

Procedure for Measuring Accuracy of PendoTECH PressureMAT®



PMAT-TCA: Test cable
assembly for PressureMAT
accuracy check

Set monitor to 2 decimal places:

1. Press the Back button 3 times to access the Global Setting Menu
2. Toggle Cursor to Control Service and press Select
3. With the cursor next to Decimal, press Select and the up arrow to show ON then press Select to save change
4. Press Home to return to the main screen

Attach **PMAT TCA** with black and red leads to PMAT channel to be measured

- Black is negative
- Red is positive

Attach calibrated millivolt generator to the leads

With the mV generator on, but no voltage being applied (generating 0.00 mV), press the TARE button on the PMAT to zero the channel

Create the Applied Voltage (mV) using the generator, using the values in the table below

Record the found pressure and compare to Theoretical Pressure + Allowed Deviation

Theoretical Pressure		Applied Voltage	Found Pressure		Allowed Deviation +/-*	
psi	bar	mV	psi	bar	psi	bar
1.00	0.07	1.034			0.04	0.01
5.00	0.34	5.179			0.08	0.01
10.00	0.69	10.439			0.13	0.01
30.00	2.07	31.136			0.33	0.02
50.00	3.45	50.137			0.53	0.04
60.00	4.14	58.959			0.63	0.04

* 1% of Target Pressure + 0.03 psi/0.0021 bar

Procedure for Measuring Accuracy of PendoTECH PressureMAT® Sensor Transmitter

Attach **PMAT TCA** with black and red leads to the transmitter

- Black is negative
- Red is positive

Attach calibrated millivolt generator to the leads

With the mV generator on, but no voltage being applied (generating 0.00 mV), tare the transmitter.

- Connect terminals 5 and 6 with dry contact, or...
- Tare the transmitter in the HMI/PLC

Note: If the transmitter is connected to a HMI/PLC there may be additional error caused by the accuracy of the HMI/PLC

Create the Applied Voltage (mV) using the generator, using the values in the table below

Record the found pressure and compare to Theoretical Pressure + Allowed Deviation

PT-30

Theoretical Pressure		Applied Voltage	Found Pressure		Allowed Deviation +/-*	
psi	bar	mV	psi	bar	psi	bar
0.00	0.00	0			0.13	0.01
7.50	0.52	4.937			0.14	0.01
15.00	1.03	9.875			0.15	0.01
22.50	1.55	14.813			0.16	0.01
30.00	2.07	19.751			0.18	0.01

*See Transmitter data sheet for details

PT-60

Theoretical Pressure		Applied Voltage	Found Pressure		Allowed Deviation +/-*	
psi	bar	mV	psi	bar	psi	bar
0.00	0.00	0			0.26	0.02
15.00	1.03	9.903			0.27	0.02
30.00	2.07	19.795			0.30	0.02
45.00	3.10	28.955			0.32	0.02
60.00	4.14	37.322			0.34	0.02

*See Transmitter data sheet for details