

Features

- 2 outputs Ex nL, expandable to up to 26 with short-circuit protection
- High-Power Trunk for high device count and long cable runs
- 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
- Integrated overvoltage protection

Function

The modular Segment Protector, a fieldbus coupler for DIN rail, connects instruments to the fieldbus segment. It features the most compact design and easily expandability for skid-mount applications.

The trunk module connects the Segment Protector to the segment. Expansion modules snap side-by-side interconnected via a system plug. The high-availability terminator is mounted at the output. As it is removed for network extensions proper termination is always ensured.

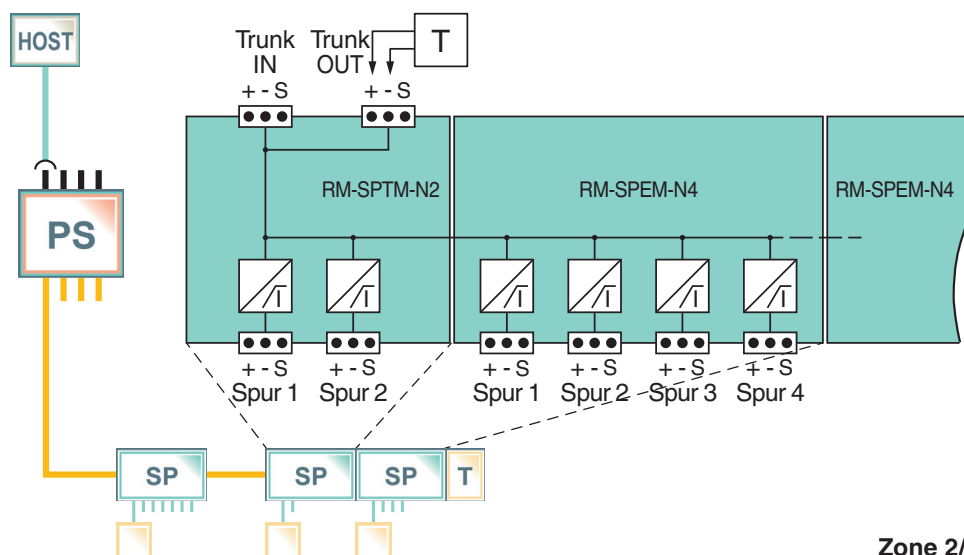
Short-circuit protection ensures proper operation of the segment in case of faults or hot work. Integrated LEDs simplify troubleshooting and help decrease repair time.

All connectors are plug-in type with receptacles for measuring tools, such as the mobile ADM. This leaves the wiring undisturbed. Any grounding and shielding concept is possible with FieldConnex enclosure solutions.

Assembly



Connection



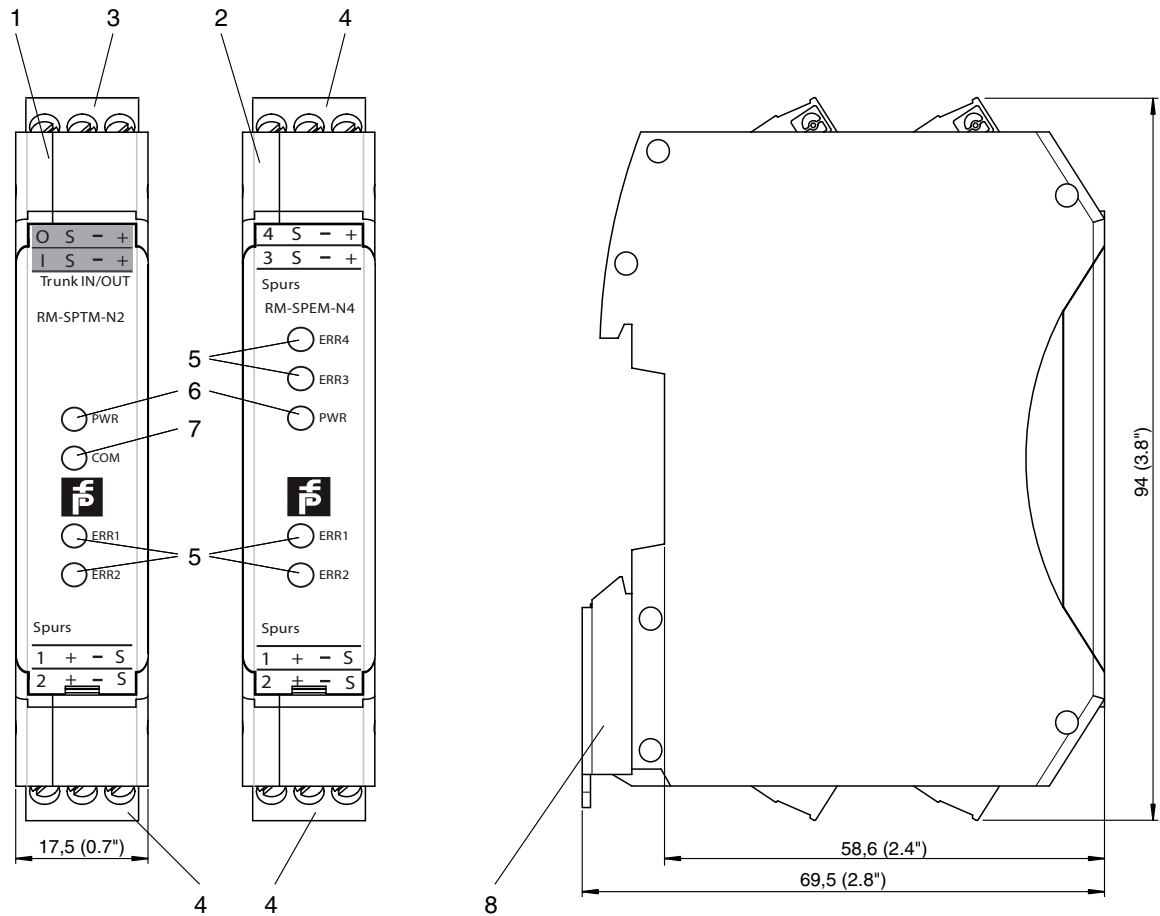
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Fieldbus interface		
Power loss		see table "Technical data depending on model"
Main cable (Trunk)		
Rated voltage		9 ... 31 V DC
Rated current		≤ 4.5 A
Outputs		
Number of outputs		see table "Technical data depending on model"
Rated voltage		≤ 31 V
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
Terminating resistor		100 Ω external
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		NE 21:2006
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		-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, removable
Core cross-section		≤ 2.5 mm ² /AWG 12-24
Housing material		Polyamide PA 66
Housing width		17.5 mm per device
Housing height		94 mm
Housing depth		54 mm
Protection degree		IP20
Mass		75 g per device
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		TÜV 11 ATEX 081152 X
Group, category, type of protection, temperature class		⊕ II 3G Ex nA [nL] IIC T4
Directive conformity		
Directive 94/9/EC		EN 60079-15:2005 , EN 60079-0:2006
International approvals		
UL approval		E106378
Approved for		Class I, Division 2, Groups A, B, C, D
Certificates and approvals		
Marine approval		DNV A-10798
General information		

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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 Trunk Module RM-SPTM-N2
- 2 Extension Module RM-SPEM-N4
- 3 Trunk connection
- 4 Spur connection
- 5 LED Spur (Error)
- 6 LED PWR (Power)
- 7 LED COM (Communication)
- 8 Fixing strap

Installation note

see manual

Technical data depending on model

	RM-SPTM-N2	RM-SPEM-N4
Number of outputs	2	4
Power loss	0.2 W	0.1 W
Inherent current consumption	7 mA	3.5 mA

Calculations:

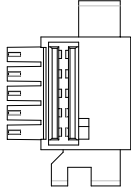
Total power loss = 0.2 W + n * 0.1 W

Total current consumption = 7 mA + n * 3.5 mA

n = number of Extension Modules RM-SPEM-N4

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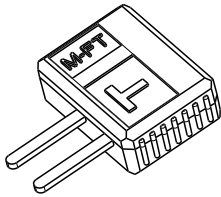
Accessories



Bus Connector Module RM-BP (packaging unit = 3 pieces).

One Bus Connector Module included with each Trunk Module RM-SPTM-N2 and Expansion Module RM-SPEM-N4.

This DIN rail preassembled system plugs providing the interconnection of the Trunk Module RM-SPTM-N2 with one or more Expansion Modules RM-SPEM-N4. To create a combination of Modular Segment Protector Modules one Bus Connector Module is required for each of them.



Fieldbus Terminator M-FT (packaging unit = 3 pieces).

One Terminator included with each Trunk Module RM-SPTM-N2.