

Panasonic

NEW

Programmable Display

GT SERIES



Tough

Excellent Visibility and Environmental Resistance

High visibility display even in bright environments, it's also compact.
Introducing a new product line in the Tough Series with excellent environmental resistance





New Models Added to the GT **Tough** Series

GT03-E Compact Models Debut!



-20 to +60°C -4 to +140°F	The wide operating temperature range allows for use in various environments. (-20 to +55 °C -4 to +131 °F when horizontally installed, vertically installed in a portrait orientation and when using battery)
UV Reduction	Resistant to UV Rays! The two-layer front protection sheet deduces UV rays in two-stage.
IP67	High waterproof performance allows for use in environments exposed to splashing water. The front panel has a protective structure rated IP67.
Low power consumption	Color type (GT03T-E): 3.1 W or less Monochrome type (GT03M-E): 1.9 W or less

Improved visibility	High visibility display even in bright environments! High in brightness and contrast and anti-glare coating provides exceptional viewing characteristics. Monochrome type uses a TFT LCD that's bright and uses deep black for great visibility.
High-definition	Same resolution [320 (W) × 240 (H) dots] as the 5.7 inch model (GT32-E) Screen data of GT32-E can be used on the smaller display.
Industry's smallest	The industry's smallest class* body among 3.5 inch screen *Based on research conducted by our company as of June, 2013

See page 4 for details. ►

Applications



Superior visibility even in sunlight

Color type



Tough series GT32T-E



Conventional model GT32T

Monochrome type



Tough series GT32M-E



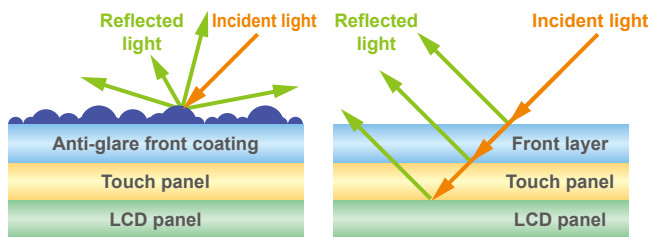
Conventional model GT32M

- **High contrast TFT LCD:** Achieved higher contrast and visibility.
- **High brightness backlight:** Achieved greater brightness and visibility than the conventional model.

The monochrome type, in particular, is greater brightness than the conventional model and is way easier to view in bright environments thanks to the “deep black”.

Anti-glare, High visibility display

- **A front protection layer has an anti-glare coating to prevent unwanted reflections**
(Fingerprints are made less noticeable even in outdoor use)



Anti-glare front coating

No anti-glare front coating

Comparison of reflection



Tough series GT32T-E

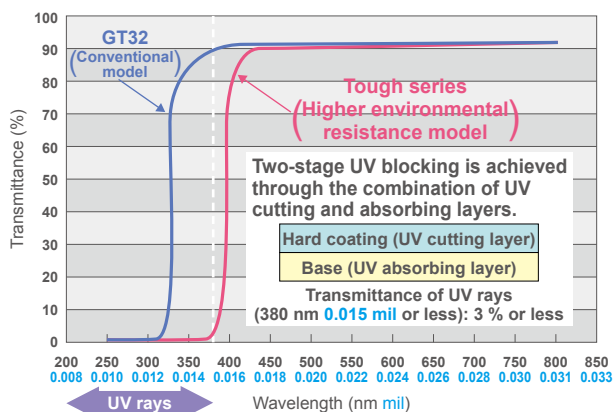


Conventional model GT32T

No risk of product deterioration due to UV exposure

- The front sheet is made of a material that does not transmit UV rays.
- A combination of a UV cutting layer and a UV absorbing layer performs two-stage UV blocking.
The LCD and touch panel can be protected from deterioration.

■ UV ray transmittance performance



Excellent water resistance

- The front panel has a protective structure rated IP67.
Safe to use outdoors or in a location exposed to splashing water.
- Added protection has been applied to the rear of the unit for a more rugged overall construction.

Wide operating temperature range

- Usable in a range of -20 to +60 °C **-4 to +140 °F**
(-20 to +55 °C **-4 to +131 °F** when horizontally installed, vertically installed in a portrait orientation and when using battery)
- The TFT LCD can quickly switch screens even at a low temperature.
- The life of the LED backlight does not decrease even at a low power consumption.
- It is not necessary to prepare a heater for use at a low temperature.

Reduced power consumption

- Compact color type (GT03T-E): 3.1 W or less
- Compact monochrome type (GT03M-E): 1.9 W or less
- Color type (GT32T-E): 7.2 W or less
- Monochrome type (GT32M-E): 4.8 W or less

GT03-E



Tough

Programmable Display

The industry's smallest class^{*1} body among 3.5 inch screen
Color display uses 3.1 W or less for low power consumption!
Use of 3.5 inch TFT monochrome LCD is an industry first^{*1}!

3.5 inch



Tough series

Silver



GT03T-E

GT03T-E

Silver



GT03M-E

98 mm
3.858 in

86 mm
3.386 in

3.5 inch, 4,096 colors TFT color LCD equipped with long life LED backlight

Built-in SD / SDHC memory card slot ^{*2}

Easy to copy, back up, and restore screen data.

GT03M-E

3.5 inch, 16-gray scale TFT monochrome LCD equipped with long life LED backlight

Through use of a TFT LCD with contrast ratio of 1,000 : 1, the "deep black" on a bright display means incredible visibility even in bright environments.

Common features

Superior visibility even in sunlight

The brightness and contrast ratio have been improved.

Wide range of operating temperature that covers outdoor use

The improved environmental resistance allows for use in a wider operating temperature range of -20 to +60 °C **-4 to +140 °F**.

UV resistant, anti-glare front panel

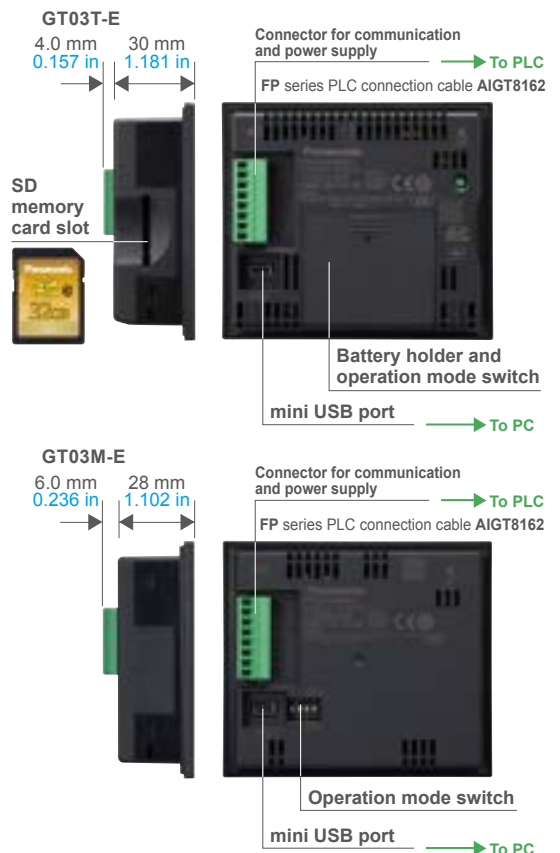
A front protection layer reduces the intensity of UV rays and has an anti-glare coating.

Impressive water resistance makes usage possible in areas prone to water contact.

The front panel is IP67 rated with added protection applied to the rear of the unit for a more rugged overall construction.

Integrated USB Interface

You can connect your PC and **GT03-E** using your USB cable to transfer screen data. When used with our **FP series PLC**, this display supports the pass through function, which allows simultaneous debugging of the PLC and the display



^{*1}: Based on research conducted by our company as of June, 2013

^{*2}: Class 10 compatible with a card of up to 32 GB.

GT32-E

Tough

Programmable Display

Outdoor Use Made Possible by Significantly Improved Environmental Resistance and Visibility

5.7 inch



Tough series

Silver



GT32T-E

GT32T-E

5.7 inch, 4,096 colors TFT color LCD equipped with long life LED backlight

Great visibility even in bright environments is possible thanks to use of a TFT LCD with contrast ratio of 500 : 1.

Silver



GT32M-E

163.2 mm
6.425 in

GT32M-E

5.7 inch, 16-gray scale TFT monochrome LCD equipped with long life LED backlight

Through use of a TFT LCD with contrast ratio of 400 : 1, the "deep black" on a bright display means incredible visibility even in bright environments.

Common features

Superior visibility even in sunlight

The brightness, contrast ratio, and viewing angle have been improved.

Wide range of operating temperature that covers outdoor use

The improved environmental resistance allows for use in a wider operating temperature range of -20 to +60 °C **-4 to +140 °F**.

UV Resistant, Anti-glare front panel

A front protection layer reduces the intensity of UV rays and has an anti-glare coating.

Impressive water resistance makes usage possible in areas prone to water contact.

The front panel is IP67 rated with added protection applied to the rear of the unit for a more rugged overall construction.

Built-in SD / SDHC memory card slot *1

Easy to copy, back up, and restore screen data.

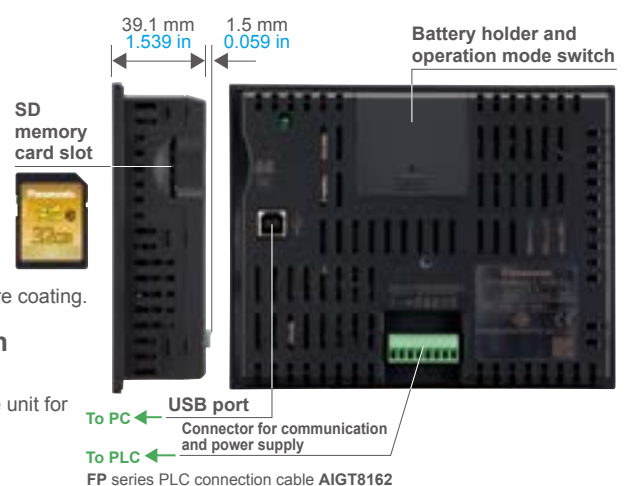
Integrated USB Interface

You can connect your PC and **GT32-E** using your USB cable to transfer screen data.

When used with our **FP** series PLC, this display supports the pass through function, which allows simultaneous debugging of the PLC and the display

Transformer-isolated power supply

The isolated power supply enhances the reliability.



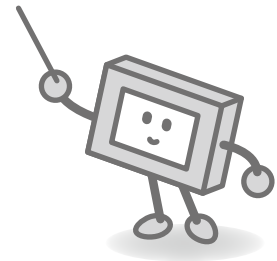
*1: Class 10 compatible with a card of up to 32 GB.

SD Solutions only Panasonic can provide

Links and expansion via SD

As small-size touch panels have significantly improved their image quality, easy to read displays with sharp characters are no longer special features these days. Instead, programmable displays will evolve with maximum "user-friendliness" in various applications with PCs or other devices.

As shown below, our touch panels exchange and store data using SD memory card, data for many applications.



Links via SD

- ▶▶ SD recipe function (Data table management)
- ▶▶ Transfer of PLC program data

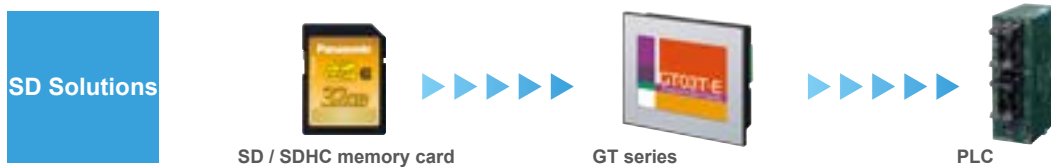
Expansion via SD

- ▶▶ Saving alarm history data on an SD
- ▶▶ Logging function
- ▶▶ Display of graphs of stored data

PLC program transfer without the use of a PC

* Our FP series, excluding FP7.

It is possible to modify PLC ladder programs as well as the GT screen programs by using an SD / SDHC memory card. SD / SDHC memory card enables everyone to easily modify programs.



SD card data transfer function



Log and other data saved on a SD memory card inserted into the GT's onboard SD memory card slot can now be sent to a PC using a USB connection.



Installation on the PC of GT_SD_Reader software is required. This software is installed simultaneously with Terminal GTWIN (Ver. 2.E1 and higher). The GT unit firmware must be a version that supports this function. If you are using a version that does not support this function, please upgrade by downloading it from our website.

SD logging function to produce data "Visualization"

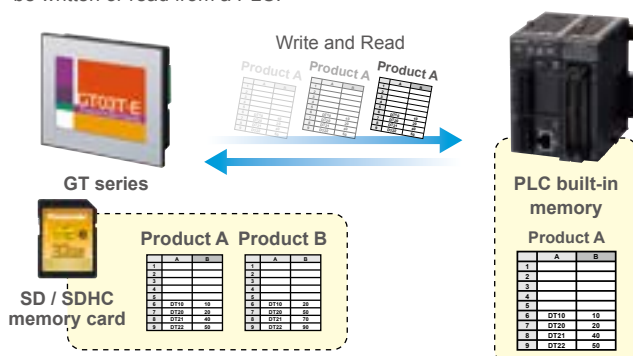
Capable of automatically collecting electrical power readings of Eco-POWER METERS and displaying them in a real time graph, allowing users to take quick actions for solutions.

- The GT unit can collect data, such as electrical power on an SD / SDHC memory card, and display the log data in a real time graph. You can make data "Visualization" without using a PC as a display or Data logger for collecting data.
- One bar graph has a maximum of eight bars and can be combined with line graphs.
- The following three conditions can be selected to trigger an operation to save log data.
 - (1) Specified time (2) Specified cycle (1 sec. to 24 hrs.) (3) Specified condition
- Large volumes of data can be saved on an SD / SDHC memory card, which can be carried with you.



SD recipe function

For high-mix production, recipe data up to 64 types and 4,096 devices in total, can be easily set on a PC. The created recipe data is saved on an SD / SDHC memory card, and the specified data can be written or read from a PLC.



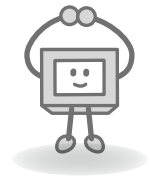
Saving alarm history data on an SD / SDHC memory card

The alarm history data stored in the GT built-in memory can be saved on an SD / SDHC memory card, making it possible to easily control problems on a PC.



• The LCD images on this page are composites.

High Visibility and Excellent Operability



Three-color LED backlight allows for checking machine status at a glance

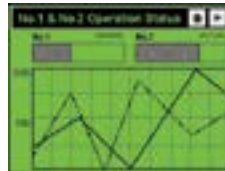
(GT02M / GT02G, GT05M / GT05G, GT12M / GT12G)

The monochrome display* has a three-color LED backlight. It allows operators to check the equipment status at a glance by changing the background color.

Example: green under normal conditions, orange during operation, and red in emergency situations.

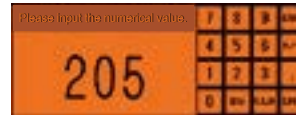
* Excluding GT03M-E, GT32M-E, GT32M and GT02L

GT05G



(Normal)

GT12G



(In operation)

GT02G

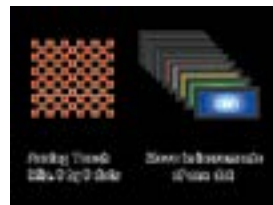


(Emergency)

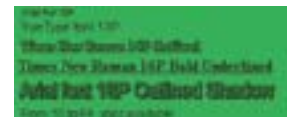
Highly flexible screen design!

GT series displays use an analog-touch panel where locations of parts and characters can be adjusted in increments of one dot. The adoption of the Windows® font has widened the character size selection (10 to 240 dots), making the screen design more flexible. *The maximum size varies depending on the model.

“Analog-touch design”



“TrueType fonts”



The adoption of the Windows® font has made it possible to choose a font focusing on the screen image and visual quality.



Graph function

One bar graph has a maximum of eight bars and can be combined with line graphs.



Flow display function

A flowing message of up to 64 characters (two-byte) can be displayed at the bottom of the screen. (128 messages)



Error warning by voice messages (GT32T1)

Voice messages or melodies immediately communicate the equipment status to operators not located near the equipment. The sound files are compatible with WAV format, which can be easily prepared by a PC.



GT32T1



Abnormal temperature in Machine No. 3. Check the coolant level.

Portrait display ideal for narrow spaces

The unit can display screens in portrait orientation and can therefore be installed in narrow spaces, expanding system design possibilities and contributing to size reduction. The portrait display is also ideal for slim equipment without enough space to install a display.



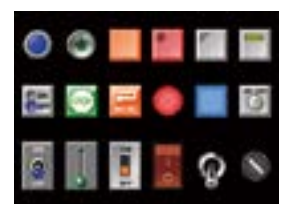
Multi-function switches

Multiple operations are possible. For example, screens can be switched by setting multiple values.

4,096-color parts libraries

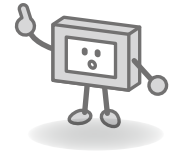
(GT05S, GT32T, GT03T-E and GT32T-E)

3D-design buttons with higher visibility and operability are available.



● The LCD images on this page are composites.

Advanced Functions to Enhance Work Efficiency



FP monitoring function (FP2SH, FP0R, FP-Z, FP-X, FP-X0, FP-e, FP0 and FP2)

*Excluding FP7

Five convenient features of GT series for improved compatibility with our FP series of PLCs

1 Device monitor (Display and change values of FP series devices. Three different modes available)

- (1) Easy monitor mode: Use this mode when you want to monitor something. Display is continuous when one device is specified and the device can be changed.
- (2) Entry monitor mode: Use this mode when you want to monitor multiple devices. You can register devices you want to display one-by-one and you can change them.
- (3) Forced on / off mode: Use this mode feature to forcibly turn output on and off. You can set devices one-by-one for which you want to control output.

2 System register monitor (Display and change of system register values.)

You can specify the system register number, display the value, and change it.

3 Shared memory monitor (Display shared memory values.)

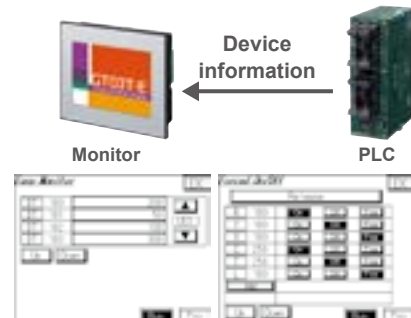
You can specify the slot number, bank number and address, and display the value. You cannot change the value.

4 Error monitor (Display an error occurring in the FP series PLC.)

You can display the self-diagnostic result, error code and error flag, and you can even clear the error.

5 Password setting (Set the password to protect FP series program reading and writing functions.)

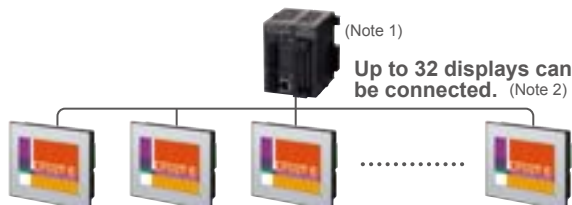
Password registration and clearing is possible for the FP series password protection function.



Multiple GT displays can be connected to our FP series PLC.

GT link function

Up to 32 GT displays can be connected to one PLC unit without communication programs. The same screen operation is possible at a conveyor line or other remote locations, and the number of PLC units can be reduced, cutting the production process costs.

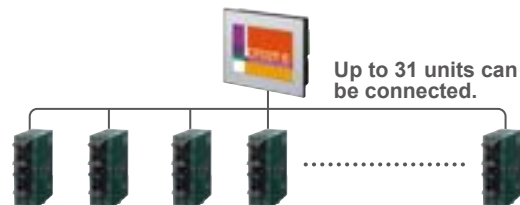


Notes: 1) Our FP series PLC

2) As the number of connected units increases, the response slows down. Check the speed in the actual line.

Connectivity with multiple PLCs

Up to 31 PLC units can be connected to one GT unit. Progress in multiple production lines can be centrally monitored and controlled via one GT unit.



Enhanced security with password protection

Password protection and operation security functions protect the data asset in the display unit and control the authorization for operation.

Password protection function

The screen data upload operation can be restricted by using passwords to protect the data asset in the display unit.

Operation security function

Up to 64 operators can set individual passwords, and up to 16 levels of restrictions can be set on displays and operations for each part. The registered users and passwords can be changed on the display unit.

High-efficiency operation with through function

This function allows operators to simultaneously carry out the transfer of screen data of a GT series display and the debugging of our FP series PLC connected to the display.

GT32T1 supports Ethernet connection, which allows the through function to be controlled from a remote location.

Easy-to-switch language






































Conventionally, screens were created for each language. With this new language switching function, data can be registered in multiple languages (up to 16) for each part. The characters can be easily edited with Microsoft Excel® and then imported.

	Japanese	English	Simplified Chinese	Traditional Chinese	Korean
000 SW0 日本語	日本語	English	简体中文	繁體中文	한글
000 SW0 ありがとうございます	ありがとうございます	Thank you	感谢	感謝	고맙습니다
000 SW1 1	1	1	1	1	1
000 SW1 2	2	2	2	2	2

Write device function

This function modifies the PLC data or turns bits on / off according to the PLC status or the screen No. Now four arithmetic operations between devices are also possible.



GTseries			Power supply	Display						External interface		
				Screen size	Display type	Display color	Resolution	Backlight	Displayable characters (Note)	Memory capacity (F-ROM)	USB port	SD / SDHC memory card
Tough Environmentally-resistant Tough series	GT03-E  GT03M-E GT03T-E 	P.4	24 V DC	3.5 inch	TFT monochrome LCD	2 colors (black / white) (16-gray scale)	320(W) × 240(H) dots	White LED	768 characters	6 Mbyte		—
				3.5 inch	TFT color LCD	4,096 colors	320(W) × 240(H) dots	White LED	768 characters	12 Mbyte		
	GT32-E  GT32M-E GT32T-E 	P.5	24 V DC	5.7 inch	TFT monochrome LCD	2 colors (black / white) (16-gray scale)	320(W) × 240(H) dots	White LED	768 characters	12 Mbyte		
				5.7 inch	TFT color LCD	4,096 colors	320(W) × 240(H) dots	White LED	768 characters	12 Mbyte		
Entry-level model	GT02L 	P.11	5 V DC	3.7 inch	STN monochrome LCD	2 colors (black / white)	160(W) × 64(H) dots	White LED	96 characters	704 kbyte		—
GT series	GT02  GT02M  GT02G	P.12	5 V DC 24 V DC	3.8 inch	STN monochrome LCD	2 colors (black / white)	240(W) × 96(H) dots	GT02M: 3-color LED (white / pink / red) GT02G: 3-color LED (green / orange / red)	216 characters	2 Mbyte		 AIG02MQ2*D and AIG02GQ2*D only
	GT12  GT12G  GT12M	P.13	24 V DC	4.6 inch	STN monochrome LCD	2 colors (black / white) (8-gray scale)	320(W) × 120(H) dots	GT12M: 3-color LED (white / pink / red) GT12G: 3-color LED (green / orange / red)	384 characters	2 Mbyte		 AIG12MQ1*D and AIG12GQ1*D only
	GT05  GT05M  GT05G	P.14	GT05M / GT05G									
		24 V DC	3.5 inch	STN monochrome LCD	2 colors (black / white)	320(W) × 240(H) dots	GT05M: 3-color LED (white / pink / red) GT05G: 3-color LED (green / orange / red)	768 characters	2 Mbyte			
	GT05S  GT05S  GT05S		GT05S									
		24 V DC	3.5 inch	TFT color LCD	4,096 colors	320(W) × 240(H) dots	White LED	768 characters	12 Mbyte			
	GT32M  GT32M  GT32M	P.15	24 V DC	5.7 inch	STN monochrome LCD	2 colors (blue / white)	320(W) × 240(H) dots	CFL	768 characters	2 Mbyte		
GT32T  GT32T0  GT32T1	P.15	24 V DC	5.5 inch	TFT color LCD	4,096 colors	320(W) × 240(H) dots	CFL	768 characters	12 Mbyte		 GT32T1 has Ethernet and sound output ports.	
Note: With the 10-dot font												

Note: With the 10-dot font

GT02L

Programmable Display

Entry-level Model Touch Panel

3.7 inch

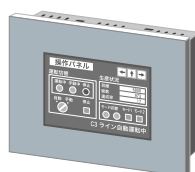


Entry-level model

Black

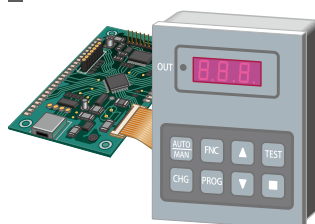


For replacing your touch panel



Contributes to the miniaturization of control panels.

For replacement of your membrane-type switch panel



The customizable button layout and switchable screens make design modification and maintenance easier.

Compact body with a wide LCD that is the largest size in its class

The small body of 74 mm 2.913 in high and 112 mm 4.409 in wide is equipped with a 3.7 inch large LCD. The analog touch system does not display any annoying visible dots or lines.

MiniUSB interface as standard equipment

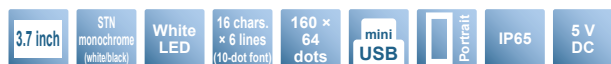
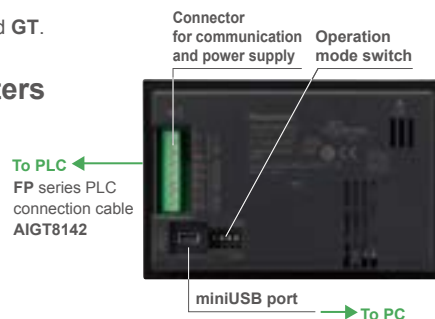
Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT.

Flexible sizing and layout available for switches and characters

Switches of a minimum of 8 × 8 dots can be moved in increments of one dot. A wide range of character fonts and sizes (10 to 64 dots) are supported.

Portrait orientation ideal for narrow spaces

Installation in narrow spaces is possible, enhancing the degree of system design freedom.



• The panel face protection sheet for the GT series is available as an option.

• The LCD images on this page are composites.

GT02

Programmable Display

Compact advanced display with 3.8 inch high-contrast monochrome LCD
(for clear and vivid images)

3.8 inch



GT series

Pure black



GT02G

Hairline silver



GT02M

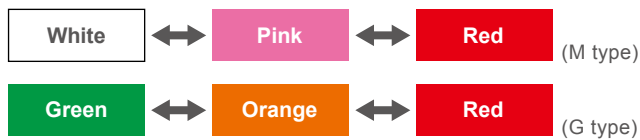
112 mm
4.409 in

74 mm
2.913 in

Largest 3.8 inch high-contrast monochrome LCD in its class provides top-level viewability*1.
High-definition 240 × 96 dots LCD produces crisp images. The analog touch screen technology does not display any annoying visible dots or lines.

Bright three-color LED backlight indicates the equipment status.

The color combination is green / orange / red or white / red / pink. The backlight ensures both operability and visibility.



27 mm
1.063 in



Connector for communication and power supply

Battery holder

First SD / SDHC memory card slot in its class*2

AIG02MQ2*D and AIG02GQ2*D are equipped with an SD / SDHC memory card slot.
Easy to copy, back up, and restore screen data.

To PLC
FP series PLC connection cable
AIGT8162 and
AIGT8142



SD memory card slot

miniUSB port → To PC

MiniUSB interface as standard equipment

Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT.

Flexible sizing and layout available for switches and characters

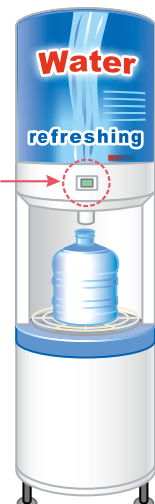
Switches of a minimum of 8 × 8 dots can be moved in increments of one dot. A wide range of character fonts and sizes (10 to 96 dots) are supported.

Equipped with IP67-rated body and newly designed bracket

Portrait orientation ideal for narrow spaces

Installation in narrow spaces is possible, enhancing the degree of system design freedom.

Application example:
Water purifier



*1: Based on research conducted by our company as of June, 2013



*2: Class 10 compatible with a card of up to 32 GB.
• The panel face protection sheet for the GT series is available as an option.

GT12

Programmable Display

Slim body equipped with a 4.6 inch Half-QVGA LCD

The highest visual quality in its class

4.6 inch  

GT series

Pure black



GT12M

Hairline silver



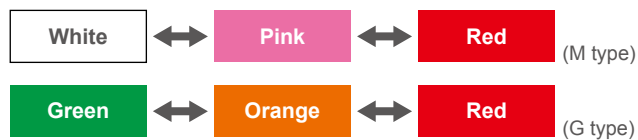
GT12G

Largest 4.6 inch high-contrast monochrome Half-QVGA LCD in its class provides top-level viewability*1.

High-definition Half-QVGA (320 × 120) LCD produces crisp images. The analog touch screen technology does not display any annoying visible dots or lines.

Bright three-color LED backlight indicates the equipment status.

The color combination is green / orange / red or white / red / pink. The backlight ensures both operability and visibility.



First SD / SDHC memory card slot in its class*2

AIG12MQ1*D and AIG12GQ1*D are equipped with an SD / SDHC memory card slot. Easy to copy, back up, and restore screen data.

MiniUSB interface as standard equipment

Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT.

Flexible sizing and layout available for switches and characters

Switches of a minimum of 8 × 8 dots can be moved in increments of one dot. A wide range of character fonts and sizes (10 to 120 dots) are supported.

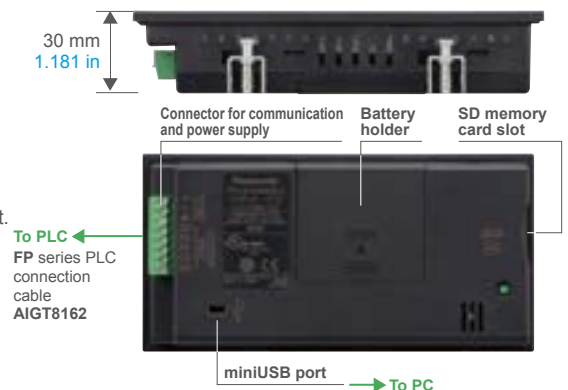
Transformer-isolated power supply

The isolated power supply enhances the reliability.

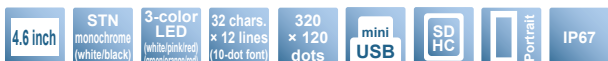
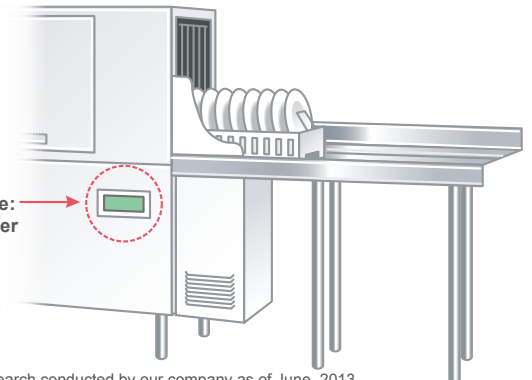
Equipped with IP67-rated body and newly designed bracket

Portrait orientation ideal for narrow spaces

Installation in narrow spaces is possible, enhancing the degree of system design freedom.



Application example:
Business dishwasher



*1: Based on research conducted by our company as of June, 2013

*2: Class 10 compatible with a card of up to 32 GB.

• The panel face protection sheet for the GT series is available as an option.

GT05

Programmable Display

Compact size and equipped with a QVGA LCD.

Both the color and monochrome types display striking images.

3.5 inch



GT series

Pure black



GT05M

Hairline silver



GT05G

Pure black



GT05S



GT05M: red

GT05M: pink



GT05G: orange

GT05G: red

GT05M / GT05G

3.5 inch high-contrast monochrome QVGA LCD provides higher visibility than our conventional model.

Bright LED backlight adopted

GT05M displays screens in white, red, and pink, and GT05G in green, orange, and red, ensuring both operability and visibility.

Common features

SD / SDHC memory card slot as standard equipment^{*1}

Easy to copy, back up, and restore screen data.

USB interface as standard equipment

Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT

Characters of a 240 dots maximum size can be displayed.

Capable of displaying several fine 10-dot characters or one 240 dots character in full screen

Transformer-isolated power supply

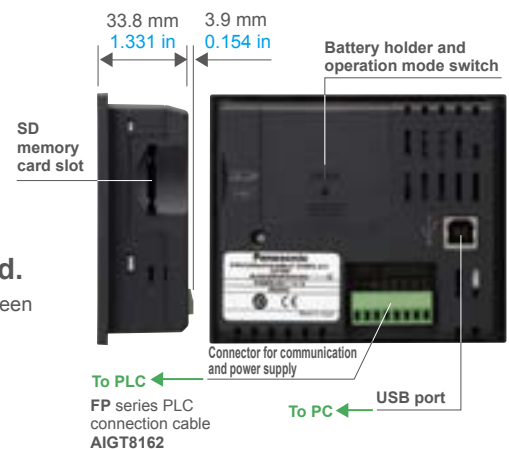
The isolated power supply enhances the reliability.

GT05S

3.5 inch TFT 4,096 colors QVGA LCD with a wide viewing angle

Much easier to view thanks to switch from STN to TFT LCD

Bright LED backlight adopted



3.5 inch	STN monochrome (white/black)	3-color LED (white/pink/red) (optional)	TFT 4,096 colors	White LED	32 chars. × 24 lines (10-dot font)	320 × 240 dots	USB	SD HC	Portrait	IP65	24 V DC
	• GT05M • GT05G	• GT05M • GT05G	• GT05S	• GT05S							

^{*1}: Class 10 compatible with a card of up to 32 GB.

• The panel face protection sheet for the GT series is available as an option.

GT32M

Clear and beautiful display achieved by the blue LCD long-life backlight

5.7 inch

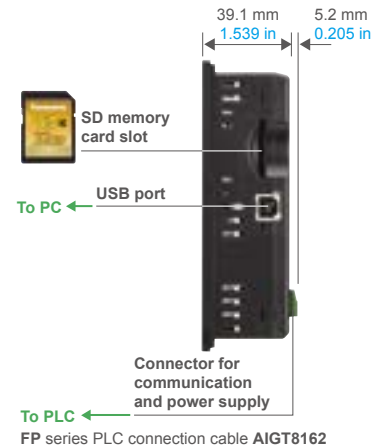
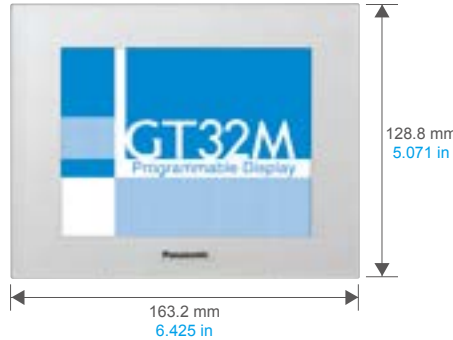


Programmable Display

Pure black



Hairline silver



5.7 inch blue LCD equipped with 75,000 hours long life backlight

Although the backlight is a CFL type, it can last as long as 75,000 hours^{*1}, reducing maintenance frequency.^{*2}

Industry's smallest size in the class, and 39.1 mm 1.539 in thin and cool body design

Large display with space-saving outer dimensions of 163.2 × 128.8 × 39.1 mm 6.425 × 5.071 × 1.539 in

SD / SDHC memory card slot as standard equipment^{*3}

Easy to copy, back up, and restore screen data.

USB interface as standard equipment

You can connect your PC and GT32 using your USB cable to transfer screen data. When used with our FP series PLC, this display supports the through function, which allows simultaneous debugging of the PLC and the display.

Transformer-isolated power supply

The isolated power supply enhances the reliability.



*1: The backlight life varies depending on the environmental conditions of use, including the temperature, humidity, and operating voltage.
*2: The backlight type for GT32M cannot be changed.
*3: Class 10 compatible with a card of up to 32 GB.
• The panel face protection sheet for the GT series is available as an option.

GT32T

Amazingly beautiful and vivid 4,096 colors TFT LCD

5.5 inch

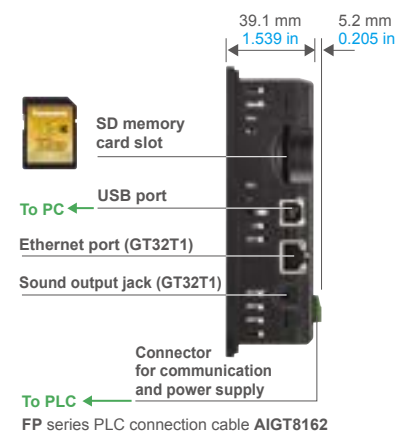


Programmable Display

Pure black



Hairline silver



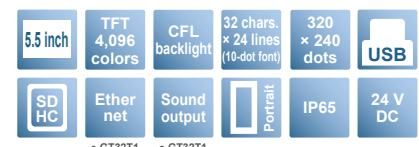
4,096 colors TFT LCD screen displays magnificent quality images.

SD / SDHC memory card slot as standard equipment^{*1}

Useful for copying, backing up, and restoring screen data, and for saving sound files. Sound files can also be saved in the internal memory of the display.

USB interface as standard equipment

Transformer-isolated power supply

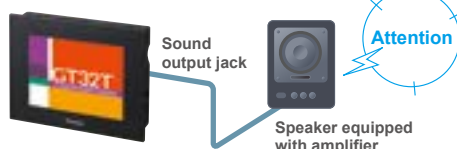


*1: Class 10 compatible with a card of up to 32 GB.
• The panel face protection sheet for the GT series is available as an option.

GT32T1 supports:

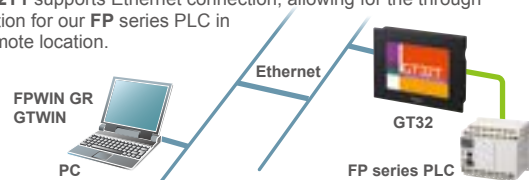
Sound output function

Audio information as well as visual and tactile information allows for more reliable control by operators.



Ethernet connection

GT32T1 supports Ethernet connection, allowing for the through function for our FP series PLC in a remote location.



GTWIN[®] Ver.2

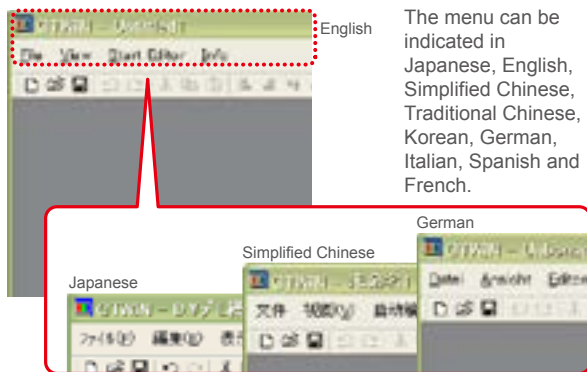
Screen Creation Tool for the GT series

User-friendly interface
makes screen creation easier.

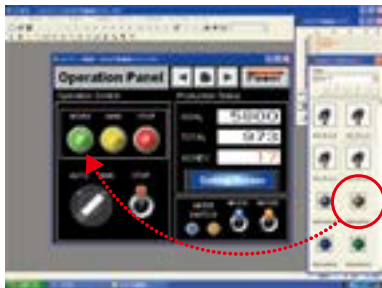
Compatible with Windows[®] 7

(Also supports 64-bit version.)

Compatible with the nine languages for the menu



Simply drag-and-drop parts.



You can easily create screens by just dragging parts from the library and dropping them anywhere you want.

More user-friendly parts libraries



In the previous version, the required parts library had to be selected from the menu every time it was needed. The new version displays a list of parts libraries, making them more user-friendly. You can also freely set the parts library window size.

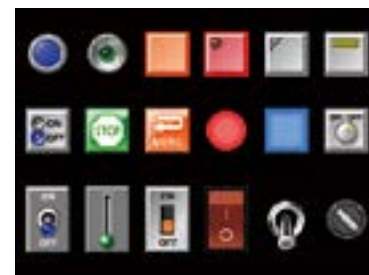
Just drag-and-drop your original parts to be registered.



You can also register your preset original parts easily by drag-and-drop operations.

4,096 colors 3D design buttons

(for GT05S, GT32T, GT03T-E and GT32T-E)



3D design buttons with higher visibility and operability are available.

Screen copy in bitmap form

You can output screen images in bitmap form and use them in off-the-shelf applications. This is useful for preparing equipment operation manuals.

Function to turn on / off the display of keyboard parts on the base screen

Indications of data parts in Japanese, Simplified chinese, Traditional chinese, and Korean

Now supports installation in a portrait orientation of all GT series models.



* The 64-bit version is not supported except for Windows[®] 7.

• GTWIN Ver. 2.8 or later is not compatible with Windows[®] 95, 98, Me or NT.

Company name	Series	Model	RS232C type	RS422 / RS485 type ^{*2}
Our company	FP series	FP7	○	○
		FP-X	○	○
		FP-X0	○	○
		FPΣ	○	○
		FP-e	○	○
		FP0	○	○
		FP0R	○	○
		FP2	○	○
		FP2SH	○	○
Mitsubishi Electric ^{*1}	FX series	FX0N	○	○
		FX1S	○	○
		FX1N	○	○
		FX1NC	○	○
		FX2N	○	○
		FX2NC	○	○
		FX3UC	○	○
		FX3U	○	○
		FX3G	○	○
		FX3GC	○	○
	Q series	Q00CPU	○	
		Q01CPU	○	
		Q00JCPU	○	
		Q00HCPU	○	
		Q00UJCPU	○	
		Q26UDHCPU	○	○
		Q25HCPU	○	
		Q12HCPU	○	
		Q06HCPU	○	
		Q02HCPU	○	
		Q02CPU	○	
	A series	A1N	○	
		A2N	○	
		A3N	○	
		A1S	○	
		A1SJ	○	
		A2SH	○	
		A1SH	○	
		A2CCPU24	○	
	L series	L26CPU-BT	○	○
		L02SCPU	○	○
Omron ^{*1}	C series	C200H	○	
		C200HS	○	
		C500	○	
		C500F	○	
		C1000H	○	
		C2000	○	
		C2000H	○	
		C1000HF	○	
		C20H	○	
		C28H	○	
		C40H	○	
		C120	○	
		C120F	○	
		CQM1-CPU42	○	
		SRM1-C02	○	
		CPM2A	○	
		CPM1-20CDR-A	○	
		CQM1H-CPU21	○	
		CPM2C	○	
		CPM2B	○	
	α series	C200HE-CPU32(-Z)	○	
		C200HG-CPU33(-Z)	○	
		C200HG-CPU53(-Z)	○	
		C200HX-CPU34(-Z)	○	
		C200HX-CPU54(-Z)	○	
		C200HE-CPU42(-Z)	○	
		C200HG-CPU43(-Z)	○	
		C200HG-CPU63(-Z)	○	
		C200HX-CPU44(-Z)	○	
		C200HX-CPU64(-Z)	○	
	CV series	C200HX-CPU65-Z	○	
		C200HX-CPU85-Z	○	
		CV500	○	
		CV1000	○	
		CVM1	○	

Models listed are the models that have been evaluated as of June, 2013.

Company name	Series	Model	RS232C type	RS422 / RS485 type ^{*2}
Omron ^{*1}	CS1 series	CS1H-CPU67	○	
		CS1H-CPU66	○	
		CS1H-CPU65	○	
		CS1H-CPU64	○	
		CS1H-CPU63	○	
		CS1G-CPU45	○	
		CS1G-CPU44	○	
		CS1G-CPU43	○	
		CS1G-CPU42	○	
	CJ series	CJ1H	○	
		CJ1M	○	
		CJ1G	○	
	CP1 series	CJ2H	○	
		CP1H	○	
		CP1L	○	
		CP1E	○ ^{*4}	○
Toshiba Machine ^{*1}	TC mini series		○	○
Yokogawa Electric ^{*1}	FA-M3 series		Models with RS232C port	Models with RS485 port
		F3SP59-7S	○	
		F3SP58-6S	○	
		F3SP58-6H	○	
		F3SP53-4S	○	
		F3SP53-4H	○	
		F3SP38-6S	○	
		F3SP38-6N	○	
		F3SP35-5N	○	
		F3SP28-3S	○	
		F3SP28-3N	○	
		F3SP25-2N	○	
		F3SP21-0N	○	
			○	
KEYENCE ^{*1}	KV series	KV-10/16/24/40	○	
		KV700	○	○
		KV1000	○	○
		KV3000	○	○
		KV5000	○	○
	EH-150 EHV series	EHV-CPU128	○	○
		EHV-CPU64	○	○
		EHV-CPU32	○	○
		EHV-CPU16	○	○
		EH-CPU104A	○	○
Hitachi Industrial Equipment Systems ^{*1}	EH150 series	EH-CPU208A	○	○
		EH-CPU316A	○	○
		EH-CPU516	○	○
		EH-CPU548	○	○
	MICRO-EH series	10-point		
		14 / 20-point	○	
		23 / 28-point	○	○
		40 / 64-point	○	
	Web controller	10-point	○	
		23-point	○	○
Rockwell Automation ^{*1} (Allen-Bradley) Models that support protocol	MicroLogix series	MicroLogix500	○	
		MicroLogix1000	○	
	SLC-500 series	MicroLogix1100	○	
		SLC-5/03	○	
Siemens ^{*1}	S7-200 series	SLC-5/04	○	
		CPU222	○	○
		CPU216	○	○
		CPU215	○	○
		CPU214	○	○
LS Industrial Systems ^{*1}	MASTER-K series	CPU212	○	○
		80S / 200S	○	
		300S / 1000S	○	
Modbus ^{*1}	Models that support RTU protocol	*3	○	○
General-purpose serial	Our dedicated protocol	*3	○	○

*1: PLCs other than our FP series may be limited in the type of device that can be used and addresses. Please see manual for details.
 *2: Communication may not be possible when using RS485 depending on the sending and receiving timing with the other device.
 *3: We cannot specify what other device you should use; therefore, please test it using the actual equipment before using.
 *4: Available for models equipped with on RS232C port.
 ○: Direct connection is possible to the CPU unit of the PLC.
 ○: Connection is possible using the communications unit or a signal conversion cable, etc.
 (Example: The QJ71C24N or QJ71C24N-R2 calculator link unit is required when using the Mitsubishi Q Series.)
 ×: Connection is not possible
 Blank: Not evaluated.
 Refer to the "Technical Support Page" of our website for details, including the latest version of **Terminal GTWIN**, usable devices and addresses.

Main Unit and Tool Software

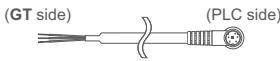




Product name	Description						Part No.
	LCD	Screen size	Power supply	Communication port	Color of front panel	SD memory card slot	
Tough GT03M-E	TFT monochrome LCD	3.5 inch	24 V DC	RS232C	Silver	Not available	AIG03MQ03DE
				RS422 / RS485			AIG03MQ05DE
Tough GT03T-E	TFT color LCD			RS232C	Silver	Available	AIG03TQ13DE
		RS422 / RS485		AIG03TQ15DE			
Tough GT32M-E	TFT monochrome LCD	5.7 inch		RS232C	Silver	Available	AIG32MQ03DE
				RS422 / RS485			AIG32MQ05DE
Tough GT32T-E	TFT color LCD		RS232C	Silver	Available	AIG32TQ03DE	
		RS422 / RS485	AIG32TQ05DE				
GT02L	STN monochrome LCD (white backlight)	3.7 inch	5 V DC	RS232C	Pure black	Not available	AIG02LQ02D
				RS422 / RS485	Hairline silver		AIG02LQ04D
GT02M	STN monochrome LCD (white / pink / red backlight)	3.8 inch	5 V DC	RS232C	Pure black	Not available	AIG02MQ02D
					Hairline silver		AIG02MQ03D
				RS422 / RS485	Pure black		AIG02MQ04D
					Hairline silver		AIG02MQ05D
			24 V DC	RS232C	Pure black		AIG02MQ12D
					Hairline silver		AIG02MQ13D
				RS422 / RS485	Pure black		AIG02MQ14D
					Hairline silver		AIG02MQ15D
				RS232C	Pure black	Available	AIG02MQ22D
					Hairline silver		AIG02MQ23D
					Pure black		AIG02MQ24D
					Hairline silver		AIG02MQ25D
GT02G	STN monochrome LCD (green / orange / red backlight)	3.8 inch	5 V DC	RS232C	Pure black	Not available	AIG02GQ02D
					Hairline silver		AIG02GQ03D
				RS422 / RS485	Pure black		AIG02GQ04D
					Hairline silver		AIG02GQ05D
			24 V DC	RS232C	Pure black		AIG02GQ12D
					Hairline silver		AIG02GQ13D
				RS422 / RS485	Pure black		AIG02GQ14D
					Hairline silver		AIG02GQ15D
				RS232C	Pure black	Available	AIG02GQ22D
					Hairline silver		AIG02GQ23D
					Pure black		AIG02GQ24D
					Hairline silver		AIG02GQ25D
GT05M	STN monochrome LCD (white / pink / red backlight)	3.5 inch	24 V DC	RS232C	Pure black	Available	AIG05MQ02D
					Hairline silver		AIG05MQ03D
				RS422 / RS485	Pure black	Available	AIG05MQ04D
					Hairline silver		AIG05MQ05D
GT05G	STN monochrome LCD (green / orange / red backlight)	3.5 inch	24 V DC	RS232C	Pure black	Available	AIG05GQ02D
					Hairline silver		AIG05GQ03D
				RS422 / RS485	Pure black	Available	AIG05GQ04D
					Hairline silver		AIG05GQ05D
GT05S	TFT color LCD	3.5 inch	24 V DC	RS232C	Pure black	Available	AIG05SQ02D
					Hairline silver		AIG05SQ03D
				RS422 / RS485	Pure black	Available	AIG05SQ04D
					Hairline silver		AIG05SQ05D
GT12M	STN monochrome LCD (white / pink / red backlight)	4.6 inch	24 V DC	RS232C	Pure black	Not available	AIG12MQ02D
					Hairline silver		AIG12MQ03D
				RS422 / RS485	Pure black	Not available	AIG12MQ04D
					Hairline silver		AIG12MQ05D
				RS232C	Pure black	Available	AIG12MQ12D
					Hairline silver		AIG12MQ13D
RS422 / RS485	Pure black	Available	AIG12MQ14D				
	Hairline silver		AIG12MQ15D				

Main Unit and Tool Software

Product name	Description						Part No.
	LCD	Screen size	Power supply	Communication port	Color of front panel	SD memory card slot	
GT12G	STN monochrome LCD (white / pink / red backlight)	4.6 inch	24 V DC	RS232C	Pure black	Not available	AIG12GQ02D
					Hairline silver		AIG12GQ03D
				RS422 / RS485	Pure black	Not available	AIG12GQ04D
					Hairline silver		AIG12GQ05D
				RS232C	Pure black	Available	AIG12GQ12D
					Hairline silver		AIG12GQ13D
				RS422 / RS485	Pure black	Available	AIG12GQ14D
					Hairline silver		AIG12GQ15D
GT32M	STN monochrome LCD	5.7 inch	24 V DC	RS232C	Pure black	Available	AIG32MQ02D
					Hairline silver		AIG32MQ03D
				RS422 / RS485	Pure black	Available	AIG32MQ04D
					Hairline silver		AIG32MQ05D
GT32T0	TFT color LCD	5.5 inch	24 V DC	RS232C	Pure black	Available	AIG32TQ02D
					Hairline silver		AIG32TQ03D
				RS422 / RS485	Pure black	Available	AIG32TQ04D
					Hairline silver		AIG32TQ05D
GT32T1	TFT color LCD	5.5 inch	24 V DC	RS232C	Pure black	Available	AIG32TQ12D
					Hairline silver		AIG32TQ13D
				RS422 / RS485	Pure black	Available	AIG32TQ14D
					Hairline silver		AIG32TQ15D
Terminal GTWIN Ver.2	Japanese version	Terminal GTWIN CD-ROM					AIGT8000V2
	English version	Terminal GTWIN CD-ROM					AIGT8001V2
Terminal GTWIN Ver.2 Upgrade version ^{*1}	Japanese version	Terminal GTWIN CD-ROM					AIGT8000V2R
	English version	Terminal GTWIN CD-ROM					AIGT8001V2R

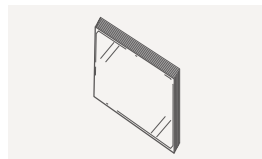
*1: For upgrading **Terminal GTWIN** Ver. 1 to Ver. 2.

Cables | PLC connection cable

Power supply and communication port	Connection cable	PLC
5 V DC and RS232C	 <p>Part No.: AIGT8142*, PLC connection cable (2 m 6.562 ft), 5-pin mini DIN connector — 4 single wires + shielding wire</p>	Our FP series^{*1}
5 V DC and RS422 / RS485	 <p>Part No.: AIGT8152*, PLC connection cable (2 m 6.562 ft), 8-pin mini DIN connector — 6 single wires + shielding wire</p>	Mitsubishi Electric FX series
24 V DC and RS232C	 <p>Part No.: AIGT8162, PLC connection cable (2 m 6.562 ft), 5-pin mini DIN connector — 3 single wires + shielding wire AIGT8165 (5 m 16.404 ft) and AIGT8160 (10 m 32.808 ft) are also available.</p>	Our FP series^{*1}
24 V DC and RS422 / RS485	 <p>Part No.: AIGT8175, PLC connection cable (5 m 16.4 ft), 8-pin mini DIN connector — 4 single wires + shielding wire</p>	Mitsubishi Electric FX series
24 V DC and RS232C	 <p>Part No.: AIP81842, PLC connection cable (2 m 6.562 ft), 9-pin D-SUB connector — 6 single wires</p>	FP2 / FP2SH COM port, CCU (Computer Communication Unit)

*1: The **FP7** series PLC can be connected using commercially available single wire cables.

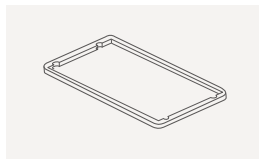
Options



■ Panel face protection sheets

10 sheets in a set (option)

For GT02L / GT02	Part No.: AIG02800
For GT05	Part No.: AIG05800
For GT12	Part No.: AIG12800
For GT32	Part No.: AIG32800

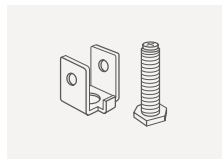


■ Waterproof packing

Waterproof packing (for replacement), 10 pieces in a set
Package includes one piece.

For GT02L / GT02	Part No.: AIG02810
For GT03-E	Part No.: AIG03810E
For GT05	Part No.: AIG05810
For GT12	Part No.: AIG12810
For GT32	Part No.: AIG32810
For GT32-E	Part No.: AIG32810E

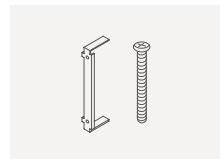
* The waterproof packing for **GT02(L)** is different from the **GT02L** main unit accessory.



■ GT02 / GT02L / GT03-E / GT12 mounting parts

5 sets of mounting parts
(4 parts / set)
Package includes one set.

Part No.: **AIG12830**

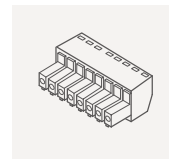


■ GT05 / GT32 / GT32-E mounting parts

5 sets of mounting parts
(2 parts / set)
Package includes one set.

Part No.: **AIGT28321**
For **GT05**

Part No.: **AIG32830**
For **GT32 / GT32-E**



■ Spare connector

5 connectors for communication and power supply in a set
Package includes one set.

Part No.: **AIGT084**



■ GT02 / GT03-E / GT05 / GT12 / GT32 / GT32-E backup battery

Part No.: **AFPX-BATT**

Item		GT03M-E		GT03T-E		GT32M-E		GT32T-E	
		RS232C	RS422 / RS485	RS232C	RS422 / RS485	RS232C	RS422 / RS485	RS232C	RS422 / RS485
Power supply		24 V DC							
Operating voltage range		21.6 to 26.4 V DC							
Power consumption		1.9 W or less		3.1 W or less		4.8 W or less		7.2 W or less	
Power supply unit isolation method						Transformer isolation			
Ambient temperature		-20 to +60 °C -4 to +140 °F (Note 1)							
Ambient humidity		10 to 90 %RH (at +25 °C +77 °F), No condensation							
Storage temperature		-20 to +60 °C -4 to +140 °F							
Storage humidity		10 to 90 %RH (at +25 °C +77 °F), No condensation							
Vibration resistance		5 to 8.4 Hz, amplitude 3.5 mm 0.138 in , 8.4 to 150 Hz, acceleration 9.8 m/s ² , 10 sweeps each in X, Y and Z directions (1 octave / min.)							
Shock resistance		147 m/s ² , 3 times in each of the X, Y and Z directions							
Superposed noise suppression		1,000 V [P-P] or more, pulse width of 50 ns, 1 μs between power supply terminals (by a noise simulator)							
Environmental resistance		IP67 (in the initial stages), Dust-proof and drip-proof from the front of the panel only (Rubber packing is attached to the panel contact surface.) (Note 2)							
Weight		170 g approx.				470 g approx.			
Display	Display device	TFT monochrome LCD		TFT color LCD		TFT monochrome LCD		TFT color LCD	
	Resolution	320 (W) × 240 (H) dots							
	Display color	2 colors (black / white, 16-gray scale)		4,096 colors		2 colors (black / white, 16-gray scale)		4,096 colors	
	Displayable area	70.6 (W) × 52.9 (H) mm 2.780 (W) × 2.083 (H) in				115.2 (W) × 86.4 (H) mm 4.535 (W) × 3.402 (H) in			
	Backlight	White LED							
Functions	Font types	Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots, Characters can be displayed in the 1, 2, 4, or 8 times width or height True Type (GTWIN): 10 to 240 dots, Windows®: 10 to 240 dots							
	Languages	Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, Italian, Spanish, French, Turkish, Russian and Vietnamese							
	Graphics	Straight lines, Continuous straight lines, Squares, Circles, Ovals, Arcs, Elliptic arcs, Fan shapes, Elliptic fan shapes, Beveled squares, and Bitmaps							
	Number of screens (Note 3)	230 screens approx.		180 screens approx.					
	Screen setting No.	Base screens: No. 0 to 3FF, Key board screens: No. 0 to 7, Login screens: No. 0 to F							
	Part functions	Messages, Lamps, Switches, Function switches, Data, Bar graphs, Clocks, Keyboards, Line graphs, Alarm list, Alarm record, and Custom parts (messages, lamps, switches)							
	Other functions	Recipe, Flow display, Write device, Multiple PLC connection, FP monitor, Language switching, GT link, Operation security, Data logging, and SD recipe (Note 4)							
	Clock function	Displayed by referencing PLC clock		Provided with a built-in clock. (Can also refer to and display a PLC clock.) * Buy the backup battery (AFPX-BATT).					
	Backlight brightness adjustment	Can be set on the menu screen, via the GT configuration screen of GTWIN , or via PLC.							
	Contrast adjustment	Not adjustable							
	Buzzer	Installed							
	Automatic communication settings	The communication speed (baud rate) is automatically changed if there is no response from the target equipment.							
	Through function	GT connected between PC and PLC allows PLC to be debugged without a direct connection to a PC.							
Screen creation	Dedicated software should be used. Applicable OS: Windows® 2000 / XP / Vista / 7 (Note 5)								
Touch key resolution		Free layout (8 dots min.)							
Touch key operation force		0.8 N or less							
Touch key life		1 million operations or more (at +25 °C +77 °F)							
COM. port	Communication standard	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485
	External communication conditions	Baud rate: 9,600 bps, 19,200 bps, 38,400 bps, 57,600 bps, and 115,200 bps Data bits: 7 or 8 bits, Parity: None, Odd, Even, Stop bits: 1 bit							
	Protocol	Our FP series supported, General-purpose serial interface supported, and Other companies' PLC supported (Refer to the " PLC COMPATIBILITY TABLE " on p.17 for manufacturers and models.)							
	Connector	Connector terminal block (8 pins)							
Screen data transfer interface	Communication standard	USB1.1							
	Communication conditions with PC								
	Protocol	Our dedicated protocol							
	Connector	USB Mini B				USB TYPE-B			
	Ethernet port (Note 6)								
User's memory	Memory	F-ROM							
	Capacity	6 Mbyte		12 Mbyte					
Memory backup	Memory			SRAM					
	Backup battery			Lithium battery (replaceable) AFPX-BATT (Does not include with product.)					

Conformance to the UL / cUL standards

UL / cUL file No.	E96300
UL standard No.	UL508

- Notes: 1) Please use within a temperature range of - 20 to + 55 °C **- 4 to + 131 °F** when horizontally installed and vertically installed in a portrait orientation and when using battery.
2) This protective structure condition applies to the front surface of the installed panel. This condition does not guarantee usage in all environments provided by users. When reattaching the panel, replace the waterproof packing.
3) The number of screens that can be registered varies according to the registered contents.
4) The data logging and SD recipe functions are available with only models equipped with an SD / SDHC memory card slot.
5) The 64-bit version is not supported except for Windows® 7.
6) Simultaneous USB and Ethernet communications are not possible.

Item		GT02L		GT02				GT05M / GT05G		GT05S			
		5 V / RS232C	5 V / RS422 / RS485	5 V / RS232C	5 V / RS422 / RS485	24 V / RS232C	24 V / RS422 / RS485	RS232C	RS422 / RS485	RS232C	RS422 / RS485		
Power supply		5 V DC				24 V DC							
Operating voltage range		4.5 to 5.5 V DC				21.6 to 26.4 V DC							
Power consumption		1 W or less				1.9 W or less		2.4 W or less		3.6 W or less			
Power supply unit isolation method		_____				Transformer isolation							
Ambient temperature		0 to +50 °C +32 to +122 °F											
Ambient humidity		20 to 85 % RH (at +25 °C +77 °F), No condensation											
Storage temperature		−20 to +60 °C −4 to +140 °F											
Storage humidity		10 to 85 % RH (at +25 °C +77 °F), No condensation											
Vibration resistance		5 to 8.4 Hz amplitude: 3.5 mm 0.138 in , 8.4 to 150 Hz acceleration 9.8 m/s ² , 10 sweeps each in X, Y and Z directions (1 octave/min.)				10 to 55 Hz (1 minute cycle): Double amplitude: 0.75 mm 0.030 in , 10 minutes in each of the X, Y, and Z directions							
Shock resistance		147 m/s ² , 3 times in each of the X, Y and Z directions				98 m/s ² or more, 4 times in each of the X, Y, and Z directions							
Superposed noise suppression		1,000 V [P-P] or more, pulse width of 50 ns, 1 μs between power supply terminals (by a noise simulator)											
Environmental resistance		IP65 (in the initial stages) (Note 1)		IP67 (in the initial stages) (Note 1)		IP65 (in the initial stages) (Note 1)							
Weight		150 g approx.		170 g approx.		230 g approx.							
Display	Display device	STN monochrome LCD										TFT color LCD	
	Resolution	160 (W) × 64 (H) dots		240 (W) × 96 (H) dots		320 (W) × 240 (H) dots							
	Display color	2 colors (black / white)										4,096 colors	
	Displayable area	88.0 (W) × 35.2 (H) mm 3.465 (W) × 1.386 (H) in		88.5 (W) × 35.4 (H) mm 3.484 (W) × 1.394 (H) in		71.0 (W) × 53.3 (H) mm 2.795 (W) × 2.098 (H) in							
	Backlight	White LED		GT02M: 3-color LED (white / pink / red) GT02G: 3-color LED (green / orange / red)		GT05M: 3-color LED (white / pink / red) GT05G: 3-color LED (green / orange / red)		White LED					
Functions	Font types	Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots, Characters can be displayed in the 1, 2, 4, or 8 times width or height, TrueType (GTWIN): 10 to 64 dots Windows®: 10 to 64 dots		Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots, Characters can be displayed in the 1, 2, 4, or 8 times width or height, TrueType (GTWIN): 10 to 96 dots		Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots, Characters can be displayed in the 1, 2, 4, or 8 times width or height, TrueType (GTWIN): 10 to 240 dots, Windows®: 10 to 240 dots							
	Languages	Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, Italian, Spanish, French, Turkish, Russian and Vietnames											
	Graphics	Straight lines, Continuous straight lines, Squares, Circles, Ovals, Arcs, Elliptic arcs, Fan shapes, Elliptic fan shapes, Beveled squares and Bitmaps											
	Number of screens (Note 2)	80 screens approx.		250 screens approx.		240 screens approx.		180 screens approx.					
	Screen setting No.	No. 0 to 3FF											
	Part functions	Messages, Lamps, Switches, Function switches, Data, Bar graphs, Clocks, Keyboards, Line graphs, Alarm list, and Custom parts (messages, lamps, switches)											
	Other functions	Recipe, Flow display, Write device, Language switching, GT link, Operation security, Data logging and SD recipe (Note 3)											
	Clock function	Displayed by referencing PLC clock				Provided with a built-in clock. (Can also refer to and display a PLC clock.) *Buy the backup battery (AFPX-BATT). Note: For the GT02 series, only GT02M2 and GT02G2 have a built-in clock.							
	Contrast adjustment	Contrast can be adjusted by using the touch panel.								Not adjustable			
	Buzzer	_____		Installed									
	Automatic communication settings	The communication speed (baud rate) is automatically changed if there is no response from the target equipment.											
	Through function	GT connected between PC and PLC allows PLC to be debugged without a direct connection to a PC.											
	Screen creation	Dedicated software should be used. Applicable OS: Windows® 2000 / XP / Vista / 7 (Note 6)											
Touch key resolution		Free layout (8 dots min.)											
Touch key operation force		0.8 N or less											
Touch key life		1 million operations or more (at +25 °C +77 °F)											
COM. port	Communication standard	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485		
	External communication conditions	Baud rate: 9,600 bps, 19,200 bps, 38,400 bps, 57,600 bps, and 115,200 bps Data bits: 7 or 8 bits, Parity: None, Odd, Even, Stop bits: 1 bit											
	Protocol	Our FP series supported, General-purpose serial interface supported, Other companies' PLC supported (Refer to the " PLC COMPATIBILITY TABLE " on p.17 for manufacturers and models.)											
	Connector	Connector terminal block (8 pins)											
Screen data transfer interface	Communication standard	USB1.1											
	Communication conditions with PC	_____											
	Protocol	Our dedicated protocol											
	Connector	USB Mini B						USB TYPE-B					
	Ethernet port (Note 4)	_____											
User's memory	Memory	F-ROM											
	Capacity	704 Kbyte		2 Mbyte				12 Mbyte					
Memory backup	Memory	_____				SRAM (Note 5)							
	Backup battery	_____				Lithium battery (replaceable) AFPX-BATT (Does not include with product.) (Note 5)							

Conformance to the UL / cUL standards

UL / cUL file No.	E96300
UL standard No.	UL508

- Notes: 1) This protective structure condition applies to the front surface of the installed panel. This condition does not guarantee usage in all environments provided by users. When reattaching the panel, replace the waterproof packing.
2) The number of screens that can be registered varies according to the registered contents.
3) The data logging and SD recipe functions are available with only models equipped with an SD / SDHC memory card slot.
4) Simultaneous USB and Ethernet communications are not possible.
5) Among GT02 series, available for GT02M2 and GT02G2 only.
6) The 64-bit version is not supported except for Windows® 7.

Item		GT12		GT32M		GT32T0		GT32T1	
		RS232C	RS422 / RS485	RS232C	RS422 / RS485	RS232C	RS422 / RS485	RS232C	RS422 / RS485
Power supply		24 V DC							
Operating voltage range		21.6 to 26.4 V DC							
Power consumption		1.7 W or less		10 W or less				12 W or less	
Power supply unit isolation method		Transformer isolation							
Ambient temperature		0 to +50 °C +32 to +122 °F		0 to +50 °C +32 to +122 °F (Note 5)					
Ambient humidity		20 to 85 % RH (at +25 °C +77 °F), No condensation							
Storage temperature		-20 to +60 °C -4 to +140 °F							
Storage humidity		10 to 85 % RH (at +25 °C +77 °F), No condensation							
Vibration resistance		5 to 9 Hz amplitude: 3.5 mm 0.138 in , 9 to 150 Hz acceleration 9.8 m/s ² , 10 sweeps each in X, Y and Z directions (1 octave/min.)		10 to 55 Hz (1 minute cycle): Double amplitude: 0.75 mm 0.030 in , 10 minutes in each of the X, Y, and Z directions					
Shock resistance		147 m/s ² , 3 times in each of the X, Y and Z directions		98 m/s ² or more, 4 times in each of the X, Y, and Z directions					
Superposed noise suppression		1,000 V [P-P] or more, pulse width of 50 ns, 1 μs between power supply terminals (by a noise simulator)							
Environmental resistance		IP67 (in the initial stages) (Note 1)		IP65 (in the initial stages) (Note 1)					
Weight		240 g approx.		500 g approx.		470 g approx.		480 g approx.	
Display	Display device	STN monochrome LCD				TFT color LCD			
	Resolution	320 (W) × 120 (H) dots		320 (W) × 240 (H) dots					
	Display color	2 colors (black / white, 8-gray scale)		2 colors (blue / white)		4,096 colors			
	Displayable area	108.8 (W) × 40.8 (H) mm 4.283 (W) × 1.606 (H) in		113.2 (W) × 86.4 (H) mm 4.457 (W) × 3.402 (H) in		110.8 (W) × 83.6 (H) mm 4.362 (W) × 3.291 (H) in			
	Backlight	GT12M : 3-color LED (white / pink / red) GT12G : 3-color LED (green / orange / red)		CFL *Not replaceable. Average life for backlight; GT32M : 75,000 hours (at +25 °C +77 °F), GT32T : 50,000 hours (at +25 °C +77 °F)					
Functions	Font types	Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots Characters can be displayed in the 1, 2, 4, or 8 times width or height. True Type (GTWIN): 10 to 120 dots		Fixed (GTWIN) : 8 × 8, 16 × 8, and 16 × 16 dots, Characters can be displayed in the 1, 2, 4, or 8 times width or height. True Type (GTWIN): 10 to 240 dots, Windows®: 10 to 240 dots					
	Languages	Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, Italian, Spanish, French, Turkish, Russian and Vietnames							
	Graphics	Straight lines, Continuous straight lines, Squares, Circles, Ovals, Arcs, Elliptic arcs, Fan shapes, Elliptic fan shapes, Beveled squares and Bitmaps							
	Number of screens (Note 2)	2-gray scale: 250 screens approx. 8-gray scale: 200 screens approx.		240 screens approx.		180 screens approx.			
	Screen setting No.	No. 0 to 3FF							
	Part functions	Messages, Lamps, Switches, Function switches, Data, Bar graphs, Clocks, Keyboards, Line graphs, Alarm list, and Custom parts (messages, lamps, switches)							
	Other functions	Recipe, Flow display, Write device, Multiple PLC connection, FP monitor, Language switching, GT link, Operation security, Data logging and SD recipe (Note 3)						Sound output (Note 6)	
	Clock function	Provided with a built-in clock. (Can also refer to and display a PLC clock.) *Buy the backup battery (AFPX-BATT).							
	Contrast adjustment	Contrast can be adjusted by using the touch panel.				Not adjustable			
	Buzzer	Installed							
	Automatic communication settings	The communication speed (baud rate) is automatically changed if there is no response from the target equipment.							
	Through function	GT connected between a PC and PLC allows the PLC to be debugged without a direct connection with the PC.							
	Screen creation	Dedicated software should be used. Applicable OS: Windows® 2000 / XP / Vista / 7 (Note 9)							
Touch key resolution		Free layout (8 dots min.)							
Touch key operation force		0.8 N or less							
Touch key life		1 million operations or more (at +25 °C +77 °F)							
COM. port	Communication standard	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485	Conforms to RS232C	Conforms to RS422 / RS485
	External communication conditions	Baud rate: 9,600 bps, 19,200 bps, 38,400 bps, 57,600 bps and 115,200 bps Data bits: 7 or 8 bits, Parity: None, Odd, Even, Stop bits: 1 bit							
	Protocol	Our FP series supported, General-purpose serial interface supported, Other companies' PLC supported (Refer to the " PLC COMPATIBILITY TABLE " on p.17 for manufacturers and models.)							
	Connector	Connector terminal block (8 pins)							
Screen data transfer interface	Communication standard	USB1.1							
	Communication conditions with PC	_____							
	Protocol	Our dedicated protocol							
	Connector	USB Mini B		USB TYPE-B					
	Ethernet port (Note 4)	_____						Available (100BASE-TX, 10BASE-T) (Note 7, 8)	
User's memory	Memory	F-ROM							
	Capacity	2 Mbyte		2 Mbyte		12 Mbyte (Ver.1.10 or later)			
Memory backup	Memory	SRAM							
	Backup battery	Lithium battery (replaceable) AFPX-BATT (Does not include with product.)							

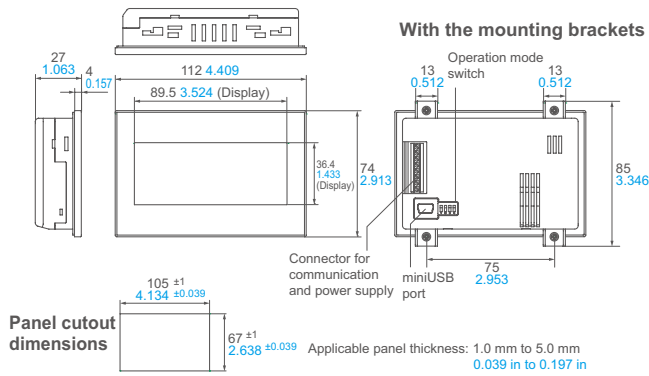
Conformance to the UL / cUL standards

UL / cUL file No.	E96300
UL standard No.	UL508

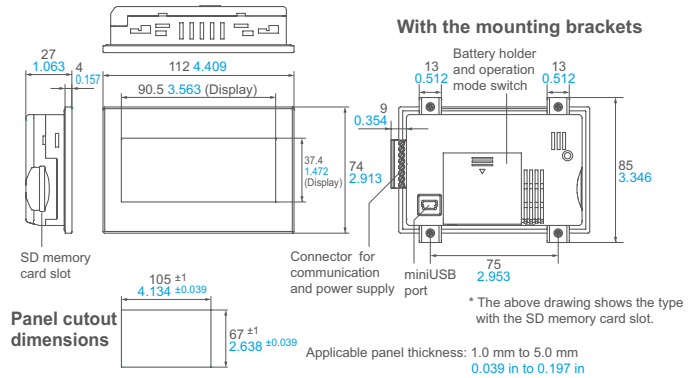
- Notes: 1) This protective structure condition applies to the front surface of the installed panel. This condition does not guarantee usage in all environments provided by users. When reattaching the panel, replace the waterproof packing.
- 2) The number of screens that can be registered varies according to the registered contents.
- 3) The data logging and SD recipe functions are available with only models equipped with an SD / SDHC memory card slot.
- 4) Simultaneous USB and Ethernet communications are not possible.

- 5) Please use within a temperature range of 0 to +40 °C **+104 °F** when horizontally installed and vertically installed in a portrait orientation.
- 6) WAV format (PCM, 8 kHz sampling rate, 16 bits, monaural), Maximum sound data capacity: 512 Kbyte (30 sec, approx.), Maximum registrable number of sound data items: 128
- 7) The unit carries out serial communication data processing at 115.2 kbits / s.
- 8) Communications with external equipment (PLC) are not available.
- 9) The 64-bit version is not supported except for Windows® 7.

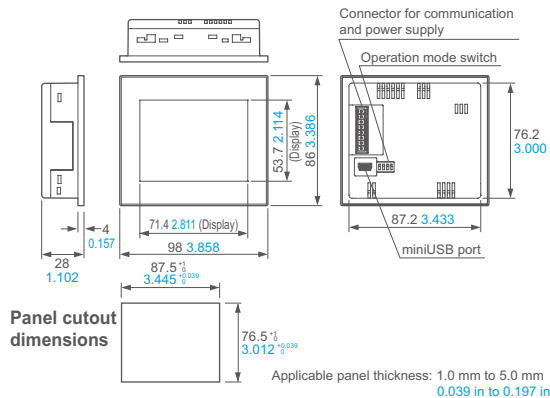
GT02L



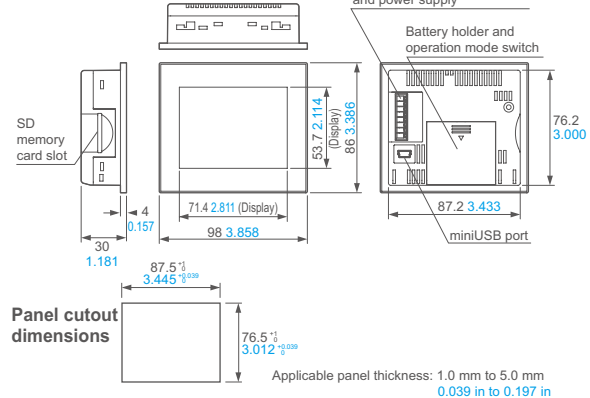
GT02



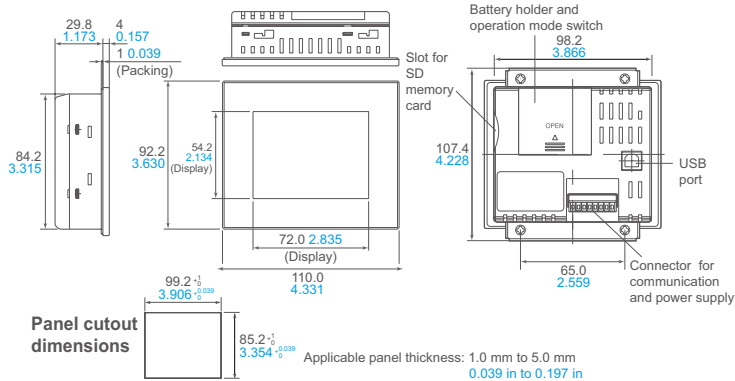
GT03M-E



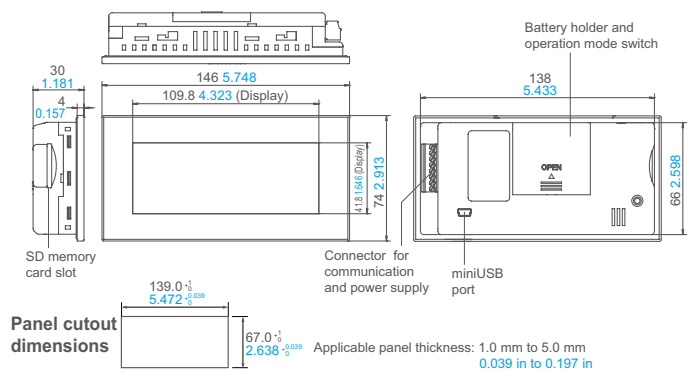
GT03T-E



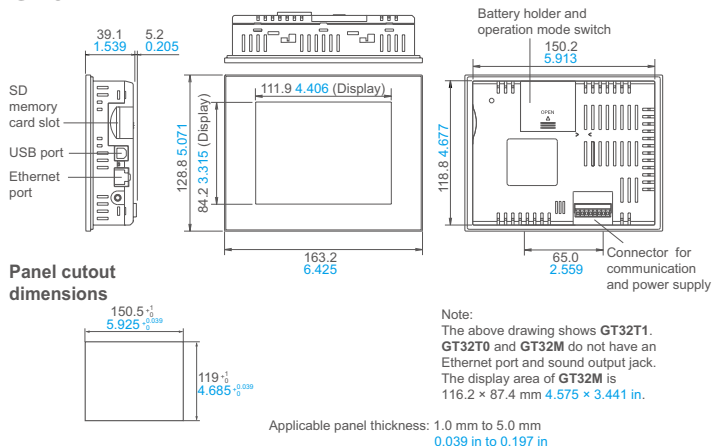
GT05



GT12



GT32



GT32-E

