



- 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

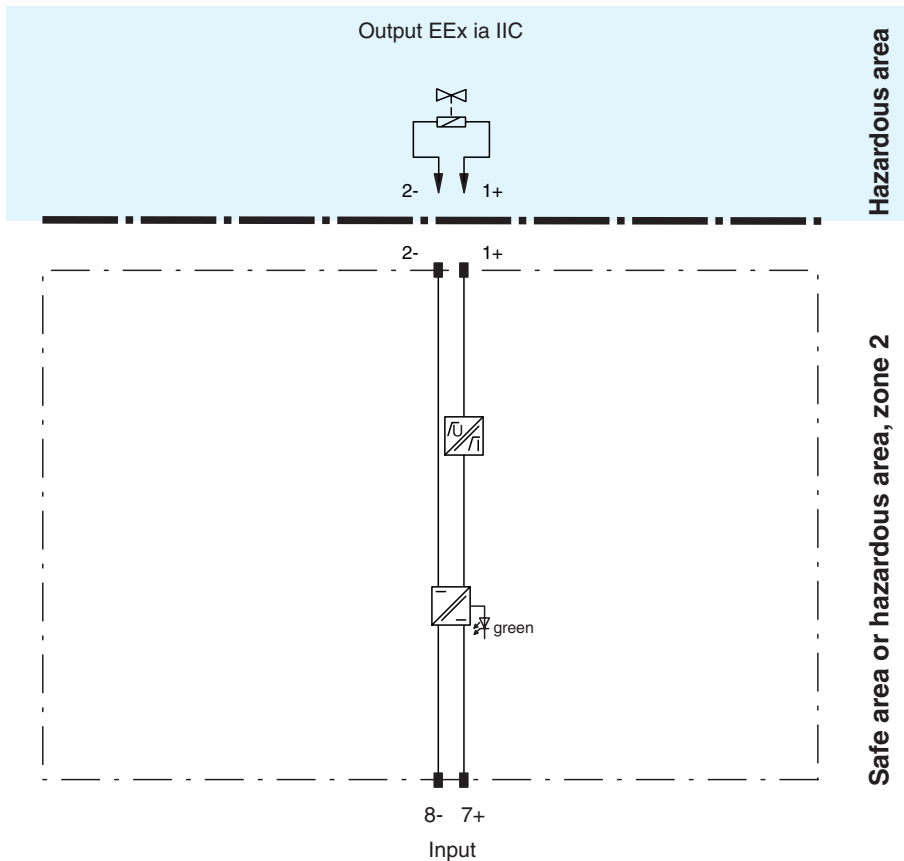
The KFD2-SD-Ex1.36 receives its power supply from the applied input signal.

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 kΩ, 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)



<b>Supply</b>	
Rated voltage	loop powered
<b>Input</b>	
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
<b>Output</b>	
Internal resistor	$\leq 174 \Omega$
Limit	current $I_E: \geq 80$ mA voltage $U_E: 9.1$ V
Open loop voltage	$\geq 23$ V DC
Connection	terminals 1+, 2-
Output rated operating current	$\leq 80$ mA
Output signal	these values are valid for the rated operational voltage 20 ... 35 V DC
<b>Electrical isolation</b>	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2
<b>Conformity</b>	
Electromagnetic compatibility	NE 21
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. 110 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>	
Certificate of conformity	BASEEFA No. Ex-94C2427 , for additional certificates refer to the approval list
Group, category, type of protection	[EEx ia] IIC ( $T_{amb} = 60$ °C)
Voltage $U_0$	28 V
Current $I_0$	185.5 mA
Power $P_0$	1.3 W
Internal capacitance $C_i$	negligibly small
Internal inductance $L_i$	negligibly small
<b>Supply</b>	
Safety maximum voltage $U_m$	250 V (Attention! The rated voltage can be lower.)
<b>Type of protection [EEx ia]</b>	
Explosion group	IIA      IIB
External capacitance	1.04 $\mu$ F    0.39 $\mu$ F
External inductance	12 mH      4.5 mH
<b>Statement of conformity</b>	
Group, category, type of protection, temperature classification	 II 3 G EEx nA II T4
<b>Electrical isolation</b>	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 94/9 EC	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, 2
<b>Input I</b>	
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 $\mu$ F    1.31 $\mu$ F
Max. external inductance $L_a$	5.38 mH    9.95 mH
<b>Safety parameter</b>	
CSA control drawing	LR 65756-13
Control drawing	No. 116-0132
Connection	terminals 1, 2

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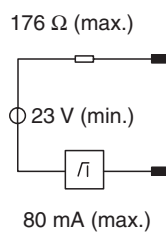
Input I			
Safety parameter	28 V / 152 Ω		
Voltage	$V_{OC}$	28 V	
Current	$I_{SC}$	169 mA	
Explosion group	A&B	C&E	D, F&G
Max. external capacitance $C_a$		0.42 μF	1.14 μF
Max. external inductance $L_a$		5.6 mH	10.4 mH

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](http://www.pepperl-fuchs.com).

Notes

Output circuit diagram



Output characteristic for input voltage

20 V ... 35 V

E: Curve angle point ( $U_E, I_E$ )

