

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.

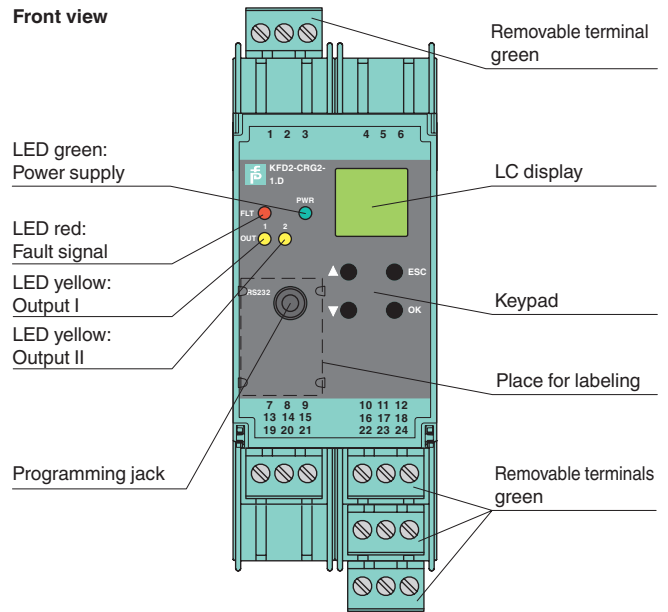
The device is easily configured by the use of keypad or with the PACTware configuration software.

The input has a line fault detection.

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

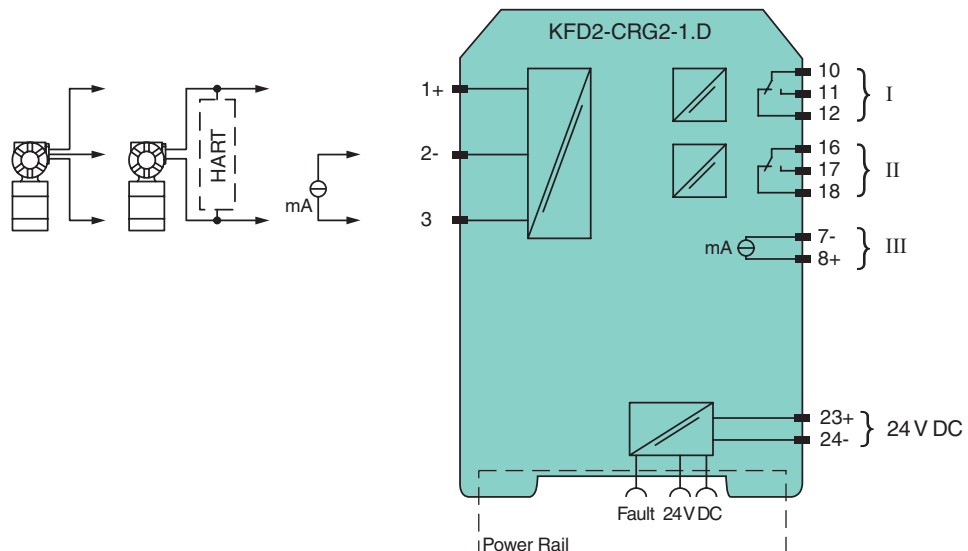
For additional information, refer to the manual and

Assembly



SIL 2

Connection



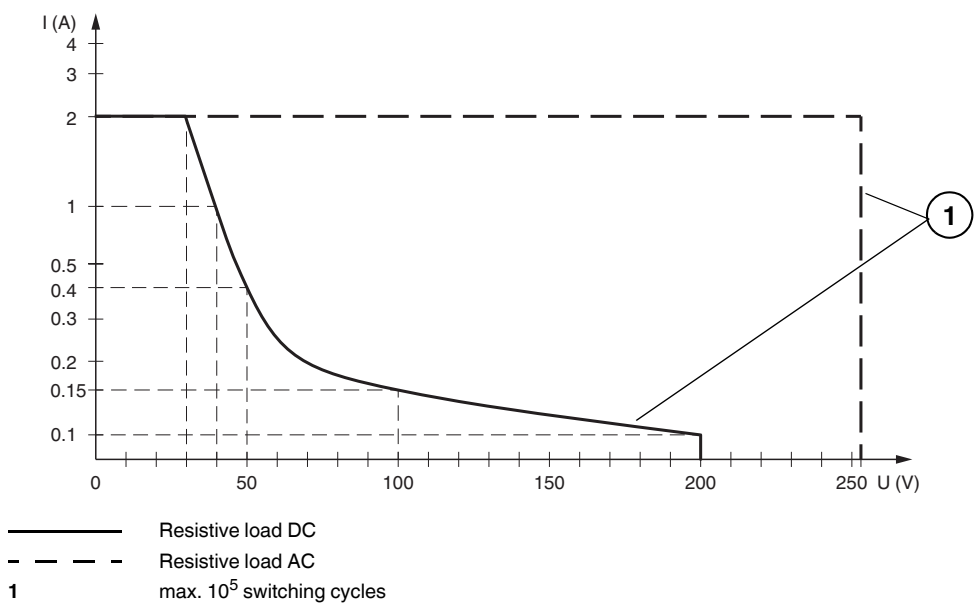
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General specifications		
Signal type		Analog input
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Connection		Power Rail or terminals 23+, 24-
Rated voltage	U_r	20 ... 30 V DC
Rated current	I_r	approx. 130 mA
Power 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
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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