

Title: Calibration Of Metrohm 9A Insulation And Continuity Testers

Scope

Work Instruction for the internal calibration of Metrohm 9A insulation and continuity 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. 45⁰ instrument balance stand.
2. Datron 9100 calibrator.
3. Keithley DMM model 136, plus resistors.
4. "Megadek" high resistance box.
5. J.J. Instruments decade resistance box.

Method

Calibration

1. All calibration results must be entered on the results sheets (see appendix A).
2. Note the lab temperature and R.H. and enter on results sheet.
3. Carry out test 2 using 45⁰ stand.
4. Carry out test 3 to 8 using the Fluke 5100B.
5. Carry out tests 9a / 9b / 9c / 9d using the Keithley DMM with matching test resistor as appropriate.
6. Carry out tests 10 to 15 using the Megadek.
7. Carry out tests 16 to 24 using the decade resistance box.
8. Complete the results sheet header and enter pass or fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Metrohm Insulation and Continuity Tester

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Appendix A

Calibration Results for Metrohm Insulation and Continuity Tester

Model Serial No

Date Result

Lab Temp / RH Operator

User Certificate No

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

Movement Check

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

Test 2 Instrument balance ± 1.6 mm at 45° all planes Pass / Fail

Voltage Range

Test No	UUT Indication Volts (50HZ)	Specified Accuracy $\pm 3\%$ FSD	Calibrator Voltage	Result
3	500	± 15 volt		Pass / Fail
4	400	± 15 volt		Pass / Fail
5	300	± 15 volt		Pass / Fail
6	200	± 15 volt		Pass / Fail
7	100	± 15 volt		Pass / Fail
8	Did neon indicator light for tests 3 to 7?			Pass / Fail

Insulation Range : DC Output Voltage

Test No	Specified Output Voltage	Specified Accuracy	Matching Test Resistor	UUT Output Volts	Result
*9a	500	± 50 v	1 Mohm		Pass / Fail
*9b	1000	± 100 v	2 Mohm		Pass / Fail
*9c	500	+ 100v - 0v	0.5 Mohm		Pass / Fail
*9d	1000	+200v - 0v	1 Mohm		Pass / Fail

Tests 9c & 9d are for "16th edition" instruments

* Delete as appropriate