

Calibration Technology Starts Here

Precision Current Loop Calibrator

*Accuracy
by
Any
Measure*



MARTEL Beta LC-100

The LC-100

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 and 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 4-20mA devices.

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35 Vantage Point Drive Rochester, NY 14624
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General Features

- Very high accuracy - $\pm 0.015\%$ of reading
- Very high resolution - 0.001mA / 0.001V
- % 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 calibrations through Automatic Step and Ramp functions
- Loop power measurements capability
 - Simulates powers, and measures two-wire transmitters
 - Five preset outputs(4,8,12,16,20 mA)
 - Fuseless input protection up to 250 VAC
- Supplied as shown with protective neoprene sleeve case



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 resistor 950 Ohm with HART resistor
Loop Supply Voltage	24 VDC
Range Select	Decade Incremental to 0.001 mA steps

Resolution

1µA

Accuracy

±0.015% of reading ±2 µA

Temperature Range

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

Power Requirements

Battery	9 V, one required; included
AC Adapter	optional

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 grams)

Accessories (included):

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

Options: Rechargeable battery, AC adapter/charger

Intuitive Interface

The Martel Electronics LC-100 Precision 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 Electronics 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 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 (4) 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 Precision Loop Calibrator like no other in its class. **The Martel Electronics LC-100.**



IVC-222HPHII

TC-100

T140

Companion products for specific calibration needs.

Need a dedicated instrument for voltage and current, 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 and Current – Model IVC-222HPHII;

Frequency – Model T150;

Thermocouple – Model TC-100;

RTD – Model T130; Pressure – Model T140.



MC-1200

Companion all-in-one instrument for multi-function calibration requirements.

Need a single instrument for current, voltage, frequency, temperature, RTD and pressure calibration? Martel Electronics offers its Model MC-1200 Multi-Function Calibrator for virtually any high performance calibration requirement.

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