

MARTEL

ELECTRONICS



Calibration Technology Starts Here

*Precision
Universal Temperature Calibrator*

*Accuracy
by
Any
Measure*



MARTEL Beta PTC-8001

The PTC-8001

The 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.

General Features

- Calibrate thermocouples and RTDs with one unit
- Works with Rosemount 3144 and all other smart transmitters
- Direct keyboard entry or scroll control of output
- User-defined setpoints
- High accuracy $\pm 0.4^\circ\text{C}$ J T/C and $\pm 0.3^\circ\text{C}$ 4W PT385 RTD; all errors included
- Ten (10) T/C types and eight (8) RTD types including PT 385 (1,000 Ohm) and Cu (10 Ohm)
- 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 connections for T/C
- Standard banana jack connections for RTDs
- Store up to nine (9) setpoints for each output function
- RS232 interface
- Supplied in full rubber boot

For more information:

- Call us toll free at 800-821-0023 or 603-434-1433
- Fax us at 603-434-1653
- Email us at sales@martelcorp.com and ask for a PTC-8001 brochure
- Or go to our website, www.martelcalibrators.com and click on PTC-8001
- **Online Product Comparison**

Specifications (23 °C ±5 °C unless otherwise noted)

Ranges	
T/C	J, K, T, E, R, S, N, B, L, U, P including -10 to 75 mV
RTD	Pt 385 (100, 200, 500, 1000 Ohms), Pt 392, JIS, Ni120, Cu10, Cu50, Cu100, 4SI
Ohm	0.0 to 400.0; 400 to 3,200
mV	-10 to +75
RTD IEX-Range	0.01 mA to 3 mA
RTD Frequency Response	10 ms; works with all pulsed transmitters
Environmental	
Operating Temperature	-10 °C to +50 °C
Storage Temperature	-20 °C to 60 °C
Power Requirements	
Batteries	6 VDC 4 AA alkaline batteries, 30 hours typ. op. time
Mechanical	
Dimensions	8.7" H x 4.2" W x 2.3" D (220.9 x 106.6 x 58.4 mm)
Weight	30 ounces (849 gms)
Accessories Included	Test leads, 4 AA alkaline batteries, NIST Cert., instruction manual
Optional Accessories	Carrying Case; Model CC572, T/C Probes, lead kits

Thermocouple Read and Source (all errors included)			
Range	Minimum	Maximum	Accuracy
J	-200.0 0.0	0.0 1,200.0	0.6°C 0.4°C
K	-200.0 0.0	0.0 1,370.0	0.8°C 0.5°C
T	-200.0 0.0	0.0 400.0	0.6°C 0.5°C
E	-200.0 0.0	0.0 950.0	0.5°C 0.4°C
R	-20.0 0.0 500.0	0.0 500.0 1,750.0	2.4°C 1.7°C 1.3°C
S	-20.0 0.0 500.0	0.0 500.0 1,750.0	2.4°C 1.7°C 1.4°C
B	600.0 800.0 1,000.0	800.0 1,000.0 1,800.0	2.1°C 1.7°C 1.3°C
L	-200.0 0.0	0.0 900.0	0.45°C 0.4°C
U	-200.0 0.0	0.0 400.0	0.7°C 0.45°C
N	-200.0 0.0	0.0 1,300.0	1.1°C 0.6°C
mV	-10.0	75.0	0.014%±2

RTD Read and Source			
Range	Minimum	Maximum	Accuracy
Ni120 (672)	-80.0	260.0	0.2 °C
Pt 100 (385)	-200.0	800.0	0.33 °C
Pt 100 (3926)	-200.0	630.0	0.3 °C
Pt 100 (3916)	-200.0	630.0	0.3 °C
Pt 200 (385)	-200.0	630.0	0.8 °C
Pt 500 (385)	-200.0	500.0	0.3 °C
	500.0	630.0	0.4 °C
Pt 1000 (385)	-200.0	100.0	0.2 °C
	100.0	680.0	0.3 °C
Cu10	-100.0	250.0	2.2 °C
YSI400	15.0	50.0	0.05 °C

Temperature Probes & Kit

A variety of temperature probe configurations are available for use with Thermocouple Calibrators.

All are Type-K, and feature ±2.2 °C/±0.75% or ±3.9 °F/±0.75% accuracy.



TP Kit includes probes:
TP-K01 through TP-K06

TP-K01 — Bead Probe
-50 °C to 200 °C; -58 °F to +392 °F

TP-K02 — Immersion Probe
-50 °C to 700 °C; -58 °F to +1,292 °F

TP-K03 — Surface Probe
-50 °C to 400 °C; -58 °F to +752 °F

TP-K04 — Piercing Probe
-50 °C to 600 °C; -58 °F to +1,122 °F

TP-K05 — Surface Probe
-50 °C to 400 °C; -58 °F to +752 °F

TP-K06 — Air & Gas Probe
-50 °C to 800 °C; -58 °F to +1,504 °F.



T/C Cable Kits

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

80029 — Kit includes:
Types J, K, T, and E T/C cables

80036 — Kit includes:
Types R, S, N, and B cables

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