Digital Input

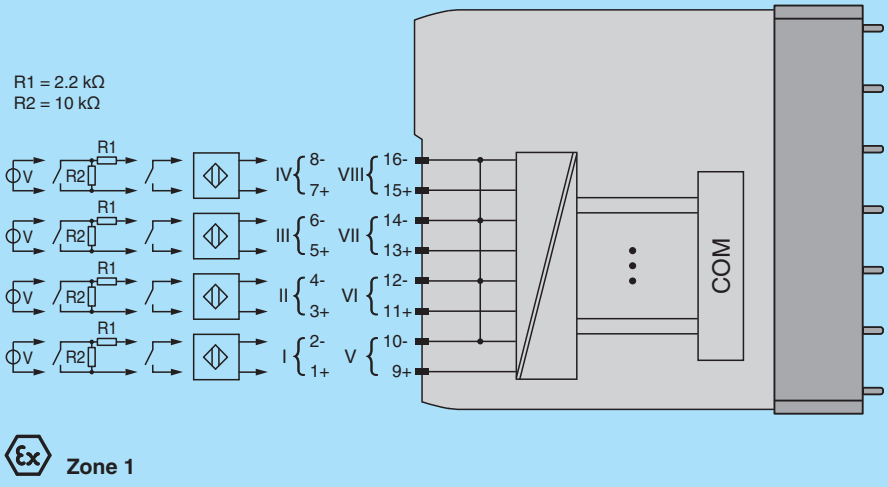
FB1308B3

- 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.

Connection



Technical Data

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

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Technical Data

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)
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
Digital signals (active)		configurable 24 V 5 V
Switching point: ON		> 8 V > 2.7 V
Switching point: OFF		< 3 V < 2.3 V
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 61326-1:2013
Conformity		
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		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 85 °C (-40 ... 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		FIDI 21 ATEX 0012 U
Marking		⟨Ex⟩ II 2G Ex db eb q IIC Gb
Galvanic isolation		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V

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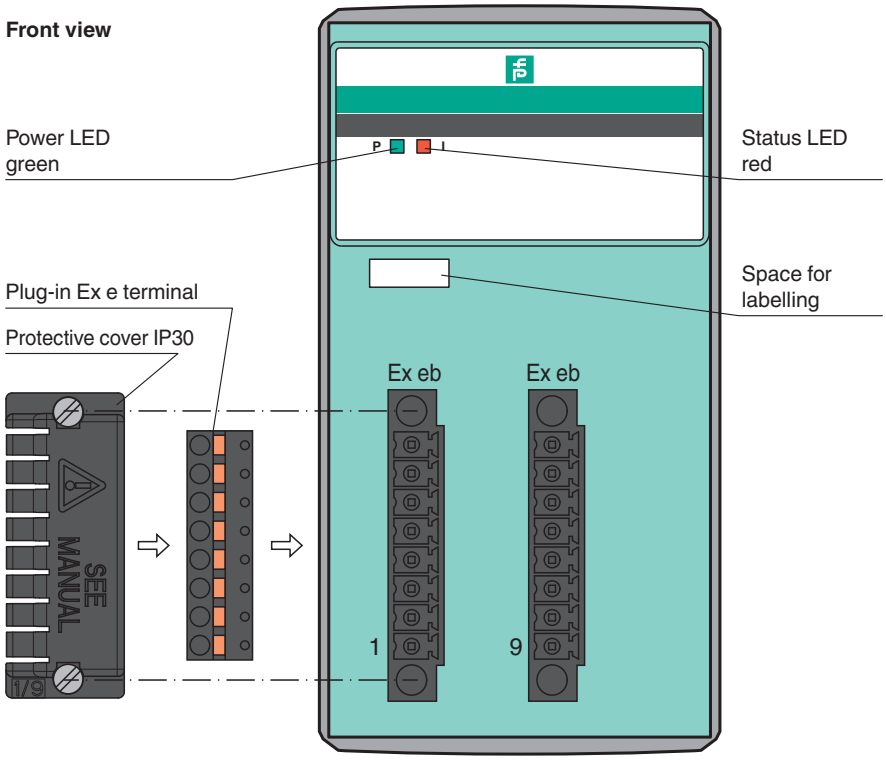
Technical Data

Directive conformity	
Directive 2014/34/EU	EN 60079-0:2018 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015+A1:2018
International approvals	
ATEX approval	FIDI 21 ATEX 0012 U
IECEx approval	
IECEx certificate	IECEx FIDI 21.0002U
IECEx marking	Ex db eb q IIC Gb
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.

Assembly

Front view



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