

Multimeter

Memorial University Technical Services

Document No: TS-0067

Revision 3

Fluke models 75,87,112,117,179,187,233,902,8810A

1.0 Equipment

Simulator capable of producing AC and DC voltage, AC and DC current , resistance
Frequency and temperature, Variac Transformer, Fluke 43 Power Quality Analyzer.

Use form TS-0088 Multimeter Calibration Record Sheet.

2.0 Procedure

- 1) Record the ambient temperature. If the ambient temperature is $<18^{\circ}\text{C}$ or $>24^{\circ}\text{C}$ perform verification at another location.
- 2) Connect the meter to the simulators voltage and common connections
- 3) Select DC voltage on meter selector switch
- 4) Input DC voltages as per Multimeter Record Sheet and record measured voltages
- 5) Select ohms on meter selector switch
- 6) Input resistance as per Multimeter Record Sheet and record measured resistances
- 7) Select DC mA on meter selector switch
- 8) Input DC mA as per Multimeter Record Sheet and record measured current
- 9) If available for that model select frequency on the meter selector switch (both AC and DC)
- 10) Input frequencies as per Multimeter Record Sheet and record measured frequencies

- 11) If available for that model select temperature on the meter selector switch
- 12) Input temperature as per Multimeter Record Sheet and record measured temperatures.

3.0 Verifying AC Voltage

- 1) Connect the multi meter leads to the output of the Variac.
- 2) Connect the Fluke 43 Power Quality Analyzer to the output of the Variac.
- 3) Select AC Volts on the multi meter.
- 4) Adjust the AC Voltage output on the Variac to a minimum then turn on the Variac.
- 5) Turn on the Fluke 43 Power Quality Analyzer.
- 6) Adjust the Variac to voltages shown on the Multi Meter Record Form TS-0088 as measured on the Fluke 43 Power Quality Analyzer.
- 7) Record the values on the Multi Meter Form TS-0088.