

MODEL: **CP024**

AC/DC CLAMP CURRENT PROBE

1、 INTRODUCTION

The is a mini size clamp current probe. It can convert the test current into a voltage output. As an adapter of the oscilloscope, it is very convenient to use this probe to test AC or DC current in any conductor. All ranges are selected by toggle switch, easy to operate. It is an ideal tester for maintenance and inspection work on all types of electrical equipment.

2、 SAFETY INTRODUCTIONS

- Please according to the method of using this manual before operating equipment, in case the instrument damage.
- To maintain the instrument use safety, please do not test beyond the prescribed current.
- Do not use a broken probe signal output line.
- When testing working voltage higher than 60 VDC or 30 vac line, please be careful to use.
- Operating environment condition:
 1. Secondary safety insulation
 2. Secondary pollution
 3. Suitable for indoor use
 4. Relative humidity below 70%RH
 5. Operating temperature: 0°C to 40°C
- Maintenance Essentials: The inspection and maintenance detailed in this manual shall be handled by professionally qualified maintenance personnel.
- Essentials of cleaning: Clean with dry cloth, do not use stain remover, solvent clean this probe.
- Safety symbols description:
 -  Caution, risk of danger (refer to this manual for specific Warning or Caution information)
 -  Equipment protected throughout by double insulation or reinforced insulation
 -  Conforms to European Union directives

3、 Specification

3.1 GENERAL Specification

- **RANGE:** 4A, 40A, 400A
- **Minimum resolution:** 10mA
- **Band wide up to 200KHz** (-3dB)
- **Error by earth magnetic:** $\pm 30\text{mA}$ max
- **Remanence($\pm 100\text{A} \rightarrow 0\text{A}$):** $\pm 30\text{mA}$ max
- **Jaw size:** 23mm (Max)
- **Auto Zero at power on**
- **Low battery/return to zero indicator:** When the battery voltage is lower than the operating voltage, the indicator lights up; When press the return to zero key, the output automatically return to zero, at the same time the indicator light on, after the end of the return to zero yellow and green indicator light automatically out.
- **Power Supply:** 9V 6F22 Battery
- **Power Consumption:** 280mW (typical)
- **Operating temperature and humidity:**
 0°C to 40°C ,relative humidity below 70%RH
- **Store temperature and humidity:**
 -10°C to 60°C ,relative humidity below 70%RH
- **Size:** 180mm(L)x 44mm(W)x 30mm(H)
- **Weight:** Approx. 200g
- **Accessories:** Manual, Battery

3.2 ELECTRICAL SPECIFICATIONS

Accuracy are \pm (%rdg + Number of current) at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ below 70%RH;

DC CURRENT:

Range	Accuracy	Sensitivity
4A	$\pm 1.5\% \text{rdg} \pm 5\text{d}$	1 mV/10 m A
40A	$\pm 1.5\% \text{rdg} \pm 5\text{d}$	1 mV/ 0.1A
300A	$\pm 1.5\% \text{rdg} \pm 5\text{d}$	1 mV/ 1A
300A~400A	$\pm 3.5\% \text{rdg} \pm 5\text{d}$	1 mV/ 1A

AC CURRENT:

Range	Accuracy	Sensitivity
4A	$\pm 2.0\% \text{rdg} \pm 5 \text{d}$	1 mV/10mA
40A	$\pm 2.0\% \text{rdg} \pm 5 \text{d}$	1 mV/0.1A
300A	$\pm 2.0\% \text{rdg} \pm 5 \text{d}$	1 mV/ 1A
300A~400A	$\pm 3.5\% \text{rdg} \pm 5 \text{d}$	1 mV/ 1A

4、 Panel Description

1. Probe jaw
2. Tong head machine
3. Gear switch
4. Power indicator
5. ZERO Key
6. Indicator panel
7. Output socket
8. Low battery/return to zero indicator

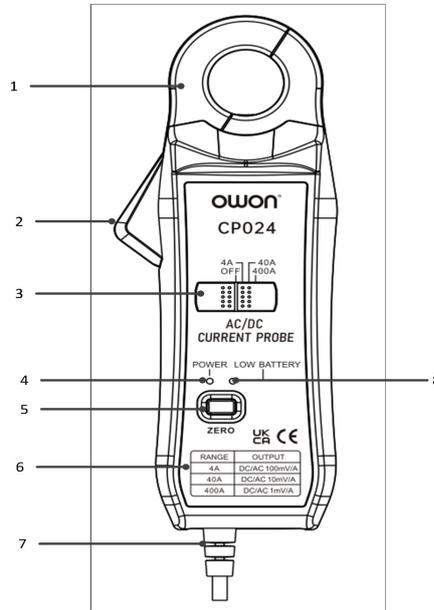


Figure 1

5、 Operating Instruction

5.1 DC current measurement

5.1.1 Choose the right gear 4A,40A or 400A.

(Note: Turn on and wait about 5 seconds.)

5.1.2 Connect the clamp current probe and an apparatus (Fig. 2).

5.1.3 Make sure that the connection wire of the pliers meter is securely connected to the input end of the oscilloscope.

5.1.4 Before measuring, please press the **ZERO** back to Zero button until the oscilloscope read value is zero.

(Note: It is normal to read 0~ 1.0mV after pressing the back to zero button in DC 4A gear.)

5.1.5 Press the board machine to open the clamp and clamp a wire to be tested. Confirm that there is no gap between movable and fixed.

5.1.6 Read the current value on LCD.

5.2 AC current measurement

5.2.1 Choose the right gear 4A,40A or 400A.

(Note: Turn on and wait about 5 seconds.)

5.2.2 Connect the clamp current probe and an apparatus (Fig. 2).

5.2.3 Make sure that the connection wire of the pliers meter is securely connected to the input end of the oscilloscope.

5.2.4 Press the board machine to open the clamp and clamp a wire to be

tested. Confirm that there is no gap between movable and fixed.

5.2.5 Read the current value on LCD.

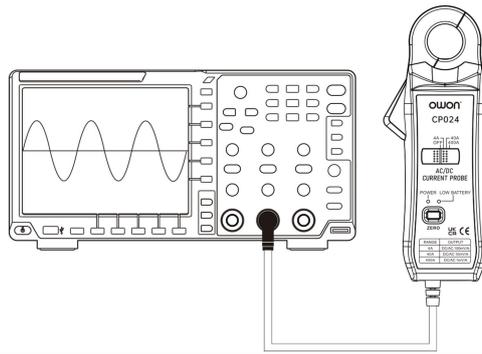
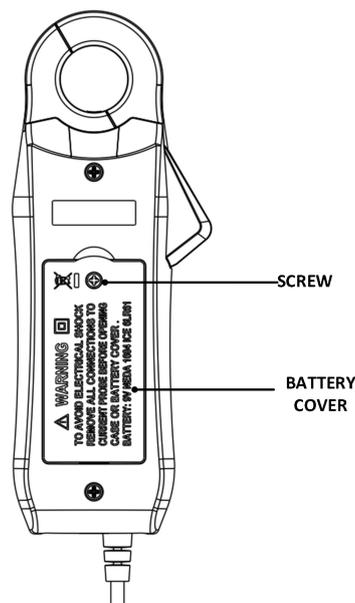


Figure 2

6、 Battery Replacement

When the battery power is low, the low power indicator lights up, please replace the battery.

Turn off the power, First remove the screws on the battery cover as shown below, remove the battery cover, replace the new battery, and then close the cover, tighten the screw.



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