

Features

- Interface between the I/O modules and the DCS/PLC
- Com unit for 20 analog or 40 digital channels
- Communication via FOUNDATION Fieldbus H1
- HART communication via service bus
- Configured via the DCS
- Non-volatile memory for configuration and parameter settings
- Quick communication set-up
- Permanently self-monitoring
- Outputs drive to safe state in case of failures
- Supports multichannel I/O modules
- Installation in suitable enclosures in Zone 1 or Zone 21
- Module can be exchanged under voltage (hot swap)

Function

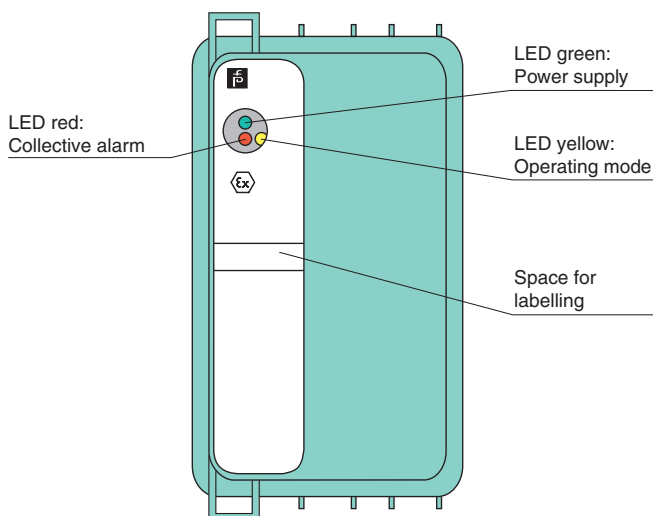
The Remote I/O Com Unit or Gateway links intrinsically safe and safe inputs and outputs from sensors and actuators to FOUNDATION fieldbus.

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

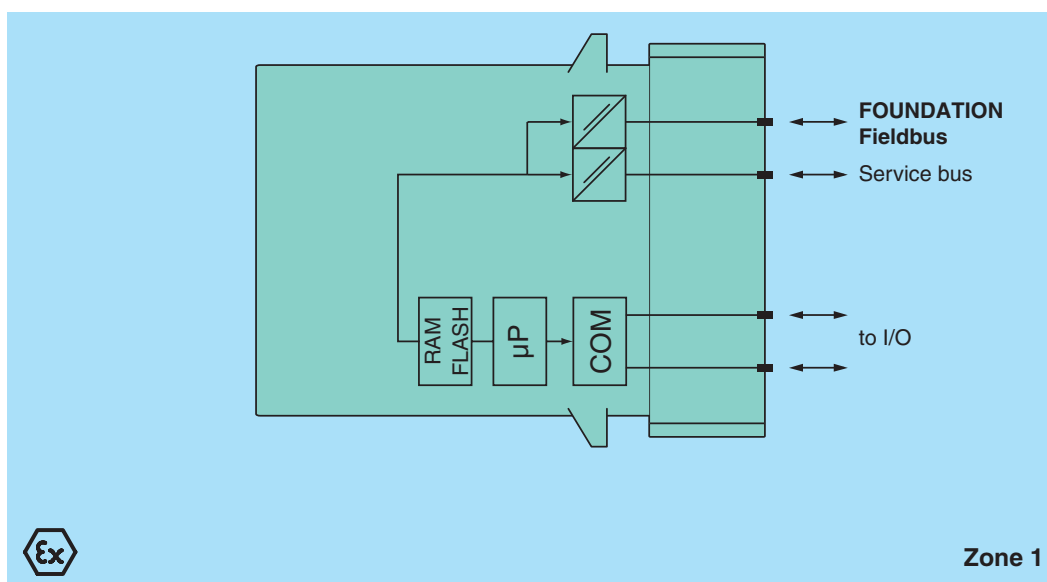
The Com Unit supports online configuration and HART. It is well integrated into renowned DCS and PLC systems.

Assembly

Front view



Connection



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

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Supply	
Connection	backplane bus
Rated voltage U_n	5 V DC , only in connection with the power supplies FB92**
Power consumption	2 W
Auxiliary energy	24 V DC Trunk load 20 mA
Fieldbus interface	
Fieldbus type	FOUNDATION Fieldbus H1
FOUNDATION Fieldbus	
Connection	wired to Ex e terminals via backplane
Baud rate	31.25 kBit/s , MBP
Protocol	H1 to IEC 1158-2
Station connection	directly at the trunk or via spur protector
Number of stations per bus line	1 or 2, depending on the required response times
Number of channels per station	≤ 20 analog, ≤ 40 digital
Supported I/O modules	5 slots, to be filled with (combinations possible): 1*08 digital input, 8-channel, NAMUR 3*05 analog input, 4-channel, 20 mA (HART via service bus) 4*05 analog output, 4-channel, 20 mA (HART via service bus) 5204 Pt100 RTD input, 4-channel 5205 thermocouple input, 4-channel 6305 relay output, 4-channel, 230 V 6306 relay output, 8-channel, 24 V 6*08 digital output, 8-channel, Ex i 6210-6215 digital output, 4-channel, Ex i power * = variable (2=IS, 3=Ex e)
Bus length	≤ 1900 m (must not be exceeded by the sum of all trunk and spur lines)
Spur length	≤ 120 m (depending on the number of field devices. Modular I/O station = 1 field device)
Addressing	via DCS (Software)
Internal bus	
Connection	backplane bus
Indicators/settings	
LED indicator	LED green (power supply): On = operating, fast flash = cold start LED red (collective alarm): On = internal fault, flashing = no fieldbus LED yellow (operating mode): Flashing = active
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 G Ex d 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 .

Ordering information

Model / Order No.	Function
FB 8210 H *	Temperature measured in degrees Celsius
FB 8210 C *	Temperature measured in degrees Fahrenheit

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