Features

- 2-channel signal conditioner
- 24 V DC supply (loop powered)
- Current input/output 0 mA ... 40 mA
- I/P or transmitter power supply
- Accuracy 1 %
- Reverse polarity protection
- Up to SIL2 acc. to IEC 61508

Function

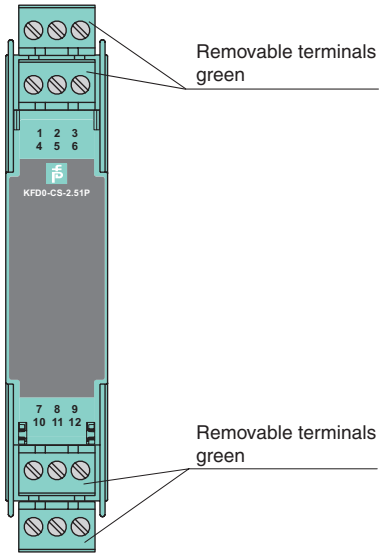
This signal conditioner transfers DC signals from fire alarms, smoke alarms, and temperature sensors to the control and provides isolation for non-intrinsically safe applications. It can also be used to control I/P converters, power solenoids, LEDs, and audible alarms.

Reverse polarity protection prevents damage to the isolator caused by faulty wiring.

Since this isolator is loop powered, use the technical data to verify that proper voltage is available to the field devices.

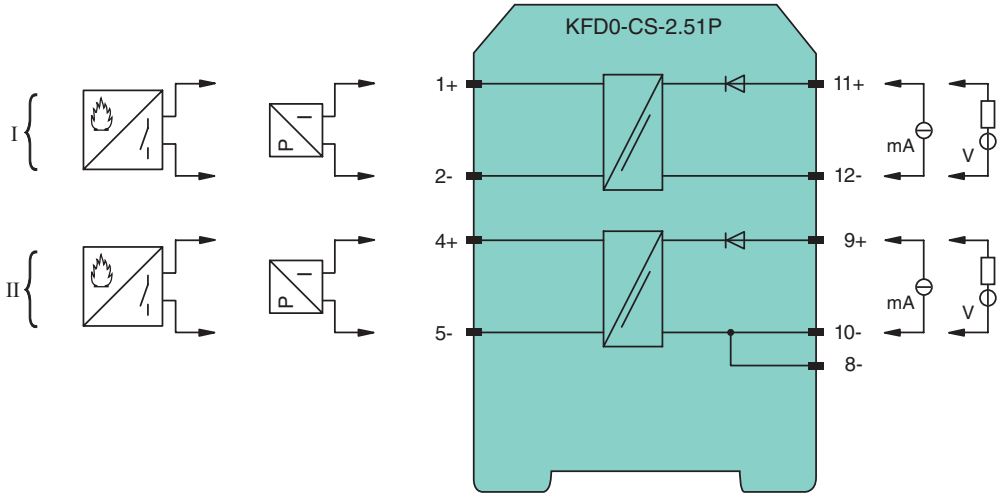
Assembly

Front view



SIL2

Connection



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General specifications		
Signal type		Analog output
Supply		
Rated voltage		loop powered
Input		
Connection		terminals 12-, 11+; 8-, 10-, 9+
Rated voltage	U_i	4 ... 35 V
Rated current	I_i	0 ... 40 mA
Power loss		at 40 mA and U_{in} < 22 V: 700 mW per channel at 40 mA and U_{in} > 22 V: 1.2 W per channel
Output		
Connection		terminals 1+, 2-; 4+, 5-
Voltage		for 4 V < U_{in} < 24 V: ≥ 0.9 x U_{in} - (0.37 x current in mA) - 1.0 for U_{in} > 24 V: ≥ 21 V - (0.36 x current in mA)
Short-circuit current		at U_{in} > 24 V: ≤ 65 mA
Transfer current		≤ 40 mA
Transfer characteristics		
Deviation		
After calibration		≤ ± 200 µA; incl. calibration, linearity, hysteresis and load fluctuations at the output up to a load of 1 kΩ and current ≤ 20 mA at 20 °C (68 °F)
Influence of ambient temperature		≤ ± 2 µA/K at U_{in} ≤ 20 V; ≤ ± 5 µA/K at U_{in} > 20 V
Rise time		≤ 5 ms at 4 ... 20 mA step and U_{in} < 24 V
Electrical isolation		
Input/Output		basic insulation according to IEC 62103, rated insulation voltage 300 V_{eff}
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Conformity		
Insulation coordination		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 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
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.

Application

The isolation of power loops for the control of positioner, I/P converters etc. A current source is connected to the input terminals.

The isolation of a current signal from fire detectors or similar sensors. In this case, a voltage source can be connected to the input terminals. A specific measurement current across a passive sensor can be measured in the input with a series resistor (min. 50 Ω). When a voltage supply is used, the measuring resistor can also provide current limitation.

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