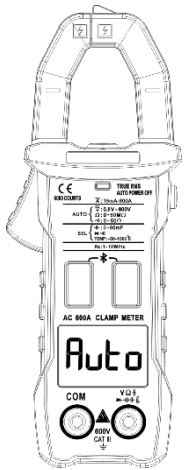
User Manual



A. Introduction

This product is a battery-powered, true-rms, auto ranging digital clamp multimeter with a 6000 counts LCD display and a backlight.

B. Safety Information

To avoid possible electrical shock, fire, or personal injury, please read all safety information before you use the product.

(1) Do **NOT** exceed the "**maximum value**" indicated in the Specification.
(2) Examine the connection of the test leads and the insulation of the product before measuring voltage higher than 36V DC or 25V AC.
(3) Disconnect the test leads from the circuit before changing the mode。
(4) Misuse of mode or range can lead to hazards, be cautious. "OL" will be shown on the display when the input is out of range.
(5) Safety symbols:

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

C. Specifications

Electrical Specifications					
Function	Range	Resolution	Accuracy	MAX.Value	Frequency Response
DC Voltage (V)	6.000V	0.001V	±(0.5%+3)	600V	
	60.00V	0.01V			
	600.0V	0.1V			
AC Voltage (V)	6.000V	0.001V	±(1.0%+3)	600V	40Hz-1kHz
	60.00V	0.01V			
	600.0V	0.1V			
AC Current (A)	6.000A	0.001A	±(5%+30)	600A	40Hz-1kHz
	60.00A	0.01A	±(2.5%+30)		
	600.0A	0.1A			

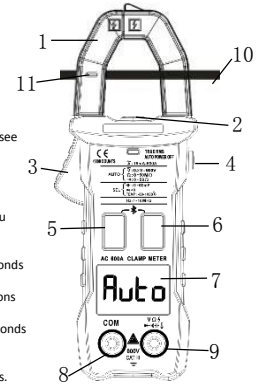
Function	Range	Resolution	Accuracy	MAX.Value	Frequency Response
Resistance	6.000kΩ	0.001kΩ	±(1.5%+3)	60MΩ	40Hz -1kHz
	60.00kΩ	0.01kΩ	±(0.5%+3)		
	600.0kΩ	0.1kΩ			
	6.000MΩ	0.001MΩ			
	60.00MΩ	0.01MΩ			
Frequency	9.999Hz	0.001Hz	±(0.1%+2)	9.999MHz	40Hz-1kHz
	99.99Hz	0.01Hz			
	999.9Hz	0.1Hz			
	9.999kHz	0.001kHz			
	99.99kHz	0.01kHz			
	999.9kHz	0.1kHz			
	9.999MHz	0.001MHz			
Capacitance	9.999nF	0.001nF	±(5.0%+20)	4.000mF	40Hz-1kHz
	99.99nF	0.01nF	±(2.0%+5)		
	999.9nF	0.1nF			
	9.999μF	0.001μF			
	99.99μF	0.01μF			
	999.9μF	0.1μF			
	4.000mF	0.001mF	±(5.0%+5)		
Diode	√				
Continuity	√				
Inrush Current	√				
Peak Hold	√				
Flashlight	√				
Temperature	(-30~1000)℃	1℃	±(2.5%+5)		
	(-22~1832)℉	1℉			

General Specifications	
Display（LCD）	6000 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	
Warranty	One year	
Environmental Specifications		
Operating	Temperature	0~40℃
	Humidity	＜75%
Storage	Temperature	-20~60℃
	Humidity	＜80%

D. Instruction

(1) Front Panel（see the picture on the right）



1. Jaw
2. Flashlight
3. Jaw release
4. Hold / Inrush Current / Peak Hold
   HOLD: To press this button once and you will see "HOLD" on the display;
   Inrush current: To press this button twice and you will see "INRUSH" on the display;
   Peak hold: To press this button twice after connecting test leads to the Terminals and you will see "Peak HOLD" on the display;
5. Power / Select
   Power: Press this button for more than 2 seconds to turn it on / off.
   Select: Press this button for switching functions after connecting test leads to the Terminals.
6. Frequency / NCV: Press this button over 2 seconds into NCV mode and exit from release.
7. LCD display
8. COM: Common terminal for all measurements.
9. : Input terminal for voltage, resistance, capacitance, temperature, frequency, continuity, diode measurements and judging N/L wires.
10. Wire to be measured
11. Marked position

(2) Measure AC/DC Voltage

1. The minimum voltage of this product is 0.8V. When the measured voltage is higher than 0.8V, the product will display the reading;
2. Connect the black test lead to the COM Terminal and connect the red test lead to the Terminal;
3. The DC or AC voltage will be matched automatically;
4. Touch the probes to the correct test points of the circuit to measure the voltage;
5. Read the measured voltage on the display.

*Caution:

a. Do not measure voltage that exceeds the MAX Value as indicated in the Specifications;
b. Do not touch high voltage circuit during measurements.

(3) Measure AC Current Only

1. Keep the probes not in the jacks,turn power switch on;
2. Push the jaw release and center the wire within the clamp jaws (as in the picture). The wire should be in the marked position to keep measurement accuracy.
3. Read the measured current on the display.

*Caution:

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

(4) Measure Resistance

1. Connect the black test lead to the COM Terminal and connect the red test lead to the Terminal;
2. The resistance will be matched automatically;
3. Touch the probes to the desired test points of the circuit to measure the resistance;
4. Read the measured resistance on the display.

*Caution:

a. Disconnect circuit power and discharge all capacitors before you test resistance.
b. Do not input voltage at the Resistance Mode.

(5) Measure Continuity / Diode

1. Connect the black test lead to the COM Terminal and connect the red test lead to the Terminal;
2. Press SEL / Power once to toggle to the Continuity/Diode Mode;
3. Touch the probes to the desired test points of the circuit;
4. The built-in beeper will beep when the resistance is lower than 50Ω, and the indicator light will be on.
5. Measure diode: Connect the red probe to the anode side and the black probe to the cathode side of the diode to be tested;
6. Read the forward biased voltage value on the display;
7. If the polarity of the test leads is reversed with diode polarity or the diode is broken, the display reading shows "OL".

*Caution:

Do not input voltage at the Continuity / Diode Mode.

(6) Measure Capacitance

1. Discharge all capacitors before you test capacitance.
2. Connect the black test lead to the COM Terminal and the red lead to the Terminal.
3. Push Power button twice to enter the Capacitance Mode
4. Connect the red probe to the anode side and the black probe to the cathode side of the capacitor to be tested.
5. Read the measured capacitance value.

(7) Measure Frequency

1. Connect the black test lead to the COM Terminal and connect the red test lead to the Terminal;
2. Press Hz / NCV button once for AC current frequency without connecting the test lead to Terminals.
3. Press Hz / NCV button once to enter the Frequency Mode for DC voltage frequency after connecting the test lead to Terminals;
4. Touch the probes to the desired test points of the circuit;
5. Read the measured frequency value on the display.

(8) Measure NCV

1. Press Hz / NCV over 2 seconds to toggle to the NCV Mode;
2. Hold the product and move it around, the built-in beeper will beep when the inner sensor detects AC voltage nearby. The stronger the voltage is, the quicker the beeper beeps.
3. Put the red probe into the terminal, then use the black probe to touh the Live line and Neutral line of the Main supply. You can judge the L-line or N-line by the beeps, If you can hear the strong beeps,this is the L-line, or it's a N-line.

(9) Measure Temperature

1. Connect the black thermocouple probe to the COM Terminal and connect the red thermocouple probe to the Terminal;
2. Press SEL / POWER once to toggle to the Temperature Mode after connecting the test lead to Terminals, and the display will show the room temperature, to switch ℃/℉, press SEL / POWER button once again;
3. Touch the probes to the desired test points;
4. Read the measured temperature on the display.

*Caution:

a. Do not input voltage at the Temperature Mode.

(10) Measure Inrush current

1. Turn power on, pull out the probes and press HOLD twice to toggle to Inrush Current Mode, the display will show "INRUSH";
2. Push the jaw release and center the wire within the clamp jaws. The wire should be in the marked position to keep measurement accuracy;
3. Turn on the engine or motor equipment, and the product will capture the maximum current within 100ms when motor is starting;
4. Read the measured temperature on the display.

(11) Peak Hold

1. Turn power on, and press HOLD once after connecting the test lead to Terminals to toggle to Peak Hold Mode, the display will show "PEAK HOLD";
2. Touch the probes to the desired test points of the circuit;
3. Read the measured voltage value on the display.

(12) Auto Power Off

1. The product automatically powers off after 15 minutes of inactivity;
2. The built-in beeper beeps 5 times 1 minute before power off;
3. To restart the product, press SELECT button;
4. To disable the Auto Power Off function, hold down the Hz / NCV button when turning on the product, you will hear five beeps if you have successfully disabled the function.

E. General Maintenance

Beyond replacing batteries and fuses, do not attempt to repair or service the product unless you are qualified to do so and have the relevant calibration, performance test, and service instructions.

(1) Do not operate the product around hot, wet, flammable, explosive or magnetic environments.
(2) Clean the product with damp cloth and mild detergent; do not use abrasives or solvents.
(3) Remove the input signals before you clean the product.
(4) Remove the batteries if you will not use the product for a long time to prevent possible battery leak.
(5) When " " is shown on the display, batteries shall be replaced as below:
    1. Loosen the screw and remove the battery cover;
    2. Replace the used batteries with new batteries of the same type;
    3. Place the battery cover back and fasten the screw.
(6) Replace fuses as above steps. Use only fuses of the same type as the original ones.

F. Link to Bluetooth App

(1) Turn on the Power;
(2) Short press "Power" and "Hz" at the same time, the screen will show " "symbol;
(3) Open e-Bull on mobile to search "Bluetooth DMM" to link;
(4) Please refer to relative explanation of the Bluetooth App.

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 do not function as normal, the following steps may help you. If the problem still cannot be solved, 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 one-year warranty from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alternation, contamination, or abnormal conditions of operation or handling.

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