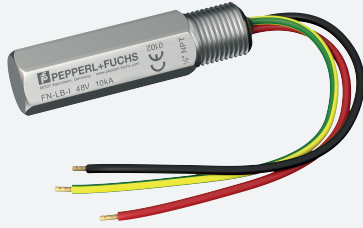


# Surge Protection Barrier

## FN-LB-I



- 1-channel
- Field mount module
- 1/2 NPT thread
- Stainless steel housing
- Max. surge current (8/20  $\mu$ s) 20 kA
- 500 V isolation from earth
- Suitable for hazardous area
- Up to SIL 3 acc. to IEC/EN 61508



**SIL 3**



### Function

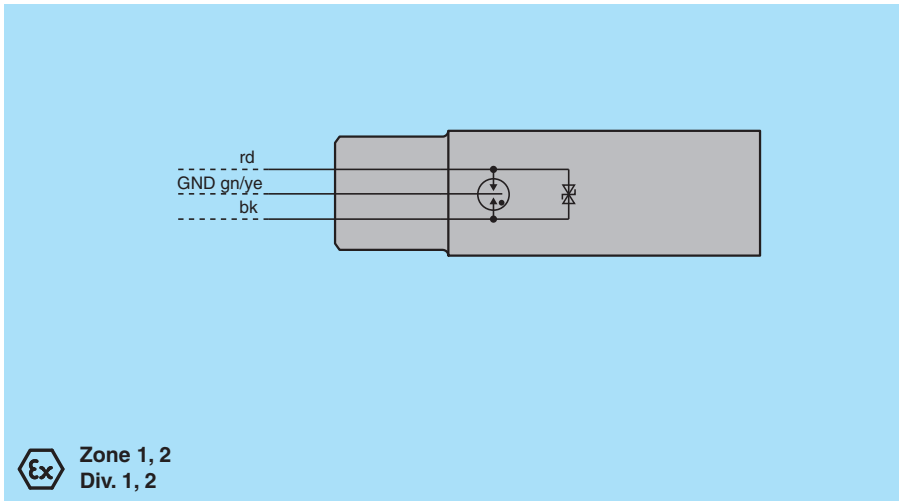
This Surge Protection Barrier limits induced transients of different origin (e. g. lightning stroke, switching impulse, etc.). This is achieved by diverting the transient current to ground and limiting the signal line voltage to a safe level for the duration of the surge. This barrier provides 85 V line-to-line and 500 V line-to-ground clamping voltage for the protected instruments. It also protects instruments that have less than 500 V isolation-to-ground.

It is installed in an available conduit or cable gland opening like those found on most process transmitters.

For additional information, refer to the manual and [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**Note:** Surge Protection Barriers must always be connected to a solid and effective ground and be at the same equipotential level as the instrument it is protecting. The ground system must comply with all applicable regulations.

### Connection



### Technical Data

#### General specifications

Number of protected signal lines 1

#### Functional safety related parameters

Safety Integrity Level (SIL) SIL 3

#### Supply

Rated voltage  $U_r$   $\leq 48$  V

Rated current  $I_r$   $\leq 250$  mA

Leakage current  $\leq 5$   $\mu$ A

On-state voltage  $\leq 85$  V

Ground insulation  $\geq 500$  V breakdown voltage

## Technical Data

### Electrical specifications

Total discharge current (8/20 $\mu$ s)	$I_{total}$	20 kA
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### Conformity

Degree of protection	IEC 60529:2001
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### Ambient conditions

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F) For usage in hazardous area observe the EC-type examination certificate.
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### Mechanical specifications

Housing material	Stainless steel 1.4401 (AISI 316) surface all over polished
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Degree of protection	IP67
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#### Cable

Length	L	0.3 m
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Mass	approx. 200 g
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Dimensions	AF22 x 77 mm (0.9 x 3 inch)
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Length	77 mm
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Width across flats	22
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Mounting	NPT1/2 thread
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### Data for application in connection with hazardous areas

EU-type examination certificate	PTB 00 ATEX 2175
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Marking	Ⓢ II 2G EEx ia IIC T6
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Voltage	$U_i$	50 V
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Maximum leakage current	10 kA line to ground (common), 5 kA line to line (differential) in accordance to IEC 60-2
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#### Nominal response time

Symmetrical	1 ns
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Asymmetric	100 ns
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Bandwidth	$\geq 40$ kHz
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#### Directive conformity

Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012
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### International approvals

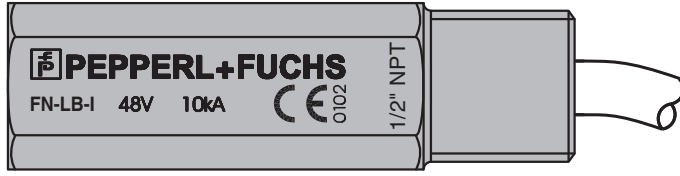
#### CSA approval

Control drawing	116-0187 (cCSAus)
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### General information

Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .
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Assembly

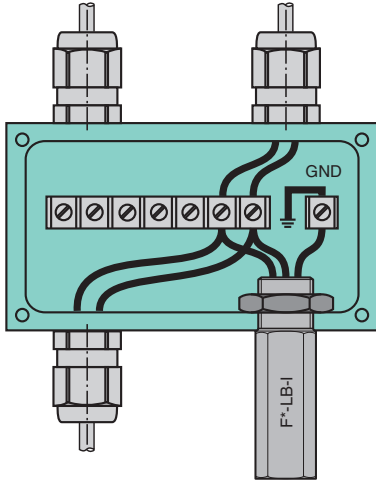


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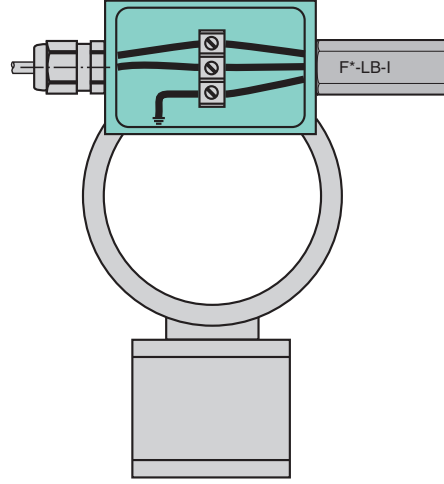
Connection

Installation examples

Terminal box



Transmitter



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