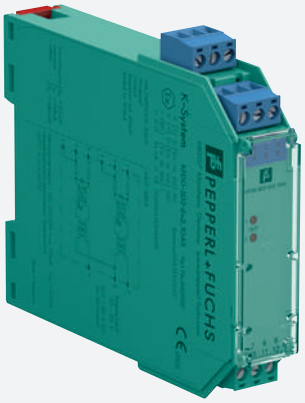


Solenoid Driver
KFD0-SD2-Ex2.1045

- 2-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 45 mA at 10 V DC
- Up to SIL 3 acc. to IEC/EN 61508

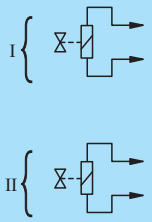
MOFLASH SIGNALLING

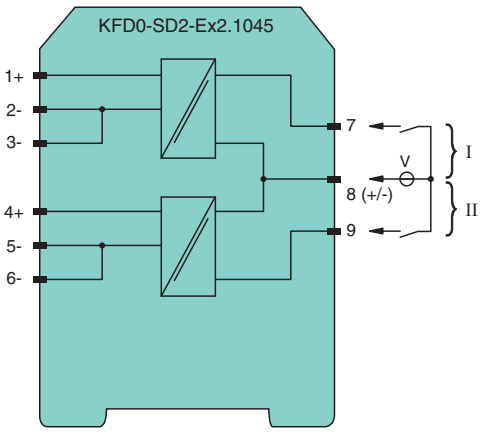
Moflash Part No. 242032

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 45 mA is available for the hazardous area application.

Connection





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	loop powered
Power dissipation		< 1.05 W (≤ 30 V) per channel
Input		
Connection side		control side
Connection		terminals 7, 8; 8, 9
Rated voltage	U_r	20 ... 35 V DC

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Technical Data

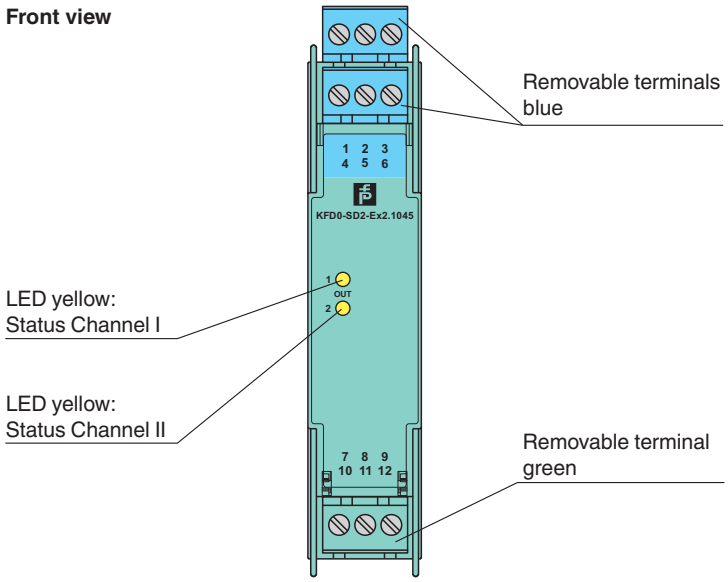
Current		72 mA at 20 V input voltage, load = 220 Ω 50 mA at 35 V input voltage, load = 220 Ω
Inrush current		≤ 200 mA after 100 µs
Output		
Connection side		field side
Connection		terminals 1+, 2-; 4+, 5-
Internal resistor	R_i	max. 282 Ω
Current	I_e	≤ 45 mA
Voltage	U_e	≥ 10 V
Open loop voltage	U_s	min. 22.7 V
Output rated operating current		45 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		LEDs
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
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 °C (-4 ... 140 °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		⟨Ex⟩ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T_{amb} ≤ 60 °C)
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.)
Certificate		TÜV 99 ATEX 1499 X
Marking		⟨Ex⟩ 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

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

Front view



Matching System Components

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

Accessories

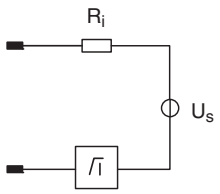
	**KF-ST-5GN**	Terminal block for KF modules, 3-pin screw terminal, green
	**KF-ST-5BU**	Terminal block for KF modules, 3-pin screw terminal, blue
	**KF-CP**	Red coding pins, packaging unit: 20 x 6

Release date: 2022-02-24 Date of issue: 2022-02-24 Filename: 242032_eng.pdf

Characteristic Curve

Output characteristics

Output circuit diagram



Output characteristic

