



iCAL

LC 11

The Ultimate Loop Calibrator

iCAL model LC 11 is the Ultimate Loop Calibrator for sourcing or measuring and simulating Loop current, mV and V. It is compact, rugged and easy to use hand held device with graphical user interface.

LC 11 has either Measure only or Source only feature.

Masibus LC 11 Loop Calibrator is designed to provide base accuracy of 0.02% of Reading in all modes of operation. 2W simulate and Read/Power are unique features for Loop testing and calibration.

It has been designed to give maximum Battery life on full charge, the backlight is adjustable for power saving and the display can be programmed to automatically switch off when not in use

Automatic Step/ Ramp output with Auto/ Man selection, data logging, Max/ Min/ Average values, scaling to Engineering units and filter settings enhances the use of LC 11 and makes it multifunctional.

LC 11 comes with a Mini USB connector for charging, logged data retrieval and firmware upgrade, standard accessories provided patch cables, charger, USB cable, instruction manual, logged data retrieval software CD and calibration certificate, all in a attractive carrying case.

Features

- Easy to read Color Graphical TFT LCD display
- Rechargeable lithium ion battery with enhanced power control for prolonged battery life
- Measure or Source: mA, mV and V readings
- 24 VDC Loop power Supply to power transmitters and loops
- 2W simulate and Read/ Power mode for in-situ Loop checking and calibration
- Step/ Ramp functions with Auto/ Man selection
- Universal Serial Bus (USB) communication port for charging, data retrieve and firmware upgrade
- Data Logging to measure long time drift
- Other Features: Max/Min/Average, filter settings, tare facility, adjustable backlight, alarm annunciation (on display and buzzer), automatic Display off.

Applications

- Loop Check and calibration
- Calibration of Transmitters and Transducers
- Switch Test and calibration
- Drift test of Transmitters and Transducers

TECHNICAL SPECIFICATIONS

Measurement Range				Power supply	
Parameter	Range	Resolution	Accuracy	Battery Type	Rechargeable Li-ion battery pack, 2300mAh 3.7V
mV	0-250.00 mV	0.01 mV	$\pm 0.02\%$ of reading ± 2 counts	Charging Time	<5 hours max
V	0-30.000 VDC	0.001 V	$\pm 0.02\%$ of reading ± 2 counts	Charger supply	100-240 VAC, 50/60 Hz; Output 5V DC@1A
mA	0-24.000 mA	0.001 mA	$\pm 0.02\%$ of reading ± 2 counts	Battery Life on full charge	>20 hours max for mA, mV, V measurement with minimum backlight brightness. > 10 hours max for 12mA generation with minimum backlight brightness
Source Range				Battery Status Indication	Battery symbol displayed with % power remaining
Parameter	Range	Resolution	Accuracy	Physical	
mV	0-250.00 mV	0.01 mV	$\pm 0.02\%$ of reading ± 2 counts	Dimensions (in mm)	161.7 (L) x 82.1 (W) x 39.5 (H)
V	0-12.000 VDC	0.001 V	$\pm 0.02\%$ of reading ± 2 counts	Housing Material	ABS Plastic
mA	0-24.000 mA	0.001 mA	$\pm 0.02\%$ of reading ± 2 counts	Electrical Terminals	Two nos., 2 mm safety sockets
General Specifications				Weight	<300 grams
Display Mode	Measure Only or Source Only			Protection	IP20
Max. input voltage	30 V DC			Environmental	
Temperature Coefficient	30 ppm			Operating temperature	0 to 55 °C
Input Impedance Measure	V, mV >1M Ω mA =10 Ω			Operating temperature while charging batteries	0 to 45° C
Response time	Input <100ms Output <100ms			Storage temperature	-20° to 60° C
Load impedance	>10 K Ω for mV/V <750 Ω for mA			Relative Humidity	30% to 90% non-condensing
Display update rate	10 readings / sec			Warm-up time	15 Minutes
Data logging	Logged data is stored in a user defined file in internal memory Periodic logging: 150000 readings max			Accessories	
Communication Interface	USB 2.0			Calibration Certificate	
Display and Keys				User Guide	
Display	2.4" TFT LCD, 262K Color, Graphical, 42.72 mm x 60.26 mm, 240x320 pixels, White LED Backlight			1 Set of 2mm to 2mm banana cable	
Keys	6 Membrane Keys			1 Set of 2mm Crocodile cable	
Special Features				USB A Male to USB mini B Male cable for PC communication and charging	
Loop power output	24V DC, $\pm 10\%$ (24mA maximum)			5 VDC Charging Adapter	
HART mA Loop Resistor	250 Ω $\pm 20\%$			Carrying Bag	
Special Function	Step/Ramp functions: Automatic/Manual, \sqrt{x} , x^2 : for measure & source			Data Logging Software CD-mCAL	

Ordering Code

LC 11