Features

- 1-channel signal conditioner
- 24 V DC supply
- Input 2-wire transmitters
- Input current and voltage sources
- Dual output 0/4 mA ... 20 mA, 0/1 V ... 5 V or 0/2 V ... 10 V
- Signal splitter (1 input and 2 outputs)
- Accuracy 0.1 %
- Configurable by DIP switches
- Connection via screw terminals

Function

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

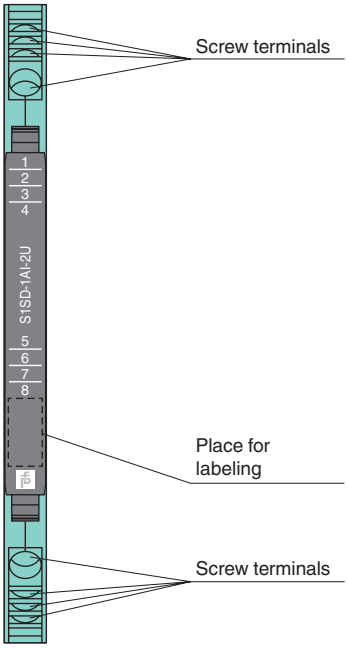
The device supplies 2-wire transmitters, and can also be used with current and voltage sources.

The device provides the following standard signals at the output:
- 0/4 mA ... 20 mA signal
- 0/1 V ... 5 V signal
- 0/2 V ... 10 V signal

The device can be powered via terminals or Power Bus.

Assembly

Front view



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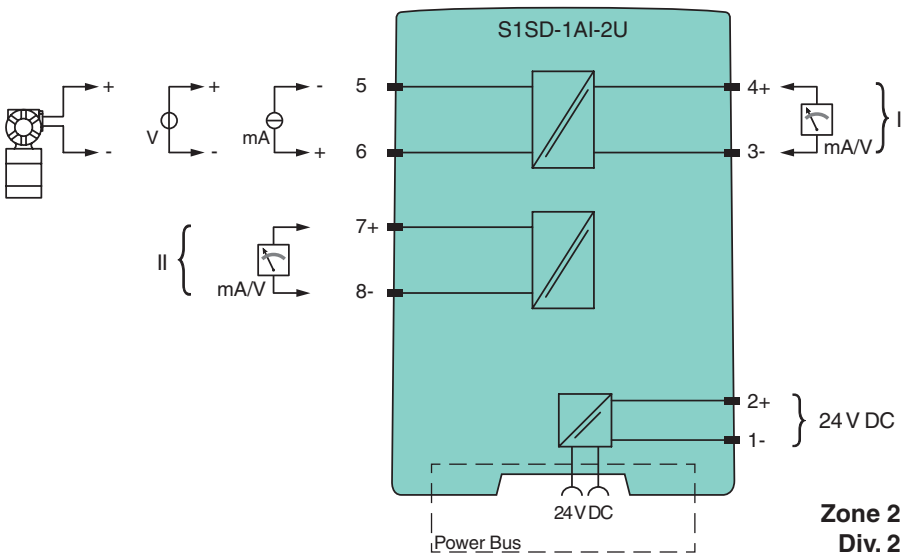
Connection



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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	0.8 W
Power consumption	1.4 W
Input	
Connection	terminals 5+, 6-
Input signal	0/4 ... 20 mA
Open circuit voltage/short-circuit current	≤ 22 V / 35 mA
Input resistance	≤ 25 Ω
Transmission range	linearity range: -1 ... 110 %
Available voltage	16 V at 20 mA
Output	
Ripple	≤ 10 mV_{eff}
Output I	
Connection	terminals 3-, 4+
Output signal	0/1 ... 5 V, 0/2 ... 10 V , load ≥ 5 kΩ 0/4 ... 20 mA , load ≤ 300 Ω
Output II	
Connection	terminals 7+, 8-
Output signal	0/1 ... 5 V, 0/2 ... 10 V , load ≥ 5 kΩ 0/4 ... 20 mA , load ≤ 300 Ω
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
Rise time/fall time	≤ 3.5 ms
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
Output I/II	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	
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	

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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	
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

Signal		Input				Output 1			Output 2		
		1	2	3	4	5	6	7	8	9	10
0 mA ... 20 mA											
4 mA ... 20 mA					ON			ON			ON
0 V... 10 V			ON	ON		ON			ON		
2 V ... 10 V			ON	ON	ON	ON		ON	ON		ON
0 V... 5 V			ON			ON	ON		ON	ON	
1 V... 5 V			ON		ON	ON	ON	ON	ON	ON	ON
Circuit supply	0 mA ... 20 mA	ON									
	4 mA ... 20 mA	ON			ON						

Factory settings: all switches in position OFF

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