

# SP5000/SP5000X/FP5000 Series

## ATEX/IECEX Instruction Guide

www.pro-face.com

Concerning the use of SP5000/SP5000X/FP5000 Series for applications in potentially explosive atmospheres (Zones 2/22)

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**Type examination certificate: INERIS 15ATEX3007X**

**IECEX Certificate of Conformity: IECEX INE15.0018X**

**Type examination certificate : CML 21UKEX3781X**

### SAFETY INSTRUCTIONS

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



## DANGER

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



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## **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

## **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.


## **NOTICE**

**NOTICE** is used to address practices not related to physical injury.

### **PLEASE NOTE**

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric or any of its affiliates or subsidiaries (hereinafter, referred to as Schneider Electric) for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

### **SCOPE**

This present document applies when the SP5000/SP5000X/FP5000 Series bears  marking and provides important information when used in hazardous areas. This documentation has to be kept and always refer to those instructions for installation, operation, maintenance or evolution of your system.

You can download this instruction guide at [www.pro-face.com](http://www.pro-face.com).

If any translation is needed, you can contact your local Pro-face support or sales center.

The product is only supplied with 12...24 Vdc

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## Relevant Standards

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These terminals have been manufactured in accordance with:

- Standard EN IEC 60079-0 (2018) and IEC 60079-0 (2017): Explosive atmospheres - Part 0: Equipment - General requirements.
- Standard EN IEC 60079-7 (2015) + A1 (2018) and IEC 60079-7 (2015) + A1 (2017): Explosive atmospheres - Part 7: Equipment protection by increased safety "e".
- Standard EN 60079-15 (2010) and IEC 60079-15 (2010): Explosive atmospheres - Part 15: Equipment protection by type of protection "n".
- Standard EN 60079-31 (2014) and IEC 60079-31 (2013): Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t".



# DANGER

### POTENTIAL FOR EXPLOSION

Install, use, and maintain these modules in accordance with:

- Standard IEC 60079-14: Explosive atmospheres - Part 14: Electrical installations design, selection and erection.
- Standard IEC 60079-17: Inspection and maintenance of electrical installations in hazardous areas.
- Edicts, by-laws, laws, directives, circulars, standards, regulations and any other document relating to where the apparatus is installed.


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

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## Permitted zones of application

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Refer to the section "Markings" to get information about the permitted zones of protection and the types of protection.

- The product installed in zones 2/22 hazardous areas must be certified and bear the  marking
- Ensure with the marking that the terminals are compatible with the conditions permitted for the hazardous area at the site where it is being used.

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## Installation, Operation and Maintenance

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Make sure you follow all the recommendations in the in the hardware manual for each product and additionally those listed below.



## DANGER

### POTENTIAL FOR EXPLOSION

- Confirm that the location is free from explosively hazardous gases or dust before connecting or disconnecting equipment, replacing or wiring modules.
- Make sure that the ambient temperature in protective enclosure never exceeds the temperature marked on the product.
- Confirm each interface (COM, Ethernet, USB, power line, ...) has been securely locked.
- Confirm that any USB cable has been attached with its appropriate clamp.
- Install the modules in an enclosure EPL Gc insuring a minimal ingress protection IP54 for use in zone 2 and in an enclosure EPL Dc insuring a minimal ingress protection IP6X for use in zone 22.
- Make sure the purging test inside the product is performed and validated in accordance with IEC 60079-2 when installed in an IP4X pressurized enclosure.
- Do not install the modules in the environment more than Pollution Degree 2 as defined in IEC 60664-1.
- Do not open the enclosure when an explosive atmosphere is present.
- Confirm that the power supply has been turned OFF before disconnecting, replacing or wiring modules.
- Ensure that ground at power supply is properly connected.
- Do not use equipment that has been damaged.
- Do not expose the terminal to direct sunlight.
- Do not allow layers of dust to form on the product: it should be cleaned regularly.
- Use a front USB cover (with screw) by Pro-face (Model Number PFXZCDCVUS1).
- Implement method to avoid risk of electrostatic discharge at using zone 2 and 22 areas. See the details at NOTE.
- Add the warning for potential electrostatic charging hazard in a location visible by the operator after installation in order to maintain the required level of safety.
- Take into consideration during the installation, that the product underwent only a shock corresponding to an energy of a low risk at 2J.
- Mount the display in an enclosure according to the installation procedures described in the user manual.
- Use only the identical replacement battery (PFXZCBBT1) for the product.

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

**NOTE:** The front surface of the product has risk of electrostatic discharge. If the product is operating in zone 2/22 areas, the following instructions must be applied:

All models except for PFXSP5700WCD and PFXSP5800WCD:







- Use non-conductive gloves (e.g. Electrosoft Latex Gloves by Honeywell Safety) made of leather, plastic or rubber whose surface resistance is more than 1 GΩ at 23 ± 2 °C and 50 ± 5 % relative humidity.
- Use a non-conductive touch pen (e.g. CA7-TPPEN/ALL-01 by Pro-face) made of plastic material whose surface resistance is more than 1 GΩ at 23 ± 2 °C and 50 ± 5 % relative humidity to all terminals.






PFXSP5700WCD and PFXSP5800WCD:

- Install the product away from 1,000 mm distance from a potential electrostatic source (e.g. plant process, conveyor belt, pipe, etc). The environmental conditions shall not be lower than 25 % relative humidity. If the potential electrostatic source is upper than 30 kV, it is necessary to call an expert to evaluate the electrostatic risk and the distance between the product and the electrostatic source.

## Markings

ATEX and IECEx markings, applied to the product are as follows:

<p>PFXSP5400WAD, PFXSP5500TPD, PFXSP5500WAD, PFXSP5600WAD, PFXSP5600TAD, PFXSP5600TPD, PFXSP5660TPD, PFXSP5700TPD, PFXSP5B00, PFXSP5B10, PFXSP5B40, PFXSP5B41, PFXFP5600TPD, PFXFP5700TPD, PFXZCDEUPF1, PFXZCDEUCA1, PFXZCDADEXP1, PFXZCDADEXR1, PFXZCHEUFN1, PFXZCHEUCAM1</p>	<p>PFXSP5700WCD, PFXSP5800WCD</p>
<p><b>Schneider Electric Japan Holdings Ltd.</b> <b>541-0041 Osaka Japan</b></p> <p>  </p> <p><b>INERIS 15ATEX3007X</b> <b>IECEx INE 15.0018X</b> <b>CML 21UKEX3781X</b> <b>II 3 G D</b> <b>Ex ec nC IIC T4 Gc</b> <b>Ex tc IIIC T135°C Dc</b> <b>Tamb: 0°C to +60°C</b></p> <p><b>WARNING</b> - Do not disconnect when circuit is live. - Potential electrostatic charging hazard (see instructions).</p>	<p><b>Schneider Electric Japan Holdings Ltd.</b> <b>541-0041 Osaka Japan</b></p> <p>  </p> <p><b>INERIS 15ATEX3007X</b> <b>IECEx INE 15.0018X</b> <b>CML 21UKEX3781X</b> <b>II 3 G D</b> <b>Ex ec IIC T4 Gc</b> <b>Ex tc IIIC T135°C Dc</b> <b>Tamb: 0°C to +55°C</b></p> <p><b>WARNING</b> - Do not disconnect when circuit is live. - Potential electrostatic charging hazard (see instructions).</p>

PFXSP5600TPDLC, PFXSP5B41LC, PFXSP5600TADLC, PFXSP5B00LC	PFXSP5B10LC	
<p><b>Schneider Electric Japan Holdings Ltd.</b>  <b>541-0041 Osaka Japan</b></p>  <p><b>INERIS 15ATEX3007X</b>  <b>IECEx INE 15.0018X</b>  <b>CML 21UKEX3781X</b>  <b>II 3 G D</b>  <b>Ex ec nC IIC T6 Gc</b>  <b>Ex tc IIIC T85°C Dc</b>  <b>Tamb: 0°C to +50°C</b></p> <p><b>WARNING</b>          - Do not disconnect when circuit is live.          - Potential electrostatic charging hazard (see instructions).</p>	<p><b>Schneider Electric Japan Holdings Ltd.</b>  <b>541-0041 Osaka Japan</b></p>  <p><b>INERIS 15ATEX3007X</b>  <b>IECEx INE 15.0018X</b>  <b>CML 21UKEX3781X</b>  <b>II 3 G D</b>  <b>Ex ec nC IIC T6 Gc</b>  <b>Ex tc IIIC T85°C Dc</b>  <b>Tamb: 0°C to +30°C</b></p> <p><b>WARNING</b>          - Do not disconnect when circuit is live.          - Potential electrostatic charging hazard (see instructions).</p>	
PFXSP5490WAD PFXSP5490WADF0H	PFXSP5B90 PFXSP5B90F0H PFXSP5690WAD PFXSP5690WADF0H	PFXSP5790WAD PFXSP5790WADF0H
<p><b>Schneider Electric Japan Holdings Ltd.</b>  <b>541-0041 Osaka Japan</b></p>  <p><b>INERIS 15ATEX3007X</b>  <b>IECEx INE 15.0018X</b>  <b>CML 21UKEX3781X</b>  <b>II 3 G D</b>  <b>Ex ec nC IIC T4 Gc</b>  <b>Ex tc IIIC T135°C Dc</b>  <b>Tamb: -30°C to +65°C</b></p> <p><b>WARNING</b>          - Do not disconnect when circuit is live          - Potential electrostatic charging hazard (see instructions)</p>	<p><b>Schneider Electric Japan Holdings Ltd.</b>  <b>541-0041 Osaka Japan</b></p>  <p><b>INERIS 15ATEX3007X</b>  <b>IECEx INE 15.0018X</b>  <b>CML 21UKEX3781X</b>  <b>II 3 G D</b>  <b>Ex ec IIC T4 Gc</b>  <b>Ex tc IIIC T135°C Dc</b>  <b>Tamb: -30°C to +70°C</b></p> <p><b>WARNING</b>          - Do not disconnect when circuit is live          - Potential electrostatic charging hazard (see instructions)</p>	<p><b>Schneider Electric Japan Holdings Ltd.</b>  <b>541-0041 Osaka Japan</b></p>  <p><b>INERIS 15ATEX3007X</b>  <b>IECEx INE 15.0018X</b>  <b>CML 21UKEX3781X</b>  <b>II 3 G D</b>  <b>Ex ec IIC T4 Gc</b>  <b>Ex tc IIIC T135°C Dc</b>  <b>Tamb: -20°C to +60°C</b></p> <p><b>WARNING</b>          - Do not disconnect when circuit is live          - Potential electrostatic charging hazard (see instructions)</p>
<p><b>NOTE:</b> Other required elements such as product reference, serial number and date code of manufacture are already marked on products.          All models may be followed by alphanumeric characters and there is no impact safety related critical components and constructions.</p>		



