



- 1-channel
- Output EEx ia IIB
- Device installation permissible in zone 2
- Current limit: 80 mA
- Up to SIL3 acc. to IEC 61508

24 V DC

KFD2-SD-Ex1.36

Standard model, replaces model KFD2-SL-Ex1.36

Function

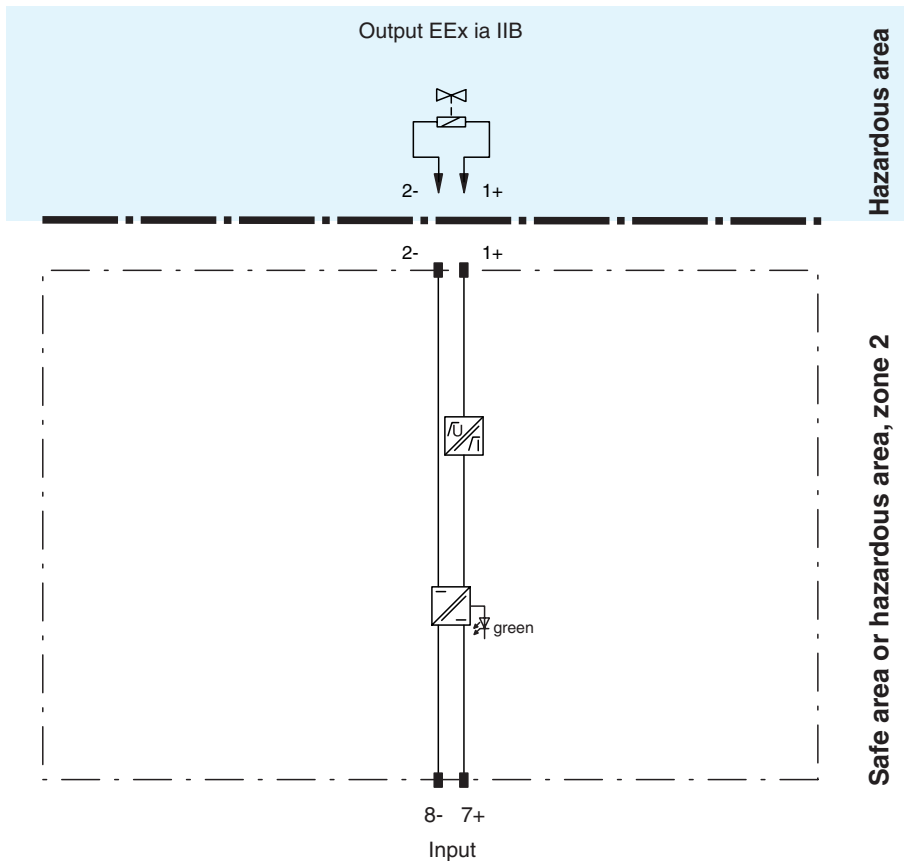
The KFD2-SD-Ex1.36 receives its power supply from the applied input signal.

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. The internal voltage regulator ensures that the output voltage is DC 24 V at no load when the input voltage is between DC 15 V and DC 35 V. The output is limited to 80 mA. In case of a rising output current the output voltage falls due to the ohmic behaviour when there is a load.

Application

- Control/supply of intrinsically safe valves, audible alarms, indicators etc.
- Control/supply of semiconductors (e. g. LED or LCD units)
In case of controlling semiconductors, a parallel resistor of approx. 10 k Ω , directly connected at the load, may be necessary, if the lead breakage monitoring is activated.

Connection



Composition

Front View

Housing type A3
(see system description)



Supply	
Rated voltage	loop powered
Input	
Connection	terminals 7+, 8-
Rated voltage U_E	20 ... 35 V DC
Current	approx. 90 mA at 65mA output current at 24 V supply voltage
Output	
Internal resistor	$\leq 174 \Omega$
Limit	current $I_E: \geq 80$ mA voltage $U_E: 9.1$ V
Open loop voltage	≥ 23 V
Connection	terminals 1+, 2-
Output rated operating current	≤ 80 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. 110 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 01 ATEX 7251 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	 II (1) G D [EEx ia] IIB (-20 °C \leq T _a \leq 60 °C) [circuit(s) in zone 0/1/2]
Output	EEx ia IIB
Voltage U_0	25.9 V
Current I_0	184 mA
Power P_0	1.2 W
Type of protection [EEx ia]	
Explosion group	IIA IIB
External capacitance	2.63 μ F 0.77 μ F
External inductance	9.61 mH 4.78 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}	26.5 V
Current I_t	173.1 mA
Explosion group	A&B C&E D, F&G
Max. external capacitance C_a	0.49 μ F 1.31 μ F
Max. external inductance L_a	5.38 mH 9.95 mH
Safety parameter	
CSA control drawing	LR 65756-13
Control drawing	No. 116-0132
Connection	terminals 1, 2
Input I	
Safety parameter	28 V / 152 Ω
Voltage V_{OC}	28 V

Release date 2006-02-14 09:44 Date of issue 2006-02-14 125892_ENG.xml

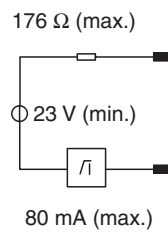
Current I_{SC}	169 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0.42 μF	1.14 μF	
Max. external inductance L_a	5.6 mH	10.4 mH	

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 diagram



Output characteristic for input voltage 20 V ... 35 V

E: Curve angle point (U_E, I_E)

