

Measure Sheet/Film/Plate Products/Materials Antistatic Flooring Just As They Are

Quality Control by Surface/Volume Resistance Measurements



- Measurement voltage up to 1,000 V enables stable resistance measurements of materials and their characteristics when high voltage is applied
- Electrodes compliant with the JIS C 2170 and IEC 61340-2-3 standards
- Surface and volume resistance of sheets and films can be measured just as they are without the need to cut samples
- Measure the surface resistance of antistatic flooring and molded products

Easy Measurement

- Sheets and molded products can be measured just as they are. Samples for which the size is specified beforehand do not need to be prepared.
- Resistance of thick samples can be measured.
- **Just place** the main body on the antistatic flooring or resin to **measure the stable surface resistance.**

Reliable Measurement

- **Standards compliance**
JIS C 2170 and IEC61340-2-3
"Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation"
- **Stable measurement**
High voltage (up to 1,000 V)
Stable contact under load
- **Test fixture (option)**

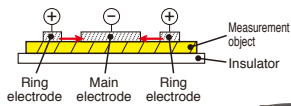
Up to $10^{13} \Omega$ (10 TΩ) High Resistance Measurement at 1,000 V

- Measurement resistance range when used with the **SM7110** or **SM7120** Super Megohm Meter: $10^3 \Omega$ to $10^{13} \Omega$
* The minimum measurable resistance is based on the specification of the super megohm meter/electrometer used in combination.
- **Surface resistance** can be measured with the main body alone
- **Volume resistance** can be measured using a pair electrode

■ Simple and Convenient Surface/Volume Resistance Measurement

When used with the SM7000 series, the Z5010 Conversion Adapter is needed.

● Surface Resistance Measurement

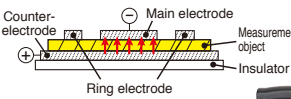


Measure the surface resistance between the main electrode and ring electrode of the main body electrode.

No need to cut samples



● Volume Resistance Measurement

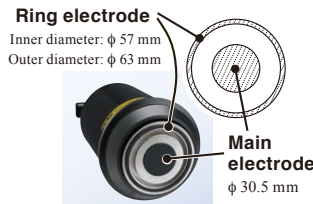


Measure the volume resistance of the sample sandwiched between the main electrode and counter-electrode.

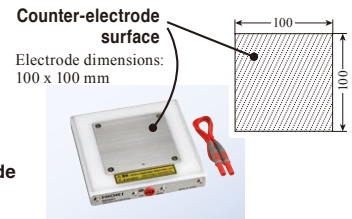
No need to cut samples



● Electrode Shapes Compliant with Standards



Main body electrode
(Bottom view of the SM9001 main body)



Counter-electrode with integrated stand
(SM9001 accessory)

The electrode on the main body uses conductive rubber in a size conforming to standards. Just place the electrode on the sample or measurement point and stable measurements can be made under a load of 2.5 kg. Furthermore, measurement voltage up to 1,000 V enables highly accurate measurements.

● Test Before Use With the SM9002 Verification Fixture for Surface Resistance Measurement (Option)

The SM9002 Verification Fixture for Surface Resistance Measurement (option) allows you to check the operation of the electrode to increase the reliability of measurement results.

VERIFICATION FIXTURE FOR SURFACE RESISTANCE MEASUREMENT SM9002



When using the SM9002

■ Specifications (One Year Product Warranty and One Year Accuracy Warranty)

Surface/Volume Resistance Measurement Electrode SM9001 Specifications	
Reference standards	IEC61340-2-3: 2000 and JIS C2170: 2004
Resistance measurement	Surface/volume resistance measurement (switch using connection terminals)
Measurement range	$1 \times 10^3 \Omega^*$ to $1 \times 10^{13} \Omega$ * The minimum measurable resistance is based on the specification of the super megohm meter/electrometer used in combination, e.g., $1 \times 10^3 \Omega$ (1 k Ω) to $1 \times 10^{13} \Omega$ (10 T Ω) when using the SM7110 or SM7120.)
Resistance between electrodes	$1 \times 10^{14} \Omega$ or more
External dimensions	Approx. $\phi 100 \times 233$ mm ($\phi 3.94'' \times 8.78''$ H) (including the handle and barrier, but not including the support holder), connection cable length: 1 m
Weight	2.5 ± 0.25 kg (88.2 ± 8.82 oz.)
Electrode	Conductive rubber with a thickness of 3 mm Main electrode diameter: $\phi 30.5$ mm Ring electrode diameters: $\phi 57$ mm (ID), $\phi 63$ mm (OD)
Counter-electrode with integrated support plate	Electrode dimensions: 100×100 mm External dimensions: Approx. 154 W \times 155 D \times 25 H mm ($6.06''$ W \times $6.10''$ D \times $0.98''$ H) Weight: Approx. 1.2 kg (42.3 oz.)
Operating temperature/humidity range	0°C to 40°C (32°F to 104°F)/80% RH or less (no condensation)
Storage temperature/humidity range	-10°C to 50°C (14°F to 122°F)/80% RH or less (no condensation)
Installation site	Indoors, pollution degree 2, altitude 2,000 m (6562 feet) or less
Rated ground voltage	Max. 1,000 V DC

Withstand voltage	7,504 V DC between input terminal (batch) and main body case
Applicable models	Super Megohm Meter SM7110, SM7120 When using super megohm meters or electrometers other than the above, measurements can be performed within their specified measurement range.
Accessories	Counter-electrode with integrated stand $\times 1$, protective stand $\times 1$, short bar $\times 1$, counter-electrode connection cable (approx. 0.7 m) $\times 1$, carrying case $\times 1$

Verification Fixture for Surface Resistance Measurement SM9002 Specifications	
Low resistance	500 k $\Omega \pm 1\%$, measurement voltage 10 V DC
High resistance	1 T $\Omega \pm 5\%$, measurement voltage 100 V DC
Operating temperature/humidity range	18°C to 28°C (64.4°F to 104°F)/60% RH or less (no condensation)
Storage temperature/humidity range	-10°C to 50°C (14°F to 122°F)/80% RH or less (no condensation)
Installation site	Indoors, pollution degree 2, altitude 2,000 m (6562 feet) or less
Rated ground voltage	Max. 100 V DC
Withstand voltage	1,120 V DC between electrode (batch) and main body case
Applicable model	Surface/Volume Resistance Measurement Electrode SM9001
Dimensions	Approx. $\phi 100 \times 56$ mm ($\phi 3.94'' \times 2.20''$ H)
Mass	Approx. 300 g (10.6 oz.)



Model : SURFACE/VOLUME RESISTANCE MEASUREMENT ELECTRODE SM9001

Model No. (Order Code) (Note)
SM9001 (For the SM7000 series and the SM-8200 series)

● Option

Model : VERIFICATION FIXTURE FOR SURFACE RESISTANCE MEASUREMENT SM9002

Model No. (Order Code) (Note)
SM9002 (For the SM9001(SM-8200 series))

With integrated low resistance [500 k Ω]/high resistance [1 T Ω] test surfaces*1
*1 The low resistance and high resistance test surfaces are arranged inside a single fixture.



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