

Features

- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Voltage input -50 mV ... 50 mV
- Output 4 mA ... 20 mA
- Span and zero point adjustment
- Line fault detection (LFD)

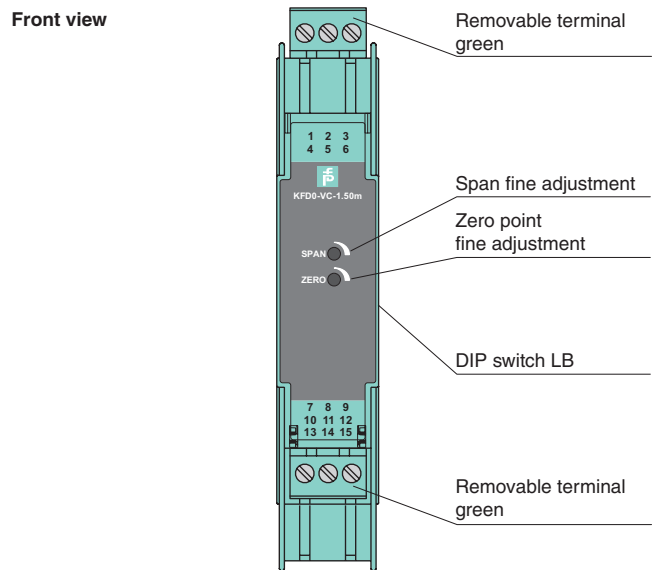
Function

This signal conditioner receives a -50 mV ... 50 mV signal input and produces a 4 mA ... 20 mA output. It also provides isolation for non-intrinsically safe applications.

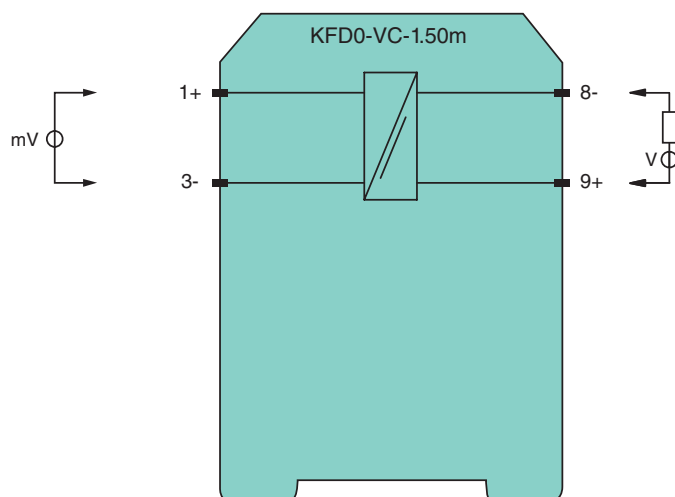
Fine adjustment for zero and span are performed with the potentiometer on top of the unit.

Optional lead breakage monitoring is available with the field configurable DIP switches. Enabling this feature produces an output ≤ 3 mA when the input lead is broken, while disabling it produces an output ≤ 22 mA.

Assembly



Connection



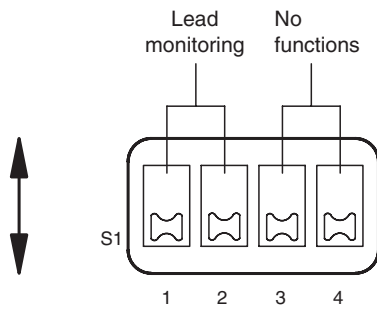
Release date 2010-11-04 Date of issue 2010-11-04 14:08 046636_ENG.xml

General specifications	
Signal type	Analog input
Supply	
Rated voltage	12 ... 35 V DC loop powered
Power loss	0.4 W
Input	
Connection	terminals 1+, 3-
Input current	input monitoring ON: ≤ 15 nA; OFF: ≤ 1 nA
Voltage range	-50 ... 50 mV (factory adjustment)
Output	
Connection	terminals 9+, 8-
Load	≤ (supply voltage -12 V) / 0.02 A
Current output	4 ... 20 mA , limited to ≤ 35 mA
Fault signal	downscaling ≤ 3 mA , upscaling ≥ 22 mA
Transfer characteristics	
Measurement range f_n	-50 ... +50 mV, zero point ± 1 % of full-scale value, span ± 3.5 % of full-scale value
Deviation	
After calibration	0.1 % of full-scale value
Temperature effect	span: 0.005 % of span /K zero point: 0.01 % of span /K or ± 1 μV/K (the larger value is applicable)
Linearization	≤ 0.04 % of full-scale value
Influence of supply voltage	6.5 ppm/V
Rise time	250 ms
Electrical isolation	
Input/Output	Basic insulation according to EN 50178, rated insulation voltage 253 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EEC	EN 61326, EN 50081-2
Conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 150 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
General information	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Release date 2010-11-04 14:08 Date of issue 2010-11-04 046636_ENG.xml

Configuration

DIP switches function



Switch	Position	Function
S1.1	1	LB UP-upscaled
S1.2	0	
S1.1	0	LB DOWN-downscaled
S1.2	1	

Adjustment instruction (example):

Input signal -50 mV ... +50 mV

Output signal 4 mA ... 20 mA; error message lead breakage downscaled

1. Set DIP switch S1.2 to the 1 position. Set all other DIP switches to the 0 position.
2. Add input minimum value of -50 mV.
3. Adjust output, zero point fine adjustment (4 mA).
4. Add maximum value +50 mV.
5. Adjust output, span fine adjustment (20 mA).

Steps 2. ... 5. may need to be repeated.