

300KHz Precision LCR Meter



Aplab Precision LCR Meter Model 4300R is a new generation of impedance test equipment with high accuracy, wide measurement range and six digits resolution. Being featured with test frequency up to 300kHz, test voltage of 5mV ~ 2V, built-in -5V ~ 5V DC bias and -10V ~ 10V DC voltage source output, it can meet all requirements for measuring components and materials and provide guarantees for production line quality assurance, incoming inspection and laboratory precision measurements. The Handler, RS232C and GPIB interfaces as well as improved command system provided by the instrument make it easier to build the test system.

FEATURES

- Simultaneous display of four different parameters with flexible combinations
- AC and DC parameters can be measured simultaneously without interference; self-demagnetization
- High speed and efficiency measurement: Max. 65 meas / sec (with display)
- Built-in bias voltage: -5V ~ + 5V; support bias mode
- Support DC source output: continuously adjustable independent voltage source (-10V ~ 10V), resolution of 2.5mV, low noise
- Auto DUT trigger function: the DUT can be measured once be trigger and the measurement results and discrimination will be displayed.
- Flexible limit comparator: support tolerance mode, sequence mode and parameter exchange
- Rapid and easy determination of Pass / Fail through multi-parameter test function
- Powerful list sweep function: mixed scanning of various excitation source and display of different parameters; also support multiple-channel scanners of devices
- New graphical scanning functions: frequency / level / bias / DC source make nuanced analysis of elements
- Complete user correction function: up to 64 dot frequency correction; can be applied to multi-channel scanning amendment for higher measurement consistency and repeatability
- Rich communication interfaces: RS232C / USB-CDC / USB-TMC / HANDLER / GPIB
- Multiple USB storage modes: CSV and TXT format for storing test data, BMP, PNG, GIF formats for stored on-screen images, U disk storage / recall setup files, U disk firmware upgrade
- Storage / recall of Parameters: real-time storage of all parameters without losing after shutdown; supporting internal storage of 100 groups, external storage and recalling of 500 groups

Technical Specifications

Measurement Function	
Test Parameters	Z , C, L, R, X, Y , B, G, D, Q, θ , DCR.
Basic Accuracy	0.05%.
Measuring Speed	Fast : 65, Medium : 10, Slow : 5 (meas/sec).
Equivalent Mode	Serial, Parallel.
Ranging Mode	Auto, Hold.
Trigger Mode	Internal, Manual, DUT, External, BUS.
Correction Function	Open / Short / Load, Full frequency correction, 64 points frequency correction.
Graphics Scanning Function	Frequency, Level, Bias Voltage / Current, DC Source.
List Sweep	20 points frequency, level, DC bias, DC source.
Display Type	480 x 272, 5-inch TFT LCD.
Memory	100 groups and 500 groups (USB disk).
Test Signal	
Test Frequency	20Hz ~ 300kHz, Resolution : 1mHz.
Output Impedance	10 Ω , 30 Ω , 100 Ω .
Test Level	10mV ~ 2V, Resolution : 1mV. 100 μ A ~ 100mA, Resolution : 1 μ A.
ALC Function	10mV ~ 1V.
Internal DC Bias	Voltage Mode : -5V ~ +5V, Resolution:1mV. Current Mode : -50mA ~ 50mA, Resolution : 20 μ A.
Measurement Display Range	
Z , R, X	0.01m Ω ~ 99.9999M Ω .
Y , G, B	0.0001 μ S ~ 999.999S.
C	0.00001pF ~ 99.9999mF.
L	0.00001 μ H ~ 99.9999kH.
D	0.00001 ~ 9.99999.
θ (Deg)	-179.9° ~ 179.9°.
θ (Rad)	-3.14159 ~ 3.14159.
Q	0.01 ~ 99999.9.
Δ %	-999.99% ~ 999.99%.
DCR	1m Ω ~ 99.9999M Ω .
Comparator and Interface	
Comparator	10 bins, BIN0 - BIN9, NG, AUX PASS / FAIL LED displayed.
Interface	RS232C / USB-HOST / USB-CDC / USB-TMC / HANDLER / GPIB (Option) / SCANNER (Option).
General Specifications	
Temperature & Humidity	0°C - 40°C, \leq 90% RH.
Power Supply	Voltage : 99V ~ 242V. Frequency : 47.5Hz ~ 63Hz.
Power Consumption	\leq 60 VA.
Dimensions (mm)	350 (W) x 120 (H) x 360 (D) approx.
Weight	3.5 Kg. approx.

WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN THIS DOCUMENT AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGED WITHOUT NOTICE.

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