

Digibridge

1730 LCR Meter

USES:

- Production Testing of LCR Components
- Component Screening
- Material Testing
- Quality Assurance Testing
- Component Design and Evaluation

FEATURES:

- 12 Measurement Parameters
- 0.1% Basic Measurement Accuracy
- 7 Test Frequencies: 100Hz-100kHz
- Programmable Test Voltage: 10mV-1V
- Measurement Speeds up to 62/second
- Monitor DUT Voltage and Current
- Large High Resolution Graphic Display
- IEEE and Handler Interfaces, Standard
- Automatic Open/Short Zeroing
- Pass/Fail Binning (8)
- Storage/Recall of 50 Setups
- Measurement Averaging (1-256)
- Measurement Delay (0-10 seconds)
- Programmable Source Impedance
- DC Bias Voltage (0-5V)
- Keypad Lockout
- Easy Operation
- Cable Correction 0-4M

Introduction

The QuadTech 1730 LCR Digibridge is an easily programmable, micro-processor-based high performance passive component tester with excellent low impedance measurement and fast measurement speeds even at 100/120Hz. It measures 12 different parameters with a basic accuracy of 0.1%. Programmable test frequency, speed, mode and voltage permits great versatility in component and materials testing. Standard IEEE-488 and Handler interfaces provide data transfer and component automation applications for faster production line testing.

Description

12 Measurement Parameters: Measure and display two of 12 impedance parameters simultaneously with a basic accuracy of 0.1%. Test results can also be shown as Deviation or %Deviation from nominal value.

7 Test Frequencies: User selectable: 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 50kHz and 100kHz.

LCD Display: Large, high resolution graphic display for clear, concise results and user friendly menu interface for easy programming.

Setup Store/Recall: Store/Recall up to 50 test setups from instrument memory. Lock out front panel to ensure procedures are run the same way every time.

Programmable Source Impedance: Program tester impedance to 100 Ω , 100/25 Ω , 25 Ω or 10 Ω constant current when comparing results with measurements made on other testers. Measurement results can vary significantly based solely on the source impedance of the tester being used.

Voltage/Current Monitoring: Use the test signal monitoring function to display the actual voltage level across and current through the DUT.

DC Bias: External and internal DC Bias voltage from 0-5V, permits capacitors to be tested under real DC bias conditions.

Open/Short Zeroing: Reduce the effects of error sources (stray admittance/residual impedance) between the DUT and the calibrated connection to the measuring instrument.

Fast Testing: Select from one of three measurement speeds: slow, medium or fast for varying degrees of accuracy and speed up to 62 measurements/second.

Interfaces Standard: The 1730 unit includes IEEE-488 and Handler interfaces for adaption into production environments or remote control applications.

For more detailed specifications, visit www.quadtech.com

For more information about special purchase, rent & lease options, call

1-800-253-1230

Fax 1-978-461-4295

Intl. 1-978-461-2100



1730 Digibridge LCR Features

Parameter	Measurement Range	Buzzer:	Programmable: HI LO or OFF for Pass or Fail Result
Ls, Lp	0.001uH - 99.999kH	Comparator:	Set Upper/ Lower Limit as absolute value or % value for primary and secondary parameters
Cs, Cp	0.001pF - 9.9999F	Test Signal:	Monitor voltage across and current through device under test.
Rs, Rp	0.01mΩ - 99.99MΩ	Test Terminals:	Front: 4 BNC & 1 GND Rear: EXT BIAS: 1 BNC, 2-terminal strip
D	0.0001 - 9999	Setup Storage:	Store/Recall 50 test setups
Q	0.0001 - 9999	Lock:	Keypad Lockout
ESR	0.01mΩ - 99.99MΩ	Dimensions:	(w x h x d): 12.5 x 4.0 x 13.5in (312.5 x 100.0 x 337.5mm)
IZI	0.01mΩ - 99.99MΩ	Weight:	12.4 lbs. (5.7kg) net, 17 lbs. (7.8 kg) ship
Xs	0.01mΩ - 99.99MΩ	Environmental:	Specifications: +15°C to +35°C, 75% RH Operating: 0°C to +50°C Storage: -40°C to +75°C Humidity: <85%
Phase	-180.00° - +180.00°	Power:	• 90 - 125V AC • 190 - 250V AC • 50 or 60 Hz • 65W max
Accuracy:	Basic LCR ±0.1%. Basic DQ ±0.001		
Test Frequencies:	100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 50kHz and 100kHz Accuracy ±(0.01% ± 0.01Hz)		
Measurement Speed:	Fast: 62 measurements/second Medium: 19 measurements/second Slow: 3 measurements/second		
Ranging:	Automatic or User Selectable		
Trigger:	Internal External (IEEE or Handler) Manual		
Source Impedance:	100/25Ω, 100Ω, 25Ω or 10Ωc.c. (constant current)		
AC Test Signal:	Voltage: 10mV - 1V, 10mV steps		
DC Bias Voltage:	External: 0-5V Internal: 0-5V with R _{BIAS} external resistor		
DC Bias Current:	Internal: 0-200mA using R _{BIAS} external resistor		
Display:	240 by 64 LCD display		
Results Format:	Value Deviation % Deviation Bin Number GO/NO GO		
Measurement Delay:	Programmable from 0-10s in 1ms steps		
Averaging:	Programmable from 1-256		
Binning:	Eight pass bins for LCR One fail bin, LCR and DQ		
Interfaces:	IEEE-488 and Handler Standard		
Equivalent Circuit:	Series or Parallel		
Zeroing:	Open and short circuit compensation.		

Ordering Information

1730 LCR Digibridge

Includes:

QuadTech P/N	Item
4200-0300	AC Power Cord
150683	Instruction Manual
520026/520138	Power Line Fuses (1.0A 250V/0.5A 250V) Calibration Certificate Traceable to NIST

Optional Accessories:

	B/A Calibration Data
1700-01	Axial/Radial Component Test Fixture
1700-02	Axial/Radial Remote Test Fixture
1700-03	Lead Set: 4 BNC Connectors to 2 Kelvin Clips
7000-01	BNC to BNC Cable Lead Set (1m)
7000-02	BNC to BNC Cable Lead Set (2m)
7000-05	Lead Set: 4 BNC Connectors to Chip Component Tweezers
7000-07	Low Voltage Chip Component Test Fixture

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