Portable Wrist Strap Tester
Installation, Operation and Maintenance

Made in the
United States of America

Figure 1. Desco 19240 Portable Wrist Strap Tester

Description

Per ANSI/ESD S20.20, test equipment is required to enact the Compliance Verification Plan Requirement. Test equipment shall be selected to make measurements of appropriate properties of the technical requirements that are incorporated into the ESD program plan. The Wrist Strap Tester can be used to fulfill ANSI/ESD S1.1, "The wrist strap system should be tested daily to ensure proper electrical value" (Annex A3). Being a portable battery powered tool, it is perfect for small labs or for a supervisor to spotcheck workers and/or ensure compliance.

The Desco Portable Wrist Strap Tester is a battery operated "on demand" wrist strap tester. When the wearer of a wrist strap plugs in their coil cord and touches the metallic surface of the Wrist Strap Tester, a path for current flow is completed from the wearer's skin, through the wrist strap. This action will cause the green "test good" LED to illuminate as long as the resistance of the circuit path is between 750 kilohms and 10 megohms.

The Desco Portable Wrist Strap Tester and its accessories are available as the following item numbers:

Item	Description
19240	Portable Wrist Strap Tester
07010	Calibration Unit

Packaging

1   Portable Wrist Strap Tester
1   9V Alkaline Battery
1   Hook and Loop Fastener Strip
1   Certificate of Calibration

Installation

Open the tester's battery compartment and install the included 9V battery. Use the included hook and loop fastener strip to mount the tester to a wall or worksurface.

NOTE: The low battery indicator flashes briefly every time the unit is used. Replace the battery once the indicator becomes constant during testing.

Operation

1.   While wearing a wrist strap, plug the wrist cord into the wrist strap jack located on the face of the Portable Wrist Strap Tester.

2.   Push down and hold the test switch until the test results are displayed. Ensure that your finger also makes contact with the metal ring around the pushbutton when performing a test.

     DO NOT touch any other metal while performing your test as this will affect your results.

3.   A pass test result is indicated by illumination of the green PASS LED. A fail low test result is indicated by illumination of the red LOW LED. A fail high test result is indicated by illumination of the red HIGH LED.

     If your ESD test fails, check your wrist strap and ensure that it is being worn correctly and/or needs to be replaced.

NOTE 1: The Portable Wrist Strap Tester may briefly display "FAIL HIGH" once the test button is released at the conclusion of a test. Residual voltage in the circuit's capacitors causes the test to continue for a split second after the button is released.

NOTE 2: Failures may be caused by dry skin or minimal sweat layer. For wrist straps, try using an approved dissipative hand lotion such as Menda Reztore® ESD Hand Lotion to your wrist prior to use.
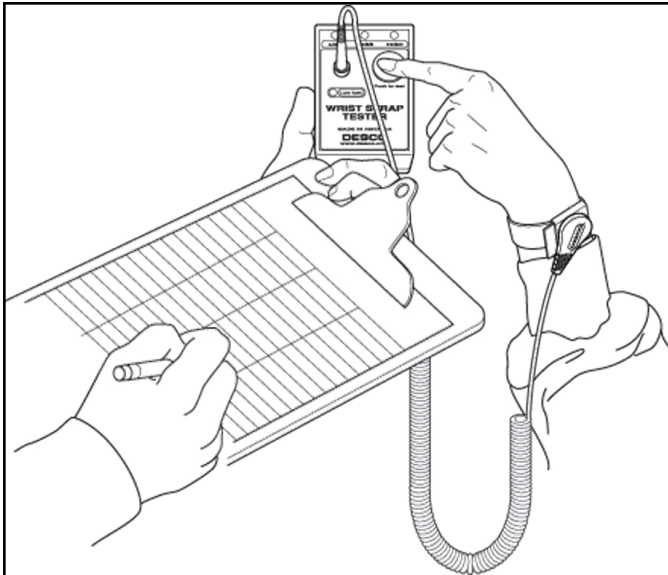
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Figure 2. Using the Portable Wrist Strap Tester and recording its results

Specifications

Power Supply	9V Alkaline Battery
Operating Temperature	32°F to 104°F (0 to 40°C)
Test Limits	750 kilohms to 10 megohms
Test Accuracy	±10% @ 750 kilohms ±15% @ 10 megohms
Test Voltage	4 VDC
Dimensions	3.6" x 2.6" x 1.1" (91 mm x 66 mm x 28 mm)
Weight	4 oz (113 g)

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

See the Desco Warranty -

Calibration

The Desco Portable Wrist Strap Tester is calibrated to NIST traceable standards. There are no user adjustments necessary. We recommend that calibration be performed annually using the Desco 07010 Calibration Unit. It is a convenient product which allows the customer to perform NIST traceable calibration on single-wire personnel testers. The Calibration Unit is designed to be used on the shop floor at the workstation, virtually eliminating downtime, verifying that the continuous monitor is operating within tolerances.

View technical bulletin TB-2039 for more information.

Figure 3. Desco 07010 Calibration Unit