



iCAL

LC 12

The Ultimate Loop Calibrator

iCAL model LC 12 is the Ultimate Loop Calibrator for sourcing, measuring and simulating Loop current, mA and V. It is compact, rugged and easy to use hand held device with graphical user interface.

LC 12 has simultaneous Source and Sense capability with independent parameter and range selection for source and sense, also the source and sense circuits are isolated from each other

Masibus LC 12 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 12 makes it multifunctional. LC 12 has Automatic Switch test feature.

LC 12 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
- Available with EMI/EMC Compliance
- Rechargeable lithium ion battery with enhanced power control for prolonged battery life
- Simultaneously Measure and Source: mA, mV and V with dual readings on display
- 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
- Switch test with condition (open/closed) indicator
- 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		
mV	0-250.00 mV	0.01 mV	±0.02% of reading ± 2 counts	Battery Type	Rechargeable Li-ion battery pack, 2300mAh 3.7V
V	0-30.000 VDC	0.001 V	±0.02% of reading ± 2 counts	Charging Time	<5 hours max
mA	0-24.000 mA	0.001 mA	±0.02% of reading ± 2 counts	Charger supply	100-240 VAC, 50/60 Hz; Output 5V DC@1A
Source Range				Battery Life on full charge	>18 hours max for mA, mV, V measurement with minimum backlight brightness.
Parameter	Range	Resolution	Accuracy	Battery Status Indication	> 8 hours max for 12mA generation with minimum backlight brightness Battery symbol displayed with % power remaining
mV	0-250.00 mV	0.01 mV	±0.02% of reading ± 2 counts	Physical	
V	0-12.000 VDC	0.001 V	±0.02% of reading ± 2 counts	Dimensions (in mm)	161.7 (L) x 82.1 (W) x 39.5 (H)
mA	0-24.000 mA	0.001 mA	±0.02% of reading ± 2 counts	Housing Material	ABS Plastic
General Specifications				Electrical Terminals	Four nos., 2 mm safety sockets
Display Mode	Measure + Source, Measure Only, Source Only, Switch Test + Source			Weight	<300 grams
Max. input voltage	30 V DC			Protection	IP20
Temperature Coefficient	30 ppm			Environmental	
Input Impedance Measure	V, mV >1MΩ mA =10 Ω			Operating temperature	0 to 55 °C
Response time	Input <100ms Output <100ms			Operating temperature while charging batteries	0 to 45° C
Load impedance	>10 KΩ for mV/V <750 Ω for mA			Storage temperature	-20° to 60° C
Display update rate	100 readings / sec			Relative Humidity	30% to 90% non-condensing
Isolation	500VDC between Measure & Source			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			2 Sets of 2mm to 2mm banana cable	
Keys	6 Membrane Keys			2 Sets of 2mm Crocodile cable	
Special Features				2 Sets of connecting plug 4mm to 2mm	
Loop power output	24V DC, ±10% (24mA maximum)			USB A Male to USB mini B Male cable for PC communication and charging	
HART mA Loop Resistor	250 Ω ± 20%			5 VDC Charging Adapter	
Special Function	Step/Ramp functions: Automatic/Manual, √x, x²: for measure & source			Carrying Bag	
Switch Test	<ul style="list-style-type: none"> Potential free contacts Trigger level : 24V, 24mA (2V) Voltage level detection Trigger level : 0 to 30V in 1V steps Input impedance : >1 MΩ 			Data Logging Software CD-mCAL	
Directive Conformity*					
			Electromagnetic Compatibility Directive 2014/30/EU	EN 61326-1:2013	
			Low Voltage Directive 2014/68/EU	EN 61010-1:2010	
*(Applicable only for CE Marked)					

Ordering Code

Model	CE Compliance	
LC12	X	
	N	NO
	Y	YES