

# Surge Protection Barrier

## P-LB-1.A.13

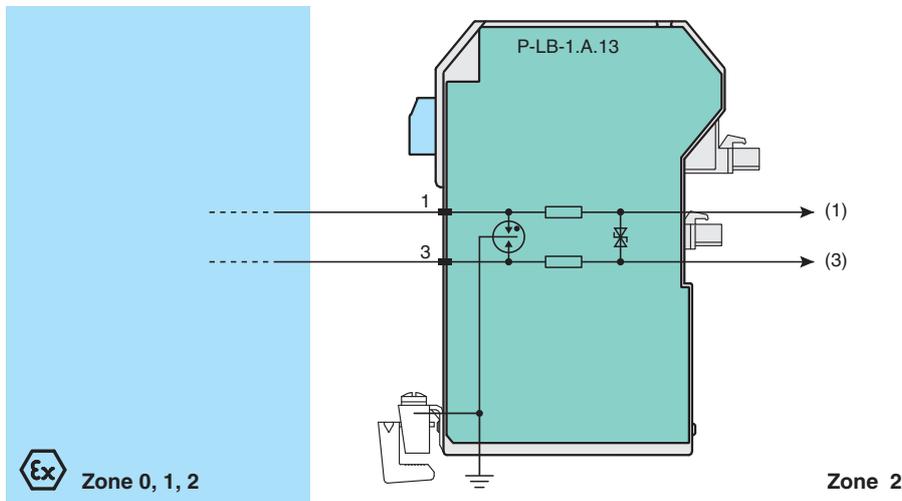
- 1-channel
- Plugs directly in to field side of KF modules
- Analog or digital signal inputs
- Surge protection up to 10 kA
- Protects leads 1 and 3 of KF modules
- Uninterruptable operation (auto reset)
- Up to SIL 3 acc. to IEC/EN 61508



### Function

This Surge Protection Barrier is designed for use with K-System (KF modules). By simply snapping the barriers into a standard KF module, the modules are safely protected against voltage surges 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. The end digits of the model designation correspond to the protected terminals of the respective KF module. 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	2
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 3
Signal lines	
Connection	terminals 1, 3
Rated voltage	$U_B$ max. 30 V
Rated current	$I_B$ max. 250 mA
Leakage current	max. 5 $\mu$ A
On-state voltage	max. 45 V

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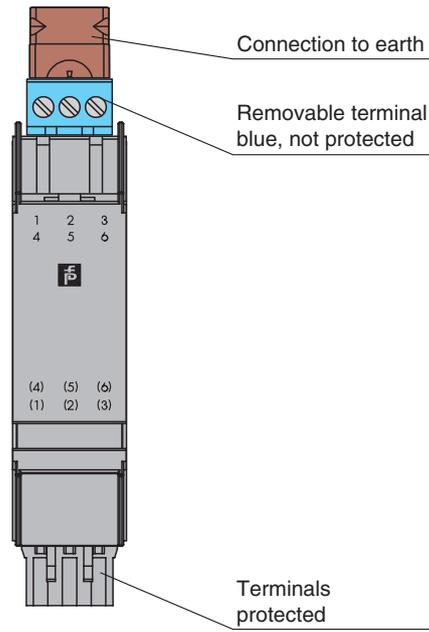
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

## Technical Data

Ground insulation		max. 500 V breakdown voltage
<b>Indicators/settings</b>		
Labeling		space for labeling at the front
<b>Conformity</b>		
Degree of protection		IEC 60529:2001
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Mass		approx. 70 g
Dimensions		20 x 104 x 127 mm (0.8 x 4.1 x 5 inch) (W x H x D)
Mounting		on the KF module
<b>Data for application in connection with hazardous areas</b>		
EU-type examination certificate		PTB 02 ATEX 2044
Marking		Ⓜ II (1)G [Ex ia Ga] IIC
Voltage	U <sub>i</sub>	30 V
Current	I <sub>i</sub>	250 mA
Internal capacitance	C <sub>i</sub>	negligible
Internal inductance	L <sub>i</sub>	200 µH
Maximum leakage current		10 kA (8/20 µs) per conductor
Nominal response time		
Symmetrical		1 ns
Asymmetric		100 ns
Series resistor		≤ 0.5 Ω per wire
Bandwidth		≥ 40 kHz
Certificate		PF 16 CERT 3908 X
Marking		Ⓜ II 3G Ex nA IIC T4 Gc
<b>Directive conformity</b>		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>		
IECEX approval		
IECEX certificate		IECEX BAS 12.0123
IECEX marking		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
<b>General information</b>		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

Assembly

Front view



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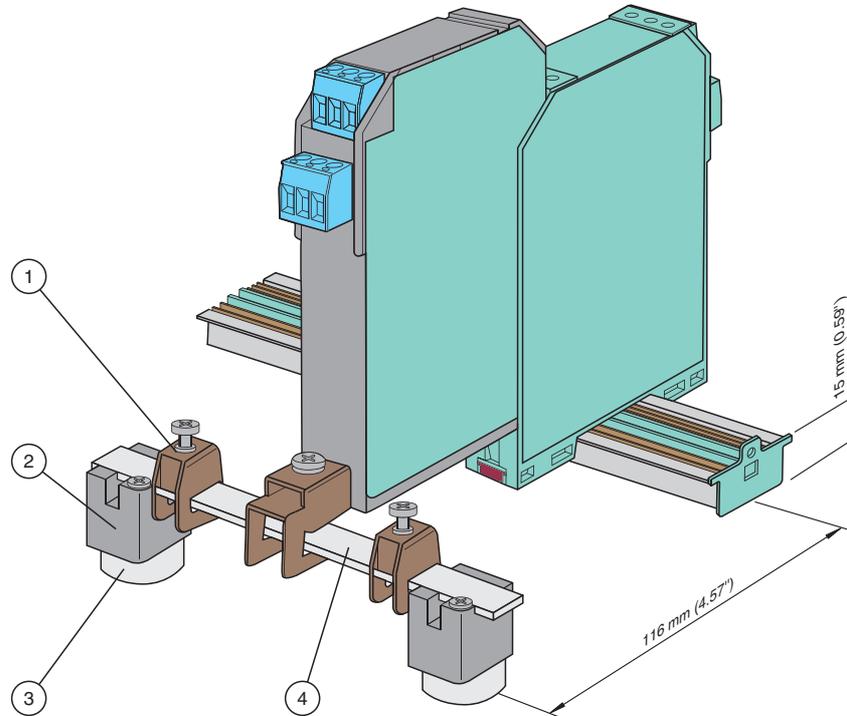
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## Installation

- |                       |   |
|-----------------------|---|
| 1 Connection terminal | ZH-Z.AK16   |
| 2 Mounting block      | ZH-Z.AB/SS  |
| 3 Spacing roller      | when mounting on 35 mm DIN EN 60715 mounting rail:<br>– installation height 15 mm: spacing roller ZH-Z.AR.85<br>– installation height 7.5 mm: no spacing roller necessary |
| 4 Grounding rail      | ZH-Z.NLS-Cu3/10   |



Keep the drilling distance of 116 mm between center mounting rail and center grounding bar.