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PFXSP5690WAD / PFXSP5690WADF0H

Standard product information	Display specifications
Electrical specifications	Environmental specifications
Structural specifications	Dimensions

Standard product information	
Family	HMI
Series	SP5000X Series
Size	12" Wide
Model	PFXSP5690WAD
Global Code	PFXSP5690WAD
Product Features	12" Wide DC

Display specifications	
Display type	TFT Color LCD (Ultra High-brightness)
Display size	12.1" Wide
Resolution	1,280 x 800 pixels (WXGA)
Effective display area	W261.12 x H163.2 mm [W10.28 x H6.43 in.]
Display colors	262,144 colors
Backlight	White LED (Not user replaceable. When replacement is required, contact your local distributor.)


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Brightness control	0 to 100 (Adjusted with touch panel or software)
Brightness	1000 cd/m ² (typ.)
Touch panel type	Resistive Film (analog)
Touch panel resolution	1,024 x 1,024
Touch panel lifetime	1,000,000 times or more





Electrical specifications

Rated input voltage	12 to 24 Vdc
Input voltage limits	10.8 to 28.8 Vdc
Allowable voltage drop	12 Vdc: 1.25 ms or less 24 Vdc: 5 ms or less
Power consumption	Max. 37 W When power is not supplied to external devices: 23 W or less Backlight OFF (Stand-by mode): 12.5 W or less Backlight adjusted (20%): 16 W or less ^{*1}
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 for 1 minute (between power terminal and FG terminals), leakage current: 20 mA or less
Insulation resistance	500 Vdc, 10 MΩ or more (between power terminal and FG terminals)

^{*1} The power consumption is the sum of the power consumption of Box Module and Display Module.

Environmental specifications



	   
Surrounding air temperature	-30 to 70 °C [-22 to 158 °F] When installing and wiring: -5 to 70 °C [23 to 158 °F]
Storage temperature	-30 to +70 °C [-22 to 158 °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 (free of conductive dust particles on all surfaces other than the front face)
Pollution degree	3 for front face, 2 for other sides
Corrosive gases	Free of corrosive gases Harsh environment model (Model numbers ending with "F0H") : IEC/EN 60721-3-3 Class 3C3
Air pressure (altitude range)	800 to 1,114 hPa (2,000 m [6,561 ft.] or lower)
UV resistance (front side)	Cutoff: 99% or more (380 nm)
Vibration resistance	2G, IEC 60068-2-6 compliant, 5 to 9 Hz Single amplitude 7 mm [0.28 in.], 9 to 150 Hz Fixed acceleration: 19.6 m/s ² , X, Y, Z directions for 10 cycles (approximately 100 minutes), IEC 61373: 1999 (Category 1, Class B), 5≤f≤150 Hz (weight < 500 kg: f1=5 Hz, f2=150 Hz) acceleration: Up and down: 7.90 m/s ² , Right and left: 3.50 m/s ² , Back and forward: 5.50 m/s ²
Concussion resistance	40G, IEC 60068-2-27 compliant 392 m/s ² , 11 ms, X, Y, Z directions for 3 times
Electrostatic discharge immunity	Contact Discharge Method: 6 kV Air Discharge Method: 8 kV (IEC/EN61000-4-2 Level 3)

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).
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	on the front panel when properly installed in an enclosure.
External dimensions	W308.5 x H230.5 x D68 mm [W12.15 x H9.07 x D2.68 in.]
Panel cut-out dimensions	W295 x H217 mm [W11.61 x H8.54 in.] Panel thickness area: 1.6 to 5 mm [0.06 to 0.2 in.]*2
Weight	3.2 kg [7.1 lb] or less
Front bezel	Aluminum die-cast Stainless steel

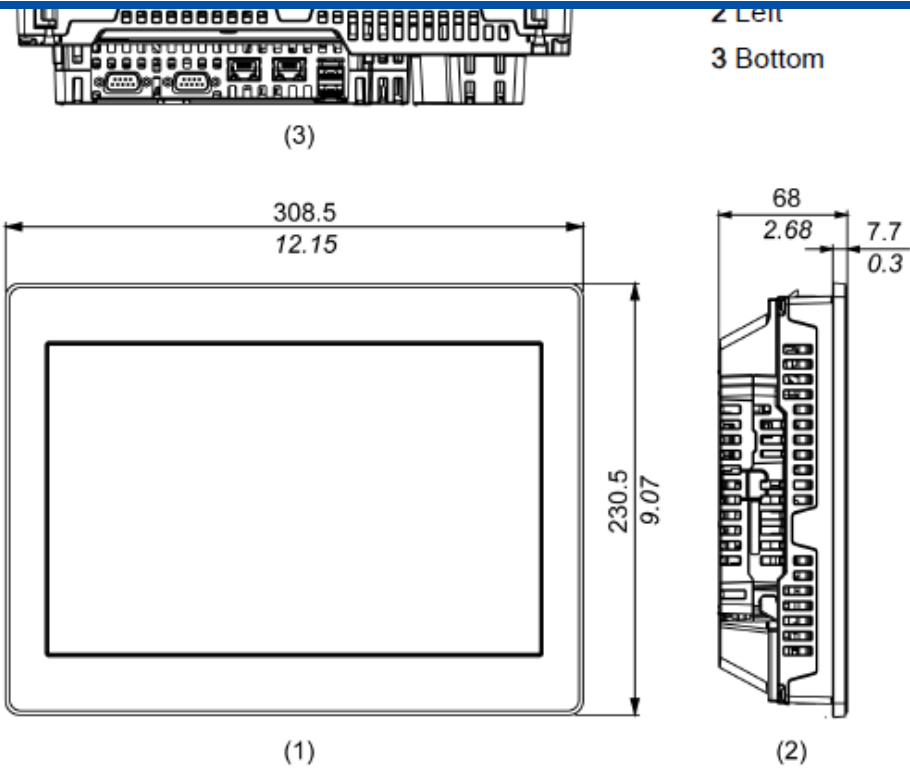
*1 The front face of the unit, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification. Even though the unit's level of resistance is equivalent to these standards, oils that should have no effect on the unit can possibly harm the unit. This 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. Check the model number and product version (PV) on the product label. If the product version is "PV: 01" and only with one of the following model numbers, the protection level is IP66F.

Model number: PFXSP5490WAD, PFXSP5690WAD

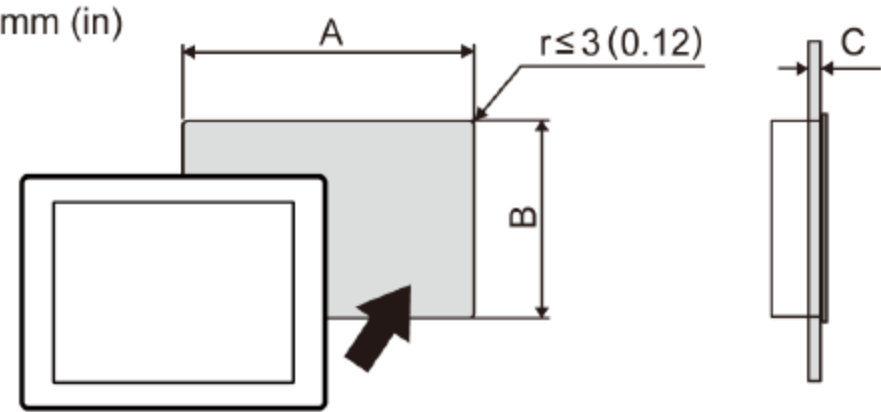
*2 For dimensional tolerance, everything $+1/-0$ mm [$+0.04/-0$ in.] and R in angle are below R3 [R0.12 in.]. Even if the installation wall thickness is within the recommended range for the "Panel Cut Dimensions", depending on wall's material, size, and installation location of GP unit and other devices,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

Dimensions

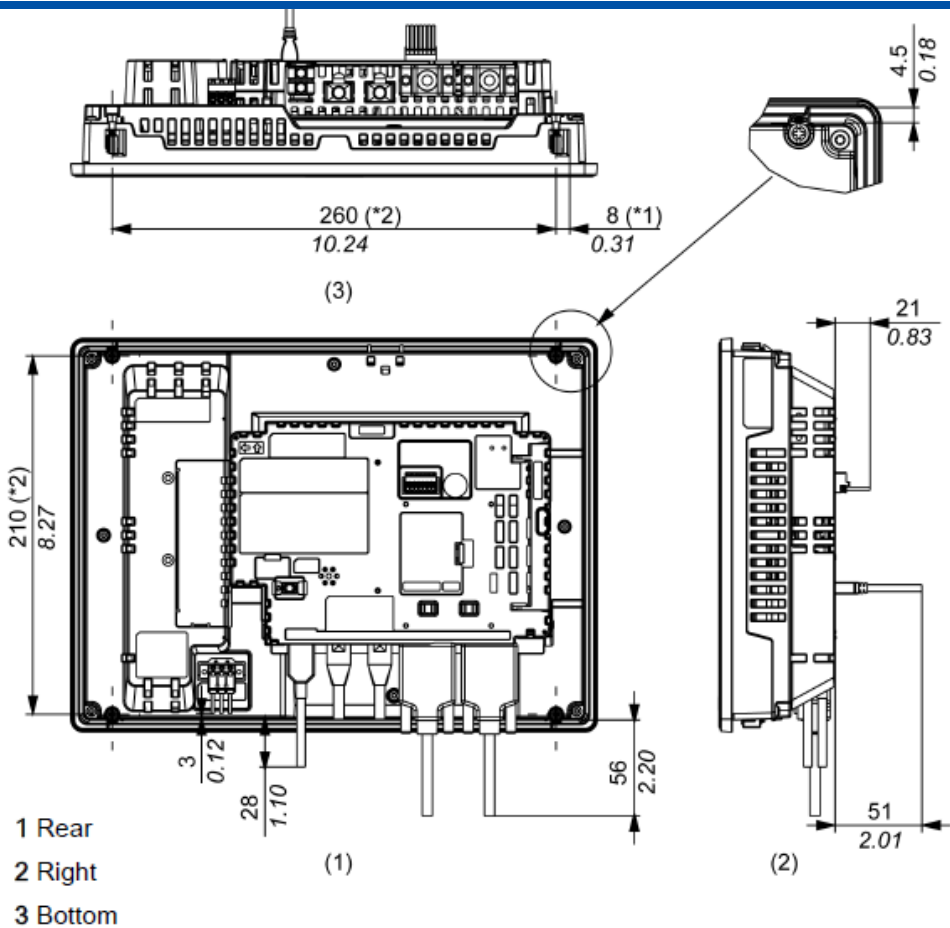
External dimensions	Display module and box module combination
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Panel cut-out dimensions



A	B	C
295 (+1/-0) mm [11.61 (+0.04/-0) in.]	217 (+1/-0) mm [8.54 (+0.04/-0) in.]	1.6 to 5 mm [0.06 to 0.2 in.]



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