

QUADTECH

7600

The QuadTech 7600 is a high-precision LCR meter belonging to the legacy QuadTech 7000 Series. Designed for rigorous component and materials testing, it covers a wide frequency range from 10 Hz to 2 MHz with 289,900 programmable frequencies. The instrument delivers a basic measurement accuracy of 0.05% and can display any two of its 14 measured impedance parameters simultaneously. With standard RS-232, IEEE-488 (GPIB), parallel printer, and PLC handler interfaces, the QuadTech 7600 is highly versatile for automated test environments, QA inspections, and laboratory calibration.

SPECIFICATIONS

General

Interfaces	RS-232, IEEE-488 (GPIB), Parallel Printer, and PLC Handler
Display	High-resolution LCD with 7-digit display

Physical

Power Supply	90 - 250 V AC, 47 - 63 Hz
Operating Temperature	0°C to +50°C °C
Dimensions (W×H×D)	432 mm x 178 mm x 356 mm mm
Weight	6.8 kg kg

Measurement Parameters & Functions

Primary & Secondary Parameters	Cs, Cp, Ls, Lp, Rs, Rp, Z , Y , G, B, X, D, Q, θ (14 parameters total, 2 displayed simultaneously)
Parameter Presentation Formats	Direct Value, Deviation, or % Deviation from a nominal value
Sequence Test Mode	Ability to automatically perform 6 unique tests in sequence
Equivalent Circuit Modes	Series, Parallel

Measurement Speed & Accuracy

Basic Measurement Accuracy	±0.05%
Maximum Measurement Speed	Up to 40 measurements/second
Programmable Averaging & Delay	Programmable average and delay times

Test Signal Characteristics

Test Frequency Range	10 Hz to 2 MHz
Number of Programmable Frequencies	289,900
AC Test Voltage Range	20 mV to 5 V (programmable)
Level Control	Constant voltage maintained to the Device Under Test (DUT)

DC Bias Source

Internal DC Bias Voltage	2 V
External DC Bias Voltage Range	0 V to 200 V

Calibration & Compensation

Zeroing / Compensation	Automatic Open/Short Zeroing
Calibration Reference	On-site calibration with NIST traceable calibration kit

Display & User Interface

Display Resolution	7 digits
Setup Storage	Internal storage and recall of test setups
Security Lockout	Keypad Lockout prevents changes to the test setup

Sweep & Graphic Analysis

Sorting Bins	14 Hi/Lo sorting bins for Pass/Fail testing
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Hardware Interfaces & Connectivity

Test Port Configuration	Four-Terminal Pair front panel BNC configuration
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Test Signal

AC Test Current Range	250 μ A to 100 mA (frequency dependent)
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Environmental

Storage Temperature	-40°C to +71°C
Operating Humidity	< 85% RH (non-condensing)

Measurement Control

Trigger Source	Continuous (Internal), Manual, External (BNC or Interface)
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Measurement Presentation

Graphical Sweep Parameters	Frequency, Voltage, Current
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Measurement Ranges

Capacitance Measurement Range	0.00001 pF to 9.9999 F
Inductance Measurement Range	0.00001 μ H to 99.999 kH
Resistance / Impedance Measurement Range	0.00001 Ω to 99.999 M Ω
Admittance Measurement Range	0.00001 μ S to 9.9999 kS
Dissipation Factor Range (D)	0.00001 to 9.9999
Quality Factor Range (Q)	0.00001 to 9999.9
Phase Angle Range (θ)	-180.00° to +180.00°

Performance

Frequency Accuracy	±0.01%
AC Voltage Resolution	5 mV (for 20 mV to 1 V), 20 mV (for 1 V to 5 V)
Trigger Delay Range	0 to 9999 ms

TECHNOLOGY

LCR Bridge / Impedance Analyzer

APPLICATIONS

Precision electronic component characterization, impedance measurement, and automated quality control testing

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