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

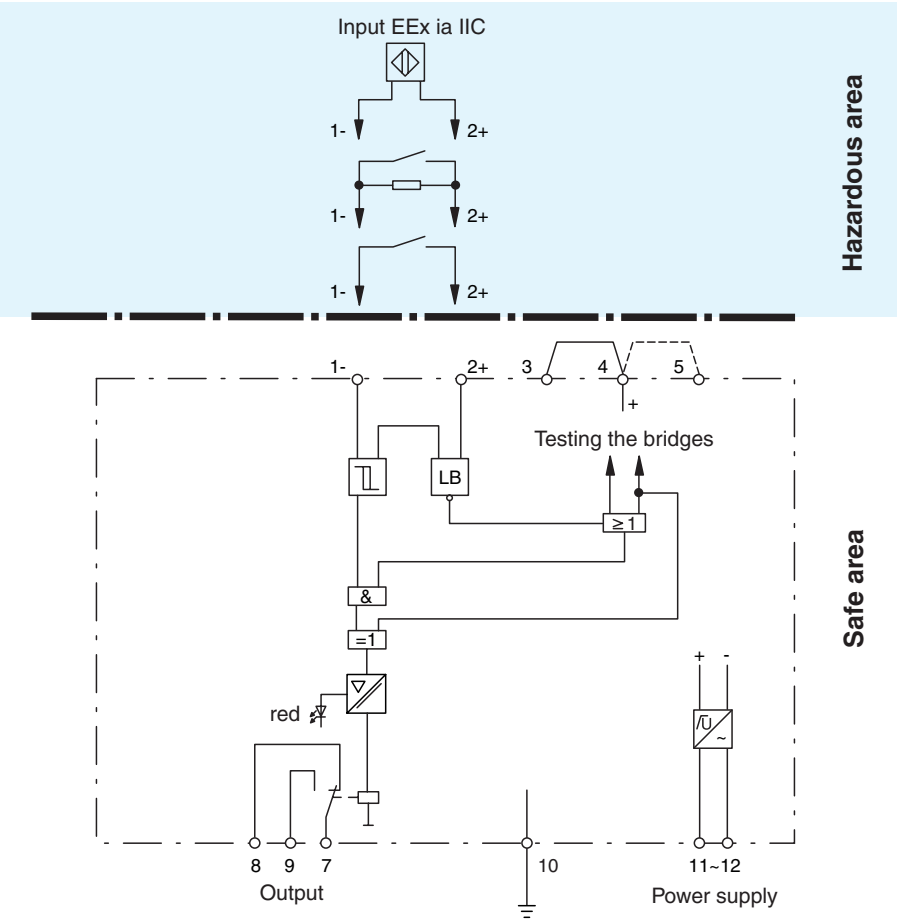
WE 77/Ex-1 230V

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).

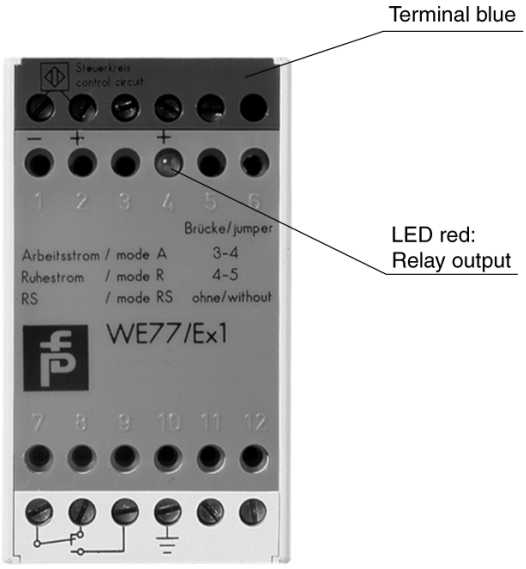
Connection



Composition

Front View

Housing type W1
(see system description)



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Supply	
Connection	terminals 11, 12
Rated voltage U_n	198 ... 253 V AC ; 45 ... 65 Hz
Power loss	1.6 W
Power consumption	approx. 2.3 VA
Input	
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
Line fault detection	breakage I ≤ 0.1 mA
Output	
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	10^7 switching cycles
Transfer characteristics	
Switching frequency	< 10 Hz
Electrical isolation	
Output/power supply	basic insulation according to IEC 61140, rated insulation voltage 300 V_{eff}
Output/Output	functional insulation acc. to EN 50178, rated insulation voltage 300 V_{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Low voltage	
Directive 2006/95/EC	EN 50178:1997
Conformity	
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Mechanical specifications	
Degree of protection	IP20
Mass	approx. 390 g
Dimensions	40 x 104 x 110 mm (1.6 x 4.1 x 4.3 in)
Data for application in connection with Ex-areas	
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_o	13.4 V DC
Current I_o	31 mA
Power P_o	145 mW (trapezoid characteristic curve)
Supply	
Maximum safe voltage U_m	253 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.)
Electrical isolation	
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
Directive conformity	
Directive 94/9/EC	EN 50014, EN 50020
General information	
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	 0-Signal	 Relay energized
Jumpers between terminals 4 and 5	 1-Signal	 Relay de-energized
Jumpers between terminals 3 and 4	 1-Signal	 Relay enegized
Jumpers between terminals 3 and 4	 0-Signal	 Relay de-energized

Mode of operation with lead breakage detection

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

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