



Current/Voltage Converter KFD0-CC-1

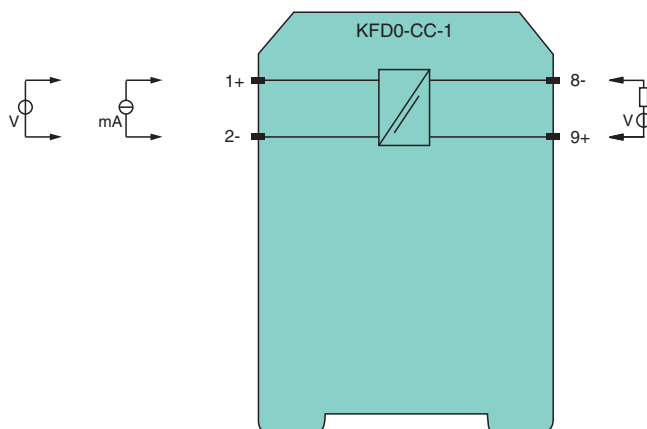
- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Current or voltage input
- Output: 4 ... 20 mA
- Potentiometer or DIP switch selectable ranges
- Line fault detection (LFD)



Function

This signal conditioner converts a 2-wire voltage or current to a 4 mA ... 20 mA signal and provides isolation for non-intrinsically safe applications. The device can be used to double signals in 20 mA measurement circuits due to the limited current signal input load of 50 Ω . DIP switches and potentiometers make field calibration easy. Since this isolator is loop-powered, use the technical data to verify that the proper voltage is available to the field devices.

Connection



Technical Data

General specifications

Signal type		Analog input
Supply		
Rated voltage	U _r	12 ... 35 V DC loop powered
Power dissipation		0.4 W
Input		
Connection side		field side
Connection		terminals 1+, 2-
Current range		0 ... 20 mA , load ≤ 50 Ω
Voltage range		0 ... 10 V , load ≥ 100 kΩ
Output		

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

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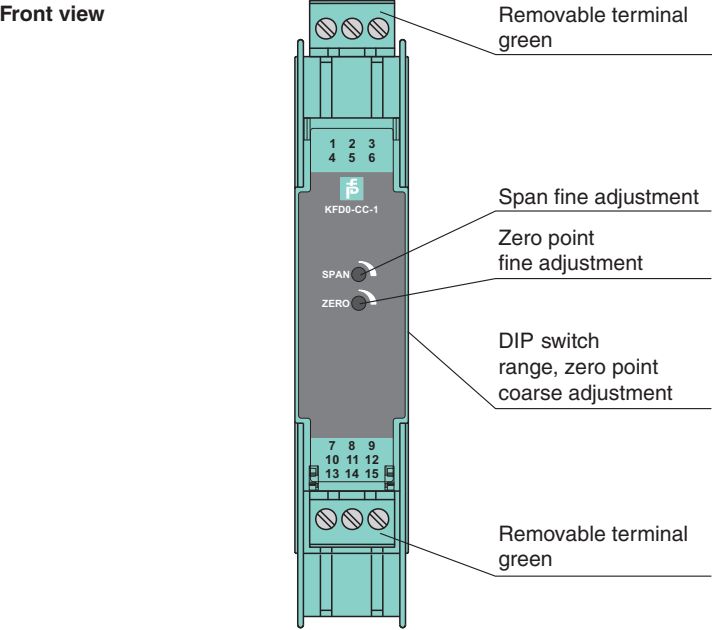
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 **PEPPERL+FUCHS**

Technical Data

Connection side		control side
Connection		terminals 9+, 8-
Load		(U -12 V) / 0.02 A
Current output		4 ... 20 mA , limited to ≤ 35 mA
Fault signal		downscaling ≤ 3 mA
Transfer characteristics		
Deviation		
After calibration		0.1 % of full-scale value
Temperature effect		span: 0.050 % of span /K ; zero point: 0.060 % of span /K
Linearization		≤ 0.04 % of full-scale value
Influence of supply voltage		6.5 ppm/V
Rise time		250 ms
Galvanic isolation		
Input/Output		safe isolation according to EN 50178, rated insulation voltage 253 V _{eff}
Indicators/settings		
Control elements		DIP switch potentiometer
Configuration		via DIP switches via potentiometer
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Insulation coordination		EN 50178
Galvanic isolation		EN 50178
Degree of protection		IEC 60529
Ambient conditions		
Ambient temperature		-20 ... 70 °C (-4 ... 158 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 100 g
Dimensions		20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) (W x H x D) , housing type B1
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 .

Assembly



Matching System Components

	K-DUCT-GY	Profile rail, wiring comb field side, gray
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Accessories

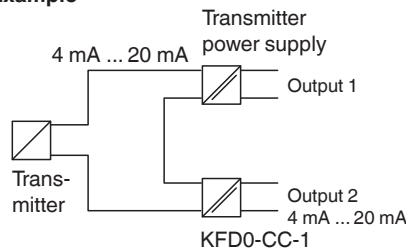
	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-CP	Red coding pins, packaging unit: 20 x 6

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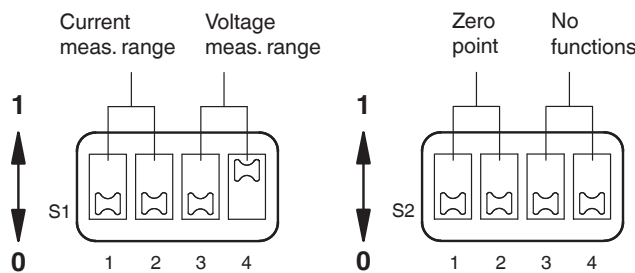
Configuration

The device is delivered with the input signal set of 4 mA ... 20 mA.

Example



DIP switches function



Measurement range	Switch S1 (range)				Switch S2 (zero point)			
	S1.1	S1.2	S1.3	S1.4	S2.1	S2.2	S2.3	S2.4
0 mA ... 20 mA	1	1	-	-	-	-	-	-
4 mA ... 20 mA	1	1	-	-	1	1	-	-
0 V ... 5 V	-	-	1	-	-	-	-	-
1 V ... 5 V	-	-	1	-	1	1	-	-
0 V ... 10 V	-	-	-	1	-	-	-	-
2 V ... 10 V	-	-	-	1	1	1	-	-

Adjustment instruction (example):

Input signal 0 mA ... 20 mA
Output signal 4 mA ... 20 mA

1. Set DIP switches S1.1 and S1.2 to the position 1. Set all other DIP switches to the position 0.
2. Set input to minimum value of 0 mA.
3. Adjust output, minimum zero point (4 mA).
4. Add maximum value of 20 mA.
5. Adjust output, range maximum value (20 mA)

Repeat steps 2. ... 5., until stable.