

High-Precision Handheld Calibrator/Thermometer Kit

CL20 Series



- ✓ **0.3°C (0.5°F) Accuracy from 18 to 28°C (64 to 82°F)**
- ✓ **NIST-Traceable Certificate of Calibration (No Points)**
- ✓ **Simulates and Measures Thermocouples, RTDs, Thermistors, and Ω**
- ✓ **0.1°C/°F Resolution**
- ✓ **10 Memory Locations for Saving Meter Readings or Calibrator Outputs**
- ✓ **Step Calibrator, Meter Hold, Thermometer Functions**
- ✓ **Ramp Function (Models CL25 and CL27)**



The CL20 handheld calibrators/thermometers simulate, measure, and record RTD, Ω , thermocouple, and thermistor signals—all in one. Featuring an accuracy of 0.3°C (0.5°F) at ambient temperatures from 18 to 28°C (64 to 82°F) and a host of powerful keypad functions, these low-cost meters outperform the competition.

The 5-digit LCD indicates all active functions and has 0.1°C/°F resolution. Operating mode and sensor type are also displayed.

Programming is a snap. The user can enter setpoints directly on the keypad or from an outside source. Ten memory locations allow for instant recall of any programmed value, and the step function lets the user navigate the test points with the push of a button.

Simulates, Measures, and Records Thermocouple, RTD, Thermistor, and Resistance Signals—All in One Meter!

The ramp function of the CL25 and CL27 makes calibration easy. When the user enters the upper limit, lower limit, and step size, the meter automatically ramps between the limits. Ramping can also be performed manually.

No matter what the input type, one of these meters can handle it. The possibilities include 100 and 1000 W RTDs and 2252 W transistors.

Need to comply with ISO-9000 reporting specifications? These meters can help! All conform to the temperature/voltage tables of the National Institute of Standards and Technology (NIST). OMEGA® provides a free NIST-traceable certificate of calibration for your records. Since ISO-9000 requires that calibration be done at the equipment site, these meters are a perfect choice. With 0.3°C (0.5°F) accuracy in an ambient temperature range of 18 to 28°C (64 to 82°F), you're not confined to the lab. Take it everywhere. The ABS plastic case protects it from dust and dirt.

All models shown smaller than actual size.



88000 Series probe, sold separately, visit omega.com/88000_hightemp

PR-16 RTD handle probe, sold separately, visit omega.com/pr-16

CL20 Series Temperature Measurement and Calibration Range

Input Type	Range		Resolution
K	-200 to 1371°C	-328 to 2502°F	0.1°
J	-210 to 760°C	-346 to 1400°F	0.1°
T	-200 to 399°C	-328 to 752°F	0.1°
E	-230 to 999°C	-382 to 1832°F	0.1°
N	-200 to 1299°C	-328 to 2372°F	0.1°
B	499 to 1815°C	932 to 3308°F	0.1°
R	0 to 1768°C	32 to 3214°F	0.1°
S	0 to 1768°C	32 to 3214°F	0.1°
G	299 to 2315°C	572 to 4201°F	0.1°
C	0 to 2315°C	32 to 4201°F	0.1°
D	0 to 2315°C	32 to 4201°F	0.1°
RTD	-200 to 849°C	-328 to 1562°F	0.1°
Series 400 Thermistor 2252 Ω	-40 to 150°C	-40 to 302°F	0.1°

Specifications

Display: 5-digit LCD; custom indicators for calibration type; units hold, recall, store, operating mode, bal, loaded memory locations (up to 10)

Keypad: Momentary switches with tactile feedback, select power, thermocouple type, units, resolution, hold, store/recall (up to 10), stop/clear, operating mode

Configuration Retention: Selected operating mode, thermocouple type, units, resolution and memory contents retained on power-off

CL26 and CL27 Resistance Measurement and Calibration Outputs

Ohms Range	Resolution	Models
0 to 100 Ω	0.01 Ω	CL26 and CL27
0 to 1000 Ω	0.1 Ω	CL27
0 to 100,000 Ω	1.0 Ω	CL26

CL20 Series Accessories

Model No.	Description
HH22-AC	NiMH battery and adaptor, 115V
CL-300-CABLE-(*)-2	Calibration cable, 0.6 m (2'), 24 AWG, SMP to spade lug
CL-300-CABLE-(*)-10	Calibration cable, 3 m (10'), 24 AWG, SMP to spade lug
CL-300-RSC-(**)-2	Calibration cable 0.6 m (2'), retractable, expands to 3 m (10'), SMP to spade lug

* Insert Type J, K, T, E, R/S, N or mV (uncompensated SMP connector).
** Insert Type J, K, T, or E.

Diagnostics: Low battery, open input, invalid keypad entry, out of range, internal hardware fault

Accuracy: See "To Order" chart on next page for details

Ambient Temperature: 0 to 50°C (32 to 122°F), 0 to 90% RH

Reading Rate: 1/s

Input Current: 50 nA typical (meter mode)

Output Load: 100 Ω, min (calibrator mode)

Max Common-Mode Voltage: 42V peak to earth ground

Power: 9V alkaline battery (included)

Battery Life: 16 hr on alkaline battery

Dimensions: 178 H x 74 W x 28 mm D (7.0 x 2.9 x 1.1")

Weight: 340 g (12 oz)



To Order Visit newportUS.com/CL20A for Pricing and Details

Model No.	Features						
	T/C Types	Platinum RTDs	Thermistors	Resistance	Resistance Resolution	Accuracy Calibrator and Thermometer	Ramp Feature
CL23A	K, J, T	—	—	—	—	±0.3°C from -46 to 677°C 0.04% over 677°C ±0.5°C under -46°C	No
CL24	K, J, T, E	—	—	—	—	0.04% over 677°C ±0.5°C under -46°C	No
CL25	K, J, T, E, N, R, S, B, G, C, D	—	—	—	—	±0.3°C full scale K, J, T, E, N 0.8°C full scale B, R, S, G, C, D	Yes
CL26	K, J, T, E	100 Ω	400 Series 2252 Ω	100 kΩ 100 Ω	1 Ω 0.01 Ω	±0.3°C from -46 to 677°C 0.04% over 677°C ±0.5°C under -46°C Ω: 0.04% of range ±0.3°C RTD & thermistor	No
CL27	K, J, T, E, N, R, S, B, G, C, D	100 Ω 1000 Ω	—	1 kΩ 100 Ω	0.1 Ω 0.01 Ω	±0.3°C full scale K, J, T, E, N 0.8°C full scale B, R, S, G, C, D Ω: 0.02% of range 0.1°C full scale RTD	Yes

Comes complete with shock-resistant holster, case, thermocouples, connectors, 9V battery, belt clip and operator's manual.

Ordering Examples: CL24, J/K/T/E calibration/thermometer kit.

CL26, J/K/T/E, thermistor and RTD calibration/thermometer kit. OCW-2