

# Thermocouple Simulator



CL540ZA



- ✓ Source 14 Thermocouple Types
- ✓ Easy-to-Read Backlight Display
- ✓ Easily Change Thermocouple Types and Scale
- ✓ Calibrate Directly in Temperature (°C or °F)
- ✓ Compatible with All Process Instruments

With the CL540ZA you can check and calibrate all your thermocouple instruments. Connect via a miniature thermocouple connector on the top end of the source. Use your own thermocouple wire connectors or order one of the cable accessories for easy operation out of the box.

Easy to operate even in the dark areas of the plant with the backlit display. Stop carrying around a millivolt source and thermocouple tables. The CL540ZA works with the thermocouples you use including Types J, K, T, E, R, S, B, N, G, C, D, L (J-DIN), U (T-DIN) and P (Platinel II). Easily set any value quickly to within 0.1° with the adjustable digital potentiometer "DIAL" plus store any three temperatures for instant recall with the selector switch. You can also calibrate from -13.000 to +80.000 mV.

Connect directly to the thermocouple inputs of smart transmitters, PLCs, controllers and multichannel recorders and verify their outputs or displays.

## SPECIFICATIONS

**Accuracy:** ±(0.015% of reading + 0.006 mV)

**Cold Junction Compensation:** ±0.25°C (±0.45°F)

**Operating Temperature Range:** -25 to 60°C (-10 to 140°F)

**Millivolt Range:** -13.000 to 80.000 mV

**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

**Dimensions:** 126 L x 69 W x 45 mm D (4.96 x 2.73 x 1.79")

**With Boot:** 144 L x 78 W x 52 mm D (5.67 x 3.06 x 2.05")

**Weight:** 238 g (8.4 oz) (including batteries)

**With Boot:** 311.8 g (11 oz) (including batteries)

**Batteries:** Four "AA" Alkaline 1.5V (included)

**Battery Life:** 50 hours

**Low Battery:** Low battery indication with nominal 1 hour of operation left

**Protection Against Misconnection:** Over-voltage protection to 60 Vdc (rated for 30 seconds)

**Display:** High contrast graphic liquid crystal display. LED backlighting for use in low lit areas

### Source

**Output Impedance:** < 0.3 Ω

**Source Current:** > 20 mA (drives 80 mV into 10 Ω)

**Noise:** ≤ 4 microvolts p-p for frequencies of 10 Hz or below



CL540ZA.

Input Type	Range	Input Type	Range
B	315 to 1820°C 600 to 3308°F	E	-240 to 1000°C -400 to 1832°F
J	-200 to 1200°C -346 to 2192°F	K	-230 to 1371°C -382 to 2500°F
N	-230 to 1300°C -382 to 2372°F	R	-13 to 1768°C -1 to 3214°F
S	-13 to 1768°C -1 to 3214°F	T	-260 to 400°C -436 to 752°F
L	-200 to 750°C -328 to 1382°F	G	100 to 2320°C 212 to 4208°F
C	-1 to 2320°C 30 to 4208°F	D	-1 to 2320°C 30 to 4208°F
U	-200 to 600°C -328 to 1112°F	P	-218 to 1395°C -360 to 2543°F

(Unless otherwise indicated all specifications are rated from a nominal 23°C, 70% RH)

To Order	
Model No.	Description
CL540ZA	Thermocouple simulator

### Accessories

Model No.	Description
SC-530	Soft carrying case
020-0209	Rubber boot
CL-300-CABLE-(*)-2	0.6 m (2') thermocouple cable, SMP male to spade lugs
CL-300-CABLE-(*)-10	3 m (10') thermocouple cable, SMP male to spade lugs
CL-300-RSC-(*)-2	Retractable cable 0.6 m (2')

Comes complete with NIST certificate, one red and black lead set with retractable shield banana plugs with alligator clips, 4 "AA" alkaline batteries, and operator's manual.

\* For CL-300-CABLE, insert one thermocouple Type: J, K, T, E, R/S, B, N, C; CL-300-RSC: J, K, T, E, or U

K