

Features

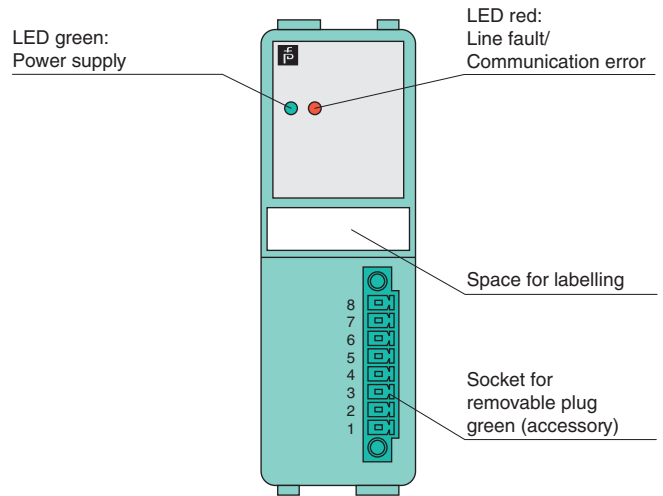
- 4-channel
- Outputs Ex ic
- Installation in Zone 2 and safe area
- Line fault detection (LFD)
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Permanently self-monitoring
- Output with watchdog

Function

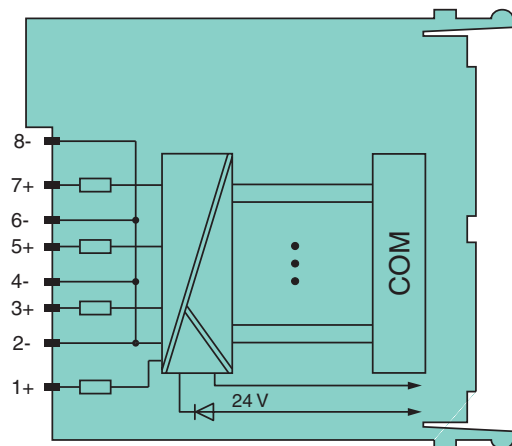
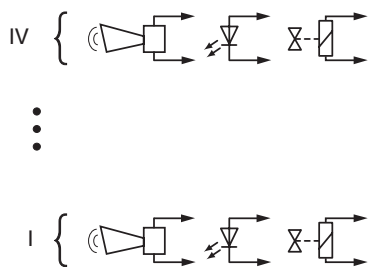
The digital output features 4 independent channels. It can drive solenoids, sounders, or LEDs. Line faults are detected. The outputs are galvanically isolated from the bus and the power supply (EN 60079-11).

Assembly

Front view



Connection



Zone 2

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

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| | |
|---|---|
| Supply | |
| Connection | backplane bus / booster terminals |
| Rated voltage | 12 V DC , only in connection with the power supplies LB9*** |
| Power consumption | 0.6 W at power supply 5 W if 24 V booster voltage |
| Internal bus | |
| Connection | backplane bus |
| Interface | manufacturer-specific bus to standard com unit |
| Output | |
| Number of channels | 4 |
| Connection | channel I: 1+, 2-; channel II: 3+, 4-; channel III: 5+, 6-; channel IV: 7+, 8- |
| Response time | 10 ms (depending on bus cycle time) |
| Line fault detection | can be switched on/off for each channel via configuration tool , also when turned off (every 2.5 s the valve is turned on for 2 ms) |
| Short-circuit | < 80 Ω |
| Open-circuit | > 12 kΩ |
| Watchdog | within 0.5 s the device goes in safe state, e.g. after loss of communication |
| Reaction time | 10 s |
| Indicators/settings | |
| LED indicator | LED green: supply LED red: line fault , communication error |
| Coding | optional mechanical coding via front socket |
| Directive conformity | |
| Electromagnetic compatibility | |
| Directive 2004/108/EC | EN 61326-1 |
| Conformity | |
| Electromagnetic compatibility | NE 21 |
| Degree of protection | 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 |
| 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 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 | |
| Statement of conformity | PF 08 CERT 1234 X |
| Group, category, type of protection | ⊕ II 3 G Ex nA [ic] IIC T4 Gc |
| Electrical isolation | |
| 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 |
| International approvals | |
| IECEx approval | BVS 09.0037X |
| Approved for | Ex nAc [ic] IIC T4 |
| 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 or Zone 22) the module must be installed in an appropriate enclosure. |

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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.

Ordering information

| U (V) | R _a (Ω) | Lim. (mA) | R _{ext} (Ω) | U _o (V) | I _o (mA) | P _o (mW) | Type/Order No. |
|-------|--------------------|-----------|----------------------|--------------------|---------------------|---------------------|----------------|
| 24.5 | 370 | 55 | 175 ... 6000 | 27.8 | 90.4 | 629 | LB6010A |

Remarks:

- R_{ext} represents the operating range (coil resistance + cable resistance).
- U represents the open circuit voltage.
- R_a represents the internal impedance.
- Output current = U / (R_a + R_{ext})
- Lim. represents the functional electronic current limitation.

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