Pro-face

by **Schneider** Electric

Graphic Operator Interface

SP5000SERIES

Flagship Model of HMI
for extensive use of information

SMART PORTAL

With increasingly sophisticated machine performance; production management and predictive maintenance utilizing operation data; and the growing popularity of the cloud, big data is coming to the manufacturing shop floor.

Pro-face has realized unprecedented connectivity in the new SMART PORTAL, creating a new interface designed firmly with the future in mind.
The SP5000 series allows a huge variety of data to be downloaded to SMART PORTAL and transmitted in an optimal format to those who need it.

SMART PORTAL connects information and people for optimal communication

Valuable information in the right format

Having more information is not necessarily better than having less. Value is created when the right information reaches the right people in the right format.

Bring your factory closer to your office

By segmenting the network, SMART PORTAL makes it possible to connect factories and offices while ensuring the highest security.

Simple to use —any time, any place

Overseas production and the diversification of market needs have increased the need for efficient machine setup and maintenance.

Check out the Movies

These movies will give you more information about SMART PORTAL concepts and benefits.

SMART PORTAL links two previously separate worlds

Enterprise Network
Integrate different networks while ensuring sufficient security.

Server PC

Mobile

Tablet

Server PC

Case 4
Data Collection PC

CLOUD

Wireless Antenna

THOMAS.M 10

89%

HMI RELIABILITY
Communicate real-time with a range of control devices, and collect data at high speed.

IPC VERSATILITY
Utilize Windows applications to deal with alarms or maintenance.

Case 1
High performance HMI

Case 2
Application PC

Case 3
Maintenance PC

Case 4
Data Collection PC

Shop Floor Network
Connect various devices on your shop floor with programless.

Accurately convey vital information in the right way at the right time.

Case 1 High performance HMI

Provide real-time response

Improves rendering performance and achieves real-time response. With high-speed processing ensuring high-speed rendering, SMART PORTAL replaces devices that have suffered from unsatisfactory response speed in the past.

Case 2 Application PC

Use as a built-in application PC

SMART PORTAL can be used in environments where PCs have been built into machines to allow the use of Windows applications. Dedicated apps can be used on the SMART PORTAL.

Case 3 Maintenance PC

Use as a maintenance PC

Manuals and all kinds of development tools can be saved in SMART PORTAL. There is no need to take a PC down to the factory every time maintenance work needs to be done.

Case 4 Data Collection PC

Use as a data collection PC

Separate IP addresses can be allocated for SMART PORTAL's two Ethernet ports. A network with the highest security can be built between the office and the factory. In addition, collected data can be stored on NVRAM to protect from data loss.

Display ✕ Box module design provides flexible functionality and size

- With a selection of ten displays and three boxes available, there are thirty SMART PORTAL combinations to choose from.
- Modular design allows the display to be attached to and detached from the box, making it possible to replace only parts that need replacing

| 19" Wide | 15" Wide | 15" | 12" | 10" |

Premium Display

Product Name	19" Wide	SP-5800WC
	15" Wide	SP-5700WC
	15"	SP-5700TP
	12"	SP-5660TP (Wireless LAN model)
	12"	SP-5600TP
	10"	SP-5500TP

Brightness Sensor

Auto Scaling

A single screen data works on three sizes of premium displays for smooth management of mixed product lines.

Wireless LAN

Easily establish a wireless network in tough environments with a built-in antenna and IP67F-compliant protection structure.

Display extension Multi Display Adapter

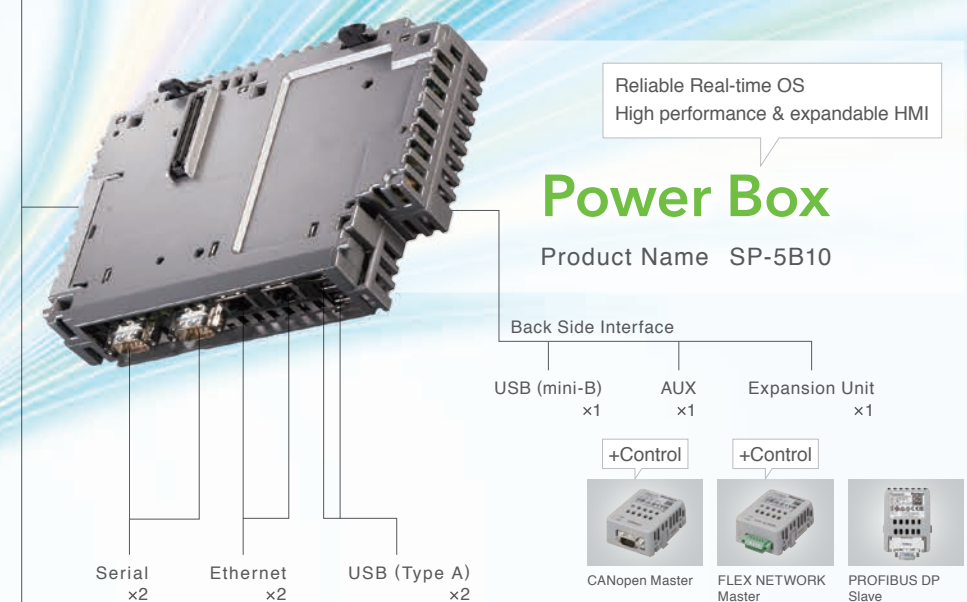Separate installation across long distances with a single LAN cable with Multi Display Adapter combined.

Front USB

COMBINATIONS

New

| 12" | 12" Wide | 10" Wide | 7" Wide |

Advanced Display

Product Name	12"	SP-5600TA
	12" Wide	SP-5600WA
	10" Wide	SP-5500WA
	7" Wide	SP-5400WA

Enable to utilize Windows Applications together with HMI (equipped with HMI Runtime standard)

Open Box

Product Name   SP-5B41

Back Side Interfaces

| Serial ×2 | Ethernet ×2 | USB (Type A) ×2 | USB (mini-B) ×1 | USB (Type A) ×1 | DVI-D ×1 | AUX ×1 | AUDIO Input ×1 |

Reliable Real-time OS High performance & expandable HMI

Power Box

Product Name   SP-5B10

Back Side Interface

| USB (mini-B) ×1 | AUX ×1 | Expansion Unit ×1 |

+Control   +Control

| Serial ×2 | Ethernet ×2 | USB (Type A) ×2 |

CANopen Master   FLEX NETWORK Master   PROFIBUS DP Slave

Reliable Real-time OS High performance HMI

New
Standard Box

Product Name   SP-5B00

Back Side Interfaces

| Serial ×2 | Ethernet × 2 | USB (Type A) ×2 | USB (mini-B) ×1 |

HMI Screen Editor and Logic Programming Software
GP-Pro EX

Intuitive operation reduces development time required for screen creation.

Data Management Software
Pro-Server EX

Data-collecting software that easily connects the production site to the office through a network with simple settings at low cost.

Remote Monitoring Software for Mobile
Pro-face Remote HMI

Display and operate the factory via a tablet or smartphone.

Secure Remote Access over Internet
Pro-face Connect

Pro-face Connect is a ready to use embedded HMI service to access machines remotely and securely.

| Open Box | Power Box |

Removable system

Set up screens by simply inserting a CFast (Open Box) or SD card (Power Box). No need for a separate PC.

| Open Box | Power Box | Standard Box |

EZ Series

Extend functionality simply via a single USB cable.
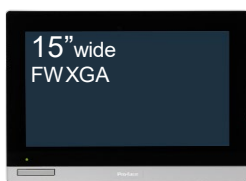
| Open Box | Power Box | Standard Box |

Multi-Converter

Collect data of various device units without a display by combining DC Power Supply Adapter.

Display Module - Premium Display

19" wide FWXGA	15" wide FWXGA	15" XGA	Built-in Wireless LAN model 12" XGA	12" XGA	10" SVGA
SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Model: PFXSP5800WCD	Model: PFXSP5700WCD	Model: PFXSP5700TPD	Model: PFXSP5660TPD	Model: PFXSP5600TPD	Model: PFXSP5500TPD

> SP5000 Series is a combined unit of Display Module and Box Module.
> The power consumption or weight for the combined unit equals each sum of power consumption or weight of the two modules.

■ Model Number Configuration

Display Module

PFXSP5 * * * * * D
        (1)(2)(3)(4)(5)

	(1) Size		(2) Wireless LAN		(3) Resolution		(4) Touch Panel		(5) Power Supply	
8	19"	60	Yes	T	TFT	C	Projected Capacitive (5 points multi-touch)	D	DC	
7	15"	00	-	W	Wide TFT	P	Resistive Film (analog, 2 points multi-touch)			
6	12"					A	Resistive Film (analog, single-touch)			
5	10"									
4	7"									

*Color selectable display modules are available. In addition to Silver, there are three optional colors,
Coated models are also available as a customized product. (SP-5800WC and SP-5700WC excluded)

| Black | Beige | Off-white |

✕ SP-5800WC, SP-5700WC and SP-5600TA are not compatible with SP-5B40 (End of Sale: Mar. 30, 2018).
SP-5660TP is supported for SP-5B10 (Power BOX) and SP-5B00 (Standard Box).

Box Module

PFXSP5 B * *
       (6) (7)

	(6) Module Type	(7) Class	
B	Box	41	Open
		10	Power
		00	Standard

*Coated models are also available as a customized product.

■ Display Specifications

	Premium Display					
	SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Display Type	TFT color LCD					
Display Size	19" wide	15" wide	15"	12"		10"
Resolution	1,366 x 768 pixels (FWXGA)		1,024 x 768 pixels (XGA)			800 x 600 pixels (SVGA)
Auto Scaling	Yes					
Effective Display Area	W409.8 x H230.4mm (W16.13 x H9.07 in)	W344.2 x H193.5mm (W13.55 x H7.62 in)	W304.1 x H228.1mm (W11.97 x H8.98 in.)	W245.8 x H184.3mm (W9.68 x H7.26 in.)		W211.2 x H158.4mm (W8.31 x H6.24 in.)
Display Colors	16 million colors					
Backlight	White LED (Not user replaceable. When replacement is required, contact your local Pro-face distributor.)					
Backlight Service Life	50,000 hours or more (continuous operation at 25 °C [77 °F] before backlight brightness decreases to 50%)					
Brightness Control	0...100 (Adjusted with touch panel or software)					
Brightness Sensor	Yes					
Front USB Interface	Yes					
Touch Panel Type	Projected Capacitive (5 points multi-touch)		Resistive Film (analog, 2 points multi-touch)			
Touch Panel Resolution	2,048 x 2,048		1,024 x 1,024			
Touch Panel Service Life	50 million times or more		1 million times or more			

■ Electrical Specifications

		Premium Display					
		SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Rated Input Voltage		12...24 Vdc					
Input Voltage Limits		10.8...28.8 Vdc					
Voltage Drop		12 Vdc : 1.25 ms or less 24 Vdc: 5 ms or less					
Power Consumption *1	Max	19 W	17 W	22 W	23 W	21 W	15 W
	When power is not supplied to devices via front USB	16 W or less	14 W or less	19 W or less	20 W or less	18 W or less	12 W or less
	When screen turns off the backlight (Standby Mode)	8 W or less	6 W or less	6 W or less	8 W or less	6 W or less	6 W or less
	When screen backlight 20%	9 W or less	8 W or less	11 W or less	13 W or less	11 W or less	8 W or less
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 charging and FG terminals)					
Insulation Resistance		500 Vdc, 10 MΩ or more (between charging and FG terminals)					

*1 Power Consumption for Display Module only.

Display Module - Premium Display

■ Environmental Specification

	Premium Display					
	SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Surrounding Air Temperature	0...55 °C (32...131 °F)		0...60 °C (32...140 °F)			
Storage Temperature	-20...60 °C (-4...140 °F)					
Surrounding Air and Storage Humidity	10%...90% RH (Non condensing, wet bulb temperature 39 °C [102.2 °F] or less)					
Dust	0.1 mg/m3 (10-7 oz/ft3) or less (non-conductive levels)					
Pollution Degree	For use in Pollution Degree 2 environment					
Corrosive Gases	Free of corrosive gases					
Atmospheric Pressure (Operating Altitude)	800...1,114 hPa (2,000 m [6,561 ft] or lower)					
Vibration Resistance	IEC/EN 61131-2 compliant 5...9 Hz Single amplitude 3.5 mm (0.14 in.) 9...150 Hz Fixed acceleration: 9.8 m/s2 X, Y, Z directions for 10 cycles (approx. 100 min.)					
Shock Resistance	IEC/EN 61131-2 compliant 147 m/s2, X, Y, Z directions for 3 times					
Electrical fast transient/burst	IEC 61000-4-4 2 kV: Power port (display unit) 1 kV: Signal ports					
Electrostatic Discharge Immunity	Contact Discharge Method: 6 kV (IEC/EN 61000-4-2 Level 3)					

■ Interface Specification

	Premium Display					
	SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Wireless LAN	-	-	-	Yes	-	-
USB（Type A）*2	Connector: USB 2.0 (Type A) x 1, Power Supply Voltage: 5 Vdc ±5 %, Maximum Current Supplied: 500 mA, Maximum Transmission Distance: 5 m (16.4 ft)					
USB（mini B）	Connector: USB 2.0 (mini B) x 1, Maximum Transmission Distance: 5 m (16.4 ft)					

*2 When using the Display Module with the Power Box, you can connect only one of each type of USB device, such as one USB flash drive, one transfer cable, or one bar code reader. If you connect multiple devices that are the same type, only the first device will work.

■ Wireless LAN Specification (Only for SP-5660TP)*3 *4

Standards	IEEE802.11b/IEEE802.11g/IEEE802.11n
Frequency Bandwidth	2.4 GHz
Channel Bandwidth	20 MHz
Channel	Access Point mode*5: 1...11ch Client mode*6: North America US: 1...11 ch, Japan JP: 1...13 ch, Europe EU: 1...13 ch, Korea KR: 1...13 ch, China CN:1...13 ch, Taiwan TW: 1...11 ch
Transmission Speed	IEEE802.11b：max 11Mbps, IEEE802.11g：max 54 Mbps, IEEE802.11n：max 72.2 Mbps
Action Mode	Client mode/Access Point mode
Communication Mode	Infrastructure
Network Authentication	Open, WPA-Personal, WPA2-Personal
Data Encryption	WEP (128 bit)(Open)*7, AUTO/TKIP (WPA-Personal), AES (WPA2-Personal)
Maximum Client Connections	10
Transmission Distance	You can connect only from the front of the display. The connection angle and distance depend on your operating environment, applications in use, and target communication devices. Conduct an operation test, including directivity, in the operating environment before use.

*3 Use Wireless LAN in a configuration with Open Box Module combined.
*4 Do not use wireless communication for operation of device units. It's necessary to consider possibilities of communication interference.
*5 In Access Point mode, IEEE802.11d is not supported.
*6 If the surrounding access points do not support IEEE802.11d, channels are limited, from 1 to 11 ch.
*7 In Access Point mode, WEP is not supported.

■ Structural Specification

	Premium Display					
	SP-5800WC	SP-5700WC	SP-5700TP	SP-5660TP	SP-5600TP	SP-5500TP
Grounding	Functional grounding: Grounding resistance of 100 Ω, 2 mm2 (AWG 14) or thicker wire, or your country's applicable standard (same for FG and SG terminals).					
Cooling Method	Natural air circulation					
Structure *8	When using a factory-installed front USB cover: IP65F, IP67F. When using a front USB cover option (PFXZCDCVUS1): IP66F, IP67F, Type 4X (Indoor Use Only)/13 * The front face of this product when properly installed in an enclosure and not using the front panel USB port.					
External Dimensions	W483 x H337 x D69 mm (W 19.02 x H13.27 x D2.72 in.)	W414 x H295 x D69 mm (W 16.30 x H11.61 x D2.72 in.)	W397 x H296 x D67 mm (W15.6 x H11.7 x D2.64 in.)	W315 x H241 x D67 mm (W12.4 x H9.49 x D2.64 in.)		W272.5 x H214.5 x D67 mm (W10.73 x H8.44 x D2.64 in.)
Panel Cut Dimensions *9	W465 x H319 mm (W18.31 x H12.56 in.)	W396 x H277 mm (W15.59 x H10.91 in.)	W383.5 x H282.5mm (W15.1 x H11.12 in.)	W301.5 x H227.5 mm (W11.87 x H8.96 in.)		W259 x H201 mm (W10.2 x H7.91 in.)
Weight*10	6.8 kg (15.0 lb) or less	5 kg (11.0 lb) or less	4.5 kg (9.9 lb) or less	3.2 kg (7.1 lb) or less		2.7 kg (5.9 lb) or less

*8 The front face of this product, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification.
*9 For dimensional tolerance, everything +1/-0mm (+0.04/-0 in.) and R in angle are below R3 (R0.12 in.)
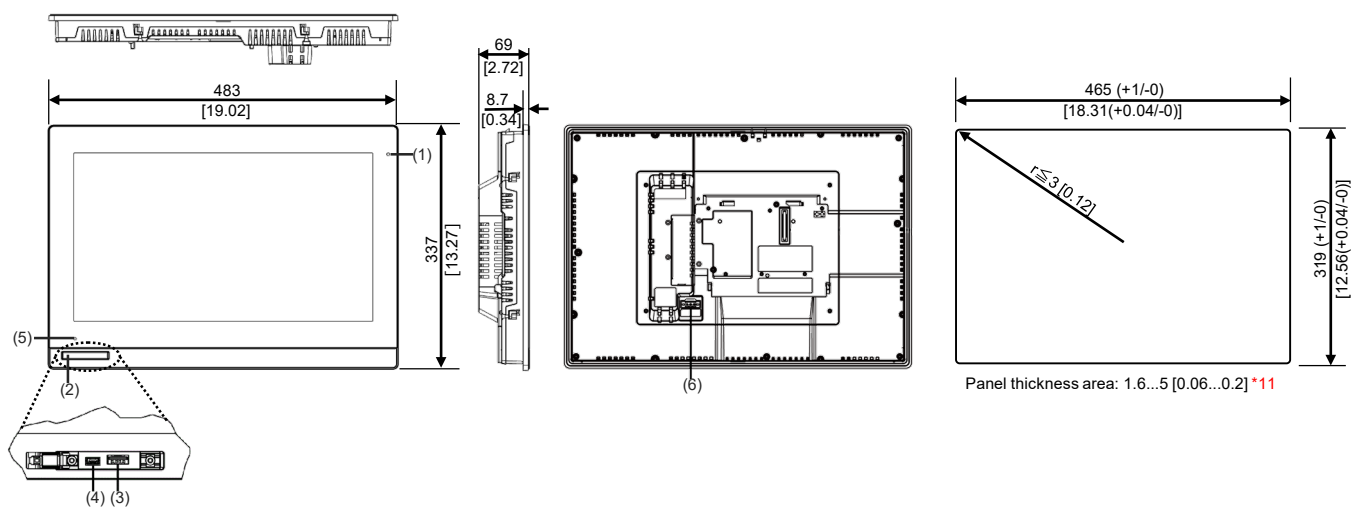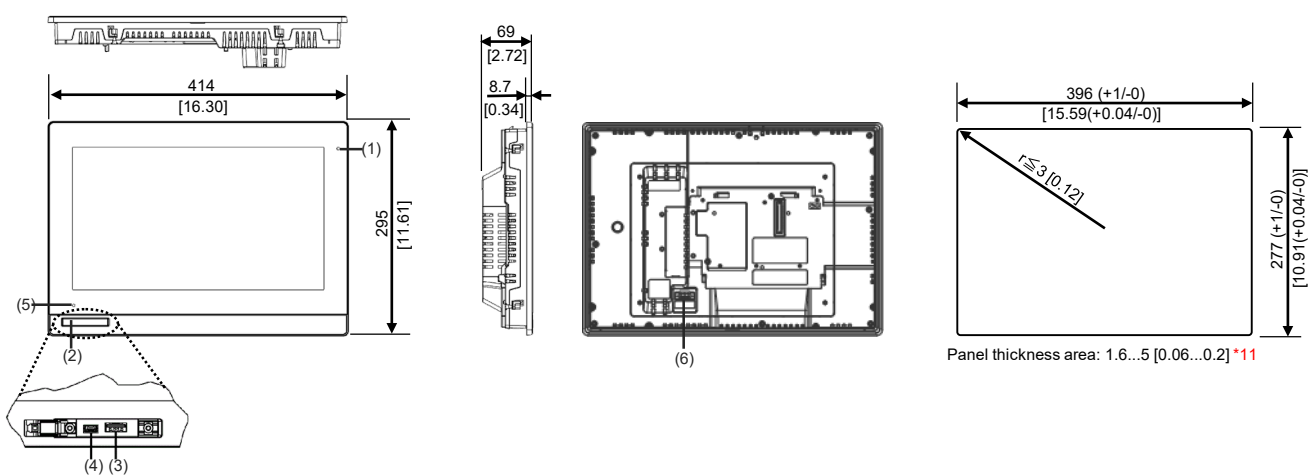*10 Weight for Display Module only

Display Module - Premium Display

■ External Dimensions / Parts Identification / Panel Cut Dimensions

SP-5800WC

mm [in.]

483
[19.02]

337
[13.27]

69
[2.72]

8.7
[0.34]

(1)
(5)
(2)
(4) (3)
(6)

465 (+1/-0)
[18.31(+0.04/-0)]

319 (+1/-0)
[12.56(+0.04/-0)]

r≦3 [0.12]

Panel thickness area: 1.6...5 [0.06...0.2] *11

SP-5700WC

414
[16.30]

295
[11.61]

69
[2.72]

8.7
[0.34]

(1)
(5)
(2)
(4) (3)
(6)

396 (+1/-0)
[15.59(+0.04/-0)]

277 (+1/-0)
[10.91(+0.04/-0)]

r≦3 [0.12]

Panel thickness area: 1.6...5 [0.06...0.2] *11

(1)Brightness Sensor   (2)Front USB Cover   (3)USB (Type A) Interface   (4)USB (mini B) Interface   (5)Status LED   (6)Power Supply Connector

*11   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 this product and other devices, the installation wall could warp. To prevent warping, the installation surface may need to be strengthened.
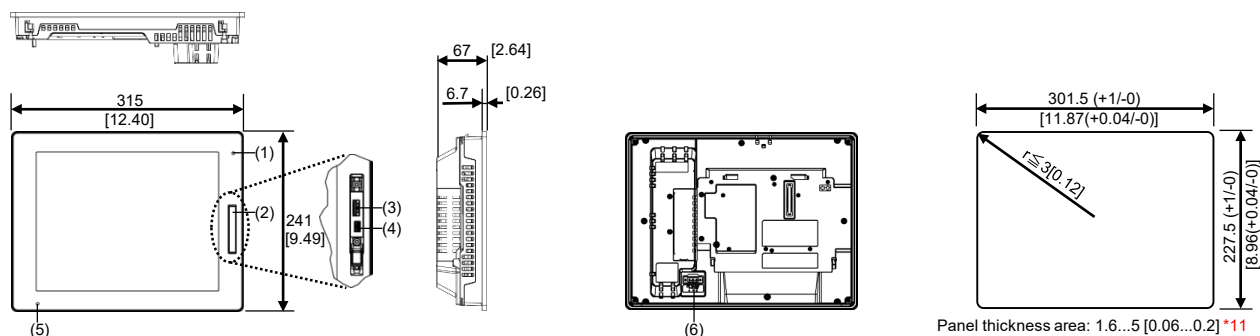
Display Module - Premium Display

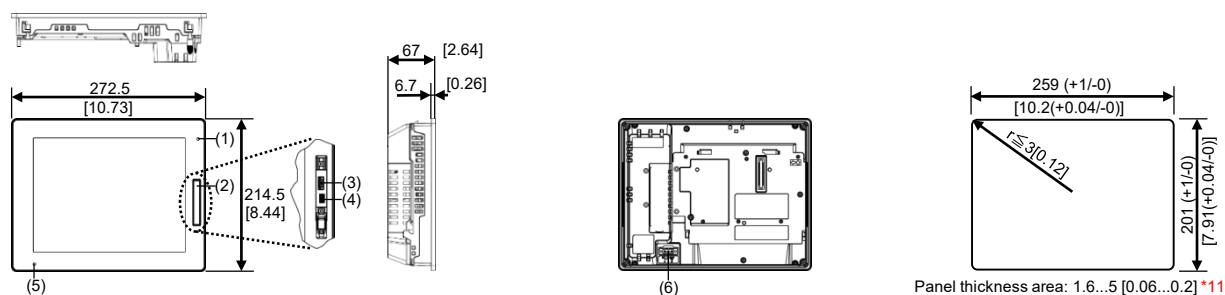## ■ External Dimensions / Parts Identification / Panel Cut Dimensions

SP-5700TP

mm [in.]
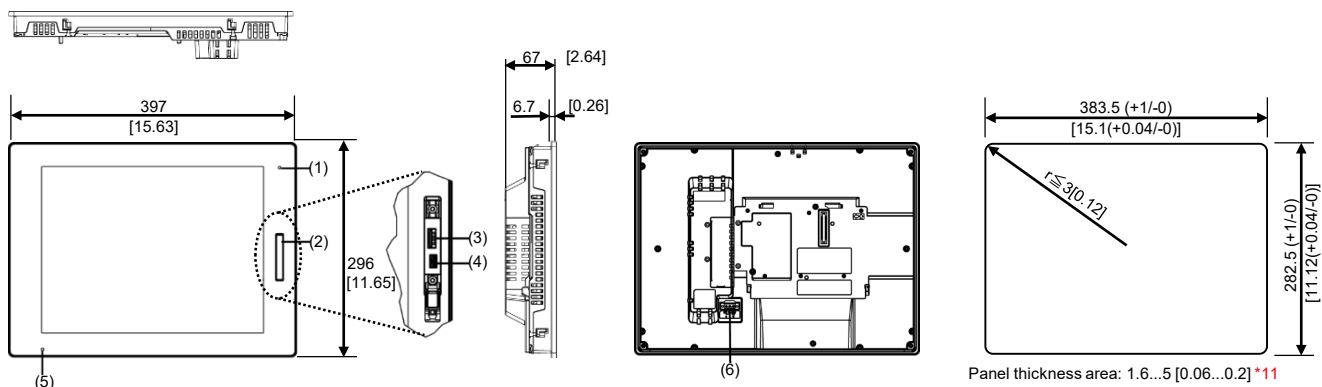
397 [15.63]
67 [2.64]
6.7 [0.26]
296 [11.65]
(1) (2) (3) (4) (5) (6)

383.5 (+1/-0) [15.1(+0.04/-0)]
282.5 (+1/-0) [11.12(+0.04/-0)]
r ≦ 3 [0.12]
Panel thickness area: 1.6...5 [0.06...0.2] *11

SP-5660TP / SP-5600TP

315 [12.40]
67 [2.64]
6.7 [0.26]
241 [9.49]
(1) (2) (3) (4) (5) (6)

301.5 (+1/-0) [11.87(+0.04/-0)]
227.5 (+1/-0) [8.96(+0.04/-0)]
r ≦ 3 [0.12]
Panel thickness area: 1.6...5 [0.06...0.2] *11

SP-5500TP

272.5 [10.73]
67 [2.64]
6.7 [0.26]
214.5 [8.44]
(1) (2) (3) (4) (5) (6)

259 (+1/-0) [10.2(+0.04/-0)]
201 (+1/-0) [7.91(+0.04/-0)]
r ≦ 3 [0.12]
Panel thickness area: 1.6...5 [0.06...0.2] *11

(1)Brightness Sensor (2)Front USB Cover (3)USB (Type A) Interface (4)USB (mini-B) Interface (5)Status LED (6)Power Supply Connector

*12 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 this product and other devices, the installation wall could warp. To prevent warping, the installation surface may need to be strengthened.

Display Module - Advanced Display

SP-5600TA
Model: PFXSP5600TAD

SP-5600WA
Model: PFXSP5600WAD

SP-5500WA
Model: PFXSP5500WAD

SP-5400WA
Model: PFXSP5400WAD

> SP5000 Series is a combined unit of Display Module and Box Module.
> The power consumption or weight for the combined unit equals each sum of power consumption or weight of the two modules.

■ Model Number Configuration

Display Module

PFXSP5 * * * * * D
(1) (2) (3) (4) (5)

(1) Size		(2) Wireless LAN		(3) Resolution		(4) Touch Panel		(5) Power Supply	
8	19"	60	Yes	T	TFT	C	Projected Capacitive (5 points multi-touch)	D	DC
7	15"	00	–	W	Wide TFT	P	Resistive Film (analog, 2 points multi-touch)		
6	12"					A	Resistive Film (analog, single-touch)		
5	10"								
4	7"								

*Color-selectable display modules are available. In addition to Silver, there are three optional colors, **Black** | Beige | Off-white .
For color-selectable SP-5600TA, please contact to our local Pro-face sales office.
Coated models are also available as a customized product. (Except for SP-5600TA. It will be supported in the future.)

✕

SP-5600TA are not compatible with SP-5B40 (End of Sale: Mar. 30, 2018).

Box Module

PFXSP5 B * *
(6) (7)

	(6) Module Type	(7) Class	
B	Box	41	Open
		10	Power
		00	Standard

*Coated models are also available as a customized product.

■ Display Specifications

	Advanced Display			
	SP-5600TA	SP-5600WA	SP-5500WA	SP-5400WA
Display Type	TFT color LCD			
Display Size	12.1"	12" wide	10" wide	7" wide
Resolution	1,024 x 768 pixels (XGA)	1,280 x 800 pixels (WXGA)	1,280 x 800 pixels (WXGA)	800 x 480 pixels (WVGA)
Auto Scaling	-			
Effective Display Area	W245.8 x H184.3 mm (W9.68 x H7.26 in.)	W261.1 x H163.2 mm (W10.28 x H6.43 in.)	W217.0 x H135.6 mm (W8.54 x H5.34 in.)	W154.1 x H95.9 mm (W6.06 x H3.78 in.)
Display Colors	262,144 colors			
Backlight	White LED (Not user replaceable. When replacement is required, contact your local Pro-face distributor.)			
Backlight Service Life	50,000 hours or more (continuous operation at 25 °C [77 °F] before backlight brightness decreases to 50%)			
Brightness Control	0...100 (Adjusted with touch panel or software)			
Brightness Sensor	-			
Front USB Interface	-			
Touch Panel Type	Resistive Film (analog)			
Touch Panel Resolution	1,024 x 1,024			
Touch Panel Service Life	1 million times or more			

■ Electrical Specifications

		Advanced Display			
		SP-5600TA	SP-5600WA	SP-5500WA	SP-5400WA
Rated Input Voltage		12...24 Vdc			
Input Voltage Limits		10.8...28.8 Vdc			
Voltage Drop		12 Vdc: 1.25 ms or less 24 Vdc: 5 ms or less			
Power Consumption *1	Max	10.0 W	11.5 W	8.5 W	6.5 W
	When power is not supplied to devices via front USB	-			
	When screen turns off the backlight (Standby Mode)	2.5 W or less			2 W or less
	When screen backlight 20%	5.7 W or less	6 W or less	5 W or less	4 W or less
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 charging and FG terminals)			
Insulation Resistance		500 Vdc, 10 MΩ or more (between charging and FG terminals)			

*1 Power Consumption for Display Module only.

Display Module - Advanced Display

■ Environmental Specification

	Advanced Display			
	SP-5600TA	SP-5600WA	SP-5500WA	SP-5400WA
Surrounding Air Temperature	0...60 °C (32...140 °F)			
Storage Temperature	-20...60 °C (-4...140 °F)			
Surrounding Air and Storage Humidity	10%...90% RH (Non condensing, wet bulb temperature 39 °C [102.2 °F] or less)			
Dust	0.1 mg/m3 (10-7 oz/ft3) or less (non-conductive levels)			
Pollution Degree	For use in Pollution Degree 2 environment			
Corrosive Gases	Free of corrosive gases			
Atmospheric Pressure (Operating Altitude)	800...1,114 hPa (2,000 m [6,561 ft] or lower)			
Vibration Resistance	IEC/EN 61131-2 compliant 5...9 Hz Single amplitude 3.5 mm (0.14 in.) 9...150 Hz Fixed acceleration: 9.8 m/s2 X, Y, Z directions for 10 cycles (approx. 100 min.)			
Shock Resistance	IEC/EN 61131-2 compliant 147 m/s2, X, Y, Z directions for 3 times			
Electrical fast transient/burst	IEC 61000-4-4 2 kV: Power port (display unit) 1 kV: Signal ports			
Electrostatic Discharge Immunity	Contact discharge method: 6 kV Air discharge method: 8 kV (IEC/EN 61000-4-2 Level 3)			

■ Interface Specification

	Advanced Display			
	SP-5600TA	SP-5600WA	SP-5500WA	SP-5400WA
Wireless LAN	-			
USB（Type A）	-			
USB （mini B）	-			

■ Structural Specification

	Advanced Display			
	SP-5600TA	SP-5600WA	SP-5500WA	SP-5400WA
Grounding	Functional grounding: Grounding resistance of 100 Ω, 2 mm2 (AWG 14) or thicker wire, or your country's applicable standard (same for FG and SG terminals).			
Cooling Method	Natural air circulation			
Structure *8	IP66F, IP67F, TYPE 4X (Indoor Use Only)/13 * on the front panel when properly installed in an enclosure.			
External Dimensions	W315 x H241 x D67 mm (W12.4 x H9.49 x D2.64 in.)	W308.5 x H230.5 x D67 mm (W12.15 x H9.07 x D2.64 in.)	W268.5 x H198.5 x D67 mm (W10.57 x H7.81 x D2.64 in.)	W203.6 x H148.6 x D36 mm (W8.02 x H5.85 x D1.42 in.)*12
Panel Cut Dimensions *9	W301.5 x H227.5 mm (W11.87 x H8.96 in.)	W295 x H217 mm (W11.61 x H8.54 in.)	W255 x H185 mm (W10.04 x H7.28 in.)	W190 x H135 mm (W7.48 x H5.31 in.)
Weight *10	3.2 kg (7.1 lb)or less	3 kg (6.6 lb) or less	2.5 kg (5.5 lb) or less	1.2 kg (2.6 lb) or less

*8 The front face of this product, installed in a solid panel, has been tested using conditions equivalent to the standards shown in the specification.
*9 For dimensional tolerance, everything +1/-0 mm (+0.04/-0 in.) and R in angle are below R3 (R0.12 in.)
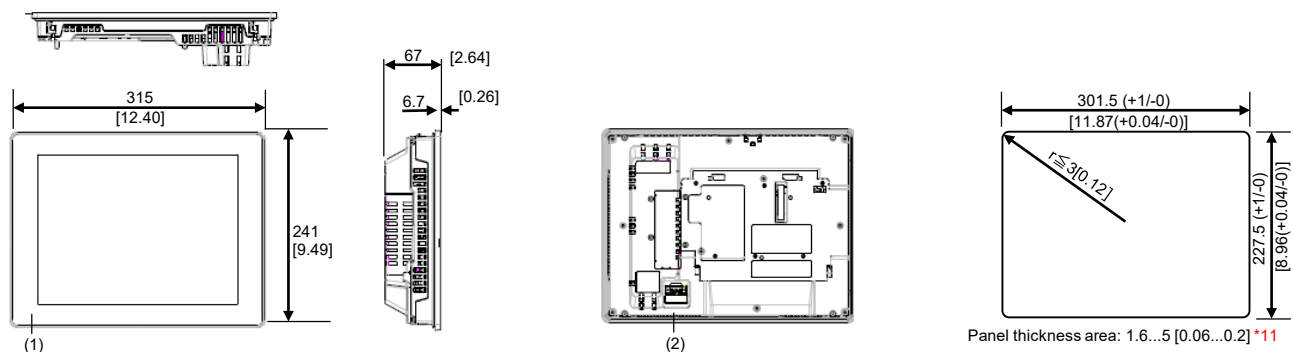*10 Weight for Display Module only
*12 When combined with Box Module, the depth is 67 mm (2.64 in.).
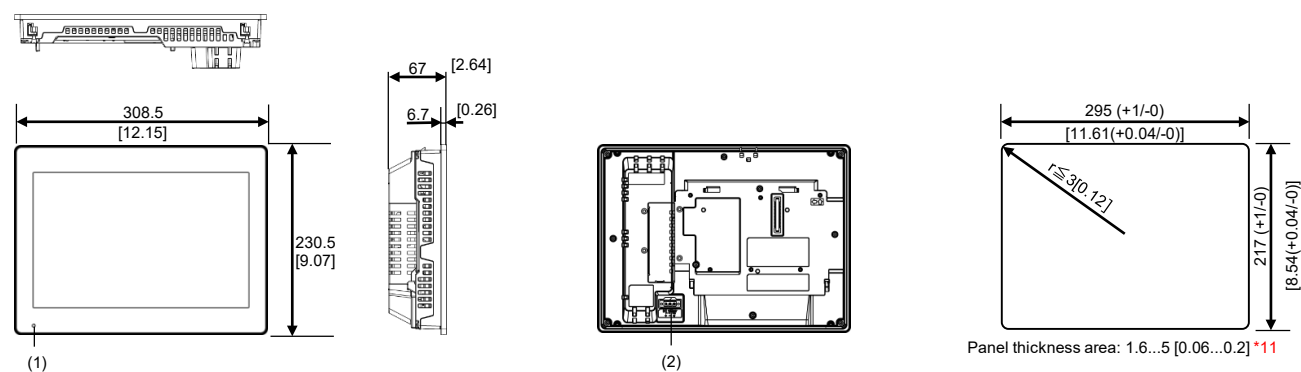
Display Module - Advanced Display

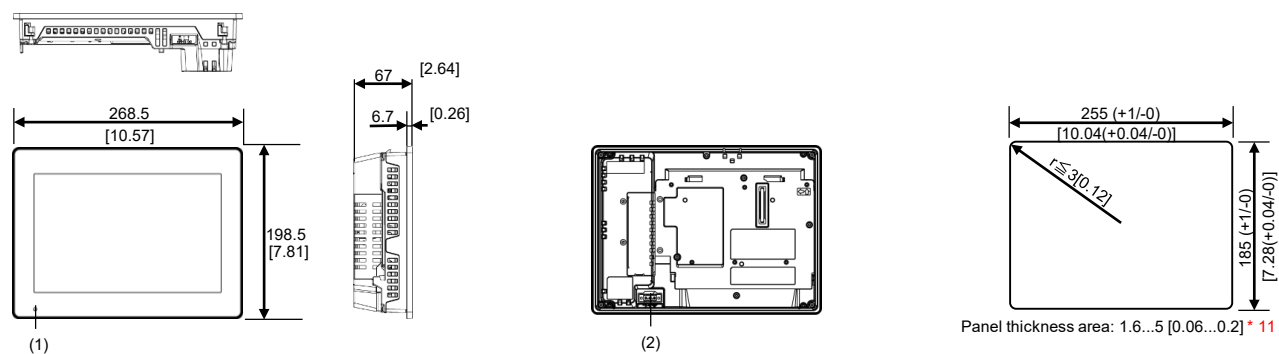## ■ External Dimensions / Parts Identification / Panel Cut Dimensions
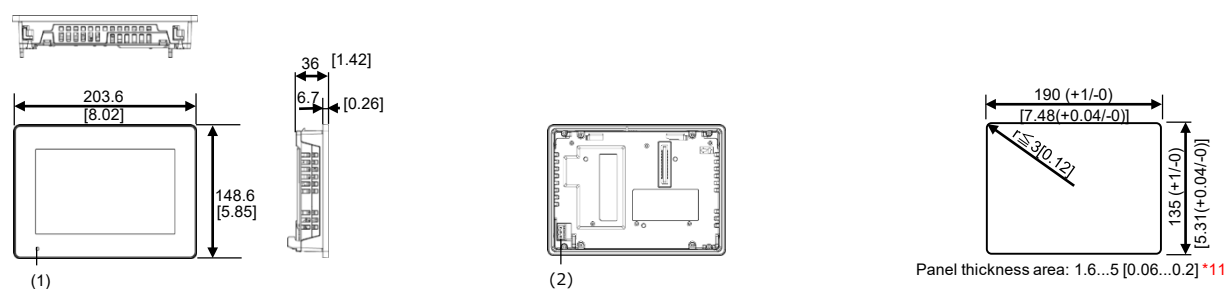
SP-5600TA

mm [in.]

315 [12.40]
241 [9.49]
67 [2.64]
6.7 [0.26]
(1)
(2)

301.5 (+1/-0) [11.87(+0.04/-0)]
227.5 (+1/-0) [8.96(+0.04/-0)]
r≦3[0.12]

Panel thickness area: 1.6...5 [0.06...0.2] *11

SP-5600WA

308.5 [12.15]
230.5 [9.07]
67 [2.64]
6.7 [0.26]
(1)
(2)

295 (+1/-0) [11.61(+0.04/-0)]
217 (+1/-0) [8.54(+0.04/-0)]
r≦3[0.12]

Panel thickness area: 1.6...5 [0.06...0.2] *11

SP-5500WA

268.5 [10.57]
198.5 [7.81]
67 [2.64]
6.7 [0.26]
(1)
(2)

255 (+1/-0) [10.04(+0.04/-0)]
185 (+1/-0) [7.28(+0.04/-0)]
r≦3[0.12]

Panel thickness area: 1.6...5 [0.06...0.2] * 11

SP-5400WA

203.6 [8.02]
148.6 [5.85]
36 [1.42]
6.7 [0.26]
(1)
(2)

190 (+1/-0) [7.48(+0.04/-0)]
135 (+1/-0) [5.31(+0.04/-0)]
r≦3[0.12]

Panel thickness area: 1.6...5 [0.06...0.2] *11

(1)Status LED   (2)Power Supply Connector

*11 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 this product and other devices, the installation wall could warp. To prevent warping, the installation surface may need to be strengthened.

Box Module

SP-5B41
Model: PFXSP5B41

SP-5B10
Model: PFXSP5B10

SP-5B00
Model: PFXSP5B00

SP5000 Series is a combined unit of Display Module and Box Module.
The power consumption or weight for the combined unit equals each sum of power consumption or weight of the two modules.

■ Model Number Configuration

Display Module

PFXSP5 * * * * * D
(1) (2) (3) (4) (5)

	(1) Size		(2) Wireless LAN		(3) Resolution		(4) Touch Panel		(5) Power Supply
8	19"	60	Yes	T	TFT	C	Projected Capacitive (5 points multi-touch)	D	DC
7	15"	00	–	W	Wide TFT	P	Resistive Film (analog, 2 points multi-touch)		
6	12"					A	Resistive Film (analog, single-touch)		
5	10"								
4	7"								

*Color selectable display modules are available. In addition to Silver, there are three optional colors,
Coated models are also available as a customized product.

Black   Beige   Off-white

✕

Box Module

PFXSP5 B * *
(6) (7)

	(6) Module Type	(7) Class	
B	Box	41	Open
		10	Power
		00	Standard

*Coated models are also available as a customized product.
(Except for SP-5B00. It will be supported in the future.)

SP-5B10 (Power Box) and SP-5B00 (Standard Box) are not compatible with SP-5660TP.

■ Electrical Specifications

		Open Box	Power Box	Standard Box
		SP-5B41	SP-5B10	SP-5B00
Rated Input Voltage		12 Vdc (Supply from Display Module)		
Power Consumption*13	Max	25 W	25 W	17.5 W
	When power is not supplied to external devices	15 W or less	12.5 W or less	8.8 W or less

*13 Power consumption for Box Module only

■ Environmental Specifications

	Open Box	Power Box	Standard Box
	SP-5B41	SP-5B10	SP-5B00
Surrounding Air Temperature	0...60 °C (32...140 °F)		
Storage Temperature	-20...60 °C (-4...140 °F)		
Surrounding Air and Storage Humidity	10%...90% RH (Non condensing, wet bulb temperature 39 °C [102.2 °F] or less)		
Dust	0.1 mg/m3 (10-7 oz/ft3) or less (non-conductive levels)		
Pollution Degree	For use in Pollution Degree 2 environment		
Corrosive Gases	Free of corrosive gases		
Atmospheric Pressure (Operating Altitude)	800...1,114 hPa (2,000 m [6,561 ft] or lower)		
Vibration Resistance	IEC/EN 61131-2 compliant 5...9 Hz Single amplitude 3.5 mm (0.14 in.) 9...150 Hz Fixed acceleration: 9.8 m/s2 X, Y, Z directions for 10 cycles (approx. 100 min.)		
Shock Resistance	IEC/EN 61131-2 compliant 147 m/s2, X, Y, Z directions for 3 times		
Electrical fast transient/burst	IEC 61000-4-4 2 kV: Power port (display unit) 1 kV: Signal ports		
Electrostatic Discharge Immunity	Contact discharge method: 6 kV Air discharge method: 8 kV (IEC/EN 61000-4-2 Level 3)		

Box Module

■ Memory

			Open Box	Power Box	Standard Box
			SP-5B41	SP-5B10	SP-5B00
Application memory	Media		CFast card	SD card	Flash EPROM
	Editor : GP-Pro EX	Screen area *14	64MB	64MB	
		User font area	No upper limit	8MB	
		Logic program area	-	132KB (Equivalent to 15,000 steps)	
		Free space	Approx. 17GB	-	
	Removable system		Yes		No
Backup memory	Editor : GP-Pro EX	Screen area	NVRAM 320KB or CFast/SD card (storage) 5MB	NVRAM 320KB	
		Variable area	NVRAM 64KB		
	Battery		- *15		

*14 Use the screen area when the user font area's capacity is exceeded - for example, when an image font or a picture font is used. (Except PFXSP5B41)
*15 SP5000 series can retain NVRAM (backup memory) and RTC (clock data) without any batteries. But, when no power is supplied for 100 days or more, it's necessary to additionally mount this option item to retain RTC (clock data).

■ Interface Specifications

	Open Box	Power Box	Standard Box
	SP-5B41	SP-5B10	SP-5B00
Serial Interface COM1	RS-232C/422/485, Data Length: 7 or 8 bits, Stop Bit: 1 or 2 bits Parity: None, odd, or even, Data Transmission Speed: 2,400（1,200）to 115,200 bps Connector: D-Sub 9 pin (plug)		RS-232C, 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: D-Sub 9 (plug)
Serial Interface COM2	RS-232C/422/485, Data Length: 7 or 8 bits Stop Bit: 1 or 2 bits Parity: None, odd, or even Data Transmission Speed: 2,400(1,200)...115,200 bps Connector: D-Sub 9 pin (plug)	RS-232C/422/485, Data Length: 7 or 8 bits Stop Bit: 1 or 2 bits Parity: None, odd, or even Data Transmission Speed: 2,400(1,200)...115,200 bps, 187,500bps（MPI） Connector: D-Sub 9 pin (plug)	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, 187,500 bps (MPI), Connector: D-Sub 9 pin (plug)
USB (Type A) Interface *16	Connector: USB 2.0 (Type A) x 3 Power Supply Voltage: 5 Vdc ±5% Maximum Current Supplied: 500 mA /port, 1 A total for 3 ports Maximum Transmission Distance: 5 m	Connector: USB 2.0 (Type A) x 2 Power Supply Voltage: 5 Vdc ±5% Maximum Current Supplied: 500 mA / port Maximum Transmission Distance: 5 m	
USB (mini-B) Interface	Connector: USB 2.0 (mini-B) x 1, Maximum Transmission Distance: 5m (16.4 ft)		
Ethernet Interface	Standard: IEEE802.3i/IEEE802.3u/IEEE802.3ab, 10BASE-T/100BASE-TX/1000BASE-T Connector: Modular jack (RJ-45) x 2		IEEE802.3i / IEEE802.3u / IEEE802.3ab, 10BASE-T / 100BASE-TX Connector: Modular jack (RJ-45) x 2
SD Card Interface	SD Card Slot (Storage) x 1	SD Card Slot (System) x 1 SD Card Slot (Storage) x 1	SD Card Slot (Storage) x 1
CFast Card Interface	CFast Card Slot (System) x 1 CFast Card Slot (Storage) x 1	-	
Video Interface	DVI-D OUT Connector: DVI-D 24 pin (socket) x 1	-	
Sound Input Interface	Sound Input: MIC or LINE input (software switch) Connector: MINI-JACK Ø3.5 x 1	-	
Sound Output Interface	Speaker Output: 300 mW (Rated Load: 8 Ω, Frequency : 1kHz) LINE Output: Rated load: 10 kΩ or more Connector: 2-piece terminal block (AUX) x 1		-
AUX Input /Output Interface	Alarm Output / Buzzer Output Rated Voltage: 24 Vdc, Rated Current: 50 mA or less Connector: 2-piece terminal block x 1		-

*16 When using the Display Module with the Power Box, you can connect only one of each type of USB device, such as one USB flash drive, one transfer cable, or one bar code reader. If you connect multiple devices that are the same type, only the first device will work.
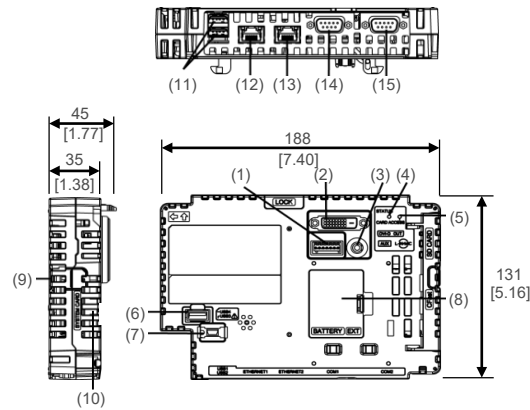
■ Structural Specifications

	Open Box	Power Box	Standard Box
	SP-5B41	SP-5B10	SP-5B00
Cooling Method	Natural air circulation		
External Dimensions *17	W188 x H131 x D45 mm (W7.4 x H5.16 x D1.77 in.)		
Weight *17	0.9 kg (1.98 lb) or less		

*17 External Dimensions and Weight for Box Module only

Box Module

■ External Dimensions / Parts Identifications

SP-5B41

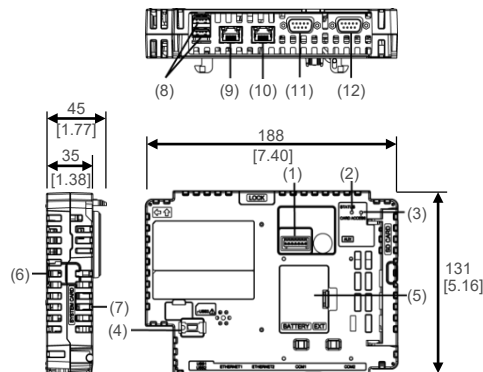mm [in.]

(1)Auxiliary Output/Speaker Output Interface (AUX) (2)DVI-D Output Interface (3)AUDIO Input Interface (LIN/MIC) (4)Status LED (5)Card Access LED (6)USB (Type A) Interface (7)USB (mini-B) Interface (8)Expansion Unit Interface Cover (EXT) (9)Storage Card Cover (10)System Card Cover (11)USB (Type A) Interface (12)Ethernet Interface (ETH1) (13)Ethernet Interface (ETH2) (14)Serial Interface (COM1) (15)Serial Interface (COM2)

SP-5B10

mm [in.]

(1)Auxiliary Output/Speaker Output Interface (AUX) (2)Status LED (3)Card Access LED (4)USB (mini-B) Interface (5)Expansion Unit Interface Cover (EXT) (6)Storage Card Cover (7)System Card Cover (8)USB (Type A) Interface (9)Ethernet Interface (ETH1) (10)Ethernet Interface (ETH2) (11)Serial Interface (COM1) (12)Serial Interface (COM2)

SP-5B00

mm [in.]
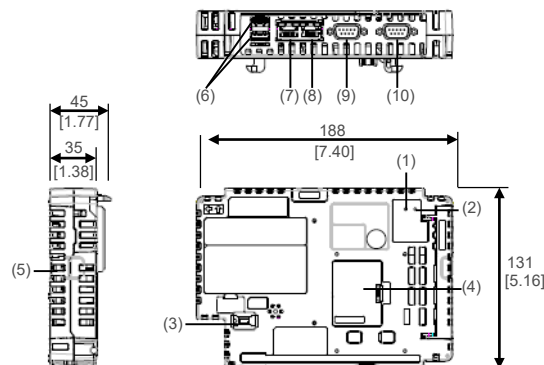
(1)Status LED   (2)Card Access LED (3)USB (mini-B) Interface   (4) Optional Battery (5)Storage Card Cover (6)USB (Type A) Interface (7)Ethernet Interface (ETH1) (8)Ethernet Interface (ETH2) (9)Serial Interface (COM1) (10)Serial Interface (COM2)

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SPSERIES

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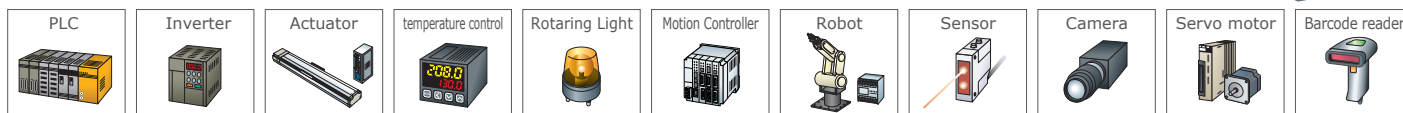
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