

ISOSLICE-2

8 Analog Input Isoslice Unit

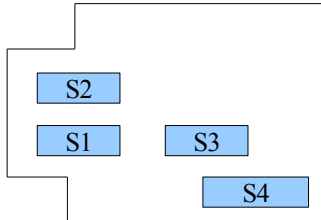
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Industrial Interface

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March 2010

The Isoslice-2 unit has 8 analogue inputs. It can be configured to accept a variety of high level signals, both bipolar and unipolar. This is achieved using the 8 way dipswitches shown in the picture below:



S1 selects the input type for inputs 1,2,3,4
 S2 selects the input type for inputs 5,6,7,8
 S3 selects unipolar or bipolar for all inputs
 S4 selects the isoslice bus channel (2 to 128)

Input Type

Each input can be set up independently of the others using S1 and S2. Any range within the limits shown below can be selected. The input types available are:

Unipolar

0 up to 20mA

0 up to 2000mV

0 up to 40V

Bipolar

-20mA to +20mA

-2000mV to +2000mV

-40V to +40V

Unipolar Input	0 to 20mA		0 to 2V		0 to 40V	
Bipolar Input	-20 to +20mA		-2 to +2V		-40 to +40V	
	S1	S2	S1	S2	S1	S2
1	1,2		1		-	
2	3,4		3		-	
3	5,6		5		-	
4	7,8		7		-	
5		1,2		1		-
6		3,4		3		-
7		5,6		5		-
8		7,8		7		-

Switches indicated should be ON.

The range shown above is the maximum the switch settings will allow. The ADC is able to adjust the gain to use full resolution for ranges that are less than those shown, but choose the most appropriate :

0 to 2V use the 0 to 2V range
 0 to 3V use the 0 to 40V range
 4 to 20mA use the 0 to 20mA range
 0 to 100mV use the 0 to 2V range

-10 to +10V use the -40 to +40V range
 -1 to +1V use the -2 to +2V range

Input Polarity

The polarity of each input is selected using S3. Switch 1 sets the polarity for input 1, switch 2 for input 2 etc.

Unipolar (eg 0 to +10V) switch is OFF
 Bipolar (eg -10V to +10V) switch is ON

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.

S4	2345678	
	0000000	channel 1 (invalid)
	0000001	channel 2
	0000010	channel 3
	0000011	channel 4
	0000100	channel 5
	1111111	channel 128

So switch 2 adds 64, 3 adds 32, 4 adds 16, 5 adds 8, 6 adds 4, 7 adds 2, 8 adds 1

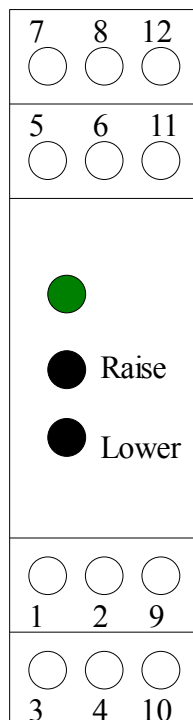
Connections

7. Input 7
 8. Input 8
 12. Input 7 & 8 -ve

5. Input 5
 6. Input 6
 11. Input 5 & 6 -ve

1. Input 1
 2. Input 2
 9. Input 1 & 2 -ve

3. Input 3
 4. Input 4
 10. Input 3 & 4 -ve



Calibration

The Isoslice-2 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 up or down button when the led is green. The led will flash red between 1 and 8 times, indicating the input that will be calibrated next.

Calibrate the Span Point

When the input has been chosen push and release both buttons.
The led will go red.

Put in the span value (eg 20mA) into the corresponding input, wait a few seconds for the input to be averaged to a stable level then push the up button to confirm that the input value is the value for the span at 100%. The Isoslice unit will check if it is using the most appropriate gain setting for the ADC. If it is, the span point has been learnt.

If the gain is not right, it will change the gain setting (green flash) then the red led will flash. Push the up button again to make it learn the input value with the new gain setting. There are 8 possible gain settings, so it may be necessary to repeat this process a few times. When the led stays red after the button has been pressed, the span point has been learnt.

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

Push and release both buttons
The led will change from green to amber.

Put in the zero value (eg 4mA) into the corresponding input, wait a couple of seconds for the input to be averaged to a stable level then push the up button to confirm that the input value is the value for the zero at 0.00%.

Push and release both buttons, 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 as expected.