

Segment Protector

FieldConnex® Fieldbus

R-SP-E12



- 12 increased safety outputs (Ex e)
- Short circuit current limitation per output
- Segment Protector in Zone 1/Div. 2
- Instruments in Zone 1/Div. 1
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- High power on trunk and spurs

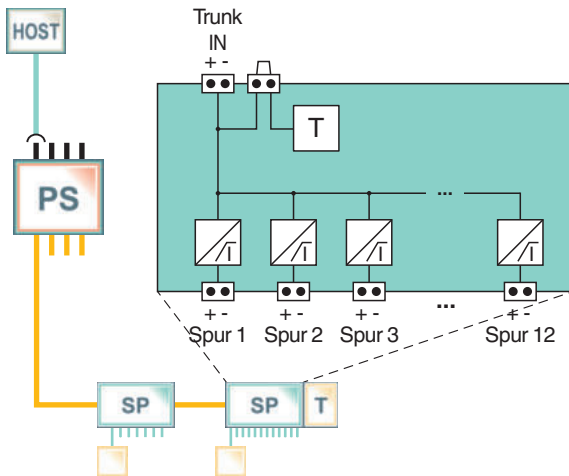
Segment protector, junction box for fieldbus with short-circuit protection, Field junction box, module for DIN rail mounting



Function

The R SP E12 Segment Protector is a device coupler that connects field instruments to the segment. Flameproof (Ex d) field devices are connected to the trunk line via one output each. Trunk and spurs are certified increased safety (Ex e). Short-circuit protection ensures proper operation of the segment in case of unwanted faults at the spur. Work on devices always requires a hot work permit. The integrated fieldbus terminator features high-availability design and is selectable. Connectors are fixed screw terminals. Any grounding and shielding concept is possible based on FieldConnex enclosure solutions. Customizable housings host one or more Segment Protectors for different output counts.

Connection



Zone 1/Div. 2

Technical Data

General specifications

Design / Mounting	Cabinet installation
Installation in hazardous area	Zone 1 / Div. 2

Fieldbus connection

Power dissipation	250 mW
Main cable (Trunk)	
Cable entry type	screw terminal , fixed
Rated voltage	9 ... 32 V DC
Outputs	
Number of outputs	12

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Cable entry type		screw terminal , fixed
Rated voltage		max. 32 V
Rated current		max. 40 mA
Short-circuit current		max. 52 mA
Self current consumption		max. 9 mA
Voltage drop main cable/outputs		max. 1.3 V
Terminating resistor		selectable 100 Ω integrated
Surge protection		trunk, spurs overvoltage protected if voltage exceeds typ. 39 V, max. 41 V
Indicators/operating means		
LED PWR		green: Fieldbus voltage > 10 V
LED CHANNEL ERROR		red flashing: short-circuit
LED COM		yellow: bus activity
LED TERM ON		yellow: termination activated
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013
Standard conformity		
Electromagnetic compatibility		NE 21:2006
Degree of protection		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		5 g , 10 ... 150 Hz
Mechanical specifications		
Connection type		screw terminal , fixed
Core cross section		max. 2.5 mm ² / AWG 12-24
Housing material		Polycarbonate
Degree of protection		IP20
Mass		800 g
Dimensions		
Height		100 mm
Width		216 mm
Depth		50 mm
Mounting		DIN rail mounting
Coating		resin filled
Data for application in connection with hazardous areas		
EU-type examination certificate		PTB 04 ATEX 2100 X
Marking		Ⓔ II 2 G Ex eb mb IIC T4 Gb
Maximum values		
Rated voltage		≤ 35 V
Prospective short-circuit current		100 A
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN IEC 60079-7:2015+A1:2018 , EN 60079-18:2015+A1:2017
International approvals		
IECEx approval		
IECEx certificate		IECEx PTB 05.0010X
IECEx marking		Ex eb mb IIC T4 Gb

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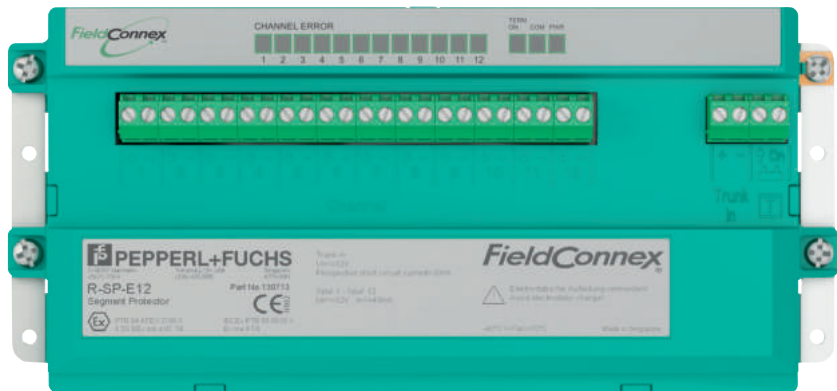
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Technical Data

General information Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .
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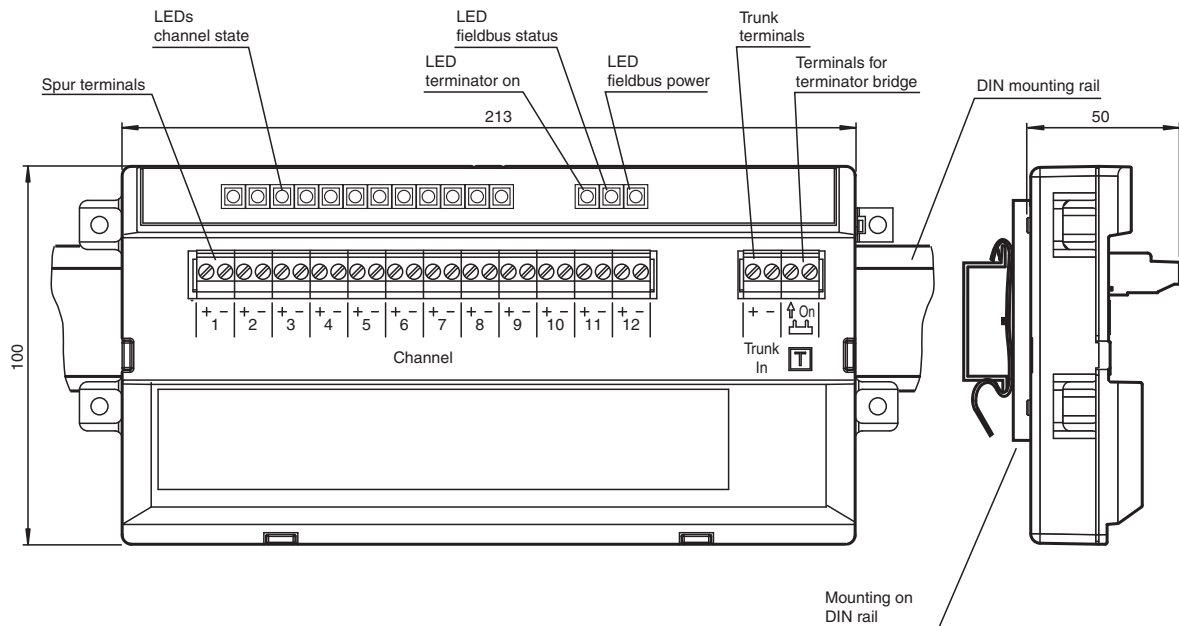
Assembly



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Additional Information

Dimensions



Note:

For the connection of the cable shields earth bars are to be used in the enclosure. With metallic enclosures the appropriate insulation has to be ensured.

Installation

see manual