

1659 Digibridge RLC Testers

p. 1 of 2

The GenRad 1659 Digibridge RLC Tester is an easily programmable, microprocessor-based high performance passive component tester. It automatically identifies the type of component under test and measures in the proper range. The result is simple, precise, unambiguous RLC component testing.



The 1659 RLC Digibridge is an instrument for measuring primary parameters of inductance (L), capacitance (C) and resistance (R) and secondary parameters of dissipation factor (D) and quality factor (Q). QuadTech designed this single compact unit with maximum flexibility and operator convenience in mind.

The simple front panel design of the Digibridge requires less effort to operate. Digital display and user friendly control allows test parameters and limits to be set easily.

Programmable test limits and automatic binning give the 1659 its remarkable capability. Programming test limits is as simple as pushing a few buttons in an easily understood sequence. Once set, the operator works in an automatic binning mode designed to replace guesswork with consistent throughput. The GenRad 1659 is ideal for incoming inspection because it satisfies a wide range of testing requirements.

FEATURES:

- Easy to Use
- Accuracy of 0.1% for RLC measurements
- Four test frequencies of 100Hz, 120Hz, 1kHz and 10kHz
- A choice of three test speeds: 2, 4, or 8 measurements per second to complement automatic handling equipment and maximize throughput.
- A choice of two measurement modes: Continuous or Triggered (single measurement or average of 10) ensures measurement flexibility.
- A full, five-digit LED display for RLC measurements and a four-digit readout for D and Q testing, simultaneously display both test results for each measurement, automatically.
- A built-in test fixture for fast setup and ease-of-use when testing axial and radial lead components.
- Guarded Kelvin measurement techniques protect measurement integrity.
- Automatic self-test and diagnostic check maintains reliable, error-free operation.
- Automatic limit comparison and binning ensure fast, mistake-proof sorting of components.
- Optional IEEE-488 Bus and Handler Interface enable remote programming and allow the addition of a component handler to optimize throughput.

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p. 2 of 2

1659 Digibridge RLC Features

- Measurement Parameters:** R/Q, L/Q, C/R, C/D (series or parallel)
- Test Frequencies:** 100Hz, 120Hz, 1kHz, and 10kHz.
Accuracy $\pm 0.01\%$.
- Applied Voltage:** 0.3V rmsV maximum
- Measurement Speed:** 2, 4 or 8 measurements/second for Slow, Medium or Fast.
- Measurement Mode:** Continuous, Triggered (single, or 1 to 10 measurements averaged).
- Display Format:** Dual Display featuring 5 full digit LED for RLC and 4 full digit LED for DQ
Bin Number, Value
Automatically positioned decimal points and minus signs where appropriate.
Individual LED indicators for parameters, units, and measurement conditions.
GO/NO GO lights
- Bias:** Internal 2.0VDC External up to 60VDC
- Automatic Functions:** Auto ranging with manual hold
Auto parameter (RLC) with manual selection
- Binning:** Eight pass bins for RLC Two fail bins, RLC and DQ
- Interfaces:** IEEE-488/Handler Interface option

Ranges:

Parameter	RLC	DQ
R/Q	0.00001 Ω to 99999M Ω	0.0001 to 9999
L/Q	0.00001mH to 99999H	0.0001 to 9999
C/D	0.00001pF to 99999mF	0.0001 to 9999

- Accuracy:** Basic RLC $\pm 0.1\%$.
Basic DQ ± 0.0005

- Zeroing:** Open and short circuit compensation.

- General Features:**
- Charged Capacitor Protection (1 Joule)
 - Keyboard Lock
 - Store Test Conditions

- Dimensions:** (w x h x d): 14.8 x 4.4 x 13.5in (375 x 112 x 343mm)

- Weight:** 10 lbs. (4.5kg) net, 15 lbs. (6.8kg) shipping.

- Accessories Supplied:**
- Power Cable
 - Axial Lead Adapters
 - Test Fixture (Built-in)
 - Instruction Manual

- Environmental:** Operating: 0°C to +50°C
Storage: -40°C to +75°C
Humidity: <85%

- Power:**
- 90 - 250V AC
 - 50 or 60 Hz
 - 60W max

Ordering Information

Digibridge 1659 RLC Tester	1658-9620	IEEE/Handler Interface
Includes:	1689-9601	BNC Adapter Box
<u>QuadTech P/N</u>	1689-9602	BNC to BNC Extender Cable
4200-0300	1657-9600	Banana/Alligator Clip Extender Cable
1657-5995	1689-9604	Calibration Kit
1659-0120	7000-03	Kelvin Clip Extender Cable
No P/N	7000-05	Chip Component Tweezers
	1689-9600	Remote Test Fixture
	1689-9605	GO/NO GO Remote Test Fixture
	1688-9600	874 Connector Extender Cable
Optional Accessories:		
No P/N		Calibration Data