Features

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 45 mA at 12 V DC
- Housing width 12.5 mm
- Up to SIL 3 acc. to IEC 61508

Function

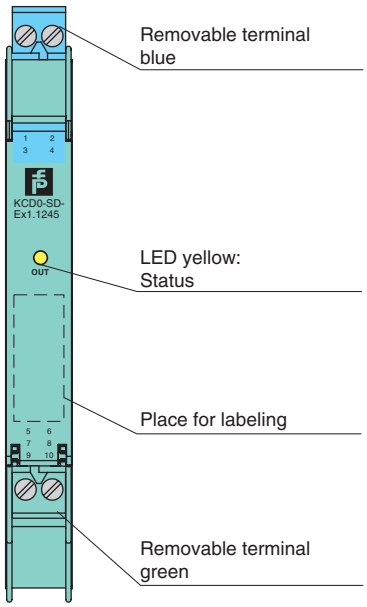
This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area.

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, 12 V at 45 mA is available for the hazardous area application.

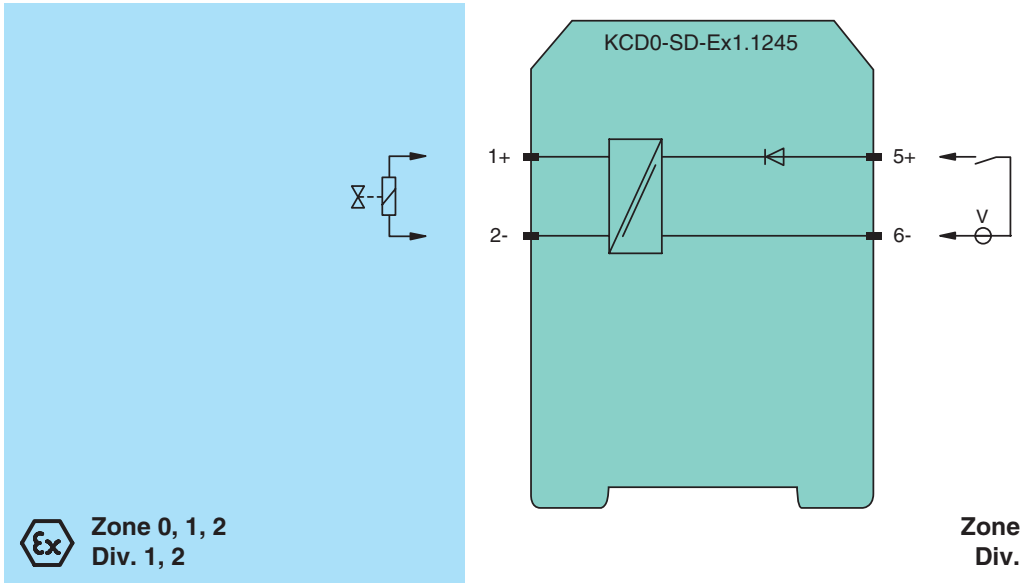
Assembly

Front view



SIL 3

Connection



Release date 2018-02-01 13:14 Date of issue 2018-02-01 233601_eng.xml

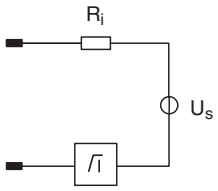
General specifications		
Signal type		Digital Output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Supply		
Rated voltage	U_r	loop powered
Power dissipation		< 1 W
Input		
Connection side		control side
Connection		terminals 5, 6
Rated voltage	U_r	19 ... 30 V DC
Current		≤ 72 mA at U_i = 19 V, ≤ 50 mA at U_i = 30 V with 265 Ω output load ≤ 45 mA at U_i = 19 V, ≤ 31 mA at U_i = 30 V with shorted output ≤ 14 mA at U_i = 19 V, ≤ 11 mA at U_i = 30 V no load at output
Inrush current		≤ 200 mA after 100 µs
Output		
Connection side		field side
Connection		terminals 1+, 2-
Internal resistor	R_i	≤ 238 Ω
Current	I_e	≤ 45 mA
Voltage	U_e	≥ 12 V
Open loop voltage	U_s	≥ 22.7 V
Output rated operating current		45 mA
Output signal		These values are valid for the rated operating voltage 19 ... 30 V DC.
Energized/De-energized delay		single operation: typ. 1.7 ms/50 µs; periodical: typ. 5 µs/50 µs
Galvanic isolation		
Input/Output		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V_{eff}
Indicators/settings		
Display elements		LED
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
Degree of protection		IEC 60529
Protection against electrical shock		UL 61010-1
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 100 g
Dimensions		12.5 x 114 x 119 mm (0.5 x 4.5 x 4.7 inch) , housing type A2
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 0170
Marking		⟨Ex⟩ II (1)G [Ex ia Ga] IIC , ⟨Ex⟩ II (1)D [Ex ia Da] IIIC , ⟨Ex⟩ I (M1) [Ex ia Ma] I
Output		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
Voltage	U_o	25.2 V
Current	I_o	110 mA
Power	P_o	693 mW
Type of protection [EEx ia]		
Input		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage can be lower.)
Certificate		PF 06 CERT 0971 X
Marking		⟨Ex⟩ II 3G Ex nA IIC T4 Gc
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 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
FM approval		
Control drawing		116-0419 (cFMus)

Release date 2018-02-01 13:14 Date of issue 2018-02-01 233601_eng.xml

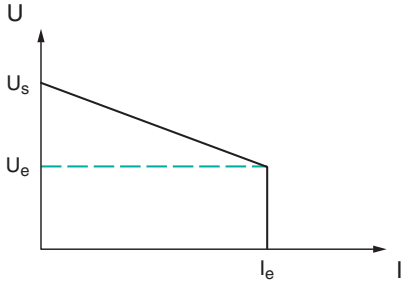
UL approval	
Control drawing	116-0420 (cULus)
IECEx approval	IECEx BAS 06.0032
Approved for	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
General information	
Supplementary information	Observe the cer conformity, instruction manuals, and manuals where applicable. For information see

Output characteristics

Output circuit diagram



Output characteristic



Release date 2018-02-01 13:14 Date of issue 2018-02-01 233601_eng.xml