

# Instruction Manual

## 1. Marking

Alarm Sounder: PF-IS-SM-105 Signal Beacon: PF-IS-BM- Alarm Sounder with Signal Beacon: PF-IS-CM-105-*
ATEX certificate: ERO 24 ATEX 0014X ATEX marking PF-IS-SM-105: Ⓢ II 1 GD Ex ia IIC T6 Ga Ex ia IIIC T <sub>200</sub> 85°C Da Ⓢ I M1 Ex ia I Ma ATEX marking PF-IS-BM- Ⓢ II 1 GD Ex ia IIC T5 Ga Ex ia IIIC T <sub>200</sub> 85°C Da Ⓢ I M1 Ex ia I Ma
IECEX certificate: IECEX EMT 24.0011X UKCA certificate: EMA 24 UKEX 0006X

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.

## 3. Reference to Further Documentation

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

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

In order to access this documentation, enter the product name, i. e. the type code, or the item number of the product in the search field of the website.

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).

## 4. Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The device can be used indoors.

The device can be used outdoors.

The device can be used in Zone 0.

The device can be used in Zone 1.

The device can be used in Zone 21.

The device can be used in Zone 2.

The device can be used in Zone 20.

The device can be used in Zone 22.

The device is designed for wall mounting.

The device is designed for ceiling mounting.

The device is designed for mounting to a steel framework.

## 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

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

Examples for such regulations are regulations regarding electricity, grounding, installation as well as hygiene and safety.

When mounting and installing the device, ensure that the environment is dry.

Mount the device so that it is visible from the area to be covered.

Mount the device so that it is audible from the area to be covered.

Ensure that the enclosure is mounted on a flat surface. This prevents the deformation of the enclosure and ensures the safe sealing function of the cover seal.

Protect the device against long-term or excessive mechanical vibrations.

If mounting the enclosure on concrete use expansion anchors.

When mounting the enclosure to a steel framework use vibration resistant mounting material.

Use suitable fixing material for mounting.

Mount the enclosure at the fixing points provided.

If you intend to install the device or enclosure in areas that may be exposed to aggressive substances, ensure that the stated surface materials are compatible with these substances. If required, contact Pepperl+Fuchs for further information.

Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device.

Mount the device in a location with low electrostatic charge.

Ensure that the device provides and maintains a degree of protection of at least IP66 according to IEC/EN 60079-0.

Safety-relevant markings are found on the nameplate supplied.

Ensure that the nameplate is present and legible. Take the ambient conditions into account.

Additional warning markings may be affixed next to the nameplate.

Ensure that the enclosure is not damaged, distorted, or corroded.

Close all unused enclosure holes with the appropriate stopping plugs.

Ensure that all seals are clean, undamaged, and correctly fitted.

If external connections are present, ensure that the connections are in good condition, and are not damaged or corroded.

To ensure compliance with the temperature class, ensure that there is adequate free air space around the enclosure.

Ensure that there are no external heat sources around the enclosure.

In order to prevent condensation in the enclosure, use suitably certified breather drains.

### Requirements for Internal Components

Contact Pepperl+Fuchs before installing additional components. Pepperl+Fuchs will check whether these components are listed in the certificate. The maximum power dissipation of this installation solution must be within the permitted limits.

### Requirements for Cables and Connection Lines

Only use cables and connection lines with a temperature range appropriate to the application.

Only use the terminals which are supplied with the device.

Ensure that the terminals are in good condition and are not damaged or corroded.

The terminals may have several connections.

Observe the tightening torque of the terminal screws.

Use the shortest possible cable lengths and avoid small core cross sections.

Observe the minimum bending radius of the conductors.

When installing the conductors the insulation must reach up to the terminal.

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

Unused cables and connection lines must be either connected to terminals or securely tied down and isolated.

Ensure that unused terminal screws are properly tightened down.

Insulation by tape alone is not permitted.

### Requirements for Cable Glands

Only use cable glands that are suitably certified for the application.

Only use stopping plugs that are suitably certified for the application.

Only use cable glands with a temperature range appropriate to the application.

For cable glands only use incoming cable diameters of the appropriate size.

Use seals that are suitable for the specified application.

Ensure that the degree of protection is not violated by the cable glands.

Install cables and cable glands in a way that they are not exposed to mechanical hazards.

The cables and connection lines must be free from mechanical stress.

Use appropriate strain relief, which must be fitted outside of the enclosure.

Ensure that all cable glands are in good condition and are securely tightened.

Close all unused cable glands with the appropriate sealing plugs.

Observe the specific ambient conditions of sealing plugs.

Tighten all cable glands with the appropriate torque.

Ground metal cable glands.

### Specific Conditions of Use

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

For mining applications, observe directives, standards, and national laws applicable to the operating location.

When connecting intrinsically safe devices with intrinsically safe circuits of associated apparatus, observe the maximum peak values with regard to

explosion protection (verification of intrinsic safety). Observe the standards IEC/EN 60079-14 or IEC/EN 60079-25.  
Observe the installation instructions according to IEC/EN 60079-14.  
Observe the installation instructions according to IEC/EN 60079-25.  
The energy stored in the cable must not exceed the maximum permissible energy limits.  
Only use the device in fixed installations.

## 7. Operation, Maintenance, Repair

Observe the requirements according to IEC/EN 60079-14 during operation.  
Observe IEC/EN 60079-17 for maintenance and inspection.  
Observe the requirements according to IEC/EN 60079-19 for repair and overhaul.  
If there is a defect, the device must be repaired by Pepperl+Fuchs.  
When energized, the enclosure may only be opened for maintenance, if only intrinsically safe circuits are used inside the enclosure.  
When maintaining the device, ensure that the environment is dry.  
Check the wear on the device and the device components at specific intervals. The interval between checks depends on the operating conditions and loads that occur.  
Ensure that all fasteners are present.  
Before assembly, check that the seal and sealing surface are clean and in good condition to ensure the degree of protection.  
To avoid hearing damage, keep a safe distance from the device.  
To avoid eye damage, do not stare into the device.  
Do not climb on the device.  
Do not stand on the device.  
Do not cover the device.

### Specific Conditions of Use

If the device is installed in potentially explosive dust atmosphere, observe that the thickness of the dust layer does not exceed 5 mm. Remove the dust layers in regular intervals.  
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.

## 8. Delivery, Transport, Disposal

Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet.  
Check the packaging and contents for damage.  
Check if you have received every item and if the items received are the ones you ordered.  
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.