Solenoid Driver

KFD0-SD2-Ex1.1045

Features

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 45 mA at 10 V DC
- Up to SIL3 acc. to IEC 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 45 mA is available for the hazardous area application.



CE (Ex)

Assembly

SIL3

Connection



Pepperl+Fuchs Group www.pepperl-fuchs.com USA: +1 330 486 0002 pa-info@us.pepperl-fuchs.com Germany: +49 621 776 2222 pa-info@de.pepperl-fuchs.com Singapore: +65 6779 9091 pa-info@sg.pepperl-fuchs.com



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General specifications		
Signal type		Digital Output
Supply		
Rated voltage	Un	loop powered
Power dissipation		< 1.05 W (≤ 30 V)
Input		
Connection		terminals 7, 8
Rated voltage	Un	20 35 V DC
Current		72 mA at 20 V input voltage, load = 220 Ω 50 mA at 35 V input voltage, load = 220 Ω
Output		
Connection		terminals 1+, 2-
Internal resistor	Ri	\leq 282 Ω
Current	l _e	≤ 45 mA
Voltage	U _e	\geq 10 V
Open loop voltage	Us	≥ 22.7 V
Output rated operating current	0	45 mA
Output signal		These values are valid for the rated operating voltage 20 35 V DC.
Energized/De-energized delay		single operation: $300 \mu s/50 \mu s$; periodical: $5 \mu s / 50 \mu s$
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		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
Mass		approx. 100 g
Dimensions		20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		$$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C \leq T _{amb} \leq 60 °C)
Voltage	Uo	25.2 V
Current	I _o	93 mA
Power	Po	590 mW
Input	. 0	
Maximum safe voltage	U _m	250 V (Attention! The rated voltage can be lower.)
Statement of conformity	-m	TÜV 99 ATEX 1499 X, observe statement of conformity
Group, category, type of prote	ection	$\langle E_{\rm X} \rangle$ II 3G Ex nA II T4 [device in zone 2]
temperature class	ection,	
Electrical isolation		acts electrical instation and to IEO/EN 00070 44 wells to a schembler 075 M
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010
International approvals		
FM approval		
Control drawing		266-031FM-12 (cFMus)
UL approval		
Control drawing		116-0316 (cULus)
IECEx approval		IECEx BAS 06.0058
General information		
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.

Refer to "General Notes Relating to Pepperl+Fuchs Product Information". Pepperl+Fuchs Group www.pepperl-fuchs.com

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Output characteristics

Output circuit diagram



Output characteristic



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