Solenoid Driver

KFD0-SD2-Ex1.1180

Features

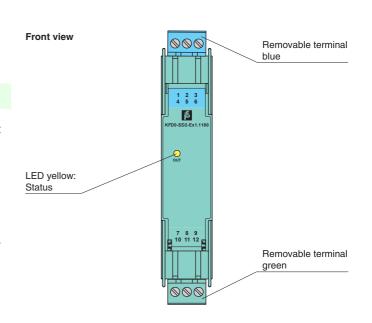
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 80 mA at 11 V DC
- Up to SIL3 acc. to IEC 61508

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, 11 V at 80 mA is available for the hazardous area application.

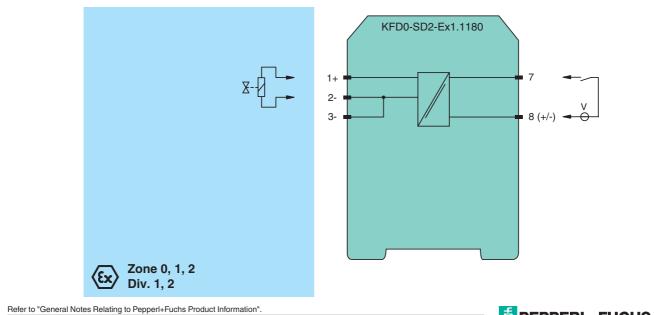


CE (Ex) S

Assembly

SIL3

Connection



Pepperl+Fuchs Group www.pepperl-fuchs.com

USA: +1 330 486 0002 pa-info@us.pepperl-fuchs.com Germany: +49 621 776 2222 pa-info@de.pepperl-fuchs.com Singapore: +65 6779 9091 pa-info@sg.pepperl-fuchs.com



1

| General specifications | | |
|---|----------------|--|
| Signal type | | Digital Output |
| Supply | | |
| Rated voltage | Un | loop powered |
| Power loss | Un | |
| | | < 1 W (≤ 30 V) |
| Input | | |
| Connection | | terminals 7, 8 |
| Rated voltage | Un | 20 35 V DC |
| Current | | 140 mA at 20 V input voltage, load = 140 Ω 100 mA at 35 V input voltage, load = 140 Ω |
| Output | | |
| Connection | | terminals 1+, 2- |
| Internal resistor | Ri | \leq 150 Ω |
| Current | l _e | ≤ 80 mA |
| Voltage | U _e | ≥ 11 V |
| Open loop voltage | Us | ≥ 22.7 V |
| Output rated operating current | | 80 mA |
| Output signal | | These values are valid for the rated operating voltage 20 35 V DC. |
| Energized/De-energized delay | | single operation: 300 μs/50 μs; periodical: 5 μs / 50 μs |
| Directive conformity | | |
| Electromagnetic compatibility | | |
| Directive 2004/108/EC | | EN 61326-1:2006 |
| 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 °C (-4 140 °F) |
| Mechanical specifications | | |
| Degree of protection | | IP20 |
| Mass | | approx. 100 g |
| Dimensions | | 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1 |
| Mounting | | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| Data for application in connection with Ex-areas | | |
| EC-Type Examination Certificate | | BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com |
| Group, category, type of protection | | ⟨x⟩ II (1)G [Ex ia Ga] IIB, II (1)D [Ex ia Da] IIIB, I (M1) [Ex ia Ma] I (-20 °C ≤ T _{amb} ≤ 60 °C) |
| Voltage | Uo | 25.2 V |
| Current | I _o | 184 mA |
| Power | Po | 1.159 W |
| Type of protection [EEx ia] | 0 | |
| Input | | |
| Maximum safe voltage | U _m | 250 V (Attention! The rated voltage can be lower.) |
| Statement of conformity | ∽m | TÜV 99 ATEX 1499 X, observe statement of conformity |
| Group, category, type of protection, temperature class | | ⟨Ex⟩ II 3G Ex nA II T4 [device in zone 2] |
| Electrical isolation | | |
| Input/Output | | safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V |
| Directive conformity | | Sale destrival issialion act. to it or the out of the voltage peak value 3/3 V |
| Ş | | EN 60070 0:0012 EN 60070 11:0012 EN 60070 15:0010 |
| Directive 94/9/EC | | EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010 |
| International approvals | | |
| FM approval | | |
| Control drawing | | 266-031FM-12 (cFMus) |
| UL approval | | |
| Control drawing | | 116-0316 (cULus) |
| IECEx approval | | IECEx BAS 06.0058 |
| General information | | |
| Supplementary information | | EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com. |

Pepperl+Fuchs Group www.pepperl-fuchs.com

Refer to "General Notes Relating to Pepperl+Fuchs Product Information". USA: +1 330 486 0002 pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222 pa-info@de.pepperl-fuchs.com

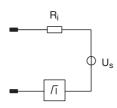
Singapore: +65 6779 9091 pa-info@sg.pepperl-fuchs.com



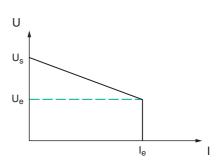
2

Output characteristics

Output circuit diagram



Output characteristic



Pepperl+Fuchs Group www.pepperl-fuchs.com

Refer to "General Notes Relating to Pepperl+Fuchs Product Information". USA: +1 330 486 0002 pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222 pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091 pa-info@sg.pepperl-fuchs.com

