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› SNAKOL SK-505A 2-in-1 Insulation Resistance Meter & Digital Multimeter User Manual

SNAKOL SK-505A

SNAKOL SK-505A 2-in-1 Insulation Resistance Meter & Digital Multimeter User Manual

Model: SK-505A | Brand: SNAKOL

1. INTRODUCTION

The SNAKOL SK-505A is a versatile 2-in-1 electrical measurement tool, combining the functionalities of an insulation resistance tester and a digital multimeter. Designed for electricians and technicians, this device offers comprehensive measurement capabilities including insulation resistance up to 20GΩ at 1000V, AC/DC voltage, frequency, resistance, capacitance, and diode testing. It features auto-ranging for ease of use, a large backlit display for visibility in various conditions, and True RMS for accurate readings.



Figure 1: The SNAKOL SK-505A device shown with its included accessories, including test leads, alligator clips, carrying bag, and battery charger.

2. SETUP

2.1 Battery Installation and Charging

The SK-505A is powered by two 3.7V rechargeable lithium batteries (included). To install or charge the batteries:

1. Locate the battery compartment on the back of the device.
2. Unscrew the battery compartment cover.
3. Insert the two 3.7V lithium batteries, ensuring correct polarity.
4. Close the cover and secure it with the screw.
5. To charge, remove the batteries and place them in the provided external battery charger. Connect the charger to a suitable power source.

【100mF Large Capacitance Measurement】



Figure 2: The SNAKOL SK-505A highlighting its rechargeable battery feature and protective casing.

2.2 Connecting Test Leads

Always ensure the device is OFF before connecting or disconnecting test leads.

1. Insert the red test lead into the 'VΩ' input jack.
2. Insert the black test lead into the 'COM' (Common) input jack.
3. For insulation resistance testing, connect the 'LINE' and 'EARTH GUARD' terminals as required by the specific test procedure.

3. OPERATING INSTRUCTIONS

3.1 General Operation

The SK-505A features a rotary dial for function selection and several buttons for specific operations.

- **Rotary Dial:** Turn the dial to select the desired measurement function (e.g., V for voltage, Ω for resistance, Insulation Test V Sel for insulation voltage).
- **SELECT Button:** Used to switch between different measurement modes within a single dial

position (e.g., AC/DC voltage, different resistance ranges).

- **HOLD Button:** Short press to lock the current reading on the display. Press again to resume normal measurement. Long press (2 seconds) to toggle the backlight on/off.
- **PI/DAR Button:** Used for Polarization Index (PI) and Dielectric Absorption Ratio (DAR) tests during insulation resistance measurements.
- **TIME Button:** Used to set measurement duration for insulation resistance tests.



Figure 3: The large backlit screen of the SK-505A, showing data retention capabilities for easy reading.

3.2 Insulation Resistance Measurement

To perform an insulation resistance test:

1. Turn the rotary dial to the 'Insulation Test V Sel' section.
2. Select the desired test voltage (50V, 100V, 250V, 500V, or 1000V) using the dial.
3. Connect the test leads to the circuit or component under test. Ensure proper connection to 'LINE' and 'EARTH GUARD' terminals.
4. Press the 'TEST' button to initiate the test. The display will show the insulation resistance value.
5. For PI/DAR tests, use the 'PI/DAR' button. For timed tests, use the 'TIME' button to set the duration before pressing 'TEST'.

【Easy Measurement of Insulation Resistance】



Figure 4: The SK-505A set up for an insulation resistance test, demonstrating its capability to measure up to 20GΩ at 1000V.

3.3 Digital Multimeter Functions

The SK-505A offers various standard multimeter functions:

- **Voltage (V):** Turn the dial to 'V' for AC or DC voltage measurement. Use the 'SELECT' button to switch between AC (~) and DC (=) modes. Max voltage: 1500V.
- **Resistance (Ω):** Turn the dial to 'Ω' for resistance measurement. The device is auto-ranging.
- **Capacitance (mF):** Turn the dial to 'mF' for capacitance measurement. Max capacitance: 100mF.
- **Frequency (Hz):** Turn the dial to 'Hz' for frequency measurement.
- **Diode Test:** Turn the dial to the diode symbol.
- **Continuity Test:** Turn the dial to the continuity symbol (speaker icon). An audible beep indicates continuity.

【AC and DC voltage 1500V】

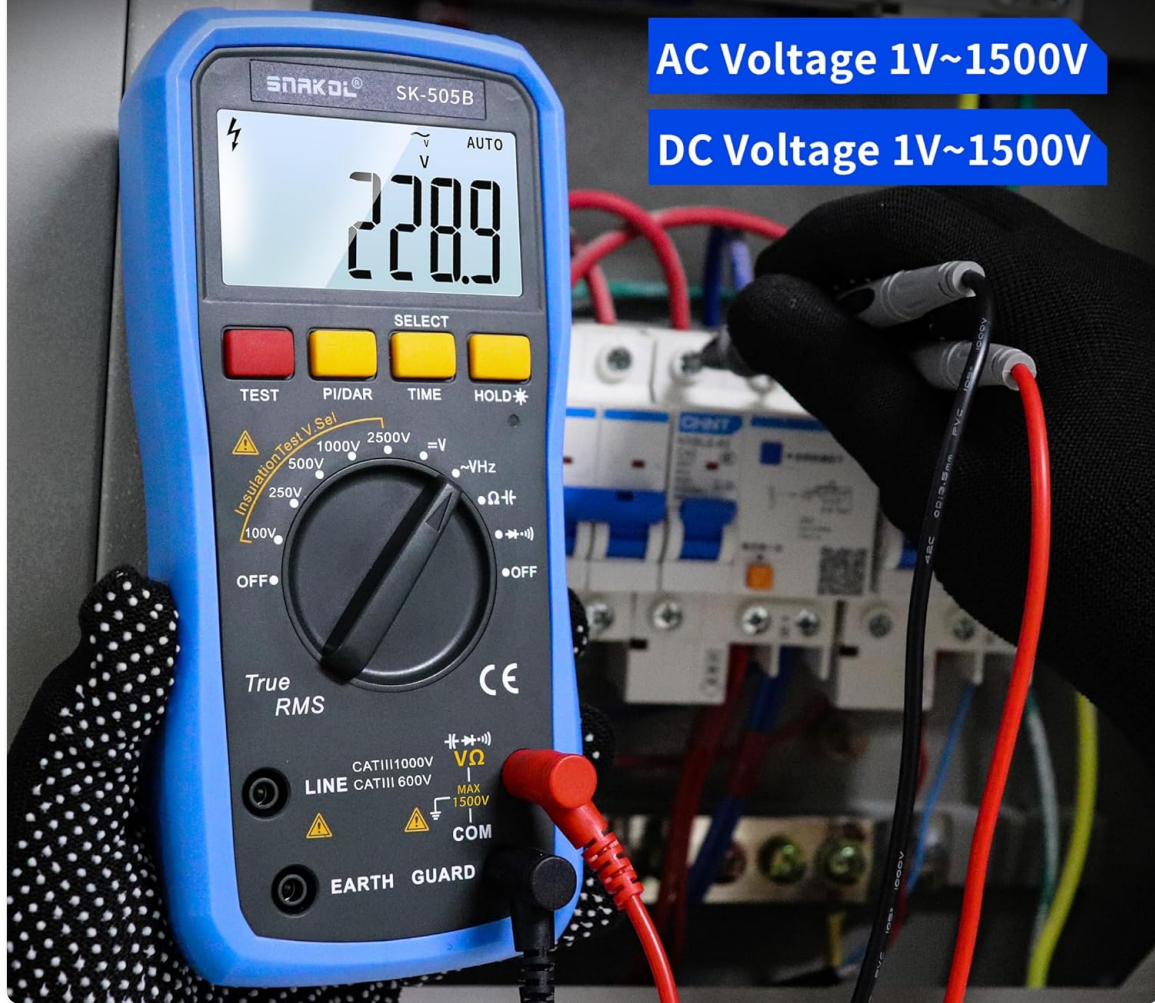


Figure 5: The SK-505A measuring voltage, capable of handling both AC and DC up to 1500V.

【100mF Large Capacitance Measurement】



Figure 6: The SK-505A measuring capacitance, demonstrating its ability to measure up to 100mF.

4. MAINTENANCE

4.1 Battery Care

To ensure optimal performance and longevity of your rechargeable batteries:

- Charge batteries fully before first use.
- Remove batteries from the device for charging using the provided external charger.
- If the device will not be used for an extended period, remove the batteries to prevent leakage.

4.2 Cleaning and Storage

- Clean the device with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Store the device and its accessories in the provided carrying bag in a cool, dry place, away from direct sunlight and extreme temperatures.

5. TROUBLESHOOTING

- **Erratic Readings:** Ensure test leads are securely connected and not damaged. Verify the correct function and range are selected. Electromagnetic interference from nearby electronic devices (e.g., mobile phones) can sometimes affect sensitive readings.
- **No Display/Power:** Check battery charge level and ensure batteries are correctly installed.
- **Inaccurate Readings:** Calibrate the device periodically if precise measurements are critical. Ensure the test environment is stable and free from excessive humidity or temperature fluctuations.
- **Accessory Quality:** While the device is robust, some accessories like alligator clips may be less durable. Handle with care and replace if damaged to ensure safety and accuracy.

6. SPECIFICATIONS

- **Model:** SK-505A
- **Product Dimensions:** 7.5 x 3.5 x 2.2 inches
- **Weight:** 1.92 Pounds
- **Power Source:** 2 x 3.7V Rechargeable Lithium Batteries (included)
- **Insulation Resistance:** Up to 20G Ω (Test Voltages: 50V, 100V, 250V, 500V, 1000V)
- **Voltage Measurement:** AC/DC up to 1500V
- **Resistance Measurement:** Auto-ranging
- **Capacitance Measurement:** Up to 100mF
- **Other Functions:** Frequency (Hz), Diode Test, Continuity Test, True RMS, Backlight, Data Hold, Auto-ranging
- **Safety Standard:** CAT III 600V

7. WARRANTY AND SUPPORT

The SNAKOL SK-505A comes with a one-year warranty. For any issues or support needs, please utilize the Amazon after-sales service. If you are not satisfied with the product, a refund option is available.