

Title: Calibration Of Megger PAT 32 Portable Appliance Tester

Scope

Work Instruction for the internal calibration of Megger PAT 32 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].
- 1.2 Test Box [2].
- 1.3 Fluke 8842 DMM.
- 1.4 Constant Voltage Transformer and "Variat".

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.
- 2.4 Carry out test 2 using item 1.1 and 1.4.
- 2.5 Carry out test 3 using a 1.1, 1.3 and 1.4.
- 2.6 Carry out test 4 using item 1.1 and 1.4.
- 2.7 Carry out test 5 using item 1.2 and 1.4.
- 2.8 Carry out test 6 using item 1.1, 1.3 and 1.4.
- 2.9 Carry out test 7 using item 1.1 and 1.4.
- 2.10 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 32 Portable Appliance Tester

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Appendix A

Calibration Results for Megger PAT 32 Portable Alliance Tester

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.

For each of the tests the supply is taken from the mains via a CVT and Variac. The Variac is set to give an output of 240 volt.

Test 1 PAT 32 Self Earth Test

Plug PAT 32 into the mains and connect 10A / 25A terminal on PAT 32 to earth of the mains supply using the red "plug-in" test lead. Press the 10A earth switch.
 Does the PAT 32 indicate less than 100 mohm?

Pass / Fail

Test 2 Insert test box [1] "Plug 1" into PAT 32, 13A socket and connect 10A / 25A terminal of PAT 32 to TPI on the test box using the earth bond test lead.

Press 10A earth bond test switch – reading =

Press 25A earth bond test switch – reading =

Actual value of 0.1 ohm load resistor (from history file) =

Does the PAT 32 indicate actual value of load resistor $\pm 7.5\%$?

Pass / Fail

Test 3 Leave connections from test 2 in place and connect the Fluke DMM to terminals marked TPV on top of the test box. Set the DMM to autorange AC volts (a) Press 10A earth bond test switch

DMM reading = volts

Test current = $\frac{\text{volts}}{\text{actual load resistor value}}$ = = Amps

(b) Press 25A earth bond test switch

DMM reading = volts

Test current = $\frac{\text{volts}}{\text{actual load resistor value}}$ = = Amps

Is test current in 3(a) $10A \pm 2A$

Pass / Fail

Is test current in 3(b) $25A \pm 2A$

Pass / Fail