1. Overview

PM2018A is a safe, stable, and reliable digital AC clamp meter, which take micro-smart IC dual-integral A/D converter as its core circuit design, and is equipped with full-range overload protective circuit. This novel device can be used to measure AC current, AC/DC voltage, and resistance, as well as for continuity tests of diode and circuit, It is a professional electrician instrument with superior performance. The AC voltage and AC current pass through a low-pass filter, and the-6dB frequency is about 2.8KHz.

2. Safety Standard

This is a meter designed and manufactured according to the safety standards of IEC61010-1 and IEC61010-2-032 for handheld current clamp meters, meeting the safety standards for double installation CAT m 600V and pollution grade-2.

3. Safety Symbols

- Warning, please operate carefully.
- High voltage.
- Allow to use around conductor with no harm to life.
- Double insulation (Class-II safety equipment).
- Earthing.

4. Notes

- Please read through the instructions carefully before using the device. And please pay special attention to the content with "⚠", and strictly follow the instructions of "⚠".
- Only the meter and the standard probes are guaranteed to meet the requirements of the safety standards. In any case that the probe is damaged, please replace it by probe of the same model or with the same electrical specifications.
- Check the meter and probes before use. Do not use the device if it is found to have exposed probes, damaged shell, or abnormal display.
- When measuring, do not touch the unused input terminal.

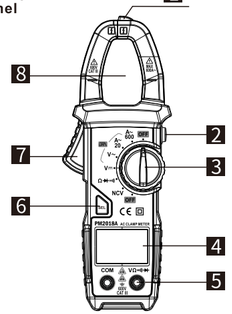
- Please be careful when measuring voltage higher than 60V DC or 30V AC, do remember to not have your fingers touch the exposed part of the probe.
- For unstable measurement range, please set the range of the meter to its maximum. Do not exceed the extreme values set for each range.
- Do not measure voltage higher than its upper limit.
- Disconnect the probe from the measured circuit before switching the function/range switch.
- Disconnect power supply and release all electric charge at both ends of the capacitance before carrying out online resistance measurement.
- Do not leave the meter in any places with strong lights, high temperature or humid conditions.
- Do not touch any exposed wires, connectors, or circuit under measurement bare-handed.

5. Accessories

• User manual	one
• Probes	one pair
• Package box	one
• 1.5V SIZE AAA battery	two

6. Description

6.1 Panel

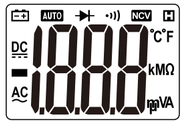


1 Non-contact sensing area for voltage detection
2 Data hold button/backlight button
3 Rotary switch
4 Screen
5 Inserting socket
6 Button to switch resistance/diode/continuity tests
7 Trigger
8 Clamp meter head for measuring current

6.2 Rotary

- OFF Turn off the meter
- A~ 600 AC 600A current measurement range
- A~ 20 AC 20A current measurement range
- V~ AC voltage measurement range
- V⎓ DC voltage measurement range
- Ω⊣•)) Resistance/diode/continuity measurement
- NCV Non-contact voltage detection

6.3 LCD



~ ⎓	AC, DC
•))	Continuity symbol
AUTO	Automatic measurement range
	Low battery symbol
H	Data hold
V,A	Volt(voltage), ampere(current)
Ω, kΩ, MΩ	Ohm,kilo ohm,mega ohm(resistance)
NCV	Non-contact voltage detection
⊣▶	Diode test symbol
mV	Millivolt

7. Instructions

7.1 Data hold

Press the "H/☀" button to show and hold the last measured data. And the "H" symbol will appear on the screen; then press the"H/☀" key again to resume normal measurement status of meter.

7.2 Backlight source of screen

If the measurement data is hard to read due to the dark ambient light, please press and hold "H/☀" button for over 2s to turn on the backlight of the screen. It will be turned off in about 15s.

When the backlight is on, press and hold "H/☀" button for over 2s, it can be turned off.

7.3 Auto shutdown

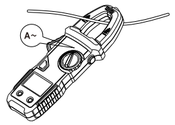
If no operation happen in about 10min, the meter will shut down automatically (hibernate mode) to save battery. It will beep 5 times continuously before shutting down.

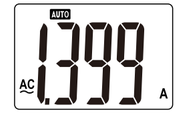
Note:

once the meter shuts down automatically,it can be resumed back to working state by pressing any button or rotate the dial.

7.4 AC current measurement

1.Rotate the function/range switch to position for AC current measurement.
2.By clamping the lead in the meter, it can measure the current passing through the lead. Please be aware that it cannot measure the current if it clamps multiple leads at the same time.
3.Read the data displayed on the screen.



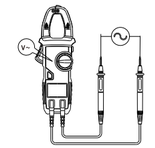


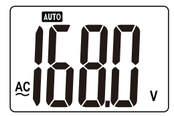
Notes:

If the range of the to-be-measured current is unknown,please rotate the function/range switch to the position of maximum current range firstly, and then, gradually reduce it till obtaining satisfactory effects.

7.5 AC voltage measurement

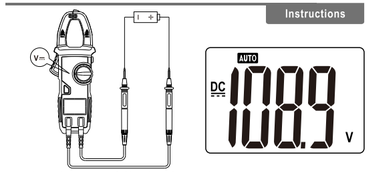
Rotate the function/range switch to " V~ " AC current position, and connect the probe to the measured signal, then the voltage value will be displayed on the screen.





7.6 DC voltage measurement

1.Rotate the function/range switch to " V⎓ " DC voltage measurement position,insert the red and black probes into "INPUT" and "COM"
2.Connect the probes to measured signals, the

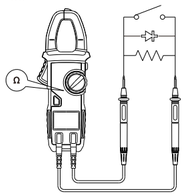


7.7 Resistance/diodes/continuity measurement

1.Rotate the function/range switch to "Ω⊣•))" position,press "SEL" button to select among resistance,diode,and continuity measurements,and then,insert the red and black probes into "INPUT" and "COM".
2.Connect the probes to the measured signals,and the measured value will be displayed on the screen.

Note:

as for the continuity test, it will beep if the resistance between both ends of the measured object is less than 50 Ω.

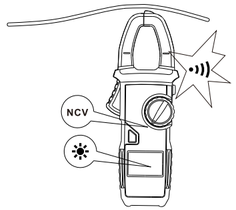


7.8 Non-contact voltage measurement(NCV)

Rotate the function/range switch to the "NCV" position, put the NCV sensor approaching the measured lead, so the meter will detect if there's any AC voltage over 90V. If the voltage exists, it will beep and have backlight flashes.

Notes:

1.Voltage may still exist even if no warning prompt emits. Do not judge the voltage existence of lead by NCV detector. The detection may subject to factors like socket design and insulation thickness, etc.
2.Under NCV detection mode, the meter won't measure voltage, resistance, current, diode, or continuity at the same time.



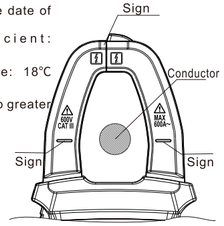
8. Technical /Accuracy Indicators

General features: Max. voltage between the voltage input end and the earth is CATII600V.
Display: LCD screen, max. data:1999
Principle: Dual-integral A/D conversion, auto range
Sampling rate: 3 times/s
Unit display: display symbols of function and electric units
Polarity display: show negative polarity with "-" symbol
Over-range symbol: "OL"
Data hold symbol: "H"
Low-battery symbol: " "
Battery: DC1.5VX2SIZEAAA
Dimension: 280mm×78mm×35mm
Weight: About 250 g
Clamp openness size (max.): 24mm
Working temperature: 5℃~℃
Storage temperature: -10℃~50℃

9. Accuracy Indicators

Accuracy: (% of reading + number of least significant digits)
Warranty: 1 year since the date of shipment
Temperature coefficient: 0.1×accuracy/1℃
Environment temperature: 18℃~28℃
Environmental humidity: no greater than 75%

*For AC current measurement, please put the measured conductor in the middle of the clamp head, otherwise, a maximum of 1.5% error should be considered.



AC current

Range	Resolution	Extreme error
2A	0.001A	± (3.0%rdg+15dgt)
20A	0.01A	
200A	0.1A	± (3.0%rdg+10dgt)
600A	1A	

Measurement frequency range: 50Hz~60Hz.
Allowed max. input current: 120% of full value,no more than 60s

AC voltage

Range	Resolution	Extreme error
2V	1mV	± (1.0%rdg+5dgt)
20V	10mV	
200V	0.1V	± (1.2%rdg+5dgt)
600V	1V	

Input resistance: 10MΩ.
Measurement frequency range: 40Hz~400H.
Allowed max. input voltage: 600V DC or 600V AC RMS

DC voltage

Range	Resolution	Extreme error
200mV	0.1mV	± (0.8%rdg+2dgt)
2V	1mV	
20V	10mV	
200V	0.1V	
600V	1V	± (1.0%rdg+2dgt)

Input resistance: 10MΩ.
Allowed max. input voltage: 600V DC or 600V AC RMS

Resistance

Range	Resolution	Extreme error
200Ω	0.1Ω	± (1.2%rdg+2dgt)
2kΩ	0.001kΩ	
20kΩ	0.01kΩ	
200kΩ	0.1kΩ	
2MΩ	0.001MΩ	
20MΩ	0.01MΩ	± (2.0%rdg+5dgt)

Overload protection: 250VDC or 250V AC RMS.

Diode test

Function	Resolution	Extreme error
⊣▶	1mV	Display of forward voltage drop approximation (about 1.5V open circuit voltage)

Overload protection: 250VDC or 250V AC RMS.

Continuity test

Function	Resolution	Extreme error
•))	1mV	Display of forward voltage drop approximation (about 1.5V open circuit voltage)

Note:

The beeper may or may not beep during the range from 50Ω to 12Ω, but won't beep when exceeding 120Ω.

10.Maintenance

- Disconnect probe from measured circuit before removing the back cover of the meter.
- Clean the meter only by damp cloth and a little detergent; never polish the shell surface by any chemical solution or abrasives.
- For any found abnormal situation, please stop using it and send it for repair.

- Calibration and repairing must only be performed by qualified professional personnel.

11.Replace Battery

Warning

In order to avoid electric shock, please disconnect the probes before opening the battery cover, and do not access to any measuring circuit or input signal.Always replace with batteries of the same model or the same electric specifications.

" "is the under-voltage identifier, indicating low battery (which can cause great error). Please replace with new battery according to the following steps:
1.Disconnect the probes from the measuring circuit, turn the function/range switch to "OFF", and move out the probes from the input jack.
2.Unscrew the bolt and remove the battery cover
3.Take out the old batteries and replace with two new 1.5V SIZE AAA batteries.
4.Put back and screw down the cover.