(Potentiometer)

QNET MECHKIT.   1
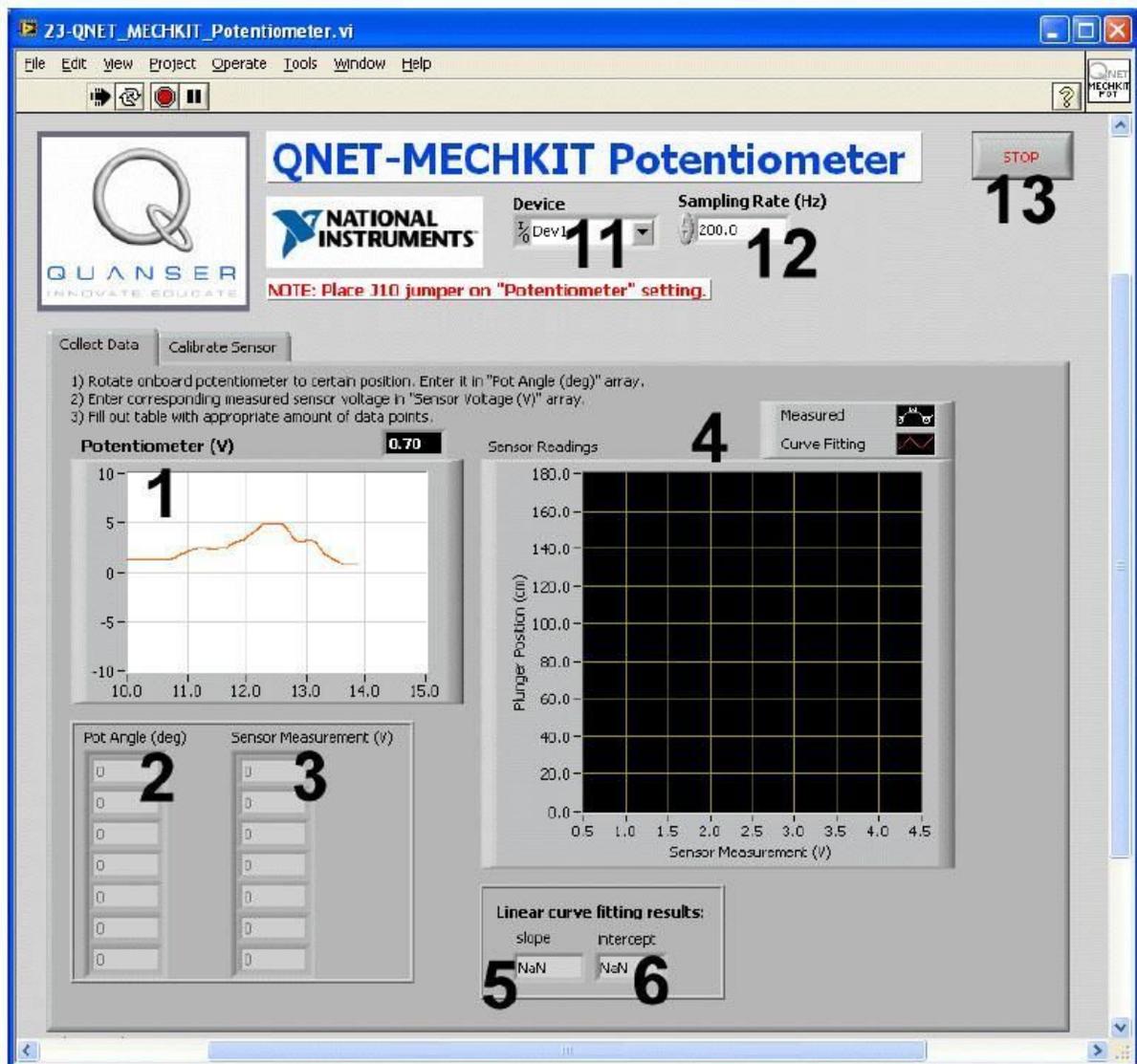
QNET_MECHKIT_ Potentiometer.   1, 2

VI

1.
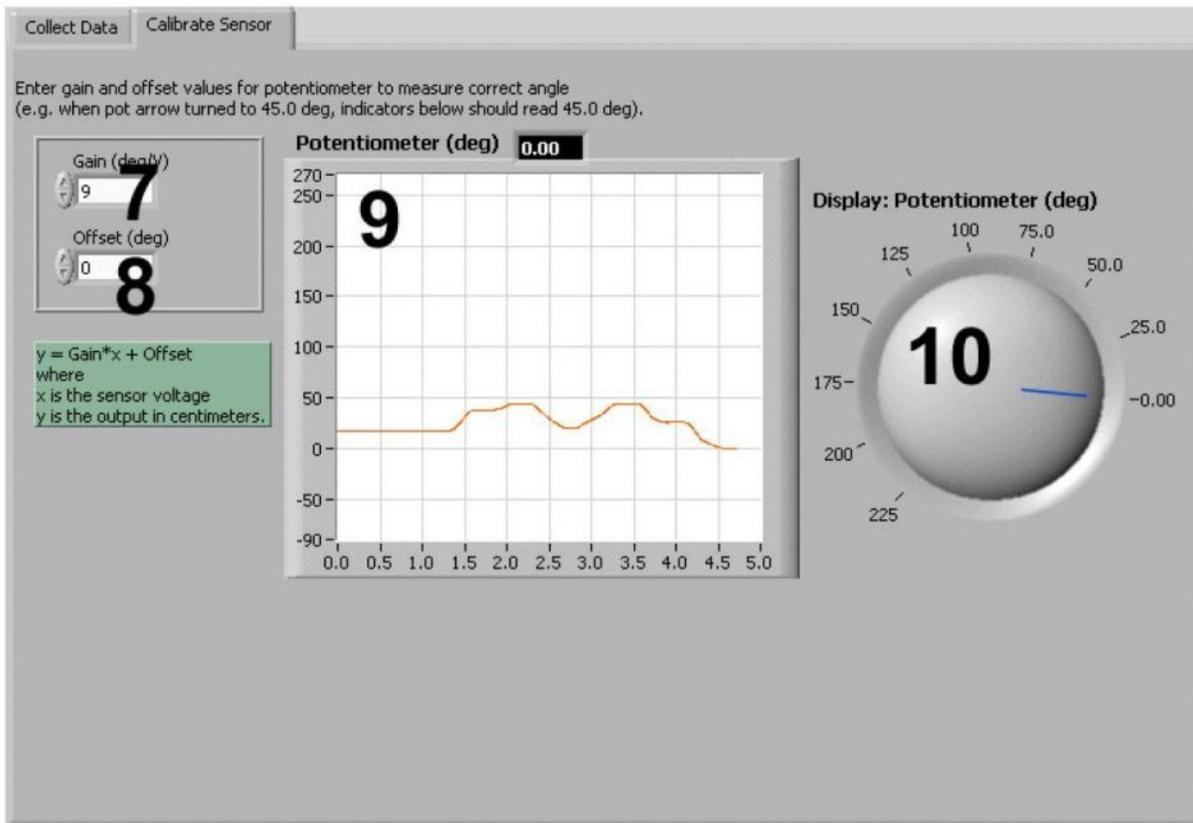
1.

. 1. VI QNET MECHKIT Potentiometer: "Collect Data"

Collect Data | Calibrate Sensor

Enter gain and offset values for potentiometer to measure correct angle
(e.g. when pot arrow turned to 45.0 deg, indicators below should read 45.0 deg).

Gain (deg/V)
9 **7**

Offset (deg)
0 **8**

y = Gain*x + Offset
where
x is the sensor voltage
y is the output in centimeters.

Potentiometer (deg) 0.00

9

270
250
200
150
100
50
0
-50
-90
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Display: Potentiometer (deg)
100 75.0
125   50.0
150   25.0
175   **10**   -0.00
200
225

. 2. VI QNET MECHKIT Potentiometer: "Calibrate Sensor"
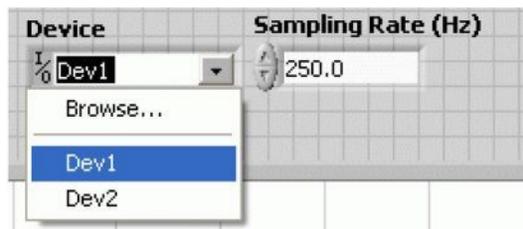
1. VI QNET MECHKIT Pressure Sensor

ID			. .
1	Potentiometer (V)	,	
2	Pot Angle (deg)	,	
3	Sensor Measurement (V)	- ,	
4	Sensor Readings		
5	slop		/
6	intercept		
7	Gain (deg/V)		/
8	Offset(deg)		
9	Potentiometer (deg),	, *Gain Offset*	

ID			. .
10	Potentiometer (deg),	, *Gain* *Offset*	
11	Device	DAQ-	
12	Sampling Rate	.	
13	Stop	, VI	
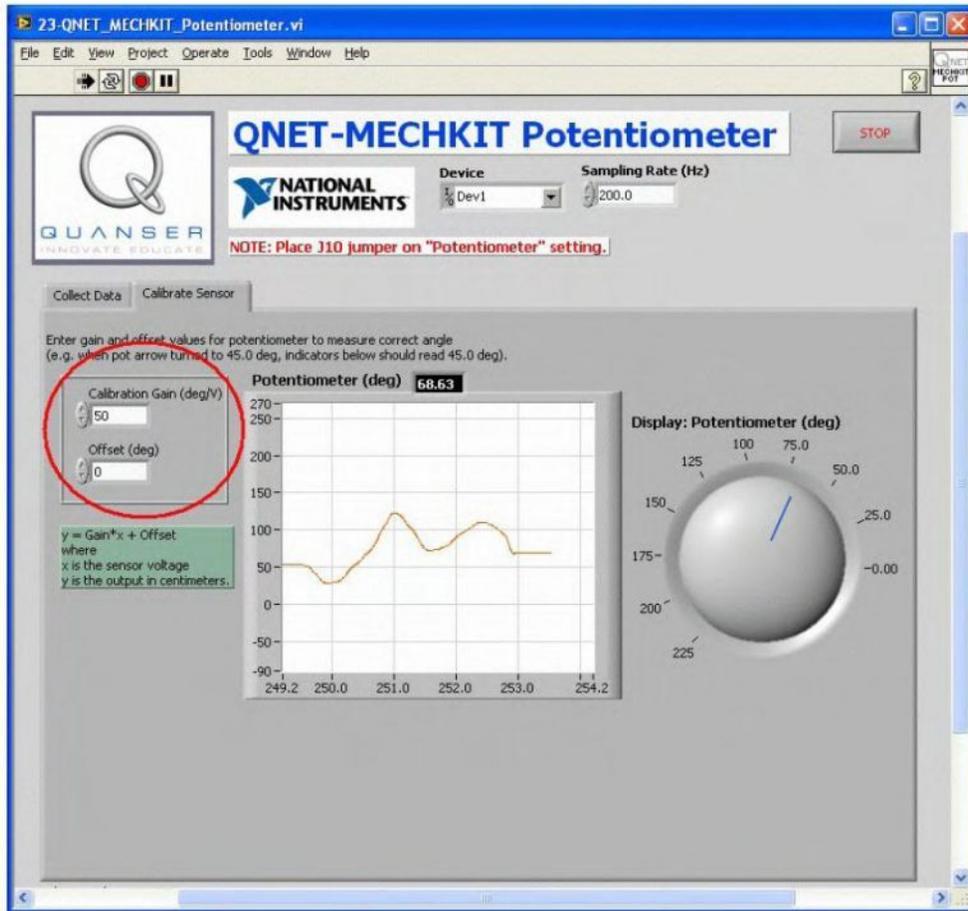
2.
1. , **J10** **POT**.

2. VI QNET_MECHKIT_ Potentiometer.vi.

3. , *Device* ,
3.

. 3 .

2.1.
1. , , 45
.

2. *Pot Angle Deg (deg)* (. 1). -
Sensor Measurement (V).

3. . ,
, .

4. **1**: 2
Sensor Readings.

5. VI, *Stop*.

Figure 25. Collect current example

. 4.

2.2

1. VI QNET_MECHKIT_ Potentiometer.vi

2. *Calibrate Sensor*
Calibration Gain *Offset* (. . 5), .
, , 45
Display Potentiometer (deg) 45 .

3. **2**: *Gain*
Offset 3.

. 5.

2.3

1.

2.

	( )	( )
0		
45		
90		
135		
180		

:

, 6, -

.

Sensor Readings
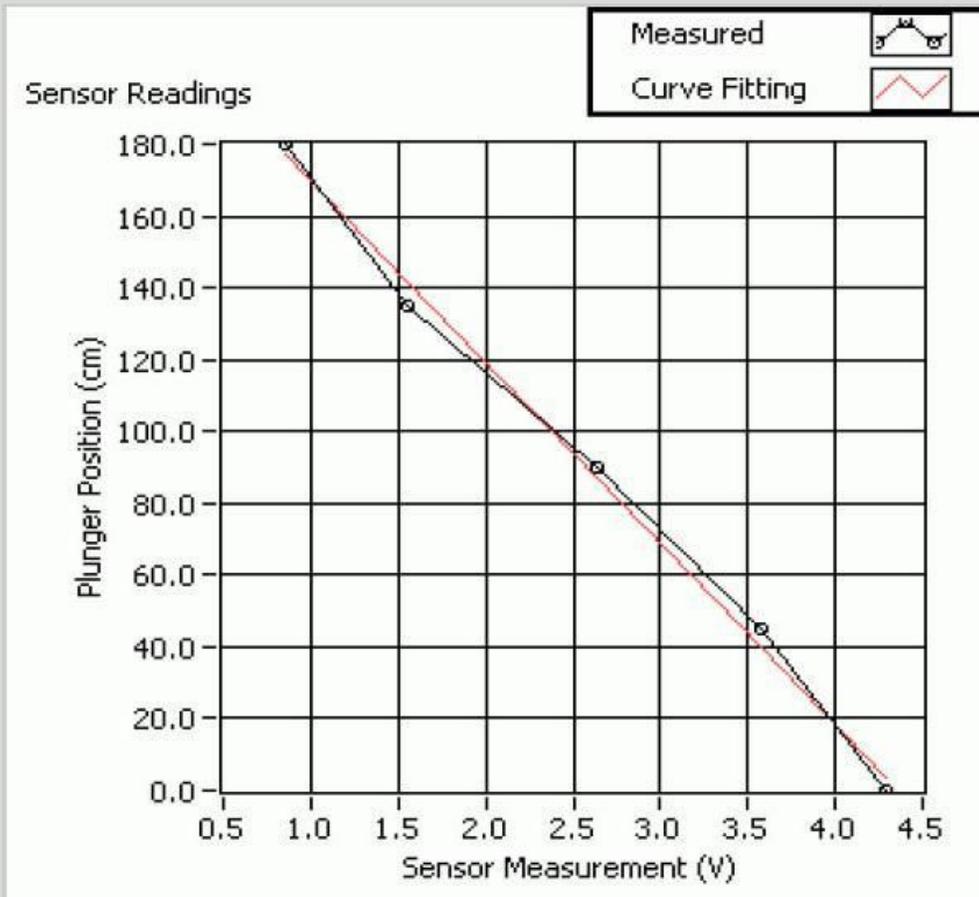
Measured
Curve Fitting

. 6.

Measured –   ; Curve Fitting –   ; Sensor Reading –
,   ; Pot Angle (deg) –   (   );
Sensor Measurement (V) –   ( )

2.

3.

:			
	-50.4	/	
	220		