

GP4106G1D

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Standard product information

Family	HMI
Series	GP4100 Series
Size	3"
Model	GP4106G1D
Global Code	PFXGP4106G1D
Product Features	Compact 3" DC RS-422/485 Monochrome (Green/ Red/ Orange)
End of sales date	2019/12/27 ^{*1}
End of repair date	2026/03/31 ^{*2}
Repair Status	- (Maintenance service is not available. Replace with a new unit under warranty while the units are in stock. Please consider to replace with recommended substitute.)

*1 Due to the limited availability of the products in stock, shipping will end when the stock is out.

*2 It might not be able to repair our products when replacement parts become unavailable, regardless of the maintenance period.

Recommended replacement information

Replacement option 1

Model	PFXGP4116T2D
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Display specifications

Display type	STN Monochrome LCD
Display size	3.4"
Resolution	200 x 80 pixels
Dot pitch	W0.4 x H0.4 mm [W0.02 x H0.02 in.]
Effective display area	W79.985 x H31.985 mm [W3.15 x H1.26 in.]
Display colors	Monochrome Green/Red/Orange (16 Levels)

Backlight	Green/Red LED (Not user replaceable. When replacement is required, contact your local distributor.)* ³
Backlight service life	Green: 50,000 hrs. or more, Red 10,000 hrs. or more (each in continuous operation at 25°C [77 °F] before backlight brightness decreases to 50%)
Brightness control	16 Levels (Adjusted with touch panel)
Contrast adjustment	8 Levels (Adjusted with touch panel)
Touch panel type	Resistive Film (analog)
Touch panel resolution	1,024 x 1,024
Touch panel lifetime	1,000,000 times or more
Language fonts	Japanese, ASCII, Chinese (Simplified), Chinese (Traditional), Korean, Cyrillic, Thai* ⁴
Character sizes	Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 pixel fonts, Stroke font: 6 to 80 pixel fonts, Image font: 8 to 72 pixel fonts
Font sizes	Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times.* ⁵
8 x 16 dots	25 char. x 5 rows
16 x 16 dots	12 char. x 5 rows
32 x 32 dots	6 char. x 2 rows

*³ The backlight burnout detection function is not supported.

*⁴ Please refer to the GP-Pro EX reference manual for details on font types and character codes.

*⁵ Other font sizes can be set up with the Editor software.

Electrical specifications

Rated input voltage	24 Vdc
Input voltage limits	19.2 to 28.8 Vdc
Allowable voltage drop	3 ms or less
Power consumption	11W
In-rush current	30 A or less
Noise immunity	Noise Voltage : 1,000 Vp-p Pulse Duration : 1 μs Rise Time : 1 ns (via noise simulator)
Voltage endurance	1,000 Vac, 20 mA for 1 minute (between power terminal and FG terminals)
Insulation resistance	500 Vdc, 10 MΩ or more (between power terminal and FG terminals)

Environmental specifications

International safety standards	           LISTED LISTED LISTED LISTED UL / cUL ANSI/ISA 12.12.01
Surrounding air temperature	0 to 50 °C [32 to 122 °F]* ⁶
Storage temperature	-20 to +60 °C [-4 to 140 °F]

Ambient humidity	10 to 90 % RH (Wet bulb temperature: 39 °C [102.2 °F] max. - no condensation)
Storage humidity	10 to 90 % RH (Wet bulb temperature: 39 °C [102.2 °F] max. - no condensation)
Dust	0.1 mg/m ³ (10 ⁻⁷ oz/ft ³) or less (non-conductive levels)
Pollution degree	For use in Pollution Degree 2 environment
Corrosive gases	Free of corrosive gases
Air pressure (altitude range)	800 to 1,114 hPa (2,000 m [6,561 ft.] above sea level or less)
Vibration resistance	IEC/EN 61131-2 compliant 5 to 9 Hz single amplitude 3.5 mm [0.14 in.] 9 to 150 Hz fixed acceleration: 9.8 m/s ² X, Y, Z directions for 10 cycles (approx. 100 min.)
Concussion resistance	IEC/EN 61131-2 compliant 147 m/s ² , X, Y, Z directions for 3 times
Electrical fast transient/burst	Power Line: 2 kV (IEC/EN61000-4-4) COM Port: 1 kV (IEC/EN61000-4-4)
Electrostatic discharge immunity	Contact Discharge Method: 6 kV Air Discharge Method: 8 kV (IEC/EN61000-4-2 Level 3)

*6 When using in an environment where the temperature becomes or exceeds 40 °C for an extended period of time, the screen contrast level may decrease from its original level of brightness.

Memory	
Application memory	FLASH EPROM 2.2 MB (includes screen editing program and extended logic program) ^{*7}
Backup memory	128 KB ^{*8}
Clock accuracy	Uses the clock of an external device ^{*9}

*7 Capacity available for user application.

*8 Application memory can provide 128KB for Data Backup. For further information, please refer to the GP-Pro EX reference manual.

*9 Set up the "Clock Updates" feature with the Editor software. Please refer to the GP-Pro EX reference manual "Common" - "Clock Update Settings" for details.

Interface specifications	
Serial (COM1)	Asynchronous Transmission: RS-422 / 485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits, Parity: None, Even or Odd, Data Transmission Speed: 2,400 to 115,200 bps, Connector: 2-piece terminal block 9 pin
USB (Type A)	Conforms to USB 2.0 (Type A) x 1 Power supply voltage: 5 Vdc ±5 % Communication distance: 5 m [16.4 ft.] or less ^{*10}
USB (mini-B)	Conforms to USB 2.0 (mini-B) x 1, Communication Distance: 5 m [16.4 ft] or less

*10 If connecting a bar code reader to the GP, be sure to supply power from an external source (such as a self-powered hub). If you supply power from the GP, the GP may reset itself because the GP cannot supply enough power.

Structural specifications	
Grounding	Functional grounding: Grounding resistance of 100 Ω, 2 mm ² (AWG 14) or thicker wire, or your country's applicable standard (same for FG and SG terminals).

Cooling method	Natural air circulation
Structure	IP65f NEMA #250 TYPE 4X/13 (on the front panel when properly installed in an enclosure) ^{*11}
Installation method	Panel mounting
External dimensions	W116.5 x H77.5 x D28 mm [W4.59 x H3.06 x D1.11 in.]
Panel cut-out dimensions	W105 x H66 mm [W4.13 x H2.60 in.] Panel thickness area: 1 to 5 mm [0.04 to 0.2 in.] ^{*12}
Weight	0.2 kg [0.45 lb] or less

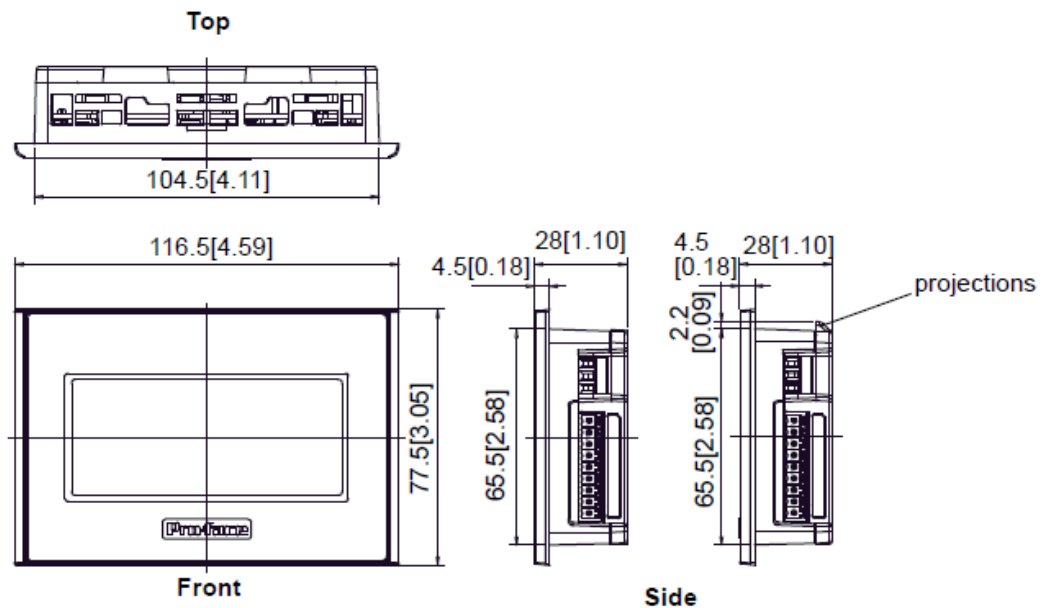
^{*11} The front face of the unit, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification. Even though the unit's level of resistance is equivalent to these standards, oils that should have no effect on the unit can possibly harm the unit. This can occur in areas where either vaporized oils are present, or where low viscosity cutting oils are allowed to adhere to the unit for long periods of time. If the unit's front face protection sheet becomes peeled off, these conditions can lead to the ingress of oil into the unit and separate protection measures are suggested. Also, if non-approved oils are present, it may cause deformation or corrosion of the front panel's plastic cover. Therefore, prior to installing the unit, be sure to confirm the type of conditions that will be present in the unit's operating environment. If the installation gasket is used for a long period of time, or if the unit and its gasket are removed from the panel, the original level of the protection cannot be guaranteed. To maintain the original protection level, be sure to replace the installation gasket regularly.

^{*12} For dimensional tolerance, everything $\pm 1/0$ mm [$\pm 0.04/0$ in.] and R in angle are below R3 [R0.12 in.]. Even if the installation wall thickness is within the recommended range for the "Panel Cut Dimensions", depending on wall's material, size, and installation location of GP unit and other devices, the installation wall could warp. To prevent warping, the installation surface may need to be strengthened.

Dimensions

External dimensions

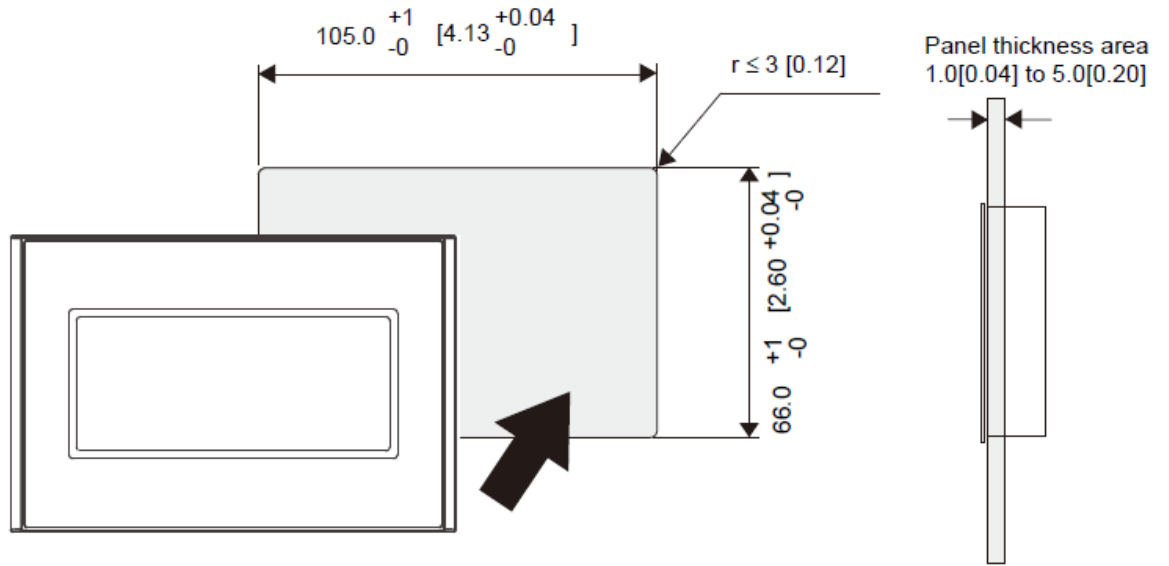
Unit: mm[in.]



(RS-422/485 Type)

Panel cut-out dimensions

Unit: mm[in.]



External dimensions with cable

Unit: mm[in.]

