

Features

- Interface between the I/O modules and the DCS/PLC
- Com unit for 80 analog or 184 digital channels
- Communication via MODBUS RTU
- HART communication via service bus
- Configuration via FDT 1.2 DTM
- 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
- Installation in suitable enclosures in Zone 1 or Zone 21
- Module can be exchanged under voltage (hot swap)

Function

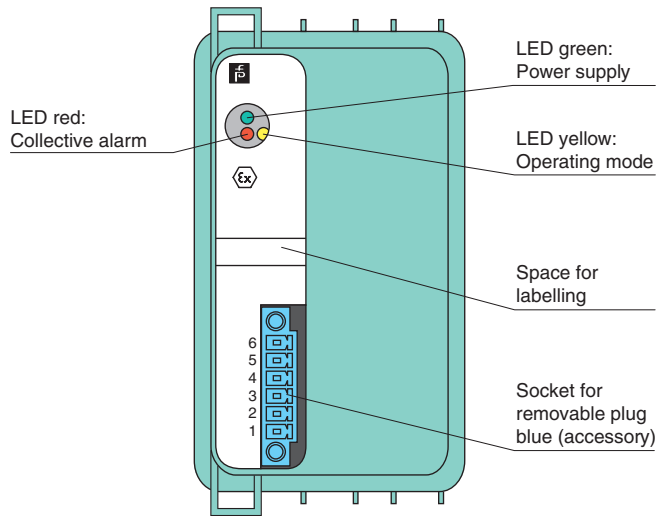
The Remote I/O Com Unit or Gateway links intrinsically safe and safe inputs and outputs from sensors and actuators to the MODBUS.

It makes use of all regular I/O modules and thus transports signals to and from NAMUR sensors, mechanical contacts, high power IS solenoids, power relays, sounders, and alarms LEDs.

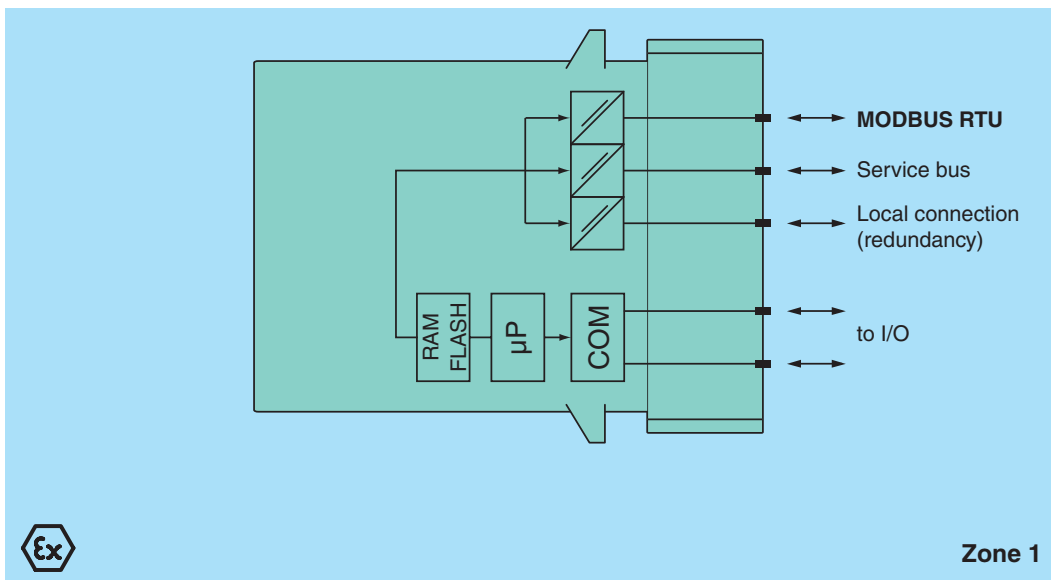
The Com Unit supports online configuration, redundancy, and HART. It is well integrated into all renowned DCS and PLC systems.

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_n	5 V DC , only in connection with the power supplies FB92**
Power consumption	2 W
Fieldbus interface	
Fieldbus type	MODBUS RTU
MODBUS RTU	
Connection	wired to Ex e terminals via backplane
Baud rate	max. 38.4 kBit/s
Number of stations per bus line	≤ 245 (MODBUS), ≤ 119 (service bus)
Number of channels per station	≤ 80 analog, ≤ 184 digital (standard configuration)
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
Bus length	≤ 1200 m (FOL, 38.4 kBd), ≤ 1200 m (copper cable, 38.4 kBd)
FOL (fiber optic link)	additional hardware required
Addressing	via configuration software
MODBUS address	standard compliant (ex works standard: 126)
Service bus address	max. 119 , redundancy address = base + 128 (automatic)
HART communication	via service bus
Redundancy	system dependent
Internal bus	
Connection	backplane bus
Redundancy	via front connector
Indicators/settings	
LED indicator	LED green (power supply): On = operating, fast flash = cold start LED red (collective alarm): On = internal fault, flashing = no Modbus RTU 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 2004/108/EC	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 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 (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 in)
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	PTB 97 ATEX 1074 U , PTB 97 ATEX 1075 (system) , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II 2(1) G Ex d [ia Ga] IIC Gb
Directive conformity	

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Directive 94/9/EC	EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007 EN 60079-26:2007 EN 61241-11:2006
General information	
System information	The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. Here, the corresponding EC-Type Examination Certificate has to be observed.
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 .

Versions

Bus couplers are available with different firmware versions. The type code extension * designates the firmware version.

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