COSINUS MESSTECHNIK GMBH

CE USB PC Software

LCR-1100/1010

Handheld LCR Meter

Inform in Advance

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.

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

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,	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	R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd
Equivalent Circuit	Series / Parallel selectable	Series / Parallel selectable

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	±(0.2% rdg + 2 counts) ~ ±(3.0% rdg + 10 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	0.5µH ~ 1000H depends on the selected test frequency	
L Best Accuracy	±(0.2% rdg + 2 counts) ~ ±(2.5% rdg + 10 counts)	
L Resolution	0.001µH ~ 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	0.05Ω ~ 10MΩ depends on the selected test frequency	
Z Best Accuracy	±(0.2% rdg+ 2 counts) ~ ±(3.0% rdg + 20 counts)	
Z Resolution	0.0001Ω ~ 0.001MΩ depends on selected range	
θ Accuracy (θe)	0.2° ~ 2°depends on the selected test frequency & range	
ESR and ø		
	ESR is equal to the series equivalent resistance (Rs)	
Accuracy Formula	$Rs_e = \pm X_x * ø_e$; $X_X = 2\pi fL_x$ or $1/2\pi fC_x$; $ø_e = \theta e * \pi/180$	
	Parallel equivalent resistance	
Accuracy Formula	$Rpe = \pm R_p * ø_e / D_e \quad ø_e$	
DC RESISTANCE		
Display Range	0.05Ω ~ 10MΩ	
Best Accuracy	±(0.2% rdg+ 2 counts) ~ ±(3.0% rdg + 5 counts)	
Resolution	0.0001Ω ~ 0.001MΩ 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		
	±1%,±5%,±10%,±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) × 195(H) × 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

COSINUS Messtechnik - Ihr Partner für Messlösungen in allen elektrischen und physikalischen Anwendungen

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