

Specifications

AC Amps	Ranges: 200/1000A Resolution: 100mA/1A Accuracy: $\pm 2\%$ rdg +5d @ 50-60 Hz (up to 800A) $\pm 3\%$ rdg +5d @ 50-60 Hz (above 800A) Overload Protection: 1200A within 60 seconds
AC Voltage	Range: 750V Resolution: 1V Accuracy: $\pm 1\%$ rdg +4d @ 50-500 Hz Input Impedance: 9 M Ω Overload Protection: 750V AC/DC on all ranges
DC Voltage	Range: 1000V Resolution: 1V Accuracy: $\pm 0.8\%$ rdg +1d Input Impedance: 9 M Ω Overload Protection: 1000V DC/peak AC on all ranges
Resistance	Ranges: 200 Ω /20K Ω Resolution: 0.1 Ω /10 Ω Accuracy: 200 Ω $\pm 1\%$ rdg +3d 20K Ω $\pm 1\%$ rdg +1d Overload Protection: 500V DC/rms AC on all ranges Continuity Buzzer (200 Ω range): 50 Ω $\pm 25\Omega$
Insulation Test (using 500V insulation tester, not included)	Ranges: 20M Ω /2000M Ω Resolution: 10K Ω /1M Ω Accuracy: 20M Ω $\pm 2\%$ rdg +2d 2000M Ω $\pm 4\%$ rdg +2d (up to 500M Ω) 2000M Ω $\pm 5\%$ rdg +2d (above 500M Ω)
Operating Temperature	Range: 32° - 122° F
Display	1 $\frac{1}{2}$ " high 3 $\frac{1}{2}$ -digit LCD
Reading Rate	3 readings/second
Measurement Method	Dual slope integration
Overload Indicator	Most Significant Digit*(MSD), decimal point and negative sign (if negative reading) shown alone
Battery	One 9 V (included)
Weight	11 oz.
Accessories	Test leads, battery, and carrying case
*Most Significant digit is the digit farthest left.	

Save This Manual

You will need the manual for the safety warnings and precautions, and operating and maintenance procedures. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tester!

1. **Test cable voltages with care.** Only use one hand when securing the tester around the cable to reduce risk of injury in case of electric shock.
2. **Avoid working alone.** If an accident happens, an assistant can bring help.
3. **Keep work area clean.** Cluttered areas invite injuries.
4. **Avoid electrical shock.** Use extreme caution when clamping around uninsulated conductors or bus bars. Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and cabinet enclosures when testing voltages.
5. **Avoid damaging meter.** Use only as specified in this manual.
6. **Observe work area conditions.** Do not test voltages in damp or wet locations. Don't expose to rain. Keep work area well lit.
7. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
8. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
9. **Dress properly.** Protective, electrically nonconductive clothes and nonskid footwear are recommended when working.
10. **Use eye protection.** Always wear ANSI approved impact safety goggles.
11. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across electrical cables or frames.
12. **Maintain tools with care.** Ensure multimeter has a fresh battery. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician.

13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not operate properly.
15. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
16. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
17. **Due to the danger inherent in such work, we strongly recommend that only a licensed electrician work on high-voltage or other potentially dangerous circuits.**
18. **WARNING:** The cord of this product contains lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
19. **When using the Insulation Tester (not included), carefully follow all operating instructions and safety precautions outlined in the documentation provided with it.**
20. **WARNING:** This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)

Note: Performance of this tool may vary depending on battery condition.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

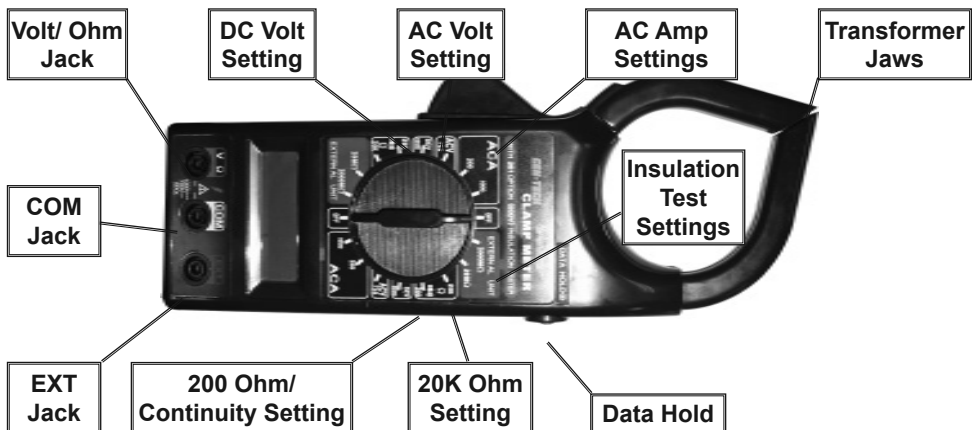
Operation

WARNING: ELECTRICAL SHOCK CAN CAUSE DEATH OR INJURY. AVOID TOUCHING EXPOSED CONDUCTORS OF ELECTRICITY.

Additional Multimeter Precautions

1. Do not test voltage on circuits higher than 750 volts AC or 1000 volts DC.
2. Do not test current on circuits higher than 1000 amps.
3. It is safer to test current using the Transformer Jaws, not with the test leads. Remove test leads when measuring current.
4. Be careful not to apply voltage to the Test Leads when they are connected to the COM (common) and Volt/Ohm Jacks and the Multimeter is in the Ohms testing setting. Damage can occur to the multimeter.
5. Do not switch between testing modes with the multimeter connected to a circuit.

Control Layout



Data Hold Function

1. The Data Hold function is used to keep the display reading the same after the measurement is finished. Press and release the data hold button to keep displaying the current measurement.
2. Press and release the Data Hold button again to resume normal operation.

Voltage Measurements

Measure conductors carrying up to 750 VAC (50-500 Hz) or 1000 VDC.

1. **AC Measurements:** Turn the Range Selector Switch to ACV 750.
DC Measurements: Turn the Range Selector Switch to DCV 1000.
2. Plug the red lead into the Volt/Ohm Jack. Plug the black lead into the COM Jack.
3. Carefully touch the exposed conductors with the tips of the probes to measure the voltage (not amperes).
4. Read measurement.
5. When testing is complete, switch the multimeter to OFF position, remove the Test Leads, and store multimeter and test leads in the carrying case.

AC Current Measurements

Measure AC conductors carrying up to 1000 amperes at a frequency 50-60 Hz.

1. Turn the Range Selector Switch to the ACA 1000 position.
The Test Leads should be removed from the multimeter.
2. Press the Transformer Jaws open and position the live (hot) conductor of the test item in the center of the Jaws for greater accuracy. Close the Jaws and read the measurement.
3. If the current is less than 200 amperes, set the Range Selector Switch to the lower range.
4. When testing is complete, switch the multimeter to OFF position and store multimeter in the carrying case.

Resistance Measurements

Measure circuit resistance up to 20,000 Ohms.

WARNING: NEVER measure resistance on a circuit with voltage running through it.

1. Turn the Range Selector Switch to the 200 Ohms position.
2. Plug the red Test Lead into the Ohms Jack. Plug the black Test Lead into the Com Jack.
Short the Test Leads together. The meter should read "0" Ohms and you should hear the continuity buzzer sound.
3. Touch the exposed conductors with the tips of the Test Leads.
4. Read measurement.
5. When testing is complete, *switch the multimeter to OFF position*, remove the Test Leads, and store multimeter and test leads in the carrying case.

Maintenance

1. To prevent oxidation, periodically open Transformer Jaws and wipe the magnetic pole pieces with a lightly oiled cloth.
2. Wipe unit with a slightly damp cloth using a light detergent. Do not use solvents or abrasives.
3. Remove battery if not in use for long periods.
4. Store unit in the carrying case and place in a dry location.
5. Other than the battery, there are no replaceable parts on this unit. Repairs should be done by a qualified technician.

Measurement Applications

- **Household uses** – Verify and measure current flow and voltage to such appliances as electric water heaters, fan motors, generators, and pumps. Measure excessive current flow on circuits in distribution panels which are tripping circuit breakers. Check for wire continuity or resistance using the Test Leads and Ohms function.
- **Distribution transformers** – Measure load on each phase for balance and for excessive current draw.
- **Motors** – Measure starting current, running current, and current imbalance between phases.
- **Variable speed motor controllers** – Measure input and output currents.

Battery Replacement

1. Remove the Test Leads from the multimeter.
2. Turn the unit over.
3. Remove back cover.
4. Pull battery out of unit and replace.
5. Replace cover.

NOTE: No internal replacement parts are available for this tool.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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