

# Digibridge

# 1715 LCR Meter

## Passive Component Tester with RS-232

### USES:

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

### FEATURES:

- 11 Measurement Parameters
- 0.2% Basic Measurement Accuracy
- Selectable Test Frequency: 100Hz, 120Hz, 1kHz, 10kHz
- Selectable Test Voltage: 0.25V, 1.0V
- Measurement Speed to 25/second
- LCD Display
- RS-232 Interface Standard
- IEEE and Handler Interfaces, Optional
- Automatic Open/Short Zeroing
- Automatic Hi/Lo Comparator Limits
- Pass/Fail Sorting (8 Bins)
- Storage of 1 Setup
- Automatic Source Impedance Selection
- Keypad Lockout
- Easy Operation
- Programmable Delay Time

### Introduction

The QuadTech 1715 LCR Digibridge is an economically priced, easily programmable, micro-processor based passive component tester for fast, precise impedance measurements. It measures eleven different parameters with a basic accuracy of 0.2%. The 1715 provides four different test frequencies and two test voltages for testing flexibility. For remote operation and automated system applications, the unit comes standard with an RS-232 interface, plus IEEE-488 and Handler interfaces are available as options.

### Description

**11 Measurement Parameters:** Measure and display two of 11 impedance parameters simultaneously with a basic accuracy of 0.2%. Test results can also be shown as Deviation or %Deviation from nominal value.

**Test Signal:** Four user selectable test frequencies: 100Hz, 120Hz, 1kHz, and 10kHz (9.6kHz), plus two test voltages: 0.25V and 1.0V.

**Display:** 40 x 4 character LCD display for user friendly menu programming and measured results. Simultaneously displays primary/secondary values and binning or comparator results.

**Setup Storage:** Storage of 1 setup with parameter, binning and compare information saved. Auto recall of this setup upon power-up of instrument.

**Auto Ranging:** For maximum measurement integrity the 1715 automatically selects the appropriate measurement range and instrument source impedance (25 $\Omega$ , 100 $\Omega$ , 1k $\Omega$ , 10k $\Omega$  or 100k $\Omega$ ), dependent upon the impedance of the device under test.

**Pass/Fail Testing:** The 1715 provides a programmable Hi/Lo comparator function as well as eight sorting bins for categorization of components.

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

**Interfaces:** For remote control, or adaption to a production environment, the 1715 instrument includes an RS-232 interface as standard equipment. Both an IEEE-488 and a Handler interface are available as optional interfaces.



For more detailed specifications, visit [www.quadtech.com](http://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



## 1715 Digibridge LCR Features

<b>Parameter</b>	<b>Measurement Range</b>	<b>Interfaces (Standard):</b>	RS-232
Ls, Lp	0.01uH - 9.999kH	<b>Interfaces (Optional):</b>	IEEE-488 and Handler
Cs, Cp	0.01pF - 99.999mF	<b>Test Terminals:</b>	Front: 4 BNC & 1 GND
Rs, Rp	0.1mΩ - 99.99MΩ	<b>Dimensions:</b>	(w x h x d): 12.5 x 4.0 x 8.0in (312.5 x 100.0 x 200.0mm)
D	0.0001 - 9999	<b>Weight:</b>	10.85 lbs. (5kg) net, 15.2 lbs. (7kg) ship
Q	0.0001 - 9999	<b>Environmental:</b>	Specifications: +15°C to +35°C, 75% RH Operating: 10°C to +40°C Storage: 0°C to +50°C Humidity: 10 -90% RH Pollution Degree 2 Installation Category II
IZI	0.1mΩ - 99.99MΩ	<b>Power:</b>	<ul style="list-style-type: none"> <li>• 90 - 125V AC</li> <li>• 190 - 250V AC</li> <li>• 48 - 62 Hz</li> <li>• 50VA max</li> </ul>
Xs	0.1mΩ - 99.99MΩ		
Phase	-180.00° - +180.00°		
<b>Accuracy:</b>	Basic LCR ±0.2% Basic DQ ±0.002		
<b>Test Frequency:</b>	100Hz, 120Hz, 1kHz and 10kHz (9.6kHz) Accuracy ±0.2%		
<b>Test Signal:</b>	0.25V or 1.0V RMS, ±(10% + 3mV)		
<b>Measurement Speed:</b>	Fast: 25 measurements/second Medium: 8 measurements/second Slow: 2 measurements/second		
<b>Measurement Mode:</b>	Continuous or Trigger		
<b>Trigger:</b>	Internal External (IEEE or Handler) Manual		
<b>Trigger Delay:</b>	0 - 9999ms		
<b>Ranging:</b>	Automatic or Hold Range		
<b>Equivalent Circuit:</b>	Series or Parallel		
<b>Zeroing:</b>	Open and short circuit compensation		
<b>Source Impedance:</b>	25Ω, 100Ω, 1kΩ, 10kΩ or 100kΩ (based on DUT impedance)		
<b>Comparator:</b>	Primary Nominal Primary Hi/Lo Limits (Value or %) Secondary Hi/Lo Limits (Value or %)		
<b>Indication:</b>	Audible Alarm programmable: HI LO or OFF for Pass or Fail Result		
<b>Binning:</b>	Primary Nominal Primary Hi/Lo Limits (8 Bins in %) Secondary Hi/Lo Limits (Value)		
<b>Display:</b>	40 by 4 Character LCD display		
<b>Results Format:</b>	Value Deviation % Deviation Bin Number		
<b>Setup Storage:</b>	Store 1 setup, Auto recall upon power-up		
<b>Lock:</b>	Keypad Lockout		

## Ordering Information

<b>1715 LCR Digibridge</b>		<b>Optional Accessories:</b>
<b>Includes:</b>		
<u>QuadTech P/N</u>	<u>Item</u>	
150710	1715 Instruction Manual	1700-01 B/A Calibration Data
1700-03	Lead Set: 4 BNC Connectors to 2 Kelvin Clips	1700-02 Axial/Radial Component Test Fixture
4200-0300	AC Power Cord	1700-03 Axial/Radial Remote Test Fixture
520023/520025	Power Line Fuses (0.630A 250V/0.315A 250V) Calibration Certificate Traceable to NIST	1700-03 Lead Set: 4 BNC Connectors to 2 Kelvin Clips
		1700-04 Lead Set: 4 BNC Connectors to 4 Banana Plugs
		1700-05 Lead Set: 4 BNC Connectors to Chip Component Tweezers
		7000-07 Low Voltage Chip Component Test Fixture
		700171 IEEE-488 & Handler Interface

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