

**Introducing the new**  
**Model 3455 High Voltage Insulation HiTESTER**  
*Insulation Resistance Tester Designed for Testing High-voltage Equipment*



HIOKI E.E. Corporation has developed the new Model 3455 High Voltage Insulation HiTESTER designed for testing high-voltage equipment.

**What is an insulation resistance tester?**

An insulation resistance tester is a measuring instrument designed for measuring the insulation resistance of electrical equipment and appliances. When testing an insulator, measured values differ depending on the voltage applied for testing, so rated test voltages are specified for each type of application. The Japanese standard JIS C1302 stipulates the following rated test voltages for insulation resistance testers: 25 V for equipment in industrial locations such as plants where a safety voltage is required for testing, 50 V for telephone line equipment, 125 V or 250 V for commercial power supply equipment, 500 V for 400 V class or less circuits or equipment, and 1000 V for high voltage equipment. JIS also stipulates resistance measurement up to 2000 MW. Previous HIOKI models also comply with JIS standards.

**Where can Model 3455 High Voltage Insulation HiTESTER be used?**

Model 3455 provides selectable test voltages of 250 V, 500 V, 1 kV, 2.5 kV, and 5 kV and has the capability of measuring up to 5 TW (at 5kV). The instrument complies with the EN61010 European safety requirements, CATIV 600 V, which ensures safety for testing equipment at 600 V on the secondary side of the transformer. (Previous HIOKI models comply with CATIII 600 V, which ensures safety for testing equipment on the indoor side of a fuse panel in a building). Model 3455 can be used to measure the insulation resistance of high-voltage equipment such as transformers, cables, and motors on the secondary side of the transformer.

**Who are the primary users of Model 3455 High Voltage Insulation HiTESTER?**

In Japan, there is no standard test method for high-voltage equipment that are the target equipment of model 3455, so inspection bodies establish and use their own test methods. Model 3455 comes with a wealth of extra features, which increase its value to users, for a price around half that of similar measuring instruments in the marketplace.

Furthermore, Model 3455 complies with the Chinese and US test requirements for the target equipment of Model 3455, so we expect sales to be extended beyond Japan to the overseas

markets.

## **Product Overview**

Model 3455 is an insulation resistance tester that provides a test voltage of up to 5 kV. While previous HIOKI models provide a voltage of up to 1 kV as required by JIS standards, the development of Model 3455 focused on meeting overseas market demand for an insulation resistance tester that provides test voltages of 2.5 kV and 5 kV for testing the insulation resistance of high-voltage equipment such as transformers, cables, and motors. Model 3455 comes packed with a multitude of features that allow for use in a wide range of applications—from low-voltage to high-voltage equipment.

## **Primary Features**

### **1. Wide Range of Test Voltages**

Test voltages are selectable from 250 V, 500 V, 1 kV, 2.5 kV, and 5 kV, or can be set in between them (in incremental steps of 25 V below 1 kV and of 100 V above 1kV). Test voltages can be monitored in real time.

### **2. Wide Range of Insulation Resistance Measurements**

Up to 5TW (at 5 kV) can be measured. Moving average processing suppresses the dispersion of displayed values, thus ensuring stable measurement.

### **3. Features Enabling Various Types of Insulation Diagnosis**

Automatic calculation/display of the polarization index (PI) and dielectric absorption ratio (DAR), step voltage tests, leakage current display, temperature measurement, and temperature compensation.

### **4. Memory Feature**

Up to 100 data points can be saved manually and up to 10 data points can be logged (logging frequency up to 360). The date and time of measurement is also recorded along with the measurement data. Data can be displayed for review on the 3455 or transferred to a PC.

### **5. USB Interface**

Data saved on the 3455 can be transferred to a PC by USB. Use of the report generation feature of the PC application software facilitates simple generation of reports.

### **6. Safety Assured**

An auto discharge feature is supported and the CAT IV 600 V and CAT III 1000 V are complied with. A shutter mechanism is employed to prevent the use of other terminals while the measurement terminals are in use. High-voltage warnings and live wire warnings are displayed (VAC/VDC measurements).

### **7. Compact Hard Case**

A compact hard case suitable for testing in the field is employed. Test leads can be stored in the case.

### **8. Large Easy-to-View Display**

A horizontal bar with a logarithmic scale gives the feel of an analog meter. The display is backlit.

### **9. Rechargeable Batteries**

It is possible to keep both AA batteries and optional rechargeable batteries in the tester. Just flicking a switch when one set of batteries runs out enables the use of the other set of batteries. This backup feature allows for working without interruption in mountainous and other remote environments where batteries are difficult to get a hold of or when you do not have time to recharge the batteries.

## **Major Applications**

**Insulation resistance testing of high-voltage equipment (transformers, cables, motors, etc) [www.hioki-indonesia.com](http://www.hioki-indonesia.com)**