

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 SIL 2 acc. to IEC 61508

Function

This signal conditioner provides the galvanic isolation between field circuits and control circuits.

The device transfers DC signals of fire alarms and smoke alarms from the field side to the control side. The device can also be used to control I/P converters, valves, indicators, and audible alarms.

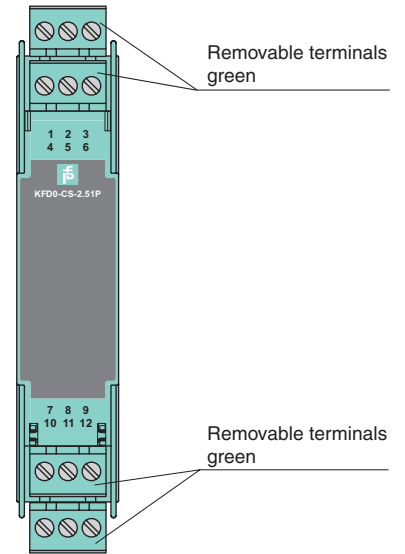
A reverse polarity protection prevents damage to the device caused by faulty wiring.

The device is loop powered. From the control side no additional power supply has to be connected.

Use the technical data to verify that proper voltage is available to the field devices.

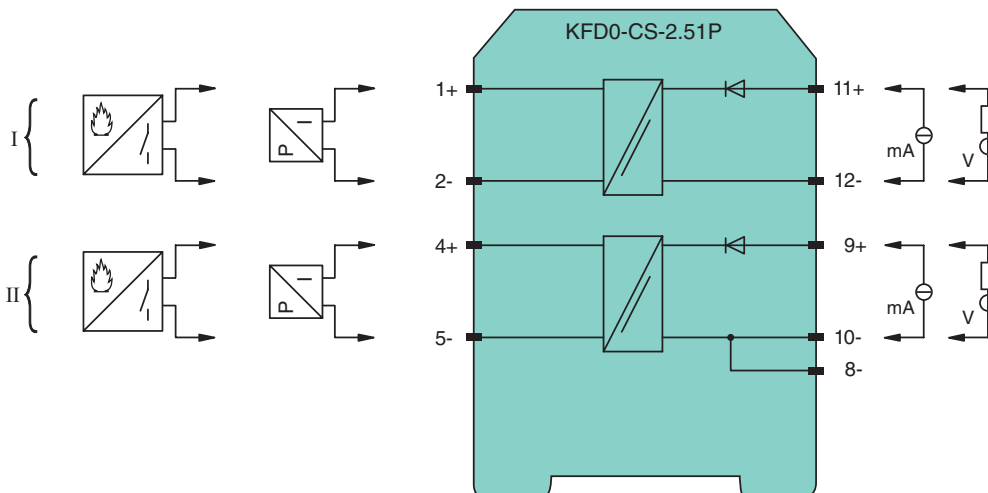
Assembly

Front view



SIL 2

Connection



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

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General specifications	
Signal type	Analog input/analog output
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 2
Supply	
Rated voltage U_r	loop powered
Control circuit	
Connection	terminals 12-, 11+; 8-, 10-, 9+
Voltage	4 ... 35 V DC
Current	0 ... 40 mA
Power dissipation	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
Field circuit	
Connection	terminals 1+, 2-; 4+, 5-
Voltage	for $4 V < U_{in} < 24 V$: $\geq U_{in} - (0.37 \times \text{current in mA}) - 1.0$ for $U_{in} > 24 V$: $\geq 21 V - (0.36 \times \text{current in mA})$
Short-circuit current	at $U_{in} > 24 V$: $\leq 65 \text{ mA}$
Transfer current	$\leq 40 \text{ mA}$
Transfer characteristics	
Accuracy	1 %
Deviation	
After calibration	$\leq \pm 200 \mu\text{A}$; incl. calibration, linearity, hysteresis and load fluctuations at the field side up to a load of 1 k Ω and current $\leq 20 \text{ mA}$ at 20 °C (68 °F)
Influence of ambient temperature	$\leq \pm 2 \mu\text{A/K}$ at $U_{in} \leq 20 V$; $\leq \pm 5 \mu\text{A/K}$ at $U_{in} > 20 V$
Rise time	$\leq 5 \text{ ms}$ at bounce from 4 ... 20 mA and $U_{in} < 24 V$
Galvanic isolation	
Input/Output	basic insulation according to IEC 62103, rated insulation voltage 300 V_{eff}
Indicators/settings	
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
Electromagnetic compatibility	NE 21
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °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) , 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 .

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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