

## SAFETY CONSIDERATIONS

**WARNING:** Please follow manufacturers test procedures whenever possible, Do not attempt to measure unknown voltages or components until a complete understanding of the circuit is obtained.

## GENERAL GUIDELINES

### ALWAYS

- Test the 100 before using it to make sure it is operating properly.
- Inspect the test leads before using to make sure there are no breaks or shorts.
- Double check all connections before testing.
- Have someone check on you periodically if working alone.
- Have a complete understanding of the circuit being measured.
- Disconnect power to circuit, then connect test leads to the 100, then to circuit being measured.

### NEVER

- Attempt to measure unknown high voltages.
- Connect the test leads to a live circuit before setting up the instrument.
- Touch any exposed metal part of the test lead assembly.

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## CATEGORY RATINGS DEFINITIONS

### IEC 1010

#### Over Voltage:

CAT II - 1000V

CAT III - 600V

Pollution Degree 2

**CAT II-1000V** Installation Category(Overvoltage Category)II: Includes voltages encountered on the step down side of the transformer on the building and at a distance of 10 meters from the CAT III source.

**CAT III-600V** Installation Category(Overvoltage Category)III: Includes voltage encountered on the distribution level with short distance to the main service connection.

**Pollution Degree 2** Normally only nonconductive pollution occurs. Occasionally temporary conductivity caused by condensation must be expected.

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## SPECIFICATIONS

| Function | Range    | Resolution | Accuracy       |
|----------|----------|------------|----------------|
| DCV      | 1.5V- 4V | 0.001V     |                |
|          | 40.00V   | 0.01V      | $\pm(0.5\%+4)$ |
|          | 400.0V   | 0.1V       |                |
|          | 600V     | 1V         | $\pm(0.8\%+4)$ |
| ACV      | 1.7V-4V  | 0.001V     |                |
|          | 40.00V   | 0.01V      | $\pm(0.8\%+4)$ |
|          | 400.0V   | 0.1V       |                |
|          | 600V     | 1V         | $\pm(1.2\%+4)$ |
| OHM      | 400.0    | 0.1        |                |
|          | 4.000K   | 0.001K     |                |
|          | 40.00K   | 0.01K      | $\pm(0.8\%+4)$ |
|          | 400.0K   | 0.1K       |                |
|          | 4.000M   | 0.001M     |                |
|          | 40.00M   | 0.01M      | $\pm(2.0\%+4)$ |

## GENERAL SPECIFICATIONS

|                 |                                     |
|-----------------|-------------------------------------|
| Power Supply    | 2 Each 1.5 Volt "AA" Batteries      |
| Battery Life    | 560hrs. Alkaline                    |
| Size(H x L x W) | 45mmX153mmX78mm<br>(1.8"X6.0"X3.1") |
| Weight          | 330g(11.6oz)                        |

## MEASURING AC/DC VOLTAGE

Make sure that the ground and positive leads are plugged into the proper receptacle for corresponding function positions.

### **WARNING**

*Do not attempt to make a voltage measurement of more than 600V or of a voltage that is unknown.*

### Measurement Procedure:

1. Disconnect power to circuit to be measured.
2. Plug black test lead into the COM input jack.
3. Plug the red test lead into the V/Ω input jack.
4. Connect test leads to circuit to be measured.
5. Reconnect power to circuit to be measured.
6. Read the voltage on the 100.

Note: For Auto mode to operate properly, DC voltage must be between  $\pm 1.5V$  and  $\pm 600V$ . AC voltage must be between 1.7V and 600V.

## MEASURING RESISTANCE

### **▲WARNING**

*Do not attempt to make resistance measurements with circuit energized. For best results, remove the resistor completely from the circuit before measuring.*

**NOTE:** *To make accurate low ohm measurements, short the test leads together and record the resistance reading. Deduct this value from actual readings.*

### **Measurement Procedure:**

1. Disconnect power to circuit to be measured.
2. Plug black test lead into the COM input jack.
3. Plug the red test lead into the V/ $\Omega$  input jack.
4. Connect test leads to circuit to be measured.
5. Read the resistance on the 100.

## MAINTENANCE

1. **Battery Replacement:** The 100 will display a battery symbol when the internal 1.5 Volt battery needs replacement. The battery is replaced as follows:
  - a. Disconnect and remove all test leads from live circuits and from the 100.
  - b. Remove the 100 from its protective boot.
  - c. Remove the four screws from back of 100 housing.
  - d. Carefully pull apart front and rear instrument housing.
  - e. Remove old batteries and replace with new batteries.
  - f. Reassemble instrument in reverse order from above.
2. **Cleaning your 100:**

Use a mild detergent and slightly damp cloth to clean the surfaces of the 100.