PGA308EVM

Current Loop Step-by-step example

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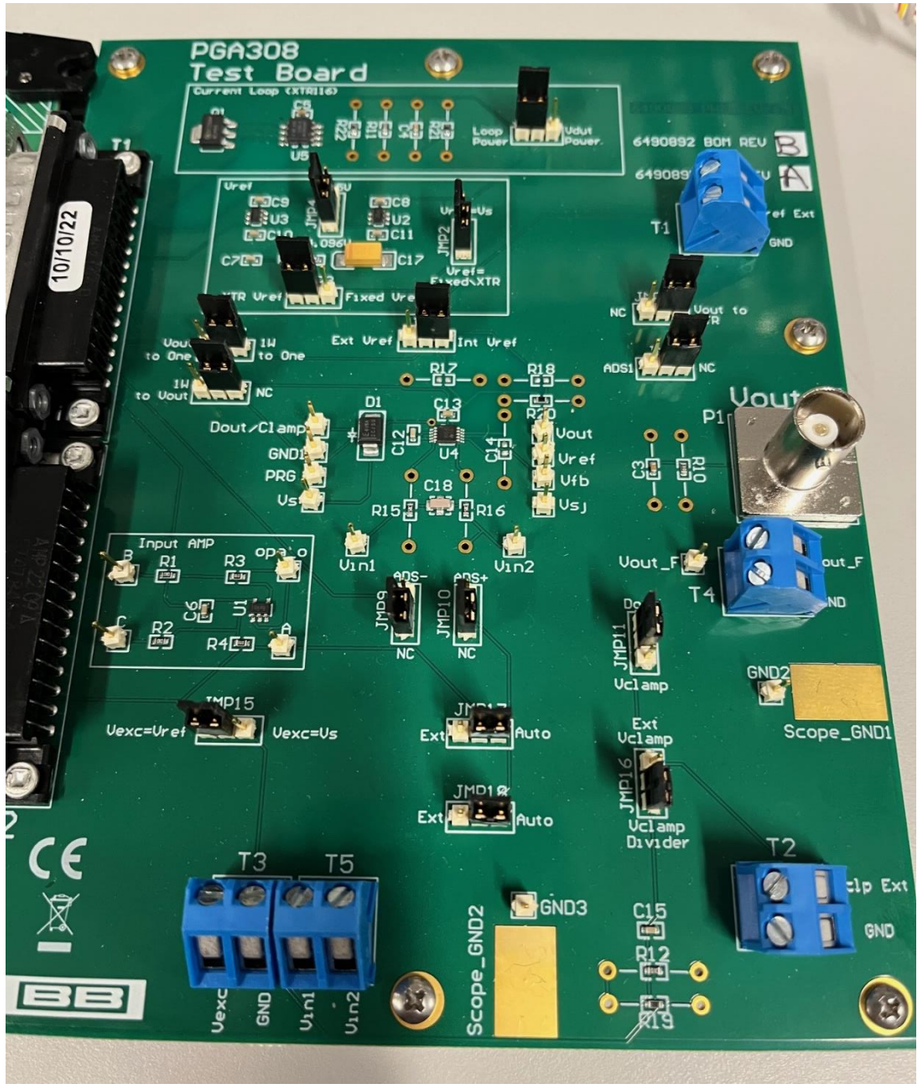
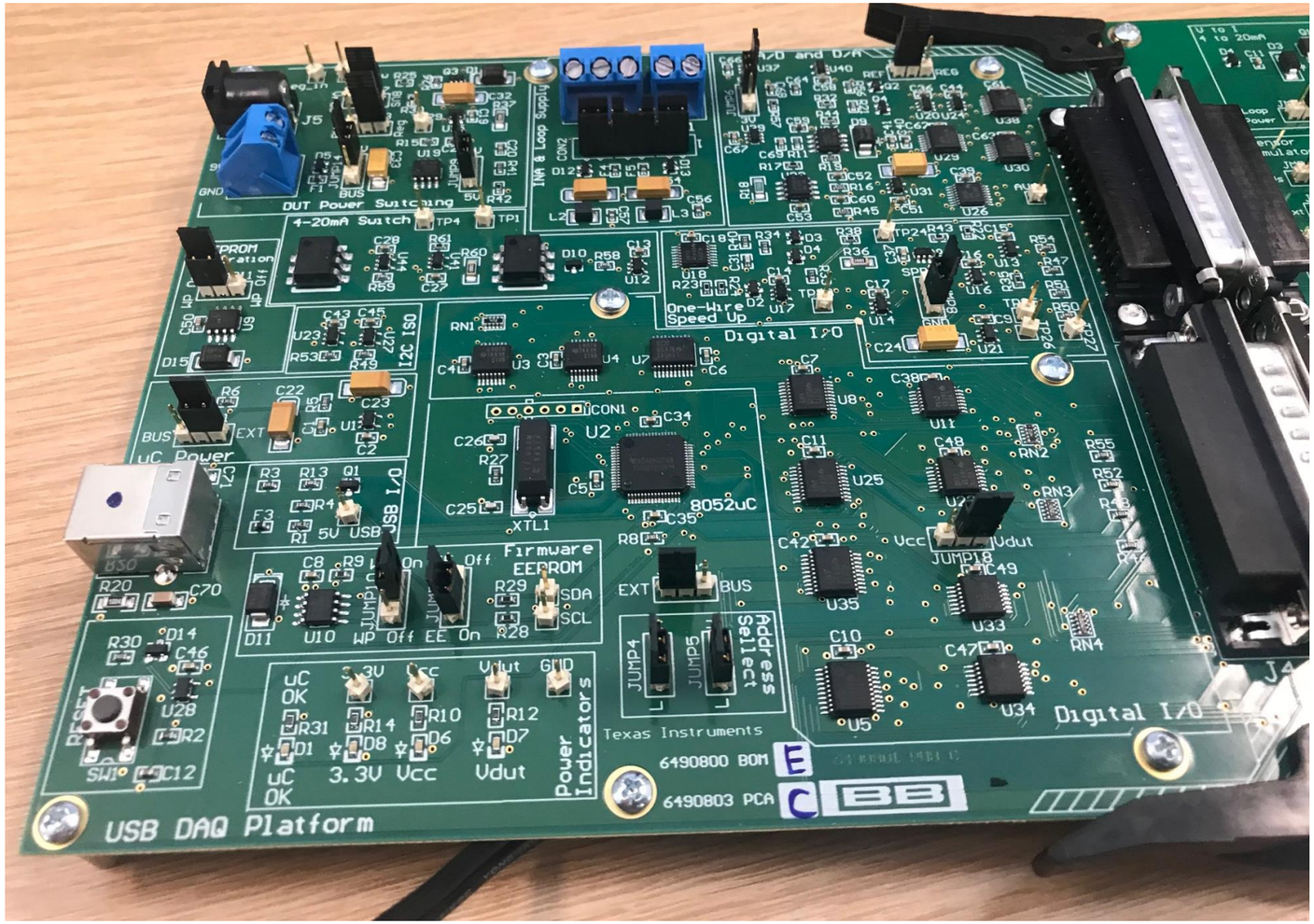
Jumper Settings on PGA308



Jumper	Setting
14	Loop_Power
4	4.096V
2	Vref=Fixed/XTR
3	XTR Vref
7	1W to ONE
1	NC
5	Int Vref
13	Vout to XTR
6	NC
9	NC
10	NC
11	Dout
15	Vexc=Vref
17	Auto
18	Auto
16	Vclamp Divider

Jumper Settings USB-DAQ-Platform



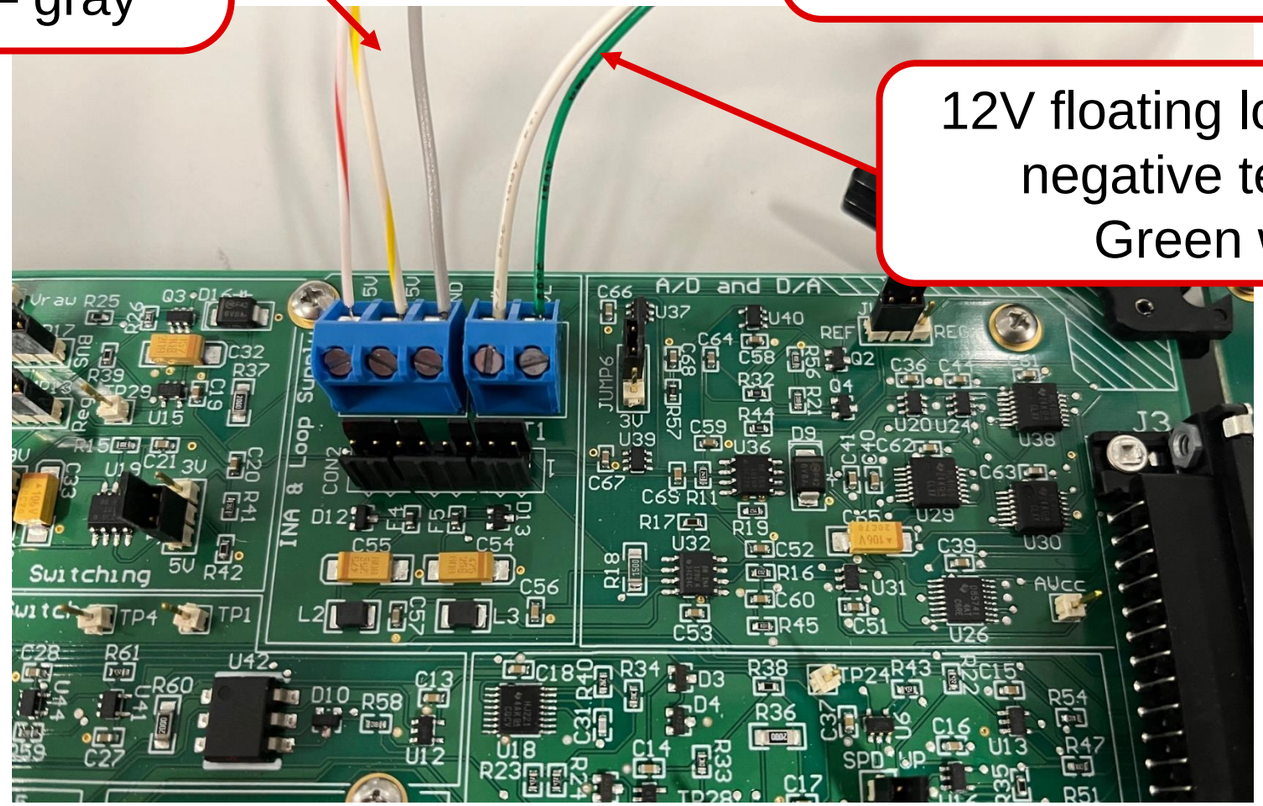
JMP	Position
17	BUS
13	Reg
14	9V
9	5V
11	WP On
6	5V
7	REF
1	EXT
8	GND
10	WP On
3	EE On
2	EXT
4	L
5	L
18	VDUT

USB-DAQ-Platform power connections

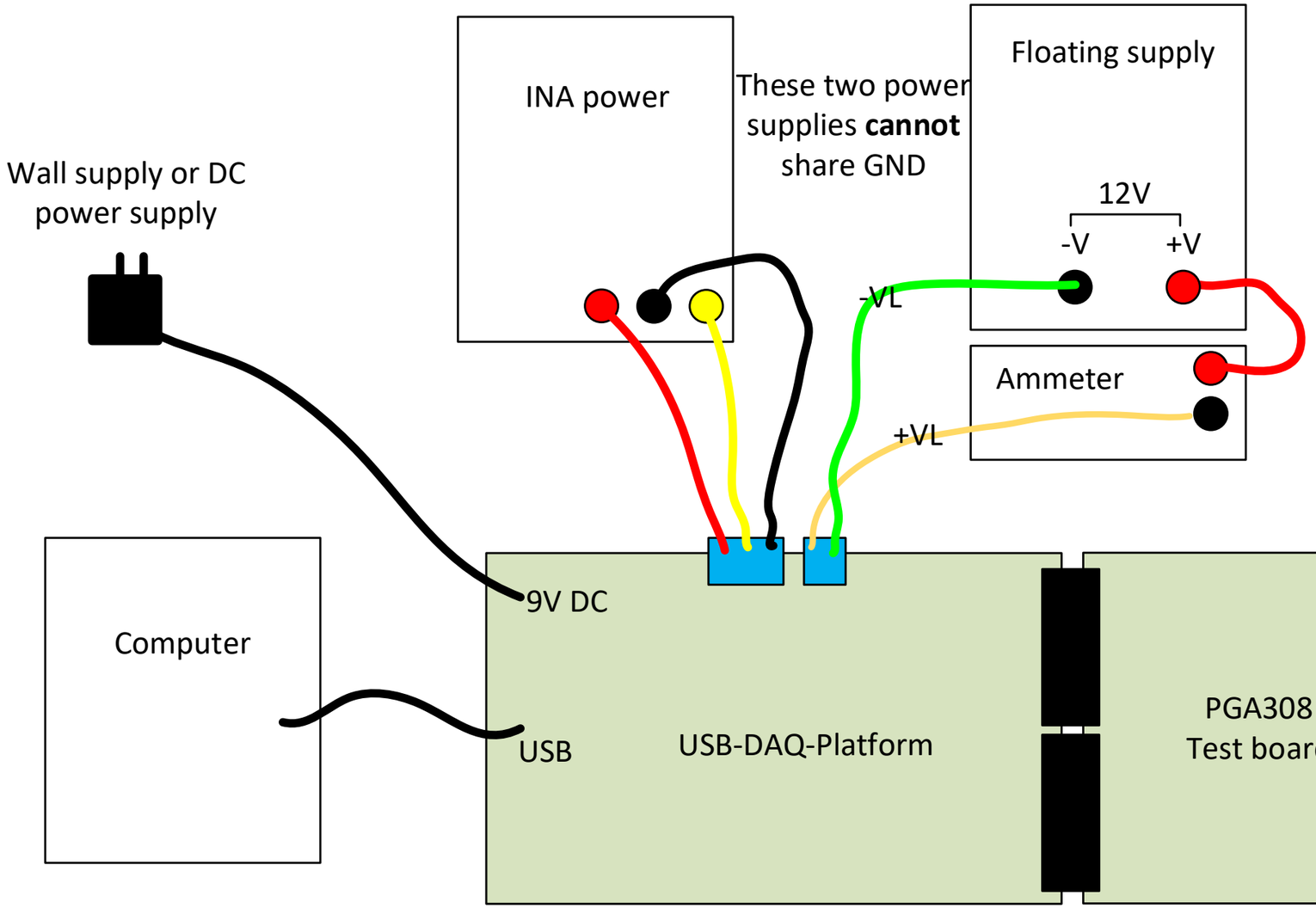
+12V – red/white
-12V – yellow/white
GND – gray

12V floating loop supply positive terminal
White wire

12V floating loop supply negative terminal
Green wire



USB-DAQ-Platform power connections

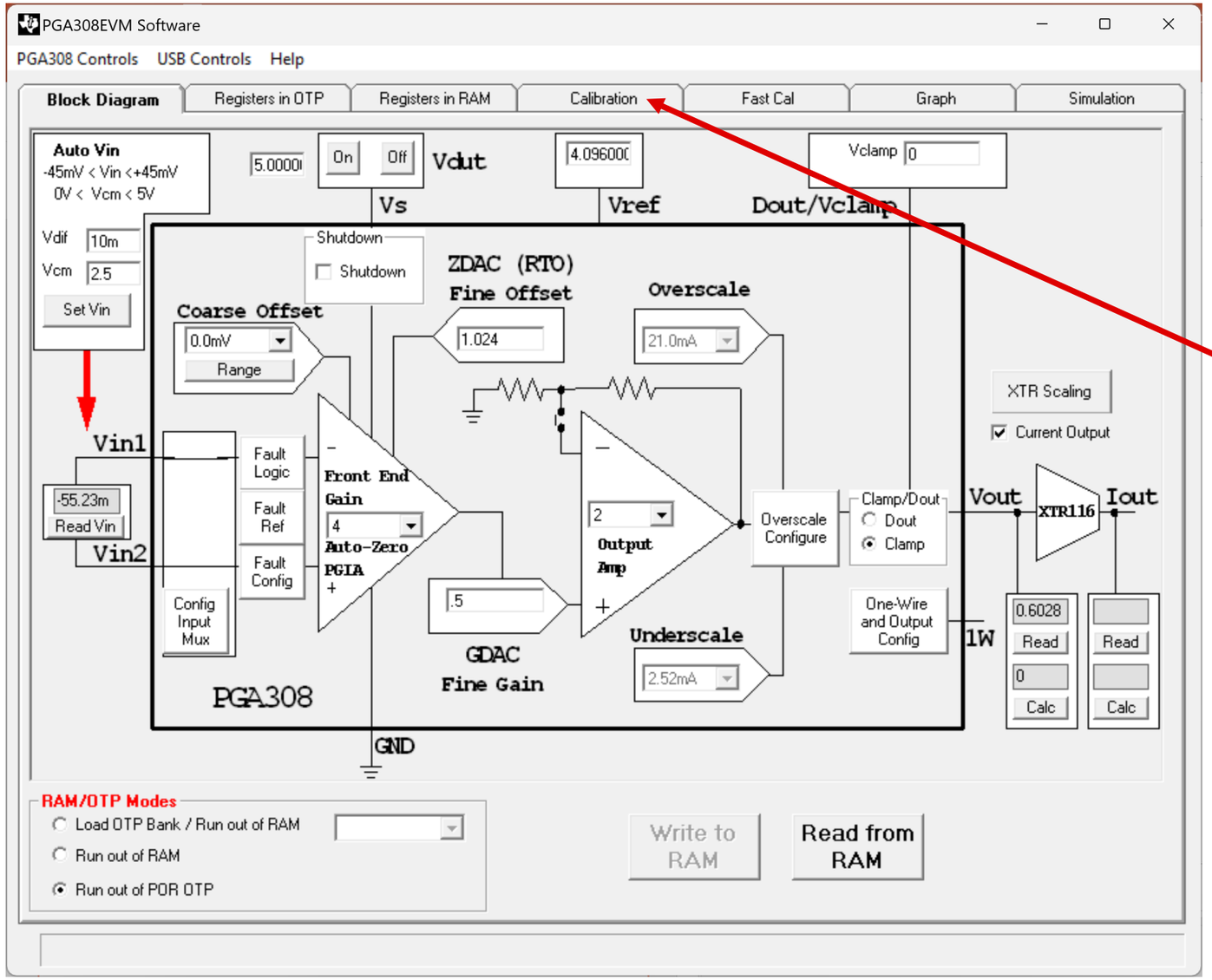


Ammeter not required but useful for debug

My setup

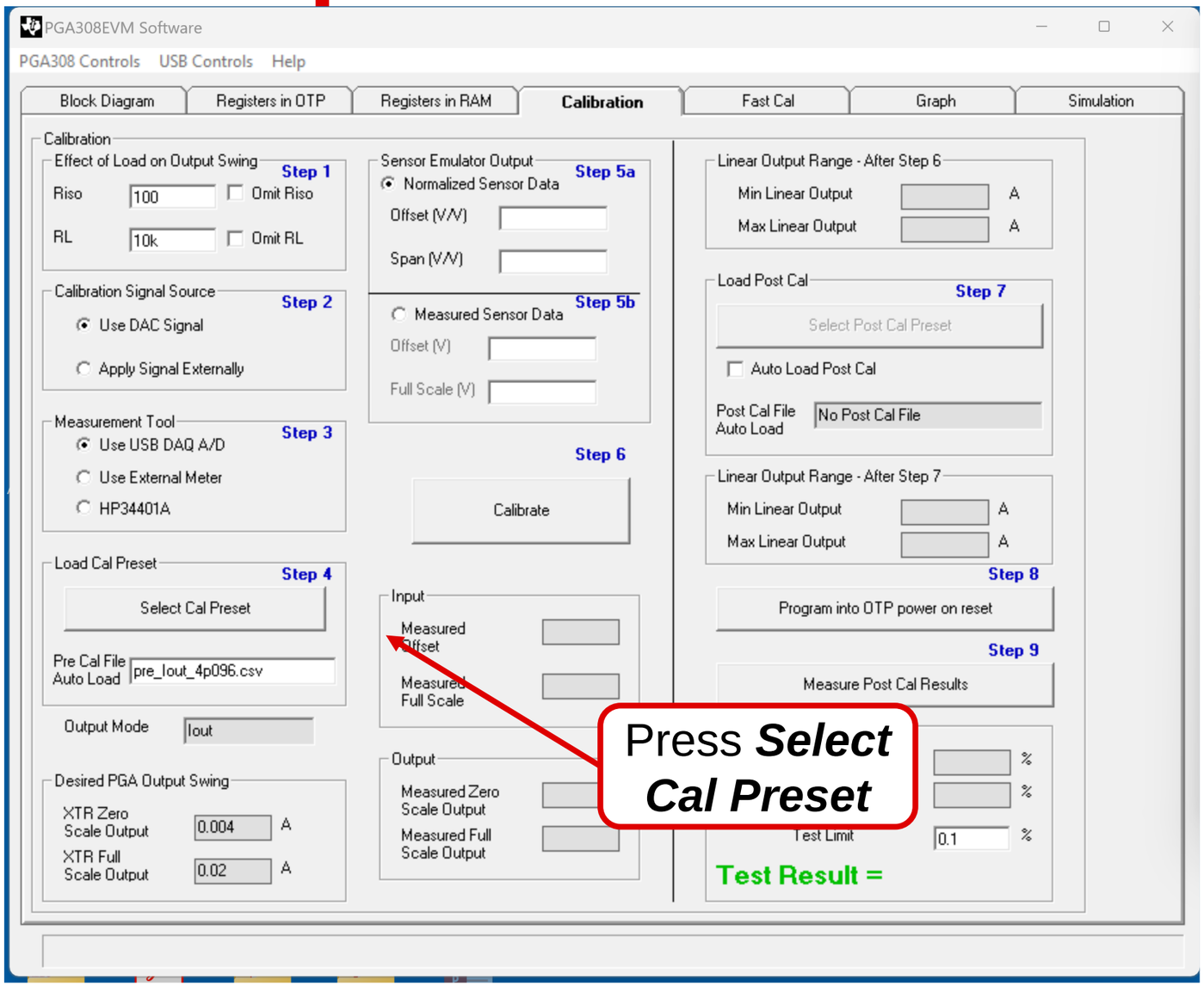

ATTENTION
NOT ESD SAFE
My setup
039978 mADC
12.05 .003
LOT_7
VDD
AVDD
#2
JLAB

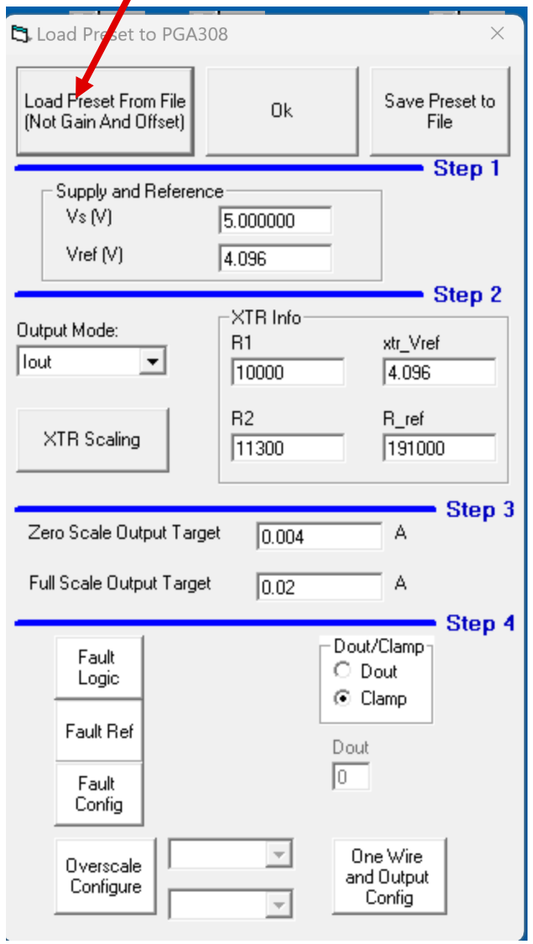
Start software



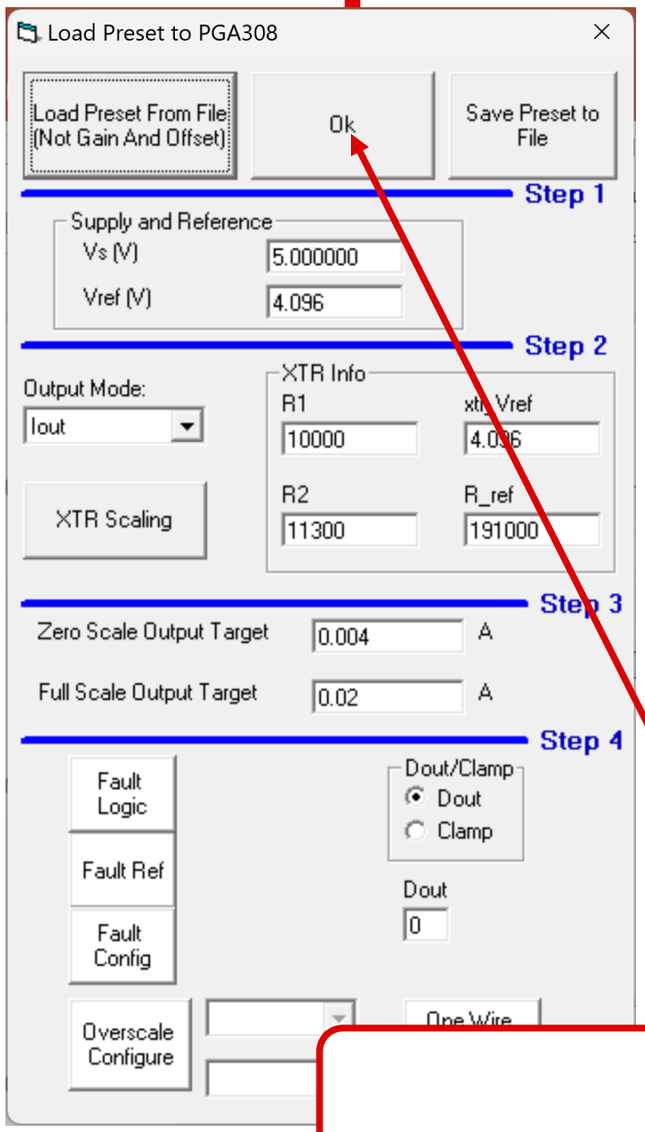
Click on calibration tab

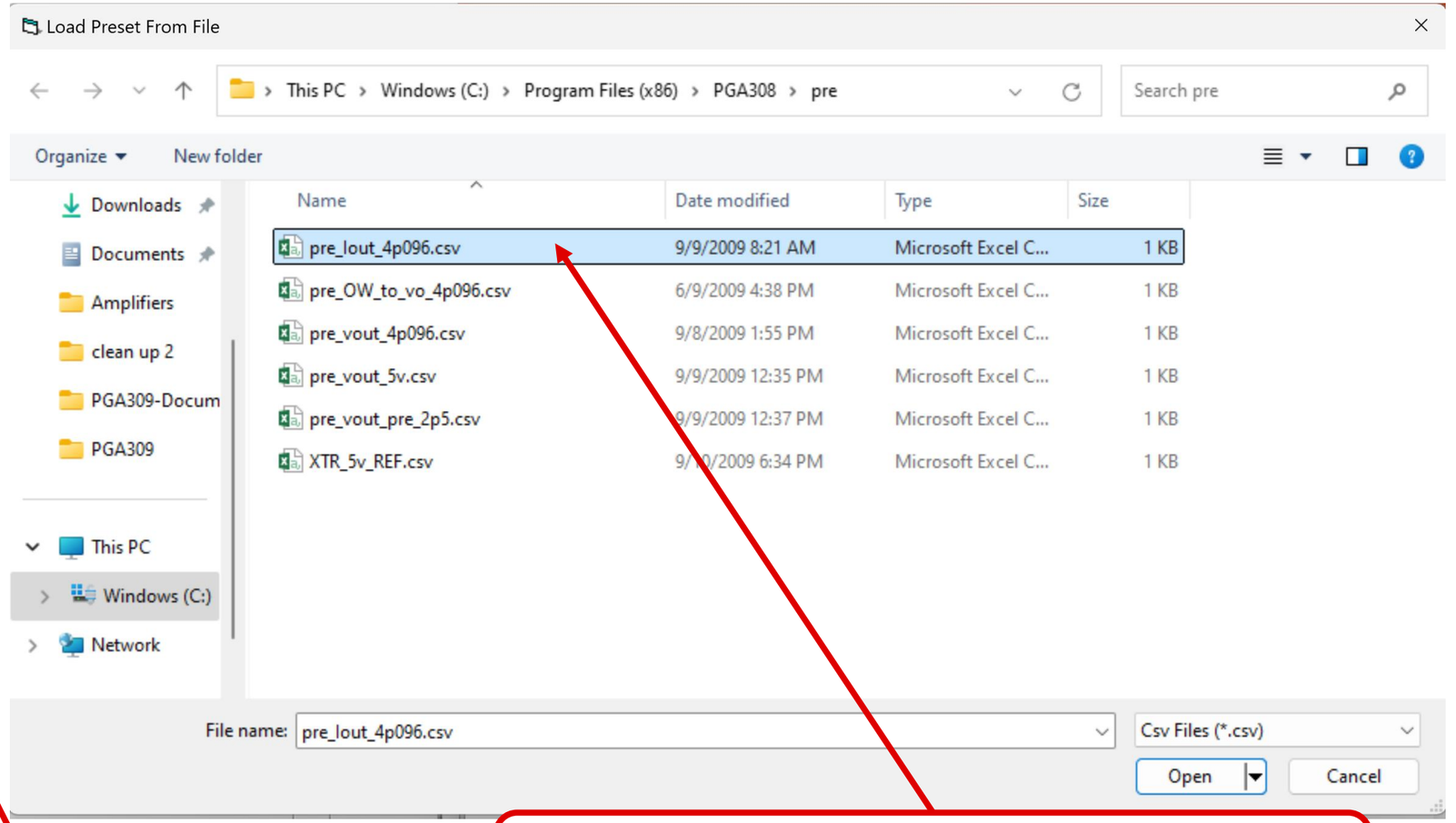
Select precal file





Select precal file continued



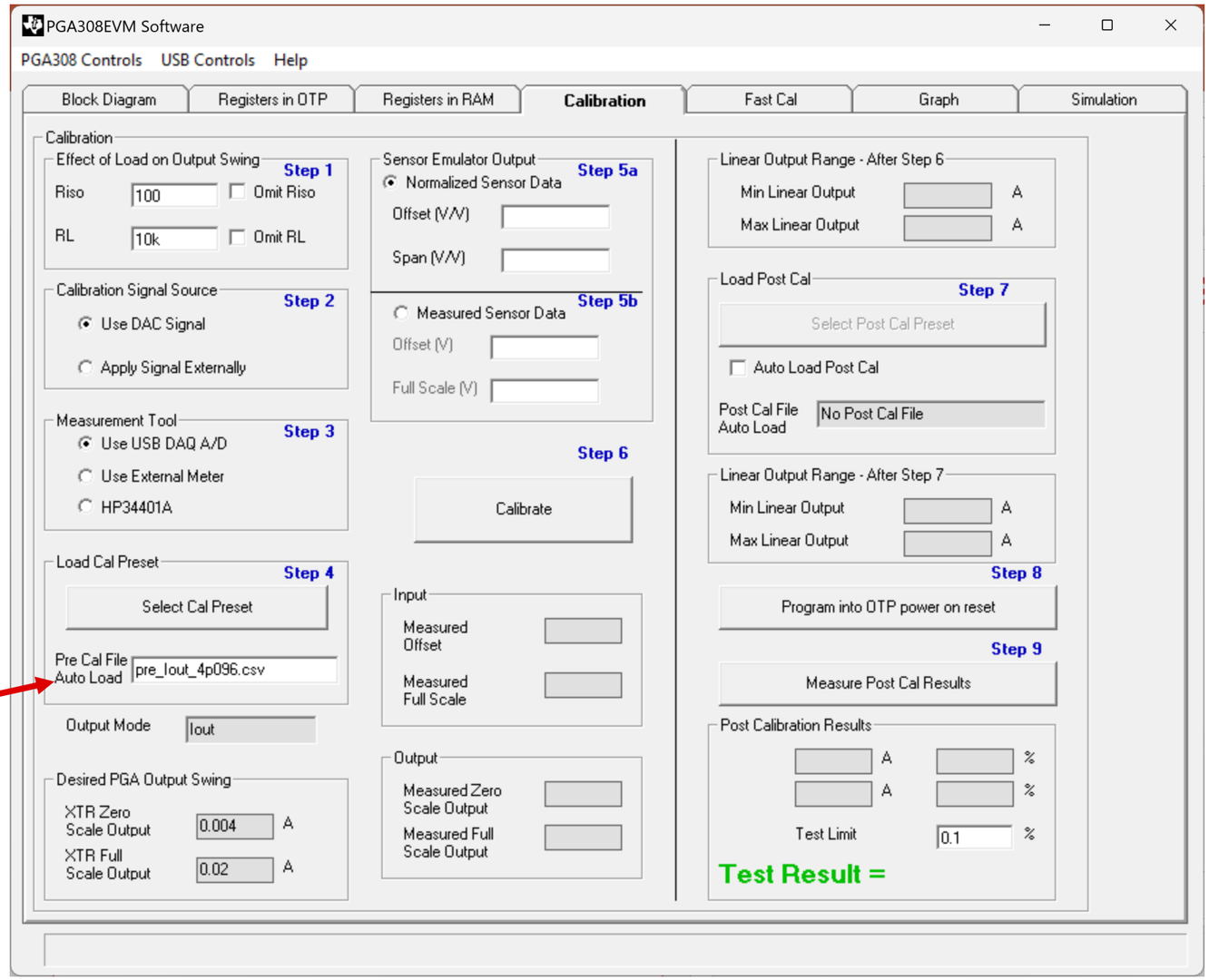


2. Press ***Ok***

1. Choose ***pre_Iout_4p096.csv***

Make sure pre_Iout_4p096.csv is selected

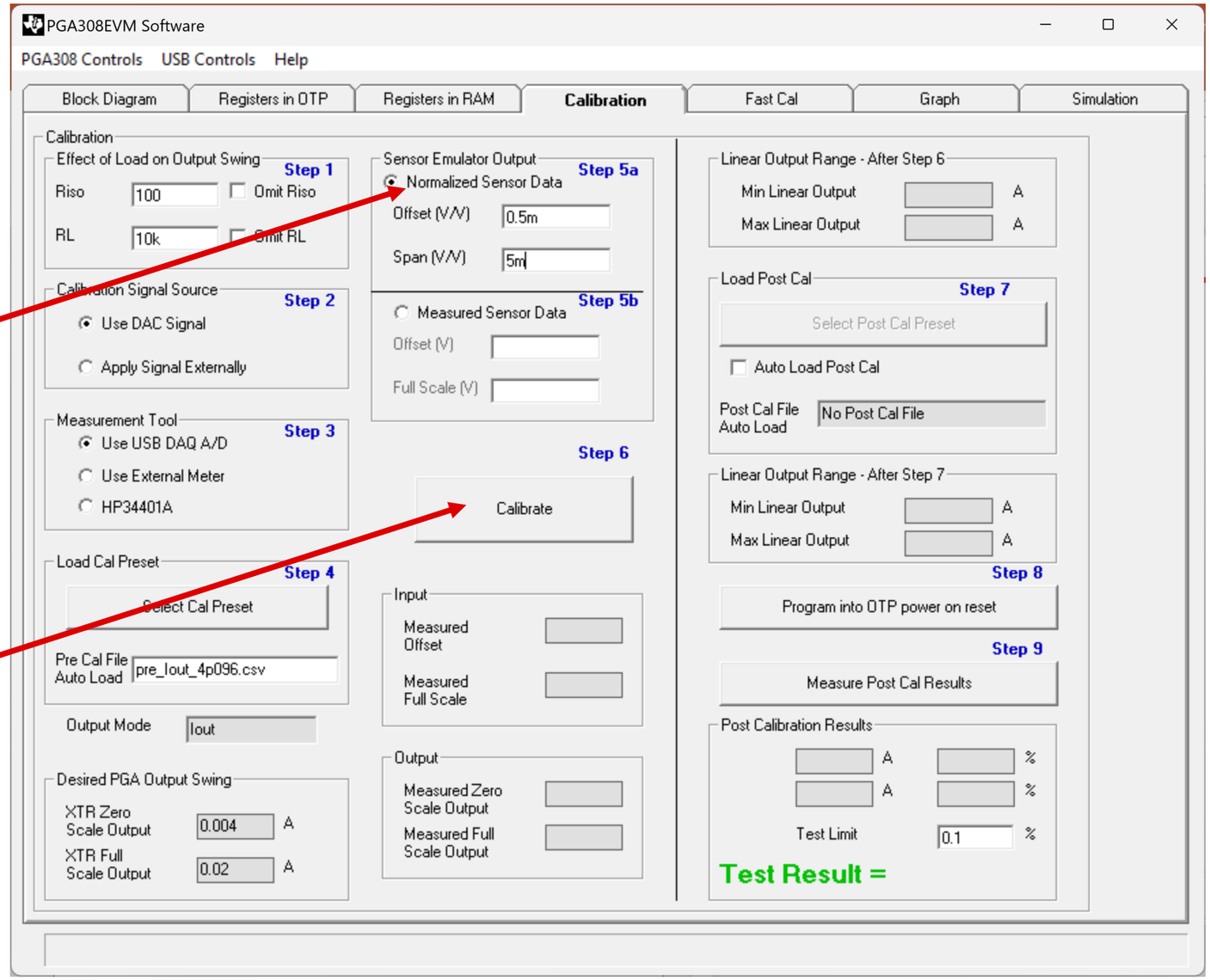
Confirm ***pre_Iout_4p096.csv*** is selected.



Enter sensor information & start calibration

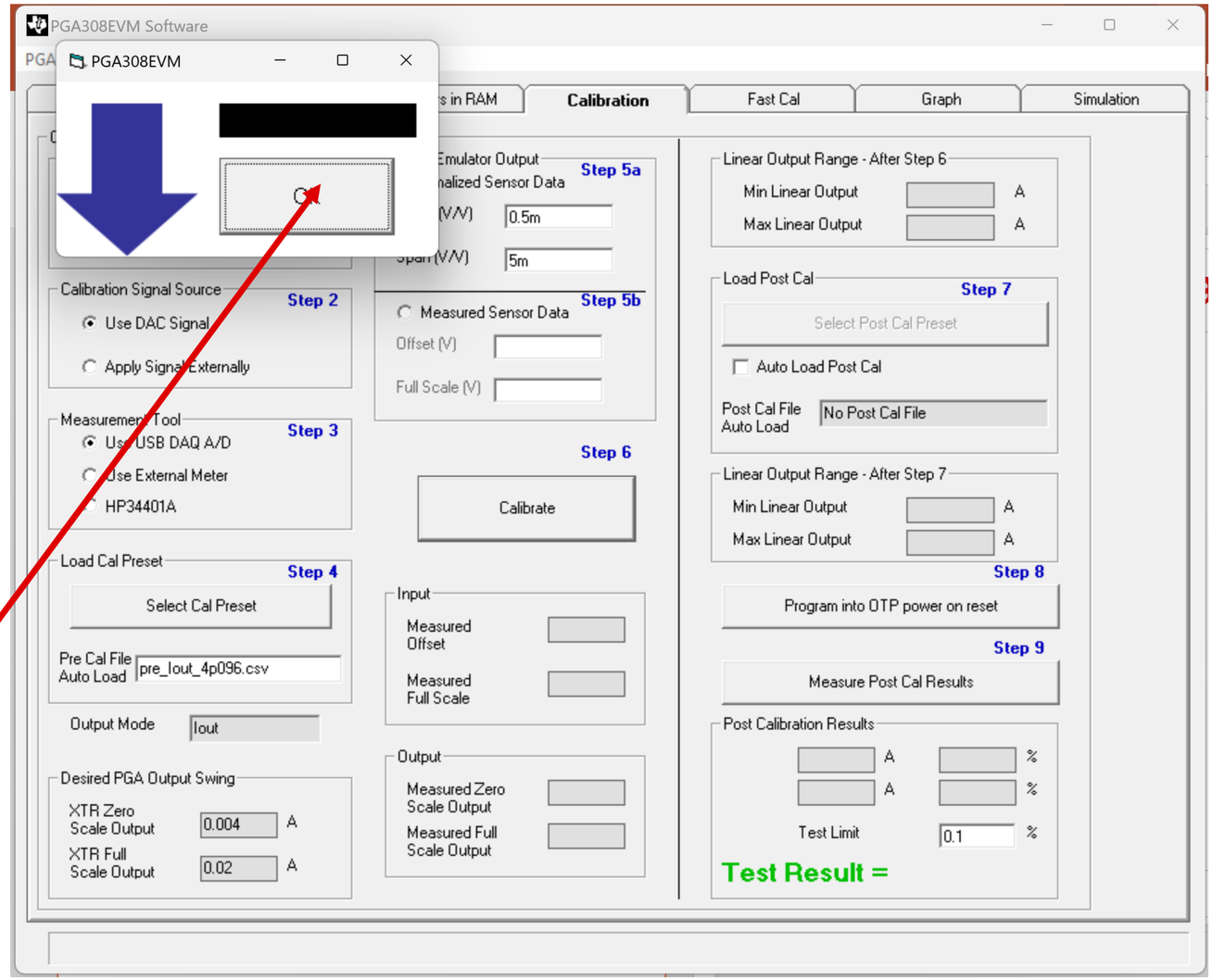
1. Enter Offset = 0.5m
Span = 5m

2. Press ***Calibrate***



Calibration process

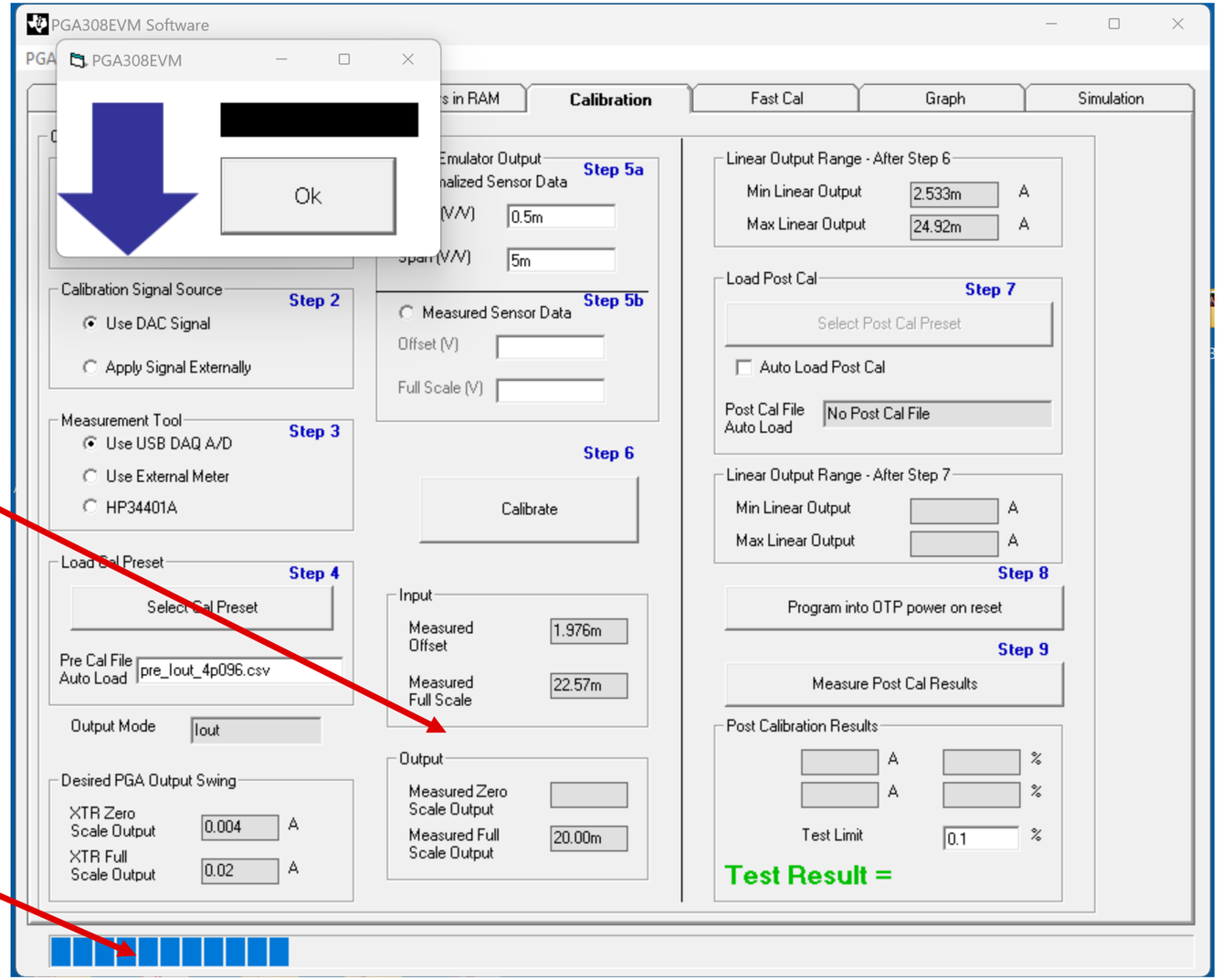
This box will pop up and pause the calibration. Press ***Ok*** to continue. The idea behind the pause is that you could adjust the pressure source throughout the calibration. However, in this example the sensor is automatically emulated. Thus, you only need to press ***Ok*** to continue at each pause.



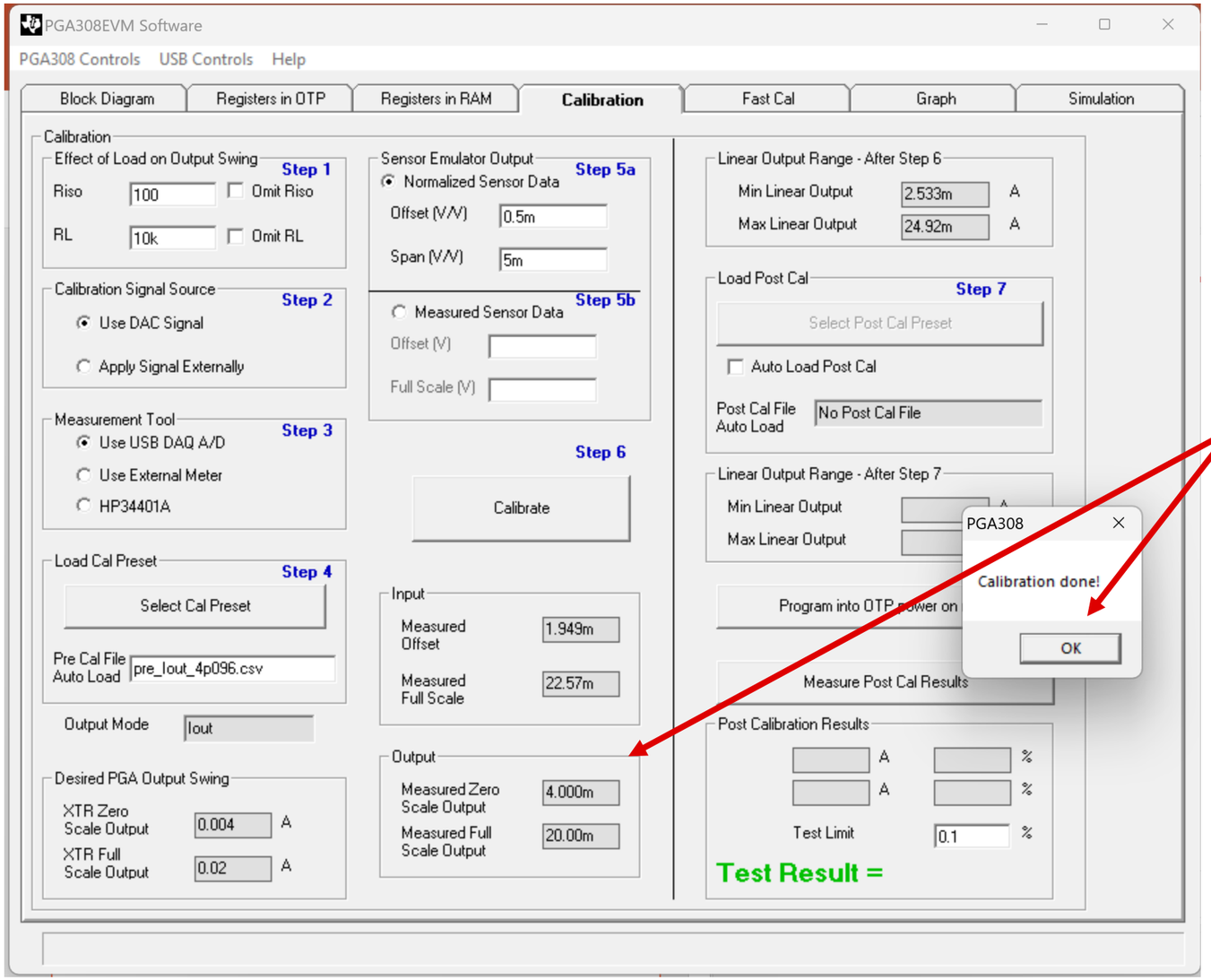
Calibration process

Throughout the calibration the input and output values will be updated.

The progress bar will move to indicate measurements are being made.

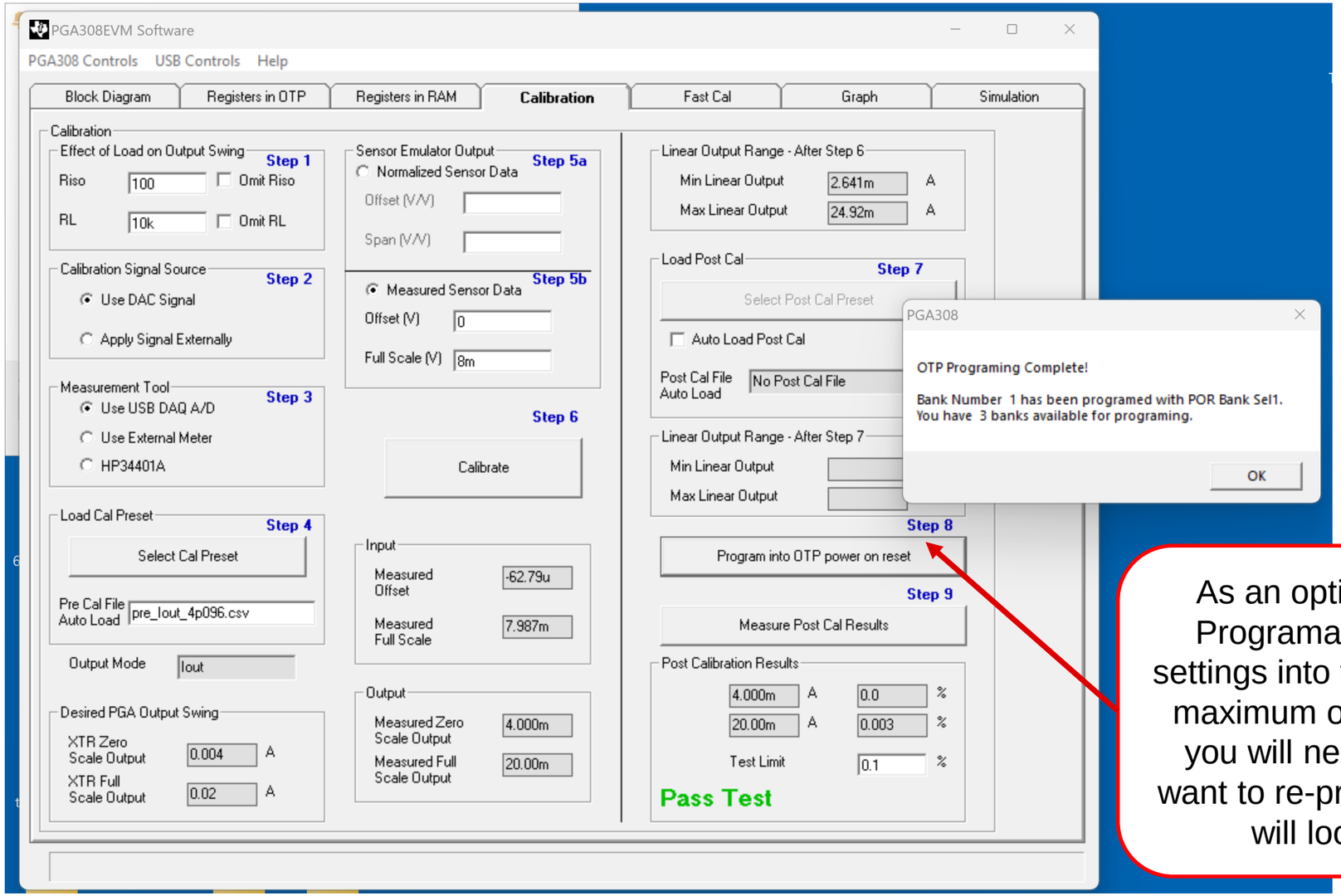


Calibration complete



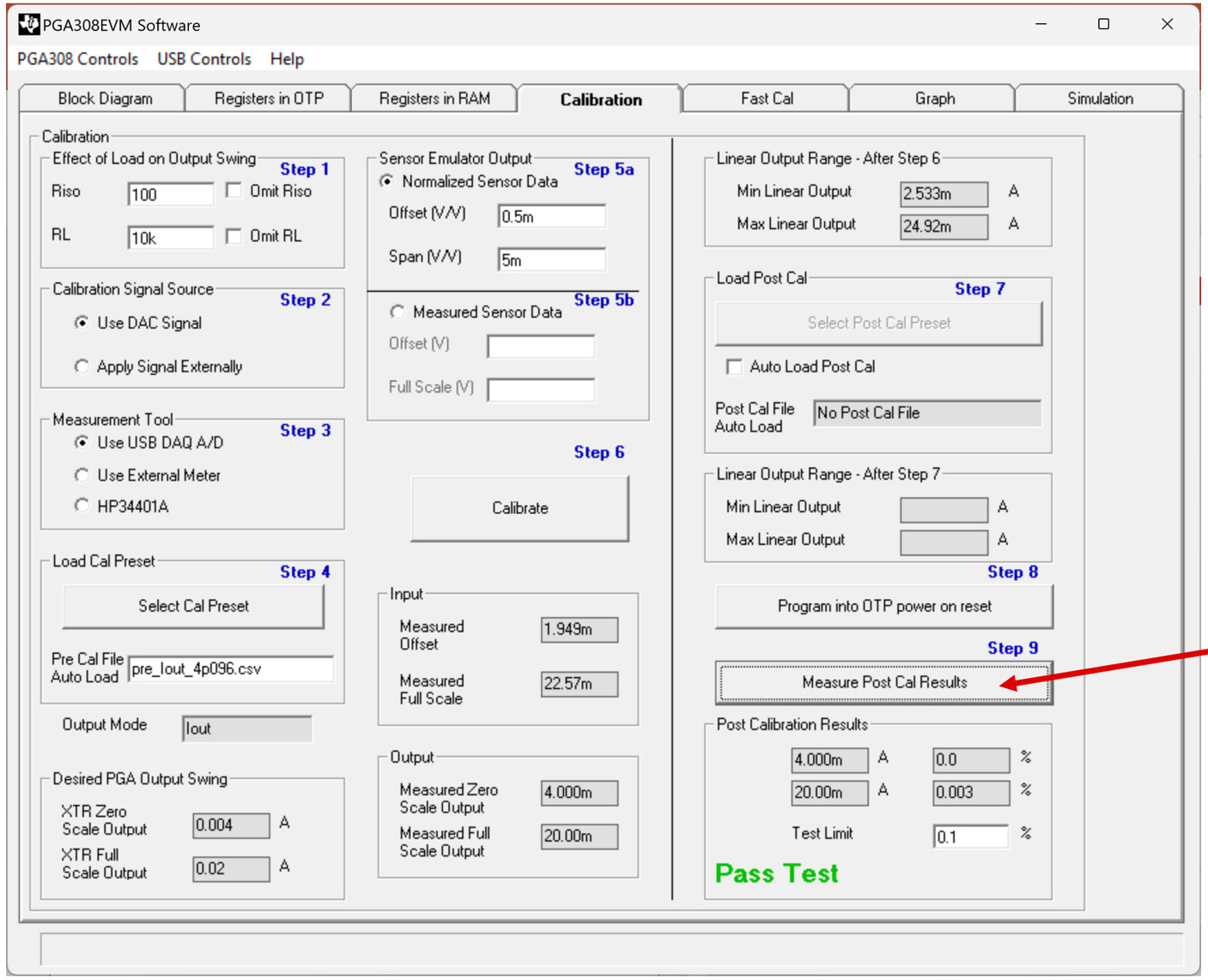
The calibration done box will pop up. At this time the output should have been calibrated to 4mA to 20mA

Optional – Program OTP



As an optional step you can program One-Time-Programable memory. This will save the current settings into the PGA308. However, you can do this a maximum of 3 times. After programing the 3rd time, you will need to replace the PGA308 device if you want to re-program. If you do not program the device will loose memory when power is cycled.

Post calibration



Press ***Measure Post Cal Results*** to confirm calibration error. This example shows very low error of 0.003%

Using a programed PGA308

Once the device OTP has been programed, you can test the device using the Block Diagram tab. First set the input signal to the desired input signal. Second, press Set Vin. Finally, press the Read button for Iout. Make sure that the Vdut LED is on (default startup state of software).