GTseries | Dimensions

Unit: mm inch

GT02

27 1.063
4 .157
112 4.409
90.5 3.563 (Display)
13 .512
13 .512
9 .354
37.4 1.472 (Display)
74 2.913
85 3.346
75 2.953

Panel cutout dimensions

105 $^{+1}_{0}$ 4.134 $^{+.039}_{0}$
67 $^{+1}_{0}$ 2.638 $^{+.039}_{0}$

Applicable panel thickness:
1.0 mm to 5.0 mm
.039 inch to .197 inch

GT05M/GT05G/GT05S

29.8 1.173
4 .157
1 .039 (Packing)
84.2 3.315
92.2 3.630
54.2 2.134 (Display)
72.0 2.835 (Display)
99.2 $^{-1}_{0}$ 3.906 $^{-.039}_{0}$
110.0 4.331

SD memory card slot

Battery holder and operation mode switch
98.2 3.866
107.4 4.228
OPEN

USB port
65.0 2.559
COM. port and Power supply terminal

Panel cutout dimensions

85.2 $^{-1}_{0}$ 3.354 $^{-.039}_{0}$

Applicable panel thickness:
1.0 mm to 5.0 mm
.039 inch to .197 inch

GT12

30 1.181
4 .157
146 5.748
109.8 4.323 (Display)
138 5.433
41.8 1.646 (Display)
74.2 2.913
66 2.598
OPEN

Panel cutout dimensions

139.0 $^{-1}_{0}$ 5.472 $^{-.039}_{0}$
67.0 $^{-1}_{0}$ 2.638 $^{-.039}_{0}$

Applicable panel thickness:
1.0 mm to 5.0 mm
.039 inch to .197 inch

GT21C

7 .276
29.9 1.177
4 .157
2 .079 (Packing)
112 4.409
99 3.898 (Display)
74.4 2.929 (Display)
130 $^{-1}_{0}$ 5.118 $^{-.039}_{0}$
142 5.591

COM. port and Power supply terminal
5.1 .201
102 4.016
129 5.079
TOOL port   Battery holder and operation mode switch

Panel cutout dimensions

130 $^{-1}_{0}$ 5.118 $^{-.039}_{0}$

Applicable panel thickness:
1.0 mm to 5.0 mm
.039 inch to .197 inch

GT32M/GT32T

39.1 1.539
5.2 .205
111.9 4.406 (Display)
128.8 5.071
84.2 3.315 (Display)
118.8 4.677
163.2 6.425

SD memory card slot
USB port
Ethernet port

Battery holder and operation mode switch
150.2 5.913
OPEN
65.0 2.559
COM. port and Power supply terminal

Panel cutout dimensions

150.5 $^{-1}_{0}$ 5.925 $^{-.039}_{0}$
119 $^{-1}_{0}$ 4.685 $^{-.039}_{0}$

Applicable panel thickness:
1.0 mm to 5.0 mm
.039 inch to .197 inch

*The above drawing shows GT32T1.
GT32T0 and GT32M do not have an Ethernet port and sound output jack.
The display area of GT32M is 116.2 x 87.4 mm 4.575 x 3.441 mm.
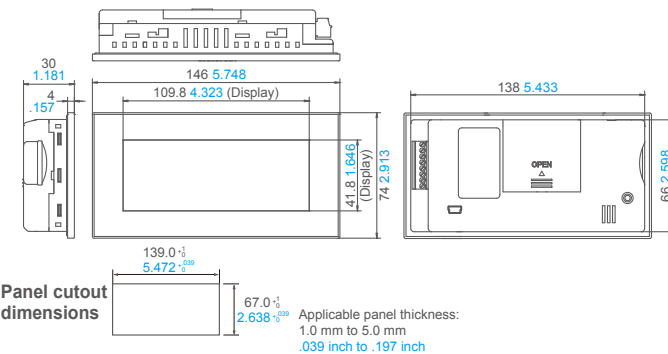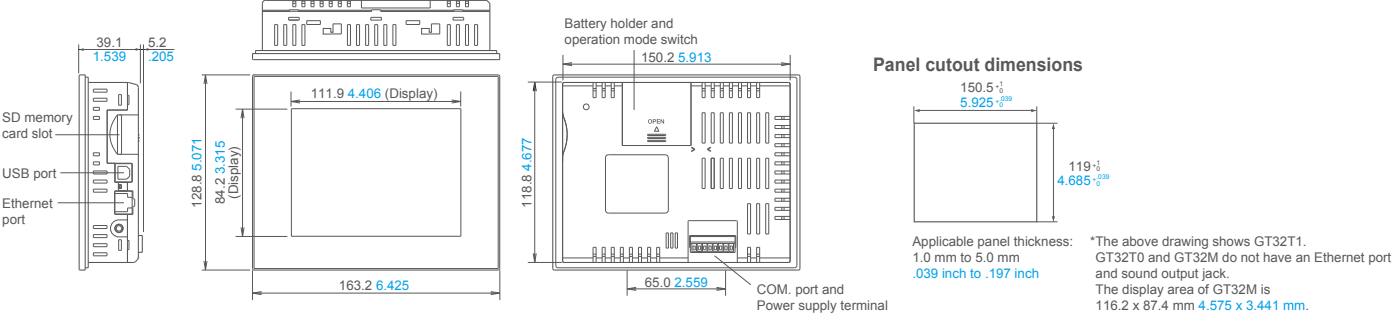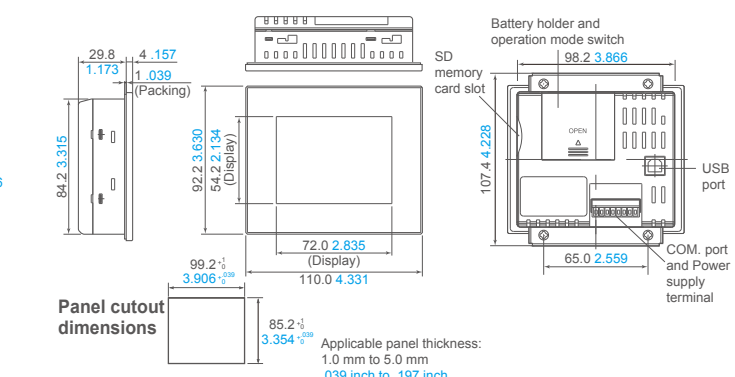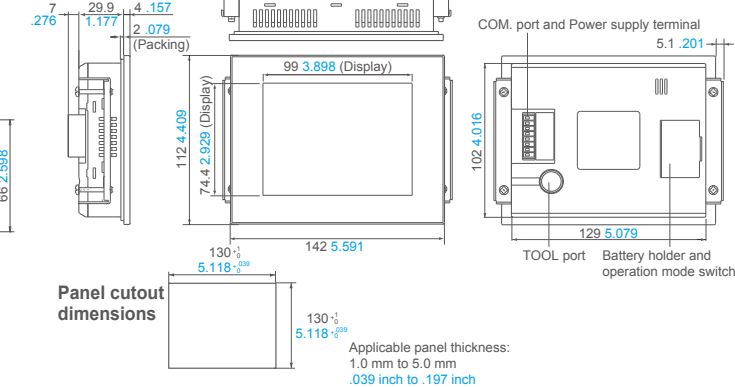
• Windows® is a registered trademark of the Microsoft Corporation.
• Ethernet is a registered trademark of Xerox Corporation.

Panasonic®

Specifications are subject to change without notice.   Printed in Japan.

Panasonic
ideas for life

GTseries
Programmable Display
GT02   GT05   GT12   GT21C   GT32

Sharp Image with Remarkable Functionality

3 Year Warranty

2010.8 | panasonic-electric-works.net/ac
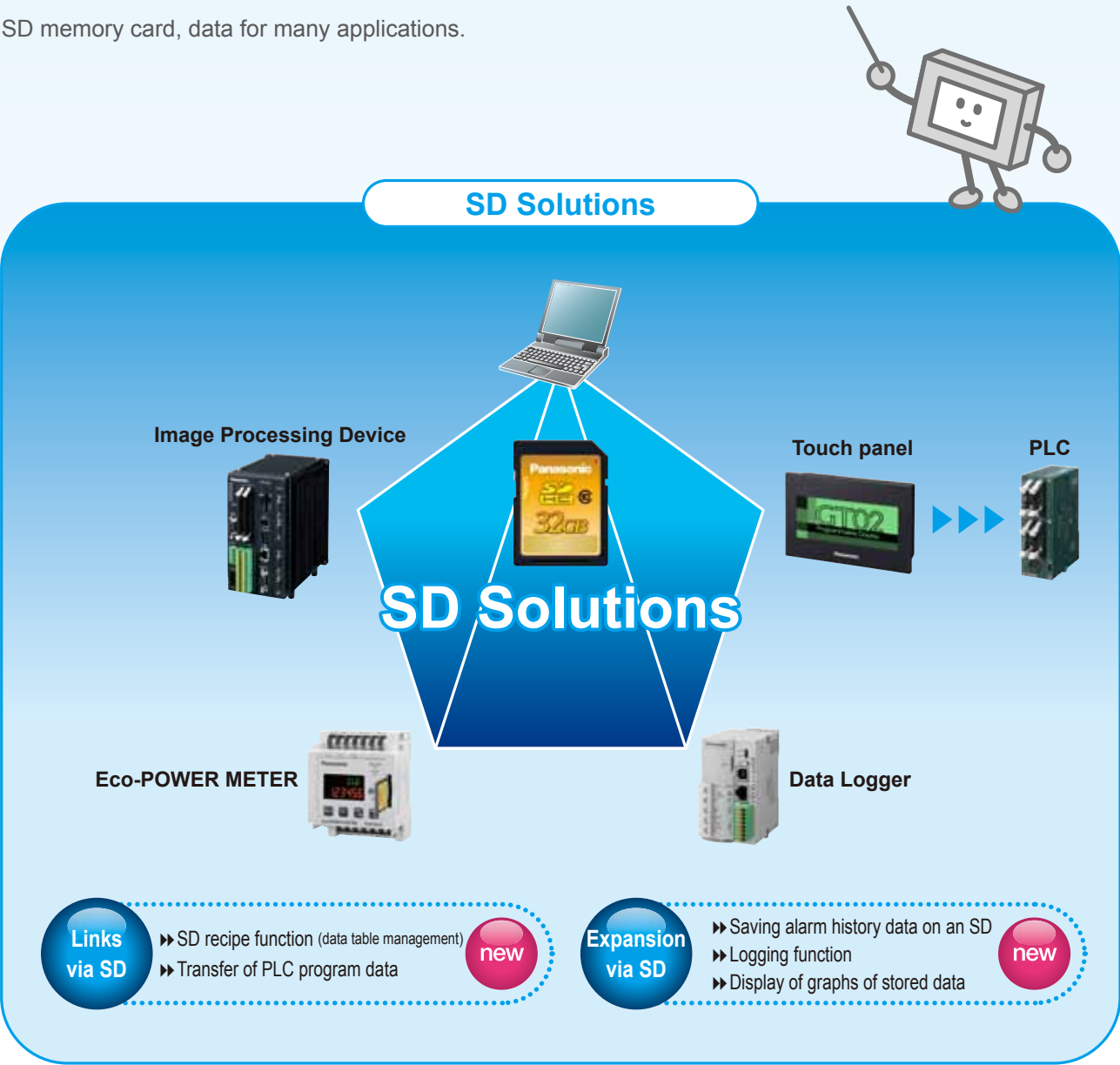
Panasonic Electric Works

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, Panasonic touch panels exchange and store data using

SD memory card, data for many applications.

SD Solutions

Image Processing Device

Touch panel

PLC

SD Solutions

Eco-POWER METER

Data Logger

Links via SD `new`
▶▶ SD recipe function (data table management)
▶▶ Transfer of PLC program data

Expansion via SD `new`
▶▶ Saving alarm history data on an SD
▶▶ Logging function
▶▶ Display of graphs of stored data

PLC program transfer without the use of a PC `new`

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.

Conventional

PC — GT02 — PLC

SD Solutions

SD/SDHC memory card — GT02 — PLC
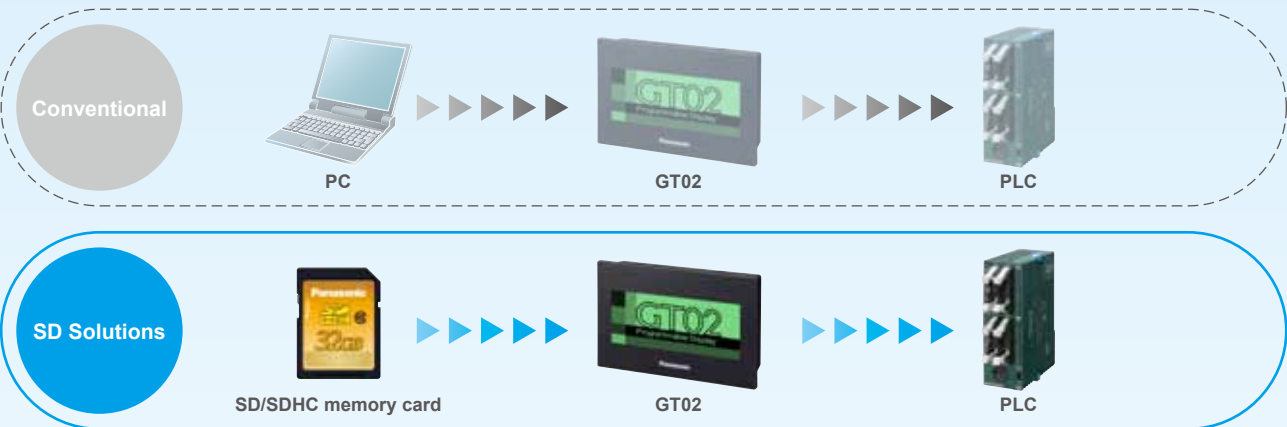
SD logging function to produce data "Visualization" `new`

Capable of automatically collecting electrical 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 Datalogger 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.

CT   CT   CT

Data collection and graph creation

Real Time Monitoring

Daily Energy Monitor

SD recipe function `new`

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.

Write and Read

GT02

SD/SDHC memory card

Product A Product B

PLC built-in memory
Product A
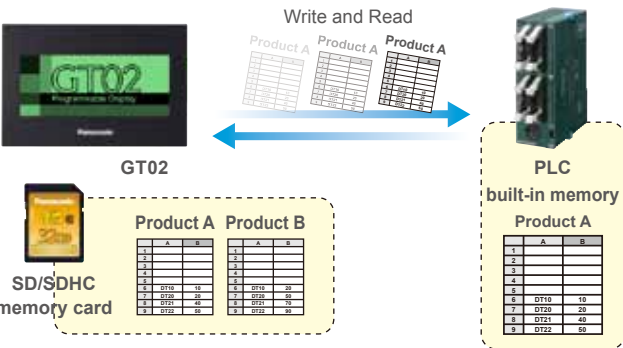
Saving alarm history data on an SD card `new`

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

SD/SDHC memory card

PC
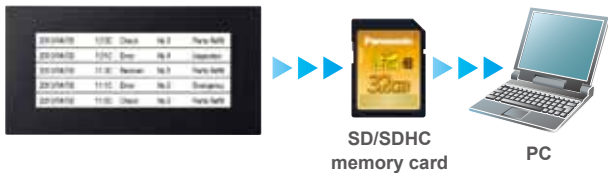
High Visibility and Excellent Operability

Three-color LED backlights allows for checking machine status at a glance (G type)

The monochrome display (except GT32M) 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.

GT05G

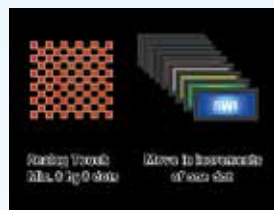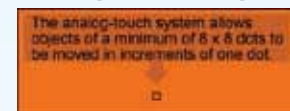(Normal)

GT12

205

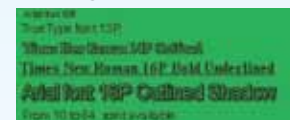(In operation)

GT02

Error

(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"

The analog-touch system allows objects of a minimum of 8 x 8 dots to be moved in increments of one dot.

Analog Touch Min. 0 by 0 dots — Move in increments of one dot
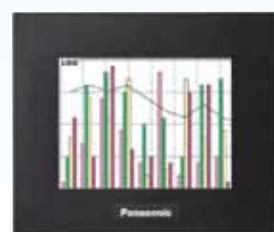
"TrueType fonts"

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

"Graph function"

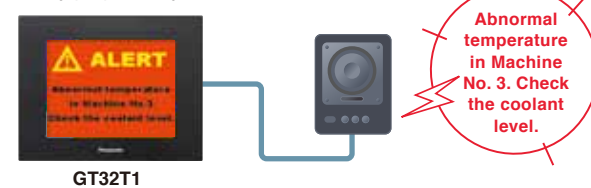One bar graph has a maximum of eight bars and can be combined with line graphs.

"Flow Display function"

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

C3 is now in automatic op

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.

⚠ ALERT

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

GT32T1

Multi-function switches (GT05/GT12/GT32)

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

4096-color parts libraries (for GT05S/GT21C/GT32T)

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

Portrait display ideal for narrow spaces (GT02/GT12)

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.
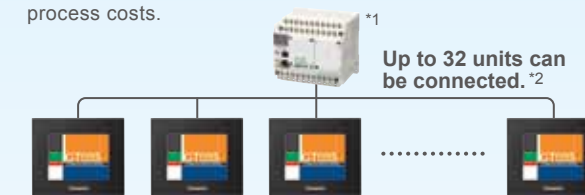

Advanced Functions to Enhance Work Efficiency

Multiple GT displays can be connected to our FP series PLC. (GT02/GT05/GT12/GT32)

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.
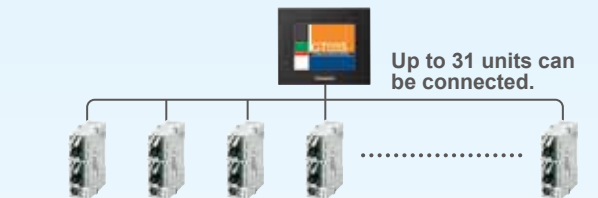
*1

Up to 32 units can be connected. *2

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.

Up to 31 units can be connected.

*1: Our FP series PLC
*2: As the number of connected units increases, the response slows down. Check the speed in the actual line.
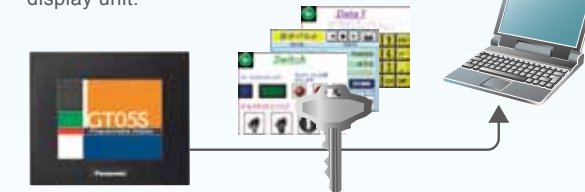
Enhanced security with password protection (GT02/GT05/GT12/GT32)

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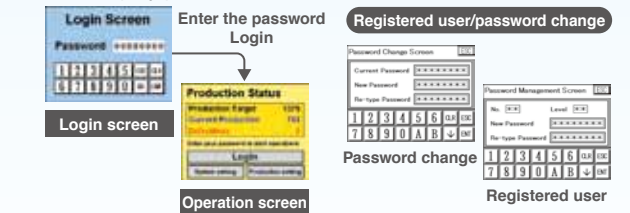
Password-protection function

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

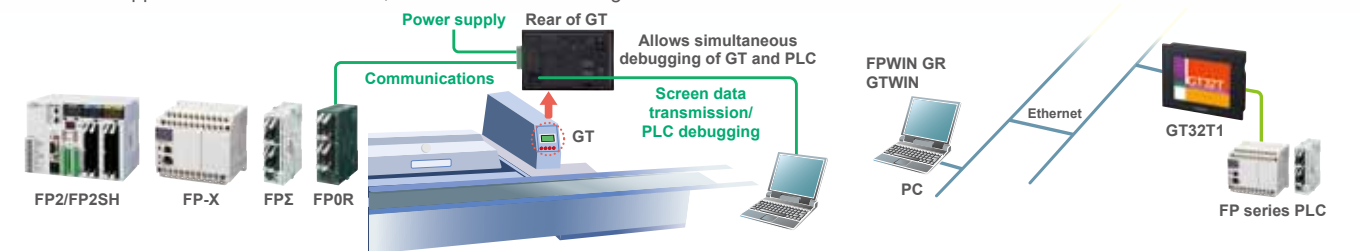### Operation security function

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 panel.

Login Screen — Enter the password Login — Registered user/password change

Login screen

Operation screen

Password change

Registered user

High-efficiency operation with USB/"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.

Power supply — Rear of GT

Communications — Allows simultaneous debugging of GT and PLC

GT — Screen data transmission/ PLC debugging

FP2/FP2SH — FP-X — FPΣ — FP0R

FPWIN GR GTWIN

PC — Ethernet — GT32T1

FP series PLC

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	English	简体中国语	繁体中國語	한국어
000	SW0	ありがとうございました	Thank you	热忱欢迎	諸多指教	안녕하세요
000	SW1	1	1	1	1	1
000	SW1	2	2	2	2	2

Write Device function

new

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.

GT32M

Programmable Display

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

5.7 inch CE c(UL)us

Pure black

Hairline silver

128.8 mm
5.071 inch

163.2 mm
6.425 inch

39.1mm
1.539inch

*3
5.2mm
.205inch

5.7-inch blue LCD equipped with 75,000-hour long life backlight
Although the backlight is a CFL type, it can last as long as 75,000 hours (approx. 8.5 years), reducing maintenance frequency. *1

Industry's smallest size in the 5-inch class, and 39.1-mm
1.539-inch thin and cool body design
Large display with space-saving outer dimensions of 163.2 x 128.8 x 39.1 mm 6.425 x 5.071 x 1.539 inch

SD/SDHC memory card slot as standard equipment (32 GB max)*
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*2 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.

Slot for SD memory card

To PC ◄ USB port

Connector for communication and power supply

To PLC ◄
FP series PLC connection cable AIGT8162

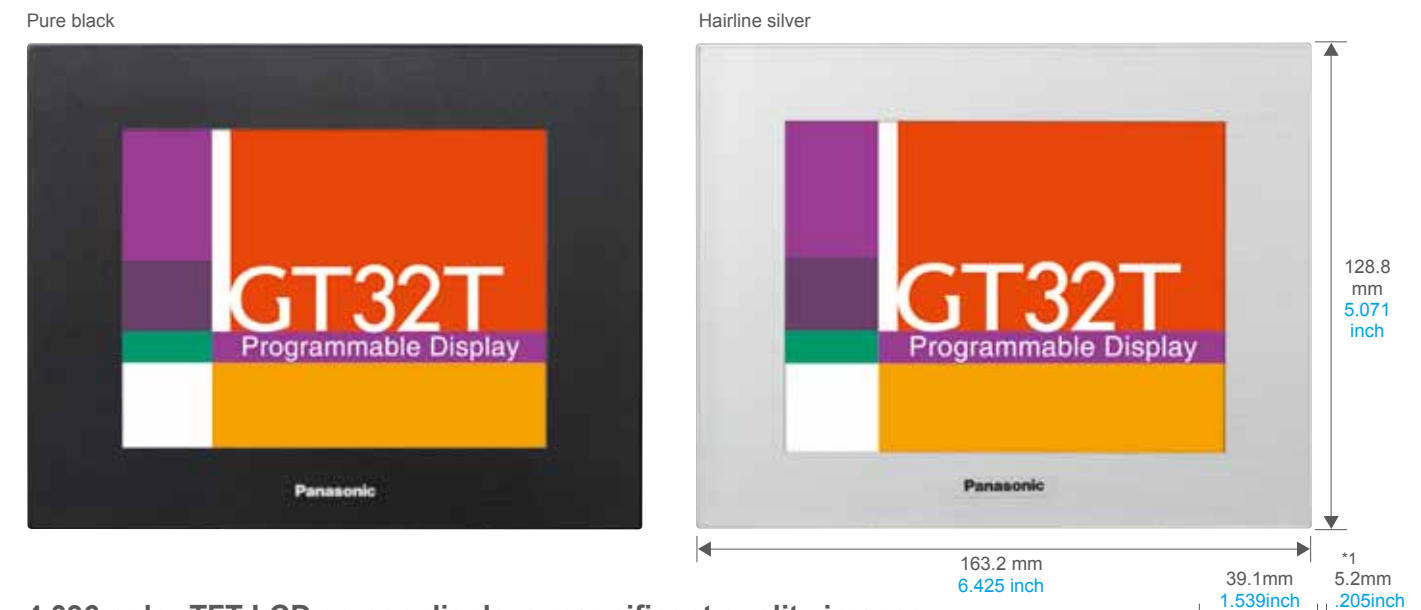| 5.7 inch | STN monochrome (white/blue) | CFL backlight | 32 chars. x 24 lines (10-dot font) | 320 x 240 dots | USB | SD HC | 24V DC |

*1: The backlight type for GT32M cannot be changed.
*2: Please use a commercially available A-B type USB cable.
*3: Note that the COM port connector projects an additional 3.9 mm .154 inch.
   Also take the cable diameter must be taken into account.
* Compliant with CLASS 10.
• The panel face protection sheet for the GT series is available as an option.

GT32T0/T1

Programmable Display

Amazingly beautiful and vivid
4,096-color TFT LCD

5.5 inch CE c(UL)us

Pure black

Hairline silver

128.8 mm
5.071 inch

163.2 mm
6.425 inch

39.1mm
1.539inch

*1
5.2mm
.205inch

4,096-color TFT LCD screen displays magnificent quality images.

Industry's smallest size in the 5-inch class, and 39.1-mm
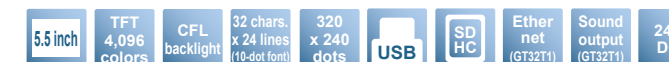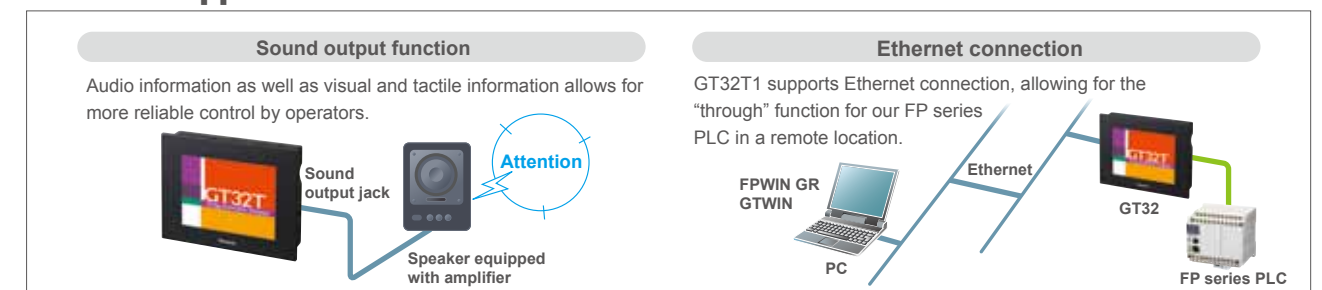### 1.539-inch thin and cool body design

SD/SDHC memory card slot as standard equipment (32 GB max)*
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

GT32T1 supports:

Slot for SD memory card

To PC ◄ USB port

Ethernet port (GT32T1)

Sound output jack (GT32T1)

To PLC ◄
FP series PLC connection cable AIGT8162

Sound output function	Ethernet connection
Audio information as well as visual and tactile information allows for more reliable control by operators.	GT32T1 supports Ethernet connection, allowing for the "through" function for our FP series PLC in a remote location.

Sound output jack

Attention

Speaker equipped with amplifier

FPWIN GR GTWIN

Ethernet

GT32

PC

FP series PLC

| 5.5 inch | TFT 4,096 colors | CFL backlight | 32 chars. x 24 lines (10-dot font) | 320 x 240 dots | USB | SD HC | Ether net (GT32T1) | Sound output (GT32T1) | 24V DC |

*1: Note that the COM port connector projects an additional 5.2mm. Also take the cable diameter must be taken into account.
* Compliant with CLASS 10.
• The panel face protection sheet for the GT series is available as an option.

GTWIN Ver.2.A

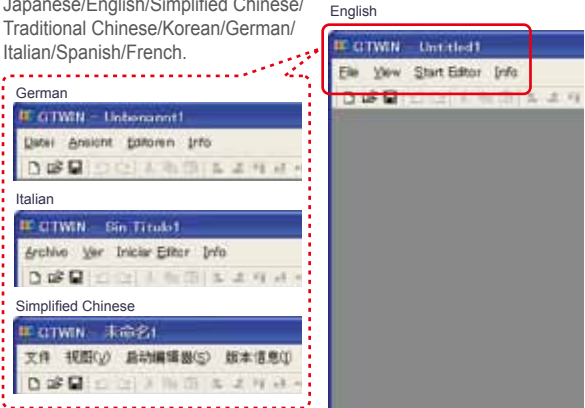**Screen Creation Tool for the GT series**

User-friendly interface makes screen creation easier.
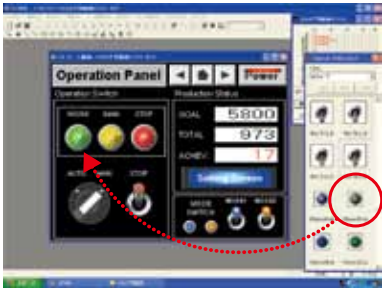
Panasonic
Terminal
GTWIN

Compatible with Windows®7

Compatible with the nine languages for the menu

The menu can be indicated in Japanese/English/Simplified Chinese/Traditional Chinese/Korean/German/Italian/Spanish/French.

English

GTWIN — Untitled1
File View Start Editor Info

German

GTWIN — Unbenannt1
Datei Ansicht Editoren Info

Italian

GTWIN — Sin Titulo1
Archivo Ver Iniciar Editor Info

Simplified Chinese

GTWIN — 未命名1
文件 视图(V) 启动编辑器(S) 版本信息(I)

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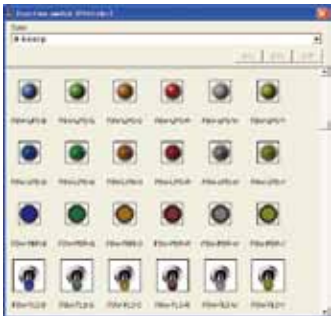
In the previous version, the required parts library had to be selected from the menu every time it was needed. The new version displays a list of parts libraries, making them more user-friendly. You can also freely set the parts library window size.

WIN 2000 | WIN XP | WIN Vista | WIN 7 | Required disk space 300 MB min.

* **Windows®:** The 64-bit version is not supported.
* **GTWIN Ver. 2.8 or later is not compatible with Windows® 95, 98, Me or NT. Please use Ver. 2.71.**
  The difference file can be downloaded from our website: http://panasonic-electric-works.net/ac/e

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

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

4096-color 3D buttons (for GT05S/GT21C/GT32T)

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/traditional Chinese, and Korean

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Models listed are the models that have been evaluated as of September, 2009.

Company	Series	Model	GT02/GT05/GT12/GT21/GT32 RS232C type	RS422 (RS485) type*2
Panasonic Electric Works	FP series	FP-X	◎	○
		FP	◎	○
		FP-e	◎	○
		FP0	◎	○
		FP0R	◎	○
		FP2	◎	○
		FP2SH	◎	○
Mitsubishi Electric*1	FX series	FX0N		◎
		FX1S	○	◎
		FX1N	○	◎
		FX1NC	○	◎
		FX2N	○	◎
		FX2NC	○	◎
		FX3UC	○	◎
		FX3U	○	◎
		FX3G	○	◎
	Q series	Q00CPU	◎	
		Q01CPU	◎	
		Q00JCPU	○	
		Q00HCPU	○	
		Q25HCPU	◎	
		Q12HCPU	◎	
		Q06HCPU	◎	
		Q02HCPU	◎	
		Q02CPU	◎	
	A series	A1N	○	
		A2N	○	
		A3N	○	
		A1S	○	
		A1SJ	○	
		A2SH	○	
		A1SH	○	
		A2CCPU24	◎	
	L series	L26CPU-BT	○	○
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	○	
		C200HE-CPU32	○	
		C200HG-CPU33-Z	○	
		C200HG-CPU33	○	
		C200HG-CPU53-Z	○	
		C200HG-CPU53	○	
		C200HX-CPU34-Z	○	
		C200HX-CPU34	○	
		C200HX-CPU54-Z	○	
		C200HX-CPU54	○	
		C200HE-CPU42-Z	◎	
		C200HE-CPU42	◎	
		C200HG-CPU43-Z	◎	
		C200HG-CPU43	◎	
		C200HG-CPU63-Z	◎	
		C200HG-CPU63	◎	
		C200HX-CPU44-Z	◎	
		C200HX-CPU44	◎	
		C200HX-CPU64-Z	◎	
		C200HX-CPU64	◎	
		C200HX-CPU65-Z	◎	
		C200HX-CPU85-Z	◎	
	CV series	CV500	◎	
		CV1000	◎	
		CVM1	◎	

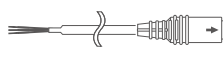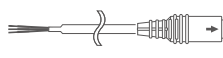| Company	Series	Model	GT02/GT05/GT12/GT21/GT32 RS232C type	RS422 (RS485) type*2
Omron*1	CS1 series	CS1H-CPU67	○	
		CS1H-CPU66	◎	
		CS1H-CPU65	○	
		CS1H-CPU64	◎	
		CS1H-CPU63	◎	
		CS1G-CPU45	◎	
		CS1G-CPU44	◎	
		CS1G-CPU43	◎	
		CS1G-CPU42	◎	
	CJ1 series	CJ1H	◎	
		CJ1M	◎	
		CJ1G	◎	
	CP1 series	CP1H	○	
		CP1L	○	
		CP1E	◎*4	○
Toshiba Machine*1	TC mini series		◎	◎
			Models with RS232 port	Models with RS485 port
Yokogawa Electric*1	FA-M3 series	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	○	○
Hitachi	EH-150 EHV series	EHV-CPU128	◎	◎
		EHV-CPU64	◎	◎
		EHV-CPU32	◎	◎
		EHV-CPU16	◎	◎
	EH-150 series	EH-CPU104A	◎	◎
		EH-CPU208A	◎	◎
		EH-CPU316A	◎	◎
		EH-CPU516	◎	◎
		EH-CPU548	◎	◎
	MICRO-EH series	10-point		
		14-point	◎	
		20-point	◎	
		23-point	◎	◎
		28-point	◎	◎
		40-point	◎	
		64-point	◎	
	Web Controller	10-point	◎	
		23-point	◎	◎
ALLEN-BRADLEY*1 Models that support protocol	Micro Logic series	MicroLogix1000	◎	
	SLC-500 series	SLC-5/03	◎	
		SLC-5/04	◎	
Siemens*1	S7-200 series	CPU222	○	◎
		CPU216	○	◎
		CPU215	○	◎
		CPU214	○	◎
		CPU212	○	◎
LG*1	MASTER-K series	80S	◎	
		200S	◎	
		300S	○	
		1000S	◎	
Modbus*1	Models that support RTU protocol	*3	◎	◎
General-purpose serial	PEW dedicated protocol	*3	◎	◎
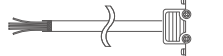
*1. PLCs other than Panasonic Electric Works FP series may be limited in the type of device that can be used and addresses. Please see manual for details.
*2. Communication may not be possible when using RS485 depending on the sending and receiving timing with the other device.
*3. We cannot specify 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 (http://panasonic-electric-works.net/ac/e) for details, including the latest version of Terminal GTWIN, usable devices and addresses.

Main Unit and Tool Software

Product name	Description					Part number
	LCD	Power supply	Communication port	Color of main unit	SD memory card slot	
GT02M	STN monochrome (white/pink/red, backlight)	5V DC	RS232C	Hairline silver	Not available	AIG02MQ03D
			RS422 (RS485)			AIG02MQ05D
		24V DC	RS232C			AIG02MQ13D
			RS422 (RS485)			AIG02MQ15D
			RS232C		Available	AIG02MQ23D
			RS422 (RS485)			AIG02MQ25D
GT02G	STN monochrome (green/orange/red, backlight)	5V DC	RS232C	Pure black	Not available	AIG02GQ02D
			RS422 (RS485)			AIG02GQ04D
		24V DC	RS232C			AIG02GQ12D
			RS422 (RS485)			AIG02GQ14D
			RS232C		Available	AIG02GQ22D
			RS422 (RS485)			AIG02GQ24D
GT05M	STN monochrome (white/pink/red, backlight)	24V DC	RS232C	Pure black	Available	AIG05MQ02D
				Hairline silver		AIG05MQ03D
			RS422 (RS485)	Pure black	Available	AIG05MQ04D
				Hairline silver		AIG05MQ05D
GT05G	STN monochrome (green/orange/red, backlight)	24V DC	RS232C	Pure black	Available	AIG05GQ02D
				Hairline silver		AIG05GQ03D
			RS422 (RS485)	Pure black	Available	AIG05GQ04D
				Hairline silver		AIG05GQ05D
GT05S	STN color	24V DC	RS232C	Pure black	Available	AIG05SQ02D
				Hairline silver		AIG05SQ03D
			RS422 (RS485)	Pure black	Available	AIG05SQ04D
				Hairline silver		AIG05SQ05D
GT12G	STN monochrome (green/orange/red, backlight)	24V DC	RS232C	Pure black / Hairline silver / Pure black / Hairline silver	Available	AIG12GQ02D / AIG12GQ03D / AIG12GQ12D / AIG12GQ13D
			RS422 (RS485)	Pure black / Hairline silver / Pure black / Hairline silver	Available	AIG12GQ04D / AIG12GQ05D / AIG12GQ14D / AIG12GQ15D
GT12M	STN monochrome (white/pink/red, backlight)	24V DC	RS232C	Pure black / Hairline silver / Pure black / Hairline silver	Available	AIG12MQ02D / AIG12MQ03D / AIG12MQ12D / AIG12MQ13D
			RS422 (RS485)	Pure black / Hairline silver / Pure black / Hairline silver	Available	AIG12MQ04D / AIG12MQ05D / AIG12MQ14D / AIG12MQ15D
GT21C	STN color	24V DC	RS232C	Pure black	Not available	AIGT2230B
				Hairline silver		AIGT2230H
			RS422 (RS485)	Pure black	Not available	AIGT2232B
				Hairline silver		AIGT2232H
GT32M	STN monochrome	24V DC	RS232C	Pure black	Available	AIG32MQ02D
				Hairline silver		AIG32MQ03D
			RS422 (RS485)	Pure black	Available	AIG32MQ04D
				Hairline silver		AIG32MQ05D
GT32T0	TFT color	24V DC	RS232C	Pure black	Available	AIG32TQ02D
				Hairline silver		AIG32TQ03D
			RS422 (RS485)	Pure black	Available	AIG32TQ04D
				Hairline silver		AIG32TQ05D
GT32T1	TFT color	24V DC	RS232C	Pure black	Available	AIG32TQ12D
				Hairline silver		AIG32TQ13D
			RS422 (RS485)	Pure black	Available	AIG32TQ14D
				Hairline silver		AIG32TQ15D
Terminal GTWIN Ver.2.A	English version	Terminal GTWIN CD-ROM				AIGT8001V2

Cables | PLC connection cable

Programmable Display	Connection cable	PLC
GT01 (5V DC, RS232C)	(GT side) (PLC side) — Part No.: **AIGT8142***, PLC connection cable (2 m 6.562 ft), 5-pin mini-DIN connector — 4 single wires + Shielding wire	Panasonic Electric Works FP Series
GT01 (5V DC, RS422/RS485)	Part No.: **AIGT8152***, PLC connection cable (2 m 6.562 ft), 8-pin mini-DIN connector — 6 single wires + Shielding wire	Mitsubishi Electric FX Series
GT series (24V DC, RS232C)	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.	Panasonic Electric Works FP Series
GT series (24V DC, RS422/RS485)	Part No.: **AIGT8175**, PLC connection cable (5 m 16.404 ft), 8-pin mini-DIN connector — 4 single wires + Shielding wire	Mitsubishi Electric FX Series
GT series (24V DC, RS232C)	Part No.: **AIP81842**, PLC connection cable (2 m 6.562 ft), 9-pin D-SUB connector — open wire	Panasonic Electirc Works FP2/FP2SH COM port, 9-pin D-SUB connector example, CCU

*This cable is for GT01, and power is supplied through the TOOL port.

Screen data transmission cable (for DOS/V computers)

9-pin D-SUB connector — 5-pin mini-DIN connector (L type: 3 m 9.843 ft) Part No.: **AFC8503**

9-pin D-SUB connector — 5-pin mini-DIN connector (Straight type: 3 m 9.843 ft) Part No.: **AFC8503S**

*For GT05/GT32, please use a commercially available A-B type USB cable.
*For GT02/GT12, please use a commercially available mini USB cable.

• Different part numbers are applied to the cables available for Europe. Please refer to http://www.panasonic-electric-works.com/
• Different part numbers are applied to the cables available for North, Central and South Americas. Please refer to http://pewa.panasonic.com/acsd/

Options

■**Panel face protection sheets**
10 sheets in a set (option)

GT02	Part No.: **AIG02810**
GT05	Part No.: **AIG05800**
GT12	Part No.: **AIG12800**
GT21	Part No.: **AIGT28021**
GT32	Part No.: **AIG32800**

■**Waterproof packing**
Waterproof packing (for replacement), 10 pieces in a set Package includes one set. One set is installed on main unit.

GT02	Part No.: **AIG02810**
GT05	Part No.: **AIG05810**
GT12	Part No.: **AIG12810**
GT21	Part No.: **AIGT28121**
GT32	Part No.: **AIG32810**

■**GT02/12 mounting parts**
5 sets of mounting parts (4 parts/set) Package includes one set. One set is installed on main unit.

GT02/12 Part No.: **AIG12830**

■**GT05/GT21C/GT32 mounting parts**
5 sets of GT05/GT21C/GT32 mounting parts (2 parts/set) Package includes one set. One set is installed on main unit.

GT05/GT21C Part No.: **AIGT28321**

GT32 Part No.: **AIG32830**

■**Spare connector**
COM. port connectors, 5 connectors in a set One set is installed on main unit.

Part No.: **AIGT084**

■**GT02/GT05/GT12/GT32 backup battery**
* For GT21C, please purchase a commercially available CR2032 battery.

Part No.: **AFPX-BATT**

Left table — GT02 / GT05M/GT05G / GT05S / GT12M/GT12G

Item	GT02				GT05M / GT05G		GT05S		GT12M/GT12G	
	5V/RS232C	5V/RS422	24V/RS232C	24V/RS422	RS232C	RS422	RS232C	RS422	RS232C	RS422
Rated voltage	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	1W max.		1.9W max.		2.4W max.		3.6W max.		1.7W max.	
Power supply unit isolation method	—				Transformer isolation					
Ambient temperature	0 to 50C 32 to 122F									
Ambient humidity	20 to 85% RH (No condensation at 25C 77F)									
Storage temperature	–20 to 60C –4 to 140F									
Storage humidity	10 to 85% RH (No condensation at 25C 77F)									
Vibration resistance	5 to 8.4 Hz amplitude: 3.5 mm, 9 to 150 Hz acceleration 9.8 m/s², 10 sweeps each in X, Y and Z directions (1 octave/min.)				10 to 55 Hz (1-minute cycle): Double amplitude: 0.75 mm .030 inch, 10 minutes in each of the X, Y, and Z directions				5 to 9 Hz amplitude: 3.5 mm, 9 to 150 Hz acceleration 9.8 m/s², 10 sweeps each in X, Y and Z directions (1 octave/min.)	
Shock resistance	147 m/s², 3 times in each of the X, Y and Z directions				98 m/s² min: 4 times in each of the X, Y, and Z directions				147 m/s², 3 times in each of the X, Y and Z directions	
Superposed noise suppression	1,000 V [P-P] min, pulse width of 50 ns, 1 s between power supply terminals (by a noise simulator) *AIGT0030B1/AIGT0030H1: When the ferrite device supplied with our PLC connection cable (AIGT8142) is mounted									
Environmental resistance	IP67 (in the initial stages)*1				IP65 (in the initial stages)*1				IP67 (in the initial stages)*1	
Mass	Approx. 170 g 5.997 oz				Approx. 230 g 8.113 oz				Approx. 240 g 8.658 oz	
Display — Display device	STN monochrome LCD				STN monochrome LCD		STN color LCD		STN monochrome LCD	
Resolution	240 (W) x 96 (H) dots				320 (W) x 240 (H) dots				320 (W) x 120 (H) dots	
Display color	2 colors (black/white)				2 colors (black/white)		4,096 colors		2 colors (black/white, 8-gradation)	
Displayable area	88.5 (W) x 35.4 (H) mm 3.484 (W) x 1.394 (H) inch				73.0 (W) x 55.2 (H) mm 2.874 (W) x 2.173 (H) inch				108.8 (W) x 40.8 (H) mm 4.283 (W) x 1.606 (H) inch	
Backlight	GT02G: 3-color LED (green, orange, red) GT02M: 3-color LED (white, pink, red) *No need for replacement				GT05M: 3-color LED (white, pink, red) GT05G: 3-color LED (green, orange, red) *No need for replacement		White LED *No need for replacement		GT12G: 3-color LED (green, orange, red) GT12M: 3-color LED (white, pink, red) *No need for replacement	
Font types	Fixed (GTWIN) : 8 x 8, 16 x 8, and 16 x 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 x 8, 16 x 8, and 16 x 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				Fixed (GTWIN) : 8 x 8, 16 x 8, and 16 x 16 dots. Characters can be displayed in the 1, 2, 4, or 8 times width or height. TrueType (GTWIN): 10 to 120 dots	
Languages	Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, Italian, Spanish, French, Turkish									
Graphics	Straight lines, continuous straight lines, squares, circles, ovals, arcs, elliptic arcs, fan shapes, elliptic fan shapes, beveled squares, bitmaps									
Number of screens*4	Approx. 250 screens				Approx. 240 screens		Approx. 180 screens		2-gradation: Approx. 250 screens, 8-gradation: Approx. 200 screens	
Screen No. that can be set	Base screens: No. 0 to 3FF									
Functions — Part functions	Messages, lamps, switches, data, bar graphs, clocks, keyboards, line graphs, and alarm list parts									
Other functions	Recipe, flow display, write device, alarm record, alarm list, and language switching, GT link, Operation security, Data logging and SD recipe									
Clock function	—		Provided with a built-in clock function. (Can also refer to and display a PLC clock.) *Buy a commercially available battery. Note: For the GT02 series, only GT02MQ2 and GT02GQ2 have a built-in clock.							
Contrast adjustment	Contrast can be adjusted by using the touch panel.									
Automatic communication settings	The communication speed (baud rate) is automatically changed if there is no response from the target equipment.									
Debugging 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									
Touch key resolution	Free layout (8 dots min.)									
Touch key operation force	0.8 N max.									
Touch key life	1 million operations min. (at 25C 77F)									
COM. Port — Communication standard	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422
External communication conditions	Baud rate: 9,600/19,200/38,400/57,600/115,200 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 compatible PLC list for manufacturers and models.)									
Connector	Connector terminal base (8 pins)									
Screen data transfer interface — Communication standard	USB1.1									
Communication conditions with personal computers	—									
Protocol	Our dedicated protocol									
Connector	USB Mini B				USB TYPE-B				USB Mini B	
Ethernet port*8	—									
User's memory	F-ROM									
Memory capacity	2 Mbyte				12 Mbyte				2M Mbyte	
Memory	—		Only available with GT02MQ2 and GT02GQ2		SRAM					
Memory backup	—		Only available with GT02MQ2 and GT02GQ2		Lithium battery (replaceable) AFPX-BATT *Does not come with product.					

Conformance to the UL/cUL standards

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

Right table — GT21C / GT32M / GT32T0 / GT32T1

Item	GT21C		GT32M		GT32T0		GT32T1	
	RS232C	RS422	RS232C	RS422	RS232C	RS422	RS232C	RS422
Rated voltage	24 V DC							
Operating voltage range	21.6 to 26.4 V DC							
Power consumption	4.8W max.		10W max.				12W max.	
Power supply unit isolation method	—		Transformer isolation					
Ambient temperature	0 to 50C 32 to 122F*2		0 to 50C 32 to 122F*3					
Ambient humidity	20 to 85% RH (No condensation at 25C 77F)							
Storage temperature	–20 to 60C –4 to 140F							
Storage humidity	10 to 85% RH (No condensation at 25C 77F)							
Vibration resistance	10 to 55 Hz (1-minute cycle): Double amplitude: 0.75 mm .030 inch, 10 minutes in each of the X, Y, and Z directions							
Shock resistance	98 m/s² min: 4 times in each of the X, Y, and Z directions							
Superposed noise suppression	1,000 V [P-P] min, pulse width of 50 ns, 1 s between power supply terminals (by a noise simulator)							
Environmental resistance	IP65 (in the initial stages)*1							
Mass	Approx. 330 g 11.610 oz		Approx. 500 g 17.637 oz		Approx. 470 g 16.579 oz		Approx. 480 g 16.932 oz	
Display — Display device	STN color LCD		STN monochrome LCD		TFT color LCD			
Resolution	320 (W) x 240 (H) dots							
Display color	256 colors		2 colors (blue/white)		4,096 colors			
Displayable area	98.0 (W) x 74.0 (H) mm 3.858 (W) x 2.913 (H) inch		113.2 (W) x 86.4 (H) mm 4.457 (W) x 3.402 (H) inch		110.8 (W) x 83.6 (H) mm 4.362 (W) x 3.291 (H) inch			
Backlight	White LED *No need for replacement		CFL *Not replaceable. Average life; GT32M: 75,000 hours (at 25C 77F), GT32T: 50,000 hours (at 25C 77F)					
Font types	Fixed (GTWIN) : 8 x 8, 16 x 8, and 16 x 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							
Graphics	Straight lines, continuous straight lines, squares, circles, ovals, arcs, elliptic arcs, fan shapes, elliptic fan shapes, beveled squares, bitmaps							
Number of screens*4	Approx. 250 screens		Approx. 240 screens		Approx. 180 screens			
Screen No. that can be set	Base screens: No. 0 to 3FF							
Functions — Part functions	Messages, lamps, switches, data, bar graphs, clocks, keyboards, line graphs, and alarm list parts							
Other functions	Recipe, flow display, write device, alarm record, alarm list, and language switching		Recipe, flow display, write device, alarm record, alarm list, language switching, GT link, Operation security, Data logging and SD recipe				Sound output *5	
Clock function	Provided with a built-in clock function. (Can also refer to and display a PLC clock.) *Buy a commercially available battery.							
Contrast adjustment	Contrast can be adjusted by using the touch panel.				Not adjustable			
Automatic communication settings	The communication speed (baud rate) is automatically changed if there is no response from the target equipment.							
Debugging 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® 95 (OSR2 or later)/ 98/Me/2000/NT/XP/Vista		Dedicated software should be used. Applicable OS: Windows® 2000/XP/Vista/7					
Touch key resolution	Free layout (8 dots min.)							
Touch key operation force	0.8 N max.							
Touch key life	1 million operations min. (at 25C 77F)							
COM. Port — Communication standard	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422	Conforms to RS232C	Conforms to RS422
External communication conditions	Baud rate: 9,600/19,200/38,400/57,600/115,200 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 compatible PLC list for manufacturers and models.)							
Connector	Connector terminal base (8 pins)							
Screen data transfer interface — Communication standard	Tool port (Conforms to RS232C)		USB1.1					
Communication conditions with personal computers	Baud rate: 9,600/19,200/115,200/230,400 bps*6 Data bits: 8 bits, Parity: None, Odd, Even, Stop bits: 1 bit		—					
Protocol	Our dedicated protocol							
Connector	5-pin mini-DIN		USB TYPE-B					
Ethernet port*9	—				Yes (100BASE-TX, 10BASE-T) *7, *8			
User's memory	F-ROM							
Memory capacity	6.5 Mbyte		2 Mbyte		12 Mbyte (Ver.1.10 or later)			
Memory	SRAM							
Memory backup	Lithium battery (replaceable) CR2032, commercially available *Does not come with product.		Lithium battery (replaceable) AFPX-BATT *Does not come with product.					

*1. Dust-proof and drip-proof from the front of the panel only (Rubber packing is attached to the panel contact surface.) *When reattaching the panel, beware of waterproof packing.
*2. When the unit is being installed in a horizontal orientation or FP programmer II is being connected to the TOOL port, the usable range is 0 to +45C +32 to +113F.
*3. When the unit is being installed in a horizontal orientation, the usable range is 0 to +40C +32 to +104F.
*4. The number of screens that can be registered varies according to the registered contents.
*5. WAV format (PCM, 8-KHz sampling rate, 16 bits, mono), Maximum sound data capacity: 512 KB (approx. 30 sec), Maximum registrable number of sound data items: 128

*6. A USB/RS232C conversion cable should be used to achieve a communication speed of 230,400 bps. When the TOOL port of GT is set to 230,400 bps, the auto communication setting for GTWIN cannot be used. Set the communication speed to 230,400 bps on GTWIN before transferring data.
*7. The unit caries out serial communication data processing at 115.2kbits/s.
*8. Communications with external equipment (PLC) are not available.
*9. Simultaneous USB and Ethernet communications are not possible.
*10. The data logging and SD recipe functions are available with only models equipped with an SD/SDHC memory card slot.