LARIAU TS58

LARIAU TS58 Digital Insulation Resistance Tester

User Manual

1. Introduction

The LARIAU TS58 is a digital insulation resistance tester designed for measuring insulation resistance in various electrical equipment and insulating materials. This includes transformers, motors, cables, switches, and other electrical appliances. It is suitable for maintenance, repair, and testing applications.

This instrument features automatic voltage release, high stability, and reliability. It offers a maximum display count of 2000, 100 groups of data storage, and an insulation resistance measurement range of 0.1 MΩ to 10 GΩ. It also includes AC/DC voltage measurement capabilities and advanced DAR (Dielectric Absorption Ratio) and PI (Polarization Index) measurements for more accurate insulation assessment.

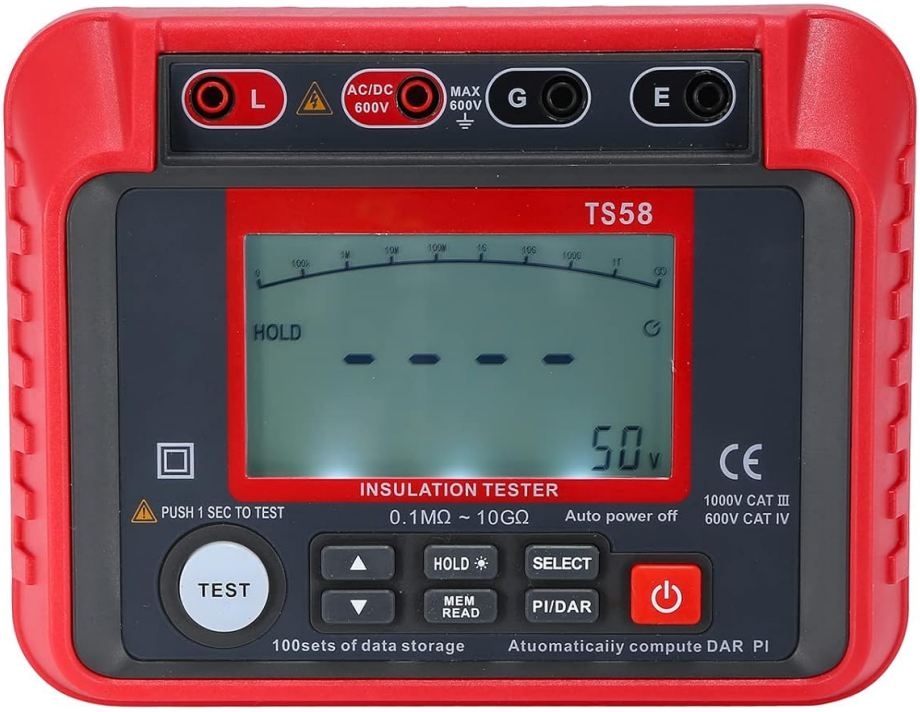


Figure 1: Front view of the LARIAU TS58 Digital Insulation Resistance Tester.

2. Safety Information

Please read this manual carefully before using the instrument. Adhere to all safety warnings and operating instructions to prevent electric shock, injury, or damage to the instrument.

- Always ensure the instrument is in good working condition before use.
- Observe the high voltage indication on the display, which reminds you of safe operation during measurements.
- Do not operate the instrument in wet environments or with wet hands.
- Replace batteries promptly when the low battery indication appears to ensure accurate readings and safe operation.
- Do not attempt to measure voltages or resistances beyond the specified ranges.
- Ensure proper connection of test leads before initiating any measurement.

3. Product Overview

The TS58 features a clear LCD backlit screen for easy reading, a robust dustproof and moisture-proof shell, a foldable bracket for convenient positioning, and comes with a zipper carry bag for portability.

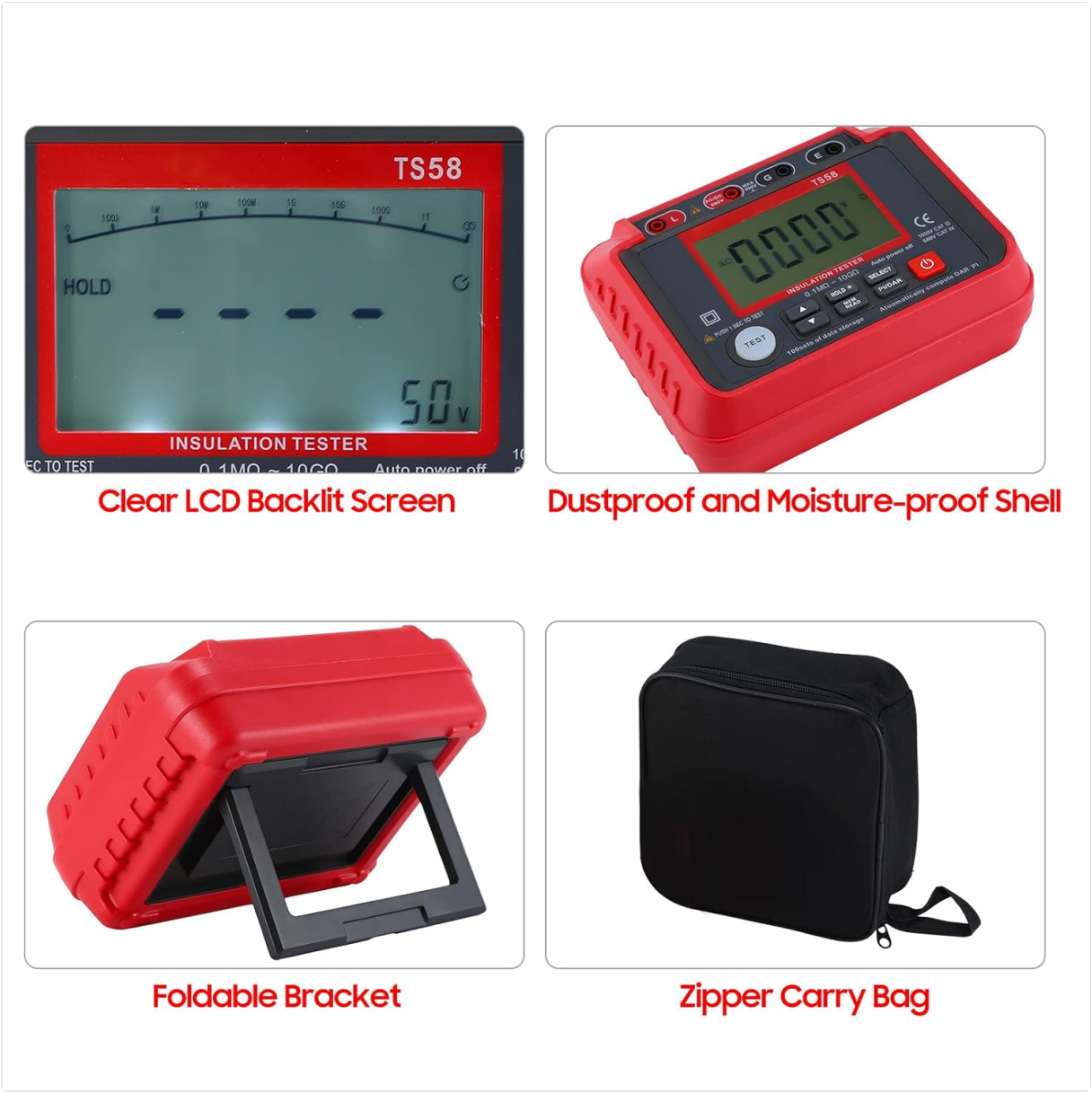


Figure 2: Key features of the TS58, including the LCD screen, protective casing, and accessories.

3.1 Controls and Display

The device includes a large digital LCD display, function buttons for selecting measurement modes, adjusting output voltage, and initiating tests. It also has input terminals for test leads.

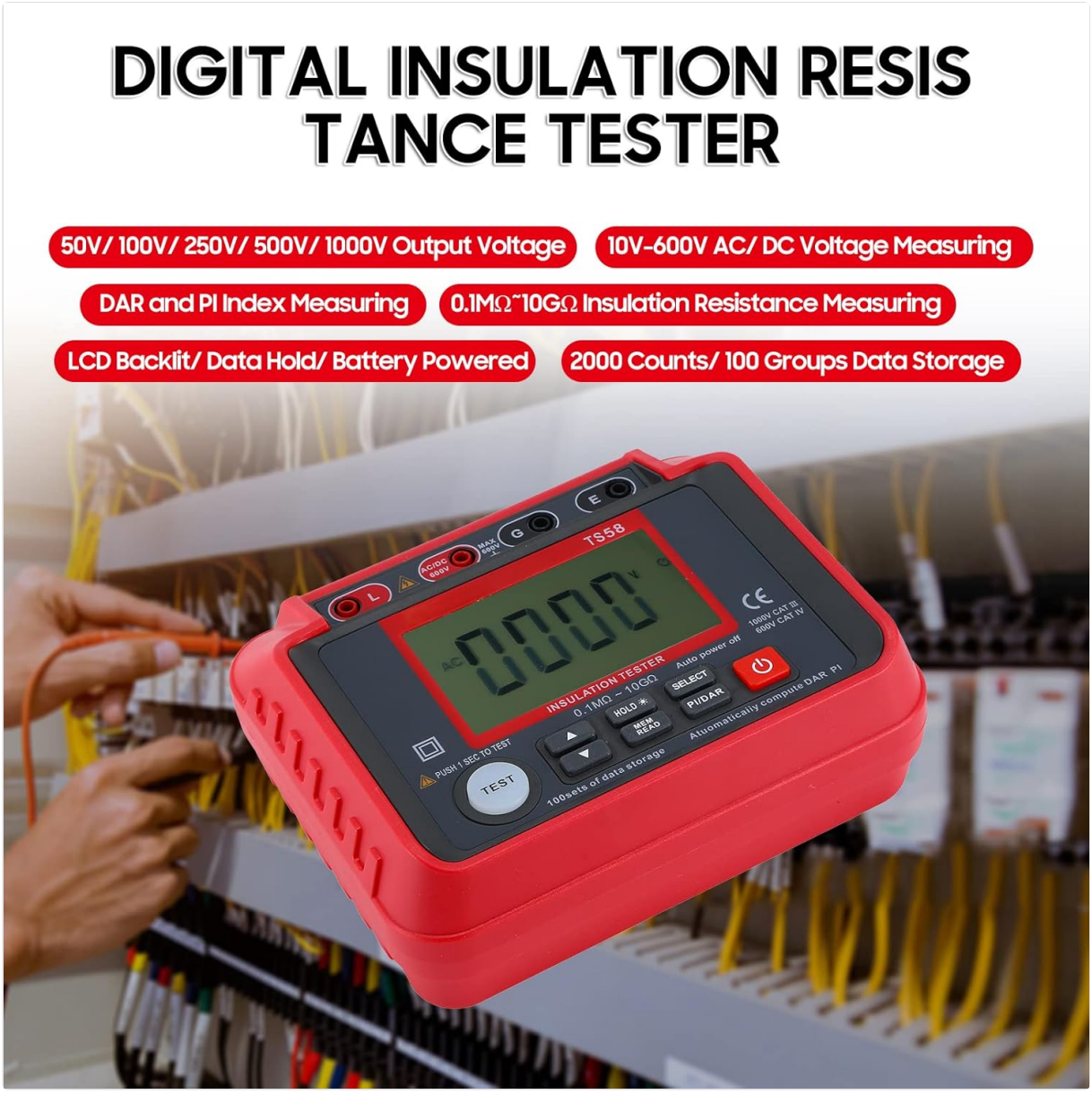


Figure 3: Overview of the TS58's main functions and display elements.

4. Setup

4.1 Battery Installation

The TS58 is powered by 8 x 1.5V AA/LR6 batteries (not supplied). To install or replace batteries:

1. Locate the battery compartment on the back of the instrument.
2. Open the battery compartment cover.
3. Insert 8 AA/LR6 batteries, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

A low battery indication will appear on the display when batteries need replacement.

5. Operating Instructions

The TS58 is designed for measuring insulation resistance and AC/DC voltage. Always ensure the test leads are securely connected to the instrument and the circuit under test.

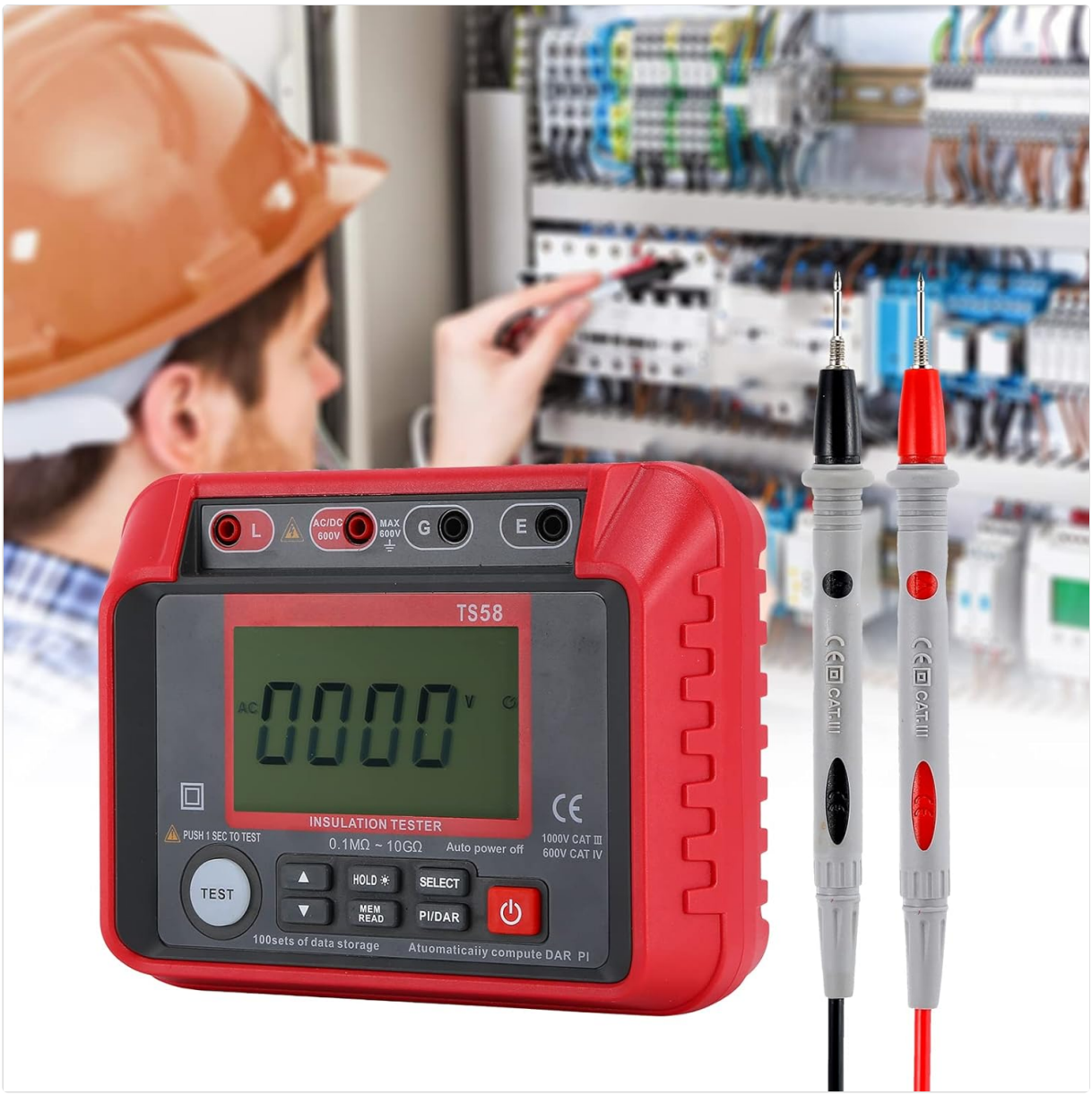


Figure 4: The TS58 tester with test leads, ready for use.

5.1 Insulation Resistance Measurement

1. Connect the test leads to the appropriate terminals on the TS58 and to the equipment under test.
2. Turn on the instrument.
3. Use the 'SELECT' button to choose the insulation resistance measurement mode.
4. Adjust the output voltage (50V/100V/250V/500V/1000V) using the up/down buttons as required for your test.
5. Press the 'TEST' button to initiate the measurement. The high voltage indicator will illuminate.
6. Read the insulation resistance value on the LCD screen.
7. After the test, the instrument automatically discharges the circuit.

5.2 AC/DC Voltage Measurement

1. Connect the test leads to the appropriate terminals on the TS58 and to the voltage source.
2. Turn on the instrument.
3. Use the 'SELECT' button to choose the AC or DC voltage measurement mode.
4. Read the voltage value on the LCD screen. The measurement range is 10V-600V.

5.3 DAR and PI Index Measurement

The DAR (Dielectric Absorption Ratio) and PI (Polarization Index) measurements help assess the quality and aging status of insulation, mitigating the effects of temperature, humidity, and interference currents.

1. Perform an insulation resistance test as described in section 5.1.
2. Press the 'PI/DAR' button. The instrument will automatically compute and display the DAR and PI values.
3. Refer to industry standards for interpreting DAR and PI values to evaluate insulation condition.

5.4 Data Storage and Recall

The TS58 can store up to 100 groups of measurement data.

- To save data: After a measurement, press the 'HOLD*' button to hold the current reading, then press 'MEM READ' to save it. (Note: The exact sequence might vary; refer to the full manual for precise steps if available).
- To recall data: Press the 'MEM READ' button and use the up/down arrows to navigate through stored data groups.

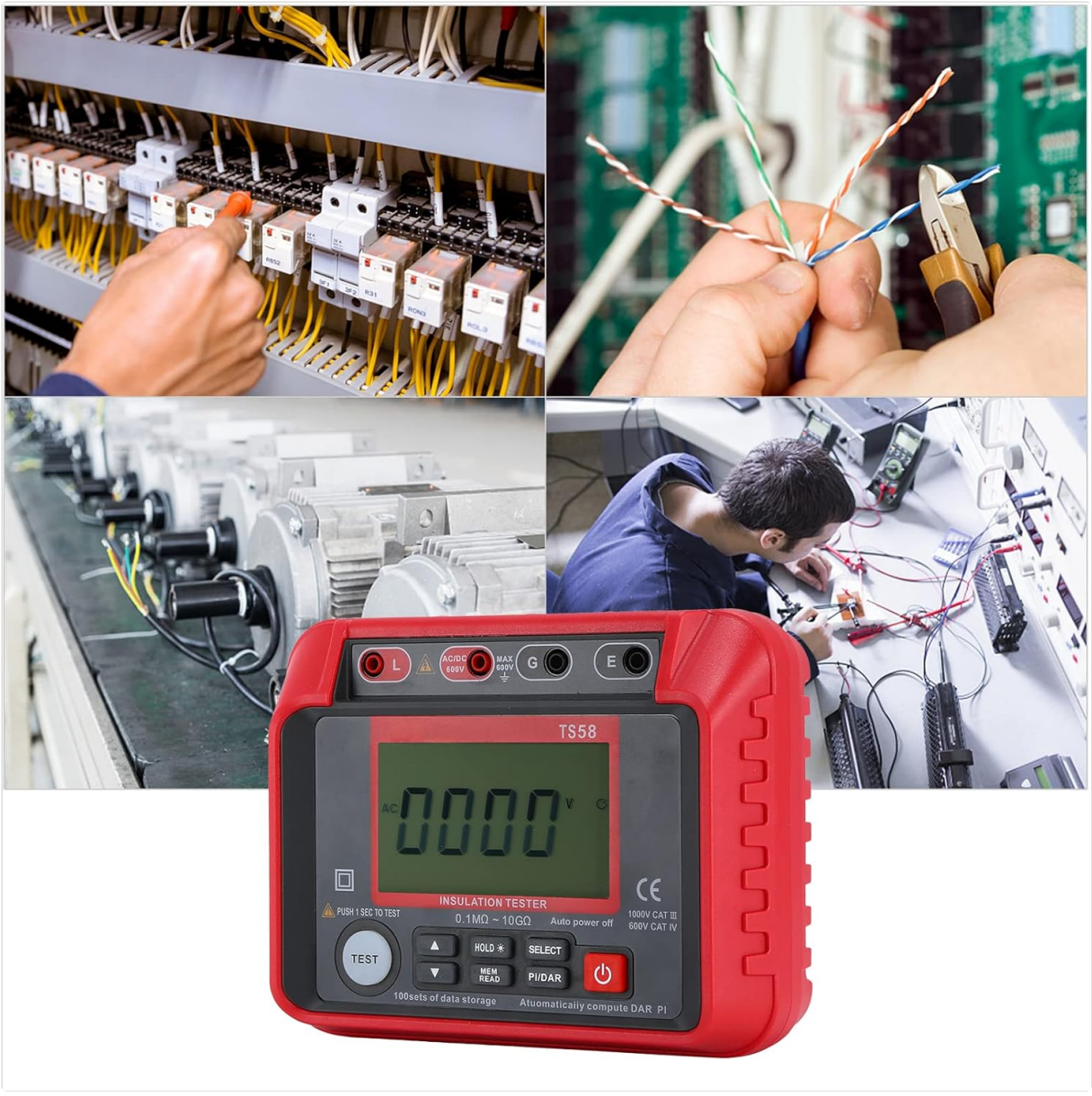


Figure 5: The TS58 in practical application scenarios.

6. Maintenance

6.1 Cleaning

Wipe the instrument's exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the device.

6.2 Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the instrument in its zipper carry bag in a dry environment, away from direct sunlight and extreme temperatures. The recommended storage environment is -10~50℃, <75%RH.

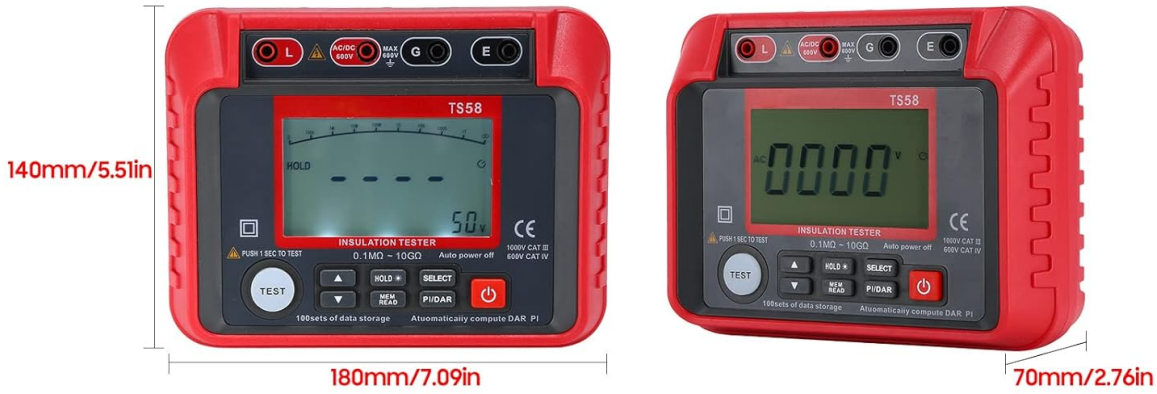
7. Troubleshooting

- **Instrument does not power on:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate readings:**
  - Ensure test leads are properly connected and not damaged.
  - Verify the correct measurement mode and output voltage are selected.
  - Consider environmental factors like temperature and humidity, especially for insulation resistance measurements.
- **High voltage warning persists after test:** The instrument has an automatic voltage release function. If the warning persists, ensure the circuit under test is fully discharged before handling.

8. Specifications

The following table details the technical specifications of the LARIAU TS58 Digital Insulation Resistance Tester.

PARAMETERS



Color: Red + Grey	Material: ABS + Silicone
Screen: LCD Backlit Screen	Maximum Count: 2000
Output Voltage: 50V/ 100V/ 250V/ 500V/ 1000V	Resistance Measuring Range: 0.1MΩ~10GΩ
AC/ DC Voltage Measuring Range: 10V-600V	AC Voltage Frequency: 40-70Hz
Data Storage: 100 Groups	Short-circuit Current: ＜1.8mA
Work Environment: 0~35℃, ＜75%RH, ＜2000m	Storage Environment: -10~50℃, ＜75%RH
Power Supply: 8 * 1.5V AA/ LR6 Battery (Not included	

Figure 6: Detailed technical parameters of the TS58.

LARIAU TS58 Technical Specifications

Parameter	Value
Color	Red + Grey
Material	ABS + Silicone
Screen	LCD Backlit Screen
Maximum Count	2000
Output Voltage	50V/100V/250V/500V/1000V
Resistance Measuring Range	0.1 MΩ ~ 10 GΩ
AC/DC Voltage Measuring Range	10 V-600 V
AC Voltage Frequency	40-70 Hz
Data Storage	100 groups

Parameter	Value
Short-circuit Current	<1.8 mA
Power Supply	8 * 1.5 V AA/LR6 (not supplied)
Work Environment	0 ~35℃, <75%RH, <2000m
Storage Environment	-10~50℃, <75%RH
Item Size	180 * 140 * 70mm / 7.09 * 5.51 * 2.76in
Item Weight (without battery)	623 g / 1.37 lb

9. Warranty and Support

Information regarding product warranty and customer support is typically provided with the product packaging or on the manufacturer's official website. Please refer to those resources for details on warranty coverage, technical assistance, and service inquiries.

For further assistance, please contact LARIAU customer support through their official channels.

Related Documents - TS58

	BIXOLON B-linerless™ Linerless Paper Spec Sheet Detailed specifications for BIXOLON's B-linerless™ linerless paper, including Restick and Permanent adhesive options, dimensions, roll counts, and compatibility with various BIXOLON printer models.