

# Electrometer



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.

## 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  $1 \times 10^{-9}$  Coulombs or  $6.25 \times 10^9$  electrons.)  
A 1 Farad capacitor at 1 Volt contains 1 Coulomb of charge.

**Current:** 'nanoamps'. (nA. equal to  $1 \times 10^{-9}$  amps.)

Both low voltage PlugPak operated model (LB1840-001) and 240V.AC. mains model (LB1840-101) of this equipment are available. Both models have the same front panel appearance and functions.

Length: 270mm	Width: 140mm	Height: 110mm	Weight: 1.4kg
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### The 4 digit IEC Electrometer provides the following ranges:

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

**Current:** nanoamps  
0 to 2, 20, 200, 2000 nA. Impedance:  $10^6$  ohms on all ranges.

**Charge:** nanocoulombs  
Up to 2000 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 +/- 2 V.DC. for recording or logging.

Designed and manufactured in Australia

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