

**Features**

- 2-channel
- Inputs wired to Ex e terminals
- Dry contact or NAMUR inputs
- Galvanic isolation between channels and the bus
- Installation in suitable enclosures in Zone 1 or Zone 21
- 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**

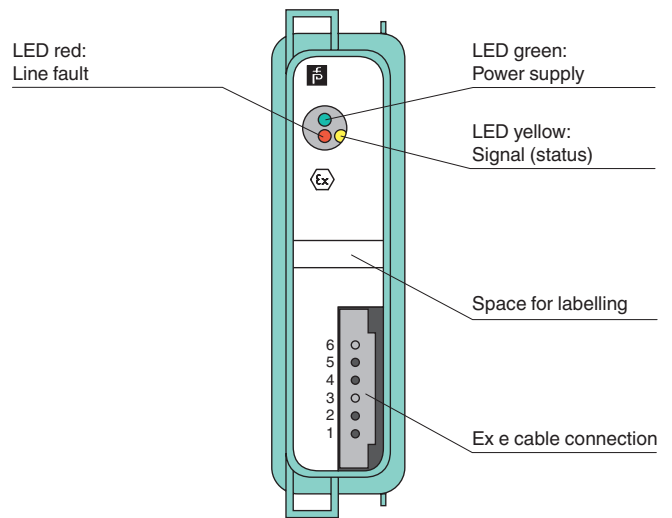
The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area.

Open or short circuit line fault alarms are detected.

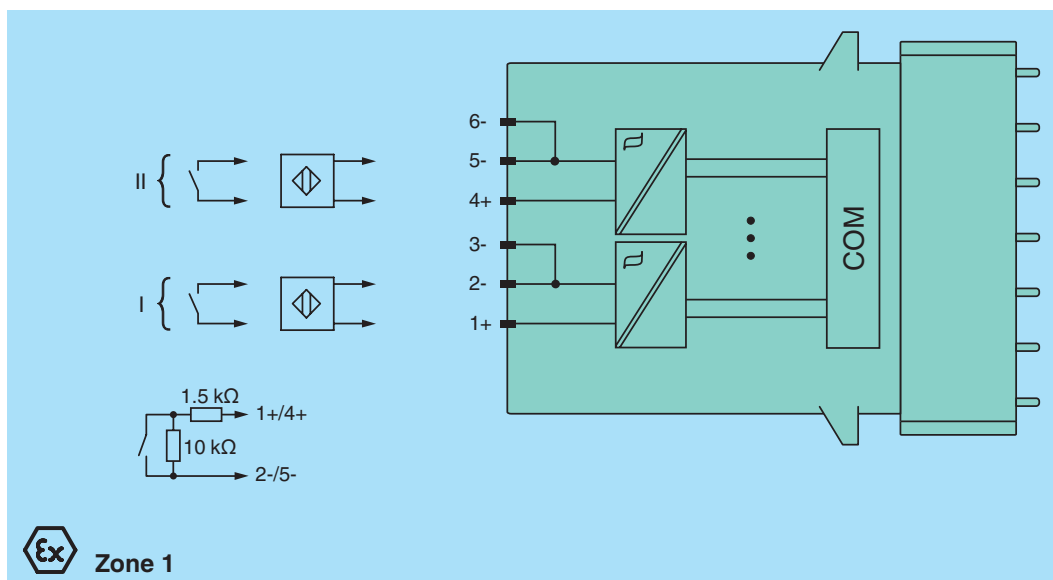
The intrinsically safe inputs are galvanically isolated from the bus and the power supply (EN 60079-11).

**Assembly**

Front view




**Connection**



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

<b>Supply</b>		
Connection		backplane bus
Rated voltage	$U_n$	12 V DC , only in connection with the power supplies FB92**
Power consumption		0.5 W
<b>Internal bus</b>		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
<b>Input</b>		
Number of channels		2
Suitable sensors		mechanical contacts, NAMUR proximity switches, 2-wire initiators
Connection		wire ends 1+ (white), 2- (brown); 4+ (yellow), 5- (grey)
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 $\Omega$
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 $\Omega$
Open-circuit		< 0.35 mA
Minimum pulse duration		20 ms
<b>Indicators/settings</b>		
LED indicator		LED green: supply LED red: line fault, per channel LED yellow: signal (status), per channel
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1
<b>Conformity</b>		
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529
Environmental test		EN 60068-2-14
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Damaging gas		EN 60068-2-42
Relative humidity		EN 60068-2-56
<b>Ambient conditions</b>		
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 <sup>2</sup> , 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 <sub>2</sub> , at 25 °C and 75 % rel. humidity, device G3
<b>Mechanical specifications</b>		
Degree of protection		IP20 (module) , a separate housing is required acc. to the system description
Connection		wire ends, 80 cm wiring connection: separately covered Ex e terminals required
Mass		approx. 350 g
Dimensions		28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in)
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		PTB 97 ATEX 1074 U , PTB 97 ATEX 1075 (system) , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection		 II 2 G Ex d IIC Gb
Electrical isolation		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007 EN 60079-26:2007 EN 61241-11:2006
<b>General information</b>		
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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .
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