Sensata ISOSLICE-7 Digital Input Pulse Counting or 2 Frequency Input Iso Slice Unit User Manual

Contents

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ISOSLICE-7

The ISOSLICE-7 unit has 1 digital input for counting pulses or 2 digital inputs used for measuring frequency. The selection is made using dip switch 1. See the section on input mode for further details. In pulse counting mode (dip switch 1 off) the number of pulses is stored as a 32-bit number, spread over 2 parameters read by the E100 or Z-Port.

Parameter

1. Pulse input 1 high 16-bits
2. Pulse input 1 low 16-bits

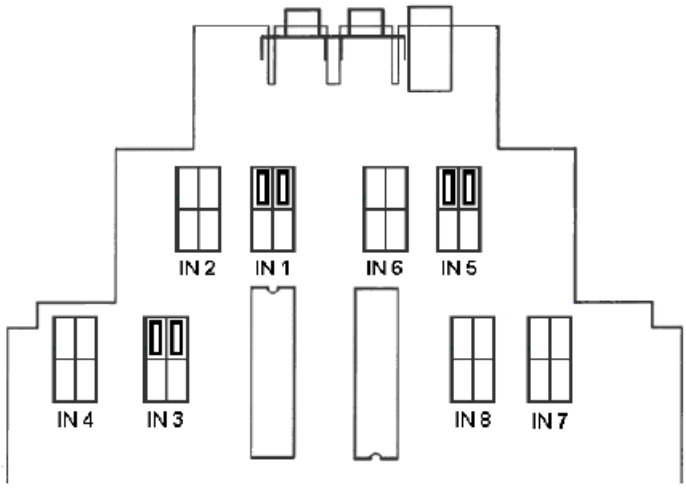
The cumulative pulse count is saved every 14 seconds, in case of power failure. In frequency measuring mode (dip switch 1 on) the frequency read from the 2 digital inputs can be scaled from one of four ranges : 0 to 10Hz, 100Hz, 1000Hz, 10000Hz. See the section on calibration for further details.

Parameter

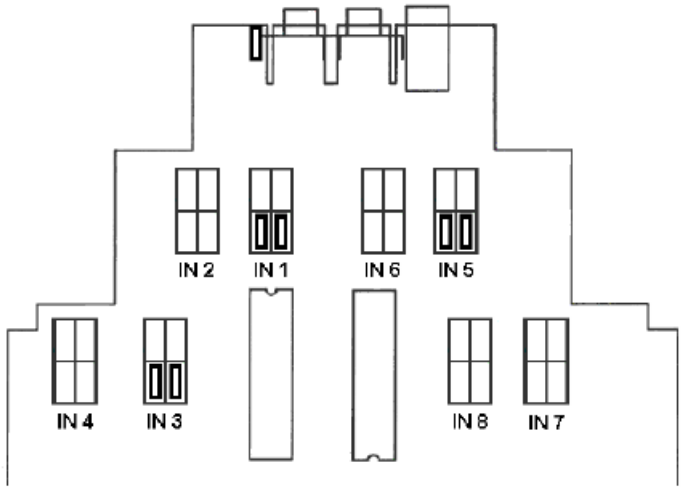
1. Scaled frequency of input 3
2. Scaled frequency of input 5

Digital Inputs Link Fitting
There are 3 different input types the unit can accept

Volt Free Contact
The digital input is an optoisolator that must be connected to the common to switch the input “ON”. The input links must be fitted in the higher positions like this:



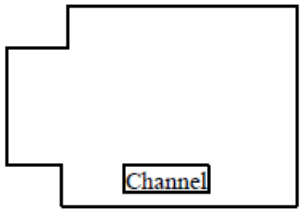
+24V dc input or +5V dc TTL input
The digital input is an optoisolator that must be powered externally by a +24V dc or +5V dc input on the Input terminal, with the corresponding Ground to the Common terminal, to switch the input “ON”. The input links must be fitted in the lower positions like this



Channel Number
The channel number is set up using the 8-way dipswitch, switches 2 to 8. If all switches are off, the channel number is 1 (invalid, indicated by the LED flashing red):

Address Switches Action

- 8 add 1
- 7 add 2
- 6 add 4
- 5 add 8
- 4 add 16
- 3 add 32
- 2 add 64



Switches Switches 1 = On, 0 = Off

- Channel
- 2 3 4 5 6 7 8 Channel 2 3 4 5 6 7 8
- 1 0 0 0 0 0 0 0 9 0 0 0 1 0 0 0
- 2 0 0 0 0 0 0 1 10 0 0 0 1 0 0 1
- 3 0 0 0 0 0 1 0 11 0 0 0 1 0 1 0
- 4 0 0 0 0 0 1 1 12 0 0 0 1 0 1 1
- 5 0 0 0 0 1 0 0 13 0 0 0 1 1 0 0
- 6 0 0 0 0 1 0 1 14 0 0 0 1 1 0 1
- 7 0 0 0 0 1 1 0 15 0 0 0 1 1 1 0
- 8 0 0 0 0 1 1 1 16 0 0 0 1 1 1 1

Input mode
Switch 1 is used to select between pulse counting mode and frequency input mode.

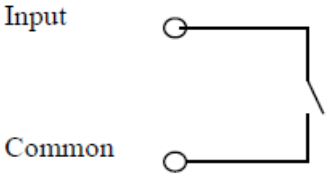
Switch 1 Off
Pulse counting on input 1

Switch 1 On :
Frequency inputs measured on inputs 3 and 5 In frequency measurement mode the unit can measure any frequency between 0 & 10kHz scaled using 4 selectable frequency ranges (see Calibration section for more details) The number of pulses is retained and saved by the ISOSLICE 7 unit, so in the event of power failure, the count is not lost. The count is saved at a maximum rate of once every 13.4 seconds, to preserve the life of its non volatile memory. Each time the to tal is saved, the green led will switch off briefly.

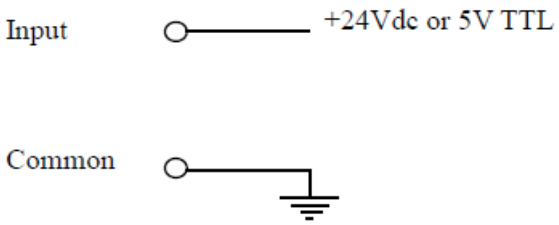
Reset Pulse Count Total
The pulse count total can be reset. Hold the raise button on the front panel down for about 15 seconds, until the green LED switches off. Release the button and the pulse count will have reset.

Connections
The digital input is wired like this:

Volt Free Contact:



+24/5V TTL Vdc Input



- 12. Common
- 5. Input 5 (frequency channel 2)
- 6. 11. Common
- 1. Input 1 (pulse counting only)
- 2. 9. Common
- 3. Input 3 (frequency channel 1)
- 4. 10. Common

Calibration of the input frequency range

The ISOSLICE 7 has an LED that shows which mode it is in. Green run mode Amber learn range for frequency channel 1 (input 3) Red learn range for frequ ency channel 2 (input 5) In run mode, the frequency ranges selected can be observed without the risk of changing the calibration. Push and release the Lower button to see the range for frequency channel 1 (input 3). The LED will flash amber. Count the number of times it flashes.

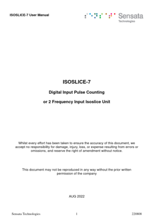
- 1 flash = 0 to10 Hz
- 2 flashes = 0 to100 Hz
- 3 flashes = 0 to1000 Hz
- 4 flashes = 0 to10000 Hz

In run mode, push and release the Raise button to see the range for frequency channel 2 (input 5). The LED will flash red. Count the number of times it flashes.

Changing the input range for channel 1 (input 3)
In run mode, press the Lower button and hold it for 4 seconds, until the LED changes from green to amber. Release the Lower button. Push and release the Raise button to increase the frequency range or Push and release the Lower button to decrease the frequency range. The LED will flash green 1 to 4 times after a button press, indicating the range selected. When the required range has been selected, push both buttons at the same time and release. The amber LED will extinguish for ¾ second then change to green, as the selected range is saved and it returns to run mode. The range is retained over a power cycle.

Changing the input range for channel 2 (input 5)
In run mode , press the Raise button and hold it for 4 seconds, until the LED changes from green to red. Release the Raise button. Push and release the Raise button to increase the frequency range or Push and release the Lower button to decrease the frequency range. The LE D will flash green 1 to 4 times after a button press, indicating the range selected. When the required range has been selected, push both buttons at the same time and release. The red LED will extinguish for ¾ second then change to green, as the selected range is saved and it returns to run mode. The range is retained over a power cycle.

Documents / Resources

	[Sensata ISOSLICE-7 Digital Input Pulse Counting or 2 Frequency Input Iso Slice Unit](#) [pdf] User Manual ISOSLICE-7 Digital Input Pulse Counting or 2 Frequency Input Iso Slice Unit, ISOSLICE-7, Digital Input Pulse Counting or 2 Frequency Input Iso Slice Unit, Frequency Input Iso Slice Unit, Iso Slice Unit