

Output Isolator

FB4204B2



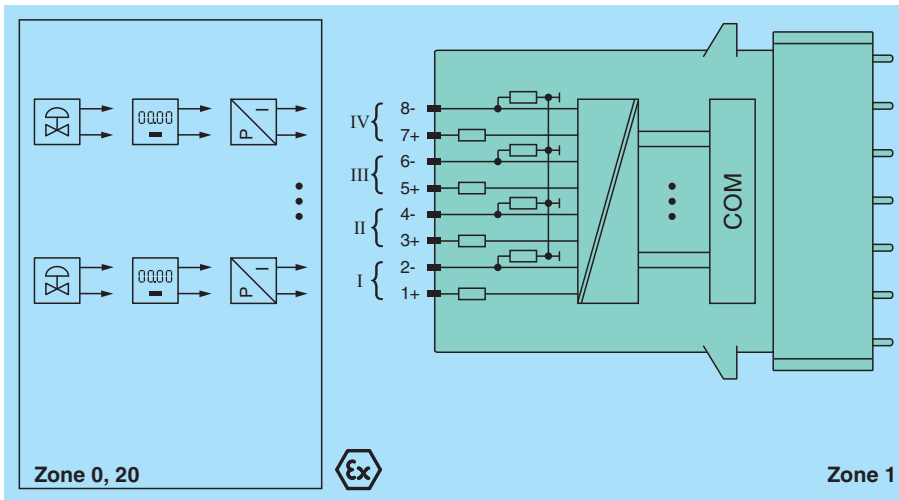
- 4-channel
- Fully compatible replacement for FB4204B
- Outputs Ex ia
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Analog output module for 0/4 mA ... 20 mA
- Simulation mode for service operations (forcing)
- Line fault detection (LFD): one LED per channel
- Permanently self-monitoring



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.

Connection



Technical Data

| | |
|----------------------|-------------------------------------------------------------------|
| Slots | |
| Occupied slots | 2 |
| Supply | |
| Connection | backplane bus |
| Rated voltage | U_r 12 V DC , only in connection with the power supplies FB92** |
| Power dissipation | 2.15 W |
| Power consumption | 3.3 W |
| Internal bus | |
| Connection | backplane bus |
| Interface | manufacturer-specific bus to standard com unit |
| Analog output | |
| Number of channels | 4 |

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

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Technical Data

| | |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable field devices | |
| Field device | Proportional Valve |
| Field device [2] | I/P converters |
| Field device [3] | on-site display |
| Connection | terminals 1+, 2-; 3+, 4-; 5+, 6-; 7+, 8- |
| Current | 0 ... 25 mA short-circuit protected |
| Line fault detection | can be switched on/off for each channel via configuration tool , configurable via configuration tool |
| Short-circuit | No |
| Open-circuit | deviation of preset output value > 0.5 mA |
| Load | 750 Ω max. |
| HART communication | no |
| HART secondary variable | no |
| 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 indication | 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 2014/30/EU | EN 61326-1:2013 |
| 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 15 g, number of shocks 18 |
| Vibration resistance | frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance |
| Damaging gas | designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level 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 inch) |
| Data for application in connection with hazardous areas | |
| EU-type examination certificate | BVS 12 ATEX E 015 X |

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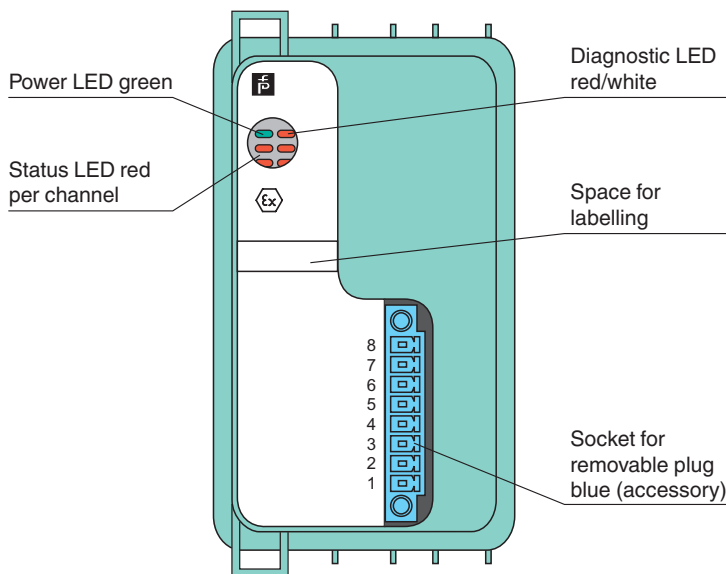
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Technical Data

| | | |
|-----------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marking | | Ⓢ 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) |
| Galvanic isolation | | |
| Output/power supply, internal bus | | safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V |
| Directive conformity | | |
| Directive 2014/34/EU | | EN IEC 60079-0:2018+AC:2020 EN 60079-1:2014 EN 60079-11:2012 |
| International approvals | | |
| ATEX approval | | BVS 12 ATEX E 015 X |
| 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, observe the corresponding EC-type examination certificate. |
| 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 . |

Assembly

Front view



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