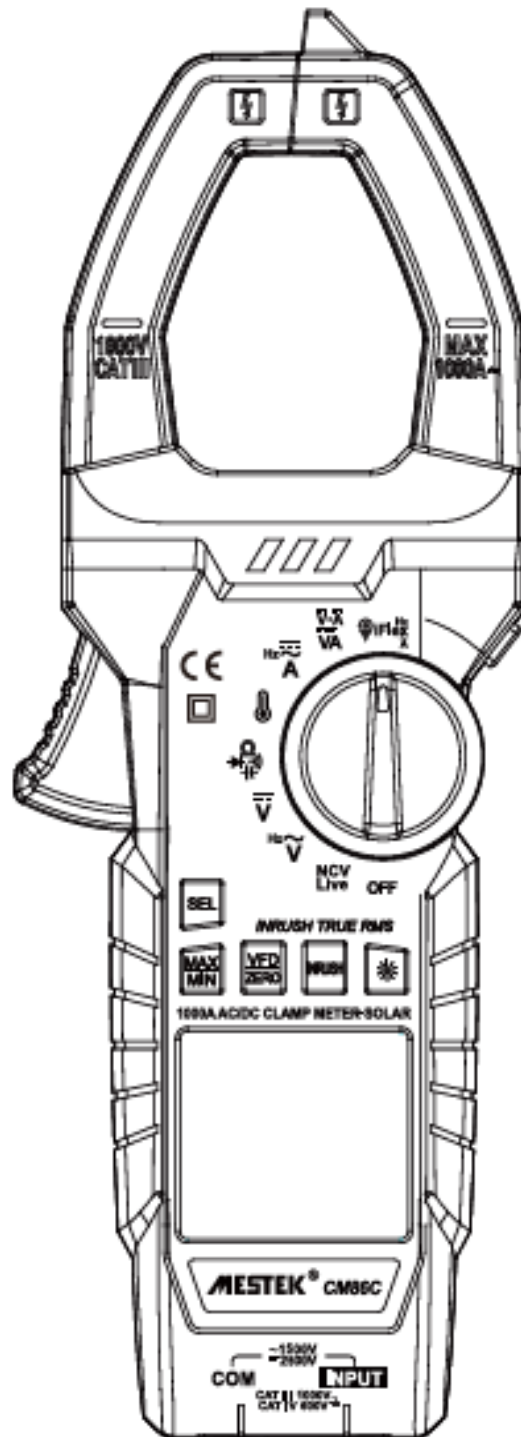


USERS MANUAL



DIGITAL CLAMP METER

Overview

- This instrument is a 6000-count automatic ranging clamp meter equipped with True RMS technology, ensuring accurate measurement of both AC and DC signals. It supports voltage measurements up to AC 1500V and DC 2500V, as well as DC power measurement up to 2500 kVA. An optional iFlex flexible current clamp extends the AC current measurement range to 3000A, making the instrument suitable for applications such as power system maintenance, industrial equipment servicing, new energy systems, and photovoltaic high-voltage testing.
- The clamp meter is capable of measuring AC/DC current, AC/DC voltage, DC power, resistance, capacitance, diode characteristics, and circuit continuity. It also features MAX/MIN value recording, INRUSH (Inrush Current) measurement, VFD (Variable Frequency Drive) measurement, built-in flashlight, temperature measurement, auto power-off, NCV (Non-contact Voltage) detection, live wire identification, full-scale overload protection, and low battery indication, providing comprehensive functionality for professional electrical diagnostics.

1. Safety Information



When using this meter, incorrect operation may result in the risk of electric shock or damage to the meter. Please read the instruction manual carefully before use and use the instrument according to the operating instructions.

- * Upon receipt, inspect the instrument and all supplied accessories for any damage that may have occurred during transportation.
- * Operation must comply with applicable national and local safety regulations. When measuring hazardous live conductors, wear appropriate personal protective equipment (PPE) to prevent electric shock or arc injury.
- * Before use, ensure the instrument housing and test leads are undamaged, the battery compartment is securely closed, and the correct measurement function and range are selected.
- * Over-range measurement and changing the rotary switch while testing are strictly prohibited. The maximum allowable input voltage is AC 1500V / DC 2500V.
- * Before rotating the switch to switch functions, the test leads must be removed from the circuit under test; when measuring current, the test leads at the COM and INPUT inputs must be pulled out first.
- * When the measured voltage is higher than 60V DC or 30V AC (Effective Value), be careful to prevent electric shock.
- * Non-professional maintenance personnel are prohibited from opening the cover to adjust or repair the instrument.
- * Before measuring resistance, capacitance, or continuity, disconnect the circuit from the power supply and fully discharge all high-voltage capacitors.
- * This instrument is suitable for CAT III 1000V/CAT IV 600V.

2. Logo

Symbol	Description
	AC Voltage
	DC Voltage
	Pay attention to the danger and refer to the instruction manual.
	Ground
	Double Insulation
	High Voltage Warning
CE	Comply With (EU) Directive
CAT III	EU Electrical and Electronic Waste Regulations (WEEE directive) Marking

3. Symbol

3.1 Monitor

Symbol	Description
AUTO	Auto Range
NCV	Non-Contact AC Voltage Detection
Live	Fire Wire Identification
H	Data Lock
MAX	Maximum Value
MIN	Minimum Value
ZERO	ZERO Clearing
	Continuity Test
	Diode
AC	AC Voltage
DC	DC Voltage
mV	Millivolt
V	Volt
VFD	Frequency Measurement
Hz	Frequency
A	Current

INRUSH	Surge Current Test
	ACA/DCA gear value is less than 0.4A, and the clamp test line flashes.
	iFlex Flexible Current Clamp
nF	Nanofarad
uF	Microfarad
mF	Millifarad
Ω	Ohm
K	Thousand
M	Trillion
$^{\circ}\text{C}$	Celsius
$^{\circ}\text{F}$	Fahrenheit
	Low Battery Indicator
	Auto Power-off
—	Negative Polarity

3.2 Button

Button	Description
SEL	Function Selection Button
MAX/MIN	Maximum Value, Minimum Value Lock Button
VFD/ZERO	In AC mode, Short press for frequency conversion measurement/For DC current mode, short press to clear.
INRUSH	Inrush Current Test Button
	Short press to turn on or off the backlight
HOLD / 	Short press to lock data/Long press to turn on or off the flashlight

3.3 Input Port

Input Socket	Description
COM Terminal	Black Test Lead Connection
INPUT Terminal	Red Test Lead Connection

4. Technical Parameters

Auto Range	Yes
Full Range Overload Protection Voltage	1000V
Maximum Input Voltage of COM Terminal And INPUT Terminal	AC 1500V/DC 2500V
Altitude	Max. 2000m
Display	LCD
Maximum Display Value	5999
Over-range Display	OL or -OL
Sampling Time	About 3 Times/Second
Power Supply	3x1.5V AAA Batteries
Working Temperature	0°C ~ 50°C
Storage Temperature	-10°C ~ 60°C
Size	250x85x45mm
Jaw Size	42 mm
iFlex Flexible Clamp Length	1.8m
iFlex Flexible Clamp Dimensions	7.5mm
Weight	About 366g (Excluding Battery)

5. Function

- * Selects measurement modes including NCV, Live/Resistance, Continuity, Diode, Capacitance, Temperature (°C/°F), and AC/DC Current, DCV+DCA/KVA.
- * MAX Maximum Value and MIN Minimum Value Lock: Can be used in AC and DC voltage ranges and AC and DC current ranges. Short press to switch MAX and MIN, and long press to cancel the test.
- * ZERO Button: To ensure accurate measurement data, press and hold the ZERO button in DC current mode to clear the base value caused by the magnetic field interference in the use environment.
- * VFD Variable Frequency Measurement: Available in AC voltage and current modes to reduce high-frequency interference and improve measurement stability.
- * INRUSH Inrush Current Test: Measures the inrush (peak) current at load startup. With the load powered off, press the INRUSH button, then power on the load to capture the peak current.
- * Automatic Shutdown Function: If there is no operation for about 15 minutes after turning on the instrument, the instrument will automatically enter sleep state. Press the SEL button to restart.
- * Cancel the Automatic Shutdown Function: Rotate the switch to the OFF position, press the HOLD button and turn it on at the same time to cancel the automatic shutdown function, and restore the automatic shutdown function after restarting.
- * Battery Under Voltage Indication: When () appears on the screen, it

indicates that the battery power is insufficient. Please replace the battery in time to avoid affecting the measurement data.

* HOLD Lock Button: Short press to freeze the displayed reading. An audible alert sounds every 3 seconds in HOLD mode. Rotate the selector or press the HOLD button again to release.

6.Use (Insert the black test lead into the COM terminal and the red test lead into the INPUT input terminal.)

6.1 NCV (Non-Contact AC Voltage Detection)

Rotate the rotary switch to the NCV position. Bring the tip of the clamp head close to the conductor to detect the presence of voltage. When a low-level voltage is detected, the display shows “---L”; when a high-level voltage is detected, the display shows “---H”. The indicator light and buzzer provide visual and audible alerts at different frequencies according to the detected voltage level.

Note :

- ① Even if there is no indication, voltage may still exist. Do not rely on non-contact voltage detection to determine whether voltage exists in the wire.
- ② Detection may be affected by factors such as socket design, insulation thickness, and material type, which may prevent accurate voltage detection.
- ③ Interference from the external environment (such as flash, motor,

electromagnetic interference, etc.) may mistakenly trigger non-contact voltage detection.

6.2 Live Fire Wire Identification

Rotate the rotary switch to the Live position and short-press the SEL button to activate the Live Wire Identification function. Insert the red test lead into the INPUT terminal and touch the conductor under test. If the conductor is live, the display will show "LIVE" and the buzzer will sound; otherwise, the conductor is neutral or ground.

Note:

- ① Before use, verify the meter's functionality by testing it on a known live conductor.
- ② When testing a socket's live wire, other connected electrical equipment may interfere with the measurement. Ensure all other devices are unplugged before testing.

6.3 AC Voltage

- (1) Rotate the switch to the ($\tilde{V}$) position. At this time, the meter is in the AC voltage measurement state.
- (2) Connect the red and black test leads to the line under test for measurement.

6.4 DC Voltage

- (1) Rotate the switch to the ($\overline{V}$) position. At this time, the meter is in the

DC voltage measurement state.

(2) Connect the red and black test leads to the line under test for measurement.

6.5 Resistor

(1) Rotate the switch to the () position, and the screen will display MΩ. At this time, the meter is in the resistance measurement state.

(2) Connect the red and black test leads to the line under test for measurement.

Note:

- ① It is forbidden to measure resistance while the circuit is live during maintenance.
- ② The resistance measured on the circuit will be different from the actual resistance value.
- ③ When the meter is in an open circuit condition or the measured resistance exceeds the range, the display will show "OL", indicating that the value is out of range.

6.6 Continuity Test

(1) Rotate the switch to the () position.

(2) Press the SEL button to select the () file.

(3) Connect the red and black test leads to the line under test.

If the resistance of the line under test is less than about 50Ω, the indicator light of the meter will be on and the buzzer will sound a continuous alarm.

6.7 Diode

- (1) Rotate the switch to the () position.
 - (2) Press the SEL button to select the () gear.
 - (3) The red and black test leads are connected to the diode under test.
- When measuring a normal diode, the meter displays the forward drop voltage of the diode under test, but does not conduct in the reverse direction.

6.8 Capacitor

- (1) Rotate the switch to the () position.
- (2) Press the SEL button to select the (nF) gear.
- (3) The red and black test leads are connected to the capacitor under test.

Note:

- ① Before measuring capacitance, ensure the capacitor is fully discharged. During measurement, the instrument applies a test signal to the capacitor, and a short stabilization period is required for accurate readings.
- ② When measuring capacitance in a circuit, other connected components may affect the reading. For accurate measurement, the capacitor should be isolated from the circuit.

6.9 Temperature

- (1) Rotate the switch to the () position, and the instrument will automatically measure the current ambient temperature. Press the SEL button to convert between Celsius and Fahrenheit.
- (2) To measure the temperature of an object or liquid, connect the red K-type thermocouple to the INPUT terminal and the black probe to the COM terminal. Ensure the thermocouple tip is in direct contact with the object or liquid for accurate measurement.

6.10 AC Current

- (1) Rotate the switch to position A, and the screen will display AC current.
- (2) Hold the clamp trigger to open the jaws, position a single conductor at the center of the clamp, and fully close the jaws. The instrument will display the measured current once the conductor is properly enclosed.

Note:

- ① To measure current, you only need to place a single wire (Live wire or Neutral wire). Placing two or more wires at the same time cannot measure correctly, and the load must be in working condition.
- ② The wire under test is in the center of the clamp head, and the maximum measured AC current is 1000A/40Hz~400Hz.

6.11 Surge Measurement

In AC current mode, short-press the INRUSH button to enter surge current measurement mode. Before measurement, disconnect the load power supply. Hold the clamp trigger and open the jaws, then place a single conductor of the circuit in the center of the clamp. After the jaws are fully closed, turn on the load power supply. The instrument will capture the peak inrush current. Change the measurement range or press the INRUSH button again to exit surge measurement mode.

Note:

- ① For surge current measurement, place only a single conductor (live or neutral) in the clamp. Measuring two or more conductors simultaneously will result in inaccurate readings.
- ② The wire under test is in the center of the clamp head, and the maximum measured AC surge current is 1000A/40Hz~400Hz.

6.12 DC Current

(1) Rotate the switch to the A position and press the SEL button to convert DC current.

(2) Hold the clamp trigger, open the jaws, and position a single conductor in the center of the clamp head. Close the jaws fully to display the measured current.

Note:

- ① For current measurement, place only one conductor in the clamp. The load must be powered
- ② The wire under test is in the center of the clamp head, and the maximum measured DC current is 1000A.
- ③ To ensure accurate measurement data, short press the ZERO button in DC current mode to clear the base value caused by electromagnetic interference in the use environment.
- ④ If the measured current is negative, reverse the orientation of the clamp head so that the load current flows in the correct (positive) direction through the clamp.

6.13 DC Power Test

(1) Rotate the switch to the $\begin{matrix} \overline{V} \cdot \overline{A} \\ \overline{VA} \end{matrix}$ position, and the meter enters the (DCV+DCA) DC voltage and current measurement mode; the screen simultaneously displays DCA/DCV.

(2) Short press the SEL button to switch to VA DC apparent power mode; the meter automatically calculates the result of (DCV×DCA), and the screen displays DC KVA.

(3) Connect the meter (COM/INPUT Terminal) to DC voltage, open the

jaws and place the single wire of the line under test in the center of the clamp head. After the jaws are closed, the meter will display the power value.

Note:

- ① If the display shows a negative value, verify that the input terminal connections and the current direction through the clamp are correct.
- ② Only a single wire is required to measure current. Placing two or more wires at the same time cannot measure correctly, and the load must be in working condition.

6.14 iFlex Flexible Current Clamp (Optional)

- (1) Rotate the rotary switch to the iFlex position and connect the flexible current clamp to the COM and INPUT terminals.
- (2) Unlock the flexible clamp according to the instructions on the clamp lock. Insert the conductor or wire to be tested into the flexible clamp, then return it to the clamp lock and rotate to secure. Ensure the conductor is fully enclosed within the flexible clamp for accurate measurement.
- (3) Turn on the load power supply. When current flows through the conductor and the flexible clamp detects the signal, the meter will display the measured current.

7. Technical Indicators

7.1 DC Voltage

Range	Resolution	Accuracy
600mV	0.1mV	$\pm (0.5\% \text{ of reading} + 3 \text{ digits})$
6V	0.001V	
60V	0.01V	
600V	0.1V	$\pm (0.8\% \text{ of reading} + 3 \text{ digits})$
1000V	1V	

Input Impedance: 10M Ω

Maximum Input Voltage: DC 1000V

7.2 AC Voltage

Range	Resolution	Accuracy
6V	0.001V	$\pm (0.8\% \text{ of reading} + 5 \text{ digits})$
60V	0.01V	
600V	0.1V	$\pm (1.0\% \text{ of reading} + 5 \text{ digits})$
1500V	1V	$\pm (1.2\% \text{ of reading} + 8 \text{ digits})$

Input Impedance: 10M Ω

Maximum Input Voltage: AC 1500V/Frequency Response: 40Hz-1KHz

7.3 DCV+DCA -DC Voltage

Range	Resolution	Accuracy
6V	0.001V	$\pm (0.5\% \text{ of reading} + 3 \text{ digits})$
60V	0.01V	
600V	0.1V	$\pm (0.8\% \text{ of reading} + 3 \text{ digits})$
1000V	1V	
2500V	1V	$\pm (1.2\% \text{ of reading} + 10 \text{ digits})$

Input impedance: 10M Ω / The maximum input voltage: DC 2500V

7.4 DCV+DCA -Current

Range	Resolution	Accuracy
1000A	1A	$\pm (2.0\% \text{ of reading} + 10 \text{ digits})$

Maximum Input Current: DCA 1000A

7.5 VA-DC Power

Range	Resolution	Accuracy
10KVA	0.001KVA	$\pm (2.0\% \text{ of reading} + 20 \text{ digits})$
100KVA	0.01KVA	
1000KVA	0.1KVA	
2500KVA	1KVA	

Accuracy Range: 5~100% Range

Overload ProtectionDC: 2500V/AC 1500V

7.6 Resistance

Range	Resolution	Accuracy
600 Ω	0.1 Ω	$\pm(1.0\% \text{ reading} + 5 \text{ digits})$
6k Ω	0.001k Ω	
60k Ω	0.01k Ω	
600K Ω	0.1k Ω	
6M Ω	0.001M Ω	$\pm(2.0\% \text{ reading} + 5 \text{ digits})$
60M Ω	0.01M Ω	

Overload Protection: 1000V / Open Circuit Voltage: 0.5V

7.7 Diode

Function	Range	Test condition
Diode test 	0.15V-2.5V	Forward DC current: about 1mA; open circuit voltage: about 4V. The meter shows the approximate value of the diode forward voltage drop.

Overload Protection: 1000V

7.8 Continuity Test

Function	Range	Description	Test condition
	600Ω	If the resistance is less than 50Ω, the buzzer will sound an alarm.	Open Circuit Voltage: About 2V

Overload Protection: 1000V

7.9 Capacitor

Range	Resolution	Accuracy
600nF	0.1nF	± (4.0% of reading +5 digits)
6uF	0.001uF	
60uF	0.01uF	
600uF	0.1uF	
6mF	0.001mF	± (5.0% of reading +10 digits)
60mF	0.01mF	

Overload Protection: 1000V

7.10 AC Current

Range	Resolution	Accuracy
60A	0.1A	± (2.0% of reading +5 digits)
600A	0.1A	± (2.5% of reading +5 digits)
1000A	1A	

Maximum Input Current: AC 1000A

Frequency Response: 40Hz~ 400Hz

7.11 DC Current

Range	Resolution	Accuracy
60A	0.1A	$\pm$ (2.0% of reading +5 digits)
600A	0.1A	$\pm$ (2.5% of reading +5 digits)
1000A	1A	

Maximum Input Current: DC 1000A

7.12 Surge Current

Range	Resolution	Accuracy
1000A	1A	<10A for reference only $\pm$ (10 % reading + 60 digits)

7.13 Temperature

Range	Resolution	Accuracy
-20 ~ 1000°C	1°C	$\pm$ (2.0% reading + 2 digits)
-4 ~ 1832°F	2°F	$\pm$ (2.0% reading + 4 digits)

Overload Protection: 1000V

Note: The standard K-type thermocouple in the accessory is only suitable for measuring <230°C (446°F). For measurements >230°C (446°F), the K-type probe needs to be replaced with a corresponding temperature resistant grade.

7.14 iFlex Current (Optional)

Range	Resolution	Accuracy
300A	0.1A	$\pm$ (3.0% reading +5 digits) increase 2% when C.F.>2
3000A	1A	

Maximum Input Current: AC 3000A

Frequency Response: 40Hz ~ 400Hz

8. Battery Replacement

Before replacing the battery, turn off the instrument and ensure that all test leads are disconnected from the circuit.

1. Turn off the power of the instrument.
2. Remove the test leads from the measurement circuit.
3. Use a screwdriver to remove the battery cover screw on the back of the meter.
4. Remove the battery cover.
5. Remove the old battery.
6. Replace with new 1.5Vx3 AAA battery.
7. Install the battery cover and tighten the fixing screws.

9. Accessories

1、Clamp Meter	×1
2、Instruction Manual	×1
3、Test the Pens	×1
4、1.5V AAA Battery	×3
5、Thermocouple	×1
6、Instrument Storage Bag	×1
7、iFlex Flexible Current Clamp (Optional)	×1

USERS MANUAL

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CE RoHS



M101040139



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