

Features

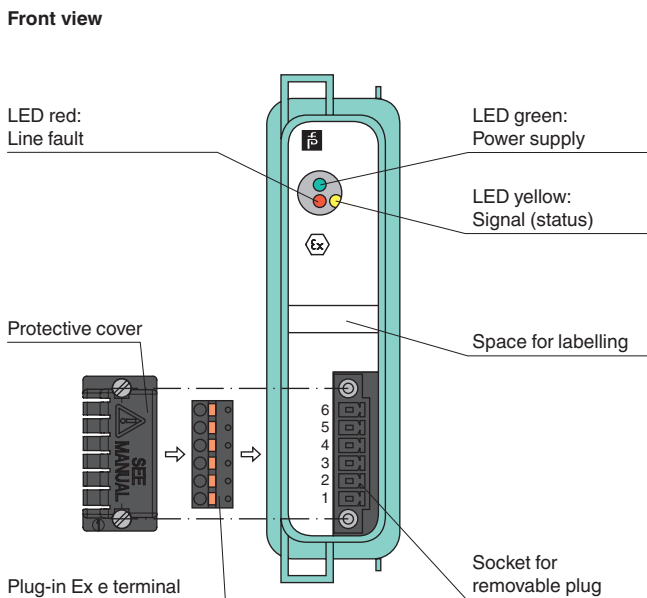
- 2-channel
- Inputs with plug-in Ex e terminals
- Dry contact or NAMUR inputs
- Galvanic isolation between channels and the bus
- Installation in suitable enclosures in Zone 1
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- Module can be exchanged under voltage (hot swap)

Function

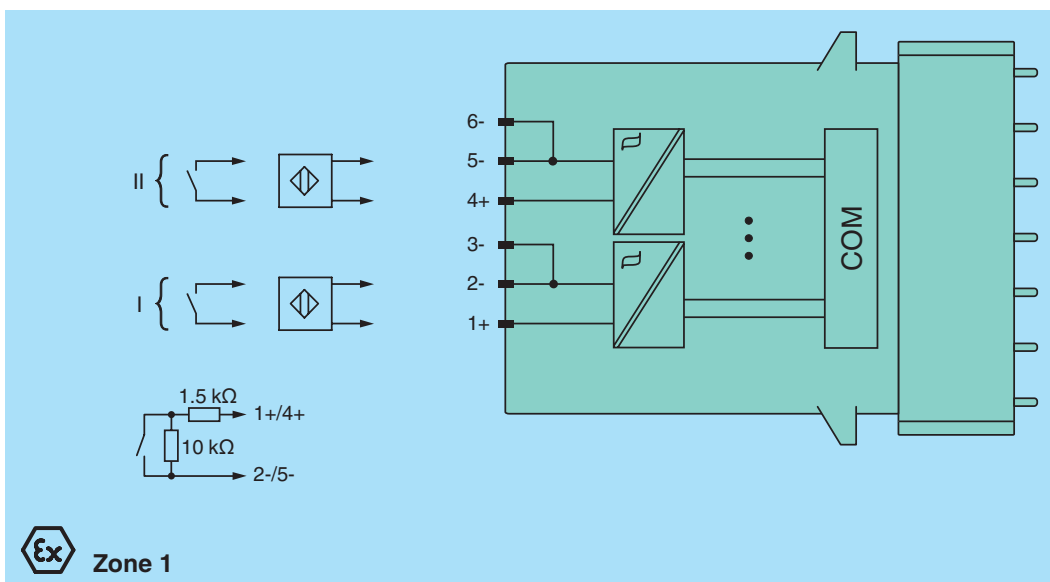
The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area. Open and short circuit line faults are detected. The device is supplied with plug-in Ex e terminals and protective cover.

The increased safety inputs are galvanically isolated from each other, the bus, and the power supply.


Assembly



Connection



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Supply		
Connection		backplane bus
Rated voltage	U_n	12 V DC , only in connection with the power supplies FB92**
Power consumption		0.5 W
Internal bus		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
Input		
Number of channels		2
Suitable sensors		mechanical contacts, NAMUR proximity switches, 2-wire initiators
Connection		channel I: 1+, 2/3-; channel II: 4+, 5/6-
Rated values		acc. to EN 60947-5-6 (NAMUR)
Switching point/switching hysteresis		1.2 ... 2.1 mA / \pm 0.2 mA
Voltage		8.2 V
Internal resistor		1 k Ω
Line fault detection		can be switched on/off for each channel via configuration tool
Connection		mechanical switch with additional resistors (see connection diagram) , proximity switches without additional wiring
Short-circuit		< 360 Ω
Open-circuit		< 0.35 mA
Minimum pulse duration		20 ms
Indicators/settings		
LED indicator		LED green: supply LED red: line fault, per channel LED yellow: signal (status), per channel
Coding		optional mechanical coding via front socket
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Conformity		
Electromagnetic compatibility		NE 21:2007
Degree of protection		IEC 60529:2000
Environmental test		EN 60068-2-14:2009
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Damaging gas		EN 60068-2-42:2003
Relative humidity		EN 60068-2-78:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Relative humidity		95 % non-condensing
Shock resistance		shock type I, shock duration 11 ms, shock amplitude 50 m/s ² , number of shock directions 6, number of shocks per direction 100
Vibration resistance		frequency range 5 ... 500 Hz, amplitude 5 ... 13.2 Hz \pm 1.5 mm, 13.2 ... 100 Hz 1g, sweep rate 1 octave/min, duration 10 sweeps 5 Hz - 100 Hz - 5 Hz
Damaging gas		for plugs: 21 days in 25 ppm SO ₂ , at 25 °C and 75 % rel. humidity, device G3
Mechanical specifications		
Degree of protection		IP20 (module) , a separate housing is required acc. to the system description
Connection		Ex e spring terminal with protective cover
Mass		approx. 350 g
Dimensions		28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in)
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		BVS 11 ATEX E 093 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		 II 2 G Ex db eb IIC T4
Electrical isolation		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007
General information		
System information		The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. Here, the corresponding EC-Type Examination Certificate has to be observed.

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

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