CENTER® 261

Instruction Manual

CE

TRMS AC/DC LOW CURRENT CLAMP METER

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TRMS AC/DC LOW CURRENT CLAMP METER

CE

261-00 MAY. 105

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1. ⚠ SAFETY INFORMATION

Do not operate the tester if the body of meter or the test lead looks broken.

Check the main function dial and make sure it is at the correct position before each measurement.

Do not perform resistance and continuity test on a live power system.

Do not apply voltage between the test terminals and test terminal to ground that exceed the maximum limit record in this manual.

Keep the fingers behind the protection ring when measuring through the test lead.

Change the battery when the ▭+ symbol appears to avoid incorrect data.

Environmental Conditions

Operation Temperature:
0°C to 40°C (32°F to 104°F); < 80 % RH

Storage Temperature:
-10°C to 60°C (14°F to 140°F); < 80 % RH

Explanation Symbols

⚠ Attention refer to operation Instructions.

Dangerous voltage may be present at terminals.

This instrument has double insulation.

Approvals: CE EN61010 600V CAT III

2. GENERAL SPECIFICATION

Digital Display:
4 digital liquid crystal (LCD), maximum reading 6000.

Polarity:
When a negative signal is applied, the − signal appears.

Low Battery Indication:
When the battery is under the proper operation range,  will appear on the LCD display.

Sample Rate:
2 times/sec for digital data.

Power Source:
1.5V size AAA alkaline battery X 2

Typical battery Life: (without backlight)
30 hours at current function.
60 hours at other functions.

Auto Power Off:
If there is no key or dial operation for 30 minutes, the meter will power itself off to save battery consumption. This function can be disabled by press and hold the "**HOLD**" button then power the unit on.

Over Load:
When the signal larger than the maximum will be shown OL.

Maximum jaw opening:
∅ 20 mm

Dimensions:
232 x 72 x 35 mm

Weight:
230g (with battery)

Accessories:
Carrying case, batteries, test lead & instruction manual.

3. ELECTRICAL SPECIFICATION

The accuracy specification is defined as ± (percent of reading + digit) at 23±5°C, ≦80 %RH.

DCmA

Range	Resolution	Accuracy
4000mA	1mA	2.0% + 5dgts

ACmA (True RMS)

Range	Resolution	Accuracy
		50~500Hz
4000mA	1mA	2.0% + 5dgts

AC+DC mA (True RMS)

Range	Resolution	Accuracy
		50~500Hz
4000mA	1mA	2.5% + 5dgts

DCA

Range	Resolution	Accuracy
40.00A	0.01A	2.0% + 5dgts
100.0A	0.1A	4.0% + 5dgts
200.0A		8.0% + 5dgts

ACA (True RMS)

Range	Resolution	Accuracy
		50~500Hz
40.00A	0.01A	2.0% + 5dgts
100.0A	0.1A	4.0% + 5dgts
200.0A		8.0% + 5dgts

AC+DC A (True RMS)

Range	Resolution	Accuracy
		50~500Hz
40.00A	0.01A	2.5% + 5dgts
100.0A	0.1A	4.5% + 5dgts
200.0A		8.5% + 5dgts

DCV

Range	Resolution	Accuracy
6.000V	0.001V	1.0% + 2dgts
60.00V	0.01V	
600.0V	0.1V	

Input impedance: 1 MΩ

ACV (True RMS)

Range	Resolution	Accuracy
		50~500Hz
6.000V	0.001V	1.2% ± 5dgts
60.00V	0.01V	
600.0V	0.1V	

Input impedance: 1 MΩ

Zero correction: fractions smaller than approximately 0.010 V are calibrated to zero.

AC+DC V (True RMS)

Range	Resolution	Accuracy
		50~500Hz
6.000V	0.001V	1.5% ± 5dgts
60.00V	0.01V	
600.0V	0.1V	

Input impedance: 1 MΩ

Capacitance

Range	Resolution	Accuracy
1.000uF	0.001uF	3.0% + 8dgts
10.00uF	0.01uF	
100.0uF	0.1uF	
1000uF	1uF	

Diode test

Range	Resolution	Accuracy
2.000V	0.001V	2.0% + 5dgts

Resistance (Ω)

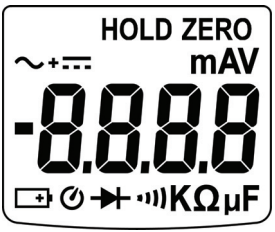
Range	Resolution	Accuracy
600.0 Ω	0.1Ω	1.0% + 3dgts
6.000KΩ	0.001KΩ	
60.00KΩ	0.01KΩ	
600.0KΩ	0.1KΩ	

Continuity

Range	Buzzer Function
	Ohm < 40Ω Beep On Ohm > 110Ω Beep OFF

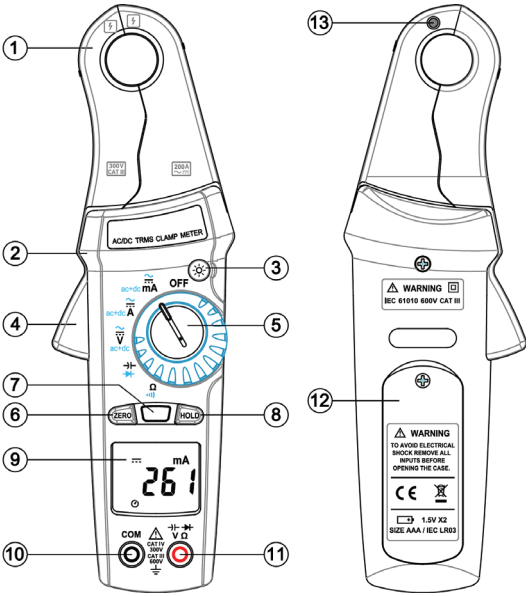
4. DESCRIPTION OF THE INSTRUMENT

4-1 Description of the display:



	Auto power off indication
	Polarity indication
	Low battery indication
	Alternative source indication
	Direct source indication
+	**AC+DC** measurement indication
A	Current measurement indication
V	Voltage measurement indication
F	Capacitance measurement indication
	Diode measurement indication
Ω	Resistance measurement indication
	Continuity test indication
HOLD	Data hold indication
ZERO	ZERO indication
K / m / μ	Measurement unit

4-2 Description of front and rear:



① Current sensing clamp
② Safety protection ring
③ Backlight button
④ Clamp opening handle
⑤ Function select dial
⑥ ZERO button
⑦ Shift function button
⑧ Data hold button
⑨ LCD display
⑩ COM input terminal
⑪ Positive input terminal
⑫ Battery cabinet
⑬ Flaslight

5. BUTTON INSTRUCTION

5-1 HOLD function:

It is possible to freeze the value displayed by pressing the "**HOLD**" button.

Press the "**HOLD**" button again to exit the Hold mode.

5-2 Shift Function:

Press "▭" shift button to change functions in each selector.

5-3 ZERO function:

Press "**ZERO**" button to enter the Zero mode, then **ZERO** indicator will appear on the display. The reading is stored as reference value for subsequent measurement.

Press the " **ZERO** " button again to exit the zero mode.

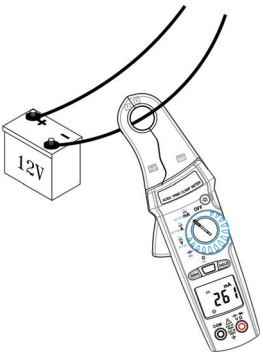
5-4 BACKLIGHT function:

When the "☼" button is pressed, the backlight and flashlight will be turned on.

To disable the function, the button is pressed again. The backlight and flashlight will be automatically turned off about 180 seconds after it turned on.

6. MEASURING INSTRUCTION

6.1 DCmA、DCA measurement:



With the clamp disconnected from any conductor, switch the function selector to **DCmA** or **DCA** range.

Press "**ZERO**" button to zero reading.

Open the clamp by pressing the jaw-opening handle and insert the cable to be measured into the jaw. Close the clamp and get the reading from the LCD panel.

Note:

Before this measurement, disconnect any test lead from the meter for safety.

In some cases where reading is difficult, press the "**HOLD**" button and read the result later.

6-2 ACmA、AC+DCmA、ACA、AC+DCA measurement:

With the clamp disconnected from any conductor, switch the function selector to **ACmA or AC+DCmA or ACA or AC+DCA** range.

Open the clamp by pressing the jaw-opening handle and insert the Cable to be measured into the jaw.

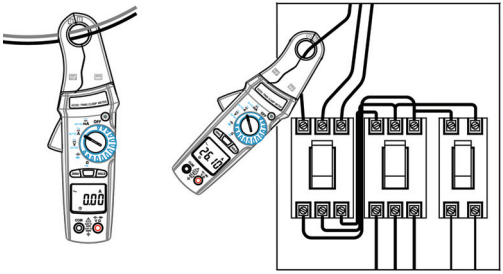
Close the clamp and get the reading from the LCD panel.

Note:

Before this measurement, disconnect any test lead with the meter for safety.

In some cases where reading is difficult, press the "**HOLD**" button and read the result later.

☒ **INCORRECT** ☑ **CORRECT**



6-3 DCV measurement：

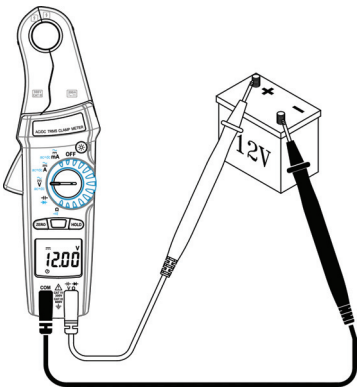
> ⚠ **WARNING!**
> Maximum Input Voltage is 660V AC/DC. Do not attempt to take any voltage measurement that may exceed this maximum to avoid electrical shock hazard and/or damage to this instrument.

Switch the main function selector to **DCV** range.

Connect red test lead to "**+**" terminal and black one to the "**COM**" terminal.

Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.



6-4 ACV、AC+DCV measurement：

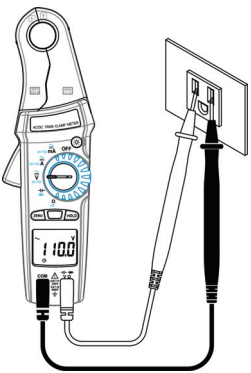
> **⚠ WARNING!**
> Maximum Input Voltage is 660V AC/DC. Do not attempt to take any voltage measurement that may exceed this maximum to avoid electrical shock hazard and/or damage to this instrument.

Switch the main function selector to **ACV** or **AC+DCV** range.

Connect red test lead to "**+**" terminal and black one to the "**COM**" terminal.

Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.



6-5 Capacitance measurement：

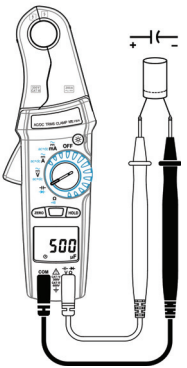
Switch the main function selector to capacitance range.

Connect tip of the test leads to the points where the value of the capacitance is needed.

Read the result from the LCD panel.

Note:

To avoid damage to the meter,disconnect circuit power and discharge all capacitors before measuring



capacitance. Use the DC voltage function to confirm that the capacitor is discharged.

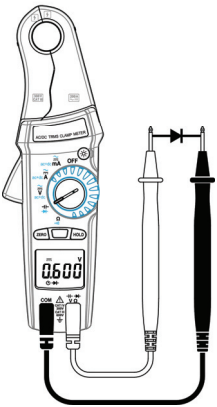
6-6 Diode test measurement：

Switch the main function selector to Diode range.

Connect red test lead to "**+**" terminal and black one to the "**COM**" terminal.

Measure the voltage by touch the test lead tips to the test circuit where the value of diode is needed.

Read the result from the LCD panel.



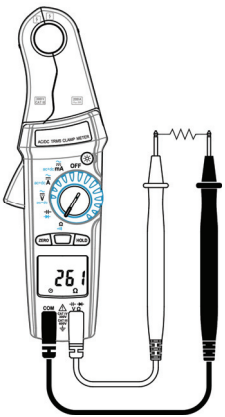
6-7 Resistance measurement

Switch the main function to ·))Ω range.

Connect red test lead to "**+**" terminal and black one to the "**COM**" terminal.

Connect tip of the test leads to the points where the value of the resistance is needed.

Read the result from the LCD panel.



Note:

When taking resistance value from a circuit system, make sure the power is cut off and all capacitors need to be discharged.

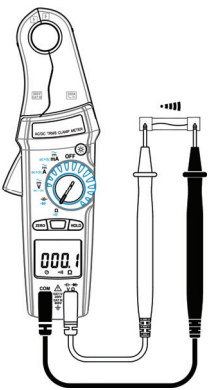
6-8 Continuity test with buzzer:

Switch the main function to ·))Ω range.

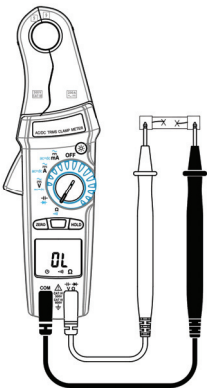
Connect red test lead to "**+**" terminal and black one to the "**COM**" terminal.

Connect tip of the test leads to the points where the conduction condition needed.

If the resistance is under 40Ω, the beeper will sound continuously.



Short circuit



Open circuit

7. BATTERY REPLACEMENT

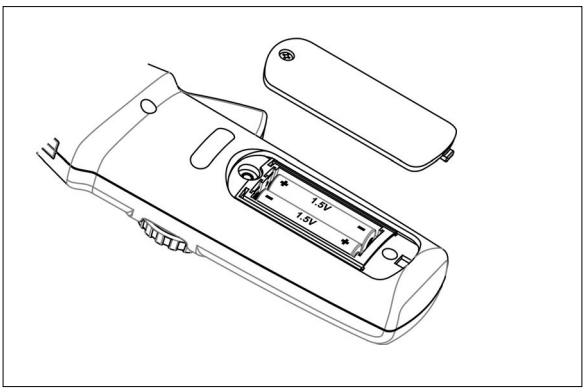
When the battery voltage drops below proper operation range, the symbol will appear on the LCD display and the battery needs to be replaced.

Before changing the battery, switch the main dial to “OFF ”and disconnect test leads.

Open the battery cover by a screwdriver.

Replace the old batteries with two new 1.5V (AAA Size) batteries.

Close the battery cover and fasten the screw.



8. MAINTENANCE

> **⚠ WARNING!**
> Before opening the meter, disconnect both test lead and never uses the meter before the cover is closed.

> **CAUTION!**
> To avoid contamination or static damage, do not touch the circuit board without proper static protection.

8-1 REMARK:

- If the meter will not be used for a long time, remove the battery and do not store the meter in high temperature or high humidity environment.
- When taking current measurement, keep the cable at the center of the clamp will get more accurate test result.
- Repairs or servicing not covered in this manual should be performed only by qualified personal.

8-2 CLEANING:

Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on these instruments.

MEMO:

MEMO:

MEMO:

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