

双模式智能探测万用表

安全注意事项

警告

使用此仪器前应特别注意。不正确的使用可能导致触电或损坏仪器。在使用中应始终遵循安全规程及人身安全。请务必遵守本手册所规定的安全措施。

为了充分利用仪器的功能和确保安全操作，请仔细阅读并遵照本手册的使用说明。

仪表符合IEC 1378-2数字多用表通用技术条件，符合GB4793.1-1995 (IEC-61010-1) 电子测量仪器安全要求，二类过电压，过电压标准为CAT II 600V。

请遵循安全操作指南，保证安全使用仪器。适当的使用和保护，仪器将给您令人满意的帮助。

1. 使用仪器时，用户应遵守标准的安全规则。

— 通用的防电击保护

— 防止误用仪表

2. 接收仪器时，检查是否在运输中损坏。

3. 在恶劣的条件下保存。装运后，检查并确认仪表是否损坏。

4. 表笔必须处于好的状态。在使用之前，检查表笔的绝缘是否损坏，存储的金属部分是否裸露。

5. 使用仪器提供的表笔能确保安全。如果需要，必须用同样或相同等级的表笔取代。

6. 使用时，必须使用正确的功能及量程。

7. 不要通过表笔的保护罩指示或进行测量。

8. 在仪表连接测量电路的时候，不要接触表笔尖端（金属部分）。

9. 在测量时，若被测电压高于 60V DC 或 30V AC（有效值），应注意保持手指头始终在表笔保护套位置之后。

10. 在测量线路电压超过500V DC或500V AC时，不要测量电压。

11. 在转动转换开关改变量程功能之前，应将表笔从被测电路移开。

12. 不要带电测量电阻及线路通断。

13. 在带电及线路通断测试量时，小心避免将表笔连接电源。

14. 不要在爆炸性的气体、蒸汽或灰尘附近使用本仪表。

15. 如果注意到仪表有任何异常或故障，应停止使用。

16. 除非表笔或表头电流在安全范围内，否则不应使用仪器。

17. 不要在阳光直射、高温、高潮湿的情况下储存或使用仪器。

产品描述

仪表外观及使用说明符号

⚡ 可用于危险的带电导体上。

⚠ 注意：重要的安全信息，参见使用说明书。

⚡ 长按：重要的安全信息，参见使用说明书。

⚡ 短按：手笔筒与背光开关(同时开、同时关)。

⚡ 短按：火线判别(LIVE)、电阻、通断、直流、交流模式选择。

INPUT插孔：输入接线端。

COM插孔：公共接线端。

3、产品外观描述

序号	说明
1	非接触电压感应区域
2	液晶显示器
3	电源开关
4	电压感应功能切换/温度单位切换
5	功能选择/照明灯开关
6	表笔输入端口

2、开关和按钮及输入插孔说明

⏻ 长按：开机/关机。
短按：自动关机开关。

规格

3、LCD全显符号说明

符号	说明
AC	交流电压
DC	直流电压
⚡	绝缘测试
⚡	电阻电压不足
⚡	自动关机标识
⚡	电容模式
⚡	模式条
⚡	非接触电压感应
⚡	二极管
⚡	摄氏度、华氏度
⚡	伏特 (电压)
⚡	欧姆, 千欧姆, 兆欧姆 (电阻)
⚡	微法, nF, mF 电容 (电容)
⚡	Hz, KHz 赫兹 (频率)

技术指标

量程	最大分辨率	准确度
500V	0.01V	±(0.8% 读数 +3字)

自动模式灵敏度：最小0.50V直流电压
输入阻抗：1MΩ
最大输入电压：500V DC或AC有效值。
其他：当测量值大于90V时，红色背光亮起。

规格

3、电阻

量程	最大分辨率	准确度
0.1Ω-10Ω	1Ω	±(1.2% 读数 +3字)

4、频率

量程	最大分辨率	准确度
1000Hz	0.1Hz	±(2.0% 读数 +3字)

频率范围：40Hz~1000Hz。

5、蜂鸣器

功能	准确度
⚡	当内部蜂鸣器发声时，被测电阻小于约30Ω。

6、非接触交流电压检测

量程	说明
低档	显示1/2档报警。蜂鸣器发出报警声。绿色背光闪烁。
中档	显示2/3档报警。蜂鸣器发出高频报警声，绿色背光闪烁。
高档	显示满档报警。蜂鸣器发出高频报警声，红色背光闪烁。

电压范围：90V~1000V 交流电压

操作说明

1. 交流电压/频率/电阻测量/连续性检测

将红色表笔插入(HRV)输入端，黑色表笔插入COM端，按开机关机。仪表显示AUTO模式工作状态。

将表笔并接到待测电路、电源或电阻上。仪表自动判别交流电压、直流电压、电阻，并自动显示交流有效值。

当被测电阻小于约30Ω时，内置蜂鸣器发声。

测量直流电压时，显示屏同时显示红色表笔测试点的电压极性。

从显示屏读取测量结果，并可通过模拟表查看数据的动态变化。

直流电压 (自动模式)

直流电压 (手动模式)

交流电压 (自动模式)

操作说明

交流电压 (手动模式)

电阻 (自动模式)

电阻 (手动模式)

通断测试 (自动模式)

操作说明

通断测试 (手动模式)

火线检测

非接触电压感应 (正常模式)

非接触电压感应 (高灵敏度模式)

操作说明

警告

- 不要输入高于500V的电压，显示更高电压值是可能的，但可能会有损坏仪器的危险。
- 测量高电压时，要格外小心，避免触电。
- 在完成所有的测量操作后，要断开表笔与被测电路的连接。

保养与维修

△ 打开仪表的电池盖之前，应确保仪表电源已断开，并检查测试笔与测试电路中断开。

— 保养与维修

* 定期使用湿布和少量洗涤剂清洁仪表外壳。请勿用研磨剂或化学溶剂。输入插座如果弄脏或潮湿可能会影响读数。

* 如发现仪表有异常，请立即停止使用并送回校准维修。

2. 更换电池

如果LCD出现“CE”符号，应立即更换电池，否则会影响测量精度。

1) 关闭表电源；

2) 将所有测试笔从输入插座中拔出；

3) 用薄刀片撬起固定电池的螺钉；

4) 取下电池盖，将旧电池更换；

5) 将电池盖按原样装上。

△ 电池的极性不可装反

DUAL MODE DETECTOR & MULTIMETER

Security Information

Warning

People who use this meter should pay special attention to it because the improper use might cause electric shock or damage to the meter. Please follow the actual safety rules and safety measures as specified in the manual.

To fully use the function of this meter and ensure its safety operation, please read and follow its usage methods in the specification carefully.

This meter matched the technical requirement of digital multimeter GB/T 1378-92 and the safety requirement of electronic measuring meter GB4793.1-1995 (IEC-61010-1) it belongs to secondary pollution and its over-voltage standard is CAT II 600V.

Please follow the safe operation guide and ensure safe use for this meter. Proper use and maintenance for meter will give you a satisfied service.

1.1 Preparation

- Users must follow the standard safety rules when using it.
- Need some universal protection to avoid electric shock.
- To avoid misuse the meter.
- Check if there is any damage on this meter or not in the process of transportation and delivered it in poor condition.
- The test lead must be in a good condition. Check whether there is any damage on its insulation or not and if meter's metal wire is exposed or not before using it.
- Using the test lead provided by meter can guarantee the use of meter safely if needed, you must use the same or similar pen to replace it.

1.2 Usage

- The correct function and measuring range must be guaranteed when using it.
- Don't overtake the indicating value of protection extent of every measuring range when testing.
- Don't touch the top of test lead (the metal part) when connected meter with measuring circuit.
- When testing, if the voltage tested is over 60V DC or 30V AC (RMS), please keep your fingers behind the test lead protector.
- When the measuring terminal voltage is over 800V DC or 500V AC, please stop testing voltage.
- Before turning the switch to change the testing function, the test lead should be removed from the measuring circuit.
- Do not measure resistance or v in a live circuit.
- In resistance range or continuity range, please do not connect the meter with voltage supply.
- Don't use the meter under the explosive gas, steam or dust environment.
- If there is any abnormality or malfunction in the meter, user should stop using it.
- Multimeter should not be used unless the meter bottom shell and the battery cover are completely clamped in place.
- Don't presence or use meter in the condition of direct sunlight, high temperature, high humidity.

Product Description

Marks

⚡ It can be used on hazardous live conductors.

⚠ Warning sign

⚡ Double insulation protection (II Level)

CAT II in accordance with the IEC-61010-1 standard over-voltage (installation) level II. Pollution level 2. CAT II means the level of pulse withstand voltage protection provided.

⚡ Matched EC(CE) standard.

1. Part Name

No.	Description
1	Non-contact voltage sensor
2	Display
3	Power button
4	V-Alert mode select/ Temperature units
5	Flashlight switch button
6	Input terminal

2. Key Description

⏻ Long press for power ON/OFF.
Short press to disable/enable auto power off.

Specification

3. LCD full display symbol

Symbol	Instruction
AC	Voltage AC
DC	Voltage DC
⚡	Continuity
⚡	Battery is low and should be changed
⚡	Auto power off function indication
⚡	Capacitance mode
⚡	Range bars
⚡	Non-contact voltage sensing
⚡	Diode
⚡	Temperature units
⚡	Volt
⚡	Ohm, kiloohm, megohm
⚡	μF, nF, mF Capacitance unit
⚡	Hz, KHz Hertz

技术指标

Accuracy applies within one year of calibration.
Reference conditions: environmental temperature 18 °C to 28 °C, relative humidity is not greater than 80%RH.

Range	Max Resolution	Accuracy
500V	0.01V	±(0.8%+3counts)

Auto mode sensitivity: minimum 0.50V DC voltage
Input impedance: 1MΩ
Maximum input voltage: 500V DC&AC(RMS)
Red backlight illuminates when the measured value >90V.

Specification

3. Resistance

Range	Resolution	Accuracy
0.1Ω-10Ω	1Ω	±(1.2% + 3 counts)

4. Frequency

Range	Resolution	Accuracy
1000Hz	0.1Hz	±(2.0% +3counts)

Frequency range: 40Hz~1000Hz.

5. Measure Continuity

Function	Accuracy
⚡	if the resistance < 30Ω the continuity beeper sounds.

6. Non-contact voltage sensing (NCV)

Range	Explanation
Low-range	Green backlight flashing, the screen displays 1/2 analog bar, the buzzer sounds a slow alarm.
Mid-range	Green backlight flashing, the screen displays 2/3 analog bar, the buzzer sounds a quick alarm.
High-range	Red backlight flashing, the screen displays full analog bar, the buzzer sounds a very quick alarm.

Voltage range: 90V~1000V AC

Operation Instructions

1. Voltage DC or AC/Frequency/Resistance/Measure Continuity

Insert the red test lead into the "INPUT" terminal, black test lead into the "COM" terminal.

Connect the test leads in parallel to the circuit, power supply, tested resistor. The meter automatically identify whether it is AC voltage, DC voltage or resistance, and shows the frequency on the screen.

When resistance is less than 30Ω, the buzzer sounds.

When measuring DC voltage, it can also shows the voltage polarity of the red test lead.

Read the measurement results from the display.

DC voltage (Automatic mode)

DC voltage (Manual mode)

AC voltage and frequency (Automatic mode)

Operation Instructions

Resistance (Automatic mode)

Resistance (Manual mode)

Measure Continuity (Automatic mode)

Operation Instructions

Measure Continuity (Manual mode)

Live wire check

Socket live wire distinguishing

Non-contact AC voltage detection high sensitivity mode

Operation Instructions

Warning

- Do not input voltages higher than 500V, showing higher voltage are possible, but it may damage the meter.
- When measuring high voltage, be careful to avoid electric shock.
- Disconnect the test leads from the circuit when completed measurement.

Maintenance

Warning

To avoid shock hazards, users should remove pen from the testing circuit before opening the battery cover of the meter.

1. General Maintenance

- Do not operate the product around hot, wet, flammable, explosive or magnetic environments.
- Clean the product with damp cloth and mild detergent; not use abrasives or solvents.
- Remove the input signals before you clean the product.
- Remove the batteries if you will not use the product for a long time to prevent possible battery leak.

2. Replace Battery

- If "CE" symbol appears, it means the battery shall be replaced.
- Remove the test leads from the terminals.
- Loosen the battery door fastener and remove the door from the case bottom.
- Remove the batteries.
- Replace the batteries with two new AAA batteries.
- Reattach the battery door to the case bottom and tighten the fastener.

Note: Do not violate the battery polarity.

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