

Home Energy Management System

EzManager3000

User Manual

GOODWE

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Note

Due to product version upgrades or other reasons, the document content may be updated from time to time. Unless otherwise agreed, the document content cannot replace the safety precautions on the product label. All descriptions in the document are for guidance only.

About This Manual

Over view

This document primarily introduces product information, installation wiring, configuration and commissioning, fault troubleshooting, and maintenance of the home energy management device. Before installing and using the product, read this manual carefully to understand the product safety information and become familiar with its functions and features. The document may be updated from time to time; please obtain the latest version and more product information from the official website.

Applicable Products

This document applies to the home energy management device model EzManager3000, abbreviated as EzManager.

Symbol Definition

 Danger
Indicates a highly potential hazard that, if not avoided, will result in death or serious injury.
 Warning
Indicates a moderately potential hazard which, if not avoided, could result in death or serious injury.
 Caution
Indicates a low-level potential hazard that could result in moderate or minor injury if not avoided.
Notice
Highlighting and supplementing the content may also provide product optimization tips or tricks, helping you solve a problem or save time.

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1 Safety Precautions

The safety precautions information contained in this document must always be observed when operating the equipment.

Warning

The equipment has been strictly designed in accordance with safety regulations and passed tests. However, as electrical equipment, relevant safety instructions must be followed before any operation. Improper operation may result in serious injury or property damage.

1.1 General Safety

Notice

- Due to product version upgrades or other reasons, the document content may be updated periodically. Unless otherwise agreed, the document content cannot replace the safety precautions on the product label. All descriptions in the document are for guidance only.
- Please read this document carefully before installing the equipment to understand the product and precautions.
- All equipment operations must be performed by professional and qualified electrical technicians who are familiar with the relevant standards and safety regulations of the project location.
- When operating equipment, use insulated tools and wear personal protective equipment to ensure personal safety. When contacting electronic components, wear anti-static gloves, anti-static wrist strap, anti-static clothing, etc., for Protection of equipment from electrostatic damage.
- Unauthorized disassembly or modification may cause equipment damage, which is not covered under warranty.
- Damage or personal injury caused by installation, use, or configuration of the equipment not in accordance with the requirements of this document or the corresponding user manual is beyond the manufacturer's liability. For more product warranty information, please visit the official website:
<https://en.goodwe.com/warranty>.

1.2 Personnel Requirements

Notice

- Personnel responsible for installation and maintenance of equipment must under go rigorous training first, under stand various safety precautions, and master correct operating methods.
- Installation, operation, maintenance, and replacement of equipment or components shall only be carried out by qualified professionals or trained personnel.

1.3 Personal Safety

Danger

- When operating equipment, use insulated tools and wear personal protective equipment to ensure personal safety.
- In case of short circuit, do not approach or touch the equipment. Turn off the power supply immediately.
- Before making electrical connections to the equipment, disconnect all upstream switches to ensure the equipment is de-energized.

1.4 Equipment Safety

Danger

Before installing the equipment, ensure that the installation location is reliable and stable.

Warning

- When performing installation, maintenance, or other operations on the equipment, please use appropriate tools and operate correctly.
- When operating equipment, relevant local standards and safety specifications shall be complied with.
- Unauthorized disassembly or modification may cause equipment damage, which is not covered under warranty.

1.5 Safety Symbols and Certification Markings

Danger

- After equipment installation, labels and warning signs on the enclosure must be clearly visible and shall not be covered, altered, or damaged.
- The following warning label description on the box is for reference only. The actual label on the equipment shall prevail.

Number	Symbol	Meaning
1		There are potential hazards when the device is running. Please take protective measures when operating the device.
2		Danger: High Voltage. High voltage is present during equipment operation. Before performing any operations on the equipment, ensure that the equipment is powered off.
3		Read the product manual carefully before operating the device.
4		The device should not be treated as household waste. Please dispose of it in accordance with local laws and regulations, or return it to the device manufacturer.
5		CE certification mark.

1.6 EU Declaration of Conformity

1.6.1 Equipment with wireless communication function

Equipment with wireless communication functions that can be sold in the European market meets the following directive requirements:

- Radio Equipment Directive 2014/53/EU (RED)
- Restrictions of Hazardous Substances Directive 2011/65/EU and (EU) 2015/863 (RoHS)
- Waste Electrical and Electronic Equipment 2012/19/EU
- Registration, Evaluation, Authorization and Restriction of Chemicals (EC) No

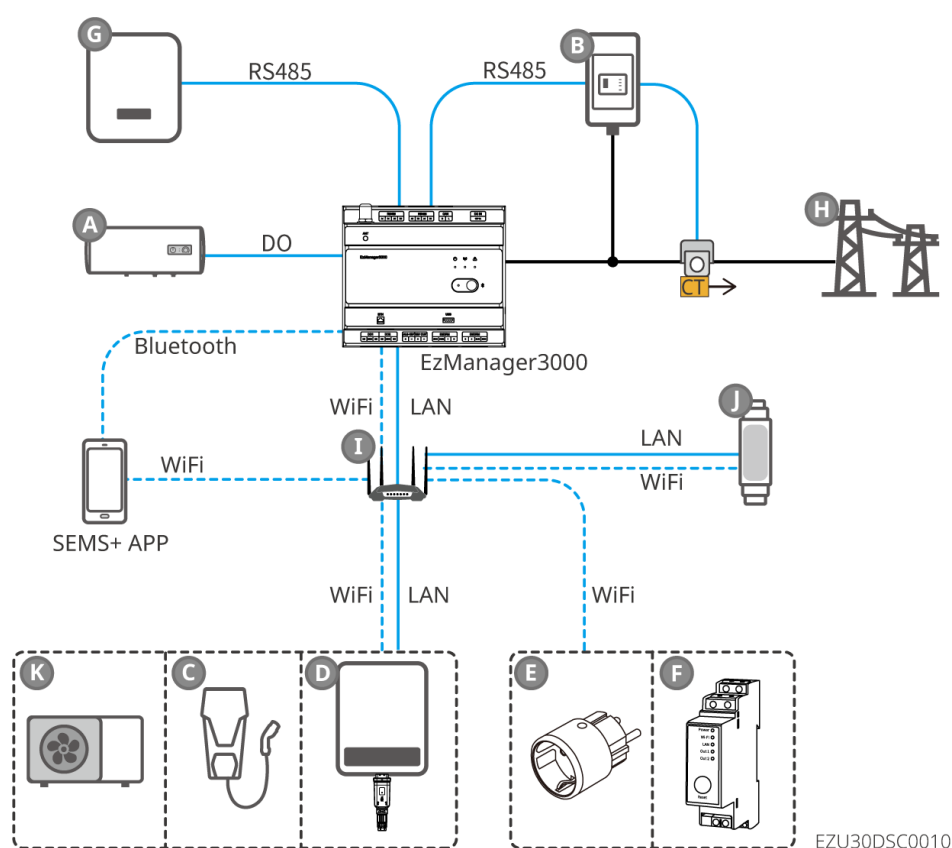
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2 System Introduction

2.1 Function Description

EzManager is a home energy management device that supports unified scheduling management of home energy. It supports station-level power control functions such as AI Mode, Self-consumption, and On-Grid Power Control, enabling station-level energy optimization.

- Connect smart meters, grid-tied inverters, etc. via RS485.
- Connect SG Ready heat pump via DO, supporting maximum of 1 heat pump.
- Connect to the router via WiFi/LAN, and connect devices such as energy storage inverters, AC charger, smart sockets, GoodHeat, etc. to the router via WiFi/LAN. Supports up to 12 smart devices. To ensure communication stability, LAN is recommended.
- Supports simultaneous connection of two charging pile devices.
- Supports hybrid connection of grid-tied inverters and energy storage inverters. The number of hybrid connections supported is subject to the actual model.
- For supported inverter models and quantities, please refer to [Inverter and IoT Device Compatibility List](#).
- If a third-party grid-connected inverter is used in the system, the data from the third-party inverter cannot be collected by EzManager, which may affect EMS scheduling. Please use with caution.



- | | | | |
|------------------------|------------------|------------------------|-----------------------------|
| (A) SG Ready heat pump | (B) Smart Meter | (C) AC Charger | (D) Energy Storage Inverter |
| (E) Smart Socket | (F) Smart Switch | (G) Grid-tied inverter | (H) Utility grid |
| (I) Router | (J) Smart Relay | (K) GoodHeat Pump | |

2.2 Model Description

This article mainly covers the following product models:

EzManager3000

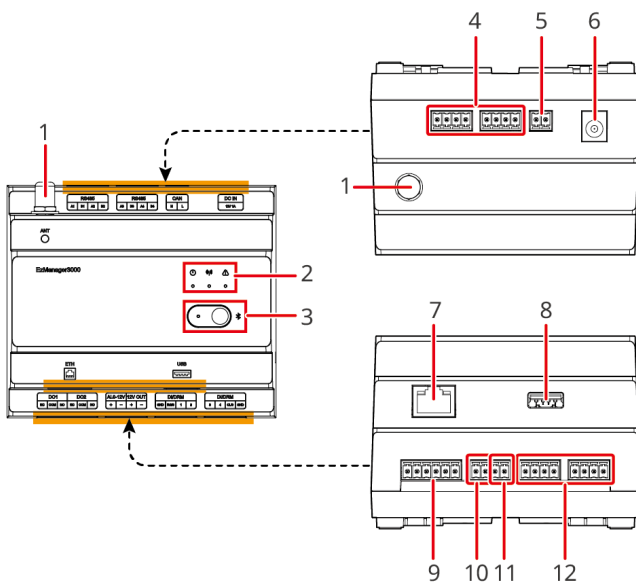
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Num ber	Meaning	Explanation
1	Product Functions	EzManger: Home Energy Management System
2	Generation Code	3000: Gen 3 product

2.3 Appearance Introduction



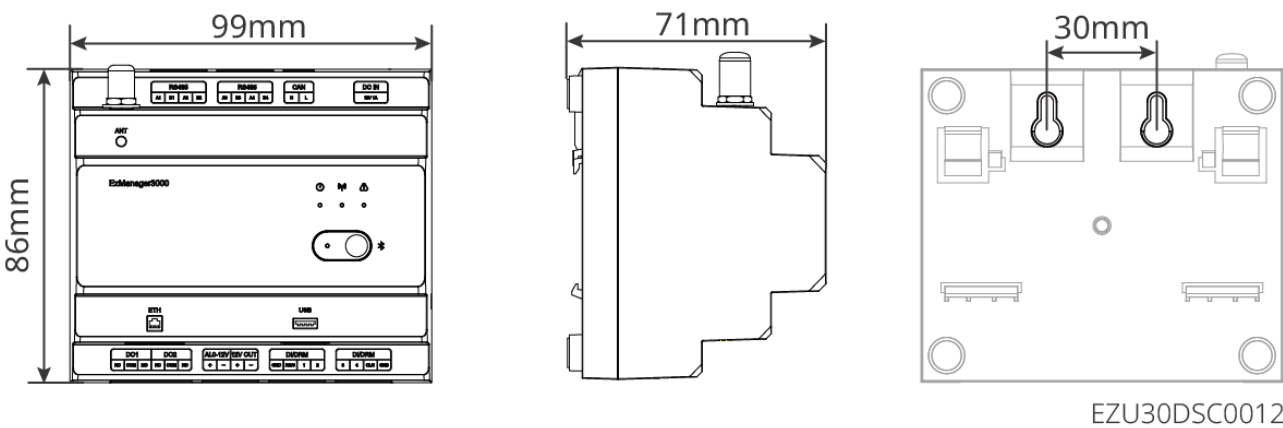
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Number	Name	Description
1	External WiFi Antenna Interface (ANT)	• For WiFi signal boosting. • If the device is installed in a metal enclosure, under a metal roof, or under a concrete roof, it is recommended to use an external suction cup antenna to enhance the signal.
2	LED indicator	Indicate equipment operating status, such as power supply status, communication status, upgrade status, etc.
3	Bluetooth indicator & RST button	• Indicates the Bluetooth status of the device, such as on or off. • Enable Bluetooth, restart the device, reset password, etc. via button.
4	RS485 communication port (RS485)	• Supports connection of smart meters, grid-tied inverters, and other devices via RS485 port. • Supported meters: GM330/GMK330/GMK110/GM3000, etc. • Supported on-grid inverters: SDT G2 series, XS G1 series, DNS G1 series, etc. For more supported models and software version requirements, please refer to Inverter and IoT Device Compatibility List.
5	CAN communication port (CAN)	Reserved port.
6	DC Power Input Port (DC IN)	12V DC power input connection port, used for powering the device.

Number	Name	Description
7	Ethernet port (ETH)	- Ethernet cable port, which can be used to connect a router. Devices such as inverters, charging piles, and GoodHeat heat pump smart devices can be connected to EzManager via the router. - Connectable smart socket: Shelly Plus Plug S, with software version no less than V1.4.4. - Connected smart switch: Shelly PLUS 2PM - Smart relay with connectivity support: Shelly PRO 2PM - Supported connected charger: GoodWe HCA series charger. - Supported connected energy storage inverters: GoodWe ESA series, ET15-30kW series, ES G2 series, ET G2 series, etc. - Supported connected GoodHeat heat pump: tri-generation series. - For more supported models and software version requirements, please refer to Inverter and IoT Device Compatibility List.
8	USB port (USB)	- Connect USB flash drive for updating device software version. - USB flash drive specification requirement: FAT32 for mat.
9	DO communication port (DO1/2)	Connect the SG Ready heat pump.
10	AI signal port (AI.0-12V)	AI analog signal input port, only applicable for achieving one-key shutdown function together with the 12V output port.
11	12V output port (12V OUT)	12V DC output port, only applicable for realizing one-key shutdown function together with AI signal port, or for connecting to SG Ready heat pump together with DO communication port.

Num ber	Name	Description
12	DI communication port (DI)	DI signal input port, supports connection of active contact or passive contact signals, or implements functions such as RCR.

2.4 Dimension



2.5 Indicator Description

Indicator	Indicator status	Description
		Green light steady on: Device power supply normal.
		Green light off: device power off or power supply abnormal.
		Green light steady on: Communication between device and server is normal.
		Green light flashing four times: Device is connected to the router, but the connection to the server is abnormal.

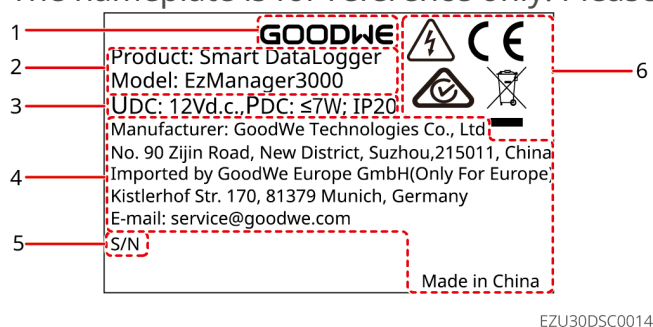
Indicator	Indicator status	Description
		Green light flashes twice: device Not Connected to router.
		Four yellow flashes: EzManager is upgrading.
		Blue LED steady on: Bluetooth is enabled, and an external device is connected to EzManager.
		Blue light slow flashing (500ms on/500ms off): Bluetooth is enabled, waiting for external device connection.
		Blue light fast flashing (50ms on/50ms off): EzManager is resetting the login password when connecting to the SEMS+ App.
		Blue light off: Bluetooth disabled.

Operation button	Function Description
Double-click	Enable Bluetooth.
Short press for 1-3 seconds	Restart EzManager.
Long press for 10-20s	- Reset the login password of EzManager when connecting to SEMS+ App via Bluetooth. Initial password: 1234. - After long pressing, the indicator light flashes quickly. When the  indicator light changes from flashing quickly to flashing slowly, it means the password has been reset.

Operation button	Function Description
Long press for more than 60 seconds	- Factory reset and restart EzManager. - After long pressing, the , , and  indicator lights will light up simultaneously, and the device will start to restart after they turn off. - Only restore configuration files, communication configuration, login password, etc.

2.6 Nameplate description

The nameplate is for reference only. Please refer to the actual product.



Number	Description
1	GoodWe trademark
2	Product Type and Model
3	Technical Parameters
4	Manufacturer, importer, and other information
5	Device Serial Number Information
6	Product Safety Symbols and Certification Marks

3 Check and Storage

3.1 Device Check

Before signing for the product, please carefully check the following:

1. Check the outer packaging for any damage, such as deformation, holes, cracks, or other signs that may indicate damage to the equipment inside the packaging box. If damaged, do not open the package and contact your dealer.
2. Check whether the equipment model is correct. If not, do not open the package and contact your dealer.

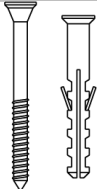
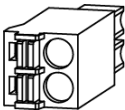
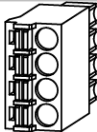
3.2 Deliverables

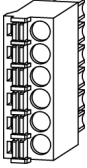
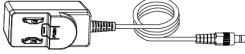
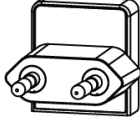
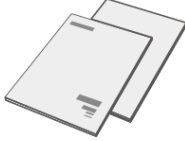
Warning

- Check that the type and quantity of the delivery items are correct, and that the appearance is free from damage. If any damage is found, please contact your dealer.
- After removing the delivery item from the packaging, do not place it on rough, uneven, or sharp surfaces to avoid paint peeling.

Notice

The adapter style is for reference only, and may vary by region. Please refer to the actual product.

Part	Description	Part	Description
	EzManager x1		Expansion bolt x2
	2-pin communication terminal x1		4-pin communication terminal x5

Part	Description	Part	Description
	6-pin communication terminal x1		External antenna x1
	Power Adapter x1		Adapter x1
	Ferrule x28		Document x1

3.3 Storage

If the device is not put into operation immediately, please store it according to the following requirements. After long-term storage, the device must be inspected and confirmed by professional personnel before it can be put back into use.

Time Requirement:

- If the storage time of the device exceeds two years or the idle period after installation exceeds 6 months, it is recommended that the device be inspected and tested by professionals before being put into operation.
- To ensure good electrical performance of the internal electronic components, it is recommended to power on the equipment once every six months during storage. If it has not been powered on for more than six months, it is recommended to have it inspected and tested by qualified personnel before putting into use.

Packaging Requirements:

Ensure that the outer packaging box is not removed.

Environmental Requirements:

- Ensure equipment is stored in a cool place, away from direct sunlight.
- Ensure that the storage environment is clean, the temperature and humidity range is suitable, and free of condensation. If condensation occurs on the equipment port, do not install the equipment.

- Ensure that the device is stored away from flammable, explosive, and corrosive items.

4 Installation

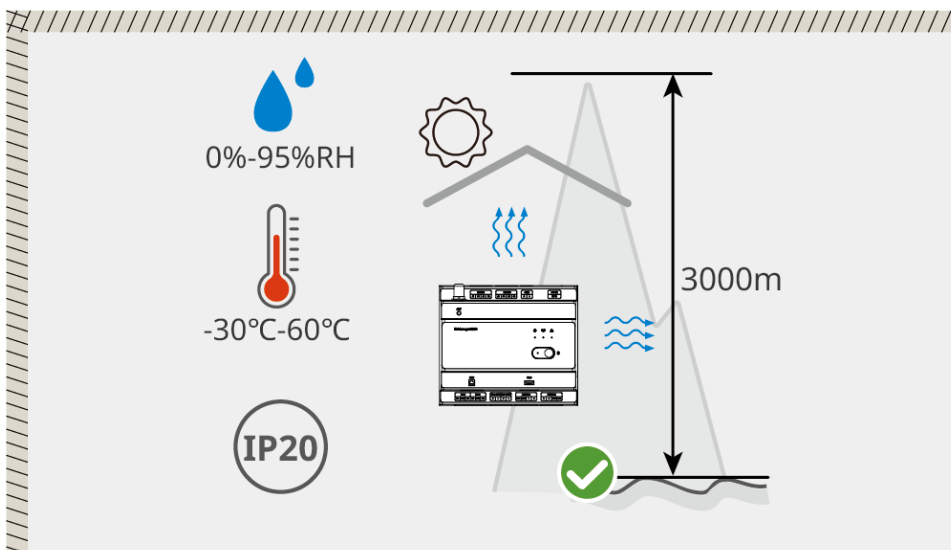
Danger

When performing equipment installation and electrical connection, please use the delivery parts shipped with the unit; otherwise, any damage to the equipment shall not be covered under warranty.

4.1 Installation Requirements

4.1.1 Installation Environment Requirements

1. Equipment must not be installed in flammable, explosive, corrosive, or similar environments.
2. The equipment's Ingress Protection Rating meets indoor installation requirements, and the ambient temperature and humidity during installation must be within the suitable range.
3. The installation location must be kept out of children's accessible range.
4. The installation space must meet the equipment's ventilation and heat dissipation requirements as well as operating space requirements.
5. The equipment installation height shall facilitate operation and maintenance, ensuring that indicator lights and all labels are easy to view, and terminals are easy to operate.
6. Equipment installation altitude is lower than Max. Operating Altitude.
7. Keep away from strong magnetic field environments to avoid electromagnetic interference. If there are radio stations or wireless communication devices below 30MHz near the installation location, ensure that the distance between the equipment and the wireless electromagnetic interference devices exceeds 30m.



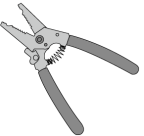
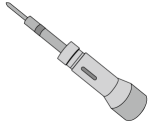
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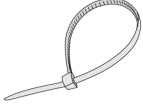
4.1.2 Tool Requirements

Notice

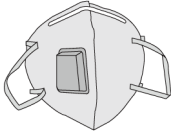
During installation, the following installation tools are recommended. If necessary, other auxiliary tools can be used on site.

Installation Tools

Tool Type	Description	Tool Type	Description
	wire stripper		crimping tool
	Impact drill (Φ6mm drill bit)		Torque wrench M4
	rubber mallet		vacuum cleaner

Tool Type	Description	Tool Type	Description
	Marker pen		spirit level
	cable tie	-	-

Personal Protective Equipment

Tool type	Description	Tool Type	Description
	Insulated gloves and protective gloves		Dust Mask
	safety goggles		Safety shoes

4.1.3 Installation equipment

Warning

- When performing drilling operations, ensure that the drilling location avoids concealed water pipes, electrical cables, etc. within the wall to prevent hazards.
- When drilling, please wear safety goggles and a dust mask to avoid inhaling dust or it entering your eyes.
- Ensure the equipment is securely installed to prevent falling and injuring personnel.

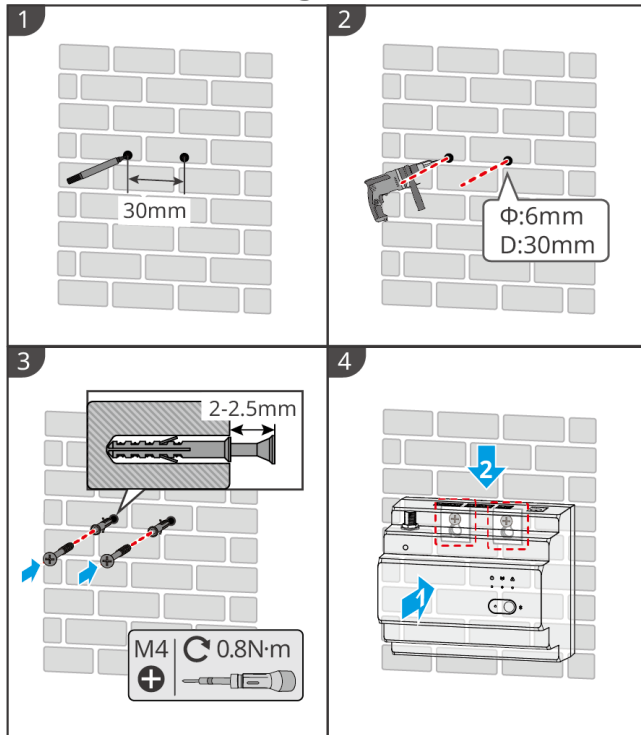
Wall-mounted Installation

Step 1: Place the device horizontally on the wall and mark the drilling positions with a marker pen.

Step 2: Use an impact drill to drill holes. Hole diameter: 6mm, hole depth: 30mm.

Step 3: Install the expansion screws. Leave 2-2.5 mm of screw length for hanging the device.

Step 4: Mount the device onto the expansion screws. Ensure the mounting is secure and free from falling risk.



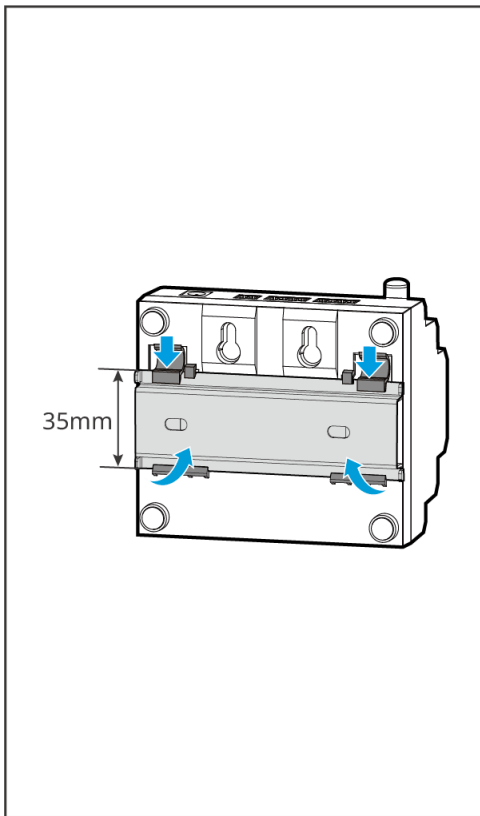
EZU30INT0011

Rail Mounting

Notice

- Please provide your own DIN35mm standard rail.
- When using rail mounting, the rail mounting bracket needs to be installed on the equipment.
- The guide rail must be installed on a firm and stable carrier, such as a wall or a bracket.

Step 1: Snap the device from bottom to top onto the DIN35mm standard rail, ensuring the device is securely installed.



EZU30INT0012

Desktop Installation

The bottom of the equipment features an anti-slip design, supporting desktop installation.

Notice

- Install the equipment on a horizontal desktop to prevent slipping and damage.
- Please place the equipment in a location that is not easily accessible to avoid accidental touch causing signal interruption.

5 System wiring

Danger

- All operations during the electrical connection process, as well as the specifications of cables and components used, must comply with local laws and regulations.
- Before making electrical connections, ensure the equipment is de-energized. Live working is strictly prohibited, otherwise electric shock and other hazards may occur.
- Cables of the same type shall be bundled together and arranged separately from different types of cables. Intertwining or crossing arrangement between the m is prohibited.
- If the cable is subjected to excessive tension, it may lead to poor connection. When wiring, please reserve a certain length of cable slack before connecting to the equipment connection terminal.
- When crimping terminals, ensure that the cable conductor fully contacts the terminal. Do not crimp the cable insulation together with the terminal. Otherwise, it may cause equipment failure, or over heating due to unreliable connections after operation, leading to damage to the terminal block or similar issues.

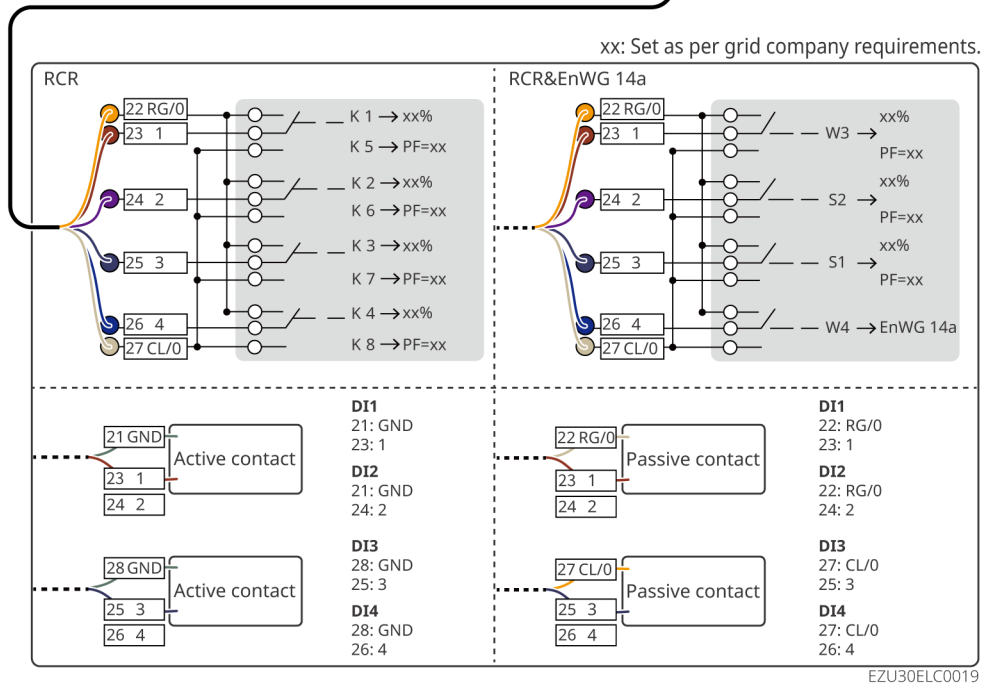
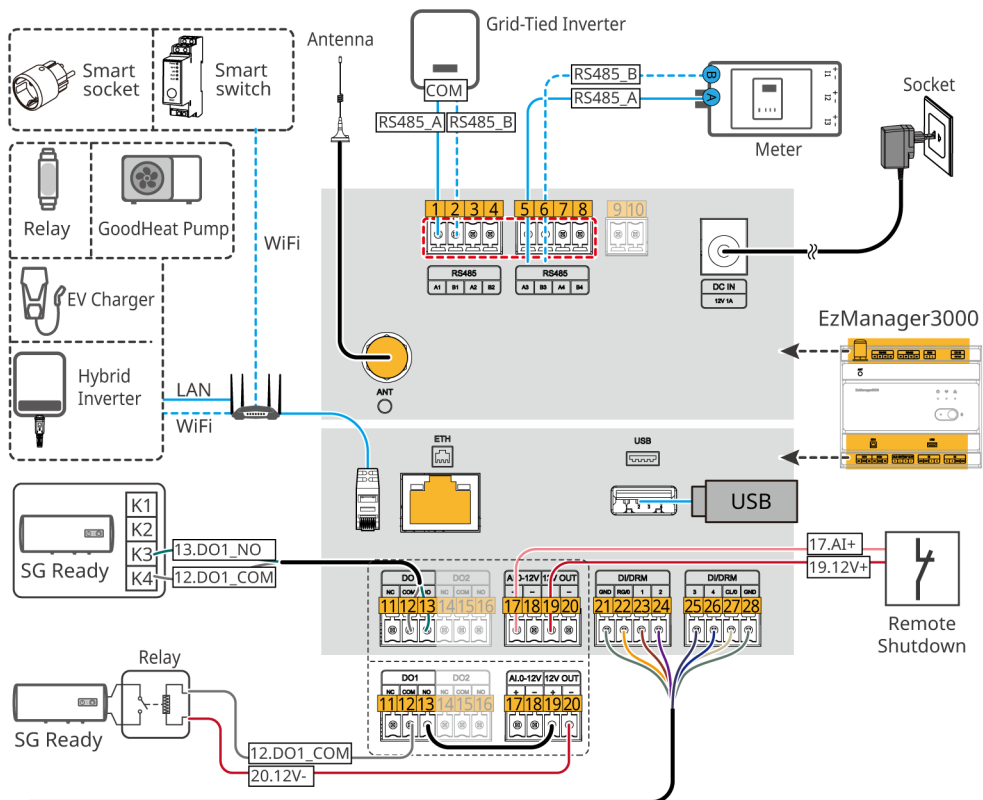
Notice

- When making electrical connections, please wear personal protective equipment such as safety shoes, protective gloves, and insulating gloves as required.
- Only qualified personnel are permitted to perform electrical connection operations.
- The cable colors in the graphics in this document are for reference only. Specific cable specifications must comply with local regulatory requirements.
- To ensure sealing, after installing the cable gland at the wiring hole, seal it with fireproof putty.

5.1 System Wiring Detail Diagram

Notice

For the values such as active power and reactive power of the RCR device in the wiring diagram, please set them according to the actual requirements of the grid company via the SEMS+ App. Please refer to the [SEMS+ App User Manual](#).



EZU30ELC0019

5.2 Pre-wiring Preparation

Before making electrical connections, prepare cables according to the recommended specifications in the table below.

Number	Silkscreen	Cable	Recommended Specifications	Acquisition Method
1	RS485	RS485 communication cable	- Outdoor shielded twisted pair - copper core cable - Conductor cross-sectional area: (24AWG-16AWG) 0.2mm²-1.0mm²	self-owned
2	CAN	CAN communication cable		self-provided
3	DO1/2	DO signal cable	- outdoor copper core cable - Conductor cross-sectional area: (24AWG-16AWG) 0.2mm²-1.0mm²	self-provided
4	AI.0-12V	AI communication cable		self-provided
5	12V OUT	12V output cable		self-owned
6	DI	DI signal cable		self-owned
7	ETH	LAN communication cable	CAT 5E and above outdoor shielded twisted pair cable	self-provided

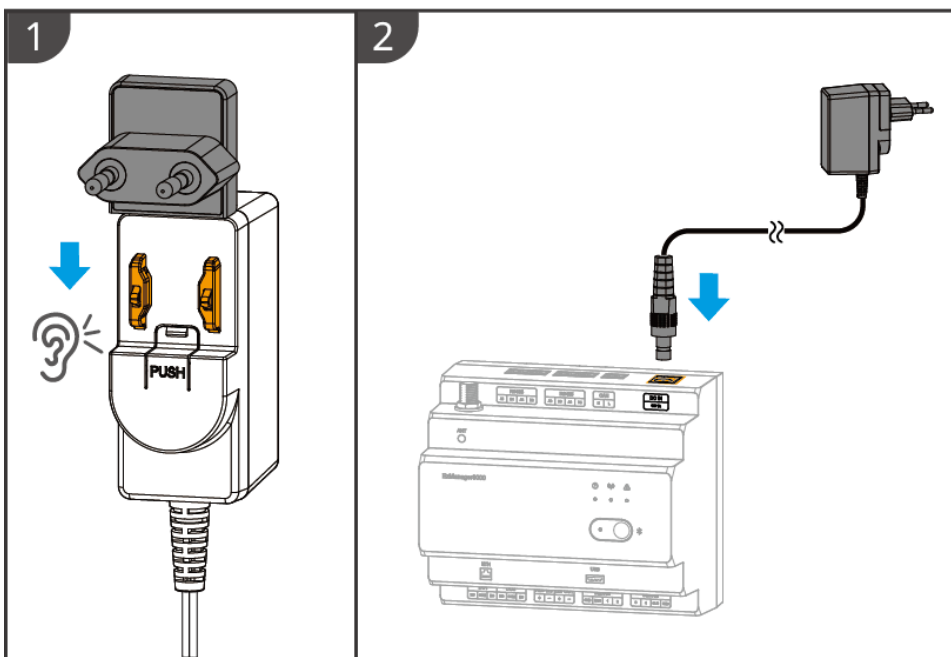
5.3 Connect the AC Power Cable

Notice

- Connect the power adapter supplied with the unit to the DC IN port to supply power to the device.
- Power Adapter Specifications: 12V/1.5A.
- Supports drawing power from the grid as a load, or from the backup side of the inverter.
- When the ET series inverter is used in a hybrid grid-tied scenario, it does not support powering the HEMS from the backup side.

Operation Steps

1. Install the plug adapter onto the power adapter.
2. Connect the power cord to the device's DC IN port and a household AC outlet.



EZU30ELC0025

5.4 Connect the Communication Cable

Notice

- Communication function is optional; please wire according to actual application scenarios.
- If you need to use functions such as RCR and one-to-uch shutdown, after wiring is completed, please enable the corresponding functions through the SEMS+ App.
- To set the heat pump working mode, after completing the wiring, please select the desired working mode via the SEMS+ App.

Communication Port Definition

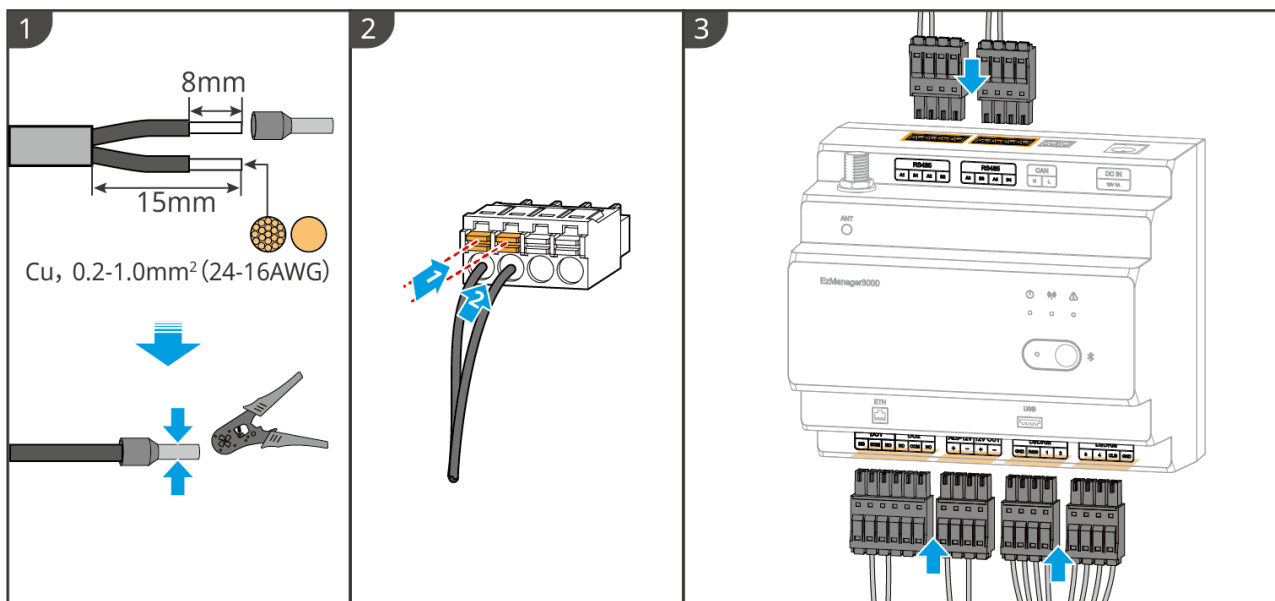
Number	Port Definition	Description
1	RS485_A1	RS485 communication connection port. Used to connect grid-tied inverters, smart meters, and other devices.
2	RS485_B1	
3	RS485_A2	
4	RS485_B2	
5	RS485_A3	
6	RS485_B3	
7	RS485_A4	
8	RS485_B4	
9	CAN_H	CAN communication connection port, reserved port.
10	CAN_L	
11	DO1_NC	
12	DO1_COM	

Number	Port Definition	Description
13	DO1_NO	- Digital Signal Output Port. - NO: normally open contact - COM: Common - NC: normally closed contact - Supports dry contact DO output, DO contact rating 30V DC @ 1A. - Support access to SG Ready heat pump, control the heat pump via dry contact signal. - The heat pump working mode can be set via the SEMS+ App. - Working Mode 2 (Signal 0:0): Energy-saving Mode, the heat pump operates in Energy-saving Mode. - Working Mode 3 (Signal 0:1): Under the premise of maintaining basic operation, the heat pump increases hot water storage. - Depending on the type of SG Ready heat pump, the following two control modes are supported: - Drive external relay through 12V power output port to control heat pump. Relay specifications are selected according to actual requirements. - Drive the heat pump directly through the DO port.
14	DO2_NC	Reserved port.
15	DO2_COM	
16	DO2_NO	
17	AI IN+	Used in conjunction with the 12V power output port to achieve a one-key shutdown function.
18	AI_GND	
19	12V power output +	

Number	Port Definition	Description
20	12V DC power output	- Rated output power capacity: 12V@100mA, Output Voltage Range: 9.5V~13.2V - Used to implement the one-button shutdown function together with the AI port. - Used together with DO port to realize SG Ready heat pump control function.
21	DI_GND	- Digital signal input port. - RCR (Ripple Control Receiver) signal control port, meeting the grid dispatching requirements of regions such as Germany. - Support access to active contact signals and passive contact signals; active contacts support 0-12V voltage input, where 8-12V input is considered high level. - The transmission distance of DI signal cable is recommended not to exceed 10m.
22	DI_RG/0	
23	DI_1	
24	DI_2	
25	DI_3	
26	DI_4	
27	DI_CL/0	
28	DI_GND	

Communication Cable Connection Steps

1. Prepare communication cables of appropriate specifications, strip the wires to a suitable length, and crimp tubular terminals.
2. Connect the crimped cable to the communication terminal.
3. Insert the communication terminal into the corresponding communication port.

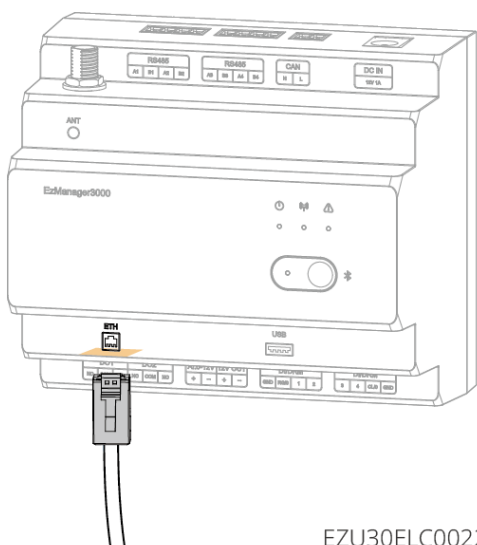


EZU30ELC0021

5.5 Connect the Ethernet Cable

Attention

- EzManager supports accessing the router via LAN.
- Smart devices, charging piles, energy storage inverters, etc. can be connected to EzManager via a router.



EZU30ELC0022

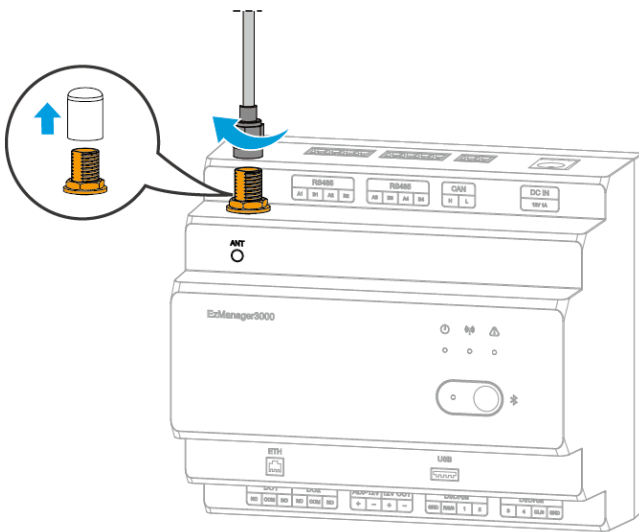
5.6 Install External WiFi Antenna

Notice

- The EzManager comes with a built-in WiFi module. To improve signal strength, an external antenna from the accessories can be installed.
- After the external antenna is installed, please set the antenna type to external antenna in the SEMS+ App.

Operation Steps:

1. Remove the dust cap of the ANT connector.
2. Install external antenna, tighten clockwise.
3. Secure the external magnetic antenna in an appropriate position.



EZU30ELC0023

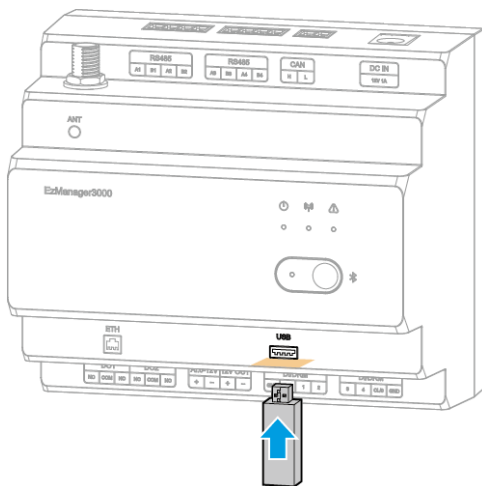
5.7 Connect the USB Port

Notice

- The device software version can be updated by connecting a USB flash drive via the USB port. Please contact the after-sales service center for the software upgrade package.
- Please bring your own FAT32-formatted USB flash drive.

When upgrading the software version via USB flash drive, please refer to the following steps:

1. Contact after-sales service to obtain the device upgrade package, and prepare a USB flash drive formatted as FAT32 with a capacity not exceeding 32GB.
2. Create a new folder named "collector" in the root directory of the USB drive, and place the device upgrade package into the collector folder.
3. Insert the USB drive into the EzManager USB port. After EzManager detects the device upgrade package and starts the upgrade, the upgrade indicator starts flashing rapidly. If the upgrade indicator does not flash rapidly, the upgrade has not started. Please check the upgrade package and the status of the USB drive.
4. After the upgrade is complete, EzManager will automatically restart. Please remove the USB drive, otherwise it may cause repeated upgrades.



EZU30ELC0024

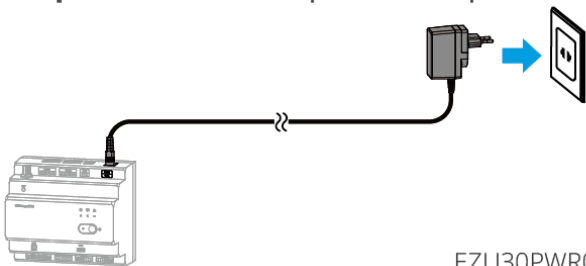
6 System Trial Operation

6.1 Pre-power-on System Inspection

Number	Inspection item
1	The equipment is installed securely, the installation location facilitates operation and maintenance, the installation space allows for adequate ventilation and heat dissipation, and the installation environment is clean and tidy.
2	Power cable, communication cable, and network cable are connected correctly and securely.
3	Cable bundling meets routing requirements, with reasonable distribution and no damage.
4	The equipment input signal and input power parameters are within the equipment operating range.

6.2 Power-on

Step 1: Connect the power adapter to a household power outlet.



EZU30PWR0004

6.3 Indicator Light Description

Indicator	Indicator status	Description
		Green light steady on: Equipment power supply normal.
		Green light off: device power off or power supply abnormal.
		Green light steady on: Communication between device and server is normal.
		Green light flashing four times: Device is connected to the router, but the connection to the server is abnormal.
		Green light flashes twice: device Not Connected to router.
		Four yellow flashes: EzManager is upgrading.
		Blue LED steady on: Bluetooth is enabled, and an external device is connected to EzManager.
		Blue light slow flashing (500ms on/500ms off): Bluetooth is enabled, waiting for external device connection.
		Blue light fast flashing (50ms on/50ms off): EzManager is resetting the login password when connecting to the SEMS+ App.
		Blue light off: Bluetooth disabled.

Operation button	Function Description
Double-click	Enable Bluetooth.
Short press for 1-3 seconds	Restart EzManager.

Operation button	Function Description
Long press for 10-20s	- Reset the login password of EzManager when connecting to SEMS+ App via Bluetooth. Initial password: 1234. - After long pressing, the indicator light flashes quickly. When the  indicator light changes from flashing quickly to flashing slowly, it means the password has been reset.
Long press for more than 60 seconds	- Factory reset and restart EzManager. - After long pressing, the , , and  indicator lights will light up simultaneously, and the device will start to restart after they turn off. - Only restore configuration files, communication configuration, login password, etc.

7 System Commissioning

EzManager supports debugging via the SEMS+ App.

SEMS+ App is a software for remote power station monitoring or local device commissioning. It supports installers or owners:

- Remotely monitor the operation status of the power station and set the operating parameters of the station and equipment.
- Connect to the local device, view its operation status and set device parameters.

For detailed functions, please refer to 《[SEMS+ App User Manual](#)》. The user manual can be obtained from the official website or by scanning the QR code below.



SEMS+ App User Manual

7.1 Download and Install SEMS+ App

Mobile Requirements

- Mobile operating system requirements: Android 7.0 or later, iOS 15.1 or later.
- The mobile phone supports a web browser and connects to the Internet.
- The phone supports WLAN/Bluetooth.

Download Method

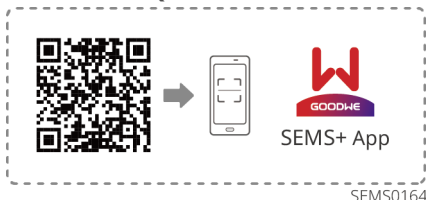
Method 1:

Search for SEMS+ in Google Play, App Store, Huawei, Honor, Xiaomi, OPPO, vivo app stores to download and install.



Method 2:

Scan the QR code below to download and install.



Add desktop widget

- When the App version is V2.5.2 or above, it supports adding the SEMSt+ App to the phone desktop.
- The steps to add desktop widgets vary across different operating systems. Please follow the actual steps.
- After adding the desktop widget, you can quickly view the power station operation status with out opening the App.

7.2 Register Account

Operation Steps

1. Click "Register" on the App homepage to enter the account registration interface.
2. Select the server and account type according to actual requirements, and click "Next".
3. Enter account information according to the actual situation, and click "Confirm" to complete the registration.

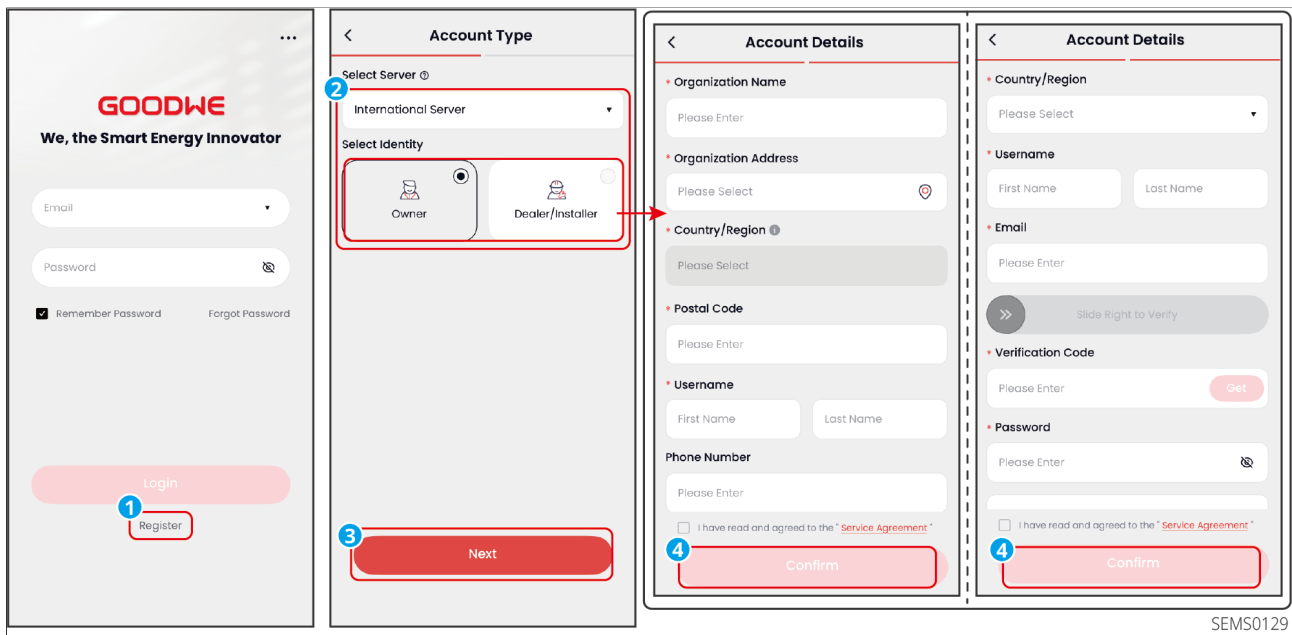


Figure1 Register account

7.3 Login Account

Attention

- Before logging into the App, please first register an account or obtain your account and password from the dealer.
- After logging into your account, you can view or manage power station information. The specific interface may vary. The displayed power station information may differ depending on account type, region, power station type, etc.

Operation Steps

1. Enter your account and password, then click "Login".

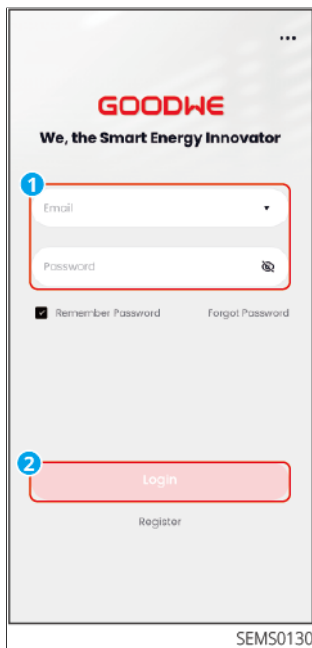


Figure2 Login account

7.4 Create Station

Support creating power plants based on actual requirements.

7.4.1 Fill in Power Station Information

Create Station (Installer/Dealer)

Operation Steps

1. After logging in to the App, if there is no power station under the account, click "create station"; if there is a power station under the account, click "+" on the power station list interface to enter the new power station information filling interface.
2. According to the interface prompts, fill in the basic information such as the address, name, capacity, and power of the power station based on actual conditions.
3. If you need to add power station visitors, you can fill in the organization code and power station visitor information. Click "Done" to create a new power station.
4. According to actual needs, choose whether to add power station equipment. If needed, please refer to the [7.4.2.Add Device\(Page 46\)](#) chapter.

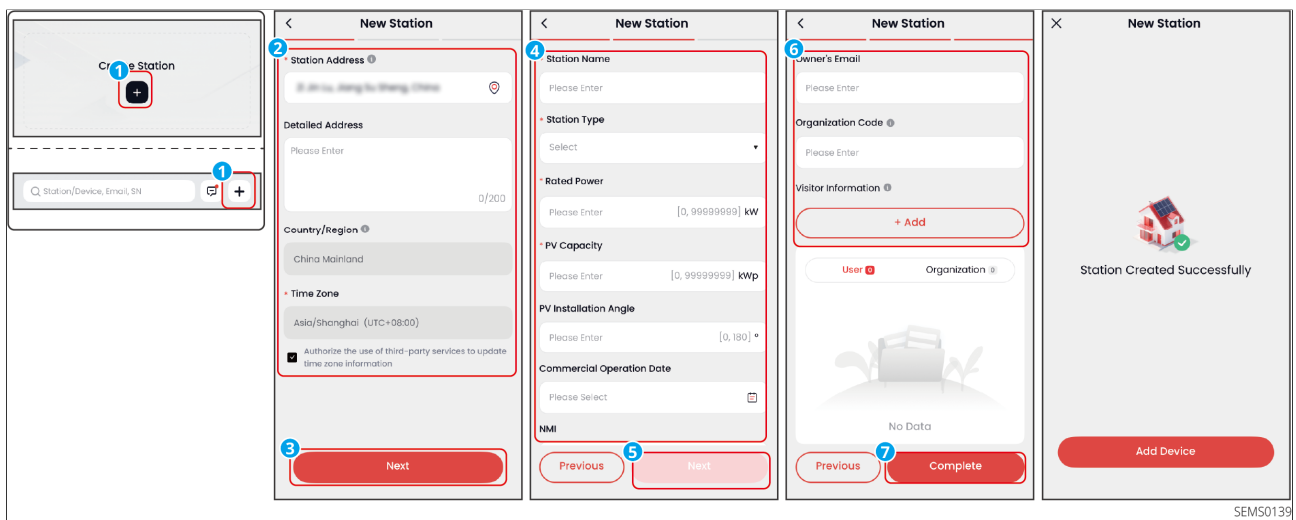


Figure3 Fill in power station information (installer/distributor)

Parameter	Function Description
Power station type	Set according to the actual station type. Supported: Residential PV Station, Residential Storage Station, Commercial & Industrial Storage Station, Commercial & Industrial PV Station.
Power Station Name	Set the power station name according to actual requirements.
Rated Power	Set the total installed capacity of the power station.
Photovoltaic capacity	Set the total PV installed capacity in the power station.
battery capacity	Set the total battery capacity of the power station.
PV Installation Angle	Set PV Panel Installation Angle.
Commercial Operation Date	Set power station grid connection date

Create Station (Owner) Operation Steps

1. After logging into the App, click "create station" according to the interface prompts; if there is a power station under the account, click "+" on the power station list interface to enter the new power station information filling interface.
2. Follow the interface prompts to fill in basic information such as the power station name, address, and type based on actual conditions.

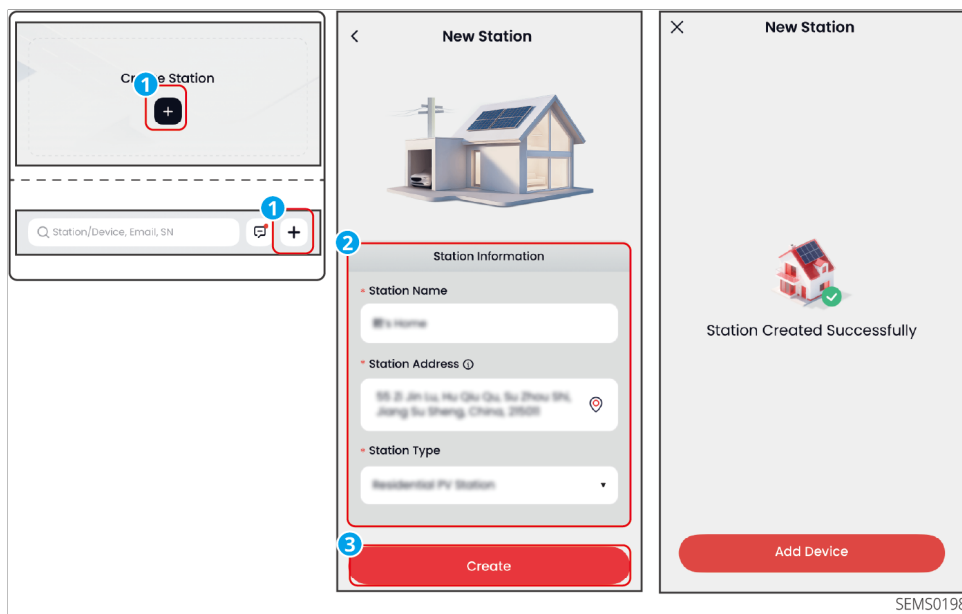


Figure4 Fill in power station information (Owner)

7.4.2 Add New Device

After the power station is created, it supports adding power station equipment according to actual needs with in the power station.

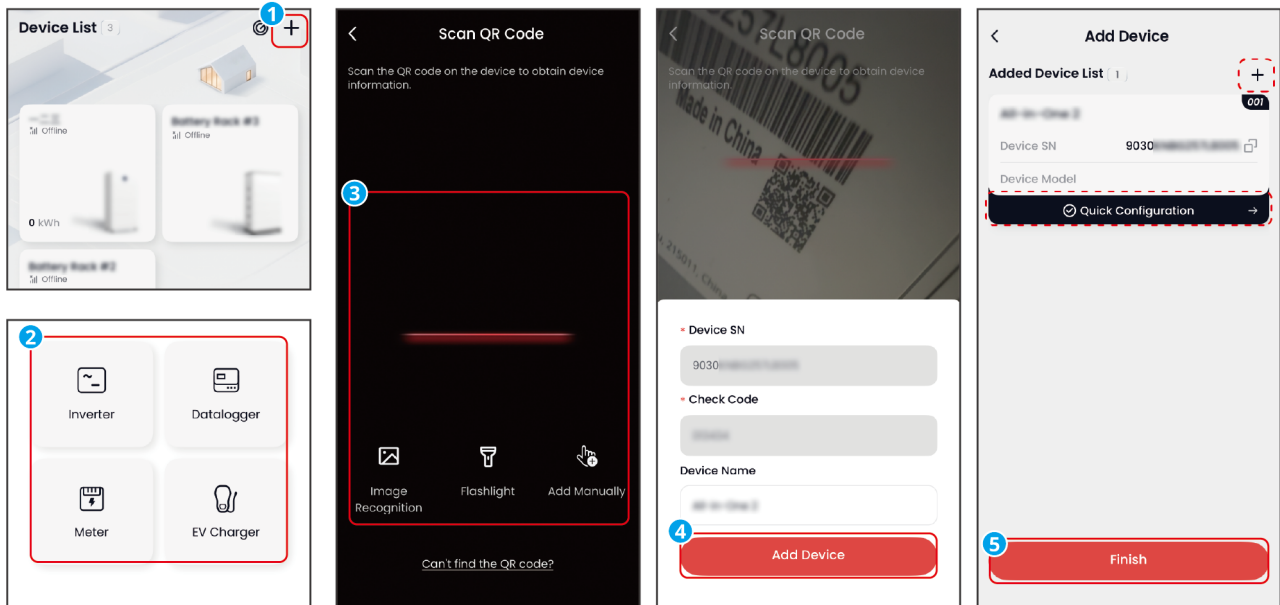
- When a household energy management device (HEMS) has been added to the power station:
 - Supports synchronizing newly added devices associated with HEMS, or adding devices not associated with HEMS, to monitor all devices with in the same power station only.
 - Please connect the energy storage inverter, EV charger, smart switch, and other devices in the network to the same router as the HEMS via Bluetooth local connection; otherwise, the HEMS cannot identify the above devices. For GoodWe products, please refer to the [Locally Connected Devices](#) section; for third-party products, please refer to the device user manual.

Steps to Manually Add a Device

1. On the device list page, click **+**.
2. Add equipment according to actual needs. Select the device type, and scan the device SN or manually enter the device SN.
3. After scanning, confirm whether the device serial number and verification code are correct. Modify the device name as needed. Click "Add Device" to complete the

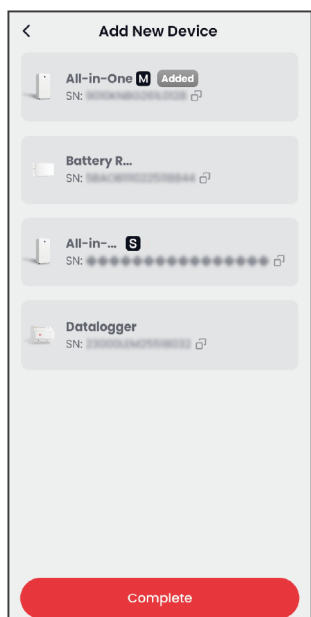
addition.

4. (Optional) To continue adding devices to current station, tap **+** and repeat the steps.
5. (Optional) Click “Quick Configuration” to modify the device’s safety regulations, network settings, etc. For details, refer to [Quick Configuration](#).



SEMS0147

6. After completing Quick Configuration, devices in the same system will be identified, such as electric meters, batteries, etc., with out needing to manually add the m again. Click "Finish" to complete device addition. After device addition is completed, if the re are new devices in the system, it will automatically scan and prompt for new devices.

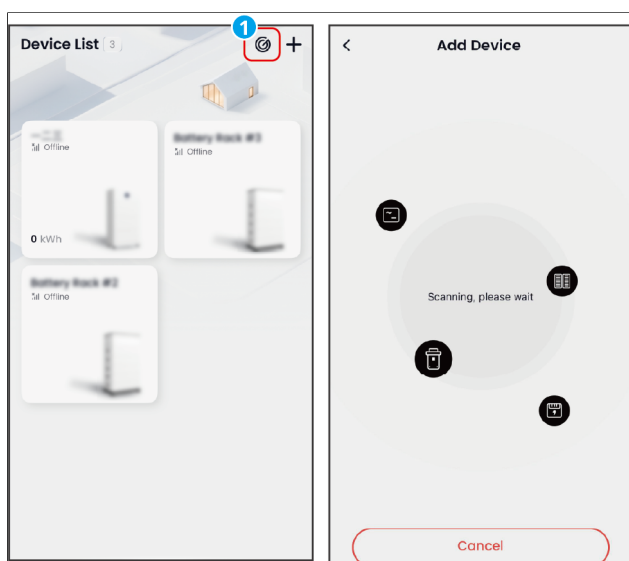


SEMS0196

Steps to Add Device by Scanning

After manually adding the inverter to the power station, you can add associated devices of the inverter, such as batteries, by scanning.

1. On the device list page, tap .
2. In the scanned devices, select the device to be added and click "Add".
3. If you need to continue adding other unscanned devices, click "Continue Adding", otherwise click "Finish".



SEMS0149

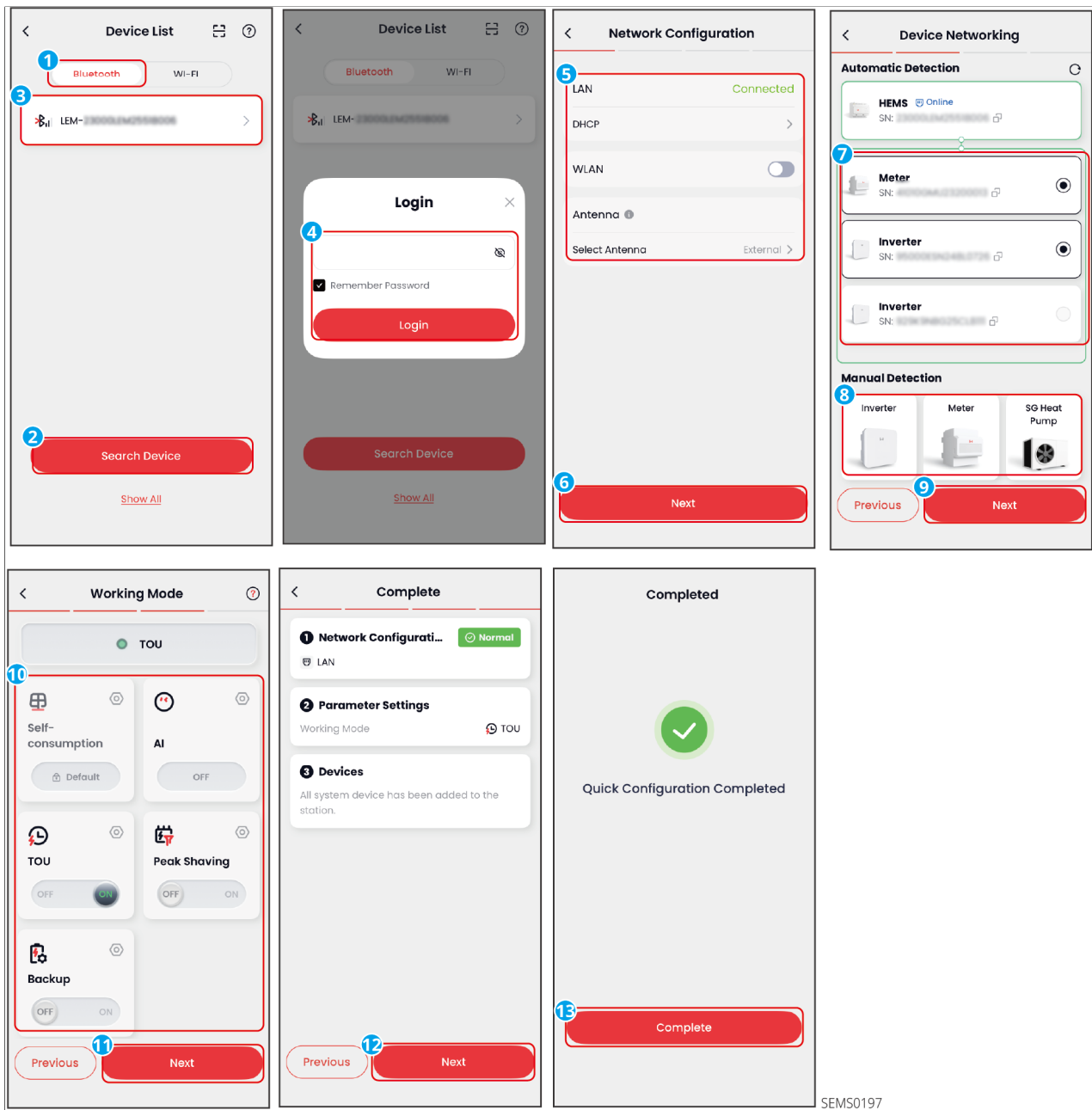
7.4.3 Quick Configuration (Home Energy Management System)

Notice

- After the device is first added to the power station, basic operation can be ensured through Quick Configuration.
- Before performing Quick Configuration, please confirm that all devices are powered on and operating normally.
- If you need to manage and dispatch inverters, charging piles, or other smart home devices such as smart switches and smart sockets through the Home Energy Management System (HEMS), please ensure that all devices are connected to the same local area network as the HEMS and have been successfully networked.
- Please refer to [Inverter and IoT Device Compatibility List](#) to ensure that the device models and software versions in the system meet the requirements.

Operation Steps

1. After adding the device, follow the interface prompts to click "Quick Configuration", or go to the device list interface via "Account" > "Local Access".
2. On the device list interface, select the "Bluetooth" tab.
3. Drop down or click "Search Device", confirm the signal name based on the device serial number, then click to enter the Quick Configuration interface. If entering the settings interface via "Local Access", please click "Quick Configuration" on the home page.
4. Complete the network configuration according to the interface prompts.
5. If other devices in the system have completed network configuration and are connected to the same LAN as the HEMS, they can be automatically searched on the "Device Networking" interface. It is recommended to select all found devices to complete networking. If devices are not found, manual addition is supported.
6. Set the working mode according to the on-screen instructions. For details about working modes, refer to the [System Working Mode](#) section.
7. Click "Complete" to complete Quick Configuration.



SEMS0197

Figure5 Quick Configuration Home Energy Management System

7.5 Configure Tariff Information

Supports viewing or setting the power station tariff information based on actual conditions.

Only some European countries or regions support the use of electricity market Tariff; the current electricity market only supports Nord Pool.

Operation Steps

1. On the power station details page, click **...** > "Tariff Setting" to enter the tariff setting interface.
2. Select "Export Energy Tariff" or "Import Energy Tariff". And set the tariff type, supporting "Fixed Tariff", "Time-of-Use Tariff" and "Dynamic Pricing".
 - Fixed Tariff: The user sets according to the actual Tariff.
 - Time-of-Use Tariff: Users can set tariff information for different time periods based on the actual tariff. Supports setting multiple groups of tariffs. For time periods with out a Time-of-Use Tariff set, the default tariff will be used automatically.
 - Dynamic Pricing: Obtain dynamic pricing from the utility company, and combine with user-set tariff surcharges to dynamically adjust the actual electricity buying and selling tariffs. Applicable only to certain regions and certain equipment.
3. Click , fill in the tariff information according to the actual situation and save.

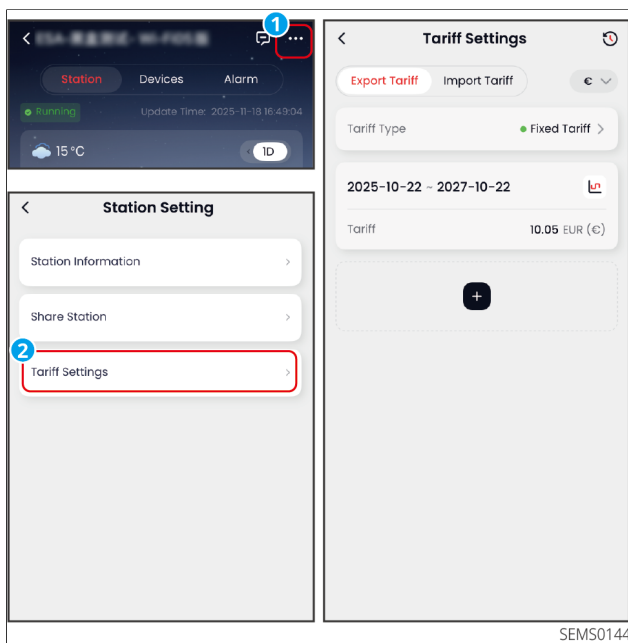


Figure6 Configure Tariff Information

7.6 Set the System Operating Mode

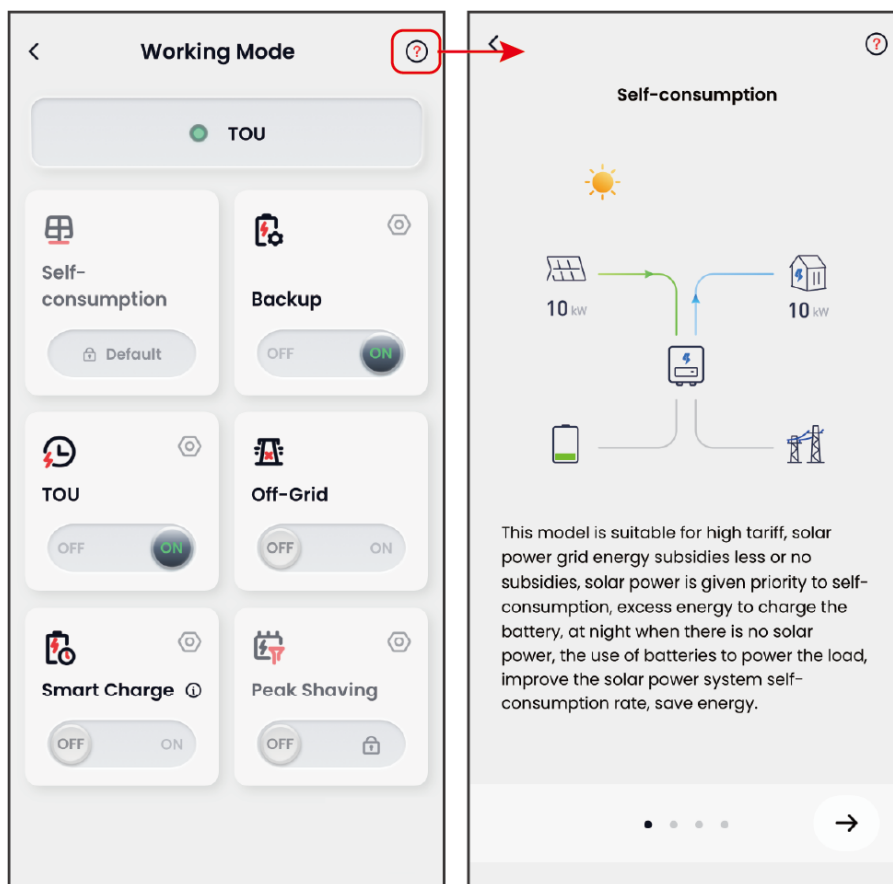
Support for selecting system operation modes based on tariff, electricity demand, or power supply conditions. Once configured, the system automatically coordinates photovoltaic, battery, and grid to dispatch electricity according to actual needs.

Notice

- Default working mode is Self-consumption Mode.
- Different systems support different configurable working modes. Please refer to the interface for details.
- When setting the working mode through the inverter, the priority of working modes is: Off-grid Mode > Demand Management > Smart Charging > TO U > Backup Mode > Self-consumption.
- When setting the working mode through the Home Energy Management System, the working mode priority is: Backup Mode > AI Mode > Demand Management > TO U Mode > Self-consumption.

Steps

1. Through "Energy Management" > "Working Mode", or search for "working mode" in the parameter control interface to enter the Working Mode Settings interface.
2. Please set the working mode according to actual needs. For more details about the working mode, click .



SEMS0159

Self-consumption

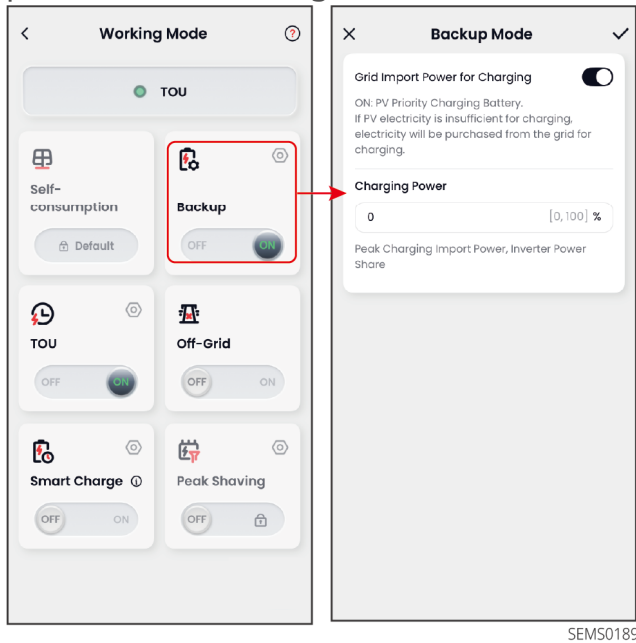
Basic operating modes of the system.

Photovoltaic power generation is prioritized for supplying loads, with excess electricity charging the battery, and any remaining surplus sold to the grid. When photovoltaic generation is insufficient, the battery supplies the loads; if the battery capacity also fails to meet the load demand, the grid supplies the loads.

Backup Mode

It is recommended for use in areas with unstable power grids.

When a Grid Power Outage occurs, the inverter switches to off-grid mode, and the battery discharges to power the load, ensuring that the BACKUP load remains powered. When the grid is restored, the inverter switches to grid-tied operation.

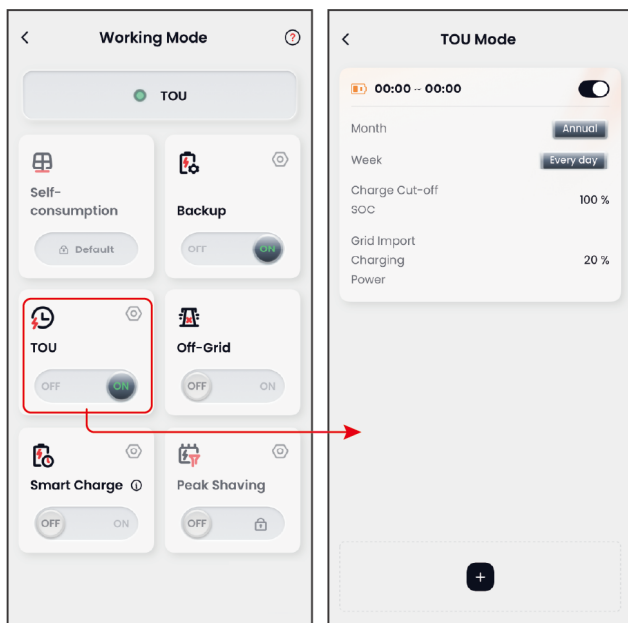


Parameter Name	Description
Grid power purchase charging	Enable this function to allow the system to purchase power from the grid.
charging power	Peak power when purchasing electricity, as a percentage of the inverter's Rated Power.

TOU Mode

Suitable for areas with large peak-valley tariff differences.

Under compliance with local laws and regulations, the system's electricity purchase or export is set according to the grid's peak and valley Tariff periods. For example, during low Tariff periods, the battery is set to charging mode to buy electricity from the grid; during high Tariff periods, the battery is set to discharging mode to supply loads or Export Energy to the grid.



SEMS0185

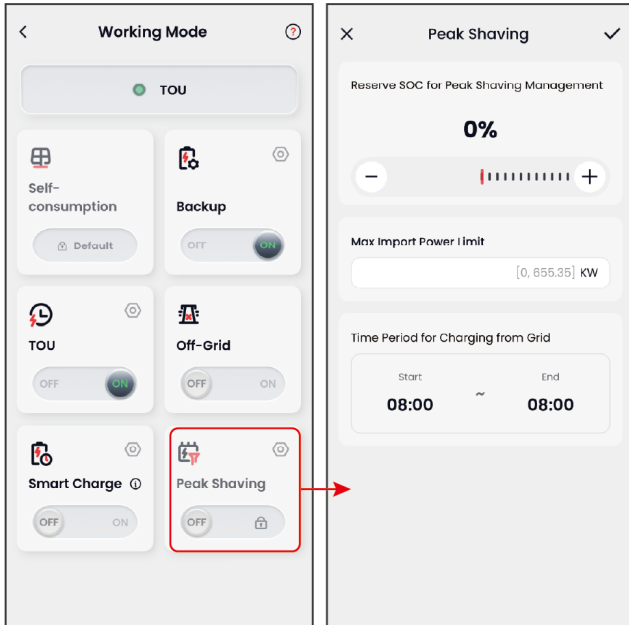
Parameter Name	Description
start time	With in the Start Time and End Time, the battery charges or discharges according to the set charging and discharging mode and Rated Power. Outside the time period, it operates in Self-consumption Mode.
End Time	
charge/discharge mode	Set to charging or discharging based on actual requirements.
Charge cutoff SOC	When the battery SOC reaches the set value, stop charging.
Grid Import Charging Power	Power during charging, as a percentage of the inverter Rated Power.
battery discharge power	Power at discharge, as a percentage of the inverter's Rated Power.

Off-grid Mode

Suitable for off-grid areas. Photovoltaic (PV) and batteries form a pure off-grid system, where PV power supplies the load and excess energy charges the battery. When PV generation is insufficient to meet load demand, the battery supplies power to the load.

Demand Management

Suitable for scenarios with limited peak power purchase. When the total load power approaches the upper limit of the electricity quota, battery discharge is used to reduce the portion of electricity consumption exceeding the quota.



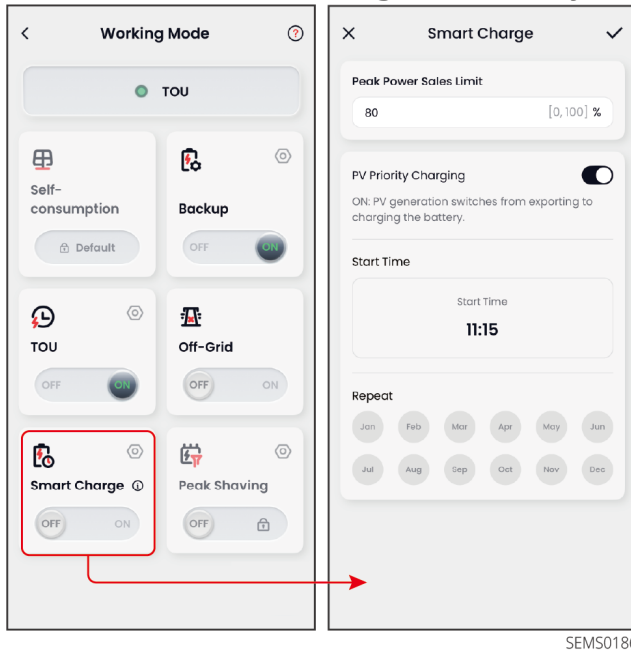
SEMS0187

Parameter Name	Description
Reserve SOC for demand management	In Demand Control Mode, reserved SOC is used for demand control. When the battery SOC is higher than the reserved SOC, the demand control function becomes ineffective.
Peak electricity purchase limit	Set the Maximum Power limit for purchasing electricity from the grid. When the load power value exceeds the sum of the electricity generated by the photovoltaic system and this limit, the battery discharges to make up for the excess power.
Time Period for Charging from Grid	During the Time Period for Charging from Grid, if the load consumption does not exceed the electricity purchase quota, the battery can be charged from the grid. Outside the time period, the battery can only be charged using photovoltaic power generation.

Smart Charging (Delayed Charging)

Suitable for areas with grid-connected power output limitations. By setting the peak

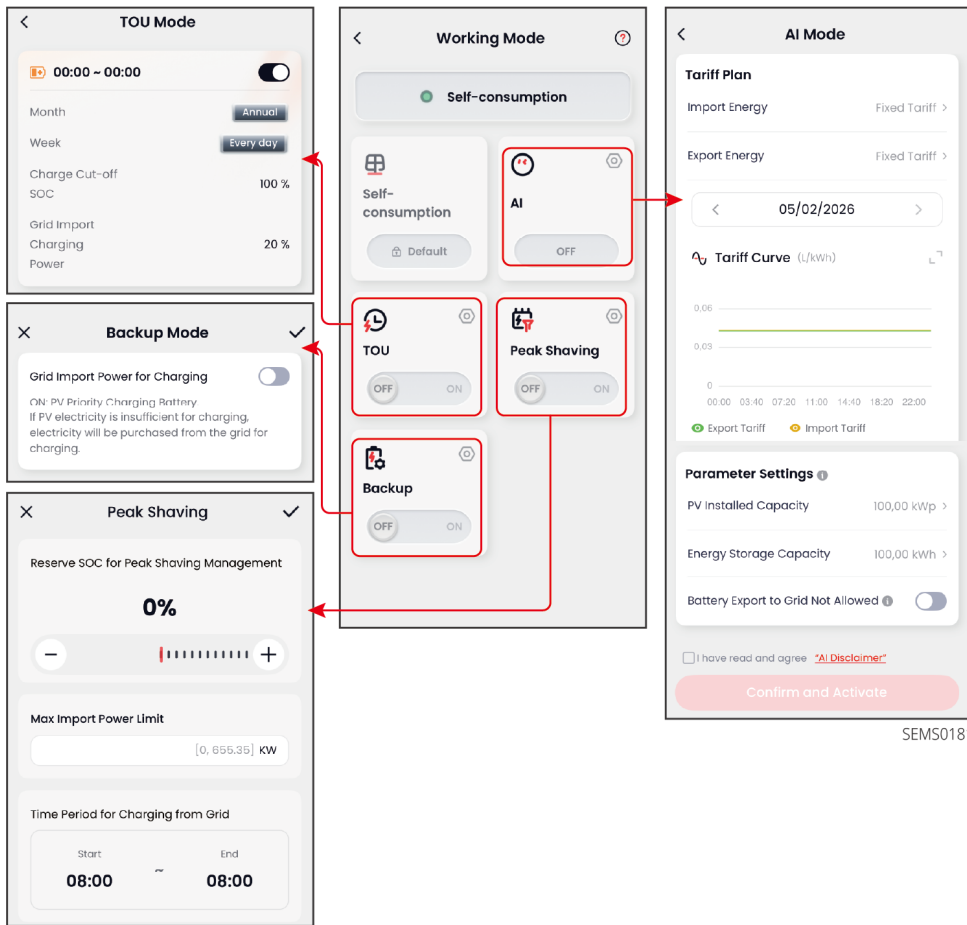
power limit and Charging Time period, the excess PV generation beyond the grid limit can be used to charge the battery, reducing PV waste.



Parameter Name	Description
Peak Power Sales Limit	According to the grid standard requirements of certain countries or regions, set the peak power limit. The peak power limit must be lower than the local specified output power limit.
PV priority charging	With in the Charging Time period, the excess electricity from PV generation after supplying the load is preferentially used for battery charging. Outside the Charging Time period, the excess electricity from PV generation after supplying the load is preferentially used for Export Energy.
Start Charging Time	

AI Mode

When the system uses a Home Energy Management System (HEMS), it supports enabling AI Mode.



SEMS0181

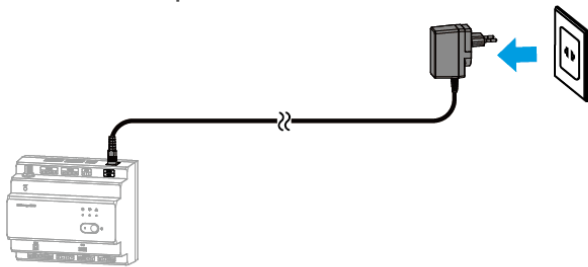
Set the tariff according to user requirements, combined with AI calculation to optimize scheduling, to maximize energy and economic efficiency. When using AI Mode, during the initial stage of collecting power station information, there may be deviations between the predicted curve and actual conditions. Before enabling AI Mode, please set the Tariff Plan first. When the Tariff Plan is Fixed Tariff, AI Mode is not supported. Select Time-of-Use Tariff or Dynamic Pricing, support:

- Dynamic Pricing: Obtain Dynamic Pricing from the utility company, and combine with the tariff surcharge set by the user to dynamically adjust the actual buy and export energy tariff.
- Time-of-Use Tariff: Users can set the tariff information for different time periods based on the actual tariff. Supports setting multiple groups of tariffs.

8 System Maintenance

8.1 Power-off

Step 1: Pull out both ends of the power adapter from the EzManager and the household power outlet.



EZU30PWR0005

8.2 Equipment Removal

Danger

- Ensure the device is powered off.
- Please wear personal protective equipment when operating equipment.

Step 1: Disconnect all electrical connections of the device, including power cords and communication lines.

步骤2: Remove equipment.

Step 3: Properly store the device. If it needs to be used again later, ensure that the storage conditions meet the requirements.

8.3 Equipment scrapping

When the equipment can no longer be used and needs to be scrapped, please dispose of the equipment in accordance with the electrical waste disposal requirements of the regulations of the country/region where the equipment is located, and do not dispose of the equipment as household waste.

8.4 Routine Maintenance

Warning

- If any issues that may affect the battery or energy storage inverter system are found, please contact after-sales personnel. Unauthorized disassembly is prohibited.
- If exposed copper strands of the conductor wire are found, do not touch. High voltage hazard. Contact after-sales personnel. Do not disassemble without authorization.
- In case of any other unexpected situations, please contact after-sales personnel immediately, and operate under their guidance, or wait for their on-site operation.

Maintenance Content	Maintenance method	Maintenance cycle	Maintenance purpose
system cleaning	Check if the installation space meets the requirements, and check if there is any debris accumulation around the equipment.	Once per half year	Prevent heat dissipation failure.
system installation	1. Check if equipment installation is secure. 2. Inspect the equipment appearance for breakage and deformation.	Once every half year to once per year	Verify the stability of equipment installation.

Maintenance Content	Maintenance method	Maintenance cycle	Maintenance purpose
electrical connection	Check whether the electrical connections are loose, whether the cable appearance is damaged, and whether the re is copper exposure.	1 time/six months ~ 1 time/year	Verify electrical connection reliability.

8.5 Troubleshooting

Please troubleshoot according to the following methods. If the troubleshooting methods cannot help you, please contact the after-sales service center.

When contacting the after-sales service center, please collect the following information for quick issue resolution.

1. Product Information, e.g., Serial Number, Software Version, Device Installation Time, Fault Occurrence Time, Fault Occurrence Frequency, etc.
2. Device Installation Environment, It is recommended to provide photos, videos, and other files to assist in problem analysis.
3. Grid Conditions

Number	Fault Symptom	Fault cause	Solution measures
1	 Power Light Off	Loose power cable connection	Please reinsert the equipment power cable firmly.
		Power adapter not securely plugged in.	Reconnect the power adapter to the socket.
		Power Adapter Fault	If the connection is confirmed normal but the re is still no power supply, contact the dealer or after-sales service center to replace the power adapter.

Number	Fault Symptom	Fault cause	Solution measures
		Equipment fault	If the fault persists after eliminating the above issues, please contact the dealer or after-sales service center.
2	 Communication Light Off	Abnormal equipment operation	Please replug the power cable and restart the device.
		Equipment Fault	If the fault persists after eliminating the above issues, please contact the dealer or after-sales service center.
3	 Firmware Upgrade LED Solid On	Equipment abnormal operation	Please reconnect the power cord and restart the device.
		Equipment fault	If the fault persists after troubleshooting the above issues, contact the dealer or after-sales service center.
4	The USB flash drive cannot upgrade the system.	USB flash drive format issue	Please confirm that the USB flash drive format is FAT32.
		Upgrade package path error	Create a new folder named "collector" in the root directory of the USB flash drive, and store the device upgrade package in the collector folder.
		equipment fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
5	Wired network connection failure.	Network parameter configuration error	Please reconfigure the network parameters, such as the acquisition method, IP address, etc.
		Equipment fault	Please contact the dealer or after-sales service center.

Number	Fault Symptom	Fault cause	Solution measures
6	External RS-485 device is not functional.	RS485 wiring fault	Please reconnect the RS485 communication cable and confirm the wire sequence is correct.
		RS485 communication parameter error	Please check whether the parameters match the actual connection port numbers, and confirm that the communication parameters are correct.
		Equipment fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
7	The WiFi signal strength is low, unable to connect to the router.	Improper antenna selection	• Enclosed environment (e. g., indoors, metal cabinet): Use an external antenna (e. g., suction cup antenna) or place the antenna in an open area. • Open environment: built-in antenna can be used.
		Not Connected External Antenna	Check whether the external antenna is securely connected to the device antenna interface. If the external antenna cannot be used, switch the antenna to the internal antenna in the App.
		EzManager is far from the router.	Adjust the equipment position to be as close to the router as possible.
		Equipment fault	If the fault persists after eliminating the above issues, please contact the dealer or after-sales service center.

Number	Fault Symptom	Fault cause	Solution measures
8	Power Limit function is not effective	Loose or disconnected RS485 cable connection	Please check the RS485 wiring of the inverter/meter to ensure the wiring is correct and secure.
		Power Limit function is not enabled	Please check whether the Power Limit function is enabled through the App.
		Inverter software version does not support Power Limit function	Please contact the dealer or after-sales service center to confirm whether the inverter model and software version support the Power Limit function.
		Equipment fault	If the fault persists after eliminating the above issues, please contact the dealer or after-sales service center.
9	RCR function not working	RS485 cable connection loose or disconnected	Please check the RS485 wiring of the inverter to ensure the connections are correct and secure.
		External device wiring error	Please confirm whether the wiring of the RCR device is correct.
		This function is not enabled in the APP configuration.	Please check whether the function is enabled through the App.
		Equipment fault	If the fault persists after eliminating the above issues, please contact the dealer or after-sales service center.
10		External device wiring error	Please confirm whether the wiring of the one-button shutdown device is correct.

Number	Fault Symptom	Fault cause	Solution measures
	One-button shutdown function is not working.	The function is not configured to be enabled in the App.	Please check whether the function is enabled via the App.
		External device does not support one-key shutdown or the function is not enabled.	Please check the external devices to ensure they support and have enabled the one-button shutdown function.
		Equipment fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
11	DO interface control of heat pump is ineffective.	Heat pump wiring error	Please confirm whether the heat pump wiring is correct.
		The function is not configured to be enabled in the App.	Please check whether the function is enabled through the App.
		Equipment fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
12	Bluetooth connection failure	Bluetooth function is not enabled.	Double-click the EzManager button, and after the blue indicator flashes twice, connect to Bluetooth.
		EzManager is installed in a metal enclosure and does not use an external antenna.	Use an external suction cup antenna, install it outside the metal enclosure, and enable the external antenna in the App.

Number	Fault Symptom	Fault cause	Solution measures
		EzManager is far from the mobile phone or other terminal devices with the App installed.	Please bring the mobile phone close to the EzManager.
		Equipment fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
		After Bluetooth connection fails at a distance, the Bluetooth LED flashes but no Bluetooth device can be found via scanning.	Double-click the EzManager indicator button to enable the Bluetooth signal.
		The Bluetooth indicator light is flashing, but the device cannot be discovered.	Double-click the EzManager indicator button to activate the Bluetooth signal.
		The Bluetooth always-on function has been enabled in the SEMS+ App, but the Bluetooth indicator light still goes off, and the device cannot be discovered.	Double-click the EzManager indicator button to enable the Bluetooth signal.

Number	Fault Symptom	Fault cause	Solution measures
		The device's Bluetooth signal cannot be searched, and it still cannot be searched after double-clicking the indicator light button.	Restart EzManager.
13	When creating a station, the inverter cannot be found.	Software version error of the module for the energy storage inverter.	Please upgrade the module software version via the App, ensuring the software version is 2.3.32 or above. For detailed operations, refer to the App user manual.
		The module paired with the energy storage inverter is not configured in the same network environment as the EzManager.	Please connect the inverter module and EzManager to the same router via the App.
		The Modbus TCP function of the module paired with the energy storage inverter is not enabled.	Please view and enable the Modbus TCP function through the App.
		Inverter has been used in other power stations	Remove the inverter from the original power station.
		Equipment Fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.

Number	Fault Symptom	Fault cause	Solution measures
14	Unable to add meter when create station	The actual RS485 port connection of the electric meter does not match the software configuration.	Please set the electric meter access port to the actual RS485 port via the App.
		The selected meter model does not match the actual meter model.	Please select the actual meter model through the App.
		RS485 wiring reversed	Please check whether the electric meter wiring is correct.
		Equipment Fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.
15	Unable to add charging pile when create station	The charging station and EzManager are not configured in the same network environment.	Please use the App to check and connect the charging pile and EzManager to the same router.
		The Modbus TCP function of the charging pile is not enabled.	Please view and enable the Modbus TCP function via the App.
		Equipment Fault	If the fault persists after troubleshooting the above issues, please contact the dealer or after-sales service center.

Number	Fault Symptom	Fault cause	Solution measures
16	After setting AI Mode via the App, the working mode displays as other modes.	User activates AI Mode for the first time after building the site.	New user AI Mode usually takes effect 24 hours after being enabled.
		User first activates AI Mode on the day.	When the AI Mode is first activated on the day, due to the data transmission time difference, it takes effect in the second or third hour.
17	In AI Mode, during low tariff periods, the battery either does not charge or the charging power is very low.	The setting of the battery SOC upper limit is unreasonable.	Please check the battery SOC set value through the remote setting interface of the energy storage inverter, and ensure that the set value is correct and reasonable.
		The current period is not the lowest tariff period.	Please confirm whether there is a lower tariff after this time period.
		After this period, it is expected that PV Energy Generation is sufficient, and can be charged via PV.	Please confirm whether there is a period with sufficient photovoltaic energy generation after that period.
		Electricity consumption is about to exceed the demand limit.	Please check the demand power limit value. If the set value does not match the actual value, modify it to the correct value; if they match, the upper limit has been reached and power consumption will be limited.

Number	Fault Symptom	Fault cause	Solution measures
		The current battery SOC is sufficient for subsequent loads, so no charging is required.	Please check the current battery SOC value.
18	In AI Mode, during high tariff periods, the battery does not discharge or its discharge power is very low.	Unreasonable setting of battery SOC lower limit value.	Please check the battery SOC setting value through the remote setting interface of the energy storage inverter to ensure the setting value is correct and reasonable.
		The current period is not the highest tariff period, and need to reserve for subsequent discharge.	Please confirm whether there is a higher tariff after this period.
		Current PV Energy Generation is sufficient, and discharging simultaneously may cause grid-connected energy to exceed the limit.	Please confirm the current PV Energy Generation and Power Limit value.
		Power Limit	Please confirm that the Power Limit function is correctly configured.

Number	Fault Symptom	Fault cause	Solution measures
19	In AI Mode, when PV Energy Generation is sufficient, no charging.	The current period has a high Export Energy Tariff, so prioritize Export Energy. And the subsequent PV Energy Generation is still sufficient, so charging can be done.	Please confirm the photovoltaic Energy Generation for the current and subsequent time periods.
		Subsequent negative tariff periods are more suitable for charging.	Please confirm whether there is a negative Tariff in the subsequent period.
20	In AI Mode, battery discharges during low tariff periods.	There are negative tariff periods afterwards, which are more suitable for charging.	Please confirm whether there will be a negative tariff in the subsequent period.
		After this period, PV Energy Generation is expected to be sufficient, allowing charging via PV.	Please confirm the photovoltaic Energy Generation for the current and subsequent periods.

9 Technical Parameters

Model	EzManager3000
Equipment Management	
energy storage inverter	Maximum 1 unit
Grid-tied inverter	Maximum 1 unit
charging pile	Maximum 2 units
heat pump	Maximum 1 unit (SG-Ready)
Shelly device	Maximum 12
power supply	
power adapter	AC Input: 100~240V, 50/60Hz DC Output: 12V
DC Input (V)	12V
Power consumption (W)	≤7
communication interface	
RS485	COM*4
LAN	1
WIFI	802.11 b/g/n
Bluetooth	Bluetooth 5.2
Digital/Analog Input/Output	DI*4、DO*2、CAN*1、AI*1
Power Output Port	12V, 100mA
Communication Protocols	
Ethernet	Modbus-TCP
RS485	Modbus-RTU
User Interface	
LED	LED*4
USB	USB 2.0*1
Mechanical parameters	
Dimensions (W×H×D mm)	99*85.6*71
Weight (kg)	0.2
Mounting Method	Wall-mounted, rail-mounted, desktop installation
environmental parameters	

Model	EzManager3000
Operating Temperature Range (°C)	-30~+60
Storage Temperature Range (°C)	-40~+70
Relative Humidity	0 to 95% (non-condensing)
Max. Operating Altitude (m)	3000
Ingress Protection Rating	IP20
Complied standards	
Certification	CE-RED (EN18031) 、 RCM

10 Appendix

10.1 Term explanation

Overvoltage Category Explanation

Over voltage Category I: Equipment connected to circuits with measures that limit transient over voltages to a relatively low level.

Over voltage Category II: energy-consuming equipment supplied by fixed power distribution devices. Such equipment includes appliances, portable tools, and other household and similar loads. If there are special requirements for the reliability and applicability of such equipment, Category III applies.

Over voltage category III: Equipment in fixed electrical installations, for which the reliability and suitability of the equipment must meet special requirements. Includes switching devices in fixed electrical installations and industrial equipment permanently connected to fixed electrical installations.

Over voltage Category IV: equipment installed in the power supply of distribution installations, including measuring instruments and prefix over current Protection devices, etc.

Definition of Humid Location Categories

environmental parameters	level		
	3K3	4K2	4K4H
humidity range	0~+40°C	-33~+40°C	-33~+40°C
temperature range	5% to 85%	15% to 100%	4% to 100%

Environmental Category Definition

Outdoor inverter: ambient air temperature range from -25°C to +60°C, applicable to environment of Pollution Degree 3;

Indoor Type II Inverter: ambient air temperature range of -25 to +40°C, suitable for environment of Pollution Degree 3;

Indoor Type I Inverter: ambient air temperature range of 0~+40°C, suitable for Pollution Degree 2 environment;

Pollution Degree Category Description

Pollution Degree 1: No pollution or only dry non-conductive pollution;

Pollution Degree 2: Normally only non-conductive pollution occurs, but occasional temporary conductivity caused by condensation must be considered;

Pollution Degree 3: Conductive pollution, or non-conductive pollution that becomes conductive due to condensation;

Pollution Degree 4: Persistent conductive pollution, such as that caused by conductive dust or rain and snow.

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