

## Current/Voltage Converter KFD0-CC-1

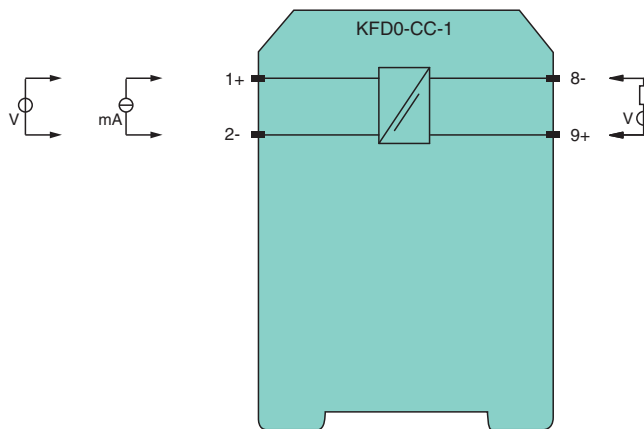
- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Current or voltage input
- Output: 4 ... 20 mA
- Potentiometer or DIP switch selectable ranges
- Line fault detection (LFD)



### 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  $\Omega$ . 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

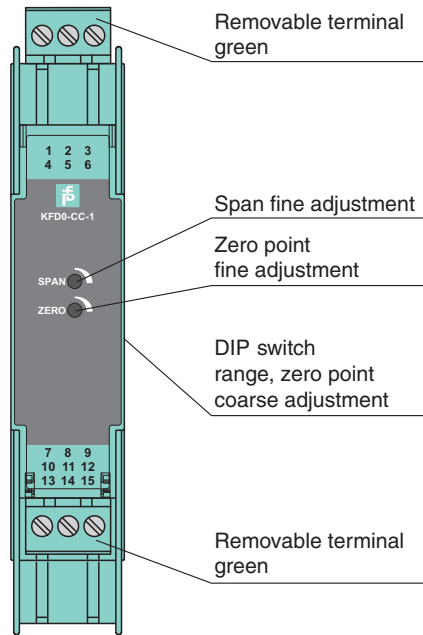
Signal type	Analog input		
<b>Supply</b>			
Rated voltage	$U_r$	12 ... 35 V DC loop powered	
Power dissipation		0.4 W	
<b>Input</b>			
Connection side		field side	
Connection		terminals 1+, 2-	
Current range		0 ... 20 mA , load $\leq$ 50 $\Omega$	
Voltage range		0 ... 10 V , load $\geq$ 100 k $\Omega$	
<b>Output</b>			

## 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
<b>Transfer characteristics</b>	
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
<b>Galvanic isolation</b>	
Input/Output	safe isolation according to EN 50178, rated insulation voltage 253 V <sub>eff</sub>
<b>Indicators/settings</b>	
Control elements	DIP switch potentiometer
Configuration	via DIP switches via potentiometer
Labeling	space for labeling at the front
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
<b>Conformity</b>	
Insulation coordination	EN 50178
Galvanic isolation	EN 50178
Degree of protection	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 70 °C (-4 ... 158 °F)
<b>Mechanical specifications</b>	
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
<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> .

## Assembly



Front view



## Matching System Components

	<b>K-DUCT-GY</b>	Profile rail, wiring comb field side, gray
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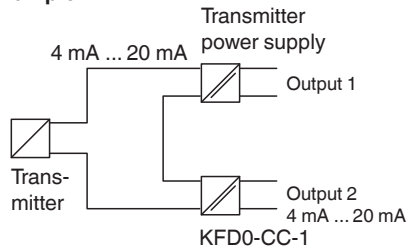
## Accessories

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

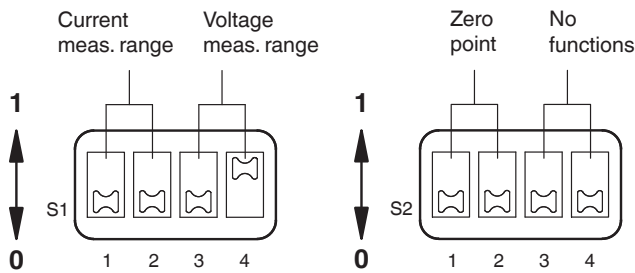
**Configuration**

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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