



## Solenoid Driver KCD0-SD3-Ex1.1245.SP

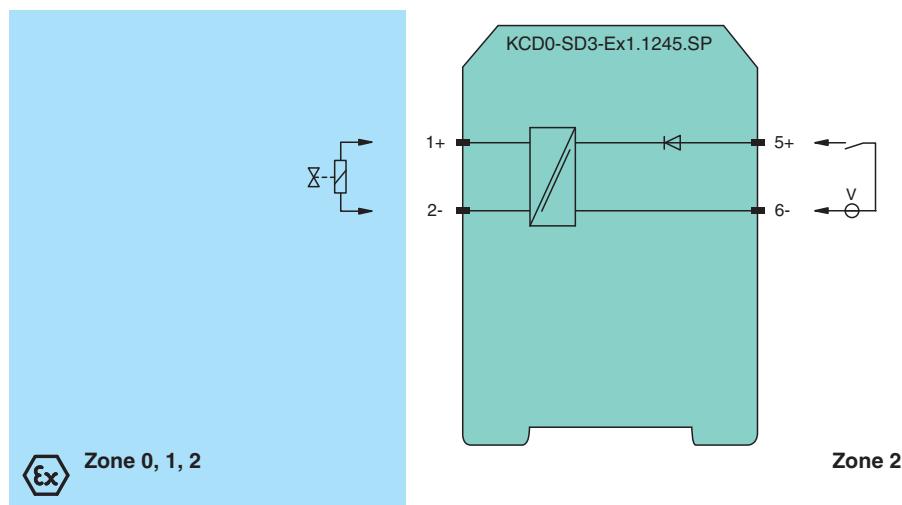
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 45 mA at 12 V DC
- Test pulse immunity
- Housing width 12.5 mm
- Connection via spring terminals with push-in connection technology
- Up to SIL 3 acc. to IEC/EN 61508



### Function

This isolated barrier is used for intrinsic safety applications. The device supplies power to solenoids, LEDs and audible alarms located in a hazardous area. The device 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, 12 V at 45 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	
Systematic capability (SC)	SC 3	
Supply		
Rated voltage	U <sub>r</sub>	loop powered
Power dissipation	< 1.3 W	
Input		
Connection side	control side	
Connection	terminals 5+, 6-	

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

## Technical Data

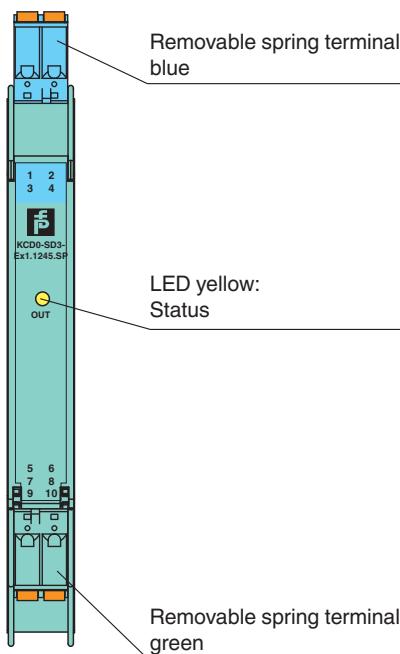
Test pulse length			max. 2 ms from DO card
Signal level			1-signal: 19 ... 30 V DC 0-signal: 0 ... 5 V DC
Rated voltage	$U_r$	19 ... 30 V DC	
Rated current	$I_r$	0-signal: typ. 1.6 mA at 1.5 V DC; typ. 8 mA at 3 V DC (maximum leakage current DO card) 1-signal: $\geq 36$ mA (minimum load current DO card)	
Inrush current			$\leq 200$ mA after 100 $\mu$ s
<b>Output</b>			
Connection side			field side
Connection			terminals 1+, 2-
Internal resistor	$R_i$	approx. 240 $\Omega$	
Current	$I_e$	typ. 45 mA	
Voltage	$U_e$	$\geq 12$ V	
Current limit	$I_{max}$	45 mA	
Open loop voltage	$U_s$	typ. 24.6 V	
Switching frequency	$f$	max. 10 Hz	
Energized/De-energized delay			28 ms / 10 ms
<b>Galvanic isolation</b>			
Output/other circuits			basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>			
Display elements			LED
Labeling			space for labeling at the front
<b>Directive conformity</b>			
Electromagnetic compatibility			
Directive 2014/30/EU			EN 61326-1:2013 (industrial locations)
<b>Conformity</b>			
Electromagnetic compatibility			NE 21:2012 , EN 61326-3-2:2008 For further information see system description.
Degree of protection			IEC 60529:2013
Protection against electrical shock			EN 61010-1:2010
<b>Ambient conditions</b>			
Ambient temperature			-20 ... 70 °C (-4 ... 158 °F)
<b>Mechanical specifications</b>			
Degree of protection			IP20
Connection			spring terminals
Mass			approx. 150 g
Dimensions			12.5 x 119 x 114 mm (0.5 x 4.7 x 4.5 inch) (W x H x D) , housing type A2
Mounting			on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>			
EU-type examination certificate			EXA 17 ATEX 0002 X
Marking			Ex II 3(1)G Ex ec [ia Ga] IIC T4 Gc Ex II (1)D [Ex ia Da] IIIC Ex I (M1) [Ex ia Ma] I
Output			Ex ia
Voltage	$U_o$	26 V	
Current	$I_o$	110 mA	
Power	$P_o$	715 mW	
<b>Input</b>			
Maximum safe voltage	$U_m$	60 V (Attention! The rated voltage can be lower.)	
<b>Galvanic isolation</b>			
Input/Output			safe electrical isolation acc. to IEC/EN 60079-11, rated insulation voltage 300 V <sub>rms</sub>
<b>Directive conformity</b>			
Directive 2014/34/EU			EN 60079-0:2012+A11:2013 , EN 60079-7:2015 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>			

## Technical Data

UL approval	E106378
Control drawing	116-0448 (cULus)
IECEx approval	
IECEx certificate	IECEx EXA 17.0001X
IECEx marking	Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## Assembly

### Front view



## Matching System Components

Release date: 2022-01-17 Date of issue: 2022-01-17 Filename: 315050\_eng.pdf

	<b>K-DUCT-BU</b>	Profile rail, wiring comb field side, blue
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## Accessories

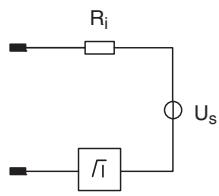
	<b>KC-CTT-3GN2BU</b>	Terminal block for KC modules, 2-pin spring terminal, with test sockets
	<b>KC-CTT-5BU</b>	Terminal block for KC modules, 2-pin spring terminal, with test sockets, blue
	<b>KC-CTT-5GN</b>	Terminal block for KC modules, 2-pin spring terminal, with test sockets, green
	<b>KF-CP</b>	Red coding pins, packaging unit: 20 x 6

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

## Characteristic Curve

### Output characteristics

Output circuit diagram



Output characteristic

