

Title: Calibration Of Megger D201 Ducter Digital Ohm Meter (20 Ohm)

Scope

Work Instruction for the internal calibration of Megger D201 Ducter Digital Ohm Meter (20 ohm). 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;-

- 1.1 J.J. Instruments Decade Resistance Box.
- 1.2 H. Tinsley Standard Resistor Box.
- 1.3 Shunt 100A / 125mV.

Method

- 2.1 All calibration results must be entered on the results sheets (see appendix A).
- 2.2 Note the lab temp / relative humidity and enter on calibration results sheet.
- 2.3 Connect the UUT to the decade resistance box using four similar leads and carry out tests 1 – 15. Forward and reverse readings of the UUT must be recorded.
- 2.4 Connect the UUT to the H. Tinsley standard resistor Box 100 mohm terminals and carry out test 17.
- 2.5 Transfer the leads to the 10 mohm terminals on the H. Tinsley standard resistance box and carry out test 17.
- 2.6 Connect the UUT to the shunt and carry out test 18.
- 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 Megger D201 Digital Ducter Ohm Meter

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Appendix A

Calibration Results for Megger D201 Digital Ducter Ohm Meter

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

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

UUT Accuracy: $\pm (0.25\% \text{ RDG} + 1d)$

Test No	UUT Range OHMs	UUT Reading (F/R) OHMs		Applied Value OHMs	Allowed Limits	Result
1	20			1.026	1.01 to 1.03	Pass / Fail
2	20			2.026	2.01 to 2.04	Pass / Fail
3	20			3.026	3.00 to 3.04	Pass / Fail
4	20			4.026	4.00 to 4.04	Pass / Fail
5	20			5.026	5.00 to 5.04	Pass / Fail
6	20			6.026	6.00 to 6.05	Pass / Fail
7	20			7.026	6.99 to 7.05	Pass / Fail
8	20			8.026	7.99 to 8.05	Pass / Fail
9	20			9.026	8.99 to 9.05	Pass / Fail
10	20			10.026	9.99 to 10.06	Pass / Fail
11	20			12.026	11.98 to 12.06	Pass / Fail
12	20			14.026	13.98 to 14.07	Pass / Fail
13	20			16.026	15.97 to 16.07	Pass / Fail
14	20			18.026	17.97 to 18.08	Pass / Fail
15	2			1.026	1.022 to 1.029	Pass / Fail
16	200m			100m	99.6 to 100.3m	Pass / Fail
17	20m			10m	9.96 to 10.03m	Pass / Fail
18	2m			1.253m	1.248 to 1.257m	Pass / Fail

The UUT was calibrated using the following equipment:

1. J.J. Instruments Decade Resistance Box S/N
2. H. Tinsley Standard Resistor Box S/N
3. Shunt 100A / 125mV S/N

The uncertainty of measurement is estimated not to exceed:

1 ohm to 20 ohm: $\pm (0.035\% + 2.5m\Omega)$
10m Ohm to 100m Ohm: $\pm 0.034\%$
1.253 m Ohm: $\pm 0.08\%$

The uncertainty limits quoted, which are derived from the arithmetic summation of the contributions, refer to the applied values only and do not relate to the stability of the UUT.