

Features

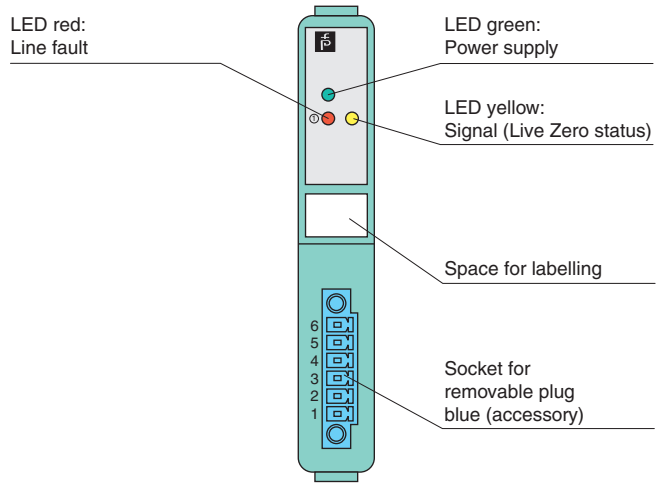
- 1-channel
- Input Ex ia
- Power supply for 2- or 3-wire transmitters with 4 mA ... 20 mA
- Supply circuit 15 V (20 mA)
- Input from active signals of 4-wire transmitters
- Installation in Zone 2, Zone 22, Div. 2, or safe area
- HART communication via field bus or service bus
- HART communication also 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

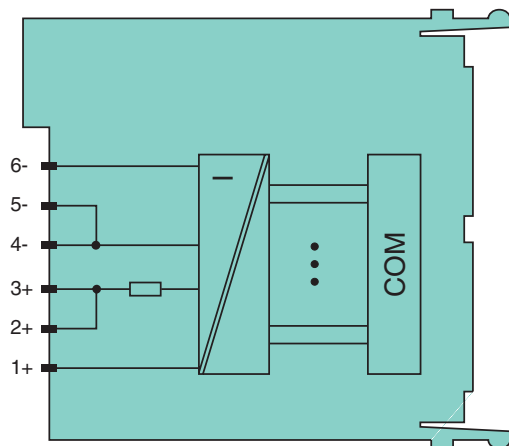
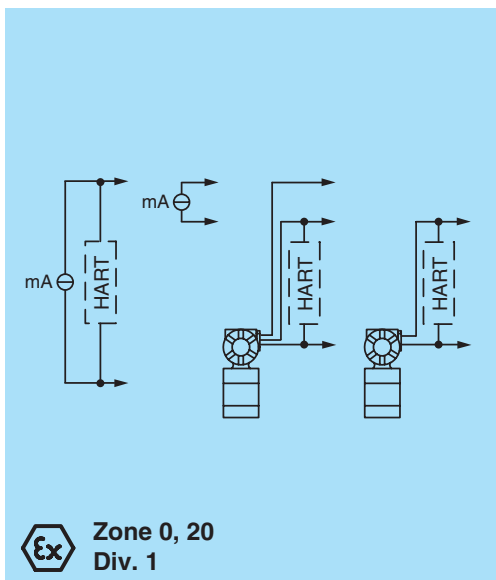
The transmitter power supply feeds 2- and 3-wire transmitters. Active signals from separately powered field devices and 4-wire transmitters can be connected. Open and short circuit line fault alarms as well as Live Zero status are detected. The intrinsically safe input is galvanically isolated from the bus and the power supply (EN 60079-11).

Assembly

Front view



Connection



Zone 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. 15 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	
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	24.9 V
Current	I _o	77 mA
Power	P _o	478 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		
Group, category, type of protection, temperature class		PF 08 CERT 1234 ⊕ 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 .