

1910 Inductance Analyzer

FEATURES:

- 20Hz to 1MHz Frequency Range
- 0.1% Basic Measurement Accuracy
- Selectable source Impedence
- Displays Voltage and Current Measurements
- Wide Measurement Range with 5 Digit Measurement Resolution
- Four-terminal Kelvin connections to maintain measurement integrity
- 1A DC Bias
- PC Software Configurable
- Multiple Steps
- Sequence Testing up to six individual tests in one pass
- Menu driven interface provides user friendly operation
- Measurement auto ranging or manual hold
- 15 total bins
- Measurement averaging from 1 to 1000
- IEEE-488.2,RS-232, handler, and serial printer interfaces all standard
- Display of DUT actual voltage
- Display of DUT current
- Load Correction

Introduction

The 1910 Inductance Analyzer is designed to perform inductance and impedance measurements on coils and wire wound devices over a frequency range from 20Hz to 1MHz. Emphasis has been placed on ease of use through menu programming, and fast accurate production testing via its remote control capability.

Description

15 Different Impedance Parameters/20 Total Parameters

Measure and display any two parameters simultaneously, to achieve coverage and flexibility not previously available.

Automatic Test Sequencing

Run up to six different tests in sequence with a single push of the start button. Each test can have different conditions and limits.

Program and Data Storage

Test setups can be stored and recalled from internal memory. The front panel can be locked out, with password protection, to ensure procedures are run the same way every time.

Load Correction

Substantially improves instrument accuracy by performing measurements on a known standard and applying correction to subsequent measurements. Ideal for repetitive testing of identical devices at like test conditions.



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Parameter	Measurement Range	Basic Measurement Accuracy			
		Speed:	Fast	Medium	Slow
Ls,Lp	0.001nH to 99.999H		+/-0.5%	+/-0.25%	+/-0.1%
Cs,Cp	1pF to 9.9999F		+/-0.5%	+/-0.25%	+/-0.1%
DF	0.00001 to 99.999		+/-0.005	+/-0.0025	+/-0.001
Q	0.00000 to 9999.9		+/-0.005	+/-0.0025	+/-0.001
Y,Gp,Bp	10 nS to 9999.9 S		+/-0.005	+/-0.0025	+/-0.001
Z ,Rs,Rp,Xs,ESR	0.0001 mΩ to 99.999MΩ		+/-0.5%	+/-0.25%	+/-0.1%
Phase Angle	-180.00 to +179.99 degrees		+/-1.8°	+/-0.9°	+/-0.18°
DCR	0.1mV to 100KV		+/-0.5%	+/-0.25%	+/-0.1%
DUT AC Voltage	20mV to 1.0V		+/-0.5%	+/-0.25%	+/-0.1%
DUT AC Current	1μA to 150mA		+/-0.5%	+/-0.25%	+/-0.1%
DUT DC Voltage	20mV to 1.0V		+/-0.5%	+/-0.25%	+/-0.1%
DUT DC Current	1μA to 150mA		+/-0.5%	+/-0.25%	+/-0.1%

Model 1910 Specifications

Test Frequency

Range: 20Hz to 1MHz, Continuous

Resolution: 1Hz from 20Hz to 1KHZ,
4 digits >1KHZ

Accuracy: +/- (0.01% +0.02 Hz)

Measurement Speed

Fast: 40 meas/sec

Medium: 8 meas/sec

Slow 1meas/sec

Ranging

Automatic,Range Hold or user selectable

Trigger

- internal (automatic)
- External(via RS-232,IEEE-488.2 or Handler interfaces)
- Manual

Source Impedance

5V, 25V, 50V, 100V, or matched impedance, range dependent

AC Test Signal

Voltage: 20mV to 1.0V (open circuit) in 5 mV steps

DC Bias Current

Internal: 0.0 to 1.0A in 1mA steps

External: 0.0 to 20.0A in 5mA steps using QuadTech 1320

Display

LCD Display with backlight

Results Formats

- Engineering numeric format
- %Deviation from nominal of primary parameter
- Deviation from nominal of primary parameter
- Pass/Fail
- No Display Mode for maximum throughput

Sequencing:

- Displays up to 6 sequential test results, primary and/or secondary

Standard Interfaces

- IEEE-488.2 • RS-232 • Handler • Serial Printer

Measurement Delay

- Programmable from 0 to 1000 ms in 1ms steps

Averaging

- Programmable from 1 to 1000

Median Value

- Averaged over last three measurements

Calibration

- Recommended interval 1 year
- NIST traceable calibration
- Built-in automatic calibration procedure

Usage & Cal Data

- Displays last calibration date, standard values used in calibration

Self Test

- Verifies critical instrument operation at power-up or when selected from menu

Test Terminals

- Front panel, four terminal (BNC)
- Optional Test Fixtures Available

Mechanical

- Bench mount with tilt bail
- Rack mount kit optional
- Dimensions: 17x 5.25x 16in (432x 133x 406 mm)
- Weight: 15lbs (8kg) net, 21lbs (9.9kg) shipped

Environmental

- Meets MIL-T-28800E, Type3, Class 5, Style E & F
- Operating 0° to +50°C
- Humidity < 75% for 11° to 30°C operating
- Storage -40° to +71° C

Ordering Information

Claridge 1910 Inductance Analyzer

Includes:

Item

AC Power Cord

Instruction Manual

Calibration Certificate

QuadTech P/N

4200-0300

150491

Optional Accessories:

Axial/Radial Component Test Fixture	1700-01
Axial/Radial Remote Test Fixture	1700-02
4 BNC Connectors to 2 Kelvin Clips Lead Set	1700-03
4 BNC Connectors to 4 Banana Plugs	1700-04
4 BNC Connectors to Chip Component Tweezers	1700-05
Rack Mount Flanges	2000-16
BNC to BNC Cable Set (1M)	7000-01
BNC to BNC Cable Set (2M)	7000-02
Low Voltage Chip Component Test Fixture	7000-07

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