



# Switch Amplifier

## WE77/Ex-1 230V

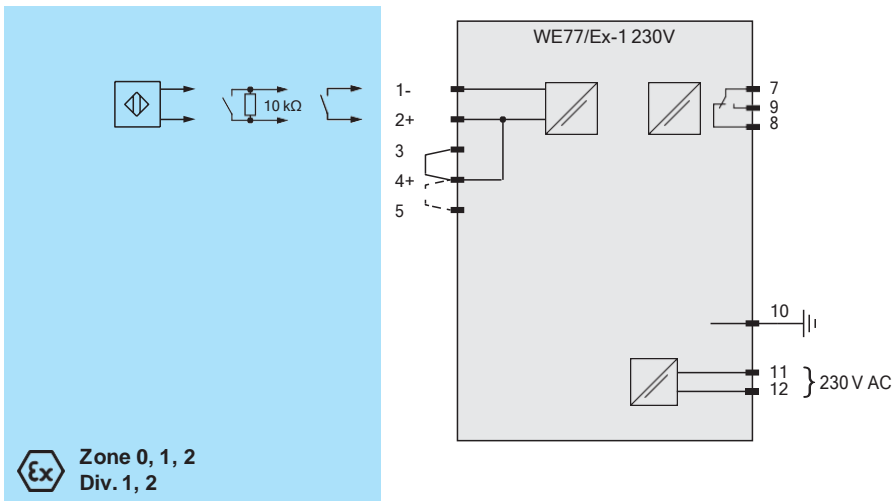
- 1-channel
- Control circuit EEx ia IIC
- 230 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay contact output (change-over contact)



### Function

The device 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



Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
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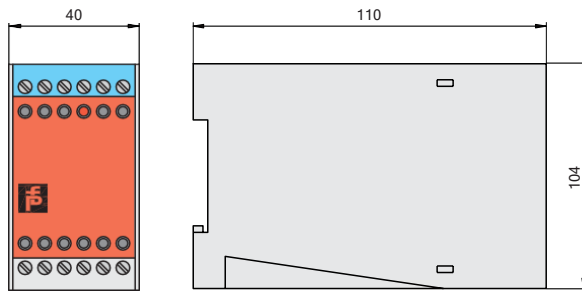
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## Dimensions



## Technical Data

### General specifications

Signal type	Digital Input
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### Supply

Connection	terminals 11, 12
Rated voltage	$U_r$ 198 ... 253 V AC ; 45 ... 65 Hz
Power dissipation	1.6 W
Power consumption	approx. 2.3 VA

### Input

Connection side	field side
Connection	terminals 1-, 2+
Rated values	acc. to EN 60947-5-6 (NAMUR), see manual 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	min. 0.5 ms / min. 0.5 ms
Line fault detection	breakage $I \leq 0.1$ mA

### Output

Connection side	control side
Connection	terminals 7, 8, 9
Output	signal ; relay
Contact loading	253 V AC/2 A/500 VA/cos $\varphi$ min. 0,7; 125 V AC/4 A/500 VA cos $\varphi$ 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
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### Galvanic isolation

Input/Output	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Input/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output/power supply	basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>

### Indicators/settings

Display elements	LED
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### Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010

**Technical Data**

**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. 390 g

Dimensions 40 x 104 x 110 mm (1.6 x 4.1 x 4.3 inch) (W x H x D) , housing type W1

**Data for application in connection with hazardous areas**

EU-type examination certificate PTB 02 ATEX 2065

Marking 1 II (1)GD [Ex 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  $U_m$  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.)

**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**

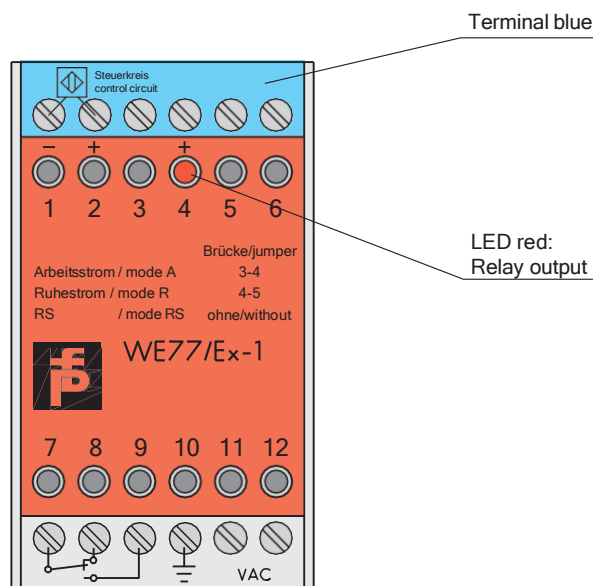
Directive 2014/34/EU EN 60079-0:2012+A11:2013 , EN 60079-11:2012

**General information**

Supplementary information Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**Assembly**

**Front view**



**Configuration**

**Mode of operation without lead breakage detection**

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

**Mode of operation with lead breakage detection**

Jumpers	Input	Output
Without jumpers		
	0-Signal	
Without jumpers		
	1-Signal	
Without jumpers		
	0-Signal	
Without jumpers		
	1-Signal	