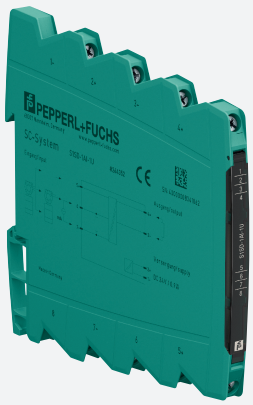


Transmitter Power Supply

S1SD-1AI-1U

- 1-channel signal conditioner
- 24 V DC supply
- Input 2-wire and 3-wire transmitters and 2-wire current sources
- Current and voltage output
- Accuracy 0.1 %
- Configurable by DIP switches
- Connection via screw terminals

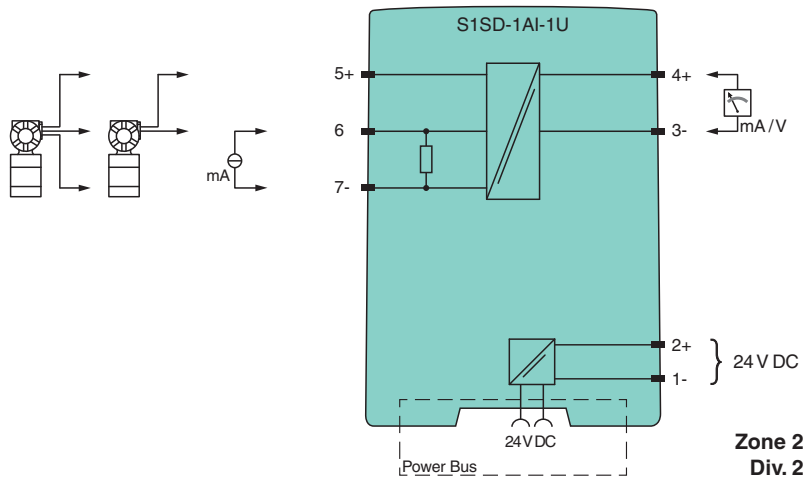
CE

Function

This signal conditioner provides the galvanic isolation between field circuits and control circuits.
The device supplies 2-wire and 3-wire transmitters, and can also be used with current sources.
The device provides the following standard signals at the output:
- 0/4 mA ... 20 mA signal
- 0/2 V ... 10 V signal

The device is easily configured by the use of DIP switches.
The device can be powered via terminals or Power Bus.

Connection



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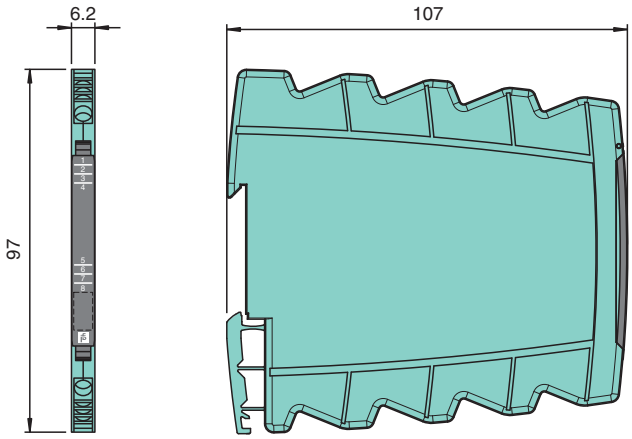
Dimensions



Technical Data

General specifications		
Signal type		Analog input
Operation time		MTBF: 445 a acc. to SN 29500 stationary continuous operating, average ambient temperature 40 °C (104 °F)
Supply		
Connection		Power Bus or terminals 1-, 2+
Rated voltage	U_r	16.8 ... 31.2 V DC
Power dissipation		0.9 W
Power consumption		1.3 W
Input		
Connection side		field side
Connection		terminals 5+, 6, 7-
Input signal		0/4 ... 20 mA
Open circuit voltage/short-circuit current		≤ 22 V / 30 mA
Input resistance		25 Ω
Transmission range		linearity range: -1 ... 110 %
Available voltage		16 V at 20 mA
Output		
Connection side		control side
Connection		terminals 3-, 4+
Analog voltage output		0/2 ... 10 V , load ≥ 2 kΩ
Analog current output		0/4 ... 20 mA, load ≤ 600 Ω
Ripple		≤ 10 mV_{eff}
Transfer characteristics		
Accuracy		max. 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
Indicators/settings		
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		

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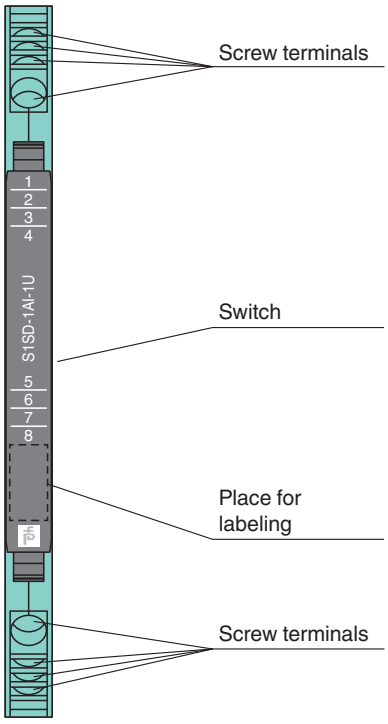
Technical Data

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	
Degree of protection	IP20
Connection	screw terminals
Core cross-section	0.5 ... 2.5 mm² (20 ... 14 AWG)
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	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

Assembly

Front view



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Accessories

	**S1SD-2PF**	Power feed module with screw terminals
	**POWERBUS-SETL5.250**	Power bus for 35 mm DIN mounting rail, height: 7.5 mm, length: 250 mm
	**POWERBUS-SETH5.250**	Power bus for 35 mm DIN mounting rail, height: 15 mm, length: 250 mm
	**POWERBUS-COV.250**	Cover for 35 mm DIN mounting rail, length: 250 mm
	**POWERBUS-CAP**	End Cap for Power Bus

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Configuration

Switch settings

Input	Output	S					
		1	2	3	4	5	6
0 mA ... 20 mA	0 mA ... 20 mA						
	4 mA ... 20 mA				ON		
	0 V... 10 V	ON	ON				
	2 V ... 10 V	ON	ON		ON		
4 mA ... 20 mA	0 mA ... 20 mA					ON	
	4 mA ... 20 mA						
	0 V... 10 V	ON	ON			ON	
	2 V ... 10 V	ON	ON				

Factory settings: all switches in position OFF

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