Features

- 1-channel
- Input Ex ia
- 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 Zone 2, Zone 22, Div. 2, or safe area
- 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
- Module can be exchanged under voltage (hot swap)

Function

The transmitter power supply feeds 2- and 3-wire transmitters.

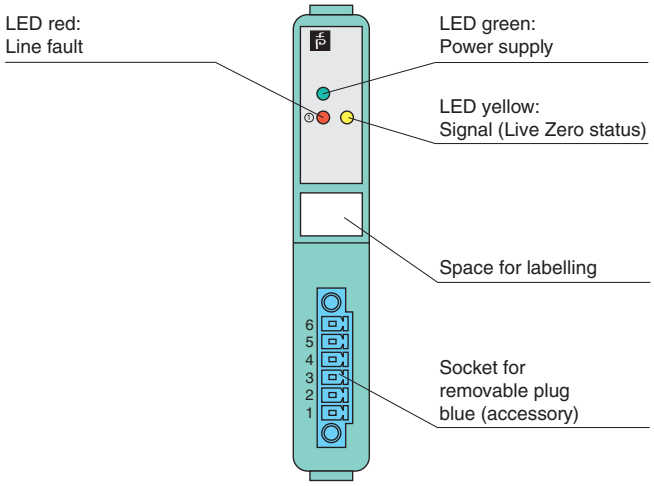
Active signals from separately powered field devices and 4-wire transmitters can be connected.

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

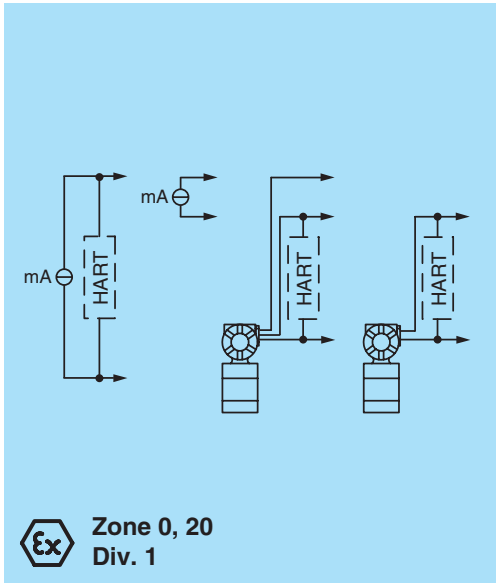
The intrinsically safe input is galvanically isolated from the bus and the power supply (EN 60079-11).

Assembly

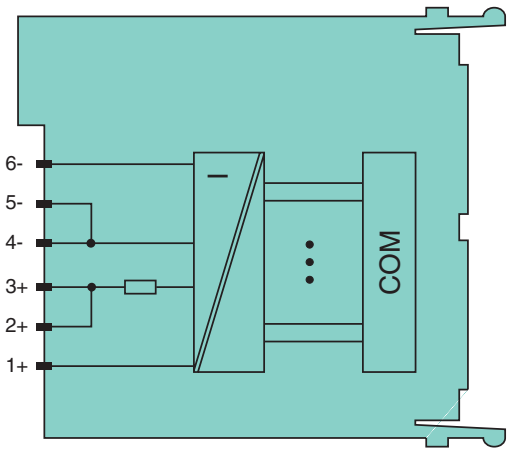
Front view



Connection



Zone 0, 20
Div. 1



Zone 2
Div. 2

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Supply		
Connection		backplane bus
Rated voltage		12 V DC , only in connection with the power supplies LB9***
Power consumption		approx. 1.2 W
Internal bus		
Connection		backplane bus
Interface		manufacturer specific bus to standard Com Unit/gateway
Input		
Number of channels		1
Suitable field devices		transmitters for pressure, differential pressure, level, flow, temperature, etc.
Connection		terminals 2+, 5-: HART supply; 5+, 6-: input; 1+, 6-: HART input
Input resistance		15 Ω (terminals 5, 6) 236 Ω (terminals 1, 6) , HART
Transmitter supply voltage		min. 16 V at 20 mA
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
Coding		mechanical coding at the front socket , optional
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) , mounted on backplane
Connection		device plug (accessories) - removable terminals - plug with screw flange - wiring connection: spring terminals: (0.14 ... 1.5 mm^2), screw terminals: (0.08 ... 1.5 mm^2)
Mass		approx. 90 g
Dimensions		16 x 100 x 103 mm (0.63 x 3.9 x 4 in)
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		PTB 03 ATEX 2042 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⟨Ex⟩ II (1) G [Ex ia] IIC, ⟨Ex⟩ II (1) D [Ex iaD]
Supply		
Voltage	U_o	27 V
Current	I_o	92 mA
Power	P_o	619 mW (linear characteristic)
Connection 1-6		

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Voltage		8.9 V
Current		56 mA
Power		336 mW (trapezoid characteristic curve)
Input		
Voltage	U_o	0.7 V
Current	I_o	3 mA
Power	P_o	2 mW (trapezoid characteristic curve)
Declaration of conformity		PF 08 CERT 1234
Group, category, type of protection, temperature class		Ⓔx II 3 G Ex nA IIC T4
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 60079-11, EN 60079-15, EN 60079-26, EN 61241-0, EN 61241-11
International approvals		
UL approval		E106378
IECEx approval		BVS 09.0037X , BVS 08.0011X
General information		
System information		The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, the corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
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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