



OPERATING INSTRUCTION MANUAL

BFN-TE1018 (Static Check Meter)

PRODUCT INTRODUCTION

The BFN-TE1018 static check meter is an easy-to-use and inexpensive unit that shows how much static voltage is present on a person and drains the charge to the connected ground. This unit can be held on a hand or mounted on the wall. The TE1018 is an audit tool for ESD protection.

SPECIFICATION

- Power Supply: 9V PP3 alkaline battery
- Battery Life: Approx. 6 Months
- Operating Voltage: > 6.5V
- Operating Temp.: 5°C to 49°C
- RH: 0% to 90% (Non-condensing)
- Accuracy: $\pm 5\%$
- Size / Weight: L145mm X W95mm X H32mm / 190g

PRODUCT PHOTO



OPERATION

- Before using the TE1018 Static Check Meter, ground the meter using the provided 6-foot cord. The cord has a 10mm snap at one end and a 4mm banana plug at the other end.
- The mentioned cord is a grounding line connection for TE1018 meter.



Notes:

Failure to ground the unit can have an inconsistent or unreliable results. If the TE1018 is not connected to ground, a charge maybe retained in the meter resulting in a inconsistent readings. The circuit will only become responsive when offered a path to the ground.

FEATURES

- Quick visual display of static voltage from 0 – 19,990V
- Touch to test body voltage in both positive and negative polarity
- Easy to ground by simultaneously touching the 10mm snap contact
- Built-in low battery indicator into the LCD
- Micro-power circuit that allows the 9V alkaline battery to continuously test and displays results for approximately 6 months.
- Conductive static-safe carrying case with protective anti-static foam
- Measures how much static voltage a person is carrying
- Audits any potential static generator including the following:
Wrist straps, heel grounders, static safe shoes, chairs, table mats, floor mats, ground leads, purpose-built floors, garments, static sprays, floor finishes, the difference in potential between two people or materials, etc.

STANDARD TEST

- To check the static charge or build-up on a person and to ground the charge, simply set-up the unit in a convenient place and press a finger to a rectangular “Touch to Test” plate.
- The LCD will display a voltage range between “0000” volt to “19,990” volts on the LCD depending on the static build-up of the person undergoing the test.
- Then touch the 10mm stud next to the word “Ground” to immediately discharge any static charge.

TESTING FOR OTHER ITEMS

- **Wrist Straps**
Connect the 10mm snap on the 10mm snap stud on the TE1018 static check meter. Shuffle feet while touching the rectangular metal plate “Touch the Plate”. If the wrist strap is functioning properly, the meter will displays “0000” volt on the LCD.
Disconnect the wrist strap and repeat the test while touching the plate and shuffle feet again.
Depending on the humidity and type of footwear, a reading of several thousand volts of static charge may be displayed.
- **Coil Cords and Ground Leads**
These can be checked the same way as above, by holding the bare metal/conductive connection to the “Touch to Test” plate.
- **Custom Floors, Floor Coatings, Floor Mats, and Carpet Sprays**
Hold the meter with the thumb or fingers making the contact with rectangular “Touch to Test” Plate. Wearing heel grounders or other ESD footwear, shuffle feet on the floor under evaluation while still making contact with “Touch to Test” plate. If the floor is properly grounded, the LCD will display “0000”. Try the same test on a known insulative floor while wearing the same footwear. Shuffle feet again to see that even with good footwear, a charge can be generated on an insulative floor. Finally, try to test on the insulative floor but with rubber-soled shoes and several thousand will be displayed.
- **Chairs and Chair covers**
Hold the meter with the thumb or fingers making the contact with rectangular “Touch to Test” Plate. Sit on the grounded chair and shuffle back and forth. If the chair or chair cover is properly grounded, the LCD will display “0000”. Disconnect the chair or chair cover from the ground or used an insulative chair, and make sure that any floor mats is not connected to ground. Shuffle again and the meter will show that even little movements will generate large amount of charges.

- **Bonding Plugs and Common Ground Boxes**

If ground is faulty or the bonding plug/common ground box has a fault, the meter will display a charge. Repeat the process used for checking ground leads using a known working ground (i.e. outlet or other grounded surface).

- **Difference in Potential**

Two people are needed in this test. Person #1 begins by holding the TE1018 meter and making contact with the rectangular “Touch to Test” plate with thumb or fingers. Person #1 will then pass the meter to Person #2 who will touch the rectangular plate and observe the value displayed on the LCD to determine the difference in charges between himself and Person #1. This simulates the charge generated by Person #1 passing a PCB (Printed Circuit Board) to Person #2. If both persons were not grounded with footwear and/or wrist strap, there is a potential voltage difference generated by passing a PCB from one person to another.

- **The BFN-TE1018 Static-Check Meter can be applied to many other types of static control products in various static control situations.**

CALIBRATION PROCEDURE

- Unscrew the unit. Connect 1V supply to the input of the meter, i.e. 0 volt to ground (4mm Banana socket) and 1 volt to the end R12 on the PCB which is connected to U1 (Large Blue Resistor inside the unit on the PCB). Monitor the voltage with your Digital Volt Meter (DVM) and adjust VR1 (adjustable pot inside the meter on the PCB) until the reading matches the DVM (1V supply can be an ordinary AA cell).
- Power the TE1018 Meter with a variable supply set to 6.5V and monitor this with DVM. Adjust VR2 (adjustable pot inside the unit) until the “LOBAT” indication comes on.

Warranty labels are fixed to the outside of the TE1018 Meter. As the above procedure indicates, the unit must be opened in order to calibrate it. Thus, breaking the labels and voiding the warranty. Sending the meter back to the supplier for annual calibration is recommended.

Operating manual is only for BFN-TE1018 users. It includes the tester's components, operation and some concerning information, some upgrading property with continuing stability, slightly difference will be allowed with operation and manual.



Suppliers Information

A large, empty rectangular box with a dotted border, intended for suppliers' information.

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