Features

- 1-channel signal conditioner
- 24 V DC supply
- Input bipolar current and voltage 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.

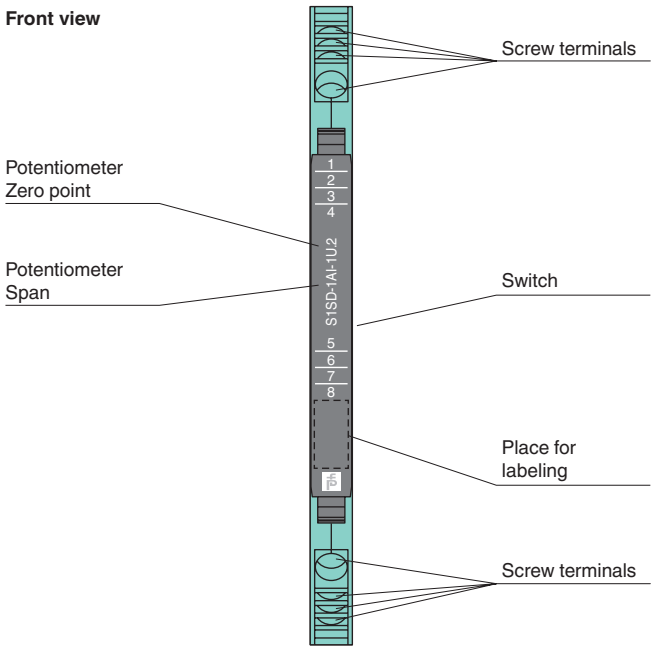
The device has an input for bipolar current and voltage sources.

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

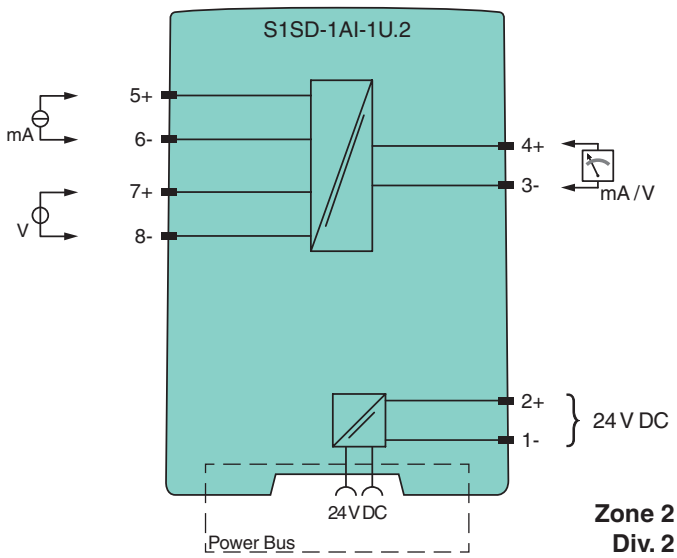
The device is easily configured by the use of DIP switches and potentiometers.

The device can be powered via terminals or Power Bus.

Assembly



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	
Transmission range	linearity range: unipolar -1 ... 110 % bipolar -110 ... 110 %
Input I	
Connection	terminals 5+, 6-
Input signal	0/4 ... 20 mA , 0/2 ... 10 mA , ± 10 mA, ± 20 mA , max. 50 mA
Input resistance	≤ 25 Ω
Input II	
Connection	terminals 7+, 8-
Input signal	0/1 ... 5 V , 0/2 ... 10 V , ± 5 V , ± 10 V , max. 30 V
Input resistance	> 1 MΩ
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 , 100 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
ON						± 10 V	ON	ON		ON		
						0 V ... 10 V	ON	ON				
		ON				2 V ... 10 V	ON	ON			ON	
ON	ON					± 5 V	ON	ON	ON	ON		
	ON					0 V ... 5 V	ON	ON	ON			
	ON	ON				1 V ... 5 V	ON	ON	ON		ON	
ON						± 20 mA				ON		
						0 mA ... 20 mA						
		ON				4 mA ... 20 mA					ON	
ON	ON					± 10 mA			ON	ON		
	ON					0 mA ... 10 mA			ON			
	ON	ON				2 mA ... 10 mA			ON		ON	
						Filter 8 kHz						
						Filter 100 Hz						ON
				ON		Zero potentiometer active						
					ON	Span potentiometer active						

Factory settings: all switches in position OFF

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