



Solenoid Driver

KFD0-SD2-Ex1.1065

SIL 3

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 65 mA at 9.8 V DC
- Up to SIL 3 acc. to IEC 61508

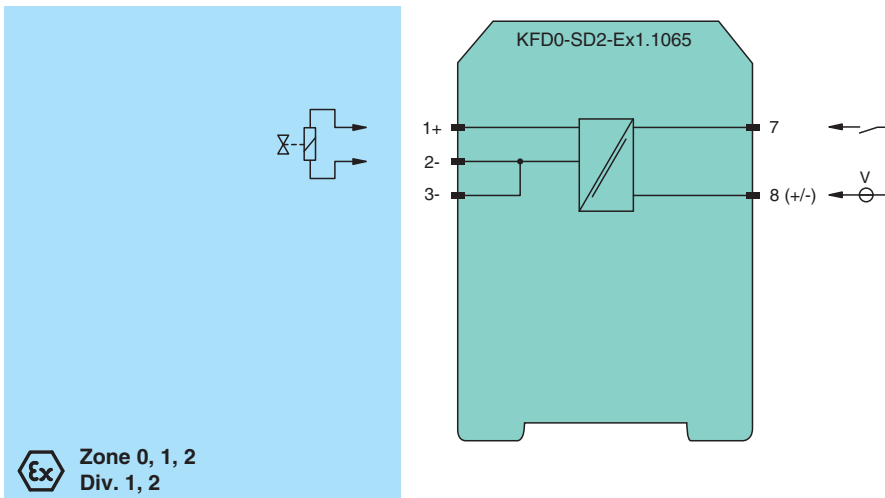
current limit 65 mA



Function

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area. It is loop powered, so the available energy at the output is received from the input signal. The output signal has a resistive characteristic. As a result the output voltage and current are dependent on the load and the input voltage. At full load, 9.8 V at 65 mA is available for the hazardous area application.

Connection



Technical Data

General specifications	
Signal type	Digital Output
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 3
Supply	
Rated voltage	U_r loop powered
Power dissipation	< 1 W (≤ 30 V)
Input	
Connection side	control side
Connection	terminals 7, 8
Rated voltage	U_r 20 ... 35 V DC

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

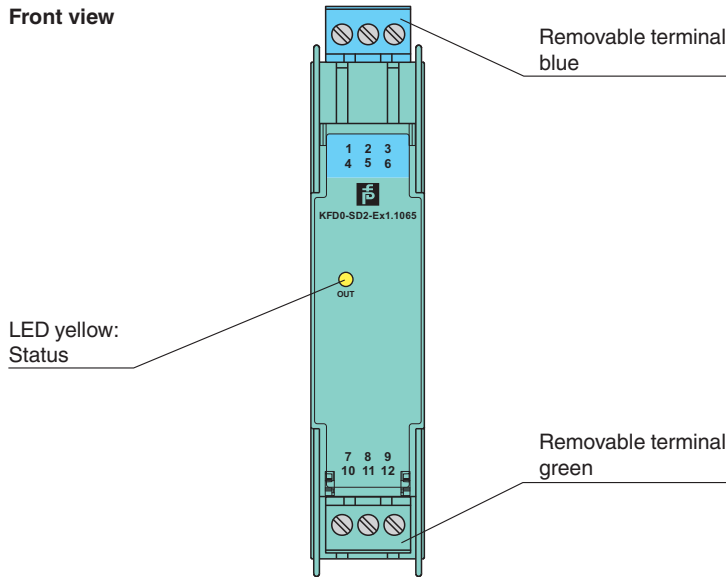
Current	72 mA at 20 V input voltage, load = 150 Ω 50 mA at 35 V input voltage, load = 150 Ω	
Output		
Connection side	field side	
Connection	terminals 1+, 2-	
Internal resistor	R_i	$\leq 90 \Omega$
Current	I_e	$\leq 65 \text{ mA}$
Voltage	U_e	$\geq 9.8 \text{ V}$
Open loop voltage	U_s	min. 15.4 V
Output rated operating current	65 mA	
Output signal	These values are valid for the rated operating voltage 20 ... 35 V DC.	
Energized/De-energized delay	single operation: 300 μs /50 μs ; periodical: 5 μs / 50 μs	
Indicators/settings		
Display elements	LED	
Labeling	space for labeling at the front	
Directive conformity		
Electromagnetic compatibility	EN 61326-1:2013 (industrial locations)	
Directive 2014/30/EU		
Conformity		
Electromagnetic compatibility	NE 21:2006	
Degree of protection	IEC 60529:2001	
Protection against electrical shock	UL 61010-1:2004	
Ambient conditions		
Ambient temperature	-20 ... 60 $^{\circ}\text{C}$ (-4 ... 140 $^{\circ}\text{F}$)	
Mechanical specifications		
Degree of protection	IP20	
Connection	screw terminals	
Mass	approx. 100 g	
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1	
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001	
Data for application in connection with hazardous areas		
EU-type examination certificate	BASEEFA 06 ATEX 0252	
Marking	Ⓔ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 $^{\circ}\text{C} \leq T_{\text{amb}} \leq 60 \text{ }^{\circ}\text{C}$)	
Voltage	U_o	17.22 V
Current	I_o	220 mA
Power	P_o	947 mW
Input		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage can be lower.)
Certificate	TÜV 99 ATEX 1499 X	
Marking	Ⓔ II 3G Ex nA II T4 [device in zone 2]	
Galvanic isolation		
Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V	
Directive conformity		
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010	
International approvals		
FM approval		
Control drawing	116-0309	
UL approval		
Control drawing	116-0316 (cULus)	
IECEx approval		
IECEx certificate	IECEx BAS 06.0058 IECEx CML 19.0093X	

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Technical Data

IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Assembly



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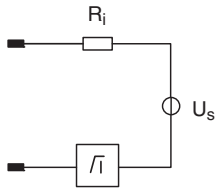
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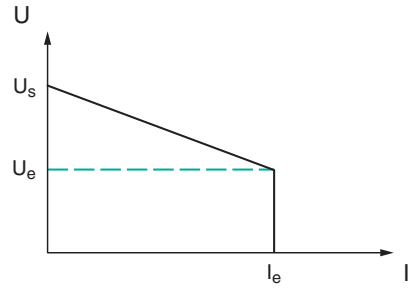
Characteristic Curve

Output characteristics

Output circuit diagram



Output characteristic



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