

Title: Calibration Of Track Circuit Shunt Resistor Box 0 – 11 Ohm

Scope Work Instruction for the internal calibration of Track Circuit Shunt Resistor Box 0 – 11 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 Megger Ducter Digital Ohmmeter.

Method

- 2.1 All calibration results must be entered on Appendix A.
- 2.2 Note Lab Temp / R.H. and enter onto the results sheet.
- 2.3 Carry out test 1 using item 1.1 on the 20 mohm range.
- 2.4 Carry out test 2 using item 1.1 on the 200 mohm range.
- 2.5 Carry out tests 3 to 12 using item 1.1 on the 2 ohm range.
- 2.6 Carry out tests 13 to 21 using item 1.1 on the 20 ohm range.
- 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 Track Circuit Shunt resistor Box 0-11Ohm

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Appendix A

Calibration Results for Track Circuit Shunt Box 0 – 11 Ohm

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.

Test 1 Residual resistance (i.e. both dials set to zero) = Pass / Fail

Switched Resistances (excluding residual) RH Decade only

Test No	Decade Switch Ohms	Measured Resistance	Allowed Limits	Result
2	0.1		0.09 to 0.11	Pass / Fail
3	0.2		0.18 to 0.22	Pass / Fail
4	0.3		0.27 to 0.33	Pass / Fail
5	0.4		0.36 to 0.44	Pass / Fail
6	0.5		0.45 to 0.55	Pass / Fail
7	0.6		0.54 to 0.66	Pass / Fail
8	0.7		0.63 to 0.77	Pass / Fail
9	0.8		0.72 to 0.88	Pass / Fail
10	0.9		0.81 to 0.99	Pass / Fail
11	1.0		0.9 to 1.1	Pass / Fail
12	1		0.9 to 1.1	Pass / Fail
13	2		1.8 to 2.2	Pass / Fail
14	3		2.7 to 3.3	Pass / Fail
15	4		3.6 to 4.4	Pass / Fail
16	5		4.5 to 5.5	Pass / Fail
17	6		5.4 to 6.6	Pass / Fail
18	7		6.3 to 7.7	Pass / Fail
19	8		7.2 to 8.8	Pass / Fail
20	9		8.1 to 9.9	Pass / Fail
21	10		9 to 11	Pass / Fail

The UUT was calibrated using the following equipment:

1. Megger Ducter Digital Ohmmeter S/N _____

The uncertainty in the applied values is estimated not to exceed:

Resistance: $\pm 2.25\%$

The uncertainty limits quoted refer to the applied values only and do not relate to the stability of the UUT.