

Features

- 8-channel
- Inputs with plug-in Ex e terminals
- 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

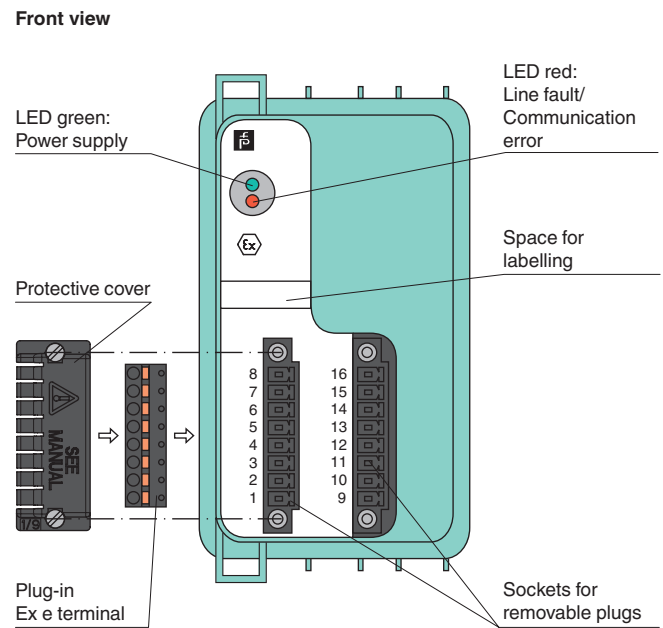
The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area. Furthermore it can read active inputs with 24 V or 5 V DC.

Open and short circuit line faults are detected. This does not apply for active signals.

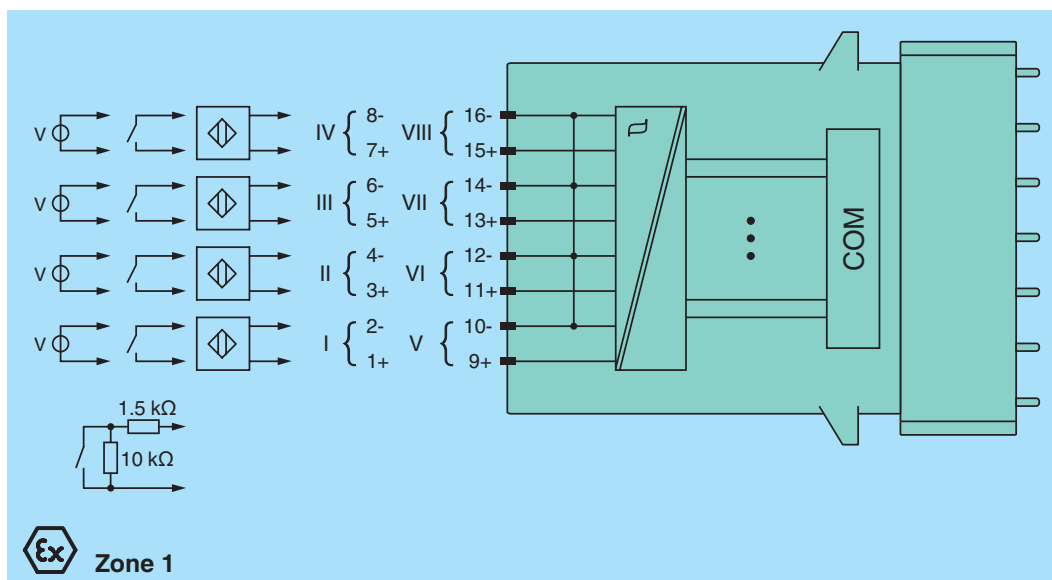
The device is supplied with plug-in Ex e terminals and protective cover.

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".

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Slots	
Occupied slots	2
Supply	
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
Internal bus	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
Digital input	
Number of channels	8
Sensor interface	
Connection	NAMUR sensor
Connection [2]	volt-free contact
Connection [3]	active binary signal 24 V DC
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)
Digital signals (active)	configurable 24 V 5 V
Switching point: ON	> 8 V > 2.7 V
Switching point: OFF	< 3 V < 2.3 V
Switching point/switching hysteresis	1.2 ... 2.1 mA / ± 0.2 mA
Internal resistor R_i	1 kΩ
Line fault detection	can be switched on/off for each channel via configuration tool , active signals (24 V, 5 V) without line fault detection
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	1 ms
Indicators/settings	
LED indication	LED green: supply LED red: line fault , red flashing: communication error
Coding	optional mechanical coding via front socket
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	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 15 g, number of shocks 18
Vibration resistance	frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 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
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. 750 g
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 inch)
Data for application in connection with hazardous areas	
EU-Type Examination Certificate	BVS 11 ATEX E 093 X
Marking	 II 2 G Ex db eb IIC T4
Galvanic isolation	

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Input/power supply, internal bus	safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007
International approvals	
ATEX approval	BVS 11 ATEX E 093X
INMETRO	Brazil: TÜV 14.1599X
EAC approval	Russia: RU C-IT.MIII06.B.00129
Marine approval	
Lloyd Register	15/20021
American Bureau of Shipping	T1450280/UN
Bureau Veritas Marine	22449/B0 BV
General information	
System information	The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. 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 www.pepperl-fuchs.com .

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