



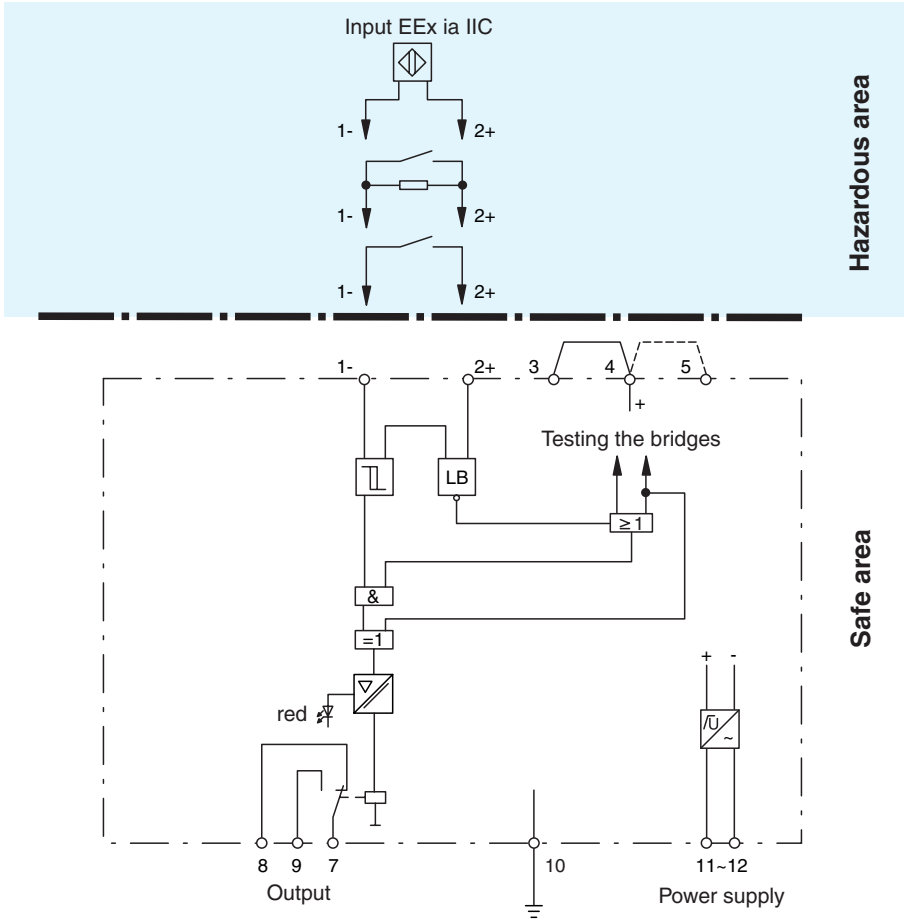
- 1-channel
- Control circuit EEx ia IIC
- 115 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay output with 1 changeover contact

**WE 77/Ex-1 115V**

**Function**

The transformer isolated barrier transfers digital signals into hazardous areas. Sensors per EN 60947-5-6 (NAMUR) or mechanical contacts may be used as transmitters. The control circuit is monitored for lead breakage (LB).

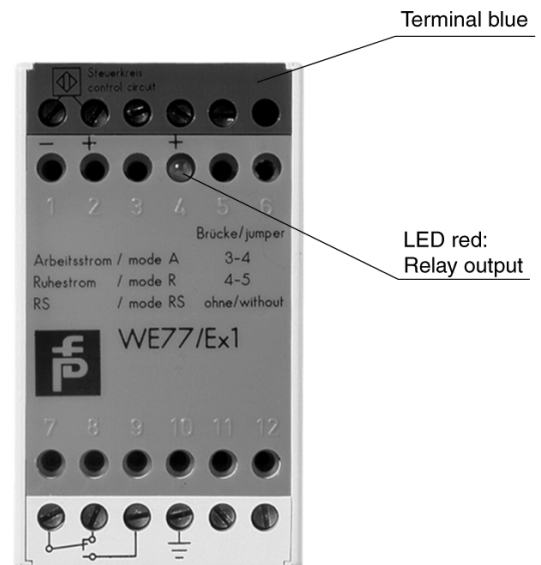
**Connection**



**Composition**

**Front View**

Housing type W1  
(see system description)



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<b>Supply</b>	
Connection	terminals 11, 12
Rated voltage	103.5 ... 126 V AC , 45 ... 65 Hz
Power loss	1.6 W
Power consumption	approx. 2.3 VA
<b>Input</b>	
Connection	terminals 1-, 2+
Rated values	acc. to EN 60947-5-6 (NAMUR), see system description for electrical data
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
Pulse/Pause ratio	≥ 0.5 ms / ≥ 0.5 ms
Lead monitoring	breakage I ≤ 0.1 mA
<b>Output</b>	
Connection	terminals 7, 8, 9
Output	signal ; relay
Contact loading	253 V AC/2 A/500 VA/cos φ min. 0,7; 125 V AC/4 A/500 VA cos φ min. 0,7; 40 V DC/2 A/80 W ohmic load
Energized/De-energized delay	approx. 10 ms / approx. 20 ms
Mechanical life	10 <sup>7</sup> switching cycles
<b>Transfer characteristics</b>	
Switching frequency	< 10 Hz
<b>Electrical isolation</b>	
Output/power supply	basic insulation according to IEC 61140, rated insulation voltage 300 V <sub>eff</sub>
Output/Output	functional insulation acc. to EN 50178, rated insulation voltage 300 V <sub>eff</sub>
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Low voltage	
Directive 2006/95/EC	EN 50178:1997
<b>Conformity</b>	
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 390 g
Dimensions	40 x 104 x 110 mm (1.6 x 4.1 x 4.3 in)
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	PTB 02 ATEX 2065 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	(Ex) II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Voltage U <sub>o</sub>	13.4 V DC
Current I <sub>o</sub>	31 mA
Power P <sub>o</sub>	145 mW (trapezoid characteristic curve)
<b>Supply</b>	
Maximum safe voltage U <sub>m</sub>	126.5 V AC (Attention! The rated voltage can be lower.)
<b>Output</b>	
Maximum safe voltage U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)
<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, EN 50020
<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 www.pepperl-fuchs.com.

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Mode of Operation

Mode of operation without lead breakage detection

Jumpers	Input	Output
Jumpers between terminals 4 and 5		 Relay energized
	0-Signal	
Jumpers between terminals 4 and 5		 Relay de-energized
	1-Signal	
Jumpers between terminals 3 and 4		 Relay energized
	1-Signal	
Jumpers between terminals 3 and 4		 Relay de-energized
	0-Signal	

Mode of operation with lead breakage detection

Jumpers	Input	Output
Without jumpers		 Relay energized
	0-Signal	
Without jumpers		 Relay de-energized
	1-Signal	
Without jumpers		 Relay de-energized
	0-Signal	
Without jumpers		 Relay de-energized
	1-Signal	

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