

## LC-100

### Description

The 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. 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 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.

### Intuitive Interface

The 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 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 (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!

## Precision Loop Calibrator



### 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
- Supplied in full rubber boot

## LC-100 Specifications (25 °C unless otherwise noted)

<b>Input</b>	
Current Range	0.000 to 24.000 mA
Voltage (Reading)	-25.00 to +125.00 %
Input Protection	fuseless, up to 250 VAC
<b>Output</b>	
Source/Simulate Range	0.000 to 24.000 mA
	-25.00 to +125.00 %
Drive Capability	
Without Hart™	1200 Ohm
With Hart™	950 Ohm
Loop Supply Voltage	24 VDC
Range Select	Decade; incremental to 0.001 mA steps
<b>Resolution</b>	1 µA
<b>Accuracy</b>	±0.015% of reading ± 2 µA
<b>Environmental</b>	
Operating Temperature	-10 °C to +55 °C
Storage Temperature	-20 °C to +70 °C
<b>Power Requirements</b>	
Battery	9V, one required; included
AC Adapter	optional
<b>Mechanical</b>	
Dimensions	5.7" H x 3.15" W x 1.43" D (144.7 x 80.0 x 3.63 mm); without boot
Weight	12 ounces (340 gms)
<b>Accessories Included</b>	Test leads, 9V battery, NIST Certificate, & instruction manual
<b>Optional Accessories</b>	Carrying case, Model LCA-05A; Rechargeable battery

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

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



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## Powerful Features (continued)

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 LC-100.

## Companion products for specific calibration needs.

Martel Electronics offers a dedicated instrument for thermocouple or pressure calibration. Please request information on either of these instruments.



Thermocouple  
TC-100



Pressure  
T140