Features

- 1-channel
- Converter for 2-, 3- and 4-wire Pt100, slide wire sensors
- Installation in Zone 2 or safe area
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- Module can be exchanged under voltage

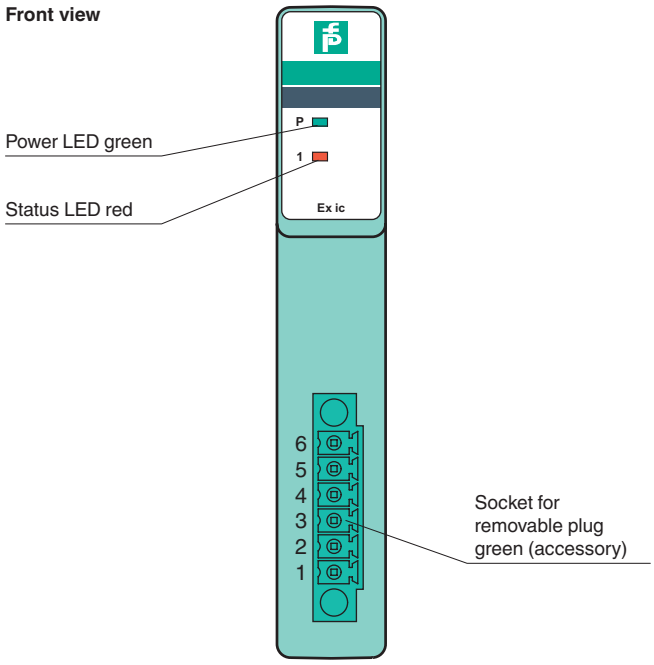
Function

The RTD converter accepts 2-, 3-, 4-wire RTD signals (Pt100) from the hazardous area.

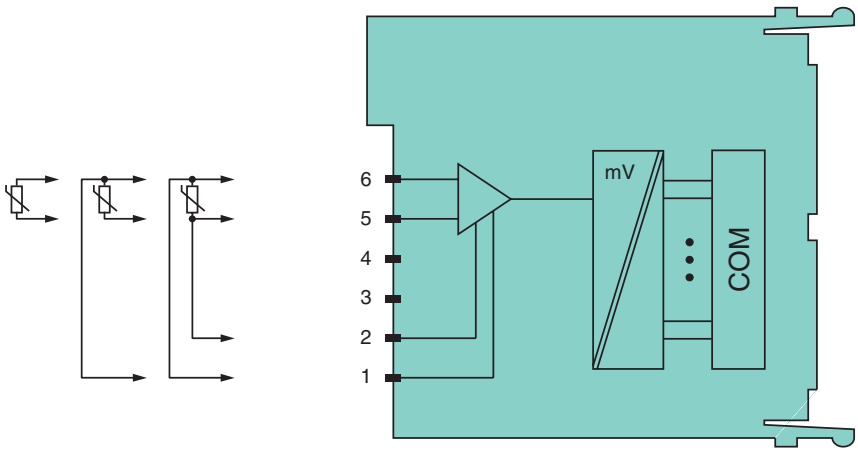
Open and short-circuit line faults are detected.

The input is galvanically isolated from the bus and the power supply.

Assembly



Connection



Zone 2

Release date 2018-09-13 16:18 Date of issue 2018-09-13 254734_eng.xml

Slots	
Occupied slots	1
Supply	
Connection	backplane bus
Rated voltage U_r	12 V DC , only in connection with the power supplies LB9***
Power dissipation	0.4 W
Power consumption	0.4 W
Internal bus	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
temperature input	
Number of channels	1
Suitable field devices	
Field device	resistance thermometer
Field device [3]	slide-wire sensors
Field device interface	
Connection	2-wire sensor
Connection [2]	3-wire sensor
Connection [3]	4-wire sensor
Connection	2-wire connection: 5, 6 3-wire connection: 1, 5, 6 4-wire connection: 1, 2, 5, 6
Measurement range	10 ... 400 Ω (500 Ω incl. line resistance)
Slide-wire sensor	10 ... 400 Ω
Measuring current	200 µA
Smallest span	20 Ω for 0.1 % accuracy
Linearity error	0.1 %
Conversion time	≤ 20 ms without LFD ≤ 150 ms with LFD
Lead resistance	≤ 50 Ω per strand
Line fault detection	can be switched on/off for each channel via configuration tool
Short-circuit	< 10 Ω
Open-circuit	> 1 kΩ
Transfer characteristics	
Deviation	
Influence of ambient temperature	max. 0,1 %/10 K
Indicators/settings	
LED indication	Power LED (P) green: supply Status LED (1) red: line fault
Coding	optional mechanical coding via front socket
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1
Conformity	
Electromagnetic compatibility	NE 21
Degree of protection	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 15 g, number of shocks 18
Vibration resistance	frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas	designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Degree of protection	IP20 when mounted on backplane
Connection	removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm^2) or screw terminals (0.08 ... 1.5 mm^2)
Mass	approx. 90 g
Dimensions	16 x 100 x 102 mm (0.63 x 3.9 x 4 inch)

Release date 2018-09-13 16:18 Date of issue 2018-09-13 254734_eng.xml

Data for application in connection with hazardous areas	
Certificate	PF 08 CERT 1234 X
Marking	Ex II 3 G Ex nA [ic] IIC T4 Gc
Galvanic isolation	
Input/power supply, internal bus	safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2009 EN 60079-11:2007 EN 60079-15:2010
International approvals	
IECEx approval	BVS 09.0037X
Approved for	Ex nA [ic] IIC T4 Gc
Marine approval	
Lloyd Register	15/20021
DNV GL Marine	TAA0000034
Bureau Veritas Marine	22449/B0 BV
General information	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, observe the corresponding declaration of conformity. 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.

Release date 2018-09-13 16:18 Date of issue 2018-09-13 254734_eng.xml