

# Pro-face

by Schneider Electric

# Outdoor Rated HMI SP5000X Series

# EXTREME



UL 50E  
Type 4X  
Outdoor  
use



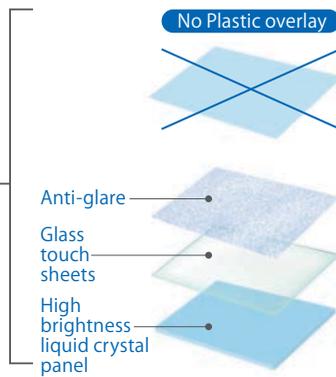
# SP5000X Series

An outdoor HMI that is sunlight readable, and resistive to extreme environments.

The SP5000X Series offers an anti-glare display screen that is resistant to direct sunlight and extreme temperatures. With this enhanced information display unit and improved operability, this product is suitable for multiple applications under harsh environmental conditions, including use in special purpose vehicles such as firetrucks and construction equipment; parking lots and gas stations; and the oil and gas industry.

# Extreme

## 01 Sunlight Readable



- High brightness liquid crystal panel**  
High brightness liquid crystal panel (1000cd/m<sup>2</sup>)
- Anti-reflection (Anti-glare)**  
Improve visibility in sunlight by decreasing glare.
- High-transmittance design**  
The liquid crystal display uses a glass touchscreen to improve transmissivity.

## 02 UV Protected



### UV Protection

Improve UV protection and prevent deterioration by replacing plastic components that are exposed to sunlight with metal or glass.



### Conformal Coating

Improve the longevity of the product even when used in harsh environments with dust and extreme temperatures by adding coating on the substrate, LCD, and power source components.

## 03 Harsh Environment Resistive



### Resistive against Vibration/Shock

IEC60068-2-6 or IEC60068-2-27 ratings are applied, instead of IEC61131-2, making the SP5000X suitable for construction equipment, generators, compressors, and other engine operated machines.



### Operating Temperature: -30°C to 70°C\*

Can be used in harsher environments without the need for anti-frost heaters, or fans and cooling systems.

\*1 Display Module : 7"v: -30 to 65°C, 12"v: -30 to 70°C, 15"v: -20 to 60°C  
Box Module : follow the connected Display Module.



### Dust and Waterproof

Compatible with IP66F, IP67F, Type 4X (indoor and outdoor use) allowing for use in harsh outdoor conditions.

## 04 Modular Design

Battery-less



Application



### Modular design allows for easy maintenance

Replace the exposed display, without changing the whole unit. The box is designed with the application pre-installed and can be used immediately upon changing components. Changes can be made quickly and easily without the need of a PC, optimizing time and resources.

## 05 IoT Solution



### Data collection and remote maintenance

Collect data remotely from a PC including error history and operation status, outcome, and trend data. It is also possible to access the HMI, verify the operation status, and conduct maintenance remotely via PC or tablet.

## Display Module



SP-5790WA

15" wide



SP-5690WA

12" wide



SP-5490WA

7" wide

	SP-5790WA	SP-5690WA	SP-5490WA
Model	PFXSP5790WAD/PFXSP5790WADF0H <sup>*2</sup>	PFXSP5690WAD/PFXSP5690WADF0H <sup>*2</sup>	PFXSP5490WAD/PFXSP5490WADF0H <sup>*2</sup>
Display type	TFT Color LCD (High brightness)		
Display size	15.6" wide	12.1" wide	7" wide
Resolution	1,366 x 768 pixels (FWXGA)	1,280 x 800 pixels (WXGA)	800 x 480 pixels (WVGA)
Display colors	262,144 colors		
Backlight	White LED (Not user replaceable. When replacement is required, contact customer support.)		
Touchpanel lifetime	1,000,000 times or more		
Rated input voltage	12...24 Vdc		
Power consumption	Max. 48 W	Max. 37 W	Max. 29 W
Ambient air temperature	-20 to 60 °C (-4 to 140 °F)	-30 to 70 °C (-22 to 158 °F)	-30 to 65 °C (-22 to 149 °F)
Dust	0.1 mg/m <sup>3</sup> (10-7 oz/ft <sup>3</sup> ) or less (non-conductive levels)		
Pollution degree	3 for front face, 2 for other sides		
Atmospheric pressure (operating altitude)	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	1G, IEC 60068-2-6 compliant, 5 to 9 Hz Single amplitude 3.5 mm [0.14 in.], 9 to 150 Hz Fixed acceleration: 9.8 m/s <sup>2</sup> , X, Y, Z directions for 10 cycles (approximately 100 minutes), IEC 61373: 1999 (Category 1, Class B), 5s f <sub>1</sub> ≤150 Hz (weight < 500 kg: f <sub>1</sub> =5 Hz, f <sub>2</sub> =150 Hz) acceleration: Up and down: 7.90 m/s <sup>2</sup> , Right and left: 3.50 m/s <sup>2</sup> , Back and forward: 5.50 m/s <sup>2</sup>	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 <sup>2</sup> , X, Y, Z directions for 10 cycles (approximately 100 minutes), IEC 61373: 1999 (Category 1, Class B), 5s f <sub>1</sub> ≤150 Hz (weight < 500 kg: f <sub>1</sub> =5 Hz, f <sub>2</sub> =150 Hz) acceleration: Up and down: 7.90 m/s <sup>2</sup> , Right and left: 3.50 m/s <sup>2</sup> , Back and forward: 5.50 m/s <sup>2</sup>	
Shock resistance	15G, IEC 60068-2-27 compliant 147 m/s <sup>2</sup> , X, Y, Z directions for 3 times	40G, IEC 60068-2-27 compliant 392 m/s <sup>2</sup> , 11 ms, X, Y, Z directions for 3 times	
Electronic fast / transient / burst immunity	IEC 61000-4-4 / 2 kV: Power port / 1 kV: Signal ports		
Electrostatic discharge immunity	Contact discharge method: 6 kV Air discharge method: 8 kV (IEC/EN 61000-4-2 Level 3)		
Structure <sup>*1</sup>	IP66F, IP67F, Type 4X (indoor and outdoor use), Type 12, Type13 (On the front panel when properly installed in an enclosure.)		
External dimensions	408 x 264 x 68 mm (16.06 x 10.39 x 2.68 in)	308.5 x 230.5 x 68 mm (12.15 x 9.07 x 2.68 in)	203.6 x 148.6 x 37 mm (8.02 x 5.85 x 1.45 in)
Front bezel materials	Aluminum die-cast / Stainless steel		

<sup>\*2</sup> For use in Harsh and Corrosive Environments (3C3)



## The Modular Design of the SP5000X

## Box Module



SP-5B90

	SP-5B90/PFXSP5B90F0H <sup>*3</sup>
Model	PFXSP5B90
Application Memory	Screen Size: 64 MB
Backup Memory	NVRAM 320KB
Interface	RS-232C / 422 / 485 x 2, Ethernet x 2, USB (Type A) x 2, USB (mini B) x 1, SD Card Slot (System) x 1, SD Card Slot (Storage) x 1, Speaker Output x 1, Alarm Output or Buzzer Output x 1
Expansion unit	Fieldbus Unit x 1
Connectable Devices	4

<sup>\*1</sup> The front face of this product, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification. Even though this product's level of resistance is equivalent to these standards, oils that should have no effect on this product can possibly harm this product. This can occur in areas where either vaporized oils are present, or where low viscosity cutting oils are allowed to adhere to this product for long periods of time. If this product's front face protection sheet or cover glass peels off, these conditions can lead to the ingress of oil into this product and separate protection measures are suggested. Also, if non-approved oils are present, they may cause deformation or corrosion of the front panel's cover. Therefore, prior to installing this product, be sure to confirm the type of conditions that will be present in this product's operating environment. If the installation gasket is used for a long period of time, or if this product and its gasket are removed from the panel, the original level of protection cannot be kept. To maintain the original protection level, be sure to replace the installation gasket regularly.