



- 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

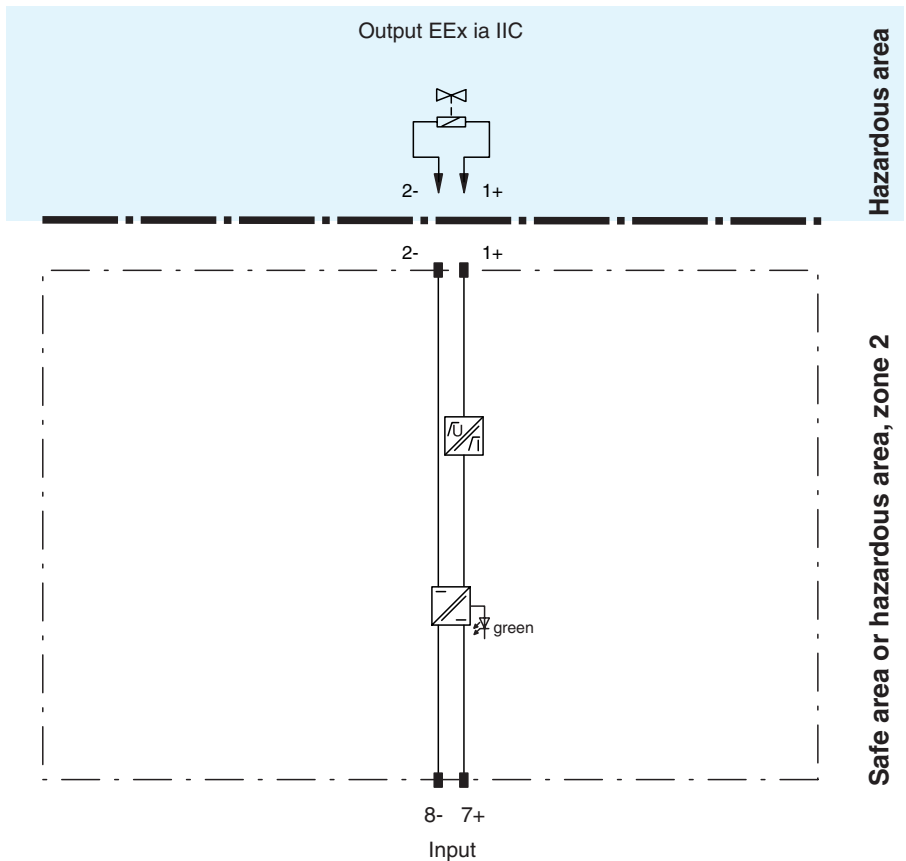
Function

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)



Release date 2006-02-14 09:31 Date of issue 2006-02-14 072040_ENG.xml

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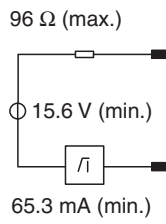
Current I_{SC}	221 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.51 μF	1.54 μF	4.1 μF
Max. external inductance L_a	0.36 mH	3.3 mH	6.1 mH

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)

