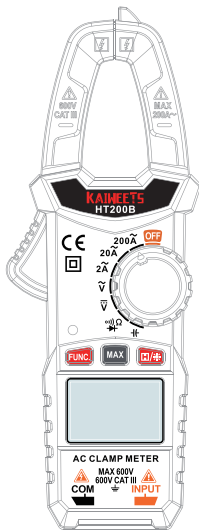


KAIWEETS



Digital Clamp Meter HT200B User Manual

CE RoHS



Contact us: support@Kaiweets.com

Contents

Introduction	1
Safety information	1
Product Overview	3
Safety-Explanation	4
Function Buttons	5
Operating Instructions	6
Insert and replace the batteries	6
Turn on/off the meter	6
Automatic shutdown	7
Auto-ranging	7
Connecting test leads	7

Measurement operation	8
AC current measurement	8
AC/DC voltage measurement	10
Resistance measurement Ω	11
Continuity test	12
Diode test	13
Capacitance measurement	14
Specification	15
Accuracy	16
Maintenance	17
Three Year Warranty	18

Introduction

200B is a cost-effective AC clamp meter. Very small, easy to use, suitable for daily work.

Safety Information

Warnings: Read First

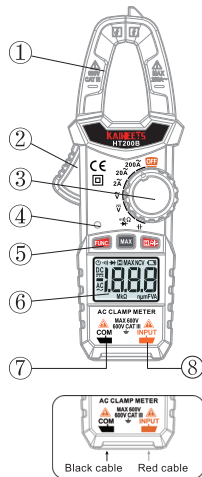
To avoid possible electric shock or personal injury, please obey the following instructions:

- Use the Meter only as specified in this manual or the protection provided by the Meter might be impaired.
- Avoid working alone so assistance can be rendered.
- Never measure AC current while the test leads are inserted into the input sockets.
- Do not use the Meter in wet or dirty environments.
- Inspect the test leads before use. Do not use them if insulation is damaged or metal is exposed.
- Check the test leads for continuity. Replace damaged test leads before using.
- Use extreme caution when working around bare conductors or bus bars. Contact with the conductor could result in electric shock.












- Do not hold the Meter anywhere beyond the tactile barrier.
- When measuring current, center the conductor in the clamp.
- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and earth ground.
- Remove test leads from the Meter before opening the Meter case.
- Never operate the Meter with the back cover removed or the case open.
- Never remove the back cover or open the case of an instrument without first removing the test leads or the jaws from a live conductor.
- Use caution when working with voltages above 30 V ac RMS, 42 V ac peak, or 60 V dc. These voltages pose a shock hazard.
- Do not attempt to measure any voltage that might exceed the maximum range of the Meter- 600 V RMS.
- Do not operate the Meter around explosive gas, vapor or dust.
- When using probes, keep fingers behind the finger guards.
- When making electrical connections, connect the common test lead before connecting the live test lead; when disconnecting, disconnect the live test lead before disconnecting the common test lead.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, or diodes.
- Check the operation of the meter at a known source before and after use.

Product Overview




- ① Current Sensing Clamp
- ② Trigger
- ③ Rotary Function Switch
- ④ LED Indicator
- ⑤ Function Buttons
- ⑥ LED Display Screen
- ⑦ COM Terminal
(Black test lead)
- ⑧ INPUT Terminal
(Red test lead)



Safety-Explanation


	Hazardous Voltage. Danger!		Alternating Current (AC)
	AC and DC		Direct current (DC)
	Important Information		Earth Ground
	Fuse		Low Battery Indication
	Double Insulated		
	Conforms to requirements of European Free Trade		
	Do not dispose of this product in unsorted municipal waste.		
CAT.III	IEC Measurement Category III: CAT III equipment has protection against transients in equipment in fixed-equipment installations, such as distribution panels, feeders and short branch circuits, and lighting systems in large buildings.		

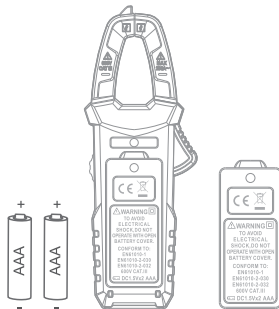
Function Buttons

	<p>Press the "MAX" button to display the maximum value. Press and hold the button for more than 2 seconds to exit "MAX" mode.</p>
	<p>HOLD: The HOLD function holds the currently displayed measured value on the display so that it can be read or logged in peace. Press this button to turn on or off data hold.</p> <p>Make sure that the function is deactivated at the start of the test, otherwise an incorrect measurement result will be simulated!</p> <p>Backlight: Pres this button to turn on or off the backlight.</p>
	<p>Press the "FUNC." key to switch the respective secondary function between the different measurements for the applications accessible via the function switch such as between AC and DC.</p>

Operating Instructions

Insert and replace batteries

Replace the batteries immediately when the symbol  appears in the display. Disconnect the meter from the power source. Remove the test leads from the measuring device, loosen the screws on the back and remove the lower half of the housing, replace the old batteries and screw the cover back on.



Attention



- Please use the same type of batteries, do not use substandard batteries
- In order to ensure safe operation and maintenance of the instrument, please take out the battery when not in use for a long time, in order to prevent damage to the product caused by battery leakage..

Turn on/off the meter

The device is switched on when the rotary switch (3) is set to a measuring function. When the rotary switch is set to OFF, the measuring device is switched off.

Automatic shutdown

No operation in 15 minutes, the clamp meter beeps 3 times. Without further operation, the clamp meter beeps again and switches off automatically.

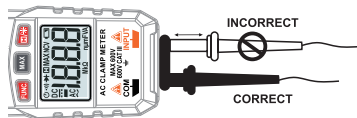
Press any key to restore the clamp meter to operating status. The symbol  appears on the display. To deactivate the automatic switch-off, hold down the "FUNC." key for more than 2 seconds and switch on the clamp meter at the same time. The symbol  disappears. Restart after switching off the meter, the automatic switch-off can be restored.

Auto-ranging

The meter automatically selects the measuring range that is best suited for the measurement performed. The measuring unit and resolution are adjusted at the same time.

Connecting Test Leads

Do not test if leads are improperly seated. Results could cause intermittent display readings. To ensure proper connection, firmly press leads into the jack completely.



Measurement operation

AC current measurement

The current is measured via the current clamp (1). The sensors in the current clamp detect the magnetic field created by current-carrying conductors. You can take measurements on insulated and not insulated conductors.

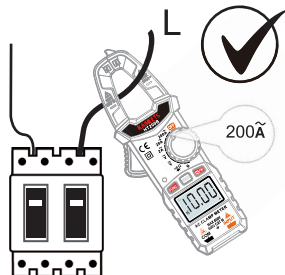
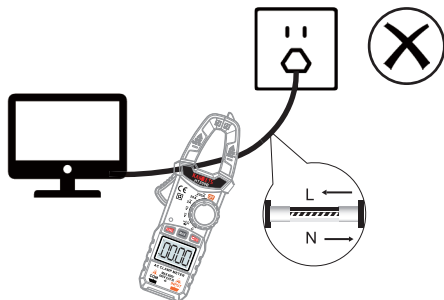
The test leads should be disconnected from the measuring device when measuring current.

Proceed as follows to measure the current:

- 1) Estimate the current range (2A, 20A or 200A) and turn the knob to 2A, 20A or 200A.
- 2) Press the clamp release lever and open the clamp.
- 3) Grasp the individual current conductor to be measured and close the current clamp again.
The measured conductor must be placed in the center of the clamp, otherwise additional errors will occur.
- 4) The measured current is shown on the display. If current > 3A, the orange display lights up.

⚠ Attention

- ▶ Do not use the current clamp to surround more than one conductor.
- ▶ If the supply and return conductors (e.g. L and N) are measured, the currents will cancel each other out and no measurement will be displayed. The cables of household appliances usually contain L and N conductors. A cable separator is required to measure with the current probe.
- ▶ If several supply conductors are measured, the currents add up.
- ▶ Center the conductor through the current clamp (above the markings)
- ▶ Hold your fingers behind the tactile barrier.



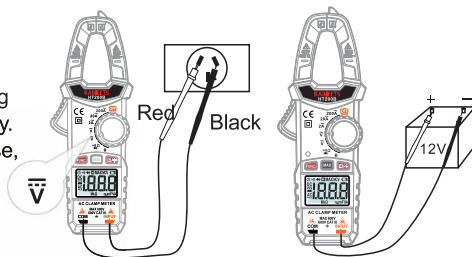
AC/DC voltage measurement

⚠ Voltage above 600 V cannot be measured! When measuring high voltage, pay special attention to safety to avoid electric shock or injury.

- 1) Turn the knob to \overline{V} (DC Voltage) or \tilde{V} (AC Voltage)
- 2) Plug the black test lead into the COM socket and the red test lead into the INPUT socket.
- 3) Then bring the test probes into contact with the points to be measured.
- 4) Read the result on the display. If the voltage is > 80 V, the orange display lights up.

⚠ Attention

- The voltage above 600V can't be measured; otherwise the instrument may be damaged.
- Pay special attention to safety when measuring high voltage to avoid electric shock or personal injury.
- Test the known voltage with the meter before use, confirm the function is intact.



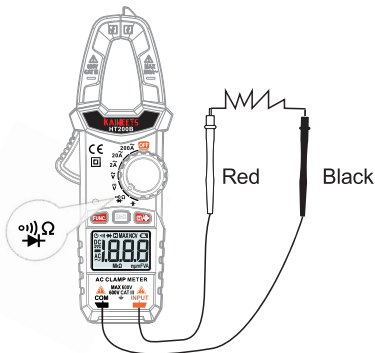
Resistance measurement Ω

⚠ Do not enter a voltage above 10 V! Make sure that the power supply to the circuit is disconnected and all capacitors are discharged.

1. Turn the rotary function switch to Ω for resistance measurement. It displays " $M\Omega$ " on screen.
2. Turn off the circuit under test.
3. Plug the black test lead into the COM socket and the red test lead into the INPUT socket.
4. Then place the test probes in contact with the points at which the resistance must be measured.
5. Read the result on the display.



Note: When measuring resistance on a circuit, the measured value can be influenced by other circuits.

Overload protection: 250V



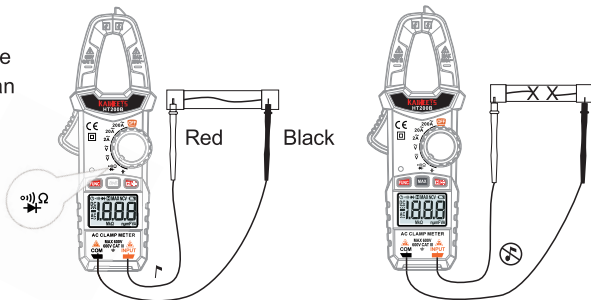
Continuity test

⚠ Do not enter a voltage above 10 V! Make sure that the power supply to the circuit is disconnected and all capacitors are discharged.

1. Turn the rotary switch to  and press the "FUNC." key several times until  appears on the display. The continuity test is now active.
2. Plug the red test lead into the INPUT socket and the black test lead into the COM socket.
3. Connect the probes to the circuit or component under test.
4. If the resistance is $<30\ \Omega$ an acoustic signal sounds continuously and the orange backlight lights up.

Note: When measuring resistance on a circuit, the measured value can be influenced by other circuits.

Open circuit voltage: approx. 2V
Overload protection: 250V



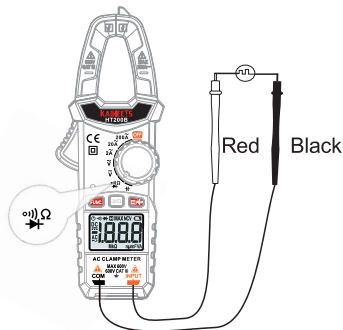
Diode Test

⚠ Do not enter a voltage above 10 V! Make sure that the power supply to the circuit is disconnected and all capacitors are discharged.

1. Turn the rotary function switch to Ω . Press the "FUNC." key 2 times until Ω appears on the display.
2. Remove power from the circuit being tested.
3. Connect the black test lead to the COM terminal and the red test lead to the INPUT terminal.
4. Connect the black test lead to the cathode side and the red test lead to the anode side of the diode being tested.
5. Read forward bias voltage value on the LCD.
6. If the polarity of the test leads is the reverse of the diode polarity, the LCD reading shows "OL".
This can be used for distinguishing the anode side and cathode side of a diode.

Test voltage approx. 2V

Overload protection: 250V



Capacitance measurement

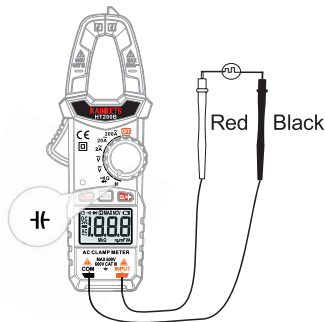
- 1) Turn the knob to $\text{--}\text{||}\text{--}$.
- 2) Insert the red probe in INPUT socket, insert the black probe in COM socket.
- 3) Contact the probe to the capacitance.
- 4) Read the measurement result on the screen.

⚠ Attention

When measuring capacitance on the line, disconnect the power supply and discharge all the high-voltage capacitors. Otherwise, the instrument may be damaged and may be struck by electric shocks.

Note: If the capacitance is $> 100\mu\text{F}$, it will take a long time to measure correctly.

Overload protection: 250V



Specification

Display	2000 counters
Measuring impedance	10 M Ω (V range)
Operating voltage	2 \times AAA (1.5V)
Weight:.....	approx. 240g
Dimension:.....	180mm \times 100mm \times 136mm
Security standard:	IEC 61010-1, IEC 61010-2-032 IEC 61010-031 CATIII 600V
Pollution level.....	2
Operating temperature.....	0 to +40 $^{\circ}$ C
Operating humidity	<80%
Operating height	0 to max. 2000 m
Storage temperature	- 10 to +60 $^{\circ}$ C
Air humidity in storage	<70%

Accuracy

Function	Range	Resolution	Accuracy
DC Volts	200mV/2V/20V200V/600V	0.1mV/0.001V/0.01V/0.1V/1V	$\pm(0.5\%+5)$
AC Volts.	2V/20V/200V/600V	0.001V/0.01V/0.1V/1V	$\pm(1.0\%+5)$
AC-Amps	2A/20A/200A	0.001A/0.01A/0.1A	$\pm(2.5\%+8)$
Resistance	200 Ω /2k Ω /20k Ω /200k Ω /2M Ω /20M Ω .	0.1 Ω /0.001k Ω /0.01k Ω /0.1k Ω / 0.001M Ω /0.01M Ω	$\pm(1.0\%+5)$
Capacitance	2nF/20nF/200nF/2uF/20uF/200uF/ 2mF.	0.001nF/0.01nF/0.1nF/0.001uF/ 0.01uF/0.1uF0.001mF	$\pm(4.0\%+5)$

Maintenance

Warning

- To avoid electrical shock, disconnect test leads from the Meter before removing its back cover. Never use the Meter with the back cover removed.
- Repairs or servicing not covered in this manual should be performed only by qualified personnel.

Caution

- To avoid contamination or static damage, do not touch the circuit board without proper static protection.
- If the Meter is not going to be used for a long time, remove the battery. Do not store the Meter in a high temperature or a high humidity environment.

Cleaning the Meter

- To avoid damaging the meter, do not use abrasives or solvents on this instrument.
- Periodically clean the Meter by wiping it with a damp cloth and mild detergent.
- Do not get water inside the case. This may lead to electrical shock or damage to the instrument.
- Wipe the contacts in the socket with a clean cotton swab soaked in alcohol.

Three Year Warranty

KAIWEETS will repair, without charge, any defects due to faulty materials or workmanship for three years from the date of purchase provided that:

- Proof of purchase is produced.
- Service/repairs have not been attempted by unauthorized persons;
- The product has been subject to fair wear and tear;
- The product has not been misused;

Defective products will be repaired or replaced, free of charge or at our discretion, if sent together with proof of purchase to our authorized distributor(s). For further detail of warranty coverage and warranty repair information, send email to support@Kaiweets.com.

Connect with us on Facebook: [@kaiweetstools](https://www.facebook.com/kaiweetstools)

