

WOOXGEHM T6125

WOOXGEHM T6125 Digital Insulation Resistance Tester User Manual

Model: T6125

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective operation of the WOOXGEHM T6125 Digital Insulation Resistance Tester. The T6125 is a robust, shockproof, and dustproof instrument designed for measuring insulation resistance, absorption ratio (DAR), polarization index (PI), AC voltage, and low resistance. It features a wide measurement range, multiple output voltage levels, a large LCD with backlight, and strong anti-interference capabilities, making it suitable for various electrical equipment testing applications.



Figure 1: WOOXGEHM T6125 Digital Insulation Resistance Tester.

2. SAFETY INFORMATION

To ensure safe operation and prevent damage to the instrument or injury to personnel, please read and understand all safety instructions before use.

- Always observe local and national safety codes.
- Do not operate the tester if it appears damaged or is not functioning properly.
- Ensure the circuit under test is de-energized and discharged before connecting test leads for resistance measurements.
- Use only the provided test leads and accessories.
- Avoid touching the test leads or the circuit under test during measurement, especially when high voltages are present.
- Do not use the instrument in wet environments or explosive atmospheres.
- Replace batteries promptly when the low battery indicator appears.

3. PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- 1 x WOOXGEHM T6125 Digital Insulation Resistance Tester
- 1 x Pair of Test Leads
- 1 x External Power Plug (5.5mm)
- 2 x Alligator Clips
- 1 x Cloth Bag
- 1 x User Manual (English)

4. PRODUCT OVERVIEW

The T6125 insulation tester is designed for comprehensive electrical insulation testing. Key features include:

- **Insulation Resistance Measurement:** Measures insulation opposition, absorption ratio, and polarization index.
- **AC Voltage Measurement:** Capable of measuring AC voltage.
- **Low Resistance Measurement:** For continuity checks.
- **Multiple Test Voltages:** Offers 100V, 250V, 500V, 1000V, and 2500V test voltage options.
- **Automatic Discharge Function:** Ensures safety after high voltage tests.
- **Data Hold:** Freezes the displayed measurement for easy recording.
- **Over-range Alarm:** Alerts the user when measurements exceed the selected range.
- **Automatic Shutdown:** Powers off after 30 minutes of inactivity to conserve battery life.
- **Large Backlit LCD:** Provides clear readings in various lighting conditions.
- **Durable Design:** Shockproof, dustproof, and dampness-proof construction.



Figure 2: Front panel layout and key components of the T6125.

- **High Voltage Output Black Negative Jack:** Connects the negative test lead for high voltage tests.
- **High Voltage Output Red Positive Jack:** Connects the positive test lead for high voltage tests.
- **Resistor Red Positive Jack:** Connects the positive test lead for resistance measurements.
- **Resistive Black Negative Jack:** Connects the negative test lead for resistance measurements.
- **12V Power Input Jack:** For external power supply.
- **LCD Display:** Shows measurement readings and status.
- **Test Button:** Initiates a measurement.
- **Data Hold Button:** Freezes the current display.
- **Backlight Button:** Activates/deactivates the LCD backlight.
- **DAR (Absorption Ratio) / PI (Polarization Index) Button:** Selects DAR or PI measurement mode.
- **Gear Rotary Switch:** Selects measurement function and test voltage.

30 minutes after automatic shutdown without operation



Figure 3: The T6125 features an automatic shutdown function after 30 minutes of inactivity to conserve battery life.

5. SETUP

5.1 Battery Installation

The T6125 requires 8 x 1.5V AA batteries (not included).

1. Locate the battery compartment on the back of the unit.
2. Open the battery compartment cover.
3. Insert 8 AA batteries, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

5.2 Connecting Test Leads

Connect the test leads to the appropriate jacks on the front panel based on the measurement type. For insulation resistance tests, use the High Voltage Output jacks. For low resistance, use the Resistor jacks.

6. OPERATING INSTRUCTIONS

6.1 Power On/Off

Rotate the Gear Rotary Switch from the "OFF" position to any measurement function to power on the device. Rotate back to "OFF" to power off. The device will automatically shut down after 30 minutes of inactivity.

6.2 Insulation Resistance Measurement

This function measures the insulation resistance of electrical equipment.

1. Ensure the circuit under test is de-energized and safely discharged.
2. Connect the test leads to the High Voltage Output jacks (red to positive, black to negative).
3. Connect the other ends of the test leads to the insulation points of the equipment to be tested.
4. Rotate the Gear Rotary Switch to the desired insulation test voltage (e.g., 100V, 250V, 500V, 1000V, 2500V).
5. Press and hold the **TEST** button. The measurement will begin, and the resistance value will be displayed on the LCD.
6. Release the **TEST** button to stop the measurement. The instrument will automatically discharge the circuit.
7. To hold the reading, press the **HOLD** button during or after a measurement. Press again to release.



Figure 4: The T6125 offers a wide insulation test measurement range up to 2500V and 200.0GΩ.

6.3 Absorption Ratio (DAR) and Polarization Index (PI) Measurement

DAR and PI are used to assess the quality of insulation over time.

1. Follow steps 1-3 for Insulation Resistance Measurement.
2. Rotate the Gear Rotary Switch to the desired insulation test voltage.
3. Press the **DAR/PI** button to select the desired mode. The display will indicate "DAR" or "PI".
4. Press and hold the **TEST** button. The instrument will automatically perform the timed measurements and display the DAR or PI value.
5. Release the **TEST** button.

6.4 AC Voltage Measurement

To measure AC voltage:

1. Rotate the Gear Rotary Switch to the "ACV" position.
2. Connect the test leads to the circuit where AC voltage needs to be measured.
3. The AC voltage will be displayed on the LCD.

6.5 Low Resistance Measurement

For continuity or low resistance checks:

1. Rotate the Gear Rotary Switch to the "Ω" (low resistance) position.
2. Connect the test leads to the Resistor jacks.
3. Connect the other ends of the test leads to the component or circuit to be measured.
4. The resistance value will be displayed on the LCD.

7. MAINTENANCE

7.1 Cleaning

Wipe the instrument with a damp cloth and mild detergent. Do not use abrasive cleaners or solvents. Ensure the instrument is completely dry before storage or next use.

7.2 Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the instrument in the provided cloth bag in a cool, dry place, away from direct sunlight and extreme temperatures.

- Storage Temperature: -20°C to 60°C
- Working Conditions: 0°C to 40°C
- Relative Humidity: 40% to 75%

8. TROUBLESHOOTING

If you encounter issues with your WOOXGEHM T6125, refer to the following common problems and solutions:

- **No Power:**
 - Check if batteries are installed correctly and have sufficient charge. Replace if necessary.
 - Ensure the Gear Rotary Switch is not in the "OFF" position.

- **Inaccurate Readings:**

- Verify test leads are securely connected and not damaged.
- Ensure the correct measurement function and test voltage are selected.
- Clean the test points on the equipment being measured.
- Check for external interference sources.

- **"OL" or Over-range Display:**

- The measured value exceeds the selected range. Try a higher test voltage or a different range if applicable.
- Ensure proper connection to the circuit.

If the problem persists, contact customer support.

9. SPECIFICATIONS

General Specifications

Model	T6125
Material	ABS
Power Supply	8 x 1.5V AA batteries (Not included)
Item Size	179 x 133 x 70 mm (7.04 x 5.23 x 2.75 in)
Item Weight	570 g (1.25 lb)
Storage Temperature	-20°C to 60°C
Working Conditions	0°C to 40°C
Altitude	2000m
Relative Humidity	40% to 75%

Insulation Test Accuracy (T-6125)

Output Voltage	Ranging	Resolution	Maximum Test Current	Accuracy
250V (±10%)	0~20MΩ	0.01MΩ	2mA	±(3%+5)
	20~200MΩ	0.1MΩ		±(3%+5)
	0.2G~2GΩ	0.001GΩ		±(10%+5)
500V (±10%)	0~20MΩ	0.01MΩ	2mA	±(3%+5)
	20~200MΩ	0.1MΩ		±(3%+5)
	0.2G~2GΩ	0.001GΩ		±(10%+5)
1000V (±10%)	0~20MΩ	0.01MΩ	2mA	±(3%+5)
	20~200MΩ	0.1MΩ		±(3%+5)
	0.2G~2GΩ	0.001GΩ		±(10%+5)

Output Voltage	Ranging	Resolution	Maximum Test Current	Accuracy
2500V (±10%)	0~20MΩ	0.01MΩ	2mA	±(3%+5)
	20~200MΩ	0.1MΩ		±(5%+5)
	0.2G~2GΩ	0.001GΩ		±(10%+5)
	2G~20GΩ	0.01GΩ		±(10%+5)
AC Voltage Accuracy	Ranging: 600V	Resolution: 1V	N/A	±(1.5%+5)
Resistance Accuracy	Ranging: 60Ω	Resolution: 0.01Ω	N/A	±(1.2%+5)

Insulation Test Accuracy (T-6125)				
Output Voltage	Ranging	Resolution	Maximum Test Current	Accuracy
250V (±10%)	0~20M Ω	0.01M Ω	2mA	±(3%+5)
	20~200M Ω	0.1M Ω		
500V (±10%)	0~20M Ω	0.01M Ω	2mA	±(3%+5)
	20~200M Ω	0.1M Ω		
	0.2G~2G Ω	0.001G Ω		
1000V (±10%)	0~20M Ω	0.01M Ω	2mA	±(3%+5) ±(5%+5) ±(10%+5)
	20~200M Ω	0.1M Ω		
	0.2G~2G Ω	0.001G Ω		
	2G~20G Ω	0.01G Ω		
2500V (±10%)	0~20M Ω	0.01M Ω	2mA	±(3%+5) ±(5%+5) ±(10%+5) ±(10%+5)
	20~200M Ω	0.1M Ω		
	0.2G~2G Ω	0.001G Ω		
	2G~20G Ω	0.01G Ω		
	20G~200G Ω	0.1G Ω		
AC Voltage Accuracy	Ranging	Resolution		Accuracy
	600V	1V		±(1.5%+5)
Resistance Accuracy	Ranging	Resolution		Accuracy
	60 Ω	0.01 Ω		±(1.2%+5)

Figure 5: Detailed insulation test accuracy specifications for the T6125 model.



Figure 6: Physical dimensions of the WOOXGEHM T6125.

10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official WOOXGEHM website. Keep your purchase receipt as proof of purchase.