

**Features**

- 8-channel
- Outputs Ex ib
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Galvanic group isolation
- Line fault detection (LFD)
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Permanently self-monitoring
- Output with watchdog
- Output with bus-independent safety shutdown input

**Function**

The device features 8 independent channels.

The device can be used to drive low power solenoids, sounders, or LEDs.

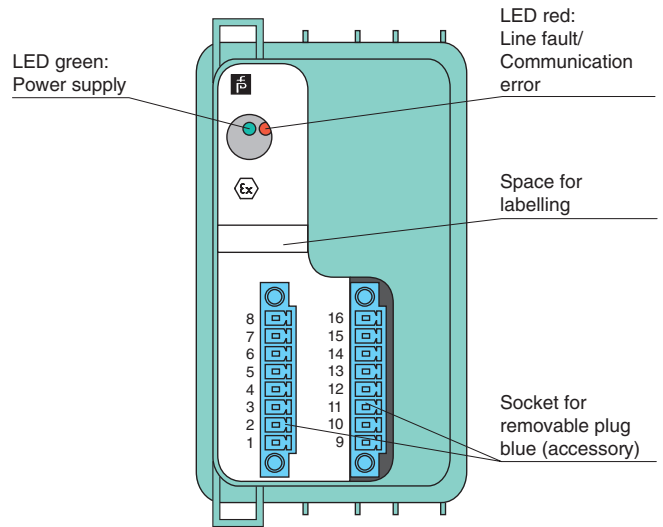
Open and short-circuit line faults are detected.

The outputs are galvanically isolated from the bus and the power supply.

The outputs can be switched off via a contact. This can be used for bus-independent safety applications.

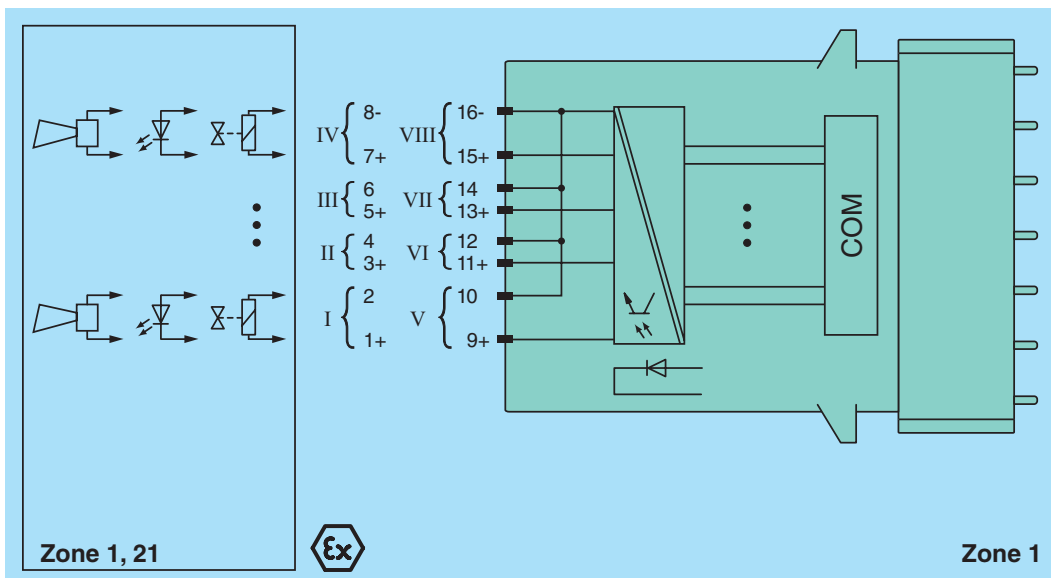
**Assembly**

Front view





**SIL2**

**Connection**



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

<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		2.35 W
Power consumption		2.35 W
<b>Internal bus</b>		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
<b>Digital output</b>		
Number of channels		8
Suitable field devices		
Field device		Solenoid Valve
Field device [2]		audible alarm
Field device [3]		visual alarm
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-
Current limit	$I_{max}$	8 mA
Open loop voltage		20 V
Line fault detection		can be switched on/off for each channel via configuration tool
Test current		0.33 mA
Short-circuit		< 300 $\Omega$
Open-circuit		> 50 k $\Omega$
Response time		20 ms (depending on bus cycle time)
Watchdog		within 0.5 s the device goes in safe state, e.g. after loss of communication
<b>Indicators/settings</b>		
LED indication		LED green: supply LED red: line fault , communication error red flashing
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 G Ex d [ib] IIC Gb  II (2) D [Ex ib Db] IIIC
<b>Output</b>		
Voltage	$U_o$	28 V
Current	$I_o$	13.5 mA
Power	$P_o$	376 mW (characteristic curve rectangular type)

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<b>Galvanic isolation</b>	
Output/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
Marine approval	
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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Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com