



Input : DC volts, 0/4~20 mA, Ohms, RTD, Thermocouples, AC Amps, AC volts, load cell, etc.  
 Output : DC volts, 0/4~20 mA  
 Supply : 12~36 V DC, 85~265 V AC / 50/60 hz  
 Input/output/supply isolation : 1000 V AC / 1 min, 250 V AC continuous  
 DINRAIL enclosure

**GENERAL**

SI3P is a 3-port signal isolator that accepts any one of the common process inputs and generates an isolated current or voltage output. It has exceptionally high accuracy and stability.

**SPECIFICATIONS**

All specifications at ambient of 25 °C, unless specified otherwise

<b>INPUTS</b>	
<b>Input types</b>	Specify any one listed below B, E, J, K, R, S, T, N, etc. Pt100, Pt200, Pt1000, 3-wire 75 mV / 200 mV / 1 V / 10 V / 100 V / 300 V / 800 V etc. (FS)
Thermocouple	
RTD	
DC Voltage	0~20 mA, 4~20 mA
DC Current	500 , 1 K , 2 K , 5 K , 10K (FS)
Resistance	0~1 A AC, 0~5 A AC, 0~250 V AC, load cell, etc.
Special	10V DC ± 5%, 30 mA nominal, for 350 bridge
<b>Excitation supply for load cell</b>	4-wire or 6-wire (with provision for remote sensing)
<b>Bridge Connection</b>	18 V DC for 2-wire transmitter (provided if input type is DC current - 4~20 mA)
<b>Transmitter supply</b>	User specified
<b>Input range</b>	
<b>ADJUSTMENTS</b>	
<b>Zero, span</b>	Multiturn potentiometers through detachable panel
<b>OUTPUTS</b>	
<b>Output types</b>	Current - 0~20 mA, 4~20 mA (Load 600 max) Voltage - 0~1 V DC, 0~10 V DC (Load 1 mA max)
<b>Input / Output relation</b>	RTD - Temperature linear Other inputs - voltage linear (output is proportional to input signal - no linearisation of input is done)
<b>Current limit</b>	Current output - 25 mA Voltage output - 10 mA
<b>ACCURACY</b>	
<b>Input / output transfer accuracy</b>	0.1% span (includes repeatability, hysteresis & non linearity)
<b>Temperature effect on accuracy</b>	See Table 1
<b>Accuracy for different inputs</b>	See Table 1

<b>ISOLATION</b>	
<b>Mutual isolation between input / output / supply</b>	1 KV AC RMS / 1 minute, 250 V AC RMS continuous
<b>POWER SUPPLY</b>	
<b>Supply voltage</b>	12~36 V DC 85~265 V AC/DC, 50/60 hz
<b>ENCLOSURE</b>	
<b>Material</b>	ABS plastic
<b>Dimensions (in mm)</b>	75(H) x 55(W) x 110(D)
<b>Mounting</b>	Snap on for 35 mm DIN rail to DIN 46277
<b>Connection, single/stranded wires</b>	2.5 mm <sup>2</sup> , AWG 14
<b>TEMPERATURE, HUMIDITY</b>	
<b>Ambient, operation</b>	0 to 60 °C
<b>Relative humidity</b>	0 ~ 95%

**TABLE 1**

Input	Range	Accuracy (% of span)	Temperature effect on accuracy (% of span/°C)
DC Current	0~20 mA, 4~20 mA	± 0.1	± 0.01
DC Current	0~1 A DC, 0~5 A DC	± 0.25	± 0.01
DC Voltage	Upto 10 V DC	± 0.1	± 0.01
DC Voltage	> 10 V DC	± 0.25	± 0.01
AC Current	0~1 A AC, 0~5 AAC	± 0.5	± 0.01
AC Voltage	Any (<500 V AC)	± 0.5	± 0.01
RTD, Pt100, Pt50, etc.	Any	± 0.1	± 0.01
Thermocouple	Any	± 0.1 of span ± thermocouple non-linearity error	± 0.01
Load Cell	5mV~50mV (Excitation supply : 10V DC)	± 0.1	± 0.02 for 12~36 V DC supply ± 0.04 for 85~265 V AC/DC supply

# EXAMPLES OF CONNECTION DIAGRAMS

SI3P can be supplied with any combination of input/output/supply. Examples & options are given below.

<b>INPUT</b>	4~20 mA	<b>INPUT</b>	2-wire transmitter with internal supply	<b>INPUT</b>	Thermocouple, Millivolts, Volts	<b>INPUT</b>	AC current
<b>OUTPUT</b>	4~20 mA	<b>OUTPUT</b>	Millivolts, Volts	<b>OUTPUT</b>	Millivolts, Volts	<b>OUTPUT</b>	Millivolts, Volts
<b>INPUT</b>	Ohms, RTD	<b>INPUT</b>	2-wire Transmitter using external supply	<b>INPUT</b>	Load cell	<b>INPUT</b>	Load cell
<b>OUTPUT</b>	4~20 mA	<b>OUTPUT</b>	4~20 mA	<b>OUTPUT</b>	4~20 mA	<b>OUTPUT</b>	Millivolts, Volts

## ORDERING INFORMATION

2115	A	B	C	D	E
	<b>A Input type</b>	<b>B Input Range</b> Specify input range	<b>C Output Type</b>	<b>D Output Range</b> Specify output range	<b>E Supply voltage</b>
	0 Pt100	8 TC S	0 DC Current (mA)	0 12-36 V DC	0 12-36 V DC
	1 Pt200	9 TC T	1 DC Millivolts	1 85-265 V AC/DC	1 85-265 V AC/DC
	2 Pt1000	10 TC N	2 DC Volts		
	3 TC B	11 DC millivolts			
	4 TC E	12 DC volts			
	5 TC J	13 AC volts			
	6 TC K	14 DC current (mA)			
	7 TC R	15 AC current (A)			
		16 Resistance			
		17 Load cell			

### Examples

- Input :Pt100, Range : 0~400°C  
Output : 4~20 mA  
Supply : 12~36 V DC  
A=0, B=0~400°C, C=0, D=4~20 mA, E=0
- Input : 0~200 mV  
Output : 0~1 V DC  
Supply : 85~265 V AC/DC  
A=11, B=0~200 mV, C=2, D=0~1 V DC, E=1
- Input : 0~20 mA  
Output : 0~10 V DC  
Supply : 12~36 V DC  
A=14, B=0~20 mA, C=2, D=0~10 V DC, E=0

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### SALES INQUIRIES

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