

TE-03 Footwear Electrical Resistance Tester

Purpose:

Apparatus is intended for testing electrical resistance with safety and other footwear for the purpose of determining electrical properties, and determining if it is a conductive or antistatic footwear.

Apparatus is made according to the requirements and apply for the tests according to the following standards:

EN ISO 20344; c. 5.10 Personal protective equipment – Test methods for footwear – Determination of electrical resistance

Description of the device:

Device consists of electrical resistance measuring instrument (Ohmmeter) with range of $10^5 \Omega$ to $10^{14} \Omega$, the inner electrode and the outer electrode plate, which also includes a device for measuring the resistance of the conductive lacquer, and 4 kg of steel balls of 5 mm diameter.

Dimension: Ohmmeter: (L) 200 x (W) 155 x (H) 100 mm; Outer electrode: 300 x 240 mm;

Weight: Ohmmeter: 1 kg; Steel balls of 5 mm diameter: 4 kg; Electrodes and cables: 0,7 kg;

Power supply: 230 V ~ 50 Hz; 25 W

Operating principle:

The test piece of footwear is filled with clean steel balls of the total mass of 4 kg (using a piece of insulating material to extend the height of the upper if necessary) and adjusted to a conductive outer electrode plate applying a voltage of (100 ± 2) V DC between the outer electrode plate and the steel balls for 1 minute and read off the resistance on the ohmmeter. The electrical resistance of conductive footwear is measured after conditioning in a dry atmosphere and the electrical resistance of antistatic footwear is measured after conditioning in a dry atmosphere and afterwards conditioning in a wet atmosphere.

