

## LCR Meters 4310 4320 4350 43100



- Measurements from 20Hz to 1MHz (43100)
- 0.1% basic accuracy
- 20ms measurement time
- Parameters Z  $\phi$  Rac C D L Q B G X Y Rdc\*
- Drive level 10mV to 2Vrms
- RS232 & GPIB Interfaces
- +2V internal /  $\pm 40$ Vdc external bias
- Protection against charged capacitors
- Small size & light weight
- Unbeatable price

### Product Description

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.

### Technical Specification

#### Frequency

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

#### Frequency Steps

20Hz to 1kHz	5Hz
1kHz to 10kHz	50Hz
10kHz to 100kHz	500Hz
100kHz to 1MHz	5kHz

#### AC Drive Level

Open circuit:	10mV to 2Vrms
Voltage step size:	10mV (200 steps)
Short circuit:	100 $\mu$ A to 20mArms
Current step size:	100 $\mu$ A (200 steps)
Signal source impedance:	100 $\Omega$

#### Measurement parameters

Impedance (Z)	Phase Angle ( $\Theta$ )
Capacitance (C)	Dissipation Factor (D)
Inductance (L)	Quality Factor (Q)
AC Resistance (Rac)	Reactance (X)
DC Resistance (Rdc)*	Admittance (Y)
Susceptance (B)	Conductance (G)

#### Series/parallel equivalent circuit

Any combination

#### Polar Form

Z +  $\Theta$ , Y +  $\Theta$

#### DC Bias Internal

2Vdc

#### DC Bias External

$\pm 40$ Vdc

\* Option

## Technical Specification (continued)

Parameter	Measurement Range
Z, R, X	0.01mΩ to >1GΩ
Y, B, G	0.1nS to >2kS
L	1nH to >2kH
C	0.01pF to >1F
D, Q	0.0001 to 9999.9
Phase Angle	-180° to +180°
Rdc	0.1mΩ to >100MΩ

### **Basic Accuracy**

0.1%

Varies with speed, frequency, AC drive level and impedance of Device Under Test

### **Measurement speeds**

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

### **Measurement Connections**

4 front panel BNC sockets with screens at ground potential.

### **Binning (optional)**

User programmable PASS and FAIL bins.  
25 way D-type interface connector.

### **Option /B1 (non-isolated)**

Common 0V. Bin outputs 0 to 5V (nominal) with >10mA current sink capability.

### **Option /B2 (isolated)**

Common 24V input. Outputs 0 to 24V with >10mA current source capability.

### **General**

#### **Power requirements**

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

#### **Display**

¼ VGA (320 x 240) Black & White

### **Remote control**

RS232  
GPIB (IEEE-488.2)

### **Mechanical**

Height 104mm (4.1")    Width 322mm (12.7")  
Depth 285mm (11.1")    Weight 3kg (6.6lb)

### **Environmental conditions**

#### **Temperature range**

Storage            -40 °C to +70 °C  
Operating        0 °C to 40 °C  
Full Accuracy    23 °C ±5 °C

#### **Relative humidity**

Up to 80% non-condensing

### **Order codes**

Description	Order code
<b>4310</b> 20Hz to 100kHz LCR Meter	<b>1J4310</b>
<b>4320</b> 20Hz to 200kHz LCR Meter	<b>1J4320</b>
<b>4350</b> 20Hz to 500kHz LCR Meter	<b>1J4350</b>
<b>43100</b> 20Hz to 1MHz LCR Meter	<b>1J43100</b>

All units supplied with User Manual, Kelvin clips and AC power cable

### **Options**

Description	Order code
Bin handler (non-isolated)	/B1
Bin handler (isolated 24V)	/B2
DC Resistance	/R

### **UK**

**Wayne Kerr Electronics**  
Vinnetrow Business Park  
Vinnetrow Road, Runcton  
Chichester, West Sussex  
PO20 1QH, UK  
Tel: +44 1243 792200  
Fax: +44 1243 792201

Please consult our website for details of our other companies and distributors around the world.