

Features

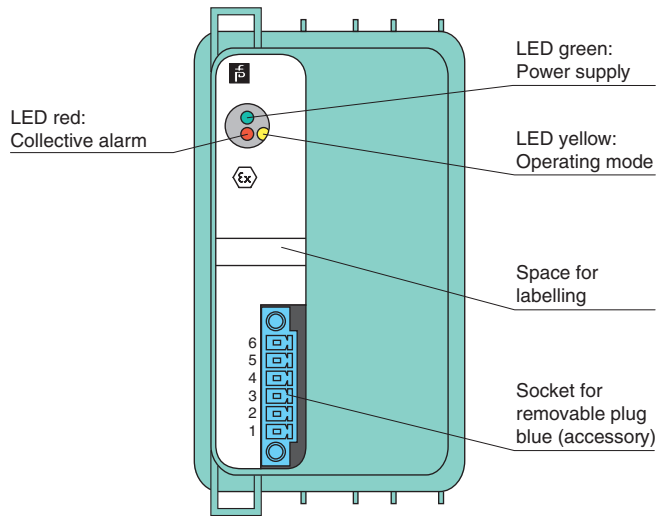
- Interface between the I/O modules and the PCS/PLC
- Com unit for 80 analog or 184 digital channels
- Communication via PROFIBUS DP
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- HART communication via PROFIBUS DP V1 or service bus
- Configuration via FDT 1.2 DTM
- Configuration in run (CiR) for any PCS
- Non-volatile memory for configuration and parameter settings
- Self configuration in redundant systems
- Permanently self-monitoring
- Outputs drive to safe state in case of failures

Function

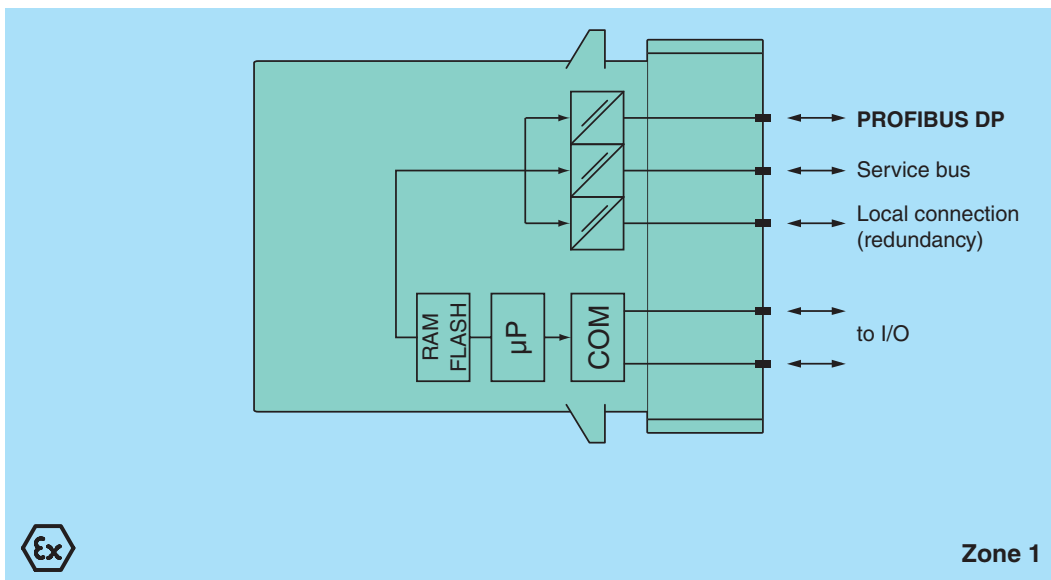
The PROFIBUS com unit forms the interface between the I/O modules on the backplane and the process control system. It supports all single width and dual width I/O modules. Thereby signals from NAMUR sensors, mechanical contacts, high-power solenoid drivers, power relays, sounders, and alarm LEDs are transported to the higher-level bus system. The com unit can be easily configured via DTM and supports redundancy as well as HART. Configuration in Run (CiR) enables configuration of a running system without a PROFIBUS restart, even in non-redundant systems.

Assembly

Front view



Connection



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

| | |
|--|--|
| Supply | |
| Connection | backplane bus |
| Rated voltage U_r | 5 V DC , only in connection with the power supplies FB92** |
| Power dissipation | 1.8 W |
| Power consumption | 1.8 W |
| Fieldbus interface | |
| Fieldbus type | PROFIBUS DP/DP-V1 |
| PROFIBUS DP | |
| Connection | wired to Ex e terminals via backplane |
| Baud rate | up to 1.5 MBit/s |
| Protocol | PROFIBUS DP/DP V1 read/write services |
| Number of stations per bus line | ≤ 125 (PROFIBUS), ≤ 119 (service bus) |
| Cyclic process data | 240 bytes input and (simultaneously) 240 bytes output |
| Number of stations per bus segment | ≤ 31 (RS-485 standard) |
| Number of repeaters between Master and Slave | max. 3 |
| Supported I/O modules | all FB remote I/O modules |
| Configuration (240 bytes I/O) | Standard: 80 analog, 184 digital Universal 2I2O: 48 analog, 184 digital Universal 4I4O: 60 analog, 120 digital |
| Bus length | ≤ 1000 m (FOL, 1.5 Mbaud), ≤ 1000 m (copper cable, 187.5 kBd), ≤ 200 m (copper cable, 1.5 MBd) |
| Addressing | via configuration software |
| PROFIBUS address | 0 ... 126 (factory standard setting: 126) |
| GSE file | CGV61710.gsd/gse |
| HART communication | via PROFIBUS or service bus |
| Internal bus | |
| Connection | backplane bus |
| Redundancy | via front connector |
| Indicators/settings | |
| LED indication | LED green (power supply): On = operating, fast flash = cold start, slow flash = HCIR loading active LED red (collective alarm): On = internal fault, flashing = no PROFIBUS connection LED yellow (operating mode): flashing 1 (1:1 ratio) = active, normal operation; flashing 2 (7:1 ratio) = active, simulation |
| Directive conformity | |
| Electromagnetic compatibility | |
| Directive 2014/30/EU | EN 61326-1 |
| Conformity | |
| Electromagnetic compatibility | NE 21 |
| Degree of protection | IEC 60529 |
| Fieldbus standard | IEC 61158-2 |
| 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 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 | via backplane |
| 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 | PTB 97 ATEX 1074 U |

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

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|--------------------------------|--|
| Marking | ⊕ II 2(1) G Ex d [ia Ga] IIC Gb |
| Directive conformity | |
| Directive 2014/34/EU | EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007 EN 60079-26:2007 EN 61241-11:2006 |
| International approvals | |
| ATEX approval | PTB 97 ATEX 1075 |
| EAC approval | Russia: RU C-IT.MIII06.B.00129 |
| Marine approval | |
| Lloyd Register | 15/20021 |
| DNV GL Marine | TAA0000034 |
| American Bureau of Shipping | T1450280/UN |
| Bureau Veritas Marine | 22449/B0 BV |
| General information | |
| System information | The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. 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 . |

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