



- Galvanic isolated measuring circuits
- Accuracy 0.1 %
- EMC acc. to NAMUR NE 21
- Up to SIL2 acc. to IEC 61508

**1-channel
KFD0-CS-1.50**

Function

The device has 4 terminals per channel. Each channel functions as a "DC current isolator".

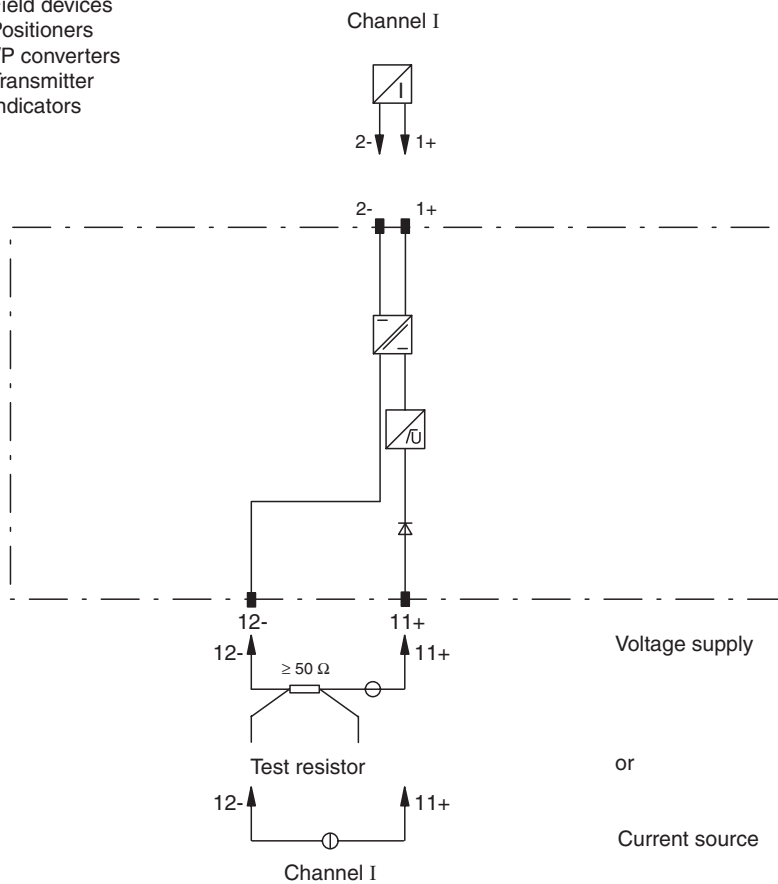
The model KFD0-CS-1.50 has 1 channel (terminals 1, 2 and 11, 12). The input and output are galvanically isolated from each other.

A separate supply with auxiliary energy is not necessary. The maximum output voltage with a load is 23 V with the input voltage limit set to 24 V. The internal resistance of the DC converter is 230 Ω.

The exact relationship may be found in the technical data.

Connection

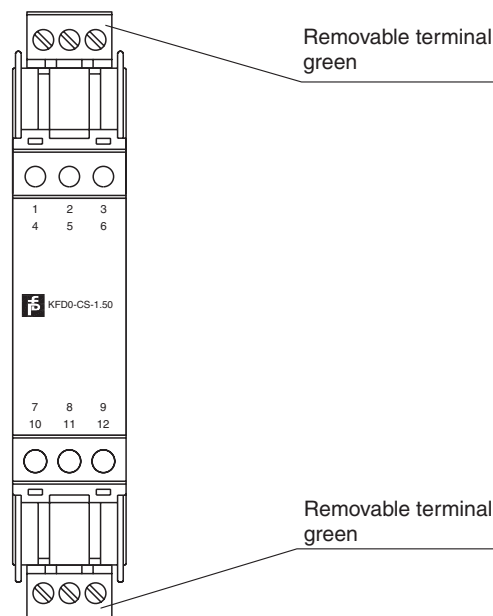
Field devices
Positioners
I/P converters
Transmitter
Indicators



Composition

Front view

Housing type B1
(see system description)



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Supply	
Rated voltage	loop powered
Power loss	0.2 W
Input	
Connection	terminals 12-, 11+
Rated voltage U_i	10 ... 35 V
Rated current I_e	4 ... 20 mA
Power loss	< 150 mW per channel at 25 mA and $U < 26.1$ V < 400 mW per channel at 25 mA and $U > 26.1$ V
Output	
Connection	terminals 1+, 2-
Voltage	$\geq 0.9 \times U_{in} - (0.23 \times \text{current in mA}) - 0.7$ for $10 \text{ V} < U_{in} < 26.1 \text{ V}$ $\geq 23 \text{ V} - (0.23 \times \text{current in mA})$ for $U_{in} > 26.1 \text{ V}$
Short-circuit current	$\leq 100 \text{ mA}$
Transfer current	$\leq 25 \text{ mA}$
Transfer characteristics	
Deviation	
After calibration	$V_{in} \geq 5 \text{ V} \pm 20 \mu\text{A}/V_{in} \leq 5 \text{ V} \pm 50 \mu\text{A}$ incl. calibration, linearity, hysteresis and output load fluctuations at $20 \text{ }^\circ\text{C}$ (293 K)
Influence of ambient temperature	$\leq 2 \mu\text{A}/\text{K}$ (0 ... $+50 \text{ }^\circ\text{C}$); $\leq 5 \mu\text{A}/\text{K}$ ($-20 \text{ }^\circ\text{C}$... $+60 \text{ }^\circ\text{C}$)
Rise time	$\leq 5 \text{ ms}$ at 4 ... 20 mA and $U_{in} = \text{input voltage} < 26 \text{ V}$
Electrical isolation	
Input/output	basic insulation according to IEC 61140, rated insulation voltage 300 V_{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326
Conformity	
Insulation coordination	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	$-20 \text{ }^\circ\text{C}$... $60 \text{ }^\circ\text{C}$ (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in)
General information	
Supplementary information	Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com .

Application

- Isolation of power loops for the control of positioners, I/P converters etc. The current source (4 mA ... 20 mA) is connected to terminals 11 and 12.
- Isolation of power loops for 2 wire transmitters, fire detectors etc. In this case a voltage source is used as the supply, on which a resistor switched in series registers the measurement current (4 mA ... 20 mA).
- Signal duplication (not free of reactions): 1 input, 1 output

Application: supply of 2 wire transmitters, fire detectors etc.

