

Features

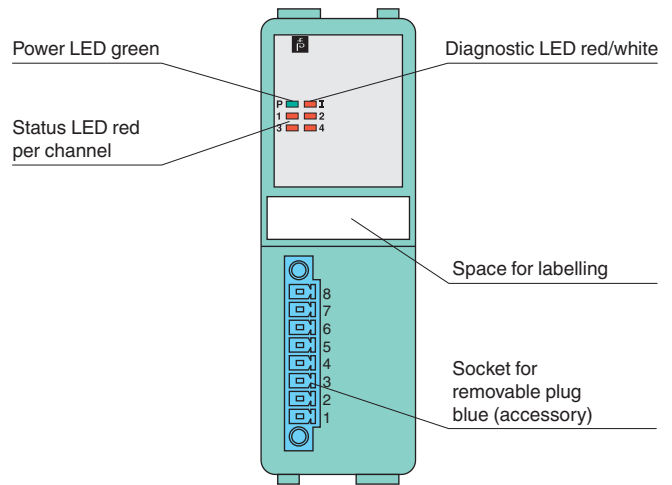
- 4-channel
- Outputs Ex ia
- Analog output module for 0/4 mA ... 20 mA
- Installation in Zone 2, Zone 22, Div. 2, or safe area
- HART communication via field bus or service bus
- Simulation mode for service operations (forcing)
- Line fault detection (LFD): one LED per channel
- Permanently self-monitoring
- Up to SIL2 acc. to IEC 61508
- 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 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.

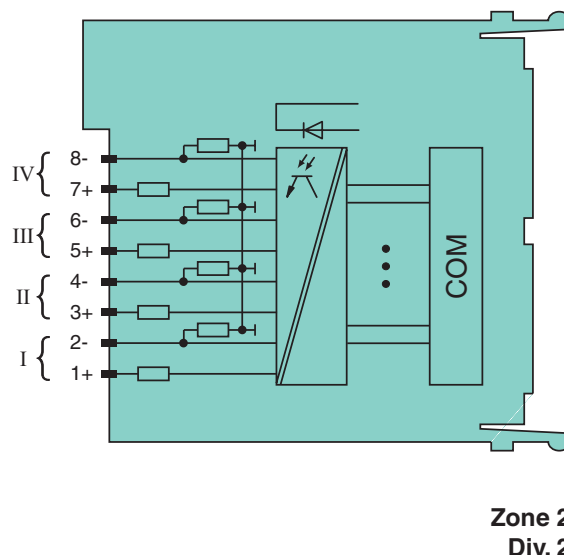
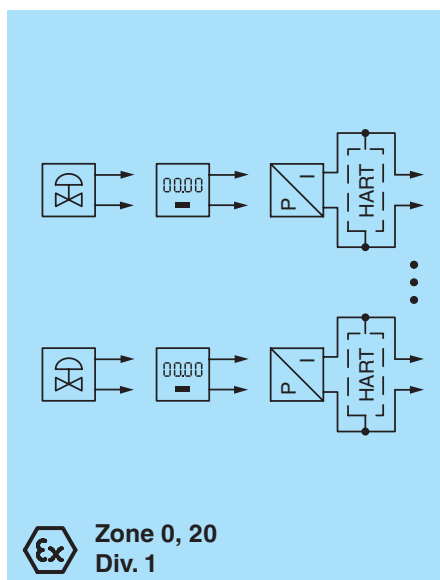
Assembly

Front view



SIL2

Connection



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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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| | |
|-----------------------------------|---|
| 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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