

EZ Numpad Installation Guide

EZ テンキー
取扱説明書



 WARNING**UNINTENDED EQUIPMENT OPERATION**

- Do not use the unit as the only means of control for critical system functions such as motor start/stop or power control.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

 WARNING**LOSS OF CONTROL**

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure.
- The machine control system design must take into account the possibility of the backlight no longer functioning and the operator being unable to control the machine, or making errors in the control of the machine.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

 WARNING**HAZARD OF ELECTRIC SHOCK OR EXPLOSION**

- Do not disassemble or remodel the unit in any way.
- Do not use the unit in areas where flammable gases are present.
- Do not allow water to enter the connector.
- Do not touch the connector with wet hands.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

 WARNING**UNINTENDED EQUIPMENT OPERATION OR LOSS OF CONTROL**

- Do not use the unit at temperatures outside the range specified in this guide.
- Do not use or store the unit at very high temperatures.
- Do not use or store the unit in direct sunlight or excessively dusty or dirty environments.
- Do not use or store the unit in an environment where it may be exposed to chemical vapors or fumes.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

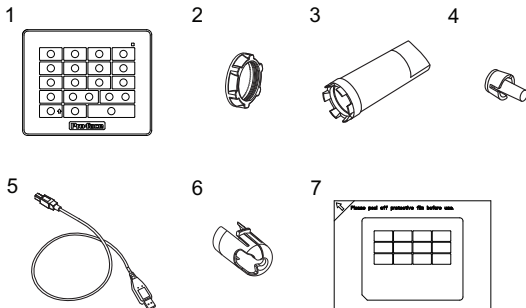
 CAUTION**BROKEN EQUIPMENT**

- Do not use sharp objects or tools to operate the unit.

Failure to follow these instructions can result in injury or equipment damage.

Package Contents

The following items are included in the EZ Numpad package (PFXZCCEUKB1). Before using the unit, please confirm that all items listed here are present.



- 1 EZ Numpad (1)
- 2 Installation Nut (1)
- 3 Socket Wrench (1)
- 4 Anti-rotation Tee (1)
- 5 USB cable (Type A/mini-B, 1.8 m (5.91 ft.)) (1)
- 6 USB clamp (Type mini-B) (1)
- 7 Function Key Label for EZ Numpad (1)
- 8 Installation Guide <this document>

This unit has been carefully packed, with special attention to quality. However, should you find anything damaged or missing, please contact your local distributor immediately.

About the Manual

This manual describes wiring and installation procedures. For more detailed information, refer to the Screen Editing Software manual.

Manual	Contents
Reference Manual	Using the EZ Numpad.

You can select the manuals from the GP-Pro EX (Ver4.0 or later) help menu, or download the manuals from the Pro-face Home Page.

URL
http://www.pro-face.com/otasuke/

General Specifications

General Specifications

Connector Type	USB I/F	Type mini-B (socket), USB 2.0 Full Speed
----------------	---------	--

Electrical Specifications

Power Supply	Rated Input Voltage	5 Vdc (Powered from USB bus)
	Input Voltage Limits	4.75...5.25 Vdc
	Power Consumption	0.75 W or less

Environmental Specifications

Physical Environment	Surrounding Air Operating Temperature	0...55 °C (32...131 °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/m ³ (10 ⁻⁷ oz/ft ³) or less (non-conductive levels)
	Pollution Degree	For use in Pollution Degree 2 environment
	Corrosive Gasses	Free of corrosive gas
	Operating Altitude	2000 m [6561 ft] or lower
Mechanical Environment	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/s ² X, Y, Z directions for 10 cycles (100 min.)
	Concussion Resistance	IEC/EN 61131-2 compliant (147 m/s ² , X, Y, Z directions for 3 times)
Electrical Environment	Electrical fast transient/burst	IEC61000-4-4 2 kV Power port (Display unit) 1 kV Signal ports
	Electrostatic Discharge Immunity	IEC61000-4-2 6 kV Contact discharge 8 kV Air discharge

External Specifications

External Dimensions	W97.6 x H80.0 x D31.5 mm (W3.84 x H3.15 x D1.24 in.)
Structure*1	IP65 UL50E TYPE 4X (Indoor Use Only) (on the front panel when properly installed in an enclosure)
Weight	150 g (0.33 lb) or less

- *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 the UL50E TYPE 4X, oils that should have no effect on the unit can possibly harm the panel. This can occur in areas where either vaporized oils are present, or where low viscosity cutting oils are allowed to adhere to the panel for long periods of time. If the unit's front face protection sheet peels 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, they 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 protection cannot be kept. To maintain the original protection level, the periodical maintenance is essential.

Note :

- A gasket with scratches or dirt could have lost much of its water resistance. The periodical maintenance is essential (e.g. once a year, or as soon as scratches or dirt become visible) for water resistance equivalent to IP65.

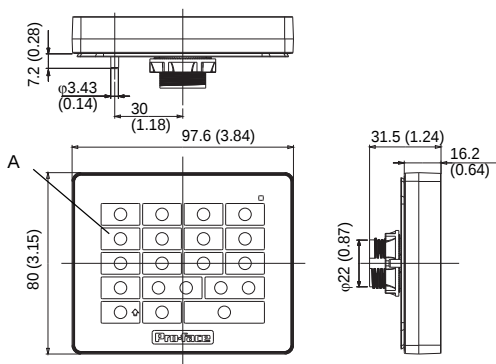
**DANGER****POTENTIAL FOR EXPLOSION**

- Verify that the power, input and output (I/O) wiring are in accordance with Class I, Division 2 wiring methods.
- Substitution of any component may impair suitability for Class I, Division 2.
- Do not disconnect equipment while the circuit is live or unless the area is known to be free of ignitable gases concentrations.
- Remove power before attaching or detaching any connectors to or from this product.
- Ensure that power, communication, and accessory connections do not place excessive stress on the ports. Consider the vibration in the environment when making this determination.
- Securely attach power, communication, and external accessory cables to the panel or cabinet.
- Suitable for use in Class I, Division 2, Groups A, B, C, and D Hazardous Locations.
- Confirm that the USB cable has been attached with the USB cable clamp before using the USB interface.

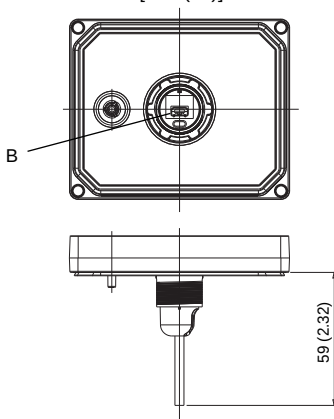
Failure to follow these instructions will result in death or serious injury.

Dimensions

External Dimensions [mm (in.)]



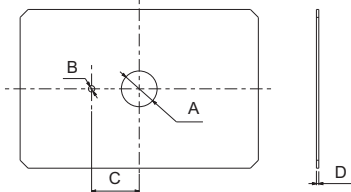
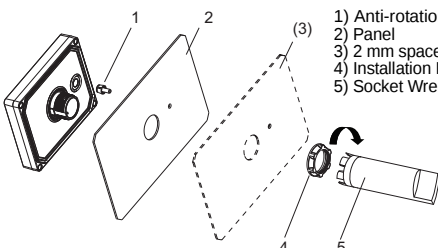
Dimensions with cable [mm (in.)]



A. Num Key / Function Key

B. USB (Type mini-B) Interface

Installation

Step	Action								
1	Create a panel cut-out and insert the unit into the panel from the front. The following illustration shows the panel cut-out for the unit:  <table border="1" data-bbox="224 566 918 725"><thead><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr></thead><tbody><tr><td>22.50⁺⁰_{-0.30} mm (0.88⁺⁰_{-0.01} in.)</td><td>4⁺⁰_{-0.20} mm (0.15⁺⁰_{-0.007} in.)</td><td>30⁺⁰_{-0.20} mm (1.18⁺⁰_{-0.007} in.)</td><td>1.5...6 mm (0.06...0.23 in.)</td></tr></tbody></table>	A	B	C	D	22.50 ⁺⁰ _{-0.30} mm (0.88 ⁺⁰ _{-0.01} in.)	4 ⁺⁰ _{-0.20} mm (0.15 ⁺⁰ _{-0.007} in.)	30 ⁺⁰ _{-0.20} mm (1.18 ⁺⁰ _{-0.007} in.)	1.5...6 mm (0.06...0.23 in.)
A	B	C	D						
22.50 ⁺⁰ _{-0.30} mm (0.88 ⁺⁰ _{-0.01} in.)	4 ⁺⁰ _{-0.20} mm (0.15 ⁺⁰ _{-0.007} in.)	30 ⁺⁰ _{-0.20} mm (1.18 ⁺⁰ _{-0.007} in.)	1.5...6 mm (0.06...0.23 in.)						
2	Insert the unit into the panel hole. Screw in the nut using torque of 1.2...2 N•m (10.62...17.70 lb-in)  1) Anti-rotation Tee 2) Panel 3) 2 mm spacer (Option) 4) Installation Nut 5) Socket Wrench Note : - Install the 2 mm spacer (Option) when the panel thickness is 1 mm (0.04 in.) or more, and less than 1.5 mm (0.06 in.). The spacer is unnecessary if the panel thickness is 1.5 mm (0.06 in.) or more. - Remove the USB cable before removing the unit. - If using an anti-rotation tee, insert it into the unit securely.								

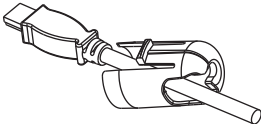
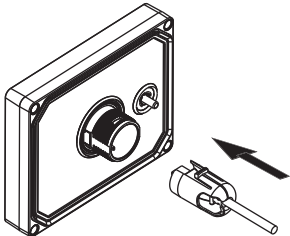
⚠ DANGER**HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

- 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 the Module the power supply.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace and secure all covers or elements of the system before applying power to this product.

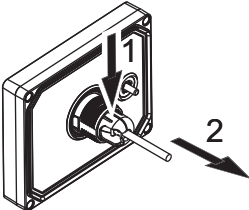
Failure to follow these instructions will result in death or serious injury.

USB Clamp

Attachment

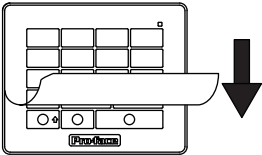
Step	Action
1	Pass the USB cable through the USB clamp. 
2	Insert the USB cable into the USB (Type mini-B) interface on the unit. Insert the USB clamp into the mounting hole. 

Removal

Step	Action
1	Hold the locking tab of the clamp and pull to remove it. 

Function Key Label for EZ Numpad

Use the function key label to change the labels on the key.

Step	Action
1	Peel off the protective sheet of the function key label.
2	Print a new label onto the function key label. Note : - The function key label is A6 size. For more detailed information on the printing method, refer to the Screen Editing Software manual. - If you rub the function key label hard, the print on the function key label may come off.
3	Attach the function key label.  Note : When replacing the function key label, slowly peel off the chamfered part on the lower left of the label. If not, the film of the unit may peel off.

Options

Options

Product Name	Model No.	Description
2mm Spacer for panel thickness adjustment	PFXZCCAT1	2mm (0.08 in.) spacer to adjust installation panel thickness.

Wall Adapter Attachment Options

Product Name	Model No.	Description
EZ Series Wall Adaptor Attachment	PFXZCEATWM1	This attachment allows you to mount the EZ Series Unit on the wall. Please use it when holding the EZ Series in your hands.
USB Front Cable (1m)	CA5-USBEXT-01	Extension cable attaching USB (Type A) interface to front panel.

Maintenance Options

Product Name	Model No.	Description
Installation Nut	PFXZGMNT1	Nut for installation to a solid panel (10 pcs/set)
Socket Wrench	PFXZGMSW1	Socket Wrench to tighten and loosen the installation nut. (1piece/set)
Accessories Kit for EZ Numpad	PFXZCCAKKB1	Anti-rotation Tee (5pcs), USB cable clamp to prevent disconnection (USB/mini-B, 1 port, 5pcs), Function Key Label for EZ Numpad (2pcs/sheet)

Relevant Standards

The unit is manufactured in accordance with:

- Standard UL 508 and CSA C22.2 n°142 for Industrial Control Equipment
- Standard ANSI/ISA - 12.12.01 and CSA C22.2 n°213 for Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

Note :

- For use in Pollution Degree 2 environments.
- For use on a flat surface of a Type 1 or Type 4X (Indoor Use Only) Enclosure.
- Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations, or Non-hazardous Locations only.

For information on certifications and standards, such as certified models and certificates, see the following or product markings.

<http://www.pro-face.com/worldwide.html>



DANGER

POTENTIAL FOR EXPLOSION

- Always confirm that this product is suitable for use in hazardous locations by checking that the ANSI/ISA 12.12.01 or CSA C22.2 N°213 certification appears on the product labeling.
- Do not attempt to install, operate, modify, maintain, service, or otherwise alter this product except as permitted in this manual. Unpermitted actions may impair the suitability of this product for Class I, Division 2 operation.
- To power on or power off this product installed in a Class I, Division 2 hazardous location, you must either:
 - Use a switch located outside the hazardous environment, or
 - Use a switch certified for Class I, Division 1 operation inside the hazardous area.
- Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous. This applies to all connections including power, ground, serial, parallel, and network connections.
- Never use unshielded/ungrounded cables in hazardous locations.
- When enclosed, keep enclosure doors and openings closed at all times to avoid the accumulation of foreign matter inside the workstation.
- Securely lock externally connected units and each interface before turning on the power supply.
- Do not use, connect, or disconnect USB cable unless area is known to be nonhazardous.
- Potential electrostatic charging hazard: wipe the front panel of the terminal with a damp cloth before turning ON.

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



CAUTION

ENVIRONMENTAL HAZARDS TO THE EQUIPMENT

- Allow the unit to reach the surrounding air temperature, not exceeding the 55°C (131°F), before turning the unit on.
- Do not turn on the unit if condensation has occurred inside the unit. After it is completely dry again, the unit may be turned on.
- Do not expose the unit to direct sunlight.
- Remove any dust from the unit before turning it on.
- Ensure that the USB cable Clamp is not damaged. Replace them, if necessary.

Failure to follow these instructions can result in injury or equipment damage.

The unit is a device for use in factory systems.

When using the unit in a system, the system should comply with the following standards in regards to the installation environment and handling.

- Standard WEEE, Directive 2012/19/EU
- Standard RoHS, Directive 2011/65/EU
- Standard RoHS China, Standard SJ/T 11363-2006

CE Markings

This product conforms to the necessary requirements of the following Directives for applying the CE label:

- 2004/108/EC EMC Directive

This conformity is based on compliance with EN61000-6-4, EN61000-6-2

KC Markings

사용자안내문

기종별	사용자안내문
A급 기기 (업무용 방송통신기자재)	이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

NOTE

Please be aware that Digital Electronics Corporation shall not be held liable by the user for any damages, losses, or third party claims arising from the use of this product.

中国 RoHS 相关资料

(本资料是中国 RoHS 的必备资料。)
(この情報は、中国 RoHS に対して必要な情報です。)
(This information is essential for China RoHS.)

 部件名称 (Parts)	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
本体 (Product)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard.

本表显示了，在销售之日所售产品中，普洛菲斯供应链的电子产品信息可能含有的有毒有害物质或元素。

注意：所售产品可能会也可能不会含有表中列出的所有部件。

This table shows where these substances may be found in the supply chain of "Pro-face" electronic information products, as of the date of sale of the enclosed product. Note that some of the component types listed above may or may not be a part of the enclosed product.