



DIGITAL LCR METER

Model : LCR-9073

1. FEATURES

- * Professional LCR meter, used the exclusive microprocessor circuit, intelligent function, high quality.
- * Wide range measurement for Inductance, Capacitance and Resistance measurement.
- * Each range is calibrated & adjusted by the internal EPROM, high accuracy.
- * Data hold function to hold the desired value on display.
- * Super large LCD with unit display, easy readout.
- * Memory function to record the maximum & minimum reading with recall.
- * "% SET" function, for checking the accuracy value of

- * "% SET " function, for checking the accuracy value of the individual components easily.
- * Zero button, can deduct the stray impedance of the test lead.
- * RS232 computer interface.
- * Built-in low battery indicator.
- * Continuity beeper for resistance 200 ohm range.

2. SPECIFICATIONS

2-1 General Specifications

Display	67 mm x 27 mm large LCD display. 18 mm x 7.5 mm, digit size.
Measurement	<i>Inductance (L) :</i> 5 ranges : 2 mH to 20 H.
	<i>Capacitance (C) :</i> 7 ranges : 2 nF to 1000 uF.
	<i>Resistance (R) :</i> 6 ranges : 200 ohm to 20 Mega ohm.
	<i>Continuity beeper</i>
	<i>Diode test</i>
Circuit	Custom one-chip of microprocessor LSI circuit.
Calibration	Each range is calibrated by internal EPROM circuit, high accuracy.
Data hold	To freeze the display reading on the LCD display.
Memory Recall	Records Maximum & Minimum readings with recall.
Zero button	Zero button is used to deduct the stray impedance value of test lead.
% SET <i>* accuracy checking</i>	0.1 %, 0.25%, 0.5%, 1%, 5%, 10 %, 20%, 30% accuracy value warning setting.
Sampling Time	Approx. 0.5 sec.
Data Output	Isolated RS 232 PC serial interface.
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F).
Operating Humidity	Less than 80% RH.
Power Supply	Alkaline or heavy duty type DC 9V battery, 006P, MN1604 (PP3) or equivalent.
Power Consumption	Approx. 9 mA (buzzer Off) Approx. 11 mA (buzzer On)
Weight	340 g/0.75 LB.
Dimension	204 x 90 x 36 mm (8.0 x 3.5 x 1.4 inch).
Accessories	Instruction manual..... 1 PC.

Accessories Included	Instruction manual..... 1 PC. Test alligator clips..... 1 Pair.
Optional Accessories	* Software (Windows version), SW-U101-WIN * RS232 cable, UPCB-02

2-2 Electrical specifications

L (Inductance)

Range	Max. in-range Display	Resolution	Test Frequency
2 mH	> 1.9 mH & < 2 mH	1 uH	Approx. 250 Hz
20 mH	> 19 mH & < 20 mH	10 uH	
200 mH	> 190 mH & < 200 mH	100 uH	
2 H	> 1.9 H & < 2 H	1 mH	
20 H	> 19 H & < 20 H	10 mH	

uH = micro Henry (10^{-6} H).
mH = mili Henry (10^{-3} H).

Accuracy of Inductance range (23 ± 5 °C)

Range	Accuracy
2 mH range	±(2% + 2 d)
20 mH range	
200 mH range	
2 H range(0.5 H)	±(5% + 1 d)
2 H range(> 0.5 H)	
20 H	

Overload Rating

AC 35V (50 Hz/60 Hz) max, or DC 35V max.,
less than 10 second.

C (Capacitance)

Range	Max. in-range Display	Resolution	Test Frequency
2 nF	> 1.9 nF & < 2 nF	1 pF	Approx. 250 Hz
20 nF	> 19 nF & < 20 nF	10 pF	
200 nF	> 190 nF & < 200 nF	100 pF	
2 uF	> 1.9 uF & < 2 uF	0.001 uF	Approx. 50 Hz
20 uF	> 19 uF & < 20 uF	0.01 uF	
200 uF	> 190 uF & < 200 uF	0.1 uF	
1000 uF	1000 uF	1 uF	Approx. 5 Hz

pF= pico Farad (10^{-12} F) nF= nan. Farad (10^{-9} F)
uF= micro Farad (10^{-6} F)

uF= micro Farad (10^{-6} F)

Accuracy of Capacitance range (23 ± 5 °C)	
<i>Range</i>	<i>Accuracy</i>
2 nF range (> 10 pF)	±(2% + 2 d)
20 nF range	
200 nF range	
2 uF range	
20 uF range	
200 uF range	
1000 uF range	±(3% + 2 d)

Overload Rating
 AC 35V (50 Hz/60 Hz) max, or DC 35V max.,
 less than 10 second.

R (Resistance)

<i>Range</i>	<i>Max. in-range Display</i>	<i>Resolution</i>	<i>Open circuit Voltage</i>
200 ohm	> 190 ohm & < 200 ohm	0.1 ohm	Approx. 600 mV
2 K	> 1.9 K & < 2 K	1 ohm	
20 K	> 19 K & < 20 K	10 ohm	
200 K	> 190 K & < 200 K	100 ohm	
2000 K	> 1900 K & < 2000 K	1 K	Approx. 300 mV
20 M	> 1.9 M & < 2 M	10 K	

Accuracy of Resistance range (23 ± 5 °C)	
<i>Range</i>	<i>Accuracy</i>
200 ohm range	±(0.8% + 1 d)
2 K range	
20 K range	
200 K range	
2000 K range	
20 M range	±(1.5% + 2 d)

Continuity beeper

For the 200 ohm range, if the measurement value less than 10 ohm, the beeper will sound. It is the useful function for the continuity check.

Diode test

Short/non conductance, good/defect test

Short/non conductance, good/defect test

Data hold

To freeze the display reading on the LCD display.

Memory

Records Maximum & Minimum readings with recall.

Zero Adjustment

Zero button on the front panel, it can deduct any test lead stray impedance.

Component accuracy checking, % SET

Can setting the accuracy value (0.1 %, 0.25%, 0.5%, 1%, 5%, 10 %, 20%, 30%) of the component. If the component (L, C, R) accuracy value are within the specification, the beeper will sound.

RS-232 interface

Isolated (photo couple) RS-232 serial data output, 9600 baud rate. If the LCR meter combine the computer & apply the optional software (Model : SWU-101-WIN, available for WIN95 & WIN98), whole system will be the useful data logger, data recorder.... The computer screen will show text display, analog display, chart display. It also build in the high & low limit, data query, data report & chart report..