

## Features

- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Scaleable current or voltage input
- Current or voltage output
- Relay contact output
- Configurable by keypad
- Line fault detection (LFD)

## Function

This signal conditioner is suitable for the connection of current and voltage signals and provides isolation for non-intrinsically safe applications.

The input ranges include 0 mA ... 20 mA, 0 V ... 10 V or 0 mV ... 60 mV. Subranges from the input ranges are selectable.

The output measuring signals are 0/4 mA ... 20 mA, 0/2 V ... 10 V or 0/1 V ... 5 V.

The output relay serves as trip value contact.

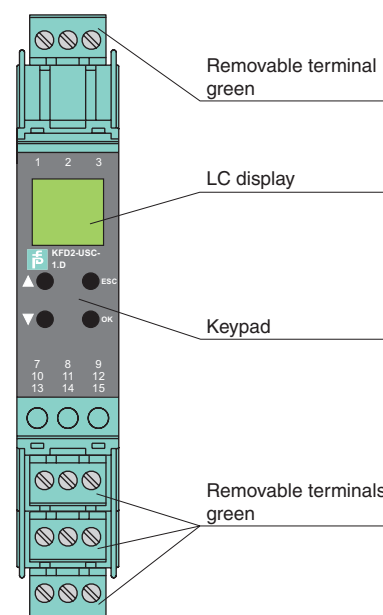
On the display the measured value can be indicated in various physical units.

The unit is easily programmed by the use of a keypad located on the front of the unit.

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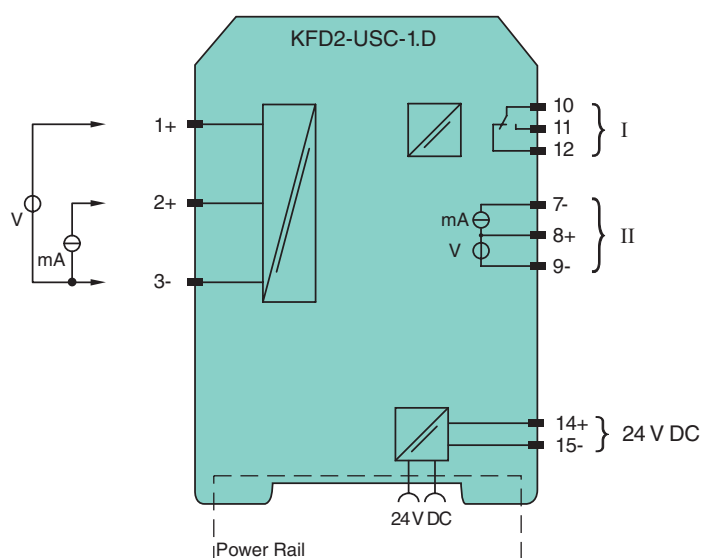
## Assembly

Front view



CE

## Connection



<b>General specifications</b>		
Signal type		Analog input
<b>Supply</b>		
Connection		terminals 14+, 15- or Power Rail
Rated voltage	$U_r$	20 ... 30 V DC
Rated current	$I_r$	≤ 80 mA DC
Power consumption		≤ 1.6 W
<b>Input</b>		
Connection side		field side
Connection		terminals 1+, 3- : mV, V ; terminals 2+, 3- : mA
Input resistance		voltage: 1 MΩ , current: ≤ 100 Ω
Limit		30 V
Current		0 ... 20 mA
Voltage		0 ... 10 V / 0 ... 60 mV
Resolution		15 Bit
<b>Output</b>		
Connection side		control side
Connection		output I: terminals 10, 11, 12 output II: terminals 7-, 8+, 9-
Output I		signal, relay
Contact loading		250 V AC/2 A/cos φ 0.7; 40 V DC/2 A
Mechanical life		2 x 10 <sup>7</sup> switching cycles
Energized/De-energized delay		approx. 10 ms / approx. 10 ms
Output II		analog
Load		current: ≤ 550 Ω , voltage: ≥ 1 kΩ
Analog voltage output		0/1 ... 5 V , 0/2 ... 10 V
Analog current output		0/4 ... 20 mA
<b>Transfer characteristics</b>		
Deviation		0.1 % of full-scale value
Resolution/accuracy		current: 1 μA/20 μA voltage: 0.5 mV/10 mV mV: 3 μV/60 μV
Influence of ambient temperature		0.003 %/K (30 ppm)
Reaction time		≥ 150 ms/≤ 300 ms
<b>Galvanic isolation</b>		
Input/Output		reinforced insulation according to IEC 61140, rated insulation voltage 300 V <sub>eff</sub>
Input/power supply		reinforced insulation according to IEC 61140, rated insulation voltage 300 V <sub>eff</sub>
Output/power supply		reinforced insulation according to IEC 61140, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>		
Display elements		display
Control elements		Control panel
Configuration		via operating buttons
Labeling		space for labeling at the front
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Low voltage		
Directive 2006/95/EC		EN 50178:1997
<b>Conformity</b>		
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529
Protection against electrical shock		IEC 61140
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		screw terminals
Mass		150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) , housing type B3
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>General information</b>		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see

Release date 2018-05-08 08:09 Date of issue 2018-05-08 192797\_eng.xml

## Accessories

### Power feed module KFD2-EB2

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 150 individual devices depending on the power consumption of the devices. Collective error messages received from the Power Rail activate a galvanically-isolated mechanical contact.

### Power Rail UPR-03

The Power Rail UPR-03 is a complete unit consisting of the electrical insert and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

### Profile Rail K-DUCT with Power Rail

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



*Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!*