

Specifications

(Reference Temperature: 23°C ±1°C)

Operating Modes:

C-Measurement

L-Measurement

Series Inductance L, Shunt Capacitance C

Series Resistance R, Shunt Conductance G

Ranges:

L : 200μ to 200H (7 decades)

Rs: 20Ω to 200kΩ (5 decades)

C : 200pF to 200μF (7 decades)

G : 20μS to 200mS (5 decades)

Max. Resolution: 0.1pF

0.1μH

0.01Ω

0.01μS

Measuring Frequencies: (Sinewave signal)

approx. 160Hz, 1.6kHz, 16kHz

($\omega = 10^3, 10^4, 10^5 \text{ s}^{-1}$)

Measuring Voltage: max. 1V_{pp}

Measuring Current: max. 36mA (rms)

Power dissipation during measurement: max. 3.2mW

Accuracy: ±0.5% o.v.¹⁾

+(3 Digit+0.5pF/0.5μH/10mΩ/0.01μS)]

Error ≤1% for separation of real component and imaginary part up to 45° phase angle

Display:

3½-digit 7 segment LED-display

Measuring Rate: 2 measurements/second

Principle of Measurement: 2- or 4-Point Measurement

General Information:

Inputs short-circuit-proof and overvoltage protected up to 100V for a short time at an energy consumption of max. 10mJ (ΔCapacitor 2μF, charged to 100V).

Polarization voltage for C-measurement: 2V

Zero calibration for display

Compensation of probe capacitance

An AC voltage proportional to display

is available at the rear BNC connector (HM8001)

Supply voltages (from HM8001):

+5V/200mA

-13V/130mA

+13V/130mA

(Σ = 4.5W)

Operating conditions: 0°C to +40°C

max. relative humidity: 80%

Dimensions (without 22-pin flat connector):

W135, **H**68, **D**228mm

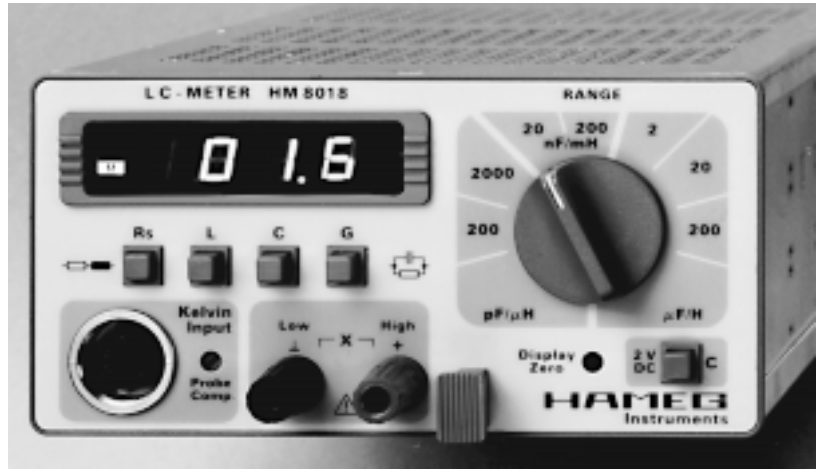
Weight: approx. 650g

¹⁾ o.v. Δ of value

Values without tolerances are meant to be guidelines and represent characteristics of the average instrument.

Subject to change without notice

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L-C Meter HM8018

- 24 Measurement Ranges
- Max. Resolution: 0.1pF - 0.1μH - 0.01Ω - 0.01μS
- 3 Test Frequencies (160Hz, 1.6kHz, 16kHz)
- 4-Point Measurement Technology
- Basic Accuracy 0.5%
- Internal Bias for Electrolytic Capacitors
- Measures both Series and Parallel Components

The LC Meter **HM8018** offers a number of features uncommon for an instrument of its price range. Measured values are displayed on a **3½ - digit** LED with a basic accuracy of **0.5%**. Measurements are performed at a 2 per second rate. Due to use of **3** oscillator frequencies, which automatically switch upon range selection, the instrument always operates at the optimum test frequency.

Besides **L** and **C** measurements, series and parallel components of inductances and capacitances can be determined with the **HM8018**, providing easy evaluation of the **quality** or **dissipation factors** of the components under test. A special measurement technique allows separation of real and imaginary components up to a phase angle of **45°** with an **accuracy of ≤1%**. The high degree of resolution, **10mΩ / 0.01μS** ensures precise and reliable test results.

The accuracy and operability of the **HM8018** make it ideal for use in virtually every area of electronic technology, including quality control and laboratory applications. The **low number of operating controls** ensures that even non-technical personnel can perform accurate measurements after only brief instruction.

Accessories supplied
Operators Manual

Optional accessories
HZ18: Kelvin Probes with gold plated contacts