

Surge Protection Barrier

P-LB-1.B.12

- 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 2 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).

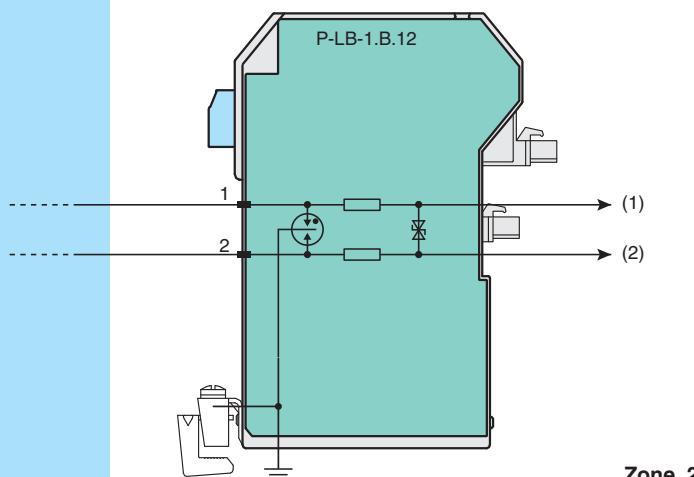
By simply snapping the barriers into a standard KF module, the modules are safely protected against voltage surges of different origin (e. g. lightning stroke, switching impulse, etc.). This is achieved by diverting the transient current to ground and limiting the signal line voltage to a safe level 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.

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

Release date: 2025-01-08 Date of issue: 2025-01-08 Filename: 103639_eng.pdf

General specifications

Number of protected signal lines 2

Functional safety related parameters

Safety Integrity Level (SIL) SIL 3

Signal lines

Connection terminals 1, 2

Rated voltage U_B max. 30 V

Rated current I_B max. 250 mA

Leakage current max. 5 μ A

On-state voltage max. 45 V

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

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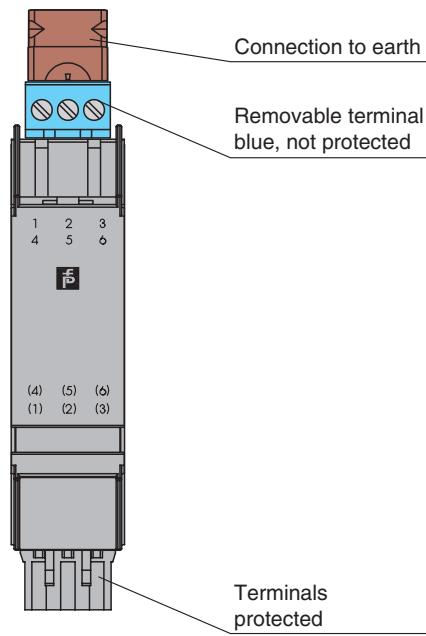
 PEPPERL+FUCHS

Technical Data

Ground insulation	max. 500 V breakdown voltage	
Conformity		
Degree of protection	IEC 60529:2001	
Ambient conditions		
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)	
Mechanical specifications		
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	
Data for application in connection with hazardous areas		
EU-type examination certificate	PTB 02 ATEX 2044	
Marking	Ex II (1)G [Ex ia Ga] IIC	
Voltage	U_i	30 V
Current	I_i	250 mA
Internal capacitance	C_i	negligible
Internal inductance	L_i	200 μ H
Maximum leakage current	10 kA (8/20 μ s) per conductor	
Nominal response time		
Symmetrical	1 ns	
Asymmetric	100 ns	
Series resistor	$\leq 0.5 \Omega$ per wire	
Bandwidth	≥ 40 kHz	
Certificate	PF 16 CERT 3908 X	
Marking	Ex II 3G Ex nA IIC T4 Gc	
Directive conformity		
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010	
International approvals		
IECEx approval		
IECEx certificate	IECEx BAS 12.0123	
IECEx marking	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I	
General information		
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .	

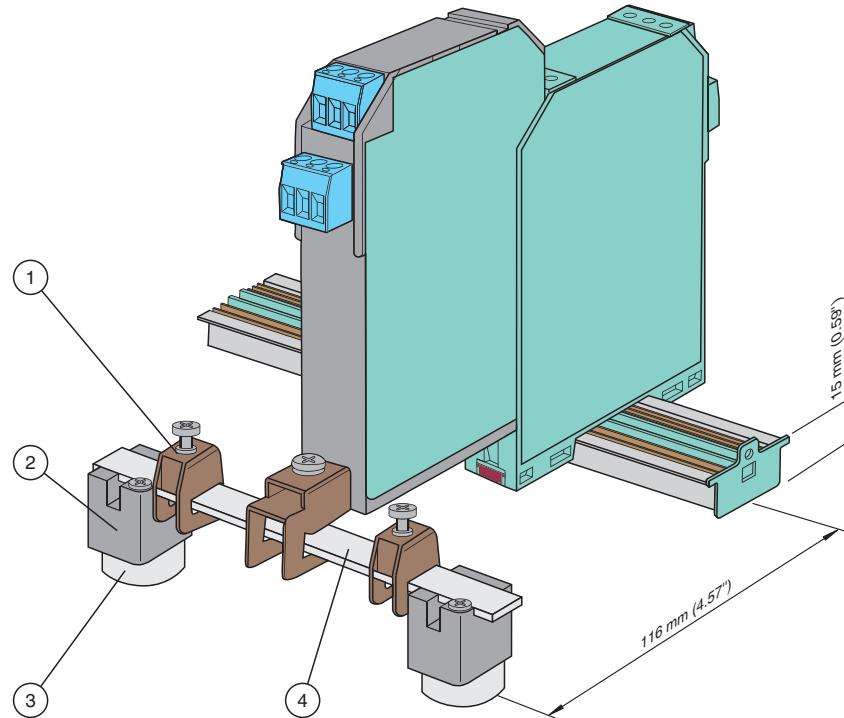
Assembly

Front view



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: – installation height 15 mm: spacing roller ZH-Z.AR.85 – 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.