Features

- 8-channel
- Outputs with plug-in Ex e terminals
- Installation in suitable enclosures in Zone 1
- Line fault detection (LFD)
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Permanently self-monitoring
- Usable up to SIL2 acc. to IEC 61508
- 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.

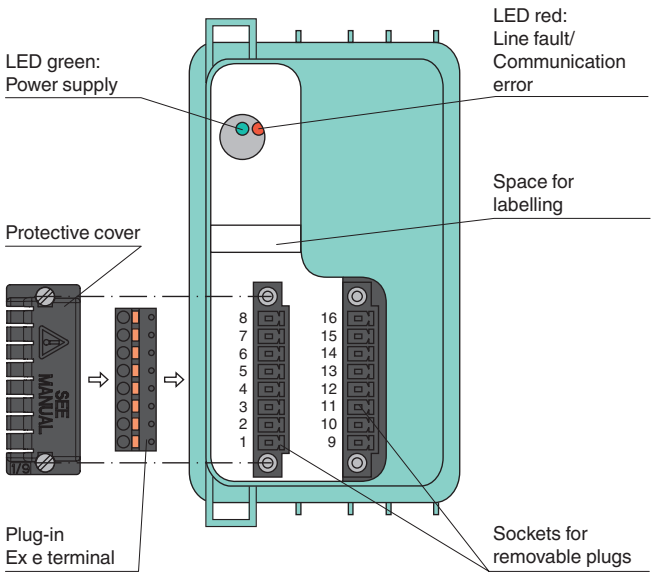
The device is supplied with plug-in Ex e terminals and protective cover.

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.

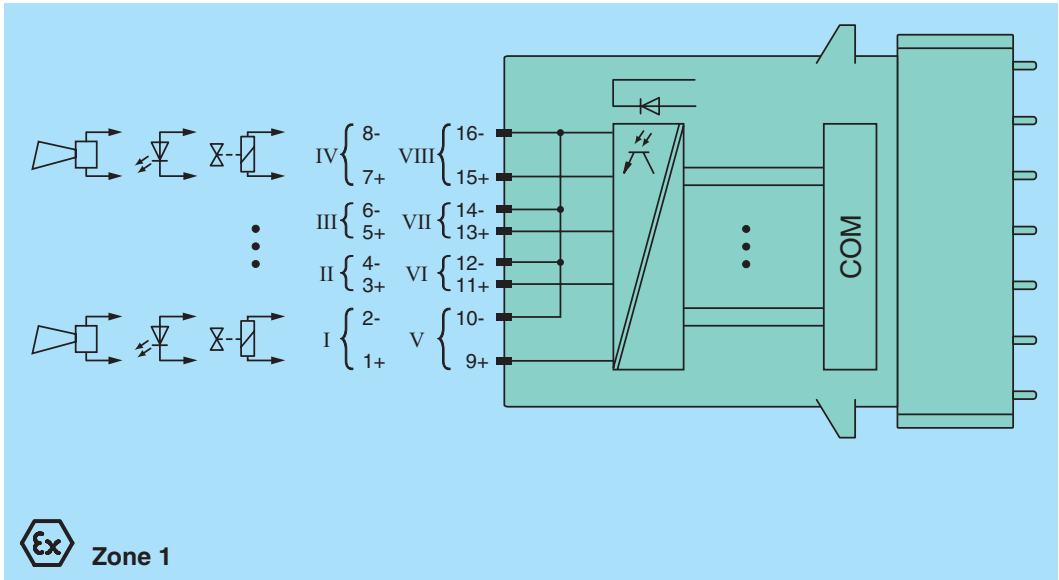
Assembly

Front view



SIL2

Connection



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Supply	
Connection	backplane bus
Rated voltage U_n	12 V DC , only in connection with the power supplies FB92**
Power loss	1.2 W
Power consumption	2.2 W
Internal bus	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
Output	
Number of channels	8
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-
Response time	20 ms (depending on bus cycle time)
Line fault detection	can be switched on/off for each channel via configuration tool
Test current	0.33 mA
Short-circuit	< 300 Ω
Open-circuit	> 50 kΩ
Watchdog	within 0.5 s the device goes in safe state, e.g. after loss of communication
Digital signals (active/short-protected)	20 V, 8 mA per channel
Indicators/settings	
LED indicator	LED green: supply LED red: line fault , red flashing: communication error
Coding	optional mechanical coding via front socket
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	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 50 m/s^2, number of shock directions 6, number of shocks per direction 100
Vibration resistance	frequency range 5 ... 500 Hz, amplitude 5 ... 13.2 Hz ± 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_2, at 25 °C and 75 % rel. humidity, device 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 in)
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	BVS 11 ATEX E 093 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	Ⓔx II 2 G Ex db eb IIC T4
Electrical isolation	
Output/power supply, internal bus	safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007
General information	
System information	The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. Here, the corresponding EC-Type Examination Certificate has to be observed.
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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