614 Electrometer

For most new applications, the Model 6514 (page A-73) offers better performance than the 614, plus IEEE-488 and RS-232 interfaces at a similar cost.

**Sensitive Performer**
The 614 performs four functions: current, resistance, voltage, and charge measurements. It is capable of detecting currents as low as $10^{-14}$ A and resistances up to $2 \times 10^{11}$ Ω. It provides more than $5 \times 10^{13}$ Ω input impedance on the voltage ranges, and can detect charge over a range of $10^{-14}$ to $2 \times 10^{-4}$ C. It is appropriate for a wide range of applications in component and circuit testing as well as in research and student laboratories.

**Battery/Line**
For isolation from AC line interference, the 614 features a built-in, rechargeable lead-acid battery pack. The pack provides more than 10 hours of off-line operation, automatically recharges when the power line is plugged in, and automatically cuts in should line power be interrupted.

**Flexible and Convenient**
The 614 rear panel includes two analog outputs: a 2V output for recorders and a preamp output for use as a driven guard with the 6167 guarded input adapter. The current suppress feature allows background currents to be zeroed out at the touch of a button. Durable construction and a full range of capabilities assure a long and cost-effective life cycle.

**ORDERING INFORMATION**
614 Electrometer with Model 6011 Triax to Alligator Clips Input Cable

This product is available with an Extended Warranty. See section C for complete ordering information.

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617, 617-HIQ Electrometer/Source

For most new applications, our Model 6517A (page A-77) offers better performance than the 617 at a similar cost. The new Model 6514 offers similar functionality and includes the high charge measurement capabilities of the 617-HIQ.

The Model 617 performs four functions: current, resistance, voltage, and charge measurements. It is capable of detecting currents from $1 \times 10^{-16}$ to $2 \times 10^{-2}$ A and resistances up to $5 \times 10^{16}$ Ω. It provides more than $2 \times 10^{14}$ Ω input impedance on voltage measurements from 10µV to 200 V and can detect charge over a range of $10^{-14}$ to $2 \times 10^{-4}$ C. In addition to standard resistance functions using constant current, the 617’s variable voltage source can supply from 50mV to 102V, which can be applied to a resistance and the resulting current or resistance displayed.

The 617’s built-in IEEE-488 interface makes all controls programmable. The built-in V-Ω GUARD switch lets you drive the inner shield of the triaxial input cable at guard voltage, minimizing leakage current and time constants. 100-point data storage is also built in, with Min/Max readings available from front panel or bus.

For measurements of charge as high as 20µC, the 617-HIQ version offers three higher charge ranges. These higher ranges have proven useful on Faraday cup measurements and other static charge applications including photocopy research and development.

**ORDERING INFORMATION**
617 Electrometer/Source with Model 6011 Input Leads and Model 6172 Triax Adapter

617-HIQ Electrometer/Source with extended charge measurement range, Model 6011 Input Leads and Model 6172 Triax Adapter

This product is available with an Extended Warranty. See section C for complete ordering information.