

Features

- 12 outputs Ex ib IIC
- Segment Protector in Zone 1
- Instruments in Zone 1
- Short-circuit protection per output
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- Power, Com and Error LEDs
- T-connector for easy installation and maintenance
- Test points for easy troubleshooting

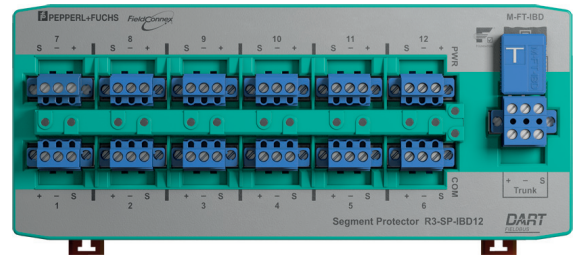
Function

The DART Segment Protector, a fieldbus coupler for DIN-rail installation, provides outputs for up to 12 intrinsically safe instruments (Ex ib IIC) to an intrinsically safe High-Power Trunk. It is equipped with short-circuit protection. This ensures proper operation of the segment during faults or hot work at the spur.

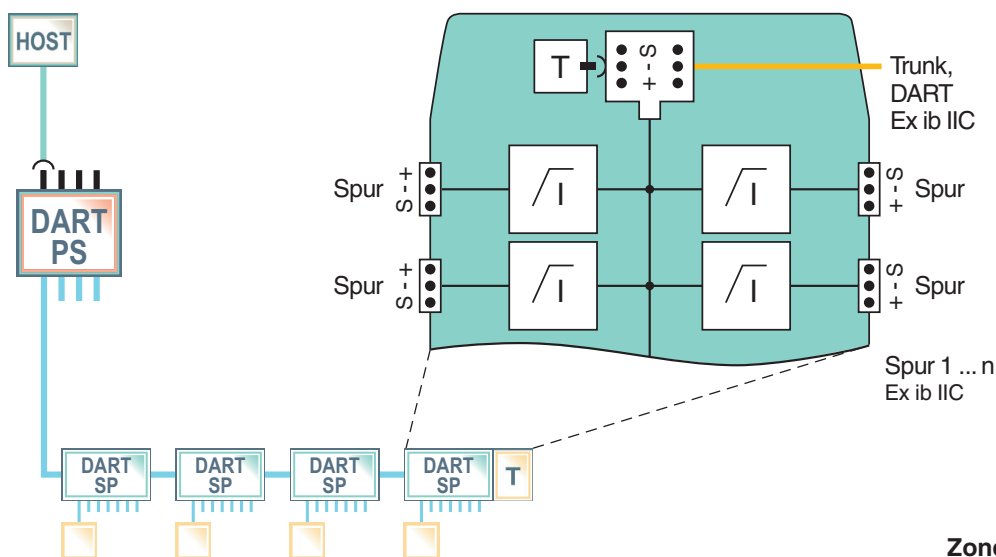
The T-connector at the trunk allows for exchange of a Segment Protector without effect on the remaining segment. The high-availability terminator is mounted at the 'T'. As it is removed for network extensions proper termination is always ensured.

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



Zone 1

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Fieldbus interface		
Main cable (Trunk)		
Rated voltage		14.5 ... 24 V DC
Rated current		≤ 4.5 A
Outputs		
Number of outputs		12
Number of devices per output		1
Rated voltage		≥ 10.5 V , ≤ 24 V
Rated current		≤ 34 mA
Short-circuit current		max. 47 mA
Self current consumption		typical 20 mA , ≤ 25 mA
Voltage drop main cable/outputs		≤ 4 V
Voltage drop trunk In/Out		0 V
Terminating resistor		external type M-FT-IBD 100 Ω +/- 10 %
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		-40 ... 70 °C (-40 ... 158 °F)
Relative humidity		-50 ... 85 °C (-58 ... 185 °F)
Shock resistance		< 95 % non-condensing
Vibration resistance		15 g 11 ms
Corrosion resistance		1 g , 10 ... 150 Hz
		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		250 g
Mounting		see dimensions
		DIN rail , according to DIN EN 60715
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		
Group, category, type of protection, temperature class		PTB 10 ATEX 2034 , PTB 10 ATEX 2018X
Main cable (Trunk)		⊕ Ex II 2G Ex ib IIC T4 , ⊕ Ex II (2)D [Ex ib] IIIC
Outputs		for connection to the DART Fieldbus System acc. to System Certificate PTB 10 ATEX 2034
Voltage	U _o	Entity
Current	I _o	23 V
Power	P _o	47 mA
Inductance	L _o	1.08 W
Capacitance	C _o	gas group IIC 170 μH gas group IIB 1 mH
		gas group IIC 60 nF gas group IIB 470 nF
Directive conformity		
Directive 94/9/EC		EN 60079-0:2009 , EN 60079-11:2007 , EN 61241-11:2006
International approvals		
IECEX approval		
Approved for		pending
		Ex ib IIC T4 [Ex ib] IIIC
Certificates and approvals		
FOUNDATION Fieldbus		
Marine approval		FF-846
		pending

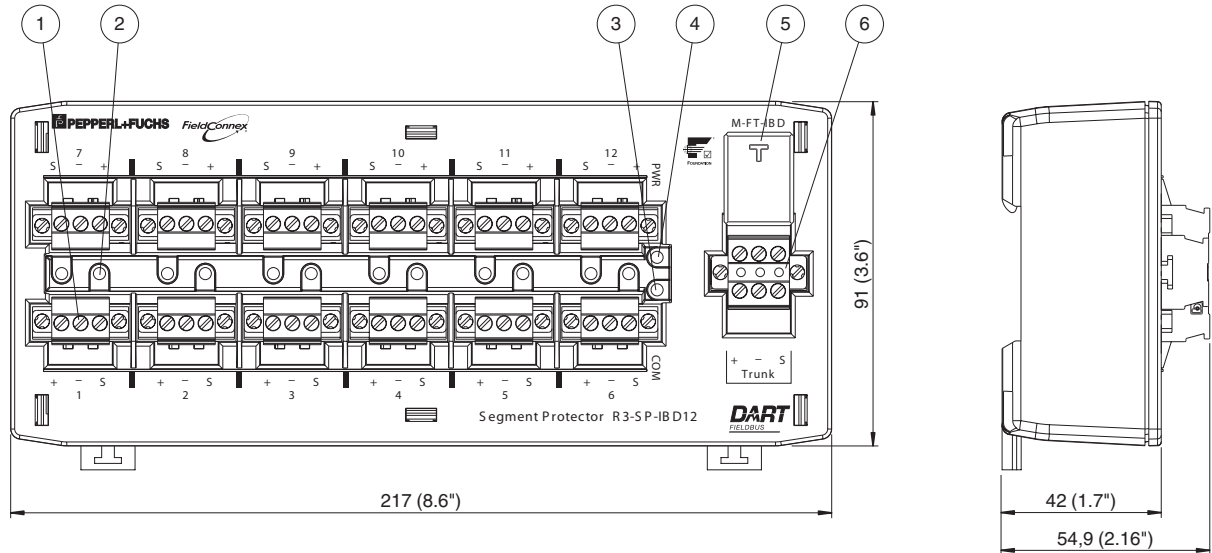
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General information

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.

Dimensions



all dimensions in millimeters (mm) and inch (") without tolerance indication

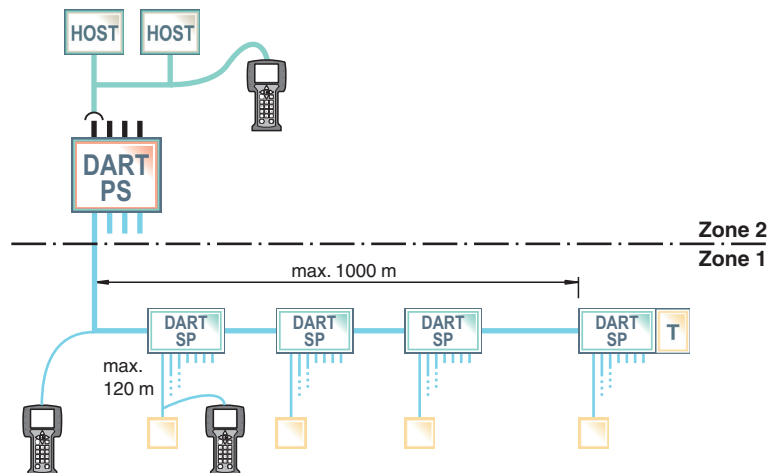
Description:

- 1 Spur Connection Segment 1
- 2 LED for Segment 1
- 3 LED COM (Communication)
- 4 LED PWR (Power)
- 5 Terminator M-FT-IBD, removable
- 6 T Connector T-CON.3.BU

Installation note

see manual

The intrinsically safe High-Power Trunk with DART



DART protects the fieldbus trunk. The DART power supply limits energy on the trunk to intrinsically safe levels Ex ib IIC. DART Fieldbus components i.e. DART Fieldbus power supply, DART Segment Protectors, and related accessories must be

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compatible with each other. They are covered under a single system certificate.

The DART Segment Protector provides outputs certified Ex ib IIC for today's intrinsically safe fieldbus instruments.