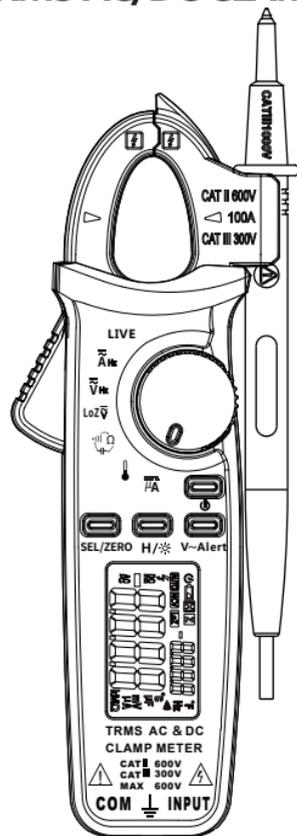


MINI TRMS AC/DC CLAMP METER



1**⚠ Warnings**

Special attention shall be paid when using the meter, improper use might cause an electric shock or damage the meter. General safety procedures shall be followed during the use and safety measures regulated by the instruction manual shall be completely respected.

To fully make use of the functions of the meter and ensure safe operation, please carefully read and follow the use method of this manual.

The meter meets IEC-61010-1, IEC-61010-2-030, IEC-61010-2-032, IEC-61010-2-033, Safety Requirements for Electronic Measuring Instruments, of the secondary pollution, over-voltage standard is CATIII 300V, CATII 600V.

Please follow the safe operation guidance and ensure to use the meter in safe.

1.1 Preparations

1.1.1 When use the meter, users must comply with the standard safety rules:

- General protection against electric shock
- Prevent misuse of the meter

1.1.2 After received the meter, check if it has been damaged during the delivery.

1.1.3 After been kept and delivered in shoddy conditions, check and confirm if the meter is damaged or not.

1.1.4 The clamp meter must be in good condition. Before use, check the clamp meter see if any damage to the insulation, if the metal wire of the cable is bare.

1.1.5 Operating temperature range: 0°C to 40°C

2**⚠ Marks**

 It can be used on hazardous live conductors.

 Warning sign

 AC

 DC

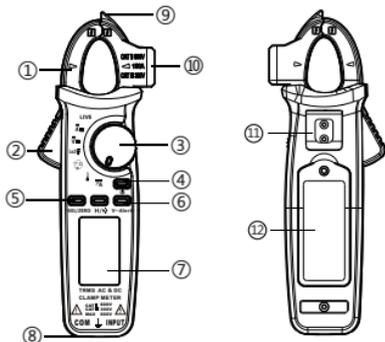
 AC&DC

 Grounding

CAT. II 600 V over voltage protection

CAT. III 300 V over voltage protection

1. Part Name



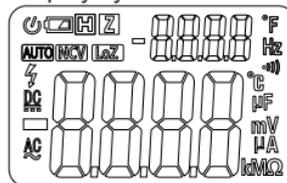
Serial number	Description
1	Jaws
2	Trigger
3	Rotary switch
4	Power button
5	Function selection keys/Base number zero
6	V~Alert activation
7	Display
8	Input Terminals
9	V~Alert sensor area
10	Slot for test lead
11	Clip
12	Battery cover

2. Key Description

- 1) SEL/ZERO: For switching among measuring functions and set the value of DC current display to zero.

- 2) H/*: For holding the reading or backlight activation. Press button for holding the reading. Backlight activation, when press button and hold for 2s.
- 3) V~Alert: V~Alert activation,when press and hold button.
- 4) V: V~Alert activation,when press and hold button.

3. LCD full display symbol



Symbol	Elaborate on
	Auto power off function indication
	Battery is low and should be changed
	Hold status
	Base number return to zero
	Automatic range measurement mode
V~Alert	Non-contact voltage detection/NCV
LoWZ	Low resistance measurement mode
	Indicates the presence of high voltage
	Direct Current
-	Negative input polarity indication
	Alternating Current
°C, °F	°C°F
Hz	Hz
	Beeper
mV, V	Voltage unit: millivolt, volt
μA, mA, A	Current unit: microampere, milliampere, ampere
Ω, kΩ, MΩ	Resistance unit: Ohm, kilohm, mega ohm
μF, mF	Capacitance unit: millifarad, microfarads

Technique Data

Power supply: 1.5V AAA battery×2
 Boundary dimension:L179* W67* H36 mm
 Weight: ~137g

1. Current DC

Range	Resolution	Accuracy
6A	0.001A	±(3%+5counts)
60A	0.01A	±(2.5%+5counts)
100A	0.1A	

Maximum input current: 100A DC current
 ZERO function activation, the accuracy
 can be ensured

2. Current DC(μA)

Range	Resolution	Accuracy
0-200μA	0.1μA	±(0.8%+5counts)

Maximum input current: 200μA
 Overload protection: 250V DC or AC (RMS)

3. Current AC

Range	Resolution	Accuracy
6A	0.001A	±(2.5%+5counts)
60A	0.01A	
100A	0.1A	

Maximum input current : 100A
 True-rms measurement,
 frequency response 50Hz-60Hz

4. Frequency

Range	Resolution	Accuracy
60.0Hz	0.1Hz	±(1.0%+5counts)
1000Hz	1Hz	±(1.0%+5counts)

Range : 45Hz ~ 1000Hz

Measure from jaws:

Range	Resolution	Accuracy
60.0Hz	0.1Hz	±(1.0%+5counts)
1000Hz	1Hz	±(1.0%+5counts)

Range : 45Hz ~ 1000Hz

5. Voltage DC

Range	Resolution	Accuracy
6V	0.001V	±(1.0%+3counts)
60V	0.01V	
600V	0.1V	

Input impedance:10 MΩ
 Maximum input voltage: 600V DC

6. Voltage AC

Range	Resolution	Accuracy
6V	0.001V	±(1.0%+3counts)
60V	0.01V	
600V	0.1V	

Input impedance:10MΩ
 Maximum input voltage:600V AC
 True-rms, frequency response: 45~1000Hz

7. low impedance (DCV)

Range	Resolution	Accuracy
600V	0.1V	±1.0%

Input impedance:10MΩ
 Maximum input voltage:600V DC

(ACV)

Range	Resolution	Accuracy
600V	0.1V	±1.0%

Input impedance:10MΩ
 Maximum input voltage:600V AC

8. Resistance

Range	Resolution	Accuracy
600Ω	0.1Ω	±(1%+3counts)
6KΩ	0.001KΩ	
60KΩ	0.01KΩ	
600KΩ	0.1KΩ	
6MΩ	0.001MΩ	±(1%+3counts)
60MΩ	0.01MΩ	±(1.2%+20counts)

Overload protection: 250V DC or AC RMS
Overload sign: OL

9. Capacitance

Range	Resolution	Accuracy
600μF	0.1μF	±(4%+3counts)
6000μF	1μF	

Overload protection: 250V DC or AC RMS

10. Buzzer

Range	Resolution	Accuracy
o)	0.1Ω	If the resistance is <30Ω, the continuity beeper sounds.

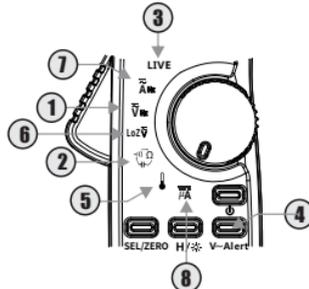
Overload protection: 250V DC or AC RMS

11. Temperature

Range	Resolution	Accuracy
-20~500°C -4~932°F	1°C/2°F	±(2%+2counts)

Overload protection: 250V DC or AC RMS

5. Operation Instructions



1. Measure AC and DC Voltage

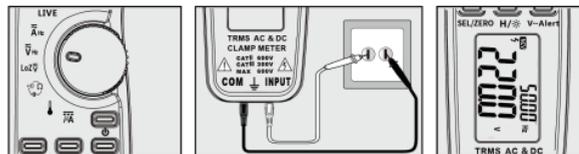
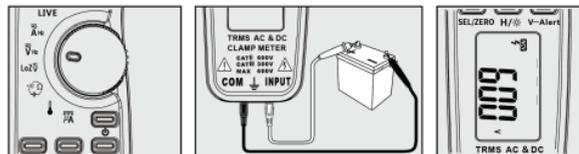
1.1: Turn the rotary switch to \bar{V}_{AC}
1.2: Insert the test leads into the Product.

1.3: Push SEL/ZERO to choose ac or dc voltage.

The chosen voltage mode shows on the display.

1.4: Measure the voltage by touching the probes to the correct test points of the circuit.

1.5: Read the measured voltage on the display.



At small voltage range, unsteady readings will appear before the test leads contact the circuit. This is normal because the meter is highly sensitive. When the test leads contact the circuit, the true reading will be shown.

2. Measure Resistance and Continuity and Capacitance

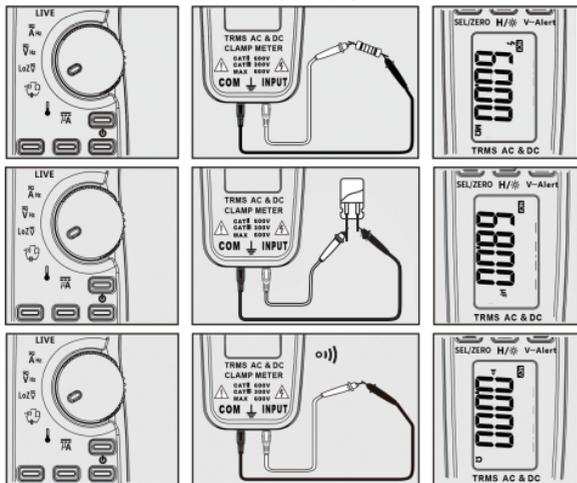
To measure resistance or continuity:

1.1. Insert the test leads into the Product.

1.2. Turn the rotary switch to Ω , chosen by push SEL button.

1.3. Measure the Ω by touching the probes to the desired test points of the circuit.

1.4. Read the measured resistance on the display.



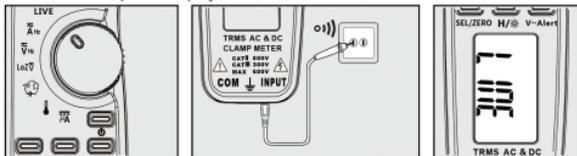
3. Live check

1. Insert the red test lead into input jack.

2. Turn the rotary switch to LIVE.

3. Check live wire by touching the red probe to the wire in the socket.

4. If meter beep and display flash, the wire is live, otherwise is neutral.

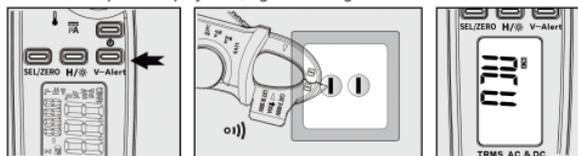


4. V~Alert measurement

1. Push V~Alert button and hold it.

2. Make V~Alert sensor close to wire or socket.

3. If meter beep and display flash, high AC voltage exist.



NOTE: 1) If the AC voltage is detected this indicates the presence of voltage, even though there is no alarm indication. The presence of voltage cannot be judged by the non-contact voltage tester. The detecting operation may be affected by such factors as socket design, insulation thickness and insulation type.

2) Before the instrument is used for detecting the AC voltage of the power socket etc., the meter should be tested on the given live circuit, to make sure that it may work well.

5. Measure Temperature

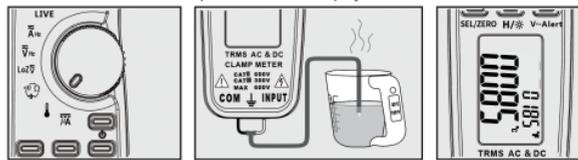
1. Connect the Probe to the input jacks noting correct polarity of the probe.

2. Turn the rotary switch to Ω .

The chosen temperature mode shows on the display.

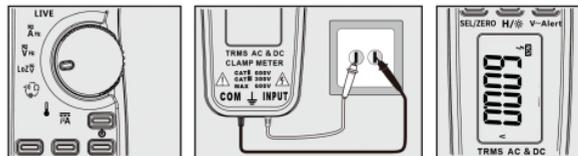
3. Position the Probe to take the measurement.

4. Read the measured temperature on the display.



6. Low Impedance voltage Measurements

This function sets the Meter's input impedance to approximately 300k Ω to reduce the possibility of false readings due to ghost voltages.

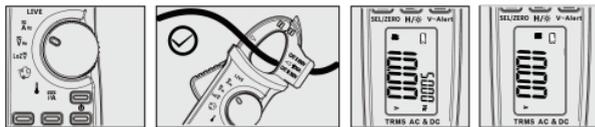


⚠ In low impedance measurement mode, the measurement time cannot be longer than 1 minute.

⚠ This feature can be automatically identified ACV/DCV.

7. Measure AC&DC Current

1. Turn the rotary switch to **A_~**, push SEL/ZERO to choose AC or DC current.
2. Center the wire within the clamp jaws below the horizontal line located on the clamp. Frequency of AC current synchronous display.



Note. Measure one wire at a time because currents moving in different directions will cancel each other out.



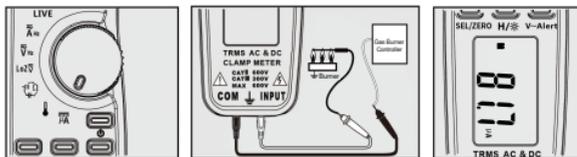
DC current mode, due to the existence of electromagnetic field, please push ZERO button 2S, set the value of display to zero. Keep the direction of the meter and zeroing in line.

8. Measure Microamps μA

The μA dc ($\overline{\mu A}$) function on the Product is primarily for HVAC flame rod testing.

To test a heating system flame rod:

1. Turn the heating unit off.
2. Locate the wire between the gas-burner controller and the flame rod, and break this connection.
3. Turn the rotary switch to $\overline{\mu A}$.
4. Use alligator clips to connect test leads between the flame sensor probe and control-module wire.
5. Turn heating unit on.
6. Read the measured amps on the display.
7. Refer to the heating unit documentation for what the desired value should be.



6.

Maintenance

1. Replace Battery

- 1) If symbol appears, it means the battery shall be replaced.
- 2) Remove the test leads from the terminals.
- 3) Loosen the battery door fastener and remove the door from the case bottom.
- 4) Remove the batteries.
- 5) Replace the batteries with two new AA batteries.
- 6) Reattach the battery door to the case bottom and tighten the fastener.

Note:

Do not violate the battery polarity!

2. Replace clamp Meter

When replacing the clamp meter, the new ones shall be of the same or in equal level. The clamp meter shall be in good condition, clamp meter level: 1000V 10A.

If the insulation layer of the clamp meter is damaged, such as the metal wire of the cable is exposed, then it shall be replaced.

7.

Specification

Composite index

Accuracy: \pm (% of reading + number of words), 1 year Guarantee period

Relative humidity: not more than 75%

Work height: maximum 2000m

Maximum display value: 6000 digits.

Polar indication: automatically indicate.

Over range Indication: '0L'

Sampling time: about 3 times/5

Automatic Power off time: 20 minutes, push SEL + to cancel the mode.

Battery low voltage indication: LCD display .

Working temperature: 0°C ~ 40°C

Storage temperature: -10°C ~ 50°C