

Features

- 4 ... 12 outputs Ex ic (FISCO or Entity) or non-incendive (Div 2)
- Advanced fault isolation at the spur
- Segment Protector in Zone 2/Div. 2
- Instruments in Zone 2/Div. 2 or Zone 1/Div. 1
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- Advanced Diagnostics at the spur
- Power, Com, Diagnostics, and Error LEDs
- T-connector for easy installation and maintenance
- Test points for easy troubleshooting

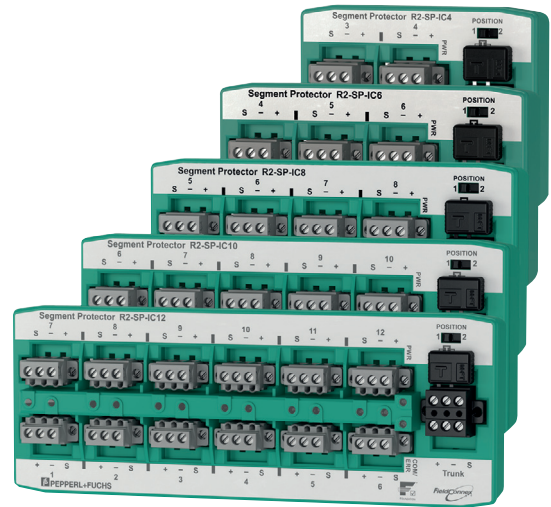
Function

The R2 Segment Protector with integrated diagnostics, a fieldbus coupler for DIN rail installation, connects 4 ... 12 instruments to the segment with intrinsic safety (Ex ic). Short-circuit, jabber, and bounce protection isolates most fault condition types from the segment. The short-circuit limit is adjustable for maximum load with Ex ic for gas groups IIB and IIC.

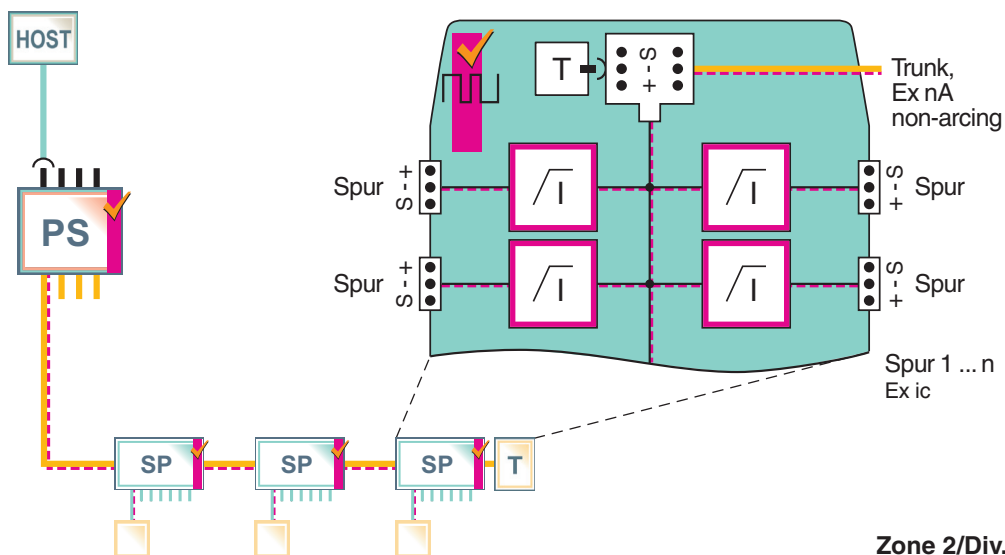
The T-connector at the trunk allows for exchange of a Segment Protector with no effect on the remaining segment. The terminator is mounted at the 'T' and removed for network extensions ensuring proper termination.

Segment Protectors with integrated diagnostics offer physical layer diagnostics at the spur. They are the basis for optional surge protectors with wear indication and enclosure leakage sensors all monitoring the quality of the installation for best availability.

Assembly



Connection



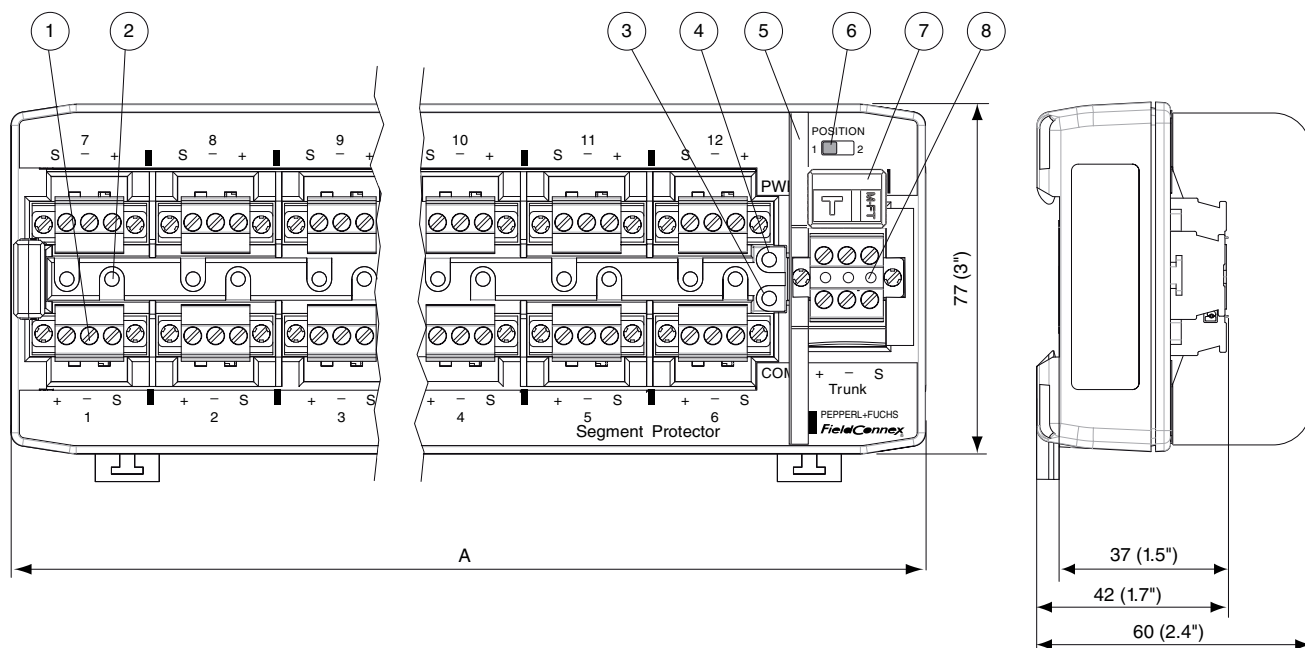
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Fieldbus interface		
Main cable (Trunk)		
Rated voltage	9 ... 31 V DC 10.5 V DC minimum input voltage acc. to FF-846	
Rated current	≤ 4.5 A	
Outputs		
Number of outputs	see table "Technical data depending on model"	
Number of devices per output	1	
Rated voltage	≤ 31 V	
Rated current	≤ 32 mA switch 1, position 1 ≤ 43 mA switch 1, position 2	
Short-circuit current	46 mA switch 1, position 1 65 mA switch 1, position 2	
Self current consumption	see table "Technical data depending on model"	
Voltage drop main cable/outputs	≤ 1.2 V	
Voltage drop trunk In/Out	0 V	
Terminating resistor	external type M-FT 100 Ω +/- 10 %	
Surge protection	Trunk overvoltage protection if voltage exceeds typ. 39 V, max. 41 V	
Indicators/operating means		
Switch	configuration of short-circuit current/rated current	
LED PWR	green: Fieldbus voltage > 10 V and fieldbus terminator is deactivated	
LED COM/ERR	yellow: flashing: fieldbus communication status and physical layer diagnostic status	
LED SPURS	red: 2 Hz flashing in short-circuit condition	
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC	EN 61326-1:2006	
Standard conformity		
Electromagnetic compatibility		
Protection degree	NE 21:2006	
Fieldbus standard	IEC 61158-2	
Climatic conditions	IEC 60721	
Shock resistance	EN 60068-2-27	
Vibration resistance	EN 60068-2-6	
Ambient conditions		
Ambient temperature	-50 ... 70 °C (-58 ... 158 °F)	
Storage temperature	-50 ... 85 °C (-58 ... 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		
Core cross-section	removable screw terminals with retaining screws	
Housing material	≤ 2.5 mm ² /AWG 12-24	
Protection degree	Polycarbonate	
Mass	IP20	
Dimensions	see table "Technical data depending on model"	
Mounting	see table "Technical data depending on model"	
Data for application in connection with Ex-areas		
EC-Type Examination Certificate	TÜV 12 ATEX 098651 X	
Group, category, type of protection, temperature class	⊕ II 3 G Ex nAc [ic] IIC T4	
Supply		
Maximum safe voltage	U _m	35 V
Outputs		
Voltage	U _o	32 V
Current	I _o	46 mA switch 1, position 1 65 mA switch 1, position 2
Inductance	L _o	0.25 mH switch 1, position 1 0.125 mH switch 1, position 2
Capacitance	C _o	60 nF
Directive conformity		
Directive 94/9/EC	EN 60079-0:2009 , EN 60079-11:2012 , EN 60079-15:2010	

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International approvals	
IECEX approval	IECEX TUN 12.0015 X
Approved for	Ex nAc [ic] IIC T4
Certificates and approvals	
Marine approval	pending
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 .

Dimensions



All dimensions in millimeters (mm) and inches (") and without tolerance indication.

Description:

- 1 Connection spur 1
- 2 LED ERR spur 1 (red, short-circuit)
- 3 LED COM/ERR (communication/diagnostics)
- 4 LED PWR (power)
- 5 Separation wall ACC-R2-SW.3
- 6 Switch, short circuit current selection
- 7 Terminator M-FT, removable
- 8 T Connector T-CON.3

Housing height "A" see table "Technical data depending on model".

Technical data depending on model

	R2-SP-IC4	R2-SP-IC6	R2-SP-IC8	R2-SP-IC10	R2-SP-IC12
Number of outputs	4	6	8	10	12
Housing height (A)	93 mm (3.7")	121 mm (4.7")	148 mm (5.8")	177 mm (7")	205 mm (8")
Mass	130 g	180 g	230 g	280 g	330 g
Quiescent current	max. 15 mA	max. 17 mA	max. 17 mA	max. 19 mA	max. 19 mA
Power loss at 31 V input	470 mW**	530 mW**	530 mW**	590 mW**	590 mW**

** + 10 mW per spur at 20 mA load

Installation note

see manual

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Scope of Delivery

Type code	Description
1 x M-FT	Fieldbus Terminator
1 x T-CON.3	T-Connector
1 x TP-CON.3 per output	Fieldbus plug sockets with test points

Accessories



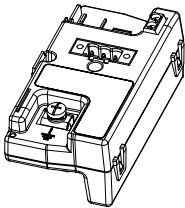
Fieldbus terminator M-FT
(packing unit: 3 pieces)



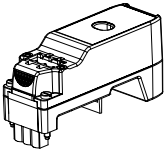
T-connector T-CON.3
(packing unit: 4 pieces)



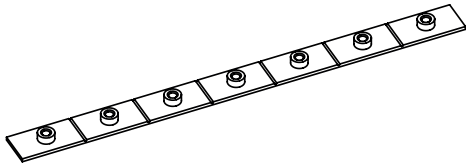
Fieldbus plug sockets with test points TP-CON.3
(packing unit: 4 pieces)



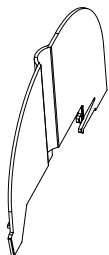
Trunk surge protector TCP-LBF-IA1.36.IE*
Installation on trunk connection of fieldbus coupler, for example Segment Protector



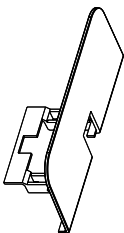
Spur surge protector SCP-LBF-IA1.36.IE*
Installation on spur connection of fieldbus coupler, for example Segment Protector



Grounding rail ACC-LBF-EB.6
Installation on spur surge protectors SCP-LBF-IA1.36.IE*



Separation wall ACC-LBF-SW.3
Installation on trunk surge protector TCP-LBF-IA1.36.IE* for Ex ic spur applications
(packing unit: 3 pieces)



Separation wall ACC-R2-SW.3 for Ex ic spur applications
(packing unit: 3 pieces)

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