

EUCOL U2815

LCR Meter

Quick Start



www.tmatlantic.com

Brief Introduction:

U2815 LCR Meter is a new generation of impedance test equipment with high accuracy, wide measurement range and six digits resolution. Being possessed with test frequency up to 1 MHz, test voltage of 10mV-5V and built-in DC bias voltage of -5V~5V, it can meet all requirements for measuring components and materials and provide guarantees for production line quality assurance, incoming inspection and laboratory precision measurements. This product can be widely used in electric performance analysis of microphones, resonators, inductors, ceramic capacitors, LCD monitors, analyzes varactor diodes, transformers and so on. Ultra-fast measurement speed of U2815 Series makes it particularly suitable for automatic production line of inspection machines and frequency response curve analysis of piezoelectric device.

Otherwise, the Handler, RS232C and GPIB interfaces as well as improved command system provided by the instrument make it easier to build the test system.

Features:

- Simultaneously display of four different parameters with flexible combinations
- AC and DC parameters can be measured simultaneously without interference; self-demagnetization
- Test frequency: 20Hz ~ 1MHz, 10mHz step
- Test level: 10mV ~5V, 1mV step
- Basic accuracy: 0.1%
- High speed and efficiency measurement: Max. 120 meas / sec
- Built-in bias voltage: -5V- + 5V; support bias mode
- Auto DUT trigger function: the DUT can be measured once be trigger and the measurement results and discrimination will be displayed.
- Automatic level control (ALC) function of V or I
- Test signal level monitor function of V and I
- Flexible limit comparator: support tolerance mode, sequence mode and parameter exchange
- Rapid and easy determination of Pass/Fail through multi-parameter test function
- Powerful list sweep function: mixed scanning of various excitation source and display of different parameters;
- New graphical scanning functions: frequency / level / bias make nuanced analysis of elements
- Complete user correction function: up to 64 dot frequency correction
- Rich communication interfaces: RS232C/USB-CDC/USB-TMC/HANDLER/GPIB
- 2m/4m test cable extension(option)
- Chinese and English operation interface
- Multiple USB storage modes: CSV and TXT format for storing test data, BMP, PNG, GIF formats for stored on-screen images, U disk storage / recall setup files, U disk firmware upgrade
- Storage / recall of Parameters: real-time storage of all parameters without losing after shutdown; supporting internal storage of 120 groups, external storage and recalling of 500 groups

U2815 LCR Meter

Test frequency: 20Hz – 1MHz, resolution: 10mHz

Basic accuracy: 0.1%

Test level: 10mV ~ 5V, resolution: 10mV

Test speed: Fast: 120, Med: 25, Slow: 5 (meas/sec)

Internal bias: -5V – +5V, resolution: 1mV

Output Impedance: 10Ω, 30Ω, 50Ω, 100Ω

General Specifications:

Temperature & Humidity		0°C - 40°C, ≤90%RH
Power Requirements	Voltage	99V - 242V
	Frequency	47.5Hz - 63Hz
Power		≤60 VA
Dimension(W×H×D)		350mm×120mm×360mm
Weight		Approx. 4.5kg

Technical parameters

Measurement function		
Test parameter	Z ,C,L,R, X, Y ,B,G,D,Q,θ,DCR	
Basic Accuracy	0.1%	
Measuring speed	Fast: 120, Med:25, Slow: 5 (meas/sec)	
Equivalent circuit	Series and Parallel	
Ranging mode	Auto, Hold	
Display mode	Direct-reading, Δ, Δ%	
Trigger mode	Internal, Manual,DUT, External and Bus	
Correction	Open / short / load, full frequency, 64 dot frequency correction	
Graphic Scanning	Frequency, level, bias voltage / current	
List sweep	20 points frequency, level, bias voltage / current	
Monitor	480 * 272, 5-inch TFT color screen	
Memory	Internal:120 groups,External:500 groups(U-disk)	
Test signal		
Test frequency	20Hz – 1MHz; resolution: 10mHz	
Output Impedance	10Ω, 30Ω, 50Ω, 100Ω	
Test level	10mV ~ 5V; resolution: 10mV	
Internal DC bias source	Voltage mode	-5V ~ +5V, 1mV step
	Current mode (internal resistance:100Ω)	-50mA ~ 50mA,100uA step

Measurement display range	
Z , R, X	0.0001Ω - 99.9999MΩ
Y , G, B	0.0001uS – 999.999S
C	0.00001pF – 99.9999mF
L	0.00001μH – 99.9999kH
D	0.00001 - 9.99999
θ(Deg)	-179.9° – 179.9°
θ(Rad)	-3.14159 – 3.14159
Q	0.01 - 99999.9
Δ%	-999.99% - 999.99%
DCR	1mΩ - 99.9999MΩ
Comparator and interface	
Comparators	10 bins, BIN0 - BIN9, NG, AUX PASS / FAIL LED display
Interfaces	RS232C/USB-HOST/USB-CDC/ USB-TMC/HANDLER/GPIB (Options)

Frequently Asked Questions:

How many trigger modes does U2815 LCR meter have?

There are 4 trigger modes on U2815: INT, MAN, EXT and DUT.

When the trigger mode is set as INT, U2815 will make sequential and repeated tests.

When the trigger mode is set as MAN, press [TRIG] once, U2815 will make one test.

When the trigger mode is set as EXT, once the HANDLER interface receives a positive impulse, U2815 will execute one measurement.

When the trigger mode is set as DUT, once the test fixture receives a component, U2815 will execute one measurement.

When the trigger mode is set as BUS, once the IEEE 488 interface receives a TRIGGER command, U2815 will execute a test. The BUS mode cannot be set on the front panel.

How can be measurement frequency set in U2815 LCR meter?

U2815 LCR meter provides two methods to set measurement frequency. The first one is to use soft keys and the other one is to input data by using numeric keys.

1) Move the cursor to the FREQ zone, the following soft keys will be displayed.

•INCR++

This is a coarse adjustment soft key used to increase the frequency. Press this key, the frequency will change as the following sequence: 20Hz, 100Hz, 1kHz, 10kHz, 100kHz, 200kHz.

•INCR+

This is a fine adjustment soft key used to increase the frequency. Press this key, the frequency will switch.

•DECR-

This is a fine adjustment soft key used to decrease the frequency. The selectable frequencies are the same as that of INCR+.

•DECR--

This is a coarse adjustment soft key used to decrease the frequency. The selectable frequencies are the same as that of INCR++.

2) Use soft keys or numeric keys to select or set frequency. When using numeric keys to input the required frequency value, the soft key displays the available frequency units (Hz, kHz and MHz). You can use unit soft key to input unit and data. When using [ENTER] to input frequency, the default unit is Hz.