KFD2-CR4-1.20

Features

- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Input 2-wire and 3-wire transmitters and 2-wire current sources
- Signal splitter (1 input and 2 outputs)
- Dual output 0/4 mA ... 20 mA
- Accuracy 0.1 %
- Up to SIL3 acc. to IEC 61508

Function

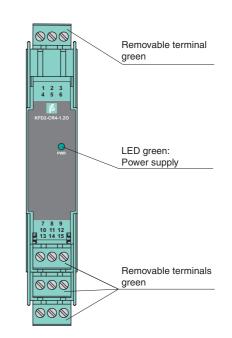
This signal conditioner provides the isolation for nonintrinsically safe applications.

The device supplies 2-wire and 3-wire transmitters, and can also be used with 2-wire current sources.

It transfers the analog input signal as two isolated current values.

Both outputs provide a 0/4 mA ... 20 mA current corresponding to the input signal. The minimum available field voltage is 16 V at 20 mA.

If necessary, the internal resistance of 250 Ω between terminals 8, 9 and 11, 12 can be used for conversion into a 0 V ... 5 V voltage signal.



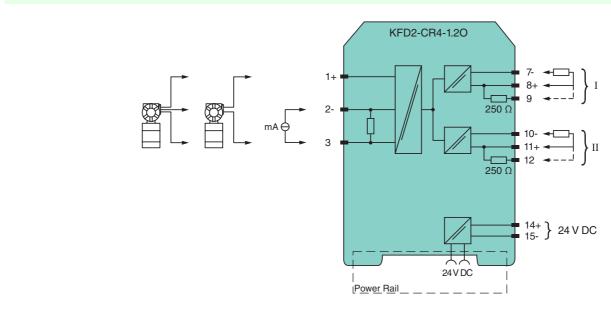
CE

Assembly

Front view

SIL3

Connection



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General specifications	
Signal type	Analog input
Supply	
Connection	Power Rail or terminals 14+, 15-
Rated voltage	20 32 V DC
Ripple	within the supply tolerance
Power consumption	approx. 2.5 W
Input	
Connection	terminals 1, 2, 3
Input signal	0/4 20 mA
Input resistance	\leq 85 Ω terminals 2-, 3
Available voltage	\geq 16 V at 20 mA terminals 1+, 3
U	
Ripple	50 mV _{ss} at 20 mA
Output	
Connection	terminals 7-, 8+,9; 10-, 11+,12
Load	0550Ω
Output signal	0/4 20 mA
Ripple	\leq 50 μ A _{rms}
Transfer characteristics	
Deviation	at 20 °C (68 °F), 0/4 20 mA \leq 10 μA incl. calibration, linearity, hysteresis, loads and fluctuations of supply voltage
Influence of ambient temperature	0.25 μΑ/Κ
Rise time	20 µs
Start-up time	200 µs
De-energized delay	20 µs
Electrical isolation	
Input/Output	Basic insulation according to EN 50178, rated insulation voltage 253 V _{eff}
Input/power supply	Basic insulation according to EN 50178, rated insulation voltage 253 V _{eff}
Output/power supply	functional insulation, rated insulation voltage 50 V AC
Output/Output	functional insulation, rated insulation voltage 50 V AC
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Input	EN 60947-5-6
Ambient conditions	
Ambient temperature	-20 60 °C (-4 140 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 150 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
General information	
	Both output loads must be connected to ensure complete and correct operation within the technical
	Doin output loads must be connected to ensure complete and correct operation within the technical
Note Supplementary information	specification. Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be

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Accessories

Power feed module KFD2-EB2

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 150 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

Power Rail UPR-03

The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

Profile Rail K-DUCT with Power Rail

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!