

**USB/RS232, True RMS**

# **2000A DCA/ACA CLAMP + DMM**

**Model : CM-9930R**

**ISO-9001, CE, IEC1010**



勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

**Lutron**

**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.<br>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.<br>* Connect the optional RS232 cable UPCB-02 will get the RS232 plug.<br>* 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.<br>(10 x 2.9 x 1.5 inch)                                                                                                                                                                                                 |
| Max. Jaw Open Size              | 51 mm ( 2.1 inch ) Dia.                                                                                                                                                                                                                          |
| Accessories Included            | Operation manual.....1 PC<br>Test lead (red & black).....1 Set<br>Fuse ( 500 mA, 5 mm dia. x 20 mm )....1 PC                                                                                                                                     |
| Optional Accessories & Adapters | * RS232 cable.....UPCB-02<br>* USB cable.....USB-01<br>* Data Acquisition software .....SW-U801-WIN<br>* 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:             |                       |
|                                | 40 V             | 0.01V      | ± ( 1 % + 2d )   |                       |
|                                | 400 V            | 0.1 V      | ACV:             |                       |
|                                | 1000V            | 1 V        | ± ( 1.2 % + 5d ) |                       |
| 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    | ± ( 2 % + 2 d ) |                     |
|                        | 4 M ohm                                                              | 1 K ohm    |                 |                     |
|                        | 40 M ohm                                                             | 10Kohm     |                 |                     |
| 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<br>( > 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 ).

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)