



# Switch Amplifier WE77/Ex-1 115V

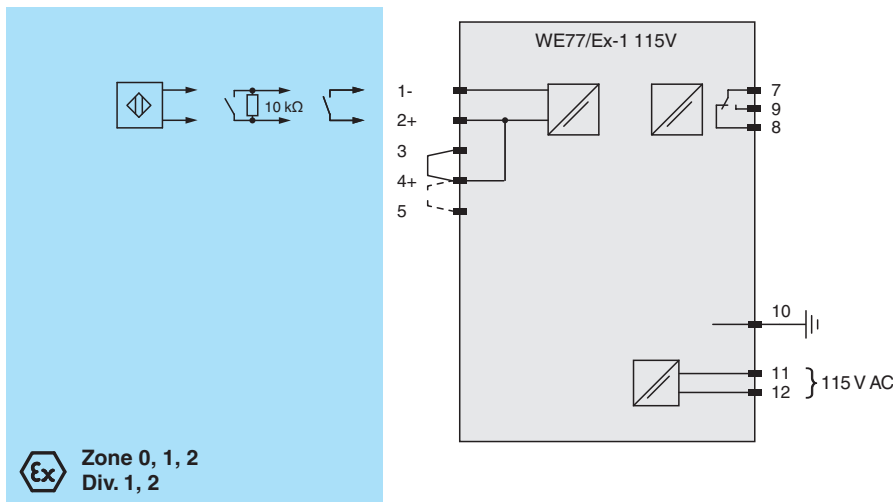
- 1-channel
- Control circuit EEx ia IIC
- 115 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay contact output (change-over contact)



## Function

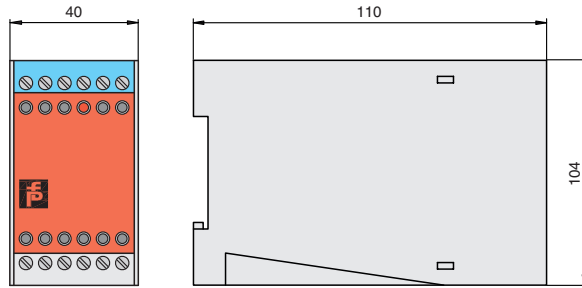
The device transfers digital signals into hazardous areas. Sensors per EN 60947-5-6 (NAMUR) or mechanical contacts may be used as transmitters. The control circuit is monitored for lead breakage (LB).

## Connection



**Ex** Zone 0, 1, 2  
Div. 1, 2

## Dimensions



## Technical Data

General specifications	
Signal type	Digital Input
<b>Supply</b>	
Connection	terminals 11, 12
Rated voltage	$U_r$ 103.5 ... 126 V AC , 45 ... 65 Hz
Power dissipation	1.6 W
Power consumption	approx. 2.3 VA
<b>Input</b>	
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
<b>Output</b>	
Connection side	control side
Connection	terminals 7, 8, 9
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>Galvanic isolation</b>	
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>
<b>Indicators/settings</b>	
Display elements	LED
<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

Release date: 2023-01-05 Date of issue: 2023-01-05 Filename: 129199\_eng.pdf

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

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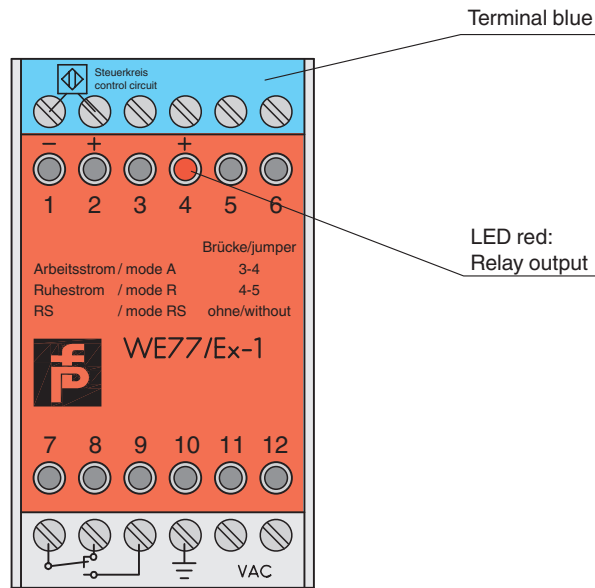
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## Technical Data

<b>Conformity</b>		
Degree of protection		IEC 60529
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
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
<b>Data for application in connection with hazardous areas</b>		
EU-type examination certificate		PTB 02 ATEX 2065
Marking		⊕ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input		Ex ia
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>Galvanic isolation</b>		
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
<b>Directive conformity</b>		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012
<b>International approvals</b>		
UL approval		
Control drawing		116-0115C (cULus)
<b>General information</b>		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

**Assembly**

Front view



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






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






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**Configuration**

**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	
Wichout jumpers		 Relay de-energized
	1-Signal	
Wichout jumpers		 Relay de-energized
	0-Signal	
Without jumpers		 Relay de-energized
	1-Signal	

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