

Mounting and Connection

General Information

This document contains information required to connect and configure your product.

This document does not substitute the instruction manual.

For full information on the product, refer to the instruction manual and further documentation on the Internet at www.pepperl-fuchs.com.

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at www.pepperl-fuchs.com/device-information.



Note

Further information is available on the product detail page of the device on the Internet at www.pepperl-fuchs.com. Enter the order designation in the search field → Select the appropriate device
→ Open the product detail page
→ Open the **Product Documentation** tab.

Device Versions

(1)	–	(2)	–	(3)	.	(4)	.	(5)
P	–	LB	–	*	.	*	.	*

(1)	Mounting version
P	Plug-in module

(2)	Function
LB	Surge protection barrier

(3)	Number of channels
1	1-channel
2	2-channel

(4)	Historical version feature
A	No technical relevance
B	
C	
D	
E	
F	

(5)	Protected terminals
12	Terminals 1, 2
13	Terminals 1, 3
23	Terminals 2, 3
123	Terminals 1, 2, 3
1234	Terminals 1, 2, 3, 4
1236	Terminals 1, 2, 3, 6
1245	Terminals 1, 2, 4, 5
1346	Terminals 1, 3, 4, 6
2356	Terminals 2, 3, 5, 6
123456	Terminals 1, 2, 3, 4, 5, 6

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.

Only use the device in the industrial location.

This Surge Protection Barrier is designed for use with KF type isolators from the K-System.

- Plug-in version for 20 mm isolators
- Protection of isolator inputs
- Suitable for isolated barriers and signal conditioners
- 1- and 2-channel versions

By simply snapping the barriers onto a KF type isolator, the isolator 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.

Improper Use

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

Mounting

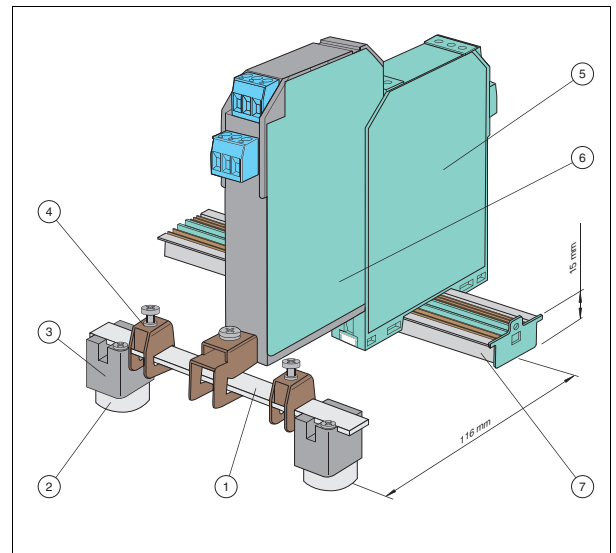


Figure 1 Earth connection assembly

- 1 Grounding rail ZH-Z.NLS-Cu3/10
- 2 Spacing roller
When mounting on 35 mm mounting rail:
- Mounting height 15 mm: spacing roller ZH-Z.AR.85
- Mounting height 7.5 mm: no spacing roller necessary
- 3 Mounting block ZH-Z.AB/SS
- 4 Terminal ZH-Z.AK16
- 5 Isolator of the K-System
- 6 Surge protection barrier P-LB-*.** with grounding terminal
- 7 35 mm mounting rail according to DIN EN 60715

> Mounting the Device

Observe that the device (6) only fits to the KF type isolators from the K-System.

- (1) Mount the grounding rail (1) parallel to the mounting rail (7). Keep the drilling distance of 116 mm between the center of the mounting rail and the center of the grounding rail.
- (2) Plug the device (6) onto the corresponding isolator (5).
- (3) Screw the grounding terminal of the device (6) to the grounding rail (1). Ensure a high-quality connection to earth.



Note

See corresponding datasheets for further information.

> Connecting the Device

Observe that the device (6) only fits to the KF type isolators from the K-System.

- (1) Always connect the device to high-quality ground connections. Observe that the device must have the same potential as the isolator that protects it.
- (2) Install the grounding system in accordance with applicable regulations.



Note

See corresponding datasheets for further information.

Connection

Protection of the Control Side in the Cabinet

The entire intrinsically safe circuit is isolated from earth. The intrinsically safe barrier is an isolator and no connection to the main system earth is necessary.

To maintain the intrinsically safe measurement loop galvanically isolated from earth, an isolated barrier must be installed at both ends of the circuit. The barrier must be close to the isolator, connected to its intrinsically safe side in the safe area and close to the field device in the hazardous area, but outside Zone 0.

Available connection versions:

Device	Channel 1	Channel 2
P-LB-1.A.13	1, 3	
P-LB-1.B.12	1, 2	
P-LB-1.C.123	1, 2, 3	
P-LB-1.D.1234	1, 2, 3, 4	
P-LB-1.E.23	2, 3	
P-LB-1.F.1236	1, 2, 3, 6	
P-LB-2.A.1346	1, 3	4, 6
P-LB-2.B.1245	1, 2	4, 5
P-LB-2.C.2356	2, 3	5, 6
P-LB-2.D.123456	1, 2, 3	4, 5, 6

Table 1 Protected terminals

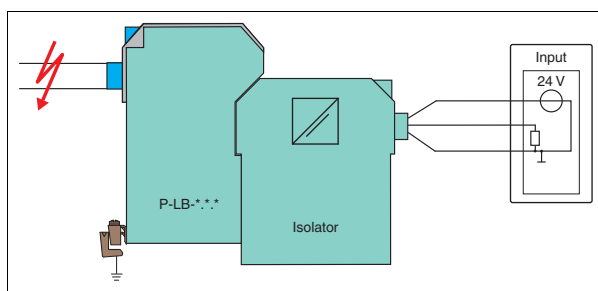


Figure 2 Protection with isolation