

Dual Thermocouple and RTD Calibrator

CL543



Accurate to $\pm 0.2^{\circ}\text{C}$ ($\pm 0.4^{\circ}\text{F}$)
with 0.1 or
0.01° Resolution
Direct Temperature Input/
Output
8 Standard T/C Types
Available: J, K, E, T, R, S,
B, N, and mV
8 RTD Curves Available in
Platinum, Copper,
and Nickel
Patent-Pending
Auto-Detection of
2-, 3-, or 4-Wire
Connection Indicator
Guaranteed to Work with
All Pulsed Instruments
Compatible with Devices
Using Pulsed Excitation
Currents, Including PLCs,
DCS, and Recorders
Easy Dial Knob Easily
Adjusts Output by 0.1°
Easy Check Switch for
0 and 100% Span
Adjustments
Store New Easy Check
Values by Pressing the
Easy Dial Knob
Selectable Auto-Stepping
Superior Battery Life of
45 Hours under Typical
Continuous Usage
NIST-Traceable Calibration
Certificate Included

CL543, \$1395.

The OMEGA® CL543 dual thermocouple and RTD calibrator provides direct temperature calibration to instruments such as transmitters, recorders, controllers, alarms, and data acquisition and computer systems. It also reads RTD and thermocouple outputs and displays temperature. Compatible with pulsed systems and transmitters, the CL543 has a patent-pending feature for troubleshooting: the auto-detection of 2-, 3-, or 4-wire connections will tell the user if the wires are correctly connected. The "auto stepping" function offers selectable step sizes

and time in-between steps. This calibrator is a superior replacement for decade boxes, eliminating the lugging around of large equipment and the possibility of misreading RTD tables.

The CL543 offers the highest performance and the most features in its class by exceeding the accuracy and functions of many higher-priced thermocouple and RTD calibrators. It is a low-cost solution for checkout and calibration of all thermocouple and RTD instruments in the field, shop, or control room.



Specifications

(Unless Otherwise Indicated, All Specifications are Rated from a Nominal 23°C (73°F), 70% RH, for 1 Year from Calibration)

Temperature Range:

-25 to 60°C (-10 to 140°F)

Relative Humidity Range:

10% ≤RH ≤90% (0 to 35°C), non-condensing

10% ≤RH ≤70% (35 to 60°C), non-condensing

Overall Size:

125.5 H x 46.2 W x 80 mm L (4.9 x 1.82 x 3.15")

Overall Weight: 204 g (7.2 oz), including 9V battery

Battery: 9V alkaline (included) provides 45-hr of continuous use

Miscellaneous:

- Low-battery indication that nominal 1-hr of operation is left
- Overload protected to 60V for 30 seconds or less
- High-contrast graphic LCD with 9.07 mm (0.357") high digits

Accuracy

Millivolt Accuracy: ±(0.008% of mV setting + 0.006 mV)

Temperature Coefficient of mV

Source: 50 ppm/°C of output range

Cold-Junction Calibration Accuracy: ±0.1°C (0.2°F)

Cold-Junction Sensor Temperature

Coefficient: ±0.025°/° in ambient temperature (°C or °F)

General Temperature Accuracy:

±0.008% of mV setting + 0.006 mV ±0.1°C (0.2°F)

Maximum Resolution:

0.01° or 0.001 Ω

Source Thermocouple Specifications

Output Range: -13 to 80 mV

Output Noise:

±5 μV p-p from 0.1 to 10 Hz

Output Impedance:

0.2 Ω (200 nV/μA)

Source Current: <8 mA

Read Thermocouple Specifications:

Input Noise: <±1 LSD from 0.1 to 10 Hz

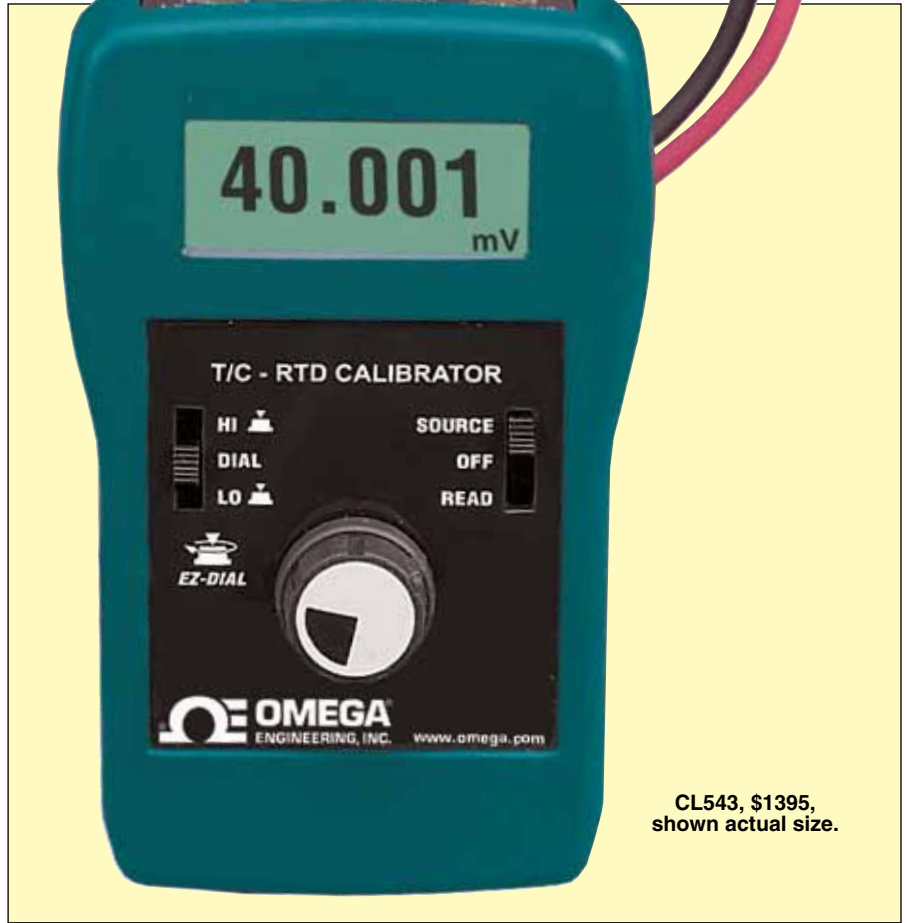
Input Impedance: >1 MΩ

Open T/C Test Pulse:

<100 μA for 300 ms

Open T/C Response Time: <3 seconds

Open T/C Threshold: 10 kΩ nominal



CL543, \$1395, shown actual size.

RTD Simulation Specifications

Allowable Excitation Current:

100 μA to 10.2 mA, steady or pulsed/intermittent/smart; for accuracies below 100 μA, add ±10 μV/excitation current (units are in Ω)

Pulsed Excitation Current

Compatibility: DC to 0.01 second pulse widths

RTD Read Specifications

Excitation Current: 300 μA nominal



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

To Order	
Model No.	Description
CL543	Dual thermocouple and RTD calibrator
SC-800	Soft carrying case

Comes complete with NIST certification, operator's manual and 9V battery.

Ordering Example: CL543, dual thermocouple and RTD calibrator.

OCW-2, OMEGACARESM extends standard 3-year warranty to a total of 5 years.