

Features

- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Current output up to 650 Ω load
- HART I/P and valve positioner
- Lead breakage monitoring
- Accuracy 0.1 %
- Housing width 12.5 mm
- Up to SIL 2 acc. to IEC 61508

Function

This signal conditioner drives SMART I/P converters, electrical valves, and positioners and provides isolation for non-intrinsically safe applications.

Digital signals are superimposed on the analog values at the field or control side and are transferred bi-directionally.

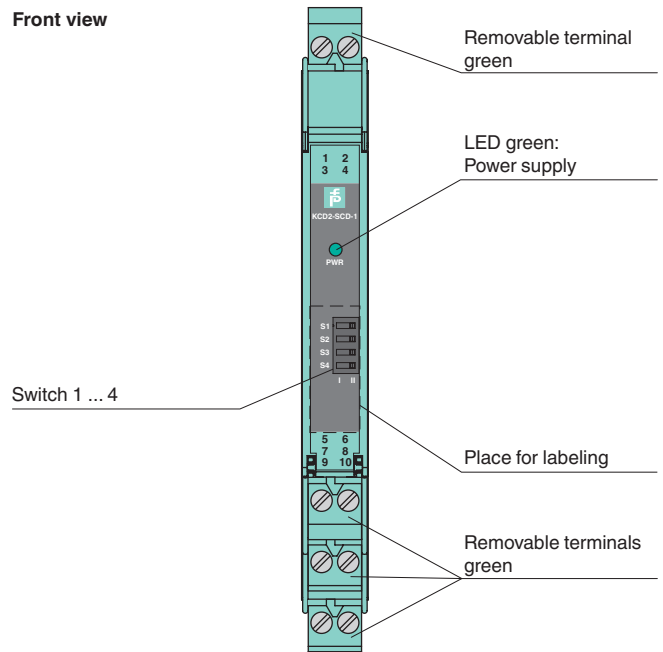
Current transferred across the DC/DC converter is repeated at terminals 1 and 2.

An open field circuit presents a high input impedance to the control side to allow lead breakage monitoring by control system.

If the loop resistance for the digital communication is too low, an internal resistor of 250 Ω between terminals 6 and 8 is available, which may be used as the HART communication resistor.

Sockets for the connection of a HART communicator are integrated into the terminals of the device.

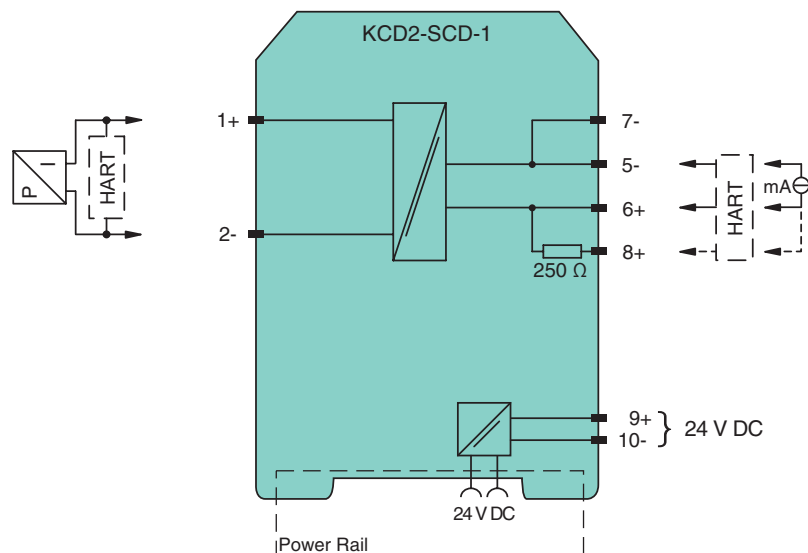
Assembly



CE

SIL 2

Connection



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

General specifications		
Signal type		Analog output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Connection		Power Rail or terminals 9+, 10-
Rated voltage	U_r	19 ... 30 V DC
Ripple		$\leq 10 \%$
Rated current	I_r	$\leq 30 \text{ mA}$
Power dissipation		$\leq 600 \text{ mW}$
Power consumption		$\leq 700 \text{ mW}$
Input		
Connection side		control side
Connection		terminals 5-, 6+
Input signal		4 ... 20 mA limited to approx. 30 mA
Input voltage		depending on switch configuration open loop voltage of the control system < 23 V open loop voltage of the control system < 27 V
Voltage drop		depending on switch configuration open loop voltage of the control system < 23 V: approx. 6 V at 20 mA open loop voltage of the control system < 27 V: approx. 10 V at 20 mA
Input resistance		> 100 k Ω , with field wiring open
Output		
Connection side		field side
Connection		terminals 1+, 2-
Current		4 ... 20 mA
Load		0 ... 650 Ω
Voltage		$\geq 13 \text{ V}$ at 20 mA
Ripple		20 mV _{rms}
Transfer characteristics		
Accuracy		0.1 %
Deviation		at 20 °C (68 °F), 0/4 ... 20 mA $\leq \pm 0.1 \%$ incl. non-linearity and hysteresis
Influence of ambient temperature		< 2 $\mu\text{A/K}$ (0 ... 60 °C (32 ... 140 °F)); < 4 $\mu\text{A/K}$ (-20 ... 0 °C (-4 ... 32 °F))
Frequency range		bandwidth at 0.5 V _{ss} signal 0 ... 3 kHz (-3 dB)
Rise time		10 to 90 % $\leq 100 \text{ ms}$
Galvanic isolation		
Input/Output		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V _{eff}
Input/power supply		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V _{eff}
Output/power supply		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V _{eff}
Indicators/settings		
Display elements		LED
Control elements		DIP-switch
Configuration		via DIP switches
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2006
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		12.5 x 114 x 124 mm (0.5 x 4.5 x 4.9 inch) , housing type A2
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 .
Accessories		

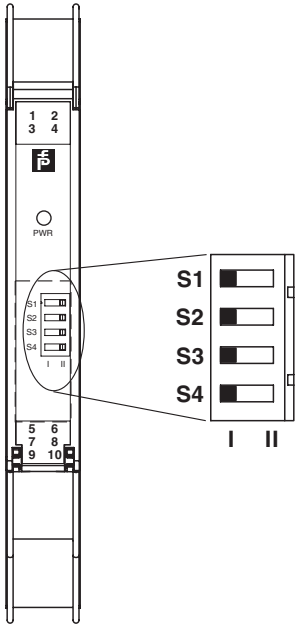
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Optional accessories

- power feed module KFD2-EB2(.R4A.B)(.SP)
 - universal power rail UPR-03(-M)(-S)
 - profile rail K-DUCT-GY(-UPR-03)
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Configuration



Switch position

Function	S1	S2	S3	S4
Open loop voltage of the control system < 23 V	I	I	II	II
Open loop voltage of the control system < 27 V	II	I	II	II

Factory settings: open loop voltage of the control system < 23 V

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