

Features

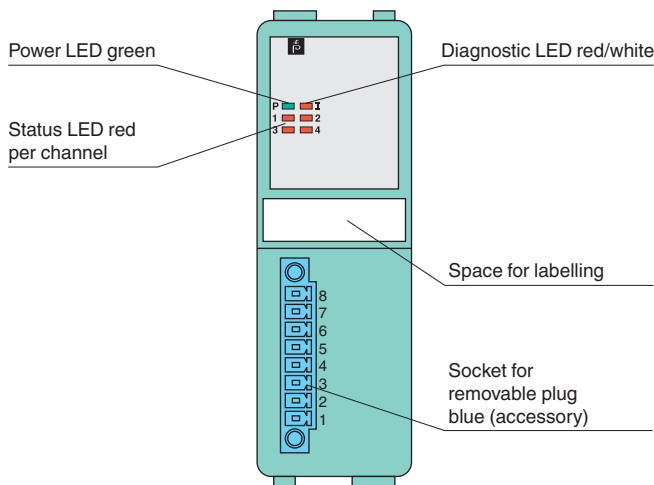
- 4-channel
- Outputs Ex ia
- Analog output module for 0/4 mA ... 20 mA
- Installation in Zone 2, Zone 22, Div. 2, or safe area
- HART communication via field bus or service bus
- Simulation mode for service operations (forcing)
- Line fault detection (LFD): one LED per channel
- Permanently self-monitoring
- Module can be exchanged under voltage

Function

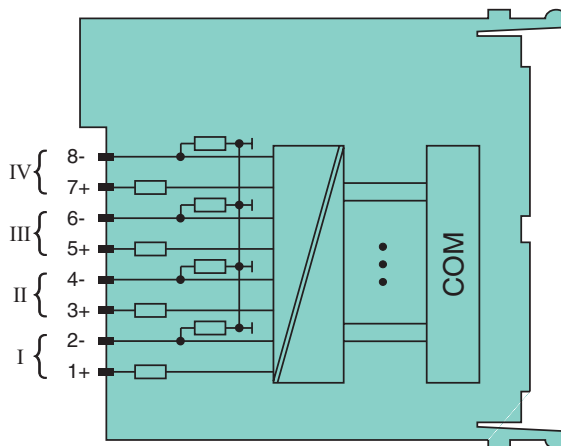
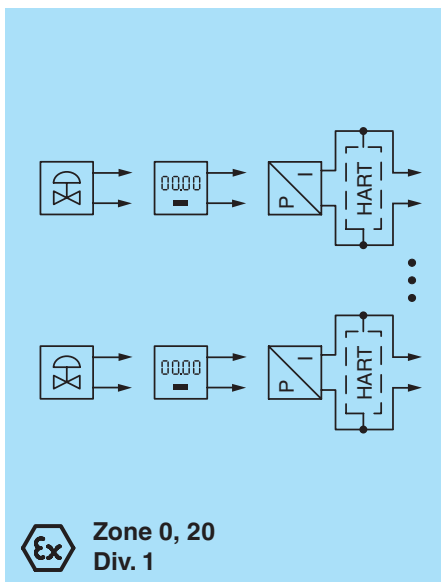
The device drives positioners, proportional valves, I/P converters, or local indicators.
 Open and short circuit line faults are detected.
 The outputs are galvanically isolated from the bus and the power supply.

Assembly

Front view



Connection



Zone 2
Div. 2

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

Supply		
Connection		backplane bus
Rated voltage	U_n	12 V DC , only in connection with the power supplies LB9***
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 when mounted on backplane
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. 150 g
Dimensions		32 x 100 x 103 mm (1.26 x 3.9 x 4 in)
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		BVS 11 ATEX E 116 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		 II 3(1) G Ex nA [ia Ga] IIC T4 Gc  I (M1) [Ex ia Ma] I  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		

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

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Output/power supply, internal bus	safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009 EN 60079-11:2007 EN 60079-15:2010 EN 60079-26:2007 EN 61241-11:2006
International approvals	
UL approval	E106378
IECEx approval	BVS 11.0068X
Approved for	Ex nAc [ia] IIC T4 [Ex ia] IIIC [Ex ia] I
General information	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, the corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
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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