

Title: Calibration Of Megger BM14, 2.5kv/5kv Insulation Tester

Scope

Work Instruction for the internal calibration of megger BM124, 2.5kV / 5kV insulation testers. To be used in the absence of a manufacturers calibration instruction

Preparation

Calibration must be carried out using Category A Master instruments as required.

Equipment required;-

1. 45° instrument balance stand.
2. 5kV electrostatic voltmeter.
3. Megadek high resistance box.
4. Datron 9100 calibrator.

Method

- 1.1.1 All calibration results must be entered on the results sheets (see appendix A)
- 1.1.2 Note the lab. temperature / R.H. and enter onto the results sheet.
- 1.1.3 Carry out test 1
- 1.1.4 Carry out test 2 using instrument balance stand.
- 1.1.5 Carry out test 3 – 8
- 1.1.6 Carry out test 9 – 10 using 5kV electrostatic voltmeter.
- 1.1.7 Carry out test 11 – 19 using megadek.
- 1.1.8 Carry out test 20 to 25 using the Datron 9100 calibrator.
- 1.1.9 Complete results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Megger BM14 2.5kV / 5kV Insulation Tester

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Appendix A

Calibration Results for Megger BM14 2.5kV / 5kV Insulation Tester

Model Serial No
Date Result
Lab Temp / RH Operator
User Location Certificate No

Accuracies quoted are from manufacturer's specifications or relevant British Standard.

Movement Check

Test 1 Is the pointer on zero - instrument horizontal? Pass / Fail

Test 2 Instrument balance – check on voltage scale:
 ± 6 volt at 45° all planes Pass / Fail

Battery Check

Test 3 Press battery test button – does pointer deflect to within the scale
marked with the battery $\pm$ symbol? Pass / Fail

Preliminary Instrument Check

Test 4 Without test leads connected and with instrument switched to 5kV range,
press test button.
Does the pointer remain at INF on 5kV scale? Pass / Fail

Test 5 Connect test leads to instrument, leave instrument switched to 5kV
range and ensure ends of leads are not touching. Press test button.
Does the pointer remain at INF on 5 kV scale? Pass / Fail

Test 6 Switch instrument to 2.5kV range; ensure ends of leads are not touching.
Press test button.
Does the pointer remain in INF at 2.5kV scale? Pass / Fail

Test 7 Leave instrument switched to 2.5kV range and short ends of leads
together.
Does pointer indicate zero ohms? Pass / Fail

Test 8 Switch instrument to 5kV range, leave leads shorted together.
Does pointer indicate zero ohms? Pass / Fail

D.C. Output Voltage

Test No	Specified Output Volts	Specified Accuracy	Allowed Limits	Electrostatic Voltmeter	Result
9	2.5kV	$\pm 10\%$	2250 – 2750		Pass / Fail
10	5kV	$\pm 10\%$	4500 - 5500		Pass / Fail