



uCAL

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	Battery type	Rechargeable Li-ion battery pack, 2300mAh 3.7V
mV	0-250.00 mV	0.01 mV	±0.02% of reading ± 2 counts	Charging time	<5 hours max
V	0-30.000 VDC	0.001 V	±0.02% of reading ± 2 counts	Charger supply	100-240 VAC, 50/60 Hz;
mA	0-24.000 mA	0.001 mA	±0.02% of reading ± 2 counts		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		> 8 hours max for 12mA generation with minimum backlight brightness
mV	0-250.00 mV	0.01 mV	±0.02% of reading ± 2 counts		
V	0-12.000 VDC	0.001 V	±0.02% of reading ± 2 counts		
mA	0-24.000 mA	0.001 mA	±0.02% of reading ± 2 counts	Battery status indication	Battery symbol displayed with % power remaining
General Specifications				Physical	
Display mode		Measure + Source, Measure only, Source only, Switch test + Source			
Max. input voltage		30 V DC			
Temperature coefficient		30 ppm			
Input impedance		V, mV >1MΩ			
Measure		mA =10 Ω			
Response time		Input <100ms Output <100ms			
Load impedance		>10 KΩ for mV/V <750 Ω for mA			
Display update rate		10 readings / sec			
Isolation		500VDC between measure & source			
Data logging		Logged data is stored in a user defined file in internal memory Periodic logging: 150000 readings max			
Communication Interface		USB 2.0			
Display and Keys				Accessories	
Display		2.4" TFT LCD, 262K Color, Graphical, 42.72 mm x 60.26 mm, 240x320 pixels, White LED backlight			
Keys		6 Membrane keys			
Special Features				Calibration certificate	
Loop power output		24V DC, ±10% (24mA maximum)			
HART mA loop resistor		250 Ω ± 20%			
Special function		Step/Ramp functions: Automatic/Manual, √x, x²: for measure & source			
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			
				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	
	Y	YES