Instruction Manual

1. Marking

Control Panels/Control Stations, Copper free aluminum EJB*
Control Panels/Control Stations, Stainless steel EJBX*
ATEX certificate: INERIS 14 ATEX 0022X
ATEX marking: ⟨Ex⟩ II 2 GD Ex db IIB+H_2 T* Gb Ex tb IIIC T** °C Db T6/T85 °C T5/T100 °C T4/T135 °C T3/T200 °C
depending on configuration, ambient temperature and built-in power loss
IECEx certificate: IECEx INE 14.0029X
CCC certificate: 2020322303002546
UL approval: cETLus Control Panels E5003368 approved for: Class I, Division 1, Groups B, C, D Class II, Division 1, Groups E, F, G Type 4, 4X, 7, 9

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 dismounting lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismounting 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.

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.

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 enclosures of the EJB* series are made of copper free aluminum.

The enclosures of the EJBX* series are made of stainless steel.

The device can be used indoor.

The device can be used outdoor.

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 22.

The device is designed for wall mounting.

The device is designed for mounting to a steel framework.

Use suitable fixing material for mounting.

Mount the enclosure at the fixing points provided.

5. Improper Use

Do not mount the device on the ceiling.

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

Ex components are not intended to be used alone. Mounting and usage of Ex components in devices or systems must be certified separately. Ex components have the U marking at the end of the certificate number.

Observe the instruction manuals for the associated components.

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

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.

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.

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

Observe the requirements according to IEC/EN 60079-31regarding excessive dust deposits.

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

The product certification allows smaller distances than the distances specified in IEC/EN 60079-14:

- Gas group IIA: = 10 mm
- Gas group IIB: = 10 mm
- Gas group IIB+H_2: = 10 mm

The enclosure cover is heavy. In order to avoid personal injuries or property damage, make appropriate provisions for the mounting procedure.

Do not damage the flamepath surfaces between enclosure and enclosure cover during the opening of the control panel.

If one of the flamepath surfaces is damaged, exchange enclosure and enclosure cover.

Do not add additional components into the control panel, which are not listed in the original bill of materials.

Before fixing the enclosure cover to the enclosure, protect the flamepath surfaces with a thin layer of suitable protective grease.

When the cover is fitted, ensure that all fasteners are fully tightened.

The delivered control panel is completely wired. Do not modify or manipulate this control panel. Observe the wiring diagram when connecting the control panel.

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

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.

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

Tighten all screws of the enclosure/enclosure cover with the appropriate torque.

Close all unused enclosure holes with the appropriate stopping plugs.

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

If mounting the enclosure on concrete use expansion anchors. When mounting the enclosure to a steel framework use vibration resistant mounting material.

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

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

In order to minimize power dissipation, observe the maximum possible conductor lengths.

If radio frequency sources are present in the device, the usage of the device is bound to local restrictions. Ensure that the local restrictions allow usage of this device before commissioning.

6.1. Requirements for Cable Glands

Only use cable glands 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.

For control panels with IECEx certification, only use cable glands with metric thread or NPT thread.

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.

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.

The device must be disconnected from the power supply prior to installation and maintenance. The power supply may be activated only after all the circuits required for operation have been fully assembled and connected.

If the control panel was affected by a short circuit, check the following.

Check the functionality of the control panel.

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.

If the enclosure is damaged, replace enclosure and enclosure cover.

Check all surfaces of the flamepath for damage. If an actuator is present, check the flamepaths of the actuator for damage.

If the surfaces of the flamepath are damaged, replace the enclosure and the enclosure cover. If the surfaces of the flamepath of an actuator are damaged replace the complete actuator.

Do not paint or varnish the surfaces of the flamepath.

If the protective grease on the surfaces of the flamepath has become old, remove the protective grease and fat with new suitable protective grease.

Enclosures with degree of protection IP66/67 have seals in the flamepath.

Only use screws with a defined minimum yield stress for closing the enclosure cover.

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

Do not modify or manipulate the device.

Ensure that all fasteners are present.

Ensure that external ground connections exist, are in good condition, and are not damaged or corroded.

If there is a defect, the device must be repaired by Pepperl+Fuchs.

Alternatively the device can be repaired by a qualified electrician in compliance with IEC/EN 60079-19.

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.

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.