



- 1-channel
- Input EEx ia IIC; $U_0 = 20V$, use standard type KFD2-STC4-Ex1 with $U_0 = 25.2 V$
- 24 V DC supply voltage
- Output: allowable load max. $1 k\Omega$
- EMC acc. to NAMUR NE 21

KFD2-CR-Ex1.20200

Function

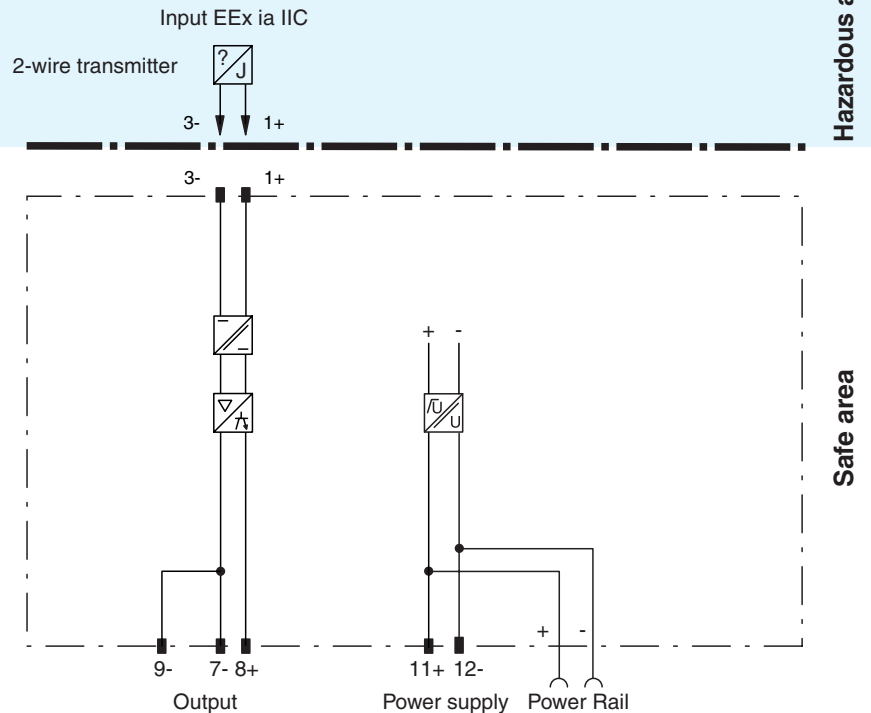
The KFD2-CR-Ex1.20200 supplies a 2-wire transmitter in the hazardous area with power. 2-wire transmitters function exclusively with a 4 mA ... 20 mA signal. At least 16 V are available to the transmitter with a measurement current of 20 mA. The open circuit voltage is 18 V.

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

Application

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

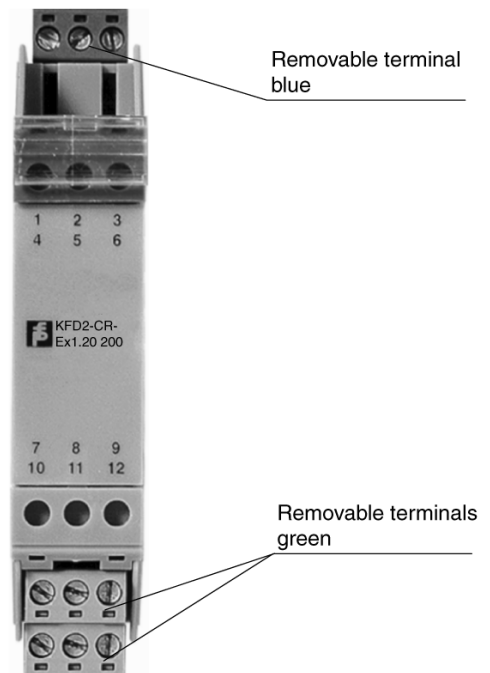
Connection



Composition

Front View

Housing type A4
(see system description)



Supply	
Connection	Power Rail or terminals 11+, 12-
Rated voltage	20 ... 35 V DC
Ripple	< 20 μA_{rms}
Power loss	1.1 W
Power consumption	$\leq 1.6 \text{ W}$
Input	
Connection	terminals 1+, 3-
Available voltage	$\geq 16 \text{ V DC}$ at 20 mA
Output	
Open loop voltage	20 V DC
Connection	terminals 7-, 8+, 9-
Load	$\leq 1 \text{ k}\Omega$
Output signal	4 ... 20 mA
Ripple	$\leq 20 \mu\text{A}_{\text{ss}}$
Transfer characteristics	
Deviation	
After calibration	at 293 K (20 °C): < $\pm 10 \mu\text{A}$ incl. non-linearity and load fluctuations
Influence of ambient temperature	< $\pm 0.2 \mu\text{A} / \text{K}$ at 273 ... 333 K; < $\pm 1.0 \mu\text{A/K}$ at 253 ... 273 K
Rise time	approx. 50 μs
Electrical isolation	
Output/power supply	function insulation acc. to EN 50178, rated insulation voltage 253 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2
Conformity	
Electromagnetic compatibility	EN 50081-2, EN 50082-2, NE 21, IEC 801-4, 801-5 and 801-6, intensity level 3
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
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)
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	BAS 00 ATEX 7164 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	 II (1)GD [EEx ia] IIC (-20 °C $\leq T_a \leq 60$ °C) [circuit(s) in zone 0/1/2]
Input	EEx ia IIC
Voltage U _o	20 V
Current I _o	93 mA
Power P _o	600 mW
Supply	
Safety maximum voltage U _m	250 V _{eff} (Attention! The rated voltage can be lower.)
Type of protection [EEx ia]	
Explosion group	IIA IIB IIC
External capacitance	5.5 μF 1.41 μF 0.22 μF
External inductance	36.02 mH 17.72 mH 4.3 mH
Output	
Safety maximum voltage U _m	250 V _{eff} (Attention! The rated voltage can be lower.)
Statement of conformity	TÜV 02 ATEX 1797 X , observe statement of conformity
Group, category, type of protection, temperature classification	 II 3G EEx nA II T4 [device in zone 2]
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	EN 50014, EN 50020, EN 50021
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}	20 V

Current I_t	93 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.34 μ F	1.01 μ F	2.7 μ F
Max. external inductance L_a	4.18 mH	16.84 mH	34.23 mH
Safety parameter			
CSA control drawing	LR 65756-13		
Control drawing	No. 116-0132		
Connection	terminals 1, 3		
Input I			
Safety parameter	20 V / $I_{SC} = 91$ mA		
Voltage V_{OC}	91 V		
Current I_{SC}	20 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.33 μ F	1 μ F	2.6 μ F
Max. external inductance L_a	4.3 mH	17.5 mH	35 mH

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!