The meter is completely portable,LCD, 3½ digit clamp meter. It has rugged design, is easy to hold in operator's hand and convenient to use.

1. Satety Information

1.1 Read the following safely information carefully before attempting to operate or service the meter.

1.2 To avoid damages to the instrument do not exceed the maximum limits of the input values show in the technical specifications tables.

1.3 Never measure current while the test leads are inserted into the input jacks.

1.4 Do not use the meter or test leads if they look damaged. Use extreme caution when working around bare conductors or bus bars.

1.5 Caution when working with voltages above 60VDC or 30VAC RMS. Such voltages pose a shock hazard.

2. Operating Features

AC Current	0. 01A to 400A
AC Voltage	1V to 450V
DC Voltage	1V to 600V

The meter display is a liquid crystal assembly providing a readbly display in all light conditions.The decimal point is automatically positioned, and the polarity sign (minus) is lighted for negative DC

measurement(plus is understook if no sign appears), so that the display is direct reading in units selected at the rotary switch. Overrange measurements are indicated by blanking all but the MSD,decimal point, and polarity sign (if negative). In addition the display includes a low battery is indication, If low battery is indicated ,operator should replace the used battery with new one.

3. Specifications

The following Specifications assume a one year calibration cycle and an operating temperature of 64°F to 82°F (18°C to 28°C) at relative humidty up to 80% unless otherwise noted.

3. 1 AC Current (Average sensing, calibrated to rms of sine wave)

Range	Resolution	Accuracy(50Hz - 60Hz)
20A	10mA	± (3% of reading +5 digits)
200A	100mA	± (2.5% of reading +5 digits)
400A	1A	± (3% of reading +5 digits)

(Overload protection: 400A on all ranges)

3.2 AC Voltage (Average sensing, calibrated to rms of sine wave)

Range	Resolution	Accuracy(50Hz - 500Hz)
450V	1V	± (2% reading +4 digits)

Imput impedance: 9MΩ

Overload protection: 450V AC/DC on all ranges.

3.3 DC Voltage

Range	Resolution	Accuracy
600V	1V	± (1.2% reading+3 digit)

Overload protection:600V DC/peak AC on all ranges

Imput impedance: 9MΩ

3.4 Diode Test

Test current: <1.2mA

Open circuit voltage: ≤ 3.2V

Overload protection: 300V DC/peak AC

Appication: Semiconductor P - N junction good or bad test

Display reading approx diode for ward, voltage value.

3.5 Continuty Test:

Buzzer sound: <75Ω

Overload Protection: 300V DC/peak AC

3.6 Resistance

Range	Resolution	Accuracy
200KΩ	± (1 .5% of reading+5 digit)	100 Ω

3.7 Environment

Temperature

Normal operation: 18°C to 28°C(64°F to 82°F)

Usable condition: 0°C to 50°C(32°F to 122°F)

Storage: - 20°C to 60°C(- 30°F to 140°F) battery removed and < 80% RH

Relative Humidity: max 80%

3.8 Function characteristics

Measurement method:Dual slope integration

Reading Rate : 3 reading/sec

Polarity: Automatic, indicated minus, assumed plus

Overload indication: Blanking of all digits,except MSD, decimal point and sign

Power requirements: 1.5V x 2

Battery indication: Display indicates LOBT when approximately 20% of battery life remains

Display: LCD, 3½ digit (1999 count)

Data hold: All function and ranges with this feature

Dimension: 150 x 63 x 28mm(L x W x H) approx

Weight: 145 grams (including battery,approx)

3.9 Accessories

Instraction manual

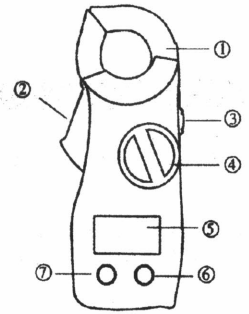
Test leads

AAA 1.5V x 2

4. Operation and Recalibration

1. Transformer Jaws:
   Pick up the AC current flowing through the conductor.
2. Trigger:
   Press the lever to open the transformer jaws. When the lever is released, the jaws will close again.
3. Data Hold Swich:
   A push switch, (push on, do not pull to selecet function). All function and ranges with this feature.

4. Rotary Switch:
   A rotary switch is used to select measurment Function and Range switch.
5. Display:
   3½ digit (1999), decimal point, minus polarity, overrange and LO BAT indicators.
6. V.Ω. ⊣⊢ Imput Connector:
   High input for all voltage, diode, continuity, measurement will accept banana plugs
7. COM Input Connector:
   Low input for all voltage resistance, diode, continuity, measurement ,will accept banana plugs.



4.1 AC Current Measurement
1. Make sure that "Data Hold " switch is not pressed.
2. Set the range switch to 2, 20A, 200A or 400A
3. Press the trigger to open the transformer jaws and clamp one conductor only. It is impossible to make measurements when two or three conductors are clamped at the same time.
4. Read the display.

4.2 AC/DC Voltage Measurement
1. Connect the black test lead to the COM jack and the red test lead to the V ⊣⊢ jack.
2. Set the range swith to AC450V or DC600V.
3. Touch the tips of the test leads to the circuit under test.
4. Read the display.

4.3 Diode/Continutity measurment
1. Connect the black test lead to the COM jack and the red test lead to the V/ ⊣⊢ jack.
2. Set the range switch to "•))) ⊣⊢ "
3. Diode measurment the meter will show the approx for word voltage of the diode. If the lead connection is reversed, only figure "1" displayed.
4. Continutity measurment.The beeper sounds below about 75Ω .(87B naught buzzer)

4.4 Resistance Measurement
1. Connedt the black test lead to the com jack and the red test lead to the VΩ ⊣⊢ jack.
2. Set the rotary switch at desired Ω position and test

leads across the resistor under measurement.

NOTE:
1. If the resistance being measured exceeds the maximum value of the range selected or the input connected, an overange indication "1" will be displayed.
2. When checking in - circuit resistance, be sure circuit under test has all power removed and tath all capacitors have been discharged fully.

4.5 How to Use Date Hold Function
On all ranges,you can hold a reading on the display using Date Hold function.
1. While making measurment,press the Date Hold switch.The last reading remains held on the display, with a Hold symbol (an arrow mark) shown on the display.
2. Press the Date Hold switch again to exit from Date Hold function.