



INSULATION RESISTANCE TESTER UT501A

The **UT501A Insulation Resistance Tester** is a handheld device designed for measuring insulation resistance in electrical systems, cables, motors, and other equipment. It is commonly used by electricians, technicians, and engineers to ensure the safety and reliability of electrical installations by detecting insulation faults or degradation.

Key Features of the UT501A:

1. **Insulation Resistance Measurement:**
 - Measures insulation resistance up to **2000 MΩ** (megaohms) or higher, depending on the model.
 - Test voltages typically range from **50V to 1000V**, allowing for testing on low-voltage and high-voltage systems.
2. **Wide Measurement Range:**
 - Capable of measuring resistance from **0.01 MΩ to 2000 MΩ** (or higher).
3. **Auto-Discharge Function:**
 - Automatically discharges residual voltage after testing to ensure user safety.
4. **Backlit LCD Display:**
 - Features a clear, easy-to-read display with backlight for use in low-light conditions.
5. **Data Hold Function:**
 - Allows users to freeze the measurement reading on the screen for easy recording.
6. **Low Battery Indicator:**
 - Alerts the user when the battery is low, ensuring accurate measurements.
7. **Portable and Durable:**



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- Compact and lightweight design for easy portability.
 - Built to withstand harsh working environments.
 - 8. **Compliance with Safety Standards:**
 - Meets international safety standards such as **IEC 61010** for electrical testing equipment.
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Typical Applications:

- Testing insulation resistance in **cables, transformers, and motors.**
 - Verifying the integrity of insulation in **household appliances, industrial equipment, and electrical panels.**
 - Preventive maintenance and troubleshooting of electrical systems.
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How to Use the UT501A:

1. **Prepare the Equipment:**
 - Ensure the device is calibrated and the battery is charged.
 - Turn off the power to the circuit or equipment being tested.
2. **Connect the Test Leads:**
 - Attach the test leads to the UT501A and the equipment under test.
 - Ensure proper contact with the test points.
3. **Select the Test Voltage:**
 - Choose the appropriate test voltage (e.g., 250V, 500V, or 1000V) based on the equipment's rated voltage.
4. **Perform the Test:**
 - Press the test button to apply the voltage and measure the insulation resistance.
 - Wait for the reading to stabilize and record the result.

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5. Interpret the Results:

- Compare the measured insulation resistance with the recommended values for the equipment.
- Low resistance values may indicate insulation degradation or faults.

6. Discharge and Disconnect:

- Allow the device to discharge any residual voltage before disconnecting the test leads.



Safety Precautions:

- Always de-energize the circuit before testing.
- Use proper personal protective equipment (PPE) such as insulated gloves and safety glasses.
- Avoid touching the test leads or equipment during the test to prevent electric shock.