

MODEL 102

MINI DIGITAL MULTIMETER

INSTRUCTION MANUAL

IMPORTANT

Please read this instruction carefully to ensure the safe and effective use of the tool.

FEATURES

3 1 / 2 digit LCD display

Safety designed in accordance with IEC 1010-1 over-voltage category 2.

7 functions 16 position selector.

Measures AC / DC voltage, DC amps and Resistance.

Battery, diode and continuity test.

Supplied complete with test leads and battery(A23)

SPECIFICATION

DC voltage: 200mV, 2V, 20V, 200V,500V

Accuracy: $\pm 0.5\%$ rdg ± 2 digits

Impedance: 1M ohm

Overload protection: 500V rms.

AC voltage: 200V, 500V(40~400Hz)

Accuracy: $\pm 2.0\%$ rdg ± 5 digits

Impedance: 450K ohm

Overload protection: 500V rms.

Resistance: 200, 2000, 20K, 200K, 2000K ohm

Accuracy: $\pm 1.5\%$ rdg ± 4 digits

DC current: 2mA, 200mA

Accuracy: $\pm 2.0\%$ rdg ± 2 digits

Overload protection: f.200mA/250V fuse

Diode test: test current 1.6mA maximum
test voltage 3.2V maximum

Battery test: range 9V, test current 6mA

Continuity test: the buzzer sounds when the resistance in a circuit to be measured is less than about 50 ohm

WARNING:

To prevent risk of fire use only the correct fuse, as shown above.

To avoid electric shock remove test probes before opening. Replace cover before use.

OPERATION

WARNINGS

Before you use the instrument, inspect the test leads and probes for damage e.g. cracks or breaks, in the insulation. Replace if they are damaged.

Never use damaged leads/ probe.

If the voltage to be measured is not know, set the selector switch to the highest range and reduce until a satisfactory reading is obtained.

DC Voltage Measurement

1. Set the selector switch to the desired DCV range.
2. Turn on the power to the circuit to be measured.
3. Connect the test leads to the circuit to be measured. The voltage value should appear on the digital display along with the voltage polarity(if reversed only).

AC Voltage Measurement

1. Set the selector switch to the desired ACV range.
2. Turn on the power to the circuit to be measured.
3. Connect the test leads to the circuit to be measured. The voltage value will appear on the digital display.

DC Current Measurement

1. Set the selector switch to the DCA range.
2. Open the circuit to be measured and connect the test leads in series with the load in which current is to be measured.
3. Turn on the power to the circuit to be measured, the current value will appear on the digital display.

Resistance Measurement

1. Set the selector switch to the desired OHM range.
2. **WARNING:** If the resistance to be measured is

part of a circuit, turn off the power and discharge all capacitors before measurement.

3. Connect the test leads to the circuit to be measured.

The resistance value should now appear on the digital display.

Diode Test

1. Set the selector switch to the diode position.
2. Connect the red test lead to the anode of the diode to be measured and the black test lead to the cathode.

The forward voltage drop in mV will be displayed. If the diode is reversed, the figure 'I' should be shown on the display.

Battery Test

1. Set the selector switch to the BATT position.
2. Connect the test leads to the battery to be measured, the battery voltage value should appear on the digital display.

Continuity test

1. Set the selector switch to the 'Buzzer' position.
2. Connect the test leads to the circuit or conductor to be tested, the continuity will be judged by whether the buzzer sound or not.
3. The buzzer sounds when the resistance in the circuit to be measured is less than about 50 ohm.