



- 1-channel
- Output EEx ia IIC
- Device installation in Zone 2
- Up to SIL3 acc. to IEC 61508

current limit 45 mA

KFD2-SD-Ex1.48.90A

Function

The solenoid driver KFD2-SD-Ex1.48.90A receives its power supply from the applied input signal.

The input and output are galvanically isolated from each other.

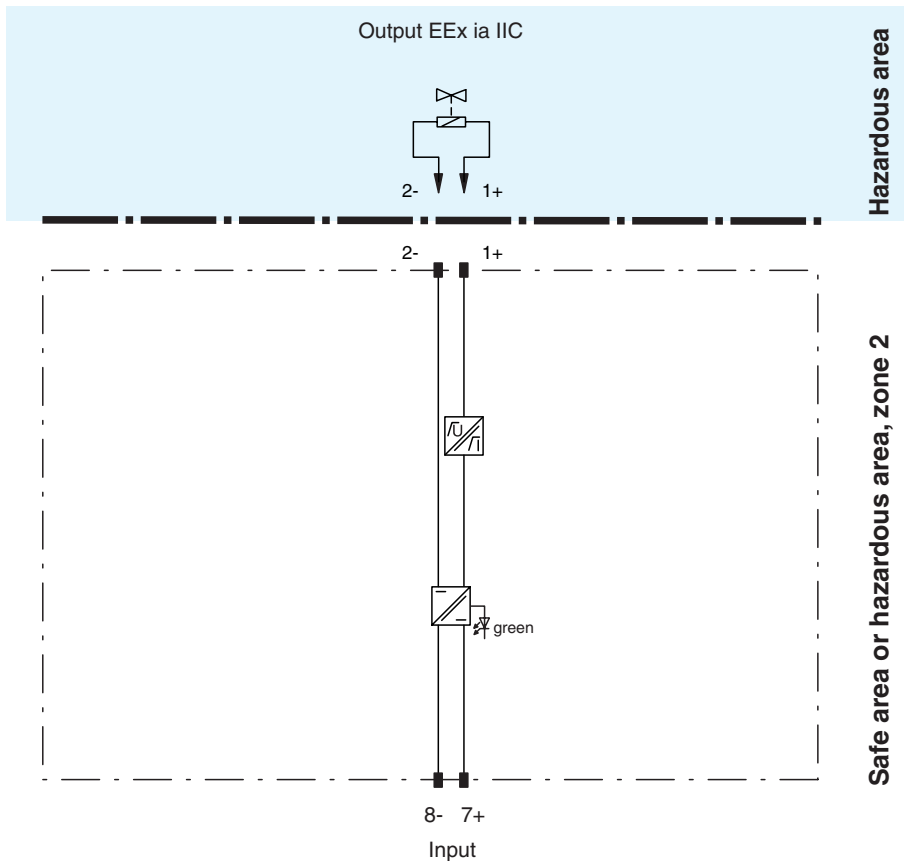
The voltage applied to terminals 7+ and 8- is transferred to the output by means of a DC/DC converter. For supply voltages up to 18 V, the open circuit output voltage is about 1.3 times the supply voltage. The input current is dependent on the load and carries a max. of 85 mA. The output current is limited to 45.3 mA. For an input voltage of above 18 V, the output voltage is limited by the internal Zener diodes. The open circuit voltage for both devices is DC 22.8 V.

The output voltage and the output current are dependent on the load as well as the input voltage.

Application

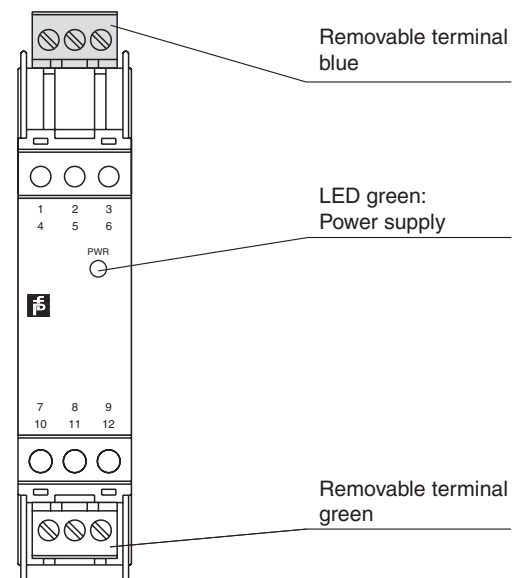
- Control/supply of intrinsically safe valves, audible alarms, indicators etc.
- Control/supply of semiconductors (e. g. LED or LCD units)

Connection



Composition

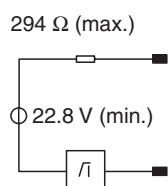
Front view



Supply	
Rated voltage	loop powered
Power loss	1.3 W
Input	
Connection	terminals 7+, 8-
Rated voltage U _i	5 ... 35 V DC
Current	7 mA at 18.5 V nominal supply voltage, 85 mA at 35 V nominal supply voltage
Output	
Internal resistor R _i	≤ 294 Ω
Limit	current I _E : ≥ 45.3 mA voltage U _E : 9.1 V
Open loop voltage U _s	≥ 22.8 V
Connection	terminals 1+, 2-
Output rated operating current	45 mA
Output signal	These values are valid for the rated operational voltage 20 ... 35 V DC.
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EEC	EN 61326, EN 50081-2
Conformity	
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
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) , housing type B1
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	BAS 00 ATEX 7216 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	ⓘ II (1)GD [Ex ia] IIC (-20 °C ≤ T _{amb} ≤ 60 °C) [circuit(s) in zone 0/1/2]
Output	Ex ia IIC
Voltage U _o	25.2 V
Current I _o	93 mA
Power P _o	590 mW
Input	
Maximum safe 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 class	ⓘ II 3G Ex nA II T4 [device in zone 2]
Electrical isolation	
Input/Output	safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 50014, EN 50020, EN 50021
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

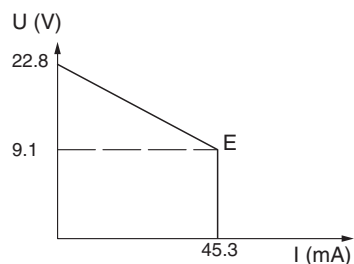
Notes

Output circuit diagramm



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!