



- 1-channel
- Device installation permissible in zone 2
- Output EEx ia IIC
- Current limit: 65 mA
- Up to SIL3 acc. to IEC 61508

24 V DC

KFD2-SD-Ex1.17

Standard model, replaces model KFD2-SL-Ex1.17

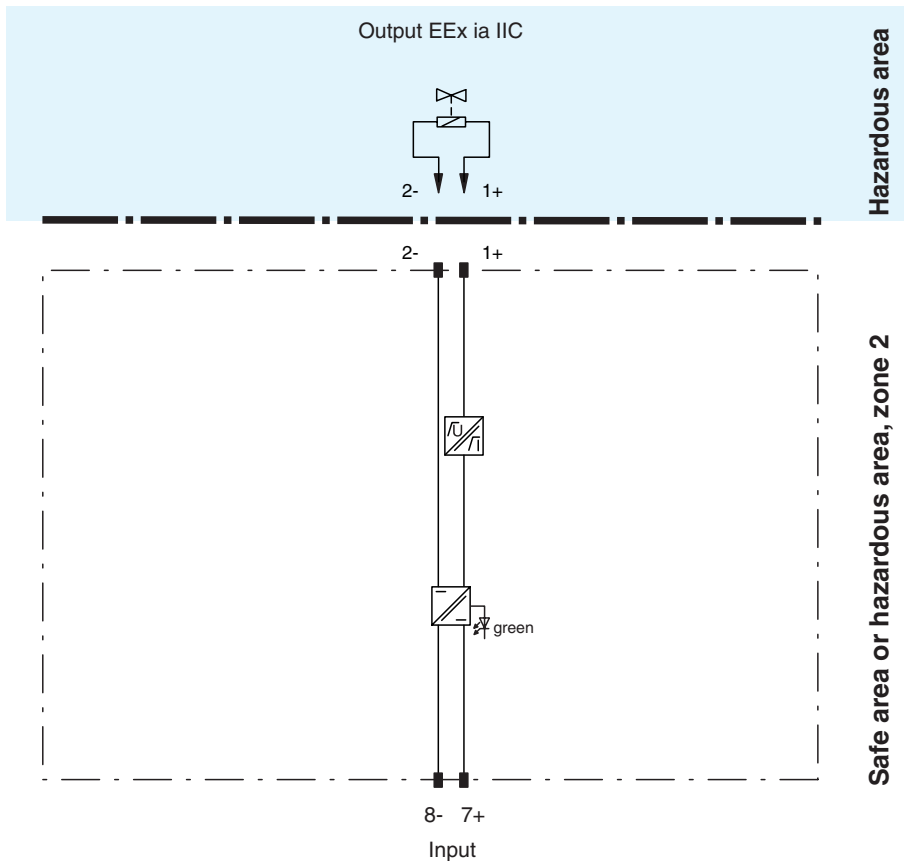
Function

The KFD2-SD-Ex1.17 receives its power supply from the applied input signal. The input and output are galvanically isolated from each other. The voltage applied to terminals 7 and 8 is transferred to the output by means of a DC/DC converter. At input voltages of 5 V ... 14 V, the output voltage increases as the input voltage increases. The voltage consumption at the output is about 5 V less than the input voltage. The internal resistance carries a max. of 96 Ω. The input current is around 10 mA higher than the output current and is limited to 65 mA. The output voltage drops as the current rises (see diagram bottom).

Application

Control/supply for intrinsically safe valves, audible alarms, LEDs, load cells etc.

Connection



Composition

Front View

Housing type A3 (see system description)



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Supply	
Rated voltage	loop powered
Input	
Connection	terminals 7+, 8-
Ripple	within the supply tolerance
Rated voltage U_e	5 ... 35 V DC
Current	≤ 70 mA at 12 V supply voltage (depending on load)
Output	
Internal resistor	≤ 96 Ω
Limit	current I_E : ≥ 65.3 mA voltage U_E : 9.3 V
Open loop voltage	≥ 15.6 V
Connection	terminals 1+, 2-
Output rated operating current	65 mA
Output signal	these values are valid for the rated operational voltage 20 ... 35 V DC
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2
Conformity	
Electromagnetic compatibility	NE 21
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 7216 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II (1) G D [EEEx ia] IIC (-20 °C ≤ T _a ≤ 60 °C) [circuit(s) in zone 0/1/2]
Output	EEEx ia IIC
Voltage U_0	17.22 V
Current I_0	220 mA
Power P_0	950 mW
Type of protection [EEEx ia]	
Explosion group	IIA IIB IIC
External capacitance	8.5 μF 2.06 μF 0.353 μF
External inductance	4.46 mH 1.67 mH 0.56 mH
Input	
Safety maximum voltage U_m	250 V (Attention! The rated voltage can be lower.)
Statement of conformity	TÜV 99 ATEX 1499 X , observe statement of conformity
Group, category, type of protection, temperature classification	⊕ II 3 G EEx nA II T4 [device in zone 2]
Electrical isolation	
Input/output	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, 2
Input I	
Voltage V_{OC}	17.4 V
Current I_t	223.7 mA
Explosion group	A&B C&E D, F&G
Max. external capacitance C_a	0.49 μF 1.49 μF 3.97 μF
Max. external inductance L_a	0.35 mH 3.24 mH 5.96 mH
Safety parameter	
CSA control drawing	LR 65756-13
Control drawing	No. 116-0132
Connection	terminals 1, 2
Input I	
Safety parameter	17.3 V / 77 Ω
Voltage V_{OC}	17.3 V

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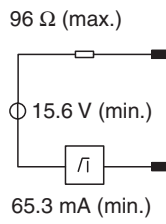
Current I_{SC}	221 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.51 μF	1.54 μF	4.1 μF
Max. external inductance L_a	0.36 mH	3.3 mH	6.1 mH

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.

Notes

Output circuit diagramm



Output characteristic for input voltage

20 V ... 25 V

E: Curve angle point (U_E, I_E)

