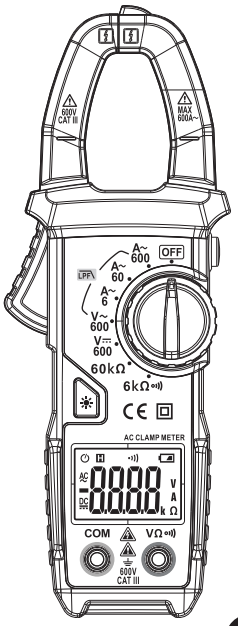
USERS MANUAL

Digital AC Clamp Meter



EMC&LVD

Designed and Conforms to IEC61010-1 CAT.III 600V

Designed and Conforms to IEC61010-1 CAT.III 600V

Y01-04-0116 A0

Before using the instrument,please read this manual carefully,and save it well for future using.

size:125x85mm

Table of Contents

1. Safety Information

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) Safety Requirements for Electronic Measuring Instruments, it is of the secondary pollution and over-voltage standard is CATIII 600V。

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

1.1 Preparations

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

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

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

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

⇨ The pen-shape meter must be in good condition. Before use, check the pen-shape meter see if any

damage to the insulation, if the metal wire of the cable is bare.

1.2 Marks

	Note (important security information, see the Instruction Manual)
	It can be used on hazardous live conductors.
	Double insulation protection (Category II)
CAT III	follows the over-voltage (Setup) level III of IEC-61010-1 standard and pollution degree 2 means the impulse withstand voltage level of protection provided.
CE	In line with the European Union (EU) Standard
	Grounding

1.3 Maintenance

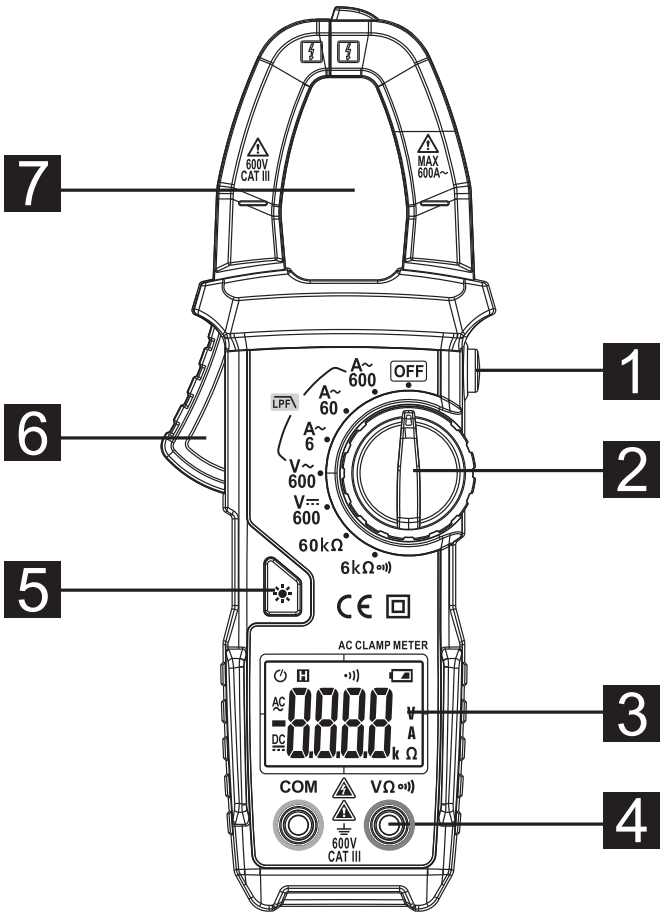
- Please do not attempt to open the bottom case to adjust or repair the meter, such operation could only be performed by technicians fully aware of the meter and the risk of electric shock.
- Before opening the meter case or battery cover at the end, the pen-shape meter should be removed from the circuit being measured.
- To avoid electric shock that might be caused by erroneous readings, when the meter displays "  " symbol, the battery should be replaced immediately.
- Use a damp cloth and mild detergent to clean the meter, do not use abrasive cleaning agents or solvents.

⇨ Power supply of the meter should be turned off when not in use, range switch to the OFF position.

⇨ If the meter is not used for a long time, batteris should be removed to prevent damage to the meter.

2. Descriptions

2.1 Part Name



1 Data hold Key

2 Rotary switch

3 Display screen

4 Input socket

5 Back-lighted Key

6 Trigger

7 Current clamp head: used for measuring current

2.2 Instructions to rotary switch and key as well as input socket

OFF: Meter OFF position

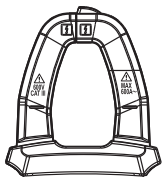
A~ AC current measurement

V~ AC voltage measurement

V⎓ DC voltage measurement

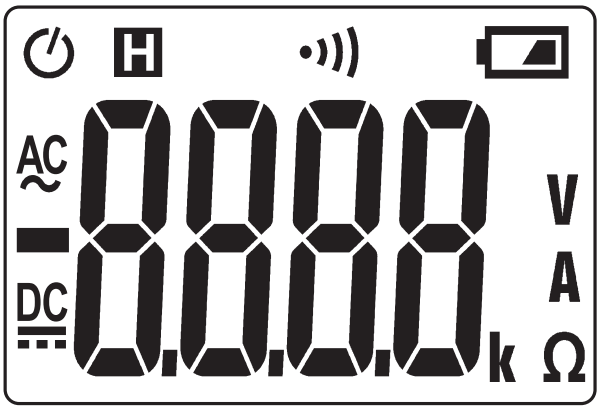
Ω•)) Resistance and buzzer measurement

VΩ•)) **COM** DC voltage, AC voltage, resistance and buzzer input terminals



Current input into mutual inductor

2.3 LCD Display Unit



DC AC	AC, DC
•))	Connected disconnect indicate
	Automatic shutdown indicate
	LOW BATTERY

H	Readings hold status
V,A	Volt (voltage), Ampere (current)
kΩ,	Thousand ohms (resistance)

3. Specifications

The meter should specify one year as a cycle to re-calibrate in the conditions of 18℃ ~ 28℃ and relative humidity less than 75.

3.1 Overview

- Manual select measurement function and range.
- Overload protection for the whole measurement range.
- Maximum allowable voltage between the measuring terminal and the Earth: 600V DC or 600V AC
- Work height: maximum 2000m
- Display: LCD
- Maximum display value: 6000 digits.
- Polar indication: automatically indicate, '-' means negative polarity.
- Over range Indication: '0L' or '-0L'.
- Sampling time: about 3 times/s
- Unit display: with function and quantity of electricity unit display
- Automatic Power off time: 10 minutes
- Power supply: 1.5V AAA battery ×2
- Battery low voltage indication: LCD display symbol.
- Temperature coefficient: < 0.1×accuracy degree/℃

- Working temperature: 18℃ ~ 28℃
- Storage temperature: -10℃ ~ 50℃

3.2 Technical Index

3.2.1 AC Current

Measurement range	Distinguishability	Accuracy degree
6A	0.001A	±(2.5% reading + 8 word)
60A	0.01A	
400A	0.1A	
400A~600A	0.1A	± (3% reading + 10 word)

- Maximum input current: 600A AC current

- Frequency range: 50/60Hz;

- When in AC current measurement, the meter automatically switches on internal low pass filter to filter out high frequency current.

3.2.2 DC Voltage

Measurement range	Distinguishability	Accuracy degree
600	0.1V	± (0.5% reading +3 word)

- Maximum input voltage: 600V DC

3.2.3 AC Voltage

Measurement range	Distinguishability	Accuracy degree
600V	0.1V	± (0.8% reading +5 word)

- Maximum input voltage: 600V AC (effective value)

- Frequency range: 50/60Hz

- When in AC voltage measurement, the meter automatically switches on internal low pass filter to filter out high frequency current.

3.2.4 Resistance

Measurement range	Distinguishability	Accuracy degree
6kΩ	0.001kΩ	±（0.8% reading +3 word）
60kΩ	0.01kΩ	

- Overload protection: 600V DC or AC (effective value)

3.2.5 Line on-off test

Measurement range	Distinguishability	Functions
	1Ω	If the resistance of circuit being measured is less than 50Ω, then the beeper in the meter may sound.

- Overload protection: 600V DC or AC (effective value)

4. Operation Guide

4.1 Readings Hold

During the measuring process, if the readings are required to hold, slightly touch H key ,the display value will be locked, slight press H key again to cancel readings hold.

4.2 BackLight

1) In the process of measurement, if the ambient light is too dim, causing reading difficulties, press ☼ to open BackLight and it will automatically off after about 1 minute.

2) During the process press ☼ key to turn off the BackLight.

4.3 Auto Power Off

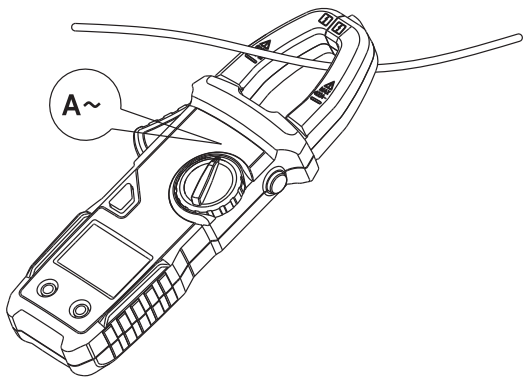
1) If after 10 minutes when the meter is on without any operation, it will go into hibernation and automatically shut down to save power.

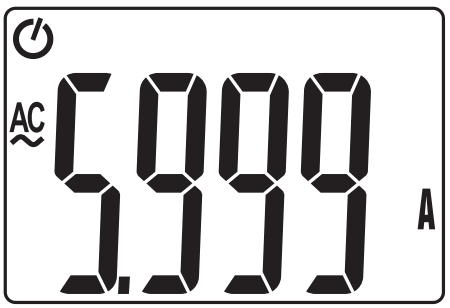
2) Press any key after auto power off to wake the meter into working status.

3) When turn the meter on, if hold the ☼ key at the same time, then the auto power off function is canceled.

4.4 AC Current Measurement

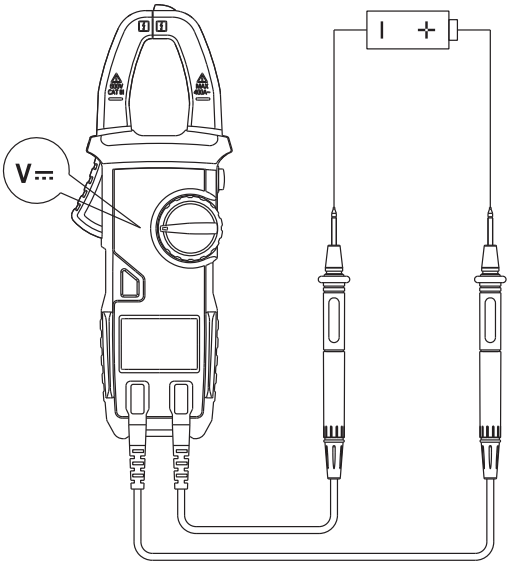
1) Turn the rotary switch into the measurement range of 600A, hold the trigger, open the clamp head and clamp one cable of the measured circuit, the meter will display measured value, select suitable measurement range (6A, 60A, 600A) according to the measured value.

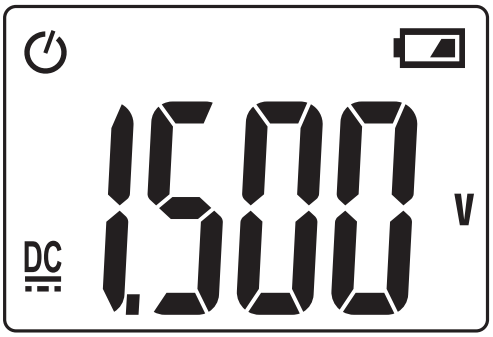




4.5 DC Voltage Measurement

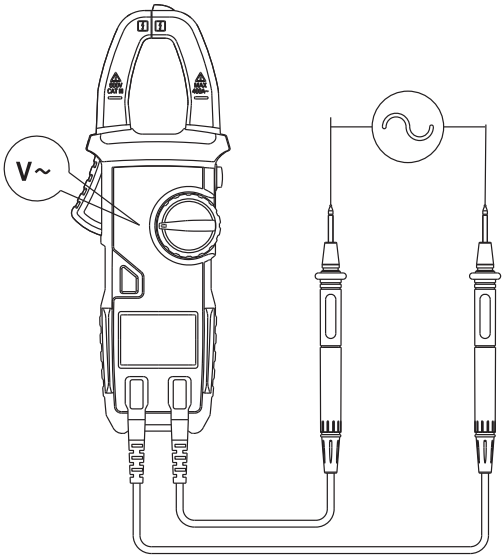
1) Connect the pen-shaped meter to the measured signal, red pen to the positive pole and black pen to the negative pole

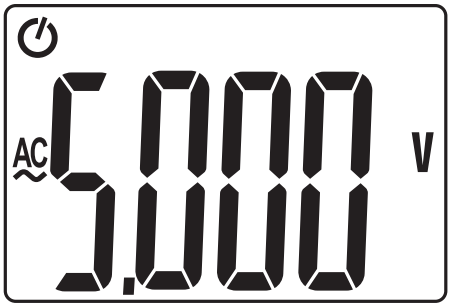




4.6 AC Voltage Measurement

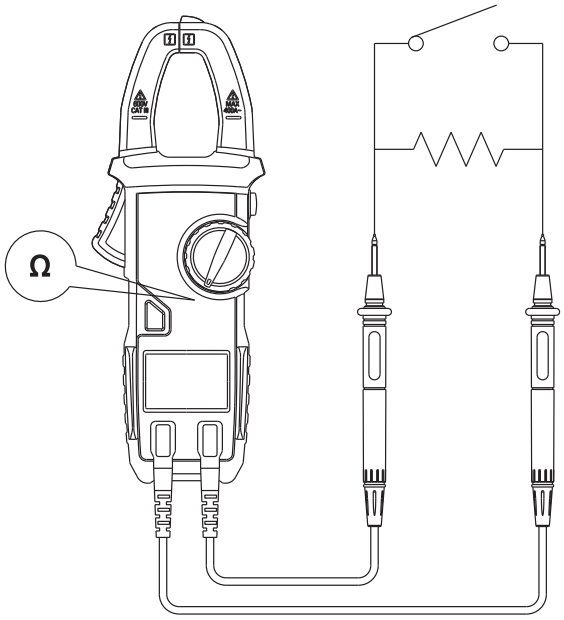
1) Connect the pen-shaped meter to both sides of the measured signal, the meter will display current measuring AC voltage value.

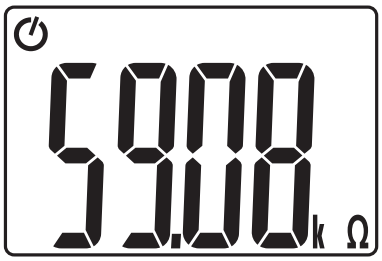


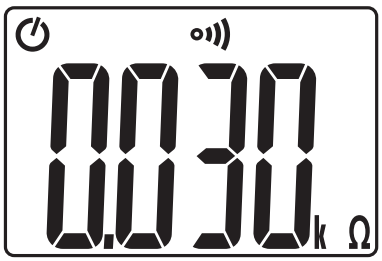


4.7 Resistance Measurement

1) Connect the pen-shaped meter to the measured resistance, the meter will display measured resistance value, if the test value is less than 50Ω, the meter buzzer will send out alarm sound.







5. Maintenance

5.1 Replace Battery

Warnings

Before opening the battery cover of the meter, the pen-shape meter shall be moved from the measuring circuit first to prevent the risk of electric shock.

❶ If " " symbol appears, it means the battery shall be replaced.

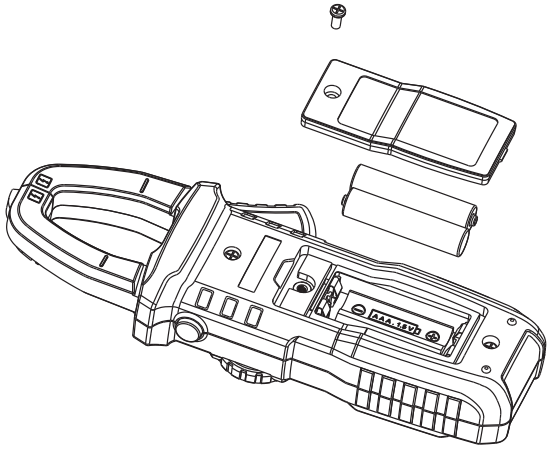
❷ Screw the fastening screws of the meter battery cover and move away.

❸ Replace the old battery.

❹ Install the battery cover as previous.

Note:

Do not violate the battery polarity.



5.2 Replace Pen-shaped Meter

Warnings

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

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

6. Accessories

❶	Pen-shaped meter	Level: 1000V 10A	One pair
❷	Instruction Manual		One copy
❸	Battery	1.5V AAA battery	2pcs
❹	Cloth bag		1pc