

- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE- SAVING UNITS
- WIRE- SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES



panasonic-electric-works.net/sunx

Features

- Cool body shape with a QVGA LCD
- Three-color backlight, which allows for checking the machine status at a site (GT02/GT05M/GT05G/GT12)
- High operability achieved by the customizable screen layout
- USB/miniUSB interface and SD/SDHC memory card slot (GT02/GT05/GT12/GT32)
- Sound output and Ethernet connection (GT32T1)

Applications

- Control panels of equipment/machines

Look, listen and touch.
Programmable displays capable of more vivid expressions

SPECIFICATIONS

		GT02	GT02L	GT12	GT05M	GT05G	GT05S
Rated voltage		5 V DC/24 V DC	5 V DC	24 V DC	24 V DC		24 V DC
Screen size		3.8 inch	3.7 inch	4.6 inch	3.5 inch		3.5 inch
Display	Display type	STN monochrome LCD		STN monochrome LCD	STN monochrome LCD		STN color LCD
	Display color	2 colors (black/white)	1 color (black)	2 colors (black/white)	2 colors (black/white)		4,096 colors
	Resolution	240(W) × 96(H)	160(W) × 64(H)	320(W) × 120(H)	320(W) × 240(H)		320(W) × 240(H)
	Backlight	GT02G: 3-color LED (green/orange/red) GT02M: 3-color LED (white/red/pink) GT02L: White LED		GT12G: 3-color LED (green/orange/red) GT12M: 3-color LED (white/red/pink)	3-color LED (white/red/pink)	3-color LED (green/orange/red)	White LED
	Displayable characters	216 characters	160 characters	384 characters	768 characters		768 characters
	Memory capacity (F-ROM)	2 Mbyte		2 Mbyte	2 Mbyte		12 Mbyte
External interface	Serial port	RS232C/RS422 (RS485)		RS232C/RS422 (RS485)	RS232C/RS422 (RS485)		RS232C/RS422 (RS485)
	USB port	○ (mini)		○ (mini)	○		○
	Ethernet	—		—	—		—
	SD/SDHC memory card	○ (Note)	—	○	○		○
	Sound output	—		—	—		—

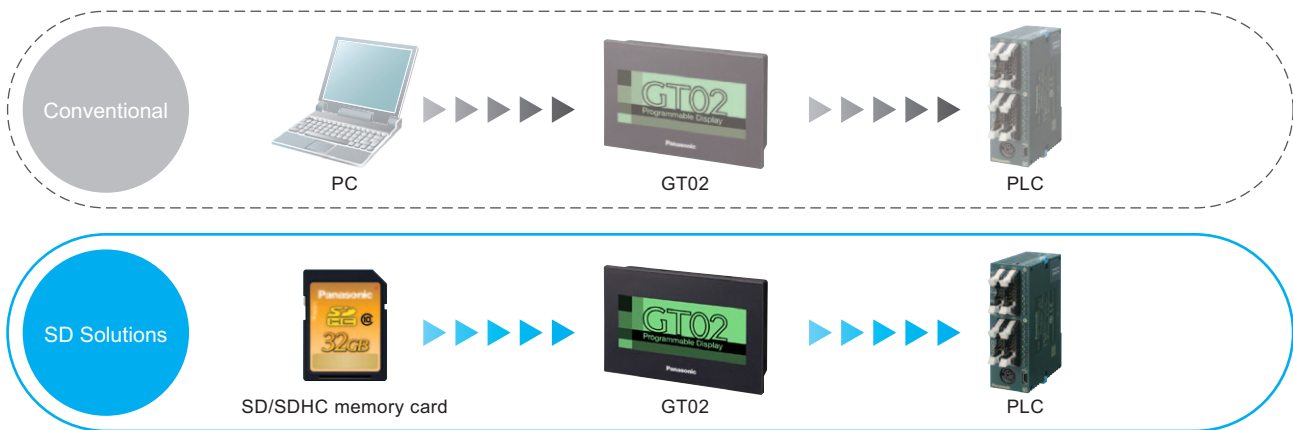
		GT21C	GT32M	GT32T0	GT32T1 (Advanced function)
Rated voltage		24 V DC	24 V DC	24 V DC	
Screen size		4.7 inch	5.7 inch	5.5 inch	
Display	Display type	STN color LCD	STN monochrome LCD	TFT color LCD	
	Display color	256 colors	2 colors (blue/white)	4,096 colors	
	Resolution	320(W) × 240(H)	320(W) × 240(H)	320(W) × 240(H)	
	Backlight	White LED	CFL	CFL	
	Displayable characters	768 characters	768 characters	768 characters	
	Memory capacity (F-ROM)	6.5 Mbyte	2 Mbyte	12 Mbyte	
External interface	Serial port	RS232C/RS422(RS485)	RS232C/RS422(RS485)	RS232C/RS422(RS485)	
	USB port	—	○	○	○
	Ethernet	—	—	○	
	SD/SDHC memory card	—	○	○	○
	Sound output	—	—	○	

○: Applicable

Note: Only available with GT02MQ2 and GT02GQ2

PLC program transfer without use of PC

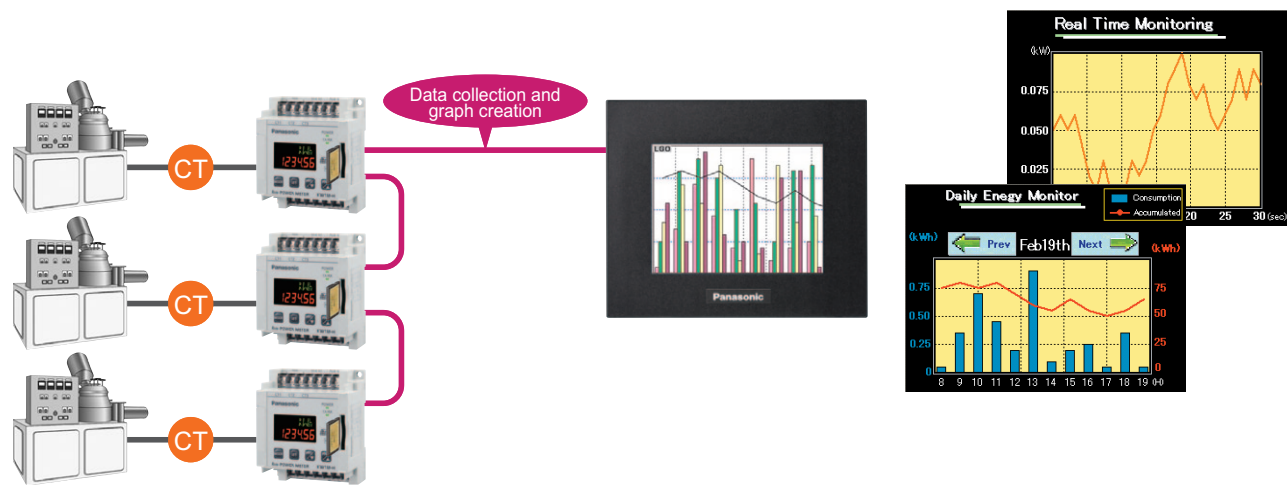
It is possible to modify PLC ladder programs as well as the GT screen programs by using an SD/SDHC memory card. SD/SDHC memory card enables everyone to easily modify programs.



SD logging function providing the data “Visualization”

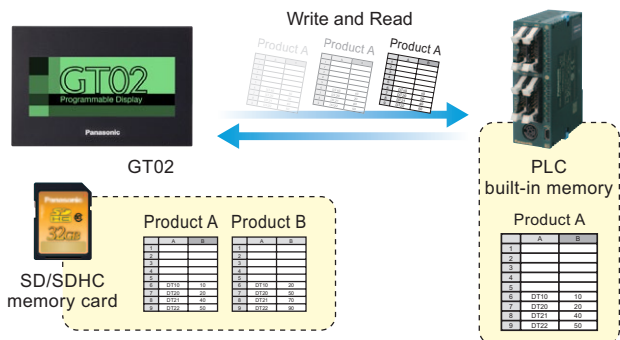
Automatically collecting electrical readings of Eco-POWER METERS and displaying in a real time graph, allowing users to take quick actions for solutions.

- 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 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.



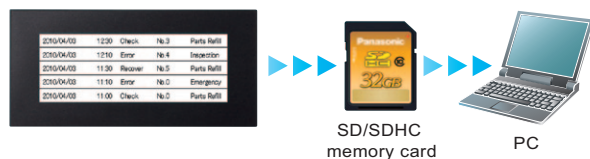
SD recipe function

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 card

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.



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PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

ENDOSCOPE

LASER MARKERS

PLC / TERMINALS

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Programmable Display

Classification

GT series

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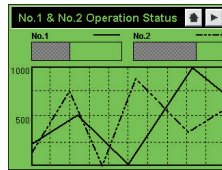
HIGH VISIBILITY AND EXCELLENT OPERABILITY

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 site by changing the background color.

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



(Normal)



(In operation)



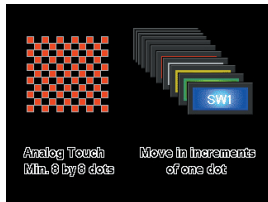
(Emergency)

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.



“True Type fonts”

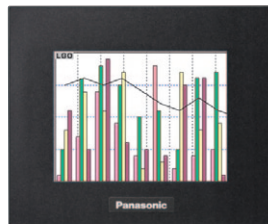


The adoption of the Windows® font has made it possible to choose a font focusing on the screen image and visual quality.



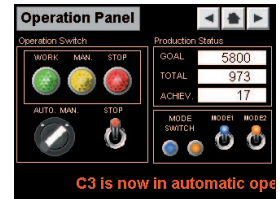
Graph function

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



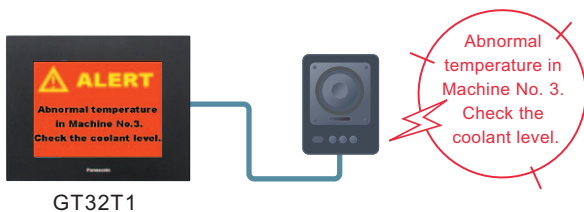
Flow display function

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.



Multi-function switches GT05/GT12/GT32

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

4096-color parts libraries GT05S/GT32T

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



Portrait display ideal for narrow spaces GT02/GT12/GT21C

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.



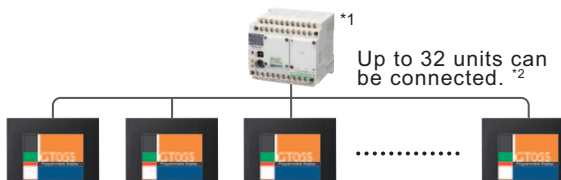
ADVANCED FUNCTIONS TO ENHANCE WORK EFFICIENCY

Multiple GT displays are available to connect to our FP series PLC

GT02/GT05/GT12/GT32

GT link function

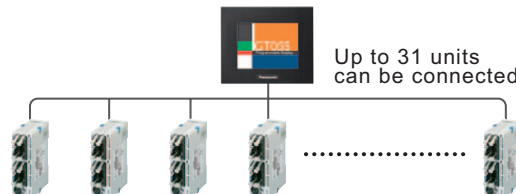
Up to 32 GT displays can be connected to one PLC unit without communication programs. The same screen operation is possible at a conveyor line or other remote locations, and the number of PLC units can be reduced, cutting the production process costs.



*1: 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.



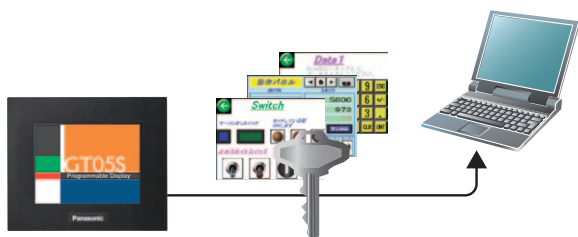
Enhanced security with password protection

GT02/GT05/GT12/GT32

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

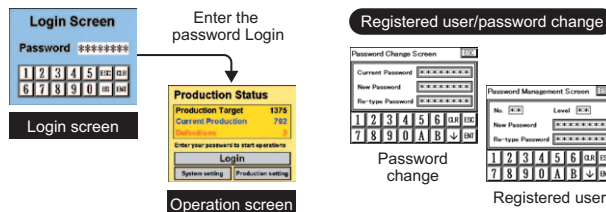
Password-protection function

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



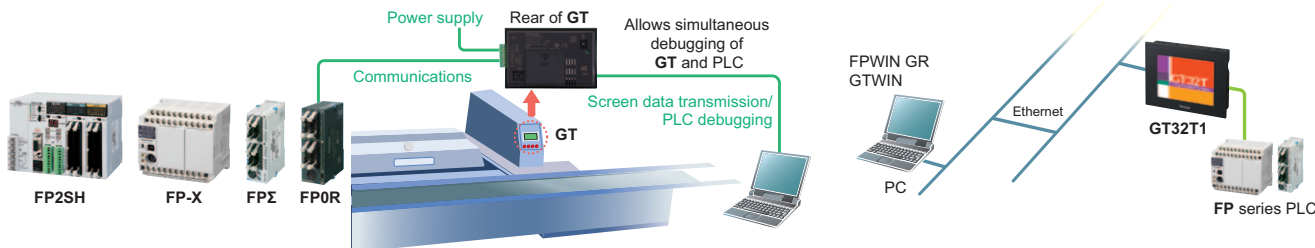
Operation security function

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.



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.



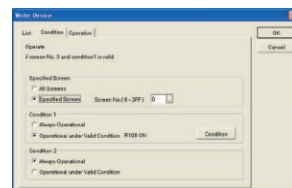
Easy-to-switch language

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.

画...部...	日本語	英語	简体字中国語	繁体字中国語	韓国語
000 SW0	日本語	English	简体中国語	繁體中國語	한국어
000 SW0	ありがとうございました	Thank you	热烈欢迎	諸多指教	안녕하사
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.



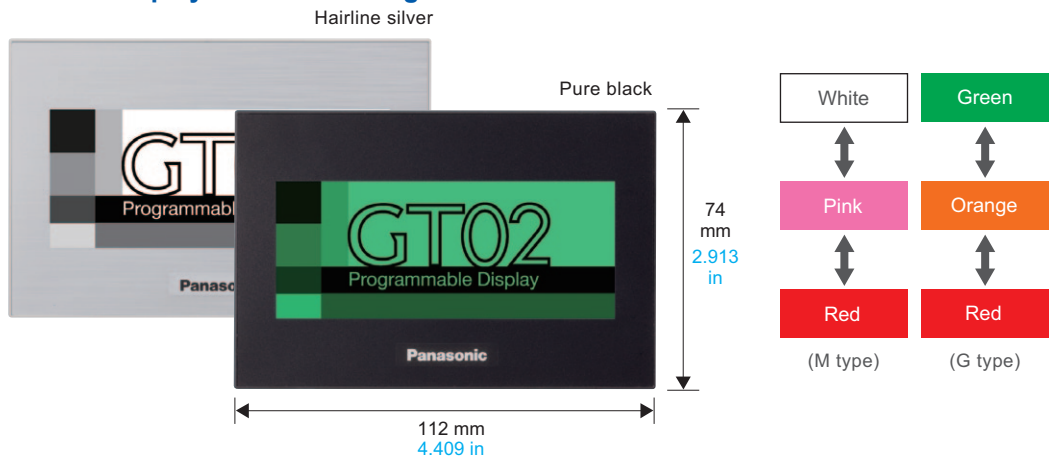
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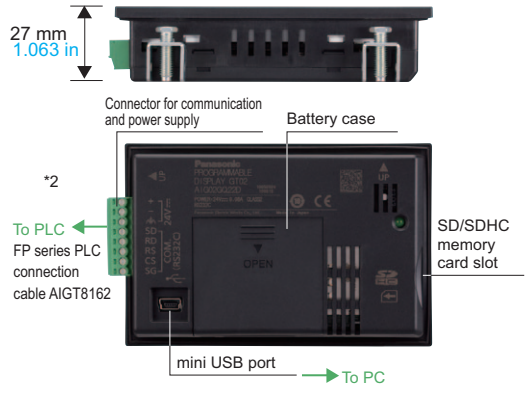
GT02 Compact Programmable Display NEW

3.8 inch	STN monochrome (white/black)	3-color LED backlight	24 chars. x 9 lines (10-dot font)	240 x 96 dots	mini USB	SD HC	Portrait	5V DC / 24V DC	IP67
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Compact advanced display with 3.8 inch high-contrast monochrome LCD for clear and vivid images



- Largest 3.8 inch high-contrast monochrome LCD in its class provides top-level viewability*1
- First SD/SDHC memory card slot in its class (32 GB max.) *2 (GT02MQ2 and GT02GQ2)
- Equipped with IP67-rated body and newly designed bracket



GT02L Compact Programmable Display NEW



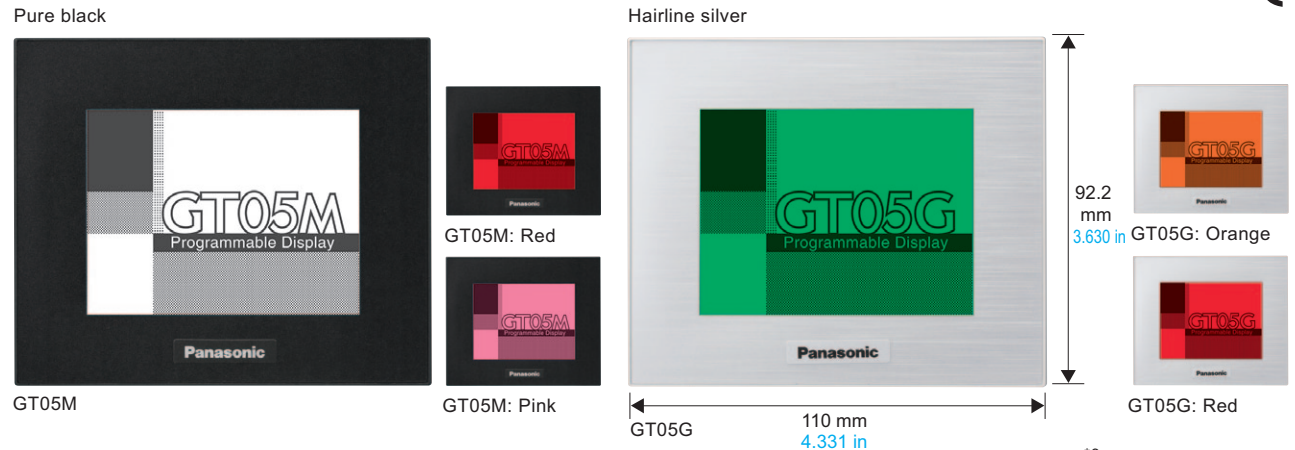
■ Entry model

3.7 inch	STN monochrome (white/black)	White LED backlight	16 chars. x 6 lines (10-dot font)
160 x 64 dots	mini USB	Portrait	5V DC

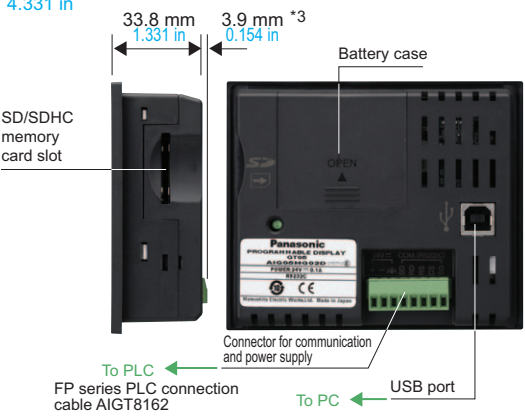
GT05M / GT05G Compact Programmable Display

3.5 inch	STN monochrome (white/black)	3-color LED backlight	32 chars. x 24 lines (10-dot font)	320 x 240 dots	USB	SD HC	24V DC
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Compact size and QVGA display Top-quality images in compact size



- 3.5 inch high-contrast monochrome QVGA LCD provides higher visibility than our conventional model
- New backlight provides higher brightness. GT05M displays screens in white/pink/red and GT05G in green/orange/red, ensuring both operability and visibility
- SD/SDHC memory card slot as standard equipment (32 GB max.) *2
- USB interface as standard equipment
- Characters of a 240-dot maximum size can be displayed
- Transformer-isolated power supply

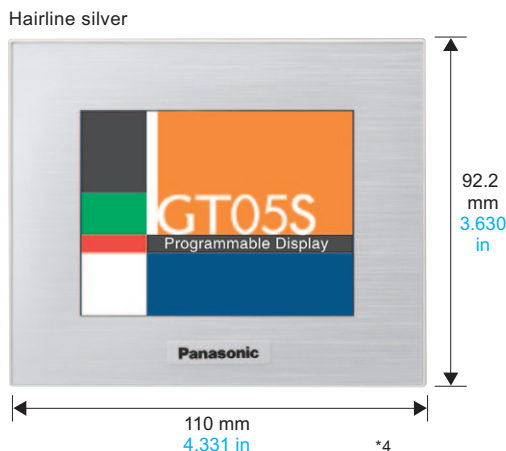


*1. Based on internal research as of Aug. 1, 2010.
 *2. Compatible with CLASS 10.
 *3. Note that the COM port connector projects an additional 3.9 mm 0.154 in. Also take the cable diameter must be taken into account.
 •The panel face protection sheet for the GT series is available as an option.

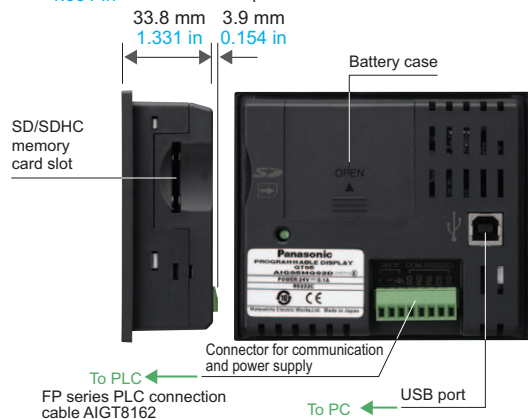
GT05S Compact Programmable Display

3.5 inch STN 4,096 colors White LED backlight 32 chars. x 24 lines (10-dot font) 320 x 240 dots USB SD HC 24V DC

The industry's smallest 3.5 inch STN color display ^{*1} Displaying colorful images with limited space



- 3.5 inch STN 4,096-color QVGA LCD with a wide viewing angle
- New backlight provides twice the brightness^{*2}
- SD/SDHC memory card slot as standard equipment (32 GB max.)^{*3}
- USB interface as standard equipment
- Characters of a 240-dot maximum size can be displayed
- Transformer-isolated power supply



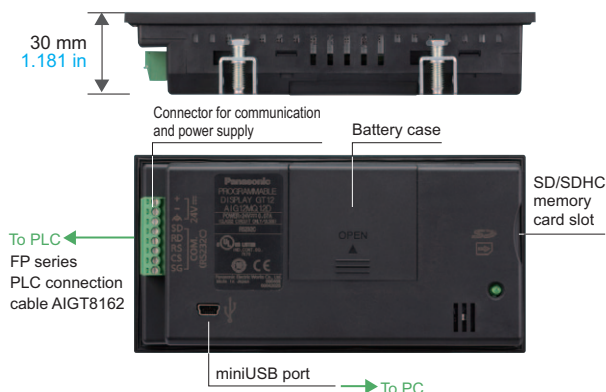
GT12 Compact Programmable Display

4.6 inch STN monochrome (white/blue) 3-color LED backlight 32 chars. x 12 lines (10-dot font) 320 x 120 dots mini USB SD HC Portrait 24V DC

Slim body with a 4.6 inch Half-QVGA LCD The highest visual quality in its class



- Largest 4.6 inch high-contrast monochrome Half-QVGA LCD in its class provides top-level viewability^{*1}
- Bright three-color LED backlight indicates the equipment status
- First SD/SDHC memory card slot in its class (32 GB max.)^{*3}
- MiniUSB interface as standard equipment
- Flexible sizing and layout available for switches and characters
- Transformer-isolated power supply
- IP67-rated body and newly designed bracket



*1. Based on internal research as of Aug. 1, 2010.
 *2. Compared with GT21C.
 *3. Compliant with CLASS 10.
 *4. Note that the COM port connector projects an additional 3.9 mm 0.154 in. Also take the cable diameter must be taken into account.
 • The panel face protection sheet for the GT series is available as an option.

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Programmable Display
Classification
GT series

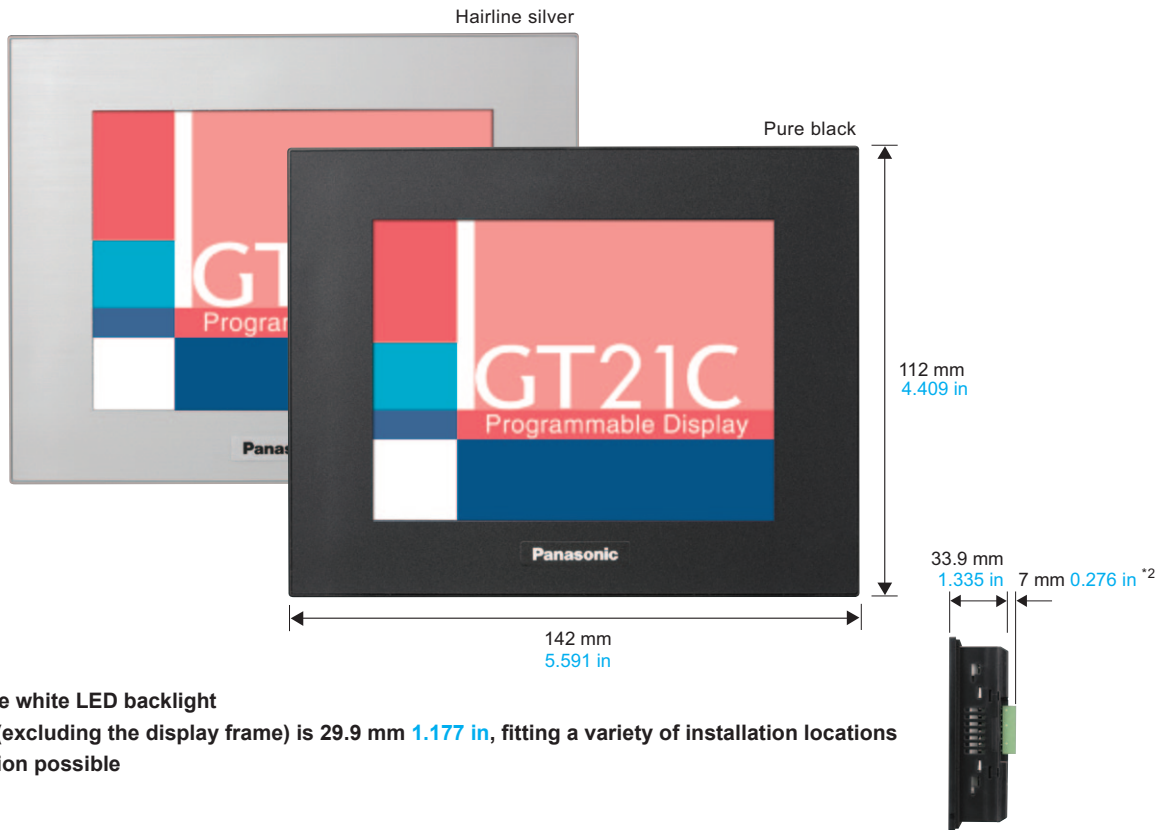
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GT21C Programmable Display

4.7 inch	STN 256 colors	White LED backlight	32 chars. x 24 lines (10-dot font)	320 x 240 dots	Portrait	24V DC
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4.7 inch STN 256-color type

The image vividness is equivalent to that of the 5.7 inch type display, which can be replaced with this model.

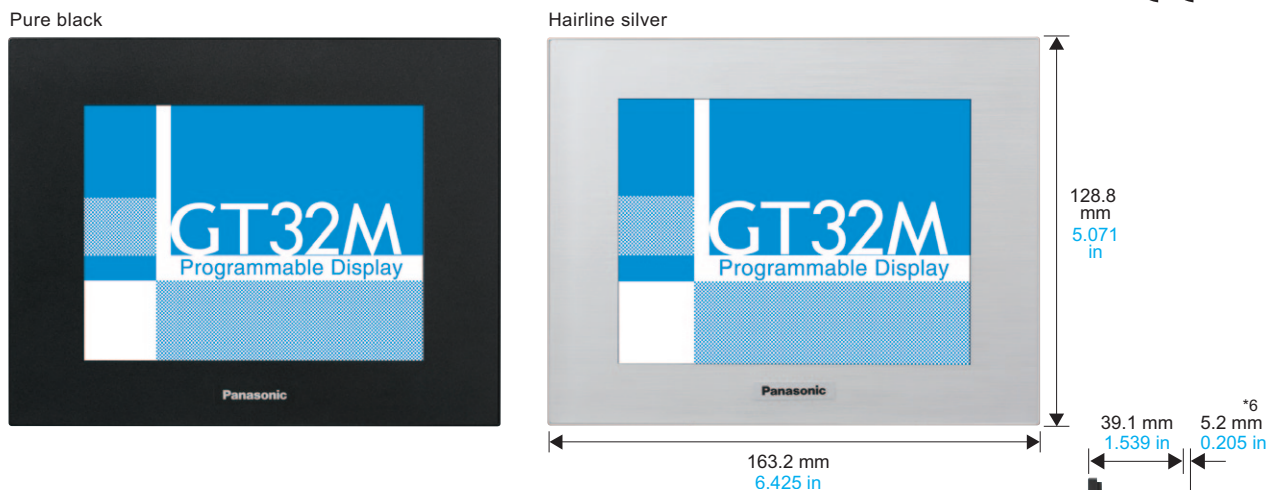


- Maintenance-free white LED backlight
- The total depth (excluding the display frame) is 29.9 mm 1.177 in, fitting a variety of installation locations
- Portrait orientation possible

GT32M Programmable Display

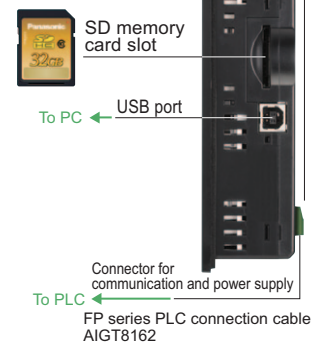
5.7 inch	STN monochrome (white/blue)	CFL backlight	32 chars. x 24 lines (10-dot font)	320 x 240 dots	USB	SD HC	24V DC
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Clear and beautiful display achieved by the blue LCD long-life backlight



- 5.7 inch blue LCD equipped with 75,000-hour long life backlight ^{*3}
- Small size in the 5 in class, and 39.1 mm 1.539 in thin and cool body design
- SD/SDHC memory card slot as standard equipment (32 GB max.) ^{*4}
- USB interface as standard equipment ^{*5}
- Transformer-isolated power supply

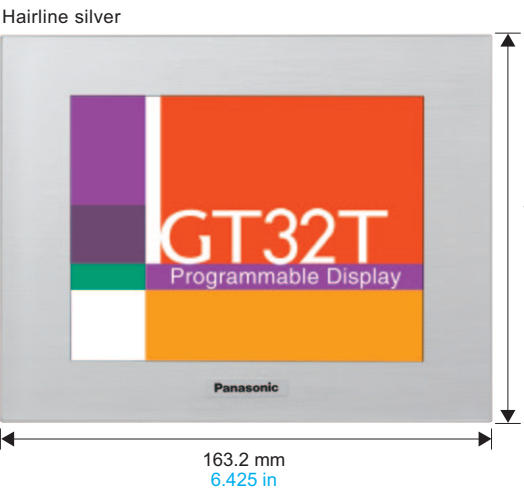
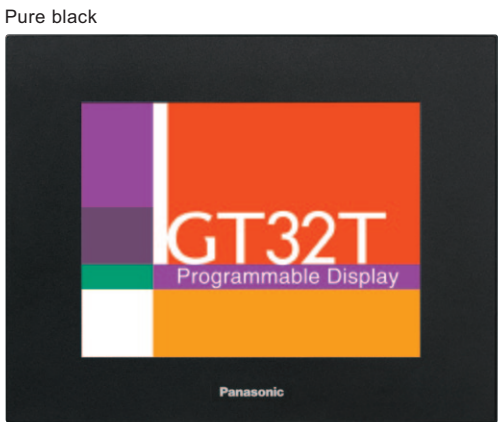
*1. When the panel thickness is 5 mm 0.197 in, the screw head of the mounting bracket protrudes 4 mm 0.157 in.
 *2. Note that the COM port connector projects an additional 5.2 mm 0.205 in. Also take the cable diameter must be taken into account.
 *3. The backlight type for GT32M cannot be changed.
 *4. Compliant with CLASS 10.
 *5. Please use a commercially available A-B type USB cable.
 *6. Note that the COM port connector projects an additional 5.2 mm 0.205 in. Also take the cable diameter must be taken into account.
 •The panel face protection sheet for the GT series is available as an option.



GT32T0/T1 Programmable Display

5.5 inch	TFT 4,096 colors	CFL backlight	32 chars. x 24 lines (10-dot font)	320 x 240 dots	USB	SD HC	Ethernet (GT32T1)	Sound output (GT32T1)	24V DC
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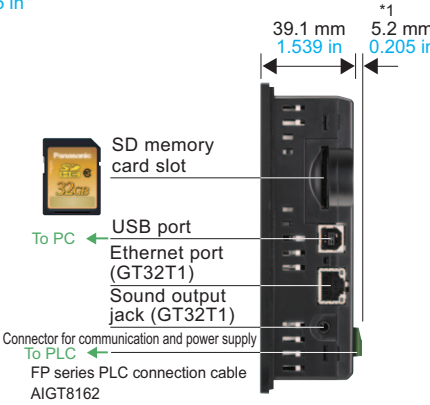
Amazingly beautiful and vivid 4,096-color TFT LCD



- 4,096-color TFT LCD screen displays magnificent quality images
- Small size in the 5 in class, and 39.1 mm 1.539 in thin and cool body design
- SD/SDHC memory card slot as standard equipment (32 GB max.)^{*2}
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

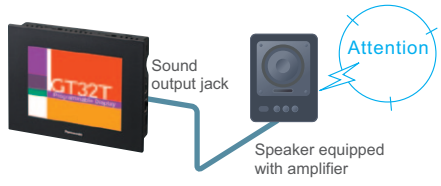
*1. Note that the COM port connector projects an additional 5.2 mm 0.205 in. Also take the cable diameter must be taken into account.
*2. Compliant with CLASS 10.
●The panel face protection sheet for the GT series is available as an option.



GT32T1 supports:

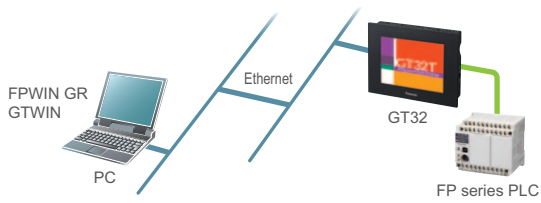
Sound output function

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.



FIBER SENSORS
LASER SENSORS
PHOTO-ELECTRIC SENSORS
MICRO PHOTO-ELECTRIC SENSORS
AREA SENSORS
LIGHT CURTAINS
PRESSURE / FLOW SENSORS
INDUCTIVE PROXIMITY SENSORS
PARTICULAR USE SENSORS
SENSOR OPTIONS
SIMPLE WIRE-SAVING UNITS
WIRE-SAVING SYSTEMS
MEASUREMENT SENSORS
STATIC CONTROL DEVICES
ENDOSCOPE
LASER MARKERS
PLC / TERMINALS
HUMAN MACHINE INTERFACES
ENERGY CONSUMPTION VISUALIZATION COMPONENTS
FA COMPONENTS
MACHINE VISION SYSTEMS
UV CURING SYSTEMS
Programmable Display
Classification
GT series