

SAFETY INFORMATION
The following safety information must be observed to insure maximum personal safety during the operation at this meter.

Display: 3½ digit liquid crystal display (LCD) with a maximum reading of 1999.

Overrange: (OL) or (-OL) is displayed

Low battery indication: the "" is displayed when the

Measurement rate: 2.5 times per second, nominal

Storage temperature: -20°C to 60°C, 0 to 80% R.H. with battery removed from meter.

Safety: According to EN61010-1 protection class II over-

Dimensions: 151mm (H) x 70mm (W) x 38mm (D).

Weight: Approx. 7 oz. (200g) including battery.
Accessories: One pair test leads, One spare fuse, 9V battery (installed) and Operating Instructions.

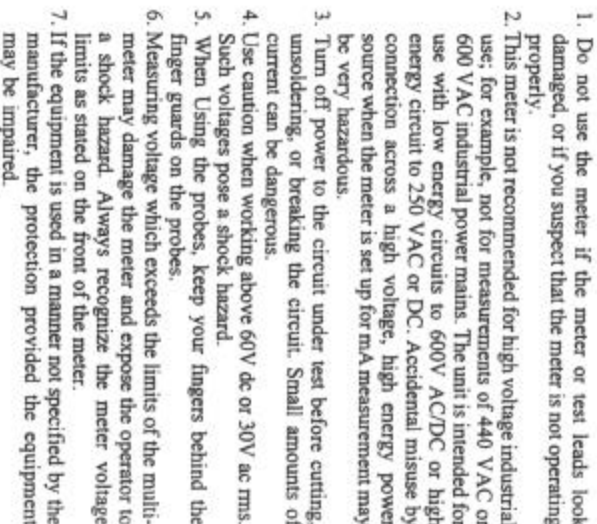
Before taking any measurements, read the Safety Information Section. Always examine the instrument for damage, contamination (excessive dirt, grease, etc.) and defects. Examine the test leads for cracked or frayed insulation. If any abnormal conditions exist do not attempt to make any measurements.

1. Connect the red test lead to the "VDA" jack and the black test lead to the "COM" jack.

2. Set the Function/Range switch to the desired voltage range and slide the "A/C/DC" selector switch to the desired voltage type. If magnitude of voltage is not known, set switch to the highest range and reduce until a satisfactory reading is obtained.
3. Connect the test leads to the device or circuit being measured.
4. For dc, a (-) sign is displayed for negative polarity; positive polarity is implied.

1. Set the Function/Range switch to the desired current range and slide the "AC/DC" selector switch to the desired current type.

- For current measurements less than 200mA, connect the red test lead to the "VΩA" jack and the black test lead to the COM jack.
- For current measurements over 200mA or greater, connect the red test lead to the 10A jack and the black test lead to the COM jack.



The following safety information must be observed to insure maximum personal safety during the operation at this meter:

1. Do not use the meter if the meter or test leads look damaged, or if you suspect that the meter is not operating properly.
2. This meter is not recommended for high voltage industrial use; for example, not for measurements of 440 VAC or 600 VAC industrial power mains. The unit is intended for use with low energy circuits to 600V AC/DC or high energy circuit to 250 VAC or DC. Accidental misuse by connection across a high voltage, high energy power source when the meter is set up for mA measurement may be very hazardous.
3. Turn off power to the circuit under test before cutting, unsoldering, or breaking the circuit. Small amounts of current can be dangerous.
4. Use caution when working above 60V dc or 30V ac rms. Such voltages pose a shock hazard.
5. When Using the probes, keep your fingers behind the finger guards on the probes.
6. Measuring voltage which exceeds the limits of the multi-meter may damage the meter and expose the operator to a shock hazard. Always recognize the meter voltage limits as stated on the front of the meter.
7. If the equipment is used in a manner not specified by the manufacturer, the protection provided the equipment may be impaired.

4. Remove power from the circuit under test and open the normal circuit path where the measurement is to be taken. Connect the meter in series with the circuit.
5. Use caution when measuring 10 amps on 10A range for 60s, please waiting for 10 minutes for next measurement of 10 amps for safety reason.

2. Remove power from the equipment under test.
3. Connect the red test lead to the "VGA" jack and the black test lead to the "COM" jack.

4. Touch the probes to the test points. In ohms, the value indicated in the display is the measured value of resistance. In continuity test, the beeper sounds continuously if the resistance is less than $40\Omega \pm 20\Omega$.

The accuracy of the functions might be slightly affected when exposed to a radiated electromagnetic field environment, e.g., radio, telephone or similar.

1. Connect the red test lead to the "VQA" jack and the black test lead to the "COM" jack.

2. Set the Function/Range switch to the **→** position.
3. Turn off power to the circuit under test.
4. Touch probes to the diode. A forward-voltage drop of about 0.6V (typical for a silicon diode).
5. Reverse probes. If the diode is good, "OL" is displayed. The diode is shorted, "000" or another number is displayed.

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MAINTENANCE

Remove test leads before changing battery or performing any servicing.

Power is supplied by a 9 volt "transistor" battery. (NEDA 1604, IEC 6F22). The "☐" appears on the LCD display.

when replacement is needed. To replace the battery, remove the two screws from the back of the meter and lift off the front case. Remove the battery from battery contacts.

If no current measurements are possible, check for a blown overload protection fuse. There are two fuses; F1 for the "V2A" jack and F2 for the 10A jack. For access to fuses, remove the two screws from the back of the meter and lift off the front case. Replace F1 only with the original type 0.5A 250V, fast acting fuse. Replace F2 only with the original type 10A/600V, fast acting ceramic fuse.

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.

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