

CALIBRATION TEST UNIT FOR PERSONNEL GROUNDING TESTERS

Installation, Operation and Maintenance



Made in Britain



Figure 1. [223001](#) Calibration Test Unit.

Operation

The Vermason [223001](#) Calibration Test Unit is designed to simplify the process of calibrating wrist strap and footwear testers. The calibration unit allows the user to quickly and easily verify whether a tester is operating within specifications. This product can be used as one of the tools to fulfill the EN 61340-5-1 clause 5.2.3 "Compliance Verification Plan". "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."

The Vermason [223001](#) Calibration Test Unit is a passive device, and requires no power source. The calibration test unit is manufactured to check the test ranges for both wrist strap and person/footwear systems per EN 61340-5-1 Table 2 Personnel Grounding of less than 3.5×10^7 ohms upper limit and detecting

the presence of current limiting resistance of 5×10^5 ohms. The [223001](#) is supplied calibrated to NIST traceable standards.

The Vermason [223001](#) Calibration Test Unit is an important tool for optimization of an ESD control program. A leading corporation estimates a \$95 to 1 return on every dollar invested in ESD control. However, the ESD protective products utilized must be working, so it is essential that testers are in calibration when used to verify the parameters of wrist straps and ESD footwear. The Vermason [223001](#) Calibration Test Unit easily pays for itself. Instead of returning testers to Vermason, a Calibration House, or even your Metrology Department, testers can be calibrated where located in the factory being out-of-service only a couple minutes. There is no need to have an extra replacement Tester. We recommend a minimum of annual calibration.

Monitoring and control instruments are out of the scope of RoHS (Restriction of Hazardous Substances).

To use the calibration unit:

1. Fit the two cords into the sockets on the calibration unit. Fit the other end of one lead into the socket on the top of the unit.
2. Turn the selector dial to the required test setting (usually fail high or low).
3. Press the end of the remaining lead onto the operating plate of the unit.

4. The relevant LED should light, and beeper should sound if it is a pass.

5. Repeat for the other settings on the calibration unit.

Calibration of the 223001

Instruments required:
BM80 Mega-ohm tester
2 x 4mm Plug leads

Instructions to Test:

Connect the BM80 to the tester using the 4mm leads. Switch the BM80 pointer to 50V test.

Point the rotary switch on the H330 Fail low to Fail high one at a time and press the button on the BM80 until meter gives a stable reading.

Record all the reading and compare with the following:

Fail Low:	793.8 – 826.2 kilohms
Pass Low:	970.2 – 1009.8 kilohms
Pass high:	30.87 – 32.13 megohms
Fail high:	37.73 – 39.27 megohms

If all the recorded readings are within the range above, the unit can be certified and labelled as tested.

Vermason's [223001](#) Calibrates items [222504](#) and [222506](#).

Limited Warranty

Vermason expressly warrants that for a period of one (1) year from the date of purchase, Vermason Calibration Test Units for Personnel Testers will be free of defects in material (parts) and workmanship (labour). Within the warranty period, a unit will be tested, repaired or replaced at Vermason's option, free of charge. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and for proper shipping instructions and address. Any unit under warranty should be shipped prepaid to the Vermason factory. You should include a copy of your original packing slip, invoice, or other proof of purchase date. Warranty repairs will take approximately two weeks.

If your unit is out of warranty, Vermason will quote repair charges necessary to bring your unit to factory standards. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and proper shipping instructions and address.

Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

Limit of liability

In no event will Vermason or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.