



Signal Converter with Trip Value

KFD2-USC-1.D

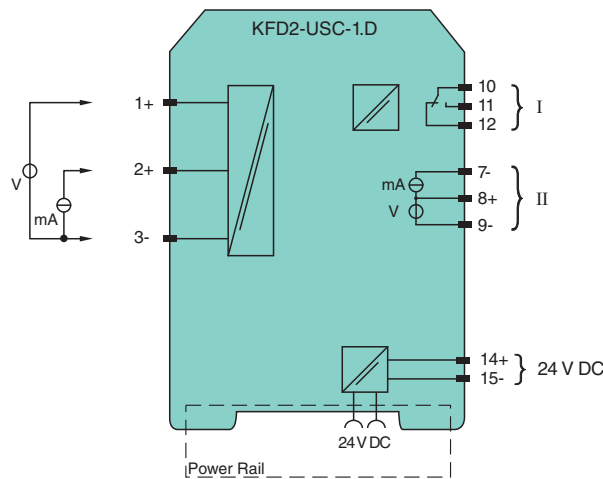
- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Scalable current or voltage input
- Current or voltage output
- Relay contact output
- Configurable by keypad
- Line fault detection (LFD)



Function

This signal conditioner is suitable for the connection of current and voltage signals and provides isolation for non-intrinsically safe applications. The input ranges include 0 mA ... 20 mA, 0 V ... 10 V or 0 mV ... 60 mV. Subranges from the input ranges are selectable. The output measuring signals are 0/4 mA ... 20 mA, 0/2 V ... 10 V or 0/1 V ... 5 V. The output relay serves as trip value contact. On the display the measured value can be indicated in various physical units. The unit is easily programmed by the use of a keypad located on the front of the unit. For additional information, refer to the manual and www.pepperl-fuchs.com.

Connection



Technical Data

General specifications	
Signal type	Analog input
Supply	
Connection	terminals 14+, 15- or Power Rail
Rated voltage	U_r 20 ... 30 V DC
Rated current	I_r \leq 80 mA DC
Power consumption	\leq 1.6 W
Input	
Connection side	field side

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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

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Technical Data

Connection	terminals 1+, 3- : mV, V ; terminals 2+, 3- : mA
Input resistance	voltage: 1 M Ω , current: max. 100 Ω
Limit	30 V
Current	0 ... 20 mA
Voltage	0 ... 10 V / 0 ... 60 mV
Resolution	15 Bit
Output	
Connection side	control side
Connection	output I: terminals 10, 11, 12 output II: terminals 7-, 8+, 9-
Output I	signal, relay
Contact loading	250 V AC/2 A/cos ϕ 0.7; 40 V DC/2 A
Mechanical life	2 x 10 ⁷ switching cycles
Energized/De-energized delay	approx. 10 ms / approx. 10 ms
Output II	analog
Load	current: max. 550 Ω , voltage: min. 1 k Ω
Analog voltage output	0/1 ... 5 V , 0/2 ... 10 V
Analog current output	0/4 ... 20 mA
Transfer characteristics	
Deviation	0.1 % of full-scale value
Resolution/accuracy	current: 1 μ A/20 μ A voltage: 0.5 mV/10 mV mV: 3 μ V/60 μ V
Influence of ambient temperature	0.003 %/K (30 ppm)
Reaction time	\geq 150 ms/ \leq 300 ms
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}
Output/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Indicators/settings	
Display elements	display
Control elements	Control panel
Configuration	via operating buttons
Labeling	space for labeling at the front
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
Conformity	
Electromagnetic compatibility	NE 21
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals
Mass	150 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) (W x H x D) , housing type B2
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

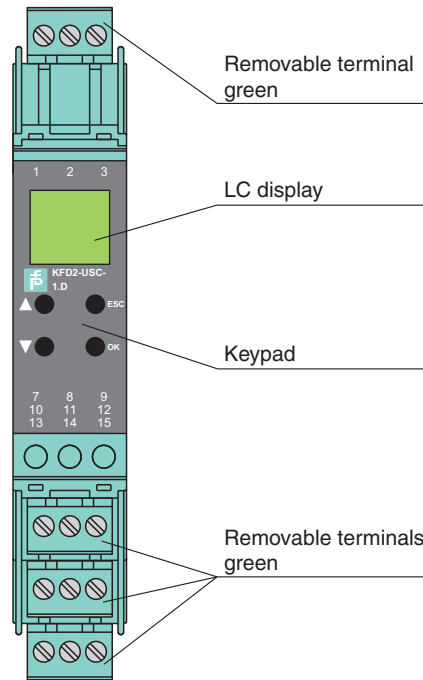
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



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Assembly



Front view



Matching System Components

	KFD2-EB2	Power Feed Module
	UPR-03	Universal Power Rail with end caps and cover, 3 conductors, length: 2 m
	UPR-03-M	Universal Power Rail with end caps and cover, 3 conductors, length: 1,6 m
	UPR-03-S	Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m
	K-DUCT-GY	Profile rail, wiring comb field side, gray
	K-DUCT-GY-UPR-03	Profile rail with UPR-03-* insert, 3 conductors, wiring comb field side, gray

Accessories

	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-CP	Red coding pins, packaging unit: 20 x 6

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