

Switch Amplifier

WE 77/Ex-2 230V

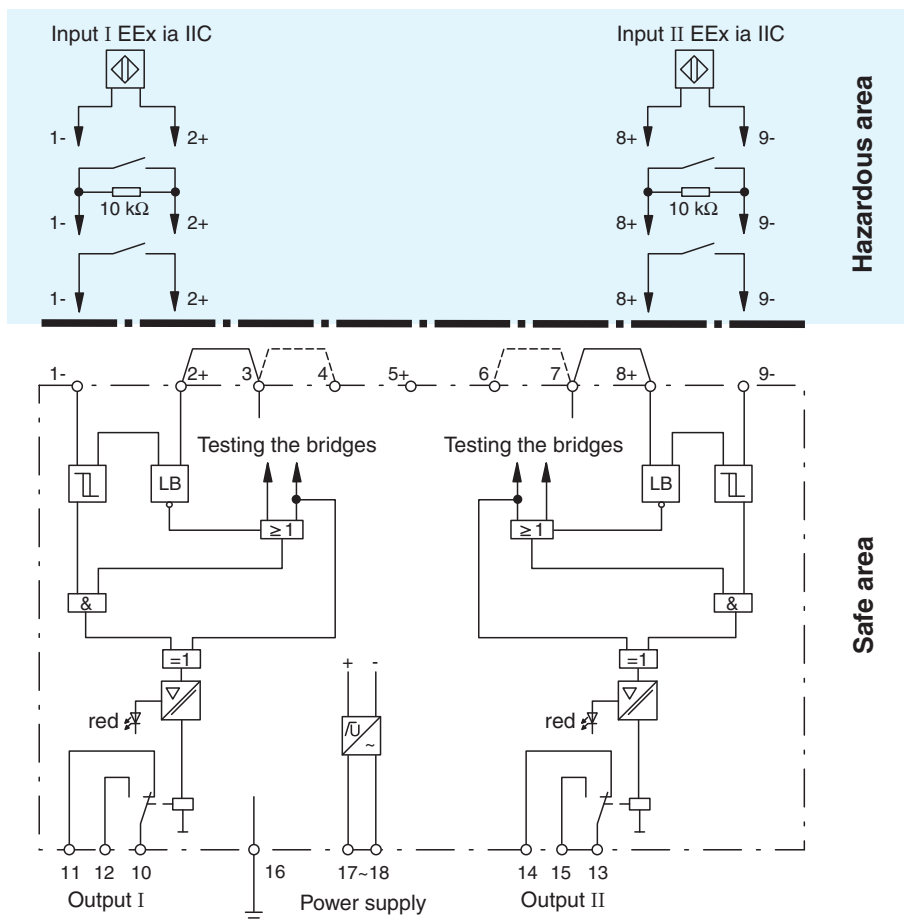
- 2-channel
- Control circuit EEx ia IIC
- 230 V AC supply voltage
- Reversible mode of operation
- Lead breakage (LB) monitoring
- 1 relay contact output (change-over contact) per channel



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



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

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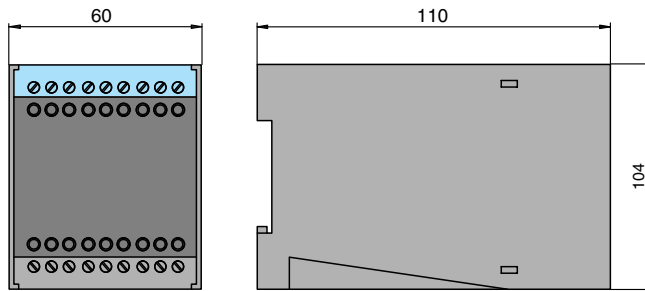
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PF PEPPERL+FUCHS

Dimensions



Technical Data

| General specifications | |
|--|---|
| Signal type | Digital Input |
| Supply | |
| Connection | terminals 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 |
| Conformity | |

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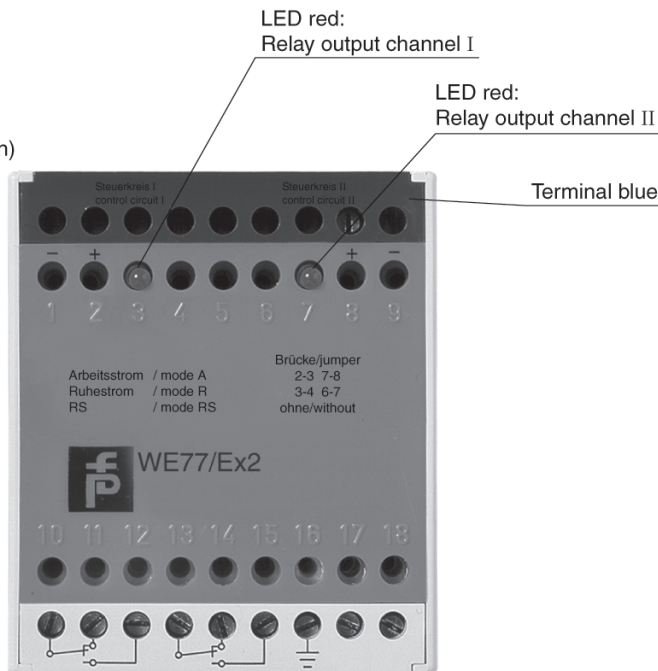
Technical Data

| | | |
|--|---|---|
| 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. 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 . | |

Assembly

Front View

Housing type W2
(see system description)



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Configuration

Mode of operation without lead breakage detection

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

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