Title: Calibration Of Metrohm Digital Insulation And Continuity Tester

Scope

Work Instruction for the internal calibration of Metrohm Digital 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;-

- Datron 9100 Calibrator.
- Keithley DMM Model 136.
- Load resistors: 500k, 1 Mohm, 2 Mohm
- Megadek high resistance box
- J.J. Instruments decade resistance box

Method

3.2.1 All calibration results must be entered on the results sheets (see appendix A)

3.2.2 Note the lab. temperature / R.H. and enter onto the results sheet.

3.2.3 Carry out tests 1 to 4 using the Datron 9100 calibrator.

3.2.4 Carry out tests 6 to 8 using the Keithley DMM and appropriate load resistors.

3.2.5 Carry out tests 9 to 14 using the Megadek high resistance box.

3.2.6 Carry out tests 15 and 16 using the J.J. Instruments decade resistance box.

3.2.7 Complete the results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Metrohm Digital Insulation and Continuity Tester

Documents
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Appendix A

Calibration Results for Kane-May Digital Thermometers

Model ……Serial No ……..

Date ……..Result ……

Lab Temp / RH ……Operator ……

User Location ……Certificate No ……

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

A.C. Voltage Range

Accuracy 1.5% F.S.D. Auto range at 200V, 500V

Test No	Metrohm Indication Volts (50Hz)	Calibrator Reading	Allowed Limits	Result
1	100		97 – 103	Pass / Fail
2	500		492 - 508	Pass / Fail

D.C. Voltage Range

Accuracy 1.5% of reading ± 1 digit

Test No	Metrohm Indication Volts (50Hz)	Calibrator Reading	Allowed Limits	Result
3	10		9.84 – 10.16	Pass / Fail
4	190		186.9 – 193.1	Pass / Fail

Neon Indicator

Test 5 Does the neon indicator light for tests 1, 2 and 4? Pass / Fail

Insulation Range D.C. Output Voltage

Accuracy ± 10%

Test No	Specified Output Volts	Load Resistor	Allowed Limits	Output Volts	Pass / Fail
6	250	500kΩ	225 – 275		Pass / Fail
7	500	1 MΩ	450 – 550		Pass / Fail
8	1000	2MΩ	900 - 1100		Pass / Fail

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