The Trek Model 152-1 Surface/Volume Resistance Meter is designed to precisely measure surface or volume resistance on a wide variety of conductive, dissipative, and insulative materials. It features exceptional measurement accuracy and wide measurement ranges. When used with Trek’s uniquely-designed 152P-CR-1 concentric ring probe (shown to left), the instrument provides consistent ease of operation even at very high resistance values. The Model 152-1 is lightweight, portable and operable via batteries or an AC line power source with battery eliminator.

**Key Specifications**

- **Measurement Range:** $10^3$ to $10^{13}$ Ω
- **Measurement Accuracy (of reading) at 25° ±10° C and 20% to 70% RH:**
  - Point to Point Probe (152BP-5P): $10^3$ to $10^{12}$ Ω range, ±5%
  - Concentric Ring Probe (152-CR-1): $10^3$ to $10^{13}$ Ω range, ±5%
  - Two Point Resistance Probe (152P-2P): $10^3$ to $10^{13}$ Ω range, ±5%

- **Probe Electrode Test Voltage:** User selectable, 10 V or 100 V ±2%
- **Test Limit Current:** Limited to less than 13 mA in 10 V range and 1.7 mA in 100 V range

**Typical Applications Include**

- Measuring surface or volume resistance on materials
  - Conductive, dissipative, insulative
- Measuring in accordance with ANSI/ESD Standards for
  - Garments (STM2.1)
  - Work surfaces (S4.1)
  - Flooring (S7.1)
  - Footwear (STM9.1)
  - Planar materials (STM11.11)
  - Volume resistance (STM11.12 and IEC 61340-2-3)
  - Seating (STM12.1)
  - Two point resistance measurements (STM11.13)
  - Floor materials/footwear (STM97.1)

**Features and Benefit**

- Complies to ANSI/ESD Association Standards
- Concentric ring probe pre-amplifier eliminates interference and enables reliable operation at high resistance values
- Exceptional accuracy, stability and repeatability
- Wide measurement range ($10^3$ to $10^{13}$ Ω)
- Elastomer electrodes for excellent surface contact
- Optional accessories include a Walking Test Adapter and Test Plate set
- NIST-traceable Certificate of Calibration provided with each unit
- CE compliant
# Model 152-1 Specifications

## Performance

<table>
<thead>
<tr>
<th>Resistance Measurement Range</th>
<th>(10^3 \text{ to } 10^{15} \Omega)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistivity</td>
<td>(\text{Resistance} \times 10 = \text{Resistivity})</td>
</tr>
<tr>
<td>Measurement Accuracy</td>
<td></td>
</tr>
<tr>
<td>(of the reading) at 25 °C and 20% to 70% RH</td>
<td></td>
</tr>
<tr>
<td>Point-to-point 5 lb probe (152BP-5P)</td>
<td>(10^5 \text{ to } 10^7 \Omega \text{ range, } \pm 5%)</td>
</tr>
<tr>
<td>&amp; (10^8 \text{ to } 10^{10} \Omega \text{ range, } \pm 10%)</td>
<td></td>
</tr>
<tr>
<td>Concentric Ring Probe (152P-CR)</td>
<td>(10^5 \text{ to } 10^7 \Omega \text{ range, } \pm 5%)</td>
</tr>
<tr>
<td>&amp; (10^8 \Omega \text{ range, } \pm 8%)</td>
<td></td>
</tr>
<tr>
<td>Two point resistance probe (152P-2P)</td>
<td>(10^5 \text{ to } 10^6 \Omega \text{ range, } \pm 5%)</td>
</tr>
<tr>
<td>&amp; (10^7 \Omega \text{ range, } \pm 8%)</td>
<td></td>
</tr>
</tbody>
</table>

## Features

- **LCD Display**: Three digits plus two digit exponent (scientific notation)
- **Low Battery Indicator**: LCD message for low battery
- **Test Voltage Range Indicator**: Indicates the test voltage selected, either 10 V or 100 V
- **Automatic Shutoff**: If the unit is left idle for longer than 10 minutes, the unit automatically turns off
- **ANSI / ESD Association Standards**: The Model 152-1 conforms to ANSI / ESD Association Standards for measuring surface resistance and surface resistivity. Please refer to the Applications section on page 1 of this data sheet for more information

## Test Probes / Accessories (cont.)

### Test Plate Set (consists of two separate plates)

- **Conductive Plate**: (5” x 5” / 127 mm x 127 mm) A stainless steel conductive plate with a mini banana plug
- **Insulative Plate**: (5.4” x 5.4” / 137 mm x 137 mm) Acts as an insulative surface

### Walking Test Adapter Kit

- **Walking Test Adapter Kit**: The Walking Test Adapter allows the analysis of resistance levels on the human body (STM 97.1)

### Mechanical

- **Dimensions**: 180 mm H x 100 mm W x 44 mm D (7” H x 4” W x 1.75” D)
- **Weight**: Approximately 0.5 kg (1 lb.) with battery

### Operating Conditions

- **Temperature**: 15°C to 35°C (59 °F to 95 °F)
- **Relative Humidity**: 5% to 80%, non-condensing
- **Altitude**: To 2000 m (6561.68 ft.)

### Power Requirements

- **Battery Operation**: Two (2) 9-Volt batteries (NEDA 1605 Alkaline, or equivalent) provide approx 6 hrs of power
- **AC Line Operation**: The use of an AC battery eliminator allows for AC line operation. The eliminator output connector is a female type 2.1 mm, DC power plug

### Included Accessories

- **Operator’s Manual**: PN: 23426
- **Ground Cord**: PN: N9044
- **Universal AC Adapter**: PN: F5054R

### Optional Accessories

- **Test Plate Set**: PN: 17530
- **Carrying Case**: PN: 43378
- **Walking Test Adapter Kit**: PN: 1K039

### Notes

*The Model 152-CR-1 will operate with the previous Model 152 resistivity meter in “surface” mode, just as the Model 152-CR probe did. The 152-CR will operate with the Model 152-1 Resistance Meter with the measurement being in “ohms,” not “ohms/sq.”*