

*Bench type, professional
SD card real time data recorder*

LCR METER

Model : LCR-9185SD

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC



The Art of Measurement

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SD card real time data recorder

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Model : LCR-9185SD

FEATURES

- * Real time Datalogger, save the into the SD memory card and can be downloaded to the Excel, extra software is no need.
- * Real time Datalogger, it Built-in Clock (year/month/date/hour/minute/second), sampling time set from 2 seconds to 3600 seconds.
- * Manual datalogger is available (set the sampling time to be 0 second).
- * 6000 counts ADC resolution.
- * High performance analog front end for impedance(Z) measurement.
- * Support Z / DCR measurement for LCR mode.
- * Four different test frequency are available : 100 Hz/120 Hz/1 KHz/10 KHz for L/C/R measurement.
- * Test AC signal level : 0.5 V rms typically.
- * Test range : (ex. F = 1 KHz)
L : 600.0 uH to 60.00 H
C : 600.0 pF to 600.0 uF
R : 60.00Ω to 20.00 MΩ
- * Min. source resistance : 120Ω typical.
- * 6 ratio resistor range used for LCR mode.
- * Support buzzer sound driver with driving pattern and frequency selectable.

GENERAL SPECIFICATIONS

Display	97 mm x 56 mm large LCD display.	
Test frequency	100 Hz/120 Hz/1 KHz/10 KHz	
Mode	L/C/R Function selector	
L/C/R	Frequency selector	D/Q/θ selector
	SER/PAL selector	
Dissipation factor	0.000 to 9999	
Quality factor	0.000 to 9999	
θ measurement	± 90°	
Calibration	Open/Short calibration	
Datalogger	Auto	2 seconds to 3600 seconds
Sampling Time	Manual	Push the data logger button once will save data one time.
Setting range	@Set the sampling time to 0 second.	
Data error no.	≤ 0.1% no. of total saved data typically.	
SD card Capacity	2 GB to 32 GB	
Power supply	1.5 V (AA) x 6 PCs, DC 9V adapter input *AC/DC Power adapter is optional.	
Power consumption	Normal operation (w/o SD card save data) : Approx. DC 11 mA When SD card save the data : Will increase approx. DC 25 mA.	
Standard Accessories Included	* Alligator clips..... 1 PC * Operation manual..... 1 PC	
Optional Accessories	SMD test clip, SMDC-21	

ELECTRICAL SPECIFICATIONS (23± 5 °C)

Resistance (DCR)

Range	Accuracy	Remark
60 Ω	± (1.5% + 5d)	After calibration
600 Ω	± (1.0% + 5d)	
6000Ω	± (1.0% + 5d)	
60 KΩ	± (1.0% + 5d)	
600 KΩ	± (1.0% + 5d)	
6000 kΩ	± (1.0% + 5d)	
20 MΩ	± (1.5% + 5d)	After calibration

Resistance(Z) (SER/PAL) 0.5V(rms)

Range	Accuracy 100 Hz/120 Hz	Accuracy 1k Hz
60 Ω	± (1.5% + 5d)	± (1.5% + 5d)
600 Ω	± (1.2% + 5d)	± (1.2% + 5d)
6000Ω	± (1.2% + 5d)	± (1.2% + 5d)
60 KΩ	± (1.2% + 5d)	± (1.2% + 5d)
600 KΩ	± (1.2% + 5d)	± (1.2% + 5d)
6000 kΩ	± (1.2% + 5d)	± (1.2% + 5d)
20 MΩ	± (2.0% + 5d)	± (2.0% + 5d)

Range	Accuracy 10 kHz	Remark
60 Ω	± (1.5% + 5d)	After calibration
600 Ω	± (1.2% + 5d)	
6000Ω	± (1.2% + 5d)	
60 KΩ	± (1.2% + 5d)	
600 KΩ	± (1.2% + 5d)	
6000 kΩ	± (1.2% + 5d)	
20 MΩ	± (3.0% + 5d)	After calibration

Remark :

- * All specifications are under in battery operation.
- * Don't apply voltage larger than 30 V to input terminals.

* Appearance and specifications listed in this brochure are subject to change without notice.

Capacitance (SER/PAL) : D ≤ 0.1, 0.5V(rms)

Range	Accuracy 100 Hz	Accuracy 120 Hz
600 pF	± (3.5% + 5d)	± (3.5% + 5d)
6000 pF	± (2.5% + 5d)	± (2.5% + 5d)
60 nF	± (2.0% + 5d)	± (2.0% + 5d)
600 nF	± (2.0% + 5d)	± (2.0% + 5d)
6000 nF	± (1.5% + 5d)	± (1.5% + 5d)
60 uF	± (1.5% + 5d)	± (1.5% + 5d)
600 uF	± (1.5% + 5d)	± (1.5% + 5d)
6000 uF	± (2.5% + 5d)	± (2.5% + 5d)
10 mF	± (3.5% + 5d)	± (3.5% + 5d)

Range	Accuracy 1k Hz	Accuracy 10 kHz
600 pF	± (2.5% + 5d)	± (2.0% After calibration
6000 pF	± (2.0% + 5d)	± (1.5% After calibration
60 nF	± (2.0% + 5d)	± (1.5% + 5d)
600 nF	± (1.5% + 5d)	± (1.5% + 5d)
6000 nF	± (1.5% + 5d)	± (1.5% + 5d)
60 uF	± (1.5% + 5d)	± (2.5% + 5d)
600 uF	± (2.5% + 5d)	-----
6000 uF	-----	-----
10 mF	-----	-----

Remark :

- * All specifications are under in battery operation.
- * Don't apply voltage larger than 30 V to input terminals.
- * Discharge capacitor before measurement.
- * If intend to obtain the accurate value of SMD capacitor, please test via optional. SMD test clip, SMDC-21.

Inductance (SER/PAL) : D ≤ 0.1, 0.5V(rms)

Range	Accuracy 100 Hz	Accuracy 120 Hz	Remark
600 uH	-----	-----	
6000 uH	-----	-----	
60 mH	± (2.0% + 5d)	± (2.0% + 5d)	
600 mH	± (1.5% + 5d)	± (1.5% + 5d)	
6000 mH	± (1.5% + 5d)	± (1.5% + 5d)	
60 H	± (1.5% + 5d)	± (1.5% After calibration	
200 H	± (2.5% + 5d)	± (2.5% After calibration	

Range	Accuracy 1k Hz	Accuracy 10 kHz	Remark
600 uH	± (2.5% + 5d)	± (2.5% After calibration	
6000 uH	± (2.0% + 5d)	± (2.0% + 5d)	
60 mH	± (1.5% + 5d)	± (1.5% + 5d)	
600 mH	± (1.5% + 5d)	± (1.5% + 5d)	
6000 mH	± (1.5% + 5d)	± (1.5% + 5d)	
60 H	± (2.5% + 5d)	-----After calibration	
200 H	-----	-----	

Remark :

- * All specifications are under in battery operation.
- * Don't apply voltage larger than 30 V to input terminals.
- * Discharge capacitor before measurement.
- * If intend to obtain the accurate value of SMD inductor, please test via optional. SMD test clip, SMDC-21.

LCR SCALE RANGE CONFIGURATION

LCR mode			
Function mode	Frequency	Measuring range	Min. resolution
Inductance (SER/PAL)	100/120Hz	60.00 mH to 200.0 H	0.01 mH
	1kHz	600.0 uH to 60.00 H	0.1 uH
	10kHz	600.0 uH to 6000 mH	0.1 uH
Capacitance	100/120Hz	600.0 pF to 10.00 mF	1 pF
	1kHz	600.0 pF to 600.0 uF	0.1 pF
	10kHz	600.0 pF to 60.00 uF	0.1 pF
Resistance (SER/PAL)	100/120Hz	60.00 Ω to 20.00 MΩ	0.01 Ω
	1kHz	60.00 Ω to 20.00 MΩ	0.01 Ω
	10kHz	60.00 Ω to 20.00 MΩ	0.01 Ω