

Switch Amplifier

WE77/Ex-2 230V

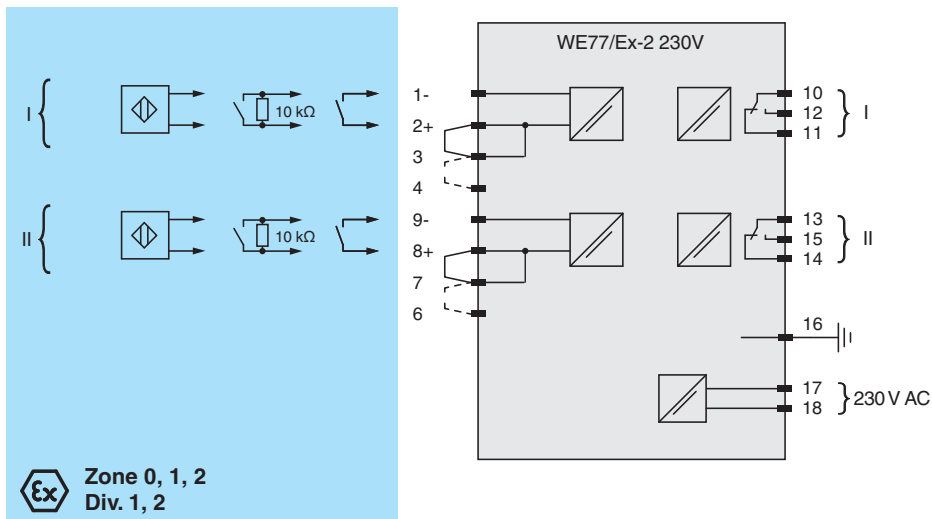
- 2-channel
- Control circuit EEx ia IIC
- 230 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay contact output (change-over contact) per channel



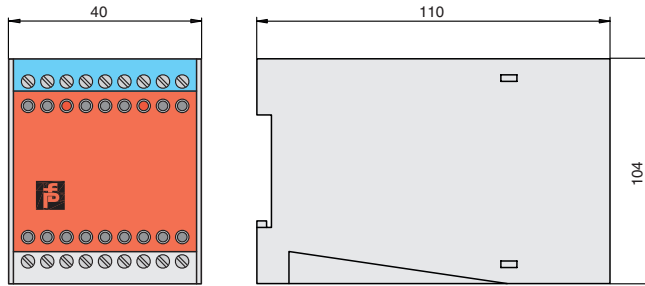
Function

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



Dimensions



Technical Data

General specifications	
Signal type	Digital Input
Supply	
Connection	terminals 17, 18
Rated voltage	U_r 198 ... 253 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 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 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

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Technical Data

Conformity

Degree of protection	IEC 60529
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Ambient conditions

Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
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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) (W x H x D) , housing type W2

Data for application in connection with hazardous areas

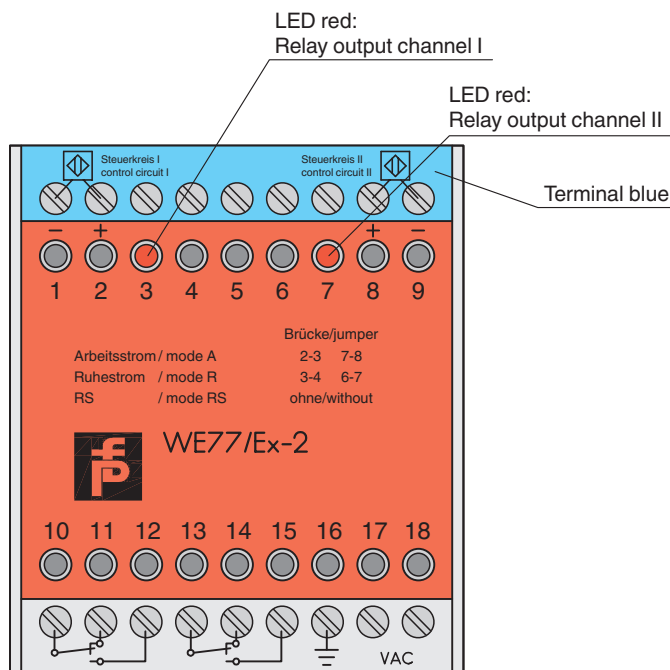
EU-type examination certificate	PTB 02 ATEX 2065
Marking	Ⓔ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input	Ex ia
Voltage	U_o 13.4 V DC
Current	I_o 31 mA
Power	P_o 145 mW (trapezoid characteristic curve)
Supply	
Maximum safe voltage	U_m 253 V AC (Attention! The rated voltage can be lower.)
Output	
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 .
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






Assembly

Front view











Configuration

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	

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