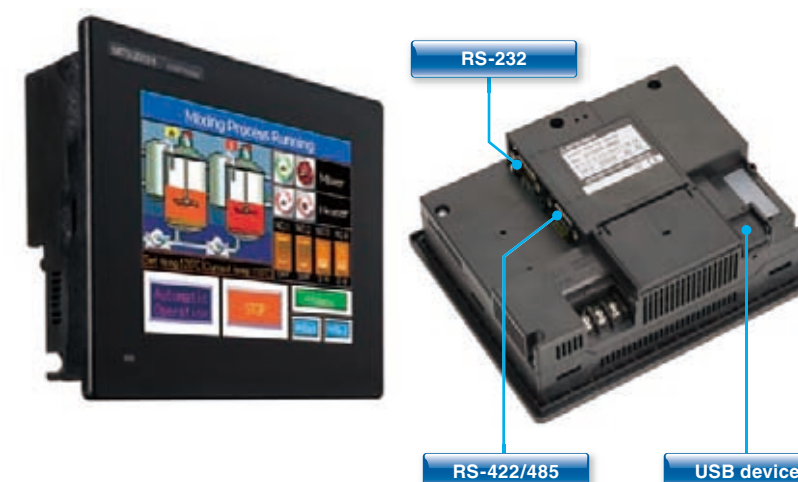


## GT10

Compact for a display device with rich functionality

### GT1050/GT1040

- User memory capacity: 3MB
- A USB device is included.
- RS-422/485 and RS-232 interfaces are supported as standard interfaces.



### GT1030/GT1020

- User memory capacity: 1.5MB (GT1030)/512KB (GT1020)
- Three-color LED backlight indicates the equipment status at a glance.
- The RS-422/485\* interface or the RS-232 interface is supported as a standard interface.

\* : Only the RS-422 interface for the 5VDC type





## Rich functionality and high performance in the palm of your hand

### GT16 Handy GOT

65,536 vivid colors on a big VGA screen

The light body includes the latest GT16 functions

Extremely easy handling and operation in one hand

Standard Ethernet interface enables long-distance communication

- User memory capacity: 15MB
- USB host and USB device ports are included.
- Ethernet, RS-422/485, and RS-232 interfaces are supported as standard interfaces.
- The latest GT16 functions are available, including various types of monitoring and ladder editing functions.

**6.5"** High resolution handy GOT **GT1665HS-VTBD** **Coming soon**



## Ergonomic design allows you to change the angle of the handle.

Various types of switches are available

- Operation switches with LEDs (6)
- Emergency stop switch
- Selector switch with key
- Three-position deadman switch

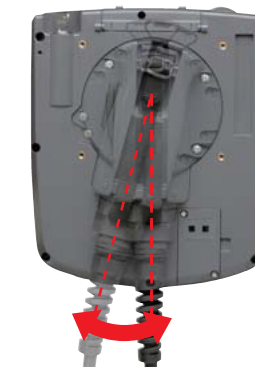
Various types of external connection interfaces are available as standard interfaces

- USB host and USB device
- CF card interface
- RS-422/485 and RS-232 interfaces (switchable)
- Ethernet interface

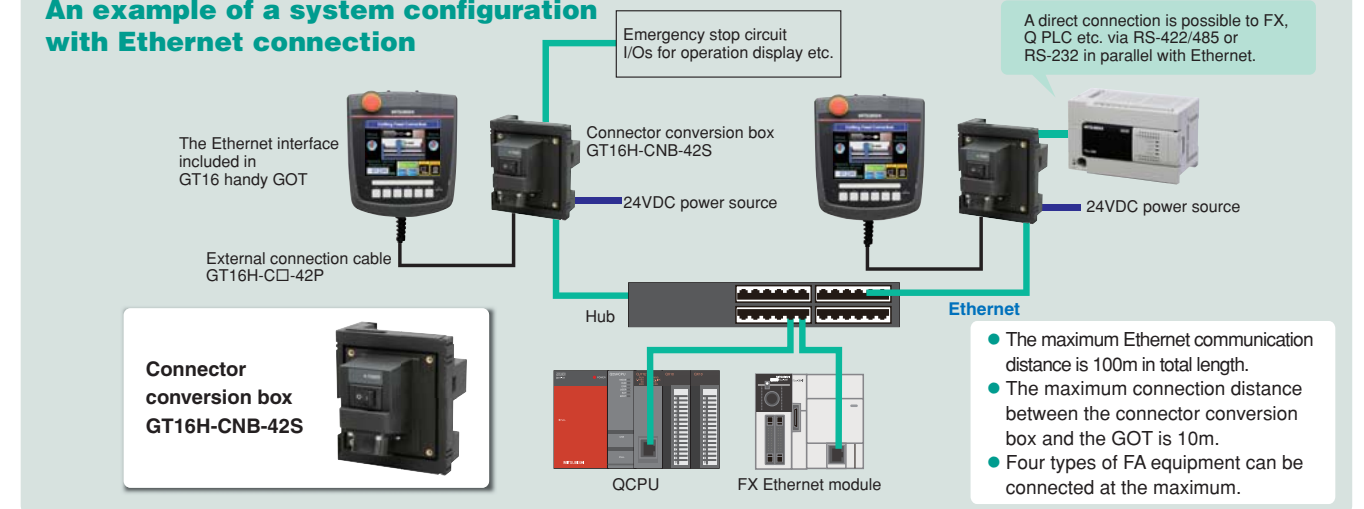
Options

Emergency stop switch guard cover

External connection cable



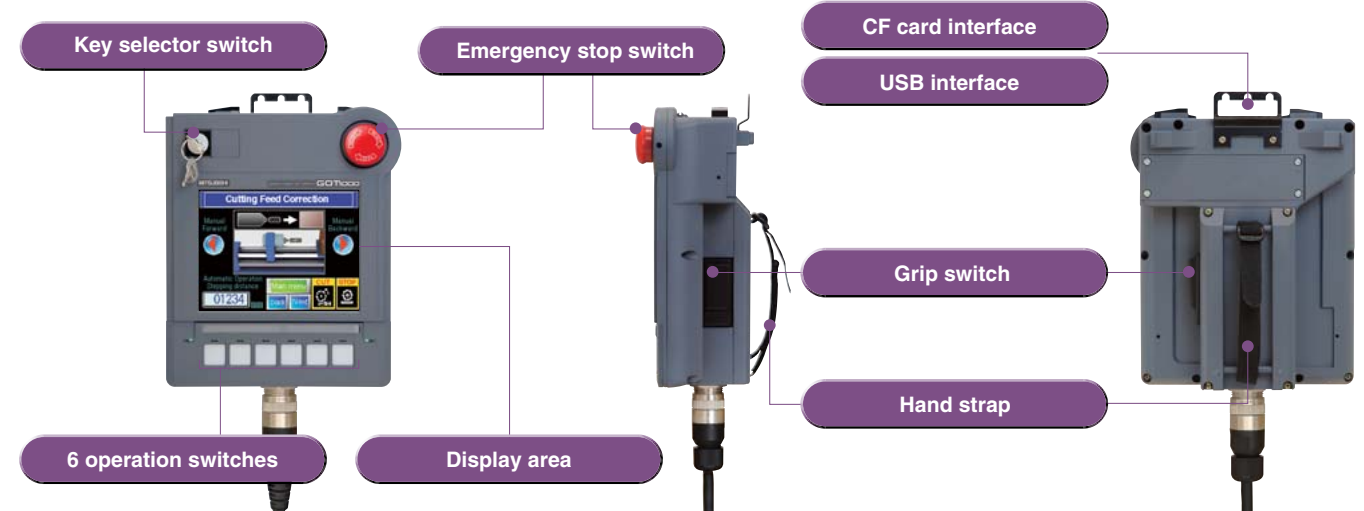
### An example of a system configuration with Ethernet connection



### GT11 Handy GOT

Portable 5.7" operation terminal

GT1155HS-QSBD  
GT1150HS-QLBD



## Use a personal computer or panel computer as a GOT.

## Software recreates various GOT functionality.

### HMI software for the GOT1000 series

# MELSOFT **GT SoftGOT1000** Version3

#### GT SoftGOT1000

GT SoftGOT1000 is the HMI software that provides GOT functions on personal computers and panel computers.

This software connects with various types of equipment such as Mitsubishi PLCs and let you see screens just like the GOT1000 series.

You can also reuse GOT's project data without modification.

Along with all the advantages of a GOT, you can also enjoy the convenience and flexibility of personal computers and panel computers.

A license key is required on your PC's parallel port or USB port while using this software.



\* GT SoftGOT1000 Version3 software included with the GT Works3 software suite.

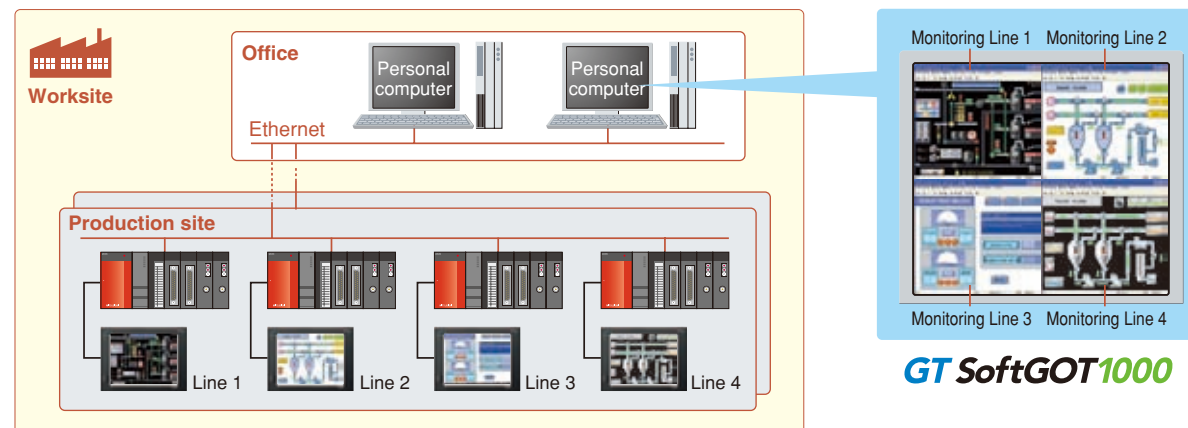
### Monitor the production site from a remote location

#### Reduce downtime

Use GT SoftGOT1000 to monitor the production site from your office. You can collect information quickly when a problem occurs, taking necessary actions immediately.

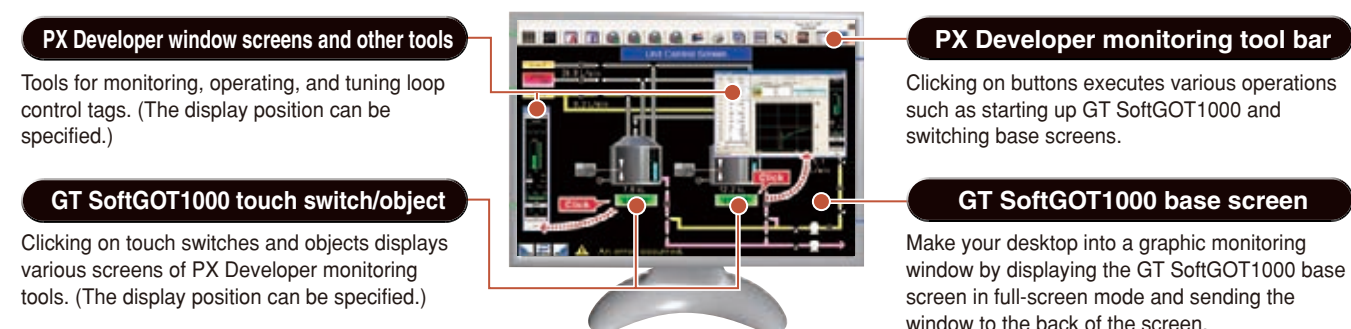
#### Use GOT project data from the production site

You can reuse project data of the GOT at your production site as the project data of GT SoftGOT1000 to reduce the design cost.



### Connect with MELSEC process control for process control applications

You can connect GT SoftGOT1000 to the monitor tools of the Engineering Environment PX Developer for design and maintenance work for process control. In this way, a process control monitoring system can easily be constructed.



### Link with other applications to construct a high-performance system

You can use a user-created application to read and write information to and from internal devices of GT SoftGOT1000. By linking data with user applications such as a data logger, you can construct a high-performance system package. You can also use a touch switch on the GT SoftGOT1000 monitor to launch another application.

#### <Development environment of user applications>

Microsoft® Visual C++.NET2003, Microsoft® Visual C++ (Version.6.0),  
Microsoft® Visual Basic.NET2003, Microsoft® Visual Basic (Version.6.0)

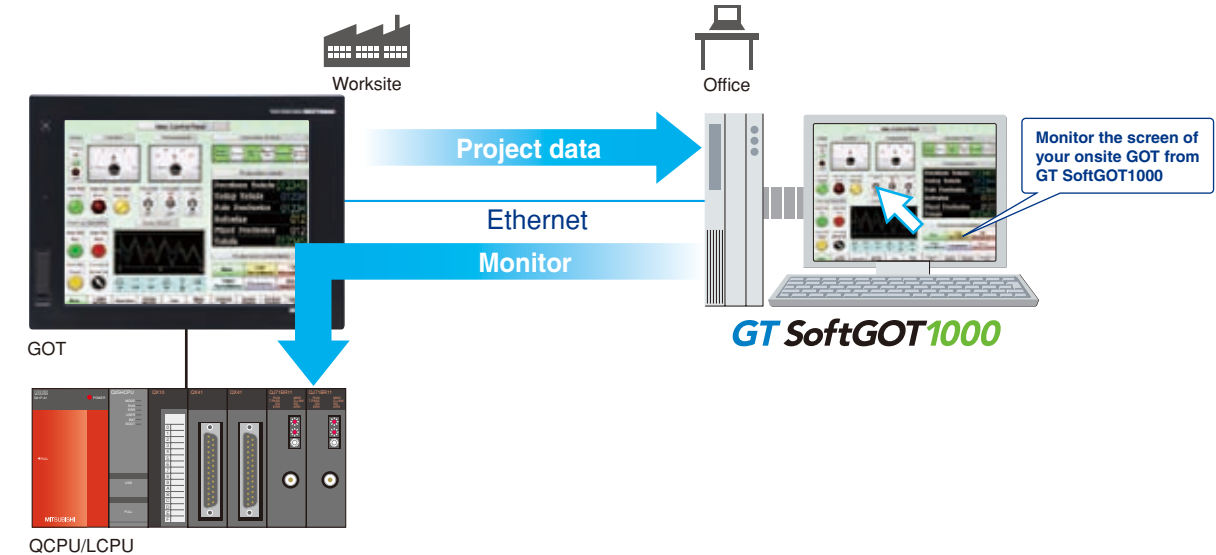
### The SoftGOT-GOT link function enhances the linkage to your onsite GOT NEW

#### Monitor the screen of your onsite GOT from GT SoftGOT1000

Connect GT SoftGOT1000 with GOT by an Ethernet connection.

Use the GOT's project data with GT SoftGOT1000 to monitor connected equipment.\*

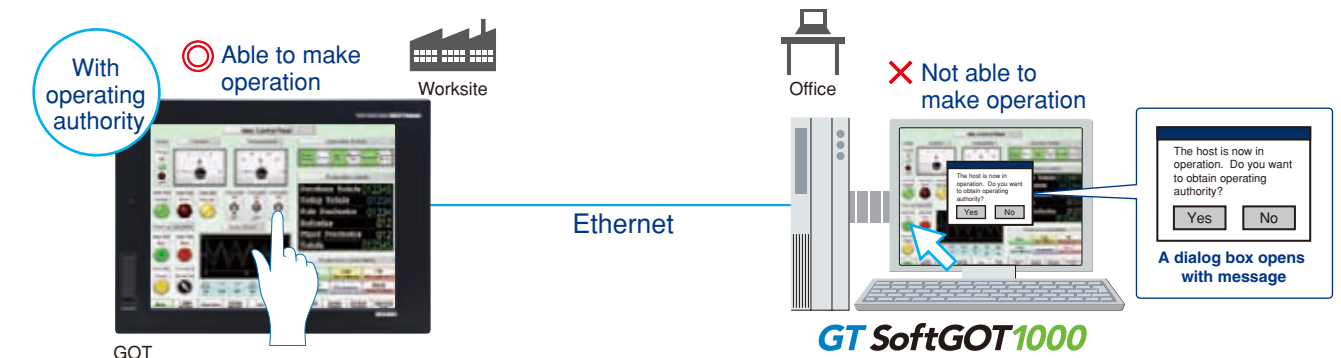
\*: Only CH1 can be monitored when GOT is connected via multi-channels.  
GOT and QCPU/LCPU can be connected by a bus connection, direct CPU connection, computer link connection, or Ethernet connection.



#### Prevent simultaneous operations from GT SoftGOT1000 and GOT

Operation of an input object (e.g. touch switch, numerical input) is allowed by either GT SoftGOT1000 or the GOT, whichever has operating authority.

When one terminal does not have operating authority, a dialog box opens to show that the other terminal has operating authority. This exclusive control method keeps prohibiting operation until the terminal obtains operating authority.



See "List of connectable models" (page 55), "Function list" (page 56), and "Notes for use (Operating environment)" (page 71).



**More intuitive. No more wasted time. The screen design software optimized for usability.**

GOT1000 Screen Design Software  
**MELSOFT GT Works3**

**7 points to easily  
create new screens  
and transfer them  
to the GOT**

**Point 1 Work tree**

View the whole project, create a new screen, and add and delete screens with ease.

**Property sheet**

A selected object or graphic's settings are displayed as a tree view. Set colors, devices, etc., on the property sheet without opening a dialog box. When selecting the same objects or graphics, change color, character size, etc., all at the same time.

**Temporary area**

Reduce workspace clutter by moving objects off of the display area.

**MELSOFT iQ Works improves design efficiency**

Batch parameter check and system labels of MELSOFT Navigator are supported.

**Related tools**

GT Works3 comes with the Data Transfer Tool, GT Converter2, and other tools.

**Point 7 Simulator**

Preview operation without connecting to a GOT.

**Point 6 Communication with the GOT**

Communication settings and drivers are automatically selected and downloaded to the GOT with the project data.

**Point 2 Tool bar**

Vividly colored icons make distinguishing active functions from inactive ones easy.

**Point 3 Library**

Parts are easy to select. High resolution graphics and parts are easy create and incorporate into projects.

**Point 4 Dialog box**

User-friendly dialog boxes and object settings.

**Point 5 Editor "screen design area"**

Navigate through multiple screens easily with a simple click of a tab. This is one of many convenient and efficient development functions that designers can take advantage of.



See the GT Works3 catalog (L (NA) 08170ENG) for more details.



## The GOT1000 series provides a variety of functions to satisfy user requirements

Usability depends on who the users are and where they carry out their tasks.

Designers want to use the most advanced HMI technology, while maintenance engineers want the most dependable HMI for their facilities.

To satisfy all of our customers, we are constantly developing more and more functions for the GOT1000 series.

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#### For designers

There are many different applications to be solved.  
How do we stay flexible?

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● Script function	P25
● Various types of window screens	P25

#### For initial startup & operations

Efficiency requires both fast data transfer as well as user-friendly functions.

● Drawing, computing, communication; a trio of high-speed response functions	P26
● Backlight brightness adjustment	P26
● Color-coded front face LED	P26
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#### For maintenance personnel

To restore a system as quickly as possible, response capabilities for "just in case" situations are the key to selecting a HMI display.

● Logging function/ Historical trend graph	P28
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● Ladder monitor function	P32
● SFC monitor function	P32
● Ladder editor function	P33
● Motion SFC monitor function	P33
● System monitor function	P34
● Network monitor function	P34
● Intelligent unit monitor function	P34
● MELSEC-L troubleshooting function	P34
● Q series motion monitor function	P35
● Servo amplifier monitor function	P35
● CNC monitor function/ CNC data I/O function	P35
● List editor for A/List editor for FX	P35



# Freedom to use motion images and connection with various devices offer greater possibilities

For designers

Smooth, high-quality motion images help efficiently investigate the cause of a problem

## GT 16 Multimedia function

### Recording audio and video

Clear view before and after the trouble occurrence  
<Recording pre/post event motion images>

- Capable of recording motion images for 120 seconds before and after an error occurrence (when the event trigger device turned on), up to 240 seconds in total.



### Playing back motion image files

Check the motion image before and after the occurrence of a problem, and diagnose the cause immediately.

- The motion image recorded on site is saved in the CF card of the GOT's multimedia unit and can be played back immediately after being recorded.
- The motion image files saved in the CF card can be sent to your personal computer over the Ethernet interface of the GOT's multimedia unit. You can then view the motion image on your personal computer.
- Fast forward and slow motion playback functions are also available.

### Use as a video guidebook for work tasks

- The GOT plays back motion image files that are created by your personal computer. Since the GOT is compatible with standard formats, commercially available software can be used to create motion image files.

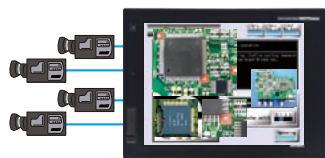
<Applicable software programs> • Quick Time 7 Pro  
<Compatible file formats> • 3GP and MP4

High-quality images with 65,536 colors provide precise detail

## GT 16 GT 15 Video/RGB function

Enhanced compatibility with cameras and inspection devices <Video input>

- Input images from up to four video cameras and inspection devices are simultaneously and cleanly displayed in four windows in 65,536 colors. Images can be saved in JPEG format.

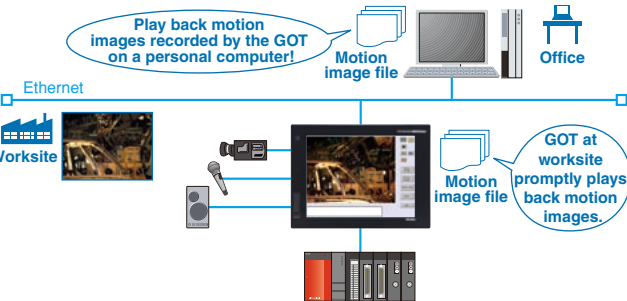


### High resolution recorded image (standard mode)

- Smooth, high resolution video can be recorded.
- Video size and frame rate
  - Maximum 15 fps in VGA (640 × 480)
  - Maximum 30 fps in QVGA (320 × 240)

### For additional recording time (extended mode)

- Over two days of video can be recorded.
- Video size QVGA (320 × 240); frame rate 15 fps



The dedicated multimedia screen is available for recording and playback. Reduce your screen design time!

- \* : Not supported by GT16□□-VN□□, GT16 Handy
- \* : The multimedia data link tool and multimedia data link FTP services are necessary to transmit motion image files to a personal computer.
- \* : Only one of the following devices can be used at one time: multimedia unit, video input unit, RGB input unit, video/RGB input unit or RGB input unit.

The multimedia data link tool and multimedia data link FTP service are multimedia-dedicated software programs included with GT Works3.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

### Displays PC images on the GOT <RGB input>

- Images on a personal computer display screen appear on the GOT simultaneously with the GOT's screen. RGB input of up to 2 channels is available when using the GT16M-R2.

### Display the GOT screen on a display <RGB output>

- Connect to a commercial display so that the GOT screen can be displayed larger.

- \* : Not supported by GT16□□-VN□□, GT16 Handy.
- \* : Only one of the following devices can be used on the GT16 at one time; video input unit, RGB input unit, video/RGB input unit, RGB output unit, or multimedia unit.
- \* : Only the GT1585V and GT1575V for the GT15 series. Only one of the following devices can be used at one time; video input unit, RGB input unit, video/RGB input unit, or RGB output unit.

Display various documents on the GOT at the worksite

## GT 16 GT 15 Document display function

- When a system error occurs, referring to recovery methods in check lists and/or manuals on the GOT can reduce downtime.



Display of documents and manuals on the GOT can reduce downtime.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

Central storage of FA device information on a single GOT terminal

## GT 16 GT 15 Multi-channel function

- Monitor up to 4 channels of FA devices (e.g. PLCs, servos, inverters, and temperature controllers).
- Easy device transfer between connected devices. Use GT Works3 to specify triggers for source and destination devices for device transfer. (Device data transfer function)

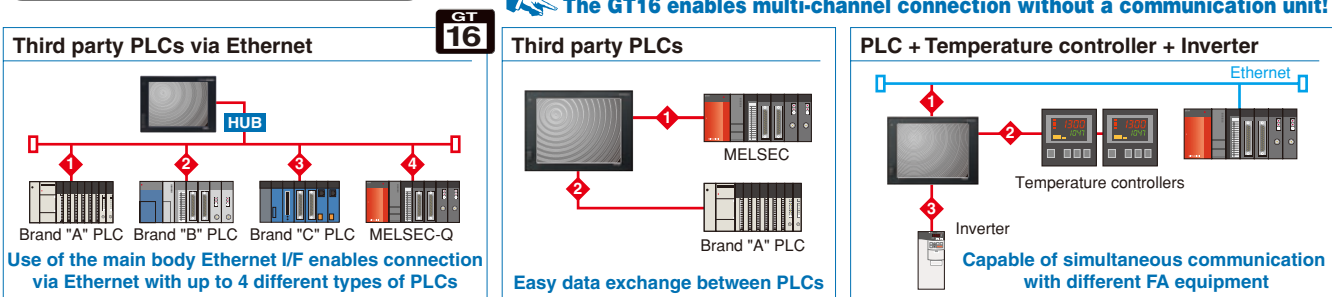
The GOT1000 Series connects with PLCs, microcomputers, and other various devices. More models from more manufactures will be supported in the future.

See "List of connectable models" (page 51), for more details on supported models of other manufactures.

### For various types of peripherals.

- General-purpose MODBUS®/RTU devices • External devices (operation panels, switches, lamps, etc.)
- Two-dimensional code readers, barcode readers • RFID readers, IC card readers • Speakers • Video cameras
- Displays (RGB output) • PCs (RGB input) • Serial printers • PictBridge printers

### Typical applications



- \* : For the Ethernet connection with GT1695 and GT1685 of function version A, if connected to equipment compatible with 10BASE-T, use a switching hub for its operation in a network environment where both 10Mbps and 100Mbps systems are operable.
- \* : The number of channels and functions, which can be used with the multi-channel function vary depending on the connection configuration. For more details, see "Notes for use" (page 67).

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

Q Platform

MELSEC Process Control + GOT1000

Specifications, External Dimensions

List of Connectable Models, etc.

# Transfer operation data in production lines in real time to host information systems.

## A sophisticated information link improves productivity.

For designers

### Monitor the screen of the onsite GOT from your PC screen

#### GT 16 GT 15 SoftGOT-GOT link function NEW

- Connect GT SoftGOT1000 with the GOT with an Ethernet connection. Use the GOT's project data with GT SoftGOT1000 to monitor connected equipment.\*
- Operation of an input object (e.g. touch switch, numerical input) is allowed by either the GT SoftGOT1000 or GOT, depending on which has operating authority. When one terminal does not have operating authority, a dialog box opens to show that the other terminal has operating authority. This exclusive control prevents operation until the terminal obtains operating authority.

\* : Only CH1 can be monitored when GOT is connected via multi-channels. GOT and QCPU/LCPU can be connected by a bus connection, direct CPU connection, computer link connection, or Ethernet connection.

See "GT SoftGOT1000" (page 14), for more details.

### Be alerted about worksite errors and collect device data from the office

#### GT 16 GT 15 Gateway function

The gateway function remotely monitors the worksite and supports remote maintenance from the office.

#### 1 Collect data on a personal computer (server function)

- A GOT (server) can be monitored from the host personal computer (MX Component) to perform indirect reading/writing of connected devices being monitored by the GOT.
- Even when third party devices are connected, MX Component can read and write the devices through the GOT using the server function.

\* : The collected data can be displayed and analyzed by Excel without using any programs other than MX Sheet. Programming with Visual C++ and Visual Basic enables applications to be flexibly designed and built. See the MELSOFT catalog (L (NA) 08008) for more details.

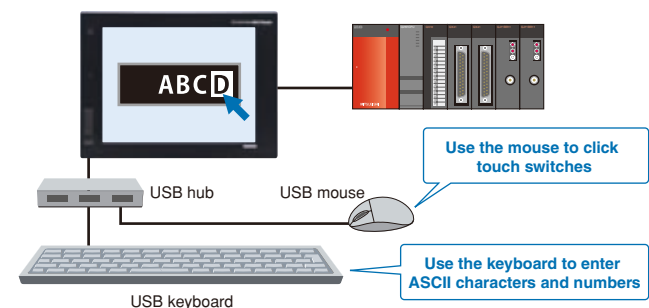
#### 2 Monitor other GOTs from a GOT (client function)

- A GOT (client) indirectly reads/writes device values of equipment monitored by another GOT (server).
- The client function can also be used to indirectly read/write device values of PLC CPUs other than the one to which the GOT (client) is connected.

### Connect your mouse/keyboard to the front USB interface

#### GT 16 USB mouse/keyboard connection NEW

- In a user-created screen, you can use your mouse to click touch switches and your keyboard to enter ASCII characters and numbers.



This is convenient when you need to operate small switches or enter many characters.

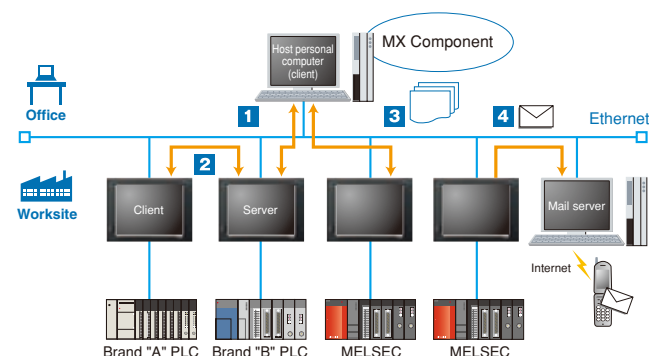
\* : Not supported by GT16 Handy

#### 3 Direct check/edit of data in the CF card (FTP server function)

- Files in the CF card within the GOT (e.g. alarms, recipes, and hard copies) can be directly read and written from a personal computer.

#### 4 Mail send function

- The alarm history display function can transmit alarm occurrences and recovery information by e-mail to personal computers and mobile phones.

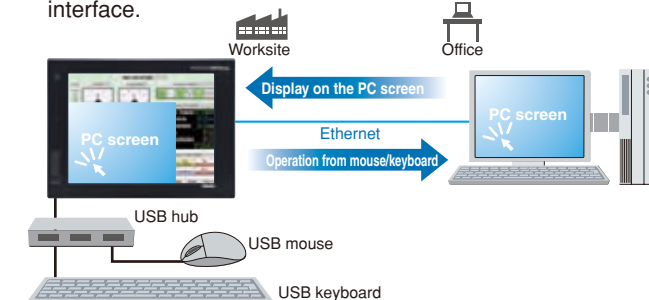


An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

### Operate a remote PC from an onsite GOT

#### GT 16 Remote personal computer operation function (Ethernet) NEW

- A personal computer at a remote location can be operated from an onsite GOT when they are connected via Ethernet.
- A USB mouse/keyboard can be connected to the front USB interface.



You can view files such as manuals stored on your personal computer, or you can use browsers and engineering tools.

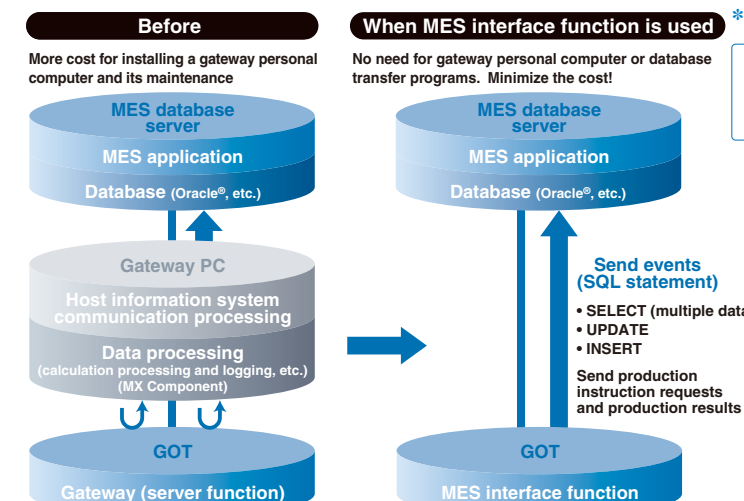
\* : Not supported by GT16□□-VNB□, GT16 Handy  
\* : The license key (GT16-PCRAKEY) is necessary.

### Database linkage support enhances productivity at your worksite

#### GT 16 GT 15 MES interface function

The GOT transmits data from connected FA devices to the server personal computer database via SQL statements.

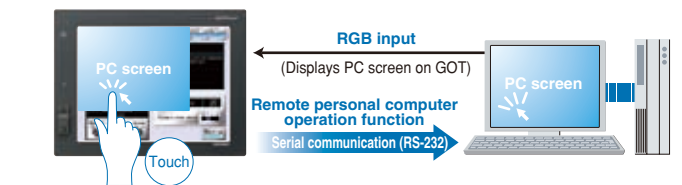
- For communication with the database, just specify the necessary data in GT Works3 without programming. There is no need to use a gateway personal computer and complicated programs to communicate with the MES database server.



### Operate a personal computer from the GOT touch screen

#### GT 16 GT 15 Remote personal computer operation function (Serial) NEW

- When using RGB input, operate a personal computer screen displayed on the GOT by touch operation (e.g. store information such as touched coordinates in GOT internal devices, transmit the data to a personal computer).



Compatible Windows OS Windows® XP Professional SP2, Windows® XP Home Edition SP2, Windows® 2000 Professional SP4

\* : Not supported by GT16□□-VNB□, GT16 Handy  
\* : Supported only on the GT1585V and GT1575V models in the GT15 series.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

#### MES interface function

- DB link function (tag function / trigger buffering function / trigger monitor function / SQL statement transmission function <SELECT / SELECT multiple data / UPDATE / INSERT> / calculation processing function / program execution function / DB buffering function)
- SNTP time synchronization function
- Resource data transmission function • Diagnosis function
- DB server function (ODBC connection function / connection setting function / log output function)

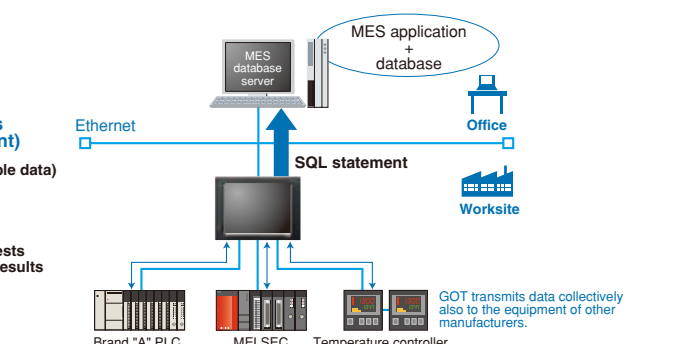
#### Usable databases

- Oracle® 8i/9i/10g • Microsoft® Access 2000/2003/2007
- Microsoft® SQL Server 2000/2005
- Microsoft® SQL Server 2000 Desktop Engine (MSDE2000)
- Wonderware® Historian 9.0

\* : Compatible only with 32-bit versions.

#### <MES (Manufacturing Execution System)>

A manufacturing execution system (MES) is a system which controls and manages production processes at a worksite in order to optimize quality, productivity, delivery date, and cost.



\* : Not supported by GT16 Handy

e-Factory

Mitsubishi Electric e-Factory presents the appropriate products to connect production information and MES (manufacturing execution system) to improve productivity of clients' plants.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

For Designers

For Initial Startup & Operations

For Maintenance

GT10

GT15

GT16

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# Quick response and useful standard functions provide users with straightforward operation

For initial startup & operations

## Dramatically improved GOT overall response

GRAPHIC OPERATION TERMINAL GOT 1000

### Drawing, computing, communication—a trio of high-speed response functions

The GOT1000 series offers faster response in drawing, computing and communication, reducing monitoring and operation load.

#### High-speed drawing

- Sharp and quick drawing of complex, layered component screens, and detailed photographic data in 65,536 colors.
- The GT16 further speeds up drawing operations.

#### High-speed computing

- Ultra-high performance processing power to satisfy the most complex and demanding of applications.

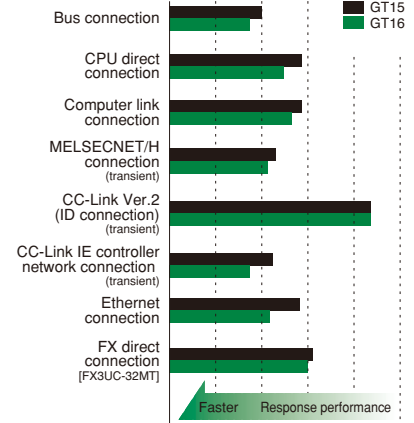
#### High-speed communication

- High-speed communication is possible for connections with both Mitsubishi and third party PLCs.

For connectable PLC models, see "List of connectable models" (page 51).

### GT16/GT15 response performance comparison

[Using MELSEC Q series] As of March 2010



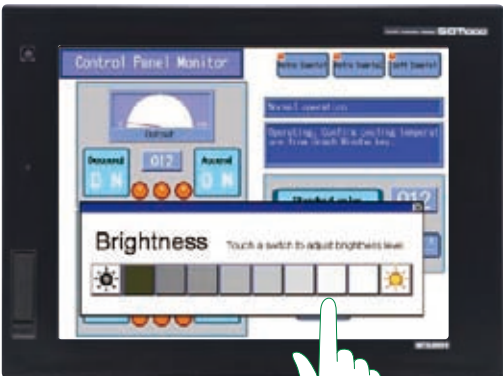
The monitor screen includes about 250 points of word devices.

## Adjust brightness according to surroundings

GRAPHIC OPERATION TERMINAL GOT 1000

### Backlight brightness adjustment

- Consider the conditions in the operation environment (daytime/nighttime etc.) and user comfort. You can adjust the brightness of the backlight while viewing the user screen.
- By using the script function or the status monitor function, you can automatically adjust the brightness according to conditions.



The touch switches for brightness adjustment are registered in the system library.

## Easy-to recognize backlight state

GRAPHIC OPERATION TERMINAL GOT 1000

### Color-coded front face LED

- The color of the LED on the front of the GOT unit indicates whether the backlight is OFF or has expired.

#### [Power LED: Color-coded message]

Green ON	When normal power is being applied	Orange/green blinking	When backlight life has expired
Orange ON	When in screen-save mode	OFF	When power is not being supplied

## For planned commodity maintenance

GRAPHIC OPERATION TERMINAL GOT 1000

### Maintenance time notification function

- The cumulative backlight ON time is automatically monitored, and the operator is notified when maintenance is required. This facilitates scheduled maintenance and prevents system malfunctions.

<Subject to be monitored> Backlight, display area, touch keys, and built-in flash memory

Warning! Backlight needs replacement soon.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).



# To minimize production time, the GOT provides the user with worksite-required functions

For initial startup & operations

## Easy data transmission without opening the cabinet

GRAPHIC OPERATION TERMINAL GOT 1000

### Equipped with front USB interface

#### USB device (Mini-B)

- Connect the USB device (Mini-B) port to a personal computer. You do not need to open the panel to transfer operating systems and project data or to use the FA transparent function.



\* : To connect the GOT to a personal computer, use the dedicated USB cable. For more details, see "Product list" (page 60).



With USB environmental protection cover installed (standard feature) IP67I \*

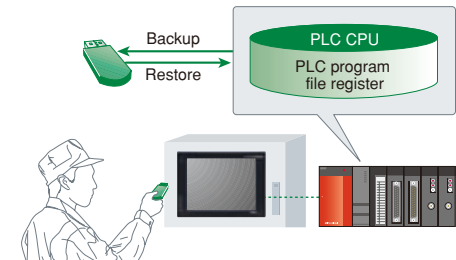
\* : This does not guarantee protection in all users' environments.

#### USB host (Type A) (for GT16 only)

- Operating systems, project data, and resource data can be stored in a USB memory device.
- A USB mouse/keyboard can also be used by connecting to the USB host interface.



#### <Example of the use of a USB memory>



## Sequence program and parameters can easily be modified at the worksite

GRAPHIC OPERATION TERMINAL GOT 1000

### FA transparent function

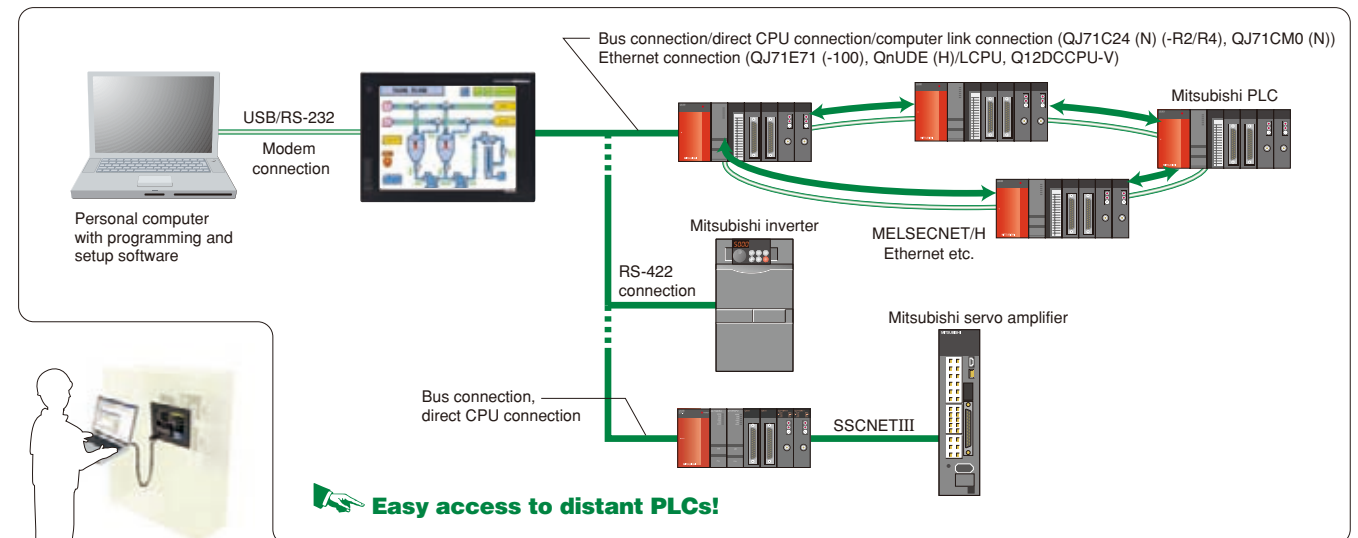
- Connected with a personal computer, the GOT acts as a transparent gateway to enable programming, start up, and adjustment of FA equipment.
- Users do not have to bother with opening the cabinet or changing cable connections. (When using the USB interface)

#### ● Supported software\*

- MELSOFT Navigator
- GX Works2
- GX Developer
- GX Configurator-AD/DA/SC/CT/TI/TC/AS/FL/PT/QP
- PX Developer
- FX Configurator-FP
- FX Ethernet module configuration software
- MT Works2
- MT Developer
- MR Configurator
- MR Configurator2 **NEW**
- FR Configurator
- RT ToolBox2
- NC Configurator
- MX Component/MX Sheet **NEW**
- GX LogViewer **NEW**

\* : The version of the software depends on the system configuration.

\* : For the software access range when using the FA transparent function, refer to the manual of the software being used.



Easy access to distant PLCs!

For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

IQ Platform

MELSEC Process Control + GOT1000

Specifications, External Dimensions

List of Connectable Models, etc.



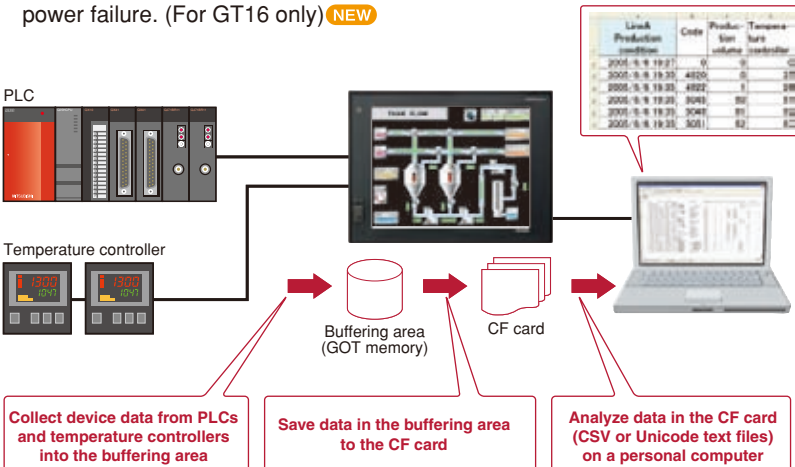
# The GOT provides complete traceability for safe and secure operation

For maintenance personnel

## Smooth operation from the collection of various data to storage of time-series data

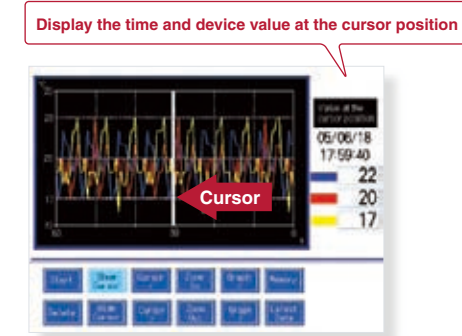
### GT 16 GT 15 Logging function/Historical trend graph

- Collecting data from temperature controllers and other units with the GOT can reduce the load on the PLC.
- Logging data is saved in the built-in SRAM even during a power failure. (For GT16 only) **NEW**



### Historical trend graph

- After collecting data with the logging function, you can display the data in a time series.
- Scroll the view or specify the time so that you can check necessary data easily.

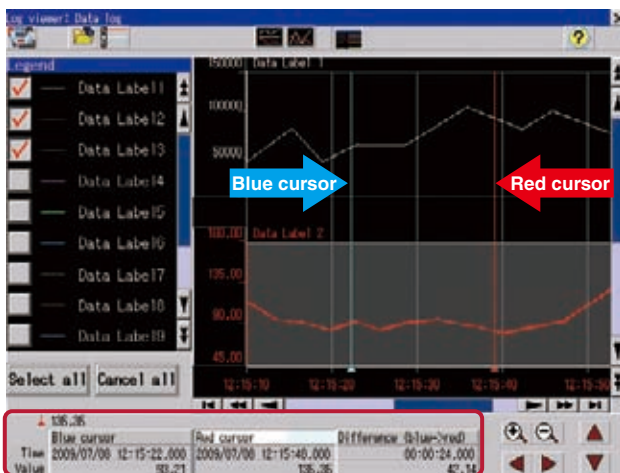


## Display logging data of a LCPU and high speed data logger module on the GOT

### GT 16 Log viewer function **NEW**

#### Display logging data without a PC

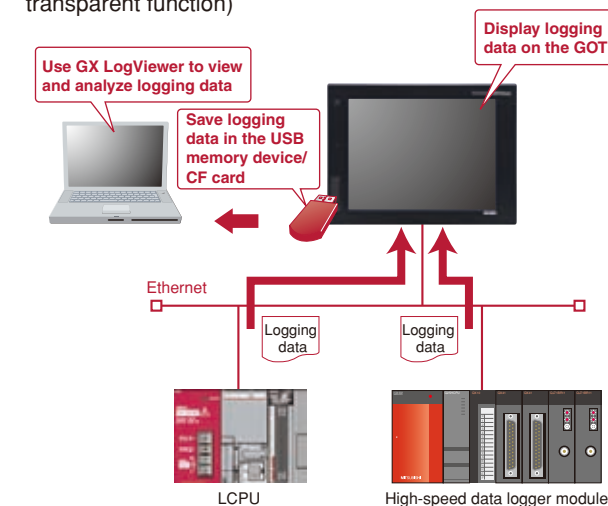
- Logging data collected by a LCPU or high speed data logger module can be displayed on the GOT.
- <Data to be displayed> Data logging (historical display)
- By displaying two cursors (multi-cursor), changes in data can easily be checked.



**You do not need to have a PC onsite. Check logging data from the GOT, and you can take corrective actions quickly.**

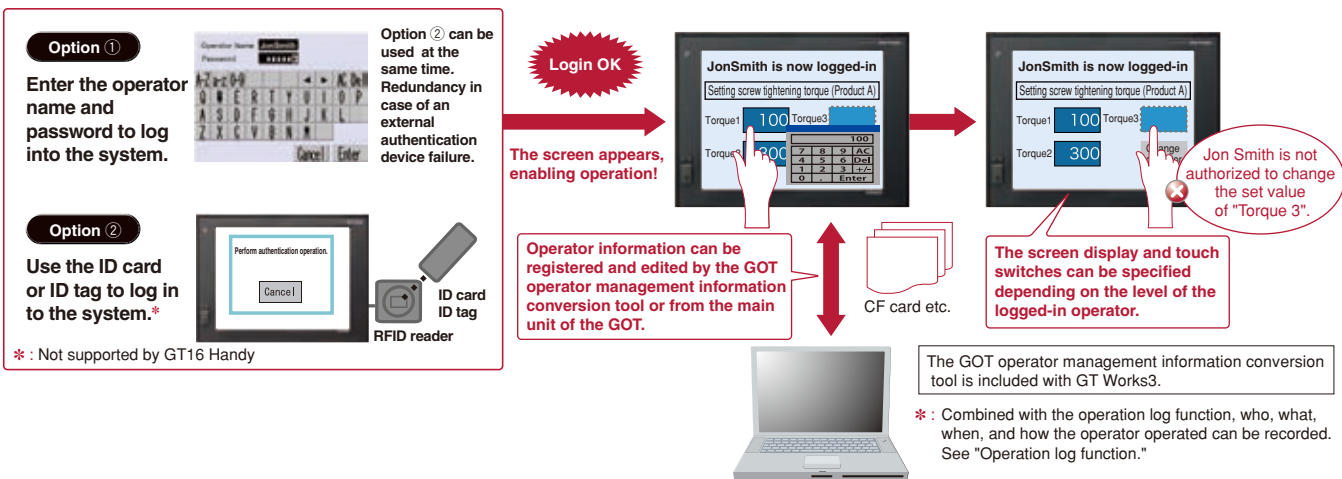
#### Logging data can be collected without opening the panel

- In a USB memory device attached to the USB interface on the front of the GOT, you can save logging data of the LCPU and high speed data logger module. In this way, you can collect the logging data easily with the GOT without removing the CF card/SD card from the LCPU or high speed data logger module.
- By connecting a personal computer to the front USB interface of the GOT, you can use GX LogViewer to view the logging data on LCPU or to change logging settings. (FA transparent function)



## Enhanced security system using password control

### GT 16 GT 15 Operator authentication function



## Setting the level (authority) of operation and display for each operator can strengthen security and prevent operation errors.

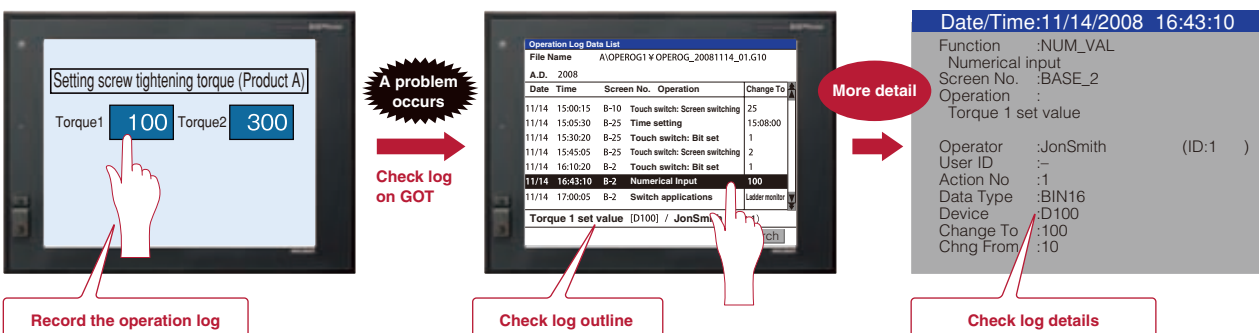
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

## Very helpful for identification and analysis of causes of incorrect operation

### GT 16 GT 15 Operation log function

- Operations performed by operators on the GOT can be recorded with respect to time, making it possible to check when, what, and how the operation was performed.

- List operations by type and easily search for specific device and GOT operation state changes.
- <Specifiable operations> Touch switch operation, numerical value input operation, security level change, screen change, etc.
- Recorded log data is saved in the CF card and is available for checking on the GOT main unit or on a personal computer (CSV or Unicode text files).
- \* : Use of this function together with the operator authentication function enables recording of "who" has operated. See "Operator authentication function".



## Refer to the operation log file, and investigate the problem source.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

**Example )**  
At 16:43:10 on November 14, 2008, Jon Smith changed the Numerical Input data entry to change the D100 value from 10 to 100 in "Torque 1 Set Value" on the BASE\_2 screen.

For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

IA Platform

MELSEC Process Control + GOT1000

Specifications, External Dimensions

List of Connectable Models, etc.

# Functions designed to support maintenance work

# significantly reduce downtime!

For maintenance personnel

## Back up important sequence programs for assurance in case of an emergency

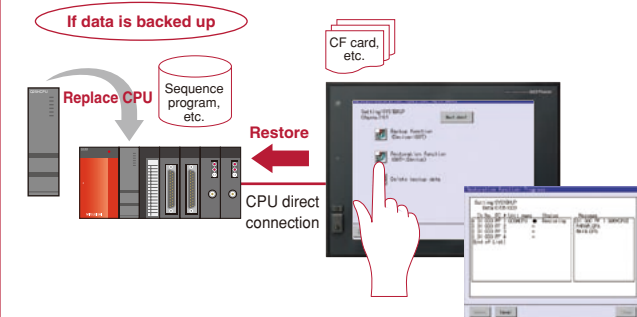
### GT 16 GT 15 Backup/restoration function

#### With backup and restore, fear troubles no more

- The sequence program and parameter data of the PLC CPU and motion controller can be backed up to the CF card in the GOT.
- Users can perform batch operation to restore the data to the PLC CPU or motion controller.

#### Example of use ①

Make a data backup in case of a PLC or CPU failure or a dead battery to quickly replace the faulty device and restore the system using the backup data in such a case.

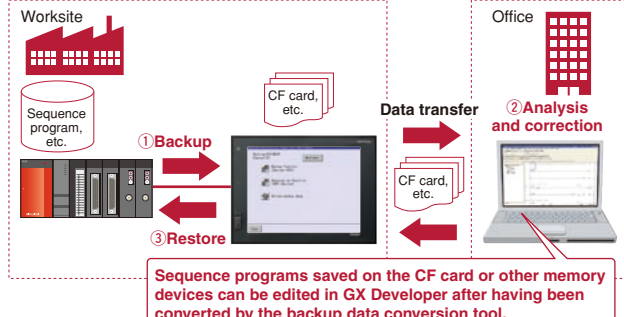


- <Objective data> Programs, parameters, device comments, device initial value data, file registers, etc.
- <Objective model> MELSEC Q-Series (excluding Q12PRH/Q25PRHCPU), L-Series, FX-Series, Q-Series motion controllers (SV13/SV22 only), CNC C70, Robot controller (CRn-D700, CRnQ-700)
- <Usable connection type> Bus connection, CPU direct connection, computer link connection, Ethernet connection

The backup data conversion tool is included with GT Works3.

#### Example of use ②

When a problem occurs, or when the PLC CPU program is updated, the sequence program data can be transferred, analyzed, and corrected without requiring an experienced engineer, increasing time and cost efficiency.

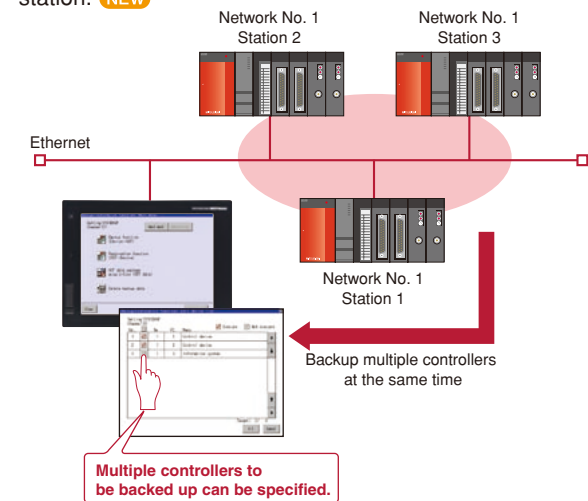


## PLC CPU programs can be easily changed without a personal computer at the worksite or any previous GX Developer knowledge.

\* : When replacing the PLC CPU, the restoration function may not be available depending on the system configuration and connection type.

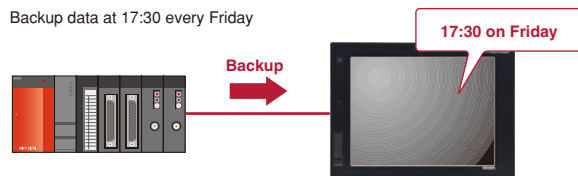
## Backup multiple controllers at the same time

- Multiple controllers can be backed up at the same time over Ethernet. Target controllers for backup can be specified per station. **NEW**



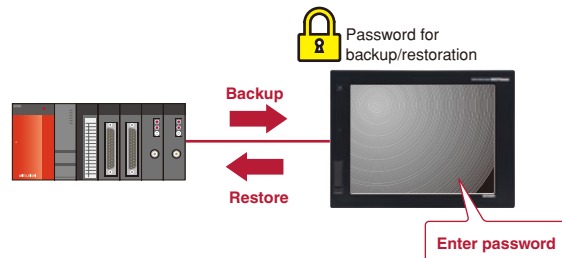
## Automatic backup is available

- Besides automatic backup from touch switches, you can specify a trigger device, a day of the week, and time for automatic backup.



## Password for increased security

- Define a password to perform password authentication when executing backup/restoration.



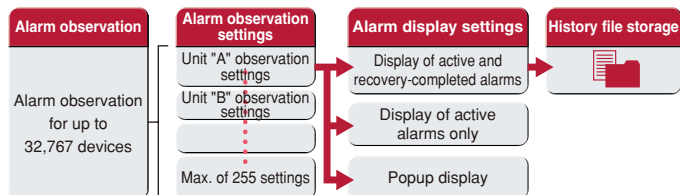
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

## Clear communication minimizes machine downtime even during an alarm

### GT 16 GT 15 Advanced alarm

#### A wider monitoring range protects even large-scale systems

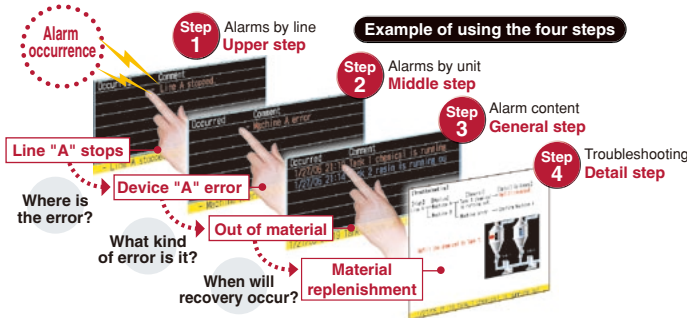
- Alarm observation is possible for up to 32,767 devices with a maximum of 255 alarm observation setting groups.
- Batch display of large amounts of alarm information in large-scale systems, and unit-specific classification for easy management.
- Alarm log data can be saved in the built-in SRAM even during a power failure. **NEW** (For GT16 only)



#### Rapid detection and corrective action for a wide array of alarms

##### Four-step alarm notification

- Alarm occurrence conditions can be divided into 4 steps and conveyed to the operator in an easy-to-understand, step-by-step format.
- The four-step display makes it easy to take in and sort out alarm conditions (information such as where, what, and how). This enables efficient troubleshooting when multiple problems occur.



##### Group-specific & level-specific displays

- Alarms can be classified by group and level, with only specified alarms being displayed.

Alarm	Group	Level
M0	Transport G	Mid-level
M1	Transport G	Mid-level
M2	Transport G	Mid-level
M3	Transport G	Mid-level
M4	Transport G	Major
M5	Process G	Major
M6	Process G	Minor
M7	Process G	Minor
M8	Process G	Minor
M9	Process G	Minor

Group: Transport G alarm display, Transport G major alarm display, Minor alarm display

Level: Minor alarm display

Combination of level & group: Transport G major alarm display

## Easy-to-understand display

- The use of colors and popups produce easily recognizable alarm displays.



## Improved system alarms

- The PLC/GOT/Network monitoring subject can be specified in advance, with only those specified alarms being displayed.

## Support in identifying alarm causes (utility function)

- Alarm occurrence conditions can be displayed in a time-series graph form.
- Alarm occurrence counts can be displayed in bar-graph form.



# Extensive FA device compatibility reduces time spent on maintenance

For maintenance personnel

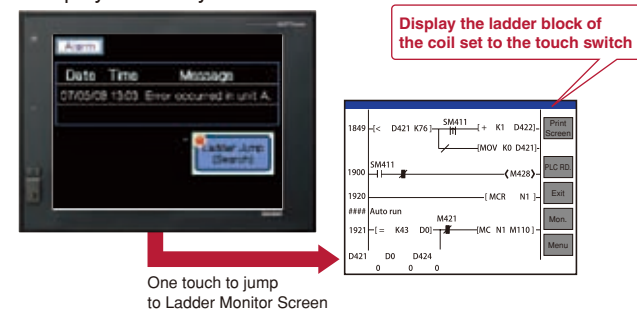
The GOT Ladder Monitor Function is greatly improved with the One-Touch Ladder Jump function

## GT 16 GT 15 Ladder monitor function

MELSEC Q/QS/L/QnA/FX series PLC sequence programs can be monitored in a circuit diagram (ladder format).

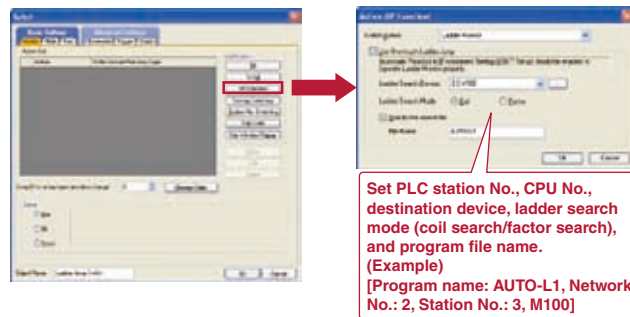
### Defect search with the One-Touch Ladder Jump function (Q/L/QnA series)

- By setting a program name and coil number of the PLC to a touch switch, the relevant ladder circuit block can be displayed directly.



- \* : Supported by XGA/SVGA/VGA models.
- \* : QS series models can only monitor the ladder program of a Q/L/QnA. It cannot alter device values, for instance.
- \* : FX3GCPU is not supported.

- Select [SP Function]-[Ladder Monitor] from the touch switch property dialog.

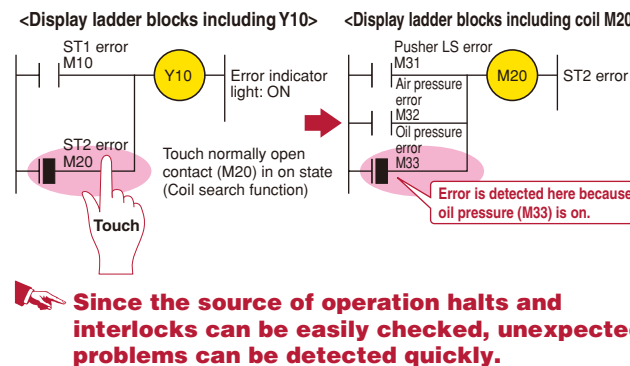


### Wide monitoring range and useful functions make maintenance work more efficient!

- Not only connected PLCs, but also PLCs of other stations, multiple CPUs, multiple programs in the CPU, and local devices can be monitored.
- Comment data of sequence programs can be saved to a CF card in the GOT. (Q/L/QnA series)
- Device values and timer (T) / counter (C) set values can be changed.
- Used together with the alarm history, a back-tracking ladder search can be performed to find the contact which triggered the alarm. <Defect search>
- Simply touching the Ladder Monitor screen can execute a coil search and contact point search. (Q/L/QnA series) <Touch search>

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

### Example of touch search (when error indicator light [Y10] is on)



Monitor SFC programs on the GOT to make troubleshooting even easier

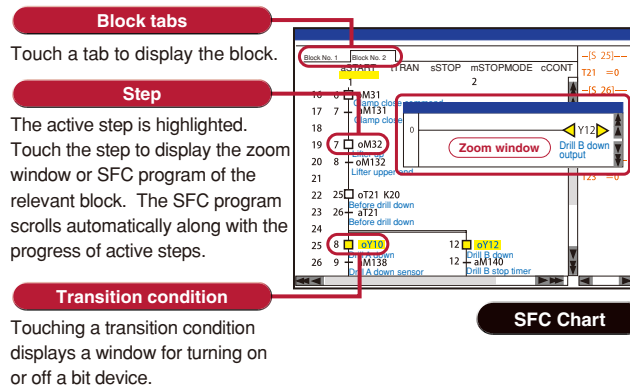
## GT 16 GT 15 SFC monitor function

MELSEC Q series PLC SFC programs (MELSP3, MELSP-L) can be monitored in a graphical format.

- Viewing the block list or active step list enables you to see the complete status at a glance.
- Touch an SFC chart or a zoom window to specify a device. Then, the Ladder Monitor function displays other sequence programs that use the specified device.
- A device test can easily be conducted from a SFC chart or block list.
- Save programs and comments in the CF card of the GOT. They can be retrieved at a moment's notice.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

- \* : Supported by XGA/SVGA/VGA models.
- \* : Q00UJ/Q00U/Q01U/Q10UD(E)/H/Q20UD(E)/H/Q50UDEH/Q100UDEHCPU are not supported.



# Simple and easy!

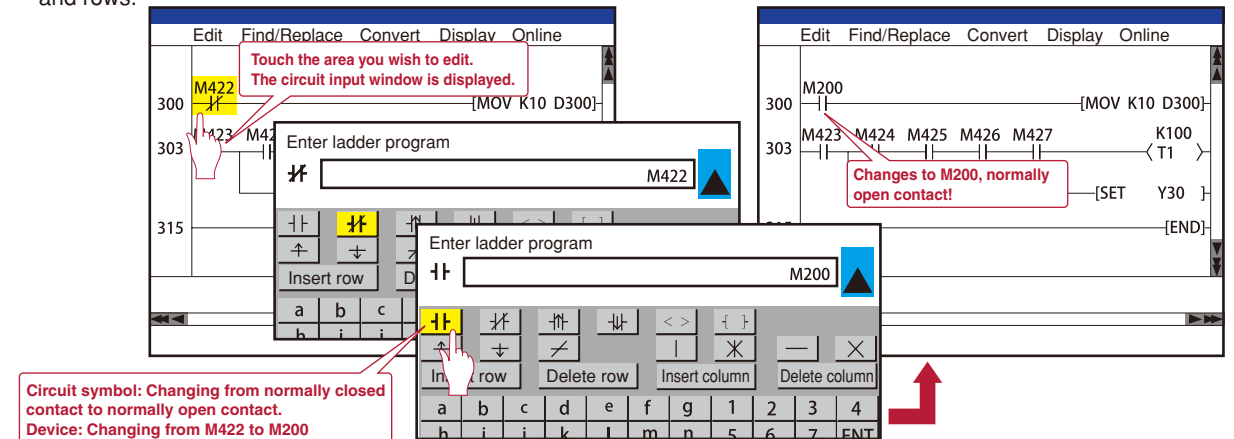
Use the GOT to correct ladder programs, no need for a PC!

## GT 16 GT 15 Ladder editor function

Sequence programs of Mitsubishi PLC Q Series (Q Mode) and CNC C70 can be edited in the ladder format.

### Ladder programs can easily be edited on the GOT at the worksite

- Just touch the portion (e.g. contact points, vertical lines) you want to edit in the ladder program. You can enter, change, or delete circuit symbols and devices. You can also insert or delete vertical lines and horizontal lines as well as columns and rows.



### Writing into PLC while it is in operation

- Edited programs can be written from GOT to a PLC even if it is in operation. You do not need to stop equipment in operation to correct ladder programs. **NEW**
- Remotely change the PLC's mode to "STOP" or "RUN" from the GOT.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

- \* : Supported by XGA/SVGA/VGA models excluding 5.7" types.
- \* : QnPHCPU/QnPRHCPU/Q50UDEH/Q100UDEHCPU are not supported.

- Search and replace of devices makes it easy to locate the point to be edited. You can also make two or more modifications in one operation.
- Statements and notes can be edited.

### Long access range and convenient functions for efficient maintenance!

- Besides a directly connected PLC, you can edit multiple programs on another station's PLC, multi CPU, or CPU in the same network.
- You can view current values, perform a search, and conduct a device test.
- The one-touch ladder jump function is available. This is helpful to identify problem causes.

Use the GOT to monitor a motion SFC program

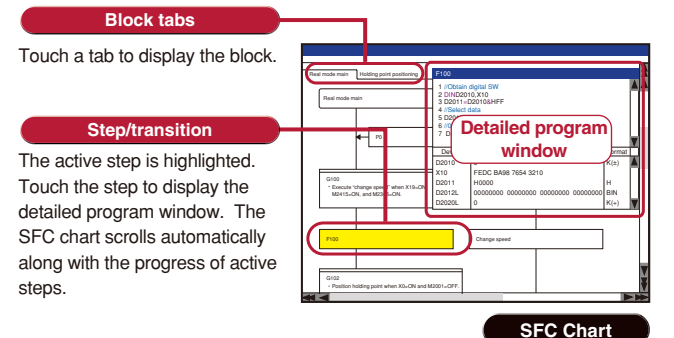
## GT 16 GT 15 Motion SFC monitor function

Motion SFC programs of the Mitsubishi Motion Controller (Q Series) can be monitored.

- Viewing the batch program monitor or the active step list enables you to see the complete status at a glance.
- The detailed program window allows you to monitor programs and current values of operation control steps and transitions.
- Save programs in the CF card of the GOT. They can be retrieved at a moment's notice.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

- \* : Supported by XGA/SVGA/VGA models.



For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

Q Platform

MELSEC Process Control + GOT1000

Specifications, External Dimensions

List of Connectable Models, etc.

# Functions designed to support maintenance work significantly reduce downtime!

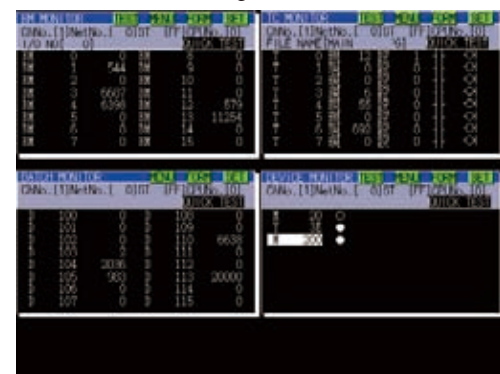
For maintenance personnel

## PLC device monitoring/changes

GRAPHIC OPERATION TERMINAL GOT1000

### System monitor function

- Mitsubishi PLC CPU devices can be monitored and changed.
- \* : Only monitoring, but not changing device values and other operations, is available with the QSCPU.
- The current values and setting values of timers (T) and counters (C) can be changed.
- The buffer memory (BM) of a special function unit can be monitored and changed.

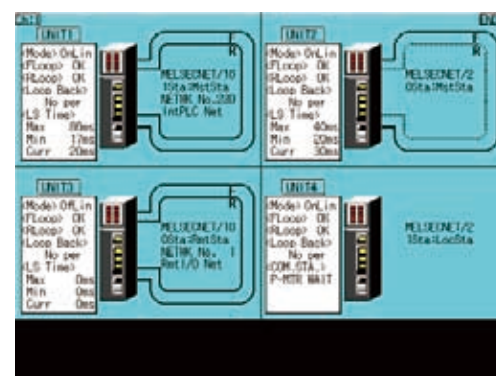


## At-a-glance monitoring of network status

GRAPHIC OPERATION TERMINAL GOT1000

### Network monitor function

- Enable monitoring of network line conditions of the CC-Link IE Control network, MELSECNET/H, MELSECNET/10, and MELSECNET II on a dedicated screen.
- Communication line and information from the host and other stations can be monitored to check the communication status.



## Easy adjustment of Q series motion controller

GRAPHIC OPERATION TERMINAL GOT1000

### Q series motion monitor function

- Up to 3 Q-type motion controllers can be used on a single base, with monitoring and parameter settings possible.
- Access to other stations is also possible.
- <Objective models>
  - Q172D/Q173DCPU (-S1) • Q170MCP
  - Q172H/Q173HCP • Q172(N)/Q173(N)CPU
- \* : Supported only if the Q series motion controller CPU has the SV13/SV22 OS version.
- Moreover, available functions of the Q series motion monitor vary according to the CPU type.

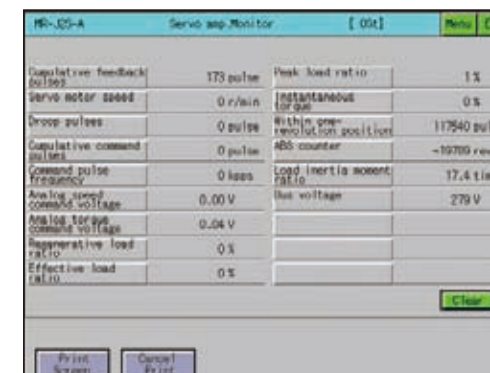


## Easy startup and adjustment of a servo amplifier

GRAPHIC OPERATION TERMINAL GOT1000

### Servo amplifier monitor function

- In a system which outputs pulse strings, the GOT can be connected to a servo amplifier in a serial connection to perform the following operations: set up, monitoring, alarm display, diagnosis, parameter setting, and test operations.
- \* : Available monitoring functions vary according to the servo amplifier type.



## Easy-to-understand display of buffer memory values and I/O information

GRAPHIC OPERATION TERMINAL GOT1000

### Intelligent unit monitor function

- Buffer memory values of intelligent function units and the ON/OFF status of I/O units can be monitored and changed.
- When a QCPU (Q mode), a QSCPU or a LCPU is in use, CPU operating status and existing errors can be monitored by PLC diagnosis.
- The status of the I/O function of LCPU can be checked.
- \* : Supported by XGA/SVGA/VGA models.



## Easy maintenance of MELSEC-L Series

GRAPHIC OPERATION TERMINAL GOT1000

### MELSEC-L troubleshooting function

- The maintenance screen dedicated to LCPU is installed. Without designing new screens and even without using a personal computer, you can check CPU status/error information easily.
- Just touch the dedicated screen. You can jump to a function screen such as the intelligent unit monitor to quickly take corrective actions on site.



## Save space and cost when no dedicated display device is required

GRAPHIC OPERATION TERMINAL GOT1000

### CNC monitor function/CNC data I/O function

- CNC monitor function**
  - Connecting to a CNC (C70, C6/C64) enables functions such as position display and alarm diagnosis, and allows tool offset parameters to be set.
- CNC data I/O function**
  - This function can be used to copy and delete CNC C70 work programs, parameters, etc.



An optional device may be necessary. For details, see "Selection of optional units and devices" (page 67).

\* : Supported by XGA/SVGA models.

## Convenient method for minor program changes onsite

GRAPHIC OPERATION TERMINAL GOT1000

### List editor for A/List editor for FX

- MELSEC-A series, FX series PLC sequence programs can be edited in list format (instruction word).
- Permits minor program changes onsite, even without a peripheral device.
- Used together with the ladder monitor function, the GT16 and GT15 can edit sequence programs while viewing the ladder data.



For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

Q Platform

MELSEC Process Control + GOT1000

Specifications, External Dimensions


List of Connectable Models, etc.



# The GT10 enhances its specifications to create a better selection


## Enhanced screen size lineup, ranging from small to medium

The GT10 now offers line up of models with 5.7" and 4.7" screens, enabling more flexible screen layouts. The 4.5" and 3.7" wide screen models are also available with a white frame.




**GT1050/GT1055** 5.7 inch

- QVGA 320 × 240 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen




**GT1040/GT1045** 4.7 inch

- QVGA 320 × 240 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen




**GT1030** 4.5 inch

- 288 × 96 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen




**GT1020** 3.7 inch


- 160 × 64 dots
- Analog touch panel
- Minimum touch key size: 2 × 2 dots
- Maximum number of touch keys: 50/Screen




**Black frame**



**White frame**



**Black frame**



**White frame**

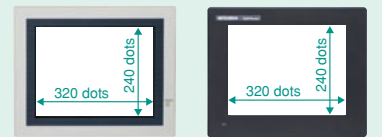
## Similar dimensions to the F900 Series allows for simple replacement without panel design changes\*1

\*1 : When the F940GOT is replaced with the GT1050/GT1055 or when the F930GOT is replaced with the GT1030

### GT1050/GT1055

The GT1050, GT1055, and F940GOT are of the same size, 5.7", with the same LCD, QVGA 320 × 240 dots. They are highly compatible.

#### F940GOT ▶ GT1050/GT1055



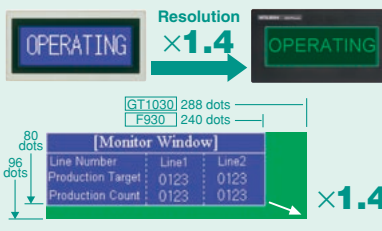
● QVGA 320 × 240 dots in each model

### GT1030

The GT1030 has the same panel mounting dimensions as the F930GOT yet with improved resolution\*2.

\*2 : 1.44 times compared with the F930GOT

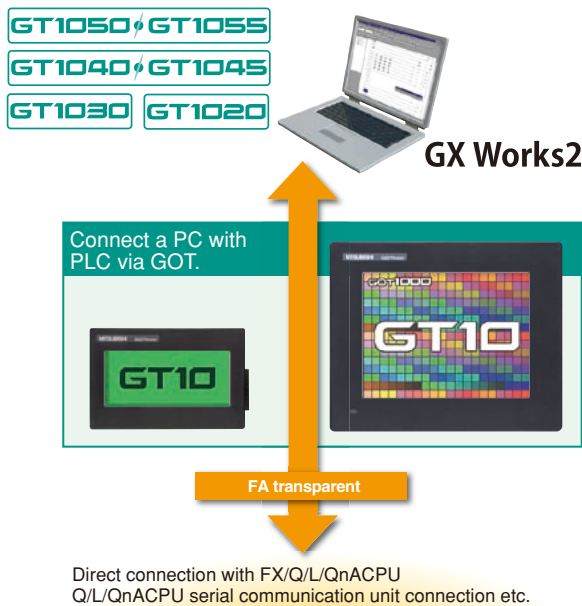
#### F930GOT ▶ GT1030



Resolution ×1.4

Line Number 0123, Production Target 0123, Production Count 0123

## FA transparent function



Connect a PC with PLC via GOT.

Direct connection with FX/Q/L/QnACPU Q/L/QnACPU serial communication unit connection etc.

## GOT multi-drop connection

By using the serial multi-drop connection unit, the GT01-RS4-M, up to 16 GOT1000 units can be connected. The total distance can be up to 500m.



## Connection to Mitsubishi inverters and AC servos

Direct connection to Mitsubishi inverters and AC servo amplifiers with RS-485 makes it easy to adjust parameter settings etc.



\* : See relevant manuals for connectable hardware and software versions.

## Data transfer for improved user-friendliness and flexibility

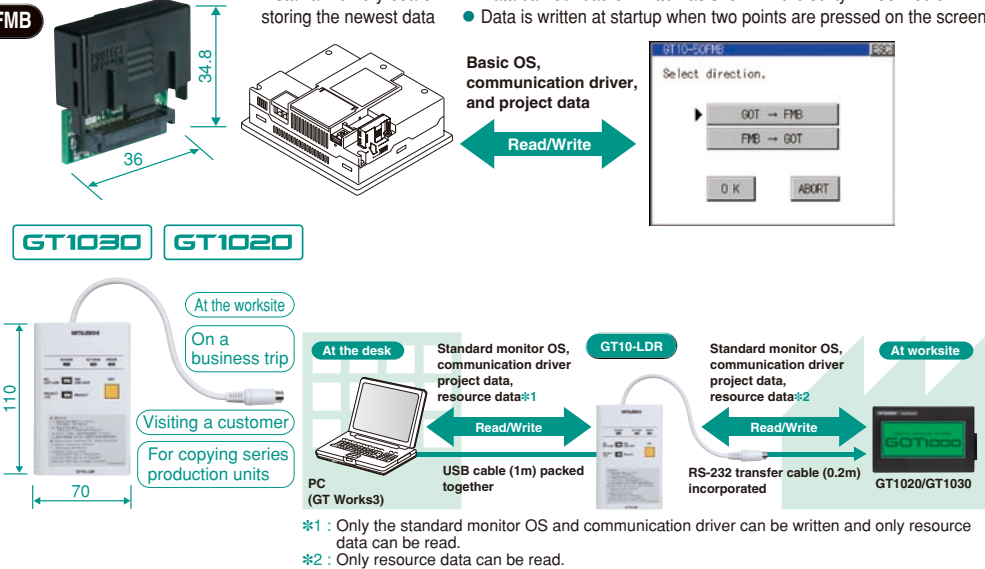
Optional memory board and memory loader provide a convenient way to download project data and operating system data to terminals without a PC. Furthermore when downloading to multiple units speed and efficiency is increased.

### Data transfer memory board GT10-50FMB

GT1050/GT1055  
GT1040/GT1045

### Memory loader GT10-LDR

- Has a compact design (70 × 110 mm), where the GOT transfer cable can be stored inside the body.
- Can write the standard monitor OS, communication driver, and project data.
- Can read the project data and resource data.
- Offers simple switch type operation, where the write-protect switch prevents erroneous reading.
- Does not require a power supply as power is supplied from the GOT or personal computer.



Install a memory board storing the newest data

Data can be read or written as shown in the utility window below.

Data is written at startup when two points are pressed on the screen.

Basic OS, communication driver, and project data

Read/Write

At the desk: Standard monitor OS, communication driver project data, resource data\*1

At the worksite: Standard monitor OS, communication driver project data, resource data\*2

\*1 : Only the standard monitor OS and communication driver can be written and only resource data can be read.

\*2 : Only resource data can be read.

## Common software functions

GT10 includes convenient functions of more advanced models in a compact package.

- Preinstalled OS to enable immediate use
- Displaying custom startup screens
- Choose your font
- Display in a variety of languages and comment switching function
- A variety of alarm functions and window functions
- The recipe function and multi-action switch for reducing sequence program load
- Screen save function

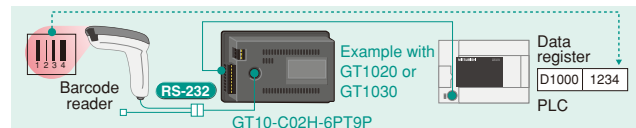
### Functionality

Common	○Screen (base: max. 1,024 screens, window: max. 512 windows) ○Fonts (standard (6 × 8 dots: Gothic, 16 dots: Gothic [except GT1020]/high quality/TrueType/Windows)
Drawing and graphics	○Screen switching function, screen call-up function, language switching function, password, system information, setting connected devices, and startup logo
Objects	○Straight lines, continuous lines, rectangular, polygons, chamfered quadrangles, circles, ellipses, arcs, elliptic arcs, circular sectors, and elliptic sectors ○Division indication ○Painting ○Images (BMP/DXF) ○Comment registration (basic comments and comment groups) ○Parts registration ○Data computing function ○Offset function ○Security function ○Lamp indications ○Touch switches ○Numeric indications and input ○ASCII indications and input ○Clock function (GT1050, GT1055, GT1040, GT1045, GT1030: Integrated clock, GT1020: Read from the PLC clock) ○Comment displays ○Alarm list and alarm history ○Parts display ○Panel meters ○Trend graphs, kinked line graphs, bar graphs, statistic crossbar graphs, statistic circular graphs ○Status monitor function ○Recipe function (4,000 points) ○Time action function

\* : See the manual for details.

## Connection to a barcode reader

The RS-232 connection port for personal computer can also be connected to a barcode reader.



# Ensuring reliable cooperation between controllers compatible with the iQ Platform, the GOT1000 represents all the controls.



Mitsubishi FA Integrated Platform optimizes front line of production

## Platform

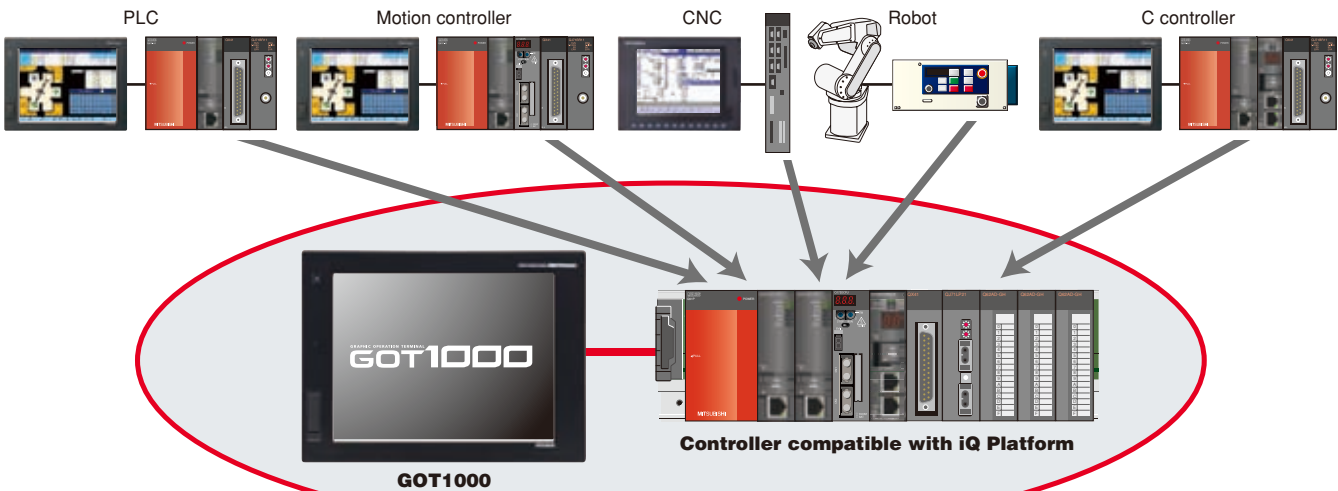
"iQ Platform," the next generation integrated platform

- integrated Q
- improved Quality
- intelligent & Quick
- innovation & Quest

With high speed control and convenience fully assured, controllers compatible with the iQ Platform and the GOT1000 are the keys to higher productivity at lower costs.

PLCs, motion controllers, CNCs, robot controllers, and C controllers are integrated into one as a controller compatible with the iQ Platform.

The GOT1000 can integrate different types of monitor units that were previously connected to each controller.



### ① Reducing engineering cost

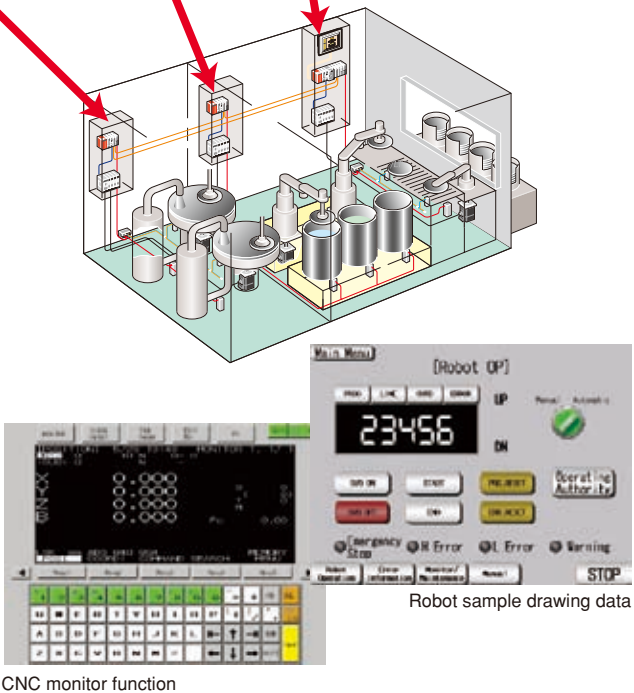
The screen design software "GT Works3" enables creation of monitor screens for each controller.

### ② Reducing spare parts cost

A single GOT1000 can integrate several types of monitor units connected to each controller, greatly reducing equipment cost.

### ③ Powerful support for maintenance

The GOT1000 has a variety of useful maintenance functions such as the "Q motion monitor function" and "CNC monitor function," very capable of and reliable for troubleshooting. (GT16 and GT15 only)



# Flexibly interacting with process control. Creating monitor systems without SCADA. MELSEC process control + GOT1000

"MELSEC process control" was developed for process control with general-purpose PLCs.

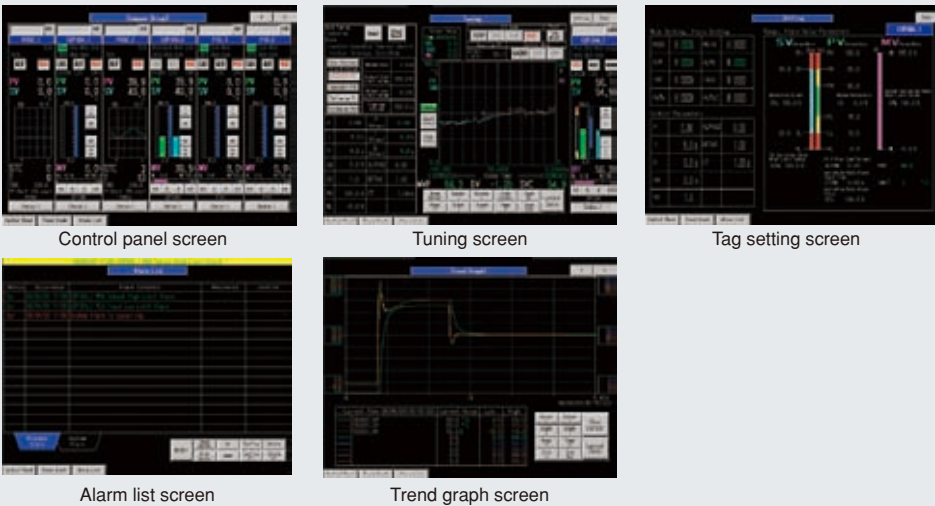
The GOT1000 can play an active role as the monitoring interface, offering various features and advantages such as excellent interaction that only a group of Mitsubishi brand units can develop and the ability to build monitoring systems without SCADA.

Three benefits that MELSEC process control and GOT1000 (GT16/GT15) can offer.

### ① PX Developer creates GOT process control screens automatically

Based on the information such as tags defined by PX Developer, process control monitor screens for the GOT can be created automatically, greatly reducing the time required for screen design. GT Designer2 can then customize the automatically created screens. (This function coming soon for GT Works3)

[Screen examples that can be created automatically]



### ② Utilizing GOT1000 & SoftGOT1000 data

Only by using GT Designer2 and PX Developer, a process control monitor system can be developed for both the worksite (GOT1000) and the remote monitoring location (GT SoftGOT1000). Screen data can be shared to monitor screens efficiently.

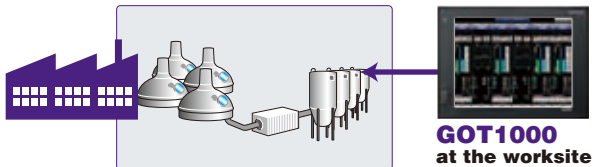
### ③ A variety of GOT1000 functions that a process control CPU can also use

Hooked up to the GOT1000, a process control CPU can use a variety of functions that are characteristic of the GOT1000 such as the backup and restoration functions.

Compatible with Q02PH and Q06PHCPU. Best fit for small-scale process equipment!

A SCADA system is not required at the worksite or monitoring location, making it simple and easy to build up a "process control monitor system."

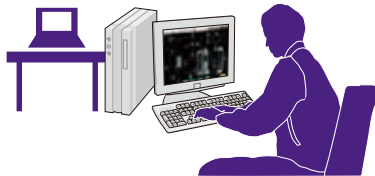
Worksite



- Excellent anti-environment performance (IP67f) for operation in various types of worksites.
- The function to automatically generate process control screens enables process control monitor screens to be created simply and easily, which was previously a time consuming task.
- A variety of functions that are characteristic of the GOT1000 are available for use such as the operation log, operator authentication, and backup/restoration functions.
- The VESA mount adapter is available.

Monitoring location

GT SoftGOT1000 in the monitoring location



- Best fit for monitoring in a monitor room because of being operable on a personal computer.
- Touch switches on the GT SoftGOT1000 can call up screens such as face plates and the alarm list of the PX Developer monitor tool.
- Since GOT1000 screen data can be used for GT SoftGOT1000 without modification, no screens need to be created just for the monitoring location.

\* : For more details, see "GT SoftGOT1000" (page 14).

\* : Connectable models and usable functions vary depending on the GOT main unit. For more details, see "List of connectable models" (page 51), "Function list" (page 56) and "Notes for use" (page 67).



# Specifications

## GT16

### General specifications

Item		Specification				
Operating ambient temperature*1	Display	0°C to 50°C*5				
	Other than display	0°C to 55°C*5				
Storage ambient temperature		-20°C to 60°C				
Operating ambient humidity		10 to 90%RH, no condensation				
Storage ambient humidity		10 to 90%RH, no condensation				
Vibration resistance	Conforming to JIS B 3502 and IEC 61131-2		Frequency	Acceleration	Half amplitude	Sweep count
		Under intermittent vibration	5 to 9Hz	—	3.5mm	10 times each in X, Y and Z directions
			9 to 150Hz	9.8m/s <sup>2</sup>	—	
		Under continuous vibration	5 to 9Hz	—	1.75mm	—
			9 to 150Hz	4.9m/s <sup>2</sup>	—	
Impact resistance		Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)				
Operating atmosphere		No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)				
Operating altitude*2		2000m or less				
Installation location		In control panel*6				
Overvoltage category*3		II or lower				
Contamination level*4		2 or less				
Cooling method		Self-cooling				
Grounding		Type D grounding (100Ω or less). Connect to panel if unable to ground.				

\*1 : The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a multimedia unit (GT16M-MMR), MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).

\*2 : Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation.  
Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.

\*3 : Assuming that the device is connected at some point between a public power distribution network and local system equipment.  
Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.

\*4 : Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes contamination with non-conductive matter only, though momentary conductivity may occur due to occasional condensation.

\*5 : 0 to 40°C for GT1665HS

\*6 : Excluding GT1665HS

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

### Performance specifications

Item		Specification					
		GT1695M-XTBA GT1695M-XTBD	GT1685M-STBA GT1685M-STBD	GT1675M-STBA GT1675M-STBD	GT1675M-VTBA GT1675M-VTBD	GT1675-VNBA GT1675-VNBD	GT1672-VNBA GT1672-VNBD
Display *1	Type	TFT color LCD (high-brightness, wide viewing angle)				TFT color LCD	
	Screen size	15"	12.1"	10.4"			
	Resolution	XGA: 1024 × 768 [dots]	SVGA: 800 × 600 [dots]	SVGA: 800 × 600 [dots]	VGA: 640 × 480 [dots]		
	Display size	304.1(W) × 228.1(H)[mm]	246(W) × 184.5(H)[mm]	211(W) × 158(H)[mm]			
	No. of displayed characters	16-dot standard font: 64 chars. × 48 lines (2-byte) 12-dot standard font: 85 chars. × 64 lines (2-byte)	16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)		16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)		
	Display colors	65,536 colors				4,096 colors	16 colors
	View angle*2	Right/left: 75°, Up: 50°, Down: 60°	Right/left: 80°, Up: 60°, Down: 80°	Up/down/right/left: 88°		Right/left: 45°, Up: 30°, Down: 20°	
	Intensity	450 [cd/m <sup>2</sup> ]	470 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	450 [cd/m <sup>2</sup> ]	200 [cd/m <sup>2</sup> ]	
	Intensity adjustment	8-step adjustment				4-step adjustment	
	Life	Approx. 52,000 hours (operating ambient temperature: 25°C)		Approx. 43,000 hours (operating ambient temperature: 25°C)		Approx. 52,000 hours (operating ambient temperature: 25°C)	
Backlight		Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.					
Touch panel *10	Life*3	Approx. 50,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)					
	Type	Analog resistive type					
	Key size	Min. 2 × 2 [dots] (per key)					
	No. of simultaneous touch points	Simultaneous touch prohibited*4 (1 point only)					
Human sensor	Life	1,000,000 times or more (operating force 0.98N or less)					
	Detection distance	1 [m]					—
	Detection range	Right/left/up/down: 70°					—
	Detection delay time	0 to 4 [sec]					—
	Detection temperature	Temperature difference to be 4°C or more between human body and ambient air					—
Memory *5	C drive	15MB built-in flash memory (for saving project data and OS)				11MB built-in flash memory (for saving project data and OS)	
	Life (No. of writings)	100,000 times					
Battery		GT15-BAT type lithium battery					
Backed up data	Life	Clock data, maintenance time notification data, system log data and SRAM user area (500KB) Approx. 5 years (operating ambient temperature: 25°C)					
Built-in interface	RS-232*7	RS-232, 1ch    Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data upload/download, OS installation, FA transparent function)					
	RS-422/485	RS-422/485, 1ch    Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: 14-pin (female)    Application: Communication with connected devices					
	Ethernet	Data transfer system: 100BASE-TX, 10BASE-T, 1ch*8 Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, gateway function, connection to personal computer (project data upload/download, OS installation, MES interface function)					
	USB	USB (full-speed 12Mbps), host 1ch Connector shape: TYPE-A    Application: Data transfer and storage					
		USB (full-speed 12Mbps), device 1ch Connector shape: TYPE Mini-B    Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function)					
	CF card	Compact flash slot, 1ch Connector shape: TYPE I    Application: Data transfer, data storage, GOT startup					
	Optional function board	1ch for optional function board installation					
	Extension unit*7	2ch for communication unit/optional unit installation					
	Buzzer output		Single tone (tone length adjustable)				
Protective construction		JEM1030    Front: IP67*9    In panel: IP2X					
External dimensions (without USB port cover)		397(W) × 296(H) × 61(D)[mm]	316(W) × 242(H) × 52(D)[mm]	303(W) × 214(H) × 49(D)[mm]			
Panel cut dimensions		383.5(W) × 282.5(H)[mm]	302(W) × 228(H)[mm]	289(W) × 200(H)[mm]			
Weight (excl. mounting brackets)		5.0[kg]	2.7[kg]	2.1[kg]		2.3[kg]	
Applicable software packages	Screen design software	GT Works3    Version1.17T or later					
	Simulation software						

### Power supply specifications

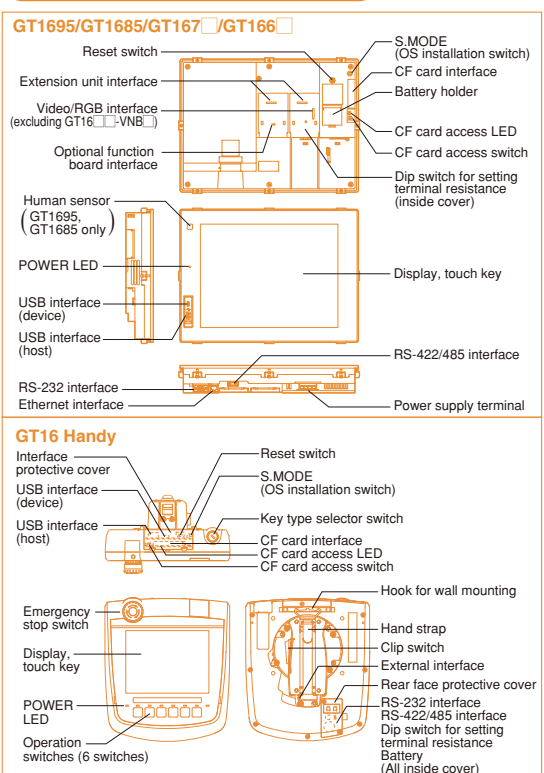
Item	Specification						
	GT1695M-XTBA	GT1685M-STBA	GT1675M-STBA GT1675M-VTBA GT1675-VNBA GT1672-VNBA GT1665M-STBA GT1665M-VTBA GT1662-VNBA	GT1695M-XTBD	GT1685M-STBD	GT1675M-STBD GT1675M-VTBD GT1675-VNBD GT1672-VNBD GT1665M-STBD GT1665M-VTBD GT1662-VNBD	GT1665HS-VTBD
Input power supply voltage	100 to 240VAC (+10%, -15%)			24VDC (+25%, -20%)			24VDC (+10%, -15%)
Input frequency	50/60Hz ±5%			—			
Input maximum apparent power	150VA (at max. load)	110VA (at max. load)	100VA (at max. load)	—			
Power consumption	64W or less	46W or less	39W or less	60W or less	40W or less	38W or less	11.6W or less
With backlight off	38W or less	32W or less	30W or less	30W or less	26W or less	27W or less	8.2W or less
Inrush current	28A or less (4ms, at max. load)			12A or less (75ms, at max. load)	12A or less (55ms, at max. load)		30A or less (2ms, at max. load)
Permissible instantaneous failure time	Within 20ms (100VAC or more)			Within 10ms			Within 5ms
Noise resistance	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 1000Vp-p, noise width 1ms by noise simulator with noise frequency 30 to 100Hz
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground			500VDC for 1 minute between power supply terminal and ground			
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)						
Applicable wire size	0.75 to 2 [mm²]*1						
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A*1						
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]*1						

\*1 : Excluding GT1665HS

### Performance specifications

Item		Specification			
		GT1665M-STBA GT1665M-STBD	GT1665M-VTBA GT1665M-VTBD	GT1662-VNBA GT1662-VNBD	GT1665HS-VTBD
Display*1	Type	TFT color LCD (high-brightness, wide viewing angle)		TFT color LCD	TFT color LCD (high-brightness, wide viewing angle)
	Screen size	8.4"		6.5"	
	Resolution	SVGA: 800 × 600 [dots]		VGA: 640 × 480 [dots]	
	Display size	171(W) × 128(H)[mm]		132.5(W) × 99.4(H)[mm]	
	No. of displayed characters	16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)		16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)	
	Display colors	65,536 colors		16 colors	65,536 colors
	View angle*2	Right/left: 80°, Up: 80°, Down: 60°		Right/left: 45°, Up/Down: 20°	Right/left: 80°, Up: 60°, Down: 80°
	Intensity	400 [cd/m <sup>2</sup> ]		200 [cd/m <sup>2</sup> ]	550 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment		4-step adjustment	8-step adjustment
	Life	Approx. 43,000 hours (operating ambient temperature: 25°C)		Approx. 52,000 hours (operating ambient temperature: 25°C)	Approx. 41,000 hours (operating ambient temperature: 25°C)
Backlight		Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.			
Touch panel*10	Life*3	LED Backlight off time and screen save time can be set.			
	Life	Approx. 50,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)			
Human sensor	Type	Analog resistive type			
	Key size	Min. 2 × 2 [dots] (per key)			
	No. of simultaneous touch points	Simultaneous touch prohibited*4 (1 point only)			
	Life	1,000,000 times or more (operating force 0.98N or less)			
Memory*5	C drive	15MB built-in flash memory (for saving project data and OS)		11MB built-in flash memory (for saving project data and OS)	15MB built-in flash memory (for saving project data and OS)
	Life (No. of writings)	100,000 times		100,000 times	100,000 times
Battery		GT15-BAT type lithium battery			
Built-in interface	Backed up data	Clock data, maintenance time notification data, system log data and SRAM user area (500KB)			
	Life	Approx. 5 years (operating ambient temperature: 25°C)			
	RS-232*7	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data upload/download, OS installation, FA transparent function)			
	RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: 14-pin (female) Application: Communication with connected devices			
	Ethernet	Data transfer system: 100BASE-TX, 10BASE-T, 1ch Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, gateway function, connection to personal computer (project data upload/download, OS installation, MES interface function)			
	USB	USB (full-speed 12Mbps), host 1ch Connector shape: TYPE-A Application: Data transfer and storage USB (full-speed 12Mbps), device 1ch Connector shape: TYPE Mini-B Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function)			
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup			
	Optional function board	1ch for optional function board installation			
	Extension unit*7	2ch for communication unit/optional unit installation			
	Buzzer output	Single tone (tone length adjustable)			
Protective construction		JEM1030 Front: IP67*9 In panel: IP2X			
External dimensions (without USB port cover)		241(W) × 190(H) × 52(D)[mm]		201(W) × 230(H) × 97(D)[mm]	
Panel cut dimensions		227(W) × 176(H)[mm]		—	
Weight (excl. mounting brackets)		1.7[kg]		1.8[kg]	1.2[kg] (main unit only)
Applicable software packages	Screen design software				
	Simulation software				

### Component names



\*1 : On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero.

Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged.

\*2 : LCD panels have characteristics of tone reversal. Note that even within the indicated view angles, the screen display may not be clear enough depending on the display color.

\*3 : Using the GOT screen save/backlight OFF functions prevents screen burn-in and extends backlight life.

\*4 : An analog resistive touch display is used. When 2 points on the screen are touched simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid touching 2 points on the screen simultaneously.

\*5 : The memory is ROM that permits overwriting of new data without having to delete the existing data.

\*6 : With the USB environmentally protective cover is on, pressing firmly the portion marked "△" makes it conform to IP67 (JEM1030). (The USB interface conforms to IP2X (JEM1030) when a USB cable or a USB memory is connected.) However, this does not guarantee protection in all users' environments.

The unit may not be used in an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.

\*7 : Where more than one extension unit, barcode reader, and RFID controller are used, the sum of their current consumptions should be within the current level which the GOT can supply.

For the currents which the extension units, barcode reader, and RFID controller consume and the current level which the GOT can supply, see "Notes for use" (page 67).

Specifications

GT15

General specifications

Item		Specification				
Operating ambient temperature*1	Display	0°C to 50°C				
	Other than display	0°C to 55°C				
Storage ambient temperature		-20°C to 60°C				
Operating ambient humidity*2		10 to 90%RH, no condensation				
Storage ambient humidity*2		10 to 90%RH, no condensation				
Vibration resistance*3	Conforming to JIS B 3502 and IEC 61131-2		Frequency	Acceleration	Half amplitude	Sweep count
		Under intermittent vibration	5 to 9Hz	—	3.5mm	10 times each in X, Y and Z directions
			9 to 150Hz	9.8m/s <sup>2</sup>	—	
		Under continuous vibration	5 to 9Hz	—	1.75mm	—
	9 to 150Hz	4.9m/s <sup>2</sup>	—			
Impact resistance		Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)				
Operating atmosphere		No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)				
Operating altitude*4		2000m or less				
Installation location		In control panel				
Overvoltage category*5		II or lower				
Contamination level*6		2 or less				
Cooling method		Self-cooling				
Grounding		Type D grounding (100Ω or less). Connect to panel if unable to ground.				

- \*1 : The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).
- \*2 : Water bulb temperature for STN display type must be 39°C or lower.
- \*3 : Refer to the Communication Unit User's Manual for vibration resistance specifications when using the MELSECNET/10 communication unit (GT15-J75J1LP23-Z or GT15-J75J1BR13-Z) or CC-Link communication unit (GT15-J75J61BT13-Z). (The specifications of communication units are different from those of the GOT main unit.)
- \*4 : Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation.  
Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.
- \*5 : Assuming that the device is connected at some point between a public power distribution network and local system equipment.  
Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.
- \*6 : Index that indicates the level of foreign conductive matter in the operating environment of the device.  
Contamination level 2 denotes contamination by non-conductive matter only, though momentary conductivity may occur due to occasional condensation.
- Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

Performance specifications

Item		Specification							
		GT1595-VTBA GT1595-VTBD	GT1585V-STBA GT1585V-STBD GT1585-STBA GT1585-STBD	GT1575V-STBA GT1575V-STBD GT1575-VTBA GT1575-VTBD	GT1575-VTBA GT1575-VTBD	GT1575-VNBA GT1575-VNBD	GT1572-VNBA GT1572-VNBD	GT1565-VTBA GT1565-VTBD	GT1562-VNBA GT1562-VNBD
Display*1	Type	TFT color LCD (high-brightness, wide viewing angle)				TFT color LCD		TFT color LCD (high-brightness, wide viewing angle)	TFT color LCD
	Screen size	15"	12.1"	10.4"				8.4"	
	Resolution	XGA: 1024 × 768 [dots]	SVGA: 800 × 600 [dots]		VGA: 640 × 480 [dots]				
	Display size	304.1(W) × 228.1(H) [mm]	246(W) × 184.5(H) [mm]	211(W) × 158(H) [mm]				171(W) × 128(H) [mm]	
	No. of displayed characters	16-dot standard font: 64 chars. × 48 lines (2-byte) 12-dot standard font: 85 chars. × 64 lines (2-byte)	16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)		16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)				
	Display colors	65,536 colors				256 colors	16 colors	65,536 colors	16 colors
	View angle*3	Right/left: 75°, Up: 50°, Down: 60°	GT1585V Right/left: 60°, Up: 40°, Down: 50° GT1585 Right/left: 65°, Up: 45°, Down: 55°	Right/left/up/down: 85°	Right/left/up/down: 85°	Right/left: 45°, Up: 30°, Down: 20°		Right/left: 65°, Up: 50°, Down: 60°	Right/left: 45°, Up: 20°, Down: 20°
	Contrast adjustment	—							
	Intensity	450 [cd/m <sup>2</sup> ]	GT1585V: 350 [cd/m <sup>2</sup> ] GT1585: 400 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	200 [cd/m <sup>2</sup> ]		380 [cd/m <sup>2</sup> ]	150 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment				4-step adjustment		8-step adjustment	4-step adjustment
	Life	Approx. 52,000 hours (operating ambient temperature: 25°C)	Approx. 50,000 hours (operating ambient temperature: 25°C)		Approx. 41,000 hours (operating ambient temperature: 25°C)				
Backlight		Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.							
Touch panel*9	Life*4	Approx. 50,000 hours or more		Approx. 40,000 hours or more					
		(Time for display intensity reaches 50% at operating ambient temperature of 25°C)							
	Type	Analog resistive type	Matrix resistive type						
	No. of touch keys	—	1900 keys/screen (38 lines × 50 columns)		1200 keys/screen (30 lines × 40 columns)				
Human sensor	Key size	Min. 2 × 2 [dots] (per key)	Min. 16 × 16 [dots] (per key) (16 × 8 only on lowermost line)		Min. 16 × 16 [dots] (per key)				
	No. of simultaneous touch points	Simultaneous touch prohibited*5 (1 point only)	Max. 2 points						
	Life	1,000,000 times or more (operating force 0.98N or less)							
	Detection distance	1 [m]			—				
	Detection range	Right/left/up/down: 70°		—					
	Detection delay time	0 to 4 [sec]		—					
	Detection temperature	Temperature difference to be 4°C or more between human body and ambient air		—					
Memory*6	C drive	9MB built-in flash memory (for saving project data and OS)				5MB built-in flash memory (for saving project data and OS)		9MB built-in flash memory (for saving project data and OS)	5MB built-in flash memory (for saving projectdata and OS)
	Life (No. of writings)	100,000 times							
Battery		GT15-BAT type lithium battery (optional)							
	Backed up data	Clock data and maintenance time notification data							
	Life	Approx. 5 years (operating ambient temperature: 25°C)							
	RS-232*8	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data upload/download, OS installation, FA transparent function)							
Built-in interface	USB	USB (full-speed 12Mbps), device 1ch Connector shape: TYPE Mini-B Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function)							
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup							
	Optional function board	1ch for optional function board installation							
	Extension unit*8	2ch for communication unit/optional unit installation							
Buzzer output		Single tone (tone length adjustable)							
Protective construction		JEM1030 Front: IP67*7 In panel: IP2X							
External dimensions (without USB port cover)		397(W) × 296(H) × 61(D) [mm]	316(W) × 242(H) × 52(D) [mm]	303(W) × 214(H) × 49(D) [mm]				241(W) × 190(H) × 52(D) [mm]	
Panel cut dimensions		383.5(W) × 282.5(H) [mm]	302(W) × 228(H) [mm]	289(W) × 200(H) [mm]				227(W) × 176(H) [mm]	
Weight (excl. mounting brackets)		5.0 [kg]	2.8 [kg]	GT1575V: 2.3 [kg] GT1575: 2.4 [kg]	2.4 [kg]	2.3 [kg]		1.9 [kg]	
Applicable software packages	Screen design software	GT Works3 Version1.17T or later							
	Simulation software								

Power supply specifications

Item	Specification									
	GT1595-XTBA	GT1585V-STBA GT1585-STBA	GT1575V-STBA GT1575-STBA GT1575-VTBA GT1575-VNBA GT1572-VNBD GT1565-VTBA GT1562-VNBA	GT1595-XTBD	GT1585V-STBD GT1585-STBD	GT1575V-STBD GT1575-STBD GT1575-VTBD GT1575-VNBD GT1572-VNBD GT1565-VTBD GT1562-VNBD	GT1555-VTBD	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Input power supply voltage	100 to 240VAC (+10%, -15%)			24VDC (+25%, -20%)						
Input frequency	50/60Hz ±5%			—						
Input maximum apparent power	110VA (at max. load)			—						
Power consumption	56W or less	41W or less	39W or less	57W or less (2380mA/24VDC)	43W or less (1790mA/24VDC)	41W or less (1710mA/24VDC)	19W or less (790mA/24VDC)	18W or less (750mA/24VDC)	17W or less (710mA/24VDC)	15W or less (620mA/24VDC)
With backlight off	30W or less	28W or less	28W or less	32W or less (1330mA/24VDC)	30W or less (1250mA/24VDC)	30W or less (1250mA/24VDC)	14W or less (580mA/24VDC)	13W or less (540mA/24VDC)		
Inrush current	50A or less (4ms, at max. load)	45A or less (4ms, at max. load)	40A or less (4ms, at max. load)	100A or less (4ms, at max. load)	115A or less (1ms, at max. load)	115A or less (1ms, at max. load)	67A or less (1ms, at max. load)	60A or less (1ms, at max. load)		
Permissible instantaneous failure time	Within 20ms (100VAC or more)			Within 10ms						
Noise resistance	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz						
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground			500VDC for 1 minute between power supply terminal and ground						
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)									
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]									
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A									
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]									

Performance specifications

Item		Specification			
		GT1555-VTBD	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Display*1*2	Type	TFT color LCD (high-brightness, wide viewing angle)		STN color LCD	STN monochrome (black/white) LCD
	Screen size	5.7"			
	Resolution	VGA: 640 × 480 [dots]	QVGA: 320 × 240 [dots]		
	Display size	115(W) × 86(H) [mm]			
	No. of displayed characters	16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)	16-dot standard font: 20 chars. × 15 lines (2-byte) 12-dot standard font: 26 chars. × 20 lines (2-byte)		
	Display colors	65,536 colors		4,096 colors	Monochrome 16 gray scale
	View angle*3	Right/left: 80°, Up: 80°, Down: 70°	Right/left: 70°, Up: 70°, Down: 50°	Right/left: 55°, Up: 65°, Down: 70°	Right/left: 45°, Up: 20°, Down: 40°
	Contrast adjustment	—		16-step adjustment	
	Intensity	350 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	220 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment			
Life	Approx. 50,000 hours (operating ambient temperature: 25°C)				
Backlight		Cold-cathode fluorescent tube (not replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.			
	Life*4	Approx. 75,000 hours or more			Approx. 58,000 hours or more
		(Time for display intensity reaches 50% at operating ambient temperature of 25°C)			
Touch panel*9	Type	Matrix resistive type			
	No. of touch keys	1200 keys/screen (30 lines × 40 columns)	300 keys/screen (15 lines × 20 columns)		
	Key size	Min. 16 × 16 [dots] (per key)			
	No. of simultaneous touch points	Max. 2 points			
	Life	1,000,000 times or more (operating force 0.98N or less)			
Human sensor	Detection distance	—			
	Detection range	—			
	Detection delay time	—			
	Detection temperature	—			
Memory*6	C drive	9MB built-in flash memory (for saving project data and OS)			
	Life (No. of writings)	100,000 times			
Battery		GT15-BAT type lithium battery (optional)			
	Backed up data	Clock data and maintenance time notification data			
	Life	Approx. 5 years (operating ambient temperature: 25°C)			
Built-in interface	RS-232*8	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data upload/download, OS installation, FA transparent function)			
	USB	USB (full-speed 12Mbps), device 1ch Connector shape: TYPE Mini-B Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function)			
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup			
	Optional function board	1ch for optional function board installation			
	Extension unit*8	1ch for communication unit/optional unit installation			
Buzzer output		Single tone (tone length adjustable)			
Protective construction		JEM1030 Front: IP67*7 In panel: IP2X			
External dimensions (without USB port cover)		167(W) × 135(H) × 60(D) [mm]			
Panel cut dimensions		153(W) × 121(H) [mm]			
Weight (excl. mounting brackets)		1.1 [kg]			
Applicable software packages	Screen design software Simulation software	GT Works3 Version 1.17T or later			



Specifications

GT11 GT10

General specifications

Item		Specification						
Operating ambient temperature	Display	0°C to 50°C*5						
	Other than display	0°C to 55°C (horizontal installation), 0°C to 50°C (vertical installation)*5						
Storage ambient temperature		-20°C to 60°C						
Operating ambient humidity*1		10 to 90%RH, no condensation						
Storage ambient humidity*1		10 to 90%RH, no condensation						
Vibration resistance	Conforming to JIS B 3502 and IEC 61131-2		Frequency	Acceleration	Half amplitude	Sweep count		
			5 to 9Hz	—	3.5mm			
		Under intermittent vibration	9 to 150Hz	9.8m/s <sup>2</sup>	—	10 times each in X, Y and Z directions		
			Under continuous vibration	5 to 9Hz	—		1.75mm	
9 to 150Hz		4.9m/s <sup>2</sup>		—	—			
Impact resistance		Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)						
Operating atmosphere		Free from oil mist, corrosive gases, flammable gases and excessive conductive dusts or direct sun beams (The same applies to unit storage.)						
Operating altitude*2		2000m or less						
Installation location		In control panel*6						
Overvoltage category*3		Ⅱ or lower						
Contamination level*4		2 or less						
Cooling method		Self-cooling						
Grounding		Type D grounding (100Ω or less). Connect to panel if unable to ground.*7						

\*1 : Water bulb temperature for STN display type must be 39°C or lower.  
\*2 : Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation.  
\*3 : Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2500V for devices with ratings up to 300V.  
\*4 : Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes contamination by non-conductive matter only, though momentary conductivity may occur due to occasional condensation.  
\*5 : 0 to 40°C for GT115□HS  
\*6 : Excluding GT115□HS  
\*7 : The 5VDC type requires no grounding.

Performance specifications

Item		Specification							
		GT1155-QTBD	GT1155-QSBD	GT1150-QLBD	GT1155HS-QSBD	GT1150HS-QLBD	GT1155-QTBDQ GT1155-QTBDA	GT1155-QSBDQ GT1155-QSBD A	GT1150-QLBDQ GT1150-QLBDA
Display*1	Type	TFT color LCD	STN color LCD	STN monochrome (black/white) LCD	STN color LCD	STN monochrome (black/white) LCD	TFT color LCD	STN color LCD	STN monochrome (black/white) LCD
	Screen size	5.7"							
	Resolution	QVGA: 320 × 240 [dots]							
	Display size	115(W) × 86(H) [mm] (in horizontal display mode)				115(W) × 86(H) [mm]	115(W) × 86(H) [mm] (in horizontal display mode)		
	No. of displayed characters	16-dot standard font: 20 chars. × 15 lines (2-byte) 12-dot standard font: 26 chars. × 20 lines (2-byte) (in horizontal display mode)							
	Display colors	256 colors		Monochrome (black/white) 16 gray scale	256 colors	Monochrome (black/white) 16 gray scale	256 colors		Monochrome (black/white) 16 gray scale
	View angle	Right/left: 70°, Up: 70°, Down: 50° (in horizontal display mode)	• Right:left: 50°, Up: 50°, Down: 60° (Hardware versions A and B) (In horizontal display mode) • Right:left: 55°, Up: 65°, Down: 70° (Hardware version C or later) (In horizontal display mode)	Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)	• Right/left: 50°, Up: 50°, Down: 60° (Hardware versions A and B) • Right/left: 55°, Up: 65°, Down: 70° (Hardware version C or later)	Right/left: 45°, Up: 20°, Down: 40°	Right/left: 70°, Up: 70°, Down: 50° (in horizontal display mode)	Right/left: 55°, Up: 65°, Down: 70° (in horizontal display mode)	Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)
	Contrast adjustment	—	16-step adjustment				—	16-step adjustment	
	Intensity	400 [cd/m <sup>2</sup> ]	• 350 [cd/m <sup>2</sup> ] (Hardware versions A and B) • 380 [cd/m <sup>2</sup> ] (Hardware version C or later)	220 [cd/m <sup>2</sup> ]	• 350 [cd/m <sup>2</sup> ] (Hardware versions A and B) • 380 [cd/m <sup>2</sup> ] (Hardware version C or later)	220 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	220 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment							
Backlight	Life	Approx. 50,000 hours (operating ambient temperature: 25°C)							
	Life*2	Cold-cathode fluorescent tube (not replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set. Approx. 75,000 hours or more Approx. 75,000 hours or more Approx. 75,000 hours or more Approx. 54,000 hours or more Approx. 75,000 hours or more Approx. 54,000 hours or more							
Touch panel	Type	Matrix resistive type							
	No. of touch keys	300 keys/screen (matrix consisting of 15 lines × 20 columns)							
	Key size	Min. 16 × 16 [dots] (per key)							
	No. of simultaneous touch points	Max. 2 points							
	Life	1,000,000 times or more (operating force 0.98N or less)							
Memory	C drive*3	3MB built-in flash memory (for saving project data and OS)							
	Life (No. of writings)	100,000 times							
Battery	D drive	512KB built-in SRAM (battery backup) GT11-50BAT type lithium battery							
	Backed up data	Clock data, alarm history and recipe data							
Built-in interface	Life	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)							
	Bus	—					1ch for QCPU (Q mode)/motion controller CPU (Q series) or 1ch for QnA/ACPU/motion controller CPU (A series) Application: For bus connection of PLC		
	RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female) Application: Communication with PLCs Terminal resistance*5: OPEN/110Ω/330Ω (switching by terminal resistance transfer switch)			—		—		
	RS-422/232	—			RS-422/232, 1ch (Select one when using.) Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Round type, 32-pin (male) Application: Communication with connected devices		—		
	RS-232	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data upload/download, OS installation, FA transparent function, etc.)			RS-232, 1ch, Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Mini-DIN 6-pin (female) Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function, etc.)		RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Connection to barcode reader/personal computer (project data upload/download, OS installation, FA transparent function, etc.)		
	USB	USB (full-speed 12Mbps), device 1ch Application: Connection to personal computer (project data upload/download, OS installation, FA transparent function)							
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer and data storage							
Buzzer output	Optional function board	Embedded in main unit							
		Single tone (tone length adjustable)							
External dimensions	Protective construction*4	JEM1030 Front: IP67f In panel: IP2X			JEM1030 IP65f (when external connecting cable is fitted)		JEM1030 Front: IP67f In panel: IP2X		
	(without USB port cover)	164(W) × 135(H) × 56(D) [mm]			176(W) × 220(H) × 93(D) [mm]		167(W) × 135(H) × 65(D) [mm]		
	Panel cut dimensions	153(W) × 121(H) [mm]			—		153(W) × 121(H) [mm]		
Weight		0.7 [kg] (excl. mounting brackets)			1.0 [kg] (main unit only)		0.9 [kg] (excl. mounting brackets)		
Applicable software packages	Screen design software Simulation software	GT Works3 Version1.17T or later							

Power supply specifications

Item	Specification								
	GT1155-QTBD GT1155-QSBD GT1155HS-QSBD	GT1150-QLBD GT1150HS-QLBD	GT1155-QTBDQ GT1155-QTBDA	GT1155-QSBDQ GT1155-QSBD A	GT1150-QLBDQ GT1150-QLBDA	GT1055-QSBD	GT1050-QBBD	GT1045-QSBD	GT1040-QBBD
Input power supply voltage	24VDC (+10%, -15%), ripple voltage of 200mV or less								
Input frequency	—								
Input maximum apparent power	—								
Power consumption	9.84W or less (410mA/24VDC)	9.36W or less (390mA/24VDC)	11.16W or less (465mA/24VDC)	9.72W or less (405mA/24VDC)	7.92W or less (330mA/24VDC)	9.84W or less (410mA/24VDC)	9.36W or less (390mA/24VDC)	3.6W or less (150mA/24VDC)	
[With backlight off]	4.32W or less (180mA/24VDC)		5.04W or less (210mA/24VDC)			4.32W or less (180mA/24VDC)		2.9W or less (120mA/24VDC)	
Inrush current	15A or less (2ms, at max. load)		26A or less (4ms, at max. load)			15A or less (26.4V) 2ms			
Permissible instantaneous failure time	Within 5ms		Within 10ms			Within 5ms			
Noise resistance	Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz		Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz			
Withstand voltage	500VAC for 1 minute between power supply terminal and ground								
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)								
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]*1					Single-wire installation	0.14 to 1.5 [mm <sup>2</sup> ] AWG26 to AWG16 (single wire) 0.14 to 1.0 [mm <sup>2</sup> ] AWG26 to AWG16 (stranded wire) 0.25 to 0.5 [mm <sup>2</sup> ] AWG24 to AWG20 (bar terminal with insulation sleeve)		
Clamp terminal						Two-wire installation	0.14 to 0.5 [mm <sup>2</sup> ] AWG26 to AWG20 (single wire) 0.14 to 0.2 [mm <sup>2</sup> ] AWG26 to AWG24 (stranded wire)		
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]*1					Al2.5-6BU, Al0.34-6TQ, Al0.5-6WH (made by Phoenix Contact) 0.22 to 0.25 [N·m]			

\*1 : Excluding GT115□HS

Performance specifications

Item		Specification			
		GT1055-QSBD	GT1050-QBBD	GT1045-QSBD	GT1040-QBBD
Display*1	Type	STN color LCD	STN monochrome (blue/white) LCD	STN color LCD	STN monochrome (blue/white) LCD
	Screen size	5.7"			4.7"
	Resolution	QVGA: 320 × 240 [dots]			
	Display size	115(W) × 86(H) [mm] (in horizontal display mode)		96(W) × 72(H) [mm] (in horizontal display mode)	
	No. of displayed characters	16-dot standard font: 20 chars. × 15 lines (2-byte), 12-dot standard font: 26 chars. × 20 lines (2-byte) (in horizontal display mode)			
	Display colors	256 colors	Monochrome (blue/white) 16 gray scale	256 colors	Monochrome (blue/white) 16 gray scale
	View angle	Right/left: 55°, Up: 65°, Down: 70° (in horizontal display mode)	Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)	Right/left: 50°, Up: 40°, Down: 70° (in horizontal display mode)	Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)
	Contrast adjustment	16-step adjustment			
	Intensity	380 [cd/m <sup>2</sup> ]	260 [cd/m <sup>2</sup> ]	150 [cd/m <sup>2</sup> ]	300 [cd/m <sup>2</sup> ]
	Life	Approx. 50,000 hours (Time for display contrast reaches 20% at operating ambient temperature of 25°C)			
Backlight		Cold-cathode fluorescent tube (not replaceable) with backlight OFF detection function. Backlight off time and screen save time can be set.		LED (no need to replace) Backlight off time and screen save time can be set.	
	Life*2	Approx. 75,000 hours or more	Approx. 54,000 hours or more	—	
		(Time for display intensity reaches 50% at operating ambient temperature of 25°C)		—	
Touch panel	Type	Matrix resistive type			
	No. of touch keys	Max. 50 keys/screen			
	Key size	Min. 16 × 16 [dots] (per key)			
	No. of simultaneous touch points	Max. 2 points			
	Life	1,000,000 times or more (operating force 0.98N or less)			
Memory	User memory*3	Built-in flash memory for saving project data (3 MB or less) and OS			
	Life (No. of writings)	100,000 times			
Battery		GT11-50BAT type lithium battery			
	Backed up data	Clock data, alarm history and recipe data			
	Life	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)			
Built-in interface	RS-422/485	RS-422/485, 1ch    Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female) Application: Communication with PLCs Terminal resistance*5: OPEN/110Ω/330Ω (switched by terminal resistance transfer switch)			
	RS-232	RS-232, 1ch    Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with PLCs, connection with barcode readers, communication with personal computers (project data upload/download, OS installation, transparent function)			
	USB	USB (full-speed 12Mbps), device 1ch Connector shape: TYPE Mini-B (receptacle) Application: Communication with personal computer (project data upload/download, OS installation, transparent function)			
	Memory board	For installing memory board (GT10-50FMB) 1ch			
	Buzzer output	Single tone (tone length adjustable/none)			
Protective construction*4		Conforming to IP67f (JEM1030) (front panel)			
External dimensions		164(W) × 135(H) × 56(D)[mm]		139(W) × 112(H) × 41(D)[mm]	
Panel cut dimensions		153(W) × 121(H)[mm]		130(+1 -0)(W) × 103(+1 -0)(H)[mm]	
Weight (excl. mounting brackets)		0.7[kg]		0.45[kg]	
Applicable software package		GT Works3    Version1.17T or later			

# Specifications

## GT10

### Power supply specifications

Item		Specification					
		GT1030-LBD GT1030-LWD GT1030-LBD2 GT1030-LWD2	GT1030-LBDW GT1030-LWDW GT1030-LBDW2 GT1030-LWDW2	GT1020-LBD GT1020-LWD GT1020-LBD2 GT1020-LWD2	GT1020-LBDW GT1020-LWDW GT1020-LBDW2 GT1020-LWDW2	GT1030-LBL GT1030-LWL GT1030-LBLW GT1030-LWLW	GT1020-LBL GT1020-LWL GT1020-LBLW GT1020-LWLW
Input power supply voltage		24VDC (+10%, -15%), ripple voltage of 200mV or less				5VDC (±5%), supplied from PLC communication cable	
Input frequency		—					
Input maximum apparent power		—					
Power consumption		2.2W or less (90mA/24VDC)		1.9W or less (80mA/24VDC)		1.1W or less (220mA/5VDC)	
With backlight off		1.7W or less (70mA/24VDC)		1.2W or less (50mA/24VDC)		0.6W or less (120mA/5VDC)	
Inrush current		18A or less (26.4DCV) 1ms		13A or less (26.4DCV) 1ms		—	
Permissible instantaneous failure time		Within 5ms				—	
Noise resistance		Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz					
Withstand voltage		500VAC for 1 minute between power supply terminal and ground				—	
Insulation resistance		10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)				—	
Applicable wire size		Single-wire installation 0.14 to 1.5mm <sup>2</sup> , AWG26 to AWG16 (single wire), 0.14 to 1.0mm <sup>2</sup> , AWG26 to AWG16 (stranded wire), 0.25 to 0.5mm <sup>2</sup> , AWG24 to AWG20 (bar terminal with insulation sleeve)					—
Two-wire installation		0.14 to 0.5mm <sup>2</sup> , AWG26 to AWG20 (single wire), 0.14 to 0.2mm <sup>2</sup> , AWG26 to AWG24 (stranded wire)					
Clamp terminal		AI2.5-6BU, AI0.34-6TQ, AI0.5-6WH (made by Phoenix Contact)					
Tightening torque (terminal block's terminal screws)		0.22 to 0.25 [N·m]					

### Performance specifications

Item		Specification							
		GT1030-LBD GT1030-LWD GT1030-LBL GT1030-LWL	GT1030-LBDW GT1030-LWDW GT1030-LBLW GT1030-LWLW	GT1030-LBD2 GT1030-LWD2	GT1030-LBDW2 GT1030-LWDW2	GT1020-LBD GT1020-LWD GT1020-LBL GT1020-LWL	GT1020-LBDW GT1020-LWDW GT1020-LBLW GT1020-LWLW	GT1020-LBD2 GT1020-LWD2	GT1020-LBDW2 GT1020-LWDW2
Display <sup>*1</sup>	Type	STN monochrome (black/white) LCD							
	Screen size	4.5"				3.7"			
	Resolution	288 × 96 [dots] (in horizontal mode)				160 × 64 [dots] (in horizontal mode)			
	Display size	109.42(W) × 35.98(H)[mm](in horizontal mode)				86.4(W) × 34.5(H)[mm](in horizontal mode)			
	No. of displayed characters	16-dot standard font: 36 chars. × 6 lines (1-byte) or 18 chars. × 6 lines (2-byte) (in horizontal mode) 12-dot standard font: 48 chars. × 8 lines (1-byte) or 24 chars. × 8 lines (2-byte) (in horizontal mode)				16-dot standard font: 20 chars. × 4 lines (1-byte) or 10 chars. × 4 lines (2-byte) (in horizontal mode)			
	Display colors	Monochrome (black/white)							
	View angle	Right/left: 30°, Up: 20°, Down: 30°(in horizontal display mode)							
	Contrast adjustment	16-step adjustment							
	Intensity	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)
Backlight	Intensity adjustment	8-step adjustment							
	Life	Approx. 50,000 hours (Time for display contrast reaches 20% at operating ambient temperature of 25°C)							
	Color	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)
	Function	Status control (color, on/flashing/off) is available and screen save time setting can be set. PLC can control color and status of backlight based on system information.							
Touch panel	Type	Matrix resistive type				Analog resistive type			
	No. of touch keys	Max. 50 keys/screen							
	Key size	Min. 16 × 16 [dots] (per key)				Min. 2 × 2 [dots] (per key)			
	No. of simultaneous touch points	Max. 2 points				(If there is a switch near the center of the pressed keys, the switch may function.)			
Memory	Life	1,000,000 times or more (operating force 0.98N or less)							
	User memory <sup>*2</sup>	Built-in flash memory for saving project data (1.5MB or less) and OS				Built-in flash memory for saving project data (512KB or less), OS, alarm history and recipe data			
Battery	Life (No. of writings)	100,000 times							
		GT11-50BAT type lithium battery				—			
	Backed up data	Clock data, alarm history and recipe data				—			
Built-in interface	Life	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)				—			
	For communication with PLC	GT1030-LBD/LWD, GT1030-LBDW/LWDW RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC Terminal resistance <sup>*3</sup> : OPEN/1100/330Q (switched by terminal resistance transfer switch)		RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC		GT1020-LBD/LWD, GT1020-LBDW/LWDW RS-422/485 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC Terminal resistance <sup>*3</sup> : OPEN/1100/330Q (switched by terminal resistance transfer switch)		RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC	
		GT1030-LBL/LWL, GT1030-LBLW/LWLW RS-422, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC				GT1020-LBL/LWL, GT1020-LBLW/LWLW RS-422 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC			
	For communication with personal computer	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Mini DIN 6-pin (female) Application: Communication with personal computer (project data upload/download, OS installation, transparent function)							
	Buzzer output	Single tone (tone length adjustable/none)							
	Protective construction <sup>*4</sup>	Conforming to IP67I (JEM1030) (front panel)							
External dimensions	145(W) × 76(H) × 29.5(D)[mm]				113(W) × 74(H) × 27(D)[mm]				
Panel cut dimensions	137(W) × 66(H)[mm]				105(W) × 66(H)[mm]				
Weight	GT1030-L□□D(W): 0.3kg (excl. mounting brackets)		0.3kg (excl. mounting brackets)		GT1020-L□□D(W): 0.2kg (excl. mounting brackets)		0.2kg (excl. mounting brackets)		
	GT1030-L□□L(W): 0.28kg (excl. mounting brackets)				GT1020-L□□L(W): 0.18kg (excl. mounting brackets)				
Applicable software package		GT Works3 Version1.17T or later							

<sup>\*1</sup> : On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on a LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Flickering may occur depending on the display colors. Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged. Displaying one single screen for a long time can lead to burn-in, causing afterimages or image irregularities that could not disappear. Use the screen saver that is effective to prevent burn-in.

<sup>\*2</sup> : The memory is ROM that permits overwriting of new data without having to delete the existing data.

<sup>\*3</sup> : In the case of GOT multi-drop connection, set the terminal resistance transfer switch on the GOT main unit according to the connection configuration.

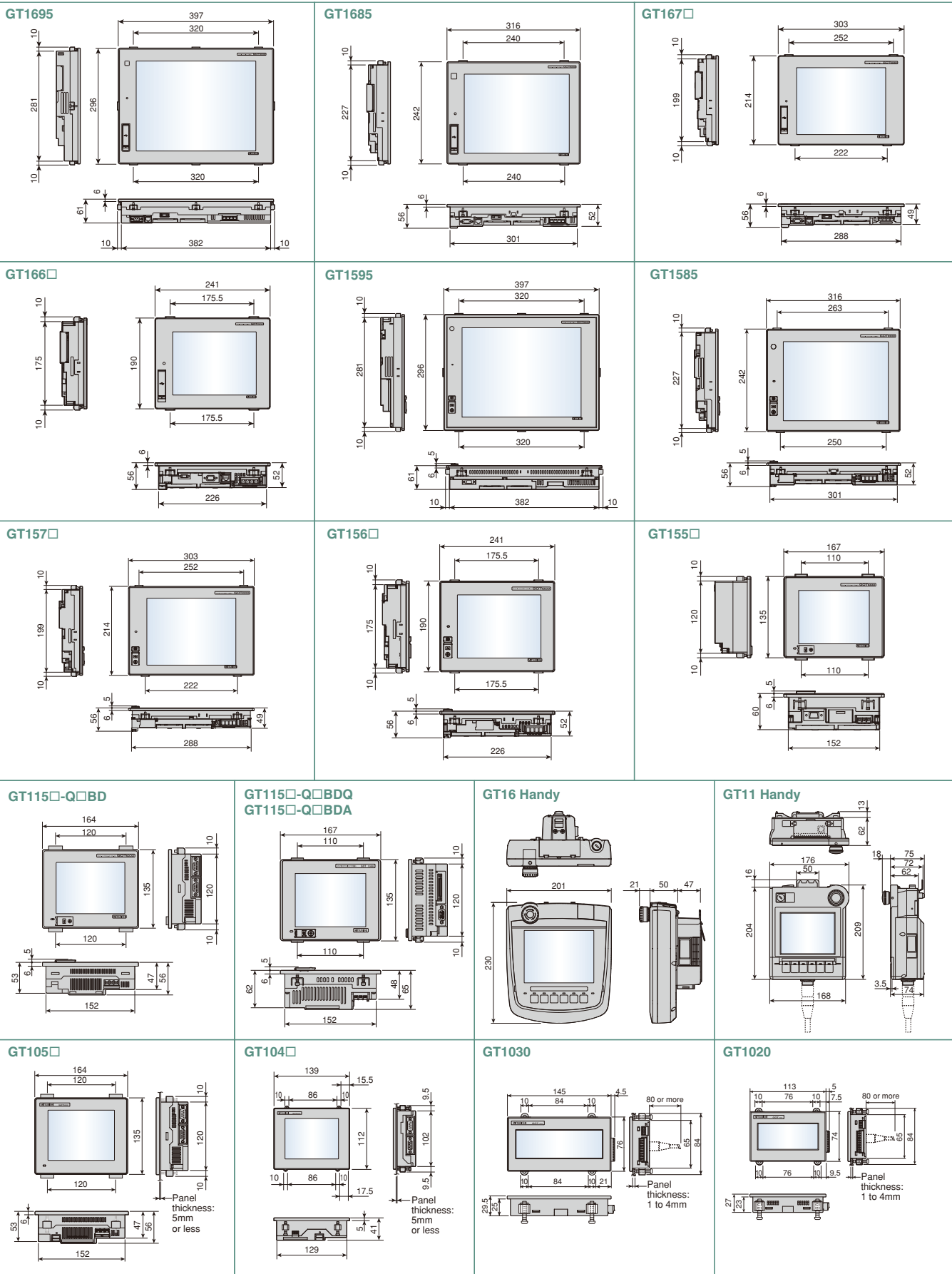
<sup>\*4</sup> : This does not guarantee protection in all users' environments.

# External dimensions

## GOT main unit

### External dimensions

(Unit: mm)



For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

IQ Platform

ME/SEC Process Control + GOT1000

Specifications External Dimensions

List of Connectable Models, etc.



External dimensions

Panel cut dimensions

●When the GOT is installed

Screen size	Type of GOT main unit	A	B
15"	GT1695	383.5	282.5
	GT1595		
	GT1685*1		
12.1"	GT1585*1	302	228
	GT167*2		
	GT157*2		
10.4"	GT166	289	200
	GT156		
8.4"	GT155*3	227	176
	GT115*3		
5.7"	GT105*3	153	121
	GT104		
	GT1030		
4.7"	GT1030	130	103
4.5"	GT1030	137	66
3.7"	GT1020	105	66

A +2\*4  
0

B +2\*4  
0

Panel opening

\*1 : Same dimensions as A985GOT(-V)

\*2 : Same dimensions as A975/970GOT(-B)

\*3 : Same dimensions as F940GOT

\*4 : For the GT104, GT1030 and GT1020, the tolerances are +1/0.

●When the CF card extension unit (mounting unit on control panel) is installed

Type	A	B
GT15-CFEX-C08SET	94.0	33.0

●Cautions when installing and uninstalling

When installing the CF card extension unit on the control panel, make sure that the extension unit does not interfere with the extension unit cable or the CF card interface of the GOT. Place the CF card extension unit at a distance of 25mm or more from the GOT.

For installation locations, see the GT16 User's Manual or the GT15 User's Manual.

For compatibility with GOT900 series, see "Backward compatibility" (page 67).

Product installation interval

The GOT must have the clearances from other devices as shown in [Fig. A]. The GOT may require more distance than the dimensions shown in the table depending on the types of connection cables. Consider the connector dimensions and radius of cable bending curvature when designing the installation.

●GT16/GT15

Item	GT1695	GT1685	GT167	GT166	GT1595	GT1585	GT157	GT156	GT155
GOT only	50 or more (20 or more)								
When a bus connection unit is installed	50 or more (20 or more)	50 or more (24 or more)	50 or more (33 or more)	50 or more (43 or more)	50 or more (20 or more)	50 or more (35 or more)	50 or more (40 or more)	50 or more	49 or more
When a serial communication unit is installed	50 or more (20 or more)								
When a RS-422 conversion unit is installed	50 or more (20 or more)	50 or more (39 or more)	50 or more (48 or more)	58 or more	50 or more (20 or more)	50 or more (39 or more)	53 or more	58 or more	49 or more
When an Ethernet communication unit is installed	50 or more (20 or more)								
When the CC-Link communication unit (GT15-J61BT13) is installed	50 or more (20 or more)								
When a CC-link IE controller network communication unit is installed	50 or more (20 or more)								
When a MELSECNET/H communication unit (coaxial) is installed	50 or more (20 or more)	50 or more (24 or more)	50 or more (25 or more)	50 or more (35 or more)	50 or more (20 or more)	50 or more (30 or more)	50 or more (35 or more)	50 or more	57 or more
When a MELSECNET/H communication unit (optical) is installed	50 or more (20 or more)*1	50 or more (23 or more)*1	50 or more (32 or more)*1	50 or more (42 or more)*1	50 or more (20 or more)*1	50 or more (23 or more)*1	50 or more (37 or more)*1	50 or more (42 or more)*1	79 or more*1
When a printer unit is installed	50 or more (20 or more)								
When a multimedia unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	—	61 or more*2	75 or more*2	—	—
When a video input unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	—	61 or more*2	75 or more*2	—	—
When a RGB input unit is installed	50 or more (20 or more)*3	61 or more*3	70 or more*3	80 or more*3	—	61 or more*3	75 or more*3	—	—
When a video/RGB input unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	—	61 or more*2	75 or more*2	—	—
When a RGB output unit is installed	50 or more (20 or more)*3	61 or more*3	70 or more*3	80 or more*3	—	61 or more*3	75 or more*3	—	—
When a CF card unit is installed	50 or more (20 or more)								
When a CF card extension unit is installed	50 or more (20 or more)	50 or more (49 or more)	58 or more	68 or more	50 or more (20 or more)	50 or more (49 or more)	63 or more	68 or more	97 or more
When an audio output unit is installed	50 or more (20 or more)								
When an external input/output unit is installed	50 or more (20 or more)	50 or more (29 or more)	50 or more (20 or more)	50 or more (24 or more)	50 or more (29 or more)	50 or more (29 or more)	58 or more	—	—
B	80 or more (20 or more)								
C	50 or more (20 or more)								
D	50 or more (20 or more)								
E	100 or more								

\*1 : The distance varies depending on the cable to be used. For details, consult the closest Mitsubishi Electric System & Service office.

The values in the table are given for your reference only and may not reflect actual conditions.

\*2 : The distances required when the coaxial cable 3C-2V (JIS C 3501) is used.

\*3 : The distance varies depending on the cable to be used. When the bending radius of the cable is larger than the indicated value, keep a space appropriate to the bending radius.

●GT11

GOT main unit	A, D	B	C	E
GT1155	50 or more (20 or more)	80 or more*1	50 or more*2	100 or more
GT1150	50 or more (20 or more)	80 or more (20 or more)	100 or more	100 or more (20 or more)

\*1 : 50 or more (20 or more) in the case of vertical installation

\*2 : 80 or more (20 or more) in the case of vertical installation

●GT10

GOT main unit	A	B	C	D	E
GT105	50 or more (20 or more)	80 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	100 or more (20 or more)*3
GT104	50 or more (20 or more)	80 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	100 or more (20 or more)*3
GT1030	50 or more (20 or more)*1	50 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	80 or more (20 or more)*2
GT1020	50 or more (20 or more)*1	50 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	80 or more (20 or more)*2

\*1 : 50 or more when a RS-232/USB conversion adapter is used.

\*2 : 80 or more when a personal computer connection cable is used or when a personal computer RS-232 interface is used for connecting multiple GOTs.

\*3 : 80 or more when using a USB cable or a memory board.

●Dimensions shown in parentheses apply when there are no devices nearby (contactor, etc.) which produce radiated noise or heat. Even with these dimensions, however, the ambient temperature must never exceed 55°C. Depending on the unit and cable being used, a cable length longer than dimension A (or dimension D for the GT10) in above [Fig. A] may be required.

[Fig. A]

Bus connection cables

Cable model name	Cable length	External dimensions
GT15-QC-B	0.6, 1.2, 3, 5, 10m	Fig. 1
GT15-QC-BS	15, 20, 25, 30, 35m	Fig. 1
GT15-C-NB	1.2, 3, 5m	Fig. 2
GT15-AC-B	0.6, 1.2, 3, 5m	Fig. 3
GT15-A370C-B-S1	1.2, 2.5m	Fig. 4
GT15-A370C-B	1.2, 2.5m	Fig. 5
GT15-A1SC-B	0.7, 1.2, 3, 5m	Fig. 6
GT15-A1SC-NB	0.45, 0.7, 3, 5m	Fig. 7
GT15-C-EXSS-1*1	10.6, 20.6, 30.6m	Figs. 8 & 9
GT15-EXCNB	0.5m	Fig. 8
GT15-C-BS	0.7, 1.2, 3, 5, 10, 20, 30m	Fig. 9
GT15-J2C10B	1m	Fig. 10

\*1 : GT15-C-EXSS-1 is a set consisting of GT15-EXCNB and GT15-C-BS. (See Fig. A.)

Fig. A

RS-422 cables

Cable model name	Cable length	External dimensions
GT16-C02R4-9S	0.2m	Fig. 11
GT01-C30R4-25P	3m	Fig. 12
GT01-C-R4-25P	10, 20, 30m	Fig. 13
GT01-C-R4-8P	1, 3, 10, 20, 30m	Fig. 14
GT10-C-R4-8P	1, 3, 10, 20, 30m	Fig. 15
GT10-C-R4-25P	3, 10, 20, 30m	Fig. 16
GT10-C10R4-8PL	1m	Fig. 17

RS-232 cables

Cable model name	Cable length	External dimensions
GT01-C30R2-6P	3m	Fig. 18
GT01-C30R2-9S	3m	Fig. 19
GT01-C30R2-25P	3m	Fig. 20
GT10-C30R2-6P	3m	Fig. 21

RS-485 terminal block conversion unit

Model name	Cable length	External dimensions
FA-LTBGTR4CBL	0.5, 1, 2m	Fig. 22

(Unit: mm)

(Unit: mm)

48

49











## Function list

[illegible]

- #7 : Only user alarms can be used.
- #8 : To use the historical trend graph, it is necessary to specify the logging function in advance. In addition, it is necessary to install the optional function OS (logging).
- #9 : Read from the PLC clock.
- #10 : Different connection configurations may require different communication units. For details, see the GOT1000 Series Handbook and the GOT1000 Series Connection Manual.
- #11 : For the compatible hardware versions, please contact your local sales office.

Function list

GT16 GT15 GT SoftGOT

Category	Function*1		Optional function board*2	Extended optional function OS installation*2	Other necessary devices*3	Details page	Model																			
							GT16										GT15									GT SoftGOT 1000 Version3
							GT1695M -XTB XGA 15"	GT1685M -STB SVGA 12.1"	GT1675M -STB SVGA 10.4"	GT1675M -VTB VGA 10.4"	GT167 -VNB VGA 10.4"	GT1665M -STB SVGA 8.4"	GT1665M -VTB VGA 8.4"	GT1662 -VNB VGA 8.4"	GT1665 HS-VTBD VGA*4 6.5"	GT1595 -XTB XGA 15"	GT1585(V) -STB SVGA 12.1"	GT1575(V) -STB SVGA 10.4"	GT1575 -VTB VGA 10.4"	GT157 -VNB VGA 10.4"	GT1565 -VTB VGA 8.4"	GT1562 -VNB VGA 8.4"	GT155 -BD VGA/QVGA 5.7"			
Specifications																										
Screen design	Standard fonts (basic)																									
	Standard fonts (optional)		Required																							
	High-quality font																									
	TrueType font, TrueType font (7 segments)																									
	Windows® font																									
	Stroke basic font (extended)		Required																							
	Stroke font (optional)		Required																							
	Logo character function																									
	Parts (object + figure) layer function																									
	Station No. switching																									
	Multilingual support function					P.24																				
	Password																									
	Boot logo																									
	Data operation function																									
	Offset function																									
	Security function																									
	Operator authentication		Required		(CF card/USB memory <GT16 only>)	P.29																				
	Lamp display																									
	Touch switch																									
	Numeric display/input																									
	Data list display																									
	ASCII display/input																									
	Kana-Kanji conversion function		Required																							
	Enhanced version		Required																							
	Clock display																									
	Comment display																									
	Extended alarm monitoring/display				(CF card) (Battery)	P.31																				
	Alarm display																									
	Alarm history display				(CF card)																					
	Floating alarm display																									
	Parts display				(CF card)																					
	Parts movement				(CF card)																					
	Panel meter display																									
	Level display																									
	Trend graph/Line graph/Bar graph/Statistical graph																									
	Historical trend graph*5		Required*6		(CF card)	P.28																				
	Scatter graph																									
	Status observation function																									
	Advanced recipe function		Required		(CF card)	P.25																				
	Recipe function		Required		(CF card)																					
	Report function			Required	(Printer unit) (CF card)																					
	Hardcopy function			Required	CF card																					
	File saving in CF card			Required	(Printer unit)	P.21																				
	Printing on printer			Required																						
	Barcode function			Required																						
	RFID function			Required																						
	Multimedia function			Required	Multimedia unit CF card	P.20																				
	Remote personal computer function (Ethernet)			Required	License	P.23																				
	Remote personal computer function (serial)			Required	Video/RGB input unit	P.23										GT1585V only										
	Operation panel function			Required	External input/output unit																					
	Operation log function			Required	CF card	P.29																				
	Document display function		Required*9 (GT15 only)	Required	CF card	P.21																				
	Logging function			Required	(CF card) (Battery)	P.28																				
	Log viewer function			Required	(CF card/USB memory)	P.28																				
	Script function					P.25																				
	Project script																									
Screen script																										
Object script			Required																							
Device data transfer function			Required		P.21																					
Device monitor function																										
System monitor function			Required		P.34																					
List editor for A			Required		P.35																					
List editor for FX			Required																							
SFC monitor function			Required*12 (GT15 only)	CF card	P.32																					
Motion SFC monitor function			Required*12 (GT15 only)	CF card	P.33																					
Ladder editor function			Required*12 (GT15 only)	CF card	P.33																					
Ladder monitor function			Required*12 (GT15 only)	(CF card)	P.32																					
Intelligent unit monitor function			Required		P.34																					
Q motion monitor function			Required																							
Servo amplifier monitor function			Required		P.35																					
Network monitor function			Required		P.34																					
CNC monitor function			Required		P.35																					
CNC data input/output function			Required	CF card/USB memory																						
Backup/restoration function			Required	USB memory <GT16 only>	P.30																					
MELSEC-L troubleshooting function			Required		P.34																					
Maintenance time notification function				Battery	P.26																					



Product list

Main unit model name

GT16

9

5

M

-

X

T

B

A

Code	Screen size	Code	Display colors	Code	Mounting type	Code	Resolution	Code	Display device	Code	Power supply	Code	Communication interface
9	15"	5	256 colors or more	V	Compatible with video/RGB	X	XGA (1024 × 768 dots)	T	TFT color (high brightness, wide viewing angle)	A	100 to 240VAC	Q	*1 With built-in bus connection interface for QCPU (Q mode)/motion controller CPU (Q series)
8	12.1"	2	16 colors	None	Panel mount type	S	SVGA (800 × 600 dots)	N	TFT color	D	24VDC	A	*1 With built-in bus connection interface for QnA/ACPU/motion controller CPU (A series)
7	10.4"	0	Monochrome	HS	Handy type	V	VGA (640 × 480 dots)	S	STN color	L	5VDC	2	*2 With built-in RS-232
6	8.4", 6.5"			M	Compatible with multimedia & Video/RGB	Q	QVGA (320 × 240 dots)	B	STN monochrome (blue/white)			None	*2 With built-in RS-422
5	5.7"					Q	(288 × 96 dots)	L	STN monochrome			*1 : GT115□□-Q□BDQ and GT115□□-Q□BDA only	
4	4.7"					None	(160 × 64 dots)					*2 : GT10 only	
3	4.5"												
2	3.7"												

Code	Main unit frame	Code	GT10 backlight
B	Black	W	White backlight
W	White	None	Green backlight

\* For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

GOT main units

Model name			Screen size [resolution]	Display	Display colors (number of colors)	Power supply	Memory size	Remarks	
GT16	GT1695	GT1695M-XTBA	15" XGA	TFT color LCD	65,536 colors	100-240VAC	15MB	Compatible with multimedia & Video/RGB	
		GT1695M-XTBD	[1024 × 768 dots]	(high brightness, wide viewing angle)	24VDC				
	GT1685	GT1685M-STBA	12.1" SVGA	TFT color LCD	65,536 colors	100-240VAC	15MB	Compatible with multimedia & Video/RGB	
		GT1685M-STBD	[800 × 600 dots]	(high brightness, wide viewing angle)	24VDC				
	GT167□	GT1675M-STBA	10.4" SVGA	TFT color LCD	65,536 colors	100-240VAC	15MB	Compatible with multimedia & Video/RGB	
		GT1675M-STBD	[800 × 600 dots]	(high brightness, wide viewing angle)	24VDC				
		GT1675M-VTBA	10.4" VGA [640 × 480 dots]	TFT color LCD	65,536 colors	100-240VAC	11MB	—	
		GT1675M-VTBD		(high brightness, wide viewing angle)	24VDC				
		GT1675-VNBA		TFT color LCD	4,096 colors	100-240VAC			
		GT1675-VNBD		24VDC					
	GT166□	GT1672-VNBA	8.4" SVGA [800 × 600 dots]	TFT color LCD	16 colors	100-240VAC	11MB	—	
		GT1672-VNBD		24VDC					
		GT1665M-STBA	8.4" VGA [640 × 480 dots]	TFT color LCD	65,536 colors	100-240VAC	15MB	Compatible with multimedia & Video/RGB	
		GT1665M-STBD		(high brightness, wide viewing angle)	24VDC				
		GT1665M-VTBA		TFT color LCD	65,536 colors	100-240VAC			
		GT1665M-VTBD		(high brightness, wide viewing angle)	24VDC				
	Handy GOT	GT1662-VNBA	8.4" VGA [640 × 480 dots]	TFT color LCD	16 colors	100-240VAC	11MB	—	
		GT1662-VNBD		24VDC					
	GT15	GT1595	GT1665HS-VTBD	6.5" VGA [640 × 480 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	24VDC	15MB	—
			GT1595-XTBA	15" XGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC		
GT1585		GT1595-XTBD	[1024 × 768 dots]	(high brightness, wide viewing angle)	24VDC	9MB	Compatible with Video/RGB		
		GT1585V-STBA	12.1" SVGA	TFT color LCD	65,536 colors			100-240VAC	
		GT1585V-STBD	[800 × 600 dots]	(high brightness, wide viewing angle)	24VDC				
		GT1585-STBA	TFT color LCD	65,536 colors	100-240VAC				
GT157□		GT1585-STBD	[800 × 600 dots]	(high brightness, wide viewing angle)	24VDC	9MB	Compatible with Video/RGB		
		GT1575V-STBA	10.4" SVGA [800 × 600 dots]	TFT color LCD	65,536 colors			100-240VAC	
		GT1575V-STBD		(high brightness, wide viewing angle)	24VDC				
		GT1575-STBA		TFT color LCD	65,536 colors			100-240VAC	
		GT1575-STBD		(high brightness, wide viewing angle)	24VDC				
		GT1575-VTBA	10.4" VGA [640 × 480 dots]	TFT color LCD	65,536 colors			100-240VAC	
		GT1575-VTBD		(high brightness, wide viewing angle)	24VDC				
		GT1575-VNBA		TFT color LCD	256 colors			100-240VAC	
		GT1575-VNBD		24VDC					
		GT156□	GT1572-VNBA	8.4" VGA [640 × 480 dots]	TFT color LCD			16 colors	100-240VAC
GT1572-VNBD			24VDC						
GT1565-VTBA			TFT color LCD		65,536 colors	100-240VAC			
GT1565-VTBD			(high brightness, wide viewing angle)		24VDC				
GT155□		GT1562-VNBA	5.7" VGA [640 × 480 dots]	TFT color LCD	16 colors	100-240VAC	5MB	—	
	GT1562-VNBD	24VDC							
	GT1555-VTBD	5.7" QVGA		TFT color LCD	65,536 colors	24VDC			
	GT1555-QTBD	[320 × 240 dots]		(high brightness, wide viewing angle)	4,096 colors				
GT11	GT1155	GT1550-QLBD	STN color LCD	Monochrome (black/white) 16 gray scales	24VDC	3MB	— Dedicated to Q bus connection Dedicated to A bus connection — Dedicated to Q bus connection Dedicated to A bus connection		
		GT1155-QTBD	5.7" QVGA [320 × 240 dots]	TFT color LCD				Monochrome (black/white) 16 gray scales	
		GT1155-QTBDQ		STN color LCD					
		GT1155-QTBDA							
		GT1155-QSBD							
		GT1155-QSBDQ							
	GT1150	GT1155-QSBDA	STN monochrome LCD	Monochrome (black/white) 16 gray scales					
		GT1150-QLBD							
		GT1150-QLBDQ							
		GT1150-QLBDA							
Handy GOT	GT1155HS-QSBD	STN color LCD	256 colors	24VDC	3MB	—			
	GT1150HS-QLBD	STN monochrome LCD	Monochrome (black/white) 16 gray scales						
GT10	GT105□	GT1055-QSBD	5.7" QVGA	STN color LCD	256 colors	24VDC	3MB	—	
		GT1050-QBBD	[320 × 240 dots]	STN monochrome LCD	Monochrome (blue/white) 16 gray scales				
	GT104□	GT1045-QSBD	4.7" QVGA	STN color LCD	256 colors	24VDC	3MB	—	
		GT1040-QBBD	[320 × 240 dots]	STN monochrome LCD	Monochrome (blue/white) 16 gray scales				

GOT main units

Model name		Screen size [resolution]	Display	Display colors (number of colors)	Power supply	Memory size	Remarks
GT10	GT1030	4.5" [288 × 96 dots]	STN monochrome LCD	Monochrome (black/white)	24VDC	1.5MB	Dedicated to RS-422 connection
					5VDC		Dedicated to RS-232 connection
				3-color LED (green, orange, red)	24VDC		Dedicated to RS-422FX connection
					5VDC		Dedicated to RS-232 connection
					5VDC		Dedicated to RS-422FX connection
		4.5" [288 × 96 dots]	STN monochrome LCD	Monochrome (black/white)	24VDC	1.5MB	Dedicated to RS-422 connection
					5VDC		Dedicated to RS-232 connection
					24VDC		Dedicated to RS-422FX connection
					5VDC		Dedicated to RS-232 connection
					5VDC		Dedicated to RS-422FX connection
	GT1020	3.7" [160 64 dots]	STN monochrome LCD	Monochrome (black/white)	24VDC	512KB	Dedicated to RS-422 connection
					5VDC		Dedicated to RS-232 connection
					24VDC		Dedicated to RS-422FX connection
					5VDC		Dedicated to RS-232 connection
					5VDC		Dedicated to RS-422FX connection
		3.7" [160 64 dots]	STN monochrome LCD	Monochrome (black/white)	24VDC	512KB	Dedicated to RS-422 connection
					5VDC		Dedicated to RS-232 connection
					24VDC		Dedicated to RS-422FX connection
					5VDC		Dedicated to RS-232 connection
					5VDC		Dedicated to RS-422FX connection

Communication interface

Product name	Model name	Specifications	Applicable model				
			GT16	GT15	GT11	Handy GOT	GT10
Bus connection unit	GT15-QBUS	Bus connection (1ch) unit standard model for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—
	GT15-QBUS2	Bus connection (2ch) unit standard model for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—
	GT15-ABUS	Bus connection (1ch) unit standard model for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—
	GT15-ABUS2	Bus connection (2ch) unit standard model for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—
	GT15-75QBUSL	Bus connection (1ch) unit thin model*1 for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—
	GT15-75QBUS2L	Bus connection (2ch) unit thin model*1 for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—
	GT15-75ABUSL	Bus connection (1ch) unit thin model*1 for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—
	GT15-75ABUS2L	Bus connection (2ch) unit thin model*1 for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—
	GT15-RS2-9P	RS-232 serial communication unit (D-sub 9-pin (male))	●	●	—	—	—
	GT15-RS4-9S	RS-422/485 serial communication unit (D-sub 9-pin (female))*2 *3	●	●	—	—	—
Serial communication unit	GT15-RS4-TE	RS-422/485 serial communication unit (terminal block)*2	●	●	—	—	—
	GT15-RS2T4-9P	RS-232→RS-422 conversion unit	●	●*4	—	—	—
	GT15-RS2T4-25P	RS-422 connector: 9-pin RS-422 connector: 25-pin	●	●*4	—	—	—
RS-422 conversion unit	GT15-J71LP23-25	Optical loop unit	●	●	—	—	—
MELSECNET/H communication unit	GT15-J71BR13	Coaxial bus unit	●	●	—	—	—
CC-Link IE controller network communication unit	GT15-J71GP23-SX	Optical loop unit	●	●	—	—	—
CC-Link communication unit	GT15-J61BT13	Intelligent device station unit (supporting CC-Link version 2)	●	●	—	—	—
Ethernet communication unit	GT15-J71E71-100	Ethernet (100Base-TX) unit	—	●	—	—	—
Serial multi-drop connection unit	GT01-RS4-M	For GOT multi-drop connection	●*5	●*5	●*5	—	●*5
Connector conversion adapter	GT10-9PT5S	Conversion connector between D sub 9-pin male and Europe terminal block 5-pin	—	—	●*5	—	●*5
CC-Link interface unit	GT11HS-CCL	CC-Link interface unit for Handy GOT	—	—	—	●	—
	GT11H-CCL		—	—	—	●	—

\*1 : The unit cannot be used stacked on other units. \*4 : The unit cannot be used with the GT155□□. \*2 : The unit may not be able to be used depending on the connection destination. See "List of connectable models" (page 54). \*5 : For the hardware version compatible with GOT, please contact your local sales office. For the instructions for connection of GT16/GT15, please contact your local sales office. \*3 : The unit cannot be used when connecting to temperature controllers/indicating controllers via RS-485 (2-wire type)

Optional units

Product name	Model name	Specifications	Applicable model				
			GT16	GT15	GT11	Handy GOT	GT10
Printer unit	GT15-PRN	USB slave (PictBridge) for printer connection, 1ch * Cable for printer connection (3m) included	●	●	—	—	—
Multimedia unit	GT16M-MMR	For video input (NTSC/PAL) 1ch motion image playback	●*2	—	—	—	—
Video input unit	GT16M-V4	For video input (NTSC/PAL) 4ch	●*2	—	—	—	—
	GT15V-75V4	For video input (NTSC/PAL) 4ch	—	●*3	—	—	—
RGB input unit	GT16M-R2	For analog RGB input 2ch	●*2	—	—	—	—
	GT15V-75R1	For analog RGB input 1ch	—	●*3	—	—	—
Video/RGB input unit	GT16M-V4R1	For video input (NTSC/PAL) 4ch / analog RGB 1ch composite input	●*2	—	—	—	—
	GT15V-75V4R1	For video input (NTSC/PAL) 4ch / analog RGB 1ch composite input	—	●*3	—	—	—
RGB output unit	GT16M-ROUT	For analog RGB output 1ch	●*2	—	—	—	—
	GT15V-75ROUT	For analog RGB output	—	●*3	—	—	—
CF card unit	GT15-CFCD	For additional CF card port (B drive) on the back of the GOT	●	●	—	—	—
CF card extension unit	GT15-CFEX-C08SET	For additional CF card port (B drive) at the front of the control panel*1	●	●	—	—	—
Sound output unit	GT15-SOUT	For sound output	●	●	—	—	—
External input/output unit	GT15-DIOR	For external input/output devices and operation panel connection (negative common input / source type output)	●	●	—	—	—
	GT15-DIO	For external input/output devices and operation panel connection (positive common input / sink type output)	●	●	—	—	—

\*1 : Includes unit to be installed on the control panel, unit to be installed on the GOT, and connection cable (0.8m). \*2 : Excluding GT16□□-VNBD□□. \*3 : Only GT1585V and GT1575V are applicable.

Product list

Software

Product name	Model name	Contents
GT Works3 Version1	SW1DNC-GTWK3-E	Single license <English version>
	SW1DNC-GTWK3-EA	Multiple-license <English version>
License key for GT SoftGOT1000 <sup>*1</sup>	GT15-SGTKEY-U	For USB port
	GT15-SGTKEY-P	For parallel port
Personal computer remote operation function (Ethernet) license <sup>*2</sup>	GT16-PCRAKEY	1 license

<sup>\*1</sup> : To use GT SoftGOT1000, a license key for GT SoftGOT1000 is necessary for each personal computer.  
<sup>\*2</sup> : 1 license is required for 1 GOT unit.

Options

Product name	Model name	Specifications	Applicable model				
			GT16	GT15	GT11	Handy GOT	GT10
Backlight	GT16-90XLTT	For GT1695M-XTB□	●	—	—	—	—
	GT16-80SLTT	For GT1685M-STB□	●	—	—	—	—
	GT16-70SLTT	For GT1675M-STB□	●	—	—	—	—
	GT16-70VLT	For GT1675M-VTB□	●	—	—	—	—
	GT16-70VLTN <sup>NEW</sup>	For GT1675-VNB□/GT1672-VNB□	●	—	—	—	—
	GT16-60SLTT	For GT1665M-STB□	●	—	—	—	—
	GT16-60VLT	For GT1665M-VTB□	●	—	—	—	—
	GT16-60VLTN <sup>NEW</sup>	For GT1662-VNB□	●	—	—	—	—
	GT15-90XLTT	For GT1595-XTB□	—	●	—	—	—
	GT15-80SLTT	For GT1585V-STB□/GT1585-STB□	—	●	—	—	—
	GT15-70SLTT	For GT1575-STB□ <sup>*1</sup>	—	●	—	—	—
	GT15-70VLT	For GT1575V-STB□/GT1575-VTB□/GT1575-STB□ <sup>*2</sup>	—	●	—	—	—
	GT15-70VLTN	For GT1575-VNB□/GT1572-VNB□	—	●	—	—	—
	GT15-60VLT	For GT1565-VTB□	—	●	—	—	—
	GT15-60VLTN	For GT1562-VNB□	—	●	—	—	—
Optional function board	GT16-MESB	For MES interface function	●	—	—	—	—
	GT15-FNB	(No expansion memory)	—	●	—	—	—
	GT15-QFNB	<sup>*</sup> The required optional function board varies depending on the GOT main unit and function.	—	●	—	—	—
	GT15-QFNB16M	+ 16MB expansion memory	—	●	—	—	—
	GT15-QFNB32M	+ 32MB expansion memory	—	●	—	—	—
	GT15-QFNB48M	+ 48MB expansion memory	—	●	—	—	—
	GT15-MESB48M	+ 48MB expansion memory	—	●	—	—	—
GT10 memory loader	GT11-50FNB	—	—	—	● <sup>*3</sup>	● <sup>*10</sup>	—
	GT10-LDR	For GT1030/GT1020 (for OS project data transfer) no power source required	—	—	—	—	● <sup>*7</sup>
GT10 memory board	GT10-50FMB	For GT105□/GT104□ (for OS and project data transfer)	—	—	—	—	● <sup>*8</sup>
Protective sheet	GT16-90PSCB	Clear, 5 sheets	●	—	—	—	—
	GT16-90PSGB	Anti-glare, 5 sheets	●	—	—	—	—
	GT16-90PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—
	GT16-90PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—
	GT15-90PSCB	Clear, 5 sheets	—	●	—	—	—
	GT15-90PSGB	Anti-glare, 5 sheets	—	●	—	—	—
	GT15-90PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—
	GT15-90PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—
	GT16-80PSCB	Clear, 5 sheets	●	—	—	—	—
	GT16-80PSGB	Anti-glare, 5 sheets	●	—	—	—	—
	GT16-80PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—
	GT16-80PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—
	GT15-80PSCB	Clear, 5 sheets	—	●	—	—	—
	GT15-80PSGB	Anti-glare, 5 sheets	—	●	—	—	—
	GT15-80PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—
	GT15-80PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—
	GT16-70PSCB	Clear, 5 sheets	●	—	—	—	—
	GT16-70PSGB	Anti-glare, 5 sheets	●	—	—	—	—
	GT16-70PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—
	GT16-70PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—
	GT15-70PSCB	Clear, 5 sheets	—	●	—	—	—
	GT15-70PSGB	Anti-glare, 5 sheets	—	●	—	—	—
	GT15-70PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—
	GT15-70PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—
	GT16-60PSCB	Clear, 5 sheets	●	—	—	—	—
	GT16-60PSGB	Anti-glare, 5 sheets	●	—	—	—	—
	GT16-60PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—
	GT16-60PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—
	GT15-60PSCB	Clear, 5 sheets	—	●	—	—	—
	GT15-60PSGB	Anti-glare, 5 sheets	—	●	—	—	—
	GT15-60PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—
	GT15-60PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—
	GT16H-60PSC <sup>Coming soon</sup>	Clear, 5 sheets	—	—	—	● <sup>*11</sup>	—
	GT15-50PSCB	Clear, 5 sheets	—	●	—	—	—
	GT15-50PSGB	Anti-glare, 5 sheets	—	●	—	—	—
	GT15-50PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—
	GT15-50PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—
	GT11-50PSCB	Clear, 5 sheets	—	—	●	—	—
	GT11-50PSGB	Anti-glare, 5 sheets	—	—	●	—	—
	GT11-50PSCW	Clear (frame: white), 5 sheets	—	—	●	—	—
	GT11-50PSGW	Anti-glare (frame: white), 5 sheets	—	—	●	—	—
	GT11H-50PSC	Clear, 5 sheets	—	—	—	● <sup>*10</sup>	—
	GT10-50PSCB	Clear, 5 sheets	—	—	—	—	●
	GT10-50PSGB	Anti-glare, 5 sheets	—	—	—	—	●
	GT10-50PSCW	Clear (frame: white), 5 sheets	—	—	—	—	●
	GT10-50PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	●
	GT10-40PSCB	Clear, 5 sheets	—	—	—	—	●
	GT10-40PSGB	Anti-glare, 5 sheets	—	—	—	—	●
	GT10-40PSCW	Clear (frame: white), 5 sheets	—	—	—	—	●
	GT10-40PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	●

Options

Product name	Model name	Specifications	Applicable model				
			GT16	GT15	GT11	Handy GOT	GT10
Protective sheet	GT10-30PSCB	Protective sheet for 4.5" screen (for GT1030)	—	—	—	—	●
	GT10-30PSGB		—	—	—	—	●
	GT10-30PSCW		—	—	—	—	●
	GT10-30PSGW		—	—	—	—	●
	GT10-20PSCB	Protective sheet for 3.7" screen (for GT1020)	—	—	—	—	●
	GT10-20PSGB		—	—	—	—	●
USB protective cover	GT10-20PSCW		—	—	—	—	●
	GT10-20PSGW		—	—	—	—	●
	GT16-UCOV	Protective cover for USB interface on main unit front panel (for replacement)	●	—	—	—	—
Oil resistant cover <sup>*5</sup>	GT15-UCOV	For 15"/12.1"/10.4"/8.4" For 5.7"	—	●	—	—	—
	GT11-50UCOV	—	—	●	—	—	—
	GT05-90PCO	Oil resistant cover for 15" screen	●	●	—	—	—
	GT05-80PCO	Oil resistant cover for 12.1" screen	●	●	—	—	—
	GT05-70PCO	Oil resistant cover for 10.4" screen	●	●	—	—	—
	GT05-60PCO	Oil resistant cover for 8.4" screen	●	●	—	—	—
	GT05-50PCO	Oil resistant cover for 5.7" screen	—	●	●	—	● <sup>*9</sup>
	GT10-30PCO	Oil resistant cover for 4.5" screen	—	—	—	—	●
Emergency stop switch guard	GT10-20PCO <sup>NEW</sup>	Oil resistant cover for 3.7" screen	—	—	—	—	●
	GT16H-60ESCOV <sup>Coming soon</sup>	For accidental operation prevention of emergency stop switch	—	—	—	● <sup>*11</sup>	—
Stand	GT11H-50ESCOV	—	—	—	—	● <sup>*10</sup>	—
	GT15-90STAND	Stand for 15" type	●	●	—	—	—
	GT15-80STAND	Stand for 12.1" type	●	●	—	—	—
	GT15-70STAND	Stand for 10.4"/8.4" type	●	●	—	—	—
	GT05-50STAND	Stand for 5.7" type	—	●	●	—	● <sup>*9</sup>
CF card	GT05-MEM-128MC	128MB flash ROM	●	●	●	●	—
	GT05-MEM-256MC	256MB flash ROM	●	●	●	●	—
	GT05-MEM-512MC	512MB flash ROM	●	●	●	●	—
	GT05-MEM-1GC	1GB flash ROM	●	●	●	●	—
	GT05-MEM-2GC	2GB flash ROM	●	●	●	●	—
	GT05-MEM-4GC	4GB flash ROM	●	—	—	● <sup>*11</sup>	—
Memory card adapter	GT05-MEM-8GC	8GB flash ROM	●	—	—	● <sup>*11</sup>	—
	GT05-MEM-16GC	16GB flash ROM	●	—	—	● <sup>*11</sup>	—
	GT05-MEM-ADPC	CF card→memory card (TYPE II) conversion adapter	●	●	●	●	—
	GT15-70ATT-98	Attachment for 10.4" type	—	●	—	—	—
	GT15-70ATT-87	Attachment for 10.4" type	—	●	—	—	—
Attachment	GT15-60ATT-97	Attachment for 8.4" type	●	●	—	—	—
	GT15-60ATT-96						
	GT15-60ATT-87						
	GT15-60ATT-77						
	GT15-50ATT-95W	Attachment for 5.7" type	—	●	●	—	—
	GT15-50ATT-85	Attachment for 5.7" type	—	●	●	—	—
	GT15-BAT	Battery for backup of clock data and maintenance time notification data	●	●	—	● <sup>*11</sup>	—
	GT11-50BAT	Battery for backup of clock data, alarm history, and recipe data (for replacement)	—	—	●	● <sup>*10</sup>	● <sup>*4</sup>

<sup>\*1</sup> : Function version B or earlier  
<sup>\*2</sup> : Function version C or later  
<sup>\*3</sup> : Excluding GT115□□□BDQ and GT115□□□BDA  
<sup>\*4</sup> : Excluding GT1020  
<sup>\*5</sup> : Check if the oil resistant cover can be used in the actual environment before use.  
When using the oil resistant cover, the front USB interface and human sensor cannot be used.  
<sup>\*6</sup> : Including the GP250□ and GP260□ manufactured by Pro-face.  
<sup>\*7</sup> : Can be used only for GT1030 and GT1020.  
<sup>\*8</sup> : Can be used only for GT105□ and GT104□.  
<sup>\*9</sup> : Can be used only for GT105□.  
<sup>\*10</sup> : Can be used only for GT11 Handy.  
<sup>\*11</sup> : Can be used only for GT16 Handy.

Manuals <sup>\*</sup>Manuals are supplied as PDFs with the software package in the CD-ROM. Printed manuals are also available.

Manual title	Catalog No.
GT Designer3 Version1 Screen Design Manual (Fundamentals)	SH-080866ENG
GT Designer3 Version1 Screen Design Manual (Functions) *A set of two volumes	SH-080867ENG
GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3	SH-080868ENG
GOT1000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3	SH-080869ENG
GOT1000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3	SH-080870ENG
GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3	SH-080871ENG
GOT1000 Series Gateway Functions Manual for GT Works3	SH-080858ENG
GOT1000 Series MES Interface Function Manual for GT Works3	SH-080859ENG
GT SoftGOT1000 Version3 Operating Manual for GT Works3	SH-080861ENG
GT Simulator3 Version1 Operating Manual for GT Works3	SH-080860ENG
GT Converter2 Version3 Operating Manual for GT Works3	SH-080862ENG
GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3	SH-080863ENG
GT16 User's Manual (Hardware)	SH-080928ENG
GT16 User's Manual (Basic Utility)	SH-080929ENG
GT15 User's Manual	SH-080528ENG
GT11 User's Manual	JY997D17501
GT16 Handy GOT User's Manual (Hardware • Utility, Connection) *A set of two volumes	<sup>Coming soon</sup>
GT11 Handy GOT User's Manual (Hardware • Utility, Connection) *A set of two volumes	JY997D20101
GT10 User's Manual	JY997D24701



Product list

Cables

Product name		Model name	Cable length	Third party products *1	Application	Applicable model *2				
						GT16	GT15	GT11	Handy GOT	GT10
Bus connection cable for QCPU (Q mode)	QCPU extension cable GOT-to-GOT connection cable	GT15-QC06B	0.6m	○	For connection between QCPU and GOT For connection between GOT and GOT	●	●	●	—	—
		GT15-QC12B	1.2m							
		GT15-QC30B	3m							
		GT15-QC50B	5m							
		GT15-QC100B	10m							
	Long-distance connection cable for QCPU GOT-to-GOT long-distance connection cable	GT15-QC150BS	15m	○	For long-distance (13.2m or more) connection between QCPU and GOT (A9GT-QCNB required) For long-distance connection between GOT and GOT	●	●	●	—	—
		GT15-QC200BS	20m							
GT15-QC250BS		25m								
		GT15-QC300BS	30m							
		GT15-QC350BS	35m							
Bus extension connector box		A9GT-QCNB	—	—	Used for QCPU long-distance (13.2m or more) bus connection	●	●	●	—	—
Bus connection cable for QnA/ACPU/motion controller CPU (A series)	Large CPU extension cable	GT15-C12NB	1.2m	○	For connection between QnA/ACPU/motion controller CPU (A series, extension base) and GOT	●	●	●	—	—
		GT15-C30NB	3m							
		GT15-C50NB	5m							
		GT15-AC06B	0.6m							
		GT15-AC12B	1.2m	○	For connection between QnA/ACPU/motion controller CPU (A series, extension base) and A7GT-CNB	●	●	●	—	—
		GT15-AC30B	3m							
		GT15-AC50B	5m							
		GT15-A370C12B-S1	1.2m							
		GT15-A370C25B-S1	2.5m	○	For connection between motion controller CPU (A series, main base) and GOT	●	●	●	—	—
		GT15-A370C12B	1.2m							
	GT15-A370C25B	2.5m								
	GT15-A1SC07B	0.7m	○			For connection between QnAS/AnSCPU/motion controller CPU (A series) and GOT	●	●	●	—
	GT15-A1SC12B	1.2m								
	GT15-A1SC30B	3m								
	GT15-A1SC50B	5m								
	Small CPU extension cable	GT15-A1SC05NB	0.45m	○	For connection between QnAS/AnSCPU/motion controller CPU (A series) and A7GT-CNB					
		GT15-A1SC07NB	0.7m			●	●	●	—	—
		GT15-A1SC30NB	3m							
		GT15-A1SC50NB	5m							
		GT15-C100EXSS-1	10.6m			○	For long-distance connection between QnAS/AnSCPU/ motion controller CPU (A series) and GOT For long-distance connection between A7GT-CNB and GOT *Set of GT15-EXCNB and GT15-C100BS	●	●	●
	GT15-C200EXSS-1	20.6m								
	GT15-C300EXSS-1	30.6m								
	GOT-to-GOT connection cable	GT15-C07BS	0.7m	○	For connection between GOT and GOT	●	●	●	—	—
		GT15-C12BS	1.2m							
		GT15-C30BS	3m							
	GOT-to-GOT long-distance connection cable	GT15-C50BS	5m	○	For connection between GOT and GOT					
		GT15-C100BS	10m			●	●	●	—	—
GT15-C200BS		20m								
		GT15-C300BS	30m							
A0J2HCPU connection cable		GT15-J2C10B	1m	○	For connection between power supply unit (A0J2-PW) for A0J2HCPU and GOT	●	●	●	—	—
Bus connector conversion box		A7GT-CNB	—	—	Used for QnA/ACPU long-distance bus connection	●	●	●	—	—
Buffer circuit cable		GT15-EXCNB	0.5m	○	Usable as GT15-C100EXSS-1 in combination with GT15-C100BS	●	●	●	—	—
Ferrite core set for Q bus cable (two-pack)		GT15-QFC	—	○	Ferrite cores for replacing existing GOT-A900 bus cable with bus cable for GOT1000	●	●	●	—	—
Ferrite core set for A bus cable (two-pack)		GT15-AFC	—							
RS-422 conversion cable		GT16-C02R4-9S	0.2m	○	For connection between RS-422/485 (connector) of GT16 and RS-422 cable (D-sub 9 pins)	●	—	—	—	—
RS-485 terminal block conversion unit		FA-LTBGTR4CBL05	0.5m	○	RS-485 terminal block conversion unit	●	—	—	—	—
		FA-LTBGTR4CBL10	1m		*With cable for connection between RS-422/485 (connector) of GT16 and RS-485 terminal block conversion unit					
		FA-LTBGTR4CBL20	2m							
RS-422 cable	QnA/A/FXCPU direct connection cable Computer link connection cable	GT01-C30R4-25P	3m	—	For connection between QnA/ACPU/motion controller CPU (A series)/FXCPU (D-sub 25-pin connector) and GOT For connection between FA-CNV100CBL and GOT For connection between serial communication unit and GOT For connection between AJ65BT-G4-S3 and GOT	●	●	●	●	●
		GT01-C100R4-25P	10m							
		GT01-C200R4-25P	20m							
		GT01-C300R4-25P	30m							
		GT10-C30R4-25P	3m							
		GT10-C100R4-25P	10m							
	Computer link connection cable	GT10-C200R4-25P	20m	—	For connection between serial communication unit (AJ71QC24(N)-R4) and GOT	—	—	—	—	●
		GT10-C300R4-25P	30m							
		GT09-C30R4-6C	3m							
		GT09-C100R4-6C	10m			●	●	●	●	●
		GT09-C200R4-6C	20m							
		GT09-C300R4-6C	30m							
	FXCPU direct connection cable FX communication function extension board connection cable	GT01-C10R4-8P	1m	—	For connection between FXCPU (MINI-DIN 8-pin connector) and GOT For connection between FXCPU communication function extension board (MINI-DIN 8-pin connector) and GOT	●	●	●	●	●
		GT01-C30R4-8P	3m							
		GT01-C100R4-8P	10m							
		GT01-C200R4-8P	20m							
		GT01-C300R4-8P	30m							
		GT10-C10R4-8P	1m							
GT10-C30R4-8P		3m								
GT10-C100R4-8P		10m								
GT10-C200R4-8P		20m								
GT10-C300R4-8P		30m								
		GT10-C10R4-8PCL	1m	—	For connection between FXCPU (MINI-DIN 8-pin connector) and GOT For connection between FXCPU communication function extension board (MINI-DIN 8-pin connector) and GOT *The unit cannot be used with the FX1NC, FX2NC, FX3UC-D/SS, FX3G.	—	—	—	—	●
		GT10-C10R4-8PC	1m	—	For connection between FXCPU (MINI-DIN 8-pin connector) and GOT					
		GT10-C30R4-8PC	3m							
		GT10-C100R4-8PC	10m							
		GT10-C200R4-8PC	20m							
		GT10-C300R4-8PC	30m							
RS-232 cable	Q/LCPU direct connection cable Data transfer cable	GT01-C30R2-6P	3m	—	For connection between Q/LCPU and GOT/personal computer (GT SoftGOT1000) (D-sub 9-pin) For connection between personal computer (screen design software) (D-sub 9-pin, female) and GOT (MINI-DIN 6-pin, male)	●	●	●	—	●
		GT10-C30R2-6P	3m	—	For connection between Q/LCPU and GOT For connection between GOT and GOT	—	—	—	—	●
		GT11H-C30R2-6P	3m	—	For connector conversion box between Q/LCPU and Handy GOT	—	—	—	●	—

Cables

Product name		Model name	Cable length	Third party products *1	Application	Applicable model *2					
						GT16	GT15	GT11	Handy GOT	GT10	
RS-232 cable	FX communication function extension board connection cable, FX communication function adapter connection cable, Data transfer cable	GT01-C30R2-9S	3m	—	For connection between FXCPU communication function extension board (D-sub 9-pin connector) and GOT/personal computer (GT SoftGOT1000) (D-sub 9-pin) For connection between FXCPU communication function adapter (D-sub 9-pin connector) and GOT For connection between personal computer (screen design software) (D-sub 9-pin, female) and GOT (D-sub 9-pin, female)	●	●	●	●	●	
		GT01-C30R2-25P	3m	—	For connection between FXCPU communication special adapter (D-sub 25-pin connector) and GOT, personal computer (GT SoftGOT1000) (D-sub 9-pin)	●	●	●	●	●	
	FX communication function adapter connection cable	GT09-C30R2-9P	3m	○	For connection between serial communication unit and GOT	●	●	●	●	●	
		GT09-C30R2-25P	3m		For connection between computer link unit and GOT	●	●	●	●	●	
Connector conversion box for Handy GOT		GT16H-CNB-42S	Coming soon	—	Converts Handy GOT connector to RJ45 for terminal block, D-sub connector or Ethernet for each signal type	—	—	—	●	—	
External connection cable	FA device, power supply and operation switch connection cable	GT11H-CNB-37S	3m	—	Converts D-sub 37-pin connector to terminal block and D-sub 9-pin connector	—	—	—	●	—	
		GT16H-C30-42P	Coming soon	3m	For connection between connector conversion box and Handy GOT	—	—	—	●	—	
		GT16H-C60-42P	Coming soon	6m		—	—	—	●	—	
		GT16H-C100-42P	Coming soon	10m		—	—	—	●	—	
		GT16H-C30-32P	Coming soon	3m		—	—	—	●	—	
		GT16H-C50-32P	Coming soon	5m	For connection between CC-Link interface unit and Handy GOT	—	—	—	●	—	
		GT16H-C80-32P	Coming soon	8m		—	—	—	●	—	
		GT16H-C130-32P	Coming soon	13m		—	—	—	●	—	
		GT11H-C30-37P	3m	—	For connection between FA device connection relay cable and GOT	—	—	—	●	—	
		GT11H-C60-37P	6m			—	—	—	●	—	
		GT11H-C100-37P	10m			—	—	—	●	—	
		GT11H-C30	3m			—	—	—	●	—	
FA device connection relay cable	RS-422, power supply and operation switch connection cable	GT11H-C15R4-8P	1.5m	—	For connection between FXCPU and GOT For connection between power supply and operation switches and GOT	—	—	—	●	—	
		GT11H-C15R4-25P	1.5m	—	For connection between A/QnACPU and GOT For connection between power supply and operation switches and GOT	—	—	—	●	—	
	RS-232, power supply and operation switch connection cable	GT11H-C15R2-6P	1.5m	—	For connection between QCPU and GOT For connection between power supply and operation switches and GOT	—	—	—	●	—	
		GT11H-C30-32P	3m	—	For connection between CC-Link interface unit and Handy GOT	—	—	—	●	—	
	Dedicated cable for CC-Link interface unit	GT11H-C50-32P	5m			—	—	—	●	—	
		GT11H-C80-32P	8m			—	—	—	●	—	
		GT11H-C130-32P	13m			—	—	—	●	—	
		GT10-C02H-6PT9P	0.2m	—	For connection between barcode reader (D-sub 9-pin, male) and GOT (MINI-DIN 6-pin, male) RS-232	—	—	—	—	●	
Barcode reader connection cable		GT10-C02H-6PT9P	0.2m	—							
External I/O unit connection conversion cable		GT15-C03HTB	0.3m	○	For connection between GOT1000 (external I/O unit) and GOT-A900 external I/O interface unit connection cable (A8GT-C05TK/A8GT-C30TB/user-fabricated cable)	●	●	—	—	—	
Analog RGB cable		GT15-C50VG	5m	○	For connection between external monitor, personal computer and vision sensor and GOT	●	●	—	—	—	
USB cable	RS-232/USB conversion adapter for data transfer	GT10-RS2TUSB-5S	—	—	For connection between personal computer (USB) and GOT (RS-232) (Adapter and personal computer are connected with GT09-C30USB-5P.)	—	—	—	—	●	
	Data transfer cable	GT09-C30USB-5P	3m	○	For connection between personal computer (USB) and GOT (USB mini-B) For connection between QnLCPU (USB mini-B) and personal computer (GT SoftGOT1000) For connection between printer and GOT (printer unit)	●	●	—	—	—	
Extension USB waterproof cable		GT10-C10EXUSB-5S	NEW	1m	For extending the USB port of GOT to the control panel	—	—	—	—	●	

\*1 : FA-LTBGTR4CBL is developed by Mitsubishi Electric Engineering Company Limited and sold through your local sales office.  
The other products listed are developed by Mitsubishi Electric System & Service Co., LTD. and sold through your local sales office.  
\*2 : The applicable connection configuration and cable vary depending on the GOT main unit. For more details, see the GOT1000 Series Handbook and the GOT1000 Series Connection Manual.  
\*3 : Can be used when used together with the Handy GOT connector conversion box.  
\*4 : Can be used only for GT105 and GT104.  
\*5 : Can be used only for GT1030 and GT1020.  
\*6 : To connect with RS-422/485 interface of GT16 main unit, an RS-422 conversion cable (GT16-C02R4-9S) is required.  
\*7 : Can be used only for GT16 Handy.  
\*8 : Can be used only for GT11 Handy.

Cables for third party FA devices

Product name		Model name	Cable length	Third party products ※1	GOT connection destination	Applicable model ※2					
						GT16	GT15	GT11	Handy GOT	GT10	
RS-232 cable	Cable for OMRON PLC	GT09-C30R20101-9P	3m	○	PLC CPU: CPM2A/CQM1(H)/CS1/CJ1/CJ2H/CP1E/C200HX/C200HG/C200HE/CV500/CV1000/CV2000/CVM1 RS-232C adapter: CPM1-CIF01/CPM2C-CIF01-V1 Cable: CPM2C-CN111/CQM1-CIF02 Serial communication unit/board: CQM1-SCB41/C200HW-COM02/C200HW-COM05/C200HW-COM06/CS1W-SCB21(-V1)/CS1W-SCB41(-V1)/CS1W-SCU21(-V1)/CJ1W-SCU21(-V1)/CJ1W-SCU41(-V1)/CP1W-CIE01 Connection cable: CQM1-CIF01 Base mount type host link unit: C500-LK201-V1/C200H-LK201-V1						
		GT09-C30R20102-25S	3m								
		GT09-C30R20103-25P	3m								
	Cable for KEYENCE PLC	GT09-C30R21101-6P	3m		PLC CPU: KV-700/1000/3000						
		GT09-C30R21102-9S	3m		Multi-communication unit: KV-L20/KV-L20R/KV-L20V (port 1)						
		GT09-C30R21103-3T	3m		Multi-communication unit: KV-L20/KV-L20R/KV-L20V (port 2)						
	Cable for Sharp Manufacturing Systems PLC	GT09-C30R20601-15P	3m		PLC CPU: JW-22CU/70CUH/100CUH/100CU						
		GT09-C30R20602-15P	3m		PLC CPU: JW-32CUH/33CUH/Z-51J						
	Cables for JTEKT PLC	GT09-C30R21201-25P	3m		RS-232/RS-422 converter: TXU-2051						
	Cable for Shinko Technos digital indicating controller	GT09-C30R21401-4T	3m		Digital indicating controller: FCR-100/FCD-100/FCR-23A/PC-900/FIR series						
		Cable for TOSHIBA PLC	GT09-C30R20501-9P		3m	PLC CPU: T2E					
			GT09-C30R20502-15P		3m	PLC CPU: T2N					
	Cable for Hitachi Industrial Equipment Systems PLC	GT09-C30R20401-15P	3m		PLC CPU: Large-size H series/H200 to 252 series/H series board type/EH-150 series						
		GT09-C30R20402-15P	3m		Intelligent serial port module: COMM-H/COMM-2H						
		GT09-C30R20402-15P	3m		PLC CPU: H-4010/H-252C/EH-150 series						
	Cable for Hitachi PLC	GT09-C30R21301-9S	3m		Communication module: LQE560/LQE060/LQE160						
Cable for Fuji Electric FA Components & Systems PLC	GT09-C30R21003-25P	3m	RS-232C interface card: NV1L-RS2 RS-232C/485 interface capsule: FFK120A-C10 General interface module: NC1L-RS2/FFU120B								
	GT09-C30R20901-25P	3m	RS-422→232 conversion adapter: AFP8550								
	Cable for Panasonic Electric Works PLC	GT09-C30R20902-9P	3m	PLC CPU: FP2/FP2SH/FP3/FP5/FP10(S)/FP10SH/FP-M							
GT09-C30R20903-9P		3m	Computer communication unit: AFP2462/AFP3462/AFP5462								
GT09-C30R20903-9P		3m	PLC CPU: FP1-C24C/C40C								
GT09-C30R20904-3C		3m	PLC CPU: FP1-C16CT/C32CT/FPOR								

Product list

Cables for third party FA devices

Product name		Model name	Cable length	Third party products*1	GOT connection destination	Applicable model*2				
						GT16	GT15	GT11	Handy GOT	GT10
RS-232 cable	Cable for YASKAWA Electric PLC	GT09-C30R20201-9P	3m	●	PLC CPU: GL120/GL130/MP-920/MP-930/CP-9200(H)/PROGIC-8 (port 1) MEMOBUS module: JAMSC-IF60/JAMSC-IF61 Communication module: 217IF/CP-217IF (when connected to CN1)/217IF-01/218IF-01	●				●*4
		GT09-C30R20202-15P	3m		PLC CPU: PROGIC-8 (port 2)					
		GT09-C30R20203-9P	3m		PLC CPU: CP-9300MS					
		GT09-C30R20204-14P	3m		PLC CPU: MP-940					
		GT09-C30R20205-25P	3m		MEMOBUS module: CP-217IF (when connected to CN2) Yokogawa Electric personal computer module: LC01-0N/LC02-0N					
	Cable for Yokogawa Electric PLC	GT09-C30R20301-9P	3m		CPU port/D-sub 9-pin conversion cable: KM10-0C/KM10-0S					
		GT09-C30R20302-9P	3m		Personal computer link module: F3LC01-1N/F3LC11-1N/F3LC11-1F/F3LC12-1F					
		GT09-C30R20305-9S	3m		PLC CPU: NFCP100/NFJT100					
	Cable for Yokogawa Electric temperature controller	GT09-C30R20304-9S	3m		Converter: ML2-□					
	Cable for Allen-Bradley (Rockwell Automation, Inc.) PLC	GT09-C30R20701-9S	3m		PLC CPU: SL500 series					
	Cable for OMRON PLC	GT09-C30R20801-9S	3m		HMI adapter	●				●*4
		GT09-C30R40101-9P	3m		PLC CPU: CV500/CV1000/CV2000/CVM1					
		GT09-C100R40101-9P	10m		Serial communication unit: CJ1W-SCU41					
		GT09-C200R40101-9P	20m		Serial communication board: CQM1-SCB41/CS1W-SCB41					
		GT09-C300R40101-9P	30m		Communication board: C200HW-COM03/COM06					
	Cable for KEYENCE PLC	GT09-C30R40102-9P	3m		Base mount type host link unit: C200H-LK202-V1/C500-LK201-V1					
		GT09-C100R40102-9P	10m		Communication board: CP1W-CIF11/CP1W-CIF12/CJ1W-CIF11					
		GT09-C200R40102-9P	20m		Multi-communication unit: KV-L20/KV-L20R/KV-L20V (port 2)					
		GT09-C300R40102-9P	30m		PLC CPU: JW-22CU/70CUH/100CUH/100CU					
		GT09-C30R40103-5T	3m		PLC CPU: JW-32CUH/33CUH/Z-512J					
	Cable for Sharp Manufacturing Systems PLC	GT09-C100R40103-5T	10m		Link unit: JW-21CM/JW-10CM/ZW-10CM					
		GT09-C200R40103-5T	20m		PLC CPU: PC3J/PC3JL					
		GT09-C300R40103-5T	30m		Communication module: PC/CMP2-LINK					
		GT09-C30R41101-5T	3m		PLC CPU: T2/T3/T3H/model3000(S3)					
		GT09-C100R41101-5T	10m		PLC CPU: T2E/model2000(S2)					
	Cable for JTEKT PLC	GT09-C200R41101-5T	20m		PLC CPU: T2N					
		GT09-C300R41101-5T	30m		Intelligent serial port module: COMM-H/COMM-2H					
		GT09-C30R40601-15P	3m		PLC CPU: LQP510					
		GT09-C100R40601-15P	10m		Communication module: LQE565/LQE165					
		GT09-C200R40601-15P	20m		RS-232C/485 interface capsule: FFK120A-C10					
	Cable for TOSHIBA PLC	GT09-C300R40601-15P	30m		General interface module: NC1L-RS4/FFU120B					
		GT09-C30R40602-15P	3m		MEMOBUS module: JAMSC-120NOM27100/JAMSC-IF612					
		GT09-C100R40602-15P	10m		PLC CPU: MP940					
		GT09-C200R40602-15P	20m		Personal computer link module: F3LC11-2N					
		GT09-C300R40602-15P	30m		Personal computer link module: LC02-0N					
	Cable for Hitachi Industrial Equipment Systems PLC	GT09-C30R40603-6T	3m		Temperature controller: GREEN series					
		GT09-C100R40603-6T	10m		Temperature controller: UT2000 series					
		GT09-C200R40603-6T	20m							
		GT09-C300R40603-6T	30m							
		GT09-C30R41201-6C	3m							
	Cable for Yaskawa Electric PLC	GT09-C100R41201-6C	10m			●				●*4
		GT09-C200R41201-6C	20m							
		GT09-C300R41201-6C	30m							
		GT09-C30R40501-15P	3m							
		GT09-C100R40501-15P	10m							
	Cable for Hitachi PLC	GT09-C200R40501-15P	20m							
		GT09-C300R40501-15P	30m							
		GT09-C30R40502-6C	3m							
		GT09-C100R40502-6C	10m							
		GT09-C200R40502-6C	20m							
	Cable for Fuji Electric FA Components & Systems PLC	GT09-C300R40503-15P	3m							
		GT09-C100R40503-15P	10m							
		GT09-C200R40503-15P	20m							
		GT09-C300R40401-7T	3m							
		GT09-C100R40401-7T	10m							
	Cable for Yaskawa Electric PLC	GT09-C200R40401-7T	20m							
		GT09-C300R41301-9S	3m							
		GT09-C100R41301-9S	10m							
		GT09-C200R41301-9S	20m							
		GT09-C300R41301-9S	30m							
	Cable for Yokogawa Electric PLC	GT09-C30R41001-6T	3m			●				●*4
		GT09-C100R41001-6T	10m							
		GT09-C200R41001-6T	20m							
		GT09-C300R41001-6T	30m							
		GT09-C30R40201-9P	3m							
	Cable for Yokogawa Electric	GT09-C100R40201-9P	10m							
		GT09-C200R40201-9P	20m							
		GT09-C300R40201-9P	30m							
		GT09-C30R40202-14P	3m							
		GT09-C100R40202-14P	10m							
	Cable for Yokogawa Electric	GT09-C200R40202-14P	20m							
		GT09-C300R40202-14P	30m							
	PLC	GT09-C30R40301-6T	3m							
		GT09-C100R40301-6T	10m							
		GT09-C200R40301-6T	20m							
	Temperature controller	GT09-C300R40301-6T	30m							
		GT09-C30R40302-6T	3m							
		GT09-C100R40302-6T	10m							
		GT09-C200R40302-6T	20m							
		GT09-C300R40302-6T	30m							
		GT09-C30R40303-6T	3m							
	Cable for Siemens AG PLC	GT09-C100R40303-6T	10m			●				●*4
		GT09-C200R40303-6T	20m							
		GT09-C300R40303-6T	30m							
		GT09-C30R40304-6T	3m							
		GT09-C100R40304-6T	10m							
	Cable for Allen-Bradley (Rockwell Automation, Inc.) PLC	GT09-C200R40304-6T	20m							
		GT09-C300R40304-6T	30m							
		GT09-C30R40304-6T	3m							
		GT09-C100R40304-6T	10m							
		GT09-C200R40304-6T	20m							
	Cable for Allen-Bradley (Rockwell Automation, Inc.) PLC	GT09-C300R40304-6T	30m			●				●*4
		GT09-C30R40304-6T	3m							
		GT09-C100R40304-6T	10m							
		GT09-C200R40304-6T	20m							
		GT09-C300R40304-6T	30m							
	Cable for Allen-Bradley (Rockwell Automation, Inc.) PLC	GT09-C30R40304-6T	3m							
		GT09-C100R40304-6T	10m							
		GT09-C200R40304-6T	20m							
		GT09-C300R40304-6T	30m							
		GT09-C30R40304-6T	3m							

\*1 : Items listed above are developed by Mitsubishi Electric System & Service Co., LTD., and sold through your local sales office.  
\*2 : The applicable connection configuration and cable vary depending on the GOT main unit. For more details, see the GOT1000 Series Handbook and the GOT1000 Series Connection Manual.  
\*3 : RS-422 cables less than 10m and the RS-232 cable less than 3m can be used when the connector conversion box for the Handy GOT is used.  
\*4 : Can be used only for GT105□ and GT104□.  
\*5 : To connect with RS-422/485 interface of GT16 main unit, an RS-422 conversion cable (GT16-C02R4-9S) is necessary.

Notes for use

Backward compatibility

Project data  
■GT Designer/GT Designer2 → GT Works3 compatibility\*  
Project data created in GT Designer2 can be used in GT Works3.  
Project data created in GT Designer can be used in GT Works3 after the data is converted by GT Designer2/GT Designer2 Classic.

■GOT900 series → GOT1000 series compatibility\*  
●Using data from the GOT-A900 series  
Project data for GOT-A900 series can be used in GOT1000 series.  
For



CF card & optional function board selection <GT16/GT15/GT11>

When using the GT16

When using optional functions & extended functions

When using the MES interface function, install the optional function board GT16-MESB.

No optional boards are necessary when using other functions.

Some functions, however, may require a CF card due to OS installation.

See below for details.

Storage memory (ROM) and operation memory (RAM)

The GOT operates by decompressing the OS and project data, which is stored in the storage memory (ROM), into the operation memory (RAM). Since the GT16 compresses some data before storing it in the storage memory (ROM), the data size becomes larger when decompressed in the operation memory (RAM).

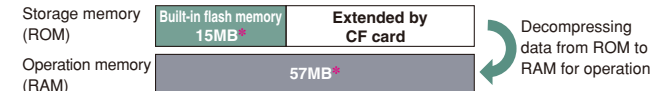
The GT16 has a 15MB\* built-in flash memory for storage memory (ROM) as a standard feature. The CF card expands the memory if the OS and project data exceeds 15MB\*.

The GT16 has a 57MB\* operation memory (RAM) as a standard feature. The operation memory is not extendable.

The built-in flash memory is for "drive C". The CF card is for "drive A (standard)" or "drive B (extension)."

Storage memory (ROM)

Operation memory (RAM)



\*: Differs depending on the GOT main unit model.

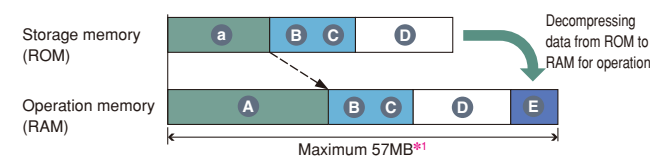
Types and capacities of data and CF card selection

The data types and capacities are as shown in the table below.

Data type	Data capacity
<b>A</b> Extended function OS and optional function OS stored in ROM	Capacity of "GT16(ROM)" in [Table A] on page 69
<b>A</b> Extended function OS and optional function OS decompressed in RAM	Capacity of "GT16(RAM)" in [Table A] on page 69
<b>B</b> Communication driver	Check with [Table B] on page 69.
<b>C</b> Special data	Check with a screen design software.
<b>D</b> Project data	Check with a screen design software.
<b>E</b> Buffering area	Check with a screen design software.

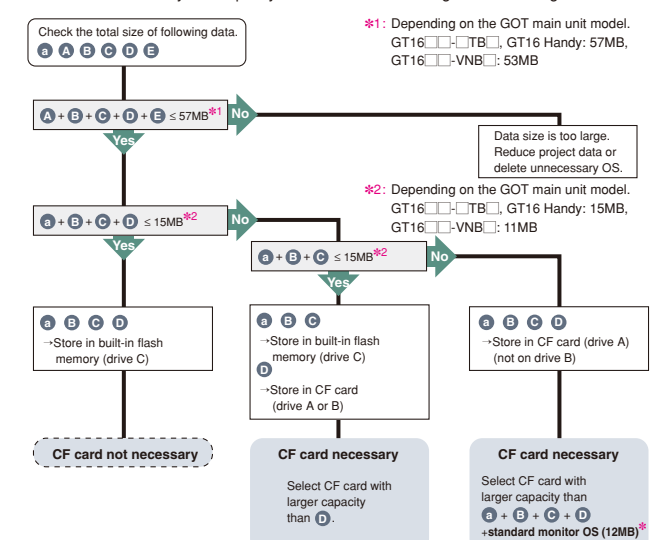
As for the extended function OS and optional function OS, when decompressing the compressed data **A** in the storage memory (ROM) to the operation memory (RAM), the data size becomes larger as shown in **A**.

The buffering area **E** is an area for storing resource data such as logging and extension alarms. It uses the operation memory (RAM). The data size differs depending on the setting. When the screen design software designates file saving, the accumulated resource data is stored in the designated storage (drive A or B). (The storage memory (ROM) is not used.) If the size of data decompressed on the operation memory (RAM) exceeds 57MB\*, it is necessary to reduce, for instance, the project data size or delete unnecessary OS.



Necessity and capacity of the CF card depends on the data size.

Determine the necessity and capacity of the CF card according to the following flow chart.



\*: When storing the extended function OS and optional function OS in the CF card (drive A), the standard monitor OS (standard monitor OS, standard font, etc.) needs to be stored in the CF card (drive A).

When using the GT11

When using optional functions

Since the following GOT models have a built-in optional function board (GT11-50FNB), it is unnecessary to mount an optional function board to use optional functions shown in [Table A].

• GT115-Q-BDQ • GT115-Q-BDA • GT1155-QTBD • GT115-HS-Q-BD: Version B or later • GT115-Q-BD: Version C or later

When using the GT15

When using optional functions & extended functions

When using the following function, install the optional function board GT15-QFNB or GT15-MESB48M.

- MES interface function

When using the following function, install the optional function board GT15-QFNB or GT15-MESB48M.

- SFC monitor function • Motion SFC monitor function

When using the following functions, install the optional function board GT15-QFNB or GT15-MESB48M.

- Multi-channel function • Document display function
- MELSEC-Q/L/QnA ladder monitor function

The following GOT requires no optional function boards when using optional functions other than above.

- GT15: hardware version D or later

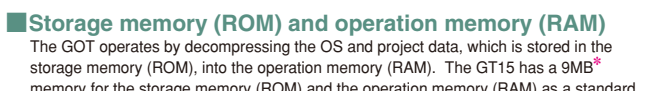
To activate the built-in optional function board in the GOT, it is necessary to install the standard monitor OS on the GOT using GT Designer Version 2.55H or later.

Some functions, however, require an optional function board with expansion memory (GT15-QFNB or GT15-MESB48M) and a CF card.

See below for details.

Storage memory (ROM)

Operation memory (RAM)



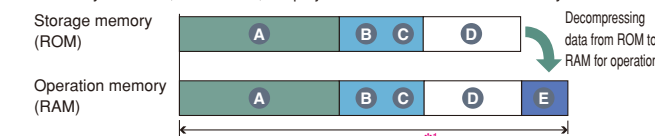
\*: Differs depending on the GOT main unit model: GT15-QFNB: 9MB, GT15-QFNB-VNB: 5MB

Types and capacities of data and CF card selection

The data types and capacities are as shown in the table below.

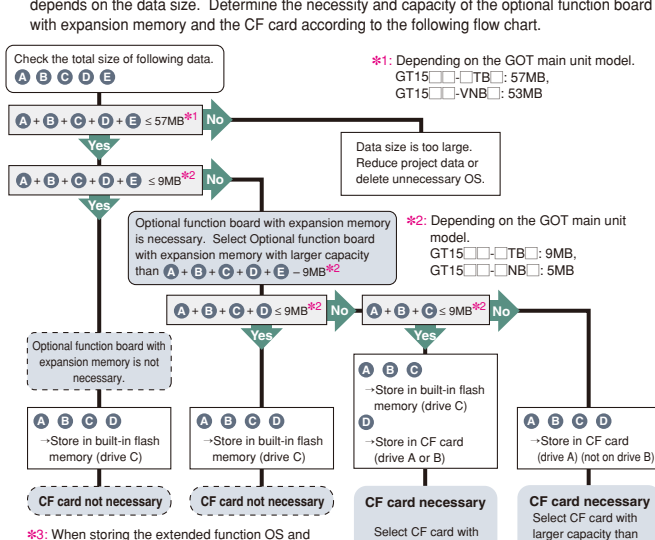
Data type	Data capacity
<b>A</b> Extended function OS, optional function OS	Capacity of "GT15" on [Table A] on page 69
<b>B</b> Second communication driver and onwards	150KB for each
<b>C</b> Special data	Check with a screen design software.
<b>D</b> Project data	Check with a screen design software.
<b>E</b> Buffering area	Check with a screen design software.

The buffering area **E** is an area for storing resource data such as logging and extension alarms. It uses the operation memory (RAM). The data size differs depending on the setting. When the screen design software designates file saving, the accumulated resource data is stored in the designated storage (drive A or B). (The storage memory (ROM) is not used.) If the size of data decompressed on the operation memory (RAM) exceeds 57MB\*, it is necessary to reduce, for instance, the project data size or delete unnecessary OS.



Necessity and capacity of the optional function board with expansion memory and the CF card depends on the data size.

Determine the necessity and capacity of the optional function board with expansion memory and the CF card according to the following flow chart.



\*: When storing the extended function OS and optional function OS in the CF card (drive A), the standard monitor OS (standard monitor OS, standard font, first communication driver, etc.) needs to be stored in the CF card (drive A).

[Table A] Capacity of extended functional OS and optional function OS

Function	User area size to be used (KB)			
	GT16		GT15	GT11
	RAM	ROM		
Barcode	84	50	84	*1
RFID	166	50	166	*1
System monitor	692	450	746	*1
Report	235	150	235	None
Printer (PictBridge)	1104	552	1104	None
Printer (serial)	200	80	200	None
Operation log (device name conversion library)	800	400	800	None
Stroke font	Stroke font support function	400	300	None
	Stroke basic font (Japanese)	2160	2160	2160
	Stroke basic font (Japanese) (with Hangul)	3175	3175	3175
	Stroke basic font (Chinese: Simplified)	1474	1474	1474
Video display	Stroke basic font (Chinese: Simplified) (with Hangul)	2016	2016	2016
	Video/RGB	480	298	512
	Video/RGB	480	298	512
	Video/RGB	480	298	512
Remote personal computer operation (Ethernet)	5130	860	None	None
Remote personal computer operation (serial)	480	292	512	None
Backup/restoration	766	420	820	None
Operator authentication	730	460	784	None
USB mouse/keyboard function	200	80	None	None
Audio output	200	100	200	None
External I/O, operation panel	100	70	100	None
CNC data input/output	383	210	437	None
input/output GOT platform library	200	77	100	None
Device data transfer	100	50	100	None
MELSEC-L troubleshooting function	770	340	None	None
SoftGOT-GOT link function	200	100	200	None
Log viewer function	3882	1434	None	None
Maintenance time notification	*2	*2	*2	None
Multi-channel	*2	*2	*2	None
Chinese region	Standard font (Chinese: Simplified)	1280	1280	1280
	Standard font (Chinese: Traditional)	1920	1920	1920
	Standard font (Japanese)	1280	1280	1280
	Stroke font (Japanese)	1037	1037	1037
Operation log	Stroke font (Chinese: Simplified)	1248	1248	1248
	Stroke font (Chinese: Traditional)	1680	1680	1680
	Document display	3072	150	2048
	Kana-Kanji conversion	None	None	1223
Optional functions	Kana-Kanji conversion (enhanced version)	2774	1242	2774
	Historical trend graph*3	*2	*2	*2
	Logging*4	710	380	740
	Recipe	100	70	100
Advanced recipe	Object script*4	360	180	360
	MELSEC-A ladder monitor	674	342	523
	MELSEC-FX ladder monitor	674	342	592
	MELSEC-Q/L/QnA ladder monitor	4170	590	1082
A list editor	MELSEC-A list editor	1024	542	1058
FX list editor	MELSEC-FX list editor	1024	542	1058
Intelligent unit monitor		770	390	384
Network monitor		370	210	324

To use the multi-channel function <GT16/GT15>

The multi-channel function is designed to connect and monitor multiple FA devices by mounting multiple communication units on a single GOT unit or by using the standard interface.

Acceptable combinations

The following connection combinations can be used for the multi-channel function.

- When using GT16:
- ① Bus connection or network connection \*1 + serial connection \*2
  - ② Bus connection or network connection \*1 + Ethernet connection \*3
  - ③ Ethernet connection \*3 + serial connection \*2
  - ④ Bus connection or network connection \*1 + Ethernet connection \*3 + serial connection \*2
  - ⑤ Serial connection \*2
  - ⑥ Ethernet connection \*3
- \*: GT16 Handy can be connected only by methods ③ or ⑥.

When using GT15:

- ① Bus connection, network connection \*1, or Ethernet connection \*3 + serial connection \*2
  - ② Serial connection \*2
- \*1: The network connections include the following connection configurations.
- MELSECNET/H connection • MELSECNET/10 connection
  - CC-Link IE connection • CC-Link connection (ID)
- \*2: The serial connections include the following connection configurations.
- CPU direct connection • Computer link connection • CC-Link connection (via G4)
  - Microcomputer connection (serial) • Connection with third party PLCs (serial)
  - Temperature controller connection • Inverter connection • Servo amplifier connection
  - CNC connection (CPU direct connection) • GOT multi-drop connection
  - MODBUS/RTU connection • Robot controller connection (serial)
- \*3: The Ethernet connections include the following connection configurations.
- Ethernet connection • MODBUS/TCP connection • Third party PLC connection (Ethernet)
  - Robot controller connection (Ethernet) • CNC connection (Ethernet)
  - Microcomputer connection (Ethernet)

Function	User area size to be used (KB)			
	GT16		GT15	GT11
	RAM	ROM		
Q motion monitor	770	390	607	None
Servo amplifier monitor	770	390	524	None
CNC monitor	770	390	588	None
Optional functions	GOT platform library	200	77	100 *5
	SFC monitor	2108	442	1373 *5
	GOT function extension library	19381	4729	4729 *5
	GOT platform library	200	77	100 *11
Motion SFC monitor*10	Motion SFC monitor	12522	1240	2477 *11
editor	GOT platform library	200	77	100 *6
	Ladder editor	8192	2567	5121 *6
	GOT function extension library	19381	4729	4729 *6
Gateway	Gateway (server, client)	100	50	100
	Gateway (mail)	100	50	100
	Gateway (FTP)	84	50	64
MES interface		13461	1598	3196 *9

- \*1: Requires installation of the optional function OS and extended function OS, but does not use the user area.
- \*2: Installation of the optional function OS is not required.
- \*3: It is necessary to specify the logging function and install the optional function OS (logging) in advance.
- \*4: Necessary when using the GOT project data that is automatically created by PX Developer (Ver. 1.15 or later). For details, see "PX Developer Version 1 Operating Manual (GOT Screen Generator)(SH-080772ENG)."
- \*5: To use the SFC monitor, free space of 6202KB or more is necessary in the user area of the specified drive for installing the extension function OS and optional function OS. The total capacity of the memory necessary for using the SFC monitor is 14393KB. Due to the above, the setting shown in Table 1 is necessary depending on the GOT to be used.

<Table 1>

GOT	Necessary setting
GT157-VN, GT1562-VN	Set boot source of OS to "A: standard CF card."
GT157-VN, GT1562-VN	Memory extension (install optional function board with expansion memory)
Other than above	Memory extension (install optional function board with expansion memory)

- For setting the boot source of the OS, see "GT Designer3 Version1 Screen Design Manual (Fundamentals)."
- \*6: To use the ladder editor, free space of 9950KB or more is necessary in the user area of the specified drive for installing the extension function OS and optional function OS. The total capacity of the memory necessary for using the ladder editor is 21212KB. For the above reasons, when using the ladder editor, specify "A: Standard CF card" for the OS boot source, and mount an optional function board with a memory capacity of 16MB or more.
- \*7: To use the SFC monitor, it is necessary to install all of the GOT platform library, SFC monitor and GOT function extension library.
- \*8: To use the ladder editor, it is necessary to install all of the GOT platform library, ladder editor and GOT function extension library.
- \*9: The operation of the MES interface function uses 8218KB of the extended memory (GT15-MESB48M(48MB)) of GT15's operation memory.
- \*10: To use the motion SFC monitor, it is necessary to install all of the GOT platform library and motion SFC monitor.
- \*11: To use the motion SFC monitor, free space of 2577KB or more is necessary in the user area of the specified drive for installing the extended function OS and optional function OS. The total capacity of the memory necessary for using the motion SFC monitor is 12622KB. For the above reasons, mount an optional function board with a memory capacity of 16MB or more.

[Table B] Capacity of GT16 communication driver

Units connected	Communication driver name	Capacity (KB)
Mitsubishi PLC, motion controller, robot controller, CNC	Bus connection Q	180
	A/QnA/QCPU, QJ71C24	180
	MELSEC-FX	180
	MELSECNET/H	200
Third party PLC, motion controller	CC-Link IE controller network	200
	JTEKT Corporation TOYOPUC-PC	160
	Ethernet (Yaskawa Electric Corporation)	160
Microcomputer	Microcomputer connection	230
Communication drivers other than above		150

Maximum number of connectable channels, mountable units and mounting stages

- (1) Number of connectable channels
  - (2) Number of mountable units and mounting stages
- The number of connectable channels varies depending on the GOT model. See Table C on the following page.
- When the multi-channel function is used, add interfaces on the GOT side using any of the following methods.
- (a) Stack communication units on the extension unit interface.
  - (b) Mount communication units on the extension unit interface to use the unit in combination with the standard interface. The number of mountable units and mounting stages vary depending on the GOT model. See Table C on the following page.

\*: The performance of GOT may be affected depending on the configuration of connected devices.

Optional function board

Not necessary when using the GT16.

The GT15 requires an optional function board. Use the optional function board GT15-QFNB or GT15-MESB48M. The GT15-FNB cannot be used.

Communication driver

A communication driver must be installed for each of the connection configurations. For the GT16, the communication driver is installed in the user area.

For the GT15, communication drivers for the second and subsequent channels will be installed in the user area.



Notes for use

[ Table C ] Number of connectable channels, number of mountable units and number of mountable stages when the multi-channel function is used

	GT1695/ GT1685/ GT167 / GT166	GT1595/ GT1585/ GT157 / GT156	GT155	Handy GT16	Description
(1)	Number of connectable channels	Up to 4 channels	Up to 2 channels	Up to 4 channels	For GT16: The number of communication ports (communication units and interfaces) for use for communication on the GOT. • Only one channel per one GOT can be connected in the bus connection and network connection. • Ethernet connection is available for up to four channels. • When the Ethernet interface built into the GOT is used for functions other than communication with the connected device <sup>*4</sup> , the interface is not included in the number of connected channels. • The number of channels does not include the interface used for connection with external devices <sup>*5</sup> For GT15: The number of communication ports (communication units and interfaces) for use for communication on the GOT. • Only one channel per one GOT can be connected in bus connection and network connection. • When the Ethernet communication unit is used for functions other than communication with the connected device <sup>*4</sup> , the unit is not included in the number of connected channels. • The number of channels does not include the interface used for connection with external devices <sup>*5</sup>
	Number of mountable units	Up to 5 units	Up to 3 units	No units can be mounted	The number of units that can be mounted on extension unit interfaces 1 and 2 of the GOT. • More than one serial communication unit <sup>*6</sup> of the same model can be mounted. • Optional units are included in the number of units. • RS-422 conversion units are not included in the number of units. • It is necessary to calculate the total current consumed by the units to be mounted. For GT15: The number of mounting stages that units can be stacked on extension unit interfaces 1 and 2 of the GOT. • Units that occupy two slots <sup>*7</sup> <sup>*8</sup> must be mounted on the first stage. • When any units in <sup>*8</sup> are used, mount the unit on the first stage, then mount other units on the second or subsequent stages. • Units in <sup>*9</sup> cannot be stacked on other units. Mount units on the first stage.
(2)	Number of mounting stages	Up to 3 stages (2 slots)	Up to 3 stages (1 slot)	No units can be mounted	See "Calculation of current consumed by units <GT16/ GT15>" (page 70). See "Calculation of current consumed by units <GT16/ GT15>" (page 70). See "External dimensions" (page 50) and "Mounting units on the GOT side interface <GT16/ GT15>" (page 70).

<sup>\*4</sup>: Ethernet download function, gateway function and MES interface function  
<sup>\*5</sup>: Barcode reader, RFID controller, personal computer (remote personal computer function, FA transparent function, OS installation, and project data download), and printer (serial)  
<sup>\*6</sup>: GT15-RS2-9P, GT15-RS4-9S and GT15-RS4-TE  
<sup>\*7</sup>: GT15-QBUS2, GT15-ABUS2, GT15-J71LP23-2S, GT15-J71BR13, GT15-J61BT13, GT15-J71GP23-SX  
<sup>\*8</sup>: GT16M-V4, GT15V-75V4, GT16M-R2, GT15V-75R1, GT16M-V4R1, GT15V-75V4R1, GT16M-ROUT, GT15V-75ROUT, GT16M-MMR  
<sup>\*9</sup>: GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L, GT15-75J71LP23-Z, GT15-75J71BR13-Z, GT15-75J61BT13-Z

Mounting units on the GOT side interface <GT16/ GT15>

(Example: GT1685)

**Extension unit interface 1** (On GT16 Handy, no units can be mounted because it does not have extension unit interface 1 or 2.)

**Extension unit interface 2** (GT155 has the extension unit interface 1 only)

Up to 3 communication units and optional units can be mounted on each extension unit interface.

**Mount a unit that occupies two slots on the first stage.**  
However, when any of the following units are used, mount the unit on the first stage, then mount other units on the second and subsequent stages.

**For GT16 (Only one of these units can be mounted on the GT16 except GT16-VNB.)**  
●GT16M-V4, GT16M-R2, GT16-V4R1, GT16-ROUT, GT16M-MMR

**For GT15 (Only one of these units can be mounted on the GT1585V and GT1575V)**  
●GT15V-75V4, GT15V-75R1, GT15V-75V4R1, GT15V-75ROUT

**The following units must not be stacked on other units. Mount any of them on the first stage.**  
●GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L  
●GT15-75J71LP23-Z, GT15-75J71BR13-Z, GT15-75J61BT13-Z (GT16 or GT155 cannot be used.)

**Instructions for mounting and removing the GT15-CFCD**  
●An extension unit cannot be mounted on a CF card unit.  
When extension units are mounted, mount the CF card unit on the last stage.  
●When mounting a CF card unit on extension interface 1 (left), ensure that the number of extension units mounted on extension interface 2 (right) is smaller than the number on the extension interface 1 (left). Otherwise, the CF card cannot be inserted or removed.  
●Remove the CF card unit in the designated direction (ΔPULL) to prevent damage to the connector.

**Standard interface (built-in RS-232 interface)**  
The interface can establish a serial connection with connected devices and peripheral devices, such as a barcode reader.

**Standard interface (built-in Ethernet interface) (GT16 only)**  
The interface can establish a connection with connected devices via Ethernet.

**Standard interface (built-in RS-422/485 interface) (GT16 only)**  
The interface can establish a serial connection with connected devices.

**Unit occupying two slots**  
Ex.: GT15-QBUS2

2 slots (1st stage) are occupied.

Calculation of current consumed by units <GT16/15>

When using multiple units, a barcode reader, and a RFID controller, the total current consumed by the units, barcode reader and RFID controller must be less than the current that can be supplied by the GOT. Design the system using the following values so that the total current is within the range of the current supply capacity of the GOT.

(1) Current that can be supplied by the GOT

GOT model	Current supply capacity (A)
GT1695	2.4
GT1685	2.4
GT167	2.4
GT166	2.4
GT1595	2.13
GT1585 (incl. GT1585V)	1.74
GT157 (incl. GT1575V)	2.2
GT156	2.2
GT155	1.3

(2) Current used by units, barcode reader and RFID controller

Unit model	Consumed current (A)	Unit model	Consumed current (A)
GT15-QBUS	0.275 <sup>*1</sup>	Barcode reader	<sup>*2</sup>
GT15-QBUS2		GT15-PHN (for gateway function)	0.09
GT15-75QBUSL		GT16M-V4	0.12 <sup>*1</sup>
GT15-75QBUS2L		GT15V-75V4	0.2 <sup>*1</sup>
GT15-ABUS	0.12	GT16M-R2	0 <sup>*1</sup>
GT15-ABUS2		GT15V-75R1	0.2 <sup>*1</sup>
GT15-75ABUSL		GT16M-V4R1	0.12 <sup>*1</sup>
GT15-75ABUS2L		GT15V-75V4R1	0.2 <sup>*1</sup>
GT15-RS2-9P	0.29	GT16M-ROUT	0.11 <sup>*1</sup>
GT15-RS4-9S	0.33	GT15V-75ROUT	0.11
GT15-RS4-TE	0.3	GT16M-MMR	0.27 <sup>*1</sup>
GT15-RS2T4-9P	0.098	GT15-CFCD	0.07
GT15-J71E71-100	0.224	GT15-CFEX-C08SET	0.15
GT15-J71GP23-SX	1.07	GT15-SOUT	0.08
GT15-J71LP23-2S	0.56	GT15-DIO	0.1
GT15-J71BR13	0.77	GT15-DIOR	0.1
GT15-J61BT13	0.56	RFID controller	<sup>*2</sup>

<sup>\*1</sup>: This value is used for calculating the current consumption of multi-channel functions. For the specifications of each unit, see the manual supplied with each unit.  
<sup>\*2</sup>: When using a barcode reader or a RFID controller to which the power is supplied from the standard interface, add the current to be used by the barcode reader or RFID controller at 5VDC. (Maximum less than 0.3A)

(3) Calculation example

When GT15-J71BR13, GT15-RS4-9S (3 units), GT15-J71E71-100 (for gateway function) and barcode reader (0.12A) are connected to a GT1575-V:

Current supply capacity of GOT (A)	Total current to be consumed (A)
2.2	0.77+0.33+0.33+0.33+0.224+0.12=2.104

Since the total current is within the current supply capacity of the GOT, the units can be used.

MELSOFT GT Works3 (English version) operating environment

Item	Details
PC	PC/AT compatible machine on which the following OS operates
OS	• Microsoft® Windows® 2000 Professional Service Pack 4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*1</sup> • Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows XP Professional Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*1</sup> • Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> • Microsoft® Windows 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup>
CPU	1 GHz or more recommended
Required memory	512 MB or more recommended
Display	Resolution XGA (1024 × 768 dots) or more
Available hard disk space	To install GT Designer3: 1.6 GB or more recommended To run GT Designer3: 512 MB or more recommended
Display colors	High Color (16 bits) or more
Software	Simulation on a PC requires the following software: • GX Works2 version 1.12N or later <sup>*6</sup> or GX Simulator version 5.00A or later <sup>*6</sup> . *The applicable software version of GX Works2 or GX Simulator varies depending on the PLC CPU to be simulated.
Others	Mouse, keyboard, printer, CD-ROM drive, sound function (sound card) <sup>*8</sup> and loudspeakers <sup>*8</sup> used with the above OS
Applicable GOT	GOT1000 Series <sup>*9</sup>

<sup>\*1</sup>: Installation requires administrator authority. Simulating the GOT-A900 requires administrator authority.  
<sup>\*2</sup>: Installation requires administrator authority. Using GT Works3 requires an account higher than the standard user.  
To use GT Works3 with another application, if an administrator account is used to run the application then use an administrator account to run GT Works3.  
Simulating the GOT-A900 requires administrator authority.  
<sup>\*3</sup>: The following functions are not supported:  
Compatible Mode, Fast User Switching, Desktop Theme (Font) Change, Remote Desktop  
<sup>\*4</sup>: Only the 32-bit OS is applicable.  
<sup>\*5</sup>: Windows XP Mode is not supported.  
<sup>\*6</sup>: Use GT Simulator3, GX Developer, GX Simulator, and GX Works2 for the same language.  
<sup>\*7</sup>: The GOT-A900 cannot be simulated.  
<sup>\*8</sup>: May be required when the simulation function is used.  
<sup>\*9</sup>: The GT10 cannot use the simulation function.  
<sup>\*10</sup>: Windows Touch features are not supported.

GT SoftGOT1000 (English version) operating environment

Item	Description
Personal computer	With DOS/V personal computer PC/AT compatible machine on which the following OS operates CONTEC PC CPU unit (PPC-852-212, PPC-852-217, PPC-852-226) <sup>*7</sup>
OS	Microsoft® Windows® 2000 Professional Service Pack 4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*2</sup> Microsoft® Windows® XP Professional Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows® XP Home Edition Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows® XP Embedded (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows Vista® Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows Vista® Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup> Microsoft® Windows 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions) <sup>*3</sup>
CPU	Recommended: 1GHz or more
Required memory	Other than Microsoft® Windows Vista®, Microsoft® Windows® 7: 512MB or more Microsoft® Windows Vista®, Microsoft® Windows® 7: 1GB or more recommended
Display	Resolution of VGA (640 × 480 dots) or more
Free hard disk space <sup>*1</sup>	For installation: 1.6GB or more recommended For execution: 512MB or more recommended
Display colors	High Color (16 bit) or more
Hardware <sup>*6</sup>	GT15-SGTKEY-U (License key (for USB port)) GT15-SGTKEY-P (License key (for parallel port))
Software	When creating or editing project data : GT Designer3 <sup>*5</sup> When using with PX Developer : PX Developer Version 1.14Q or later GT Designer3 Version 1.01B or later
Other	Mouse, keyboard, printer, CD-ROM drive, sound function (sound speaker), or speaker

Specification

Item	Description
Resolution (dots)	640 × 480, 800 × 600, 1024 × 768, 1280 × 1024, 1600 × 1200 Specifiable resolution (640 to 480 × 1200)
Display colors	65,536 colors
Memory capacity	57MB
Connection configuration <sup>*10</sup>	Bus connection <sup>*11</sup> , CPU direct connection, computer link connection, CC-Link IE controller network connection, MELSECNET connection, Ethernet connection

<sup>\*1</sup>: Use of GT Designer3 and PX Developer requires additional memory space. For free space required when using the PX Developer monitoring tool, refer to the PX Developer Version1 Operation Manual (Monitor Tool). Additional memory space is also required when using user-created applications.  
<sup>\*2</sup>: Administrator authority is required to install GT SoftGOT1000.  
<sup>\*3</sup>: Administrator authority is required to install and operate GT SoftGOT1000.  
<sup>\*4</sup>: The following functions are not supported.  
• Compatible Mode  
• Fast User Switching  
• Desktop Theme (Font) Change  
• Remote Desktop  
<sup>\*5</sup>: GT Designer3 and GT SoftGOT1000 must be installed from the same GT Works3.  
<sup>\*6</sup>: The PC must be equipped with a USB port to use the GT15-SGTKEY-U. The PC must be equipped with a parallel port (Centro/printer connector) to use the GT15-SGTKEY-P.  
<sup>\*7</sup>: For CONTEC PC CPU unit, refer to the manual for the PC CPU module.  
<sup>\*8</sup>: Use is possible only when PPC-852-226 is preinstalled.  
<sup>\*9</sup>: Supported only by a 32-bit OS.  
<sup>\*10</sup>: The required devices vary depending on the connection configuration.  
<sup>\*11</sup>: Connectable only when using a PC CPU unit.  
<sup>\*12</sup>: Windows XP Mode is not supported.  
<sup>\*13</sup>: Windows Touch features are not supported.



## Warranty

Please confirm the following product warranty details before using this product.

## Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

### ■ Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

### ■Gratis Warranty Range

- (1) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.  
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense. The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.
- (2) The range shall be limited to normal use within the usage state, usage methods, usage environment, etc. which follow the conditions, precautions, etc. given in the instruction manual, user's manual, caution labels on the product, etc.
- (3) Even within the gratis warranty term, repairs shall be charged for in the following cases.
  - ① Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
  - ② Failure caused by unapproved modifications, etc., to the product by the user.
  - ③ When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
  - ④ Failure that could have been avoided if consumable parts designated in the user's manual etc. had been correctly serviced or replaced.
  - ⑤ Replacing consumable parts such as the battery, backlight and fuses.
  - ⑥ Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
  - ⑦ Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
  - ⑧ Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

### Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

## Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

## 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 damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

## Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

## Product application

- (1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.
  - (2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc.
- Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications.
- In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications.
- However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion.
- In some of these cases, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required.

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# Mitsubishi Graphic Operation Terminal

## Precautions for Choosing the Products

This catalog explains the typical features and functions of the GOT1000 series HMI and does not provide restrictions and other information on usage and module combinations.

When using the products, always read the user's manuals of the products.

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage 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

- To use the products given in this catalog properly, always read the related manuals before starting to use them.
- The products within this catalog have been manufactured as general-purpose parts for general industries and have not been designed or manufactured to be incorporated into any devices or systems used in purpose related to human life.
- Before using any product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products within this catalog have 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.

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