

LC-100 Precision Loop Calibrator

The Martel Electronics LC-100 Precision Loop Calibrator provides significantly extended performance when compared to any competitive calibrator. With an accuracy of 0.015% of reading, with 0.001 mA resolution, the LC-100 has the highest accuracy in its class. Unique features, such as a “% Error” function, which eliminates manual error calculation and allows the display of the actual versus ideal error at any calibration point, put the LC-100 way beyond similar instruments. The Martel LC-100 can simulate, power, and measure two-wire transmitters. With automatic Step and Ramp functions, the LC-100 enables remote calibration of 4-20 mA devices.



Features:

- ▲ Very high accuracy - $\pm 0.015\%$ of reading
- ▲ Very high resolution - 0.001 mA
- ▲ % Error function - eliminates manual error calculation
- ▲ Extended adjustment range—digital knob and user-selectable decade output allow both large and incremental (0.001 mA step) output changes
- ▲ Reads 0 to 28.000 VDC
- ▲ Built-in 250 Ohm resistor facilitates calibration of Hart™ devices
- ▲ Remote calibration through Automatic Step and Ramp functions
- ▲ Loop power measurement capability
- ▲ Simulates, powers, and measures two-wire transmitters
- ▲ Five preset outputs (4, 8, 12, 16, 20 mA)
- ▲ Fuseless input protection up to 250 VAC



MARTEL
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Specifications (25°C unless otherwise noted)

Input

Current Range	0.000 to 24.000 mA -25.00 to +125.00 %
Voltage (Reading)	0 to 28 VDC
Input Protection	fuseless, up to 250 VAC

Output

Source/Simulate Range	0.000 to 24.000 mA -25.00 to +125.00 %
Drive Capability	1200 Ohm without Hart 950 Ohm with Hart
Loop Supply Voltage	24 VDC
Range Select	Decade Incremental to 0.001 mA steps
Resolution	1 μ A
Accuracy	$\pm 0.015\%$ of reading $\pm 2 \mu$ A

Resolution

Accuracy

Temperature Range

Operating	-10 to +55 °C
Storage	-20 to +70 °C

Power Requirements

Battery*	9V, one required
AC Adapter	included

Mechanical

Dimensions	5.7" x 3.15" x 1.43" (14.47 cm x 8.00 cm x 3.63 cm)
Weight	12 ounces (340 gms)

Accessories (included)

Test leads, carrying case, 9V battery, NIST Certificate, and instruction manual

* Rechargeable battery option available



Companion products for specific calibration needs.

Need a dedicated instrument for voltage, frequency, thermocouple, RTD or pressure calibration? Martel Electronics offers a dedicated instrument to meet any calibration need.

Please request information on any of the following: Voltage - Model T110; Frequency - Model T150; Thermocouple - T120; RTD - T130; Pressure-T140.



MC1000

Companion all-in-one instrument for multifunction calibration requirements.

Need a single instrument for current, voltage, frequency, temperature, RTD and pressure calibration? Martel Electronics offers its Model MC1000 Multi-Function Calibrator for virtually any high performance calibration requirement.



Intuitive Interface

The Martel LC-100 Loop Calibrator

provides a highly intuitive user interface. A pair of cursor keys allows rapid selection of the decade to be modified, while a large knob allows precise and rapid adjustment to any value needed, with immediate feedback from the LCD display. A single MODE key cycles through and selects the source, simulate, and measure modes.

Powerful Features

The Martel LC-100 provides innovative, powerful features to make your calibration job easier. A handful of clearly marked keys provide access to the full functionality of the unit.

To enable remote calibration of devices and processes, the LC-100 features automatic STEP and RAMP output modes, which automate either a discrete 4-8-12-16-20-16-12-8-4 mA stair step output, or two speeds of a linear 4-20-4 mA ramp output, respectively. One or more simple pushes of the AUTO key (1) are all that are needed to access this time-saving function.

To further aid remote calibration, the LC-100 features a Minimum/Maximum value recall function. In the measure mode, holding the AUTO(/MAX) key (1) provides a direct readout of the maximum value achieved, while holding the 25%(/MIN) key provides a direct readout of the minimum value achieved.

Holding the % ERROR key (2) while turning the large knob provides instant feedback of the difference between the ideal and actual current values required for a given device response. Instant verification of whether the device is within its accuracy range is provided. No more calculations are necessary!

A LOOP POWER key (3) provides instant 24 VDC loop power output.

The 25% (4) key provides instant outputs of 4, 8, 12, 16 and 20 mA loop current, which increments each time the key is pushed.

Powerful features and an intuitive interface come together to provide a Loop Calibrator like no other in its class. **The Martel Electronics LC-100.**

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