Features

- 1 digital output, 2 digital inputs
- Output voltage 24 V, max. internal resistance 210 Ω
- Installation in Zone 2, Zone 22, or safe area
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Permanently self-monitoring
- Output with watchdog
- Module can be exchanged under voltage (hot swap)

Function

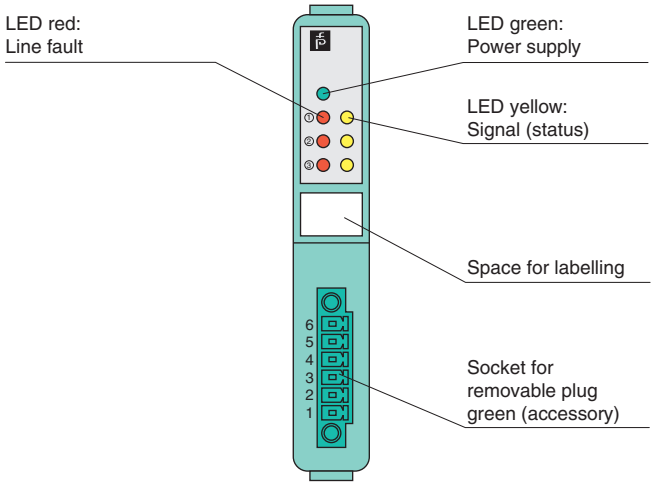
The digital output features 1 output with 2 feedback inputs.

The device can be used to switch solenoids, sounders, or indicators (without line fault detection) in the field. Furthermore, the device accepts digital input signals of NAMUR sensors or mechanical contacts from the field.

The inputs and the output are galvanically isolated from the bus and the power supply.

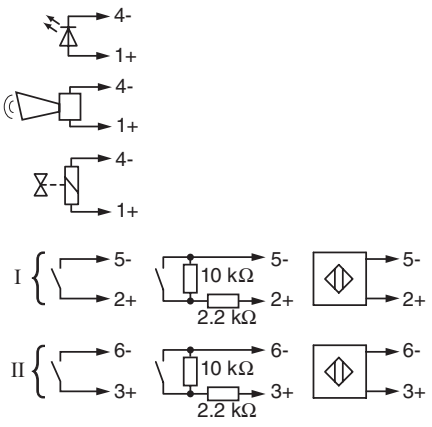
Assembly

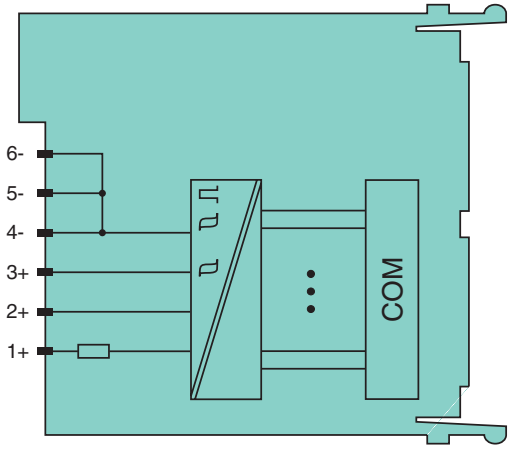
Front view



CE

Connection





Zone 2

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Supply	
Connection	backplane bus
Rated voltage	12 V DC , only in connection with the power supplies LB9***
Power consumption	1.8 W
Internal bus	
Connection	backplane bus
Interface	manufacturer specific bus to standard Com Unit/gateway
Input	
Number of channels	2
Suitable sensors	mechanical contacts, NAMUR proximity switches, 2-wire initiators
Connection	terminals 2+, 5-; 3+, 6-
Rated values	acc. to EN 60947-5-6 (NAMUR)
Switching point/switching hysteresis	1.2 ... 2.1 mA / ± 0.2 mA
Voltage	8.2 V , typical
Internal resistor	approx. 1 kΩ
Minimum pulse duration	1 ms
Output	
Suitable field devices	solenoid valves, acoustic alarms and LED indicators (without line fault detection)
Connection	terminals 1+, 4-
Operating frequency	0 ... 50 Hz , depending on the process control system
Watchdog	output off 0.5 s after serious fault
Indicators/settings	
LED indicator	LED green: supply LED yellow: signal (status), per channel
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) , 70 °C (non-Ex)
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. 110 g
Dimensions	16 x 100 x 103 mm (0.63 x 3.9 x 4 in)
Data for application in connection with Ex-areas	
Declaration of conformity	PF 08 CERT 1234 X
Group, category, type of protection, temperature class	⟨Ex⟩ II 3G Ex nA [ic] IIB T4
Electrical isolation	
Input/power supply, internal bus	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Output/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
International approvals	
IECEx approval	BVS 09.0037X

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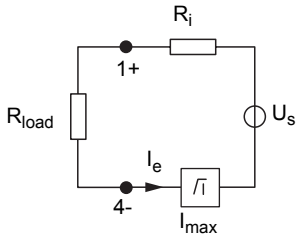
General information	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, the corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2 or Zone 22) the module must be installed in an appropriate 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.

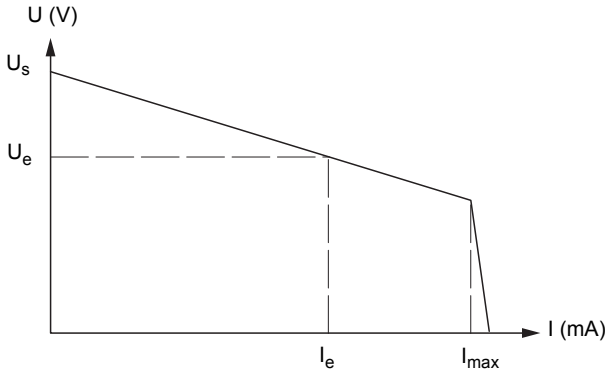
Output data

Load calculation



R_{load} = Field loop resistance
$U_e = U_s - R_i \times I_e$
$I_e = U_s/(R_i + R_{load})$

Output characteristics



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