

Installing and Wiring

What's in This Chapter

Installation	35
Separate Installation	42
Wiring the Power Supply	48
USB Cable Clamp	53

Installation

Precautions for Building into an End-use Product

The display module of this product is designed for use on flat surfaces of IP65F, UL 50/50E, Type 1, Type 4X (indoor use only), Type 12 and Type 13 enclosures.

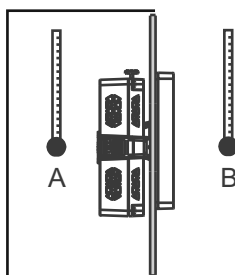
Be aware of the following when building this product into an end-use product:

- The rear module of this product is not approved as an enclosure. When building this product into an end-use product, be sure to use an enclosure that satisfies standards as the end-use product's overall enclosure.
- Install this product in an enclosure with mechanical rigidity.
- This product is not designed for outdoor use. UL certification obtained is for indoor use only.
- Install and operate the display module with its front panel facing outward.

NOTE: IP65F is not part of the UL certification.

Installation Requirements

- Check that the installation wall or cabinet surface is flat, in good condition and has no jagged edges. Metal reinforcing strips may be attached to the inside of the wall, near the panel-cut, to increase its rigidity.
- Decide on the thickness of the enclosure wall, based on the level of strength required. Even if the installation wall thickness is within the recommended range for the Panel Cut Dimensions, page 37, 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.
- Check that the ambient air temperature and the ambient humidity are within their specified ranges in Environmental Specifications, page 19. When installing this product in a cabinet or enclosure, the ambient air temperature is the cabinet's or enclosure's internal and external temperature.

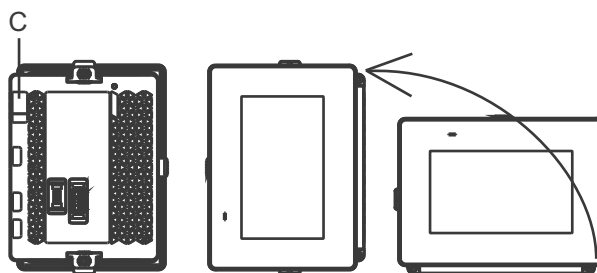


- A. Internal temperature
- B. External temperature

- Be sure that heat from surrounding equipment does not cause this product to exceed its standard operating temperature.

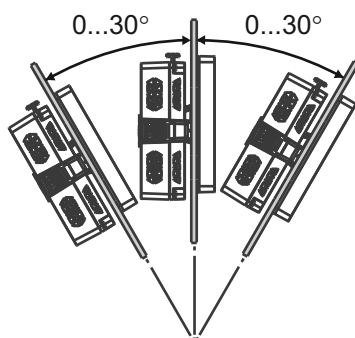
- When mounting this product in portrait orientation, ensure that the right side of this product faces up. In other words, the DC power connector should be at the top.

NOTE: For portrait orientation mounting, make sure your screen editing software supports the function.

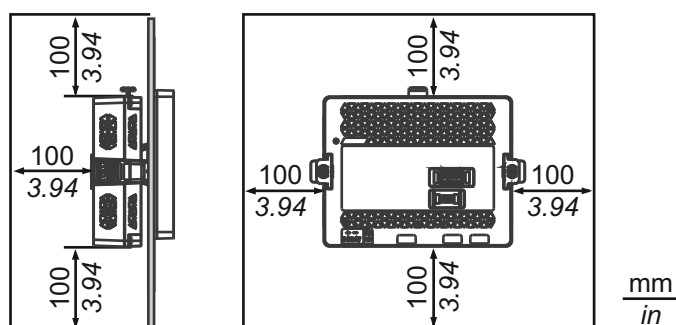


C. Power connector

- When installing this product in a slanted position, the product face should not incline more than 30°.



- For easier maintenance, operation and improved ventilation, install this product at least 100 mm (3.94 in) away from adjacent structures and other equipment as shown in the following illustration:



- The panel must be designed to avoid any induced vibration resonance on the rear module exceeding an amplitude factor of 10 and to avoid any induced permanent vibration resonance. To reduce the resonance use the spacer (sold separately).

NOTICE

EQUIPMENT DAMAGE

When transporting a panel with the product installed, remove its rear module.

Failure to follow these instructions can result in equipment damage.

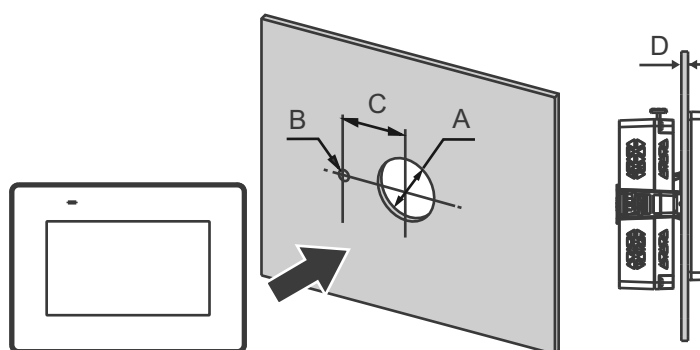
Pressure Differences

When applying and installing this product, it is important that steps are taken to eliminate any pressure difference between the inside and the outside of the enclosure in which this product is mounted. Higher pressure inside the enclosure can cause delamination of the front membrane of the display. Even a small pressure difference inside the enclosure will act on the large area of the membrane and can result in sufficient force to delaminate the membrane and thus cause failure of the touch capability. Pressure differences can often occur in applications where there are multiple fans and ventilators moving air at different rates in different rooms. Please follow these techniques to ensure that this product's function is not impacted by this mis-application:

1. Seal all conduit connections inside of the enclosure, especially those that lead to other rooms that may be at a different pressure.
2. Where applicable, install a small weep hole at the bottom of the enclosure to allow equalization of the internal and external pressure.

Panel Cut Dimensions

Based on the panel cut dimensions, open a mount hole on the panel.



A	B	C
22.5 mm (+0/-0.3 mm) (0.88 in [+0/-0.01 in])	4.0 mm (+0/-0.2 mm) (0.15 in [+0/-0.007 in])	30.0 mm (+0/-0.2 mm) (1.18 in [+0/-0.007 in])

Panel thickness recommended range:

Panel material	Thickness range (D)
Steel	1.5... 6.0 mm (0.06... 0.23 in)
Glass fiber reinforced plastics (minimum GF30)	3.0... 6.0 mm (0.12... 0.23 in)

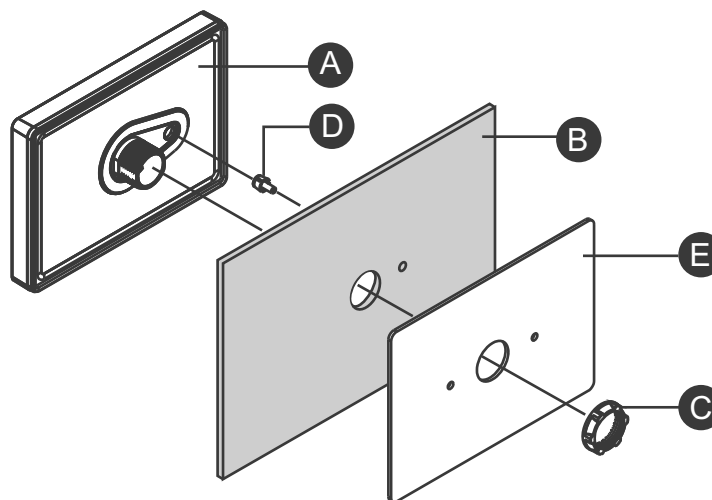
About Spacer

If the panel thickness does not meet the conditions for use with the product, you can use an optional spacer.

Product number	PFXZCM6MP2	PFXZCM6MP4
Spacer size (W x H x D)	145 x 105 x 2 mm (5.71 x 4.13 x 0.08 in)	204 x 140 x 2 mm (8.03 x 5.51 x 0.08 in)
Spacer material	Stainless steel	Stainless steel

The thickness and material of panels you can use the spacer are as follows.

Panel material	STM-6200WA	STM-6400WA
Steel	1 ... 1.5 mm (0.04 ... 0.06 in)	1 ... 1.5 mm (0.04 ... 0.06 in)
Glass fiber reinforced plastics (minimum GF30)	1 ... 3 mm (0.04 ... 0.12 in)	2 ... 3 mm (0.08 ... 0.12 in)
Other plastic	1 ... 3 mm (0.04 ... 0.12 in)	not possible



- A. Display module
- B. Panel
- C. Display module fixing nut
- D. Anti-rotation tee
- E. Spacer

Installation Procedure

This section describes how to install the rear module and display module to the panel.

⚡⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Unplug the power cable from both this product and the power supply prior to installing the product.
- Always use a properly rated voltage sensing device to confirm power is off where and when indicated.
- Replace and secure all covers or elements of the system before applying power to this product.

Failure to follow these instructions will result in death or serious injury.

NOTICE

EQUIPMENT DAMAGE

Always use the installation gasket.

Failure to follow these instructions can result in equipment damage.

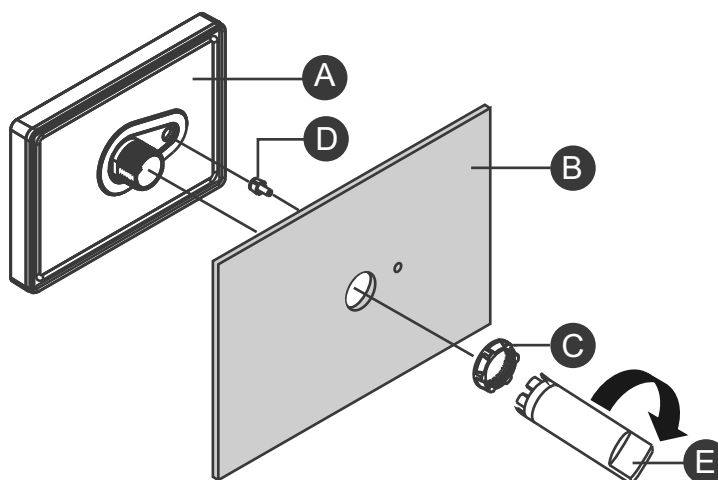
1. Place the display module on a clean and level surface with the screen facing down.
2. Check that the gasket is seated securely into the bezel groove, which runs around the perimeter of the display panel frame.

NOTE: Always use the installation gasket, since it absorbs vibration in addition to repelling water. For the procedure on replacing the installation gasket, refer to Replacing the Installation Gasket, page 58.

3. Based on this product's Panel Cut Dimensions, page 37, open a mount-hole on the panel.
4. Insert the display module and the anti-rotation tee into the panel hole from the front side. Use the socket wrench to tighten the nut. The necessary torque for the nut is 1.2 to 2.0 N•m (10.62 to 17.70 lb-in).

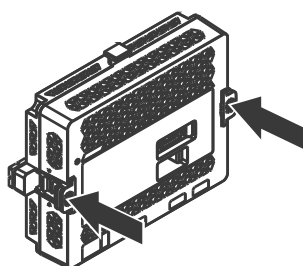
NOTE:

- The anti-rotation tee is used to install the display module horizontally on the panel. When you do not use an anti-rotation tee, applying 2.5 N•m (22.12 lb-in) or more force to the display module could cause the product to rotate. By using an anti-rotation tee, 6 N•m (53.10 lb-in) or more force could cause the product to rotate.
- If the panel thickness does not meet the specified conditions, use the spacer (sold separately).

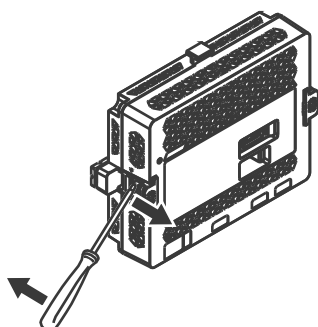


- A. Display module
- B. Panel
- C. Display module fixing nut
- D. Anti-rotation tee
- E. Socket wrench

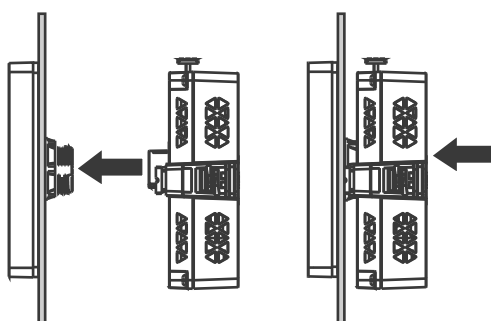
5. If the panel thickness is 3.8 mm (0.15 in) or less, push in the bumper on the rear module until you hear a click. If the panel thickness is more than 3.8 mm (0.15 in), do not change the bumper position.



NOTE: To return the bumper to its original position, use a screwdriver or other tool as a lever to push the bumper up.



6. Insert and push the rear module straight in to the display module, until they lock into place.



Removal Procedure

This section describes how to remove the rear module and display module from the panel.

⚠ ⚠ DANGER**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Unplug the power cable from both this product and the power supply prior to removing the product.
- Always use a properly rated voltage sensing device to confirm power is off where and when indicated.

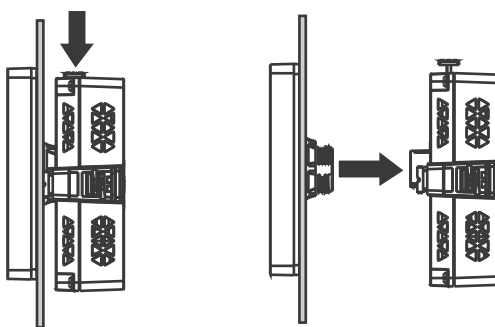
Failure to follow these instructions will result in death or serious injury.

NOTICE**EQUIPMENT DAMAGE**

Be sure to remove the rear module from the display module without twisting.

Failure to follow these instructions can result in equipment damage.

1. Push and hold the button at the top of the rear module, and pull the rear module straight out.



2. Remove the nut and the display module from the panel.

