Features

- Interface between the I/O modules and the DCS/PLC
- Com unit for 80 analog or 184 digital channels
- Communication via MODBUS TCP
- HART communication via MODBUS TCP
- 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

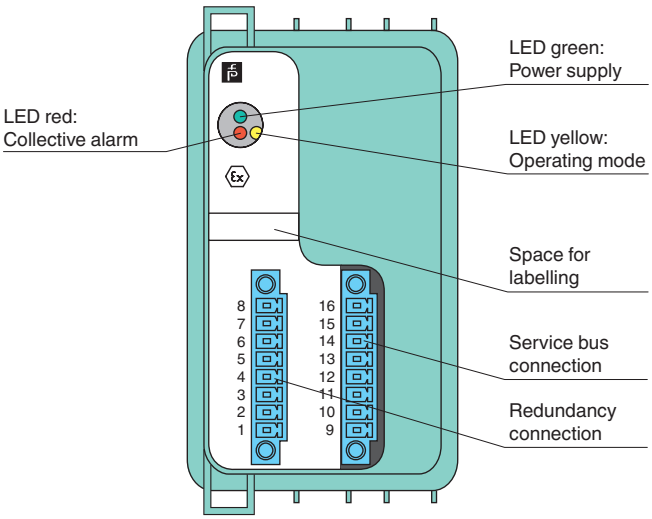
The MODBUS TCP Remote I/O Com Unit or Gateway links intrinsically safe and safe inputs and outputs from sensors and actuators to the Ethernet.

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.

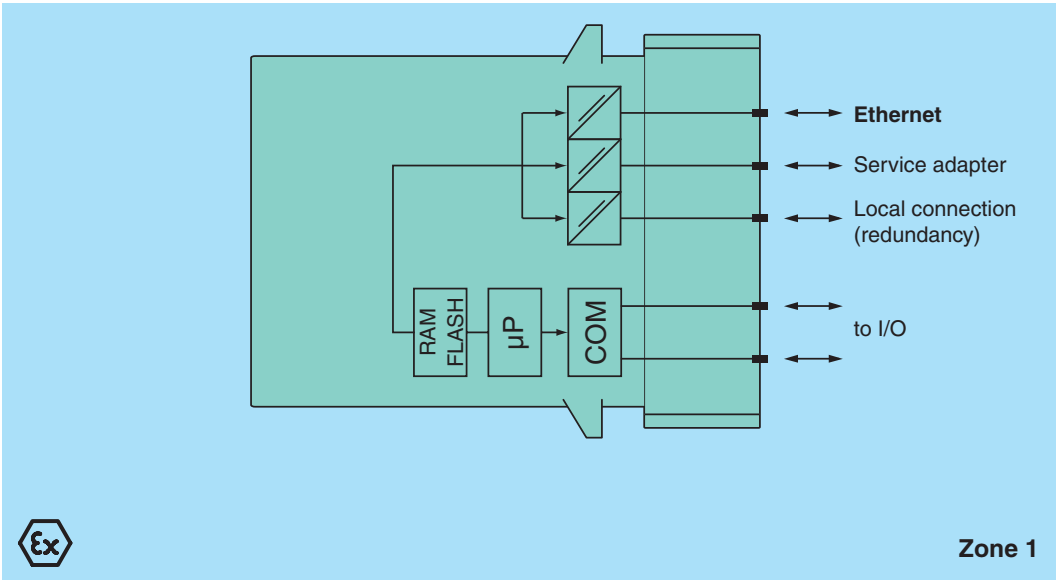
Industrial Ethernet hardware is familiar to most users not only through office applications but also through the architecture on which DCS systems are based.

Assembly

Front view



Connection



Release date 2015-02-09 11:08 Date of issue 2015-02-09 t159199_eng.xml

Supply		
Connection		backplane bus
Rated voltage	U_n	5 V DC , only in connection with the power supplies FB92**
Power consumption		2.5 W
Fieldbus interface		
Fieldbus type		MODBUS TCP
Ethernet Interface		
Connection type		wired to Ex e terminals via backplane
Transfer rate		10 MBit/s
Station connection		directly to DCS or PLC or via hubs or switches
Bus length		≤ 100 m (Ethernet standard)
Addressing		IP address assigned via Ethernet
Ethernet address		IP V4 address (ex works standard: 0.0.0.0, auto IP, DHCP)
Number of channels per station		≤ 80 analog, ≤ 184 digital
Supported I/O modules		all FB remote I/O modules
HART communication		via Ethernet
Internal bus		
Connection		backplane bus
Redundancy		via left front connector
Service interface		
Connection		via right front connector in connection with service adapter SERV8001
Indicators/settings		
LED indicator		LED green (power supply): On = operating, fast flash = cold start LED red (collective alarm): On = internal fault, flashing = no Modbus TCP 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		IEEE 802.3
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		⟨Ex⟩ II 2 G Ex d [ib] IIC Gb
Directive conformity		
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.

Release date 2015-02-09 11:08 Date of issue 2015-02-09 t159199_eng.xml

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.

Release date 2015-02-09 11:08 Date of issue 2015-02-09 t159199_eng.xml