



RS-733-996

Compact Tester Installation, Operation and Maintenance



Figure 1. 733-996 Wrist Strap and Footwear Test Station.

Description

The RS Compact Tester series can be used to test personnel wrist straps and footwear. The tester uses LEDs and an audible alarm to indicate whether the measured resistance is within the range specified by EN 61340-5-1.

A foot plate is included with the RS Compact Tester to allow users to test both their footwear and wrist strap. The Compact Tester is powered by a 9V PP3 battery for portability.

“Wrist straps shall be checked before use. Each check shall be made with the wrist band worn in contact with the wearer’s skin and with the ground cord attached to the appropriate tester.” [EN 61340 5 1 Clause 9.6 Daily checks, Clause 9.6.2 Wrist strap]

“Where toe and heel straps are used as ESD footwear, once these are worn outside the EPA [ESD protected area], particularly on carpets, they are likely to accumulate fluff and become ineffective; this requires that they be checked or replaced on every visit to the EPA. ...When ESD footwear is used, it should be noted that ESD footwear alone cannot achieve protection, but needs to be used in conjunction with a suitable ESD floor.” [EN 61340-5-2 Clause 5.2.8 Footwear]

“All wearers shall check that their heel and toe straps meet requirements [of Table 1 NOTE 2 – ‘When the footwear/floor systems are used as the primary

means of grounding personnel, the resistance of the combination shall be determined by the ESD co-ordinator, and is recommended to be between $7,5 \times 10^5$ ohms and $3,5 \times 10^7$ ohms]. The check shall be made before entering the EPA.” [EN 61340 5-1 Daily checks, Clause 9.6.3 Non-permanent footwear]

Packaging

Remove the test unit from the carton and inspect for shipping damages.

Each 733-996 unit should include the following:

- 1 Compact Wrist Strap / Footwear Tester
- 1 9V PP3 Alkaline Battery
- 1 Wall Plate
- 1 Foot Plate with Cord

Procedure to test wrist strap

1. Wear wristband. Choose one that fits snugly or adjust it to do so.
2. Connect the ground cord securely to the band using the snap connector.
3. Connect the other end of the cord to a matching termination on the tester.
4. Push the contact plate on the tester with one or two fingers. The tester will now indicate whether the total resistance is within the acceptable range.
5. Green light and buzzer indicate that the specification is met
Green = OK
6. A red light on either High fail or Low fail indicates non-conformance.
Red = FAIL

Do not proceed in the usual manner but contact your supervisor or follow your company procedure.

Procedure to test Footwear

1. Place one foot on the test plate and depress the contact plate on the tester.
The tester will now indicate whether the total resistance is within the acceptable range.

2. Green light and buzzer indicate that the specification is met
Green = OK

3. A red light on either High fail or Low fail indicates non-conformance.

Red = FAIL

Do not proceed in the usual manner but contact your supervisor or follow your company procedure.

In case of non-conformance

The instrument measures the resistance of the external circuit between the metal contact button and the cord connectors or the foot test plates. The wristband and cord, the plates and the footwear, the connection to the operator, the operator’s body resistance and the fingertip button contact are all part of the circuit. In case of a failure being indicated, determine whether the wrist strap or the footwear alone is failing by ensuring that the other elements of the circuit are sound.

Note:

If ‘battery low’ light comes on, insert a new 9V alkaline PP3 battery. The ‘battery low’ threshold is factory set at 6.5V.

Calibration

RS recommends annual calibration for all testers, monitors and ionisers. Please use the RS [763-0945](#) to verify the calibration of your Compact Tester.

Specifications

Dimensions: 115 x 70 x 26mm

Mass: 0.1 kg excluding battery

Resistance Limit

Low: 750 kilohms
High: 35 megohms

Accuracy: ±5%

Power Supply: 9V PP3 Battery

Typical Battery Life: 3500 tests