

MONROE 272A

Rapid, accurate, and repeatable measurements of surface resistivity, volume resistivity, or resistance to ground in one versatile instrument.



The Monroe 272A measures the resistive properties of static control products such as static dissipative packaging, flooring, or work surfaces over the range of 8×10^3 to 2×10^{13} ohms or 8×10^4 to 2×10^{14} ohms per square. Simply place the resistive material under the instrument's electrode assembly. One glance at the large digital display will tell you whether the test material meets your specifications.

The Monroe 272A includes a concentric ring probe and support base conforming to ASTM D-257, ANSI/ESD STM11.11, and ANSI/ESD STM11.2 for making surface and volume resistivity measurements. An adaptor is included for resistance-to-ground measurements.

PRODUCT HIGHLIGHTS

- Ideal for testing static-control products
- Meets ESD Association ANSI/ESD STM 11.11 and ANSI/ESD STM 11.12 plus ASTM D-257 and EIA-541
- Measures both resistivity and resistance-to-ground
- Rugged and reliable for routine factory use
- Fast and simple to use
- 8-hour rechargeable battery
- Selectable scientific notation or 3-place log readouts
- No adjustments required

AT A GLANCE

Resistivity Range

8×10^4 to 2.0×10^{14} Ω/\square

Resistance Range

8×10^3 to 2.0×10^{13} Ω

Display Type

16-character alphanumeric LCD

TECHNICAL DATA

Performance Specifications		
Resistivity Range	8×10^4 to $2.0 \times 10^{14} \Omega/\square$	
Resistance Range	8×10^3 to $2.0 \times 10^{13} \Omega$	
Accuracy	± 0.1 decade thru 10E12, ± 0.15 decade above 10E12 (typical)	
	± 0.1 decade thru 10E9, ± 0.15 decade thru 10E11; ± 0.2 decade above 10E12 (max)	
Resistivity Measuring Voltage	$8.0 \times 10^4 \Omega/\square$ to $2.0 \times 10^{13} \Omega/\square$	10 volts
	$1.1 \times 10^6 \Omega/\square$ to $2.0 \times 10^{14} \Omega/\square$	100 volts
Resistance Measuring Voltage	$8.0 \times 10^3 \Omega/\square$ to $2.0 \times 10^{12} \Omega/\square$	10 volts
	$1.1 \times 10^5 \Omega/\square$ to $2.0 \times 10^{13} \Omega/\square$	100 volts
Display Type	16-character alphanumeric LCD	
Information Shown	Operating mode, measured Ω or Ω/\square in log or scientific notation, applied voltage, low battery indication	

Mechanical Specifications	
Weight	2.3 kg (5 lb)

Electrical Specifications	
Power	Rechargeable battery with 100, 120, or 230 VAC adapter/charger supplied
Battery Life	Up to 8 hours continuous operation per charge

Electrode Specifications	
Electrode Type	Monroe 96101A-1 Guarded-ring-type designed to ASTM D-257
Outer Electrode Dimensions	5.7 cm (2.25 in) ID, 0.32 cm (0.125 in) thick
Inner Electrode Diameter	3.0 cm (1.2 in)
Electrode/Meter Cable Length	0.9 m (3 ft)
Meter Dimensions	6.4 x 1 5.2 x 1 5.2 cm (2.5 x 6.0 x 6.0 in)

EASY-TO-USE OPERATION

To measure resistivity (Ω/\square), a sample is placed under the electrode assembly and a voltage is applied to the outer of two concentric electrodes resting on the sample. The geometry of the electrode assembly's surface is such that current flows from the outer ring, via the sample, to the inner electrode is a direct indication of the sample's resistivity, which is read on the digital display. In the resistance-measuring mode, current flows from ground or a second electrode through the resistive material to the measurement electrode. All test parameters can be preset, so operation is push-button simple. The instrument can be programmed to automatically time out to save battery.

Easy-To-Use

Test parameters (resistivity/resistance, test voltage, display mode) only need to be set once before testing multiple samples. To perform either resistivity or resistance to ground measurements:

1. Place the test material on the supplied Teflon® coated specimen support plate and connect a single test lead to the plate.
2. Set the electrode assembly on the test material.
3. Press POWER ON and read test results on the display.

REFERENCE NUMBERS

Included Accessories	
-	Operator's Manual
96101A-1	Surface Test Electrode
-	Surface-to-Ground Adapter
-	Specimen Plate
-	Power Supply
-	Carrying Case
-	Connecting Cable

Optional Accessories	
SE0032	Mini Guard Ring Probe
96163	Point-to-Point Probe
433	Replacement Battery Charger for Monroe 272A
272RV-6	Monroe 272A Reference Test Fixtures $10^6 \Omega/\square$
272RV-8	Monroe 272A Reference Test Fixtures $10^8 \Omega/\square$
272RV-11	Monroe 272A Reference Test Fixtures $10^{11} \Omega/\square$
272RVK	Monroe 272A Reference Test Fixtures 10^6 & 10^8 & $10^{11} \Omega/\square$ Kit



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

AE's power solutions enable customer innovation in complex semiconductor and industrial thin film plasma manufacturing processes, demanding high and low voltage applications, and temperature-critical thermal processes.

With deep applications know-how and responsive service and support across the globe, AE builds collaborative partnerships to meet rapid technological developments, propel growth for its customers and power the future of technology.

PRECISION | POWER | PERFORMANCE

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