

GP-4521T (Model No.: PFXGP4521TAD)

| Functional Specification | | |
|--------------------------|--|--|
| Display Type | TFT Color LCD | |
| Display Size | 10.4" | |
| Resolution | 640 x 480 pixels (VGA) | |
| Effective Display Area | W211.2 x H158.4 mm [W8.31 x H6.24 in.] | |
| Display Colors | 65,536 Colors (No blink)/16,384 Colors (Blink) | |
| Backlight | White LED (User nonreplaceable parts. When replacement is required, contact your local distributor.) | |
| Brightness Control | 16 Levels (Adjusted with the touch panel or the software) | |
| Backlight Service Life | 50,000 hrs. or more (continuous operation at 25°C [77 °F] before backlight brightness decreases to 50%) | |
| Language Fonts | Japanese: 6,962 (JIS Standards 1 & 2) (including 607 non-kanji characters) ANK: 158 (Korean fonts, Simplified Chinese and Traditional Chinese fonts are downloadable.) | |
| Character Sizes | Standard font: 8 x 8, 8 x 16, 16 x 16 and 32 x 32 pixel fonts, Stroke font: 6 to 127 pixel fonts, Image font: 8 to 72 pixel fonts | |
| Font Sizes *1 | Standard font: Width can be expanded up to 8 times. Height can be expanded up to 8 times. | |
| Text | 8 x 8 dots | 80 char. x 60 rows |
| | 8 x 16 dots | 80 char. x 30 rows |
| | 16 x 16 dots | 40 char. x 30 rows |
| | 32 x 32 dots | 20 char. x 15 rows |
| Application Memory | FLASH EPROM 32 MB (including a logic program area) | |
| Logic Program Area *2 | FLASH EPROM 132 KB (Equivalent to 15,000 steps) | |
| Font Area | FLASH EPROM 8 MB (Replaceable Lithium battery for backup memory) | |
| Data Backup | SRAM 320 KB (Replaceable Lithium battery for backup memory) | |
| Variable Area | SRAM 64 KB (Replaceable Lithium battery for backup memory) | |
| Clock Accuracy *3 | ±65 sec/month (deviation at room temperature and power is OFF) | |
| Touch Panel Type | Resistive Film (analog) | |
| Touch Panel Resolution | 1,024 x 1,024 | |
| Touch Panel Service Life | 1,000,000 times or more | |
| Interface | Serial (COM1) | RS-232C Asynchronous Transmission Data Length: 7 or 8 bits, Parity: none, Odd or Even, Stop Bit: 1 or 2 bits, Data Transmission Speed: 2,400 bps to 115.2 kbps, Connector: D-Sub9 (plug) |
| | Serial (COM2) | RS-422/485 Asynchronous Transmission Data Length: 7 or 8 bits, Parity: none, Odd or Even Stop Bit: 1 or 2 bits, Data Transmission Speed: 2,400 bps to 115.2 kbps, 187.5kbps (MPI) Connector: D-Sub9 (plug) |
| | Ethernet (LAN) | IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: Modular jack (RJ-45) x 1 |
| | Expansion Unit | Video Unit Interface x 1 |
| | USB (Type-A) | Conforms to USB2.0 (TYPE-A) x 1, Power Supply Voltage: DC 5 V ±5 %, Output Current: 500 mA or less, Communication Distance: 5 m [16.4ft.] or less |
| | USB (Type mini-B) | Conforms to USB2.0 (mini-B) x 1, Communication Distance: 5 m [16.4ft.] or less |
| | SD Card | SD Card Slot x 1 |

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

*2: Up to 60,000 steps can be converted in software. However, this reduces application memory capacity (for screen data) by 1 MB

*3: Depending on the operating temperature and age of unit, the clock can deviate from -380 to +90 sec/month.

For systems where this level of deviation is a problem, the user should monitor and make adjustments when required.

| General Specification | |
|----------------------------------|--|
| Rated Input Voltage | 24 Vdc |
| Input Voltage Limits | 19.2...28.8 Vdc |
| Allowable Voltage Drop | 10 ms or less |
| Power Consumption | 24 W or less |
| In-Rush Current | 30 A or less |
| Voltage Endurance | 1,000 Vac for 1 minute (between power terminal and FG terminal), leakage current: 20 mA or less |
| Insulation Resistance | 500 Vdc, 10 MΩ or more (between charging and PE/FG terminals) |
| Surrounding Air Temperature *4 | 0 to 55 °C [32 to 131 °F] |
| Storage Temperature | -20 to 60 °C [-4 to 140 °F] |
| Ambient Humidity | 10 to 90 % RH (Wet bulb temperature: 39 °C [102.2 °F] or less - no condensation.) |
| Storage Humidity | |
| 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 |
| Atmosphere | Free of corrosive gases |
| Air Pressure (altitude range) | 800 to 1,114 hPa (2,000 m [6,561ft.] or lower) |
| Vibration Resistance | IEC/EN61131-2 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/EN61131-2 compliant, 147 m/s ² , X, Y, Z directions for 3 times |
| Noise Immunity | Noise Voltage: 1,000 Vp-p, Pulse Duration: 1 μs, Rise Time: 1 ns (via noise simulator) |
| Electrostatic Discharge Immunity | Contact Discharge Method: 6 kV (IEC/EN61000-4-2 Level 3) |
| Grounding | Functional grounding: Grounding resistance of 100Ω, 2mm ² (AWG 14) or thicker wire, or your country's applicable standard. (Same for FG and SG terminals) |
| Structure *5 | IP65f NEMA #250 TYPE 4X/13 (on the front panel when properly installed in an enclosure) |
| Cooling Method | Natural air circulation |
| Weight Approx. | 2 kg [4.4 lb] or less (Main unit only) |
| External Dimensions | W272.5 x H214.5 x D57 mm [W10.73 x H8.44 x D2.24 in.] |
| Panel Cut Dimensions *6 | W259 x H201 mm [W10.2 x H7.91 in.], Panel thickness area: 1.6 to 5 mm [0.06 to 0.2 in.] |

*4: Surrounding Air Temperature of the Video Unit is 0 to 50 °C (32 to 122 °F) when attaching the Video Unit to GP-4521T.

*5: The front face of the GP unit, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification. Even though the GP unit's level of resistance is equivalent to these standards, oils that should have no effect on the GP 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 GP's front face protection sheet becomes peeled off, these conditions can lead to the ingress of oil into the GP 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 GP unit, be sure to confirm the type of conditions that will be present in the GP'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.

*6: Regarding dimensional tolerance, everything +1/-0 mm [+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.