

Overview

Description

The Combo Tester X3 verifies the functionality of an operator's wrist strap and footwear. It determines if an operator's wrist strap and footwear will function correctly. The operator's wrist strap and footwear (both feet) will test simultaneously with no need for separate tests. Green lights indicate that the wrist strap and footwear are passing. Red lights and an audible alarm indicate when the wrist strap and/or footwear (left or right) are failing. If failure occurs, the tester will also display if the grounding device's resistance is too low or too high.

The Combo Tester X3 features a reliable and durable solid state switch which replaces the traditional mechanical test switch that has a spring and moving parts. The outer and inner portions of the solid state switch are designed to be bridged by a person's skin.

The factory test limits are set to:

Wrist Straps: 750 Kilohms and 35 Megohms
 Footwear: 750 Kilohms and 35 Megohms

Alternate test limit settings:

TESTER CONFIGURATION

The resistance limits for footwear and wrist strap tests are controlled by the DIP switches located on the left side of the Combo Tester X3. Use the following tables for the DIP switch settings and their corresponding test values.

Footwear Resistance

DIP switches 1 and 2 control the HIGH test limit.

Switch 1	Switch 2	HIGH Limit Resistance
ON	ON	10 Megohms (1×10^7)
OFF	OFF	35 Megohms (3.5×10^7)
ON	OFF	100 Megohms (1×10^8)
OFF	ON	1 Gigohm (1×10^9)

DIP switches 3 and 4 control the LOW test limit.

Switch 3	Switch 4	LOW Limit Resistance
OFF	OFF	footwear test disabled
ON	OFF	100 Kilohms (1×10^5)
OFF	ON	750 Kilohms (7.5×10^5)

default setting

NOTE: At 1 Gigohm high limit resistance, a dirty foot plate could result in a false pass. Be sure to keep the foot plate clean particularly when using this setting. This setting is not suitable for relative humidity greater than 50%.

Wrist Strap Resistance

DIP switches 5 and 6 control the HIGH test limit.

Switch 5	Switch 6	HIGH Limit Resistance
OFF	OFF	wrist strap test disabled
ON	ON	10 Megohms (1×10^7)
ON	OFF	35 Megohms (3.5×10^7)

default setting



Each Combo Tester X3 is calibrated with accepted procedures and standards traceable to the National Institute of Standards and Technology (NIST) and includes a NIST certificate.

This product can be used as one of the tools to fulfil EN 61340-5-1 Compliance verification requirements "Process monitoring (measurements) shall be conducted in accordance with a compliance verification plan that identifies the technical requirements to be verified, the measurement limits and the frequency at which those verifications must occur. ... Compliance verification records shall be established and maintained to provide evidence of conformity to the technical requirements. The test equipment selected shall be capable of making the measurements defined in the compliance verification plan."

"Wrist straps should be tested periodically. The frequency of testing, however, is driven by the amount of usage, wear and ESD risk exposure that can occur between tests. For example, what is the quantity of product handled between test periods? Typical test programs recommend that wrist straps that are used daily should be tested daily. However, if the products that are being produced are of such value that a guarantee of a continuous, reliable ground is needed then continuous monitoring should be considered or even required." (CLC TR 61340-5-2 User guide Wrist Strap clause 4.7.2.4.4 Test frequency)

Packaging COMBO TESTER X3

- 1 Combo Tester X3
- 1 Dual Foot Plate
- 1 Power Adapter, 12 VDC
- 1 Foot Plate Cord, 1.8 m
- 1 Ground Cord
- 1 10mm Wrist Cord Adapter
- 1 Certificate of Calibration