



- 1-channel
- Input EEx ia IIC; $U_0 = 26\text{ V}$
- 24 V DC nominal supply voltage
- Output: allowable load max. 1 k Ω
- EMC acc. to NAMUR NE 21

24 V DC:
KFD2-CR-Ex1.30200

Function

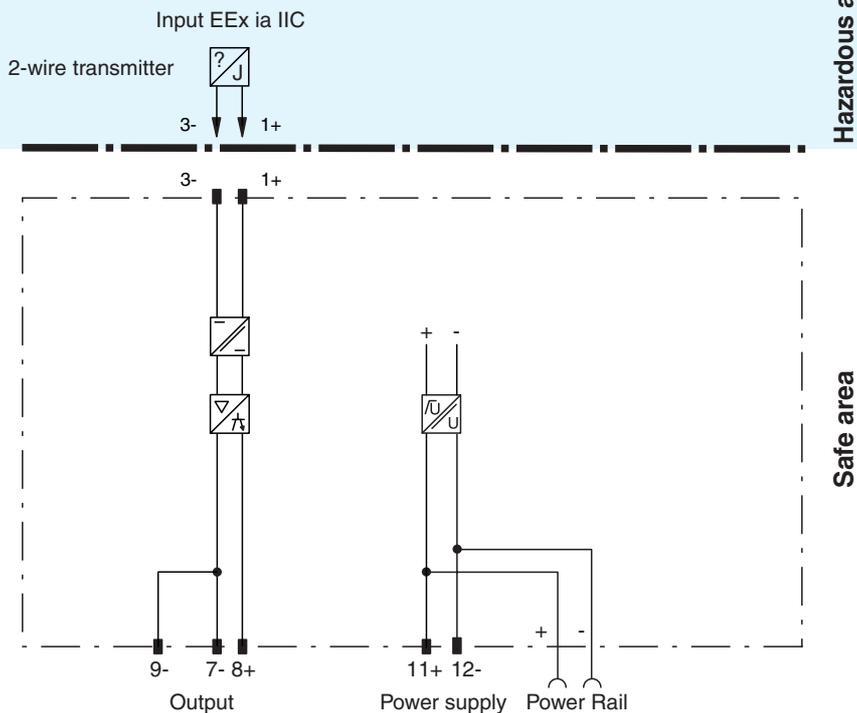
The KFD2-CR-Ex1.30200 supplies a 2-wire transmitter in the hazardous area with power. 2-wire transmitters function exclusively with a 4 mA ... 20 mA signal. At least 17.6 V is available for the transmitters at a measurement current of 20 mA.

The input circuit's current is transferred to the safe area. The maximum load that may be applied to the output is 1 k Ω .

Application

The supply of power to 2-wire transmitters and the transfer of the measurement current to the output.

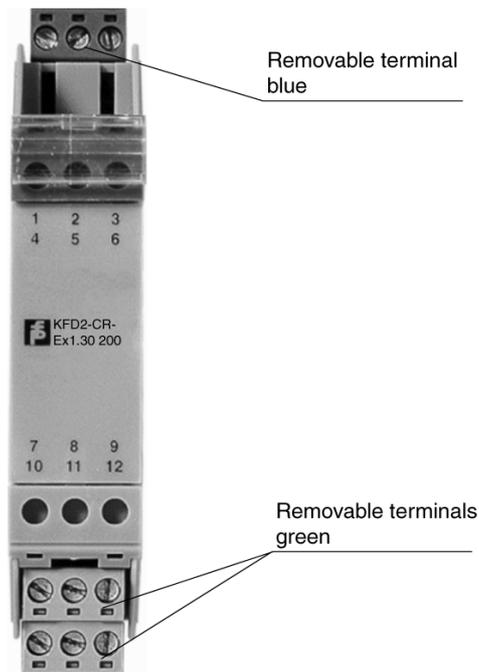
Connection



Composition

Front View

Housing type A4
(see system description)



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Supply	
Connection	Power Rail or terminals 11+, 12-
Rated voltage	20 ... 35 V DC
Ripple	within the supply tolerance
Power loss	1.1 W
Power consumption	approx. 1.6 W
Input	
Connection	terminals 1+, 3-
Available voltage	17.6 V DC at 20 mA
Output	
Connection	terminals 7-, 8+, 9-
Load	≤ 1 kOhm
Output signal	0 ... 20 mA or 4 ... 20 mA
Ripple	≤ 20 μA _{SS}
Available voltage	20 V DC
Transfer characteristics	
Deviation	
After calibration	≤ ± 10 μA incl. non-linearity and load fluctuations
Influence of ambient temperature	≤ ± 0.2 μA / K in the range of 273 K ... 333 K; ± 1.0 μA in the range of 253 K ... 273 K
Rise time	≤ 50 μs ; load = 250 Ω
De-energized delay	≤ 50 μs; load = 250 Ω
Electrical isolation	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Output/power supply	function insulation acc. to EN 50178, rated insulated voltage 250 VAC
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2, NE 21
Standard conformity	
Climatic conditions	acc. to DIN IEC 721
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	
Group, category, type of protection	⊕ II (1) G D [EEx ia] IIC (-20 °C ≤ T _{amb} ≤ 60 °C)
Voltage U ₀	26 V
Current I ₀	93 mA
Power P ₀	600 mW
Supply	
Safety maximum voltage U _m	250 V _{eff}
Type of protection [EEx ia]	
Explosion group	IIA IIB IIC
External capacitance	2.6 μF 0.77 μF 0.099 μF
External inductance	36.02 mH 17.72 mH 4.3 mH
Statement of conformity	
Group, category, type of protection, temperature classification	⊕ II 3 G EEx nA II T4
Electrical isolation	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9 EC	on request
Entity parameter	
Certification number	4Z6A5.AX
FM control drawing	No. 116-0129
Suitable for installation in division 2	yes
Connection	terminals 1, 3
Input I	
Voltage V _{OC}	26 V
Current I _t	96.1 mA
Explosion group	A&B C&E D, F&G

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Max. external capacitance C_a	0.13 μ F	0.39 μ F	1.05 μ F
Max. external inductance L_a	3.6 mH	15.79 mH	31.91 mH
Safety parameter			
CSA control drawing	LR 65756-13		
Control drawing	No. 116-0132		
Connection	terminals 1, 3		
Input I			
Safety parameter	28 V / 300 Ω		
Voltage V_{OC}	28 V		
Current I_{SC}	93 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.14 μ F	0.42 μ F	1.14 μ F
Max. external inductance L_a	3.1 mH	16.7 mH	34 mH
Input III	terminals 1, 2, 3		

Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

Accessories

Power Rail PR-03

Power Rail UPR-03

Power feed module KFD2-EB2...

Using Power Rail PR-03 or UPR-03 the devices are supplied with 24 V DC by means of the power feed modules. If no Power Rails are used, power supply of the individual devices is possible directly via their device terminals.

Each power feed module is used for fusing and monitoring groups with up to 100 individual devices. The Power Rail PR-03 is an inset component for the DIN rail. The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm x 2000 mm. To make electrical contact, the devices are simply engaged.

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