

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4980AL

The Keysight E4980AL Precision LCR Meter is an industry-standard benchtop instrument for component and material evaluation. It provides accurate, reliable measurements across three frequency options (300 kHz, 500 kHz, and 1 MHz) and features high measurement speed, a 4.3-inch color display, and versatile connectivity for automated test systems.

SPECIFICATIONS

General

Interfaces	USB Host, USB Device, LAN (LXI Class-C), GPIB (optional via Option 1A7), Handler (optional via Option 201), Scanner (optional via Option 301)
Display	4.3-inch color TFT LCD
Internal Setup Memory	10 instrument setups
Warm-up Time	30 minutes

Physical

Power Supply	90 to 264 V AC, 47 to 63 Hz, 150 VA max.
Operating Temperature	0 to 45 °C °C
Dimensions (W×H×D)	370 mm × 105 mm × 390 mm mm
Weight	5.3 kg kg

Measurement Parameters & Functions

Primary Measurement Parameters	Z , Y , Ls, Lp, Cs, Cp, Rs, Rp, Rdc
Secondary Measurement Parameters	D, Q, Theta (deg), Theta (rad), Xs, G, B
Equivalent Circuit Modes	Series, Parallel
Impedance Measurement Range	100 mohm to 100 Mohm
Phase Angle Range	-180 deg to 180 deg
DC Resistance (Rdc) Range	0.00001 ohm to 100 Mohm

Test Signal Characteristics

Test Frequency Range	20 Hz to 300 kHz (Option 032) / 500 kHz (Option 052) / 1 MHz (Option 102)
Test Signal Voltage Range	100 uVrms to 2 Vrms
Test Signal Current Range	50 uArms to 20 mArms
Source Output Impedance	100 ohm (nominal)
Automatic Level Control (ALC)	Signal voltage, Signal current

Measurement Speed & Accuracy

Basic Impedance Accuracy	±0.05%
Measurement Time (Short Mode)	12 ms
Measurement Time (Medium Mode)	118 ms
Measurement Time (Long/Precise Mode)	343 ms
Averaging Factor Range	1 to 256

DC Bias Source

Internal DC Bias Voltage Range	0 V, 1.5 V, 2 V
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Sweep & Graphic Analysis

Sweep Parameters	Frequency, Test Voltage, Test Current, DC Bias
Number of Sweep Points	Up to 201 points

Calibration & Compensation

Compensation Functions	Open, Short, Load
Cable Length Correction Settings	0 m, 1 m, 2 m, 4 m

Hardware Interfaces & Connectivity

Test Port Configuration	4-terminal pair (BNC)
USB Ports	USB-Host (front), USB-Device (rear)
LAN Port	10/100 Base-T (LXI Class C compliant)
GPIB Interface	Optional via Option E4980AL-1A7

Display & User Interface

Display Size	4.3 inch
Display Type	Color TFT LCD

Environmental & Compliance

Operating Humidity Range	15% to 85% RH (non-condensing)
Storage Temperature Range	-20 to 60 °C

Power & Physical Specifications

Power Supply Voltage Range	90 V to 264 V AC
Power Supply Frequency Range	47 Hz to 63 Hz
Power Consumption	150 VA max.

Measurement Signal

Frequency Options	Option 032 (20 Hz to 300 kHz), Option 052 (20 Hz to 500 kHz), Option 102 (20 Hz to 1 MHz)
Test Signal Voltage Resolution	100 µV to 1 mV (level dependent)
Test Signal Current Resolution	1 µA to 10 µA (level dependent)

Measurement Control

Trigger Sources	Internal, Manual, External, Bus
Trigger Delay Range	0 s to 999.9999 s
Step Delay Range	0 s to 999.9999 s
Bin Sorting	9 primary bins, secondary bin, out-of-bin, and auxiliary bin

Interfaces

Interface Options	Option 201 (Handler Interface), Option 202 (Scanner Interface)
LXI Compliance	LXI Class C compliant

Software & Control

Command Language	SCPI
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Environmental

Operating Altitude	Up to 2,000 m
Storage Altitude	Up to 4,572 m

Display

Display Resolution	6 digits
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Test Signal

Test Signal Voltage Level Accuracy	$\pm(10\% + 1\text{ mVrms})$
Test Signal Current Level Accuracy	$\pm(10\% + 10\text{ }\mu\text{Arms})$

DC Bias

Standard DC Bias Voltage Levels	0 V / 1.5 V / 2.0 V
Standard DC Bias Voltage Accuracy	$\pm(5\% + 2\text{ mV})$

Compliance

Safety Standards	IEC 61010-1, EN 61010-1, CAN/CSA-C22.2 No. 61010-1
EMC Standards	IEC 61326-1, EN 61326-1, AS/NZS CISPR 11, ICES/NMB-001

APPLICATIONS

LCR and Impedance Measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.