

USB/RS232, True RMS

2000A DCA/ACA CLAMP + DMM

Model : CM-9930R

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

USB/RS232, True RMS 2000 A DCA/ACA CLAMP METER + DMM

Model : CM-9930R

FEATURES

* 2 in 1, 2000 A clamp meter + Digital multimeter.
* Design meet IEC 1010 CATIII 1000V safety requirement.
* True rms reading for ACV & ACA measurement.
* 4000 counts, Auto range, multi-functions for ACA, DCA, ACV, DCV, Ohms, Capacitance, Hz, Duty cycle, diode and continuity check.
* Wide ranges (2000A, 400 A) clamp on current measurement both for ACA & DCA.
* 4 ranges (400 uA, 4000 uA, 40 mA, 400 mA) direct current input measurement both for ACA & DCA.
* LSI circuit provides high reliability and durability.
* Overload protection circuit is provided for all ranges.
* Data hold, Relative key, Back light.
* RS232/USB PC COMPUTER interface.
* Compact & heavy duty ABS and fireproof plastic case.

GENERAL SPECIFICATIONS

Display	15 mm (0.6") LCD, 4 digits, Max. indication 4000.
Measurement Range	ACA, DCA, ACV, DCV, Ohms, Diode, Hz, Capacitance, Duty cycle, Continuity beeper.
Polarity	Automatic Switching, "-" indicates negative polarity.
Current Sensor	Hall effect sensor.
Zero adjustment	DCA : Push bottom adjustment. Other ranges : Automatic adjustment.
Over-input	Indication of " OL " or " -OL ".
Sampling Time	Approx. 0.35 second.
Data Output	RS 232/USB PC computer interface. * Connect the optional RS232 cable UPCB-02 will get the RS232 plug. * Connect the optional USB cable USB-01 will get the USB plug.
Battery	DC 9V battery, heavy duty or Alkaline type, 006P, MN1604 (PP3) or equivalent.
Power Consump.	Approx. DC 5 mA.
Operating Temp.	0 °C to 50 °C (32 °F to 122 °F).
Operating Humidity	Less than 80% RH.
Weight	380 g/0.85 LB (including battery).
Dimension	HWD : 255 x 73 x 38 mm. (10 x 2.9 x 1.5 inch)
Max. Jaw Open Size	51 mm (2.1 inch) Dia.
Accessories Included	Operation manual.....1 PC Test lead (red & black).....1 Set Fuse (500 mA, 5 mm dia. x 20 mm)....1 PC
Optional Accessories & Adapters	* RS232 cable..... UPCB-02 * USB cable..... USB-01 * Data Acquisition softwareSW-U801-WIN * Carrying case, EMF Adapter, Light Adapter, Anemometer Adapter, Pressure Adapter, Sound Adapter, Tachometer Adapter, High Voltage Probe.

ELECTRICAL SPECIFICATIONS (23 ± 5 °C)

Function	Range	Resolution	Accuracy	Overload Protection
DC/AC Voltage	400 mV (DC only)	0.1 mV	± (0.5 % + 2d)	AC/DC 1000 V.
	4 V	0.001V	DCV: ± (1 % + 2d)	
	40 V	0.01V	ACV: ± (1.2 % + 5d)	
	400 V	0.1 V		
	1000V	1 V		
DC / AC Current (Direct input)	400 uA	0.1 uA	± (1.2% + 5d)	AC/DC 500 mA (Fuse)
	4000 uA	1 uA		
	40 mA	0.01 mA		
	400 mA	0.1 mA		
DC /AC current (Clamp on)	400 A	0.1 A	± (2 % + 5 d)	AC/DC 2000A/1000V
	2000 A	1 A	± (2 % + 8 d)	

Remark :

- * True rms measurement both for ACV, ACA function.
- * Input impedance for ACV & DCV range is 10 Mega ohm.
- * ACA, ACV frequency response is from 45 to 1 KHz.
- * ACA, ACV specification be tested on sine wave 50/60 Hz.

Function	Range	Resolution	Accuracy	Overload Protection
Ohms	400 ohm	0.1 ohm	± (1 % + 5 d)	AC / DC 400V
	4 K ohm	1 ohm		
	40 K ohm	10 ohm		
	400 K ohm	100 ohm		
	4 M ohm	1 K ohm		
	40 M ohm	10Kohm	± (3.5 % + 5d)	
Capacitance	50 nF	10 pF	± (3 % + 5d)	AC / DC 400V
	500 nF	100 pF		
	5 uF	0.001 uF		
	50 uF	0.01 uF		
Frequency (> 5 V)	5 Hz	0.001 Hz	± (1 % + 5 d)	AC / DC 1000V
	50 Hz	0.01 Hz		
	500 Hz	0.1 Hz		
	5 KHz	1 Hz		
	50 KHz	0.01 KHz		
	100 KHz	0.1 KHz		
Duty cycle	1 % to 99 %	0.1 %		
Diode	Short/non conductance, good/defect test			
Continuity	If rmeasuring esistance is less than 10 ohm, the beeper will sound .			

Remark :

- * Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.
- * The accuracy of capacitance range are specified under that the " zero " procedure is executed before the measurement (push " REL. button).