METRAVI DIT-914

Metravi DIT-914 5000V Digital Insulation Tester User Manual

Model: DIT-914

1. INTRODUCTION

This manual provides essential instructions for the safe and effective operation of the Metravi DIT-914 Digital Insulation Tester. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent potential hazards.

The Metravi DIT-914 is a versatile digital insulation tester designed for measuring insulation resistance, AC voltage, low resistance, and continuity. It operates on both battery and mains power, offering flexibility for various testing environments.

2. SAFETY INFORMATION

Always adhere to the following safety precautions to prevent electric shock, injury, or damage to the instrument:

- Do not use the tester if it appears damaged or if the test leads are compromised.
- Ensure proper connection of test leads before initiating any measurement.
- Avoid touching exposed conductors or circuit components during testing, especially when high voltage is present.
- Always discharge the circuit under test after insulation resistance measurements, as residual charge can be hazardous.
- Do not operate the tester in wet conditions or in the presence of explosive gases or vapors.
- Refer to local and national safety codes for specific electrical testing procedures.
- Replace batteries promptly when the low battery indicator appears to ensure accurate readings.

3. PRODUCT OVERVIEW

The Metravi DIT-914 is a robust digital insulation tester featuring multiple test voltage ranges and measurement capabilities. Key features include:

- Four selectable test voltages: 500V, 1000V, 2500V, 5000V.
- Automatic extension of high voltage output for 30 seconds.
- Autorange insulation resistance testing.
- AC voltage, low resistance, and continuity measurement functions.
- Warning beeper for high voltage output.
- Backlit LCD display for visibility in low-light conditions.
- Battery and mains operated.

Figure 3.1: Front panel of the Metravi DIT-914 Digital Insulation Tester. It features a digital LCD display, a 'Press to Test' button, and

4. SETUP

4.1 Battery Installation

The Metravi DIT-914 requires 6 AA batteries for operation. To install or replace batteries:

1. Locate the battery compartment cover on the rear of the unit.
2. Open the cover and insert 6 AA batteries, observing the correct polarity markings.
3. Securely close the battery compartment cover.

The device can also be operated via mains power using an appropriate adapter (not specified if included, assume external power input). Ensure the power source matches the device's requirements.

4.2 Initial Checks

- Inspect the tester and test leads for any signs of damage.
- Ensure the test leads are securely connected to the appropriate terminals on the tester.
- Turn the rotary switch to an OFF position or a non-testing mode before connecting to a circuit.

5. OPERATING INSTRUCTIONS

The Metravi DIT-914 offers various measurement modes accessible via the rotary switch and the "Press to Test" button.

5.1 Insulation Resistance Measurement

1. Ensure the circuit to be tested is de-energized and safely isolated.
2. Connect the test leads to the circuit.
3. Turn the rotary switch to the desired insulation test voltage:**500V, 1000V, 2500V, or 5000V**. The display will show "AUTO" and "GO" indicating readiness.
4. Press and hold the **"PRESS TO TEST"** button. The high voltage output will activate, and a warning beeper will sound. The insulation resistance value will be displayed.
5. For continuous testing, press and hold the **"PRESS AND HOLD FOR CONTINUOUS"** button. The test will continue until the button is released.
6. The high voltage output testing automatically extends for 30 seconds if the button is held.
7. After releasing the test button, allow the circuit to discharge before disconnecting the test leads. The tester may show a decaying voltage reading during discharge.

The insulation resistance ranges are: 2000MΩ @ 500V, 2000MΩ @ 1000V, 20GΩ @ 2500V, and 200GΩ @ 5000V.

5.2 AC Voltage Measurement

1. Turn the rotary switch to the **750V~** position (AC Voltage measurement).
2. Connect the test leads to the AC voltage source.
3. The AC voltage reading will be displayed on the LCD. The measurement range is 0 – 750V AC.

5.3 Low Resistance Measurement

1. Turn the rotary switch to the **200Ω** position (Low Resistance measurement).
2. Connect the test leads across the component or circuit section to be measured.

3. The low resistance value will be displayed. The measurement range is 0 – 200 Ohms.

5.4 Continuity Measurement

The continuity function is typically integrated with the low resistance measurement or indicated by a specific symbol (e.g., a speaker icon) on the display when the rotary switch is in the low resistance position. If continuity is detected (resistance below a certain threshold), an audible tone may sound.

1. Turn the rotary switch to the **200Ω** position.
2. Connect the test leads to the circuit or component.
3. Observe the display for resistance reading and listen for an audible tone if the circuit is continuous.

5.5 Backlight Function

The tester is equipped with a white backlight for the LCD display. This feature allows for clear viewing of test results in dimly lit areas. Refer to the device's front panel for a dedicated backlight button (often indicated by a light bulb icon) or if it activates automatically with certain functions.

6. MAINTENANCE

6.1 Cleaning

Wipe the exterior of the tester with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any power source before cleaning.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace all 6 AA batteries as described in Section 4.1. Using depleted batteries can lead to inaccurate measurements.

6.3 Storage

Store the tester in a cool, dry place away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.

7. TROUBLESHOOTING

- **No Display/Power On:** Check battery installation and charge level. Ensure mains adapter is correctly connected if using external power.
- **Inaccurate Readings:** Verify test lead connections. Ensure batteries are not low. Check for external interference.
- **Low Battery Indicator:** Replace all 6 AA batteries immediately.
- **No High Voltage Output:** Ensure the "Press to Test" button is fully depressed. Check for low battery condition.

If problems persist, contact Metravi customer support or a qualified service technician.

8. SPECIFICATIONS

Parameter	Value
Brand	METRAVI

Parameter	Value
Model Number	DIT-914
Test Voltages	500V, 1000V, 2500V, 5000V
Insulation Resistance Range (500V)	0 - 2000 MΩ
Insulation Resistance Range (1000V)	0 - 2000 MΩ
Insulation Resistance Range (2500V)	0 - 20 GΩ
Insulation Resistance Range (5000V)	0 - 200 GΩ
Insulation Resistance Accuracy	±5.0%
AC Voltage Measurement Range	0 - 750V AC
AC Voltage Measurement Accuracy	±1.0%
Low Resistance Measurement Range	0 - 200 Ohms
Low Resistance Measurement Accuracy	±0.8%
Display	LCD: 75x35mm, Max reading: 1999
Power Source	6 AA Batteries (included), Mains Operated
Item Weight	450 Grams
Product Dimensions (L x W x H)	9.5 x 14.8 x 8.5 Centimeters
Included Components	Insulation Tester
Certification	CE

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Metravi Instruments directly. Details regarding warranty periods and service procedures are typically available from the manufacturer or authorized distributors.

Contact information for Metravi Instruments can usually be found on their official website or on the product packaging.

Related Documents - DIT-914

[Metravi DT-725 Digital T-RMS AC/DC Clamp Meter - Technical Specifications](#)
Detailed technical specifications and features of the Metravi DT-725 Digital T-RMS AC/DC Clamp Meter, including measurement ranges, accuracy, and general specifications for electrical testing.

[Metravi Pro Uniks C128 1000A TRMS AC/DC Clamp Meter - Technical Specifications](#)
Detailed specifications and features of the Metravi Pro Uniks C128 1000A TRMS AC/DC Clamp Meter, designed for industrial and civil use with advanced measurement capabilities including TRMS, NCV, and VFD filtering.

[Metravi PRO CFL-01A Cable Fault Locator - Technical Specifications and Features](#)
Detailed information on the Metravi PRO CFL-01A Cable Fault Locator, including its technical specifications, features, and applications for tracking and identifying cable faults.

[Metravi ERT-1501 Digital Earth Resistance Tester Specifications](#)
Comprehensive details on the Metravi ERT-1501 Digital Earth Resistance Tester, covering its features, applications, general specifications, and technical performance metrics for electrical safety testing.

[Metravi Pro Solar-2A Digital T-RMS AC/DC Clamp Meter - Specifications and Features](#)
Detailed specifications, features, and product introduction for the Metravi Pro Solar-2A Digital T-RMS AC/DC Clamp Meter, a versatile tool for solar, PV, EV, and power applications.

[UNIKS by METRAVI RAPID PRO Multifunction Installation Tester - Technical Specifications and Features](#)
Explore the UNIKS by METRAVI RAPID PRO, a compact multifunction installation tester for electrical verification. Features include Loop impedance, RCD testing, Voltage/Frequency measurement, Harmonics analysis, and internal memory with smartphone reporting. Complies with IEC/EN standards.