



- 1-channel
- Field circuit EEx ia IIC
- Device installation permissible in zone 2
- Accuracy 0.1 %
- EMC acc. to NAMUR NE 21
- Up to SIL2 acc. to IEC 61508

**KFD0-CS-Ex1.50P**

**Function**

These devices are designed for the connection of fire detectors, smoke detectors or for controlling of I/P converters etc.

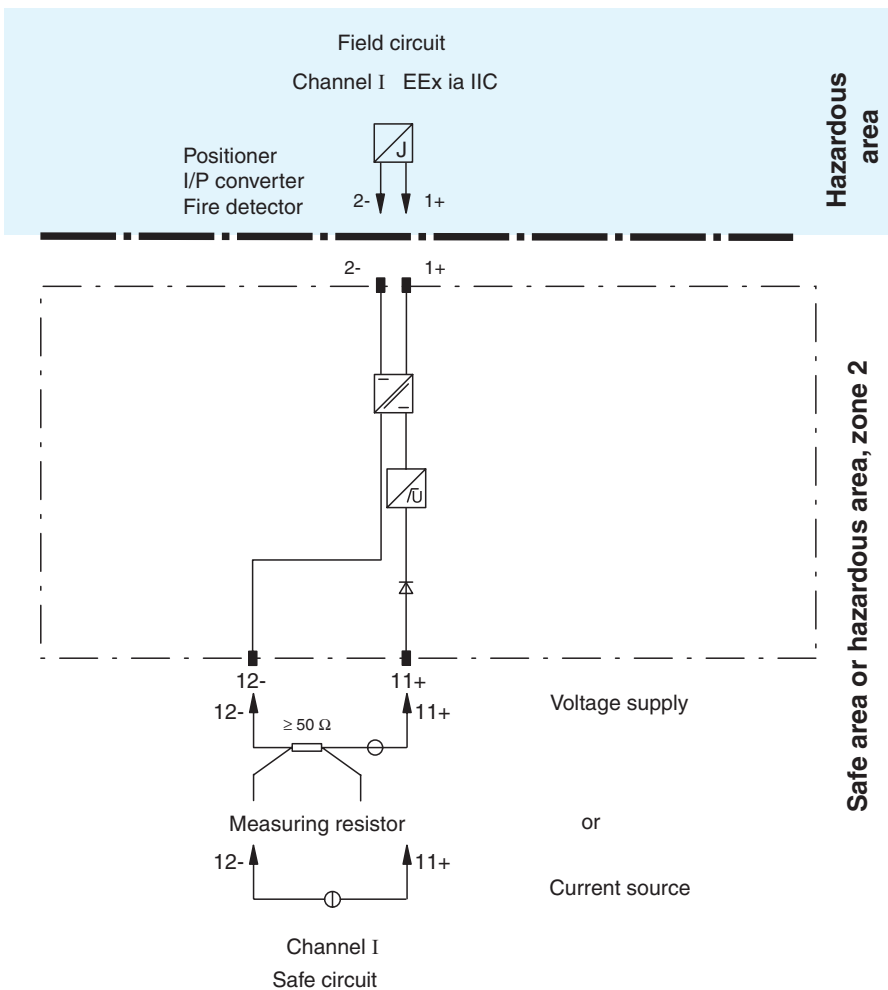
Their increased current range and the higher accuracy allow for differentiation between normal operation, fire alarm, lead breakage and short circuit current in the safe area.

A separate power supply with auxiliary power is not required. Due to the input voltage limiting of 24 V, the maximum voltage output is 21 V.

**Application**

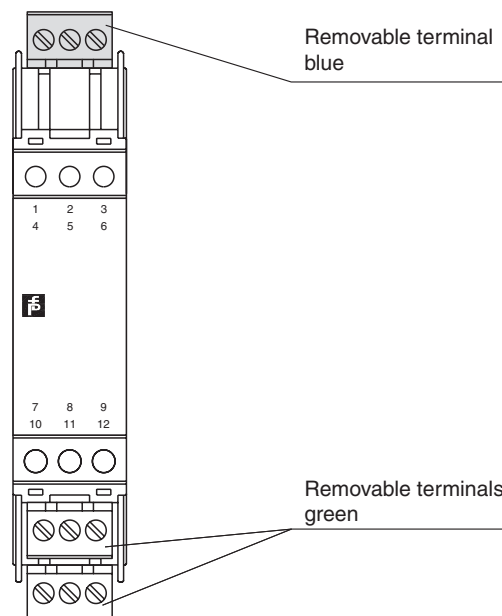
- The isolation of power loops for the control of positioner, I/P converters etc. A current source is connected to the safe area terminals.
- The isolation of a current signal from fire detectors or similar sensors. In this case, a voltage source can be connected to the safe area terminals. A specific 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.

**Connection**



**Composition**

**Front view**



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<b>Supply</b>	
Rated voltage	loop powered
<b>Safe circuit</b>	
Connection	terminals 12-, 11+
Voltage	5 ... 35 V DC
Current	4 ... 20 mA
Power loss	at 20 mA and $U_{in} < 24.3$ : < 250 mW per channel at 20 mA and $U_{in} > 24.3$ V: < 500 mW per channel
<b>Field circuit</b>	
Connection	terminals 1+, 2-
Output voltage	for $5V < U_{in} < 24.3V$ : $\geq 0.9 \times U_{in} - (0.37 \times \text{current in mA}) - 1.0$ for $U_{in} > 24.3$ V: $\geq 21$ V - (0.36 x current in mA)
Short-circuit current	at $U_{in} > 24.3$ V : $\leq 65$ mA
Transfer current	$\leq 40$ mA
<b>Transfer characteristics</b>	
Deviation	
After calibration	$\leq \pm 20 \mu\text{A}$ ; incl. calibration, linearity, hysteresis and load fluctuations at the output up to a load of 1 k $\Omega$ at 20 °C (293 K)
Rise time	$\leq 5$ ms at 4 ... 20 mA step and $U_{in} < 24$ V
<b>Electrical isolation</b>	
Field circuit/safe circuit	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 89/336/EC	EN 50081-2, EN 50082-2
<b>Conformity</b>	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	BAS 98 ATEX 7343 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	$\text{Ex}$ II (1)GD [EEx ia] IIC (-20 °C $\leq T_{amb} \leq 60$ °C)
Voltage $U_o$	25.2 V
Current $I_o$	93 mA
Power $P_o$	585 mW
<b>Safe circuit</b>	
Safety maximum voltage $U_m$	250 V $_{eff}$ (Attention! The rated voltage can be lower.)
<b>Field circuit</b>	
Safety maximum voltage $U_m$	250 V $_{eff}$ (Attention! The rated voltage can be lower.)
<b>Statement of conformity</b>	
Group, category, type of protection, temperature classification	$\text{Ex}$ II 3G EEx nA II T4
<b>Electrical isolation</b>	
Field circuit/safe circuit	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 94/9 EC	EN 50014, EN 50020, EN 50021
<b>Entity parameter</b>	
Certification number	4Z6A5.AX
FM control drawing	No. 116-0129
Suitable for installation in division 2	yes
Connection	terminals 1, 2
<b>Field circuit</b>	
Voltage $V_{OC}$	25.2 V
Current $I_t$	93 mA
<b>Safety parameter</b>	
Certification number	LR 65756-13
CSA control drawing	No. 116-0132
Connection	terminals 1, 2

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Field circuit		
Voltage	$V_{OC}$	25.2 V
Current	$I_{SC}$	93 mA
<b>General information</b>		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .