

Features

- 1-channel isolated barrier
- AC/DC wide range supply
- 2-wire transmitters or current sources
- Output 0/4 mA ... 20 mA
- 2 relay contact outputs
- Programmable high/low alarm
- Configurable by **PACTware™** or keypad
- Line fault detection (LFD)
- Up to SIL2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It is suitable for a variety of measuring tasks.

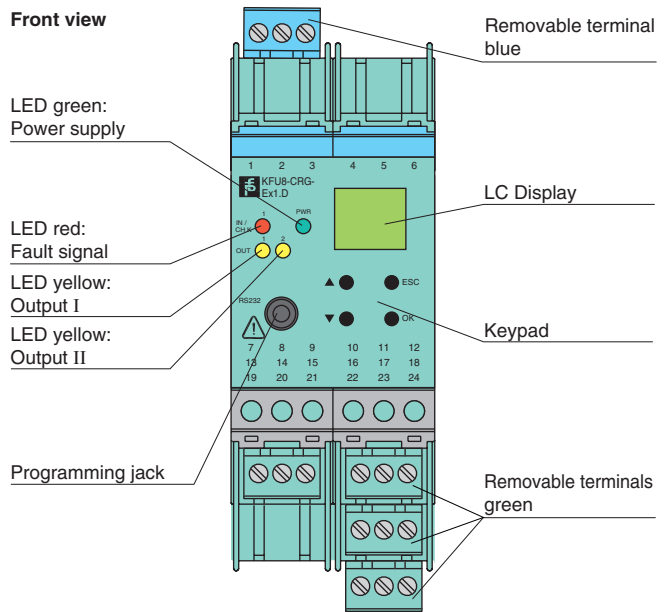
Active power supplies as well as 2-wire transmitters can be connected. Two relays and an active 0/4 mA ... 20 mA current source are available as outputs.

The relay contacts and the current output can be integrated in security-relevant circuits. The trip values of the relays are derived from the transmitter signal or the signal of a connected power source. The current output is easily scaled. The input has a line fault detection.

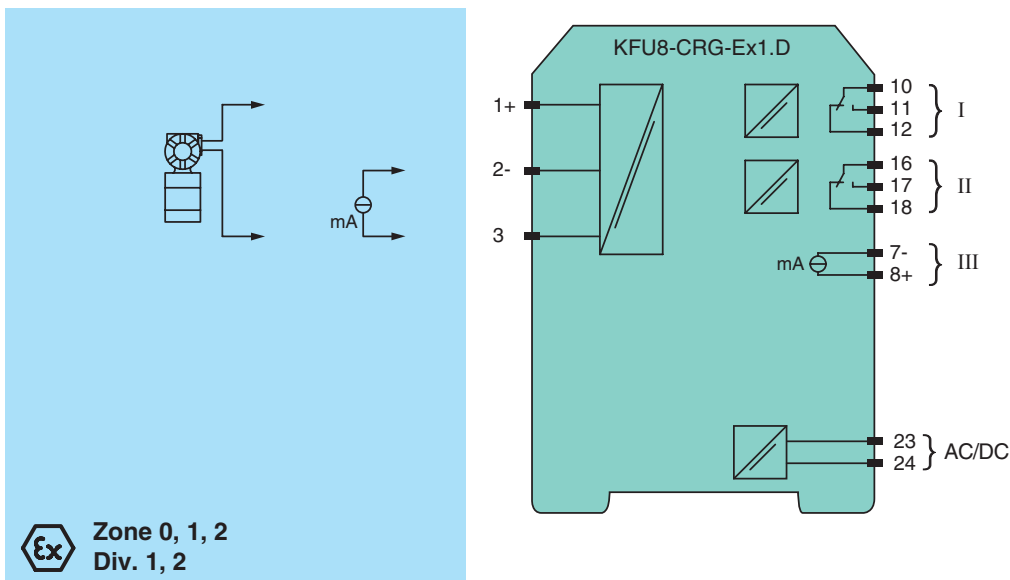
The unit is easily programmed by the use of a keypad located on the front of the unit or with the **PACTware™** configuration software.

For additional information, refer to the manual and www.pepperl-fuchs.com.

Assembly



Connection



Ex Zone 0, 1, 2
Div. 1, 2

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Supply	
Connection	terminals 23, 24
Rated voltage	20 ... 90 V DC or 48 ... 253 V AC
Power loss	2 W / 3 VA
Power consumption	2.2 W / 4 VA
Input	
Connection	terminals 1, 2, 3
Input I	
Input signal	0 ... 20 mA or 4 ... 20 mA
Available voltage	> 15 V at 20 mA
Open-circuit voltage/short-circuit current	24 V / 33 mA
Input resistance	45 Ω (terminals 2, 3)
Lead monitoring	breakage I < 0.2 mA; short-circuit I > 22 mA acc. to NAMUR NE43
Output	
Connection	output I: terminals 10, 11, 12 output II: terminals 16, 17, 18 output III: terminals 8+, 7-
Output signal	0 ... 20 mA or 4 ... 20 mA
Output I, II	
Contact loading	250 V AC / 2 A / $\cos \phi \geq 0.7$; 40 V DC / 2 A
Mechanical life	5×10^7 switching cycles
Energized/de-energized delay	approx. 20 ms / approx. 20 ms
Output III	
Current range	0 ... 20 mA or 4 ... 20 mA
Open loop voltage	≤ 24 V DC
Load	≤ 650 Ω
Fault signal	downscale I ≤ 3.6 mA, upscale I ≥ 21.5 mA (acc. NAMUR NE43)
Transfer characteristics	
Input I	
Accuracy	< 30 μA
Measuring time	< 100 ms
Influence of ambient temperature	0.003 %/°C (30 ppm)
Output I, II	
Response delay	≤ 200 ms
Output III	
Resolution	≤ 10 μA
Accuracy	< 20 μA
Influence of ambient temperature	0.005 %/°C (50 ppm)
Electrical isolation	
Output I, II/other circuits	reinforced insulation acc. to IEC 61140, rated insulation voltage 300 V _{eff}
Mutual output I, II, III	reinforced insulation acc. to IEC 61140, rated insulation voltage 300 V _{eff}
Output III/power supply	reinforced insulation acc. to IEC 61140, rated insulation voltage 300 V _{eff}
Interface/power supply	reinforced insulation acc. to IEC 61140, rated insulation voltage 300 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326, EN 50081-2, EN 50082-2
Low voltage	
Directive 73/23/EEC	EN 50178
Conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Protection against electric shock	IEC 61140
Input	EN 60947-5-6
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	300 g
Dimensions	40 x 119 x 115 mm (1.6 x 4.7 x 4.5 in) , housing type C3
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	TÜV 01 ATEX 1701 , for additional certificates see www.pepperl-fuchs.com

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Group, category, type of protection	⊕ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]	
Input	EEx ia IIC	
Supply		
Safety maximum voltage U_m	253 V AC (Attention! The rated voltage can be lower.)	
Equipment	terminals 1+, 3-	
Voltage U_o	25.8 V	
Current I_o	93 mA	
Power P_o	0.603 W	
Equipment	terminals 2-, 3	
Voltage U_i	< 30 V	
Current I_i	115 mA	
Voltage U_o	5 V	
Current I_o	0.3 mA	
Power P_o	0.3 mW	
Equipment	terminals 1+, 2 / 3-	
Voltage U_o	25.8 V	
Current I_o	112 mA	
Power P_o	720 mW	
Output I, II	terminals 10, 11, 12; 16, 17, 18 non-intrinsically safe	
Safety maximum voltage U_m	253 V AC / 40 V DC (Attention! U_m is no rated voltage.)	
Contact loading	253 V AC/2 A/cos ϕ > 0.7; 40 V DC/2 A resistive load	
Output III	terminals 8+, 7- non-intrinsically safe	
Safety maximum voltage U_m U_m	40 V (Attention! The rated voltage can be lower.)	
Interface	RS 232	
Safety maximum voltage U_m	40 V (Attention! The rated voltage can be lower.) , RS 232	
Electrical isolation		
Input/other circuits	safe electrical isolation acc. to EN 50020, voltage peak value 375 V	
Directive conformity		
Directive 94/9 EC	EN 50014, EN 50020	
International approvals		
CSA approval		
Control drawing	116-0202	
General information		
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .	

Accessories

PACT^{ware}™

Device-specific drivers (DTM)

Adapter K-ADP1

Programming adapter for parameterisation via the serial RS 232 interface of a PC/Notebook

For programming, please use the new version of adapter K-ADP1 (part no. 181953, connector length 14mm). When using the previous version K-ADP1 (connector length 18 mm) the plug is exposed by approx. 3 mm. The function is not affected.

Adapter K-ADP-USB

Programming adapter for parameterisation via the serial USB interface of a PC/Notebook