

Model 152

Surface Resistance Meter



The Trek Model 152 Resistance Meter is designed to precisely measure surface resistance on a wide variety of conductive, dissipative, and insulative materials. The Model 152 employs a measurement technique which conforms to several ESD Association standards for measuring surface resistance and surface resistivity including S2.1 for garments, S4.1 for work surfaces, S7.1 for flooring, and S11.11 for planar materials. A variety of measuring probe electrode configurations are available for making surface resistance or surface resistivity measurements.

The Model 152 features exceptional measurement accuracy and wide measurement ranges of 10^3 to 10^{13} ohms using point-to-point probes or the two-point resistance probe for small surface measurements, and 10^4 to 10^{14} ohms/square using the Trek Concentric Ring probe. Measured resistance values are clearly displayed on a high-contrast LCD display using scientific notation.

The electrode test voltage for the measurement probe(s) is switch selectable for 10 V or 100 V operation to conform to the individual requirements of the ESD Association standards and testing conditions. The selected test voltage is indicated on the LCD display.

The exclusive Trek Model 152P-CR concentric ring measuring probe contains a preamplifier which eliminates the usual noise, stray pickup, and long settling time associated with other type probe designs, therefore providing ease of operation even at very high resistance values.

The Model 152 is light-weight and portable, and can be operated from internal batteries or connected to an AC line power source using a battery eliminator.

Concentric ring probe preamplifier eliminates interference and enables reliable operation at high resistance values

Exceptional accuracy, stability, and repeatability

Complies with ESD Association standards concerning surface resistance measurements including S2.1, S4.1, S7.1, and S11.11

Wide measurement ranges of 10^4 to 10^{14} ohms/square or 10^3 to 10^{13} ohms

Elastomer electrodes for excellent surface contact

Battery or AC line operated with automatic shutoff

Light-weight and portable

• CE compliant

CONTROL WITHOUT COMPROMISE



Model 152 Specifications

Performance

Resistance/Resistivity

Measurement Ranges

Concentric Ring Probe

10^4 to 10^{14} ohms/square.

Point-to-point probes

10^3 to 10^{13} ohms.

Two-point resistance probe

10^3 to 10^{13} ohms.

Measurement Accuracy (of reading)

At 25 °C ±5 °C, 50% ±20% RH:

Concentric Ring Probe

10^4 to 10^{13} ohms/square, ±2.5%,

10^{14} ohms/square, ±5%.

Point-to-point probes

10^3 to 10^{12} Ω range, ±2.5%,

10^{13} Ω range, ±5%.

Two-point resistance probe

10^3 to 10^{11} Ω range, ±2.5 %,

10^{12} to 10^{13} Ω range, ±8 %.

At 25° C ±10 °C, 50% ±30% RH:

Concentric Ring Probe

10^4 to 10^{13} ohms/square, ±5%,

10^{14} ohms/square, ±8%.

Point-to-point probes

10^3 to 10^{12} Ω range, ±5 %,

10^{13} Ω range, ±8%.

Two-point resistance probe

10^3 to 10^{11} Ω range, ±5 %,

10^{12} to 10^{13} Ω range, ±8 %.

Please contact TREK, INC.
for information about
additional EOS/ESD
probes and instruments.

Features

Test current Limit

Limited to less than 13 mA in the 10 V range and less than 1.7 mA in the 100 V range.

Probe Electrode Test Voltage

User selectable for 10 V or 100 V, ±2%.

Test Probes (optional)

A) **Trek Model 152AP-5P** 2.27 kg. (5 lb.) test probes (set of two probes) are available for performing resistance measurements including ANSI/EOS/ESD-S4.1 standards (point-to-point or resistance to ground measurements).

B) **Trek Model 152P-CR** 2.27 kg. (5 lb.) concentric ring test probe is available for performing surface resistance/resistivity measurements including EOS/ESD-S11-11 standards.

C) **Trek Model 152P-2P** probe performs measurements on surface areas too small to be measured with conventional probes.

Resistance/Resistivity Probe Detection

The Model 152 will detect the connection of the active Concentric Ring probe, automatically adjust the measuring range, and indicate values in ohms/square (Ω/sq) on the LCD display.

LCD Display

Three digits plus two digit exponent (scientific notation).

Low Battery Indicator

LCD message for low battery.

Features (cont.)

Test Voltage Range Indicator

User selectable, either 10 V or 100 V.

Automatic Shutoff

If the unit is left idle for longer than 10 minutes, the unit automatically turns off.

General

Battery Operation

Two (2) 9 Volt batteries (NEDA 1604 Alkaline, or equivalent) provide 6 hours of power for portable operation.

AC Line Operation

Use the AC battery eliminator. The eliminator output connector is a female type 2.1 mm DC power plug.

ESD Association Standards

The Model 152 conforms to the following ESD Association Standards for measuring surface resistance and surface resistivity:

- S2.1 Garments.
- S4.1 Work surfaces-resistive characterization.
- S7.1 Flooring materials.
- S11.11 Surface resistance measurements of static dissipative planar materials.

Instrument Dimensions

180 mm H x 100 mm W x
44 mm D
(7" H x 4" W x 1.75" D)

Instrument Weight

Approximately 0.5 kg (1 lb) with batteries.

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Model 152 Ordering Information

Model 152

Item	Part No.
Surface Resistance Meter	152

Probes

2.27 kg. (5 lb.) Concentric Ring Resistivity probe	152P-CR
2.27 kg. (5 lb) point-to-point probes (pair)	152AP-5P
Two-point resistance probe	152P-2P

Probes are ordered separately.
Other probe configurations available by request.

Accessories

Item	Part No.
Supplied	
Operator's Manual	23143
Ground Cord	N9044
Optional	
Battery Eliminator/Charger (115 V AC)	L5111
Universal AC Adapter Kit (100 to 230 V AC).	1K010
Carrying Case	43378



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