## Repeater

## KFD0-CS-Ex2.50P

green

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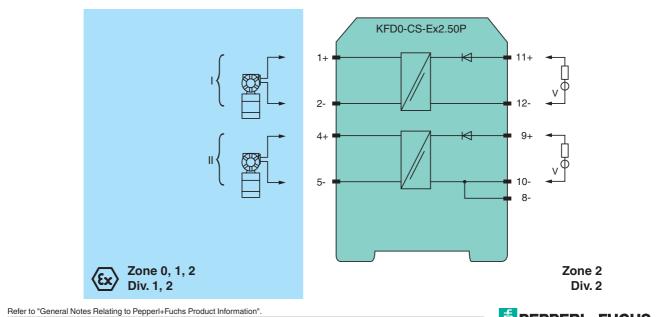
<del>71 11</del> ©©©

Features	Assembly		
<ul> <li>2-channel isolated barrier</li> <li>24 V DC supply (loop powered)</li> <li>Current input/output 4 mA 20 mA</li> <li>transmitter power supply</li> <li>Accuracy 0.1 %</li> <li>Reverse polarity protection</li> <li>Up to SIL 2 acc. to IEC 61508</li> </ul>	Front view	000 1 2 3 4 5 6 Feb. CS-Ex2. SPP	Removable terminals blue
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.		7 8 9 10 11 12	Removable terminals

Use the technical data to verify that proper voltage is available to the field devices.



## Connection



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Concernal on a sifila sticks		
General specifications		Analag input/analag autout
Signal type	romotoro	Analog input/analog output
Functional safety related pa	arameters	SIL 2
Safety Integrity Level (SIL)		SIL 2
Supply Bated voltage	Ur	
Rated voltage Control circuit	0 <sub>r</sub>	loop powered
Connection		terminale 12, 11, 9, 10, 0,
		terminals 12-, 11+; 8-, 10-, 9+ 5 35 V DC
Voltage Current		4 20 mA
		at 20 mA and $U_{in}$ < 24.3 V: < 250 mW per channel
Power dissipation		at 20 mA and $U_{in}$ > 24.3 V. < 500 mW per channel
Field circuit		
Connection		terminals 1+, 2-; 4+, 5-
Voltage		for $5V < U_{in} < 24.3V \ge 0.9 \times U_{in} - (0.37 \times \text{current in mA}) - 1.0$ for $U_{in} > 24.3 \text{ V} \ge 21 \text{ V} - (0.36 \times \text{current in mA})$
Short-circuit current		at $U_{in} > 24.3 \text{ V} :\le 65 \text{ mA}$
Transfer current		< 40 mA
Transfer characteristics		
Accuracy		0.1 %
Deviation		
After calibration		$\leq$ ± 20 µA; incl. calibration, linearity, hysteresis and load fluctuations at the field side up to a load of 1 k $\Omega$ at 20
	ratura	°C (68 °F)
Influence of ambient tempe	ature	$\leq \pm 2 \mu A/K$ at $U_{in} \leq 20 V$ ; $\leq \pm 5 \mu A/K$ at $U_{in} > 20 V$
Rise time Galvanic isolation		$\leq$ 5 ms at bounce from 4 20 mA and U <sub>in</sub> < 24 V
Field circuit/control circuit		asta alastrical isolation and to IEC/EN 60070 11 valtage peak value 275 V
Indicators/settings		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Labeling		space for labeling at the front
Directive conformity		space for fabeling at the none
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2006
Degree of protection		IEC 60529:2001
Protection against electrical s	hock	UL 61010-1
Ambient conditions	noon	
Ambient temperature		-20 60 °C (-4 140 °F)
•		
Mechanical specifications		IP20
Mechanical specifications Degree of protection		IP20 screw terminals
Mechanical specifications		screw terminals
Mechanical specifications Degree of protection Connection		
Mechanical specifications Degree of protection Connection Mass		screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1
Mechanical specifications Degree of protection Connection Mass Dimensions	nection	screw terminals approx. 100 g
Mechanical specifications Degree of protection Connection Mass Dimensions Mounting	nection	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1
Mechanical specifications Degree of protection Connection Mass Dimensions Mounting Data for application in conr		screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343
Mechanical specifications Degree of protection Connection Mass Dimensions Mounting Data for application in commwith hazardous areas		screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001
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Mechanical specifications Degree of protection Connection Mass Dimensions Mounting Data for application in com with hazardous areas EU-Type Examination Certific Marking Voltage	ate U <sub>o</sub>	screw terminals approx. 100 g $20 \times 107 \times 115 \text{ mm} (0.8 \times 4.2 \times 4.5 \text{ inch})$ , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \widehat{\text{ts}} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{\text{amb}} \leq 60$ °C) 25.2 V
Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in committee with hazardous areas         EU-Type Examination Certification         Marking         Voltage         Current	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub>	screw terminals approx. 100 g $20 \times 107 \times 115 \text{ mm} (0.8 \times 4.2 \times 4.5 \text{ inch})$ , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \widehat{x} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA
Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in consistent with hazardous areas         EU-Type Examination Certification         Marking         Voltage         Current         Power	ate U <sub>o</sub> I <sub>o</sub>	screw terminals approx. 100 g $20 \times 107 \times 115 \text{ mm} (0.8 \times 4.2 \times 4.5 \text{ inch})$ , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \widehat{x} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA
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Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in consisting         with hazardous areas         EU-Type Examination Certifice         Marking         Voltage         Current         Power         Control circuit         Maximum safe voltage	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub>	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \underline{x} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA 585 mW 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.)
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Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in comwith hazardous areas         EU-Type Examination Certificat         Marking         Voltage         Current         Power         Control circuit         Maximum safe voltage         Field circuit         Maximum safe voltage         Certificate         Marking	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub> U <sub>m</sub>	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \underline{x} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA 585 mW 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.)
Mechanical specificationsDegree of protectionConnectionMassDimensionsMountingData for application in comwith hazardous areasEU-Type Examination CertificatMarkingVoltageCurrentPowerControl circuitMaximum safe voltageField circuitMaximum safe voltageCertificateMarkingGalvanic isolation	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub> U <sub>m</sub>	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 ( $\bigotimes$ ) II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq$ T <sub>amb</sub> $\leq$ 60 °C) 25.2 V 93 mA 585 mW 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) TÜV 99 ATEX 1499 X ( $\bigotimes$ ) II 3G Ex nA II T4 [device in zone 2]
Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in comwith hazardous areas         EU-Type Examination Certificate         Marking         Voltage         Current         Power         Control circuit         Maximum safe voltage         Field circuit, control circuit         Marking         Certificate         Marking         Field circuit/control circuit	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub> U <sub>m</sub>	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch), housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 $\langle \widehat{x} \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA 585 mW 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) TÜV 99 ATEX 1499 X
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Mechanical specifications         Degree of protection         Connection         Mass         Dimensions         Mounting         Data for application in consisting         With hazardous areas         EU-Type Examination Certifice         Marking         Voltage         Current         Power         Control circuit         Maximum safe voltage         Field circuit         Maximum safe voltage         Certificate         Marking         Galvanic isolation         Field circuit/control circuit         Directive conformity         Directive 2014/34/EU         International approvals	ate U <sub>o</sub> I <sub>o</sub> P <sub>o</sub> U <sub>m</sub>	screw terminals approx. 100 g 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch), housing type B1 on 35 mm DIN mounting rail acc. to EN 60715:2001 BAS 98 ATEX 7343 ( $\bigotimes$ ) II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) 25.2 V 93 mA 585 mW 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) 250 V <sub>eff</sub> (Attention! The rated voltage can be lower.) TÜV 99 ATEX 1499 X ( $\bigotimes$ ) II 3G Ex nA II T4 [device in zone 2] safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V

Refer to "General Notes Relating to Pepperl+Fuchs Product Information". Pepperl+Fuchs Group www.pepperl-fuchs.com

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## **Technical data**

Control drawing	116-0173 (cULus)
IECEx approval	IECEx BAS 05.0004
Approved for	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

Refer to "General Notes Relat	ing to Pepperl+Fuchs Product Inform	ation".
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