

**Features**

- 1-channel signal conditioner
- Universal usage at different power supplies
- Input 2-wire and 3-wire transmitters and 2-wire current sources
- Output 0/4 mA ... 20 mA
- 2 relay contact outputs
- 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.

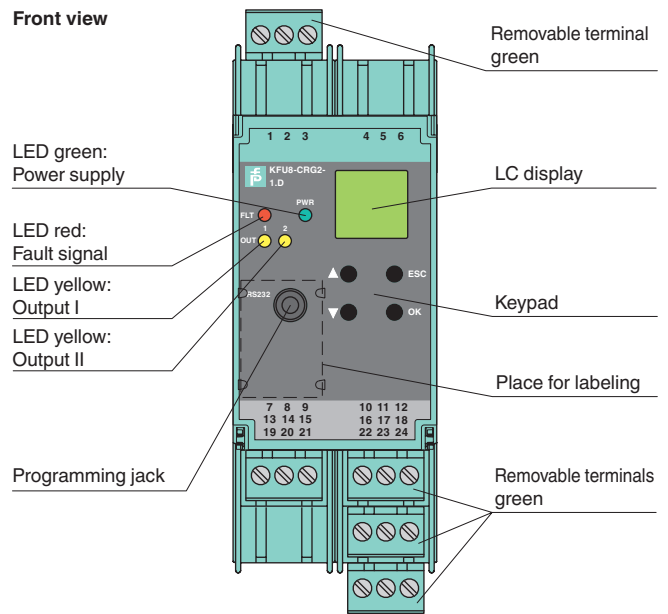
The device is easily configured by the use of keypad or with the PACTware configuration software.

The input has a line fault detection.

A fault is signaled by LEDs acc. to NAMUR NE44.

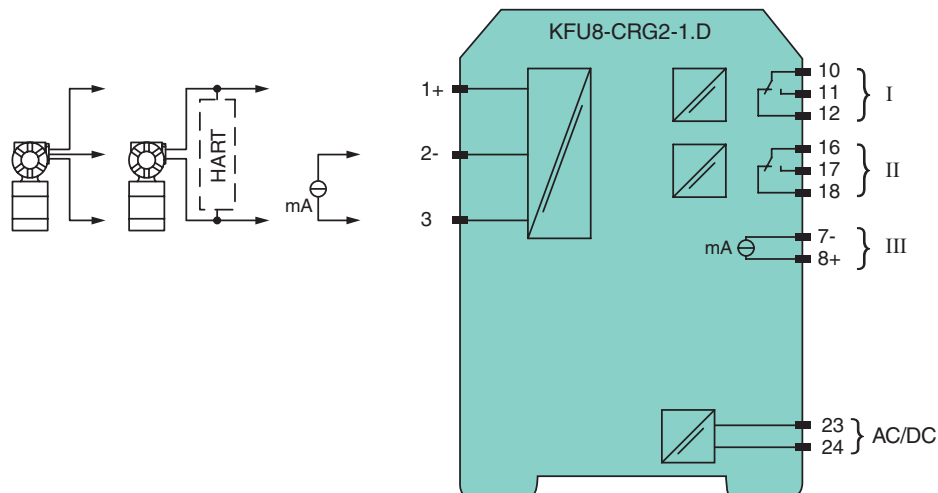
For additional information, refer to the manual and [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**Assembly**



**SIL 2**

**Connection**



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

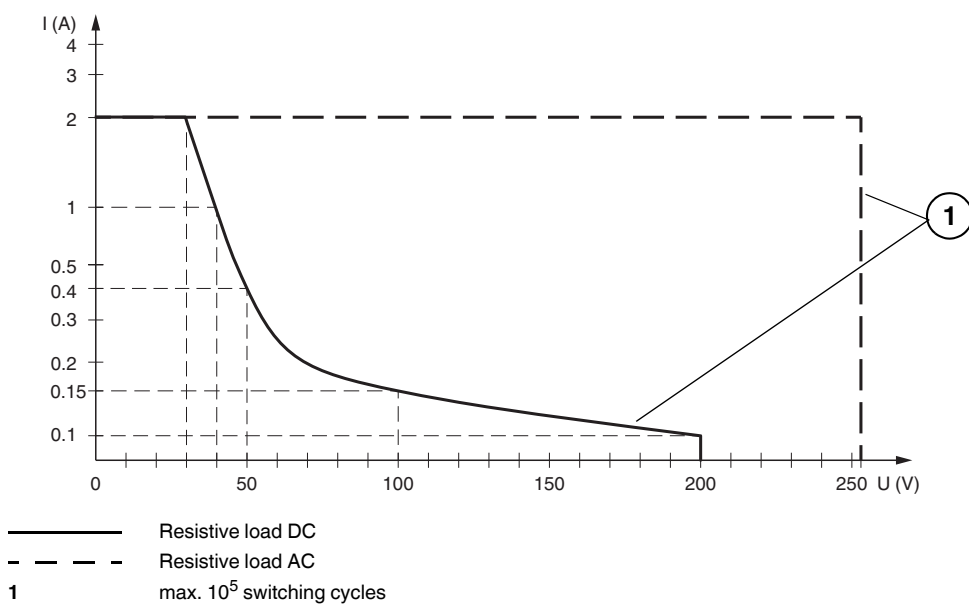
<b>General specifications</b>	
Signal type	Analog input
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 2
<b>Supply</b>	
Connection	terminals 23, 24
Rated voltage $U_r$	20 ... 90 V DC or 48 ... 253 V AC
Power dissipation	2 W / 3 VA
Power consumption	2.2 W / 4 VA
<b>Interface</b>	
Programming interface	programming socket
<b>Input</b>	
Connection side	field side
Connection	terminals 1, 2, 3
<b>Input I</b>	
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 $\Omega$ (terminals 2, 3)
Line fault detection	breakage I < 0.2 mA; short-circuit I > 22 mA
<b>Output</b>	
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
<b>Output I, II</b>	
Contact loading	250 V AC / 2 A / $\cos \phi \geq 0.7$ ; 40 V DC / 2 A
Mechanical life	$5 \times 10^7$ switching cycles
<b>Output III</b>	
Current range	0 ... 20 mA or 4 ... 20 mA
Open loop voltage	$\leq 24$ V DC
Load	$\leq 650 \Omega$
Fault signal	downscale I $\leq 3.6$ mA, upscale I $\geq 21.5$ mA (acc. NAMUR NE43)
<b>Transfer characteristics</b>	
<b>Input I</b>	
Accuracy	< 30 $\mu$ A
Influence of ambient temperature	0.003 %/K (30 ppm)
<b>Output I, II</b>	
Response delay	$\leq 200$ ms at bounce from 0 ... 20 mA
<b>Output III</b>	
Resolution	$\leq 10 \mu$ A
Accuracy	< 20 $\mu$ A
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
<b>Galvanic isolation</b>	
Input/Other circuits	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output I, II/other circuits	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Mutual output I, II, III	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output III/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Interface/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>	
Display elements	LEDs , display
Control elements	Control panel
Configuration	via operating buttons via PACTware
Labeling	space for labeling at the front
<b>Directive conformity</b>	
<b>Electromagnetic compatibility</b>	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
<b>Low voltage</b>	
Directive 2014/35/EU	EN 61010-1:2010
<b>Conformity</b>	
Electromagnetic compatibility	NE 21:2006

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Degree of protection	IEC 60529:2001
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>	
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
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

### Maximum Switching Power of Output Contacts



### Accessories

#### PACTware™

Device-specific drivers (DTM)

#### Adapter K-ADP1

Programming adapter for parameterisation via the serial RS 232 interface of a PC/Notebook

For programming, please use the new version of adapter K-ADP1 (part no. 181953, connector length 14mm). When using the previous version K-ADP1 (connector length 18 mm) the plug is exposed by approx. 3 mm. The function is not affected.

#### Adapter K-ADP-USB

Programming adapter for parameterisation via the serial USB interface of a PC/Notebook

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