



- 2-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 per channel

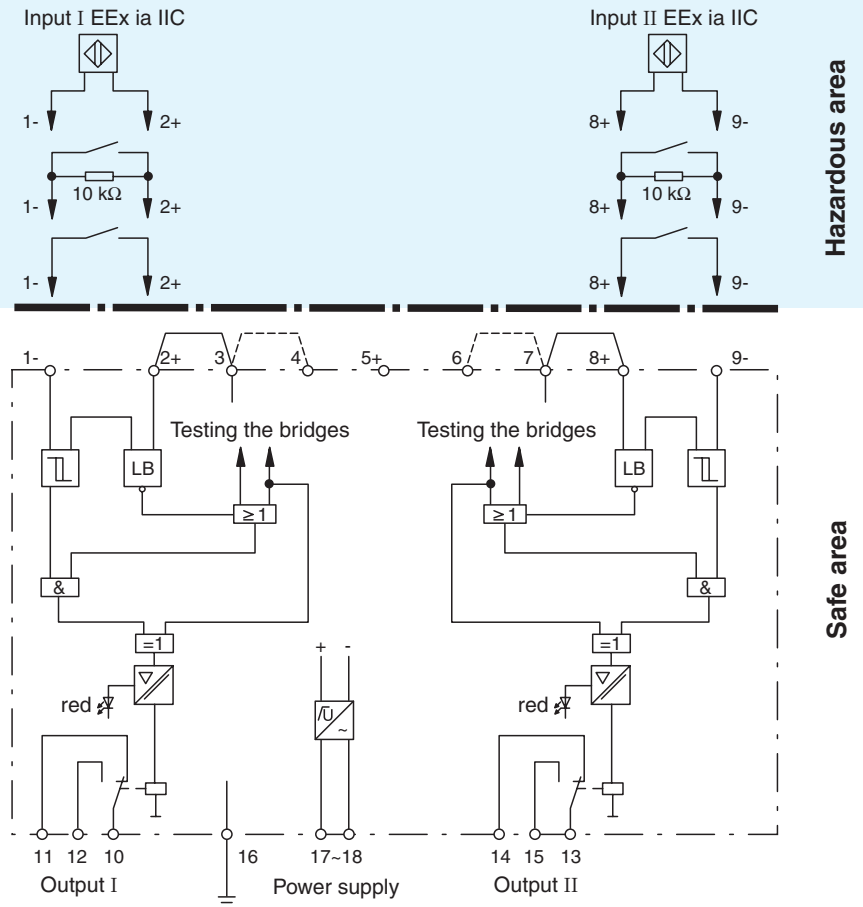
## WE 77/Ex-2 230V

### 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

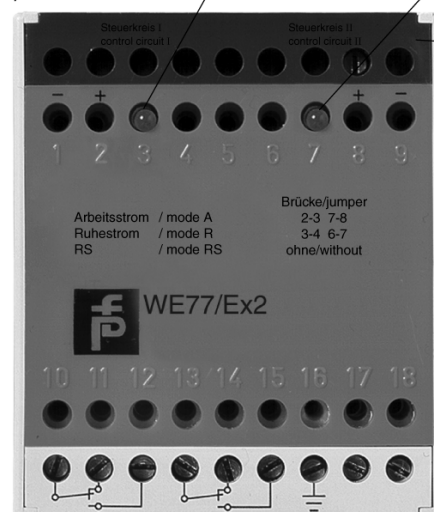
#### Front View

Housing type W2  
(see system description)

LED red:  
Relay output channel I

LED red:  
Relay output channel II









Terminal blue







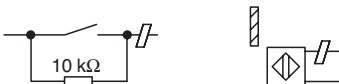



<b>Supply</b>	
Connection	terminals 17, 18
Rated voltage $U_n$	198 ... 253 V AC ; 45 ... 65 Hz
Power dissipation	2.5 W
Power consumption	approx. 3.2 VA
<b>Input</b>	
Connection	terminals 1-, 2+; 8+, 9-
Rated values	acc. to EN 60947-5-6 (NAMUR), see system description for electrical data
Open circuit 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	$\geq 0.5$ ms / $\geq 0.5$ ms
Line fault detection	breakage $I \leq 0.1$ mA
<b>Output</b>	
Connection	terminals 10, 11, 12; 13, 14, 15
Output	signal ; relay
Contact loading	253 V AC/2 A/500 VA/cos $\phi$ min. 0,7; 125 V AC/4 A/500 VA cos $\phi$ 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
<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 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
<b>Conformity</b>	
Degree of protection	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
<b>Mechanical specifications</b>	
Degree of protection	IP20
Mass	approx. 410 g
Dimensions	60 x 104 x 110 mm (2.4 x 4.1 x 4.3 inch)
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	PTB 02 ATEX 2065
Group, category, type of protection	Ⓔ II (1)GD [EEEx 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)
<b>Supply</b>	
Maximum safe voltage $U_m$	253 V AC (Attention! The rated voltage can be lower.)
<b>Output</b>	
Maximum safe voltage $U_m$	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 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012
<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> .

## Mode of Operation

### Mode of operation without lead breakage detection

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