

PTC-8001

Universal Temperature Calibrator

Description

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.

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 $\pm 0.4^{\circ}\text{C}$ JT/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



PTC-8001 Specifications (23 °C ±5 °C unless otherwise noted)

Ranges	
T/C	J, K, T, E, R, S, N, B, L, U, including -10 to 75 mV
RTD	Pt 385 (100, 200, 500, 1000 Ohms), Pt 392, JIS, Ni120, Cu10, YSI 400
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	
6 VDC	
Batteries	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	

Thermocouple Read and Source (all errors incl.)			
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	75.00	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	500.0 630.0	0.3 °C 0.4 °C
Pt 1000 (385)	-200.0 100.0	100.0 680.0	0.2 °C 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:
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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