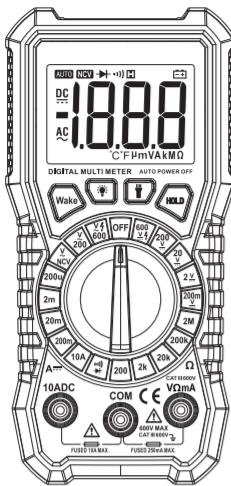


Digital Multimeter



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

- Do not exceed the input limit value specified for each range.
- Do not touch unused input when the instrument is measuring.
- When it is no longer possible to determine the size of the measured range, the functional range switch should be placed in the maximum range position.
- Before switching the functional range switch, the test lead should be used to open the circuit to be measured.
- Before conducting on-line resistance measurement, all power sources in the circuit should be switched off and all capacitors discharged.
- When measuring voltages above 60V DC and 30V AC, be careful not to exceed the finger of the test lead holder.
- When measuring a TV or switching power supply, it should be noted that there may be pulses in the circuit that damage the meter.

Maintenance

- Before opening the back cover, the test lead should disconnect the measuring circuit.
- In order to protect the internal line of the instrument, the self-recovery fuse used in this series of instruments must not use the instrument before the back cover is finished and the screw is not screwed.

Only wet cloth and a small amount of lotion should be used to

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Warning

1. If the measured voltage range is not known in advance, please put the function range switch to the maximum range, and then gradually reduce it until you get a satisfactory resolution.
2. If the display only shows "OL", it means that the range has been exceeded and the functional range switch should be set to a higher range.
3. Do not input voltage higher than 600V, display higher voltage is possible, but there is a risk of damage to the internal wiring of the instrument.
4. When measuring high voltage, pay special attention to avoid electric shock.

DC current measurement

1. Insert the black test lead into the COM jack, when the measured current does not exceed 200mA, insert the red test lead into the "VΩmA" jack. If the measured current is between 200mA and 10A, insert the red test lead into the 10A jack.
2. Place the function range switch in the desired A range position, and connect the test meter test lead in series to the load to be tested, the current value will be displayed at the

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Auto power off & cancel auto power off

1. Automatically shut down, when the instrument function key range switch is not used for about 10 minutes, the instrument shutdown clamp buzzer will emit beep 2 sound, prompting the instrument to enter the dormant state quickly. Before the instrument enters the dormant state, the buzzer will issue a beep prompt. The instrument will enter the dormant state. Press any key or rotates the range switch to rotates the range switch to OFF, and then restart the instrument can wake up.
2. Cancel the automatic shutdown, press H key to start the machine before it starts release it after 2 seconds, cancel the automatic shutdown, turn on again after shutdown can restore the automatic shutdown function.

Replace battery

1. Turn off the meter power and remove the probes.
2. Remove the screw fixing the battery cover and remove the battery cover.
3. Remove the old battery and replace it with a new one of the same specification. Please pay attention to the battery polarity.
4. Install the battery cover back to its original position, and fix and lock the battery cover with screws.

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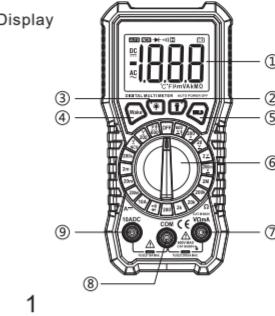
Introduction

The is a small handheld 3 1/2 digital multifunction table with stable performance, high reliability and anti-drop performance. The entire circuit design is based on a large-scale integrated circuit dual-integral A/D converter and is equipped with an overload protection circuit. Make it a superior and compact instrument.

The digital multimeter can measure AC/DC voltage, AC current, resistance, duty cycle, diode and on-off continuity test, non contact AC voltage test

Overview

1. Display 3 1/2 Digit LCD Display
2. " " Lighting button
3. " " Backlight button
4. " " Wake-up button
5. Data hold button
6. Function range switch
7. " VΩmA " jack
8. COM jack
9. 10A jack



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Overload protection: PTC 600V DC or AC RMS.
Frequency range: 40Hz to 400Hz.
Display: Average (RMS sine wave).

Resistance

Range	Resolution	Accuracy
200mV	0.1mV	±(0.5% + 2)
2V	0.001V	
20V	0.01V	
200V	0.1V	
600V	1V	±(0.8% + 2)

Overload protection: PTC 600V DC or AC RMS.

DC current

Range	Resolution	Accuracy
200μA	0.1μA	±(1% + 2)
2mA	0.001mA	
20mA	0.01mA	
200mA	0.1mA	
10A	0.01A	±(3% + 2)

Overload protection: μA/mA: 250mA fuse; 10A: 10A fuse

AC voltage

Range	Resolution	Accuracy
200V	0.1V	±(1.2% + 10)
600V	1V	

Overload Protection: PTC 600V DC or AC RMS.

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Resistance measurement

1. Turn the rotary switch to "Ω". Initially, the display "OL", that is, the input is in the open circuit that is not yet access to any resistance.
2. Insert the black test lead into the COM jack, the red test lead into the "VΩmA" jack.
3. Use the test lead to measure the resistance value of the circuit to be tested on both sides.
4. Read the measured resistance value from the LCD display.

Warning

Note 1. If the measured resistance exceeds the maximum value of the selected range, the excess range "OL" will be displayed. Higher range should be chosen at this time. When measuring resistance above 1MΩ, it may take several seconds to stabilize, which is normal for high resistance measurement.

2. When there is no input, such as opencircuit, the instrument displays "OL".

3. When checking on-line resistance, all the power supply in the line under test in circuit must be turned off and all capacitors should be fully discharged

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Diode and on-off continuity test

1. Insert the black test lead into the COM jack, the red test lead into the "VΩmA" at this time the red test lead polarity is "+".
2. The function range switch is placed in the " " range position, the red test lead to the anode of the diode under test, the black test lead to the cathode of the diode, the diode under test by the display reads the approximate forward voltage drop value.
3. Connect the test leads to two points of the circuit under test. If the resistance between the two points is less than about 50Ω, the built-in buzzer will sound to indicate that the two points are connected.
4. Diode and on-off test meter will be automatically recognized, without switching gears.

Non-contact AC voltage test

Put the function range switch to the desired NCV range position, and the meter display screen shows ----. Place the top of the meter close to the conductor. When the detected voltage is greater than 90 V (RMS), the buzzer will have a beeping alarm sound, and the alarm sound will change from slow to fast. The faster it is, the closer it is to

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Data hold

the conductor. The screen will also display "--L", indicating that the LOW signal is weak, and the screen will also display "--H" to indicate that the HI signal is strong.

Warning

1. Even if there is no indication, the voltage may still exist. Do not rely on non-contact voltage detectors to determine whether the conductor has voltage. Detection voltage. Detection operation may be affected by factors such as socket design, insulation thickness and type.

2. External interference sources (such as flash, motor, etc.) may trigger non-contact voltage detection by mistake.

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Safety information

Digital multimeter is designed according to IEC61010-1-600V (CATIII) and pollution level 2. In order to ensure the instrument can be used accurately and safely, please read the instructions carefully.

Safety sign

⚠ Warning
⚡ High Voltage hazard.
☒ Non-recyclable
☒ Double insulation (Class II safety equipment).
☒ Fuses must be replaced in accordance with specifications specified in the specifications.

Use precautions

• Instruments can only be used with the test lead provided to meet the requirements of the standard. If the test lead is damaged and needs to be replaced, the same type of test lead or the same electrical specifications must be emperor's test lead.

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Usage method

Precautions before operation

1. Turn on the power, first check the 1.5V battery, if the battery voltage is insufficient, " " will be displayed on the monitor, then you need to replace the battery. If the display does not show " " then follow the steps below.
2. The " " symbol next to the test lead jack indicates that the input voltage or current should not exceed the indicated value in order to protect the internal line from damage.
3. Before testing, the function range switch is placed in the range you need.

DC voltage measurement

1. Insert the red test lead into the " VΩmA " jack and the black test lead into the "COM" jack.
2. Set the function range switch to the V= range and connect the test lead to the power supply or load to be tested. The polarity the end connected to the red test lead will be displayed on LCD at the same time.

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