



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

24 V DC  
**KFD2-CR-Ex1.30200**

**Function**

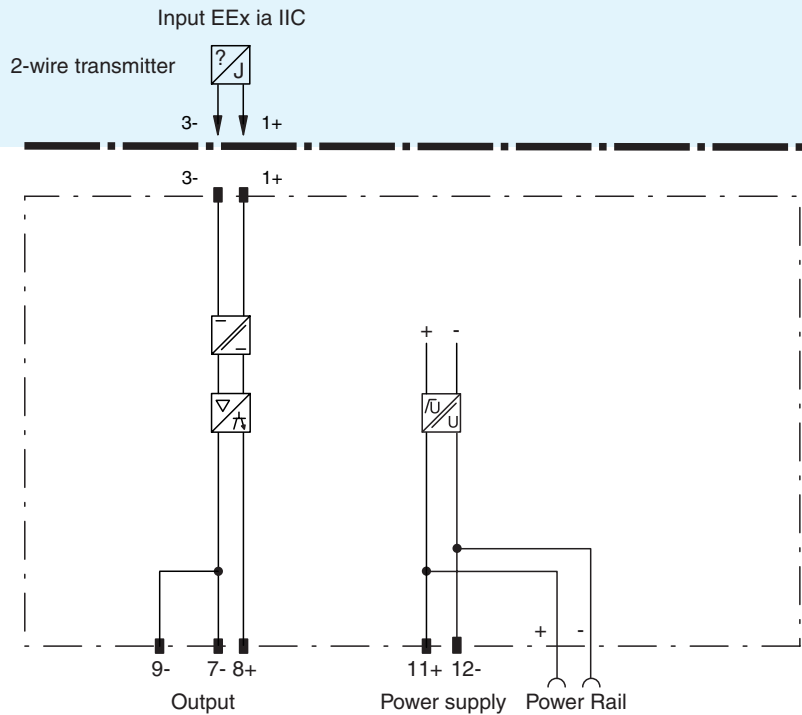
The KFD2-CR-Ex1.30200 supplies a 2-wire transmitter in the hazardous area with power. 2-wire transmitters function exclusively with a 4 mA ... 20 mA signal. At least 17.6 V is available for the transmitters at a measurement current of 20 mA.

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

**Application**

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

**Connection**



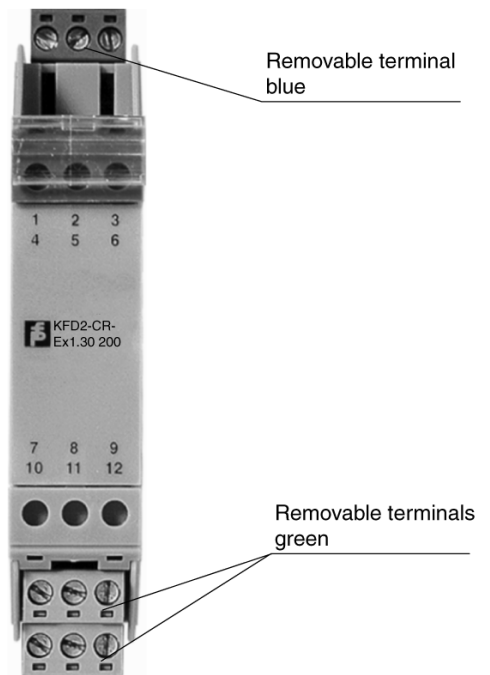
Hazardous area

Safe area

**Composition**

**Front View**

Housing type A4  
(see system description)



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<b>Supply</b>	
Connection	Power Rail or terminals 11+, 12-
Rated voltage	20 ... 35 V DC
Ripple	< 20 $\mu\text{A}_{\text{rms}}$
Power loss	1.1 W
Power consumption	approx. 1.6 W
<b>Input</b>	
Connection	terminals 1+, 3-
Available voltage	17.6 V DC at 20 mA
<b>Output</b>	
Connection	terminals 7-, 8+, 9-
Load	$\leq 1 \text{ k}\Omega$
Output signal	0 ... 20 mA or 4 ... 20 mA
Ripple	$\leq 20 \mu\text{A}_{\text{ss}}$
Available voltage	20 V DC
<b>Transfer characteristics</b>	
Deviation	
After calibration	$\leq \pm 10 \mu\text{A}$ incl. non-linearity and load fluctuations
Influence of ambient temperature	$\leq \pm 0.2 \mu\text{A} / \text{K}$ in the range of 273 K ... 333 K; $\pm 1.0 \mu\text{A}$ in the range of 253 K ... 273 K
Rise time	approx. 50 $\mu\text{s}$ ; load = 250 $\Omega$
De-energized delay	approx. 50 $\mu\text{s}$ ; load = 250 $\Omega$
<b>Electrical isolation</b>	
Output/power supply	function insulation acc. to EN 50178, rated insulation voltage 253 $V_{\text{eff}}$
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2
<b>Conformity</b>	
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
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in)
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	BAS 00 ATEX 7164 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	$\text{Ex}$ II (1) G D [Ex ia] IIC (-20 °C $\leq T_a \leq$ 60 °C) [circuit(s) in zone 0/1/2]
Input	EEx ia IIC
Voltage $U_0$	26 V
Current $I_0$	93 mA
Power $P_0$	600 mW
<b>Supply</b>	
Safety maximum voltage $U_m$	250 $V_{\text{eff}}$ (Attention! The rated voltage can be lower.)
Type of protection [EEx ia]	
Explosion group	IIA IIB IIC
External capacitance	2.6 $\mu\text{F}$ 0.77 $\mu\text{F}$ 0.099 $\mu\text{F}$
External inductance	36.02 mH 17.72 mH 4.3 mH
<b>Output</b>	
Safety maximum voltage $U_m$	250 $V_{\text{eff}}$ (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	$\text{Ex}$ II 3 G EEx nA II T4 [device in zone 2]
<b>Electrical isolation</b>	
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
<b>Directive conformity</b>	
Directive 94/9 EC	EN 50014, EN 50020, EN 50021
<b>Entity parameter</b>	
Certification number	4Z6A5.AX
FM control drawing	No. 116-0129
Suitable for installation in division 2	yes
Connection	terminals 1, 3
Input I	

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Voltage	$V_{OC}$	29 V		
Current	$I_t$	93 mA		
Explosion group		A&B	C&E	D, F&G
Max. external capacitance $C_a$		0.99 $\mu$ F	0.77 $\mu$ F	2.6 $\mu$ F
Max. external inductance $L_a$		4.3 mH	17.72 mH	36.02 mH
<b>Safety parameter</b>				
CSA control drawing		LR 65756-13		
Control drawing		No. 116-0132		
Connection		terminals 1, 3		
<b>Input I</b>				
Safety parameter		26 V / 279 $\Omega$		
Voltage	$V_{OC}$	26 V		
Current	$I_{SC}$	93 mA		
Explosion group		A&B	C&E	D, F&G
Max. external capacitance $C_a$		0.099 $\mu$ F	0.77 $\mu$ F	2.6 $\mu$ F
Max. external inductance $L_a$		4.3 mH	17.72 mH	36.02 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](http://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!**