

Figure 1 – IGY Dual Direct Pressure Sensor Input Module Component Layout

Detailed Description

The Tiger 320 Series controller has four input channels capable of processing almost any input signal type. The dual direct pressure sensor input module IGY uses only channels 1 and 2.

The input module processes the pressure inputs via built-in pressure sensors capable of processing an absolute or differential pressure input. The pressure signals are then fed to CH1 and CH2 for further processing. Gain setting resistors are factory installed to optimize the full scale output for each pressure range. Contact Texmate when ordering to discuss your pressure range requirements.

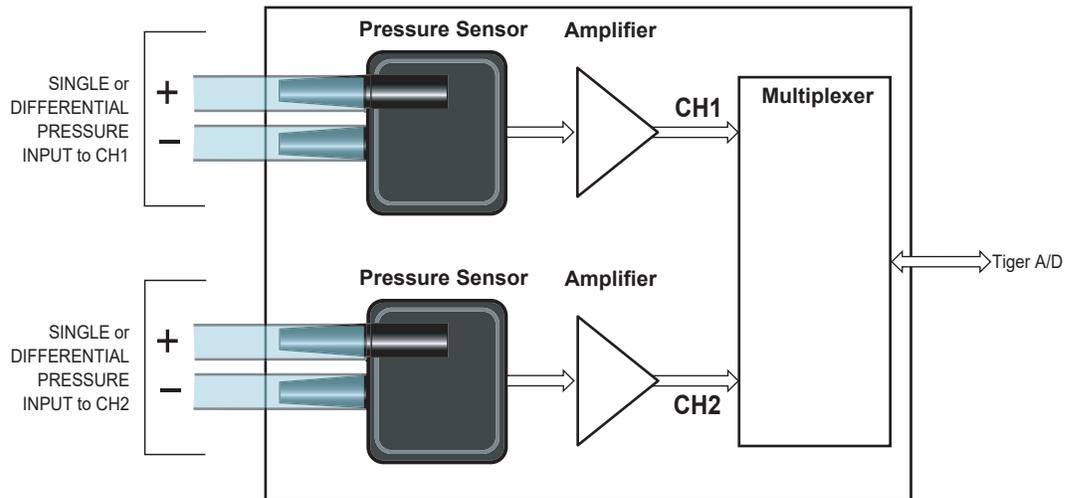


Figure 2 – IGY Dual Direct Pressure Sensor Input Module Signal Flow Diagram

Tiger 320 Series Meter Settings

Channel 1 (CH1) and channel 2 (CH2) configuration settings for the IGY input module are selected in Codes 2 and 4 respectively of the Tiger 320 Series meter's main programming mode. Both CH1 and CH2 must be selected as a voltage input.

CH1 → PRESSURE INPUT → CODE 2 → [X00]

1st Digit: X Select analog sample and output rate as required.

FIRST DIGIT	
ANALOG SAMPLE RATE	
0	Sample Rate: Typically 10 samples/second (60 Hz) Control Output Rate: 0.1 seconds See Example
1	Sample Rate: Typically 10 samples/second (50 Hz). Control Output Rate: 0.1 seconds See Example
2	Sample Rate: Typically 10 samples/second (60 Hz) Counter or 10 millisecs Control Output Rate See Example
3	Sample Rate: Typically 10 samples/second (50 Hz) Counter or 10 millisecs Control Output Rate See Example
<i>Note:</i> Output Rate refers to setpoint and macro outputs , and input rates from smart input modules.	
<i>Note:</i> All above sample rates are quoted for single channel operation. Where more than one channel is available, sample rates are divided by the number of active channels. See Example.	



See the Tiger 320 Series Programming Code Sheet for a complete list of main and setpoint mode programming code settings.

Example: 10 Samples/Second

- 1 Channel = 10 samples/second
- 2 Channels = 5 samples/second
- 3 Channels = 3.33 samples/second
- 4 Channels = 2.5 samples/second

2nd Digit: 0 Selects **Voltage, Current**. (any other selection will not work)

3rd Digit: 0 Selects **No function**. (any other selection will not work)

CH2 → PRESSURE INPUT → CODE 4 → [3X0]

1st Digit: 0 Selects **Voltage, Current**. (any other selection will not work)

2nd Digit: X Select required setting for CH2.

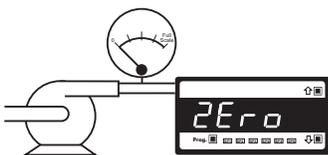
FOR VOLTAGE & CURRENT	
0	Channel 2 Disabled
1	Direct (no post processing)
2	Square Root of Channel 2
3	Inverse of Channel 2
4 -	
5 -	
6 -	
7 -	

3rd Digit: 0 Selects **No function**. (any other selection will not work)

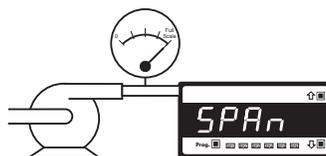
Calibration

Both channel 1 and channel 2 must be individually calibrated using the two-point calibration method. Calibration must be done using a source of pressure equal to the pressure range you selected for your meter. For example, if you selected 0-5 psi for CH1, then you should be able to apply a pressure of 5 psi from your source for the meter's [SPAN] setting. See Figure 3 and the 2-point calibration procedure on the next page.

- 1) Enter the meter's calibration mode and set the display to [111]. This sets you up to calibrate CH1 using the 2-point method.
- 2) While in the [ZER] setting mode with no pressure applied, set the display to the number of counts you want to see on the display for the zero setting.
- 3) Now enter the [SPAN] setting mode and apply the maximum pressure for CH1. Set the display to the number of counts you want to see on the display for the span setting (full scale).
- 4) Save the CH1 settings and repeat the procedure for CH2 by setting the calibration mode to [112].



The **low** input source is applied to the meter when setting the zero value.



The **high** input source is applied to the meter when setting the span value.

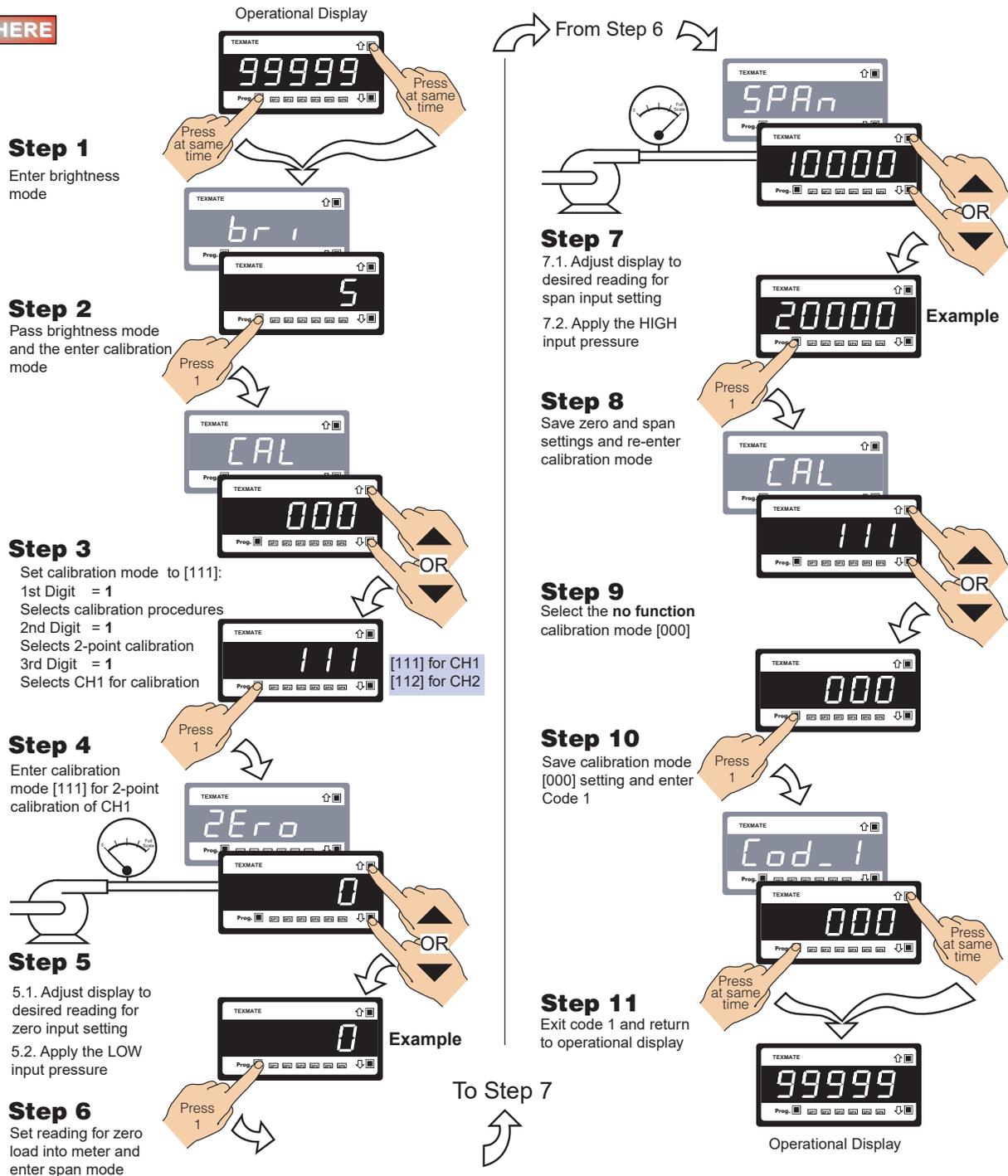


Programming Tip

All displays shown in this calibration sheet are for a 5-digit, 7-segment display. Using any other display type in the Tiger 320 Series range will look slightly different.

Figure 3 – Two-point Calibration Procedure

START HERE



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1934 Kellogg Ave. • Carlsbad, CA 92008

Tel: 1-760-598-9899 • USA 1-800-839-6283 • That's 1-800-TEXMATE

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