

**Features**

- 2-channel isolated barrier
- 24 V DC supply
- Dry contact or NAMUR inputs
- Relay output and active transistor output
- Line fault detection (LFD)
- Reversible mode of operation
- Up to SIL2 acc. to IEC 61508

**Function**

This isolated barrier is used for intrinsic safety applications. The device transfers digital signals (NAMUR sensors or dry contacts) from a hazardous area to a safe area. Each proximity sensor or switch controls a relay output for the safe area load. The mode of operation and the line fault detection can be determined for each individual channel. This allows a desired mix of sensors and mechanical contacts with or without LB/SC. A fault is signaled by LEDs acc. to NAMUR NE44.

**Assembly**

Front view

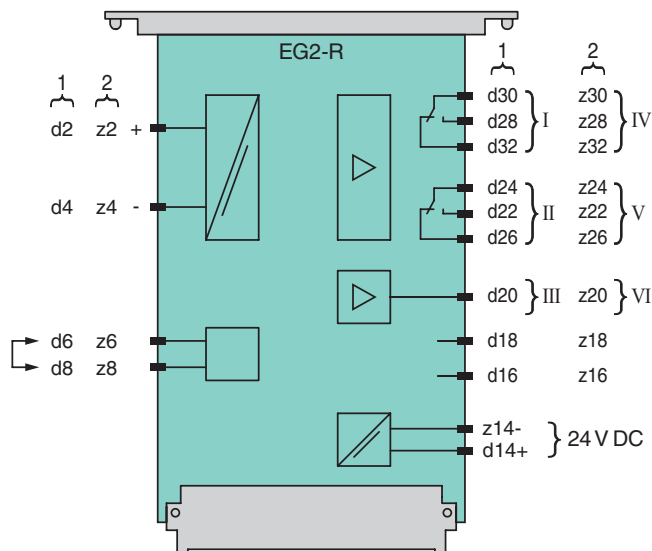
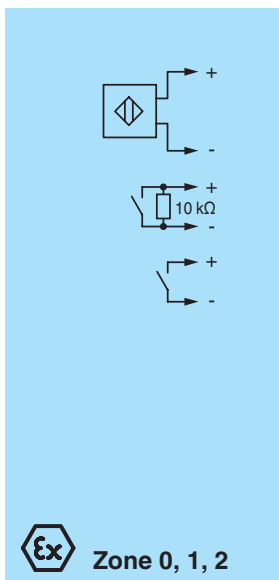


LED yellow: Output channel 1

LED yellow: Output channel 2



**Connection**



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<b>General specifications</b>		
Signal type	Digital Input	
<b>Supply</b>		
Connection	d14+, z14-	
Rated voltage	20.4 ... 27.6 V DC	
Ripple	≤ 10 %	
Rated current	approx. 60 mA	
<b>Input</b>		
Input (intrinsically safe)		
Number of channels	2	
Connection	channel 1: d2+, d4- channel 2: z2+, z4-	
Rated values	acc. to EN 60947-5-6 (NAMUR)	
Open circuit voltage/short-circuit current	approx. 8 V DC / approx. 8 mA	
Switching point/switching hysteresis	1.2 ... 2.1 mA / approx. 0.2 mA	
Line fault detection	breakage I ≤ 0.1 mA	
Pulse/Pause ratio	≥ 0.5 ms / ≥ 0.5 ms	
Input (non-intrinsically safe)		
Connection	channel 1: d16 channel 2: z16	
Input current	1 mA	
Signal level	1-signal: 15 ... 30 V DC 0-signal: 0 ... 5 V DC or open input	
Input delay	5 ... 20 ms (typical 10 ms)	
<b>Output</b>		
Connection	channel 1: output I: d32, d30, d28, output II: d26, d24, d22, output III: d20 channel 2: output IV: z32, z30, z28, output V: z26, z24, z22, output VI: z20	
Switching current	output III, VI: 10 mA , short-circuit protected	
Output	output III, VI: electronic output, active	
Signal level	output III, VI: 1-Signal: (L+) -5 V/0.9 V 0-Signal: blocked output (off-state current ≤ 10 μA)	
Contact loading	in conjunction with SIL2 applications output I, II, IV, V: 50 V AC/1 A/cos φ = 1/0.5 A/cos φ = 0.3; 40 V DC/1 A/50 W resistive load	
Energized/De-energized delay	output I, II, IV, V: < 12 ms / < 5 ms	
Mechanical life	output I, II, IV, V: 2 x 10 <sup>5</sup> switching cycles	
<b>Transfer characteristics</b>		
Switching frequency	output I, II, IV, V: ≤ 25 Hz output III, VI: 1 kHz ≤ ≤ 1 kHz	
<b>Electrical isolation</b>		
Output/power supply	reinforced insulation acc. to EN 50178, rated insulation voltage 50 V <sub>eff</sub>	
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC	The device has been used for the same applications for several years. It therefore features an appropriate electromagnetic field immunity. The device must not be used in new plants.	
<b>Conformity</b>		
Insulation coordination	EN 50178	
Protection degree	IEC 60529	
<b>Ambient conditions</b>		
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)	
<b>Mechanical specifications</b>		
Protection degree	IP20	
Connection	32-pin plug connector acc. to DIN 41612 , series 2 , type F ; z and d provided	
Mass	approx. 200 g	
Dimensions	20 x 128 x 193 mm (0.8 x 5 x 7.5 in)	
Construction type	Eurocard 100 x 160 mm (3.9 x 6.3 in) acc. to DIN 41494, front panel 4TE	
Mounting	in 19" rack	
Coding	a3/c3	
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate	PTB 00 ATEX 2210 , for additional certificates see www.pepperl-fuchs.com	
Group, category, type of protection	⊕ II (1)GD [Ex ia] IIC	
Input	Ex ia IIC	
Voltage	U <sub>o</sub>	12.7 V
Current	I <sub>o</sub>	20 mA

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Power	P <sub>o</sub>	62 mW (linear characteristic)
<b>Output</b>		
Contact loading		output I, II, IV, V: 50 V AC/2 A/cos φ = 1/1 A/cos φ = 0.3; 40 V DC/2 A/100 W resistive load
<b>Electrical isolation</b>		
Input/Output		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>		
Directive 94/9/EC		EN 50014:1997, EN 50020:1994
<b>General information</b>		
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> .

**Notes on connection assignment**

**Line fault detection**

Line fault detection can be disabled by bridging. Connections see technical data and connection diagram. If necessary, the unit can also be supplied with a factory installed plug-in jumper for the line fault detection setting.

**Mode of operation**

1-Signal: no reversal of operating mode from input to output

0-Signal: reversal of operating mode from input to output

Connections see technical data and connection diagram. If necessary, the operating mode can also be selected by a factory installed plug-in jumper on the card.