



Solenoid Driver

KFD0-SD2-Ex1.10100

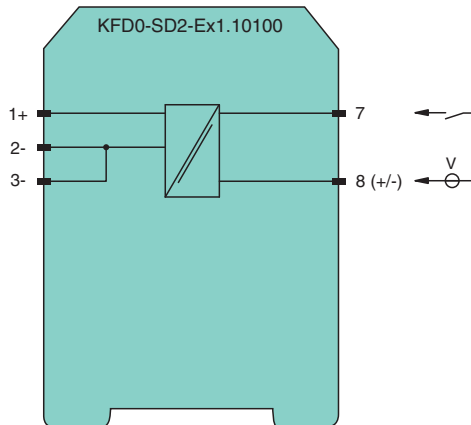
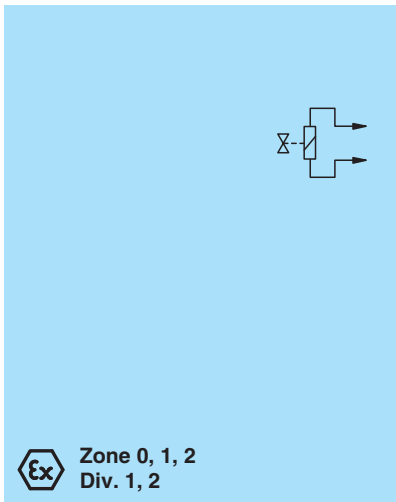
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 100 mA at 10 V DC
- Up to SIL 3 acc. to IEC/EN 61508



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, 10 V at 100 mA is available for the hazardous area application.

Connection



Ex Zone 0, 1, 2
Div. 1, 2

Technical Data

General specifications			
Signal type	Digital Output		
Functional safety related parameters			
Safety Integrity Level (SIL)	SIL 3		
Supply			
Rated voltage	U_r	20 ... 35 V DC , loop powered	
Power dissipation		< 1.2 W ($U_i \leq 30$ 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

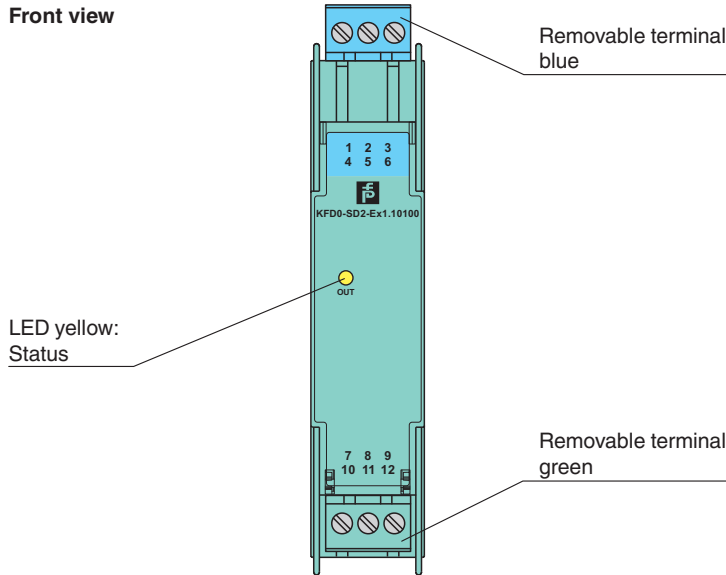
Current	150 mA at 20 V input voltage, load = 100 Ω 100 mA at 35 V input voltage, load = 100 Ω	
Output		
Connection side	field side	
Connection	terminals 1+, 2-	
Internal resistor	R_i	$\leq 68 \Omega$
Current	I_e	$\geq 100 \text{ mA}$
Voltage	U_e	$\geq 9.5 \text{ V}$
Open loop voltage	U_s	min. 16.2 V
Output rated operating current	100 mA	
Output signal	These values are valid for the rated operating voltage 20 ... 35 V DC.	
Energized/De-energized delay	single operation: typ. 1.7 ms/50 μs ; periodical: typ. 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) (W x H x D) , 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 V
Current	I_o	271 mA
Power	P_o	1152 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 IEC 60079-0:2018+AC:2020 , 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



Matching System Components

	K-DUCT-BU	Profile rail, wiring comb field side, blue
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Accessories

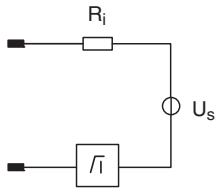
	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue
	KF-CP	Red coding pins, packaging unit: 20 x 6

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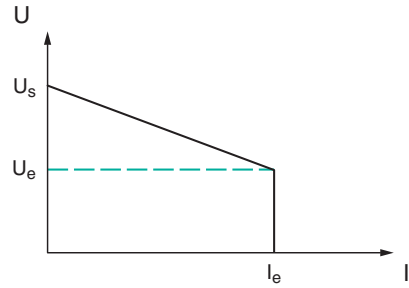
Characteristic Curve

Output characteristics

Output circuit diagram



Output characteristic



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