

Features

- 4 ... 12 outputs Ex ic, Ex nL (FISCO or Entity) or non-incendive (Div 2)
- Short-circuit protection per output
- Segment Protector in Zone 2/Div. 2
- Instruments in Zone 2/Div. 2
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- Power, Com, and Error LEDs
- T-connector for easy installation and maintenance
- Test points for easy troubleshooting

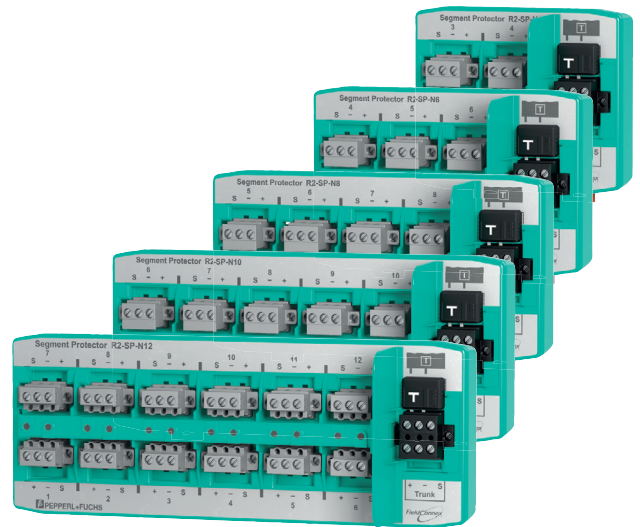
Function

The R2 Segment Protector, a fieldbus coupler for DIN-rail installation, connects 4 ... 12 instruments to the segment with intrinsic safety (Ex ic), energy limitation (Ex nL) and short circuit protection at each spur. This ensures proper operation of the segment during faults or hot work at the spur.

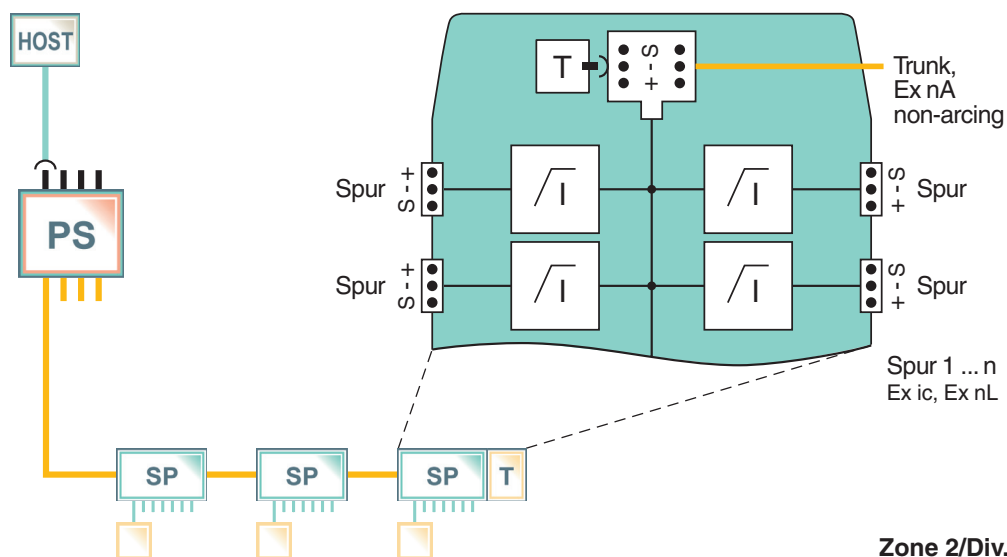
The T-connector at the trunk allows for exchange of a Segment Protector with no effect on the remaining segment. The terminator is mounted at the 'T' and removed for network extensions always ensuring proper termination.

All plugs feature retaining screws. LEDs and test access points simplify troubleshooting and help to decrease repair time. Any grounding and shielding concept is possible based on FieldConnex enclosure solutions.

Assembly



Connection



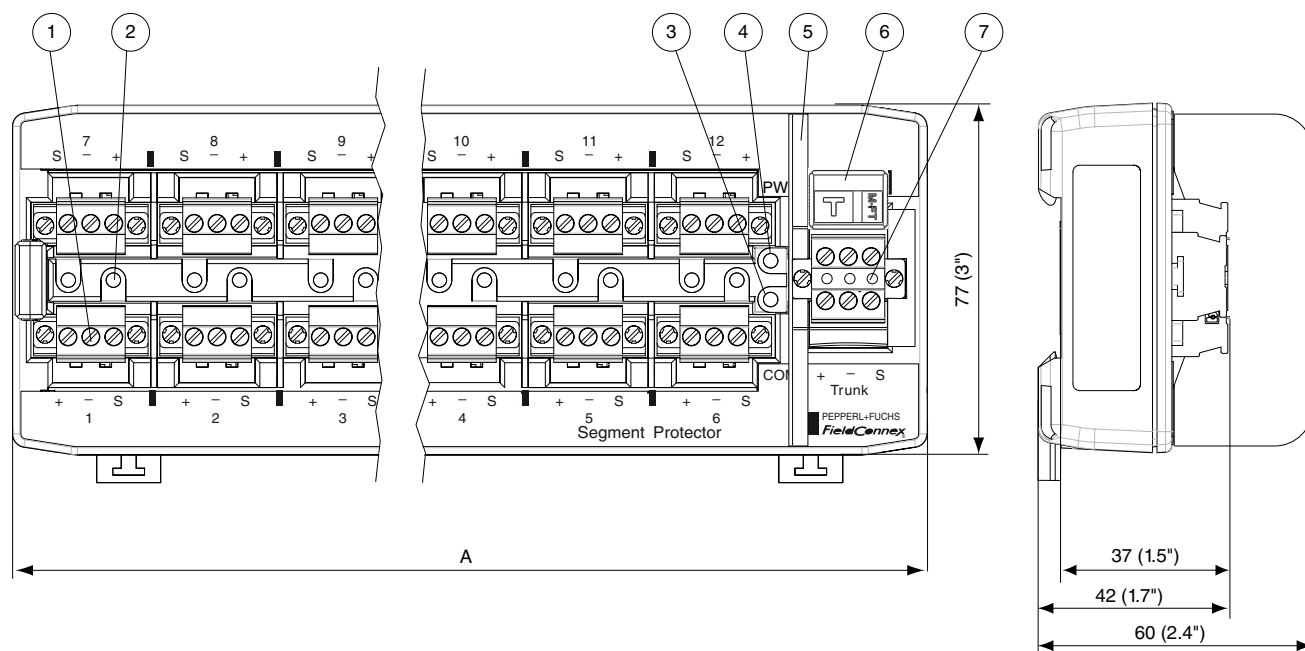
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Fieldbus interface		
Main cable (Trunk)		
Rated voltage		9 ... 31 V DC
Rated current		≤ 4.5 A
Outputs		
Number of outputs		see table "Technical data depending on model"
Rated voltage		≤ 31 V
Rated current		≤ 43 mA
Short-circuit current		max. 58 mA
Self current consumption		see table "Technical data depending on model"
Voltage drop main cable/outputs		≤ 1.3 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		
LED ERR		red: short-circuit
LED PWR		green: Fieldbus voltage > 10 V
LED COM		yellow: bus activity
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Standard conformity		
Electromagnetic compatibility		
Protection degree		IEC 60529
Fieldbus standard		IEC 61158-2
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Ambient conditions		
Ambient temperature		
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
Housing width		Polycarbonate
Housing height		see table "Technical data depending on model"
Housing depth		see table "Technical data depending on model"
Protection degree		IP20
Mass		see table "Technical data depending on model"
Mounting		DIN rail mounting
Data for application in connection with Ex-areas		
Main cable (Trunk)		
Rated current		see Statement of Conformity
Outputs		
Voltage	U _o	24 V for IIC gas group, defined by trunk voltage 32 V for IIB gas group
Current	I _o	65 mA for IIC and IIB gas groups
Inductance	L _o	0.25 mH for IIC and IIB gas groups
Capacitance	C _o	60 nF for IIC and IIB gas groups
Statement of conformity		
Group, category, type of protection, temperature class		TÜV 11 ATEX 081151 X ⊕ II 3G Ex nA [nL] [ic] IIC T4
Directive conformity		
Directive 94/9/EC		EN 60079-0:2006 , EN 60079-11:2007 , EN 60079-15:2005 , EN 60079-27:2008
International approvals		
FM approval		
Control drawing		CoC 3027877, CoC 3027877C
Approved for		No. 116-0280
UL approval		Class I, Division 2, Groups A, B, C, D, T4 / Class I, Zone 2, Ex nA [nL] IIC T4
Approved for		E106378
Approved for		Class I, Division 2, Groups A, B, C, D

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IECEX approval	IECEX 11.0011 X
Approved for	Ex nA [nL] [ic] IIC T4
Certificates and approvals	
Marine approval	DNV A-10798
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 inch (") without tolerance indication
Description:

- 1 Spur Connection Segment 1
- 2 LED for Segment 1
- 3 LED COM (Communication)
- 4 LED PWR (Power)
- 5 Separation wall ACC-R2-SW.3
- 6 Terminator M-FT, removable
- 7 T Connector T-CON.3

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

Installation note

see manual

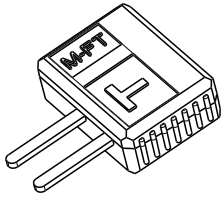
Technical data depending on model

	*-N4	*-N6	*-N8	*-N10	*-N12
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. 8 mA	max. 8 mA	max. 8 mA	max. 10 mA	max. 10 mA
Power loss at 31 V input	248 mW**	248 mW**	248 mW**	310 mW**	310 mW**

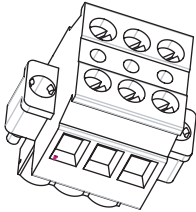
** + 8 mW per spur at 20 mA load

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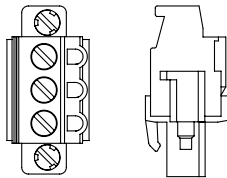
Accessories



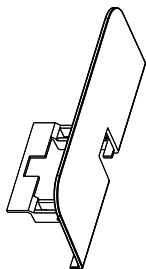
Fieldbus Terminator M-FT, (packaging unit = 3 pieces)
 One Terminator comes with each Segment Protector R2-SP*



T-Connector T-CON.3, (packaging unit = 4 pieces)
 One T-Connector comes with each Segment Protector R2-SP*



Fieldbus plug sockets with test points TP-CON.3, (packaging unit = 4 pieces)
 One plug per output comes with the Segment Protector R2-SP*



Separation wall ACC-R2-SW.3, (packaging unit = 3 pieces)
 One separation wall comes with each Segment Protector R2-SP*