

Current Driver/Repeater KFD0-CS-Ex2.51P

- 2-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 0 mA ... 40 mA
- I/P or transmitter power supply
- Accuracy 1 %
- Reverse polarity protection
- SIL 2 (SC 3) acc. to IEC/EN 61508



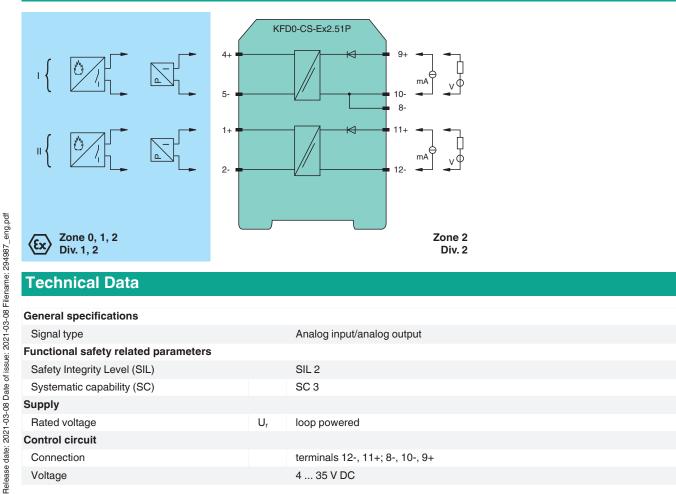
Function

This isolated barrier is used for intrinsic safety applications.

The device transfers DC signals of fire alarms and smoke alarms from the hazardous area to the non-hazardous area. The device can also be A reverse polarity protection prevents damage to the device caused by faulty wiring. The device is loop powered. From the control side no additional power supply has to be connected. Use the technical data to verify that proper voltage is available to the field devices.

US

Connection



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

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VoltageUo25.2 VCurrentIo93 mAPowerPo585 mWControl circuitFeMaximum safe voltageUm250 V eff (Attention! The rated voltage can be lower.)Field circuitFeMaximum safe voltageUm250 V eff (Attention! The rated voltage can be lower.)CertificateUm250 V eff (Attention! The rated voltage can be lower.)CertificateIUm250 V eff (Attention! The rated voltage can be lower.)MarkingS250 V eff (Attention! The rated voltage can be lower.)Galvanic isolationIUmField circuit/control circuitSafe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 VDirective 2014/34/EUEN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010	Technical Data		
Power dissipation at d On A and U ₄ < 22 Y: 12W per channel Field circuit Emminals 1 + 2; 4+, 5. Connecton terminals 1 + 2; 2+ 4; 5. Voltage for 4 V < U ₄ < 24 V; 2 U ₄ : (0.57 x current in mA) - 1.0 Short-circuit current cut > 24 V; 2 U ₄ : (0.57 x current in mA) - 1.0 Transfor characteristics current current Tarafor characteristics current current Accuracy 19 for 40 v < U ₄ < 24 V : 50 m A Accuracy 19 for 40 v < U ₄ < 20 V : 50 m A Accuracy 19 for 40 v < U ₄ < 20 V : 50 m A Accuracy 5 = 50 m At 20 or (67 e) for 60 m A Influence of ambient temperature 5 = 50 m At 20 or (67 e) for 60 m A Controntig sepace for labeling at the front for 70 m V Control for 40 m Control + 10 m Control for 40 m Control + 10 m Control for 40 m Control + 20 M A for 80 m A Directive control forcult EE for 10 m Control for 40 m Control + 10	Current		0 40 mA
Field circuit currentwith a state of the state			at 40 mA and U_{in} < 22 V: 700 mW per channel
Connection terminals 1+, 2: 4+, 5- Valaga for 4, V 1, 4, 2, 4, 2, 4, 1, 0, 0, 37 x current in mA) - 1.0 Short-circuit current at U ₄ , > 24 V : 45 mA Transfer current > 40 mA Transfer current > 40 mA Accuracy 1% Deviation - After calibration \$= 200 µA; incl. calibration, linearly, hysteresis and load fluctuitons at the field side up to a load of 1 KD and current \$20 mA at 20 °C 8°F) Influence of ambient temperature \$= 200 µA; incl. calibration, linearly, hysteresis and load fluctuitons at the field side up to a load of 1 KD and current \$20 mA at 20 °C 8°F) Influence of ambient temperature \$= 20 µA; incl. calibration acc. to IEC/EN 60079-11, voltage peak value 375 V Indicators/settings side electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V Indicators/settings Side electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V Indicators/settings Side electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V Indicators/settings Side electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V Indicators/settings Side electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V Indicatorsettings Side electrical isolation acc. to IEC/E	Field circuit		
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After calibration image: a constraint of the product of the constraint of the product of the constraint of the consten the const			1 %
Influence of ambient temperature ≤ ± 2 µAK at U _n ≤ 20 Y, ≤ ± 3 µAK at U _n , > 20 V Rise time ≤ 5 ms at bounce from 4 20 mA and U _n < 24 V			
Rise time ≤ 5 m s at bounce from 4 20 m A and U _n < 24 V			up to a load of 1 k Ω and current \leq 20 mÅ at 20 °C (68 °F)
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Directive 2014/34/EU EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010	Field circuit/control circuit		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
	Directive conformity		
International approvals	Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
	International approvals		

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

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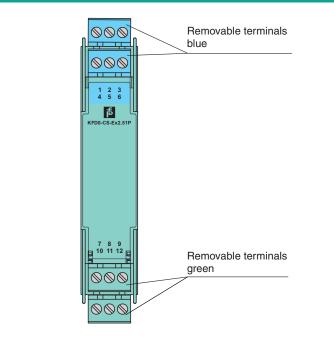
Release date: 2021-03-08 Date of issue: 2021-03-08 Filename: 294987_eng.pdf

Technical Data	_		
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		IIIGa	I Data

FM approval	
Control drawing	116-0437
UL approval	
Control drawing	116-0438 (cULus)
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



Match	Matching System Components				
	K-DUCT-BU	Profile rail, wiring comb field side, blue			
Acces	Accessories				
	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green			
	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue			
*	KF-CP	Red coding pins, packaging unit: 20 x 6			

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Application

The device is used for isolation of power loops for the control of positioner, I/P converters etc. A current source is connected to the safe area terminals.

The device is used for isolation of a current signal from fire detectors or similar sensors. In this case, a voltage source can be connected to the safe area terminals. A specific measurement current across a passive sensor can be measured in the safe area with a series resistor (min. 50 Ω). When a voltage supply is used, the measuring resistor can also provide current limitations.

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

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