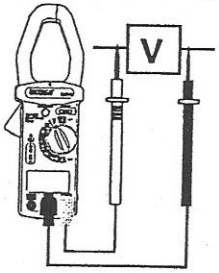
AC + DC Voltage Measurements

WARNING

The maximum input is 600V. Do no attempt voltage measurements above this limit. Exceeding this limit could cause electrical shock and damage to the meter.

1. Set the rotary switch to the '⎓ V' position.
2. Insert the test leads into the meter's input jacks. (Black to 'COM' and Red to 'V')
3. Connect the test leads to the measured circuit.
4. The meter will automatically detect and display AC or DC voltage. The meter will also automatically select the appropriate range.
5. Read the voltage (main display) and frequency (upper, smaller display digits) on the LCD.



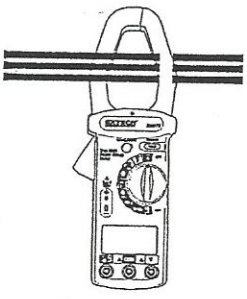
NOTE: The sensitivity for Automatic AC/DC Voltage detection is 1V. Voltage below 1V may indicate DC.

NOTE: The sensitivity for voltage measurements is 1.2V and the frequency range is 40Hz to 1 KHz. If the frequency is less than 40Hz the LCD may display 'Hz'.

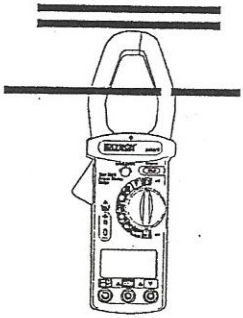
AC Current Measurements

1. Set the rotary switch to the "~A" position.
2. Press the Trigger to open the jaw.
3. Fully enclose the conductor that is being measured in the jaw. No gap should exist between the two jaw halves. The conductor under test must be a single wire; if there are multiple wires in a cable the conductor must first be isolated (see diagram below).
4. The meter selects the range automatically.
5. Read the measured current (main display) and frequency (upper display) on the LCD.

NOTE: The sensitivity for current measurements is 6A and the frequency range is 40Hz to 400Hz. If the frequency is less than 40Hz the LCD may display 'Hz'.

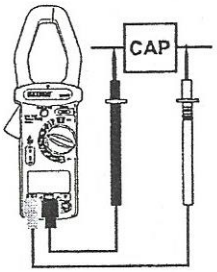


Incorrect



Correct

Capacitance Measurements



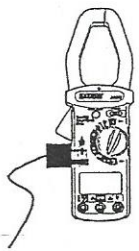
1. Fully discharge the capacitor under test before proceeding.
2. Insert the test leads into the input jacks. (Black to 'COM' and Red to '⊣(⊢').
3. Set the rotary switch to the '⊣(⊢' position.
4. Connect the red and black test leads to the capacitor. For Electrolytic (polarized) capacitors, connect the red test lead to the positive side and the black lead to the negative side.
5. Read the capacitance value displayed on the LCD.

Note: Large valued capacitors will take a long period of time to charge and to auto-range to the correct range. (up to 60 seconds in the worst case). For improved resolution and shortest test time, manually pre-selecting the proper range is recommended.

Diode Tests

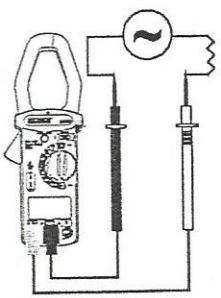
1. Set the rotary switch to the "→+ ·ıl) " position.
2. Insert the test leads into the input jacks. (Black to 'COM' and Red to '→+ ')
3. Touch the test probe tips to the diode or semiconductor junction under test. Note the meter reading.
4. Reverse the test lead polarity by reversing the red and black leads. Note this reading.
5. The diode or junction can be evaluated as follows:
   a. If one reading shows a value and the other reading shows 'OL' (overload), the diode is good.
   b. If both readings show 'OL', the device is open.
   c. If both readings are very small or zero, the device is shorted.
   d. Note that the audible continuity function is operational in this mode (<40mV).

Temperature Measurements



1. Set the rotary switch to the "TEMP" position.
2. Press the RANGE button to select the desired unit of measure (C or F).
3. Insert the Type K Thermocouple into the subminiature input jacks located to the lower left of the rotary selector switch.
4. Touch the thermocouple sensor to the object under test.
5. Read the temperature value on the LCD.

AC and DC µA Measurements



1. Set the rotary switch to the "~ ⎓ µA" position.
2. Insert the test leads into the input jacks. (Black to 'COM' and Red to 'µA')
3. Connect the test leads in series with the circuit or device under test.
4. The meter will automatically select AC or DC and the appropriate range.
5. Read the current value on the LCD.