

# Multifunction Thermocouple/mV Calibrator



CL300A



- ✓ High Accuracy:  $\pm 0.3^{\circ}\text{C}$
- ✓ Measures Inputs from 10 Common Thermocouple Types plus mV
- ✓ Accepts Miniplugs and Bare Wires
- ✓ Simple Decade Control of Output
- ✓ 3 Setpoints for Each Thermocouple Type
- ✓ Min/Max Recall
- ✓ Input Protection to 240 Vac
- ✓ Protected by Rubber Boot; Carrying Case Optional

The CL300A multifunction thermocouple/mV calibrator combines high accuracy with ease of use. Its accuracy of  $\pm 0.3^{\circ}\text{C}$  ( $\pm 0.5^{\circ}\text{F}$ ) includes all errors, at resolutions of  $0.01^{\circ}\text{C}$  or  $^{\circ}\text{F}$  in measure mode and  $0.1^{\circ}\text{C}$  or  $^{\circ}\text{F}$  in source mode. Features include min/max recall in measure mode, 3 setpoints per thermocouple type, a large knob for decade control of the output in source mode, and compatibility with both bare-wire and miniplug inputs.

## Specifications

(1-Year at  $23 \pm 5^{\circ}\text{C}$ ; % of Reading Unless Otherwise Noted)

### Output Voltage

Range: -10 to 75 mV

Resolution: 1  $\mu\text{V}$

Accuracy:  $\pm 0.007\%$  rdg,  $\pm 10 \mu\text{V}$

Output Impedance: 1  $\Omega$

### Input Voltage

Range: -10 to 75 mV/thermocouple source/measure

### Thermocouple Types:

J, K, T, E, R, S, B, L, U, C

## Resolution

Source:  $\pm 0.1^{\circ}\text{C}$  or  $^{\circ}\text{F}$

Measure:  $\pm 0.01^{\circ}\text{C}$  or  $^{\circ}\text{F}$

## Accuracy:

J:  $\pm 0.5^{\circ}\text{C}$ ; -210 to  $-100^{\circ}\text{C}$ ,  $\pm 0.3^{\circ}\text{C}$ ; -100 to  $1200^{\circ}\text{C}$

K:  $\pm 0.6^{\circ}\text{C}$ ; -200 to  $-100^{\circ}\text{C}$ ,  $\pm 0.35^{\circ}\text{C}$ ; -100 to  $1000^{\circ}\text{C}$ ,  $\pm 0.5^{\circ}\text{C}$ ; 1000 to  $1372^{\circ}\text{C}$

T:  $\pm 0.7^{\circ}\text{C}$ ; -200 to  $-150^{\circ}\text{C}$ ,  $\pm 0.3^{\circ}\text{C}$ ; -150 to  $400^{\circ}\text{C}$

E:  $\pm 0.5^{\circ}\text{C}$ ; -200 to  $-100^{\circ}\text{C}$ ,  $\pm 0.3^{\circ}\text{C}$ ; -100 to  $1000^{\circ}\text{C}$

R:  $\pm 1.8^{\circ}\text{C}$ ; 0 to  $250^{\circ}\text{C}$ ,  $\pm 1.0^{\circ}\text{C}$ ; 250 to  $1767^{\circ}\text{C}$

S:  $\pm 1.8^{\circ}\text{C}$ ; 0 to  $250^{\circ}\text{C}$ ,  $\pm 1.0^{\circ}\text{C}$ ; 250 to  $1767^{\circ}\text{C}$

B:  $\pm 1.7^{\circ}\text{C}$ ; 600 to  $1000^{\circ}\text{C}$ ,  $\pm 1.2^{\circ}\text{C}$ ; 1000 to  $1820^{\circ}\text{C}$

L:  $\pm 0.5^{\circ}\text{C}$ ; -200 to  $-100^{\circ}\text{C}$ ,  $\pm 0.4^{\circ}\text{C}$ ; -100 to  $900^{\circ}\text{C}$

U:  $\pm 0.7^{\circ}\text{C}$ ; -200 to  $0^{\circ}\text{C}$ ,  $\pm 0.3^{\circ}\text{C}$ ; 0 to  $600^{\circ}\text{C}$

C:  $\pm 0.4^{\circ}\text{C}$ ; 0 to  $1000^{\circ}\text{C}$ ,  $\pm 0.7^{\circ}\text{C}$ ; 1000 to  $1800^{\circ}\text{C}$ ,  $\pm 1.2^{\circ}\text{C}$ ; 1800 to  $2316^{\circ}\text{C}$

Resolution: 1  $\mu\text{V}$

Accuracy:  $\pm 0.007\%$  rdg,  $\pm 10 \mu\text{V}$

Input Impedance:  $> 1 \text{ M}\Omega$

CJC Temp Offset:  $\pm 0.05^{\circ}\text{C}/^{\circ}\text{C}$  outside of  $23 \pm 5^{\circ}\text{C}$

Warm-Up Time: 1 minute to specification

## Environmental

### Operating Temperature:

-10 to  $55^{\circ}\text{C}$  (14 to  $131^{\circ}\text{F}$ )

### Storage Temperature:

-20 to  $70^{\circ}\text{C}$  (-4 to  $158^{\circ}\text{F}$ )

Power Requirement: 9 Vdc

Battery: 9V alkaline (included)

Optional Power: Ni-Cad battery, AC adaptor/charger

## Mechanical

### Dimensions:

144.7 H x 80.0 W x 36.3 mm D

(5.7 x 3.15 x 1.43")

Weight: 340 g (12 oz)



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

## To Order

Model No.	Description
CL300A	Thermocouple calibrator

Comes complete with rubber boot, 9V battery, Type K thermocouple, operator's manual and calibration certificate.

Ordering Example: CL300A, thermocouple/millivolt calibrator. OCW-2, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 3 years.

## Accessories

Model No.	Description
CL300A-CC	Soft carry case
PCL-BATT-9V	9V NICAD battery
PCL-ACA	AC charger 120 Vac