



MCA 204

Clamp Meter

Instruction Manual



Disclaimer

The manufacturer assumes no responsibility for any consequences resulting from the use or misuse of this product. Product specifications and manual content are subject to change without prior notice.

Part Number: 7603321

GTIN: 6298043998031

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A. Introduction

This product is a battery-powered, true-RMS, auto-ranging digital clamp multimeter with a 4000-count LCD display and backlight.

B. Safety Information

To prevent electric shock, fire, or personal injury, read all safety instructions before use.

- Do not exceed the maximum values specified.
- Verify test lead connections and insulation before measuring voltages above 36 V DC or 25 V AC.
- Disconnect test leads before changing measurement mode.
- Incorrect mode or range selection can create hazards; the display shows "OL" when the input exceeds range.
- Safety symbols:

	Hazardous Voltage		Earth
	Double Insulated		Low Battery
	Risk of Danger. Check the User Manual.		N/ L Wire Judgement

C. Specifications

Electrical Specifications					
Function	Range	Resolution	Accuracy	MAX.Value	Frequency Response
DC Voltage (V)	4.000V	0.001V	±(0.5%+3)	600V	
	40.00V	0.01V			
	400.0V	0.1V			
	600V	1V			
AC Voltage (V)	4.000V	0.001V	±(1.0%+3)	600V	40Hz-1kHz
	40.00V	0.01V			
	400.0V	0.1V			
	600V	1V			
AC Current (A)	4.000A	0.001A	±(5%+5)	600A	40Hz-1kHz
	40.00A	0.01A			
	400.0A	0.1A	±(2.5%+8)		
	600A	1A			

Function	Range	Resolution	Accuracy	MAX.Value	Frequency Response
Resistance	400.0Ω	0.1Ω	±(0.5%+3)	40MΩ	
	4.000kΩ	0.001kΩ			
	40.00kΩ	0.01kΩ			
	400.0kΩ	0.1kΩ			
	4.000MΩ	0.001MΩ			
	40.00MΩ	0.01MΩ	±(1.5%+3)		
Frequency	4.000Hz	0.001Hz	±(0.1%+2)	1.000MHz	
	40.00Hz	0.01Hz			
	400.0Hz	0.1Hz			
	4.000kHz	0.001kHz			
	40.00kHz	0.01kHz			
	400.0kHz	0.1kHz			
	1.000MHz	0.001MHz			
Capacitance	4.000nF	0.001nF	±(5.0%+20)	4.000mF	
	40.00nF	0.01nF	±(2.0%+5)		
	400.0nF	0.1nF			
	4.000μF	0.001μF			
	40.00μF	0.01μF			
	400.0μF	0.1μF	±(5.0%+5)		
4.000mF	0.001mF				
Diode			✓		
Continuity			✓		
Inrush current			✓		
Flashlight			✓		
Temperature	(-30~1000)°C	1°C	±(2.5%+5)	1000°C	
	(-22~1832)°F	1°F		1832°F	

General Specifications	
Display (LCD)	4000 counts
Ranging	Auto
Material	ABS
Update Rate	3 times/second
Ture RMS	✓
Data Hold	✓
Low Battery Alert	✓
Auto Power Off	✓

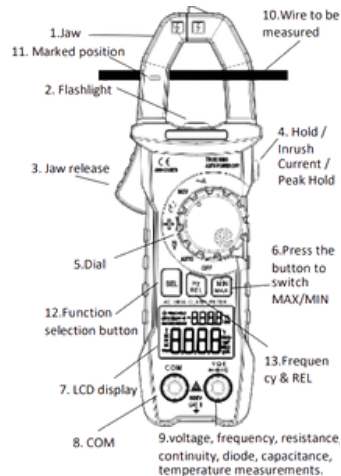
Mechanical Specifications		
Dimension	172*64*32mm	
Weight	172g	
Battery Type	1.5V AA Battery * 2	
Environmental Specifications		
Operating	Temperature	0~40°C
	Humidity	<75%
Storage	Temperature	-20~60°C
	Humidity	<80%



D . Instruction

(1) Front Panel (Refer to the front panel illustration below)

1. **Jaw**
2. **Flashlight**
3. **Jaw release**
4. **HOLD / Inrush Current / Peak Hold**
 - **HOLD:** Press once to freeze the current reading; "HOLD" appears on the display.
 - **Inrush Current:** Press twice; "INRUSH" appears on the display.
 - **Peak Hold:** Press twice after connecting test leads; "Peak HOLD" appears on the display.
5. **Dial:** Rotate clockwise to select modes: OFF → Auto Mode → AC/DC Voltage → Resistance/Capacitance/Continuity/Diode → Temperature → NCV → AC Current
6. **MAX/MIN:** Press the button to toggle MAX/MIN readings.
7. **LCD Display**
8. **COM:** Common terminal for all measurements.
9. **VΩHz Terminal:** Input for voltage, frequency, resistance, continuity, diode, capacitance, and temperature measurements.
10. Wire to be measured
11. **Marked position**
12. **SEL:** Function selection button.
13. **Hz/Rel:** Press to measure frequency or relative values.



(2) Measure AC/DC Voltage

- The minimum measurable voltage is 0.8 V. Voltages above 0.8 V will display the reading.
- Connect the black test lead to the COM terminal and the red test lead to the VΩHz terminal.
- DC or AC voltage is automatically detected in auto mode; press SEL to switch manually if required.
- Place the probes on the correct circuit points to measure voltage.
- Read the measured voltage on the display.

(3) Measure AC Current Only

- Keep the probes not put in the jacks, turn power switch on
- Push the jaw release and center the wire within the clamp jaws
- The wire should be in the marked position to keep measurement accuracy
- Read the measured current on the display

Caution:

- Do not measure current that exceeds the MAX Value as indicated in the Specifications.
- Measure one wire at a time because current moving in different directions will cancel each other out.

(4) Measure Resistance

- Connect the black test lead to the COM terminal and the red test lead to the VΩHz terminal. Resistance measurement is automatically selected.
- Place the probes on the circuit points to measure resistance.
- Read the measured resistance on the display.

Caution:

- Disconnect circuit power and discharge all capacitors before measuring resistance.
- Do not apply voltage in Resistance mode.

(5) Measure Continuity / Diode

- Connect the black test lead to the COM terminal and the red test lead to the VΩHz terminal.
- Press SEL once to switch to Continuity/Diode mode.
- Place the probes on the desired circuit points.
- For continuity: the built-in beeper sounds when resistance is below 50Ω, and the indicator light turns on.
- For diode testing: connect the red probe to the anode and the black probe to the cathode of the diode.
- Read the forward-biased voltage on the display (typically 0.2–0.8 V for silicon diodes).
- If the test lead polarity is reversed or the diode is defective, the display shows “OL”.

Caution:

Do not apply voltage in Continuity/Diode mode.

(6) Measure Capacitance

- Discharge all capacitors before measuring capacitance.
- Connect the black test lead to the COM terminal and the red test lead to the VΩHz terminal.
- Press the SEL button twice to select Capacitance mode.
- For electrolytic capacitors, observe polarity (red probe to the anode and black probe to the cathode). For non-polar capacitors, polarity does not matter.
- Read the measured capacitance value on the display.

(7) Measure Frequency

- Connect the black test lead to the COM terminal and the red test lead to the VΩHz terminal.
- Press the Hz/NCV button once to measure AC current frequency without connecting the test leads to the terminals.
- Press the Hz/NCV button once to enter Frequency mode for DC voltage frequency after connecting the test leads to the terminals.
- Place the probes on the desired circuit points.
- Read the measured frequency on the display.

(8) Measure NCV

- Press the Hz/NCV button for over 2 seconds to switch to NCV mode.
- Hold the meter and move it near conductors; the built-in beeper sounds when the internal sensor detects AC voltage. The stronger the voltage, the faster the beeper sounds.
- Do **NOT** insert the probes into live terminals during NCV testing. Simply move the meter’s NCV sensor near the conductor.. The L-line and N-line can be identified by the beeper: strong beeps indicate the live line, weaker or no beeps indicate the neutral line.

(9) Measure Temperature

- Connect the black thermocouple probe to the COM terminal and the red thermocouple probe to the VΩHz terminal.
- Press SEL/POWER once to select Temperature mode after connecting the probes; the display will show ambient temperature. Press SEL/POWER again to toggle between °C and °F.
- Place the probes on the desired test points.
- Read the measured temperature on the display.

Caution:

Do not apply voltage in Temperature mode.

(10) Measure Inrush Current

- Turn on the power, retract the probes, and press HOLD twice to select Inrush Current mode; the display will show “INRUSH.”
- Press the jaw release and center the wire within the clamp jaws. Position the wire at the marked location to ensure measurement accuracy.
- The meter captures the peak inrush current during the first 100 ms of startup. Read the measured current on the display.
- Read the measured Temperature on the display.

(11) Auto Power Off

- The meter powers off automatically after 15 minutes of inactivity.
- The beeper sounds five times one minute before shutdown.
- Press SELECT to restart the meter.
- To disable Auto Power Off, hold the Hz/NCV button while powering on; five beeps confirm successful deactivation.



E. General Maintenance

Except for battery and fuse replacement, do not attempt repairs or service unless qualified and equipped with the relevant calibration, performance, and service instructions.


- Do not operate the meter in hot, wet, flammable, explosive, or strong magnetic environments.
- Clean the meter with a damp cloth and mild detergent; avoid abrasives or solvents.
- Disconnect all input signals before cleaning.
- Remove batteries during extended storage to prevent leakage.
- When " " appears on the display, replace batteries as follows:
 - Loosen the screw and remove the battery cover.
 - Install new batteries of the same type.
 - Replace the battery cover and fasten the screw.
- Replace fuses following the same procedure; use only fuses identical to the originals.

Warning:

1. Do NOT exceed the "maximum value" indicated in the Specification;
2. Do NOT input voltage at the Current Mode, the Resistance Mode, the Diode Mode, the Continuity Mode, or the Temperature Mode;
3. Do NOT use the product when the batteries or the battery cover is not placed properly;
4. Turn off the product and remove the test leads from the test points before changing batteries or fuses.

F. Troubleshooting

If your product does not function normally, the following steps may help you. If the problem persists, please contact your dealer.

Problem	Possible Reason
Display Malfunction	Low battery; replace batteries
 Symbol	Replace batteries
No current input	Replace fuse

LIMITED WARRANTY AND LIMITATION OF LIABILITY

Customers enjoy two-year warranty from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling.

All rights reserved. Specifications are subject to change without notice.

