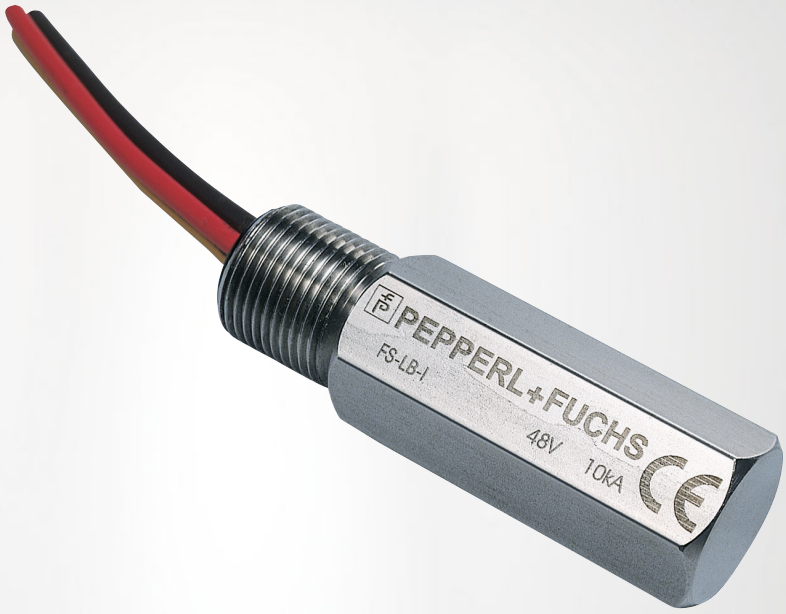
Fieldbus Surge Protectors

F*-LBF-I1.32 and F*-LBF-D1.32

Brief Instructions



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With regard to the supply of products, the current issue of the following document is applicable: The General Terms of Delivery for Products and Services of the Electrical Industry, published by the Central Association of the Electrical Industry (Zentralverband Elektrotechnik und Elektroindustrie (ZVEI) e.V.) in its most recent version as well as the supplementary clause: "Expanded reservation of proprietorship"

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1 Safety

1.1 Validity

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

1.2 Symbols Used

This document contains symbols for the identification of warning messages and of informative messages.

Warning Messages

You will find warning messages, whenever dangers may arise from your actions. It is mandatory that you observe these warning messages for your personal safety and in order to avoid property damage.

Depending on the risk level, the warning messages are displayed in descending order as follows:



Danger!

This symbol indicates an imminent danger.

Non-observance will result in personal injury or death.



Warning!

This symbol indicates a possible fault or danger.

Non-observance may cause personal injury or serious property damage.



Caution!

This symbol indicates a possible fault.

Non-observance could interrupt the device and any connected systems and plants, or result in their complete failure.

Informative Symbols



Note

This symbol brings important information to your attention.



Tip

This symbol brings an useful tip to your attention.



Example

This symbol provides an example of the issue described.



Action

1. This symbol indicates a paragraph with instructions. You are prompted to perform an action or a sequence of actions.

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1.3 System Operator and 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.

1.4 Pertinent Laws, Standards, Directives, and 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 (see datasheet) are an integral part of 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.

1.5 Delivery, Transport, and Storage

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.

Always store the device in a clean and dry location. Observe the permissible storage temperature (see datasheet).

2 Product Description and Intended Use

F*-LBF-I1.32 (Intrinsically Safe)

F*-LBF-I1.32 are surge protection devices for fieldbus installations. They direct power surges to earth via gas discharge tubes, protecting field devices and control units from voltage surges and lightning strikes. They are in accordance with the fieldbus standard IEC 61158-2 and are certified intrinsically safe Ex ia for Zone 1, FISCO, and Entity.

F*-LBF-D1.32 (Flameproof)

F*-LBF-D1.32 are surge protection devices for fieldbus installations. They direct power surges to earth via gas discharge tubes, protecting field devices and control units from voltage surges and lightning strikes. They are in accordance with the fieldbus standard IEC 61158-2 and are certified Ex d (flameproof enclosure) for Zone 1.

Intended Use

The device is designed to protect equipment from damage caused by indirect effects of lightning or other transient overvoltages.

This protection is achieved by diverting the increased transient current and limiting the voltage during the duration of the overvoltage surge.

The device is screwed directly onto the terminal box or onto the housing of field devices.

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3 Mounting and Installation in Hazardous Areas

General Safety Information



Danger!

Explosion hazard from damaged electronic components

Premature wear of electronic components in a device that was previously used in a general electrical installation can cause sparks that can ignite the surrounding potentially explosive atmosphere.

Never install devices that have already been operated in general electrical installations in electrical installations used in combination with hazardous areas!



Danger!

Explosion hazard from wrong separation distances

If you do not observe the minimum separation distance between 2 intrinsically safe circuits, this can lead to added currents or voltages. This can result in a current/voltage flashover generating sparks. The sparks can ignite the surrounding potentially explosive atmosphere.

Ensure that you observe all separation distances between 2 adjacent intrinsically safe circuits according to IEC/EN 60079-14.



Danger!

Danger to life from using damaged or repaired devices.

Using a defective or repaired device can compromise its function and its electrical safety.

- Do not use a damaged or polluted device.
- 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.

General Information

Ensure to install all electric circuits in accordance with the acknowledged rules of technology and applicable regulations for installers.

Adhere to the EC-Type Examination certificate and the Declaration of Conformity when handling, mounting and installing the device. If the marking of the device proposes "special conditions," pay particularly careful attention and ensure to fulfill these special conditions precisely as they are defined in the EC-Type-Examination certificate.

Install the device in a way that safely guarantees its potential equalization.

The device complies with degree of protection IP67. Therefore, ensure to protect the device properly if used under adverse ambient conditions.

F*-LBF-I1.32 (Intrinsically Safe Surge Protector) – Mounting Tips and Instructions

Devices of this type are suitable for installation in the Zones 1 or 2.

Special conditions for safe use: The dielectric strength of at least 500 V of the intrinsically safe circuit of this type of device is limited only by the overvoltage protection.

Installation in a housing with the types of protection Ex d or Ex e

- Install the device mechanically with at least 5 thread turns
- Choose a suitable measure to prevent the device from coming loose in the threading and to ensure the degree of protection at all times.
  Suitable measures are, e. g.:
  - Using lock nuts with seals

- Using Loctite medium-strong adhesive in threaded holes

When you are finished with the installation, double-check the following:

- The device is not damaged
- Device is fully installed (5 thread turns at least)
- Device is unfailingly installed (installation is fixed by suitable measures)
- Connection area is clean
- If applicable, flameproof enclosure is undamaged, the section with the attached device is not altered by paint or any treatments

F*-LBF-D1.32 (Flameproof Surge Protector) – Mounting Tips and Instructions

Devices of this type are suitable for installation in the Zones 1 or 2.

Ensure that the system is fully voltage-free before starting with the installation of the device.

Do not, under any circumstances, open the encapsulation of the Ex d space!

The threaded, joint limiting sections of this type of device must neither be treated nor painted afterwards.

Special conditions for safe use: The free end of the field wiring is to be connected in an appropriate way, e. g. in a suitable Ex e or Ex d junction box.
Particular attention must be paid to the permissible ambient temperature range. See technical data of this type of device on the Pepperl+Fuchs website.

Installation in a housing with the types of protection Ex d or Ex e

- Install the device mechanically with at least 5 thread turns
- Choose a suitable measure to prevent the device from coming loose in the threading and to ensure the degree of protection at all times.
  Suitable measures are, e. g.:
  - Using lock nuts with seals
  - Using Loctite medium-strong adhesive in threaded holes

When you are finished with the installation, double-check the following:

- The device is not damaged
- Device is fully installed (5 thread turns at least)
- Device is unfailingly installed (installation is fixed by suitable measures)
- Connection area is clean
- If applicable, flameproof enclosure is undamaged, the section with the attached device is not altered by paint or any treatments

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4 Repair and Servicing

The device must not be repaired, changed, or manipulated. In case of failure, always replace the device with an original device.

5 Disposal

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.

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