

# Instruction Manual

## 1. Marking

Segment Protector R2-SP-IC*
ATEX certificate: TÜV 12 ATEX 098651 X ATEX marking: Ⓜ II 3G Ex nA [ic] IIC T4 Gc Ⓜ II (3)D [Ex ic Dc] IIIC
IECEX certificate: IECEX TUN 12.0015X IECEX marking: Ex nA [ic] IIC T4 Gc [Ex ic Dc] IIIC
North America Certificates: E106378 (UL) Class I, Division 2, Groups A-D, T4 Class I, Zone 2, Group IIC, T4
CCC certificate: 2020322310002500 CCC marking: Ex ec [ic] IIC T4 Gc, [Ex ic Dc] IIIC

The \*-marked letters of the type code are placeholders for versions of the device.

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## 2. Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismantling lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismantling of the device. The trained and qualified personnel must have read and understood the instruction manual.

Prior to using the product make yourself familiar with it. Read the instruction manual carefully.

## 3. Reference to Further Documentation

Observe directives, standards, and national laws applicable to the intended use and the operating location.

Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, and control drawings if applicable supplement this document. You can find this information under [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

Due to constant revisions, documentation is subject to permanent change. Please refer only to the most up-to-date version, which can be found under [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## 4. Intended Use

The Segment Protector is a fieldbus device coupler designed in accordance with IEC/EN 61158-2 to connect field devices via spurs to the trunk of a segment.

Each spur individually limits or isolates the current during a spur failure, ensuring that the remaining segment is not affected.

If the device has already been operated in general electrical installations, the device may subsequently no longer be installed in electrical installations used in combination with hazardous areas.

The device is designed for use in intrinsically safe fieldbus systems according to FISCO or Entity.

The device must only be operated in the specified ambient temperature range and at the specified relative humidity without condensation.

## 5. Improper Use

Protection of the personnel and the plant is not ensured if the device is not used according to its intended use.

## 6. Mounting and Installation

Prior to mounting, installation, and commissioning of the device you should make yourself familiar with the device and carefully read the instruction manual.

Observe the installation instructions according to IEC/EN 60079-14. Observe the installation instructions according to IEC/EN 60079-25.

Do not mount a damaged or polluted device.

If the device has already been operated in general electrical installations, the device may subsequently no longer be installed in electrical installations used in combination with hazardous areas.

Only use operating elements in the absence of a potentially explosive atmosphere.

Only use operating elements in the specified ambient temperature range.

Temperature range	-5 °C to +70 °C
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Do not connect the signal lines to earth or to the cable shield.

All cables and connection lines must be mechanically secured.

Only manipulate the connections within the specified ambient temperature range.

Temperature range	-5 °C to +70 °C
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The device may be installed in a corrosive atmosphere according to ISA-S71.04, severity level G3.

Observe the tightening torque of the screws.

### 6.1. Requirements for Cables and Connection Lines

Observe the permissible core cross section of the conductor.

The insulation stripping length must be considered.

When using stranded conductors, crimp wire end ferrules on the conductor ends.

### 6.2. Hazardous Area

Observe the compliance of the separation distances between two adjacent intrinsically safe circuits according to IEC/EN 60079-14.

Intrinsically safe circuits of associated apparatus (installed in non-hazardous area) can be led into hazardous areas. Observe the compliance of the separation distances to all non-intrinsically safe circuits according to IEC/EN 60079-14.

In order to maintain the separation distances defined in IEC/EN 60079-11 when using a Segment Protector to generate intrinsically safe outputs, use the specified accessories.

Accessory:	ACC-R2-SW.3
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In order to maintain the separation distances defined in IEC/EN 60079-11 when using the SCP-LBF\* surge protectors on intrinsically safe spur outputs, use the surge protector TCP-LBF\* with an integrated separation wall at the trunk.

Ensure that the trunk is equipped with two terminators, one at each end of the trunk.

Ensure that the operating element for gas group selection is set to the correct position for your intended application.

#### 6.2.1. Gas

##### 6.2.1.1. Zone 2

The device must be installed and operated only in surrounding enclosures that

- comply with the requirements for surrounding enclosures according to IEC/EN 60079-0,
- are rated with the degree of protection IP54 according to IEC/EN 60529.

Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

#### 6.2.2. Dust

##### 6.2.2.1. Zone 22

The device may only be installed and operated in Zone 22 if mounted in a surrounding enclosure, which corresponds to equipment protection level Dc.

Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

## 7. Operation, Maintenance, Repair

Do not repair, modify, or manipulate the device.

Do not use a damaged or polluted device.

If cleaning is necessary while the device is located in a hazardous area, in order to avoid electrostatic charging only use a clean damp cloth.

If there is a defect, always replace the device with an original device.

## 8. Delivery, Transport, Disposal

Check the packaging and contents for damage.

Check if you have received every item and if the items received are the ones you ordered.

Keep the original packaging. Always store and transport the device in the original packaging.

Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet.

The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.