

THERMOCOUPLE SIMULATORS

CL540 Series

Starts at
\$499



- ✓ 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® CL540 Series thermocouple simulators simulate a standard thermocouple curve over the entire industrial temperature range. Choose between 8 standard T/C types or millivolts.

The CL540 Series sources precise temperatures for inputs to all types of instruments such as transmitters, recorders, controllers, alarms, and data acquisition and computer systems.

The CL540 Series for 1 thermocouple type calibration comes with a 45 cm (18") thermocouple extension wire of that calibration and is internally cold-junction compensated for changes in ambient temperature. The CL540Z offers an SMP-type connector on the top, and connection cables are ordered separately.

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 100 mV

Accuracy

Millivolt Uncertainty: $\pm(0.015\%$ of mV setting + 0.009 mV)

Temperature Coefficient of mV

Source: ± 0.005 mV/°C ambient

Output Noise: ± 5 μ Vpp from 0.1 to 10 Hz

Output Impedance: 0.2 Ω

Cold Junction Uncertainty:

Cold Junction Sensor

Temperature Coefficient:

$\pm 0.05^\circ$ in ambient temperature (°C or °F)

General Temperature

Accuracy: $\pm(0.015\%$ of mV

setting + 0.009 mV) $\pm 0.25^\circ$ C (0.5°F)

Output Dial Adjustment Resolution:

0.1°C or 0.1°F for CL540Z, 1°C or 1°F

for CL540 (single T/C type)

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% \leq RH \leq 90% [0 to 35°C (32 to 95°F)]

non-condensing, 10% \leq RH \leq 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 (0.357") high digits

Connections: Thermocouple SMP type on top for CL540Z; wire 45 cm (18") with stripped-end leads of appropriate type for CL540(*)

Dimensions:

125.5 H x 46.2 W x 80 mm L

(4.9 x 1.82 x 3.15")

Weight: 255 g (9 oz)



CL540Z, \$599, shown smaller than actual size. Cable sold separately.



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.

AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

MODEL NO.	PRICE	DESCRIPTION
CL540Z	\$599	J, K, E, T, R, S, B, N, mV simulator
CL540(*)	499	Thermocouple simulator
SC-800	10	Soft carrying case

* Insert 1 thermocouple Type: J, K, E, T, R, S, B, N or mV.

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

Ordering Example: CL540Z, J, K, E, T, R, S, B, N, mV thermocouple simulator, \$599.

OCW-2, OMEGACARESM extends standard 3-year warranty to a total of 5 years (\$107), \$599 + 107 = \$706.

CABLE OPTIONS ONE REQUIRED FOR CL540 SERIES

FOR MODEL NO.	STANDARD CABLE (2 AND 10')	PRICE	RETRACTABLE CABLE (2')	PRICE
CL540Z	CL-300-CABLE-(*)-2	\$10	CL-300-RSC-(**)-2	\$20
	CL-300-CABLE-(*)-10	20		

* Insert one thermocouple type for:

CL-300-CABLE: J, K, T, E, R, S, B, N; CL-300-RSC: J, K, T, E.

Recommended Reference Book: American Electrician's Handbook, EE-0682, \$90. See Section Y for Additional Books.





UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters