

**Features**

- 4 channels
- Converter for 2-, 3- and 4-wire RTDs (Pt100 ... Pt1000), slide wire sensors etc.
- 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

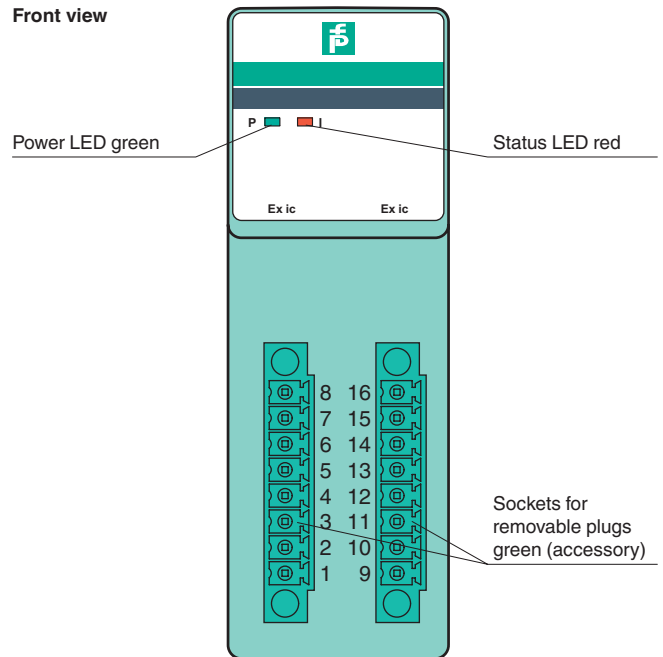
**Function**

The RTD converter accepts 2-, 3-, 4-wire RTD signals (Pt100 ... Pt1000) and slide-wire sensors from the field. Ni100 through Ni1000 can also be connected.

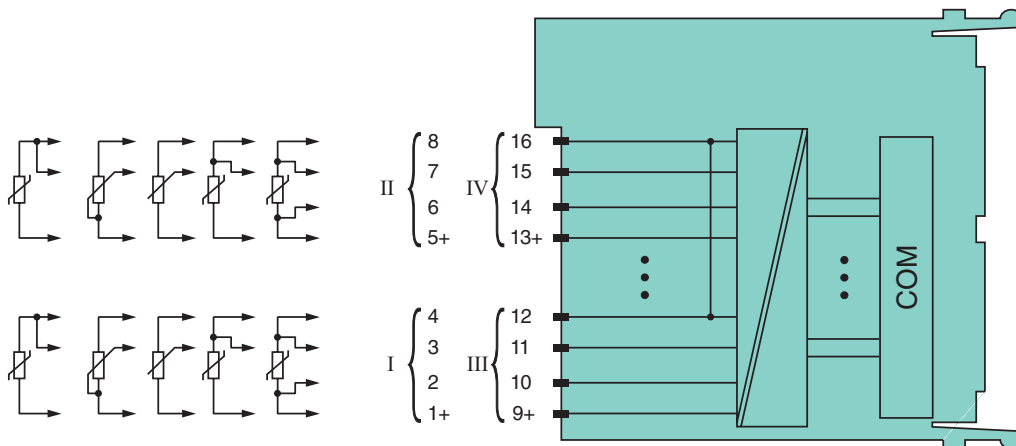
Open and short-circuit line faults are detected.

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

**Assembly**



**Connection**



Zone 2

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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<b>Slots</b>	
Occupied slots	2
<b>Supply</b>	
Connection	backplane bus
Rated voltage	$U_r$ 12 V DC , only in connection with the power supplies LB9***
Power dissipation	0.35 W
Power consumption	0.35 W
<b>Internal bus</b>	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
<b>temperature input</b>	
Number of channels	4
Suitable field devices	
Field device	resistance thermometer
Field device [3]	slide-wire sensors
Field device [5]	potentiometer
Field device interface	
Connection	2-wire sensor
Connection [2]	3-wire sensor
Connection [3]	4-wire sensor
Connection	channel I: resistance/potentiometer input 1 ... 4 channel II: resistance/potentiometer input 5 ... 8 channel III: resistance/potentiometer input 9 ... 12 channel IV: resistance/potentiometer input 13 ... 16
Measurement range	Pt100 (18-390 $\Omega$ ) (500 $\Omega$ incl. line resistance) Pt200 (37-780 $\Omega$ ) Pt500 (92-1952 $\Omega$ ) Pt1000 (185-3905 $\Omega$ ) Ni100 (69-270 $\Omega$ ) Ni500 (345-1350 $\Omega$ ) Ni1000 (690-2700 $\Omega$ )
Slide-wire sensor	0 ... 10 k $\Omega$
Measuring current	200 $\mu$ A
Smallest span	50 $\Omega$ for 0.1 % accuracy
Linearity error	0.1 %
Conversion time	$\leq$ 500 ms (4 channels) $\leq$ 1 s (for 4x 3-wire Pt100)
Busy after download	5 ... 15 s
Lead resistance	$\leq$ 50 $\Omega$ per strand
Line fault detection	can be switched on/off for each channel via configuration tool
Short-circuit	$<$ 10 $\Omega$
Open-circuit	$>$ 1 k $\Omega$
<b>Transfer characteristics</b>	
Deviation	
Influence of ambient temperature	max. 0,1 %/10 K
<b>Indicators/settings</b>	
LED indication	Power LED (P) green: supply Status LED (I) red: line fault (collective alarm) , red flashing: communication error
Coding	optional mechanical coding via front socket
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1
<b>Conformity</b>	
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
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 $^{\circ}$ C (-4 ... 140 $^{\circ}$ F) , 70 $^{\circ}$ C (non-Ex)
Storage temperature	-25 ... 85 $^{\circ}$ C (-13 ... 185 $^{\circ}$ F)
Relative humidity	95 % non-condensing
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18

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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
<b>Mechanical specifications</b>	
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 <sup>2</sup> ) or screw terminals (0.08 ... 1.5 mm <sup>2</sup> )
Mass	approx. 150 g
Dimensions	32.5 x 100 x 102 mm (1.28 x 3.9 x 4 inch)
<b>Data for application in connection with hazardous areas</b>	
Certificate	PF 08 CERT 1234 X
Marking	⊕ II 3 G Ex nA [ic] IIC T4 Gc
<b>Galvanic isolation</b>	
Input/power supply, internal bus	safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 2014/34/EU	EN 60079-0:2009 EN 60079-11:2007 EN 60079-15:2010
<b>International approvals</b>	
IECEX approval	BVS 09.0037X
Approved for	Ex nA [ic] IIC T4 Gc
<b>Marine approval</b>	
Lloyd Register	15/20021
DNV GL Marine	TAA0000034
Bureau Veritas Marine	22449/B0 BV
<b>General information</b>	
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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

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