

**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)
- Permanently self-monitoring
- Up to SIL2 acc. to IEC 61508
- Module can be exchanged under voltage (hot swap)

**Function**

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

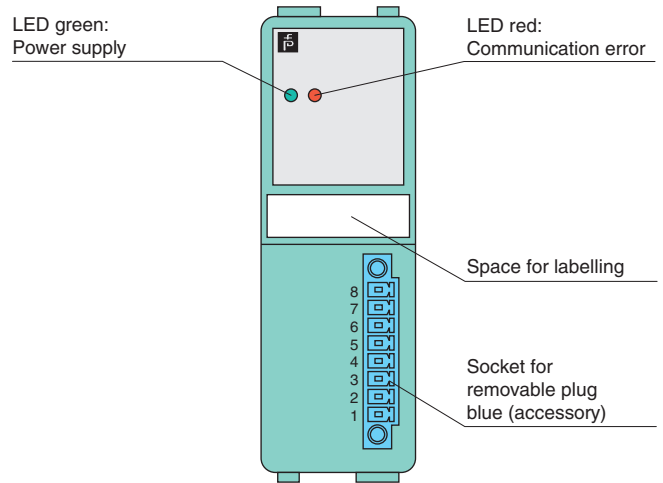
Open circuit line fault alarms are detected.

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

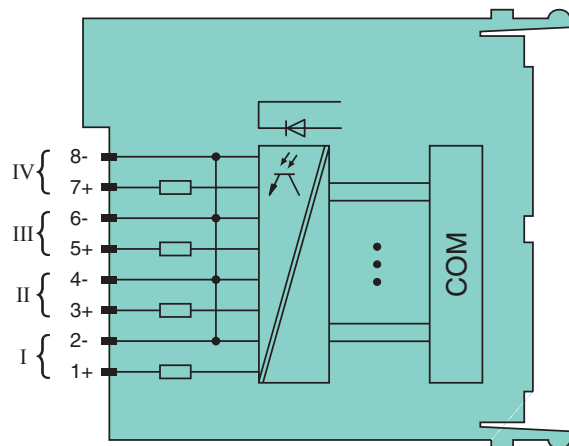
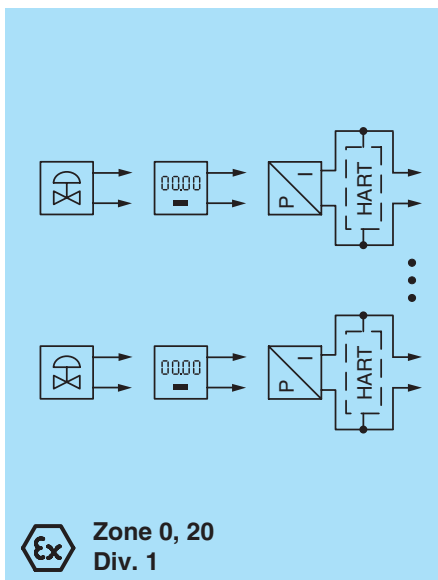
The outputs are galvanically isolated from the bus and the power supply (EN 60079-11).

**Assembly**

Front view






**Connection**



**Zone 2  
Div. 2**

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<b>Supply</b>		
Connection		backplane bus
Rated voltage		12 V DC , only in connection with the power supplies LB9***
Power consumption		3 W
<b>Internal bus</b>		
Connection		backplane bus
Interface		manufacturer specific bus to standard Com Unit/gateway
<b>Output</b>		
Connection		terminals 1+, 2-, 3+, 4-, 5+, 6-, 7+, 8-
Current		4 ... 20 mA (0 ... 25 mA) short-circuit protected
Load		750 Ω max.
Line fault detection		min. 1 mA
Response threshold		≥ 850 Ω
Watchdog		output off 0.5 s after serious fault
<b>Transfer characteristics</b>		
Deviation		0.1 % of the input signal range at 20 °C (68 °F)
Influence of ambient temperature		0.01 %/K of the input signal range
Refresh time		58 ms (4 channels) 110 ms during HART
<b>Indicators/settings</b>		
LED indicator		LED green: supply LED red: line fault , communication error
Labeling		space for labeling at the front
Coding		mechanical coding at the front socket , optional
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1
<b>Conformity</b>		
Electromagnetic compatibility		NE 21
Protection degree		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 50 m/s <sup>2</sup> , 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 <sub>2</sub> , at 25 °C and 75 % rel. humidity, device G3
<b>Mechanical specifications</b>		
Protection degree		IP20 (module) , mounted on backplane
Connection		device plug (accessories) - removable terminals - plug with screw flange - wiring connection: spring terminals: (0.14 ... 1.5 mm <sup>2</sup> ), screw terminals: (0.08 ... 1.5 mm <sup>2</sup> )
Mass		approx. 150 g
Dimensions		32 x 100 x 103 mm (1.26 x 3.9 x 4 in)
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		PTB 03 ATEX 2042 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection		 II (1) G [Ex ia] IIC,  II (1) D [Ex iaD]
<b>Output</b>		
Voltage	U <sub>o</sub>	27.3 V
Current	I <sub>o</sub>	93 mA
Power	P <sub>o</sub>	635 mW (linear characteristic)
Declaration of conformity		PF 08 CERT 1234 X
Group, category, type of protection, temperature class		 II 3 G Ex nA IIC T4
Electrical isolation		

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Output/power supply, internal bus	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 94/9/EC	EN 60079-0, EN 60079-11, EN 60079-15, EN 60079-26, EN 61241-0, EN 61241-11
<b>International approvals</b>	
UL approval	E106378
IECEx approval	BVS 09.0037X , BVS 08.0011X
<b>General information</b>	
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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .