

Title: Calibration Of Megger PAT 2/2 Portable Appliance Tester

Scope

Work Instruction for the internal calibration of Megger PAT 2/2 Portable Appliance Tester. 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 Test Box.
- 1.2 45° Instrument Balance Stand.
- 1.3 Constant Voltage Transformer and "Variac".
- 1.4 Fluke 8842A DMM.
- 1.5 5kV Electrostatic Voltmeter.
- 1.6 Flash Test Lead.
- 1.7 Flash Test Lead.
- 1.8 Special extension Lead.
- 1.9 Clampmeter.

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 Carry out test 1 and 2 and note the results.
 - 2.4 Carry out test 3 using equipment 1.3.
 - 2.5 Carry out tests 4 and 5 using equipment 1.1. and 1.3.
 - 2.6 Carry out test 6 using equipment 1.1. and 1.3.
 - 2.7 Carry out test 7 using 1.1, 1.3 and 1.4.
 - 2.8 Carry out test 8 using equipment 1.1, 1.3 and 1.4.
 - 2.9 Carry out test 9 using equipment 1.3, 1.5 and 1.6.
 - 2.10 Carry out test 10 using equipment 1.3, 1.5 and 1.7.
 - 2.11 Carry out test 11 using equipment 1.4, 1.8, and 1.9.
 - 2.12 Complete the results sheet header and enter Pass / Fail.
- All records must be kept for audit purposes

References

Appendix A Calibration Results for Megger PAT 2/2 Portable Appliance Tester

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Appendix A

Calibration Results for Megger PAT 2/2 Portable Appliance Tester

Model Serial No

Date Result

Lab Temp / RH Operator

User Location Certificate No

Accuracies quoted are from the manufacturer's specification so results obtained below are a guide to the correct operation of the PAT 2/2

Test No		Result
1	Is the pointer on zero? – instrument horizontal	Pass / Fail
2	Instrument balance $\pm \frac{1}{16}$ " AT 45^0 all planes	Pass Fail

Note: for test 3 to 10 PAT 2/2 supply must be from the mains via a CVT and Variac. The output from the Variac must be set at 240 volt.

3	PAT 2/2 earth test – Plug PAT 2/2 into Variac and connect 25A test point on PAT 2/2 to earth of mains supply using earth bond lead – switch to test 1 and press test button: Does the instrument indicate less than 0.2 ohm?	Pass / Fail
4	Insert test box "Plug 1" into PAT 2/2 tester "load" socket and connect 25A test point on PAT 2/2 to TP1 on test box. Set PAT 2/2 switch to test 1 and press test button. Does the instrument indicate 0.1 ohm $\pm \frac{1}{16}$ "?	Pass / Fail
5.	Insert test box "plug 2" onto PAT 2/2 test "load" socket, set PAT 2/2 switch to test 2 and press test button. Does the instrument indicate 2 Mohm $\pm \frac{1}{16}$ "?	Pass / Fail
6	Insert test box "plug 4" into PAT 2/2 test "load" socket, set PAT 2/2 switch to test 3 and press test button. Does PAT 2/2 indicate at right hand edge of green band	Pass / Fail
7	Insert test box "plug 3" into PAT 2/2 tester "flash" socket, set PAT 2/2 switch to test 5. Select the 20 mA A.C. range on the Fluke 8842A and connect to blue sockets on tope of the test box. Press the test button and using pot on test box, set the current as read on the Fluke to 5mA. Does PAT 2/2 indicate 5 mA $\pm \frac{1}{16}$ "?	Pass / Fail
8	Insert test box "plug 5" into PAT 2/2 tester "load" socket and set PAT 2/2 switch to test 2. Select the 1000v D.C. range on Fluke and connect to green / black sockets on test box and press test button.	

Fluke Reading	Allowed Limits	Result
	450 - 550	Pass / Fail