

Features

- 1-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

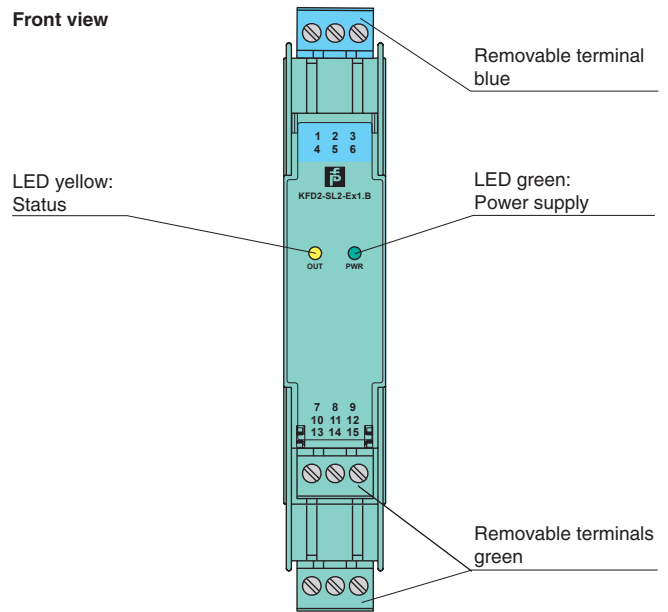
Function

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.

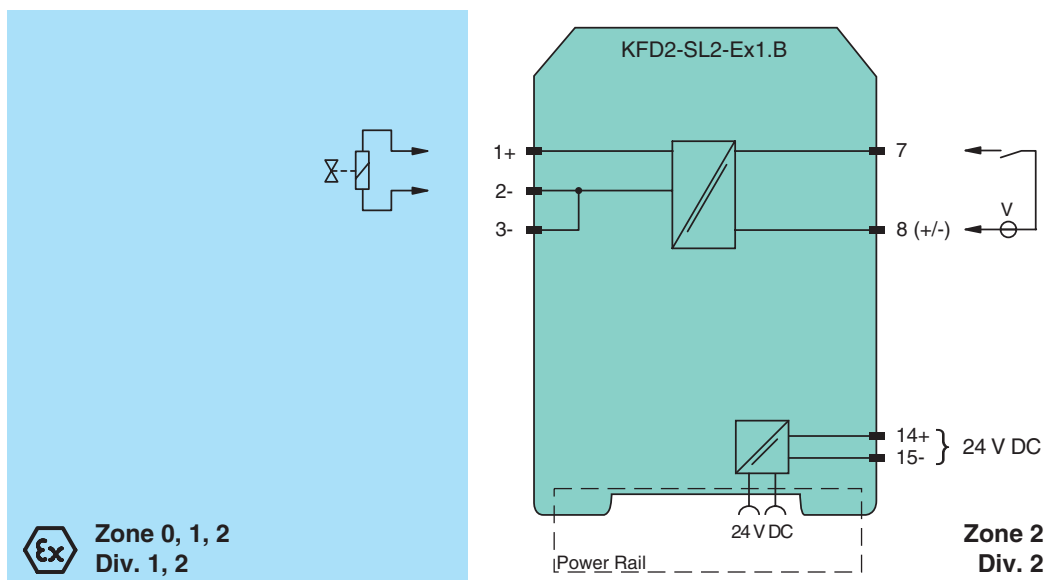
At full load, 11.7 V at 45 mA is available for the hazardous area load.

Assembly





SIL2

Connection



Release date 2010-08-11 18:56 Date of issue 2011-11-21 184257_eng.xml

General specifications		
Signal type		Digital Output
Supply		
Connection		Power Rail or terminals 14+, 15-
Rated voltage		20 ... 30 V DC
Power consumption		≤ 1.7 W at 45 mA output current
Input		
Connection		terminals 7, 8
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	R_i	272 Ω
Limit		current I_E : 45 mA voltage U_E : 11.7 V
Open loop voltage	U_s	≥ 24 V
Connection		terminals 1+, 2- or 3-
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}
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 ... 60 °C (-4 ... 140 °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		 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.)
Type of protection [EEx ia and EEx ib]		
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		
Group, category, type of protection, temperature class		 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		
Approved for		[Ex ia] IIC , [Ex iaD]
General information		

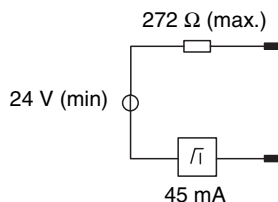
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Supplementary information

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.

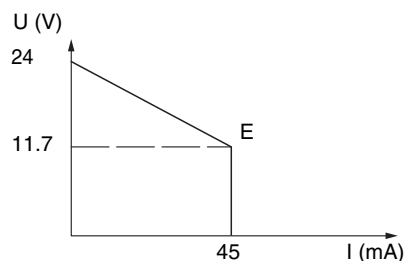
Output characteristic

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!