

Digital Input LB1108A

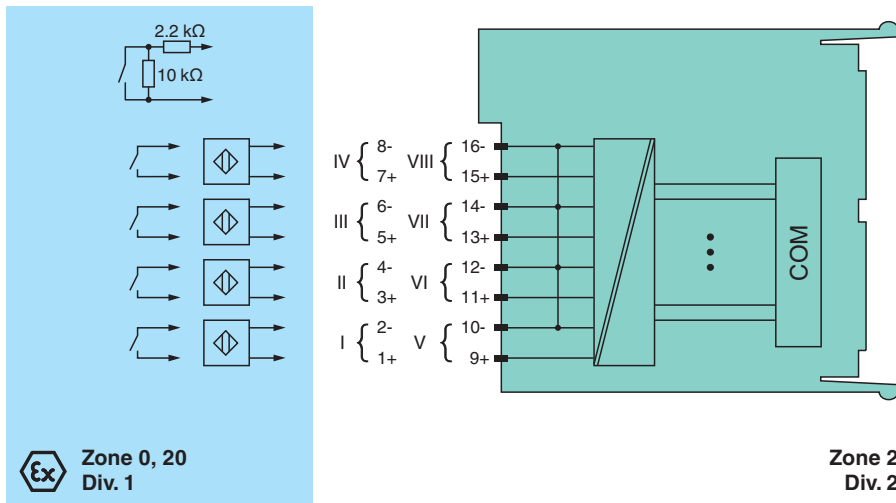
- 8-channel
- Inputs Ex ia
- Mounting in Zone 2, Class I/Div.2 or in the safe area
- Dry contact or NAMUR inputs
- Positive or negative logic selectable
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring
- Module can be exchanged under voltage



Function

The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area. Open or short circuit line fault alarms are detected. The inputs are galvanically isolated from the bus and the power supply (EN 60079-11).

Wiring Diagram



Technical Data

Slots	
Occupied slots	2
Supply	
Connection	backplane bus
Rated voltage	U_r 12 V DC , only in connection with the power supplies LB9***
Power dissipation	0.95 W
Power consumption	0.95 W
Internal bus	
Connection	backplane bus
Interface	manufacturer-specific bus to standard com unit
Digital input	
Number of channels	8
Sensor interface	

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Technical Data

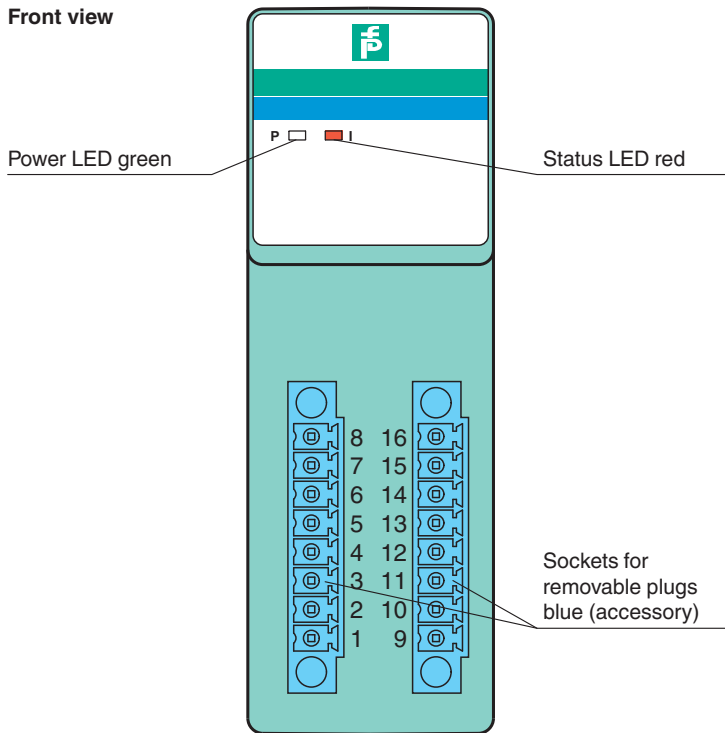
Connection	NAMUR sensor	
Connection [2]	voltage-free contact	
Connection	channel I: 1+, 2-; channel II: 3+, 4-; channel III: 5+, 6-; channel IV: 7+, 8-; channel V: 9+, 10-; channel VI: 11+, 12-; channel VII: 13+, 14-; channel VIII: 15+, 16-	
Rated values	acc. to EN 60947-5-6 (NAMUR)	
Switching point/switching hysteresis	1.2 ... 2.1 mA / ± 0.2 mA	
Voltage	8.2 V	
Internal resistor	R _i	1 kΩ
Line fault detection	can be switched on/off for each channel via configuration tool	
Connection	mechanical switch with additional resistors (see connection diagram) proximity sensors without additional wiring	
Short-circuit	< 360 Ω	
Open-circuit	< 0.35 mA	
Minimum pulse duration	1 ms	
Indicators/settings		
LED indication	Power LED (P) green: supply Status LED (I) red: line fault	
Coding	optional mechanical coding via front socket	
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU	EN 61326-1:2013	
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 60068-2-78	
Ambient conditions		
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)	
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)	
Relative humidity	95 % non-condensing	
Altitude	max. 2000 m	
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. 130 g	
Dimensions	32.5 x 100 x 102 mm (1.28 x 3.9 x 4 inch)	
Data for application in connection with hazardous areas		
EU-type examination certificate	PTB 03 ATEX 2042 X	
Marking	Ⓜ II (1)G [Ex ia Ga] IIC Ⓜ II (1)D [Ex ia Da] IIIC Ⓜ I (M1) [Ex ia Ma] I	
Input		
Voltage	U _o	14.9 V
Current	I _o	15.7 mA
Power	P _o	58.2 mW (linear characteristic)

Technical Data

Certificate	PF 08 CERT 1234 X
Marking	Ⓜ II 3 G Ex nA 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 IEC 60079-0:2018+AC:2020 EN 60079-11:2012 EN 60079-15:2010
International approvals	
ATEX approval	PTB 03 ATEX 2042 X
UL approval	E106378
IECEX approval	
IECEX certificate	IECEX BVS 09.0037X
IECEX marking	Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIC [Ex ia Ma] I
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, 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 .

Assembly

Front view



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