

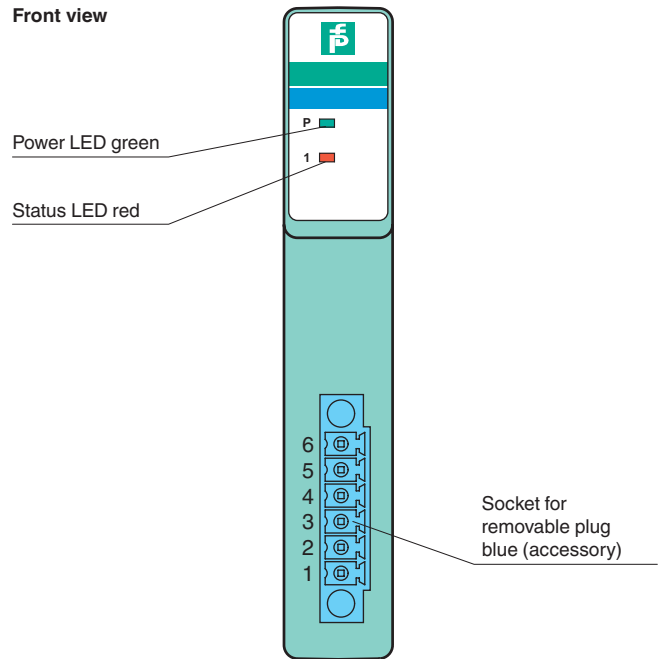
**Features**

- 1-channel
- Input Ex ia
- Mounting in Zone 2, Class I/Div.2 or in the safe area
- Input for frequency, counter, direction of rotation
- Digital input max. 400 Hz
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- Module can be exchanged under voltage

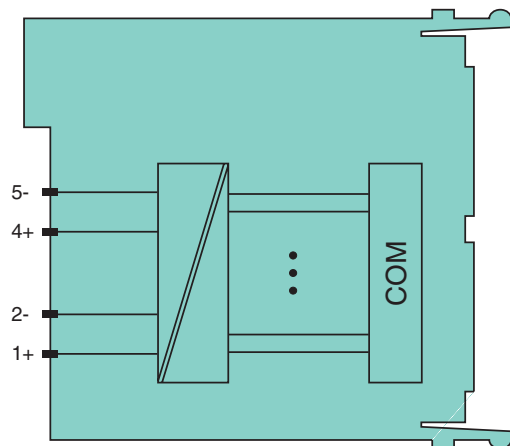
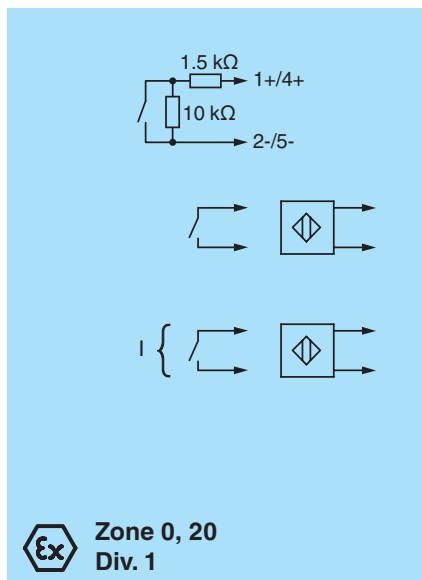
**Function**

The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area.  
 Open and short-circuit line faults are detected.  
 The intrinsically safe input is galvanically isolated from the bus and the power supply.

**Assembly**



**Connection**



Zone 2  
Div. 2

Release date 2018-09-14 10:16 Date of issue 2018-09-14 254623\_eng.xml

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

<b>Slots</b>		
Occupied slots		1
<b>Supply</b>		
Connection		backplane bus
Rated voltage	$U_r$	12 V DC , only in connection with the power supplies LB9***
Power dissipation		0.65 W
Power consumption		0.65 W
<b>Internal bus</b>		
Connection		backplane bus
Interface		manufacturer-specific bus to standard com unit
<b>Digital input</b>		
Number of channels		1
<b>Function</b>		
Function		Counter
Function [2]		frequency
Function [3]		direction of rotation
<b>Sensor interface</b>		
Connection		NAMUR sensor
Connection [2]		volt-free contact
Connection		channel I: 1+, 2/3-; direction: 4+, 5/6-
Rated values		acc. to EN 60947-5-6 (NAMUR)
Switching point/switching hysteresis		1.2 ... 2.1 mA / $\pm$ 0.2 mA
Voltage		8.2 V
Internal resistor	$R_i$	1 k $\Omega$
Line fault detection		can be switched on/off for each channel via configuration tool
Connection		mechanical switch with additional resistors (see connection diagram) proximity switches without additional wiring
Short-circuit		< 360 $\Omega$
Open-circuit		< 0.35 mA
Minimum pulse duration		; in frequency + counter mode: 12.5 ms ; otherwise 20 $\mu$ s
Operating frequency		0 ... 400 Hz ; in frequency + counter mode ... 40 Hz
<b>Indicators/settings</b>		
LED indication		Power LED (P) green: supply Status LED (1) red: line fault
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)
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
Vibration resistance		frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration $\pm$ 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration $\pm$ 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. 90 g
Dimensions		16 x 100 x 102 mm (0.63 x 3.9 x 4 inch)
<b>Data for application in connection with hazardous areas</b>		
EU-Type Examination Certificate		PTB 03 ATEX 2042

Release date 2018-09-14 10:16 Date of issue 2018-09-14 254623\_eng.xml

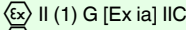
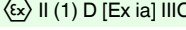
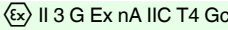
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

Marking		 
Input		
Voltage	U <sub>o</sub>	10.5 V
Current	I <sub>o</sub>	23.3 mA
Power	P <sub>o</sub>	61.2 mW (linear characteristic)
Certificate		PF 08 CERT 1234 X
Marking		
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 EN 61241-11:2006
<b>International approvals</b>		
ATEX approval		PTB 03 ATEX 2042
UL approval		E106378
IECEx approval		BVS 09.0037X
Approved for		Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIIC
Marine approval		
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, 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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

Release date 2018-09-14 10:16 Date of issue 2018-09-14 254623\_eng.xml