

Electrometer/High Resistance Meter

Make/Model : Keithley 6517B

Purpose: Measure voltage, current, resistance/resistivity and charge.

DC voltage measurements from 1 V to 210 V

DC current measurements from 10 nA to 21 mA

Charge measurements from 10 fC to 2.1 μ C

Resistance measurements from 10 Ω to 210 P Ω

Surface resistivity measurements from 10^3 to 10^{17} Ω /sq. cm

Volume resistivity measurements from 10^3 to 10^{18} Ω -cm

PRECAUTIONS

1. Take caution while test runs as high voltage is present at the tip of the leads continuously (when measurements are being done without 8009 fixture).
2. Make sure the interlock feature is disabled if measurements are being done without the 8009 fixture.
3. METER CONNECT option (CONFIG \rightarrow OPER) should be enabled if an external fixture is connected.
4. Provide sufficient discharge time between measurements to avoid erroneous results.

STANDARD OPERATING PROCEDURE

1. Connect the PICOAMMETER High (Triax cable RED) to the positive and voltage source high (red) to the negative terminals of the device under test. Guard terminals can be connected to the voltage source low (black).
2. Connect the GPIB cable with laptop in which KICKSTART-HRMA software is installed (for resistance/resistivity measurements).
3. Select the instrument and test type in the software.
4. Select step response option for normal polarity measurements and high resistivity option for alternate polarity measurements.
5. Enter the details of instrument settings and material and fixture geometries in the software.
6. Enter start test.
7. The readings can be saved in excel/csv format.

V/I/Q measurements

1. Use the meter front panel buttons to enter the details (CONFIG \rightarrow V/I/Q) and run the test (OPER).