

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 %
- Connection via screw terminals

Function

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

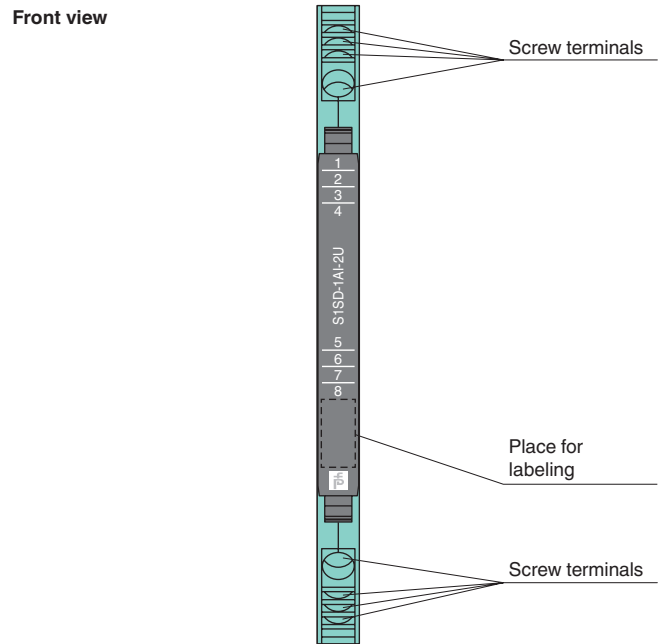
The device supplies 2-wire transmitters, and can also be used with current and voltage sources.

The device provides the following standard signals at the output:

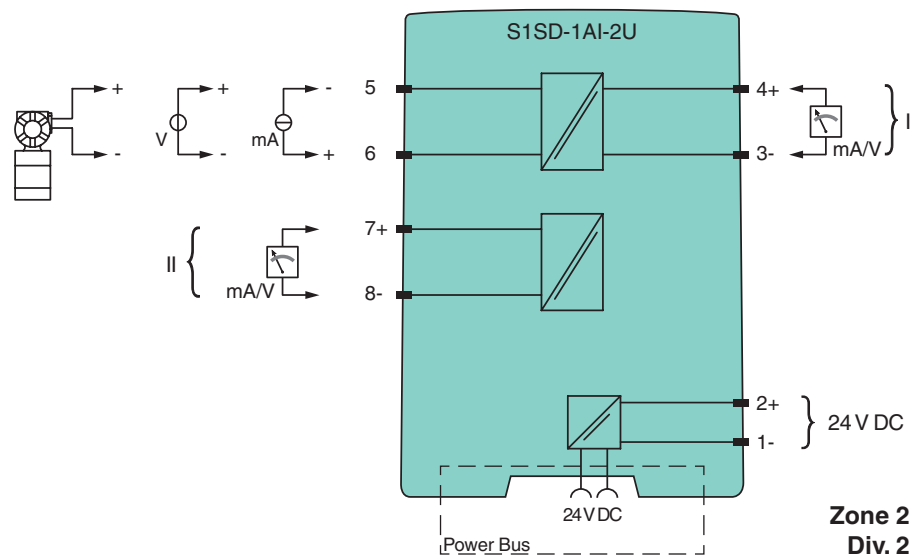
- 0/4 mA ... 20 mA signal
- 0/1 V ... 5 V signal
- 0/2 V ... 10 V signal

The device can be powered via terminals or Power Bus.

Assembly




Connection



Zone 2
Div. 2

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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 side	field side
Connection	terminals 5+, 6-
Input signal	0/4 ... 20 mA
Open circuit voltage/short-circuit current	$\leq 22 \text{ V} / 35 \text{ mA}$
Input resistance	$\leq 25 \Omega$
Transmission range	linearity range: -1 ... 110 %
Available voltage	16 V at 20 mA
Output	
Connection side	control side
Ripple	$\leq 10 \text{ mV}_{\text{eff}}$
Output I	
Connection	terminals 3-, 4+
Output signal	0/1 ... 5 V, 0/2 ... 10 V, load $\geq 5 \text{ k}\Omega$ 0/4 ... 20 mA, load $\leq 300 \Omega$
Output II	
Connection	terminals 7+, 8-
Output signal	0/1 ... 5 V, 0/2 ... 10 V, load $\geq 5 \text{ k}\Omega$ 0/4 ... 20 mA, load $\leq 300 \Omega$
Transfer characteristics	
Accuracy	$\leq 0.1 \%$ of full-scale value
Influence of ambient temperature	$< 100 \text{ ppm/K}$ of full-scale value
Frequency range	0 ... 100 Hz
Rise time/fall time	$\leq 3.5 \text{ ms}$
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
Indicators/settings	
Labeling	space for labeling at the front
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	
Degree of protection	IP20
Connection	screw terminals
Core cross-section	0.5 ... 2.5 mm ² (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	 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

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IECEX approval	IECEX UL 16.0116X
Approved for	Ex nA IIC T4 Gc
General information	
Supplementary information	Observe the cer conformity, instruction manuals, and manuals where applicable. For information see
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

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