Thermocouple Calibrator

CL542

3 YEAR WARRANTY | NIST | CE

Standard

- **Types J, K, E, T, R, S, B, N, and mV**
- **Resolution 0.1°C or °F**
- **Easy Dial Knob Easily Adjusts Output**

The OMEGA® CL542 thermocouple calibrator simulates or reads a standard thermocouple curve over the entire industrial temperature range. Choose between 8 standard T/C types or millivolts.

The CL542 sources precise temperatures for inputs to all types of instruments such as transmitters, recorders, controllers, alarms and data acquisition and computer systems.

The CL542 offers an SMP-type connector and slotted screws on the top for easy connection.

The easy check function allows the user to store 3 output temperatures for real convenience. This will save time for repetitive calibrations by instantly recalling the 3 stored temperature values. Three output settings can be stored, and all settings are saved, even with the power off.

Specifications

Unless otherwise indicated, all specifications are rated from a nominal 23°C (73°F), 70% RH for 1 year from calibration.

T/C Temperature Range:
Type B: 594 to 1820°C (1101 to 3308°F)
Type E: -260 to 1000°C (-436 to 1832°F)
Type J: -210 to 1200°C (-346 to 2192°F)
Type K: -245 to 1372°C (-409 to 2501°F)
Type N: -229 to 1300°C (-380 to 2372°F)
Type R: 24 to 1768°C (75 to 3214°F)
Type S: 21 to 1768°C (69 to 3214°F)
Type T: -251 to 400°C (-419 to 752°F)
Millivolt Range: -12 to 80 mV
Millivolt Accuracy: ±(0.008% of mV setting + 0.006 mV)
Temperature Coefficient of mV Source: 50 ppm/°C of output range
Output Noise: ±5 µVpp from 0.1 to 10 Hz
Output Impedance: 0.2 Ω

Cold Junction Sensor

Temperature Coefficient: ±0.025°/° in ambient temperature (°C or °F)
Temperature Accuracy: ±(0.008% of mV setting + 0.006 mV) ± 0.1°C (0.2°F)
Output Dial Adjustment Resolution: 0.1°C or 0.1°F
Operating Temperature Range: -25 to 60°C (-10 to 140°F)
Storage Temperature Range: -25 to 60°C (-10 to 140°F)
Relative Humidity Range: 10% ≤RH ≤90% [0 to 35°C (32 to 95°F)] non-condensing, 10% ≤RH ≤70% [35 to 60°C (95 to 140°F)] non-condensing
Battery: 9V alkaline (included) provides 45 hours of continuous use with low battery indication
Display: High-contrast graphic liquid crystal 5-digit display with 9.07 mm H (0.357") digits
Connections: Thermocouple SMP type and slotted screws on top
Dimensions: 125.5 H x 80 W x 46.2 mm D (4.9 x 3.15 x 1.82")
Weight: 258 g (9.1 oz)

CL542.

OMEGACARE℠ Extended Warranty Program

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

To Order

Model No.	Description
CL542	J, K, E, T, R, S, B, N, mV calibrator
SC-800	Soft carrying case

Cable Options *with male SMP connector and compensated terminal lugs*

Model No.	Description
CL-300-CABLE-(*)-2	Standard 0.6 m (2') cable
CL-300-CABLE-(*)-10	Standard 3 m (10') cable
CL-300-RSC-(*)-2	Retractable 0.6 m (2') cable

***** *Insert 1 thermocouple type for:* ***CL-300-CABLE:*** *J, K, T, E, R, S, B, N;* ***CL-300-RSC:*** *J, K, T, E. Comes complete with NIST certification, operator's manual and 9V battery.*
Ordering Example: CL542, *J, K, E, T, R, S, B, N, mV thermocouple simulator.*
OCW-2, *OMEGACARE℠ extends standard 3-year warranty to a total of 5 years.*