Features

- 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.

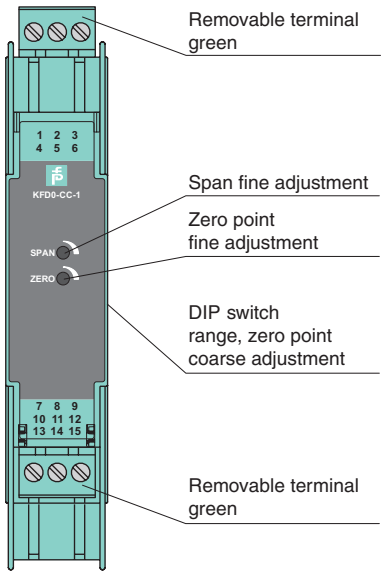
The device can be used to double signals in 20 mA measurement circuits due to the limited current signal input load of 50 Ω.

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.

Assembly

Front view



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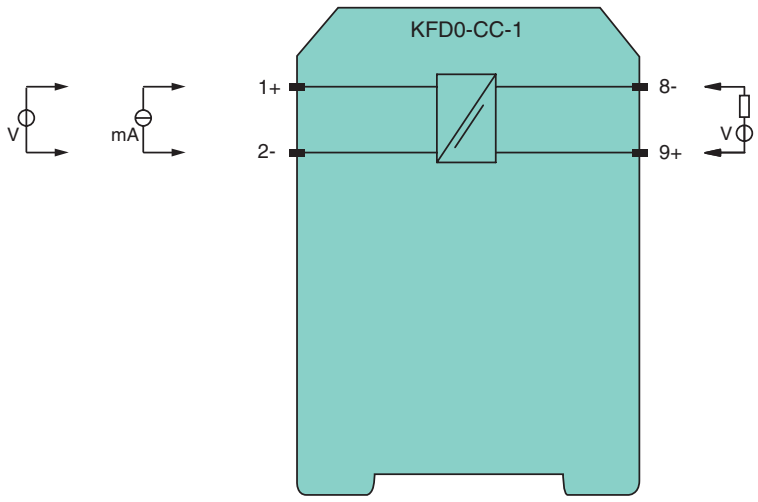
Connection



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General specifications	
Signal type	Analog input
Supply	
Rated voltage	12 ... 35 V DC loop powered
Power loss	0.4 W
Input	
Connection	terminals 1+, 2-
Current range	0 ... 20 mA , load ≤ 50 Ω
Voltage range	0 ... 10 V , load ≥ 100 kΩ
Output	
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
Electrical isolation	
Input/Output	safe isolation according to EN 50178, rated insulation voltage 253 V_{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
General information	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

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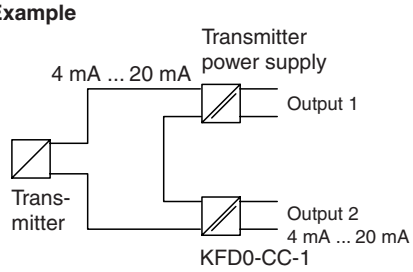
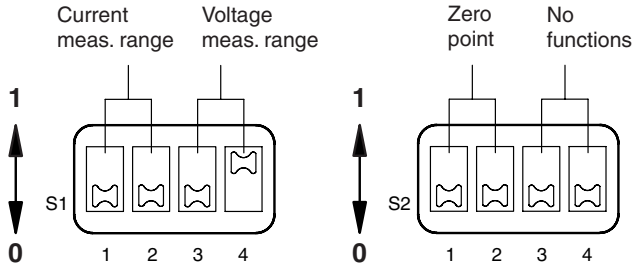
Configuration

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.

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