

**Features**

- For intrinsically safe PROFIBUS PA and FOUNDATION Fieldbus applications
- Connection acc. to FISCO or Entity
- Installation in Zone 1
- Fieldbus cables can be led in zone 0
- Two-part construction, base module DB-LB-I is mounted on DIN rail and forms a feed-through terminal for the protection module DP-LBF-I
- 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

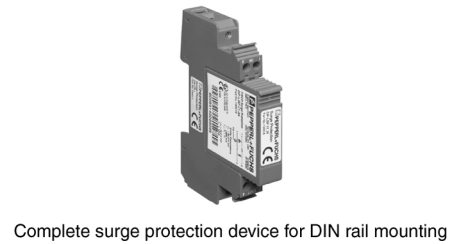
**Function**

The modular DP-LBF-I 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 intrinsically safe segments of 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-I1.34 and a base module DB-LB-I. 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**



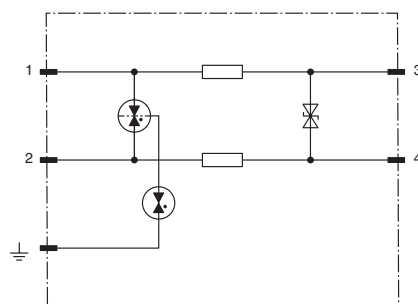
Base modules  
DB-LB-I without signal line interruption  
DB-LB-I.I with signal line interruption




Protection module DP-LBF-I1.34



**Connection**



Release date 2012-09-13 15:23 Date of issue 2012-09-13 130018\_eng.xml

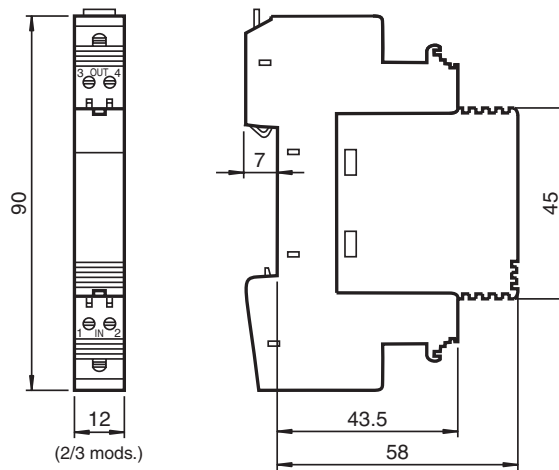
<b>Electrical specifications</b>		
Rated voltage		34.8 V
Rated current		500 mA
Surge Current (8/20)	$I_n$	
per line		10 kA
total		10 kA
Max. surge current (8/20)	$I_{max}$	20 kA
Voltage Protection Level at max. rated current		
Line/Line		60 V
Voltage Protection Level at 1 kV/ $\mu$ sec		
Line/Line		50 V
Line/Earth		1 kV
Reaction time	$t_A$	
Line/Line		$\leq 1$ ns
Line/Earth		$\leq 100$ ns
Trip value		6 MHz
Impedance per line		1.8 $\Omega$
Capacitance		
Line/Line		1.1 nF
Line/Earth		2 pF
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
<b>Standard conformity</b>		
Electromagnetic compatibility		
Protection degree		NAMUR NE 21
Fieldbus standard		IEC 60529
Climatic conditions		IEC 61158-2
Surge protection		IEC 60721
		IEC 61643-21
<b>Ambient conditions</b>		
Ambient temperature		-50 ... 80 °C (-58 ... 176 °F)
Storage temperature		-50 ... 85 °C (-58 ... 185 °F)
Relative humidity		$\leq 95$ % non-condensing
<b>Mechanical specifications</b>		
Connection type		screw terminals
Core cross-section		signal 2.5 mm <sup>2</sup> , shield $\leq 4$ mm <sup>2</sup>
Housing material		Polyamide PA 6.6
Protection degree		IP20
Mass		protection module 20 g , base module 40 g
Mounting		DIN rail
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		
Group, category, type of protection, temperature class		PTB 03 ATEX 2248  II 2(1)G Ex ia IIC T4/T5/T6
Voltage	$U_i$	34.8 V
Current	$I_i$	500 mA
Internal capacitance	$C_i$	negligible 0 nF
Internal inductance	$L_i$	negligible 0 $\mu$ H
Directive conformity		
Directive 94/9/EC		EN 50014, EN 50020

**Supplementary information**

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

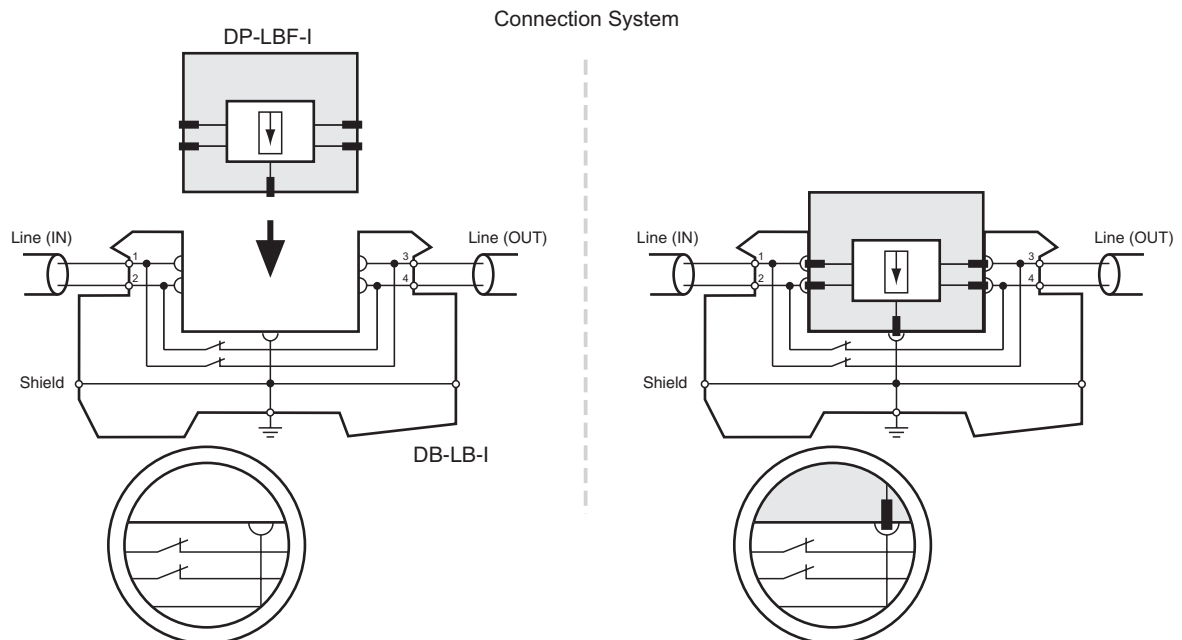
Release date 2012-09-13 15:23 Date of issue 2012-09-13 130018\_eng.xml

**Dimensions**



**Installation notes**

see also system description



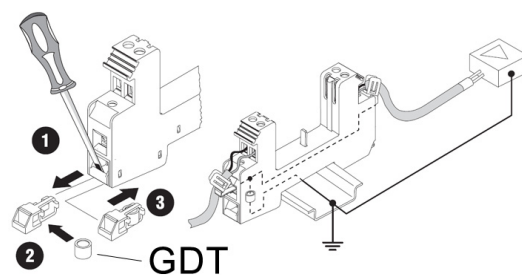
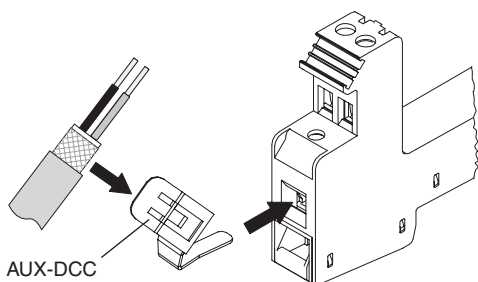
The above picture shows the removal of protection module DP-LBF-I without interruption of the signal line by using the base module DB-LB-I. Base module DB-LB-I.I allows signal line interruption by removing the protection module.

**Accessories**

to be ordered separately

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

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



Release date 2012-09-13 15:23 Date of issue 2012-09-13 130018\_eng.xml