

Features

- Pluggable, mounts between Power Hub and trunk cable
- Intrinsically safe (Ex ia), FISCO, Entity, DART Fieldbus, or general-purpose
- Optional diagnostics for wear
- Grounding of shield direct
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- Indication via LED and Advanced Diagnostics

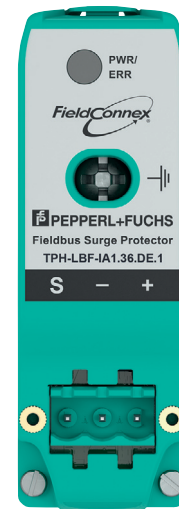
Function

This fieldbus surge protector is in acc. with IEC 61158-2 and mounts on the trunk connector of FieldConnex® High-Density and Compact Power Hubs protecting them. It directs power surges to ground via gas discharge tubes. It is certified intrinsically safe for circuits in hazardous areas up to Zone 0/Div. 1 and DART Fieldbus. The surge protector is installed in Zone 1 ... 2 or Div. 1 ... 2.

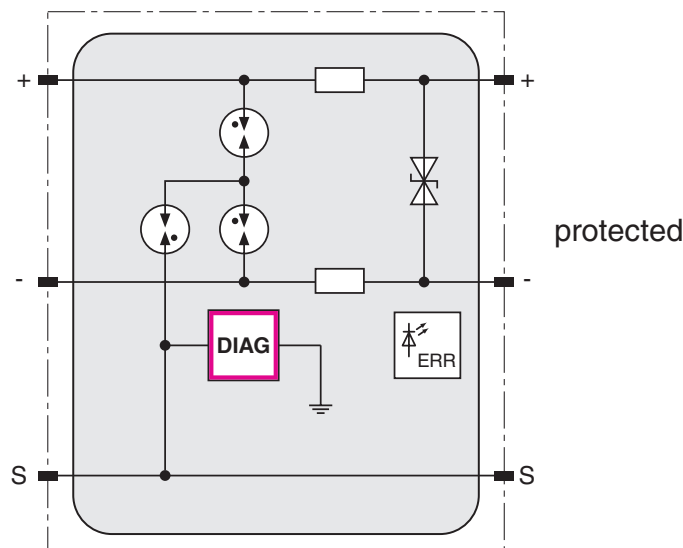
Self-diagnostics (option) continuously monitors wear caused by surges. The end of the useful life is indicated via LED and in the control room via FieldConnex® Advanced Diagnostics for exchange before protection is lost.

Installation on the trunk connector is without additional wiring even as retrofit. A single grounding bar connects surge protectors mounted side by side to common ground.

Assembly



Connection



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Fieldbus interface		
Self current consumption		≤ 6 mA (for version TPH-LBF-IA1.36.DE.1) , ≤ 0 mA (for version TPH-LBF-IA1.36.DE.0)
Indicators/operating means		
LED ERR		green flashing: status OK , red flashing: maintenance required , (for version TPH-LBF-IA1.36.DE.1)
Electrical specifications		
Rated voltage		36 V
Rated current		600 mA
Voltage Protection Level	U_p	
Line/Line		≤ 50 V category B2 10/700μsec , 25 A ≤ 52 V category C1 8/20μsec , 300 A ≤ 55 V category C2 8/20μsec , 5 kA ≤ 46 V category C3 1kV/μsec , 10 A
Line/Earth		≤ 1060 V category B2 10/700μsec , 50 A per line ≤ 800 V category C1 8/20μsec , 300 A per line ≤ 1450 V category C2 8/20μsec , 5 kA per line ≤ 1300 V category C3 1kV/μsec , 50 A per line ≤ 1080 V category D1 10/350μsec , 500 A per line
Reaction time	t_A	
Line/Line		≤ 1 ns
Line/Earth		≤ 100 ns
Overstressed fault mode		acc. IEC 61643-21 line inoperable mode 3
Series resistance in line		2 Ω +/- 5 %
Impulse durability		
Per line		5 kA category C2 8/20μsec
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Standard conformity		
Electromagnetic compatibility		
Protection degree		NAMUR NE 21
Fieldbus standard		IEC 61158-2
Climatic conditions		IEC 60721
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Surge protection		IEC 61643-21
Ambient conditions		
Ambient temperature		-40 ... 70 °C (-40 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Relative humidity		≤ 95 % non-condensing
Shock resistance		15 g 11 ms
Vibration resistance		1 g , 10 ... 150 Hz
Corrosion resistance		acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Connection type		screw terminals
Core cross-section		flexible wire 2.5 mm ² solid wire ≤ 4 mm ²
Housing material		Polyamide PA 6.6
Protection degree		IP20
Mass		pending
Grounding		M4 screw and external grounding rail
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		SIRA 12 ATEX 2128X
Group, category, type of protection, temperature class		⊕ II 1G Ex ia IIC T4
Voltage	U_i	24 V
Current	I_i	500 mA
Internal capacitance	C_i	2 nF
Internal inductance	L_i	0.1 μH
Statement of conformity		SIRA 12 ATEX 4176X
Group, category, type of protection, temperature class		⊕ II 3G Ex nAc IIC T4 , ⊕ II 3G Ex ic IIC T4
Voltage	U_i	33 V
Current	I_i	600 mA
Internal capacitance	C_i	2 nF

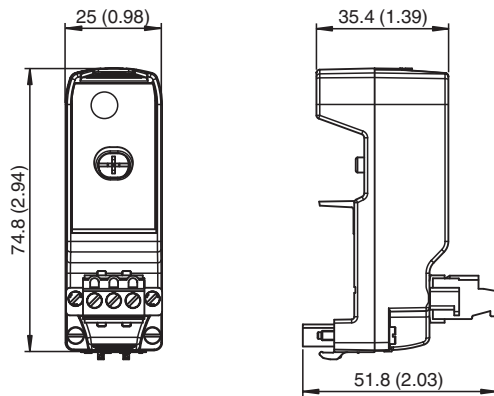
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Directive conformity	
Directive 94/9/EC	EN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010 , EN 60079-26:2007
Supplementary information	
	FISCO field device
International approvals	
CSA approval	pending
Control drawing	pending
IECEX approval	
Approved for	IECEX SIR 12.0051X Ex ia IIC T4
General information	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Versions

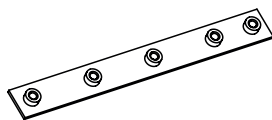
Type	Description
TPH-LBF-IA1.36.DE.0	Fieldbus Surge Protector without diagnosis
TPH-LBF-IA1.36.DE.1	Fieldbus Surge Protector with diagnosis

Dimensions

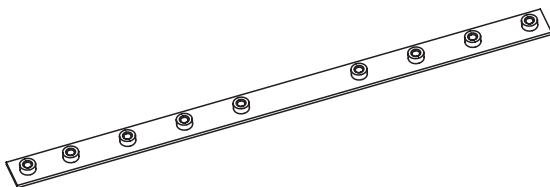


Dimensions in mm (in)

Accessories



Grounding rail ACC-LBF-EB.4
for High-Density Fieldbus Power Hubs, type code MBHD*



Grounding rail ACC-LBF-EB.8
for Compact Fieldbus Power Hubs, type code MBHC*

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