Features

- 1-channel signal conditioner
- 24 V DC supply
- Input bipolar millivolt sources
- Output bipolar current and voltage sources
- Accuracy 0.1 %
- Configurable via DIP switches and potentiometer
- Connection via screw terminals

Function

This signal conditioner provides the galvanic isolation between field circuits and control circuits.

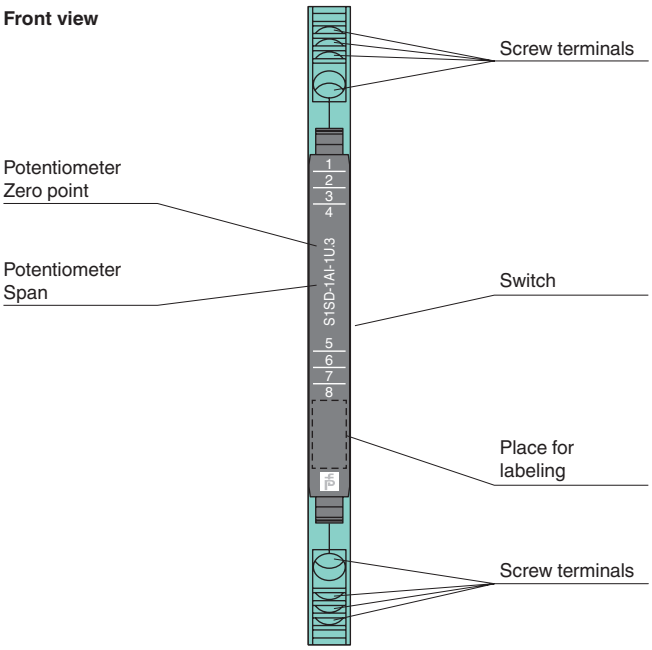
The device has an input for bipolar millivolt sources.

At the output the signals are available as bipolar current and voltage sources.

The device is easily configured by the use of DIP switches and potentiometers.

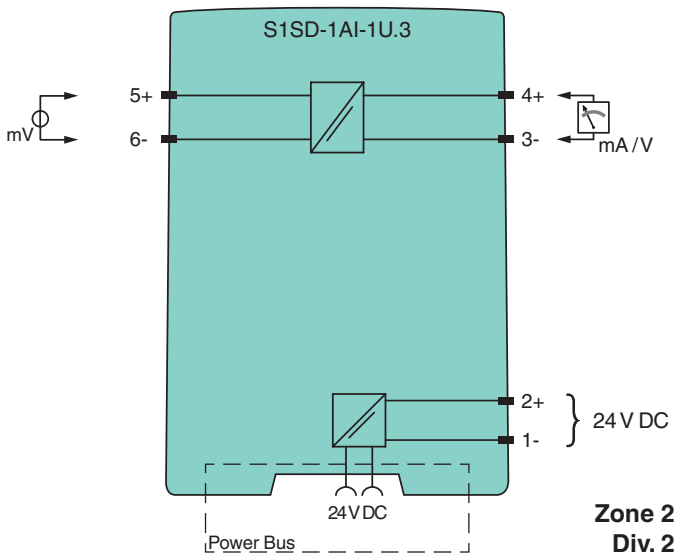
The device can be powered via terminals or Power Bus.

Assembly



CE

Connection



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General specifications		
Signal type		Analog input
Supply		
Connection		Power Bus or terminals 1-, 2+
Rated voltage	U_r	16.8 ... 31.2 V DC
Power dissipation		0.6 W
Power consumption		0.8 W
Input		
Connection		terminals 5+, 6-
Input signal		±60 mV, ±100 mV, ±150 mV, ±250 mV, ±300 mV, ±500 mV
Input resistance		≥ 100 kΩ
Transmission range		linearity range: unipolar -1 ... 110 % bipolar -110 ... 110 %
Output		
Connection		terminals 3-, 4+
Analog voltage output		0/1 ... 5 V , 0/2 ... 10 V , ± 5 V, ± 10 V , load ≥ 2 kΩ
Analog current output		0/4 ... 20 mA, ± 10 mA, ± 20 mA, load ≤ 600 Ω
Ripple		≤ 10 mV $_{eff}$
Transfer characteristics		
Deviation		≤ 0.1 % of full-scale value
Influence of ambient temperature		< 100 ppm/K of full-scale value
Frequency range		0 ... 100 Hz , 0 ... 8 kHz
Settling time		7 ms , 150 µs
Galvanic isolation		
Output/power supply		safe electrical isolation by reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff} test voltage 3 kV, 50 Hz, 1 min
Input/Other circuits		safe electrical isolation by reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff} test voltage 3 kV, 50 Hz, 1 min
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Degree of protection		IEC 60529:2001
Protection against electrical shock		EN 61010-1:2010
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Damaging gas		designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Connection type		screw terminals
Core cross-section		0.5 ... 2.5 mm^2 , 20 ... 14 AWG
Degree of protection		IP20
Mass		approx. 70 g
Dimensions		6.2 x 97 x 107 mm (0.24 x 3.82 x 4.21 inch) , housing type S1
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		DEMKO 16 ATEX 1750X
Marking		⟨Ex⟩ II 3G Ex nA IIC T4 Gc
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-15:2010
International approvals		
UL approval		E106378
IECEx approval		IECEx UL 16.0116X
Approved for		Ex nA IIC T4 Gc
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.
Accessories		

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Optional accessories	power feed module S1SD-2PF Power Bus POWERBUS-SETL5.*** Power Bus POWERBUS-SETH5.*** cover for DIN mounting rail POWERBUS-COV.250 end cap POWERBUS-CAP

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Configuration

Switch settings

Input	S1						Output	S2					
	1	2	3	4	5	6		1	2	3	4	5	6
± 60 mV	ON		ON				± 10 V	ON	ON		ON		
0 mV ... 60 mV			ON				0 V ... 10 V	ON	ON				
± 100 mV	ON		ON	ON			2 V ... 10 V	ON	ON			ON	
0 mV ... 100 mV			ON	ON			± 5 V	ON	ON	ON	ON		
± 150 mV	ON	ON					0 V ... 5 V	ON	ON	ON			
0 mV ... 150 mV		ON					1 V ... 5 V	ON	ON	ON		ON	
± 250 mV	ON	ON		ON			± 20 mA				ON		
0 mV ... 250 mV		ON		ON			0 mA ... 20 mA						
± 300 mV	ON						4 mA ... 20 mA					ON	
0 mV ... 300 mV							± 10 mA			ON	ON		
± 500 mV	ON			ON			0 mA ... 10 mA			ON			
0 mV ... 500 mV				ON			2 mA ... 10 mA			ON		ON	
Zero potentiometer active					ON		Filter 8 kHz						
Span potentiometer active						ON	Filter 100 Hz						ON

Factory settings: all switches in position OFF

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