



2-channel

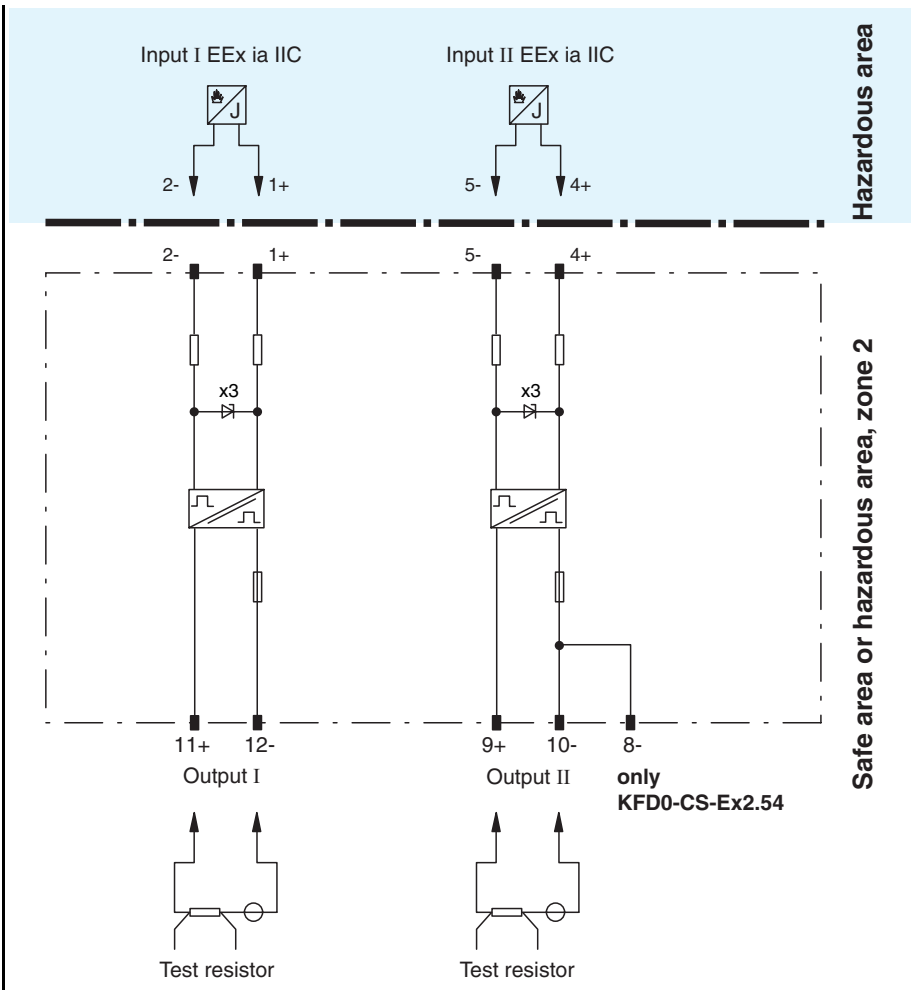
- For fire alarm in "SMART technology"
- Transmission range: 1 mA ... 20 mA
- Input EEx ia IIC
- Device installation permissible in zone 2
- Loop powered
- EMC acc. to NAMUR NE 21

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

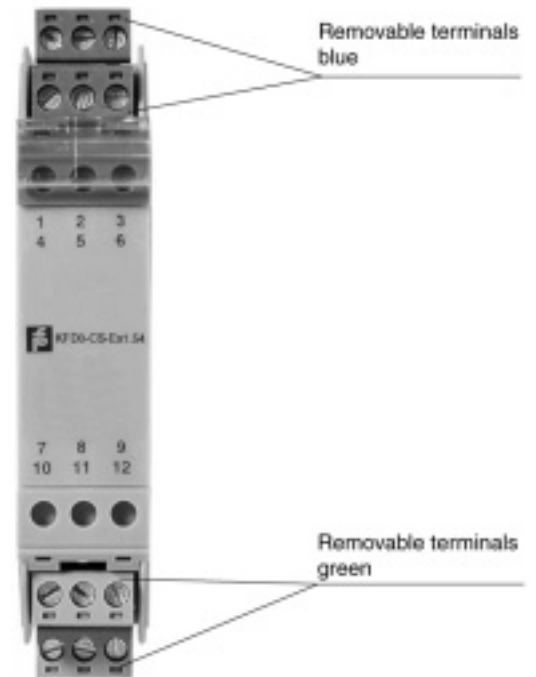
The connection of SMART compatible fire and smoke detectors, when a digital data exchange is required.



Composition

Front View

Housing type A4
(see system description)



Supply			
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 _{SS} AC current: 1 ... 20 mA		
Output			
Connection	terminals 11+, 12-; 9+, 10-		
Current	0 ... 20 mA		
Voltage	0 ... 26 V for 4 V ≤ U _E ≤ 26 V: ≥ U _E - (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)		
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		
Standard conformity			
Coordination of insulation	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		
Directive conformity			
Electromagnetic compatibility	standards		
Directive 89/336/EG	on request		
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 X ; for additional certificates refer to the approval list		
Group, category, type of protection	⊕ II (1) G D [Ex ia] IIC (-20 °C ≤ T _a ≤ 60 °C)		
Voltage U ₀	28 V		
Current I ₀	93 mA		
Power P ₀	653 mW		
Type of protection [Ex ia]			
Explosion group	IIA	IIB	IIC
External capacitance	2,14 µF	0,64 µF	0,077 µF
External inductance	35 mH	17 mH	4,3 mH
Statement of conformity	TÜV 99 ATEX 1499 X (observe statement of conformity)		
Group, category, type of protection, Temperature classification	⊕ II 3 G EEx nA II T4		
Supply			
Safety maximum voltage U _m	250 V		
Electrical isolation			
Input/Output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V		
Directive conformity			
Directive 94/9 EU	on request		
Entity parameter			
Certification number	4Z6A5.AX		
FM control drawing	No. 116-0129		
Suitable for installation in division 2	yes		
Connection	terminals 1, 2; 4, 5		
Input I			
Voltage V _{OC}	28,5 V		
Current I _t	95 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C _a	0,13 µF	0,41 µF	1,1 µF
Max. external inductance L _a	4,09 mH	16,02 mH	32,82 mH
Safety parameter			
CSA control drawing	LR 65756-13		
Control drawing	No. 116-0132		

Connection	terminals 1, 2; 4, 5		
Input I			
Safety parameter	28 V / 300 Ohm		
Voltage V_{OC}	28 V		
Current I_{SC}	93,3 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance C_a	0,14 μ F	0,42 μ F	1,14 μ F
Max. external inductance L_a	3,1 mH	16,7 mH	34 mH