

## LCR Meters 4310 4320 4350 43100



- Measurements from 20Hz to 1MHz (43100)
- 0.1% basic accuracy
- <20ms measurement time
- Parameters Z  $\theta$  Rac C D L Q B G X Y Rdc
- Display four parameters and two tests at once
- Drive level from 10mV to 2Vrms
- RS232, GPIB, USB & LAN Interfaces
- +2V internal /  $\pm$ 40Vdc external bias
- Small size & light weight

The 4300 series is the entry level range of Wayne Kerr LCR Meters. They provide a wide range of features and offer high performance and very competitive prices.

### Frequency

Model	Frequency Range
4310	20Hz to 100kHz
4320	20Hz to 200kHz
4350	20Hz to 500kHz
43100	20Hz to 1MHz

### Frequency Step Size

Frequency	Step Size
20Hz to 1kHz	5Hz
1kHz to 10kHz	50Hz
10kHz to 100kHz	500Hz
100kHz to 1MHz	5kHz

### AC Drive Level

Voltage (into open circuit): 10mV to 2Vrms  
 Voltage step size: 10mV (200 steps)  
 Signal source impedance: 100  $\Omega$

### DC Drive Level

1V or 2V

### DC Bias Voltage

Internal: 2V  
 External:  $\pm$ 40V

### Basic Accuracy

AC: 0.1%  
 DC: 0.2%

Varies with speed, frequency, drive level and impedance of the device under test.

### Measurement Parameters

Impedance (Z)                      Phase Angle ( $\theta$ )  
 Capacitance (C)                    Dissipation Factor /  $\tan \delta$  (D)  
 Inductance (L)                    Quality Factor (Q)  
 AC Resistance (R)                Reactance (X)  
 DC Resistance (Rdc)              Admittance (Y)  
 Susceptance (B)                  Conductance (G)

### Series/Parallel Equivalent Circuit

Any combination of AC parameters

### Range of Readings

Parameter	Display Measurement Range
Z, R, X	10.0000 $\mu\Omega$ to >100.000G $\Omega$
Y, B, G	1.00000pS to >10.0000kS
L	100.000pH to >100.000MH
C	10.0000fF to >1.00000F
D, Q	0.00001 to 99999.9
A	-180.000 $^\circ$ to 180.000 $^\circ$
Rdc	0.1000m $\Omega$ to >10.000G $\Omega$



### Measurement Speeds

Four selectable measurement speeds for all functions. Over 50 measurements per second, depending on frequency and set up conditions.

### Test Mode

One test or two tests can be triggered automatically. Measurement parameters, frequency, and drive level can be changed between Test 1 and Test 2.

### Test Limits

Limits can be set for all measurements in one or two test mode. Results of limit checks are displayed on screen. PASS/FAIL signal is available on Scaleizer port on rear panel.

### Save and Recall

Up to 20 measurement set ups can be saved with user-defined names and later recalled.

### External Control

GPIO, USB, LAN and RS232.

### Binning (Option)

User programmable PASS and FAIL bins indicated by signals available on the rear panel. /B1 provides non-isolated signals. /B2 provides isolated signals.

### Scaleizer (Option)

Provides relay controlled signals available on the rear panel indicating PASS/FAIL decisions based on user-defined limits. 2 versions available (/S1 and /S2).

### Safety

Complies with the requirements of EN61010-1.

### EMC

Complies with EN61326 for emissions and immunity.

### AC Power Input

90VAC to 264VAC (Autoranging); 47Hz to 63Hz

### Display

3.8" ¼ VGA (320 x 240) Black & White

### Remote Control

RS232, GPIO, USB and LAN

### Mechanical

Height 104mm (4.1")      Width 322mm (12.7")

Depth 285mm (11.1")      Weight 3kg (6.6lb)

### Temperature Range

Operating:      0°C to 40°C

Full Accuracy:      23°C ±5°C

Storage:      -40°C to +70°C

### Order Codes

Model	Part No.
4310 (100kHz)	1J4310R
4320 (200kHz)	1J4320R
4350 (500kHz)	1J4350R
43100 (1MHz)	1J43100R

### Options

Description	Code
Scaleizer (S1 type)	/S1
Scaleizer (S2 type)	/S2
Bin handler (non-isolated)	/B1
Bin handler (isolated 24V)	/B2

### Recommended Accessories

Description	Part No.
4-terminal component fixture	1EV1006
SMD tweezers	1EVA40120

All units are supplied with User Manual, Kelvin clips and AC power cable as standard. Only one option may be fitted.