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TABLE OF CONTENTS

1. ⚠ SAFETY INFORMATION

Do not operate the tester if the body of meter or the test lead look broken.
Check the main function dial and make sure it is at the correct position before each measurement.
Do not perform resistance and continuity test on a live power system.
Do not apply voltage between the test terminals and test terminal to ground that exceed the maximum limit record in this manual.
Keep the fingers after the protection ring when measuring through the test lead.
Chang the battery when the ▭+ symbol appears to avoid incorrect data.

Environmental Conditions

Operation Temperature: 0°C to 40°C(32°F to 104°F); < 70 % RH
Storage Temperature: -10°C to 60°C(14°F to 140°F); < 80 % RH

Explanation Symbols

⚠ Attention refer to operation Instructions.

Dangerous voltage may be present at terminals.

This instrument has double insulation.

Approvals: CE EN61010 600V CAT III

2. GENERAL SPECIFICATION

Digital Display:
4 digital liquid crystal(LCD), Maximum reading 6600.

Polarity:
When a negative signal is applied, the ▬ signal appears.

Low Battery Indication:
When the battery is under the proper operation range, ▭+ will appear on the LCD display.

Sample Rate:
3 times/sec for digital data.

Power Source:
1.5V size AAA battery X 2
Typical battery Life: 50 hours (without buzzer, backlight function)

Auto Power Off:
If there is no key or dial operation for 15 minutes, the meter will power itself off to save battery consumption. This function can be disabled by press and hold the " ☼ " button then power the unit on.

Over Load:
When the signal larger than the maximum will be show OL.

Maximum jaw opening:
∅ 25 mm

Dimensions:
210 x 62 x 36 mm

Weight:
273g (with battery)

Accessories:
Carrying case, Batteries, Test Lead & Instruction Manual.

3. ELECTRICAL SPECIFICATION

Accuracy is to within ± [% of the reading + number of counts (cts)] in the reference conditions indicated in the appendix.

3-1 Direct Voltage

Range	Resolution	Accuracy
600 V	0.1 V	1% ± 2dgts

Input impedance: 1 MΩ

3-2 Alternating Voltage

Range	Resolution	Accuracy
600 V	0.1 V	1.2% ± 5dgts

Input impedance: 1 MΩ

3-3 Alternating Current

Range	Resolution	Accuracy
66 A	0.01 A	1.9% ± 5dgts
660 A	0.1 A	

3-4 Resistance (Ω)

Range	Resolution	Accuracy
660 Ω	0,1 Ω	1% ± 2dgts

3-5 Continuity ·))

Range	Resolution	Accuracy
·))	Ohm function Buzzer<30Ω	

3-6 Frequency Hz

Input impedance: 100 kΩ

For current:

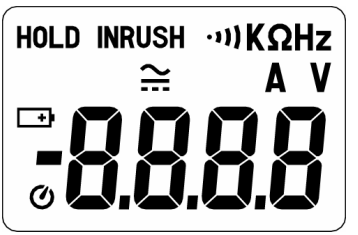
Range	Resolution	Accuracy	Sensitivity
660Hz	0.1 Hz	0.2% ±1 dgt	3 Arms
6.6KHz	0.001KHz		
30KHz	0.01KHz		

For voltage:

Range	Resolution	Accuracy	Sensitivity
660Hz	0.1 Hz	0.2% ±1 dgt	5 Vrms
6.6KHz	0.001KHz		
66KHz	0.01KHz		
100KHz	0.1KHz		

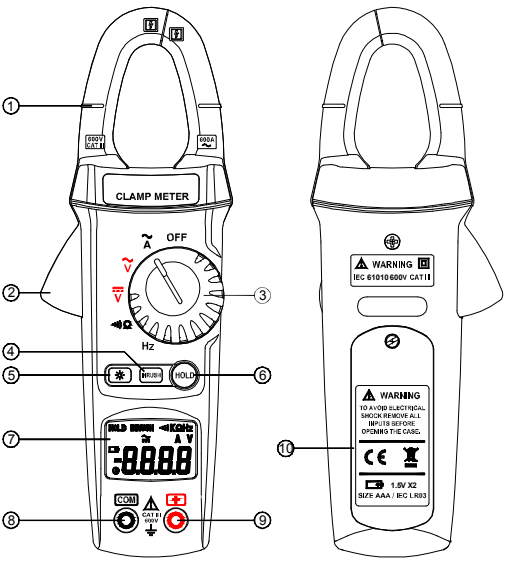
4. DESCRIPTION OF THE INSTRUMENT

4-1 Description Of The Display



	Auto power off indication
	Polarity indication
	Low battery indication
	Alternative source indication
	Direct source indication
A	Current measurement indication
V	Voltage measurement indication
HOLD	Data hold indication
INRUSH	INRUSH Current Indication
	Continuity test indication
K	Measurement unit
Ω	Resistance measurement indication
Hz	Frequency measurement indication

4-2 Description Of Front And Rear



① Current Sensing Clamp
② Clamp opening handle
③ Function select dial
④ Inrush button
⑤ Backlight button
⑥ Data hold button
⑦ LCD display
⑧ COM input terminal
⑨ Positive input termina
⑩ Battery cabinet

5. BUTTON INSTRUCTION

5-1 HOLD Function

It is possible to freeze the value displayed by pressing on the "**HOLD**" button. To deactivate this function, press the "**HOLD**" button a second time.

5-2 INRUSH Function

In ACA range, press INRUSH button will force meter to enter INRUSH mode. Then LCD display " - - - - " until the motor starts up and is detected (10A above). The detection will be done only one time and the output reading will be held. When done, press INRUSH button could enter INRUSH mode again. To exit INRUSH mode, press INRUSH button more than one second. Enter INRUSH mode in automatic ACA range will force the range be locked in higher one.

5-3 BACKLIGHT Function

If you press on the " ☼ " button, it will turn on the backlight function.(The backlight is blue light. When you turn on this function, it will light for 1 minutes)

If you press on the " ☼ " button again, the function will be turned off.

6. MEASURING INSTRUCTION

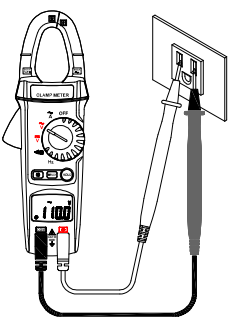
6-1 AC Voltage Measurement:

Switch the main function selector to Ṽ range.

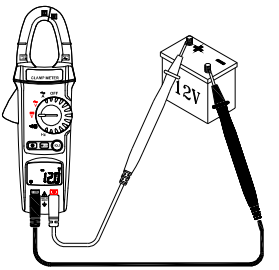
Connect red test lead to " + " terminal and black one to the " COM " terminal.

Measure the voltage by touching the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.



6-2 DC Voltage Measurement:



Switch the main function selector to $\overline{\tilde{V}}$ range.

Connect red test lead to " + " terminal and black one to the " COM " terminal.

Measure the voltage by touching the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.

6-3 AC Current Measurement:

Switch the main function selector to $\tilde{A}$ range.

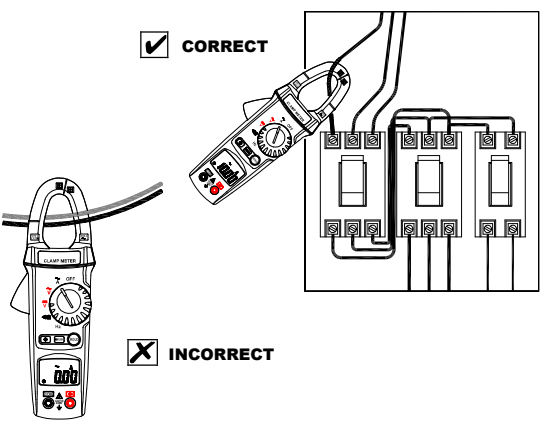
Open the clamp by pressing the jaw-opening handle and insert the cable to be measured into the jaw.

Close the clamp and get the reading from the LCD panel.

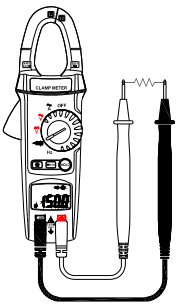
Note:

Before this measurement, disconnect the test lead with the meter for safety.

In some occasion that the reading is hard to read, push the HOLD button and read the result later.



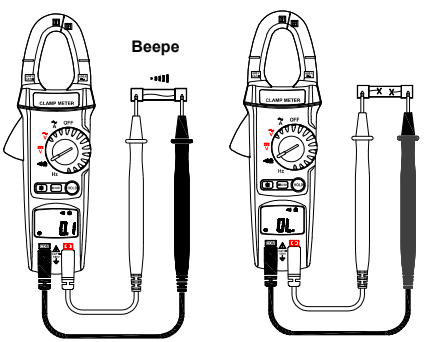
6-4 Resistance Measurement



Switch the main function to Ω range.
Connect red test lead to " + " terminal and black one to the "COM" terminal.
Connect tip of the test leads to the points where the value of the resistance is needed.
Read the result from the LCD panel.
Note:
When taking resistance readings from a circuit system, make sure the power is cut off and all capacitors need to be discharged.

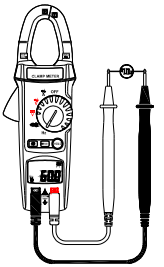
6-5 Continuity Test With Buzzer:

Switch the main function to Ω range.
Connect red test lead to " + " terminal and black one to the " COM " terminal.
Connect tip of the test leads to the points where the conduction condition needed.
If the resistance is under 30Ω, the beeper will sound continuously.



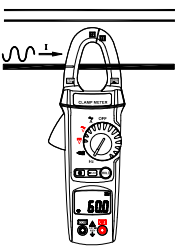
6-6 Measurement Of The Voltage Frequency

Switch the main function to Hz range.
Connect red test lead to " + " terminal and black one to the " COM " terminal.
Place the probes in contact with the points where frequency is to be measured.
Read the result on the LCD panel.



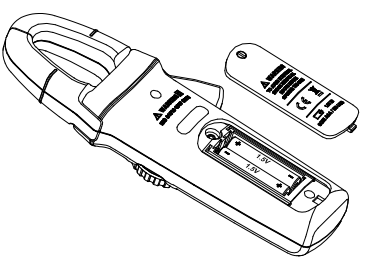
6-7 Measurement Of The Current Frequency

Switch the main function to Hz range.
Open the clamp by pressing the trigger.
Encircle the conductor and close the jaws correctly by releasing the trigger.
Read the result on the LCD panel.



7. BATTERY CHANGING

When the battery voltage drops below proper operation range the symbol will appear on the LCD display and the battery needs to be changed.
Before changing the battery, switch the main dial to " OFF " and disconnect test leads.
Open the back cover by a screwdriver.
Replace the old batteries with two new 1.5V (AAA Size) battery.
Close the back cover and fasten the screw.



8. MAINTENANCE

⚠ WARNING!

Before opening the meter, disconnect both test lead and never use the meter before the cover is closed.

CAUTION!

To avoid contamination or static damage, do not touch the circuit board without proper static protection.

8-1 REMARK:

- If the meter is not going to be used for a long time, take out the battery and do not store the meter in high temperature or high humidity environment.
- When taking current measurement, keep the cable at the center of the clamp to get more a ccurate test result.
- Repairs or servicing not covered in this manual should be performed only by qualified personal.

8-2 CLEANING:

Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on these instruments.

NOTES:

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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