



- 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

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.

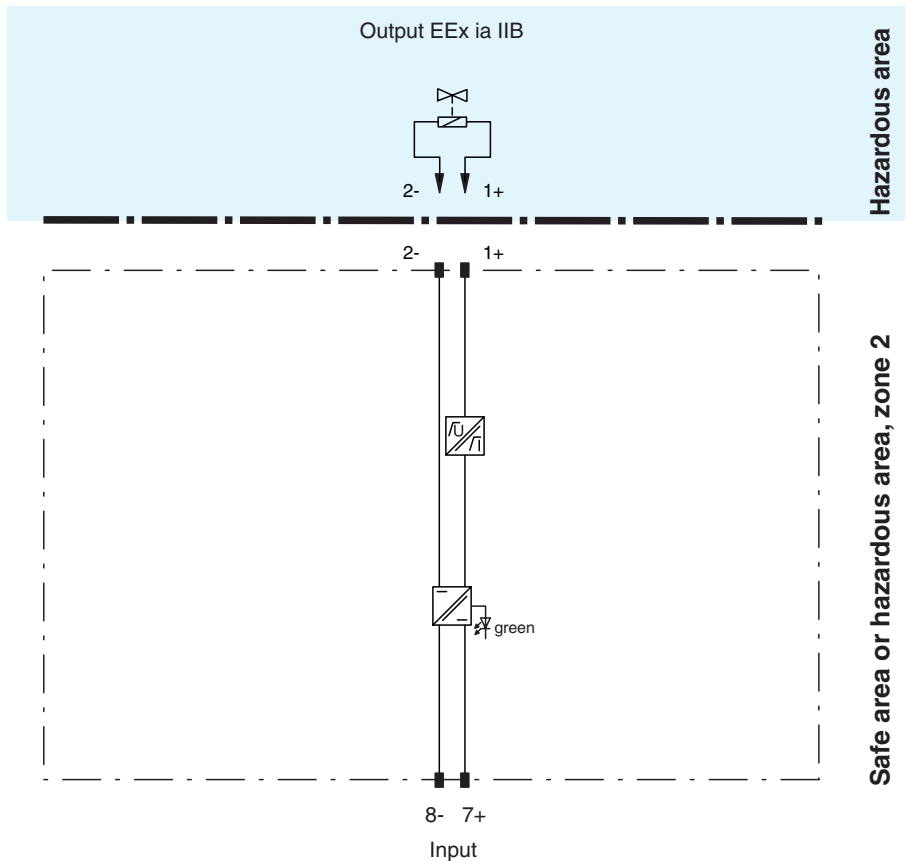
The voltage applied to terminals 7+ and 8- is transferred to the output by means of a DC/DC converter. The internal voltage regulator ensures that the output voltage is DC 24 V at no load when the input voltage is between DC 15 V and DC 35 V.

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

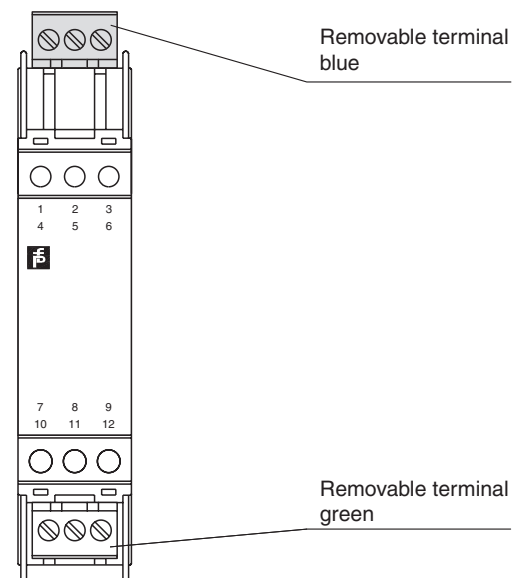
- Control/supply of intrinsically safe valves, audible alarms, indicators etc.
- Control/supply of semiconductors (e. g. LED or LCD units)

Connection





Composition

Front view



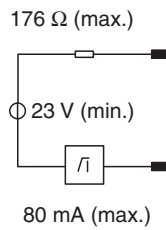
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Supply	
Rated voltage	loop powered
Input	
Connection	terminals 7+, 8-
Rated voltage U_i	20 ... 35 V DC
Current	approx. 90 mA at 65mA output current at 24 V supply voltage
Output	
Internal resistor	$\leq 174 \Omega$
Limit	current $I_e: \geq 80 \text{ mA}$ voltage $U_e: 9.1 \text{ V}$
Open loop voltage	$\geq 23 \text{ V}$
Connection	terminals 1+, 2-
Output rated operating current	$\leq 80 \text{ mA}$
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) , housing type B1
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)GD [EEx ia] IIB (-20 °C $\leq T_a \leq$ 60 °C) [circuit(s) in zone 0/1/2]
Output	EEx ia IIB
Voltage U_o	25.9 V
Current I_o	184 mA
Power P_o	1.2 W
Type of protection [EEx ia]	
Explosion group	IIA IIB
External capacitance	2.63 μF 0.77 μF
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 3G 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 μF 1.31 μF
Max. external inductance L_a	5.38 mH 9.95 mH
General information	
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 .

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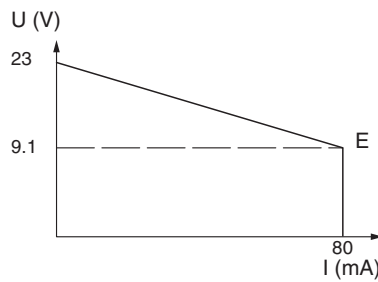
Notes

Output circuit diagram



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

E: Curve angle point (U_E, I_E)



Accessories

Power feed modules KFD2-EB2...

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 100 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

Power Rail UPR-03

The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 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!