

Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Output 45 mA at 11.7 V DC
- Logic input, non-polarized
- Line fault detection (LFD)
- Up to SIL 2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. The device supplies power to solenoids, LEDs and audible alarms located in a hazardous area.

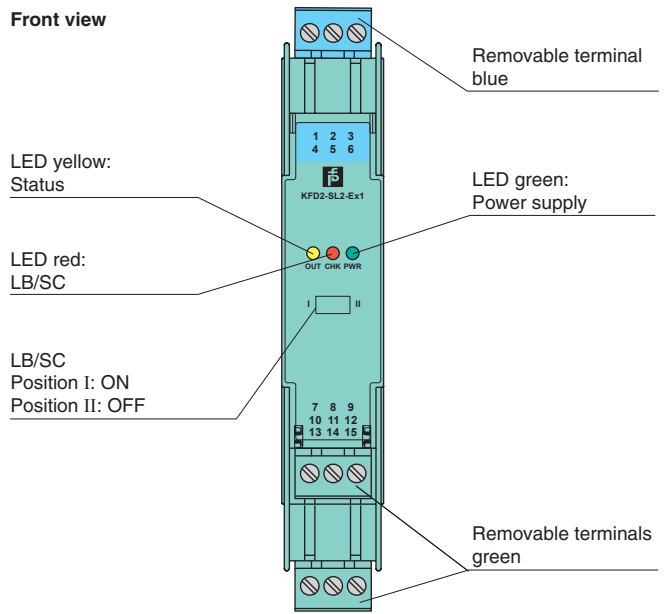
It is controlled via logic signals. The inputs have two defined states: 1-Signal = 16 V DC ... 30 V DC, 0-Signal = 0 V DC ... 5 V DC. The current consumption of the input is about 3 mA.

At full load, 11.7 V at 45 mA is available for the hazardous area application.

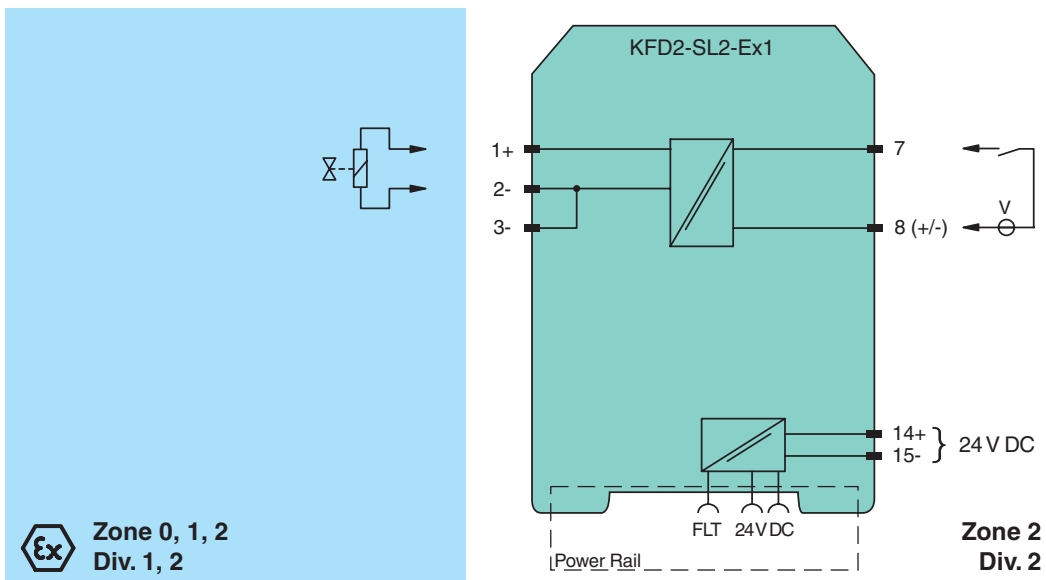
If the field impedance is > 10 kΩ for lead breakage or < 50 Ω for short circuits a line fault is detected.

A fault is signaled by LEDs and a separate collective error message output.

Assembly



Connection



Release date 2019-02-20 14:12 Date of issue 2019-03-19 184256_eng.xml

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

| | | |
|--|-------|--|
| General specifications | | |
| Signal type | | Digital Output |
| Functional safety related parameters | | |
| Safety Integrity Level (SIL) | | SIL 2 |
| Supply | | |
| Connection | | Power Rail or terminals 14+, 15- |
| Rated voltage | U_r | 20 ... 30 V DC |
| Power consumption | | ≤ 1.7 W at 45 mA output current |
| Input | | |
| Connection side | | control side |
| Connection | | terminals 7, 8 |
| Input current | | approx. 3 mA at 24 V DC |
| Signal level | | 1-signal: 16 ... 30 V DC 0-signal: 0 ... 5 V DC |
| Output | | |
| Connection side | | field side |
| Connection | | terminals 1+, 2- or 3- |
| Internal resistor | R_i | 272 Ω |
| Current | I_e | ≤ 45 mA |
| Voltage | U_e | ≥ 11.7 V |
| Open loop voltage | U_s | ≥ 24 V |
| Output signal | | These values are valid for the rated operating voltages from 20 ... 30 V DC. |
| Energized/De-energized delay | | ≤ 20 ms / ≤ 20 ms |
| Line fault detection | | signal at short-circuit $R_B < 30 \Omega$, lead breakage $R_B > 15 \text{ k}\Omega$, test current < 500 μA |
| 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} |
| Power supply/Output | | reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff} |
| Indicators/settings | | |
| Display elements | | LEDs |
| Control elements | | DIP-switch |
| Configuration | | via DIP switches |
| 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 | | EN 61010-1:2010 |
| Ambient conditions | | |
| Ambient temperature | | -20 ... 60 °C (-4 ... 140 °F) |
| Mechanical specifications | | |
| Degree of protection | | IP20 |
| Connection | | screw terminals |
| Mass | | approx. 150 g |
| Dimensions | | 20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch), housing type B2 |
| Mounting | | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| Data for application in connection with hazardous areas | | |
| EU-Type Examination Certificate | | ZELM 00 ATEX 0024 |
| Marking | | |
| Output | | Ex ia |
| Voltage | U_o | 28 V |
| Current | I_o | 110 mA |
| Power | P_o | 770 mW (linear characteristic) |
| Supply | | |
| Maximum safe voltage | U_m | 40 V (Attention! The rated voltage can be lower.) |
| Input | | |
| Maximum safe voltage | U_m | 60 V (Attention! The rated voltage can be lower.) |
| Collective error message | | |
| Maximum safe voltage | U_m | 40 V (Attention! The rated voltage can be lower.) |
| Certificate | | TÜV 02 ATEX 1820 X |

Release date 2019-02-20 14:12 Date of issue 2019-03-19 184256_eng.xml

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

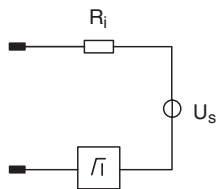
Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

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

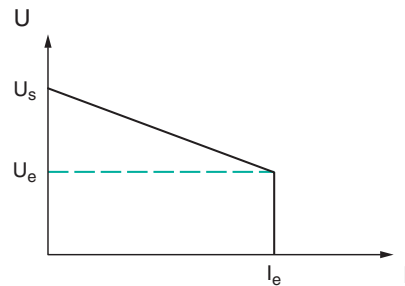
| | |
|--------------------------------|---|
| Marking | ⊕ II 3G Ex nA IIC T4 Gc |
| Galvanic isolation | |
| Input/Output | safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V |
| Output/power supply | safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V |
| Directive conformity | |
| Directive 2014/34/EU | EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010 , EN 60079-26:2007 , EN 50303:2000 |
| International approvals | |
| CSA approval | |
| Control drawing | 116-0304 |
| IECEX approval | |
| IECEX certificate | IECEX TUN 04.0001 |
| IECEX marking | [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I |
| General information | |
| Supplementary information | Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com . |
| Accessories | |
| Optional accessories | <ul style="list-style-type: none"> - power feed module KFD2-EB2(.R4A.B)(.SP) - universal power rail UPR-03(-M)(-S) - profile rail K-DUCT-BU(-UPR-03) |

Output characteristics

Output circuit diagram



Output characteristic





SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

www.scatts.co.uk