

Instruction Manual

Marking

Surge protector types *LBF-IA1.36*: Field installation at spur SCP-LBF-IA1* Field installation at trunk TCP-LBF-IA1* Trunk installation at Power Hub TPH-LBF-IA1*
EC-type-examination certificate: SIRA 12 ATEX 2128X Ⓜ II 1G Ex ia IIC T4
SIRA 12 ATEX 4176X Ⓜ II 3G Ex nAc IIC T4, Ⓜ II 3G Ex ic IIC T4

table 1

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table 2

Validity

Specific processes and instructions in this instruction manual require special provisions to guarantee the safety of the operating personnel.

Target Group, Personnel

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

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

Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use and the operating location. Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, declarations of conformity, EC-type-examination certificates, certificates and control drawings if applicable supplement this document. You can find this information under 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.

Intended Use

The TPH-LBF*, TCP-LBF*, and SCP-LBF* surge protector series protect fieldbus equipment, e. g. fieldbus Power Hubs or device couplers, from damage caused by surge voltages or secondary lightning strikes.

The device is suitable for all fieldbus systems that use the Manchester encoding according to IEC/EN 61158-2 as physical layer.

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

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

Improper Use

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

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.

Do not mount a damaged or polluted device.

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

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.

If circuits with type of protection Ex i are operated with non-intrinsically safe circuits, they must no longer be used as circuits with type of protection Ex i.

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

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.

Hazardous Area

Gas

The device may be installed in gas groups IIC, IIB and IIA.

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

Zone 0

The level of protection of the circuit is not changed by the device.

If a cable is led into Zone 0, the cable length between the device and the boundary of Zone 0 must be limited to 1 m according to IEC/EN 60079-14.

If the cable is led into Zone 0, the cable must be protected against interferences deriving from lightning.

The shield of the cable may only be led into Zone 0 if it is safely grounded like an equipotential bonding conductor according to IEC/EN 60079-14.

The cables connected to the device must be shielded, or covered by a metal coating, or passed within a metal pipe.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the dielectric strength requirements according to IEC/EN 60079-11 between the intrinsically safe circuits and the parts that may be grounded.

Zone 1

The device may be installed in Zone 1.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the dielectric strength requirements according to IEC/EN 60079-11 between the intrinsically safe circuits and the parts that may be grounded.

Zone 2

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

If the surge protectors are mounted on the spur outputs that must be intrinsically safe (Ex ic): Use the trunk module TCP-LBF-IA1.36.* with an integrated mounted separation wall to ensure intrinsic safety.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the insulation from ground or housing requirements according to IEC/EN 60079-15.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the dielectric strength requirements according to IEC/EN 60079-11 between the intrinsically safe circuits and the parts that may be grounded.

The connections must either be mechanically secured or must have a holding force of at least 15 N. Both, plug and socket connections of FieldConnex surge protectors, device couplers, and Power Hubs, meet the required holding force of at least 15 N.

Dust

Zone 21

Due to the presence of gas discharge tubes, the surge protective devices do not meet the dielectric strength requirements according to IEC/EN 60079-11 between the intrinsically safe circuits and the parts that may be grounded.

Zone 22

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

If the surge protectors are mounted on the spur outputs that must be intrinsically safe (Ex ic): Use the trunk module TCP-LBF-IA1.36.* with an integrated mounted separation wall to ensure intrinsic safety.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the insulation from ground or housing requirements according to IEC/EN 60079-15.

Due to the presence of gas discharge tubes, the surge protective devices do not meet the dielectric strength requirements according to IEC/EN 60079-11 between the intrinsically safe circuits and the parts that may be grounded.

The connections must either be mechanically secured or must have a holding force of at least 15 N. Both, plug and socket connections of FieldConnex surge protectors, device couplers, and Power Hubs, meet the required holding force of at least 15 N.

Operation, Maintenance, Repair

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

The device must not be repaired, changed or manipulated.

If there is a defect, always replace the device with an original device from Pepperl+Fuchs.

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 (see datasheet) must be considered.

Disposing of device, packaging, and possibly contained batteries must be in compliance with the applicable laws and guidelines of the respective country.