



Description:

Monroe Model 292A Digital Surface Resistance Test Kit is a portable, versatile, instrument designed to accurately measure resistance between two points (Rtt), surface to ground (Rtg), and surface resistivity in accordance with ANSI/ESD Association standard S-4.1. In addition, the meter measures ambient temperature and relative humidity.

The Surface Resistance Meter (included in the kit) is designed to make measurements in accordance with specified test methods on:

- **Work surfaces** – ANSI/ESD STM S4.1 Work surfaces – Resistance Measurements
- **Floors** – ANSI/ESD STM S7.1 – Resistive Characterization of Materials Floor Materials
- **Footwear** – ANSI/ESD STM S9.1 and S9.2 – Footwear- Resistive Characterization
- **Garments** – ANSI/ESD STM 2.1 Garments
- **Seating** – ANSI/ESD STM 12.1 Seating – Resistive Measurement
- **Floor/Footwear** – ANSI/ESD STM 97.1 Floor Materials and Footwear Resistance Measurement in Combination with a Person
- **Workstations** – ESD-ADV53.1 ESD Protective Workstations

Features:

- **Liquid Crystal Display (LCD):** A 3.5 digit 9/16" high, liquid crystal display provides easy to read measurements directly from the meter. No interpretations or calculations are required.
- **LED Displays:** Surface resistance exponents are displayed via 12 light emitting diodes ($< 10^3$ - $> 10^{12}$). LEDs are color coded for quick check recognition: Five additional Function LEDs identify the measurement taken when lit.
- **Auto/10 Volt Hold Test Range Voltage Button:** When in the "up" or Auto position, during resistance testing, the meter automatically switches to the correct voltage for the resistance range. When in the "down" or 10 Volt Hold position automatic voltage selection is overridden and the test is performed at 10 Volts regardless of resistance level. An LED illuminates to note selected voltage.
- **Test Push Button:** Activates electrical power to the meter.
- **Quick Check Button:** When set to FULL, the meter will cycle through the 15 second electrification period that displays the temperature and relative humidity before the surface resistance mantissa is displayed.

* When set to QUICK, the meter will skip the 15 seconds and immediately display the surface resistance mantissa.

- **Ambient Temperature, Relative Humidity and Surface Resistance Mantissa Measurement:** When the test button is pressed and the meter is set to FULL test mode, following displays in sequence:
 - Temperature in degrees F (+/- 5°)
 - Temperature in degrees C (+/- 3°)
 - Relative Humidity as a percentage (+/- 10 integers)
 - Surface Resistance Mantissa (with exponent displayed via LED, measurement expressed in ohms.)

Surface Resistivity:

Resistivity measurements require incorporating our **optional** resistivity adaptor model 292A/41. The Surface Resistance Test Meter attaches easily too the resistivity adaptor. Parallel conductive silicone rubber electrodes provide for measurement of surface resistivity.

The adapter is optional and must be specified separately when ordering, (292A/41 p/n 0930245.) The data sheet for the 292A/41 Adapter can be viewed on our website.

Surface Resistance Test Kit model 292A

Specifications:

Range:	1.0 x 10 ³ to 1 x 10 ¹² Ω @ 10V 1.0 x 10 ⁶ to 1 x 10 ¹² Ω @ 100V
Accuracy:	Resistance measurements within +/-10% (20% for resistance values 1x10 ¹¹ and greater.)
Open Circuit Voltages:	10 and 100 volts ±5%
Electrification Period:	15 seconds
Temperature Accuracy:	±5 degrees F and ±3 degrees C Typ. +/- 10%
Relative Humidity:	Range from 5% - 95%; ±10 digits Typ.
Power:	Two - Alkaline AA batteries Battery Life: approximately 1500 measurements.
Meter Jacks:	Left jack on meter accepts a 3.5 mm plug Right jack on meter accepts a standard banana plug
Test Leads:	Black lead terminated with a 3.5 mm plug one end and a standard banana plug on the other White lead terminated with a standard banana plus both ends
External Electrodes:	Two NFPA-99 5 pound electrodes (80 oz.) ±2oz with Shore A (IRHD) 50 - 70 durometer conductive pads that comply with EOS/ESD S4.1
*Resistivity Electrodes:	Model 292A/41 (optional) Parallel conductive silicone rubber electrodes 1.875 inches long and spaced 1.875 inches apart mounted onto a separate adapter.
Meter Weight:	.7 lbs / .03 kg
Dimensions:	8.1" L x 4.1" W x 1.5" H (20.6cm x 10.4cm x 3.8cm)

Kit includes:

- Meter
- Protective carrying case
- Test leads with gator clip
- Two NFPA-99 5-pound electrodes
- Two AA Alkaline batteries
- Operator's Manual

***Resistivity adapter is optional and must be ordered separately.**

Maintenance:

The 292A Surface Resistance Kit requires little maintenance. Containing no user serviceable parts, only careful cleaning of the electrodes and replacement of the batteries is required.

Calibration:

Monroe Electronics instruments are factory-calibrated prior to shipment. Recalibration should be performed annually, or more frequently if specified by contract or company policy. Your instrument should also be recalibrated any time it has been repaired or tampered with. We will be happy to perform the calibration for you or refer you to one of our Authorized Service Organizations.

Warranty:

Monroe Electronics, Inc., warrants that each instrument and sub-assembly manufactured by them shall be free from defects in material and workmanship for a period of two years after shipment from the factory. This warranty is applicable to the original purchaser only.

The Monroe Electrostatic & ESD product line is now owned by Advanced Energy and managed by TREK in Lockport, NY.