

LCR-1100/1010

Handheld LCR Meter

GW INSTEK
Simply Reliable



dataTec

Ihr Ansprechpartner /
Your Partner:

dataTec AG
E-Mail: info@datatec.eu
>>> www.datatec.eu

Mess- und Prüftechnik. Die Experten.

FEATURES

- * 2.8" TFT Touch LCD
- * 50,000 Counts Resolution on Primary and Secondary Display
- * 0.2% Basic Accuracy
- * Six or Eight Selectable Test Frequencies Depends on Model
- * 15 Kinds Measurement Combinations Available
- * Test Level Selectable : AC 0.3V/0.7V/1Vrms and DC +/- 1V
- * Selectable Measurement Speed : Fast 10 Times/s, Slow 2.5 Times/s
- * Auto LCZ Mode for Automatic Component Type Identification and Measurement
- * Data Hold
- * USB-HID/USB-VCOM Interfaces for Remote Communication
- * Software for Datalogging is Available

APPLICATIONS

- * Field Service
- * Passive Component Trouble Shooting
- * Electronic Assembly
- * Incoming Inspection

GW Instek launches the new LCR-1000 Series, which is a handheld LCR meter with the automatic real-time test function. The series adopts TFT-LCD and provides a basic accuracy of 0.2%. Users can choose to use buttons or touch screen operations. The series, with high measurement accuracy and usability, is suitable for precision tests, including maintenance test, component production, schools/research institutes, and even quality test.

The LCR-1000 Series comprises 2 models. The LCR-1100 provides a test frequency up to 100 kHz, and the LCR-1010 provides a test frequency up to 10 kHz. The series provides selectable test voltages (0.3/0.7/1.0Vrms) and equivalent circuits (series/parallel) to automatically measure capacitance, inductance, resistance, reactance, impedance, quality factor, loss factor, phase and DC resistance.

The LCR-1000 Series, with 50,000 display counts for both main and auxiliary parameters and a basic accuracy of 0.2%, supports 2-wire or 5-wire measurement. Furthermore, the series also provides the comparison function and data retention function to meet various test and measurement requirements for different types of components.

The entire series is equipped with USB-HID and USB-VCOM interfaces. A simple and practical free PC software is provided and remote control commands (compatible with SCPI) are available for users to write their own personal software to meet the needs of data acquisition.

| MODEL | LCR-1100 | LCR-1010 |
|--------------------|--|--|
| Test Frequency | 50/100/120Hz/1k/2k/10k/50k/100kHz | 50/100/120Hz/1k/2k/10kHz |
| Display | Primary/Secondary : 50,000 counts | Primary/Secondary : 50,000 counts |
| Output Impedance | 100Ω | 100Ω |
| Basic Accuracy | 0.2% | 0.2% |
| Test Speed | Slow: 2.5 times/s, Fast: 10 times/s | Slow: 2.5 times/s, Fast: 10 times/s |
| Test Signal Level | 0.3V/0.7V/1.0Vrms selectable | 0.3V/0.7V/1.0Vrms selectable |
| Test Parameters | C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc, R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd | C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc, R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd |
| Equivalent Circuit | Series / Parallel selectable | Series / Parallel selectable |



Website



Facebook



LinkedIn

| SPECIFICATIONS | | |
|--|---|--|
| | LCR-1100 | LCR-1010 |
| TEST FREQUENCY | | |
| | 50Hz/100Hz/120Hz/1k/2k/10k/50k/100kHz selectable | 50Hz/100Hz/120Hz/1k/2k/10kHz Selectable |
| FULL SCALE | | |
| Main Display | 50,000 counts | |
| Sub Display | 50,000 counts | |
| CAPACITANCE (C) and DISSIPATION (D) | | |
| C Display Range | 1pF ~ 50mF depends on the selected test frequency | |
| C Best Accuracy | $\pm(0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm(3.0\% \text{ rdg} + 10 \text{ counts})$ | |
| C Resolution | 0.001pF ~ 0.001mF depends on selected range | |
| D Accuracy (De) | 0.002 ~ 0.03 depends on the selected test frequency & range | |
| INDUCTANCE (L) and QUALITY FACTOR (Q) | | |
| L Display Range | 0.5 μ H ~ 1000H depends on the selected test frequency | |
| L Best Accuracy | $\pm(0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm(2.5\% \text{ rdg} + 10 \text{ counts})$ | |
| L Resolution | 0.001 μ H ~ 0.1H depends on selected range | |
| Q Accuracy (Qe) | 0.002 ~ 0.08 depends on the selected test frequency & range | |
| IMPEDANCE (Z) and PHASE ANGLE (θ) | | |
| Z Display Range | 0.05 Ω ~ 10M Ω depends on the selected test frequency | |
| Z Best Accuracy | $\pm(0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm(3.0\% \text{ rdg} + 20 \text{ counts})$ | |
| Z Resolution | 0.0001 Ω ~ 0.001M Ω depends on selected range | |
| θ Accuracy (θ_e) | 0.2° ~ 2° depends on the selected test frequency & range | |
| ESR and \varnothing | | |
| | ESR is equal to the series equivalent resistance (Rs) | |
| Accuracy Formula | $R_{s_e} = \pm X_x * \varnothing_e$; $X_x = 2\pi f L_x$ or $1/2\pi f C_x$; $\varnothing_e = \theta_e * \pi/180$ | |
| | Parallel equivalent resistance | |
| Accuracy Formula | $R_{p_e} = \pm R_p * \varnothing_e / D_e \mp \varnothing_e$ | |
| DC RESISTANCE | | |
| Display Range | 0.05 Ω ~ 10M Ω | |
| Best Accuracy | $\pm(0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm(3.0\% \text{ rdg} + 5 \text{ counts})$ | |
| Resolution | 0.0001 Ω ~ 0.001M Ω depends on selected range | |
| MEASUREMENT CIRCUIT | | |
| | Parallel or Series selectable | |
| AUTO LCZ MODE | | |
| | Automatically identifies and measures the DUT when the meter is switch on | |
| SORTING MODE | | |
| | $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$, Input% | |
| OTHER FUNCTIONS | | |
| | Auto range, Backlight, Data hold, Zero, Auto power off | |
| DISPLAY | | |
| | 2.8 Color LCD display (touch operation available) | |
| INTERFACE | | |
| | USB (type C) | |
| POWER SOURCE | | |
| | Rechargeable lithium battery(8.4V) | |
| DIMENSIONS & WEIGHT | | |
| | 90(W) \times 195(H) \times 41(D) mm, Approx. 380g | |

Specifications subject to change without notice.

LCR-1100/1010_ID1DH

ORDERING INFORMATION

LCR-1100 100kHz Hand-held LCR Meter

ACCESSORIES

User manual, Safety Instruction Sheet, Rechargeable Lithium battery (LCR-305), Kelvin Clip (LCR-101), Short circuit bar (LCR-100), USB Cable Type A-C (LCR-205), Carry bag (LCR-503), Tweezers Test fixture (LCR-108)

ORDERING INFORMATION

LCR-1010 10kHz Hand-held LCR Meter

ACCESSORIES

User manual, Safety Instruction Sheet, Rechargeable Lithium battery (LCR-305), Kelvin Clip (LCR-101), Short circuit bar (LCR-100), USB Cable Type A-C (LCR-205), Carry bag (LCR-503)

OPTIONAL ACCESSORIES

LCR-108 Test fixture (Tweezers) for SMD/Chip Components



Ihr Ansprechpartner /
Your Partner:

dataTec AG

E-Mail: info@datatec.eu

>>> www.datatec.eu

GW INSTEK
Simply Reliable