

## Features

- 2-channel signal conditioner
- 24 V DC supply (Power Rail)
- Input 2-wire SMART transmitters
- Output 4 mA ... 20 mA
- Terminals with test sockets
- Up to SIL2 acc. to IEC 61508

## Function

This signal conditioner provides the isolation for non-intrinsically safe applications.

The device supplies 2-wire SMART transmitters.

It transfers the analog input signal as an isolated current value.

Digital signals may be superimposed on the input signal and are transferred bi-directionally.

If the HART communication resistance in the loop is too low, the internal resistance of 250  $\Omega$  between terminals 8, 9 and 11, 12 can be used.

Test sockets for the connection of HART communicators are integrated into the terminals of the device.

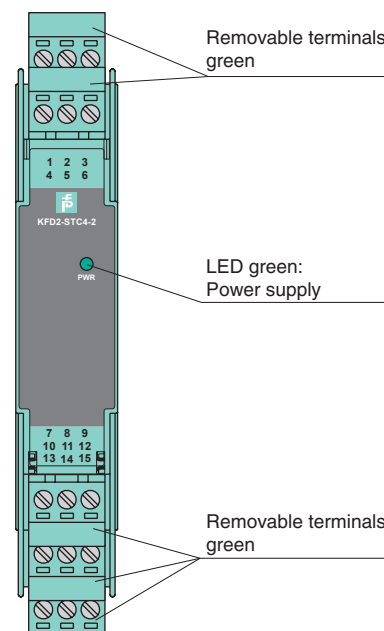
## Application

The device supports the following SMART protocols:

- HART
- BRAIN
- Foxboro

## Assembly

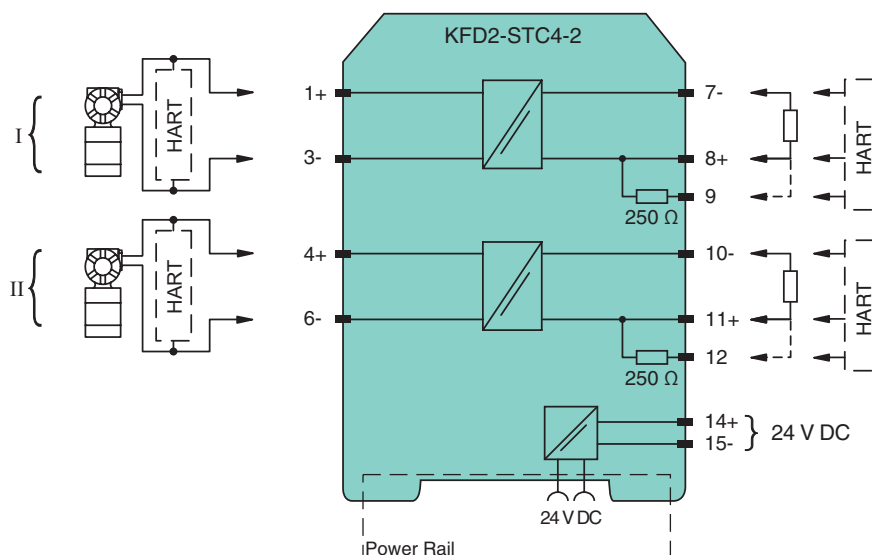
Front view



CE

**SIL2**

## Connection



<b>General specifications</b>	
Signal type	Analog input
<b>Supply</b>	
Connection	Power Rail or terminals 14+, 15-
Rated voltage	20 ... 35 V DC
Ripple	within the supply tolerance
Power loss	1.9 W
Power consumption	≤ 2.8 W
<b>Input</b>	
Connection	terminals 1+, 3-; 4+, 6-
Input signal	4 ... 20 mA
Available voltage	≥ 16 V at 20 mA, terminals 1+, 3
<b>Output</b>	
Connection	terminals 7-, 8+; 10-, 11+
Load	0 ... 550 Ω
Output signal	4 ... 20 mA (overload > 25 mA)
Ripple	≤ 50 μA <sub>rms</sub>
<b>Transfer characteristics</b>	
Deviation	at 20 °C (293 K), 4 ... 20 mA ≤ 10 μA incl. calibration, linearity, hysteresis, loads and fluctuations of supply voltage
Influence of ambient temperature	0.25 μA/°C
Frequency range	input to output: bandwidth with 1 V <sub>pp</sub> -signal 0 ... 7.5 kHz (-3 dB) output to input: bandwidth with 1 V <sub>pp</sub> -signal 0.3 ... 7.5 kHz (-3 dB)
Rise time	20 μs
Settling time	200 μs
De-energized delay	20 μs
<b>Electrical isolation</b>	
Input/output	basic insulation according to EN 50178, rated insulation voltage 253 V <sub>eff</sub>
Input/power supply	basic insulation according to EN 50178, rated insulation voltage 253 V <sub>eff</sub>
Output/power supply	functional insulation, rated insulation voltage 50 V AC
Output/output	functional insulation, rated insulation voltage 50 V AC
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Input	EN 60947-5-6
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 150 g
Dimensions	20 x 124 x 115 mm (0.8 x 4.9 x 4.5 in) , housing type B2
<b>General information</b>	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## Accessories

### Power feed modules 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 100 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

### Power Rail UPR-03

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

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