

High Precision Calibrators

CL8300 Series



CL8300 Series
\$3780
Basic Unit

Shown smaller than actual size

- ✓ Fully Programmable Via RS-232 and IEEE-488
- ✓ ac Power or Rechargeable Battery
- ✓ Benchtop Units Can Be Easily Rack Mounted
- ✓ High Precision: 0.002%, 6 Digits
- ✓ Traceable to International Standards
- ✓ Storage of 200 Calibration Values in Memory
- ✓ Easily Integrated into a Rack Mount System

The CL8300 represents a major advance in calibration standards because of its high precision, compact design and ease of use. The CL8300 series is a dc voltage and current source that supplies voltages from 100 nV to 110 Vdc and currents from 1 nA dc to 110 mA dc with 0.002% (20 ppm) accuracy. The CL8300 has been ergonomically designed for the user with such features as simple, fast readout of values and functions on the 11-digit backlit display, 200 predetermined calibration values in memory, and automatic calibration.

This lightweight, portable calibrator can give laboratory precision in the field or in the workshop. The unit is

Program the CL8300 to display prompts in any of 5 languages!

ENGLISH

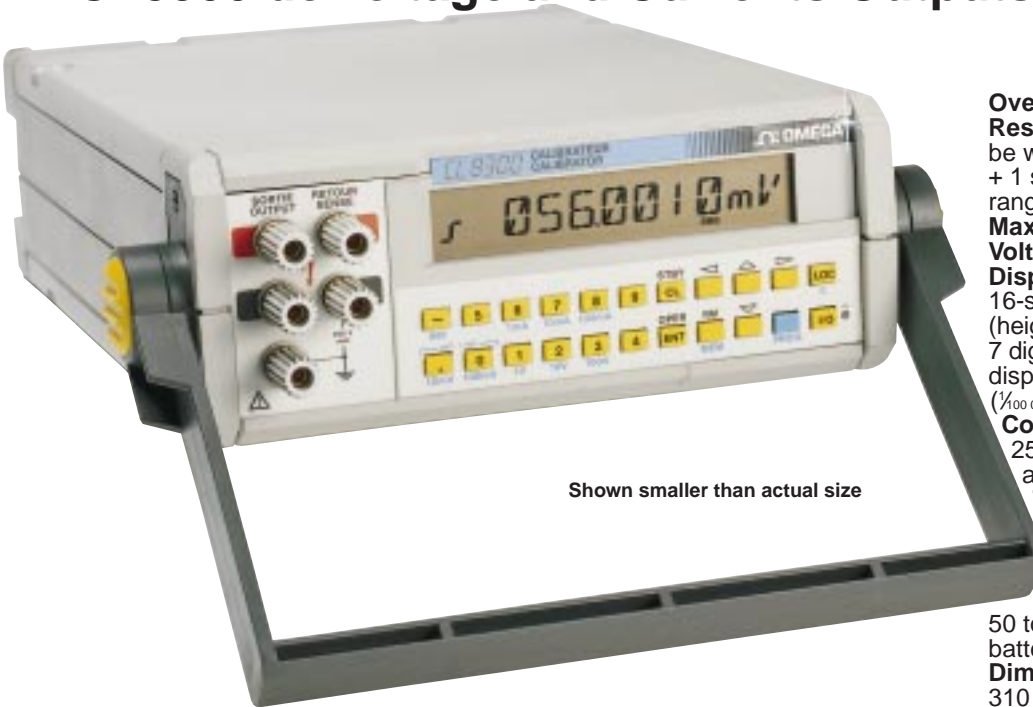
ESPAÑOL

FRANÇAIS

ITALIANO

DEUTSCH

CL8300 dc Voltage and Currents Outputs



Shown smaller than actual size

Overshoot: 5%
Response Time: 3 seconds to be within specified accuracy + 1 second when changing range or inverting polarity
Max. Permissible Floating Voltage: 250 Vac or 350 V peak
Display: 11 character, 16-segment backlit LCD display (height 11.5 mm (.45") up to 7 digits + units of measurement displayed. 6-digit resolution ($\frac{1}{100,000}$ counts)
Common Mode Voltage: 250 V max. between earth and output terminals
Temperature Operating Range: 0 to 45°C (32 to 114°F)
Power Supply: 110 Vac or 240 Vac $\pm 10\%$; 50 to 400 Hz. 12 V rechargeable battery and charger (optional)
Dimensions: 225 H x 88 W x 310 mm D (8.85 x 3.46 x 12.2")
Weight: 3 kg (6.6 lb)

remotely programmable using either RS-232C (standard) or IEEE-488 (optional) digital interface, and is easily integrated into a rack system, allowing it to be used in bench test sets. The exceptional precision, stability and extended range of the CL8300 permit its use in a wide variety of applications, including use as a dc voltage and current standard for calibration or testing of voltmeters or ammeters up to 200,000 counts; simulation of sensors as μV , mV or mA sources to calibrate controllers, transmitters, recorders and other instruments in process control; or as an ultra-stable, programmable, high precision power supply.

Specifications

Linearity: 0.0003% of range.
Accuracy given at 23°C $\pm 1^\circ\text{C}$ (73°F $\pm 1.8^\circ\text{F}$)

Output Impedance: 100 V, 10 V and 1 V $< 0.5 \text{ m}\Omega$; 100 mV, 99 ohm; 100 mA; 10 mA and 1 mA $> 100 \text{ M}\Omega$

Output Protection: Max. permissible overvoltage on the output terminals having normal polarity. 100 mV range: $\pm 5 \text{ V}$ (dc or peak). Other ranges: -20 V and $+120 \text{ V}$ (dc or peak)

Temperature Coefficient: 10% of accuracy per $^\circ\text{C}$

Common Mode Rejection: 140 dB
Warm-Up Time: 30 seconds to obtain an output within 0.002% of final value; 5 minutes to obtain an output within 0.0002% of final value

Output Modes

Range	Emission Range	Resolution	Accuracy	
			90 days	1 year
100 V	-5.0000 V +110.0000 V	100 μV	0.0020% + 2	0.004% + 3
10 V	-1.10000 V +11.00000 V	10 μV	0.002% + 2	0.004% + 3
1 V	-0.110000 V +1.100000 V	1 μV	0.0025% + 4	0.005% + 6
100 mV	-11.0000 mV +110.0000 mV	100 nV	0.0035% + 20	0.007% + 20
100 mA	-11.0000 mA +110.0000 mA	100 nA	0.0030% + 4	0.006% + 8
10 mA	-1.10000 mA +11.00000 mA	10 nA	0.0030% + 4	0.006% + 8
1 mA	-0.110000 mA +1.100000 mA	1 nA	0.0030% + 4	0.006% + 8

IN STOCK FOR FAST DELIVERY

To Order (Specify Model Number)

Model Number	Price	Description
CL8301	\$3780	Calibrator with RS-232C
CL8302	4410	Calibrator with RS-232C, rechargeable battery and charger
CL8303	4410	Calibrator with IEEE-488
CL8304	4655	Calibrator with IEEE-488, rechargeable battery and charger
CL8300-SOFTWARE	245	Software program

Comes with complete operator's manual and power cord

Ordering Example: CL8302, calibrator with RS-232C, rechargeable battery and charger, \$4410



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• Flow and Level

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• pH and Conductivity

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• 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