

RTD Calibrator

CL514



- ✓ Simulate or Read RTD Sensors
- ✓ Automatic Detection of 2, 3, or 4 Wire Connections
- ✓ High Accuracy
- ✓ Works with All Pulsed Instruments and a Wide Variety of Transmitters
- ✓ Easy Dial Knob Adjusts Output by 0.1°C/°F
- ✓ Easy Check Switch for 0% and 100% Span Adjustments

The OMEGA® CL514 RTD calibrator simulates or reads standard RTD curves over the entire industrial temperature range. Choose between 7 standard RTD curves or select Ω for direct resistance source/read capability. Curves include Pt100 ($\alpha = 3850, 3902, 3916, 3926$), Cu 10 ($\alpha = 427$), Ni 110 ($\alpha = 530$), Ni 120 ($\alpha = 672$). Display is in °C or °F with 0.1 resolution with an auto-off feature to help save battery life.

The CL514 Series will simulate RTD resistances into all types of instruments such as transmitters, recorders, controllers, alarms and data acquisition and computer systems.

The easy check function allows the user to store 3 output temperatures for real convenience. All settings are saved 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)

Accuracy:

$\pm(0.015\%$ of setting in $\Omega + 0.05 \Omega$)

Resolution: 0.1°C, 0.1°F, 0.01 Ω

Span: 0.00 to 400.00 Ω

Range: Pt100, -200 to 850°C;

Cu 10, -200 to 260°C; Ni 110, -100 to 300°C; Ni 120, -80 to 260°C

Typical Accuracies

for RTD Curves are:

Pt100 $\alpha = 1.3850, 1.3902,$

1.3916, 1.3926: $\pm 0.25^\circ\text{C}$

($\pm 0.5^\circ\text{F}$)

Cu 10 Ω : $\pm 1.5^\circ\text{C}$ ($\pm 3^\circ\text{F}$);

Ni 110 Ω , Ni 120 Ω :

$\pm 0.25^\circ\text{C}$ ($\pm 0.5^\circ\text{F}$)

Allowable Excitation Current:

100 μA to 10.2 mA, steady or pulsed/intermittent/smart

For Accuracies Below

100 μA Add: $\pm 10 \mu\text{V}$ /excitation current (units are in Ω)

Pulsed Excitation Current

Compatibility: DC to

0.01 second pulse widths

Connections:

4 leads (2 red, 2 black), 70 cm (28") with spade lugs

RTD Read Excitation Current:

1 mA nominal

Output Dial Adjustment

Resolution: 0.1°C or 0.1°F

adjustment resolution

Temperature Coefficient:

$\pm 0.01\%$ of span in $\Omega/^\circ\text{C}$ ambient

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



CL514.

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

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)



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
CL514	Multi-Type RTD calibrator (7 RTD curves)
SC-800	Soft carrying case for CL514

Comes complete with NIST certification (without test point), operator's manual, and 9V battery.

Ordering Example: CL514, multi-type RTD calibrator with 7 RTD curves.

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