

Features

- For PROFIBUS PA and FOUNDATION Fieldbus applications
- Two-part construction, base module DB-LB is mounted on DIN rail and forms a feed-through terminal for the protection module DP-LBF
- Compact, space-saving construction
- Optional: change of protection module without signal interruption
- Base module with integrated shield terminal
- Safe earthing via base module with snap-on mounting
- Can be used in 4 mA ... 20 mA signal loops with HART

Function

The modular DP-LBF Surge Protection Device protects fieldbus field devices and control units safely from damages caused by voltage surges and lightning strikes. They are designed for use in fieldbus communication topologies according to IEC 61158-2.

They allow the coordinated use in the EMC-orientated Lightning Protection Zones Concept in accordance with IEC 61312-1. The protective effect is adapted to the EMC interference immunity (conducted high-energy interference impulses) for fieldbus measuring, control and data technology equipment.

The Surge Protection Device consists of the protection module DP-LBF-1.34 and a base module DB-LB. These base modules are available separately in different versions, thus allowing the design of the surge protection system with or without signal line interruption by removing the protection module.

Assembly



Complete Surge Protection Device for DIN rail mounting



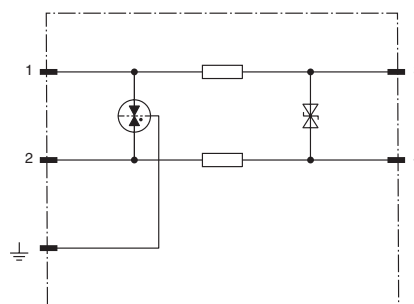
Base modules
DB-LB without signal line interruption
DB-LB.I with signal line interruption



Protection module
DP-LBF-1.34



Connection



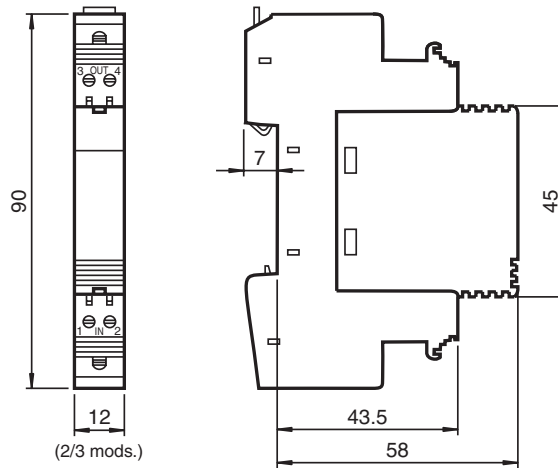
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Electrical specifications		
Rated voltage	U_r	34.8 V
Rated current	I_r	1 A
Nominal discharge current (8/20 μ s)		
per line		10 kA
total		10 kA
Max. surge current (8/20 μ s)	I_{max}	20 kA
Voltage protection level at max. rated current		
Line/Line		60 V
Voltage protection level at 1 kV/ μ sec		
Line/Line		50 V
Line/Earth		600 V
Reaction time		
Line/Line		≤ 1 ns
Line/Earth		≤ 100 ns
Trip value		6 MHz
Impedance per line		1.8 Ω
Capacitance		
Line/Line		1.1 nF
Line/Earth		0.9 nF
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Standard conformity		
Electromagnetic compatibility		
Degree of protection		NAMUR NE 21
Degree of protection		IEC 60529
Fieldbus standard		IEC 61158-2
Climatic conditions		IEC 60721
Surge protection		IEC 61643-21
Ambient conditions		
Ambient temperature		-50 ... 80 °C (-58 ... 176 °F)
Storage temperature		-50 ... 85 °C (-58 ... 185 °F)
Relative humidity		≤ 95 % non-condensing
Mechanical specifications		
Connection type		screw terminals
Core cross-section		signal 2.5 mm ² , shield ≤ 4 mm ²
Housing material		Polyamide PA 6.6
Degree of protection		IP20
Mass		Protection Module 20 g, base module 40 g
Mounting		DIN mounting rail

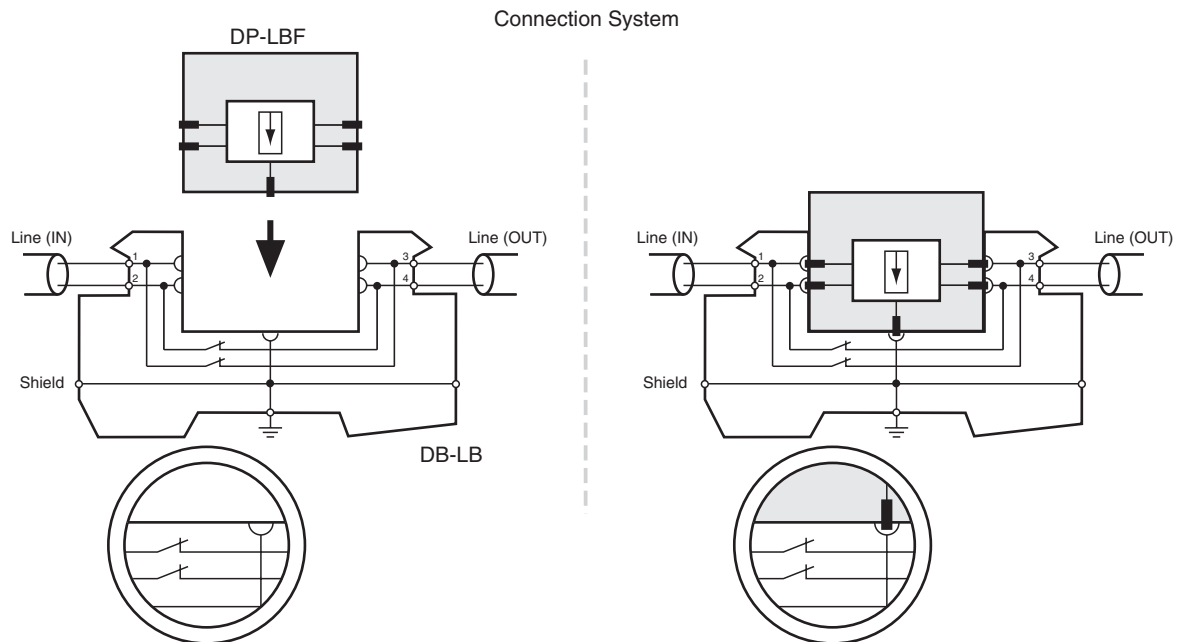
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Dimensions



Installation notes

see also system description



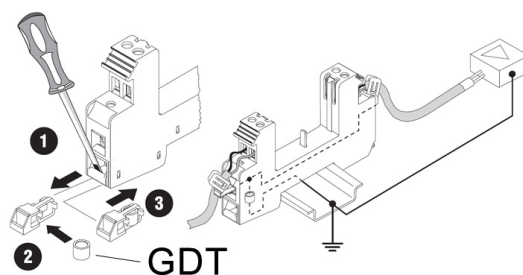
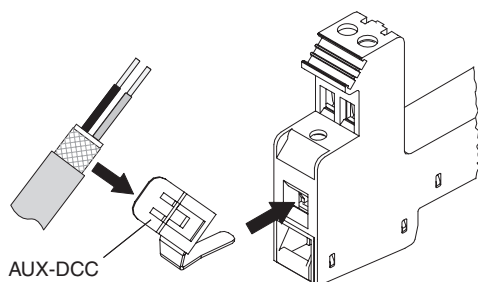
The above picture shows the removal of protection module DP-LBF without interruption of the signal line by using the base module DB-LB. Base module DB-LB.I allows signal line interruption by removing the protection module.

Accessories

to be ordered separatly

- Base module without signal interruption:
- Base module with signal interruption:
- EMC spring terminal for shield earthing:
- Shield earthing via gas discharge tube:

- DB-LB
- DB-LB.I
- AUX-DCC
- GDT



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