

Home Energy Management System

EzManager

User Manual

GOODWE

Copyright Statement

Copyright©GoodWe Technologies Co., Ltd. 2026. All rights reserved.

Without the authorization of GoodWe Technologies Co., Ltd., no part of this manual may be reproduced, disseminated, or uploaded to public networks or other third-party platforms in any form.

Trademark Authorization

GOODWE and other GOODWE trademarks used in this manual are the property of GoodWe Technologies Co., Ltd. All other trademarks or registered trademarks mentioned in this manual are the property of their respective owners.

NOTICE

Due to product version upgrades or other reasons, the content of this document is updated periodically. Unless otherwise specified, the content of this document cannot replace the safety precautions on the product label. All descriptions in this document are for guidance only.

About This Manual

Overview

This document primarily introduces the Home Energy Management Device's product information, installation and wiring, configuration and commissioning, troubleshooting, and maintenance content. Please read this manual carefully before installing and using the product to understand the product safety information and familiarize yourself with the product's functions and features. The document may be updated periodically; please obtain the latest version and more product information from the official website.

Applicable Model

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

Symbol Definition

 DANGER
Indicates a highly potential danger that, if not avoided, will result in death or serious injury.
 WARNING
Indicates a moderately potential danger that, if not avoided, could result in death or serious injury.
 CAUTION
Indicates a low potential danger that, if not avoided, may result in moderate or minor injury.
NOTICE
Emphasizes and supplements the content, and may also provide tips or tricks for optimizing product use, helping you solve a problem or save your time.

Table of Contents

1 Safety Precautions	6
1.1 General Safety	6
1.2 personnel requirements	7
1.3 Personal Safety	7
1.4 Equipment Safety	8
1.5 Safety Symbols and Certification Marks	8
1.6 EU Declaration of Conformity	9
1.6.1 Equipment with Wireless Communication Modules	9
2 System Introduction	11
2.1 Functional Description	11
2.2 Model Description	12
2.3 Appearance Introduction	13
2.4 Dimensions	15
2.5 Indicator Light Description	16
2.6 Nameplate Description	17
3 Check and Storage	19
3.1 Check Before Receiving	19
3.2 deliverables	19
3.3 Storage	20
4 Installation	22
4.1 Installation Requirements	22

4.1.1 Installation Environment Requirements	22
4.1.2 Tool Requirements	23
4.1.3 Installing the Equipment	24
5 System Wirings	27
5.1 Detailed System Wiring Diagram	27
5.2 Preparation Before Wiring	29
5.3 Connecting AC Power Cable	29
5.4 Connecting Communication Cable	30
5.5 Connecting Network Cable	34
5.6 Installing External WiFi Antenna	35
5.7 Connecting USB Port	35
6 System Commissioning	37
6.1 Check Before Power ON	37
6.2 Power ON	37
6.3 Indicator Light Description	37
7 System Commissioning	40
7.1 Download and Install SEMS+ App	40
8 Maintenance	42
8.1 Power OFF the System	42
8.2 Removing the Equipment	42
8.3 Disposing of the Equipment	42
8.4 Routine Maintenance	42

8.5 fault.....	43
9 technical parameter.....	54
10 Appendix.....	56
10.1 Abbreviations.....	56
10.2 Explanation of Terms.....	56

1 Safety Precautions

Please always adhere to the safety precaution information contained in this document when operating the equipment.

WARNING

The equipment has been strictly designed and tested in accordance with safety regulations. However, as electrical equipment, relevant safety instructions must be followed before performing any operations. Improper handling may lead to serious injury or property damage.

1.1 General Safety

NOTICE

- Due to product version upgrades or other reasons, this document is updated periodically. Unless otherwise agreed, the content herein cannot supersede the safety precautions on the product labels. All descriptions in this document serve only as usage guidance.
- Please read this document carefully before installing the device to understand the product and relevant precautions.
- All operations on the device must be performed by professional and qualified electrical technicians who are familiar with the relevant standards and safety regulations at the project location.
- When operating the device, use insulated tools and wear personal protective equipment to ensure personal safety. When handling electronic components, wear anti-static gloves, an ESD wrist strap, anti-static clothing, etc., to protect the device from electrostatic damage.
- Unauthorized disassembly or modification may cause device damage, which is not covered by warranty.
- Device damage or personal injury resulting from installation, use, or configuration 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/warrantyrelated.html>.

1.2 personnel requirements

NOTICE

- Personnel responsible for Installation and maintenance of the equipment must undergo strict training first, understand all safety precautions, and master the correct operating methods.
- Installation, operation, maintenance, and replacement of equipment or components are only permitted to be performed by qualified professionals or trained personnel.

1.3 Personal Safety

DANGER

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

1.4 Device Security

DANGER

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

WARNING

- When performing operations such as installation or maintenance on the device, please use appropriate tools and operate correctly.
- Operate the device in compliance with local relevant standards and safety regulations.
- Unauthorized disassembly or modification may cause damage to the device, and such damage is not covered under warranty.

1.5 Safety Symbols and Certification Marks

DANGER

- After equipment installation, labels and warning signs on the enclosure must remain clearly visible. Do not cover, alter, or damage them.
- The following enclosure warning label descriptions are for reference only. Please refer to the actual labels on the equipment in use.

No.	Symbol	Meaning
1		Potential hazards exist during equipment operation. Take protective measures when operating the equipment.
2		High voltage hazard. High voltage is present during equipment operation. Ensure the equipment is powered off before performing any operations.
3		Read the product manual thoroughly before operating the equipment.
4		Do not dispose of the equipment as household waste. Dispose of the equipment according to local laws and regulations, or return it to the equipment manufacturer.
5		CE certification mark.

1.6 EU Declaration of Conformity

1.6.1 Equipment with Wireless Communication Modules

Equipment with Wireless Communication Modules sold in the European market must comply with the following directives:

- 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

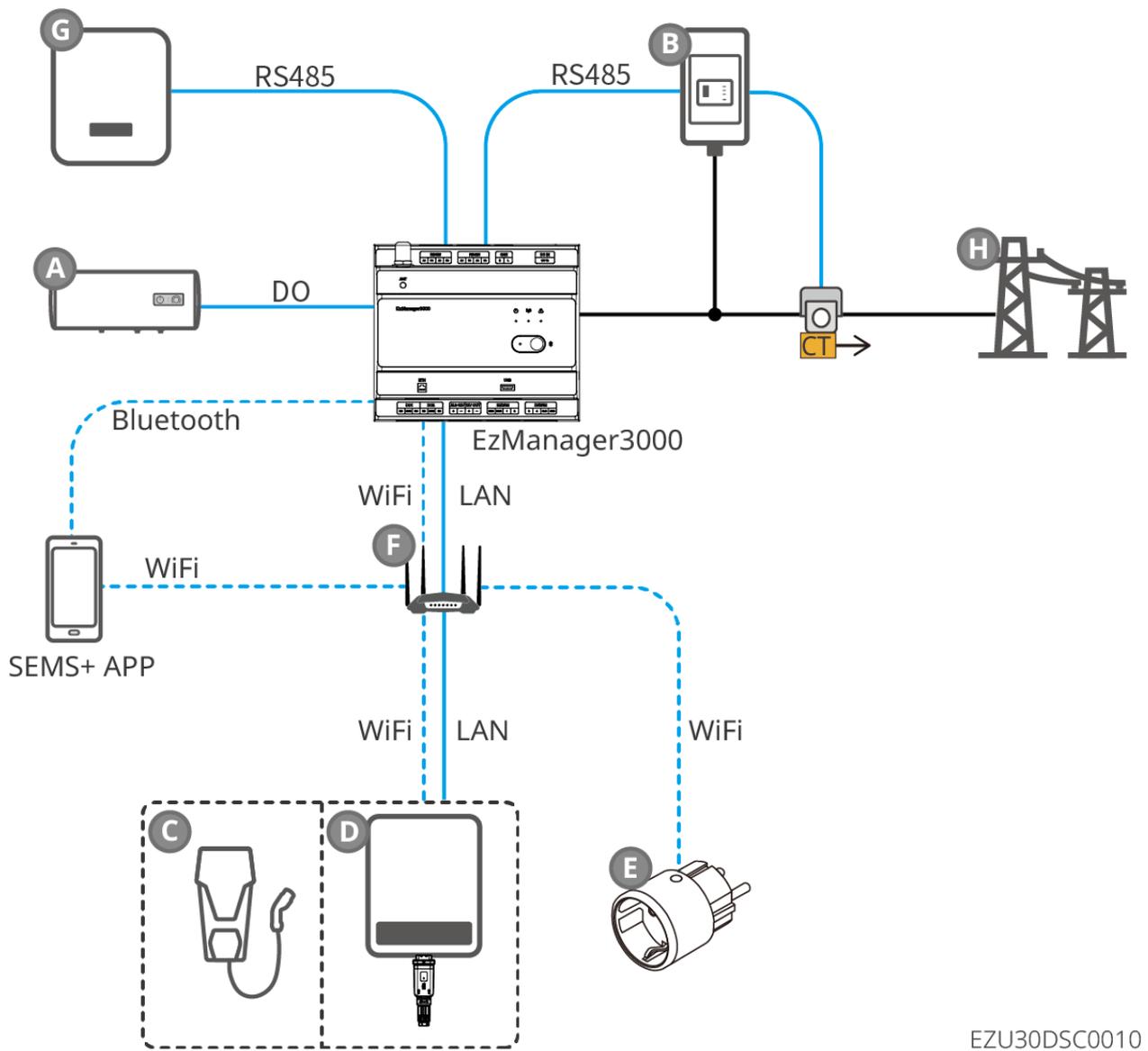
1907/2006 (REACH)

2 System Introduction

2.1 Feature Description

EzManager is a home energy management device that supports unified scheduling and management of home energy. It supports station-level power control functions such as AI mode, Self-consumption, and grid-connected power control, enabling station-level energy optimization.

- Connects to smart meters, grid-connected inverters, etc., via RS485.
- Connects to an SG Ready heat pump via DO, supporting a maximum of 1 heat pump.
- Connects to a router via WiFi/LAN, and connects devices such as energy storage inverters, charging piles, and smart plugs to the router via WiFi/LAN. Supports a maximum of 12 smart devices. For communication stability, LAN connection is recommended as the priority.
- Supports hybrid parallel connection of one grid-connected inverter and one energy storage inverter.
- If a third-party grid-connected inverter is used in the system, its data cannot be counted by EzManager, which may affect EMS scheduling. Please use with caution.



(A) SG Ready heat pump

(B) Smart Meter

(C) charging station

(D) hybrid inverter

(E) smart socket

(F) Router

(G) grid-tied PV inverter

(H) Utility grid

2.2 Model Description

This article mainly covers the following product models:

EzManager3000

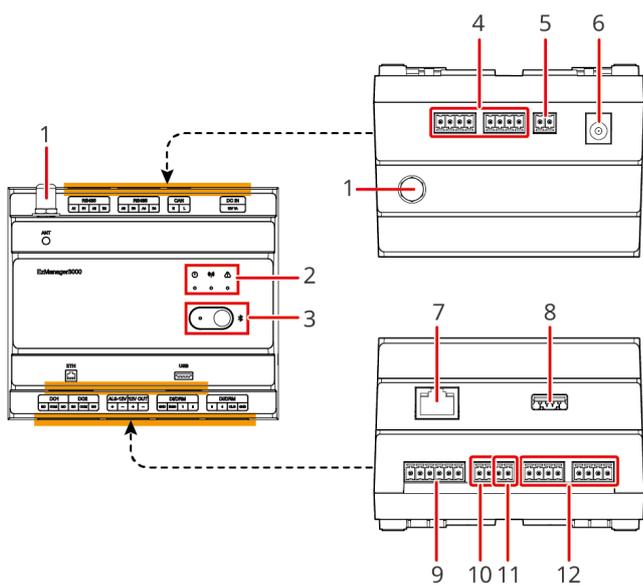
1

2

EZU30DSC0015

No.	Meaning	Explanation
1	Product Function	EzManger: Home Energy Management System
2	Generation Code	3000: Third Generation Machine

2.3 Appearance Introduction

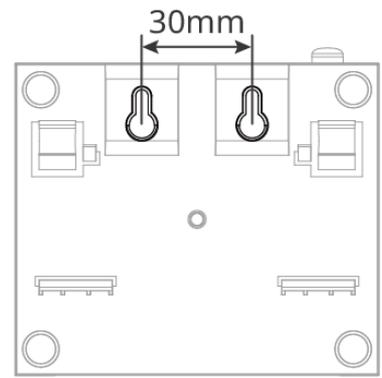
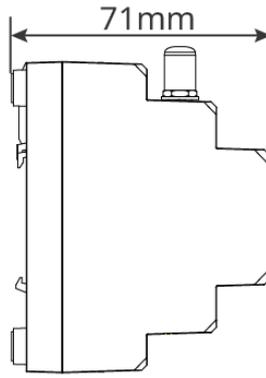
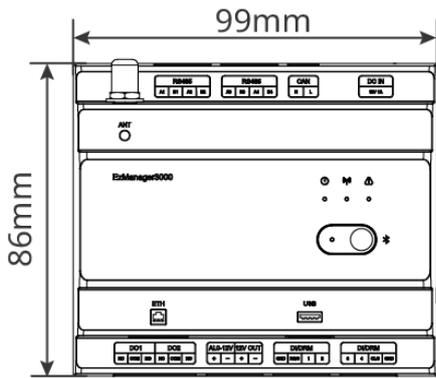


EZU30DSC0011

No.	Name	Description
1	External WiFi Antenna Port (ANT)	<ul style="list-style-type: none"> Used to enhance WiFi signal. If the device is installed inside a metal box, under a metal roof, or a concrete roof, it is recommended to use an external suction cup antenna to enhance the signal.
2	LED Indicator	Indicates device operation status, such as power supply status, communication status, upgrade status, etc.
3	Bluetooth Indicator & RST Button	<ul style="list-style-type: none"> Indicates device Bluetooth status, such as enabled or disabled. Use the button to enable Bluetooth, restart the device, reset the password, etc.
4	RS485 Communication Port (RS485)	<ul style="list-style-type: none"> Supports connecting devices such as smart meters and grid-tied inverters via the RS485 port. Supported meters: GM330/GMK330/GMK110/GM3000, etc. Supported grid-tied inverters: SDT G2 series, XS G1 series, DNS G1 series, etc. For software version requirements, please refer to the Inverter and IoT Device Compatibility List.
5	CAN Communication Port (CAN)	Reserved port.
6	Power Input Port (DC IN)	12V DC power input connection port, can be used to power the device.

No.	Name	Description
7	Ethernet Port (ETH)	<ul style="list-style-type: none"> Ethernet cable connection port, can be used to connect to a router. Devices such as inverters and charging piles can connect to EzManager via the router. Supported smart plug: Shelly Plus Plug S, software version must be V1.4.4 or higher. Supported charging pile: GoodWe HCA series charging pile. Supported energy storage inverters: GoodWe ET15-30kW series, ES G2 series, ET G2 series, etc. For software version requirements, please refer to the Inverter and IoT Device Compatibility List.
8	USB Port (USB)	<ul style="list-style-type: none"> Connect a USB flash drive to update the device software version. USB flash drive specification requirements: FAT32 format.
9	DO Communication Port (DO1/2)	Connect SG Ready heat pump.
10	AI Signal Port (AI.0-12V)	AI analog signal input port, only applicable for implementing the one-key shutdown function together with the 12V output port.
11	12V Output Port (12V OUT)	12V DC output port, only applicable for implementing the one-key shutdown function together with the AI signal port or for connecting the SG Ready heat pump together with the DO communication port.
12	DI Communication Port (DI)	DI signal input port, supports connecting active contact or passive contact signals, or implementing functions such as RCR.

2.4 Size



EZU30DSC0012

2.5 Indicator Light Instructions

Indicator	Indicator Status	Description
		Green light steady: Device power supply is normal.
		Green light off: Device is powered off or power supply is abnormal.
		Green light steady: Device communication with the server is normal.
		Green light flashing four times: Device is connected to the router, but connection to the server is abnormal.
		Green light flashing twice: Device is not connected to the router.
		Yellow light flashing four times: EzManager is upgrading.
		Blue light steady: Bluetooth is enabled, and an external device is connected to EzManager.
		Blue light slow flash (500ms on/500ms off): Bluetooth is enabled, waiting for external device connection.

Indicator	Indicator Status	Description
		Blue light fast flash (50ms on/50ms off): EzManager is resetting the login password for connecting to the SEMS+ App.
		Blue light off: Bluetooth is disabled.

Button	Description
Double-click	Enable Bluetooth.
Short press for 1-3s	<ul style="list-style-type: none"> Restart EzManager. After a short press, the , , and  indicator lights will illuminate simultaneously. After they turn off, the device begins to restart.
Long press for 6-10s	<ul style="list-style-type: none"> Reset the login password for connecting EzManager to the SEMS+ App via Bluetooth. Default password: 1234. After a long press, the  indicator light will flash rapidly. When the rapid flashing changes to slow flashing, it indicates the password has been reset.

2.6 Nameplate Description

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



EZU30DSC0014

No.	Description
1	GoodWe Trademark
2	Product Type and Model
3	Product 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 Check Before Receiving

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

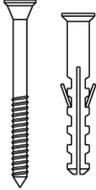
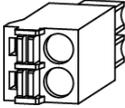
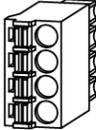
1. Check the outer packaging for any damage, such as deformation, holes, cracks, or any other signs that could indicate damage to the equipment inside the box. If any damage is found, do not open the packaging and contact your dealer.
2. Check if the device model is correct. If it does not match, do not open the packaging and contact your dealer.

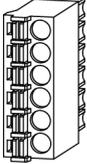
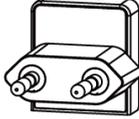
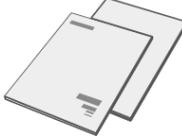
3.2 deliverables

- Check if the type and quantity of delivery items are correct and if there is any visible damage. If damaged, please contact your dealer.
- After removing delivery items from the packaging, do not place them on rough, uneven, or sharp surfaces to avoid paint chipping.

NOTICE

Adapter styles are for reference only; actual styles may vary by region.

Component	Description	Component	Description
	EzManager x1		expansion bolt x2
	2PIN communication terminal x1		4PIN communication terminal x5

Component	Description	Component	Description
	6PIN communication terminal x1		External antenna x1
	Power adapter x1		Adapter x1
	PIN terminal x28		Documentation x1

3.3 Storage

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

Time Requirements:

- If the storage time of the device exceeds two years or the time after installation without operation exceeds 6 months, it is recommended to have it inspected and tested by professionals before putting it into use.
- To ensure the good electrical performance of the internal electronic components of the device, it is recommended to power it on every 6 months during storage. If it has not been powered on for more than 6 months, it is recommended to have it inspected and tested by professionals before putting it into use.

Packaging Requirements:

Ensure the outer packaging box is not removed.

Environmental Requirements:

- Ensure the device is stored in a cool place, avoiding direct sunlight.
- Ensure the storage environment is clean, with appropriate temperature and humidity ranges, and no condensation. If there is condensation on the device ports, do not install the device.
- Ensure the device is stored away from flammable, explosive, corrosive, and other hazardous materials.

4 Installation

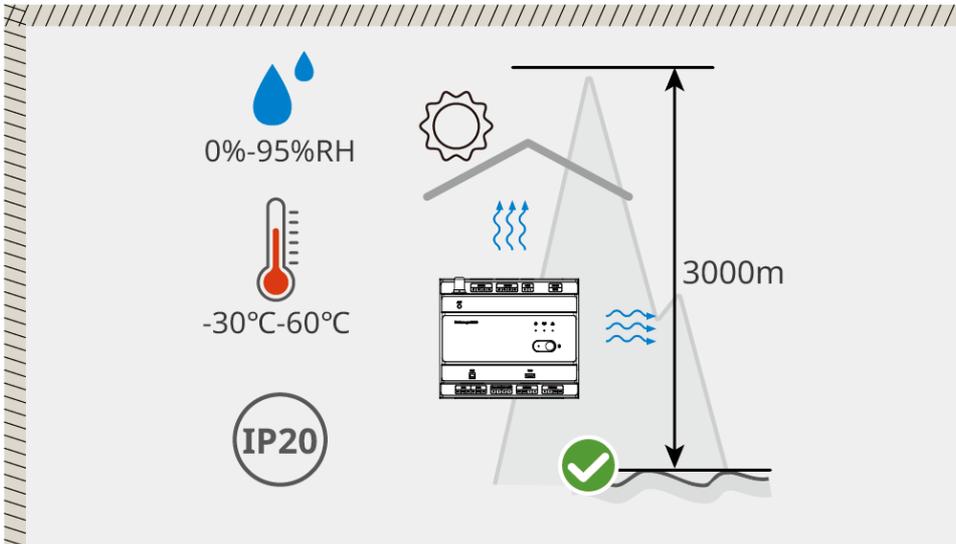
DANGER

For device installation and electrical connections, use the delivery parts shipped with the box. Otherwise, any device damage caused will not be covered under warranty.

4.1 Installation Requirements

4.1.1 Installation Environment Requirements

1. The device must not be installed in flammable, explosive, corrosive, or similar environments.
2. The device's protection rating is suitable for indoor installation; the installation environment's temperature and humidity must be within the appropriate range.
3. The installation location must be out of reach of children.
4. The installation space must meet the device's ventilation, heat dissipation, and operational space requirements.
5. The device installation height should facilitate operation and maintenance, ensuring device indicator lights, all labels are easily visible, and wiring terminals are easy to operate.
6. The device installation altitude must be lower than the maximum operating altitude.
7. Keep away from strong magnetic field environments to avoid electromagnetic interference. If there are radio stations or wireless communication equipment operating below 30MHz near the installation location, ensure the distance between the device and the wireless electromagnetic interference source exceeds 30m.



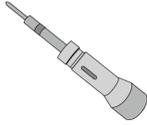
EZU30DSC0013

4.1.2 Tool Requirements

NOTICE

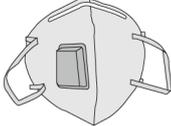
During installation, it is recommended to use the following installation tools. Other auxiliary tools may be used on-site if necessary.

Installation Tools

Tool Type	Description	Tool Type	Description
	wire stripper		crimping tool
	hammer drill (bit $\Phi 6\text{mm}$)		Torque wrench M4
	rubber hammer		Vacuum cleaner

Tool Type	Description	Tool Type	Description
	Marker pen		Level bar
	cable tie	-	-

Personal Protective Equipment

Tool Type	Description	Tool Type	Description
	insulating gloves, protective gloves		dust mask
	goggle		safety shoes

4.1.3 Equipment Installation

CAUTION

- When drilling, ensure the drilling location avoids water pipes, cables, etc. inside the wall to prevent hazards.
- When drilling, wear safety goggles and a dust mask to prevent dust from being inhaled into the respiratory tract or entering the eyes.
- Ensure the device is installed securely to prevent it from falling and causing injury.

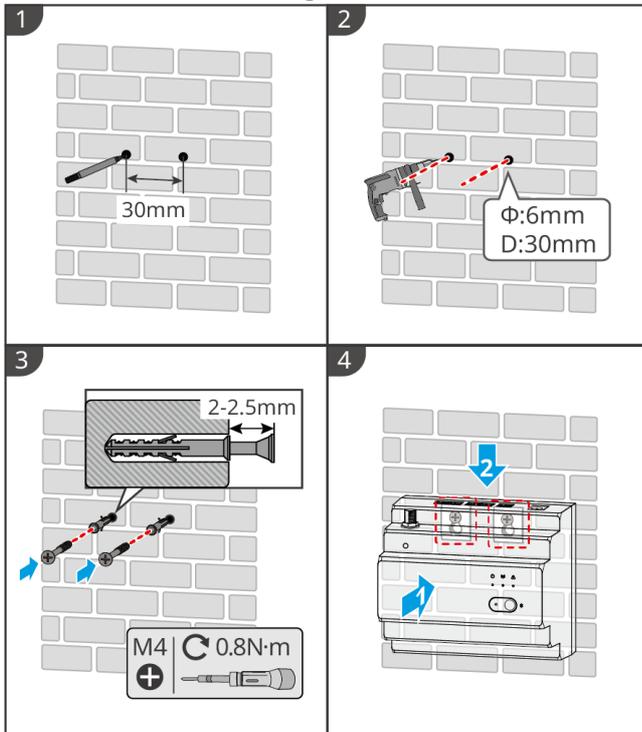
Wall Mounting

Step 1: Place the device horizontally against the wall and use a marker to mark the drilling positions.

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

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

Step 4: Hang the device onto the expansion screws. Ensure it is securely mounted with no risk of falling.



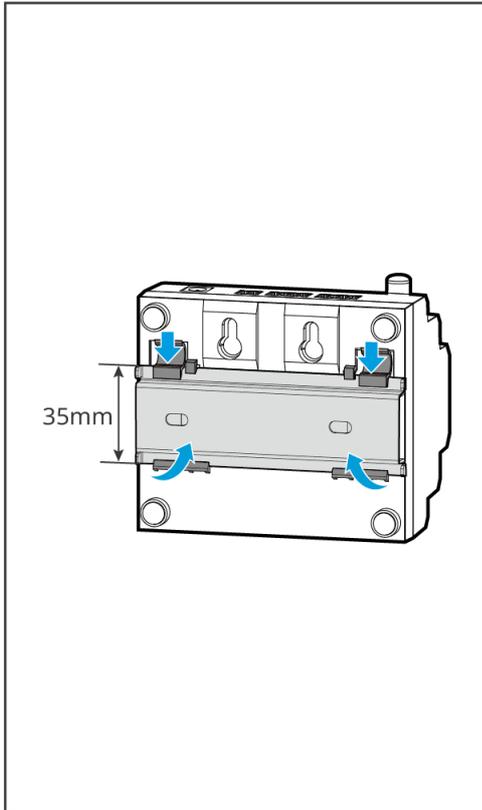
EZU30INT0011

DIN Rail Mounting

NOTICE

- Please prepare your own DIN35mm standard rail.
- When installing with the rail, the rail mounting bracket needs to be installed on the device.
- The rail needs to be installed on a solid and stable carrier, such as a wall or bracket.

Step 1: Snap the device onto a standard 35mm DIN rail from bottom to top, ensuring it is securely installed.



EZU30INT0012

Desktop Placement

The device bottom features anti-slip design, supporting desktop placement.

NOTICE

- Please install the device on a level desktop to prevent slipping and damage.
- Place the device in a location where it is not easily touched to avoid accidental contact causing signal interruption.

5 System Wirings

DANGER

- All operations during electrical connections, as well as the specifications of cables and components used, must comply with local laws and regulations.
- Before performing electrical connections, ensure the equipment is powered off. Never perform operations with power on, otherwise dangers such as electric shock may occur.
- Cables of the same type should be bundled together and routed separately from different types of cables. It is prohibited for them to be intertwined or cross-routed.
- If cables are subjected to excessive tension, poor connections may result. When wiring, leave a certain length of slack in the cable before connecting it to the equipment's terminal port.
- When crimping wire terminals, ensure the conductive part of the cable makes full contact with the terminal. Do not crimp the cable's insulation together with the terminal, as this may cause equipment malfunction, or after operation, lead to conditions such as equipment terminal block damage due to unreliable connections causing heat generation.

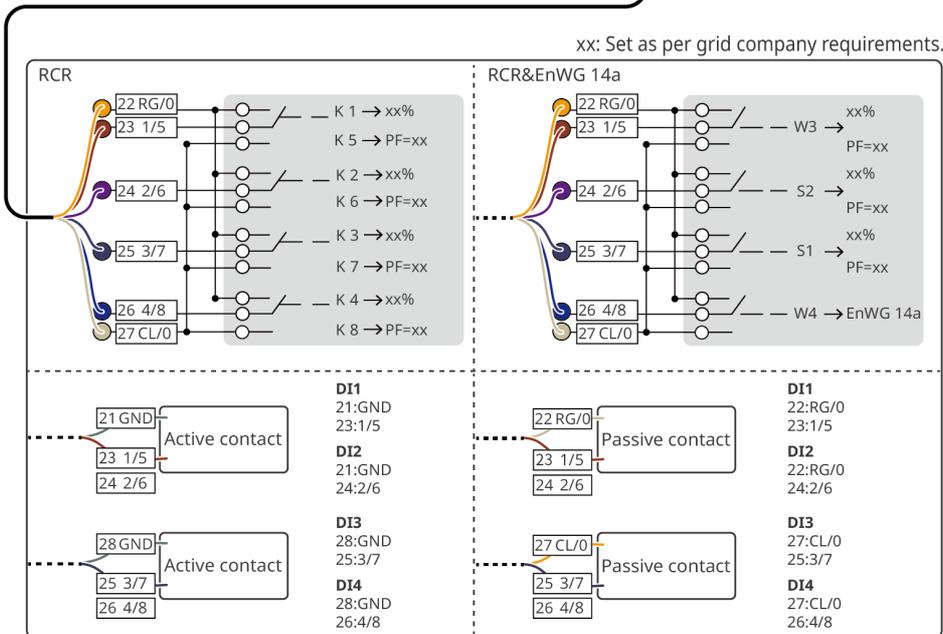
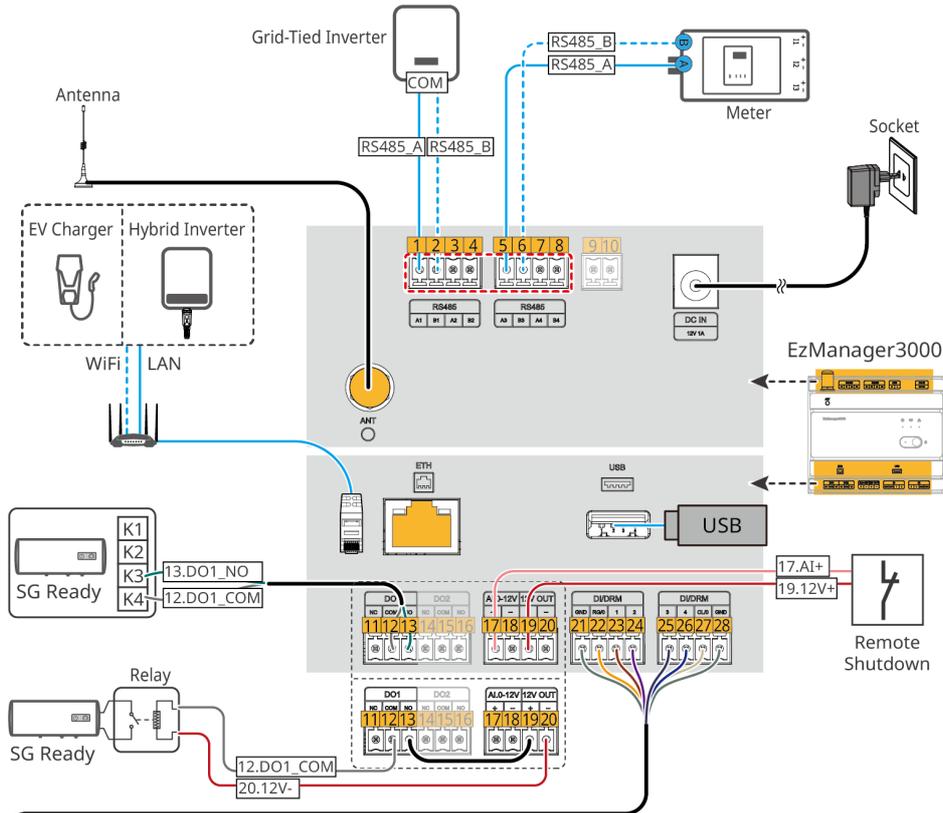
NOTICE

- When performing electrical connections, wear personal protective equipment such as safety shoes, protective gloves, and insulated gloves as required.
- Only qualified personnel are permitted to perform electrical connection operations.
- The cable colors shown in the graphics in this document are for reference only. Actual cable specifications must comply with local regulations.

5.1 Detailed System Wiring Diagram

NOTICE

The values for active power, reactive power, etc., of the RCR device in the wiring diagram should be set via the SEMS+ App according to the actual requirements of the grid company. Please refer to the [SEMS+ App User Manual](#).



EZU30ELC0019

5.2 Preparation Before Wiring

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

No.	Silkscreen	Cable	Recommended Specification	Acquisition Method
1	RS485	RS485 communication cable	<ul style="list-style-type: none"> Outdoor shielded twisted pair copper cable Conductor cross-sectional area: (24AWG-16AWG) 0.2mm²-1.0mm² 	Self-provided
2	CAN	CAN communication cable		Self-provided
3	DO1/2	DO signal cable	<ul style="list-style-type: none"> Outdoor copper 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-provided
6	DI	DI signal cable		Self-provided
7	ETH	LAN communication cable	CAT 5E or above outdoor shielded network cable	Self-provided

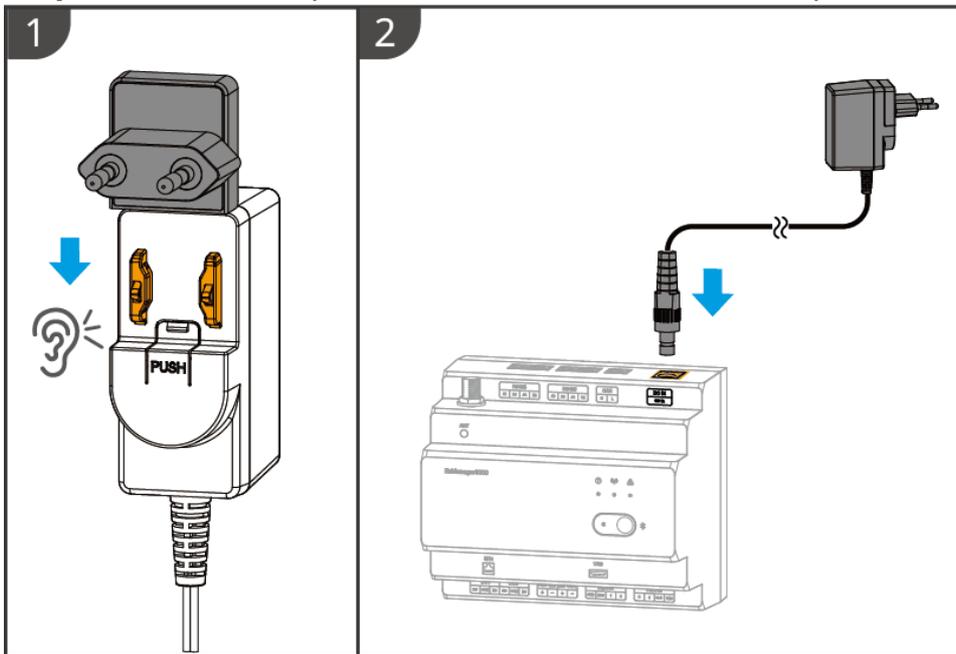
5.3 Connecting the AC Power Cord

NOTICE

- Please connect the included power adapter to the DC IN port to supply power to the device.
- Power adapter specifications: 12V/1.5A.

Step 1: Install the adapter onto the power adapter.

Step 2: Connect the power cord to the device's DC IN port and a household AC outlet.



EZU30ELC0025

5.4 Connecting Communication Cables

NOTICE

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

Communication Port Definition

No.	Port Definition	Description
1	RS485_A1	RS485 communication connection port. Used to connect to 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	

No.	Port Definition	Description
13	DO1_NO	<ul style="list-style-type: none"> • Digital signal output port. <ul style="list-style-type: none"> ◦ NO: Normally open contact ◦ COM: Common point ◦ NC: Normally closed contact • Supports dry contact DO output, DO contact rating is 30V DC@1A. • Supports connecting to SG Ready heat pumps, controlling the heat pump via dry contact signals. • Heat pump operating modes can be set via the SEMS+ App. <ul style="list-style-type: none"> ◦ Operating Mode 2 (Signal 0:0): Energy-saving Mode, the heat pump operates in energy-saving mode. ◦ Operating Mode 3 (Signal 0:1): The heat pump increases hot water reserve while maintaining basic operation. • Depending on the SG Ready heat pump type, the following two control methods are supported: <ul style="list-style-type: none"> ◦ Drive an external relay using the 12V power output port to control the heat pump. Select relay specifications based on actual requirements. ◦ Directly drive the heat pump via the DO port.
14	DO2_NC	Reserved port.
15	DO2_COM	
16	DO2_NO	
17	AI IN+	Used together with the 12V power output port to implement a one-touch shutdown function.
18	AI_GND	
19	12V Power Output +	

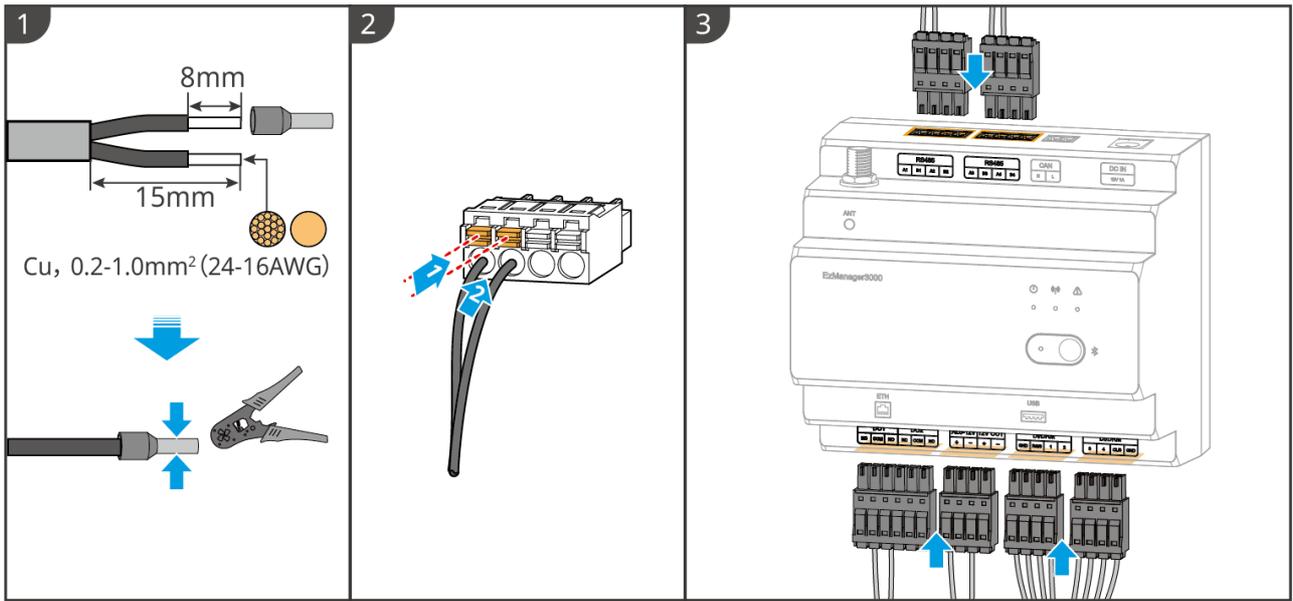
No.	Port Definition	Description
20	12V Power Output -	<ul style="list-style-type: none"> Rated output power capability is 12V@100mA, output voltage range is 9.5V~13.2V Used together with the AI port to implement a one-touch shutdown function. Used together with the DO port to implement SG Ready heat pump control function.
21	DI_GND	<ul style="list-style-type: none"> Digital signal input port. RCR (Ripple Control Receiver) signal control port, meeting grid dispatch requirements in regions like Germany. Supports connecting to active contact signals and passive contact signals; active contacts support 0-12V voltage input, where 8-12V is considered high level. It is recommended that the DI signal cable transmission distance does not 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

Step 1: Prepare a communication cable of appropriate specifications, strip the wire to a suitable length, and crimp on the tubular terminals.

Step 2: Insert the crimped cable into the communication terminal block.

Step 3: Insert the communication terminal block into the corresponding communication port.

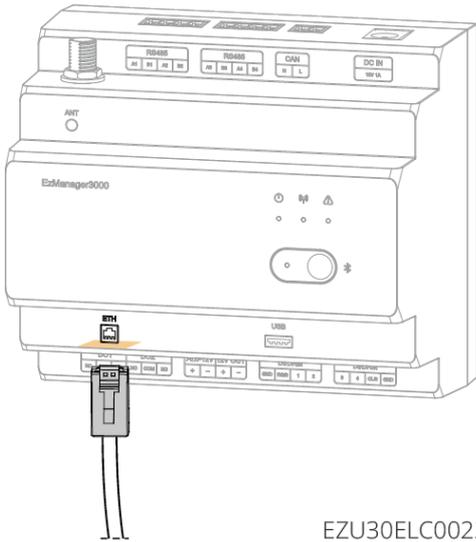


EZU30ELC0021

5.5 Connect Network Cable

NOTICE

- EzManager supports connection to a router via LAN.
- Smart devices, charging piles, hybrid inverters, etc., can connect to EzManager through a router. Supported device models are as follows:
 - Smart Plug: Shelly Plus Plug S, with software version no lower than V1.4.4.
 - Charging Pile: GoodWe HCA series charging pile.
 - hybrid inverter: GoodWe ET15-30kW series, ES G2 series, ET G2 series, etc. For software version requirements, please refer to the [Compatibility List of Inverters and IoT Products](#).



EZU30ELC0022

5.6 Installing an External WiFi Antenna

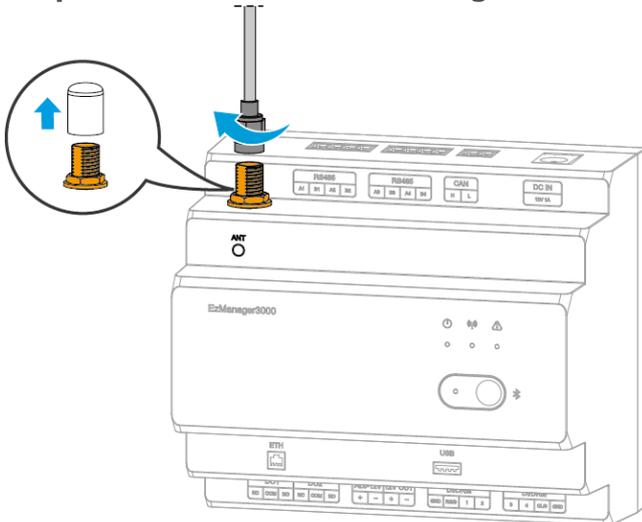
NOTICE

- EzManager has a built-in WiFi module. To improve signal strength, you can install the external antenna included in the accessories.
- After installing the external antenna, please set the antenna type to "External Antenna" in the SEMS+ App.

Step 1: Remove the dust cap from the ANT port.

Step 2: Install the external antenna by screwing it on clockwise until tight.

Step 3: Secure the external magnetic base antenna in a suitable location.



EZU30ELC0023

5.7 Connecting USB Ports

NOTICE

- You can connect a USB flash drive via the USB port to update the device software version. Please contact the after-sales service center to obtain the software upgrade package.
- Please prepare your own FAT32 format USB flash drive.

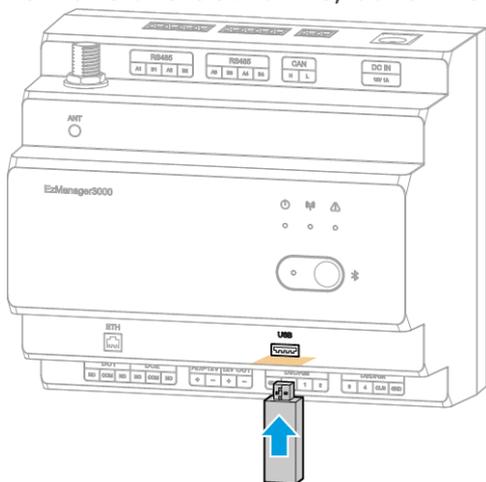
When upgrading the software version via a USB drive, please refer to the following steps:

Step 1: Contact after-sales service to obtain the device upgrade package, and prepare a USB drive formatted in FAT32 with a capacity not exceeding 32GB.

Step 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.

Step 3: Insert the USB drive into the EzManager USB port. After EzManager detects the device upgrade package and begins the upgrade, the upgrade indicator light will change to fast blinking. If the upgrade indicator light does not change to fast blinking, the upgrade has not started; please check the upgrade package and the status of the USB drive.

Step 4: After the upgrade is complete, EzManager will automatically restart. Please remove the USB drive; otherwise, it may cause repeated upgrades.



EZU30ELC0024

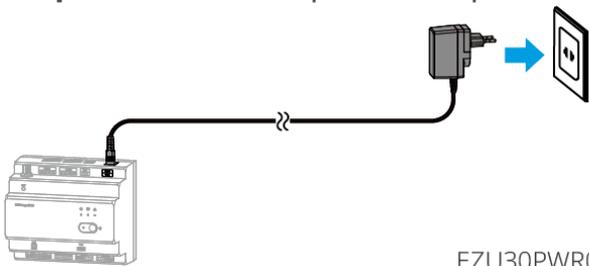
6 System Commissioning

6.1 Check Before Power ON

No.	Inspection Item
1	The equipment is securely installed, positioned for convenient operation and maintenance, with adequate space for ventilation and heat dissipation, and the installation environment is clean and tidy.
2	Power cables, Communication cables, network cables, etc., are connected correctly and securely.
3	Cable bundling meets routing requirements, is reasonably distributed, and shows no damage.
4	Equipment input signals and input power parameters are within the equipment's operating range.

6.2 Power ON

Step 1: Connect the power adapter to the household power socket.



EZU30PWR0004

6.3 Indicator Light Instructions

Indicator	Indicator Status	Description
		Green light steady: Device power supply is normal.

Indicator	Indicator Status	Description
		Green light off: Device is powered off or power supply is abnormal.
		Green light steady: Device communication with the server is normal.
		Green light flashing four times: Device is connected to the router, but connection to the server is abnormal.
		Green light flashing twice: Device is not connected to the router.
		Yellow light flashing four times: EzManager is upgrading.
		Blue light steady: Bluetooth is enabled, and an external device is connected to EzManager.
		Blue light slow flash (500ms on/500ms off): Bluetooth is enabled, waiting for external device connection.
		Blue light fast flash (50ms on/50ms off): EzManager is resetting the login password for connecting to the SEMS+ App.
		Blue light off: Bluetooth is disabled.

Button	Description
Double-click	Enable Bluetooth.
Short press for 1-3s	<ul style="list-style-type: none"> Restart EzManager. After a short press, the , , and  indicator lights will illuminate simultaneously. After they turn off, the device begins to restart.

Button	Description
Long press for 6-10s	<ul style="list-style-type: none"> • Reset the login password for connecting EzManager to the SEMS+ App via Bluetooth. Default password: 1234. • After a long press, the  indicator light will flash rapidly. When the rapid flashing changes to slow flashing, it indicates the password has been reset.

7 System Commissioning

EzManager supports commissioning via the SEMS+ App. The SEMS+ App is a software used for remote power plant monitoring or local device commissioning. It supports installers or owners:

- Remotely monitor the operation of the power plant and set the operating parameters of the plant and devices.
- Locally connect to devices, view device operation status, and set device parameters.

For detailed functions, please refer to the "[SEMS+ App User Manual](#)".

The user manual can be obtained from the official website or by scanning the QRcode below.



SEMS+ App User Manual

7.1 Download and Install SEMS+ App

Phone Requirements:

- Mobile OS requirements: Android 7.0 and above, iOS 15.1 and above.
- The phone must have a web browser and be connected to the Internet.
- The phone must support WLAN/Bluetooth functionality.

Download Methods:

Method 1:

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



SEMS0163

Method 2:

Scan the QR code below to download and install.

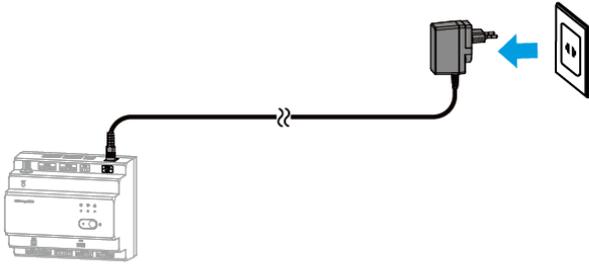


SEMS0164

8 Maintenance

8.1 Power OFF the System

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



EZU30PWR0005

8.2 Removing the Equipment

DANGER

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

Step 1: Disconnect all electrical connections to the equipment, including power cables and communication cables.

Step 2: Remove the equipment.

Step 3: Store the equipment properly. If it will be put into use later, ensure the storage conditions meet the requirements.

8.3 Disposing of the Equipment

When the equipment can no longer be used and needs to be disposed of, please dispose of it according to the electrical waste disposal requirements of the regulations in the country/region where the equipment is located. The equipment must not be disposed of as general household waste.

8.4 Routine Maintenance

WARNING

- If any issues are discovered that may affect the battery or energy storage inverter system, contact after-sales personnel. Unauthorized disassembly is prohibited.
- If exposed copper wires are found inside the conductive wires, do not touch them due to high voltage danger. Contact after-sales personnel. Unauthorized disassembly is prohibited.
- In case of other emergencies, contact after-sales personnel immediately. Operate under the guidance of after-sales personnel or wait for them to perform on-site operations.

Maintenance Item	Maintenance Method	Maintenance Cycle	Maintenance Purpose
System Cleaning	Check if the installation space meets requirements, and check for debris accumulation around the equipment.	Once every six months	Prevent cooling failures.
System Installation	<ol style="list-style-type: none"> 1. Check if the equipment installation is secure. 2. Check for any damage or deformation on the equipment exterior. 	Once every six months to once a year	Confirm equipment installation stability.
Electrical Connections	Check for loose electrical connections, cable exterior damage, or exposed copper.	Once every six months to once a year	Confirm electrical connection reliability.

8.5 Troubleshooting

Please perform fault diagnosis 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 to facilitate a quick resolution.

1. Product information, such as: 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.

No.	Fault Phenomenon	Fault Cause	Solution
1	 Power indicator is off	Loose power cord connection	Please securely reconnect the device power cord.
		Power adapter not plugged in firmly	Please reconnect the power adapter to the power outlet.
		Power adapter failure	If there is still no power supply after confirming proper connection, please contact the dealer or after-sales service center to replace the power adapter.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
2	 Communication indicator is off	Device operation anomaly	Please unplug and replug the power cord to restart the device.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.

No.	Fault Phenomenon	Fault Cause	Solution
3	 Upgrade indicator stays on	Device operation anomaly	Please unplug and replug the power cord to restart the device.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
4	Unable to upgrade system via USB drive	USB drive format issue	Please confirm the USB drive format is FAT32.
		Incorrect upgrade package path	Create a new folder named "collector" in the root directory of the USB drive, and place the device upgrade package inside the "collector" folder.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
5	Wired network connection failure	Incorrect network parameter configuration	Please reconfigure the network parameters, such as acquisition method, IP address, etc.
		Device failure	Please contact the dealer or after-sales service center.
6	External RS485 device cannot be used	Abnormal RS485 wiring	Please reconnect the RS485 communication cable and confirm the wire sequence is correct.
		Incorrect RS485 communication parameters	Please check if the parameters match the actual connected port number and confirm the communication parameters are correct.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.

No.	Fault Phenomenon	Fault Cause	Solution
7	Weak WiFi signal, unable to connect to router	Inappropriate antenna selection	<ul style="list-style-type: none"> • Enclosed environment (e.g., indoors, inside metal cabinet): Use an external antenna (e.g., magnetic mount antenna) or place the antenna in an open location. • Open environment: The built-in antenna can be used.
		External antenna not connected	Check if the external antenna is securely connected to the device's antenna port. If an external antenna cannot be used, switch the antenna to the built-in antenna within the App.
		EzManager is too far from the router	Adjust the device position to be as close as possible to the router.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
8	Anti-backfeed function not working	Loose or detached RS485 cable connection	Please check the RS485 wiring of the inverter/meter to ensure correct and secure connections.
		Anti-backfeed function not enabled	Please check via the SEMS+ App whether the anti-backfeed function is enabled.
		Inverter software version does not support anti-backfeed function	Please contact the dealer or after-sales service center to confirm if the inverter model and software version support the anti-backfeed function.

No.	Fault Phenomenon	Fault Cause	Solution
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
9	RCR function not working	Loose or detached RS485 cable connection	Please check the RS485 wiring of the inverter to ensure correct and secure connections.
		Incorrect external device wiring	Please confirm the RCR device wiring is correct.
		Function not configured/enabled in the App	Please check via the SEMS+ App whether the function is enabled.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
10	One-touch shutdown function not working	Incorrect external device wiring	Please confirm the one-touch shutdown device wiring is correct.
		Function not configured/enabled in the App	Please check via the SEMS+ App whether the function is enabled.
		External device does not support one-touch shutdown or the function is not enabled	Please check the external device to ensure it supports and has enabled the one-touch shutdown function.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
11		Incorrect heat pump wiring	Please confirm the heat pump wiring is correct.

No.	Fault Phenomenon	Fault Cause	Solution
	DO interface control of heat pump not working	Function not configured/enabled in the App	Please check via the SEMS+ App whether the function is enabled.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
12	Unable to connect via Bluetooth	Bluetooth function not enabled	Double-click the EzManager button, and after the blue indicator flashes twice, connect via Bluetooth.
		EzManager installed in a metal box without using an external antenna	Use an external magnetic mount antenna, install it outside the metal box, and enable the external antenna setting in the SEMS+ App.
		EzManager is too far from the phone or other terminal device with the App installed	Please bring the phone closer to the EzManager.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
		Bluetooth indicator flashes but device cannot be searched after failed connection from a distance	Double-click the EzManager indicator button to enable the Bluetooth signal.
		Bluetooth indicator is flashing, but the device cannot be searched or identified	Double-click the EzManager indicator button to enable the Bluetooth signal.

No.	Fault Phenomenon	Fault Cause	Solution
		Bluetooth always-on function is enabled in the SEMS+ App, but the Bluetooth indicator still turns off and the device cannot be searched	Double-click the EzManager indicator button to enable the Bluetooth signal.
		Device Bluetooth signal cannot be searched, and remains unsearchable even after double-clicking the indicator button	Restart the EzManager.
13	Cannot find inverter when creating a power plant	Incorrect module software version paired with the energy storage inverter	Please upgrade the module software version via the SolarGo App to ensure the software version is 2.3.32 or above. For detailed operations, please refer to the SolarGo App user manual.
		The module paired with the energy storage inverter and the EzManager are not configured in the same network environment	Please use the SolarGo App to connect the inverter module and the EzManager to the same router.
		Modbus tcp function of the module paired with the energy storage inverter is not enabled	Please check and enable the Modbus tcp function via the SolarGo App.

No.	Fault Phenomenon	Fault Cause	Solution
		Inverter is already used in another power plant	Remove the inverter from the original power plant.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
14	Unable to add meter when creating a power plant	Mismatch between the actual RS485 port the meter is connected to and the software configuration	Please use the SEMS+ App to set the meter connection port to the actual RS485 port it is connected to.
		Selected meter model does not match the actual meter model	Please use the SEMS+ App to select the actual meter model in use.
		RS485 wires are reversed	Please check if the meter wiring is correct.
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
15	Unable to add charging pile when creating a power plant	Charging pile and EzManager are not configured in the same network environment	Please use the SolarGo App to check and connect the charging pile and the EzManager to the same router.
		Modbus tcp function of the charging pile is not enabled	Please check and enable the Modbus tcp function via the SolarGo App.

No.	Fault Phenomenon	Fault Cause	Solution
		Device failure	If the fault persists after ruling out the above issues, please contact the dealer or after-sales service center.
16	In the SEMS+ App, after setting AI mode, the working mode displays as another mode	User enables AI mode for the first time after plant creation	For new users, AI mode typically takes effect 24 hours after being enabled.
		User enables AI mode for the first time on that day	When AI mode is enabled for the first time on a given day, due to data transmission time lag, it may take effect in the second or third hour.
17	In AI mode, battery does not charge or charges with very low power during low electricity price periods	Unreasonable battery SOC upper limit setting	Please check the battery SOC setting value via the energy storage inverter remote settings interface to ensure it is correct and reasonable.
		Current period is not the lowest electricity price period	Please confirm if there is a lower electricity price after this period.
		Sufficient PV generation is expected after this period, allowing charging via PV	Please confirm if there is a period with sufficient PV generation after this period.
		Power consumption is about to exceed the demand limit	Please check the demand power consumption limit. If the set value does not match the actual, modify it to the correct value; if they match, the limit has been reached and power consumption will be restricted.

No.	Fault Phenomenon	Fault Cause	Solution
		Current battery SOC is sufficient for subsequent load usage, no need to charge	Please check the current battery SOC value.
18	In AI mode, battery does not discharge or discharges with very low power during high electricity price periods	Unreasonable battery SOC lower limit setting	Please check the battery SOC setting value via the energy storage inverter remote settings interface to ensure it is correct and reasonable.
		Current period is not the highest electricity price period, discharge needs to be reserved for later	Please confirm if there is a higher electricity price after this period.
		Current PV generation is sufficient, simultaneous discharge may cause grid feed-in power to exceed the limit	Please confirm the current PV generation and the anti-backfeed limit value.
		Anti-backfeed limitation	Please confirm if the anti-backfeed function is set correctly.
19	In AI mode, does not charge when PV generation is sufficient	Current period has high sell-back electricity price, prioritizing selling. And subsequent PV generation is still sufficient, allowing charging later.	Please confirm the current and subsequent period's PV generation.

No.	Fault Phenomenon	Fault Cause	Solution
		There are negative electricity price periods later, more suitable for charging	Please confirm if there are negative electricity prices in subsequent periods.
20	In AI mode, battery discharges during low electricity price periods	There are negative electricity price periods later, more suitable for charging	Please confirm if there are negative electricity prices in subsequent periods.
		Sufficient PV generation is expected after this period, allowing charging via PV	Please confirm the current and subsequent period's PV generation.

9 technical parameter

model	EzManager3000
Device Management	
hybrid inverter	Max. 1 unit
grid-tied PV inverter	Max. 1 unit
EV Charger	Max. 2 units
Heat Pump	Max. 1 unit (SG-Ready)
Shelly Device	Max. 12 units
Power	
Power Adapter	AC Input: 100~240V, 50/60Hz DC Output: 12V
DC Input (V)	12V
Power Consumption (W)	≤7
Communication Interfaces	
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, DIN rail, Desktop
Environmental Parameters	
Operating Temperature Range (°C)	-30~+60

model	EzManager3000
Storage Temperature Range (°C)	-40~+70
Relative Humidity	0 to 95% (non-condensing)
Max. Operating Altitude (m)	3000
Ingress Protection Rating	IP20
Standards Compliance	
Certification	CE-RED (EN18031), RCM

10 Appendix

10.2 Explanation of Terms

Definition of Overvoltage Categories

Overvoltage Category I: Equipment connected to circuits with measures to limit transient overvoltages to a relatively low level.

Overvoltage Category II: Energy-consuming equipment supplied by fixed electrical installations. This category includes appliances, portable tools, and other household and similar loads. Overvoltage Category III shall be adopted if special requirements for the reliability and suitability of such equipment exist.

Overvoltage Category III: Equipment within fixed electrical installations where reliability and suitability must meet special requirements. This includes switching devices within fixed electrical installations and industrial equipment permanently connected to fixed electrical installations.

Overvoltage Category IV: Equipment used at the origin of the electrical installation, including meters and primary overcurrent protection devices.

Definition of Damp Location Categories

Environmental Parameter	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%

Definition of Environmental Categories

Outdoor Inverter: Ambient air temperature range -25°C to +60°C, suitable for Pollution Degree 3 environment.

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

Indoor Type I Inverter: Ambient air temperature range 0°C to +40°C, suitable for

Pollution Degree 2 environment.

Definition of Pollution Degree Categories

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

Pollution Degree 2: Normally only non-conductive pollution, but temporary conductivity due to condensation must be considered.

Pollution Degree 3: Conductive pollution exists, or non-conductive pollution becomes conductive due to condensation.

Pollution Degree 4: Persistent conductive pollution, for example due to conductive dust, rain, or snow.

Contact Information

GoodWe Technologies Co., Ltd.
No. 90 Zijin Road, Suzhou New District, China
400-998-1212
www.goodwe.com
service@goodwe.com