

## OhmMETRICS™ SRM500K Resistance Test Kit with Temp and RH

### Complete Testing Kit for Resistance Measurements

Ohm METRICS' SRM500K is a digital surface resistance test kit that accurately measures resistance and performs tests such as resistance-point-to-point and resistance-to-ground. The Ohm METRICS SRM500K has 10V and 100V selectable test voltage and measures ambient temperature and humidity. The kit is suitable for factory audits, material and test lab evaluations and compliance testing.

The SRM500K kit includes a surface resistance meter with a digital read out, parallel probes on the back for quick measurements, two 5lb disc probes for more specific tests, all in a easy to carry case.

Meets or exceeds requirements of ANSI ESD-S20.20 and ESDA Standard 1.1-2006



SRM500K kit includes two 5lb disc probes



### Features

- Designed for Measuring Surface Resistance for ESD Compliance.
- Built-in Parallel Resistivity Probes
- 10v and 100v range voltage selection
- Two 5 lb disk probes
- Auto Zeroing and Power Shut Off
- Carrying Case

### Applications:

**Performs resistance measures required by ANSI ESDS20.20 including ANSI/ESD S4.1, S7.1, S2.1 and STM12.1 and STM97.1. Perform resistance-to-ground, resistance-point-to-point and volume resistance. Measures temperature and humidity.**

This document is prepared for our customers as a service, and is to the best of our knowledge true and accurate. However, it is understood and agreed by the users of this document that we will accept no liability for the conclusions reached. Users of this document may therefore wish to perform additional testing before determining that products mentioned are suitable.

## Work Surface Measurements

There are three primary measurements for evaluating a work surface; Resistance Point to Point (RTT – also known as Resistance Top to Top), Resistance to Groundable Point (RTGP) and Resistance to Ground (RTG).

### Resistance to Ground Measurement

This measurement is made using a 5 lb electrode connected to the positive terminal of the resistance meter. The electrode is placed on the work surface in the most heavily used area. The negative lead is connected to electrical ground. This measurement assures that the mat is connected to AC Equipment Ground. Test at 10 volts, and if the measurement exceeds  $1.0 \times 10^6$  ohms, switch to 100 volts.

If the resulting RTG measurement is within your required limits, no further work surface testing is required and you can proceed to the next work surface. Should the measurements still exceed your limits you will then want to conduct a Resistance to Groundable Point (RTGP) measurement.

### Resistance to Groundable Point Measurement

This measurement is similar to the RTG measurement except that the negative lead is attached to the grounding point (snap) of the work surface. The testing is performed using 100 volts when the expected resistance is greater than  $1.0 \times 10^6$  ohms.

Should this measurement provide a reading that is within your requirements the problem is somewhere between the snap and AC Ground. If this measurement also provides a value that exceeds your requirements, then there may be a problem with the work surface. A point-to-point resistance measurement can be done to verify the performance of the work surface material.

### RTT – Resistance Point-to-Point

This measurement is made using two 5 lb electrodes. The electrodes are placed 10" apart on the work surface in various locations. The testing is performed using 100 volts when the expected resistance is greater than  $1.0 \times 10^6$  ohms. If the reading meets your requirements, there is possibly a connection problem with the groundable point. Should the reading exceed your limits the work surface is likely faulty and should be replaced. It is important that RTG measurements be made regularly. The frequency of testing is dependent up on internal requirements and testing history. RTG testing must be performed even if constant monitoring is in place, as constant monitors verify ground connection of the worksurface, but not the performance of the worksurface.

## About Transforming Technologies

Since 1998, Transforming Technologies has helped electronic manufacturing facilities to protect their products and processes from the many serious problems associated with static electricity.

Transforming Technologies offers a wide range of unique and outstanding products to detect, protect, eliminate and monitor electrostatic charges. Our products are integral components of an effective static control program.

### Model SRM500K

Dimensions/Weight  
 Test range:  
 Test voltage:  
 Power Supply

### Specifications

5.15" H x 2.50" W x 1.8" D /8.46 oz  
 $10^3$ - $10^{12}$   
 10V/100V(automatic ranging)  
 9V-Battery (PP3)  
 120 volt AC Adapter  
 Two 5 pound disk probes  
 Two 3"parallel probes  
 LCD alpha-numeric scale-no LED'S

Probes:

Read Out

Test Range

Resistivity:  $10^3$ - $10^{12}$  ohms/sq.

Resistance:  $10^3$ - $10^{12}$  ohms

Relative humidity: 10% to 90%RH

Temperature: 0C-37.7C (32F to 100F)

#### Accuracy for 10 volt scale:

$10^3$ - $10^8$ +/-10%@RH<90%  
 $10^8$ - $10^{12}$ +/-30%@RH<90%

#### Accuracy for 100 volt scale:

$10^3$ - $10^8$ +/-10%@RH<90%  
 $10^9$ - $10^{12}$ +/-30%@RH<60%

### Product Number

SRM500K	Resistance meter with 5lb disk probes and carrying case
SR0055	5lb Disc Probes, Black, Set
SR0065	5lb Disc Probes, Yellow Rubber Set