

ELECTROMETER

Cat: LB1840-001 (240/12V.AC. PlugPak) LB1840-101 (240V.AC. mains)

DESCRIPTION:

An Electrometer is a device used for the measurement of extremely small voltages, electric charges and currents. The voltage ranges begin at 0-2mV so that microvolts can be measured. The current ranges begin at 0-2 nanoamps and the electric charge ranges begin at 0-2 nanocoulombs. Output is provided for a logger or plotter.

Instruments such as this are useful for measuring charge on Aepinus Capacitor plates or the electric charge around an electrostatic rod, or the current passing through an 'insulator' or similar.

Both low voltage (PlugPak operated) and 240V.AC. mains models of this equipment are available. Both models have the same front panel appearance and functions.



LB1840-101 240V.AC mains model

Physical size: 270x170x105mm LxDxH Weight: 1.4 kg

UNITS FOR THE ELECTROMETER:

The units used when using the Electrometer are as follows:

Voltage: 'Millivolts'. (mV. equal to 10^{-3} volts.)

Charge: 'Nanocoulomb'. (nC. equal to 1x10⁻⁹ Coulombs or 6.25x10⁹ electrons.)

A 1 Farad capacitor at 1 Volt contains 1 Coulomb of charge.

Current: 'Nanoamps'. (nA. equal to 1x10⁻⁹ amps.)



The IEC Electrometer is a 4 digit electronic design providing the following ranges:

VOLTAGE:

0 to 2, 20, 200, 2000 mV. **Impedance:** 10^8 ohm on 2000mV. range. 10^6 ohm on other ranges.

CURRENT:

0 to 2, 20, 200, 2000 nA. **Impedance:** 10⁶ ohms on all ranges.

CHARGE:

Up to 2000 nanocoulombs. (nC.) one range only.

A 'Shorting' position is provided on the switch to discharge the Coulomb meter prior to taking a reading of charge. When measuring charge (nC.) set the range switch on 2000.

Before a reading is taken, always 'zero' the display with the control provided and select the highest range first.

NOTE: Output sockets provide +/- 0 - 2 V.DC. for recording or logging.

Designed and manufactured in Australia