

Bench type, professional
SD card real time data recorder

LCR METER

Model : LCR-9185SD

ISO-9001, CE, IEC1010

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02-2389-0101

Support Z / DCR measurement
Real time SD memory card Datalogger
6000 counts ADC resolution
Frequency selector
D/Q/ θ selector 、SER/PAL selector



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The Art of Measurement

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FEATURE

* 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 SPECIFICATION

Display	97 mm x 56 mm large LCD display.	
Test frequency	100 Hz/120 Hz/1 KHz/10 KHz	
Mode L/C/R	L/C/R Function selector 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 Sampling Time Setting range	Auto	2 seconds to 3600 seconds
	Manual	Push the data logger button once will save data one time. @ 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 K Ω	$\pm (1.0\% + 5d)$	
6000 k Ω	$\pm (1.0\% + 5d)$	
20 M Ω	$\pm (1.5\% + 5d)$	After calibration

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

Range	Accuracy 100 Hz/120 Hz	Accuracy 1k Hz
60 Ω	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
600 Ω	$\pm (1.2\% + 5d)$	$\pm (1.2\% + 5d)$
6000 Ω	$\pm (1.2\% + 5d)$	$\pm (1.2\% + 5d)$
60 K Ω	$\pm (1.2\% + 5d)$	$\pm (1.2\% + 5d)$
600 K Ω	$\pm (1.2\% + 5d)$	$\pm (1.2\% + 5d)$
6000 k Ω	$\pm (1.2\% + 5d)$	$\pm (1.2\% + 5d)$
20 M Ω	$\pm (2.0\% + 5d)$	$\pm (2.0\% + 5d)$

Range	Accuracy 10 kHz	Remark
60 Ω	$\pm (1.5\% + 5d)$	After calibration
600 Ω	$\pm (1.2\% + 5d)$	
6000 Ω	$\pm (1.2\% + 5d)$	
60 K Ω	$\pm (1.2\% + 5d)$	
600 K Ω	$\pm (1.2\% + 5d)$	
6000 k Ω	$\pm (1.2\% + 5d)$	
20 M Ω	$\pm (3.0\% + 5d)$	After calibration

Remark :

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

Capacitance (SER/PAL) : $D \leq 0.1$, 0.5V(rms)

Range	Accuracy 100 Hz	Accuracy 120 Hz
600 pF	$\pm (3.5\% + 5d)$	$\pm (3.5\% + 5d)$
6000 pF	$\pm (2.5\% + 5d)$	$\pm (2.5\% + 5d)$
60 nF	$\pm (2.0\% + 5d)$	$\pm (2.0\% + 5d)$
600 nF	$\pm (2.0\% + 5d)$	$\pm (2.0\% + 5d)$
6000 nF	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
60 μ F	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
600 μ F	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
6000 μ F	$\pm (2.5\% + 5d)$	$\pm (2.5\% + 5d)$
10 mF	$\pm (3.5\% + 5d)$	$\pm (3.5\% + 5d)$

Range	Accuracy1k Hz	Accuracy 10 kHz
600 pF	$\pm (2.5\% + 5d)$	$\pm (2.0\%$ After calibration
6000 pF	$\pm (2.0\% + 5d)$	$\pm (1.5\%$ After calibration
60 nF	$\pm (2.0\% + 5d)$	$\pm (1.5\% + 5d)$
600 nF	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
6000 nF	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
60 μ F	$\pm (1.5\% + 5d)$	$\pm (2.5\% + 5d)$
600 μ F	$\pm (2.5\% + 5d)$	-----
6000 μ F	-----	-----
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) : $D \leq 0.1$, 0.5V(rms)

Range	Accuracy 100 Hz	Accuracy Remark 120 Hz
600 μ H	-----	-----
6000 μ H	-----	-----
60 mH	$\pm (2.0\% + 5d)$	$\pm (2.0\% + 5d)$
600 mH	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
6000 mH	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
60 H	$\pm (1.5\% + 5d)$	$\pm (1.5\% \text{ After calibration}$
200 H	$\pm (2.5\% + 5d)$	$\pm (2.5\% \text{ After calibration}$

Range	Accuracy 1k Hz	Accuracy Remark 10 kHz
600 μ H	$\pm (2.5\% + 5d)$	$\pm (2.5\% \text{ After calibration}$
6000 μ H	$\pm (2.0\% + 5d)$	$\pm (2.0\% + 5d)$
60 mH	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
600 mH	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
6000 mH	$\pm (1.5\% + 5d)$	$\pm (1.5\% + 5d)$
60 H	$\pm (2.5\% + 5d)$	----- 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

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 μ H to 60.00 H	0.1 μ H
	10kHz	600.0 μ H to 6000 mH	0.1 μ H
Capacitance	100/120Hz	600.0 pF to 10.00 mF	1 pF
	1kHz	600.0 pF to 600.0 μ F	0.1 pF
	10kHz	600.0 pF to 60.00 μ F	0.1 pF
Resistance (SER/PAL)	100/120Hz	60.00 Ω to 20.00 M Ω	0.01 Ω
	1kHz	60.00 Ω to 20.00 M Ω	0.01 Ω
	10kHz	60.00 Ω to 20.00 M Ω	0.01 Ω

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

LCR9185+1702

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