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EVTSCAN IT811

EVTSCAN IT811 Digital Insulation Resistance Multimeter User Manual

Model: IT811

1. Introduction

The EVTSCAN IT811 is a digital insulation resistance multimeter designed for measuring insulation resistance, AC voltage, and other electrical parameters. It features a large LCD display, data hold function, and automatic power-off for energy saving. This manual provides essential information for the safe and effective operation of the device.

2. Safety Information

WARNING: To avoid electric shock or personal injury, please read and understand all safety information before using this product.

- Always ensure the device is in good working condition before use.
- Do not use the meter if it appears damaged or if the test leads are damaged.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and earth ground.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. Such voltages pose a shock hazard.
- Always disconnect the test leads from the circuit under test before changing functions or ranges.
- Replace batteries immediately when the low battery indicator appears.
- Do not operate the meter in explosive gas, vapor, or dust environments.
- Ensure proper polarity when installing batteries.

3. Product Overview

The IT811 features a clear LCD display, functional buttons, and a rotary switch for selecting measurement ranges. Input terminals are located at the bottom of the device.



Figure 3.1: Front view of the IT811 Multimeter, showing the LCD screen, function buttons (RANGE, TEST/STOP, HOLD), rotary switch for voltage selection, and input terminals.

3.1. Components

- **LCD Display:** Shows measurement readings, units, and indicators.
- **RANGE Button:** Used to select measurement ranges (if applicable for the selected function).
- **TEST/STOP Button:** Initiates and stops the insulation resistance test.
- **HOLD Button:** Freezes the current display reading.
- **Rotary Switch:** Selects the desired test voltage (100V, 250V, 500V, 1000V) or AC voltage (750V) function.
- **Input Terminals (L, E, V~, G+):** Connect test leads for measurements.

4. Setup

4.1. Battery Installation

The IT811 requires six 1.5V dry cell batteries (not included) for operation.

1. Ensure the device is powered off.
2. Locate the battery compartment cover on the back of the meter.
3. Use a screwdriver to open the battery compartment.
4. Insert six 1.5V batteries, observing the correct polarity markings inside the compartment.
5. Replace the battery compartment cover and secure it with the screw.



Figure 4.1: Back view of the IT811, showing the battery compartment location and integrated kickstand.

4.2. Connecting Test Leads

Connect the test leads to the appropriate input terminals based on the measurement function you intend to use.

- For insulation resistance testing, connect the red lead to the 'L' terminal and the black lead to the 'E' terminal.
- For AC voltage measurement, connect the red lead to the 'V~' terminal and the black lead to the 'G+' terminal.

5. Operating Instructions

5.1. Powering On/Off

To power on the device, rotate the central switch from the 'OFF' position to any desired measurement function (e.g., 100V, 250V, 500V, 1000V, or 750V~). To power off, rotate the switch back to the 'OFF' position.

5.2. Insulation Resistance Measurement

1. Connect the test leads to the 'L' and 'E' terminals.
2. Rotate the central switch to the desired test voltage (100V, 250V, 500V, or 1000V).
3. Connect the test leads to the circuit or component under test. Ensure the circuit is de-energized before connecting.
4. Press and hold the **TEST/STOP** button to initiate the test. The display will show the insulation resistance value.
5. Release the **TEST/STOP** button to stop the test.
6. Disconnect the test leads from the circuit.

5.3. AC Voltage Measurement

1. Connect the test leads to the 'V~' and 'G+' terminals.
2. Rotate the central switch to the '750V~' position.
3. Connect the test leads to the AC voltage source.
4. The display will show the AC voltage reading.
5. Disconnect the test leads from the voltage source.

5.4. Data Hold Function

During any measurement, press the **HOLD** button to freeze the current reading on the display. Press the **HOLD** button again to release the reading and resume live measurement.

5.5. Auto Power Off

The device features an automatic power-off function that activates approximately 15 minutes after the last operation to conserve battery life. To reactivate the device, rotate the central switch to 'OFF' and then back to the desired function.



Figure 5.1: The IT811 in use, demonstrating its ergonomic design and kickstand for convenient viewing.

6. Maintenance

6.1. Cleaning

Wipe the meter with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

6.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 4.1. Remove batteries if the meter is not used for an extended period to prevent leakage.

6.3. Storage

Store the meter in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for a long time, remove the batteries.

7. Troubleshooting

- **No display or faint display:** Check battery installation and charge level. Replace batteries if necessary.
- **Display shows '1' (Over-range):** The measured value exceeds the maximum range of the selected function. Select a higher range if available, or note that the resistance is beyond the meter's capability.
- **Inaccurate readings:** Ensure test leads are properly connected and not damaged. Verify the correct function and range are selected. Check battery level.

8. Specifications

Parameter	Specification
Display	LCD 64 x 44 mm, Max 1999
Over-range Indication	Only '1' displayed for highest digit
Power Supply	6 x 1.5V Dry Cell Batteries (AA size recommended)
Low Voltage Indicator	Yes
Auto Power Off	Approx. 15 minutes after power on
Power Consumption (No Load)	< 300 mW
Operating Environment	Temperature: 0-40°C, Relative Humidity: 30%-85% RH
Output Voltage Accuracy	100V/250V/500V/1000V ±10%
Test Current (R = 100kΩ)	100V: 1mA ±10%
Test Current (R = 250kΩ)	250V: 1mA ±10%
Test Current (R = 500kΩ)	500V: 1mA ±10%
Test Current (R = 1MΩ)	1000V: 1mA ±10%
Insulation Resistance Range (100V)	0.1 MΩ - 20 MΩ ±(4% of reading + 2 digits)
Insulation Resistance Range (250V)	0.1 MΩ - 500 MΩ

Parameter	Specification
Insulation Resistance Range (500V)	0.1 MΩ - 1000 MΩ
Insulation Resistance Range (1000V)	0.1 MΩ - 2000 MΩ
Short Circuit Current	100V/250V/500V/1000V: Approx. 1.2mA
AC Voltage Range	750V
AC Voltage Input Impedance	1 MΩ
AC Voltage Frequency Response	(50-200) Hz
Weight	770 g
Manufacturer Model Number	EVTSCANxvs5736bam
Country of Origin	China

9. Package Contents

The following items are included in the product package:

- 1 x EVTSCAN IT811 Digital Insulation Resistance Multimeter (Batteries not included)
- 2 x Test Cables
- 2 x Alligator Clips
- 1 x Carrying Bag
- 1 x User Manual

10. Warranty and Support

Specific warranty details are not provided in the product information. For warranty claims, technical support, or service inquiries, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

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