

**Features**

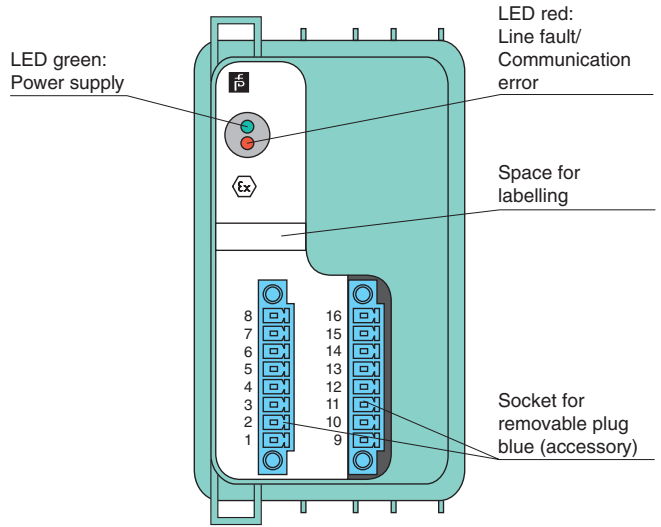
- 8-channel
- Inputs Ex ia
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Dry contact or NAMUR inputs
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- On/Off delay

**Function**

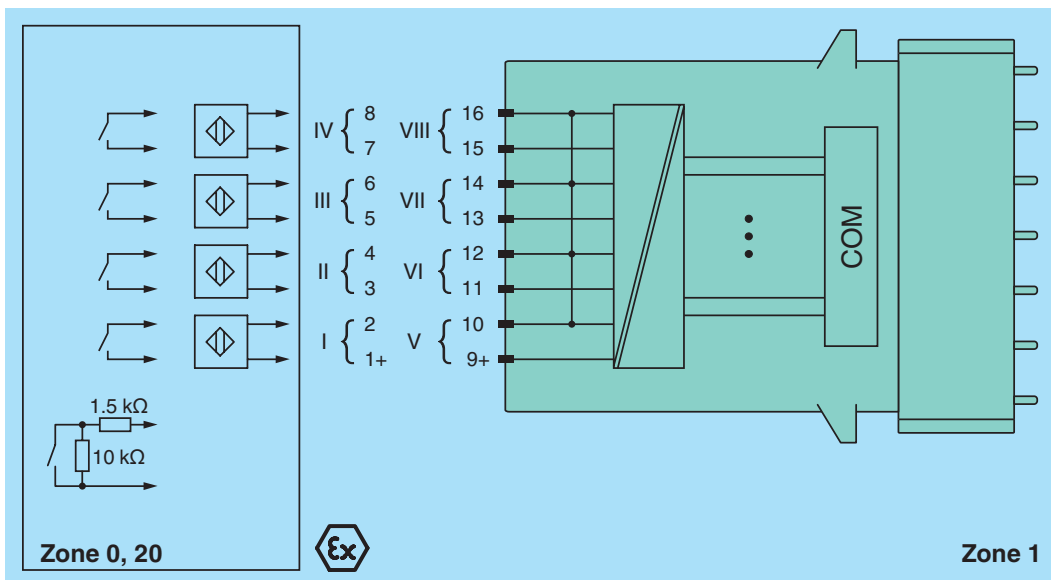
The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area.  
 Open or short circuit line fault alarms are detected.  
 The inputs are galvanically isolated from the bus and the power supply (EN 60079-11).

**Assembly**

Front view



**Connection**



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<b>Slots</b>	
Occupied slots	2
<b>Supply</b>	
Connection	backplane bus
Rated voltage $U_r$	12 V DC , only in connection with the power supplies FB92**
Power dissipation	0.95 W
Power consumption	0.95 W
<b>Internal bus</b>	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
<b>Input</b>	
Digital signals (active)	
Switching point: ON	
<b>Digital input</b>	
Number of channels	8
Sensor interface	
Connection	NAMUR sensor
Connection [2]	volt-free contact
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
Internal resistor $R_i$	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	1 ms
<b>Indicators/settings</b>	
LED indication	LED green: supply LED red: line fault
Coding	optional mechanical coding via front socket
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	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 15 g, number of shocks 18
Vibration resistance	frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration $\pm$ 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration $\pm$ 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas	designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
<b>Mechanical specifications</b>	
Degree of protection	IP20 (module) , a separate housing is required acc. to the system description
Connection	removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm <sup>2</sup> ) or screw terminals (0.08 ... 1.5 mm <sup>2</sup> )
Mass	approx. 750 g
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 inch)
<b>Data for application in connection with hazardous areas</b>	
EU-Type Examination Certificate	PTB 97 ATEX 1074 U
Marking	 II 2(1) G Ex d [ia Ga] IIC Gb  II (1) D [Ex ia Da] IIIC
Input	

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Voltage	$U_o$	15.3 V
Current	$I_o$	16.1 mA
Power	$P_o$	61.8 mW (linear characteristic)
<b>Galvanic isolation</b>		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>		
Directive 2014/34/EU		EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007 EN 60079-26:2007 EN 61241-11:2006
<b>International approvals</b>		
ATEX approval		PTB 97 ATEX 1075 ; PTB 97 ATEX 1074 U
EAC approval		Russia: RU C-IT.MIII06.B.00129
<b>Marine approval</b>		
Lloyd Register		15/20021
DNV GL Marine		TAA0000034
American Bureau of Shipping		T1450280/UN
Bureau Veritas Marine		22449/B0 BV
<b>General information</b>		
System information		The module has to be mounted in appropriate backplanes and housings (FB92**) in Zone 1, 2, 21, 22 or outside hazardous areas (gas or dust). Here, observe the corresponding EC-type examination certificate.
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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