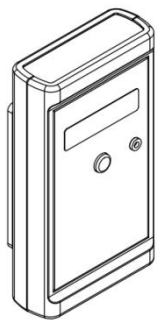
QUICK 499D Digital Surface Impedance Tester

Instruction Manual



Thank you for purchasing our products. Please keep the instruction manual properly for future reference.

Contents

1.Safety Instructions

 CAUTION

- During the installation and use of this product, all electrical safety regulations of the country and regions must be strictly observed.
- If the product does not work properly, please contact the supplier or our company, and do not disassemble or change the product in any way. We are not responsible for any problems caused by unauthorized maintenance or modification.

 WARNING

- Don't install the product in a place where the surface is easy to shake or be impacted, as it may damage the product.
- Don't install the product in places where it may be exposed to rain or moisture.
- The product should be used away from places where there is magnetic interference
- Don't use in flammable and explosive environments.
- Please do not hit the sensor sensing part.
- Please unplug the power cord when the product is not used for a long time.

2.Overview

The surface impedance tester can measure the surface resistance coefficient and grounding resistance of object, as well as the anti-static and insulating material. It adopts ASTM standard D-257 parallel electrode sensing method and uses high-precision OP-AMP integrated amplifier for automatic measurement.
This product complies with ANSI/ESD STM11.11 standard for Protection of Electrostatic Discharge Sensitive Objects. Measurement of surface resi

stance of static dissipative planar materials.

3.Product Characteristics

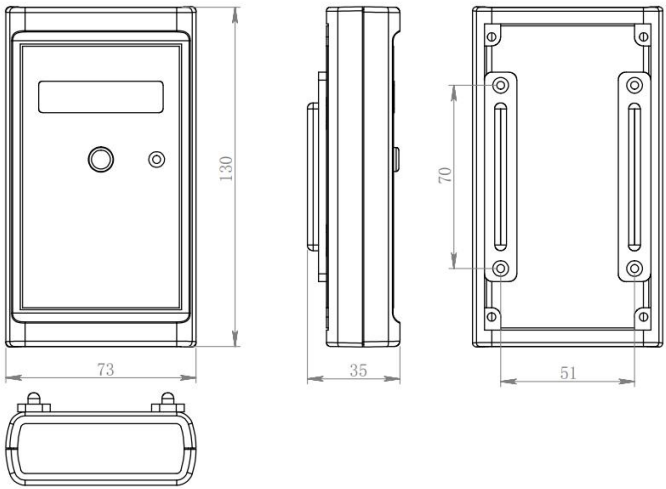
- Measure the surface resistance coefficient and grounding resistance of the object, such as the anti-static and insulating material.
- Digital display, high accuracy.
- Small size, light weight, easy to use and reliable.

4.Product Specifications

Product Model	499D
Power Supply	DC 9V Battery
Measuring Range	10^3～10^{12}
Resolution	0.1 Digit
Accuracy	±10%
Operating Environment	0～50℃, RH＜80％
Dimensions(L*W*H)	73*130*35mm
Weight	About 0.2kg

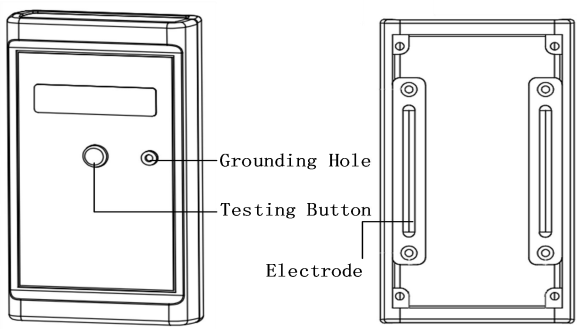
5.Functional Descriptions

5. 1. Dimensions



Unit：mm

6.Part Descriptions



7.Operation

1）**Measure the surface resistance coefficient**：Place the tester on the surface of the testing object, press the testing button and it will display the surface resistance coefficient of the testing object, unit is ohm/□

LED display value meaning：

bAtL: Press the power switch, if the LED displays “bAtL”, indicating that the battery voltage is low and the battery needs to be replaced.

CALE: Press the power switch, if the LED displays “CALE”, indicating that the tester is not calibrated or the calibration is wrong and needs to be recalibrated. If it is still not calibrated, the tester will read the default data, and the test accuracy will be reduced.

Lr: The testing resistance is less than 300 ohms（$3*10^2\Omega$）.

Hr: The testing resistance is more than 2T ohms ($2*10^{12}\Omega$）.

x.xEXX：X is the resistance value of the testing object. X times 10 to the XX power ohm/□.

For example: LED displays 5.6E10,it represents $5.6\times10^{10}\Omega/\square$. ohms/口（sheet resistance）is the resistance between any opposite sides of a square area with a constant thickness.

2）Measure the grounding resistance： Insert one end of the testing wire into the grounding socket on the tester (the electrode inside the right side of the tester is disconnected), and the other end is clamped on a reliable connecting ground, then place the tester on the surface of the testing object and press the testing button. In this way, the measured data is the grounding resistance of the measured object rather than the surface resistance coefficient.

Note: *Ensure that the testing object surface is clean. Ensure good contact with the test electrode of the tester by applying appropriate pressure.

*The tester will automatically shut down after releasing the button for about 5S.