

说明书做货要求：

序号	项目	内容	
1	尺寸	展开尺寸：210x148mm，折叠后尺寸：52.5x148mm	
2	材质	80克书纸	
3	颜色	黑色，双面印刷	
4	外观要求	印刷完整清晰, 版面整洁. 无分层. 残损. 毛边等缺陷.	
5	装订方式	折页	
6	表面处理	/	
7	其它		
版本		V01	
DWH 设计	林枝	MODEL HT86B 机型：	Part NO. 物料编号：X
CHK 审核		HABOTEST® 东莞市华博精测仪表科技有限公司	
APPRO. 批准			

此页不印刷，只供参考

Smart Multimeter User Manual

Security Information

Warning

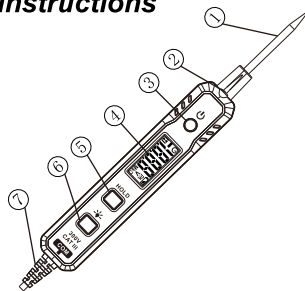
In order to avoid possible safety accidents such as electric shock or personal injury, please observe the following specifications:

- Before using the instrument, please read this manual carefully, and strictly follow the operation of this manual to use this instrument, otherwise the protection function provided by the instrument may be damaged or weakened.
- Please be careful when measuring in excess of 60VDC. This kind of voltage has the danger of electric shock.
- Do not measure voltage higher than the rated value between terminals or between terminals and ground.
- Check if the instrument is working properly by measuring the known voltage. Do not use if it is abnormal or damaged.
- Before using the instrument, please check whether there is a crack in the instrument case or damaged plastic parts, if there is please do not use.
- Please use the instrument according to the measurement category and voltage rating specified in the instrument or manual.
- Please observe local safety regulations. Wear personal protective equipment (such as approved rubber gloves, masks and fire-retardant clothing) to prevent electrical shock and arc injuries when dangerous live conductors are exposed.

terminals or between terminals and ground.

- When low battery indicator appears, please replace the battery in time to avoid measurement error.
- Do not use the instrument in the presence of explosive gas or steam or in a humid environment.
- Do not use the meter when the meter is removed or the battery cover is opened.

Instrument panel instructions



- ① Positive probe
- ② Flashlights
- ③ Power key
- ④ LCD

- ⑤ Hold key
- ⑥ Light/Backlight key
- ⑦ Negative clamp

Measurement operation

POWER ON

Press the power button for about 2 seconds to boot.

DATA HOLD

After booting, when the data is measured, press the HOLD key 1 sec to lock the data, and then press to release the lock.

FLASHLIGHT

Press the Light/Backlight key 2 sec to turns on or off the lights.

BACKLIGHT

Press the Light/Backlight key 1 sec to turns on or off the backlight.

AUTO POWER OFF

- After power on, about 15 minutes without any operation, the instrument will automatically shut down.
- Hold down the Light/Backlight

key and turn on the instrument power, it will cancel the automatic shutdown function. Reboot, resume the function of automatic shutdown.

Smart measurement mode

This measurement mode is the default on boot. In this mode, DC voltage, resistance and on-off can be measured, and the measuring signal can be recognized automatically by the instrument.

- 1) Press the power button to open the instrument power, instrument display"---", into the intelligent measurement mode.
- 2) The meter will automatically recognize the current measured signal by touching the probe to the power supply or the resistance (parallel) .
- 3) When the resistance is measured, Resistance< 50Ω , the buzzer sounds.

- 4) Read the measurement results from the display screen.

Note: minimum discernible

voltage in this mode is:0.8 V



- **Do not measure voltage above 300V, or you may damage the instrument.**
 - **Pay special attention to safety when measuring high voltage to avoid electric shock or personal injury.**
 - **Before use, use the instrument to test the known voltage and confirm the function of the instrument.**
- Note: when the measuring circuit is on or off, the reading may be affected by other channels between the meter and pen.**

General Technical Indicators

- Environmental conditions for use: CAT.III 300V; pollution level: 2; Altitude < 2000m.
- Working temperature and humidity : 0~40°C(<80% RH , <10°C Non-condensing)
- Storage temperature and humidity : -10~60°C(<70% RH, remove the battery).
- Maximum allowable voltage between the measuring terminal and the Earth: 300V
- Sampling rate: about 3 times/sec
- Indication of excess range: display"OL".
- Battery low voltage indication: display"".
- Enter a polarity indication: auto display "-"sign.
- power: 1 x 1.5V AAA Batteries.

Precision Index

The accuracy shall be applicable within one year after calibration

Benchmark conditions : Ambient temperature 18°C~28°C 、 humidity<80%

Accuracy: ± (%reading+5 word)

DC voltage

range	Resolution	Accuracy
2V	0.001V	±(1.0%reading+5 word)
20V	0.01V	
200V	0.1V	
300V	1V	

Voltage range: 0.8V~100V

AC voltage

range	Resolution	Accuracy
2V	0.001V	±(1.0%reading+5 word)
20V	0.01V	
200V	0.1V	
300V	1V	

Voltage

range:0.8V~300V/40~400Hz

Resistance

range	Resolution	Accuracy
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2000Ω	1Ω	±(1.2% reading+5 word)
20kΩ	0.01kΩ	
200kΩ	0.1kΩ	
2MΩ	0.001MΩ	
20MΩ	0.01MΩ	
Overload protection: 250V		

Continuity

	Resistance<50Ω , A buzzer inside the instrument will sound.
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Maintenance

CLEAN

Stop measuring and turn off instrument power. Wipe the case with a damp cloth or mild detergent.

Do not use abrasives or solvents.

Warning

Please keep the inside of the instrument clean and dry at all times to prevent electric shock or damage to the instrument.

Change the battery:

- 1) Turn off the power.
- 2) Use a screwdriver to unscrew the battery cover and remove it.
- 3) Remove the old battery and replace it with a new one of the same size. Please note the polarity of the battery. There is a positive and negative polarity mark for each battery in the battery case.
- 4) Put the battery cover back in its original position and lock the battery cover with screws.

Warning

- To avoid incorrect readings that may result in shock or personal injury, replace the battery immediately if it is low. Do not short-circuit or reverse the polarity of the battery to make the battery discharge.
- In order to ensure safe

operation and maintenance of the instrument, when long-term unused, please remove the battery, in order to prevent battery leakage caused by damage to the product.

Warnings and safety information

For all information on handling and use, please refer to the instruction manual or product label. Before using the products, read its contents and follow the instructions contained therein.

Also read the following information before use:

Safety of use

1. Use measuring tools for their intended purpose. Do not use measuring tools for tasks for which they were not designed to avoid damage or erroneous measurement results.
2. Always make sure a tool is in good working condition before using it. Damaged tools, such as cracked cases or damaged displays, can lead to incorrect measurements or risk of accidents.
3. Calibrate measuring tools regularly to ensure accuracy and reliability of measurements. Incorrectly calibrated devices can lead to erroneous results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained people to prevent accidental damage or misuse.
3. Avoid using measuring tools in extreme conditions of temperature, humidity or in an atmosphere with a high concentration of dust, which can affect their accuracy and functionality.
4. Be careful not to damage delicate measuring components (e.g., sensors, probes) when working with measuring tools.

Safe use

1. Always make sure that the measuring tool is properly aligned and fixed to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimize the risk of accidents, such as slippery or uneven surfaces.
3. Never take measurements on live components or in conditions that may pose a safety hazard.

Rules for use in appropriate conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which can damage the devices or affect their accuracy.
2. When using measuring tools, make sure they are well seated and will not be subjected to shocks or impacts that can damage them.
3. Avoid using measuring tools in areas with extreme conditions, such as high vibration, hot surfaces, dust, or moisture, unless the tool is rated for this by the manufacturer.

Maintenance instructions

1. Regularly check the condition of measuring tools, especially measuring components (e.g., sensors, probes, displays) and batteries.
2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g., soft cloths) to avoid damaging delicate components.
3. Calibrate measuring tools regularly, according to the manufacturer's recommendations, to maintain measurement accuracy.

Safe disposal

1. Dispose of used or damaged measuring tools in accordance with current environmental and electronics recycling regulations.
2. Do not dispose of measuring tools in regular waste containers, as they may contain elements harmful to the environment.
3. Contact local authorities or recycling companies for information on proper disposal of used measuring tools.

Statement of compliance

The products have been designed in accordance with the safety requirements of **Regulation (EU) 2023/988** on general product safety, ensuring their compliance with applicable standards for the safety and health protection of users.