

## HV Lab Series 149 Data Sheet

40kV, and 60kV

LAB HIGH VOLTAGE METER

### Applications:

High voltage calibration, testing and power supply set-up

- 4½ digit LCD display.
- High input resistance (10GΩ & 100GΩ types).
- Up to 40kV or 60kV direct measuring
- Battery operation for portable use (9V).
- Display is Voltage Co-efficient compensated
- Recorder output for monitoring.
- 40kV models supplied with hand held probe.
- Rugged construction.



**Caution:** Great care must be taken when making measurements in high voltage circuits. Always ensure the HV return terminal of the meter is grounded. **DO NOT** use the hand-held probe on supplies that are potentially lethal.

### Electrical Specification

Order Code	Ranges	Input resistance	Accuracy
149-01	2kV, 20kV & 40kV	10GΩ	±0.1% ±2 digits
149-02	2kV, 20kV & 60kV	10GΩ	±0.1% ±2 digits
149-03	2kV, 20kV & 40kV	100GΩ	±0.1% ±2 digits
149-04	2kV, 20kV & 60kV	100GΩ	±0.1% ±2 digits

#### 149-01 & 149-03 only

Voltage ranges (dc) Zero to 1.9999kV on 2kV range, zero to 19.999kV on 20kV range and zero to 40.000kV on 40kV range.

Resolution 0.1V on 2kV range, 1V on 20kV range and 10V on 40kV range.

HV input Supplied with a 40kV hand held probe with 2m of HV cable and HV plug.

#### 149-02 & 149-04 only

Voltage ranges (dc) Zero to 1.9999kV on 2kV range, zero to 19.999kV on 20kV range and zero to 60.000kV on 60kV range.

Resolution 0.1V on 2kV range, 1V on 20kV range and 10V on 60kV range.

HV input Supplied with a 2m lead and HV plug for direct connection to high voltage source.

#### 149 series all models

Stability Better than 0.3% over 1 year.

Protection Circuits are protected against damage by external arcing and flashover.

Controls Push button power on/off, and range selection.

Recorder output (Source / sink capability up to 100uA. Long term drift <0.5% over 1 year.

Range	Recorder Accuracy		Scale (mV / kV)	Temp Co. ppm/°C
2kV	0.5%	±10mV	1000	150
20kV	0.3%	±1mV	100	75
40/60kV	0.5%	±1.5mV	10	75

## Spares & probes

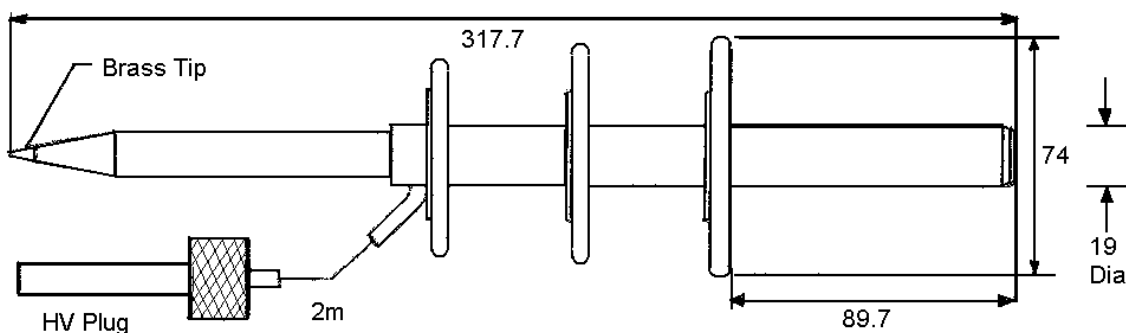
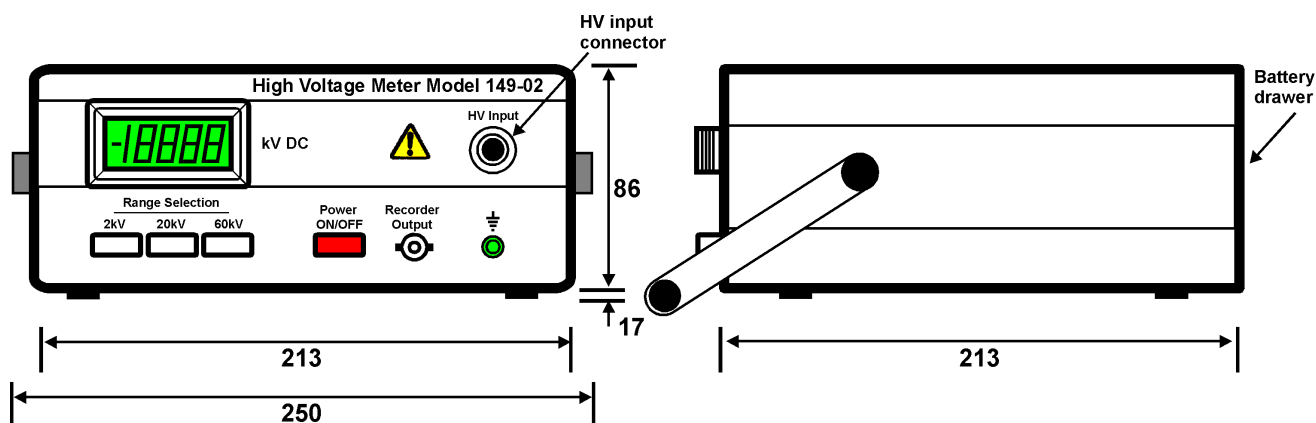
Order Code	Description
BB-1495-06	Pointed probe tip (for use with BB-1495-08).
BB-1495-08	40kV hand held probe, for use with 149 series meter. <b>MAX 40kV!</b> (as supplied with 149-01 & 149-03).
BB-1495-09	40kV plug and 2m of un-screened cable assembly. <b>MAX 40kV!</b> (for use with all 149-01 & 149-03).
BB-1495-10	60kV plug and 2m of screened cable assembly. (for use with all 149 series).
BB-1495-11	Recorder output lead (BNC with 1.2m coax cable with 2 off 4mm banana plugs).
BB-0593-01	Beryllium copper flat tip (for use with BB-1495-08).

## Environmental Specification

Temperature, operating	-10 to +50°C.		
Temperature, storage	-20 to +65°C.	Humidity (RH) <31°C	80% maximum non-condensing.
Pollution category	II	Humidity (RH) >30°C	Decrease linearly to 50% at 40°C.

## Mechanical Specification

Dimensions	W x H x D: 203 x 213 x 86 mm (8" x 8.38" x 3.38")	Weight	1.35kg (3lb) approximately.
Battery type	One "PP3" 9V alkaline battery.	Battery life	500 hours approximately.
Battery check	Automatic "BAT" shown on LCD when low.	Recorder output	BNC series, front panel.



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