

Title: Calibration Of Weir 6 Inch D.C. Ammeter With Internal Shunt 0 – 150A (100mv Movement)

Scope

Work Instruction for the internal calibration of Weir 6 Inch D.C. Ammeter with Internal Shunt 0 – 150A (100mV Movement). 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 Datron 9100 calibrator.
- 1.2 Solartron Model 7065 Microprocessor Voltmeter.

Method

- 2.1 All calibration results must be entered on the results sheets (see appendix A).
 - 2.2 Note the lab. temperature / R.H. and enter onto the results sheet.
 - 2.3 Carry out test 1.
 - 2.4 Carry out test 2 using item 1.2.
 - 2.5 Disconnect the movement from the shunt and carry out tests 3 to 7 using item 1.1, with the 50 ohm override switched on.
 - 2.6 Carry out test 8 using items 1.1. and 1.2. Note: remove the link between guard and negative terminal of item 1.2.
 - 2.7 Reconnect the shunt and carry out the functional test 9.
 - 2.8 Complete the results sheet header and enter Pass / Fail.
- All records must be kept for audit purposes

References

Appendix A Calibration of Weir 6 Inch D.C. Ammeter with Internal Shunt 0 – 150A (100mV Movement)

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Appendix A

Calibration of Weir 6 Inch D.C. Ammeter with Internal Shunt 0 – 150A (100mV Movement)

ModelSerial No

DateResult

Lab Temp / RHOperator

User LocationCertificate No

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

Movement Check

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

Test 2 Instrument balance $\pm 1\%$ at 45° all planes Pass / Fail

Millivolt Calibration

UUT Accuracy $\pm 2.0\%$ F.S.D.

Note: Shunt Disconnected

Test No	UUT Reading A/mV	Calibrator Reading mV	Allowed Limits	Result
3	30 / 20		18 to 22	Pass / Fail
4	60 / 40		38 to 42	Pass / Fail
5	90 / 60		58 to 62	Pass / Fail
6	120 / 80		78 to 82	Pass / Fail
7	150 / 100		98 to 102	Pass / Fail

Shunt Calibration (Actual Value 0.666 mohms)

Test No	Calibrator Setting Amps	Solartron Reading mV	Allowed Limits	Result
8	15		9.9 to 10.1	Pass / Fail

Functional Test (Shunt Connected)

UUT Accuracy: $\pm 2\%$ F.S.D. $\pm 1\%$ reading

Test No	UUT Reading Amps	Calibrator Reading Amps	Allowed Limits	Result
9	15		11.85 to 18.15	Pass / Fail