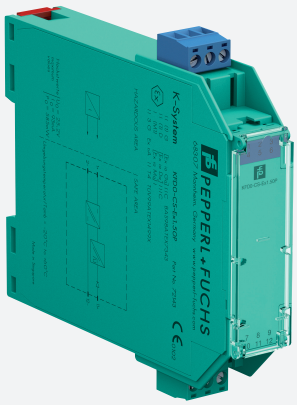


Repeater

KFD0-CS-Ex1.50P

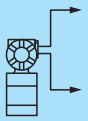
SIL 2

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 4 mA ... 20 mA
- transmitter power supply
- Accuracy 0.1 %
- Reverse polarity protection
- Up to SIL 2 acc. to IEC 61508

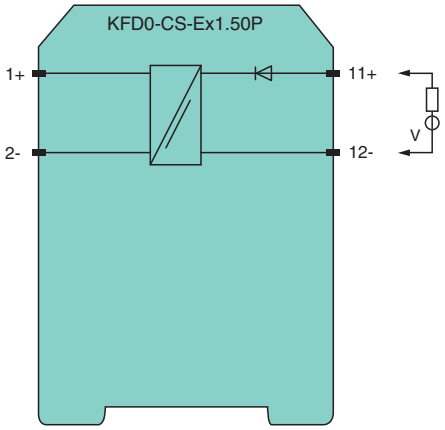
Function

This isolated barrier is used for intrinsic safety applications.
The device can be used as a repeater or transmitter power supply for 2-wire transmitters.
This device is loop powered. No additional power supply has to be connected.
Use the technical data to verify that proper voltage is available to the field devices.

Connection



Zone 0, 1, 2
Div. 1, 2



Zone 2
Div. 2

Technical Data

General specifications		
Signal type		Analog input/analog output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Rated voltage	U_r	loop powered
Control circuit		
Connection		terminals 12-, 11+
Voltage		5 ... 35 V DC
Current		4 ... 20 mA
Power dissipation		at 20 mA and U_{in} < 24.3 V: < 250 mW per channel at 20 mA and U_{in} > 24.3 V: < 500 mW per channel

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Field circuit		
Connection		terminals 1+, 2-
Voltage		for 5V < U_{in} < 24.3V: ≥ 0.9 x U_{in} - (0.37 x current in mA) - 1.0 for U_{in} > 24.3 V: ≥ 21 V - (0.36 x current in mA)
Short-circuit current		at U_{in} > 24.3 V : ≤ 65 mA
Transfer current		≤ 40 mA
Transfer characteristics		
Accuracy		0.1 %
Deviation		
After calibration		≤ ± 20 µA; incl. calibration, linearity, hysteresis and load fluctuations at the field side up to a load of 1 kΩ at 20 °C (68 °F)
Influence of ambient temperature		≤ ± 2 µA/K at U_{in} ≤ 20 V; ≤ ± 5 µA/K at U_{in} > 20 V
Rise time		≤ 5 ms at bounce from 4 ... 20 mA and U_{in} < 24 V
Galvanic isolation		
Field circuit/control circuit		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Indicators/settings		
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 21:2012 EN 61326-3-2:2008
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1:2012
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) , 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		BAS 98 ATEX 7343 X
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	585 mW
Control circuit		
Maximum safe voltage	U_m	250 V_{eff} (Attention! The rated voltage can be lower.)
Field circuit		
Maximum safe voltage	U_m	250 V_{eff} (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		
Field circuit/control circuit		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		116-0437
UL approval		
Control drawing		116-0438 (cULus)

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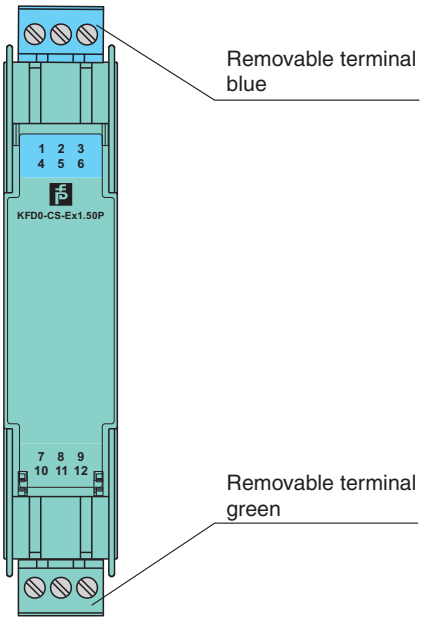
IECEx approval		
IECEx certificate		IECEx BAS 05.0004X IECEx CML 19.0040X
IECEx marking		[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

Assembly

Front view



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