



## **TC-100**

## **Description**

The TC-100 Thermocouple Calibrator provides high accuracy source and measurement of ten common thermocouples, as well as mV. The TC-100's accuracy of  $\pm 0.3$ °C for Type J T/Cs includes all errors, at resolutions of  $\pm 0.01$ °C or °F in measure mode and  $\pm 0.1$ °C or °F in source mode. Features including MIN/MAX recall in measure mode, three setpoints per thermocouple range, a large knob for decade control of the output in source mode, and the ability to accept bare T/C wires in addition to mini-plug inputs, makes the TC-100 an accurate, easy-to-use instrument for all your thermocouple calibration needs.

## **Features**

- High accuracy ±0.3°C (Type JT/C all errors combined)
- Ten (10) common T/C types plus mV
- Accepts both T/C mini-plug and bare T/C wires
- Simple decade control of output
- Three (3) setpoints for each T/C type
- MIN/MAX recall in measure mode
- Input protection to 240 VAC
- Supplied in full rubber boot

The TC-100 accepts both mini-plug AND bare thermocouple wires!

# Thermocouple Calibrator



# TC-100 Specifications (1 year at 23 °C ±5 °C; % of reading unless otherwise noted)

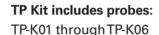
TC-100 Specifications (1 year at 23 °C ±5 °C; % o		
Output Voltage		
Range	-10 to +75.000 mV	
Resolution	1 μV	
Accuracy	$\pm \dot{0}$ .007 % of rdg, $\pm 10 \mu V$	
Output Impedance	≤1 0hm	
Input Voltage		
Range	-10 to +75.000 mV	
Resolution	1 μV	
Accuracy	±0.007 % of rdg, ±10 μV	
Input Impedance	> 1 MeaOhm	
Thermocouple Source/M		
Types	J, K, T, E, R, S, B, L, U, C	
Range	mV	
Resolution	. 0.10C or 0F	
Source Measure	±0.1°C or °F ±0.01°C or °F	
	±0.01 C 01 F	
Accuracy J	±0.5 °C; -210 °C to -100 °C	
3		
V	±0.3 °C; -100 °C to +1,200 °C	
K	±0.6 °C; -200 °C to -100 °C	
	±0.35 °C; -100 °C to +1,000 °C	
	±0.5 °C; +1,000 °C to +1,372 °C	
T	±0.7 °C; -200 °C to -150 °C	
	±0.3 °C; -150 °C to +400 °C	
E	±0.5 °C; -200 °C to -100 °C	
	±0.3 °C; -100 °C to +1,000 °C	
R	±1.8 °C; 0 °C to 250 °C	
	±1.0 °C; 250 °C to +1,767 °C	
S	±1.8 °C; 0 °C to 250 °C	
<b>G</b>	±1.0 °C; 250 °C to +1,767 °C	
В	±1.7 °C; 600 °C to 1,000 °C	
Б	±1.2 °C; 1,000 °C to 1,820 °C	
L	±0.5 °C; -200 °C to -100 °C	
L		
11	±0.4 °C; -100 °C to +900 °C	
U	±0.7 °C; -200 °C to 0 °C	
0	±0.3 °C; 0 °C to +600 °C	
С	±0.4 °C; 0 to °C 1,000 °C	
	±0.7 °C; 1,000 °C to +1,800 °C	
	±1.2 °C: +1.800 °C to +2.316 °C	
CJC Temp. Offset	±0.05 °C/°C outside of	
	23±5 °C	
Warm-up Time	1 minute to specification	
Environmental		
Operating Temperature	-10 °C to +55 °C	
Storage Temperature	-20 °C to 70 °C	
Power Requirements	9 VDC	
BatterY •	9 V alkaline; 006P/ IEC 6F22/	
	NEDA1604	
	Optional NiCad	
	Optional AC adapter/charger	
Mechanical	Optional Ao adapter/charder	
Dimensions	5.7" H x 3.15" W x 1.43" D	
Difficitions	(111 - 00 0 00 00 0	

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	Weight	12 ounces (340 grams)
0	optional Accessories	Carrying Case;
	•	Model LCA-05A

Notes:

1. Temperature standard ITS-90.

Temperature Probes & Kit A variety of temperature probe configurations are available. All are Type-K, and feature ±2.2 °C/±0.75% or ±3.9 °F/±0.75% accuracy.



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

# Need a high performance loop calibrator?

### Consider the LC-100.

With accuracy of ±0.015% of reading and 0.001 mA resolution, the LC-100 furnishes significantly extended performance over any competitive calibrator. A % Error function eliminates manual error calculations. The LC-100 simulates, powers and measures two-wire transmitters, and can remotely calibrate 4-20 mA devices.



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(144.7 x 80.0 x 36.3 mm)