Concentric Ring Probe Installation, Operation and Maintenance

Made in the United Kingdom

Figure 1. Desco 50005 Concentric Ring Probe

Description

The Desco 50005 Concentric Ring Probe is an instrument to be used in conjunction with a resistance meter, such as the Desco 19290 Digital Surface Resistance Meter, to measure surface resistance per ANSI/ESD STM11.11 the test method listed in Packaging standard ANSI/ESD S541 for surface resistance of planar materials.

The Concentric Ring Probe (Ref: ANSI/ESD STM11.12) can measure the volume resistance of planar materials using a flat conductive metal plate (not included).

The Concentric Ring Probe may be used for the resistance measurements of ESD packaging including static shielding and other bags.

The Desco Concentric Ring Probe is compatible with the following Desco Surface Resistance Meters:

Item	Description
19290	Digital Surface Resistance Meter Kit
19291	Digital Surface Resistance Meter
19784	Analog Surface Resistance Meter Kit
19786	Analog Surface Resistance Meter
19640	Surface Resistance Checker

Resistivity and Resistance
Per ANSI/ESD STM11.11 section 12.0 “CONVERSION TO RESISTIVITY, When it is appropriate to convert a resistance obtained by this test method to an equivalent resistivity in ohms per square, multiply the resistance measurements obtained by this method by ten. The conversion factor of ten is derived from the geometry of the electrode assembly. NOTE: Conversions to resistivity may not be valid for materials that are laminated, plated or metallized with conductive materials. This fact should be understood when users of this test procedure are required to satisfy specifications given in “ohms/square.”

Repeatability
Per ANSI/ESD STM11.11 section 4.0 “REPEATABILITY, This test method has been shown to have a repeatability of approximately one half order of magnitude” in controlled environments.

Packaging

1 Concentric Ring Probe
1 BNC / Banana Jack Adapter

Operation

1. Connect the Concentric Ring Probe to a resistance meter using the included BNC / banana jack adapter and the meter’s test leads.
2. Place the material to be tested on an insulative surface.
3. Place the Concentric Ring Probe on top of the material to be tested.
4. Take a resistance measurement using the resistance meter.

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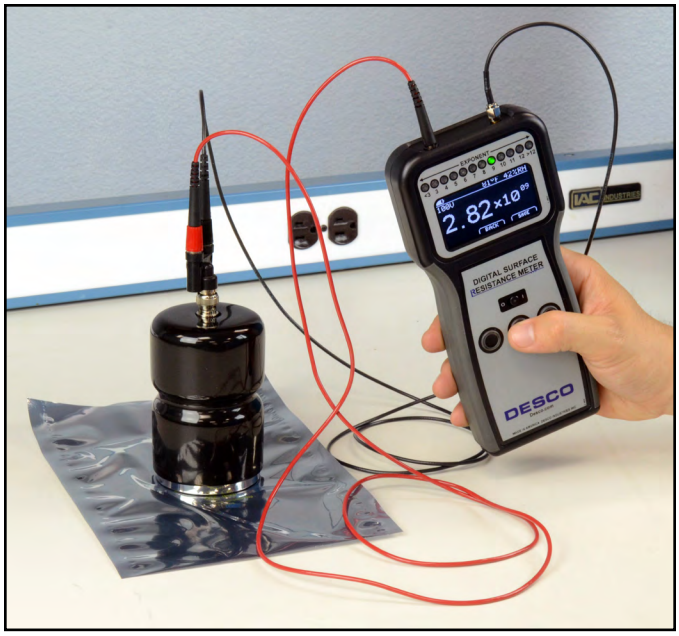

Figure 2. Using the Concentric Ring Probe with the Desco Digital Surface Resistance Meter

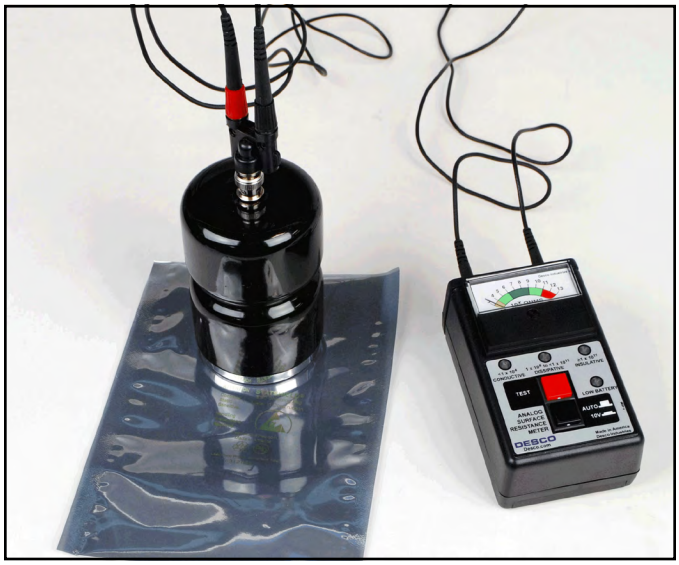

Figure 3. Using the Concentric Ring Probe with the Desco Analog Surface Resistance Meter

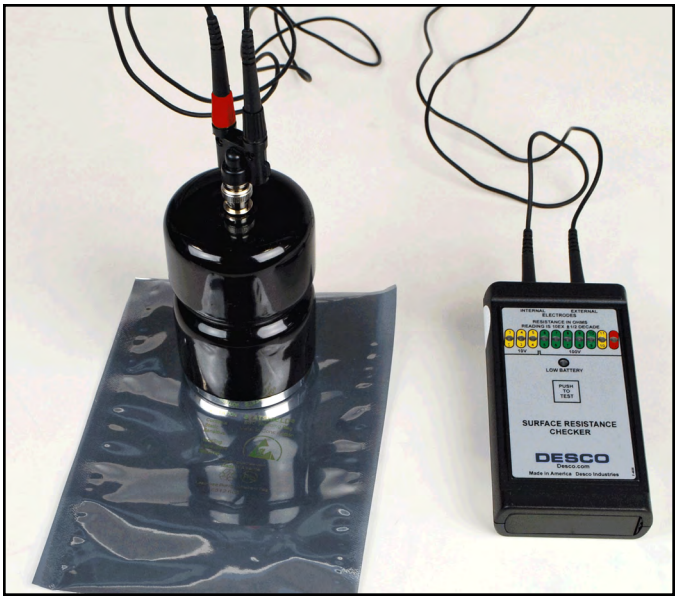

Figure 4. Using the Concentric Ring Probe with the Desco Surface Resistance Checker

Specifications

Dimensions (with BNC / banana jack adapter)	2.8" Dia. x 6.5" H (71 mm x 165 mm)
Outer Probe Diameter	2.5" (63 mm)
Inner Probe Diameter	1.2" (30 mm)
Weight	5.8 lbs. (2.6 kg)
Insulation Resistance Between Probes	>1 x 10^{12} ohms @ 500V
Probe Resistance of Carbon Pads	<100 ohms at low test voltage
Country of Origin	United Kingdom

Limited Warranty, Warranty Exclusions, Limit of Liability and RMA Request Instructions

See the Desco Warranty - Desco.com/Limited-Warranty.aspx

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