

Features

- 4-channel
- Outputs Ex ia
- Installation in suitable enclosures in Zone 1 or Zone 21
- Analog output module for 0/4 mA ... 20 mA
- HART communication via field bus or service bus
- Simulation mode for service operations (forcing)
- Line fault detection (LFD): one LED per channel
- Permanently self-monitoring
- Up to SIL2 acc. to IEC 61508
- Module can be exchanged under voltage (hot swap)

Function

The device drives positioners, proportional valves, I/P converters, or local indicators.

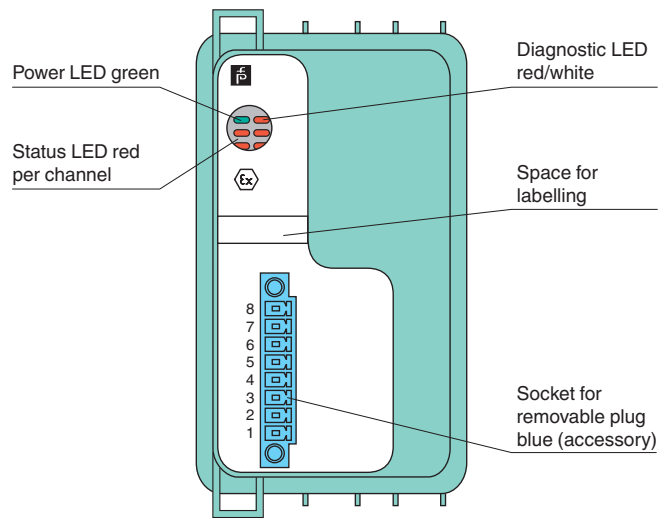
Open and short-circuit line faults are detected.

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

The output is galvanically isolated from the bus and the power supply.

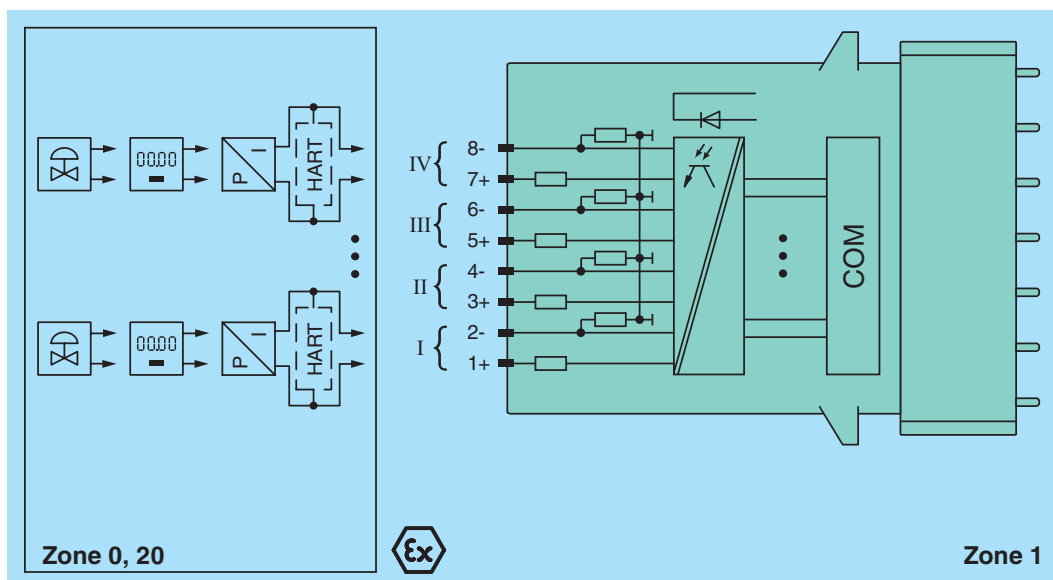
Assembly

Front view



SIL2

Connection



Release date 2015-02-09 11:09 Date of issue 2015-02-09 239059_eng.xml

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

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

Supply		
Connection		backplane bus
Rated voltage	U_n	12 V DC , only in connection with the power supplies FB92**
Power loss		1.5 W
Power consumption		3 W
Internal bus		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
Output		
Number of channels		4
Suitable field devices		proportional valves, I/P converter, local indicators
Connection		channel I: 1+, 2-; channel II: 3+, 4-; channel III: 5+, 6-; channel IV: 7+, 8-
Current		0 ... 25 mA short-circuit protected
Load		750 Ω max.
Line fault detection		can be switched on/off for each channel via configuration tool , configurable via configuration tool
Short-circuit		Ex works settings: < 50 Ω configurable between 0 ... 26 mA
Open-circuit		deviation of preset output value > 0.5 mA
Watchdog		within 0.5 s the device goes in safe state, e.g. after loss of communication
Transfer characteristics		
Deviation		
After calibration		0.1 % of the signal range at 20 °C (68 °F)
Influence of ambient temperature		0.1 %/10 K of the signal range
Refresh time		100 ms
Indicators/settings		
LED indicator		Power LED (P) green: supply Diagnostic LED (I) red: module fault , red flashing: communication error , white: fixed parameter set (parameters from com unit are ignored) , white flashing: requests parameters from com unit Status LED (1-4) red: line fault (lead breakage or short circuit)
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 \pm 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		removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm ²) or screw terminals (0.08 ... 1.5 mm ²)
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 12 ATEX E 015 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		 II 2(1) G Ex d [ia Ga] IIC T4 Gb  II (1) D [Ex ia Da] IIIC
Output		
Voltage	U_o	27 V
Current	I_o	87 mA
Power	P_o	575 mW (linear characteristic)
Electrical isolation		
Output/power supply, internal bus		safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V

Release date 2015-02-09 11:09 Date of issue 2015-02-09 239059_eng.xml

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

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

Directive conformity	
Directive 94/9/EC	EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007 EN 60079-26:2007
General information	
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, 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 .

Release date 2015-02-09 11:09 Date of issue 2015-02-09 239059_eng.xml

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

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