



Switch Amplifier

WE 77/Ex-1 230V

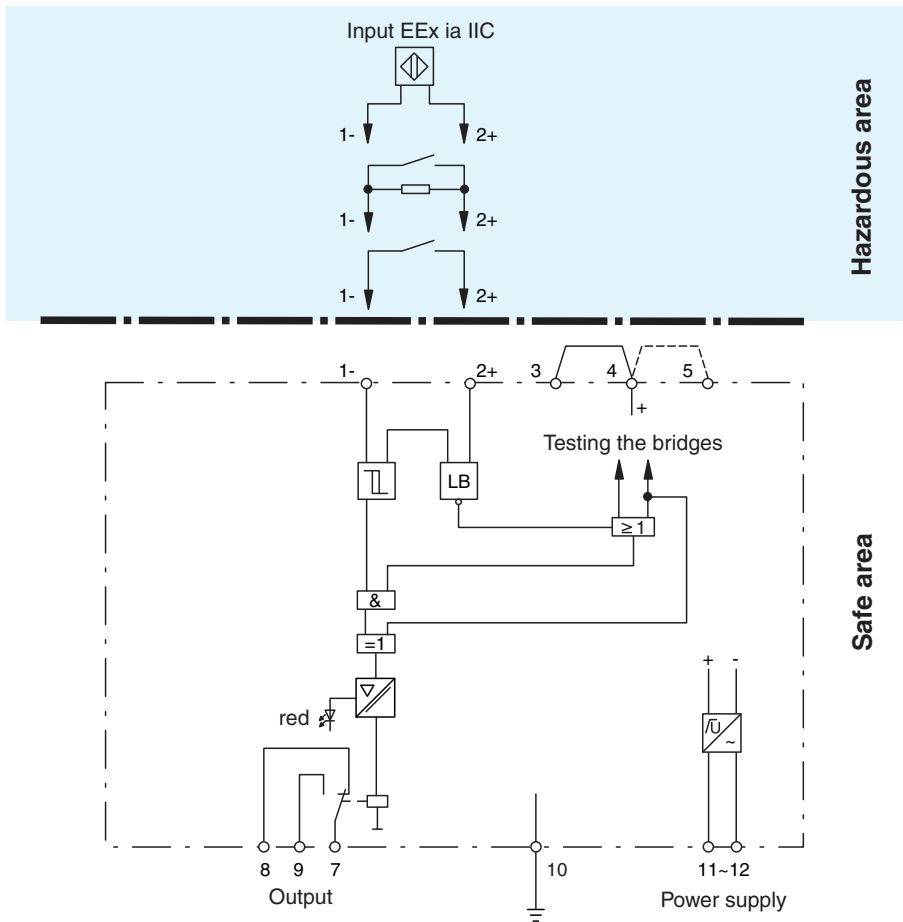
- 1-channel
- Control circuit EEx ia IIC
- 230 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay contact output (change-over contact)



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



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

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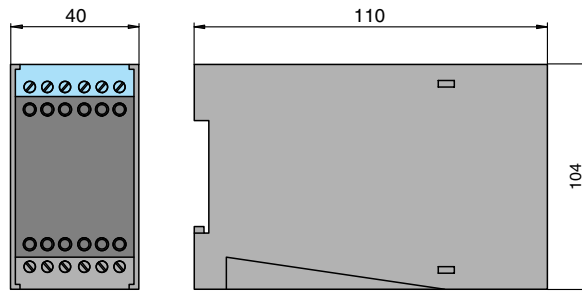
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PF PEPPERL+FUCHS

Dimensions



Technical Data

General specifications		
Signal type		Digital Input
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 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		LED
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Low voltage		
Directive 2014/35/EU		EN 61010-1:2010
Conformity		

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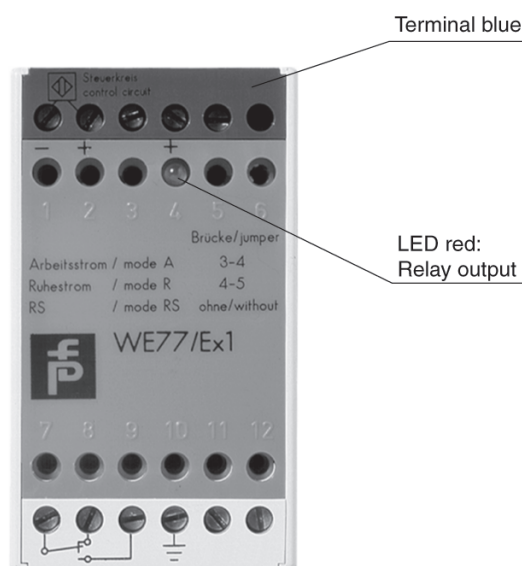
Technical Data

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	Ⓜ 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 .	

Assembly

Front View









Housing type W1
(see system description)











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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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