



- **Thermocouple & RTD Capability in one unit!**
- **Works with Rosemont 3144 and all other "smart" transmitters!**

The Martel PTC-8001 Precision Temperature Calibrator is an ideal device to handle all of your temperature calibration needs in a truly rugged, low cost package. It combines virtually all widely used thermocouples and RTDs in one device—you'll never have to worry about finding a temperature device you can't calibrate. This is especially true when calibrating "smart" or pulsed RTD transmitters where many other calibrators fail to work or operate at reduced accuracy specs. The PTC-8001 handles those applications with ease.

**Each Unit Includes:** Test leads, carrying case, 4 AA alkaline batteries, NIST Certificate, and instruction manual  
 Note: For T/C please order T/C cable kit

## T/C Cable Kit

Ideal for use with MC-1000, PTC-8001 and T120 calibrators. Martel part number 80029.



**Kit includes:**

- Type J T/C cable
- Type K T/C cable
- Type T T/C cable
- Type E T/C cable

All cables are terminated with a standard mini-connector on one end and bare leads on the other.

## Features

- High accuracy  $\pm 0.4^{\circ}\text{C}$  J T/C and  $\pm 0.3^{\circ}\text{C}$  4W PT385 RTD all errors included
- 10 T/C types and 8 RTD types including PT 385 (1000 ohm) and cu (10 ohm)
- Direct keyboard entry or scroll control of output
- Nema 4 rated case, rugged design
- RTD simulation works with all pulsed (smart) transmitters
- YSI 400 series thermistor range for medical applications
- Standard mini-plug or banana jack connections for T/C
- Store up to nine setpoints for each output function
- RS232 Interface

## General Specifications

<b>T/C Ranges:</b>	J, K, T, E, R, S, N, B, L, U including - 10 to 70 mV range
<b>RTD Ranges:</b>	Pt 385 (100, 200, 500, 1000 ohms) Pt 392, JIS, Ni 120, CU10, YSI 400
<b>Ohms Ranges:</b>	0 to 400.00 and 400.0 to 4000.0
<b>Accuracy:</b>	T/C Type J: $\pm .3^{\circ}\text{C} \pm 10 \mu\text{V}$ ( $\pm 0.6^{\circ}\text{C}$ total error) RTD PT100: $\pm .1^{\circ}\text{C} \pm .075 \Omega$ ( $\pm 0.3^{\circ}\text{C}$ total error) Ohms (400): $\pm 0.1 \Omega$ Ohms (4000): $\pm 1.0 \Omega$
<b>RTD IEX-range:</b>	0.01 mA to 3 mA
<b>RTD Frequency Response:</b>	10 mS – works with all pulsed XMTR's
<b>Oper. Temp:</b>	-10°C to 50°C
<b>Storage Temp:</b>	-20°C to 60°C
<b>Power Supply:</b>	4 AA Alkaline Cells, 30 hours typical operating time
<b>Size:</b>	7.5" x 4" x 1.5"

## Range & Accuracy

Range	Min	Max	Accuracy
Ohms Read 4w (low)	0.00	400.00	0.1 ohm
Ohms Read 4w (high)	400.0	1500.0	0.5 ohm
	1500.0	4000.0	1.0 ohm

  

Range	Min	Max	Excitation Current	Accuracy
Ohms Source (low)	5.00	400.00	0.1 to 0.5 mA	0.15 ohm
	5.00	400.00	0.5 to 3 mA	0.1 ohm
Ohms Source (high)	400.0	1500.0	0.05 to 0.8 mA	0.5 ohm
	1500.0	4000.0	0.05 to 0.4 mA	1.0 ohm

Range	Min	Max	Accuracy
Ni120 (672)	-80.0	260.0	0.2°C
Pt100 (385)	-200.0	800.0	0.33°C
Pt100(3926)	-200.0	630.0	0.3°C
Pt100(3916)	-200.0	630.0	0.3°C
Pt200(385)	-200.0	630.0	0.8°C
Pt500(385)	-200.0	500.0	0.3°C
	500.0	630.0	0.4°C
Pt1000(385)	-200.0	100.0	0.2°C
	100.0	630.0	0.3°C
Cu10	-100.0	250.0	2.2°C
YSI400	15.00	50.00	0.05°C

## Thermocouple Read and Source (All errors included)

Range	Min	Max	Accuracy
J Thermocouple	-200.0	0.0	0.6°C
	0.0	1200.0	0.4°C
K Thermocouple	-200.0	0.0	0.8°C
	0.0	1370.0	0.5°C
T Thermocouple	-200.0	0.0	0.8°C
	0.0	400.0	0.5°C
E Thermocouple	-200.0	0.0	0.5°C
	0.0	950.0	0.4°C
R Thermocouple	-20	0.0	2.4°C
	0	500	1.7°C
	500	1750	1.3°C

Range	Min	Max	Accuracy
S Thermocouple	-20	0	2.4°C
	0	500	1.7°C
	500	1750	1.4°C
B Thermocouple	600	800	2.1°C
	800	1000	1.7°C
	1000	1800	1.3°C
L Thermocouple	-200	0.0	0.45°C
	0.0	900.0	0.4°C
U Thermocouple	-200	0.0	0.7°C
	0.0	400.0	0.45°C
N Thermocouple	-200	0.0	1.1°C
	0.0	1300.0	0.6°C
mV Read/Source	-10.00	75.00	0.015% $\pm$ 2