

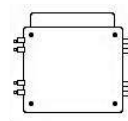
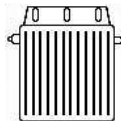
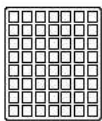
BPIS-1000

All-in-one Solar Storage System

User Manual



Solar Panel + LiFePO₄ Battery + Microinverter + MPPT



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Warning

- **Please read the Product User Manual carefully before using this product.**
- **Please do not violently carry, impact, and puncture this product.**
- **Please recycle and discard the product in accordance with the local laws and regulations.**
- **Please do not disassemble the product by yourself. If you need to disassemble the product, please obtain the manufacturer's authorization.**
- **During installation, please pay attention to distinguish the positive and negative poles of the cable to avoid the wrong connection or short circuit.**
- **We have carefully checked and packaged the products before they leave the factory. When you receive the products with damaged package or missing parts, please contact the distributor. We are willing to help you.**

1. Product Profile

This product is an all-in-one solar storage system, integrating solar panel, MPPT, energy storage battery and micro-inverter, which realizes the function of energy storage and grid connection after power generation of solar panel, and improves the utilization rate of clean energy. The power generated by the solar energy is stored in the battery for use on grid at night, and the working mode of the product can also be set to customize the working state through the APP. This product can be installed quickly and supports plug and play. It can be installed in the courtyard, roof, walls and other places. The world will be a better place because of your support for clean energy.

2. Product Diagram

- ① Support;
- ② Solar panel;
- ③ LiFePO4 battery;
- ④ MPPT module;
- ⑤ Micro inverter;
- ⑥ Power indicator light
- ⑦ Grid-connected AC output port;
- ⑧ Micro-reverse parallel input port;
- ⑨ Screw hole;
- ⑩ Power switch;
- ⑪ Communication antenna;
- ⑫ PV+ input;
- ⑬ PV- input.



3. Product Parameter








PROJECT		SPECIFICATIONS
Basic Information	Model	BPIS-1000
	Size	2094*1134*150mm

	Weight	47.5 Kg
Solar Energy Panel Information	Power	500W
	Solar panel type	Monocrystalline silicon
	Open circuit voltage	46.64V
	Short-circuit current	13.57A
	Working voltage	39.03V
	Operating current (Max)	12.81A
	Generating efficiency	≥90% after 15 years; ≥80% after 25 years
Battery Information	Battery type	LiFePO4 Battery
	Battery Lifecycle	6000+ times
	Rated voltage	41.6V
	Operating voltage range	35.1V-47.45V
	Rated capacity	41.6V/24Ah (998.4Wh)
	Battery power display	Red1%~19% Yellow20%~39% Cyan40%~59% Blue60%~79% Green80%~100%
MPPT	PV input voltage	12V-60V
	PV MPPT Voltage range	20V-60V
	Input current / power (PV-BAT)	≤25A/50-700W
	Output voltage (PV-inverter)	12V-60V

	Output voltage (BAT-inverter)	41.6V
	Output current / power (BAT-inverter)	≤14A/200-500W
Micro Inverter	PV input power	180W-450W
	MPPT voltage range	24V-45V
	PV input maximum voltage	54V
	PV input maximum current	15A
	PV input voltage range	18V-54V
	PV input for persistent maximum current	12A*2 ports
	Rated output power	600W
	Rated output current	2.72A
	Rated output voltage	220V/230V
	Frequency	50/60Hz
	Power factor	More than 0.95
	Harmonic distortion rate	< 3%
Other Information	Operating temperature range	-30°C-65°C
	Classification of waterproof	IP65
	Parallel operation	Support for 8 Units

	WIFI	Support (2.4G)
	Altitude	≤2000 meters

4. Packing List

No.	NAME	QUANTITY	PICTURE
1	The BPIS-1000 ontology	1	
2	M4 nut	8	
3	M4 * 12 screw	8	
4	M6 nut	4	
5	M6 * 12 screw	4	
6	AC output cable (3 m)	1	
7	User manual	1	

5. Product Use

- (1) The product integrates solar panel, MPPT, energy storage battery, micro inverter and bracket, which can be connected to the home power grid by a single unit, or can be connected to the grid by a plurality of units to save the cost of electricity for homes, shopping malls, schools, offices and other places, and to improve the utilization rate of clean energy. This product can support up to 8 products and output power up to 4800W.
- (2) When installing this product, it is necessary to adjust the angle of solar panels and to ensure that the solar panels are exposed to 100% sunlight, and the solar panels cannot be blocked by buildings, trees, etc.
- (3) After the installation of this product, the AC output cable of the product can be connected to the home socket so that clean energy can be connected to the grid.
- (4) When multiple products are connected to the grid, the AC output cable of the first product is connected to the AC input port of the next product. After the integration of multiple products is completed, the AC output cable of the last product is connected to the grid socket, and clean energy grid connection can be realized.
- (5) Since the solar panels are working outdoors for a long time, they may be blocked by dust, leaves, dirt, etc and affect the power generation efficiency. It is recommended to clean the solar panels every 3 months.



(6)

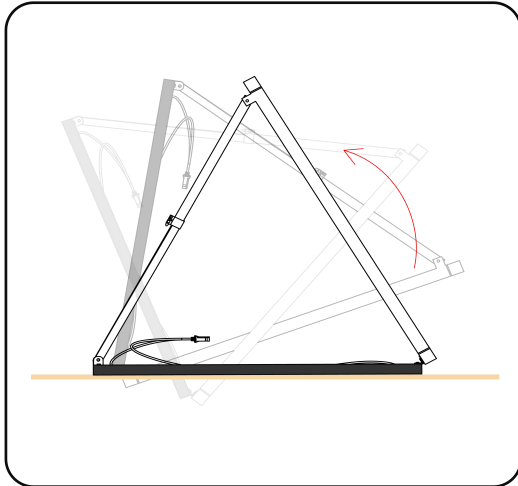
Warning

- When multiple products are connected to the power grid, it is necessary to confirm whether the AC socket power supports the on-grid input power after the product, otherwise it may cause overheating or even fire.
- When multiple products are connected to the power grid, it is necessary to confirm whether the AC socket power supports the on-grid input power after the product, otherwise it may cause overheating or even fire.

6. Product Installation

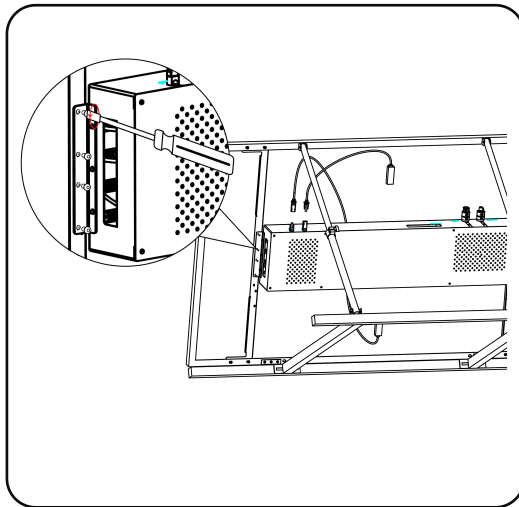
Step 1: Remove the product packaging and lay out the installation accessories neatly;

Step 2: Fixing the host with the solar panel



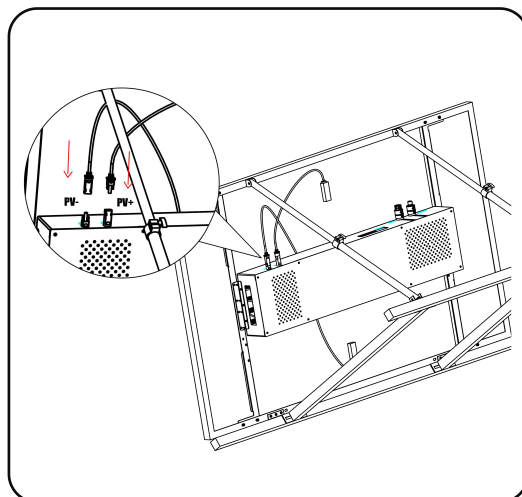
Turn over the solar panel to make the back of the solar panel upward; (Note: When turning over the solar panel, please pay attention to selecting a flat ground and taking protective measures to avoid scratching or even breaking the glass on the surface of the solar panel);

Step 3: Fixing the solar panel bracket with the solar panel

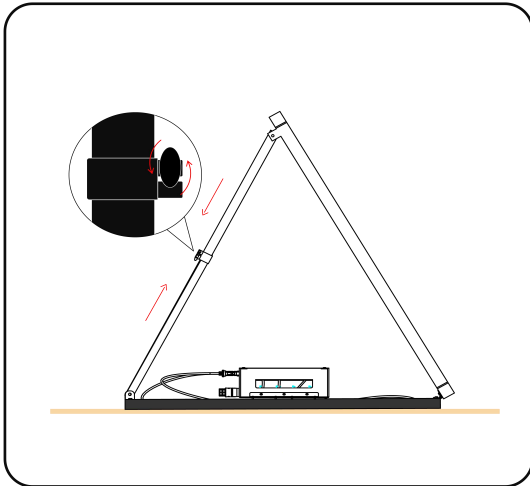


Align the screw holes at both ends of the host with the screw holes on the U-shaped fixing frame and then tighten M4*12 screws and M4 nuts;

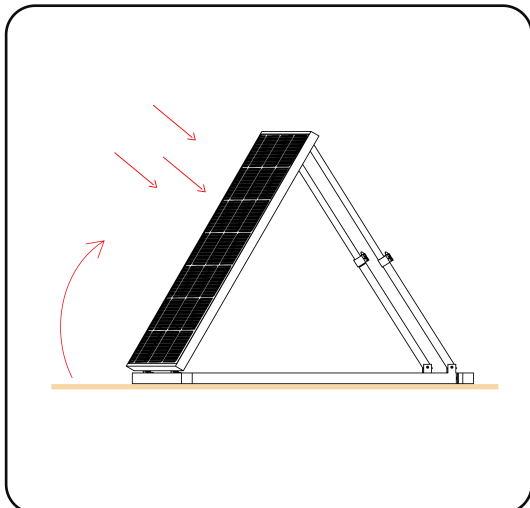
Step 4:



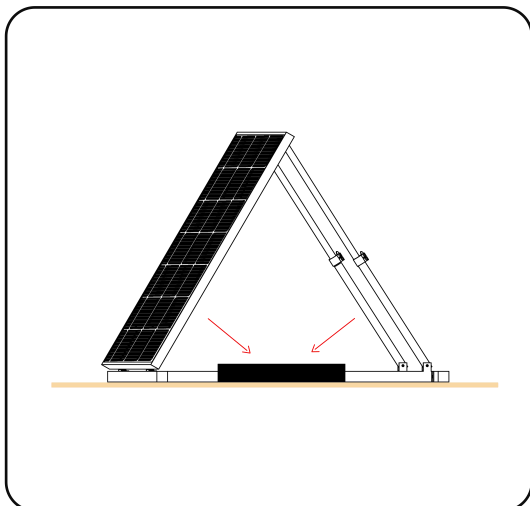
The PV + cable of the solar panel connects to the PV + input port of the host, and the PV- cable connects to the PV- input port of the host.

Step 5:

- (1) Fix one end of the two hinges on the aluminum alloy frame at the bottom of the solar panel by screws, and fix the other end of the two hinges with the solar panel bracket by screws; (Please pay attention to the direction of hinge when installing);
- (2) Tighten the telescopic rod of the solar panel bracket and the aluminum alloy frame at the top of the solar panel by screws;
- (3) Connect the two telescopic rods and tighten them.

Step 6:

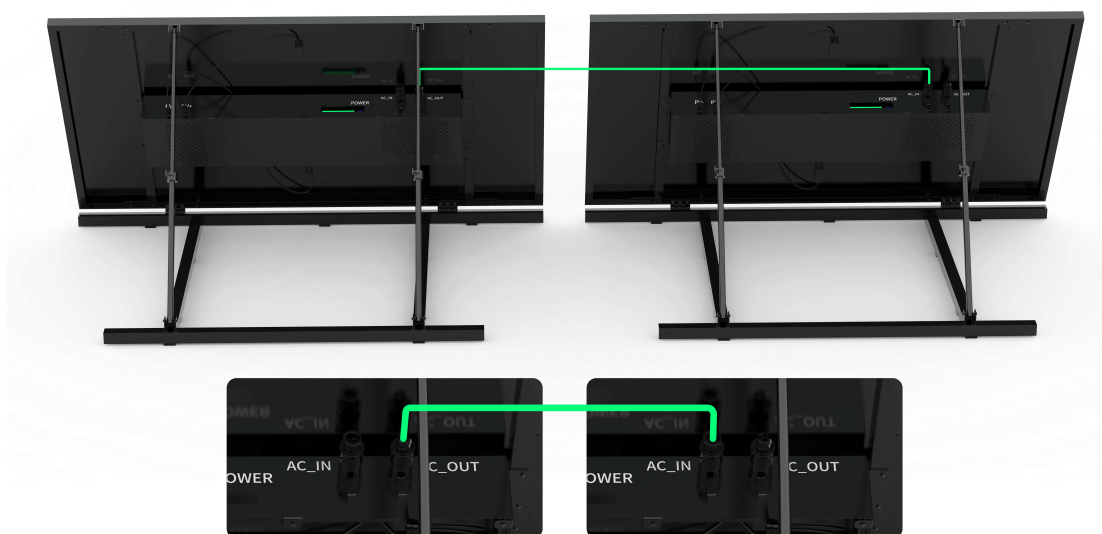
- (1) Turn over the solar panel.
- (2) Loosen the telescopic rods of the solar panel bracket and adjust the bracket angle of the solar panel, and then tighten the telescopic rods.

Step 7:

Press the bottom of the solar panel bracket with heavy objects to avoid being moved by strong winds.

Note : If you have 2 or more all-in-one solar system (maximum 8), the AC_OUT output port of the first unit can be connected to the AC_IN input port of the next unit by parallel cable, which realize multiple products connected to the grid through parallel technology, and the maximum grid-connected power up to 4800W.

(The parallel connection diagram is as follows:)



Warning

- The product must be installed in direct sunlight, otherwise the solar panels will not work.
- Please do not install the product on the ground that is easy to accumulate water to avoid being soaked by rainwater and cause damage to the product.

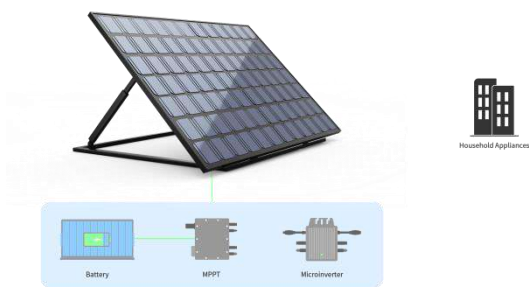
7. APP Introduction

- (1) After the installation of the product is completed, the APP can be downloaded to connect the product for operation (see the following

installation steps for details).

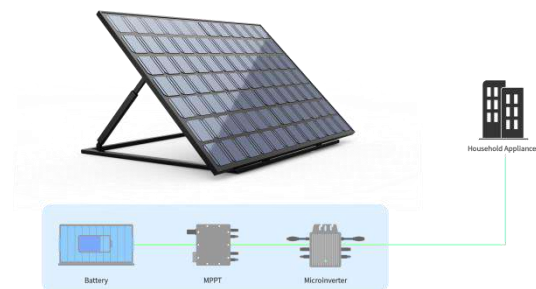
- (2) The APP supports setting the working modes. Users can choose the working modes in the APP according to the state of electricity consumption. There are 4 modes for your options: power storage priority mode, power use priority mode, power storage and power use mode, or PV direct output mode. It can also be set by the POWER button of this product. The POWER button can be clicked three times continuously within 3s to realize switching above 4 modes to meet the various power consumption requirements of users.

- **Power storage priority mode**



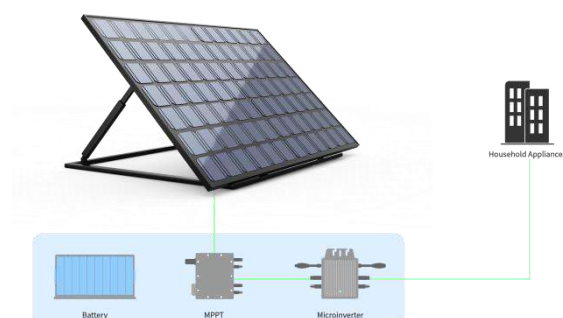
When the solar panel generates power, it preferentially charges the built-in battery. When the built-in battery is fully charged, it supplies power to the micro inverter and the grid.

- **Power use priority mode**



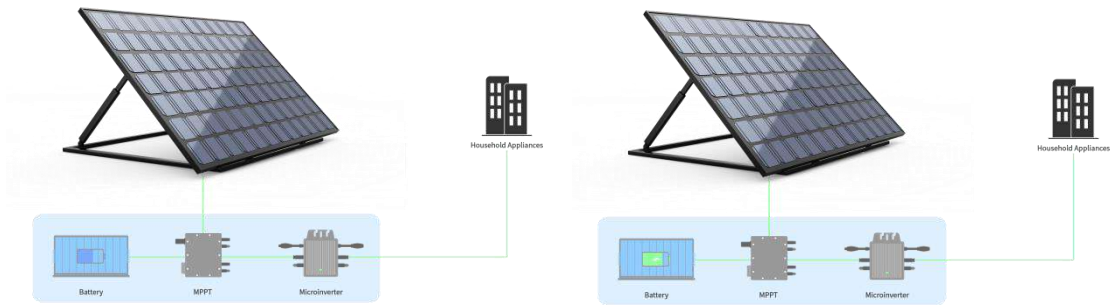
When the solar panel generates power, it preferentially charges the micro inverter and the grid.

- **PV direct-output mode**



When the solar panel generates electricity, it is directly supplied to the micro inverter and the grid, not to the built-in battery.

- **Power storage and the power use mode**



When solar panels generate electricity:

When the output power of the solar panel is more than the input power of the micro inverter, the power generated by the solar panel is supplied to the micro inverter and the grid, and the surplus power is charged to the built-in energy storage battery.

When the output power of the solar panel is less than the input power of the micro inverter, the power generated by the solar panel is supplied to the micro inverter and the grid; meanwhile, the built-in energy storage battery supplies power to the micro-inverter and the grid.

- (3) It can remotely control and view the working status and historical charge and discharge data of the product.
- (4) Before the product leaves the factory, the default working mode of the APP is the power storage and the power use mode.

(5) The APP installation steps are as follows:

- ① Scan the QR code and download the APP.



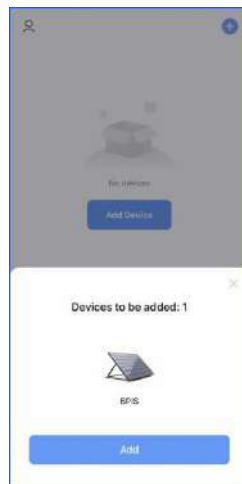
- ② Register and log in to the APP.



- ③ Turn on Bluetooth and WIFI, and the WIFI network is 2.4G frequency.



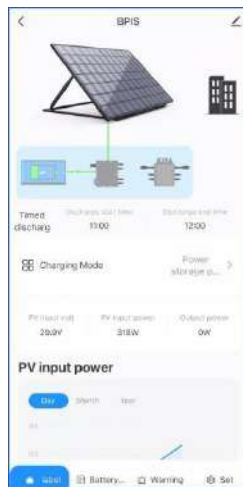
- ④ Open the power switch of this product to enter the distribution network state;
- ⑤ Open the APP. If "Connect Device" pops up, please click Connect. If "Connect Device" doesn't pop up, please click "+" to select add device and click Connect.



- ⑥ Select the corresponding WIFI name and enter the password, to enter the add device wait...



- ⑦ When the device is added, click finish to enter the APP interface.

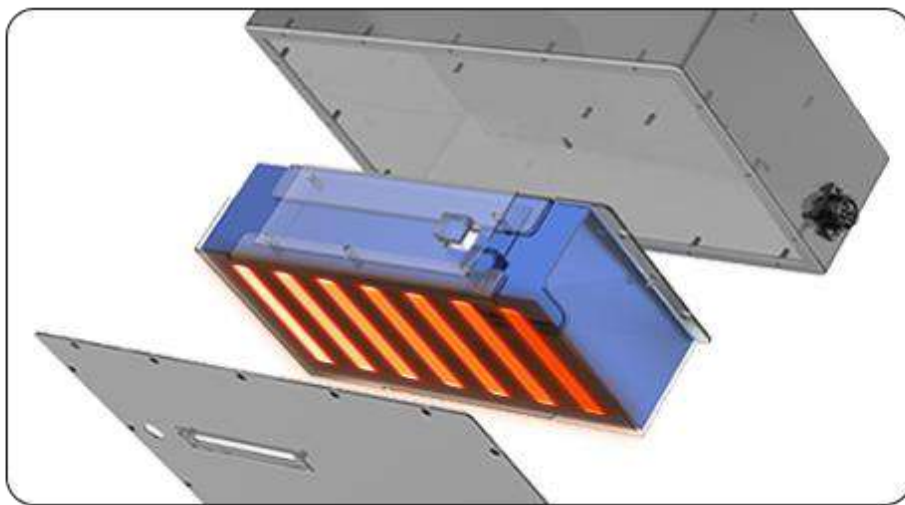


Note

- 1) The power indicator is always-on: WIFI has been successfully connected; Flashing: WIFI is not connected; Click 6 times or more in 3s to reset WIFI and restore factory settings.
- 2) App only supports WIFI network 2.4 G. If the connection is unsuccessful, please check whether the network frequency is correct.
- 3) The timed charging and discharging function of APP will be retained until the next modification once the function is set.
- 4) Do not cross the timing charging and discharging time interval of APP. If there is a cross, timed charging mode will be preferred.
- 5) Whether the modes switching is successful can be judged from the flashing color of the electric quantity indicator light:
 - The green power indicator flashes 5 times, which means the power storage priority mode;
 - The blue power indicator flashes 5 times, which means power use priority mode;
 - The cyan electricity indicator flashes 5 times, which means PV direct output mode;
 - The yellow power indicator flashes 5 times, which means power storage and power use mode.

8. Using Environment

- ① The operating ambient temperature is $-30^{\circ}\text{C}\sim 60^{\circ}\text{C}$.
- ② In order to ensure that the product can work normally at low temperature, when the temperature of the internal battery is lower than 5°C , the product will automatically turn on the battery heating system and stop heating when the battery temperature is heated to 15°C .



Battery heating schematic diagram

- ③ In order to avoid high temperature inside the product, it was designed to lower the internal working temperature through the heat dissipation hole. When the operating ambient temperature is too high, the product automatically starts the over-temperature protection. The over-temperature protection will be turned on automatically when the internal battery temperature is higher than 55°C during charging or higher than 60°C during discharging



9. Safety Guidelines

- (1) Do not place the product near any heat source, such as open flames or heating furnaces.
- (2) Do not allow the product to contact any corrosive liquid. Do not immerse this product in water.
- (3) Do not use the product in the environment of strong static electricity or strong magnetic field.
- (4) Do not disassemble or puncture the product in any way with sharp objects.
- (5) Do not use wire or other metal objects to make the product short circuit.
- (6) When using this product, please strictly follow the ambient temperature of this user manual. Excessive temperature may cause fire or even explosion.

- (7) Do not stack other heavy objects on this product.
- (8) Please avoid impact, fall and severe vibration. If there' s a severe external impact, please immediately turn off the power supply and stop using it.
- (9) If the product is on fire, please use the fire extinguisher in the following recommended order: water or water mist, sand, fire blanket, dry powder, carbon dioxide fire extinguisher.
- (10) Please install this product in places where children and pets cannot access it.

10. Disposal

This product contains a lithium iron phosphate battery (LiFePO₄), and should be professionally disassembled and disposed of according to local laws and regulations, with materials sorted accordingly.

11. Trouble Shooting

(1) The solar panel not charging

- ① Check whether the working range of the solar panel matches the product;
- ② Check whether the solar panel connection cable is plugged in securely or whether the positive and negative electrode are correct;
- ③ Check whether the solar panel is exposed to sunlight, if not, it may not work.

(2) The product cannot discharge

- ① Check whether the product' s battery has power. If it doesn' t, charge the product first.
- ② Check if the power switch is turned on.

- ③ Check if the grid has power. The micro inverter will not operate when the grid is cut off.
- ④ Check if the AC output cable and the grid socket are plugged in securely.

12. After-sales Service

When a failure occurs during the use of the product, please follow the Article 10 "troubleshooting" method of the user manual, please contact the distributor in time and give clear feedback to the after-sales personnel: product model, purchase date, contact number and fault phenomenon.

- (1) The product warranty period is 5 years.
- (2) The expiration date shall be calculated from the date of consumer purchase. In order to determine the purchase date, consumers are requested to keep the purchase-related notes and online shopping records.
- (3) Within the warranty period, if any damage is caused by product design, materials, or non-human factors, the company will assume the obligation of free maintenance and replacement of parts.
- (4) The following situations are not covered by the warranty:
 - ① Unauthorized disassembly and maintenance;
 - ② Product performance failure caused by human factors;
 - ③ Damage caused by natural disasters, lightning, accidents or other irresistible factors;
 - ④ The appearance damage of the product after use is not covered by the warranty.
- (5) Warranty record

Date of Purchase:

Product SN:

Maintenance date	failure cause	Maintenance results	Maintenance person

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