011_MAU Series_MAU5000_EN

1. Release Notes

This table records the changes related to MAU5000 User Manual：

Product Name	Models	Version	Update Date
PowerTrunk MAU	TSOL-MAU5000 TSOL-MAU5000-M	V1.0	2026-03-26
		V2.0	2026-09-11

2. Read before using

Dear customer, thank you for choosing the **TSOL-MAU5000**. We sincerely hope that our product can meet your demands for renewable energy. Meanwhile, we appreciate your feedback on our products.

This manual contains important instructions for the **TSOL-MAU5000**. Please read the entire text thoroughly before installing and commissioning the equipment. For safety reasons, only qualified technicians who have received professional training and hold relevant qualifications are permitted to carry out equipment installation and maintenance work in accordance with this document.

2.1 Applicable Products and Models

This manual is valid for the following models:

Product Name	Models	Appearance
PowerTrunk MAU	TSOL-MAU5000 TSOL-MAU5000-M	

Naming Convention

TSOL	Enterprise Code	Tensheng Technology Co. , Ltd.
MAU	Series Code	Micro AC Couple Unit
5000	Battery Capacity	5000 represents approximately 5 kWh
M	Output Power	the suffix **M** denotes a 2.5 kW unit;
		Models without the letter M represent an 0.8 kW unit. *Set according to local regulations Factory setting: 0.8 kW, unlockable up to 2.5 kW in the APP

2.2 Applicable Group

This manual is intended for professional technicians responsible for equipment installation, operation and maintenance, as well as users who need to refer to equipment parameters. Only professional technicians are permitted to carry out installation work for this equipment. A professional technician shall satisfy all the following requirements simultaneously:

- Proficient in professional knowledge related to electronic and electrical wiring as well as mechanics, capable of understanding electrical schematic diagrams and mechanical schematic diagrams;
- Have received professional training in the installation and commissioning of electrical equipment;
- Capable of promptly handling various hazardous conditions and unexpected emergencies during installation and commissioning operations;
- Familiar with relevant standards for electrical systems and current safety regulations;
- Possess corresponding qualifications for electrical work, be able to carry out operations in a standardized manner, and avoid electrical and mechanical safety risks;
- Read this manual carefully to fully understand all safety precautions related to the operation.

2.3 Important Safety Information

Before installing, operating, and maintaining the unit, please read this manual first and follow all safety precautions marked on the unit and in the manual.

The "instructions", be followed, but only serve as a supplement to all safety precautions. Our company does not assume all "precautions", "warnings", and "dangers" in the manual could

represent all safety precautions that would against responsibility for violating general safety operation requirements or violating safety standards for design, production, and use of unit.

This unit should be used in an environment that meets the design specifications, otherwise it may cause unit malfunction, resulting in unit functional abnormalities or component damage, personal safety accidents, property losses, etc., which are not within the scope of product warranty assurance.

Local laws, regulations, and specifications should be followed when installing, operating, and maintaining the unit. The safety precautions in the manual are only a supplement to local laws, regulations, and norms.

If operations are performed in violation of the provisions of this manual, the responsible party shall bear all resulting equipment damage, personal injury and related losses on its own, and TSUN Company shall not assume corresponding liabilities.

Statement:

Our company shall not be responsible for any of the following situations.

- Not operating within the usage conditions specified in this manual.
- The installation and use environment exceed the provisions of relevant international or national standards.
- Unauthorized disassembly, modification of products, or modification of parameter or product firmware.
- Failure to follow the operating instructions and safety warnings in the product and documentation.
- Product damage caused by abnormal natural environments (force majeure, such as earthquakes, fires, storms, etc.).
- Transportation damage caused by non-authorized transportation.
- Damage caused by storage conditions not meeting requirements stated in this manual.

Danger:

- If fire occurs, evacuate the building or equipment area and press the fire alarm bell, or call the fire alarm number. Under any circumstances, it is strictly prohibited to re-enter a burning building.
- Do not disassemble or modify the **MAU5000** without prior written permission from TSUN.

2.4 Product Identification

The following safety symbols are used in this manual. Before installing or operating the system, familiarize yourself with these symbols and their meanings.

Symbol	Description
	**Danger** Danger indicates a hazardous situation that may result in fatal electric shock, other serious personal injury or fire hazard.
	**Warning:** Warnings indicate hazardous situations that must be fully understood and the associated instructions followed to avoid potential safety hazards, including equipment damage or personal injury.
	**Caution:** Caution indicates a hazardous situation that may result in minor personal injury or equipment damage if instructions are not followed.

Symbol	Description
	**Danger** Danger indicates a hazardous situation that may result in fatal electric shock, other serious personal injury or fire hazard.
	**Warning:** Warnings indicate hazardous situations that must be fully understood and the associated instructions followed to avoid potential safety hazards, including equipment damage or personal injury.
	**Caution:** Caution indicates a hazardous situation that may result in minor personal injury or equipment damage if instructions are not followed.

The labels on the body of the **MAU5000** are listed below and their descriptions are as follows.

Label	Description
	Please set router and repeater to 2.4GHz single band to connect device and smart meter

	This is the internationally recognized hot surface warning symbol. It indicates that the surface or component in the marked area is at an extremely high temperature, and direct contact may cause severe burns.
	The warranty shall be void if the label is broken.
	This device meets the Radio Equipment Directive requirements.
	Please read the installation manual first before installation, operation, and maintenance.
	To avoid electric shock or injury, do not touch or use the device for 3 minutes after turning off the debice or disconnecting it from the power grid.
	This is the internationally recognized general danger warning symbol
	This symbol indicates the presence of high voltage and the risk of electric shock.
	This device SHOULD NOT be disposed in residential waste.

Read the manual and other related documents before any operation of the unit is carried out. Documents must be stored carefully and be available at all times. All rights to the content of this manual are owned by TSUNESS Co., Ltd. (hereinafter “TSUN”). This document cannot be modified, distributed, reproduced or published in any form or by any means without prior written permission from TSUN. Content may be periodically updated or revised due to product development. The information in this manual is subject to change without notice. For further information, please visit our official website at www.tsun-ess.com.

2.5 Safety Instructions

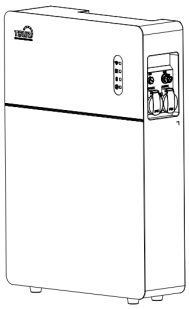
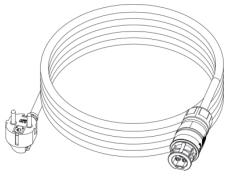
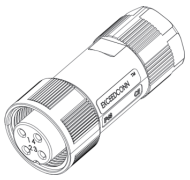
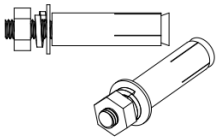
1. Please store this product in a cool and dry place, and do not use it near any open flames.
2. Do not immerse this product in water. It is not recommended to use this product in a humid environment.
3. Do not use this product in flammable, explosive or corrosive environments, such as those containing gasoline, gas and chemical reagents, otherwise your safety may be endangered.

4. Always operate this product in strict accordance with relevant laws, regulations, instructions and labels, especially in environments where explosions may occur.
5. Do not store any flammable liquids, gases or explosives in the compartment where this product is stored.
6. Do not use this product in environments with strong static electricity or strong magnetic fields.
7. Do not disassemble or puncture this product with sharp objects in any manner.
8. Do not connect using wires or other metal objects without permission to avoid short-circuiting the product.
9. Do not use parts or accessories that are not officially provided.
10. When using this product, please strictly comply with the ambient temperature specified in this user manual. High temperatures may cause the battery to catch fire or even explode; low temperatures may significantly degrade the product's performance and even cause it to stop working.
11. Do not place any other heavy objects on this product.
12. Please avoid subjecting this product to impacts, drops, or severe vibration. If this product is subjected to a strong external impact, turn off the power immediately and stop using it. Secure the product properly during transportation to avoid vibration and impacts. For long-distance transportation, it is recommended to use the original packaging.
13. If this product accidentally falls into water during use, please place it in a safe open area and do not approach it until it is completely dry. The dried product should not be reused and should be properly disposed of in accordance with the methods described in the "Waste Disposal" section. In case of a fire involving this product, please use appropriate fire extinguishing media in the following recommended order: water or water spray, sand, fire blanket, dry powder fire extinguisher, carbon dioxide fire extinguisher.
14. If there is any dirt on the interface of this product, please wipe it clean with a dry cloth.
15. Please place this product with care to prevent damage caused by tipping over. If this product is severely damaged due to tipping over, please power it off immediately, place the battery in an open area away from combustibles and people, and dispose of it in accordance with local laws and regulations.
16. Please keep this product out of the reach of children and pets to avoid potential safety hazards.
17. If water gets inside this product, do not power it on again. Take precautions against electric shock before touching the product. Immediately move to a safe, non-slip open area and contact customer service right away.

18. This product is not recommended to supply power for medical emergency equipment related to personal safety.
19. Electric products will inevitably generate electromagnetic fields during use, which may affect the normal operation of implantable medical devices or personal medical devices (such as pacemakers, cochlear implants, hearing aids, defibrillators, etc.). If you use such medical devices, please consult the device manufacturer for advice on usage restrictions and ensure a safe distance between this product and any implantable medical devices.
20. When installing such equipment, any modifications to the household electrical circuit must only be carried out by professionally trained personnel.
21. Be sure to use the original cable provided by our company. When disconnecting the cable, if the plug is equipped with a nut, please unscrew the nut first before disconnecting the cable connection. Never operate the product with a damaged cable.

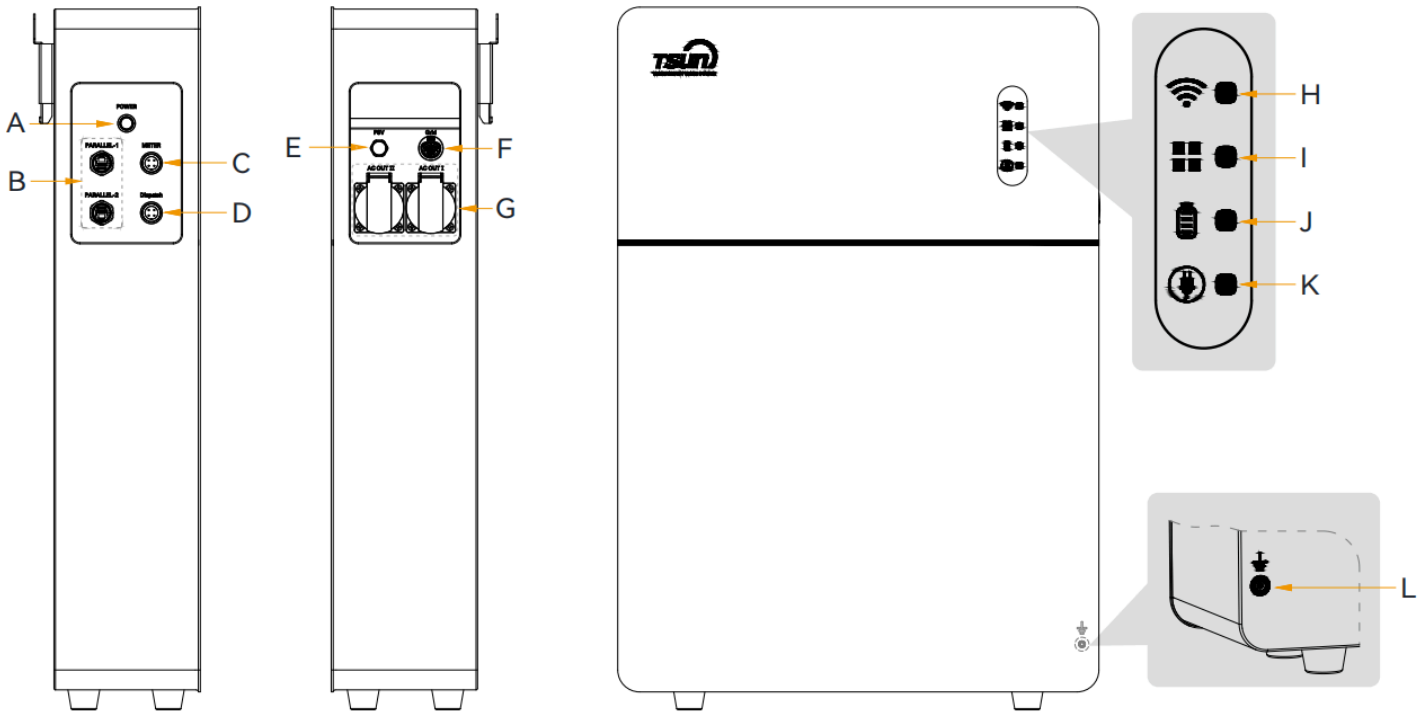
3. Packing List

MAU 5000

					
SolarTrunk/PowerTrunk x 1	AC End Cable x 1	RS485 Connectors x 2	QIG x 1	Warranty Card x 1	Expansion Screw x 2

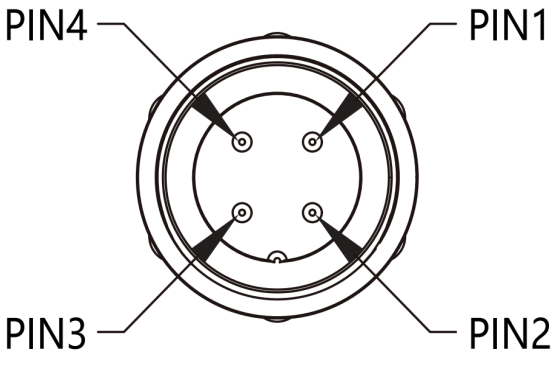
4. Product Introduction

4.1 Product Overview



A	Power Button	**G**	AC Load
B	Parallel communication interface	**H**	WiFi Indicator
C	RS485 port for Meter	**I**	Status Indicator
D	RS485 port for Dispatch	**J**	Battery Indicator
E	Vent Valve	**K**	Fault Indicator
F	AC Grid	**L**	Grounding

RS485 Interface Pinout Definition



Pin	RS485 Function Bit
1	RS485-A
2	RS485-B
3	5 V
4	GND

Pin 1 & 2: Used to connect external 485 devices, such as smart meters, Data Acquisition terminals, etc.

Pins 3 & 4: Used to supply power to external devices.

4.2 Dimensions and Weight

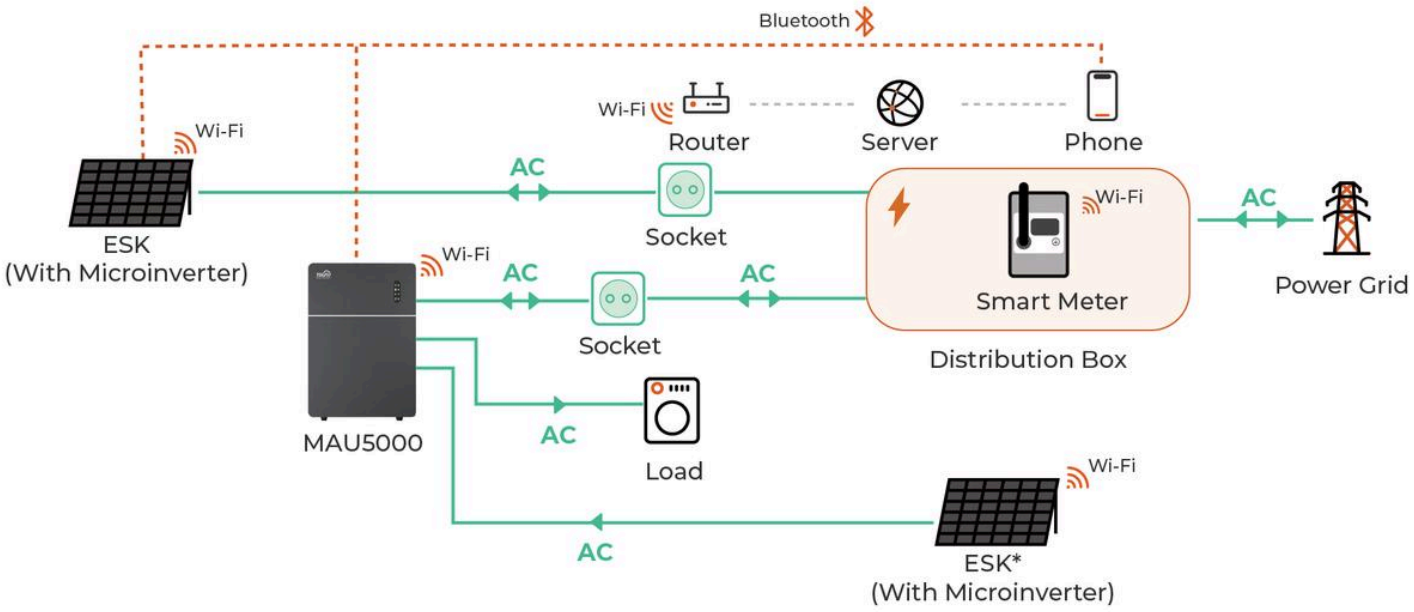


Dimensions(mm)	484(W)*707(H)*168(D)
Weight(kg)	52

4.2.1 Heavy Lifting Safety

- When carrying the **MAU5000**, preparations should be made for load-bearing to avoid being crushed.
- When handling the unit manually, it is recommended that the **MAU5000** be lifted by two persons. It is also recommended to wear protective gloves to prevent injury.

4.3 System Diagram

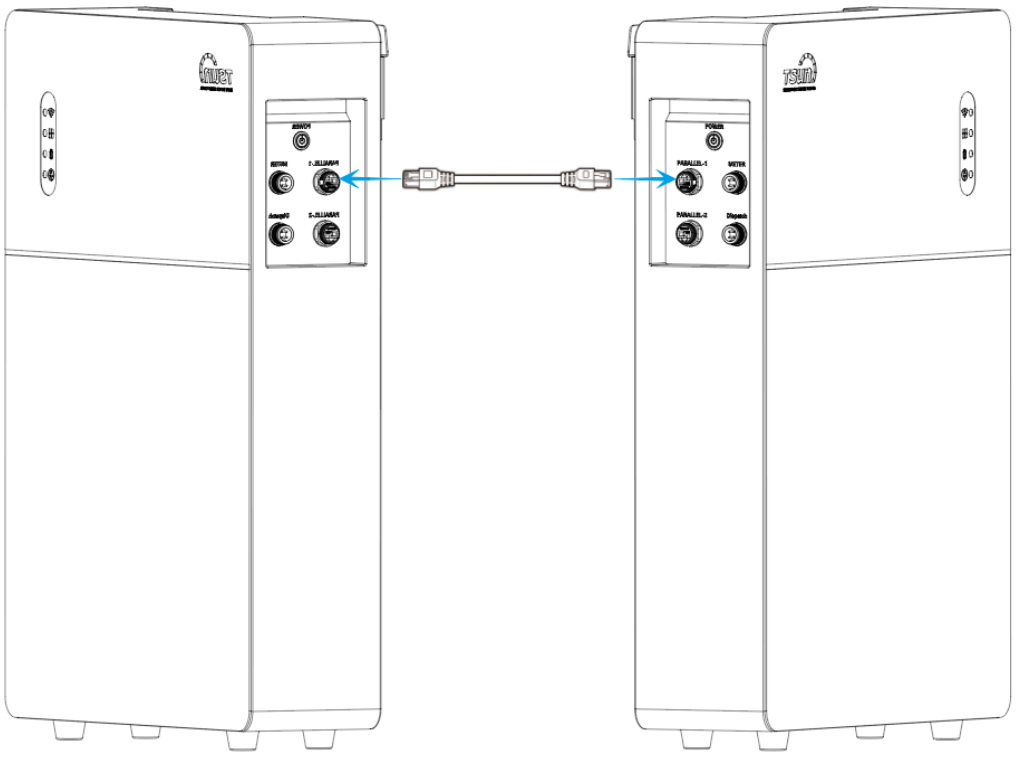


The system can be used in Off-Grid and On-Grid Hybrid Solar systems, suitable for home users and balcony scenarios.

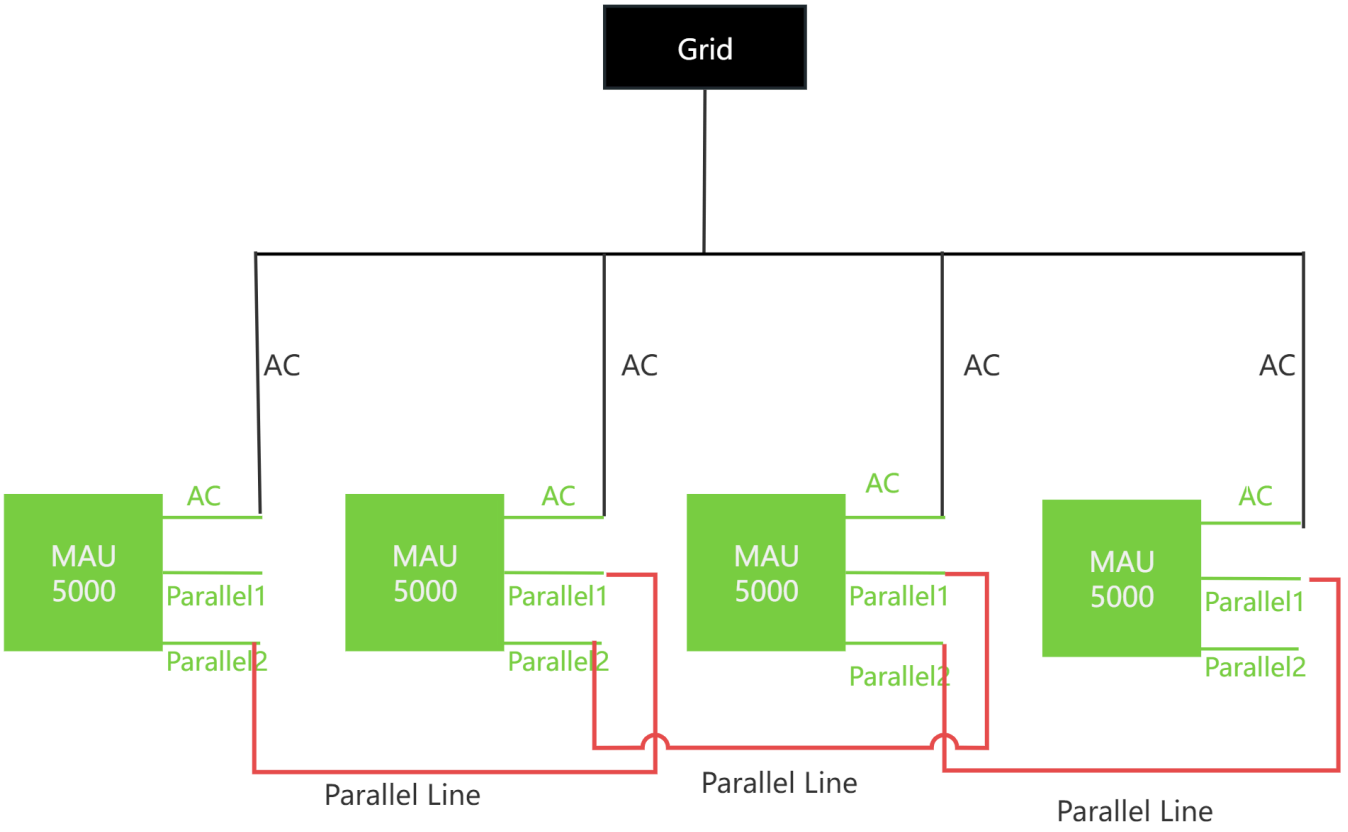
4.4 Parallel Operation

4.4.1 Wired Parallel

If parallel operation is required, please refer to the figures below.

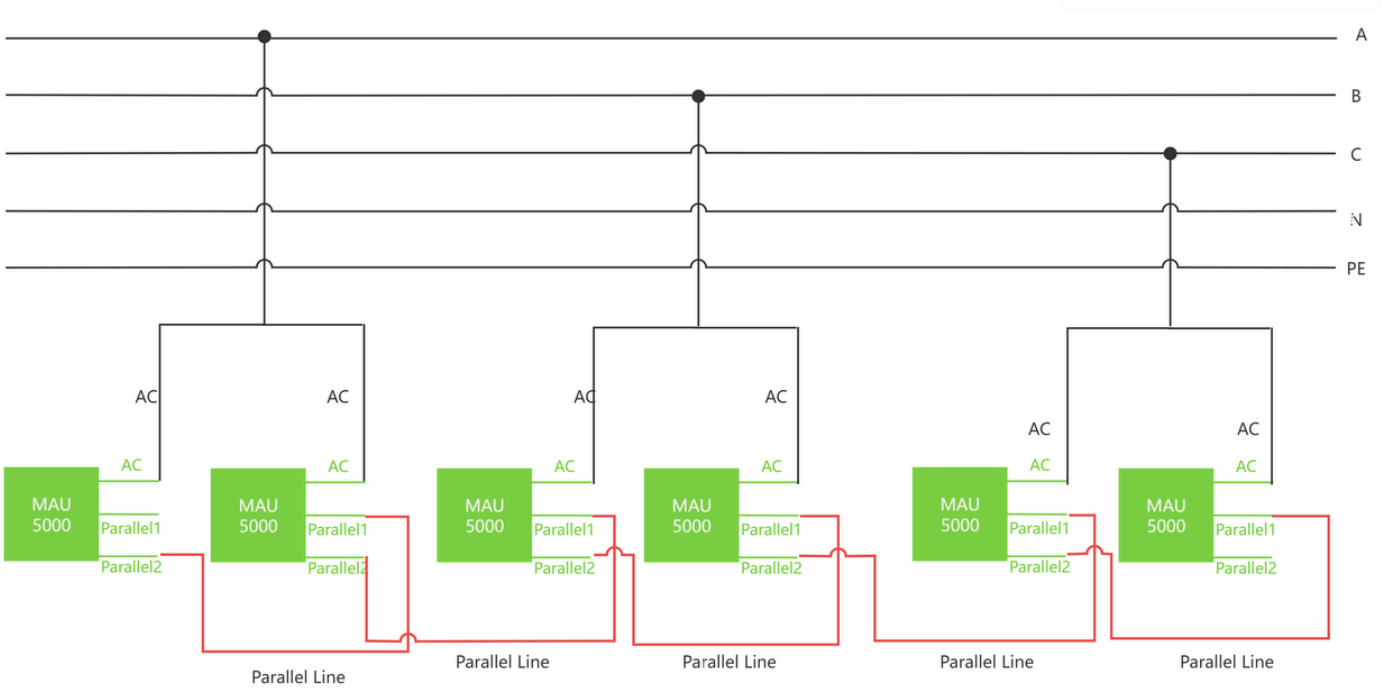


1. **Single-phase Parallel**



This is the wiring diagram for the MAU5000 single-phase parallel system. The system is powered by the utility grid, with a maximum of 4 MAU5000 units connectable in parallel on a single circuit. The AC terminals of each device are connected to the mains power. The devices are daisy-chained via crystal-head cables (optional accessories) labeled "Parallel Line", which link the Parallel1 and Parallel2 ports of adjacent units in sequence. This forms a closed-loop communication bus to achieve impedance matching for the entire parallel communication network.

2. **Three-phase Parallel**



Wiring Diagram for MAU5000 Three-Phase Parallel System. A maximum of 2 units can be connected in parallel per phase circuit, with a total of 6 MAU5000 units deployed. The AC terminal of each device shall be connected to the corresponding phase sequence. Parallel communication between devices is realized via crystal-head cables (optional accessories) marked "Parallel Line". The cables connect the Parallel1 and Parallel2 parallel ports of each device in sequence to form a daisy-chain communication bus, enabling matching and closed-loop connection of the entire parallel communication network.

Configure the parallel mode in the APP based on actual application scenarios.

4.4.2 Wireless Parallel

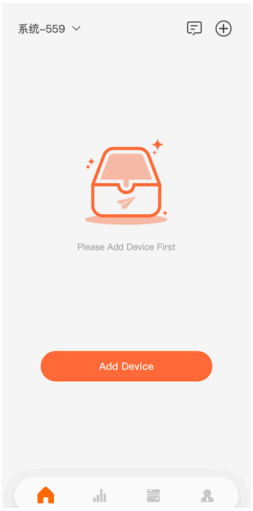
Parallel connections can also be implemented wirelessly. Simply add the paralleled devices to the same power station.

1. **Confirm the network environment**

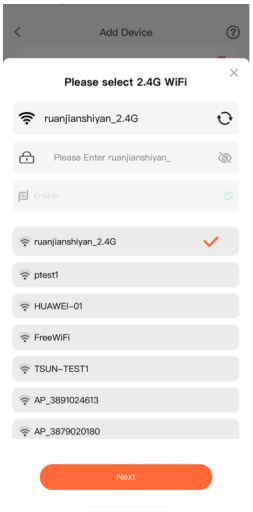
First, make sure all MAUs to be connected in parallel are connected to the same WiFi network.

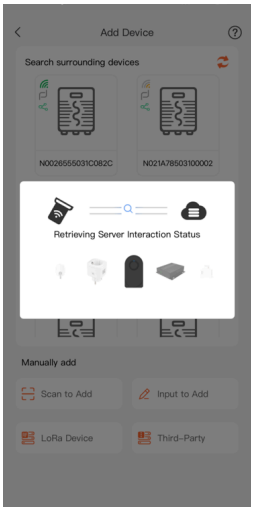
2. **Add the first device**

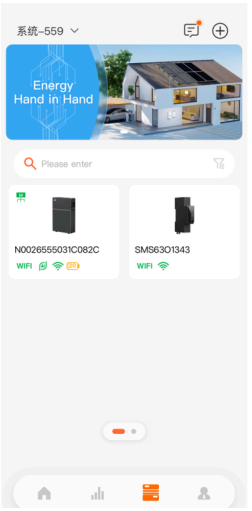
Start the network configuration in the power station and add the first MAU. Once added, the system will automatically set this device as the master. The operation steps are shown below.











3. **Add the remaining parallel devices**

Using the same method, add the remaining MAUs in the power station one by one. Once all devices have been added, the wireless parallel connection is complete. The completion screen is shown below.

Note

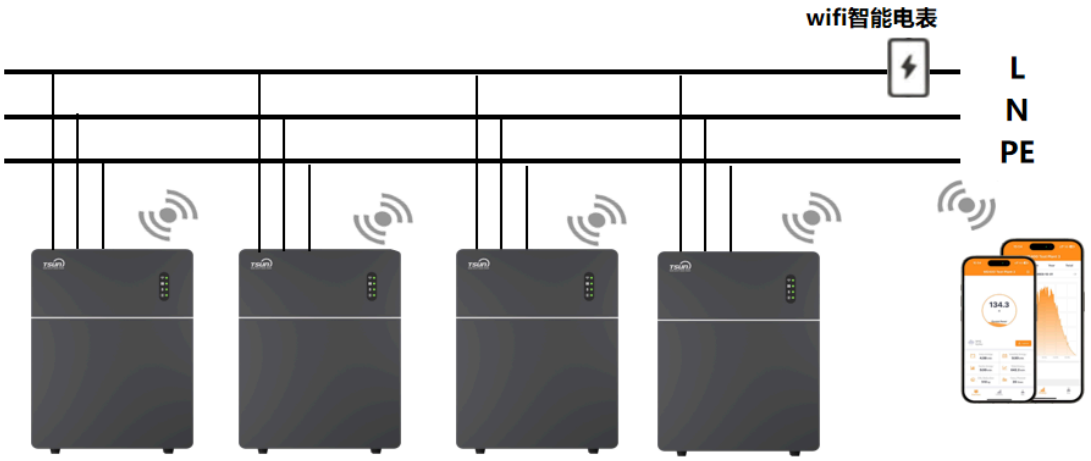
Single-phase system: up to 4 MAUs can be connected in parallel

Three-phase system: up to 6 MAUs can be connected in parallel

1. **Single-phase Parallel**

- Add all MAU5000 units for single-phase parallel to the same plant. (Max. 4 units in total)
- Go to `Parameter Settings`, tap `Parallel mode`, and select `Parallel` for all units.
- Tap `Confirm` after completing the settings.

> *Note: The first device added by default acts as the master, and the rest are slaves.

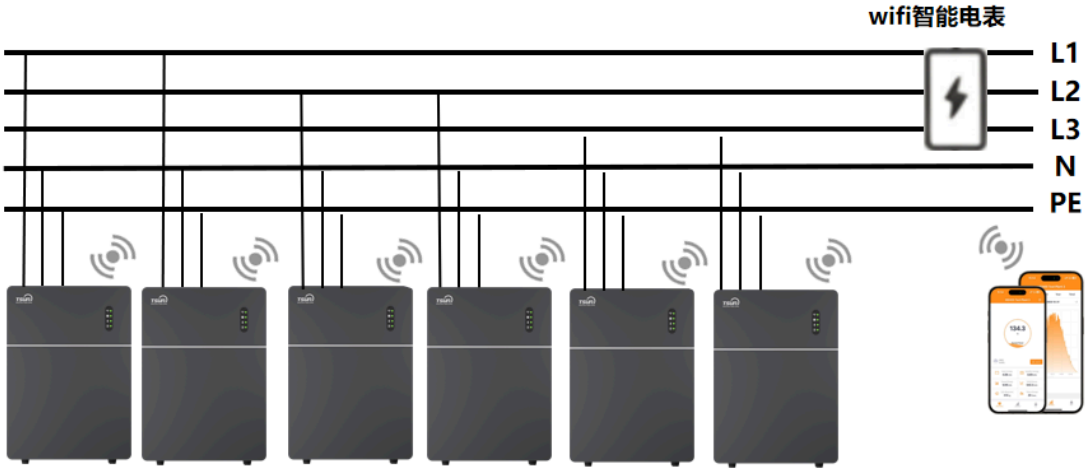


2. **Three-phase Parallel**

- Add all 6 units to the same plant.
- Go to `Parameter Settings` → `Parallel mode`, open the drop-down list and assign a phase for each unit.

> - Example:
>
> Phase A unit: Select the `First of three phases` (1st phase = Phase A)
>
> Phase B unit: Select the `Second of three phases` (2nd phase = Phase B)
>
> Phase C unit: Select the `Third phase of three phases` (3rd phase = Phase C)
>
> *Max. 2 units per phase. Example: set 2 units to First, 2 to Second, and 2 to Third.

- Tap `Confirm` to save the settings after configuring each unit.



5. Product Installation

5.1 Pre-installation

5.1.1 Check the Packaging

Before unpacking the unit, inspect the packaging for any unexpected damage such as holes or cracks, and verify the unit model number. If damage is found or the model does not match your order, do not unpack the unit and contact your dealer or supplier immediately.

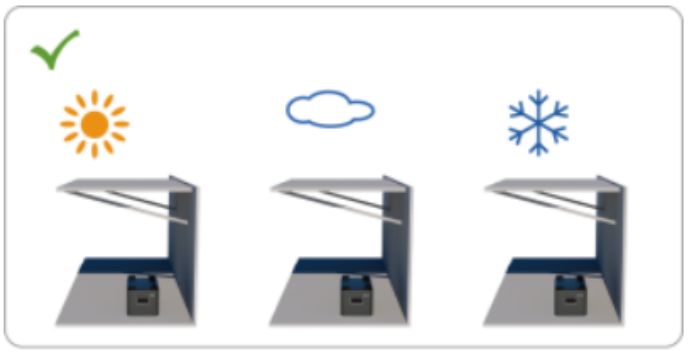
5.1.2 Check the unit

After unpacking the unit, inspect it to confirm it is intact, complete and free from obvious damage. If any item is missing or damaged, contact your dealer or supplier.

5.1.3 Check the installation environment and position

1. This user manual only describes the cable connection methods and assembly steps for the MAU8000;
2. Ensure that the MAU8000 is within the WiFi coverage area;
3. Do not place the equipment near open flames or explosives, to prevent accidents such as equipment malfunction, fire or even explosion caused by high temperature or surrounding hazardous materials;
4. The equipment must be installed vertically, and shall not be tilted forward, backward, sideways or placed upside down; minor installation deviation is allowed subject to the site ground conditions; it is recommended that the total deviation of the whole machine relative to the vertical direction be $\leqslant 3°$, and the lateral tilt be $\leqslant 2°$ as far as possible, which shall be achieved by leveling with bottom gaskets, and it is strictly forbidden to use it directly along with the ground tilt without leveling.

5. The equipment shall be installed in a well-ventilated location;
6. Operating ambient temperature of the equipment: -20 °C to 55 °C; relative humidity: ⩽ 90 % (no condensation);
7. Equipment installation shall be protected from direct sunlight, rain and snow intrusion;ensure that the selected installation location is free of potential risks such as floods, so as to prevent the equipment from being damaged by water immersion.





8. At least 20 mm of clearance shall be reserved on the top and at the back of the equipment, and there shall be no other equipment or obstacles around it to meet the requirements of heat dissipation and safety isolation.
9. Prevent the equipment from being subjected to electromagnetic interference, so as to avoid affecting the normal operation of its electronic components.
10. Solid brick-concrete structures, concrete walls or floors are preferred as the mounting bearing surface; if other materials such as drywall or wood are used, they must be flame-retardant and meet the load-bearing requirements of the equipment, so as to prevent equipment damage or falling risks caused by insufficient load-bearing capacity.
11. An AC power socket shall be provided near the installation site to serve as an interface for connecting the AC power generated by the microinverter to the power grid.
12. The maximum operating altitude of the equipment is 2000 meters.

5.2 Installations steps

5.2.1 Grounding wire connection

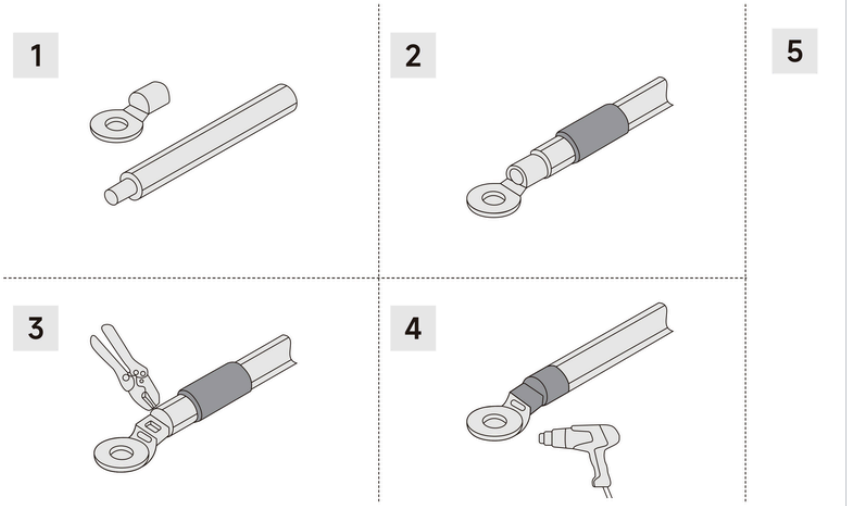
***Note:**

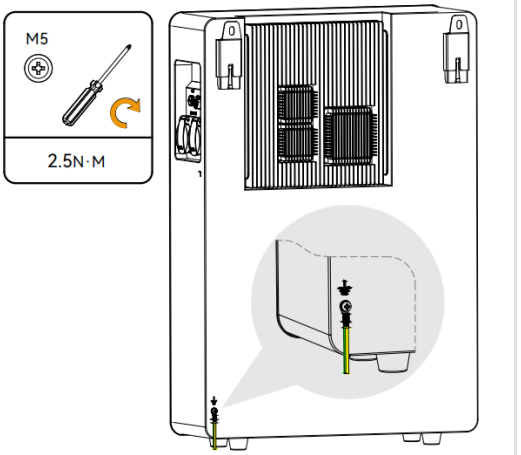
Verify the total length of the ground cable in advance. Reserve sufficient cable slack to reach the grounding point to prevent insufficient-length issues.

Then connect the ground wire with the following steps:

1. Strip the insulation layer of the GND cable.
2. Insert a heat shrink tubing and a ring terminal into the GND cable.

3. Crimp the ring terminal onto the GND cable using a crimper.
4. Wrap the wire crimping area with the heat shrink tubing using a heat gun.
5. Loosen the pre-installed screw and use it to secure the GND cable.



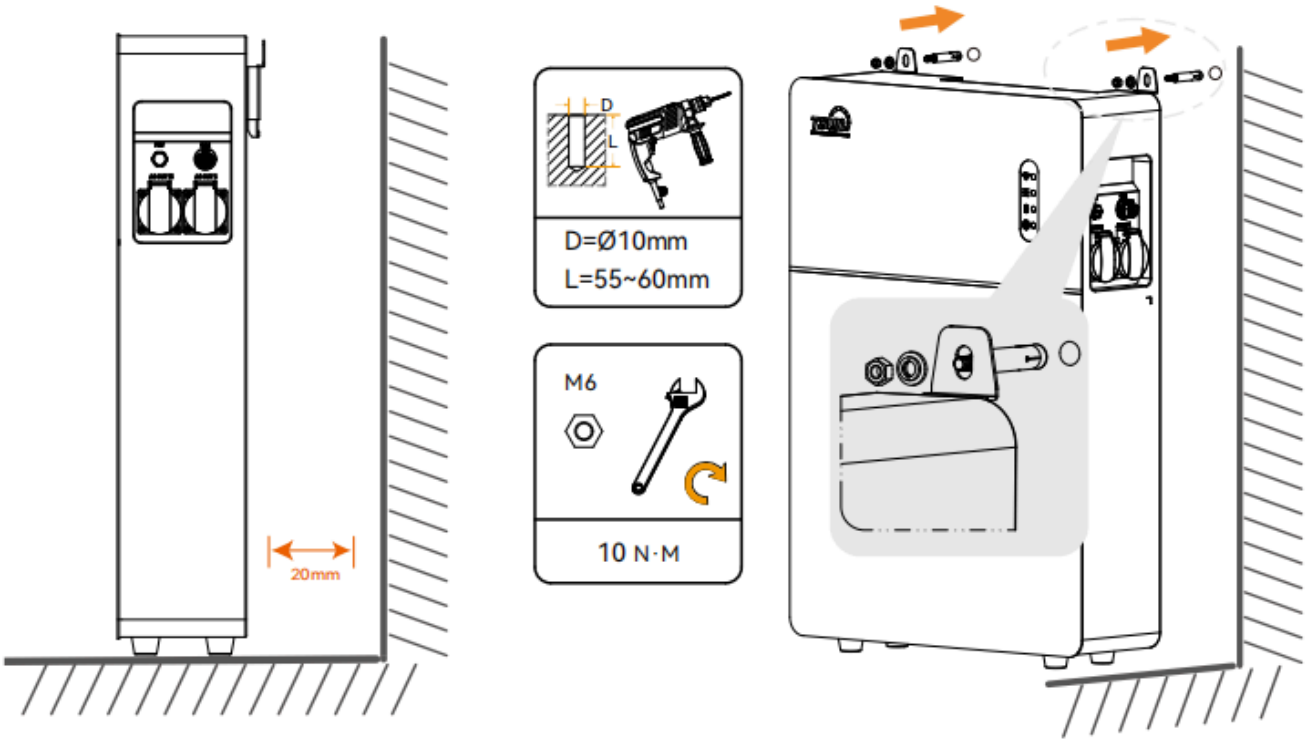


Caution:

- Make sure the selected location has a strong and stable WiFi connection.

5.2.2 Placing the MAU5000

1. Set the MAU5000 directly on the ground, leaving a clearance of approx. 20 mm from the wall.
2. Press the device against the wall to mark the drilling spots.
3. Drill holes, insert wall anchors, screw the brackets to the wall, then secure the device.

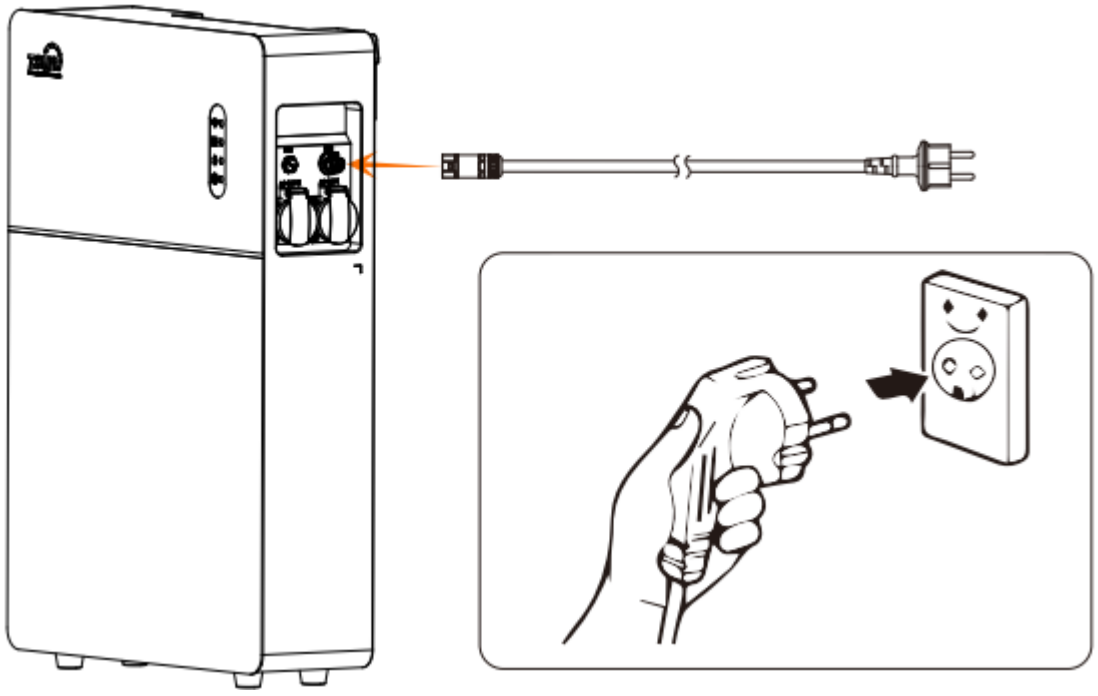


⚠	**Caution:** • Make sure the selected location has a strong and stable WiFi connection.

5.2.3 Electrical Connections

1. Connect the AC Grid port to the home socket using the AC end cable.

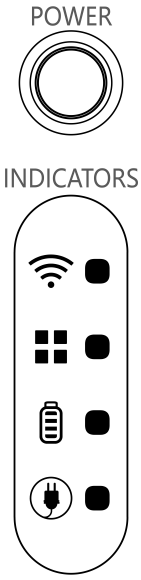
After the wiring is completed, the indicator lights on the MAU5000 unit and the inverter turn on. Press the power button once to start the MAU5000.



2. Connect external load to the AC Load port if needed.

5.2.4 Introduction of Button & Indicators

The operation method of the buttons and the definition of the indicator light are as follows:

Buttons/Indicators			Status	Function
		Power button	Power ON	Turn on the device and activate the battery
			Power OFF	Turn off the device and disconnect the battery
		Wi-Fi Status Indicator	Steady ON	Network configured, connected to server
			Slow Flash (1.0s cycle)	Network configured, disconnected from server
			Fast Flash (0.5s cycle)	Network pairing / Device power-on, attempting pairing; auto-off after 1 minute
			OFF	Wi-Fi disconnected, no network access
		System Operation Indicator(Green LED)	Steady ON	Device powered on, grid-tied operation
			Slow Flash (1.0s cycle)	Device powered on, grid-tied standby or off-grid standby
			Fast Flash (0.5s cycle)	Device powered on, off-grid operation
			OFF	Device powered off or BMS communication fault
		Charge & Discharge Indicator(Green LED)	Steady ON	Battery charging, SOC ⩾ 95%
			Slow Flash (1.0s cycle)	Battery charging
			Fast Flash (0.5s cycle)	Battery discharging
			OFF	SOC ⩽ 10%
		System Fault Indicator(Green LED)	Steady ON	System normal, no alarms
			Slow Flash (1.0s cycle)	System normal with alarms (no impact on normal operation)
			OFF	Persistent system fault exists

5.2.5 Power off the MAU5000

1. Disconnect the AC end cable from the socket.
2. Press the Power button once to turn off output of AC load.

6. Smart Meter Installation

The installation of the meter needs to be done by a professional. Please refer to the meter QIG or user manual for detailed steps.

SMeter-RS07-Product Specification.pdf

7. APP Quick Use Guide

7.1 Download the APP

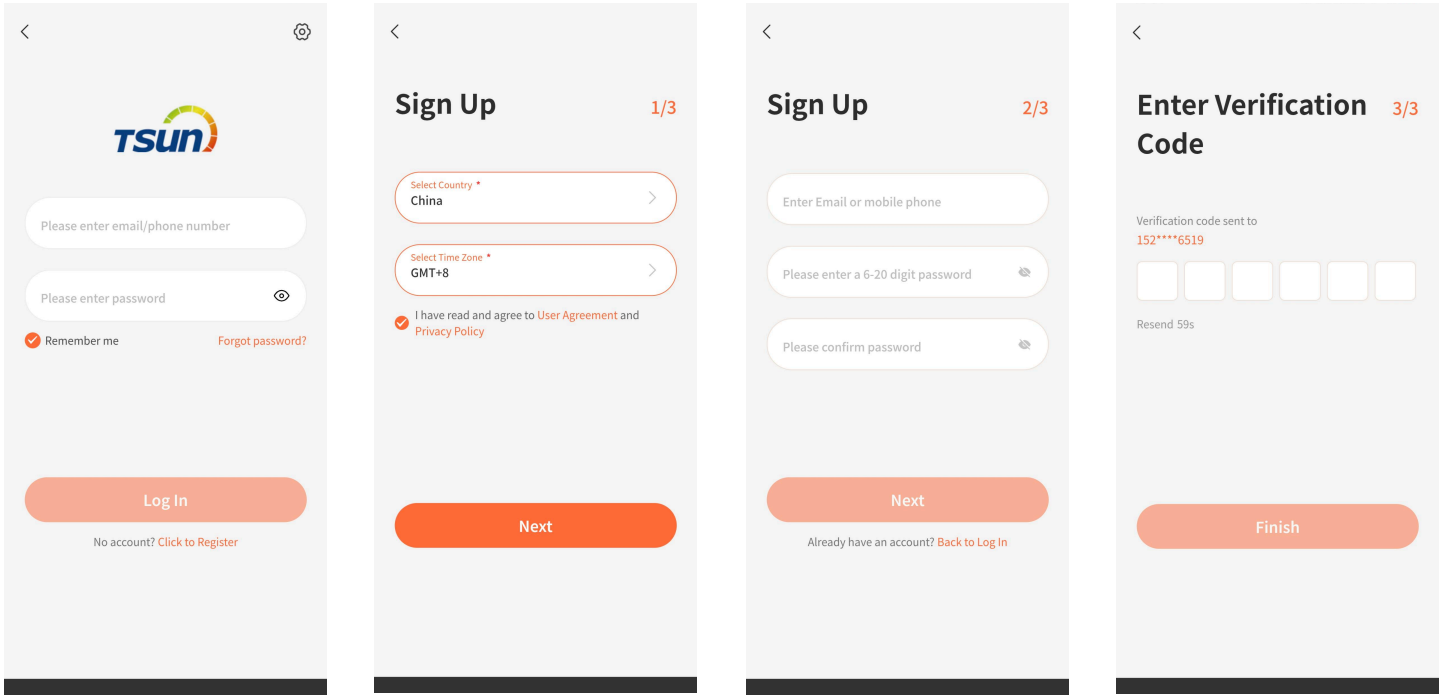
Download "EasyWatt" and install it on your smart phone.

Before performing this operation, please complete the installation of the MAU5000.

7.2 APP Basic setting

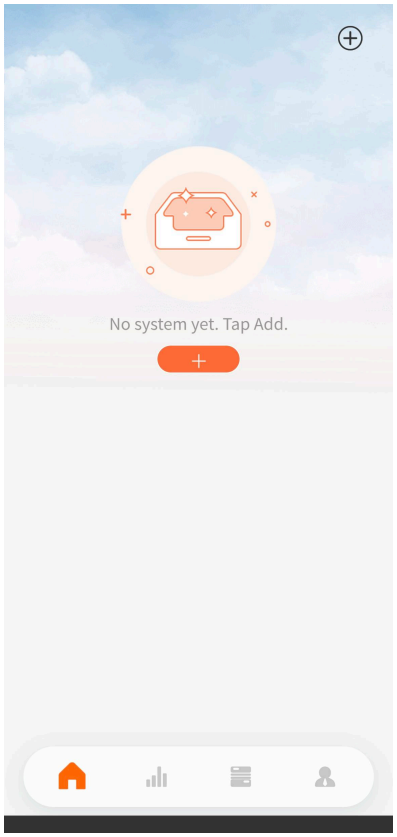
7.2.1 Account registration

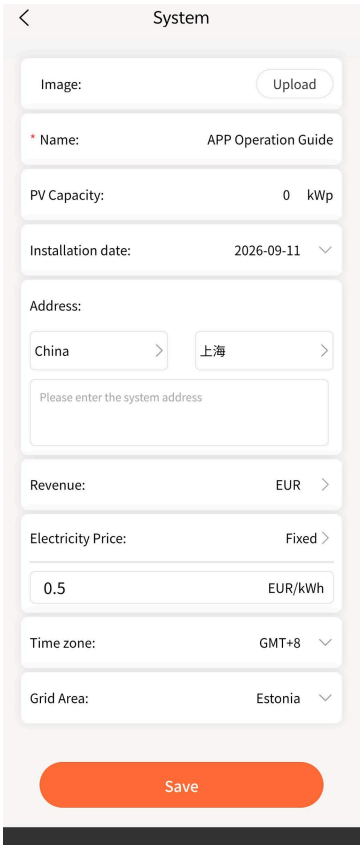
1. Tap `Click to Register` to create your account
2. Fill in all details and tap `Next`
3. Enter verification code and tap `Finish`



7.2.2 Plant creation

1. Tap `+` to create a plant
2. Fill in all required fields of **System** page and tap `Save` button

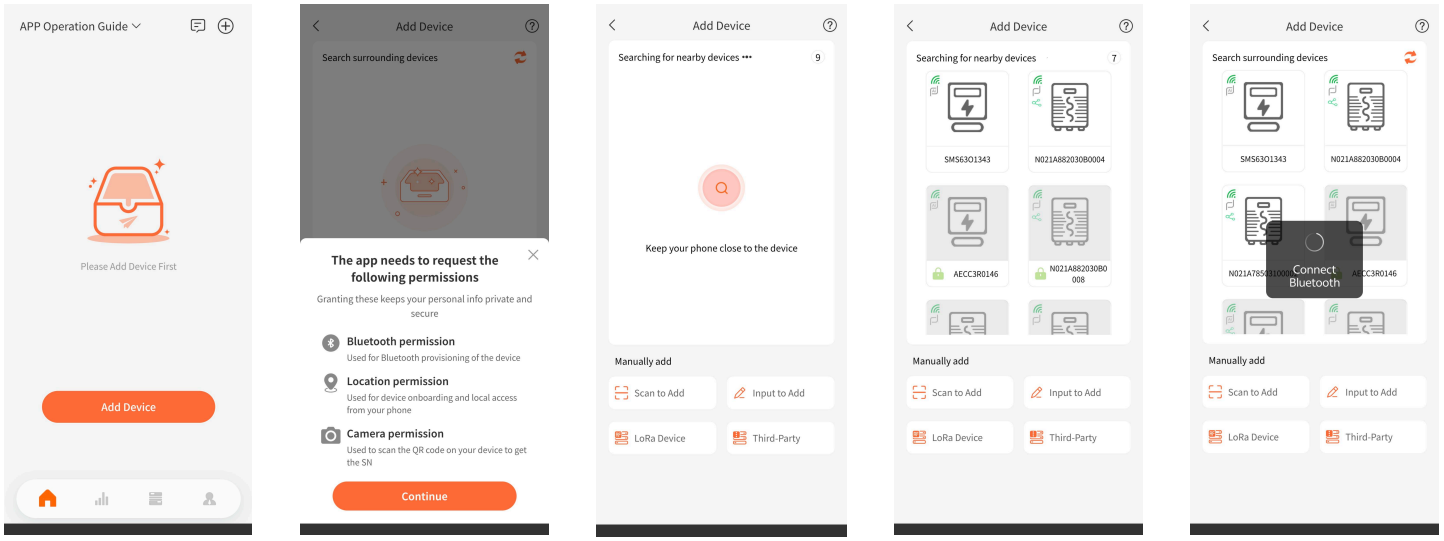




7.2.3 Add device

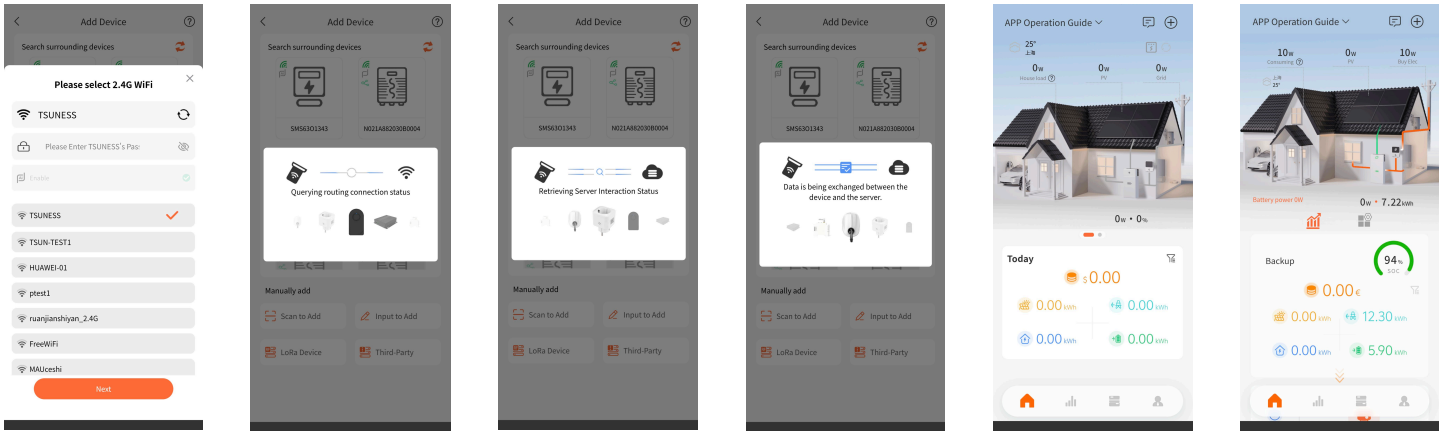
1. Tap `Add Device` on the homepage.
2. Tap `Continue`

3. Select the corresponding device to the SN on the nameplate.



7.2.4 Configure Wi-Fi Network

1. Select Wi-Fi (2.4GHz) and enter the password.
2. Once the device is added successfully, the screen will show `Add successfully`.
3. Follow the same steps above to add electricity meters and smart sockets.
4. After configuration completed, please wait patiently for a moment, then tap the `Quick refresh icon` in the upper-right corner of the homepage to update homepage data.



Before installing the smart meter, please check the WiFi signal first. If the signal is weak, it is recommended to purchase a repeater and set the route and repeater in the 2.4-GHz band.

How to set the repeater, here we take FRITZ! Repeater as an example:

Enable the 2.4-GHz band in the FRITZ!Box user interface (http://fritz.box) under “Wi-Fi / Wi-Fi Network”.Enter the website printed on the product, enter your username and password（also printed on the product）, and switch the FRITZ! repeater to the 2.4-GHz band.

During the network configuration process, please only use the 2.4GHz network. If the page displays an error, check the following possible causes and try again:

1. Check if the WIFI password is correct or not, and make sure WIFI names no special characters, only numbers and English letters are acceptable .
2. Check if WiFi and router work only in 2.4GHz , the device cannot connect to the 5G network.
3. WiFi signal strength should be at least 2 bars shown on your phone for 2.4GHz band.
4. One router can only connect to up to 9 devices (not only SolarTrunk, but also phones, PCs, etc.). Please check if the connected device already exceeds 9.
5. Make sure that your phone's WLAN is turned on.
6. Try shortening the distance between the phone and the device.

After approximately 10 seconds, the WiFi configuration will be completed successfully, and the data of PowerTrunk will be uploaded to the server in about 5-10 minutes.

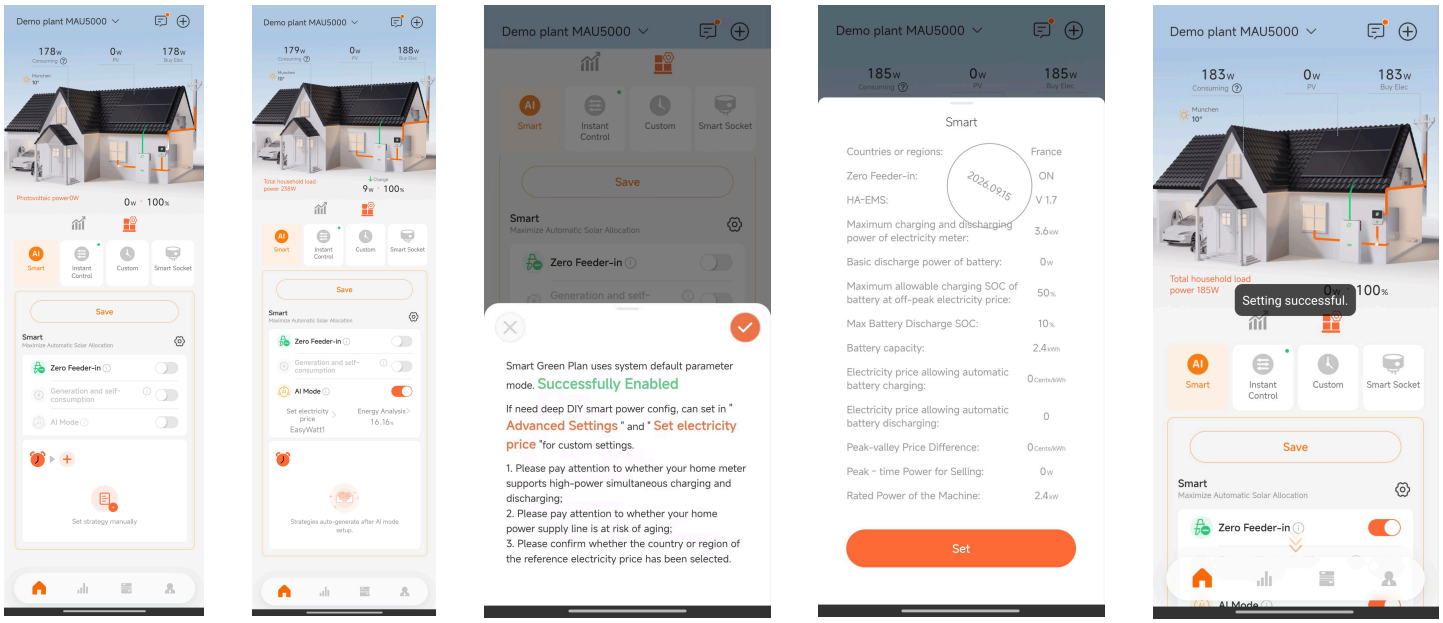
7.3 Work mode

7.3.1 Smart Mode

*Note: Before using this mode, please add the smart meter first.

Smart Mode intelligently analyzes users' power consumption patterns and dynamic electricity prices. It automatically optimizes the plant's energy strategy to maximize PV generation and cut electricity bills substantially.

1. On the APP homepage, tap the icon to enter mode selection. Tap the toggle switch to enable Smart Mode. A prompt will pop up. After reading the prompt, tap `√` to enter Smart Mode.
2. Once Smart Mode is enabled, the system displays the entry points for `Set Electricity Price` and `Energy Consumption Analysis` .
3. `Set Electricity Price` : Allows users to flexibly configure electricity price information according to their actual usage scenarios.
4. `Energy Consumption Analysis` : Shows data such as achievable benefits and savings rate after enabling Smart Mode (Savings rate = Benefits / Costs incurred when Smart Mode is disabled).
5. After finishing the settings in `Set Electricity Price` , tap the `Save` button. The system will pop up detailed information related to Smart Mode settings. Confirm that all information is correct, then tap the `Set` button. The system automatically delivers the corresponding configuration parameters.
6. After successful setup, the system automatically deploys a charge and discharge strategy tailored to the user's consumption habits. It continuously learns user habits and iteratively optimizes the charge and discharge strategy.



7.3.1.1 Zero Feeder-in

1. When `Zero Feeder-in` is enabled:

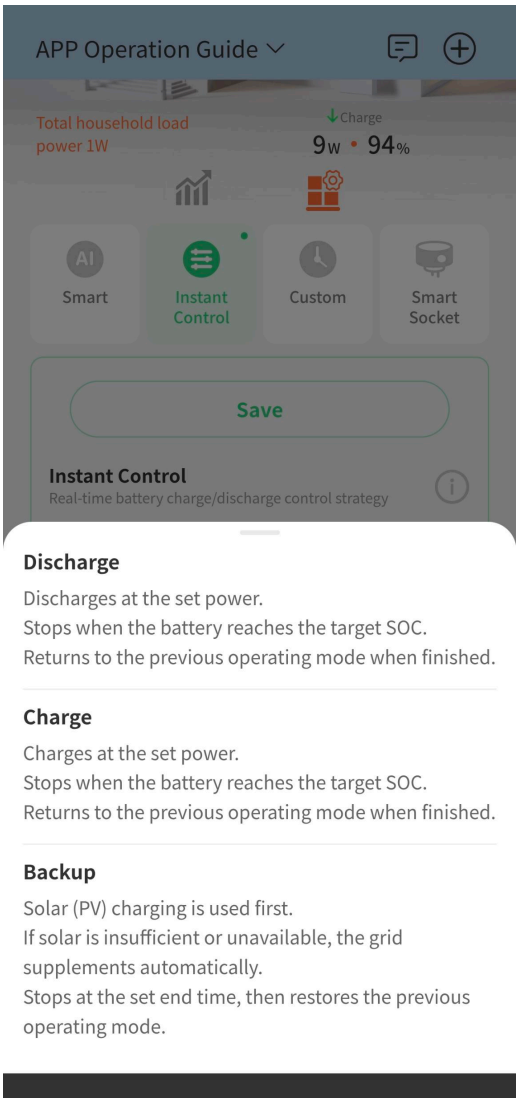
Power export to the grid is prohibited. No revenue can be obtained from grid feed-in. This function can be used together with `Smart Mode`.

2. When `Zero Feeder-in` is disabled: Power export to the grid is permitted. Revenue from grid feed-in is available. This function can be used together with `Smart Mode`.
3. Once all configurations are finished, tap the `Save` button.

7.3.2 Instant Control Mode

The **Instant Control** function allows users to manually intervene in battery charging and discharging behaviour to meet temporary or special power consumption requirements.

1. **Discharge Mode**: Discharge at the set power. Discharging stops when the battery reaches the target State of Charge (SOC). The system automatically reverts to the original operating mode upon completion.
2. **Charge Mode**: Charge at the set power. Charging stops when the battery reaches the target State of Charge (SOC). The system automatically reverts to the original operating mode upon completion.
3. **Backup Mode**: Prioritise charging via solar (PV) power. If solar power is insufficient or unavailable, the grid will automatically supplement power. Charging stops after the set duration, and the system returns to its original operating mode.

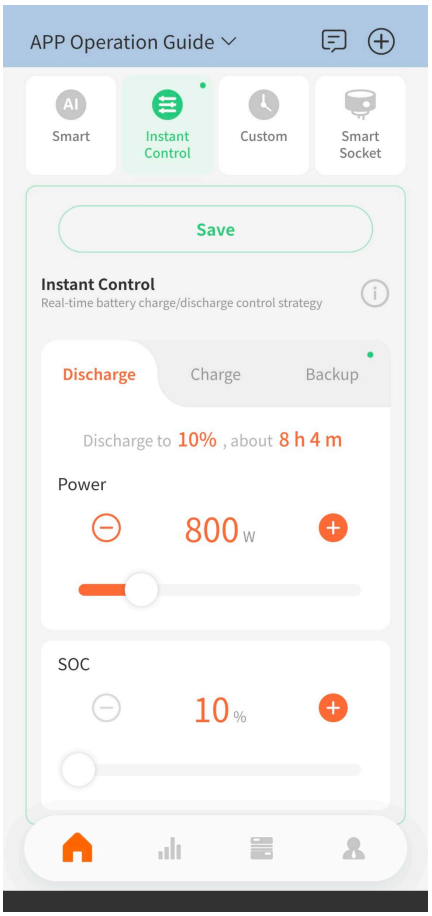


7.3.2.1 Discharge Mode

Function description: Force the energy storage battery to supply power externally and release stored electricity to household loads.

Application scenarios: Select this mode during grid electricity price peak periods, or when battery capacity needs to be emptied in anticipation of sufficient PV generation the next day.

> Interface reference example: Current Power: 800 W Current State of Charge (SOC): 10% Estimated remaining time: Approx. 8 h 4 m to discharge to 10%
>
> *Note: The estimated time displayed on the interface is calculated by the system based on the current power and battery status. Actual duration may fluctuate with load changes.

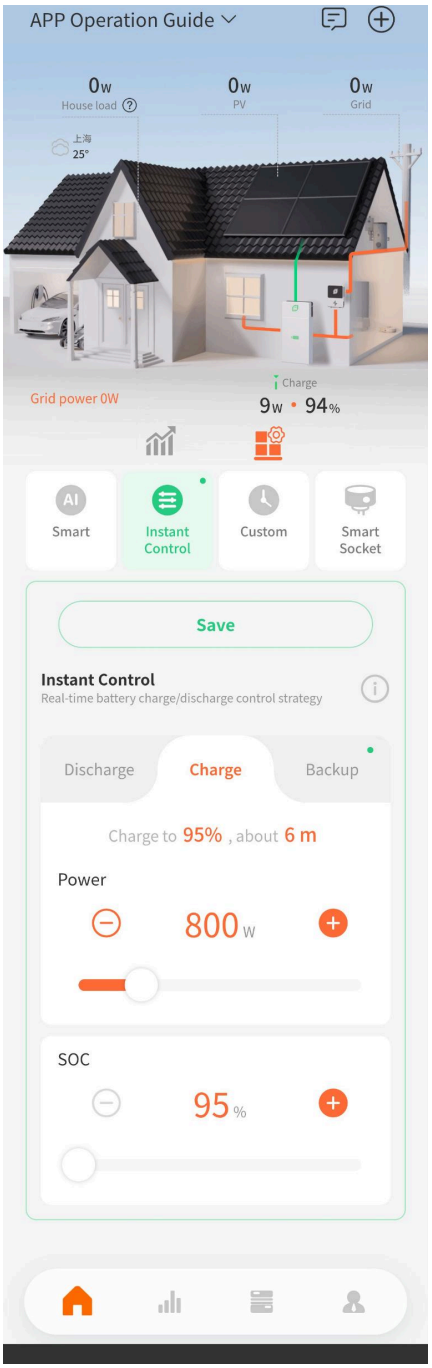


7.3.2.2 Charge Mode

Function description: Force the energy storage battery to charge from the grid or PV system to increase the battery energy reserve.

Application scenarios: Select this mode to store power in advance if rainy weather (insufficient PV generation) is expected the next day, or during grid electricity price off-peak periods.

> Interface information: Current Power: 800 W Current State of Charge (SOC): 95% Estimated remaining time: Approx. 6 m to charge to 95%
>
> *Note: The target SOC for charging and the estimated completion time are dynamically calculated by the system based on the current power and battery status, for reference only.

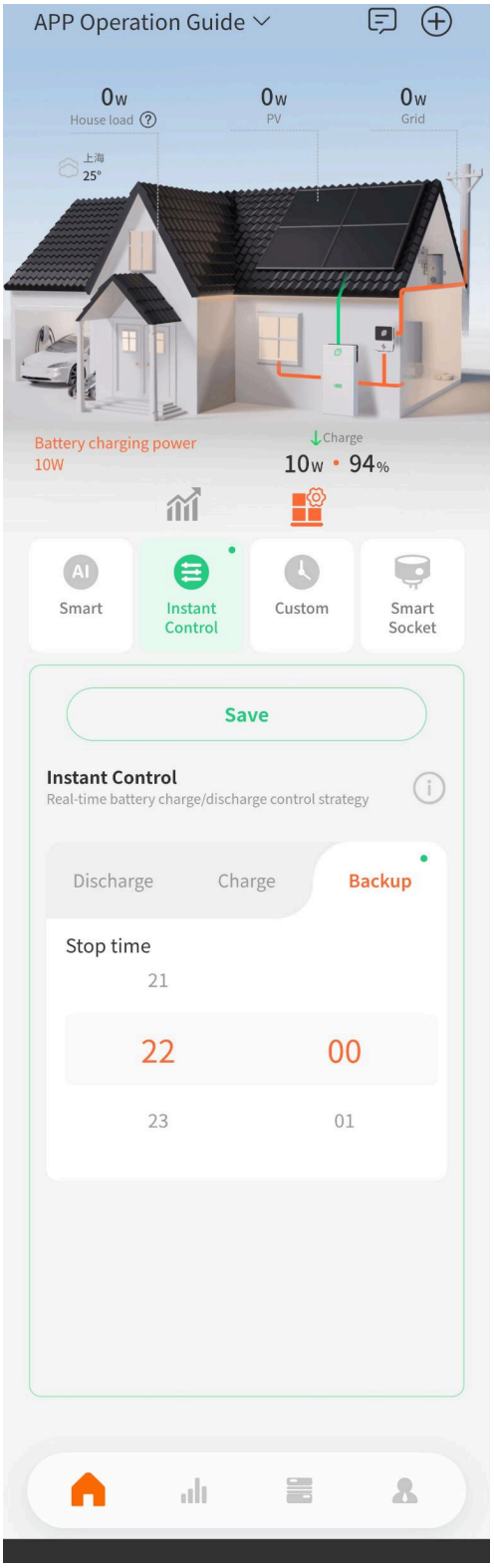


7.3.2.3 Backup Mode

Function description: Keep the battery in standby status to prioritise emergency power demand. The battery will not actively charge or discharge unless necessary.

Application scenarios: Select this mode when a grid outage is anticipated, or when battery reserve needs to be maintained for unexpected power events.

Unique setting item: In this mode, an `Stop time` can be configured. The system will automatically exit Backup Mode and resume normal operation at the specified time. Users set the target end time via the time wheel picker (e.g. set to 22:00 on the same day).



Once all configurations are finished, tap the `Save` button.

7.3.3 Custom Mode

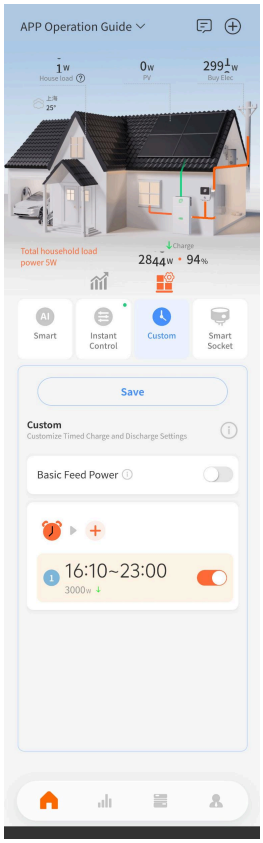
After entering the page, first confirm the setting value of **Basic Feed Power**. This parameter is used to meet basic power demands such as home appliance standby power. In feed mode, the total actual battery discharge power = Feed Power + Basic Feed Power. (Tap the `!` icon next to the parameter to view detailed description.)

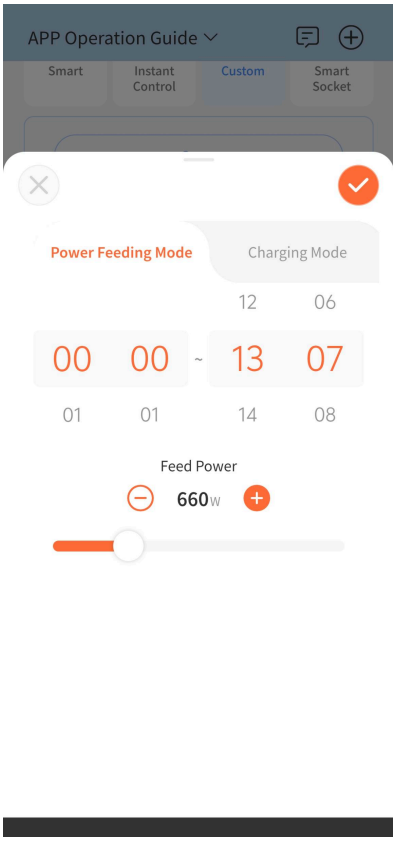
Then users can configure the following two modes separately:

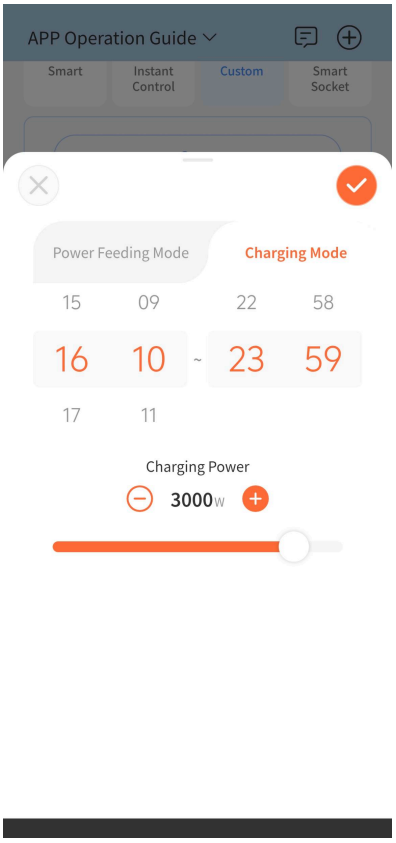
Feed Mode: Tap the `Power Feeding Mode` tab. Use the wheel picker to set the start and end time for battery external discharge, and adjust the discharge power value.

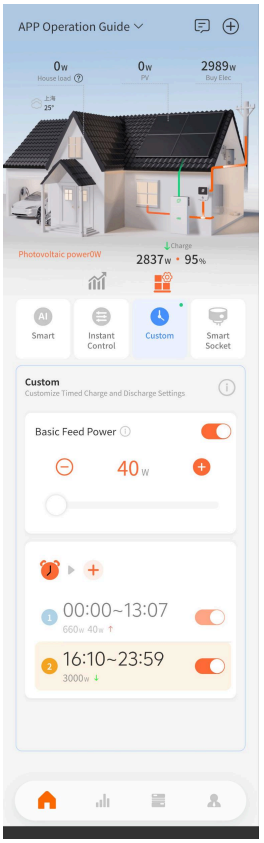
Charge Mode: Tap the `Charging Mode` tab. Use the wheel picker to set the start and end time for battery charging from the grid or PV system, and adjust the charge power value.

The time periods and power values of the two modes can be configured independently. After completing configuration, tap the green `Save` button at the top right of the page to activate the settings.









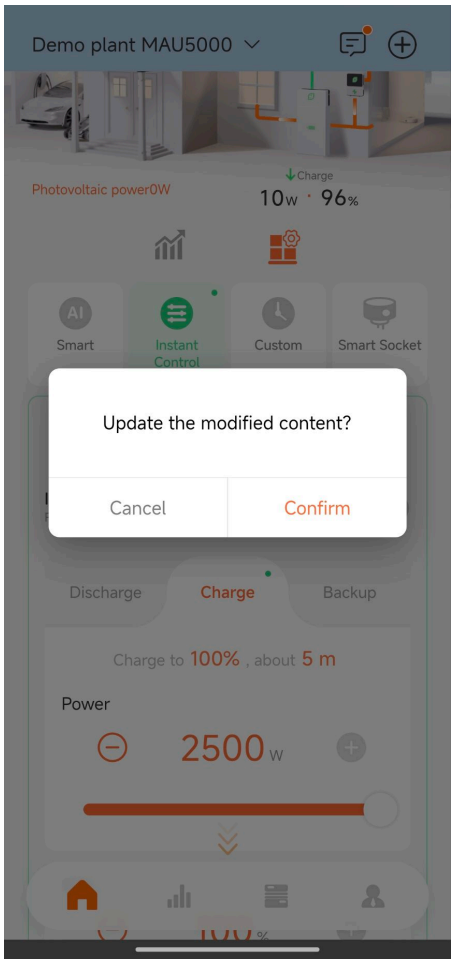
7.3.4 Smart Socket Mode

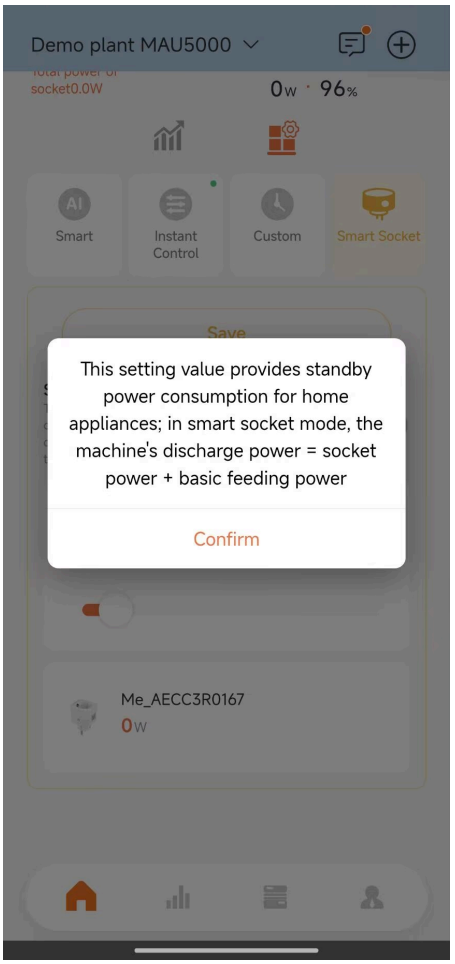
*Note: Before using this mode, please add the smart socket first.

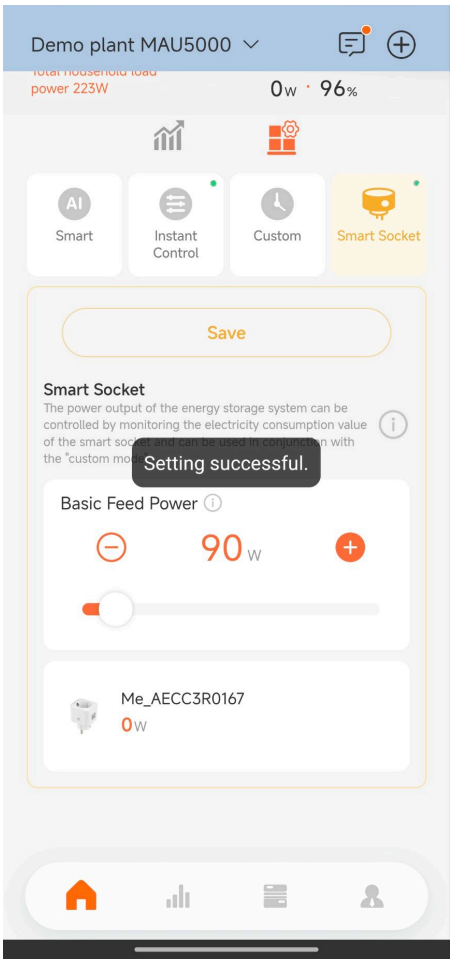
It dynamically controls the power output of the energy storage system by monitoring the power consumption value of devices connected to the smart socket. When the device on the smart socket starts running, the energy storage system will automatically increase the corresponding power output to match the load demand; after the device is turned off, the output will decrease automatically.

Basic Feed Power can be set on this page to meet basic power demands such as home appliance standby power. Connected smart socket devices are displayed in the device list, with their power consumption values updated in real time. This function can be used together with **Custom Mode**. When used in combination, the formula for the total discharge power of the energy storage system is: Total Discharge Power = Feed Power + Socket Power + Basic Feed Power

After completing configuration, tap the `Save` button on the page to activate the settings.







8. FAQ

1. Q: Is the balcony storage system complicated to install? Does it require a professional electrician?

A: Our products adopt a plug-and-play design with clear instructions, allowing general users to complete installation easily. Regarding grid-connection requirements in specific countries, we recommend consulting local electricity service providers.

2. Is the system safe, especially in semi-outdoor environments such as balconies?

A： The product is designed with an IP65 waterproof and dustproof rating, capable of withstanding common rain and snow conditions. It features a built-in heating membrane that warms the battery in low-temperature environments, ensuring reliable power availability even under cold conditions.

3. Are the products internationally certified?

A： Yes, we have passed multiple mainstream international certifications, including CE and RoHS, and comply with the UN38.3 transportation standard, ensuring safe and compliant export to global markets.

4. Can the MAU5000 be mounted on the wall?

A：No, the MAU5000 requires floor-standing installation. The mounting brackets on the device are only for anti-tipping purposes when secured to the wall and are not load-bearing.

5. Which electricity meters are compatible with MAU5000 for anti-reverse flow function?

A：It is compatible with various electricity meters including Pulse P1, SMeter-RS07, SMeter-RS06, SMeter-RS09, SMeter-RS02, Shelly Pro EM-50, Shelly 3EM, Shelly Pro 3EM, Poweropti, IOmeter, EcoTracker IR and P1 Meter.

6. Can the MAU5000 be connected in parallel?

A：Yes. Up to 4 units can be connected in parallel for single-phase systems, and up to 6 units for three-phase systems. They support parallel connection via WiFi. You can add devices within the same power station for unified monitoring.

9. Appendix

9.1 Product Maintenance

- During normal operation, check that the environmental and logistic conditions are appropriate. Make sure that the conditions have not changed over time and that the unit is not exposed to adverse weather conditions and has not been covered with foreign bodies.
- DO NOT use the unit if any problems are found and restore the normal conditions after the fault has been corrected.
- The firmware version can be checked by using the monitoring system.
- Avoid temporary repairs. All repairs should be carried out using only genuine spare parts.

9.2 Storage and Disposal

- If the unit is not used immediately or is stored for long periods, check whether it is correctly packed. The unit must be stored in well-ventilated indoor areas that do not have characteristics that might damage the components of the unit.
- For long-term storage, please charge and discharge this product once every 3 months. Products that have not undergone charging and discharging for more than 3 months will not be covered by the warranty.
- If the battery level of this product is critically low and it has been idle for an extended period, it needs to be recharged before it can be used again.

- Take a complete inspection when restarting after a long time or prolonged stop.
- Please dispose of the unit properly after scrapping, as component parts are potentially harmful to the environment, following the regulations in force in the country of installation.
- If conditions permit, make sure that the battery is fully discharged before disposing it in a designated battery recycling bin. The product contains batteries with potentially dangerous chemicals, so it is strictly prohibited to dispose of it in ordinary trash cans. For more details, please follow the local laws and regulations on battery recycling and disposal.
- If the battery cannot be fully discharged due to a product failure, please do not dispose of the battery directly in the battery recycling box. In such case, you should contact a professional battery recycling company for further processing.
- Please dispose of over-discharged batteries that cannot be recharged.

9.3 Warranty Service

This Warranty is subject to the following conditions:

- The products must have been installed and correctly commissioned by an authorized and licensed installer. Proof may be required of correct commissioning of the Product (such as a certificate of compliance). Claims for failures due to incorrect installation or commissioning are not covered under this Warranty.
- Where a Product or part thereof is replaced or repaired under this Warranty, the balance of the original Warranty period will apply. The replacement product or part(s) do not carry a new voluntary warranty.
- The product must have its original serial number and rating labels intact and readable.
- This Warranty does not extend to any product that has been completely or partially disassembled or modified, except where such disassembly is carried out by TSUNESS
- The terms of this Warranty cannot be amended except in writing by one of our authorized officers.
- There must have been a commissioning report signed by the end user and the installer for product commissioning and handling instructions.

9.4 Exclusions

1. TSUNESS makes no warranties, either expressed or implied, orally, or in writing, concerning any other warranty coverage except those expressly stated in this limited Factory warranty.
2. The Factory warranty does not cover damages that occur due to:
    - Transport damage;
    - Failure to observe the user manual, maintenance regulations, and intervals;

- Modifications, changes, or attempted repairs, except as conducted by an Authorized Dealer;
- Incorrect use or inappropriate operation;
- Insufficient ventilation of the covered product;
- Failure to observe the applicable safety regulations;
- Force majeure.

3. This factory warranty does not cover cosmetic defects which do not directly influence energy production, or degrade form, fit, and function.
4. Claims that go beyond the scope of this limited factory warranty, in particular claims for compensation for direct or indirect damages arising from the defective device, for compensation forcosts arising from disassembly and installation, or loss of profits, are expressly NOT covered by this factory warranty.
5. In no event will TSUNESS Co., Ltd be held responsible or liable for any personal injuries resulting from the use of the system, or for any other damages, whether direct, indirect, incidental, orconsequential; even if TSUNESS Co., Ltd has been advised of such damages.

9.5 Datasheet

Model	TSOL-MAU5000	TSOL-MAU5000-M
Battery (DC)		
Battery Capacity (Wh)	5120	5120
Battery Type	$LiFePO_4$	$LiFePO_4$
Nominal Voltage (V)	51.2	51.2
Life Cycle	6000	6000
AC Port (On-grid)		
Max. AC Output Power (W)	800	2500
Max. AC Input Power (W)	2500	2500
Nominal AC Voltage (V)	220/230/240, L/N/PE	220/230/240, L/N/PE
Nominal AC Frequency (Hz)	50/60	50/60
AC Port (Off-grid)		

Max. AC Output Power (W)	2500	2500
Nominal AC Voltage	220/230/240, L/N/PE	220/230/240, L/N/PE
Nominal AC Frequency (Hz)	50/60	50/60
Switch Time (ms)	10	10
General Data		
Dimensions (W×H×D mm)	484 × 707 × 168	484 × 707 × 168
Weight (kg)	52	52
Communication	WiFi (Bluetooth) + RS485	WiFi (Bluetooth) + RS485
Ingress Protection	IP65	IP65
Cooling Method	Natural Convection	Natural Convection
Operating Temperature Range	-20 ~ 55°C	-20 ~ 55°C
Relative Humidity	0 ~ 95%, Non condensing	0 ~ 95%, Non condensing
Max. Operating Altitude（m）	2000	2000
Protection Class	I	I