

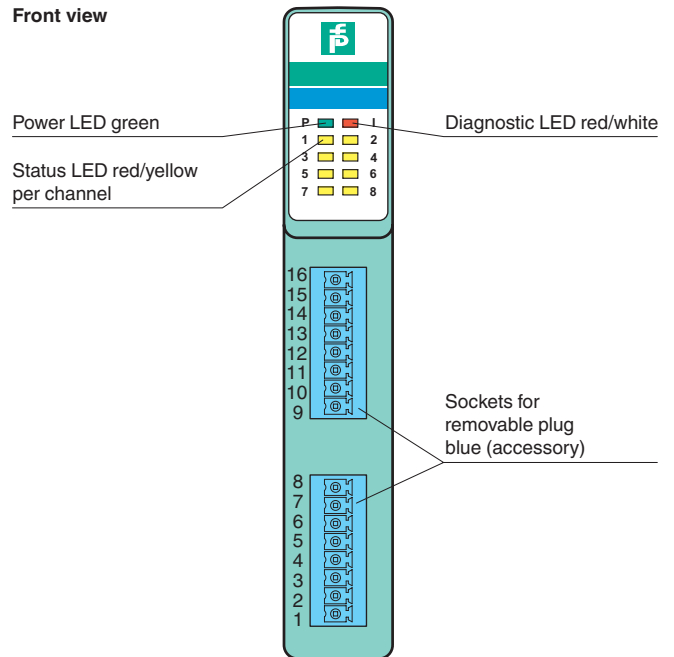
**Features**

- 8-channel
- Inputs Ex ia
- Dry contact or NAMUR inputs
- Installation in Zone 2, Zone 22, Div. 2, or safe area
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- Module can be exchanged under voltage

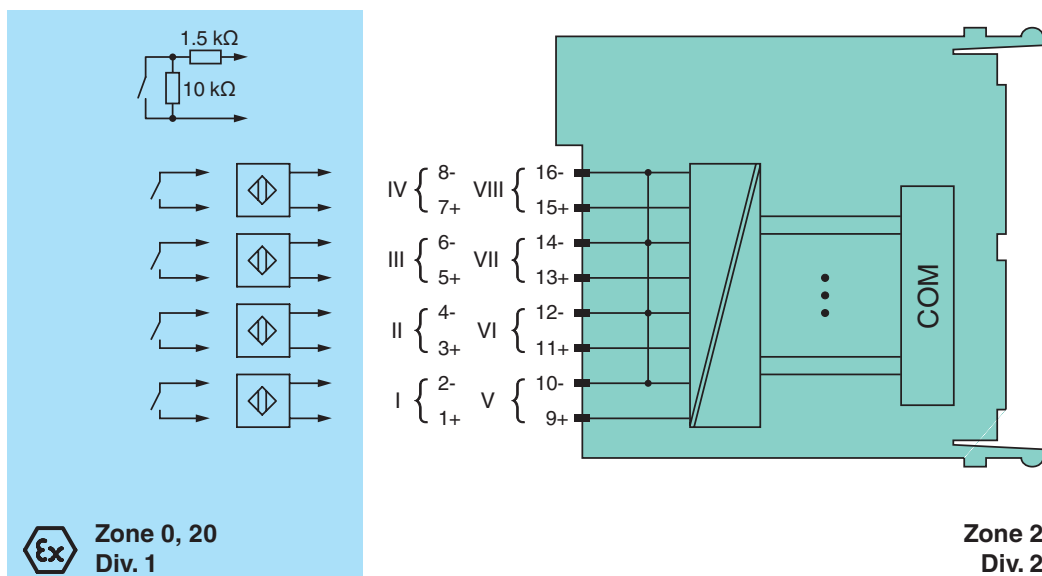
**Function**

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 inputs are galvanically isolated from the bus and the power supply.

**Assembly**



**Connection**



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

Pepperl+Fuchs Group  
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<b>Supply</b>		
Connection		backplane bus
Rated voltage	$U_n$	12 V DC , only in connection with the power supplies LB9***
Power consumption		1.2 W
<b>Internal bus</b>		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
<b>Input</b>		
Number of channels		8
Suitable sensors		mechanical contacts, NAMUR proximity switches, 2-wire initiators
Connection		channel I: 1+, 2-; channel II: 3+, 4-; channel III: 5+, 6-; channel IV: 7+, 8-; channel V: 9+, 10-; channel VI: 11+, 12-; channel VII: 13+, 14-; channel VIII: 15+, 16-
Rated values		acc. to EN 60947-5-6 (NAMUR)
Switching point/switching hysteresis		1.2 ... 2.1 mA / $\pm$ 0.2 mA
Voltage		8 V
Internal resistor		820 $\Omega$
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		15 ms
<b>Indicators/settings</b>		
LED indicator		Power LED (P) green: supply Diagnostic LED (I) red: module fault , red flashing: communication error , white: fixed parameter set (parameters from com unit are ignored) , white flashing: requests parameters from com unit Status LED (1-8) red: line fault (lead breakage or short circuit) , yellow: signal (per channel)
Coding		optional mechanical coding via front socket
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1
<b>Conformity</b>		
Electromagnetic compatibility		
Degree of protection		NE 21
Environmental test		IEC 60529
Shock resistance		EN 60068-2-14
Vibration resistance		EN 60068-2-27
Damaging gas		EN 60068-2-6
Relative humidity		EN 60068-2-42
		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 when mounted on backplane
Connection		removable front connector with spring terminal (0.14 ... 0.5 mm <sup>2</sup> )
Mass		approx. 90 g
Dimensions		16 x 100 x 103 mm (0.63 x 3.9 x 4 in)
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		
Group, category, type of protection		EXA 13 ATEX 0036X , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
		$\text{Ex}$ II 3(1) G Ex nA [ia Ga] IIC T4 Gc
		$\text{Ex}$ I (M1) [Ex ia Ma] I
		$\text{Ex}$ II (1) D [Ex ia Da] IIIC
<b>Input</b>		
Voltage	$U_o$	10 V
Current	$I_o$	12 mA
Power	$P_o$	30 mW (linear characteristic)
Electrical isolation		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity		

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Directive 94/9/EC	EN 60079-0:2011 EN 60079-11:2011 EN 60079-15:2010
<b>International approvals</b>	
IECEx approval	EXA 13.0003X
Approved for	Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I
<b>General information</b>	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, the corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
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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