

# Trek Model 152P-CR-1 Surface/Volume Concentric Ring Probe



The Trek Model 152P-CR-1 Concentric Ring Probe is capable of measuring surface and volume resistance in materials as per IEC or ESDA standards. A three (3) position switch on the probe selects surface resistance or volume resistance measurements with either a guarded or unguarded outer electrode. (See page 2.)

An optional Test Plate Set [CN 17530] consists of two separate plates. A stainless steel conductive plate can act as a second electrode to apply the test voltage to the sample under test and also provides a mini-banana plug connection for a secure ground connection. An insulative plate is utilized as needed. The use of these plates are described in the ESD STM11.12 and in IEC 61340-2-3 standards.

The Trek Model 152-1 Resistance Meter used with the 152P-CR-1 system, is designed to precisely measure surface resistance on a wide variety of conductive, dissipative, and insulative materials.

The Model 152-1 Resistance Meter employs a measurement technique which conforms to ANSI/ESD Association standards for measuring surface resistance, resistivity, and volume resistance and features exceptional measurement accuracy and wide measurement ranges of  $10^3$  to  $10^{13}$  ohms using either a point-to-point probe or the two-point probe. Measured resistance values are clearly displayed on a high-contrast LCD display. Various probes are available and accessory options include a Walking Test Adapter which allows analysis of resistance levels on the human body [STM 97.1].

## **Trek MODEL 152-1 Resistance Meter**

**Measurement Range**  
 $10^3$  to  $10^{13}$  ohms

## **Probe Electrode Test Voltage**

User selectable for  
10 V or 100 V,  $\pm 2\%$ .

## **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.

## **MODEL 152P-CR-1 Surface / Volume Resistance Probe**

A three (3) position switch  
on the probe selects  
performance options.

## **Optional Test Plate Set**

These plates provide  
additional ESD STM  
standard options for  
guarded and unguarded  
resistance and volume  
measurements.

## **Optional Probe Calibration Fixture**

Provides measurement  
accuracy verification of  
resistance/resistivity  
probes.



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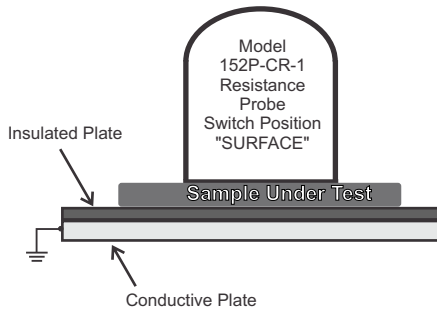
# Model 152-CR-1 Concentric Ring Probe and Test Plate Set

The Trek Model 152P-CR-1 Concentric Ring Probe, when used with the Trek Model 152-1 Resistance Meter, is capable of measuring surface and volume resistance in materials as per IEC or ESDA standards. A three (3) position switch on the probe selects for SURFACE resistance measurements or VOLUME resistance measurements either with a GUARDED or UNGUARDED outer electrode.

In addition to the Model 152P-CR-1 Concentric Ring Probe [CN 17529], Trek offers a Test Plate Set [CN 17530] that consist of two separate plates, each approximately 5 inches square. A stainless steel conductive plate acts as a second electrode for the application of the test voltage to the sample under test. An insulative plate is utilized as needed. The use of the plates are described in the ESD STM11.12 and IEC 61340-2-3 standards.

## Test Position SURFACE

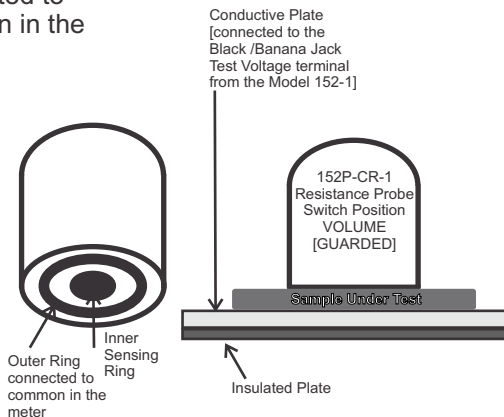
The test voltage is applied to the outer ring during surface measurements. Model 152P-CR-1 switch is positioned at SURFACE designation.



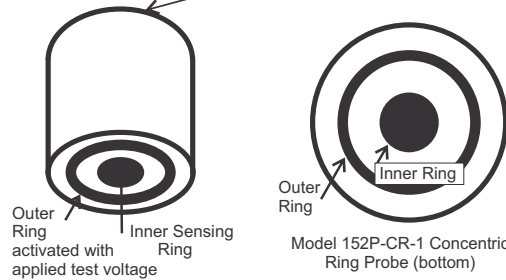
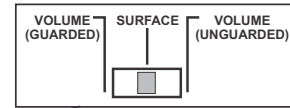
Resistivity - Resistance X Factor 10 = Resistivity

## Test Position VOLUME [GUARDED]

The outer ring is connected to common in the 152-1 meter (guarded) during volume measurements. As per IEC 61340-2 standard, when performing volume measurements the outer ring is guarded (connected to common in the meter).

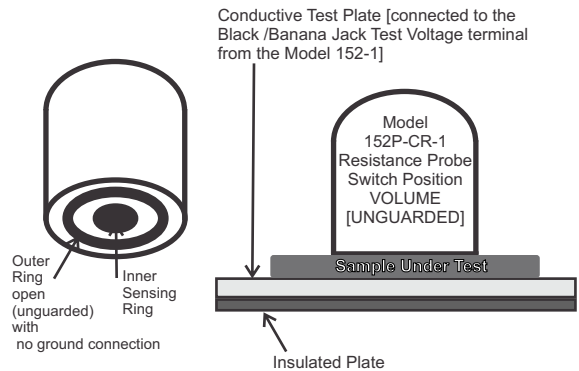


Model 152P-CR-1 [3 Position Switch]



## Test Position VOLUME [UNGUARDED]

The test voltage is removed and outer ring is open (unguarded) during volume measurements. Model 152P-CR-1 switch is positioned at VOLUME [UNGUARDED] designation. As per ESD STM11.12 standard, the outer ring is unguarded with no ground connection.



## Optional Accessories

### CR Probe Calibration Fixture [CN 16160]

This surface resistance calibration test fixture is designed to check the electrode alignment of resistance/resistivity probes, the electrification time of the probe/cable meter test setup and verify overall measurement accuracy of the test setup at both ends of the static dissipative measurement range. It consists of a 502K ohm test surface and a teraohm test surface.



Surface Resistance Calibration Test Fixture

### Test Plate Set [CN 17530]

Includes two separate plates, approx. 5" X 5":  
Stainless Steel Conductive Plate  
Insulative Test Plate

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