

Features

- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Input 2-wire and 3-wire transmitters and 2-wire current sources
- Output 0/4 mA ... 20 mA
- 2 relay contact outputs
- Adjustable energized/de-energized delay
- Programmable high/low alarm
- Linearization function (max 20 points)
- Line fault detection (LFD)
- Up to SIL 2 acc. to IEC 61508/IEC 61511

Function

This signal conditioner provides the galvanic isolation between field circuits and control circuits.

The device supplies 2-wire and 3-wire transmitters, and can also be used with current sources.

Two relays and an active 0/4 mA ... 20 mA current source are available as outputs. The relay contacts and the current output can be integrated in security-relevant circuits. The current output is easily scaled.

On the display the measured value can be indicated in various physical units.

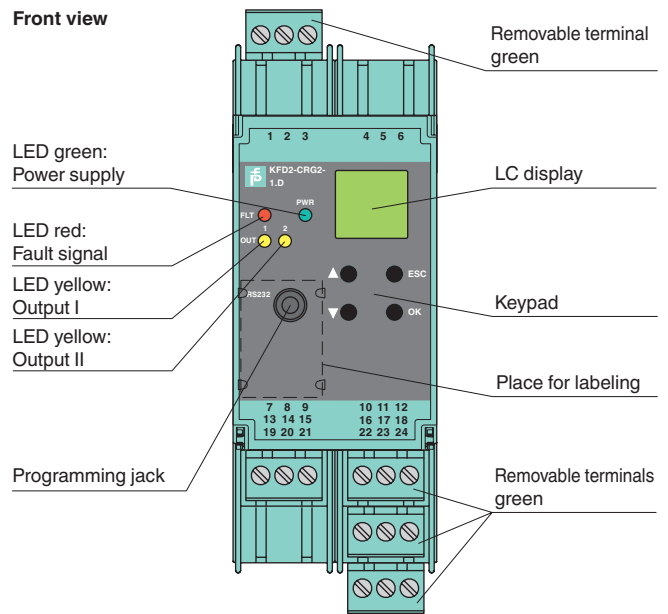
The device is easily configured by the use of keypad or with the PACTware configuration software.

The input has a line fault detection.

A fault is signaled by LEDs acc. to NAMUR NE44 and a separate collective error message output.

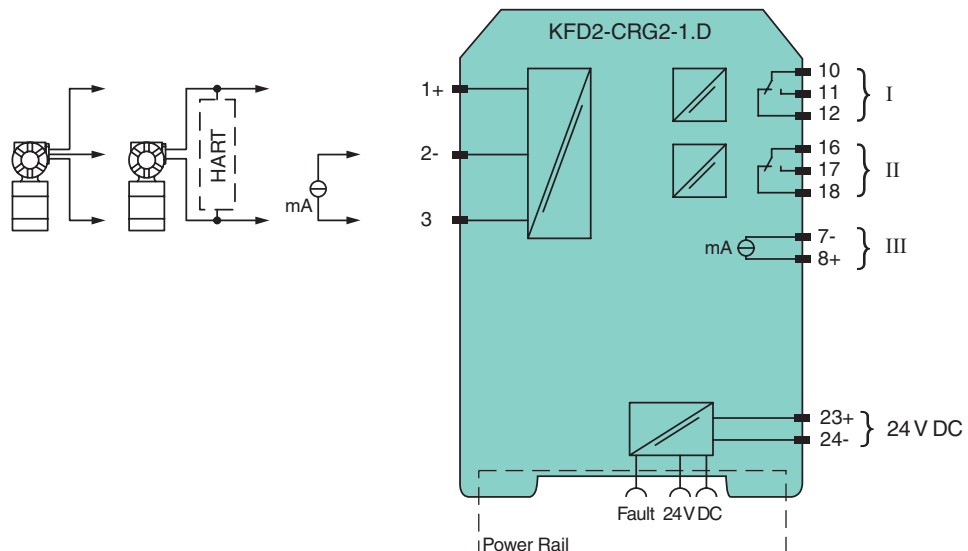
For additional information, refer to the manual and www.pepperl-fuchs.com.

Assembly



SIL 2

Connection



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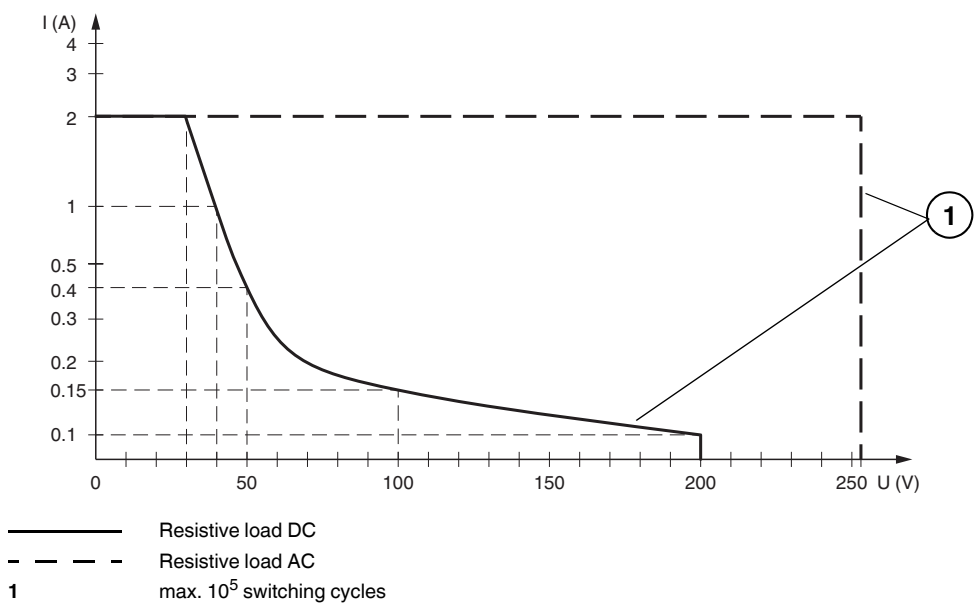
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

| | | |
|--|-------|--|
| General specifications | | |
| Signal type | | Analog input |
| Functional safety related parameters | | |
| Safety Integrity Level (SIL) | | SIL 2 |
| Supply | | |
| Connection | | Power Rail or terminals 23+, 24- |
| Rated voltage | U_r | 20 ... 30 V DC |
| Rated current | I_r | approx. 130 mA |
| Power dissipation | | 2 W |
| Power consumption | | 2.5 W |
| Interface | | |
| Programming interface | | programming socket |
| Input | | |
| Connection side | | field side |
| Connection | | terminals 1, 2, 3 |
| Input I | | |
| Input signal | | 0/4 ... 20 mA |
| Available voltage | | ≥ 15 V at 20 mA |
| Open circuit voltage/short-circuit current | | 24 V / 33 mA |
| Input resistance | | 45 Ω (terminals 2, 3) |
| Line fault detection | | breakage I < 0.2 mA; short-circuit I > 22 mA |
| Output | | |
| Connection side | | control side |
| Connection | | output I: terminals 10, 11, 12 output II: terminals 16, 17, 18 Output: analog terminals 8+, 7- |
| Output signal | | 0 ... 20 mA or 4 ... 20 mA |
| Output I, II | | signal, relay |
| Contact loading | | 250 V AC / 2 A / $\cos \phi \geq 0.7$; 40 V DC / 2 A |
| Mechanical life | | 5×10^7 switching cycles |
| Output III | | Signal, analog |
| Current range | | 0 ... 20 mA or 4 ... 20 mA |
| Open loop voltage | | ≤ 24 V DC |
| Load | | ≤ 650 Ω |
| Fault signal | | downscale I ≤ 3.6 mA, upscale I ≥ 21.5 mA (acc. NAMUR NE43) |
| Energized/De-energized delay | | 0 ... 250 s , adjustable |
| Transfer characteristics | | |
| Input I | | |
| Accuracy | | < 30 μA |
| Influence of ambient temperature | | 0.003 %/K (30 ppm) |
| Output I, II | | |
| Response delay | | ≤ 200 ms at bounce from 0 ... 20 mA |
| Output III | | |
| Resolution | | ≤ 10 μA |
| Accuracy | | < 20 μA |
| Influence of ambient temperature | | 0.005 %/K (50 ppm) |
| Reaction time | | < 650 ms at bounce from 0 ... 20 mA at the input, 90 % of output full-scale value |
| Galvanic isolation | | |
| Input/Other circuits | | reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff} |
| Output I, II/other circuits | | reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff} |
| Mutual output I, II, III | | reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff} |
| Output III/power supply and collective error | | functional insulation acc. to IEC 62103, rated insulation voltage 50 V _{eff} |
| Interface/power supply and collective error | | functional insulation acc. to IEC 62103, rated insulation voltage 50 V _{eff} |
| Indicators/settings | | |
| Display elements | | LEDs , display |
| Control elements | | Control panel |
| Configuration | | via operating buttons via PACTware |
| Labeling | | space for labeling at the front |
| Directive conformity | | |
| Electromagnetic compatibility | | |
| Directive 2014/30/EU | | EN 61326-1:2013 (industrial locations) |

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|----------------------------------|--|
| Low voltage | |
| Directive 2014/35/EU | EN 61010-1:2010 |
| Conformity | |
| Electromagnetic compatibility | NE 21:2006 |
| Degree of protection | IEC 60529:2001 |
| Ambient conditions | |
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F) |
| Mechanical specifications | |
| Degree of protection | IP20 |
| Connection | screw terminals |
| Mass | 300 g |
| Dimensions | 40 x 119 x 115 mm (1.6 x 4.7 x 4.5 inch) , housing type C3 |
| Mounting | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| International approvals | |
| UL approval | E223772 |
| 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-GY(-UPR-03) - FDT framework PACTware 4.1 - device type manager DTM Interface Technology - adapter K-ADP-USB |

Maximum Switching Power of Output Contacts



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