### **Solenoid Driver**

### KFD0-SD2-Ex1.1180

## Features

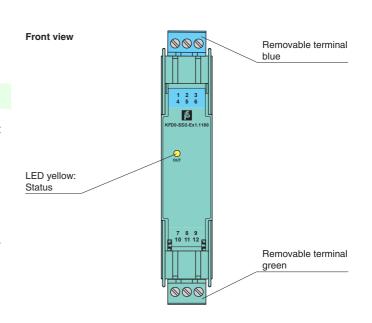
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 80 mA at 11 V DC
- Up to SIL3 acc. to IEC 61508

#### 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, 11 V at 80 mA is available for the hazardous area application.

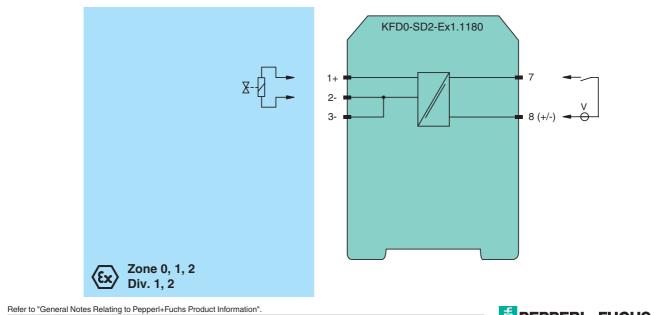


CE (Ex) S

Assembly

# SIL3

# Connection



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1

General specifications		
		Digital Output
Signal type		
Supply		
Rated voltage	Un	loop powered
Power loss		< 1 W (≤ 30 V)
Input		
Connection		terminals 7, 8
Rated voltage	Un	20 35 V DC
Current		140 mA at 20 V input voltage, load = 140 $\Omega$ 100 mA at 35 V input voltage, load = 140 $\Omega$
Output		
Connection		terminals 1+, 2-
Internal resistor	Ri	$\leq$ 150 $\Omega$
Current	l <sub>e</sub>	≤ 80 mA
Voltage	Ue	≥11 V
Open loop voltage	Us	≥ 22.7 V
Output rated operating current	3	80 mA
Output signal		These values are valid for the rated operating voltage 20 35 V DC.
Energized/De-energized delay		single operation: $300 \mu\text{s}/50 \mu\text{s}$ ; periodical: $5 \mu\text{s}/50 \mu\text{s}$
Directive conformity		
Electromagnetic compatibility		
		EN 61226 1-2006
Directive 2004/108/EC		EN 61326-1:2006
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		$\langle \widehat{\mathbf{x}} \rangle$ II (1)G [Ex ia Ga] IIB, II (1)D [Ex ia Da] IIIB, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60 °C$ )
Voltage	U <sub>o</sub>	25.2 V
Current		184 mA
	l <sub>o</sub>	
Power	Po	1.159 W
Type of protection [EEx ia]		
Input		
Maximum safe voltage	U <sub>m</sub>	250 V (Attention! The rated voltage can be lower.)
Statement of conformity		TÜV 99 ATEX 1499 X, observe statement of conformity
Group, category, type of prot temperature class	ection,	⟨ы⟩ II 3G Ex nA II T4 [device in zone 2]
Electrical isolation		
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, 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.

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

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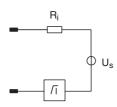
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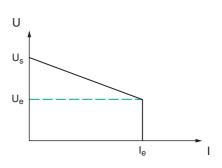
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# **Output characteristics**

## Output circuit diagram



## **Output characteristic**



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