

Features

- 1-channel
- Input wired to Ex e terminals
- Power supply for 2- or 3-wire transmitters with 4 mA ... 20 mA
- Supply circuit 16.5 V (20 mA)
- Input from active signals of 4-wire transmitters
- Installation in suitable enclosures in Zone 1 or Zone 21
- HART communication via field bus or service bus
- HART communication also for separately powered devices
- Simulation mode for service operations (forcing)
- Line fault detection (LFD) and Live Zero monitoring
- Permanently self-monitoring

Function

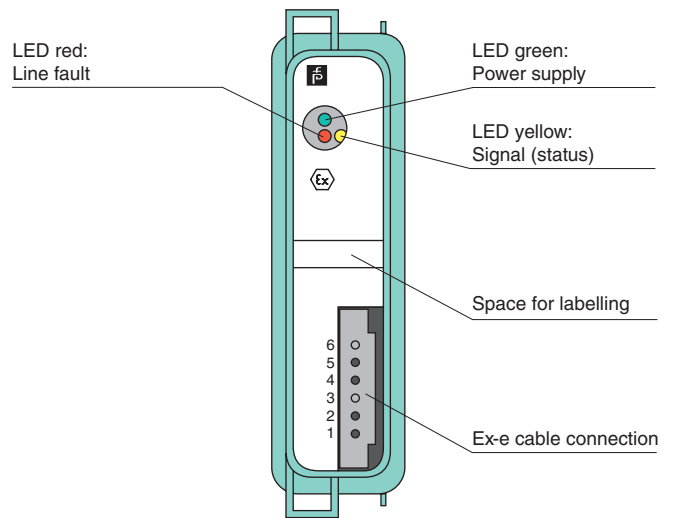
The transmitter power supply feeds 2-and 3-wire transmitters. Active signals from separately powered field devices and 4-wire transmitters can be connected.

Open and short circuit line fault alarms as well as Live Zero status are detected.

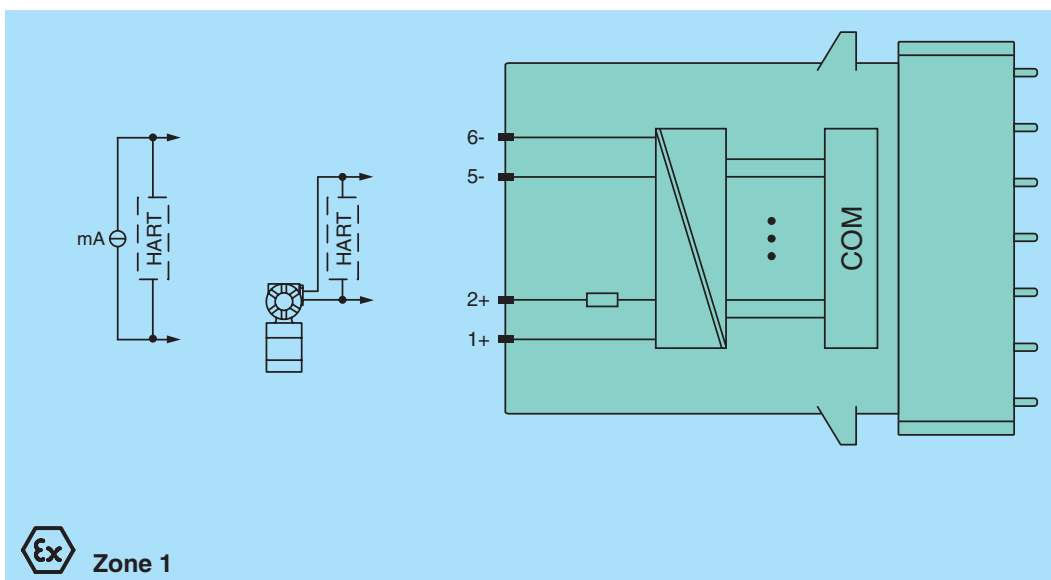
The input is galvanically isolated from the bus and the power supply (EN 60079-11).

Assembly

Front view



Connection



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Supply	
Connection	backplane bus
Rated voltage	12 V DC , only in connection with the power supplies FB92**
Power consumption	approx. 1.2 W
Internal bus	
Connection	backplane bus
Interface	manufacturer specific bus to standard Com Unit/gateway
Input	
Suitable field devices	transmitters for pressure, differential pressure, level, flow, temperature, etc.
Connection	wire ends 2+ (brown), 5- (grey, HART supply), 1+ (white), 6- (pink, HART input)
Input resistance	15 Ω (terminals 5, 6) 236 Ω (terminals 1, 6) , HART
Transmitter supply voltage	min. 16 V at 20 mA (incl. 250 Ω HART communication resistor)
Line fault detection	Parameterization range 0 ... 26 mA Ex works settings: line fault < 0.5 mA, short circuit > 22 mA
Live Zero monitoring	Ex works settings: ≤ 3.6 mA
Transfer characteristics	
Deviation	0.1 % of the input signal range at 20 °C (68 °F)
Influence of ambient temperature	0.01 %/K of the input signal range
Resolution	12 Bit (0 ... 26 mA)
Refresh time	approx. 50 ms
Indicators/settings	
LED indicator	LED green: supply LED red: line fault LED yellow: signal (Live Zero status)
Labeling	space for labeling at the front
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1
Conformity	
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
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	
Protection degree	IP20 (module) , a separate housing is required acc. to the system description
Connection	wire ends or shielded cable tail wiring connection separately covered Ex e terminals required
Mass	approx. 350 g
Dimensions	28 x 107 x 132 mm (1.1 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
Electrical isolation	
Input/power supply, internal bus	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0 , EN 60079-1
International approvals	
IECEx approval	pending
General information	

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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, 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

Model number	Options
FB3302B-80	wire ends, 80 cm
FB3302B150	wire ends, 150 cm
FB3302BS200	shielded cable tail, 200 cm