



Solenoid Driver

KFD0-SD2-Ex1.10100

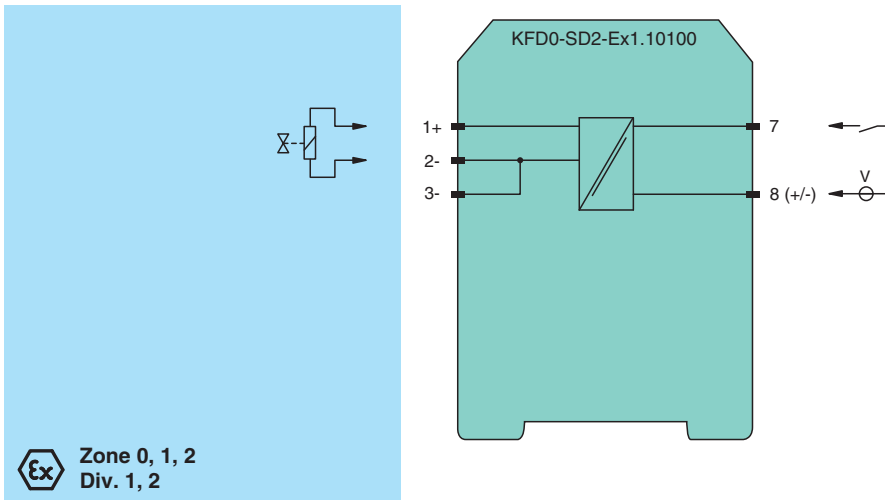
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 100 mA at 10 V DC
- Up to SIL 3 acc. to IEC/EN 61508



Function

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area. It is loop powered, so the available energy at the output is received from the input signal. The output signal has a resistive characteristic. As a result the output voltage and current are dependent on the load and the input voltage. At full load, 10 V at 100 mA is available for the hazardous area application.

Connection



Technical Data

| | | | |
|---|----------------|-------------------------------|--|
| General specifications | | | |
| Signal type | Digital Output | | |
| Functional safety related parameters | | | |
| Safety Integrity Level (SIL) | SIL 3 | | |
| Supply | | | |
| Rated voltage | U_r | 20 ... 35 V DC , loop powered | |
| Power dissipation | | < 1.2 W ($U_i \leq 30$ V) | |
| Input | | | |
| Connection side | | control side | |
| Connection | | terminals 7, 8 | |
| Rated voltage | U_r | 20 ... 35 V DC | |

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

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Technical Data

| | | |
|--|-------|--|
| Current | | 150 mA at 20 V input voltage, load = 100 Ω 100 mA at 35 V input voltage, load = 100 Ω |
| Output | | |
| Connection side | | field side |
| Connection | | terminals 1+, 2- |
| Internal resistor | R_i | $\leq 68 \Omega$ |
| Current | I_e | ≥ 100 mA |
| Voltage | U_e | ≥ 9.5 V |
| Open loop voltage | U_s | min. 16.2 V |
| Output current | | 100 mA |
| Output signal | | These values are valid for the rated operating voltage 20 ... 35 V DC. |
| Energized/De-energized delay | | single operation: typ. 1.7 ms/50 μ s; periodical: typ. 5 μ s/50 μ s |
| Indicators/settings | | |
| Display elements | | LED |
| Labeling | | space for labeling at the front |
| Directive conformity | | |
| Electromagnetic compatibility | | |
| Directive 2014/30/EU | | EN 61326-1:2013 (industrial locations) |
| Conformity | | |
| Electromagnetic compatibility | | NE 21:2006 |
| Degree of protection | | IEC 60529:2001 |
| Protection against electrical shock | | UL 61010-1:2004 |
| Ambient conditions | | |
| Ambient temperature | | -20 ... 60 $^{\circ}$ C (-4 ... 140 $^{\circ}$ F) |
| Mechanical specifications | | |
| Degree of protection | | IP20 |
| Connection | | screw terminals |
| Mass | | approx. 100 g |
| Dimensions | | 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) (W x H x D) , housing type B1 |
| Height | | 107 mm |
| Width | | 20 mm |
| Depth | | 115 mm |
| Mounting | | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| Data for application in connection with hazardous areas | | |
| EU-type examination certificate | | BASEEFA 06 ATEX 0252 |
| Marking | | Ⓜ II (1)G [Ex ia Ga] IIC Ⓜ II (1)D [Ex ia Da] IIIC Ⓜ I (M1) [Ex ia Ma] I |
| Voltage | U_o | 17 V |
| Current | I_o | 271 mA |
| Power | P_o | 1152 mW |
| Input | | |
| Maximum safe voltage | U_m | 250 V (Attention! The rated voltage can be lower.) |
| Certificate | | TÜV 99 ATEX 1499 X |
| Marking | | Ⓜ II 3G Ex nA II T4 |
| Galvanic isolation | | |
| Input/Output | | safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V |
| Directive conformity | | |
| Directive 2014/34/EU | | EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010 |
| International approvals | | |
| FM approval | | |
| Control drawing | | 116-0309 |
| UL approval | | E106378 |
| Control drawing | | 116-0316 (cULus) |

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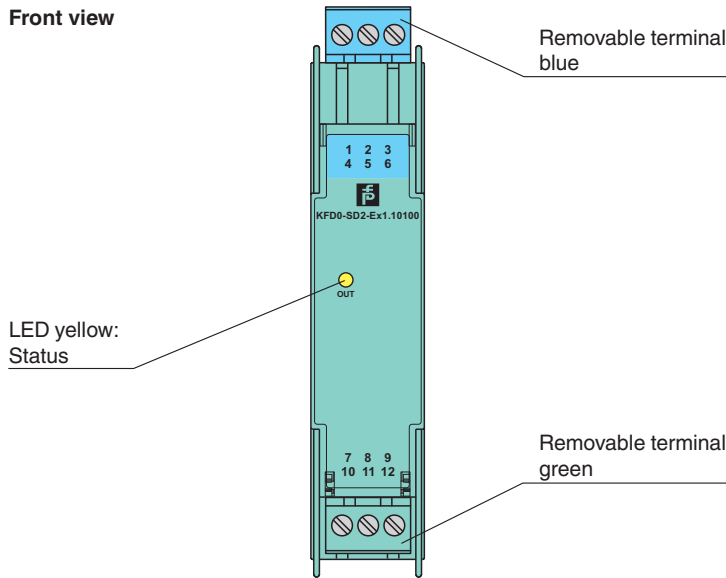
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Technical Data

| | | |
|----------------------------|--|---|
| IECEX approval | | |
| IECEX certificate | | IECEX BAS 06.0058 IECEX CML 19.0093X |
| IECEX marking | | [Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc |
| 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



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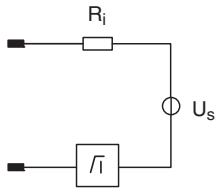
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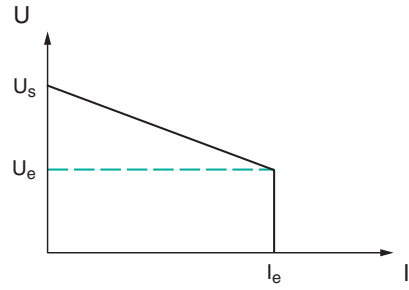
Characteristic Curve

Output characteristics

Output circuit diagram



Output characteristic



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