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# **SC-ISOSLICE-1**

## **2 Isolated Analog Input SC-ISOSLICE Unit**

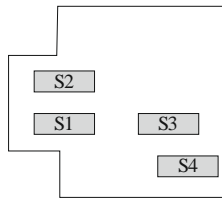
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The SC-ISOSLICE-1 unit has 2 isolated analogue inputs. It can be configured to accept a variety of signals, including mA ,V, mV, potentiometers and thermocouples. This is achieved using the dip switches shown in the picture below:



S1 selects the circuit for input 1  
 S2 selects the circuit for input 2

S3 selects the input range for inputs 1 & 2  
 S4 selects the sc-isoslice bus channel

### Input types and ranges

There are a large number of input types and ranges available for the SC-ISOSLICE-1. The tables below show the switch setting required for the different types of inputs

Input Type	Input Range	Input 1 S1 ON	Input 1 S3 ON	Input 2 S2 ON	Input 2 S3 ON
mA	0(4)-20mA	1,3,6	-	1,3,6	-
V	0-10V	2,6	4	2,6	8
mV	0-1000mV	1,6	3	1,6	7
3 Wire Pot	10k to 100kΩ	2,6	3,4	2,6	7,8
Bipolar mV	-25 to +25mV	1,4	2	1,4	6
Bipolar V	-10 to +10V	2,4	2,4	2,4	6,8
V	0-30V	2,6	2,3	2,6	6,7
Bipolar mV	-50 to +50mV	1,4	2,3,4	1,4	6,7,8
Type K	0-1200	1,4,7	1	1,4,7	5
Type J	0-1200	1,4,7	1,4	1,4,7	5,8
Type N	0-1000	1,4,7	1,3	1,4,7	5,7
Type E	0-1000	1,4,7	1,3,4	1,4,7	5,7,8
Type R	0-1400	1,4,7	1,2	1,4,7	5,6
Type S	0-1400	1,4,7	1,2,4	1,4,7	5,6,8
Type B	400-1800	1,4,7	1,2,3	1,4,7	5,6,7
Type T	-200 to 400	1,4,7	1,2,3,4	1,4,7,	5,6,7,8

The SC-ISOSLICE-1 performs cold junction compensation for the thermocouple input types. For a thermocouple input with CJC off and Linearisation off use the -50 to +50mV or -25 to +25mV ranges and set S1 and/or S2 to 1,4,7 as switch 7 enables burnout detection.



**Channel number**

The channel number is selected using S4. The channel number must be between 2 and 128, using switches 2 to 8. If all switches are off, channel number is 1 (invalid):

The channel number is a binary reading of switches 2 to 8, with switch 8 the lowest bit.

<b>S4</b>		<b>1 = On, 0 = Off</b>													
Channel	2	3	4	5	6	7	8	Channel	2	3	4	5	6	7	8
2	0	0	0	0	0	0	1	9	0	0	0	1	0	0	0
3	0	0	0	0	0	1	0	10	0	0	0	1	0	0	1
4	0	0	0	0	0	1	1	11	0	0	0	1	0	1	0
5	0	0	0	0	1	0	0	12	0	0	0	1	0	1	1
6	0	0	0	0	1	0	1	13	0	0	0	1	1	0	0
7	0	0	0	0	1	1	0	14	0	0	0	1	1	0	1
8	0	0	0	0	1	1	1	15	0	0	0	1	1	1	0
								16	0	0	0	1	1	1	1

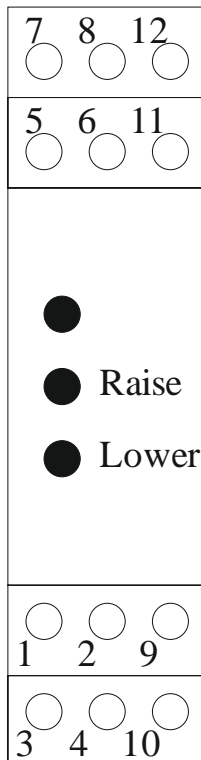
**Connections**

- 7.
- 8.
- 12.

- 5. Input 2 mA, V, TC -ve
- 6. Input 2 mA V, TC +ve
- 11.

- 1.
- 2. Input 1 mA, V, TC +ve
- 9. Input 1 mA, V, TC -ve

- 3.
- 4.
- 10.





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## Calibration

The SC-ISOSLICE-1 has an led that shows which mode it is in.

Green	run
Red	learn span point
Amber	learn zero point

Calibration of a channel:

In run mode select the input to be calibrated  
Calibrate the span point  
Return to run mode  
Calibrate the zero point  
Return to run mode

### Select the input to be calibrated

Push the raise or lower button when the led is green. The led will flash red between 1 and 2 times, indicating the input that will be calibrated next.

### Calibrate the span point

When the input has been chosen put in the span value (eg cjc compensated mV value for 100 degrees C) into the corresponding input.

Push and release both buttons.

The led will change from green to red.

Wait a few seconds for the input to be averaged to a stable level then push the raise button to confirm that the input value is the value for the span at 100%.

Push and release both buttons to return to run mode. The led will go off briefly (to indicate it has learnt and saved a new value) then change to green.

### Calibrate the zero point

Put in the zero value (eg cjc compensated mV value for 0 degrees C) into the corresponding input.

Push and release both buttons.

The led will change from green to amber.

Wait a few seconds for the input to be averaged to a stable level then push the raise button to confirm that the input value is the value for the zero at 0%.

Push and release both buttons to return to run mode. The led will again go off briefly then change to green.

Check the calibration has been successful by varying the input and confirming the value shown on the Z-Port or E-100 display for the corresponding input and channel is correct.