**100 Hz／120 Hz／1 KHz／10 KHz／100 KHz, Professional**

# LCR METER

**Model : LCR-9183** *ISO-9001, CE, IEC1010*

*www.yalab.com.tw* *02-2389-0101*




HOLSTER
Model : HS-03


SMD TESTER, optional
Model : SMDA-22

SMD TEST CLIP, optional
Model : SMDC-21

Lutron

**www.YaLAB.com.tw**

***The Art of Measurement***

**100 Hz/120 Hz/1 KHz/10 KHz/100 KHz Ls/Lp/Cs/Cp/Rs/Rp with D/Q/θ /ESR parameters**

# Professional LCR METER

**Model : LCR-9183**

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**FEATURES**

| |
|---|
| * 19,999/1,999 counts dual LCD display. |
| * AutoLCR smart check and measurement. |
| * Serial/Parallel modes are selectable. |
| * Ls/Lp/Cs/Cp with D/Q/θ /ESR parameters. |
| * Support DCR mode 1.00 Ω to 200.0 MΩ . |
| * Five different test frequency are available :<br>100 Hz/120 Hz/1 KHz/10 KHz/100 KHz. |
| * Test AC signal level : 0.6 V rms typically. |
| * Test range : ( ex. F = 1 KHz )<br>L : 200.00 uH to 2000.0 H<br>C : 2000.0 pF to 2.000 mF<br>R : 20.000Ω to 200.0 MΩ |
| * Multi-level battery detector. |
| * RS232/USB PC Computer interface. |
| * Can default auto power off. |

**GENERAL SPECIFICATIONS**

| | |
|---|---|
| Display | LCD size：56.4 X 52.9 mm. |
| Test frequency | 100 Hz/120 Hz/1 KHz/10 KHz/100 KHz |
| Function | L/C/R Function selector<br>Frequency selector<br>D/Q/θ /ESR selector |
| Dissipation factor | 0.000 to 999 |
| Quality factor | 0.000 to 999 |
| θ measurement | ± 90° |
| Calibration | Open/Short calibration |
| Data Hold | Freeze the display reading |
| Data output | RS232/USB PC computer interface |
| Power off | Auto shut off saves battery life or manual off by push button |
| Operating temperature | 0℃ to 50℃ |
| Operating humidity | Less then 85% R.H. |
| Power Supply | 006P DC 9V battery<br>* Alkaline or Heavy duty type |
| | DC 9V adapter input<br>* AC/DC power adapter is optional. |
| Power consumption | DC 16 mA approximately. |
| Dimension | 193 x 88 x 41mm |
| Weight | 420 g<br>* meter only |
| Standard Accessories Included | * Instruction manual..... 1 PC<br>* Alligator clips ( red and black )..... 1 Pair |
| Optional Accessories | SMD tester, SMDA-22<br>SMD test clip, SMDC-21<br>Holster, HS-03<br>AC to DC 9V adapter Hard carrying case, CA-06<br>Soft carrying case, CA-05A<br>USB cable, USB-01<br>RS232 cable, UPCB-02<br>Excel data acquisition software, SW-E803 |

**ELECTRICAL SPECIFICATIONS (23± 5 ℃)**

**Resistance ( DCR )**

| Range | Accuracy | Remark |
|---|---|---|
| 20 Ω | ± ( 0.8% + 5d ) | After Short CAL. |
| 200 Ω | ± ( 0.8% + 5d ) | |
| 2000 Ω | ± ( 0.8% + 5d ) | |
| 20 KΩ | ± ( 0.8% + 5d ) | |
| 200 KΩ | ± ( 0.8% + 5d ) | |
| 2000 KΩ | ± ( 0.8% + 5d ) | After Open CAL. |
| 20 MΩ | ± ( 1.5% + 5d ) | After Open CAL. |
| 200 MΩ | ± ( 2.5% + 5d ) | After Open CAL. |

**Resistance ( Rp/Rs )**

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 100 Hz/120 Hz | 1000 Hz | |
| 20 Ω | ± ( 1.2% + 5d ) | ± ( 1.2% + 5d ) | After Short CAL. |
| 200 Ω | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 2000 Ω | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 20 KΩ | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 200 KΩ | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 2000 KΩ | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Open CAL. |
| 20 MΩ | ± ( 1.5% + 5d ) | ± ( 2.5% + 5d ) | After Open CAL. |
| 200 MΩ | ± ( 2.5% + 5d ) | ± ( 6% + 5d ) | After Open CAL. |

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 10 KHz | 100 KHz | |
| 20 Ω | ± ( 1.2% + 5d ) | ± ( 2.5% + 5d ) | After Short CAL. |
| 200 Ω | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 2000 Ω | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 20 KΩ | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 200 KΩ | ± ( 0.8% + 5d ) | ± ( 0.8% + 5d ) | |
| 2000 KΩ | ± ( 1.5% + 5d ) | ± ( 3% + 5d ) | After Open CAL. |
| 20 MΩ | ± ( 2.5% + 5d ) | ---------- | After Open CAL. |

**Capacitance ( Cp/Cs ) : D ≦ 0.1**

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 100 Hz/120 Hz | 1000 Hz | |
| 20 pF | ± ( 2.5% + 5d ) | ± ( 1.5% + 5d ) | After Open CAL. |
| 200 pF | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Open CAL. |
| 2000 pF | ± ( 1.2% + 5d ) | ± ( 1.5% + 5d ) | After Open CAL. |
| 20 nF | ± ( 1.0% + 5d ) | ± ( 1% + 5d ) | |
| 200 nF | ± ( 1.0% + 5d ) | ± ( 1% + 5d ) | |
| 2000 nF | ± ( 1.0% + 5d ) | ± ( 1% + 5d ) | |
| 20 uF | ± ( 1.0% + 5d ) | ± ( 1% + 5d ) | |
| 200 uF | ± ( 1.0% + 5d ) | ± ( 1% + 5d ) | After Short CAL. |
| 2000 uF | ± ( 2% + 5d ) | ± ( 2% + 5d ) | After Short CAL. |
| 20 mF | ± ( 3% + 5d ) | ---------- | After Short CAL. |

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 10 KHz | 100 KHz | |
| 20 pF | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Open CAL. |
| 200 pF | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | After Open CAL. |
| 2000 pF | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | After Open CAL. |
| 20 nF | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 200 nF | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 2000 nF | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 20 uF | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | |
| 200 uF | ± ( 2% + 5d ) | ---------- | After Short CAL. |

**Inductance ( Lp/Ls ) : D ≦ 0.1**

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 100 Hz/120 Hz | 1000 Hz | |
| 20 uH | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Short CAL. |
| 200 uH | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Short CAL. |
| 2000 uH | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | |
| 20 mH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 200 mH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 2000 mH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 20 H | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 200 H | ± ( 1.0% + 5d ) | ± ( 1.5% + 5d ) | |
| 2000 H | ± ( 2% + 5d ) | ---------- | After Open CAL. |

| Range | Accuracy | Accuracy | Remark |
|---|---|---|---|
| | 10 KHz | 100 KHz | |
| 20 uH | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Short CAL. |
| 200 uH | ± ( 1.5% + 5d ) | ± ( 1.5% + 5d ) | After Short CAL. |
| 2000 uH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 20 mH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 200 mH | ± ( 1.0% + 5d ) | ± ( 1.0% + 5d ) | |
| 2000 mH | ± ( 1.0% + 5d ) | ---------- | |