

Digital Clamp Meter

User Manual



Part Number: 72-7800

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1. Overview

72-7800 is a portable true RMS 5-5/6 bit (6000 Counts), auto range clamp ammeter with analog simulation bar graph. The clamp ammeter featuring full-function on screen display, full-range overload protection and unique design makes this a highly featured clamp ammeter with incredible performance. The clamp ammeter is applicable to following measurements: AC/DC voltage, AC/DC current, surge current, resistance, frequency, maximum/minimum value measurement, relative value measurement, data recording and read-back, under-voltage display and automatic shutdown function.

The instruction manual includes relevant safety information and warning indication, please read them carefully and strictly observes all warnings and notes.

2. Open Case and Check

Unpack and remove the instrument. Check the instrument for any damage and verify that the following items are included in the box. If anything is damaged or missing, please contact your supplier.





- An operating instruction manual
- A test lead
- A Temperature sensor
- A carry case
- A safety certificate

3. Safety Codes

The clamp ammeter is designed and produced strictly in accordance with IEC61010-1 safety standards. It meets the double insulation over-voltage standardd CAT II 1000V. CAT III 600V and safety standards of pollution degree II. If failure to use the meter under the relevant operation instruction, the protection provided shall be weakened or lost.

1. Check the clamp ammeter and test leads before use, guard against and damage or abnormal phenomenon. if abnormal condition is found: bare test leads, damaged classic, no display or random display in LCD, please do not use it. It is forbidden to use the clamp ammeter without rear cap or rear cap not in place, or otherwise there is risk of electric shock.
2. Damaged test lead should be replaced with a new one.
3. Do not touch the bare wire and connector, used input terminal or the circuit being measured when clamp ammeter is in operation.
4. Be careful in measuring voltage higher than DC 42V or AC 30V and keep fingers behind the test lead finger guard to prevent against electrical shock.
5. Set the function range switch at the maximum range position if the scope of measured value could not be defined.
6. Do not use voltage or current values greater than those defined by the clamp meter for safe use.
7. Set function switches to their needed positions before measurement. Before changing functions, remove the test leads from their measured circuits to prevent damage to the meter.
8. Refrain from storing or using the clamp ammeter in explosive and flammable environment with high temperature, high humidity and strong electromagnetic field.
9. Refrain from altering the internal wiring in the clamp ammeter to guard against damage to meter and danger.
10. When LCD display shows the icon "🔋", it is required to replace the battery in time to ensure the measurement accuracy.
11. Power off immediately after measurement. Take out battery when the clamp ammeter is not be in use for a long time.

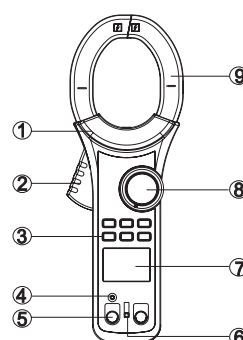
4. Electrical Symbols

	Dual Insulation
	Grounding
	Warning prompt
	AC (Alternating Current)

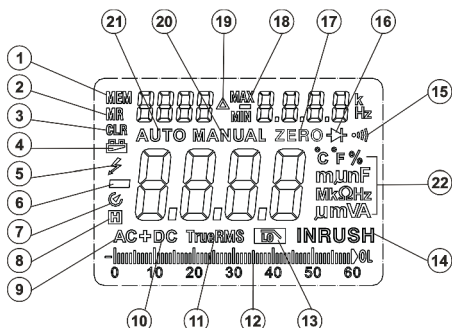
	DC (Direct Current)
	Buzzing on-off
	Diode
	Low battery
	AC or DC (Alternating current or direct current)
	Danger. High Voltage.
	Comply with EU standards

5. External Structure




1. Clamp ammeter body: Designed to safely protect operator from electric shock during proper use.
2. Clamp head pulling handle: Press the trigger to open the clamp head, when release the trigger, clamp head will partially closed.
3. Functional key: Select basic functions.
4. Analog current output
5. Measure input terminal: Measure the signal input.
6. Toggle: Used to select the measurement of input terminal or analog current output terminal.
7. LCD display area: Displays the measurement data and functional symbols.
8. Dial switch: Select the measurement function position.
9. Clamp head: A device used to measure AC/DC current and convert current into voltage.



6. LCD Display



1. MEM:	Memory number
2. MR	Read back stored data
3. CLR	Stored data clearing
4.	Battery under-voltage
5.	High voltage warning
6.	Display negative reading
7.	Auto shutdown
8.	Hold mode
9. AC	AC measurement

10. DC	DC measurement	
11. True RMS	TrueRMS measurement	
12. +System Digit and Simulation Bar	Measurement of reading value	
13. 	LPF measurement	
14. INRUSH	INRUSH current measurement	
15. 	Buzzing on-off measurement	
16. 	Diode measurement	
17. Zero	AC current gear ZERO	
18. Max, Min	Maximum and minimum value measurement	
19. Δ	Relative measurement	
20. Manual	Manual range	
21. Auto	Auto Range	
22. Measurement unit :	V	Voltage unit: Volt
	A	Current unit: Ampere
	Ω , k Ω , M Ω	Resistance unit: Ω , k Ω , M Ω
	nF, μ F, mF	Capacitance unit: nF, μ F, mF
	Hz, kHz, MHz	Frequency unit: Hz, kHz, MHz
	$^{\circ}$ C, $^{\circ}$ F	Temperature unit: $^{\circ}$ C, $^{\circ}$ F

7. Key Function



1. SELECT/CLEAR

Select position by a short press.

With a long press, LCD will display “CLR” symbol, clear stored data record, and then “CLR” symbol disappears, MEM stored number becomes 0.

2. RANGE/ \blacktriangle

While in data recording mode, enter the manual measurement mode by a short press of the RANGE button and change the manual range. After a long press of the RANGE button, the unit will switch to manual ranging.

While under the data recording recall mode, you can view the stored data upward by pressing this key.

3. MAX/MIN/STORE

With a press on the key, enter MAX/MIN standby mode, LCD will display “----” ; after the second press, LCD will display “MAX” to enter the maximum value measurement mode, after the third press, LCD will display “MIN” to enter the minimum value measurement mode. Under non-standby mode, record the current measurement data with a long press on the key.

4. REL/ \blacktriangle

While in the data recording mode (except during DC Current function), enter the relative measurement mode with a short press. The main display will show the measured value-basic value; the right display will show the basic value. Press again

to exit this mode. While in DC current measurement mode, you can clear the mode with a short press, and display will show "ZERO".

While in the data recording mode, you can do a long press to quit the continuous data recording mode. While in the data recall mode, you can review the data downward by pressing this key.

5. INRUSH/LOAD

At the AC current position, enter INRUSH current measurement mode by pressing the key, after another press, quit the mode. After long press on the key, enter the read back stored recording data mode, after another press on the key, quit the mode.

6. HOLD/☀

After a short press, enter the reading hold measurement mode, after another press, quit the mode. After a long press, the backlight will be illuminated. In case of long press within 10s, backlight will turn off. If no long press, it will be automatically turn off after 10s.

8. Measurement Operating Instruction

1. DC voltage measurement

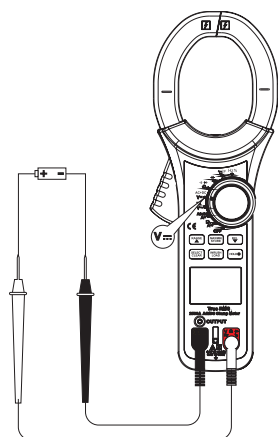
- 1) Insert red test leads in "V" jack and black test leads in "COM" jack.
- 2) Change the function range switch to the DC voltage measurement position, and connect test leads in parallel with the power or load to be measured.
- 3) Directly read the measured voltage value from display.
- 4) Press SELECT at the DC voltage measurement position to select AC+DC measurement.

Note:

Do not input voltage higher than 1000V. It may be feasible to measure higher voltage, but damage will be caused to the meter. Beware of potential electric shock when measuring high voltage.

After completing all measurement operations, disconnect test leads from the measured circuit.

When measured voltage is higher than the safety voltage 42V/DC, the meter LC displays high voltage warning symbol "⚡" when inputting overvoltage, higher than DC 1000V position range, the meter ⚡ will automatically sound intermittent buzzing and high voltage warning symbol will automatically flash to provide warning symbol.



2. AC voltage measurement

- 1) Insert red test leads in "V" jack and black test leads in "COM" jack.
- 2) Push the function range switch to the AC voltage measurement position, and connect test leads in parallel with the power or load to be measured.
- 3) Main display will show the true RMS, while the right secondary display shows frequency value. Conditions must be met when reading frequency value: input range \geq range \times 10%.
- 4) Press SELECT at the AC voltage measurement position to select LPF measurement $\overline{\text{f}}$.

Note:

Beware of potential electric shock when measuring high voltage.

After completing all measurement operations, disconnect test leads from the measured circuit.

When the measured voltage is greater than the 30V AC, the meter LCD displays a high voltage warning symbol “⚡”. If the measured voltage is greater than the 1000V limit, the meter will intermittently buzz while the high voltage warning “⚡” flashes.

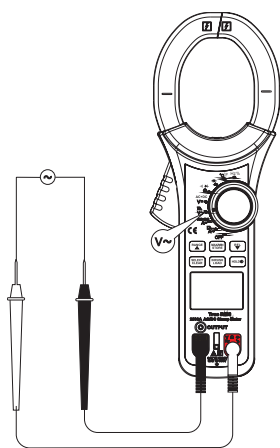
AC conversion adopts the AC coupling true RMS response mode, sine wave input for correction.

The accuracy of non-sine wave should be adjusted as follows:

Crest factor 1.4~2.0, accuracy should be increased 1%;

Crest factor 2~2.5, accuracy should be increased 2.5%;

Crest factor 2.5~3, accuracy should be increased 4%;

**3. Resistance measurement**

1) Insert red test leads in “Ω” jack and black test leads in “COM” jack.

2) Turn the function range switch to the measurement position “Ω” press SELECT to select resistance measurement Ω and connect test leads in parallel with the two terminals of measured resistance .

3) Directly read the measured resistance value from display.

Note:

If the resistance open circuit or resistance being measured exceeds the maximum range of the meter, display will show “OL” .

Before measuring line resistance, the circuits should be powered off and all capacitors properly discharged to insure measurement accuracy.

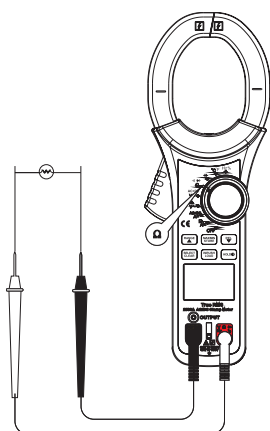
When measuring low resistance, a measurement error of $0.1\Omega \sim 0.2\Omega$ will be caused by the test leads. To acquire an accurate reading, short the test leads and press the Relative Measurement (TRIANGLE SYMBOL). This value will then be deducted from the resistance measurement.

If the resistance value is not less than 0.5 Ω when test leads are short circuit, please inspect test leads.

In measuring resistance over $1M\Omega$, it might take several seconds to stabilize the reading. This is normal for high resistance measurement. To acquire stable reading, the short test lead can be used for measurement.

Do not input voltage higher than DC 42V or AC 30V, which may cause personal injury.

After completing all measurement operations, disconnect the test leads from the circuit being measured.



4. Circuit on-off measurement (Ω)

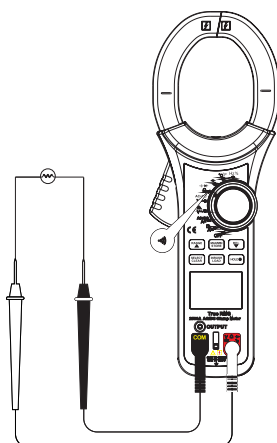
- 1) Insert red test leads in “Ω” jack and black test leads in “COM” jack.
- 2) Push the function range switch to the measurement Position “Ω”, press SELECT to select circuit on-off measurement and connect test leads in parallel with the two terminals of measured circuit. When the measured resistance between two terminals $<30\Omega$, the circuit should be deemed conductive, buzzer will sound continuously. When resistance is $\geq 30\Omega$, the buzzer will not sound.
- 3) Directly read the measured resistance value loaded by the circuit from display.

Note:

When checking a circuit, prior to measurement, be certain to power off all power sources and discharge any inline capacitors. With respect to the circuit on-off measurement, open-circuit voltage is approximately -3.5V and range should be 600Ω measurement Position

Do not input voltage higher than DC 42 V or AC 30V, which may cause personal injury.

After completing all measurement operations, disconnect the test leads from the measured circuit.



5. Diode measurement (diode symbol)

- 1) Insert red test lead in “diode symbol” jack and black test lead in “COM” jack. Polarity of red and black test leads are respectively “+” and “-”.
- 2) Select the “diode symbol” position on the function switch, and press SELECT to select diode measurement and diode symbol to display the forward diode voltage drop. For silicon diode junctions, the general voltage drop value is between 500~800mV as a normal value.

Note:

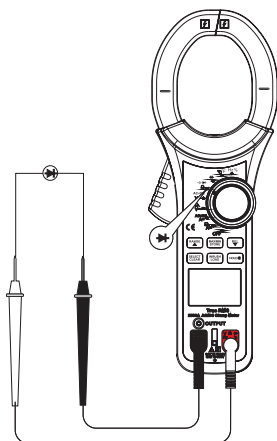
“OL” will be displayed when the measured diode is open-circuit or polarity is inversely connected.

Before diode measurement, make sure all circuits are powered off and discharge any capacitors for best measurement accuracy.

The test open-circuit voltage of diode is approximately 3.5V.

Do not input voltage higher than DC 42V or AC 30V, which may cause personal injury.

After completing all measurement operations, disconnect the test leads from the measured circuit.

**6. Capacitance measurement**

1) Insert red test lead in “VΩ” jack and black test lead in “COM” jack.

2) Select the “C” position on the function switch, and connect the test lead in parallel with the capacitor or circuit to be measured.

3) Directly read out the capacitance value of measured circuit from display. It is recommended to carry out capacitance measurement with the short test leads, thus reducing the impact caused by distributed capacitance.

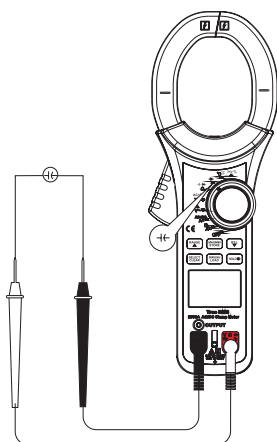
Note:

If the measured capacitance is short circuited or capacitance exceeds the maximum range of the meter, display will show “OL”.

While in the Capacitance Measurement mode, the simulated analog measurement bar is disabled. It will take a longer amount of time to obtain measurements if the capacitance is greater than 600 μ F.

For best measurement accuracy, discharge capacitors before the test, and then connect leads for measurement. Some high voltage capacitors can cause damage

After completing measurement operation, disconnect the test leads from the measured capacitance.



7. Frequency/duty ratio measurement

- 1) Insert red test leads in “Hz” jack and black test leads in “COM” jack.
- 2) Select the “mV ∴/Hz%” position on the function switch, and press the red key to select the “Hz” frequency measurement function. Connect the test leads in parallel with signal to be measured.
- 3) Directly read out the measured frequency value from display.
- 4) Press SELECT to select duty ratio measurement.

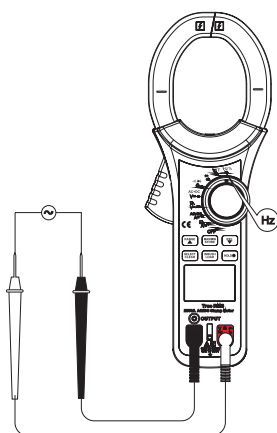
Note

For measuring signal with frequency between 10Hz ~ 40kHz

The amplitude must be between 1Vrms and 30Vrms. Upper frequency limit 40MHz

Do not input frequency higher than 30V rms, which may cause personal injury

After completing all measurement operations, disconnect the test leads from the measured circuit



8. Temperature measurement

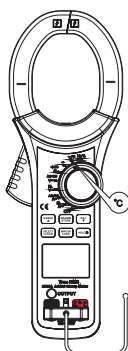
- 1) Select the “°C/°F” position on the function switch. The display will initially read “OL”. Short the standard test leads to display room temperature.
- 2) Insert temperature K type socket in the corresponding hole as per the diagram.
- 3) Put temperature probe directly on the measured surface, several seconds later, directly read out the measured Celsius temperature value from LCD.
- 4) Press SELECT to select Fahrenheit temperature measurement.

Note

The meter should be operated when ambient temperature is outside 18°C ~ 28°C range for accurate measurement, particularly evident in low temperature environment.

Do not input voltage higher than DC 42V or AC 30V, which may cause personal injury.

After completing temperature measurements, remove the temperature probe.



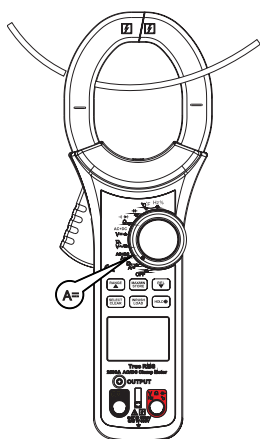
9. DC current measurement

- 1) Select the “ --- ” on the function switch. If the display does not read zero, press REL to reset the voltage measurement to zero. You may need to repeat this after each current measurement.
- 2) Squeeze clamp trigger to open the clamp head and place around single conductor to be measured. Slowly release the clamp trigger to make certain that the head is completely closed. Keep the conductor centred in the clamp head. Please note that only one conductor can be measured at a time; multiple conductors will product an incorrect measurement.
- 3) Directly read out the measured DC current value from display.
- 4) Press SELECT at the DC current position to select AC+DC measurement.

Note:

Current measurement must be taken between 0° and 40°C. If a positive reading is achieved after measure DC current, the current direction run from the base of the meter to the front of the meter. Never release the clamp too abruptly as the component is sensitive to shock, heat, and magnet fields. Impact of the clamp jaws will also cause short term reading variation.

Be sure the conductor to be measured is clamped at the center of clamp head, if not, an additional reading error of $\pm 1\%$ may be resulted.



10. AC current measurement

- 1) Select the “A~” on the function switch. Squeeze clamp trigger to open the clamp head and place around single conductor to be measured. Slowly release the clamp trigger to make certain that the head is completely closed. Keep the conductor centred in the clamp head. Please note that only one conductor can be measured at a time; multiple conductors will product an incorrect measurement.
- 2) Main display will show the true RMS, while the right secondary display shows frequency value. Conditions must be met when reading frequency value: input range \geq range \times 10%.
- 3) Press SELECT at the AC voltage measurement position to select LPF measurement LPF
- 4) When measuring an initial surge current, press INRUSH while in the AC Current function. The meter will display “—” while in the standby INRUSH mode. After starting the electrical appliance being measured, the instant-on current of the appliance will be displayed. Press INRUSH again to exit the surge current measurement.

Note:

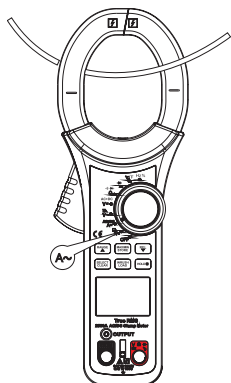
Current measurement must be taken between 0° and 40°C. If a positive reading is achieved after measure DC current, the current direction will from the base of the meter to the front of the meter. Never release the clamp too abruptly as the component is sensitive to shock, heat, and magnet fields. Impact of the clamp jaws will also cause short term reading variation.

Be sure the conductor to be measured is clamped at the centre of clamp head, if not, an additional reading error of $+1\%$ may be resulted

AC Conversion utilizes the AC True RMS response and sine wave measurement for correction. The accuracy of non-sine wave measurements can be adjusted as follows:

Crest factor 1.4~2.0, accuracy should be increased 1%;

Crest factor 2.0~2.5, accuracy should be increased 2.5%;
Crest factor 2.5~3.0, accuracy should be increased 4.0%;

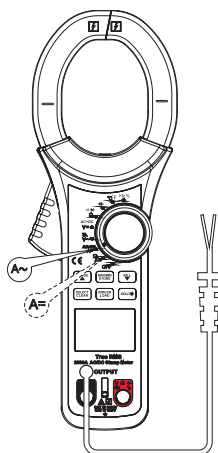


11. Current signal output function

The 72-7800 clamp meter features a current output signal function. The signal converts measured current into voltage at a ratio of 1A/amV readable by other meters and pieces of test equipment. For example, this allows you to observe current as a waveform on an oscilloscope, or collect data with PC enabled equipment.

Note:

Do not input voltage greater than 5V, as this could damage the meter.



12. Power gear (OFF)

Instrument will be powered off.

13. Automatic shutdown function

If buttons are not pressed or if function rotary knob is not used within given time (15 minute default), the display will turn off, and the instrument enters a low-power mode. The meter can be awakened by pressing a button or turning the knob.

Note:

Current measurement must be taken between 0° and 40°C. If a positive reading is achieved after measure DC current, the current direction will from the base of the meter to the front of the meter. Never release the clamp too abruptly as the component is sensitive to shock, heat, and magnet fields. Impact of the clamp jaws will also cause short term reading variation.

Be sure the conductor to be measured is clamped at the center of clamp head. If not, an additional reading error of $\pm 1\%$ may be resulted

9. Technical Specifications

1. General specification

- Liquid crystal display: 3-5/6 digit LCD, maximum display 6000 count.
- Polarity display: auto positive and negative polarity display.
- Overload display: "OL" or "-OL".
- Low voltage display: "⚡" indicates that battery voltage is lower than working voltage.
- Therefore, the battery needs to be replaced.
- Sampling rate: 3 per second
- Type of sensor: Hall effect sensor for DC/AC measurement
- Test position error: an additional reading error of $\pm 1\%$ may be resulted when the power to be measured is not clamped at the center of clamp head
- Resistance to impact strength: 1m fall impact
- Maximum clamp opening: diameter 63mm
- Maximum size of current lead: diameter 60mm
- Electromagnetic field impact: the application of device near electromagnetic field may result in unstable display or inaccurate reading.
- Power requirement: 6LF22 9V alkaline battery
- Dimensions: 11.7" \times 4.2" \times 1.9" (298mm \times 107mm \times 47mm)
- Weight: 26oz (726g) - inclusive of battery.

2. Environment (For Most Accurate Measurements)

Indoor

- Maximum elevation: 6560' (2000m)
- Safety Standard: CAT IV 600, CAT III 1000; Pollution grade 2
- Operating humidity and temperature:
0°C ~ 30°C ($\leq 80\%RH$), 30°C~40°C (not greater than 75%RH),
40°C~50°C (not greater than 45%RH)
- Storage humidity and temperature: -20°C~+60°C (not greater than 80%RH)

3. Electrical specification

- Accuracy: $\pm(\% + \text{count})$, one-year calibration time
- Ambient temperature: 23°C $\pm 5^\circ\text{C}$
- Ambient humidity: $\leq 80\% RH$
- Temperature coefficient: $0.1 \times (\text{accuracy}) / ^\circ\text{C}$

(1) DC voltage V_{DC}

Range	Resolution	Accuracy: $\pm(\% \text{ reading} + \text{count})$
6V	0.001V	$\pm(0.5\%+2)$
60V	0.01V	
600V	0.1V	
1000V	1V	$\pm(1\%+2)$

Input impedance: about 10M Ω

Overload protection: 1000V

(2) AC voltage V_{AC}

Range	Resolution	Accuracy: $\pm(\% \text{ reading} + \text{count})$	
6V	0.001V	40Hz~400Hz	400Hz~1kHz
60V	0.01V	$\pm(1\%+3)$	$\pm(2\%+3)$
600V	0.1V		

Range	Resolution	Accuracy: \pm (% reading + count)	
1000V	1V	$\pm(1.2\%+3)$	$\pm(2.5\%+3)$

Input impedance: about 10M Ω

Overload protection: 1000V

Display: true RMS, applicable to 10%-100% of the range.

(3) Voltage AC+DC

Range	Resolution	Accuracy: \pm (% reading +count)	
6V	0.001V	40Hz~400Hz	400Hz~1kHz
60V	0.01V	$\pm(2\%+20)$	$\pm(4\%+20)$
600V	0.1V		
1000V	1V	$\pm(2.5\%+20)$	$\pm(5\%+20)$

Input impedance: about 10M Ω

Overload protection: 1000V

Display: true RMS, applicable to 10%~100% of the range.

(4) DC current A $\overline{\text{---}}$

Range	Resolution	Accuracy: \pm (% reading + count)
600A	0.1A	$\pm(1.5\%+5)$
2500A	1A	$\pm(2.5\%+5)$

(5) AC current

Range	Resolution	Accuracy: \pm (% reading + count)
600A	0.1A	$\pm(1.5\%+5)$
2500A	1A	$\pm(2.5\%+5)$

Display: true RMS, applicable to 10%-100% of the range.

Frequency response: 50Hz~60Hz

The clamp will vibrate slightly when measuring 2000 AC current with no impact on measuring accuracy.

(6) Current: AC+DC

Range	Resolution	Accuracy: + (% reading + count)
600A	0.1A	$\pm(3.0\%+20)$
2500A	1A	$\pm(5.0\%+20)$

Display: true RMS, applicable to 10%~100% of the range.

Frequency response: 50Hz~60Hz

It is normal that the clamp vibrates slightly when measuring 2000 AC current, no impact on measuring accuracy.

(7) Resistance Ω

Range	Resolution	Accuracy: \pm (% reading + count)
600 Ω	0.1 Ω	Under REL state: $\pm(1.2\%+2)$
6k Ω	0.001k Ω	$\pm(1\%+2)$
60k Ω	0.01k Ω	
600k Ω	0.1k Ω	
6M Ω	0.001M Ω	$\pm(1.2\%+2)$
60M Ω	0.01M Ω	$\pm(1.5\%+2)$

Overload protection: 1000V

(8) Continuity test $\cdot\Omega$)

Range	Resolution	Remark
$\cdot\Omega$)	0.1 Ω	Open-circuit voltage is about -3.5V; Sound continuity is set as <30 Ω , buzzer continuously sounds. Short circuit is set as \geq 30 Ω , buzzer will not sound.

Overload protection: 1000V

(9) Diode $\rightarrow\blacktriangleleft$

Range	Resolution	Remark
$\rightarrow\blacktriangleleft$	0.001V	Open circuit voltage is about 3.5V, able to measure the PN junction <3V forward voltage drop value. The normal voltage value of silicon PN junction is about 0.5~0.8V.

Overload protection: 1000V

(10) Capacitance $\blacktriangleleft\blacktriangleright$

Range	Resolution	Accuracy: \pm (% reading + count)
60nF	0.01nF	Under REL state: \pm (3%+5)
600nF	0.1nF	\pm (3%+5)
6 μ F	0.001 μ F	
60 μ F	0.01 μ F	
600 μ F	0.1 μ F	\pm (4%+5)
6000 μ F	1 μ F	\pm (5%+5)
60mF	0.01mF	Reference value

Overload protection: 1000V

(11) Frequency Hz

Range	Resolution	Accuracy: + (% reading + count)
60Hz	0.001Hz	\pm (0.1 % +3)
600Hz	0.01Hz	
6kHz	0.0001kHz	
60kHz	0.001kHz	
600kHz	0.01kHz	
6MHz	0.0001MHz	
60MHz	0.001MHz	

Overload protection: 1000V

Input range a: 10Hz~40MHz: 1Vrms \leq a \leq S30Vrms;

When >40MHz: unspecified.

(12) Duty ratio %

Range	Resolution	Error limit: \pm (% reading + count)
10% ~ 90 % (10Hz ~ 2kHz)	0.01	\pm (1.2%+30)

Overload protection: 1000V

(13) Temperature

Range	Resolution	Error limit: \pm (% reading + count)
-40 $^{\circ}$ C~40 $^{\circ}$ C	1 $^{\circ}$ C	\pm (2%+10)

Range	Resolution	Error limit: \pm (% reading + count)
40°C~400°C	1°C	$\pm(1\%+10)$
40°C~1000°C		$\pm 2.5\%$
-40°F~104°F	2°F	$\pm(2\%+18)$
104°F~752°F		$\pm(1\%+18)$
752°F~1832°F		$\pm 2.5\%$

Overload protection: 1000V

Temperature sensor: K type (Ni-Cr and Ni- Si) thermocouple

(14) AC voltage + LPF

Range	Resolution	Remark
6V	0.001V	Intercept AC voltage signal higher than 1kHz
60V	0.01V	
600V	0.1V	
1000V	1V	

(15) AC Current+ LPF

Range	Resolution	Remark
600A	0.1A	Intercept AC voltage signal higher than 1kHz
2500A	1A	

10. Maintenance and Upkeep

1. General maintenance

Warning: to prevent electrical shock, keep the test leads disconnected if opening the housing for battery or fuse maintenance.

- The clamp meter should be serviced or repaired only by a qualified professional technician.
- When needed, wipe the outer casing with a clean cloth.

Do not use abrasive materials or solvents.

2. Installation or replacement of battery

A 9V (6LF22) battery provides power for the clamp meter. To install or replace battery:

- Turn off the clamp meter, and remove test leads from input terminals.
- Gently place the meter panel face down, and remove battery cover screw. Lift the battery cover off, and install new battery -paying attention to the indicated polarity.
- Only use the same type of 9V Alkaline battery. Do not try to fit with another battery type or mains power.
- After installing battery, replace and secure battery cover and screw.

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