Limit Comparator for Testers Installation and Operating Instructions

Made in America

Figure 1. Item 222693 Limit Comparator

Description

Figure 2 shows the components of the limit comparator.

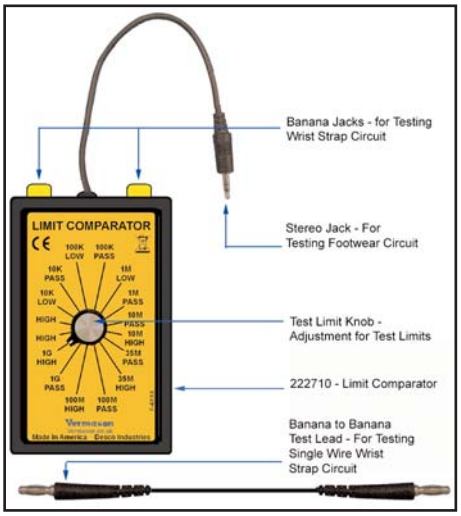


Figure 2. Components of item 222693

Installation

Remove the Limit Comparator from the carton and inspect for shipping damage. Included with the unit are:

- 1 Limit Comparator
- 2 Test Leads, Banana to Banana
- 1 NIST Certificate of Calibration

Operation

Testing Footwear Circuit, refer to figure 3.
To complete the footwear test, you will need to test the low and high limits. Refer to the dip setting on the left side of the testers for footwear test ranges. Manufacturer's suggested default test range is 1Meg low and 35Meg high for the US and Europe.

Do not power down tester, remove stereo cable from bottom right jack of tester labeled "FOOTPLATE" and connect the stereo lead from model 222693 to the jack labeled "FOOTPLATE".

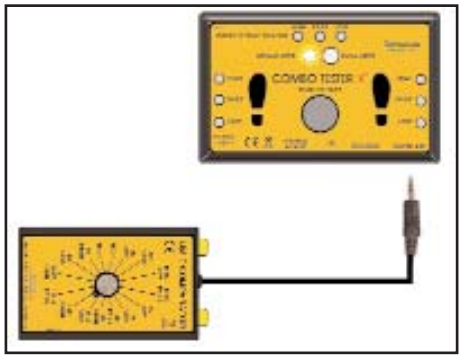
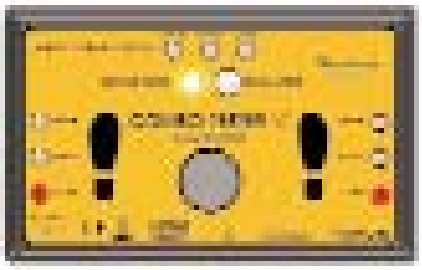


Figure 3. Footwear test setup

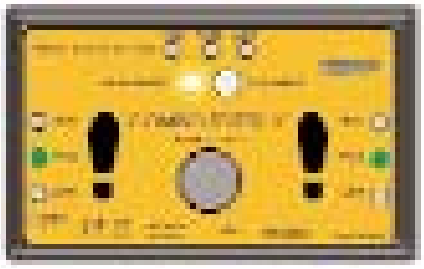
Testing Low Circuit - If the tester's low range is set to 1Meg. Set the knob on model 222693 to the "1M LOW" position. Push the metal button down on the tester and you should get a red LED for the left and right foot. Disregard the test result for the wrist strap if the wrist strap circuit is on.

Set the knob on model 222693 to "1M Pass", push the metal button on the tester and you should get a green LED for the left and right of the foot.

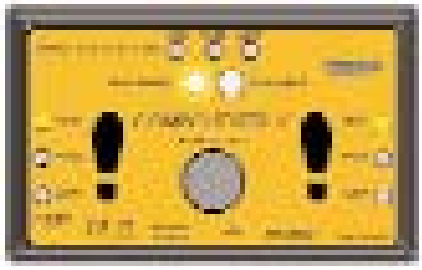
Testing High Circuit - If the tester's high range is 35Meg. Set the knob on model 222693 to "35M PASS", push the metal button on the tester and you should get a green LED for the left and right feet. Set the knob on model 222693 to "35M HIGH", push the metal button on the tester and you should get a yellow LED for both the left and right feet. If the limit is set to 1Gig on the tester, test at 1Gig on model 222693, same for 10Meg and 100Meg.



Footwear Low Fail



Footwear Low and High Pass



Footwear High Fail

Figure 4. Footwear test results

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Testing Wrist Strap Circuit, refer to figure 5.
To complete the wrist strap test, you will need to test the low and high limits. Refer to the dip setting on the left side of the testers for wrist strap test ranges. Manufacturer's suggested default test range is 1Meg low and 10Meg high for the US and 1Meg to 35Meg for Europe.

Do not power down the tester. Using the 2 banana leads included with model 222693. Attach 1 of the banana leads to the right side banana jack on model 222693 and connect the other end to the ground symbol jack on the tester. Connect the last banana jack to the left banana jack of model 222693 and the other end to the "SINGLE - WIRE" banana jack

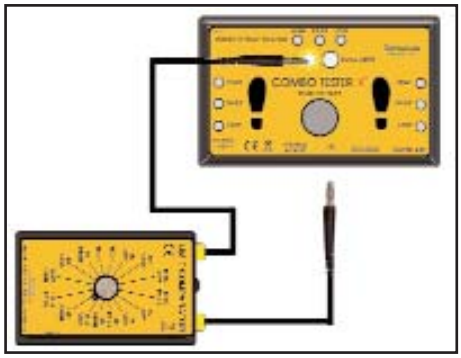

Figure 5. Wrist strap test setup

Testing Low Circuit - If the tester's low range is set to 1Meg. Set the knob on model 222693 to the "1M LOW" position. Push the metal button down on the tester and you should get a red LED for the Wrist strap. Disregard the test result for the footwear. Set the knob on model 50401 to "1M Pass", push the metal button on the tester and you should get a green LED for the wrist strap.

Testing High Circuit - If the tester's high range is 10Meg. Set the knob on model 222693 to "10M PASS" and push the metal button on the tester and you should get a green LED for the wrist strap. Set the knob on model 222693 to "10M HIGH" and push the metal button on the tester and you should get a yellow LED for the wrist strap. If the limit is set to 35Meg on the tester, then test at 35Meg on model 222693.

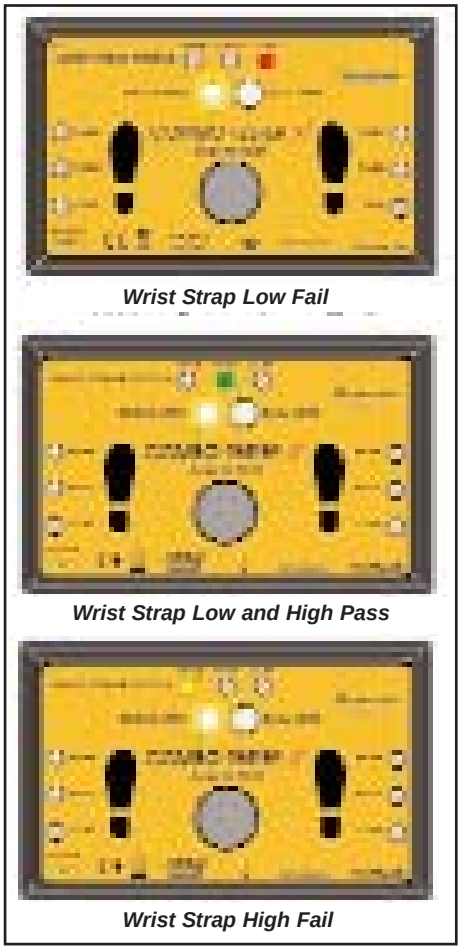

Figure 6. Wrist Strap test results

Specifications and Dimensions

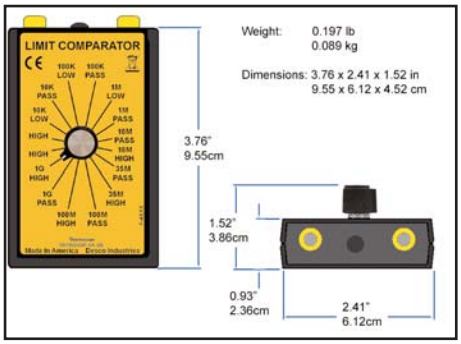

Figure 7. Dimensions of the 222693

The 22693 limit comparator will calibrate the following testers:

222720 - SmartLog X3 w/Dual Foot Plate, Keypad, & Barcode Reader, 120V
222700 - Dual Independent Footwear and Wrist Strap Tester
222690 - Dual Independent Footwear Tester

Calibration

There are no user adjustments on model 222693. Each value is a fixed resistor load, any model 222693 that falls out of specification will need to be sent to factory for repair. Using a DVM (digital voltage meter) set the meter to read ohms. The limit that the knob is set on can be measured using the DVM connected between Banana 1 to Banana 2 and connected between Conductor 1 and Conductor 2. Refer to figure 8.

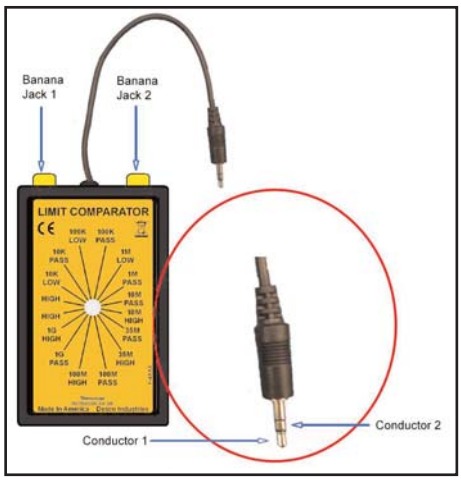

Figure 8. Test points

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222693 Limits	Nominal Resistance	% Tolerance of Nominal Resistance
10K Fail Low	9.5K	2%
10K Pass	10.5K	2%
100K Fail Low	95.0K	2%
100K Pass	105K	2%
1M Fail Low	950K	2%
1M Pass	1.05M	2%
10M Pass	9.09M	2%
10M Fail High	11.09M	2%
35M Pass	31.09M	2%
35M Fail High	37.89M	2%
100M Pass	90.9M	2%
100M Fail High	112.9M	2%
1G Pass	912.9M	2%
1G Fail High	1.113G	2%

Limited Warranty

Vermason expressly warrants that for a period of one (1) year from the date of purchase, Vermason Limit Comparators 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.

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