

## LCR Meters 4234 4235 4236 4237



- Low cost component measurement
- Characterize components to 1 MHz (4237)
- Fast measurement speed
- 0.2% basic measurement accuracy
- Comprehensive measurement functions
- GPIB Interface
- Large LCD display
- Intuitive user interface
- Unbeatable price

### Product Description

Provides economical, thorough and accurate testing of passive components at frequencies up to 10 MHz.

The instruments in the range are designed for comprehensive testing of components, with a basic accuracy of 0.2% with a wide range of measurement parameters

The 4234 LCR Meter is the entry level instrument with a maximum frequency of 100 kHz whilst the 4235, 4236, 4237 up to 1 MHz.

### External control

The GPIB interface is used to control the instrument and read back measured values.

### Excellent performance and unbeatable price

As the market leader with over 50 years experience of developing and manufacturing component analyzers Wayne Kerr provides the best facilities in the industry with high performance and accuracy at very competitive prices.

### Technical Specification

#### **Frequency**

4234 20 Hz to 100 kHz

4235 20 Hz to 200 kHz

4236 20 Hz to 500 kHz

4237 20 Hz to 1 MHz

#### **Accuracy of set frequency**

±0.005%

#### **Resolution of set frequency**

5 Digits

#### **Measurement parameters**

Capacitance (C), Dissipation Factor (D)

Inductance (L), Quality Factor (Q)

AC Resistance (Rac), Reactance (X)

Impedance (Z), Admittance (Y)

Phase Angle (Θ)

Susceptance (B), Conductance (G)

DC Resistance (Rdc),

#### **Series/parallel equivalent circuit.**

C+R, C+D, C+Q, L+R, L+Q

#### **Series equivalent circuit only**

X+R, X+D, X+Q

#### **Parallel equivalent circuit only**

C+G, B+G, B+D, B+Q

#### **Polar Form**

Z + Θ, Y + Θ

#### **Basic accuracy**

L/C ±0.2 %

G/B ±0.2 %

R/X ±0.2 %

Q ±0.2 %

D ±0.002

Rdc ±0.5 %

Accuracy varies with component value, drive level, measurement speed, frequency and temperature.

#### **Measurement speeds**

Four selectable measurement speeds for all functions. Up to 30 measurements per second with the speed varying with frequency.



## Technical Specification (continued)

### Test Conditions

#### Drive level

Open circuit voltage	10 mV to 2 V rms
Resolution	10mV
Accuracy	2% ±5mV
Short circuit current	20mA to 100mA
Signal source impedance	100 Ω

#### Measurement ranges

R, Z, X	0.01 mΩ to 1 GΩ
G, Y, B	0.001 nS to 1 kS
L	0.1 nH to 100 kH
C	0.001pF to 1 F
D	0.00001 to 1000
Q	0.01 to 1000
Rdc	0.1 mΩ to 100 MΩ

### Modes of operation

#### Measurement

Selection of any measurement parameter and test condition.

Single level function menu controlled by keyboard and soft keys.

Single and repetitive measurements displaying major and minor terms.

Analogue scale with configurable Hi/Lo limits giving PASS/FAIL indication.

#### Multi-Step

Up to 30 steps with configurable limits. PASS/FAIL indication.

Up to 64 multi-step programs can be saved in the non-volatile memory.

#### Measurement Connections

4 front panel BNC sockets with screens at ground potential.

### General

#### Power requirements

115 V or 230 V AC ±10% (selectable)  
150 VA Max, 50 / 60 Hz

#### Mains fuse rating

115V / 230 V operation - 3A 'T' type

#### Display

High contrast black and white LCD  
Resolution 320 x 240  
Visible area 115 x 86 mm

#### Remote control

Designed to GPIB (IEEE-488.2) and SCPI 1992.0  
RS232

#### Mechanical

Height 150 mm (5.9")  
Width 340 mm (13.38")  
Depth 460 mm (18.1")  
Weight 6.5 kg (14.33 lb)

### 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

#### Altitude

Up to 2000 m

#### Installation category

II in accordance with IEC664

#### Pollution degree

2 - mainly non-conductive

This equipment is intended for indoor use only in a non-explosive and non-corrosive atmosphere

#### Safety

Complies with the requirements of EN61010-1

### EMC

Complies with EN61326 for emissions and immunity

### Order codes

Description	order code
4234 LCR Meter (20 Hz to 100 kHz)	1J4234
4235 LCR Meter (20 Hz to 200 kHz)	1J4235
4236 LCR Meter (20 Hz to 500 kHz)	1J4236
4237 LCR Meter (20 Hz to 1 MHz)	1J4237
Supplied with user manual and 2m AC power cable	

### Optional accessories

Description	order code
Kelvin Lead (large jaw)	1EVA40180
Kelvin Lead (fine jaw)	1EVA40100
4 Terminal Lead Set	1EV1505
BNC-4 Term. Fixture	1EV1005
BNC-4 Term. Fixture ( >500 kHz )	1EV1006
SMD Probe Lead	1EV1905A
SMD Tweezers	1EVA40120
Operating Manual	9H4234
Certificate of Calibration	1JCALRES

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