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

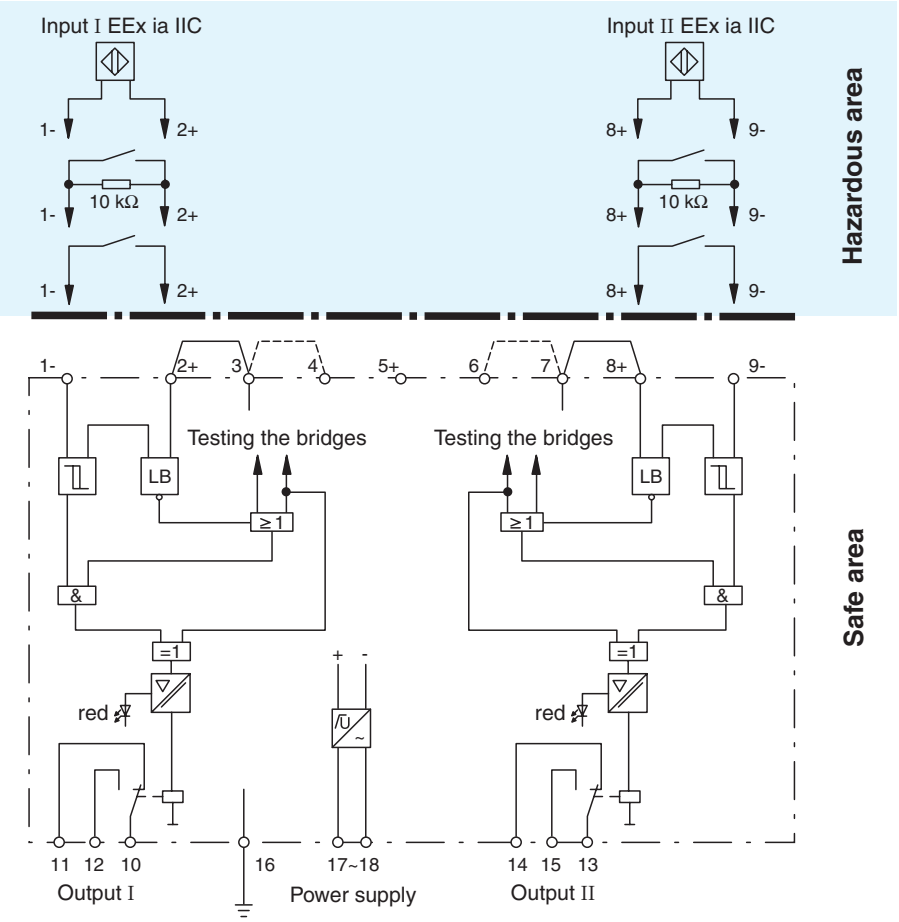
WE 77/Ex-2 115V

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).

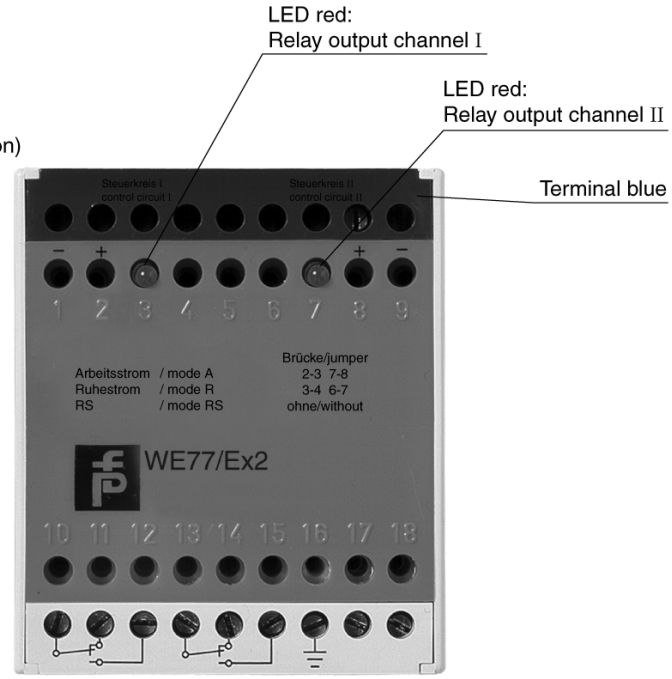
Connection



Composition

Front View

Housing type W2
(see system description)



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General specifications	
Signal type	Digital Input
Supply	
Connection	terminals 17, 18
Rated voltage U_r	103.5 ... 126 V AC , 45 ... 65 Hz
Power dissipation	2.5 W
Power consumption	approx. 3.2 VA
Input	
Connection side	field side
Connection	terminals 1-, 2+; 8+, 9-
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
Line fault detection	breakage I ≤ 0.1 mA
Output	
Connection side	control side
Connection	terminals 10, 11, 12; 13, 14, 15
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	10^7 switching cycles
Transfer characteristics	
Switching frequency	< 10 Hz
Galvanic isolation	
Input/Output	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Input/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Output/power supply	basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Indicators/settings	
Display elements	LEDs
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
Conformity	
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals
Mass	approx. 410 g
Dimensions	60 x 104 x 110 mm (2.4 x 4.1 x 4.3 inch)
Data for application in connection with hazardous areas	
EU-Type Examination Certificate	PTB 02 ATEX 2065
Marking	⟨Ex⟩ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input	Ex ia
Voltage U_o	13.4 V DC
Current I_o	31 mA
Power P_o	145 mW (trapezoid characteristic curve)
Supply	
Maximum safe voltage U_m	126.5 V AC (Attention! The rated voltage can be lower.)
Output	
Maximum safe voltage U_m	253 V AC (Attention! The rated voltage can be lower.)
Galvanic isolation	
Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012
International approvals	
UL approval	
Control drawing	116-0115C (cULus)
General information	

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Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

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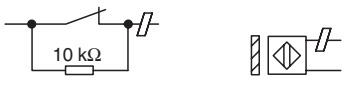
Mode of Operation

Mode of operation without lead breakage detection

Jumpers	Input	Output
Jumpers between terminals 3 and 4, terminals 6 and 7	 0-Signal	 Relay energized
Jumpers between terminals 3 and 4, terminals 6 and 7	 1-Signal	 Relay de-energized
Jumpers between terminals 2 and 3, terminals 7 and 8	 1-Signal	 Relay enegized
Jumpers between terminals 2 and 3, terminals 7 and 8	 0-Signal	 Relay de-energized

Mode of operation with lead breakage detection

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

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