- For fire alarm in "SMART technology"
- Transmission range: 1 mA ... 20 mA
- Input EEx ia IIC
- Device installation in Zone 2
- Loop powered
- EMC acc. to NAMUR NE 21

1-channel

KFD0-CS-Ex1.54

Function

The devices have 4 terminals per channel. The input and output are galvanically isolated from each other.

The device is used in order to control SMART compatible fire or smoke detectors in the hazardous area. The power source for the indicators is mounted in the safe area.

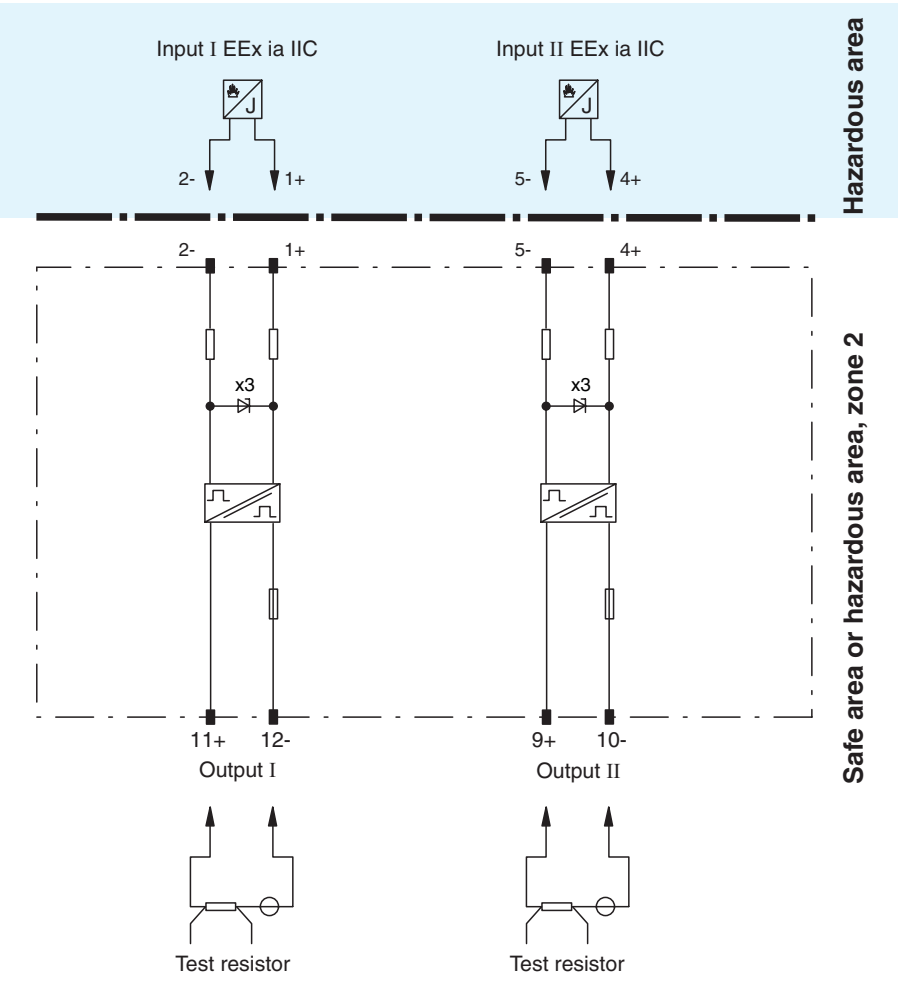
The device transfers the voltage to the hazardous area. A response from the indicator is displayed in the case of a current alteration in the safe area.

With the device it is possible to modulate an AC voltage signal upon an analogue signal. A digital data exchange between the devices in the safe area and the hazardous area is then possible parallel to signal transfer. The drop time of the digital signal must be less than 50 µs and the current in the hazardous area must be greater than 1 mA.

Application

The connection of SMART compatible fire and smoke detectors, when a digital data exchange is required.

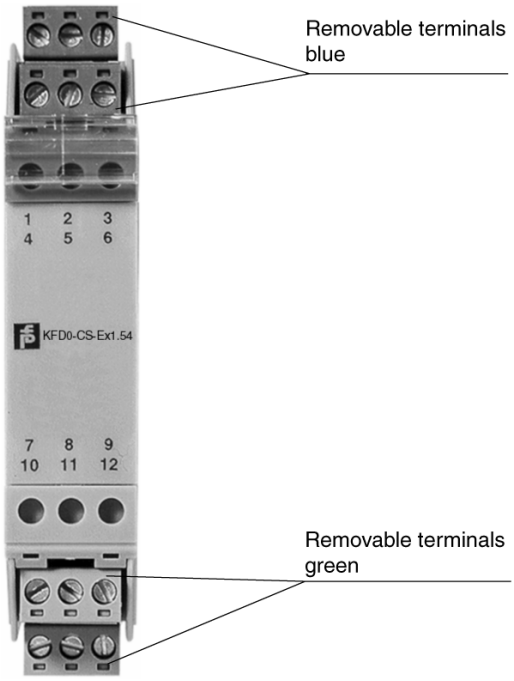
Connection



Composition

Front View

Housing type A4
(see system description)



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General specifications	
Signal type	Analog input
Supply	
Rated voltage	loop powered
Power loss	0.2 W
Input	
Connection	terminals 1+, 2-; 4+, 5-
Short-circuit current	≤ 65 mA
Transmission range	voltage: 4 ... 26 V DC/0 ... 6 V_{pp} AC current: 1 ... 20 mA
Output	
Connection	terminals 11+, 12-; 9+, 10-
Current	0 ... 20 mA
Voltage	0 ... 26 V for 4 V ≤ U_{in} ≤ 26 V: ≥ U_{in} - (0.38 x current in mA) - 0.5
Transfer characteristics	
Deviation	
After calibration	-1.6 ... 0 mA (incl. non-linearity, hysteresis, load and DC quiescent current)
Influence of ambient temperature	± 20 µA / K
Rise time	≤ 50 µs (load current ≥ 1 mA)
Electrical isolation	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Electromagnetic compatibility	standards
Directive 89/336/EEC	**on request**
Standard conformity	
Insulation coordination	acc. to DIN EN 50178
Electrical isolation	acc. to DIN EN 50178
Electromagnetic compatibility	acc. to EN 50081-2 / EN 50082-2, NAMUR NE 21
Climatic conditions	acc. to DIN IEC 721
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	BAS 00 ATEX 7087 ; for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⟨Ex⟩ II (1)GD [EEx ia] IIC (-20 °C ≤ T_{amb} ≤ 60 °C)
Voltage U_o	28 V
Current I_o	93 mA
Power P_o	653 mW
Type of protection [EEx ia]	
Statement of conformity	TÜV 99 ATEX 1499 X (observe statement of conformity)
Group, category, type of protection, temperature classification	⟨Ex⟩ II 3G EEx nA II T4
Electrical isolation	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	**standards**
Directive 94/9/EC	**on request**

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