Features

- 2-channel isolated barrier
- 24 V DC supply (Power Rail)
- Output 45 mA at 11.7 V DC
- Logic input, non-polarized
- Up to SIL2 acc. to IEC 61508

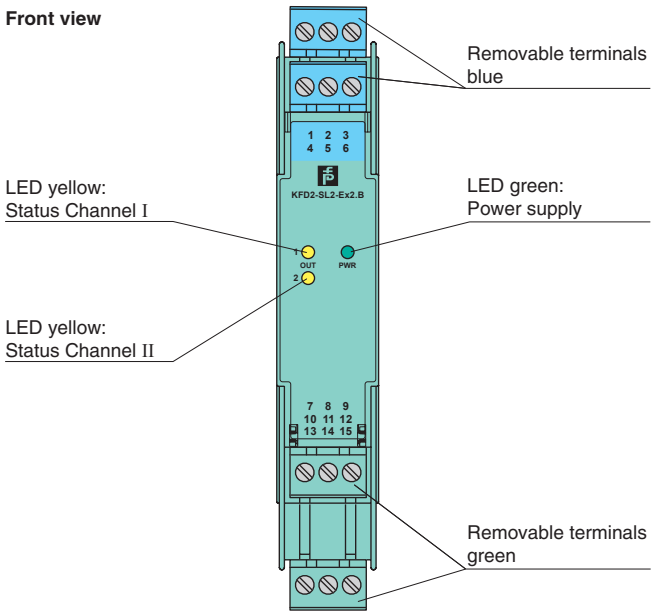
Function

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms.

It is controlled by means of a logic circuit. Voltage signals in a range of 16 V DC ... 30 V DC are accepted as 1-signal. The 0-signal must be within a range of 0 V DC ... 5 V DC. The current consumption of the logic inputs is about 3 mA each.

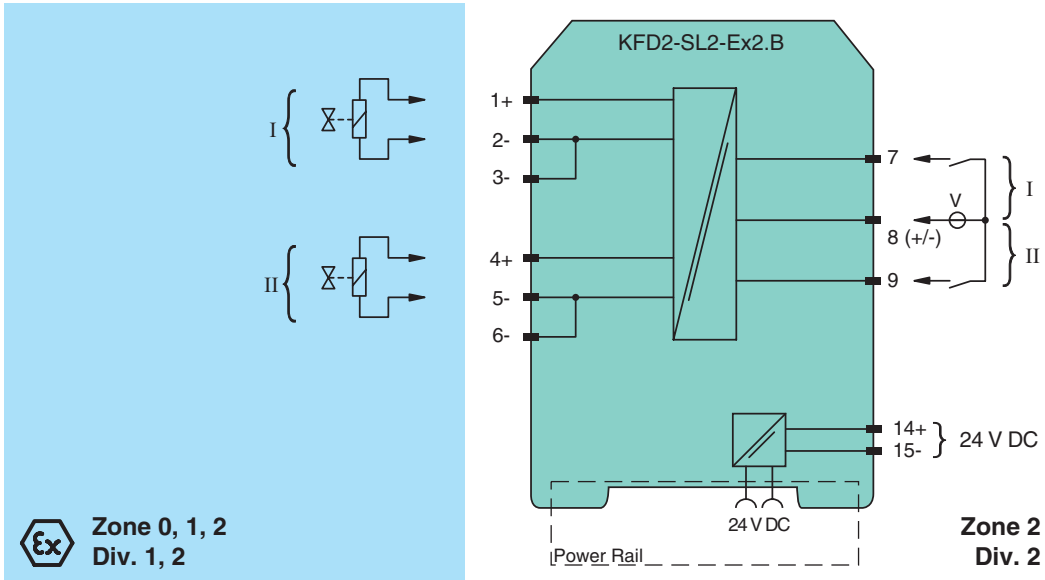
At full load, 11.7 V at 45 mA is available for the hazardous area load.

Assembly



SIL2

Connection



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General specifications	
Signal type	Digital Output
Supply	
Connection	Power Rail or terminals 14+, 15-
Rated voltage	20 ... 30 V DC
Power consumption	≤ 3.3 W at 45 mA output current
Input	
Connection	terminals 7, 8, 9
Input current	approx. 3 mA at 24 V DC
Signal level	1-signal: 16 ... 30 V DC 0-signal: 0 ... 5 V DC
Output	
Internal resistor	272 Ω
Limit	current I_E: 45 mA voltage U_E: 11.7 V
Open loop voltage	≥ 24 V
Connection	terminals 1+, 2-, 3- channel 1 , terminals 4+, 5-, 6- channel 2
Output rated operating current	45 mA
Output signal	These values are valid for the rated operational voltages from 20 ... 30 V DC.
Energized/De-energized delay	≤ 20 ms / ≤ 20 ms
Electrical isolation	
Input/power supply	functional insulation acc. to EN 50178, rated insulation voltage 50 V_{eff}
Input/input	not available
Output/Output	not available
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 150 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	ZELM 00 ATEX 0024 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⟨Ex⟩ II (1)GD [Ex ia] IIC; [Ex iaD] [circuit(s) in zone 0/1/2/20/21/22]
Output	Ex ia IIC, Ex iaD
Voltage U_o	28 V
Current I_o	110 mA
Power P_o	770 mW (linear characteristic)
Supply	
Maximum safe voltage U_m	40 V (Attention! The rated voltage can be lower.)
Input	
Maximum safe voltage U_m	60 V (Attention! The rated voltage can be lower.)
Collective error indication	
Maximum safe voltage U_m	40 V (Attention! The rated voltage can be lower.)
Statement of conformity	TÜV 02 ATEX 1820 X
Group, category, type of protection, temperature classification	⟨Ex⟩ II 3G Ex nA II T4
Electrical isolation	
Input/Output	safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Output/power supply	safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 50020:2002 , EN 60079-0:2006, EN 60079-15:2005 , IEC 61241-0, IEC 61241-11
International approvals	
FM approval	
Control drawing	16-548FM-12
IECEx approval	IECEx TUN 04.0001
Approved for	[Ex ia] IIC , [Ex iaD]
General information	

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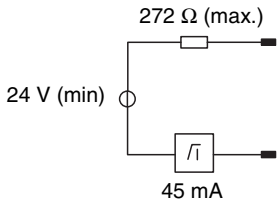
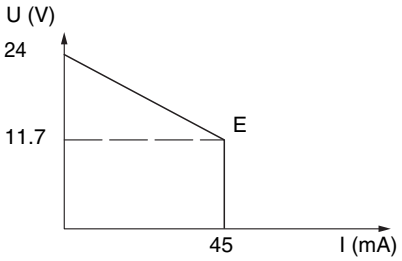
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

Output characteristic

Output circuit diagramm



Output characteristic for input voltage 20 V ... 30 V
E: Curve angle point (U_E, I_E)



Accessories

Power feed module 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.

Profile Rail K-DUCT with Power Rail

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.

Attention

Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!

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