

Operation manual

Basic introduction

This pen type digital meter is a small 3 3/4 bit true RMS automatic scanning digital instrument. According to the difference between voltage and resistance, operator do not need to turn the dial to select the function, because of its automatic identification measurement. The stable performance, high precision, high reliability, clear reading, overload protection function are achieved. And this meter charged by AAA 1.5V low battery. and with large screen LCD display, beautiful backlight making the display clear, convenience, it is cherished by most people. This new type of meter also automatically identify Dc voltage, Ac voltage, resistance, continuity, without any selection, besides with the function manually switching to measure diode electric field induction and fireline discrimination. it will be an ideal tool for radio enthusiasts and families, thanks to its superior performance.

Safety Requirements:


This series of digital pincer meter is designed and produced according to the safety standard IEC1010 of electronic measuring instruments and handheld current pincer meter. Strictly comply with double insulation DC 600V CAT III and pollution level 2 safety standards.

Precautions

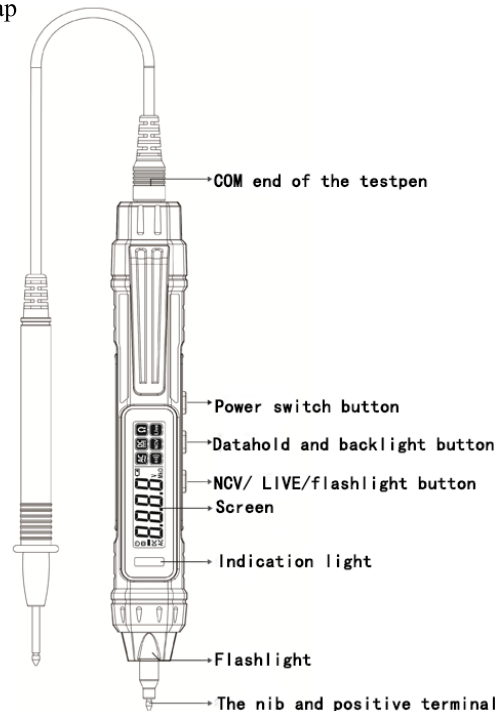
- When using the instrument, please read the instructions carefully, especially pay attention to the "warning" content. Follow the instructions for Warnings.
- Before using, please check the instrument and test pen, beware of any damage or abnormal phenomenon.
- When the meter is being measured, do not touch the input end that is not in use.
- Do not measure voltage whose input value is higher than the allowed.
- Do not expose the meter to bright light, high temperature or humidity.
- In case of crash during use, just turn off the power and restart Maintenance
- Only use a wet cloth and a small amount of detergent to clean the meter, do not use other chemical compatibles to wipe the case.

- Only use a wet cloth and a small amount of detergent to clean the meter, do not use other chemical compatibles to wipe the case.
- If any abnormality is observed, the instrument should be stopped immediately and sent for maintenance.
- Check and repairment only by trained people or with help of them.

Product Features




- Automatic measuring range
- LCD display: 4000 count.
- 600V input protection
- Automatic shutdown
- NCV (non-contact voltage detection) function
- Flashlight function
- Data HOLD function
- Process display as "OL"
- Low battery display: "  "
- Power supply: 2 3V No. 7 batteries
- Product size and weight: 184.5 (L) ×25.7 (W) ×29.2 (H) Weight: 74.5g (including battery)

sketch map






Operation illustration

Dc voltage Test

1. Long press the "  " key for more than 2 seconds to turn on, the instrument displays "  "
2. Insert the black testpen into the COM jack of the pen cap.
3. Connect the instrument nib and black pen to the power supply or load to be tested, and the polarity of the nib will be displayed on the screen
4. Read the measurement result from the monitor. If "  " is displayed on the right of the monitor, the DC voltage is measured
5. The measured voltage is greater than 0.8V.

- Do not input a voltage higher than 600V. It is possible to display a higher voltage, and there is a risk of damage to the internal wiring of the meter
- Do not touch the nib or the metal part of the test pen when measuring high voltage to avoid electric shock

Ac voltage test

1. Long press the "  " key for more than 2 seconds to turn on, the instrument displays "  "
2. Insert the black testpen into the COM jack of the pen cap.
3. Connect the instrument nib and black pen to the power supply or load to be tested, and the polarity of the nib will be displayed on the screen
4. Read the measurement result from the monitor. If the symbol "  " is displayed on the right of the monitor, the Ac voltage is measured
5. The measured voltage is greater than 0.8V.

- Do not input a voltage higher than 600V. It is possible to display a higher voltage, and there is a risk of damage to the internal wiring of the meter
- Do not touch the nib or the metal part of the test pen when measuring high voltage to avoid electric shock

Ω Resistance

1. Long press the "⏻" key for more than 2 seconds to turn on, the instrument displays "HUT0"
2. Insert the black watch pen into the COM jack of the pen cap.
3. Connect the instrument nib and black pen to the power supply or load to be tested, and the polarity of the nib will be displayed on the screen

4. Read the measurement result from the monitor. If the symbol "Ω" is displayed on the right of the monitor, the resistance is measured

● If the measured resistance exceeds the maximum value of the range, the display only displays "OL"

● When checking in-line resistance, all power supplies in the line under test must be turned off and all capacitors fully discharged.

o)) Circuit on/off test

1. Press the "⏻" for more than 2 seconds to start the system.
2. Insert the black watch pen into the COM jack of the pen cap.
3. Connect the instrument nib and black pen to two points of the circuit. If the resistance between the two points is below about 50 Ω, the built-in buzzer will sound to indicate that the two points are on, and a "🔊" comes up on the right side.

Diode test

1. Press the "⏻" for more than 2 seconds. the instrument displays "HUT0". Short press this meter to diode. "OL v" will come out.
2. Insert the black test pen into the COM jack of the pen cap.
3. Connect the tip of instrument to the positive electrode of the diode, and the black pen to the negative electrode. The instrument displays the positive voltage drop of the diode (unit: V); "OL" is displayed when the diode is reversed.

NCV(Noncontact Voltage test)

1. Long press the "⏻" key for more than 2 seconds to turn on, the instrument displays "HUT0"
2. Insert the black test pen into the COM jack of the pen cap.
3. Press the key to select the NCV file. On the display screen, "EF" is displayed.
4. Place the instrument nib about 8 ~ 15mm close to the measured object for induction detection, and the simulated amount of induced AC voltage is: If the critical voltage is $\leq 100V$, "EF" is displayed; if the critical voltage is $< 100V$, "-" is displayed in the transverse section. According to the voltage, there are four sections "- - -". According to the number of sections, there also is different

rhythms of the buzzer sound and light indication of red indicator, in order to distinguish the intensity of the induced electric field.

5. Note: When switching NCV measurement, please unplug the black testpen to avoid electric shock.

Live identification

1. Long press the "⏻" key for more than 2 seconds to turn on, the instrument displays "HUT0".
2. Press the "🔊" key to select the measurement of LIVE. "LIVE" is displayed on the right of screen.
3. When the instrument nib is connected to the firewire, the buzzer will emit a ticking sound and the red LED light will turn on, and the LCD screen will display "--H"; If the pen is connected to the zero line, the buzzer does not sound, and the LCD displays "LIVE".

Note:

● Don't touch the metal part of the testpen during measurement to avoid the risk of electric shock.

Data hold

During measurement, short press "HOLD" to enable or disable data retention

Backlight

Long press the "HOLD" button > 2 seconds to turn on or off the backlight

Flashlight

Long press the "N/L" button > 2 seconds to turn on or off the flashlight.

Auto Power off

If there is no operation within 15 minutes, the meter will automatically shut down to save battery energy.

Indication

Accuracy:(reading + words)

The guarantee period is one year.

Ambient temperature: 23 °C

Relative humidity: $< 75\%$

DC Voltage

Range	Accuracy	Resolution
4V	$\pm(1.0\%+5)$	1mV
40V		
400V		
600V		

Overload protection : maximum input 600V ◦

Ac voltage

Range	Accuracy	Resolution
4V	$\pm(1.2\%+5)$	1mV
40V		
400V		
600V		

Frequency Range : 40Hz-1000Hz ◦

Ω Resistance

Range	Accuracy	Resolution
4K Ω	$\pm(1.2\%+3)$	1 Ω
40K Ω		
400K Ω		
4M Ω		
40M Ω		

Overload protection : maximum input 250V ◦

o)) Continuity

Function	Test condition
o))	When the resistance is less than about 50 Ω, the buzzer occurs and the red indicator lights up

Overload protection : maximum input 250V ◦

General characteristics

Ambient temperature: 5 °C -- 35 °C

Storage temperature: -10 °C -50 °C

Attachment

Instruction manual one

Warranty Card/Certificate of Qualification one

Test pen one

Battery No. 7 batteries Two

⚠ Warning

Before opening the back cover of the meter, make sure that test pen is not connected to the circuit under test. Before using the meter, make sure that the back cover is tight. If "🔊" is displayed, it indicates that the battery needs to be replaced. Perform the following operations:

1. The pen should be disconnected from the test circuit, pull out the pen from the input jack.
2. Unscrew the battery cover with a screwdriver and remove the battery cover.
3. Remove the old battery and replace it with a new one.
4. Cover the battery and tighten the screws