智能数据采集器

EzLogger3000U

EzLogger3000U-A

用户手册

1. Copyright Statement

NOTICE

Due to product version upgrades or other reasons, the content of the documentation may be updated periodically. Unless otherwise agreed, the content of the documentation cannot replace the safety precautions on the product labels. All descriptions in the documentation are provided for guidance only.

2. About This Manual

2.1. Overview

This document primarily introduces the product information, installation wiring, configuration and commissioning, troubleshooting, and maintenance of the intelligent data collector. Please read this manual carefully before installing and using the product to under stand the safety information and familiarize yourself with the product's functions and features. The document may be updated periodically; please obtain the latest version and additional product information from the official website.

2.2. Applicable Model

This document applies to the following smart data loggers:

EzLogger3000U

EzLogger3000U-A

EzLogger3000U/EzLogger3000U-A, collectively referred to as EzLogger.

2.3. Applicable Personnel

Only for use by professionals who are familiar with local regulatory standards and electrical systems, have received specialized training, and possess in-depth knowledge of this product.

2.4. Symbol Definition

DANGER
Indicates a highly hazardous situation that, if not avoided, will result in death or serious injury.
WARNING
Indicates a medium potential hazard, which if not avoided, could result in death or serious injury.
CAUTION
Indicates a low potential hazard which, if not avoided, may result in minor or moderate injury.
NOTICE
Emphasis and supplementation of content may also provide tips or tricks for optimizing product use, helping you solve a problem or save time.

3. Safety Precautions

WARNING
The equipment has been strictly designed in accordance with safety regulations

and has passed all required tests. However, as electrical apparatus, all relevant safety instructions must be followed before performing any operations. Improper handling may result in severe injury or property damage.

3.1. General Safety

NOTICE

- Due to product version upgrades or other reasons, the content of the documentation may be updated periodically. Unless otherwise agreed, the content of the documentation cannot replace the safety precautions on the product labels. All descriptions in the documentation are provided for guidance only.
- Please read this document carefully before installing the equipment to under stand the product and precautions.
- All operations of the equipment must be performed by professional and qualified electrical technicians who are thoroughly familiar with the relevant local standards and safety regulations at the project site.
- When operating equipment, use insulated tools and wear personal protective equipment to ensure personal safety. When handling electronic components, wear anti-static gloves, wrist straps, and clothing to protect the devices from electrostatic damage.
- Unauthorized disassembly or modification may cause equipment damage, which is not covered under warranty.
- Damage to equipment or personal injury caused by failure to install, use, or configure the device in accordance with this document or the corresponding user manual is beyond the manufacturer's liability. For more product warranty information, please visit the official website: .

3.2. Grounding Safety

DANGER

When installing equipment, the grounding cable must be installed first; when removing equipment, the grounding cable must be removed last.

WARNING

- Please ground the equipment nearby.
- Before operating the equipment, ensure that it is reliably grounded.

3.3. Personal Safety

DANGER
• When operating equipment, use insulated tools and wear personal protective equipment to ensure personal safety. • Do not approach or to uch the equipment during a short circuit; immediately shut off the power. • Before performing electrical connections on the equipment, disconnect all upstream switches to ensure the equipment is de-energized.

3.4. Equipment Safety

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

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

3.5. Warning Label Interpretation

DANGER
• After installation, the labels and warning signs on the equipment enclosure must remain clearly visible. Obstructing, altering, or damaging the m is strictly prohibited. • The warning labels on the equipment enclosure are as follows:

No.	Symbol	Description
1		High voltage hazard. High voltage is present during equipment operation. Ensure the equipment is de-energized before performing any operations.
2		Potential hazards exist during equipment operation. Please take necessary precautions when operating.
3		Before operating the equipment, please read the product manual carefully.
4		grounding point
5		CE Marking
6		The equipment must not be disposed of as household waste. Please handle the equipment in accordance with local laws and regulations or return it to the manufacturer.

3.6. Personnel Requirements

NOTICE
• Personnel responsible for installing and maintaining equipment must under go rigorous training to under stand all product safety precautions and master the correct operating procedures. • Installation, operation, maintenance, and replacement of equipment or components shall only be performed by qualified professionals or trained personnel.

3.7. EU Declaration of Conformity

3.7.1. Devices with out wireless communication functionality

Devices with out wireless communication functions that can be sold in the European market meet the following directive requirements:

- Electromagnetic compatibility Directive 2014/30/EU (EMC)
- Electrical Apparatus Low Voltage Directive 2014/35/EU (LVD)
- 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)

4. Product Introduction

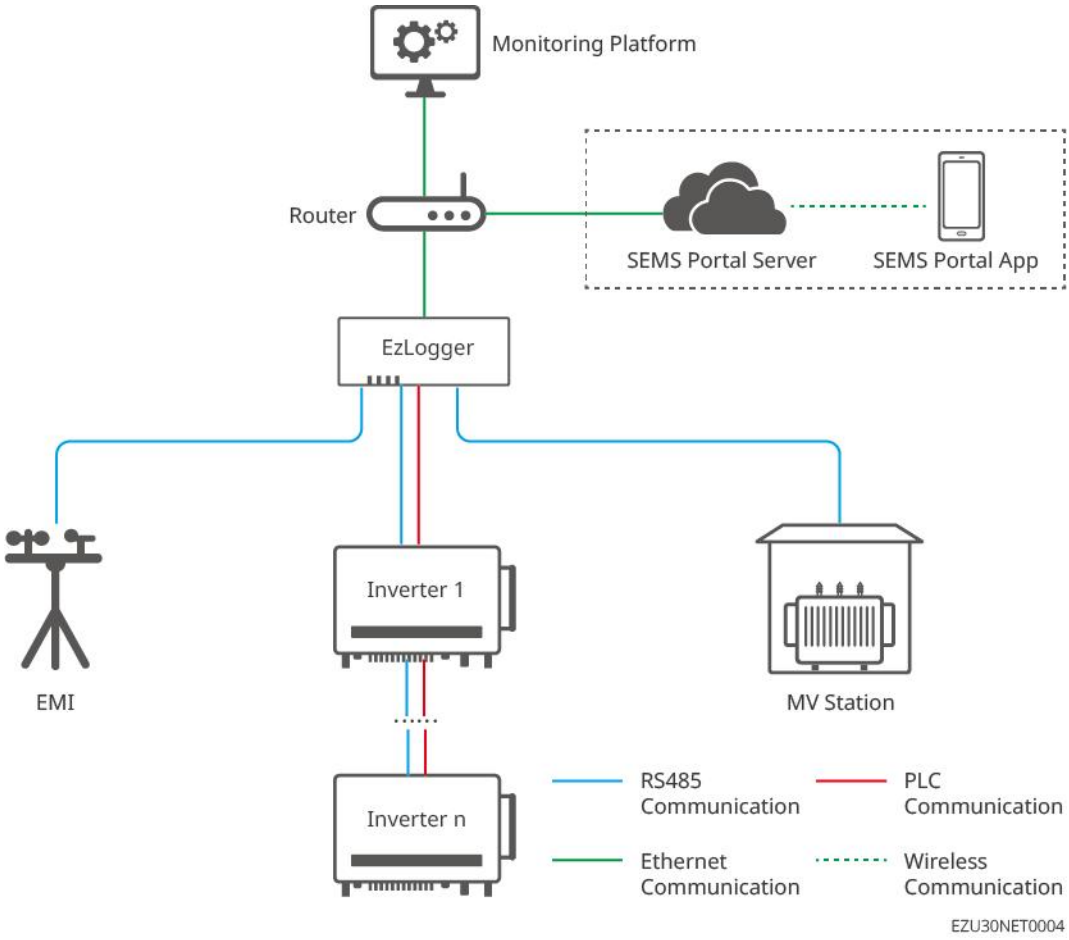
4.1. Functional Description

The EzLogger is a dedicated device for the photovoltaic power generation system monitoring and management platform. It features interface aggregation, data acquisition, log storage, centralized monitoring, and centralized maintenance for equipment such as inverters, environmental monitors, and box transformers in photovoltaic power generation systems.

EzLogger is suitable for photovoltaic systems:

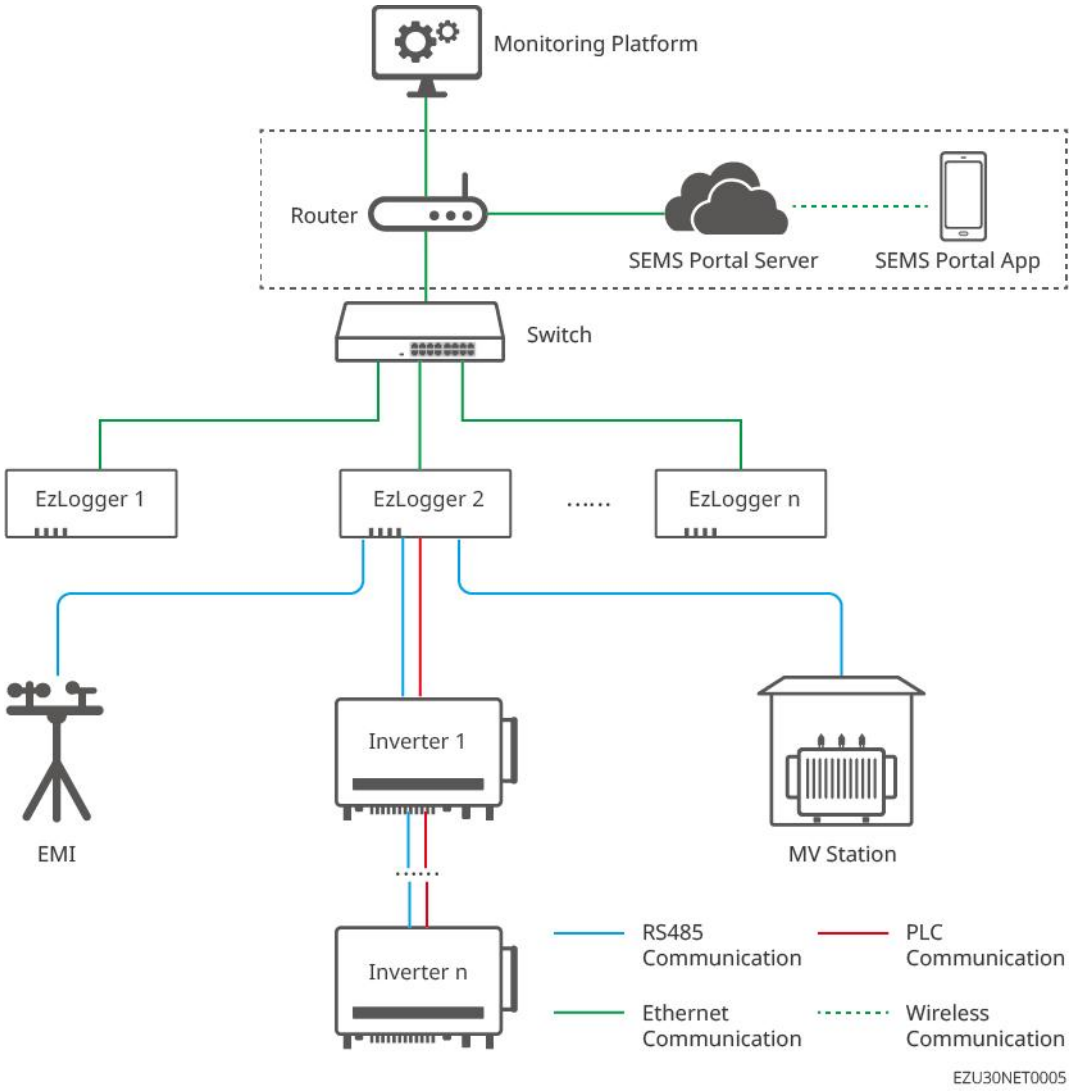
- Through RS485 communication, it can connect to: Inverter, box transformer, environmental monitor, and other RS485 communication devices.
- Connection via Ethernet communication: Router, switch, PC, power plant management and monitoring system.
- Can be connected via PLC communication: inverters with PLC communication capability.

Single-unit grid connection

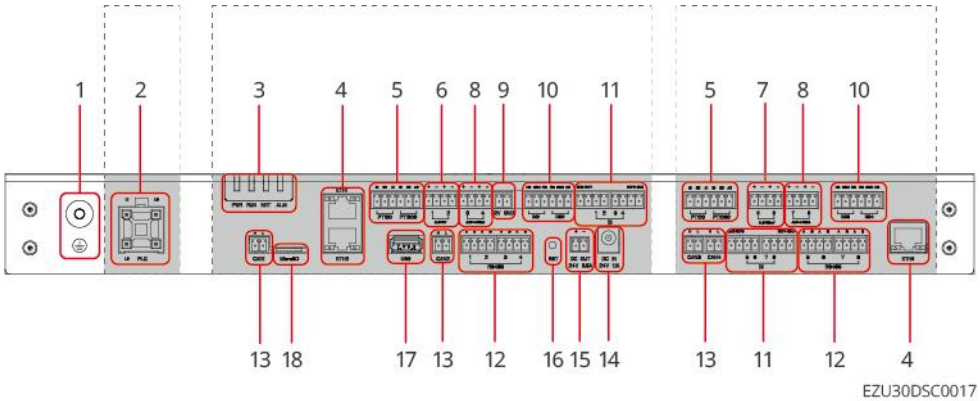


- The EzLogger single-channel RS485 communication supports the connection of up to 20 inverters.
- PLC communication supports up to 60 inverters.
- When using PLC communication, it is recommended to add peripheral protection circuits such as circuit breakers and lightning protection modules. Recommended specifications:
    - Lightning protection module: 1000VAC/20KA
    - breaker: 1000VAC/32A
- In the same sub-array, do not mix equipment from different manufacturers when using PLC. If mixing is necessary, please contact the manufacturer in advance for detailed consultation.

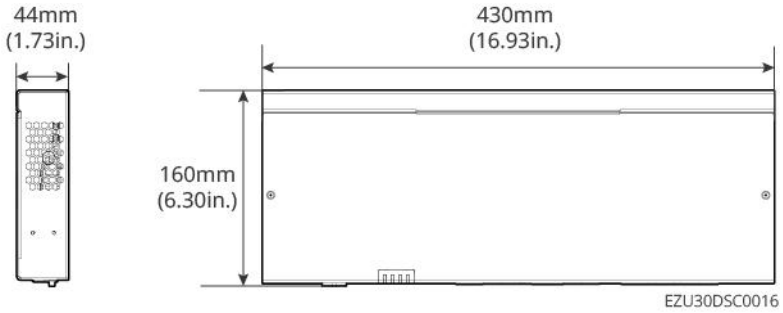
Multi-unit Networking



4.2. Appearance and Dimensions Introduction



No.	Silkscreen	Description
1		Protective grounding point.
2	PLC	PLC communication connection port.
3	indicator	Indicates the operating status of the equipment.
4	ETH1~ ETH3	Network cable connection port, ETH3 is a reserved port.
5	PT100 PT1000	Temperature sensor connection port.
6	AI_0-12V 1-2	AI signal input connection port: 0-12V.
7	AI_0-100mV 5-6	AI signal input connection port: 0-100mV.
8	AI_0/4-20mA 3-4/7-8	AI signal input connection port: 4-20mA.
9	12V GND	12V power output interface.
10	DO 1~ DO 4	DO signal output connection port, DO3/DO4 are reserved ports.
11	DI 1~ DI 8	DI signal input connection port, supports connection of passive contacts and active contact signals.
12	RS485 1~ RS485 8	RS485 communication connection port.
13	CAN1~ CAN4	CAN communication connection ports. CAN1 is used with the CCO module, while CAN2/CAN3/CAN4 are reserved ports.
14	DC IN 24V 1.1A	24V DC power input connection port.
15	DC OUT 24V 0.5A	24V DC power output connection port.
16	RST	• Reset button. • Press and hold for 6~20S: EzLogger restarts, network settings and embedded web login password are restored to factory defaults; Press briefly for 1~3S: EzLogger restarts.
17	USB	USB connection port for system software version updates.
18	MicroSD	MicroSD card interface for storing EzLogger operation logs, maintenance logs, and event logs.

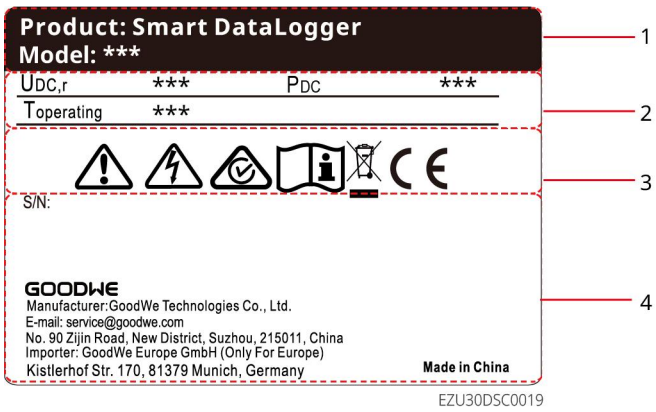


4.3. Indicator Light Description

Indicator	Status	Description
PWR		Green light steady on: Normal power supply to the equipment.
		Off: Abnormal power supply to the equipment
RUN		Green light steady on/off: Equipment operation abnormal
		Green light slow flashing: The device is operating normally.
NET		Green light steady on: Device is connected normally to the server.
		Green light flashing: Device is connected to the router but not to the server.
		Green light slow flashing: Device not connected to router
ALM		Steady red: All inverters in the system are in a fault state.
		Off: At least one inverter in the system is in normal operation.

4.4. Nameplate Description

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



EZU30DSC0019

No.	Description	No.	Description
1	Product Type and Model	2	Product Technical Parameters
3	Product Safety Symbols	4	GoodWe trademark, contact information, serial number details

5. Check and Storage

5.1. Pre-delivery Inspection

Before signing for the product, please carefully inspect the following items:

1. Check the outer packaging for any damage, such as deformation, punctures, cracks, or other signs that may indicate potential harm to the equipment inside the box. If damage is found, do not open the packaging and contact your distributor.
2. Check if the equipment model is correct. If the re is any discrepancy, do not open the package and contact your distributor.
3. Check whether the type and quantity of the delivered items are correct and whether the re is any damage to the appearance. If the re is any damage, please contact your dealer.

5.2. Storage

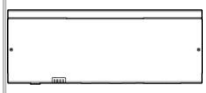
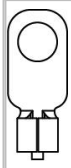
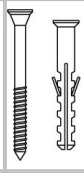
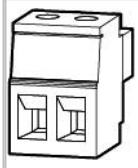
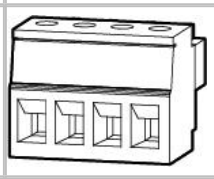
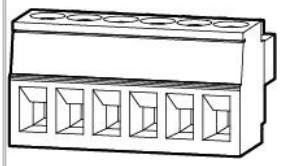
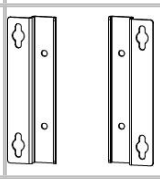
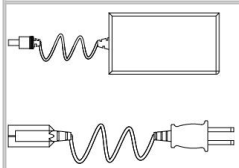
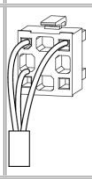
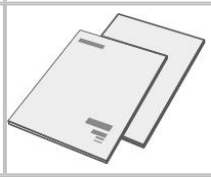
If the EzLogger is not to be put into use immediately, store it according to the following requirements:

1. Ensure the outer packaging box is not removed and the desiccant inside the box is not missing.
2. Ensure the storage environment is clean, with appropriate temperature and humidity ranges, and free from condensation.

3. After long-term storage, the equipment must be inspected and confirmed by qualified personnel before it can be put back into use.

5.3. Deliverables

NOTICE
• Please use the terminals and screws provided with the package. Using terminals and screws of other models may lead to serious consequences, and any resulting equipment damage will not be covered by the manufacturer's liability. • The appearance of the power adapter is subject to the actual product.

Component	Description	Component	Description
	EzLogger x 1		M4 screw x 5
	Grounding OT terminal x 1		Expansion bolts x 4
	2PIN communication terminal x 6		4PIN communication terminal x 12
	6PIN communication terminal x 4		Mounting plate clips x 2
	Guide Rail Clips x 2		Guide rail x 1
	Power adapter x 1*		PLC communication connection terminal x 1
	M3 screws x 4		Product Information x 1

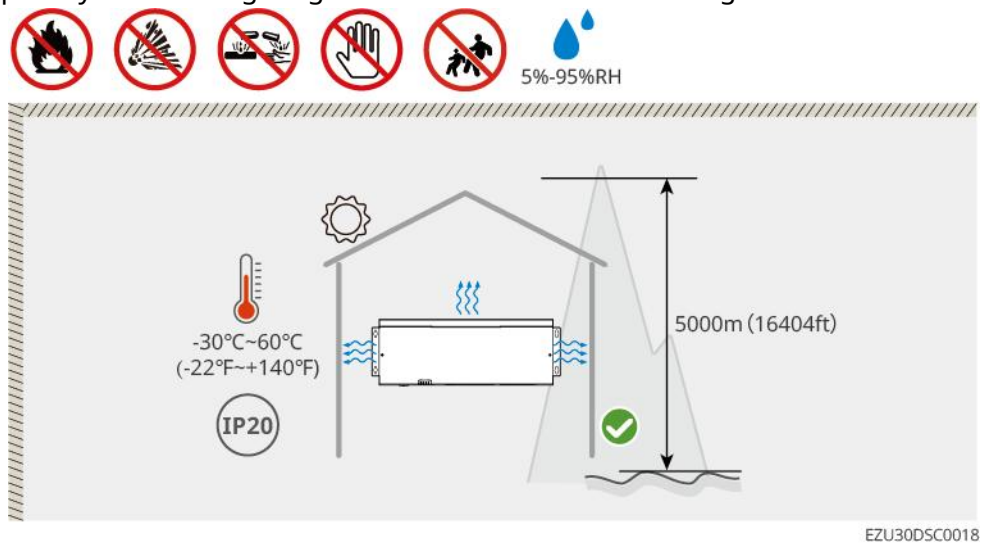
6. Installation

DANGER
Please use the delivered components included in the package for equipment installation and electrical connections. Otherwise, any resulting equipment damage will not be covered under warranty.

6.1. Installation Requirements

6.1.1. Installation Environment Requirements

1. The equipment must not be installed in flammable, explosive, or corrosive environments.
2. The temperature and humidity of the equipment installation environment must be with in the suitable range.
3. The installation location should be out of reach of children and avoid being placed in easily accessible areas.
4. The equipment should be installed away from direct sunlight, rain, snow accumulation, and similar conditions. It is recommended to place it in a sheltered location, and a sunshade can be constructed if necessary.
5. The installation space must meet the ventilation and heat dissipation requirements of the equipment as well as the operational space requirements.
6. The installation height of the equipment shall facilitate operation and maintenance, ensuring that indicator lights, all labels are easily visible and wiring terminals are readily accessible.
7. Keep away from strong magnetic fields to avoid electromagnetic interference.



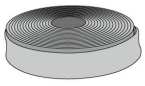
6.1.2. Mounting Substrate Requirements

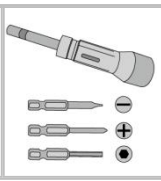
- The mounting carrier must not be made of flammable materials and must possess fire-resistant properties.
- Please ensure the mounting structure is sturdy and reliable, capable of supporting the equipment's weight.

6.1.3. Tool Requirements

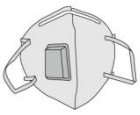
NOTICE
During installation, the following tools are recommended. Other auxiliary tools may be used on-site as necessary.

Installation Tools

Tool Type	Description	Tool Type	Description
	diagonal plier		wire stripper
	hammer drill		Hot air gun
	Crystal Crimping Pliers		crimping tool
	Marker pen		Level bar
	Heat shrink tubing		rubber hammer
	multimeter		Vacuum cleaner

	Cable tie		torque wrench

personal protective equipment

Tool Type	Description	Tool Type	Description
	Safety gloves		Dust mask
	goggle		Safety shoes

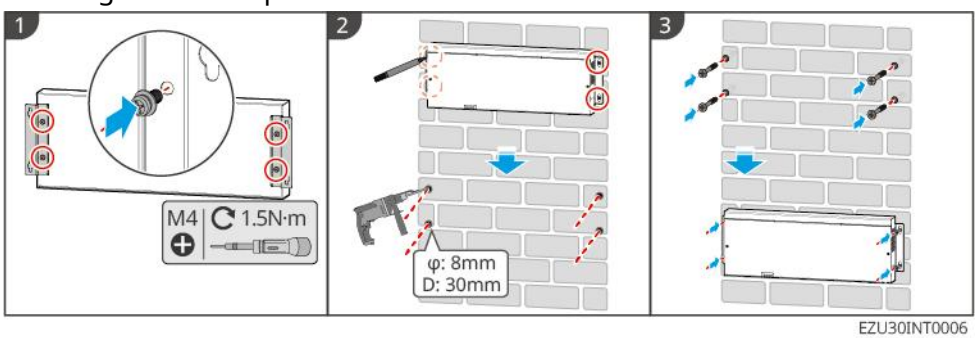
6.2. Installing the EzLogger

Option 1: Wall-mounted Installation

NOTICE
• When drilling holes, 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. • When mounting the data logger, ensure the wiring area faces downward for easy access during wiring or maintenance.

Operation steps:

1. Use M4 screws to mount the bracket onto the EzLogger.
2. Place the EzLogger horizontally on the wall and mark the drilling positions with a marker pen.
3. Use an impact drill with an 8mm diameter drill bit to create holes, ensuring a depth of approximately 30mm, and install expansion bolts.
4. Tighten the expansion bolt.

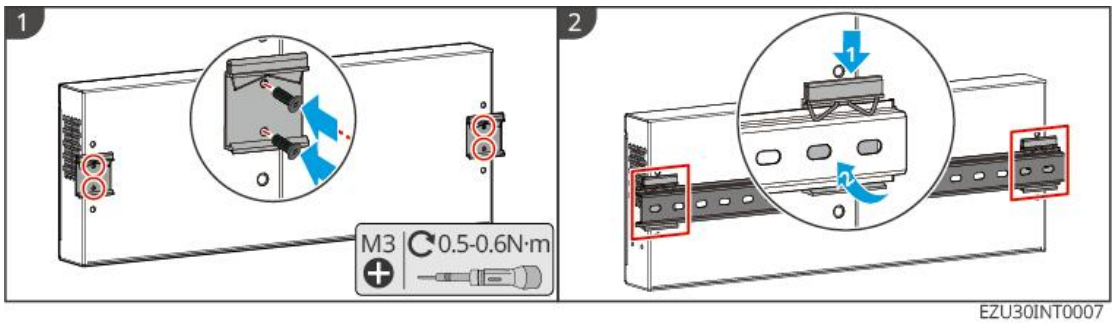


Option 2: Rail Mounting

NOTICE
• When using rail mounting, the rail hanger must be installed on the equipment. • Before installing the data logger, please prepare M3 screws to securely fasten the rail to a sturdy and stable carrier, such as a wall or mounting bracket.

Operation steps:

1. Secure the rail mounting bracket to the equipment using M3 screws.
2. Mount the device on the rail.



Option 3: Roof-Mounted Installation

The data logger supports desktop installation.

NOTICE
• Please install the data logger on a horizontal surface to prevent slipping and damage. • Please place the data logger in a location that is not easily accessible to avoid accidental contact and signal interruption.

7. Electrical Connection

DANGER
• Before performing electrical connections, ensure all upstream switches of the equipment are turned off to confirm the device is de-energized. Live operation is strictly prohibited to avoid hazards such as electric shock. • All operations during the electrical connection process, as well as the specifications of cables and components used, must comply with local laws and regulations. • If the cable is subjected to excessive tension, it may result in poor connections. When wiring, ensure to leave a certain length of slack in the cable before connecting it to the equipment's terminal ports.

NOTICE
• When performing electrical connections, 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 diagrams of this document are for reference only. The actual cable specifications must comply with local regulatory requirements. • To avoid signal interference, please arrange the signal lines and power lines separately, maintaining a minimum spacing of 500mm between the m.

No.	Cable Type	Screen Printing	Cable Requirements
1	Protective Grounding Wire		• Outdoor copper core cable • Conductor cross-sectional area: 4mm²-6mm² (12AWG-10AWG)
2	DC output line (12V/24V)	DC OUT 24V 0.5A / 12V GND	• Armored copper core cable • Conductor cross-sectional area: 0.2mm²-1.5mm² (24AWG-16AWG)
3	DO signal line	DO 1-4	
4	DI signal line	DI 1-8	
5	AI signal line	AI_0-12V AI_0/4-20mA AI_0-100mV	
6	PT signal line	PT100 PT1000	
7	RS485 signal line	RS485 1-8	• Shielded Twisted Pair (STP) • Conductor cross-sectional area: 0.2mm²-1.5mm² (24AWG-16AWG)
8	CAN signal line	CAN 1-4	
9	Ethernet cable	ETH 1-3	• CAT 5E or higher-grade network cable • Shielded RJ45 connector
10	Three-phase AC line	PLC	• Shipped with the box • Cable length: 1500mm (59.06in.)

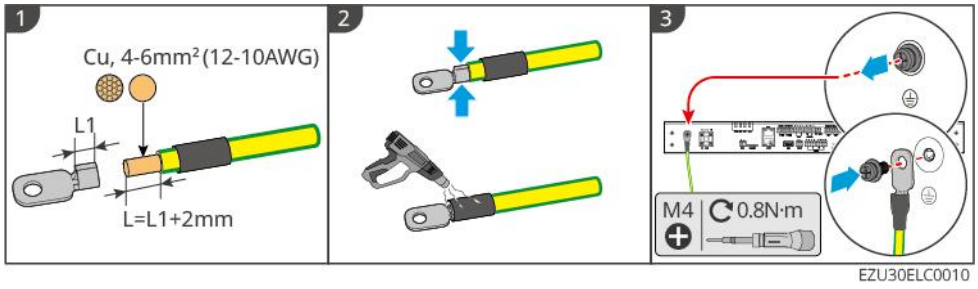
7.1. Connecting the PE cable

WARNING
• Please ground the equipment nearby. • Before operating the equipment, ensure that it is reliably grounded. • To enhance the corrosion resistance of the terminal, it is recommended to apply silicone or paint to the exterior of the grounding terminal after completing the protective ground wire connection installation.

NOTICE
• Please use the grounding OT terminal and fastening screws provided in the enclosure. • Please bring your own protective grounding wire.

Operation steps:

1. Strip the cable to an appropriate length.
2. Crimping cables and grounding OT terminals.
3. Use heat shrink tubing to insulate the connection between the cable and the OT terminal.
4. Secure the protective ground wire to the EzLogger grounding terminal using an M4 screw.

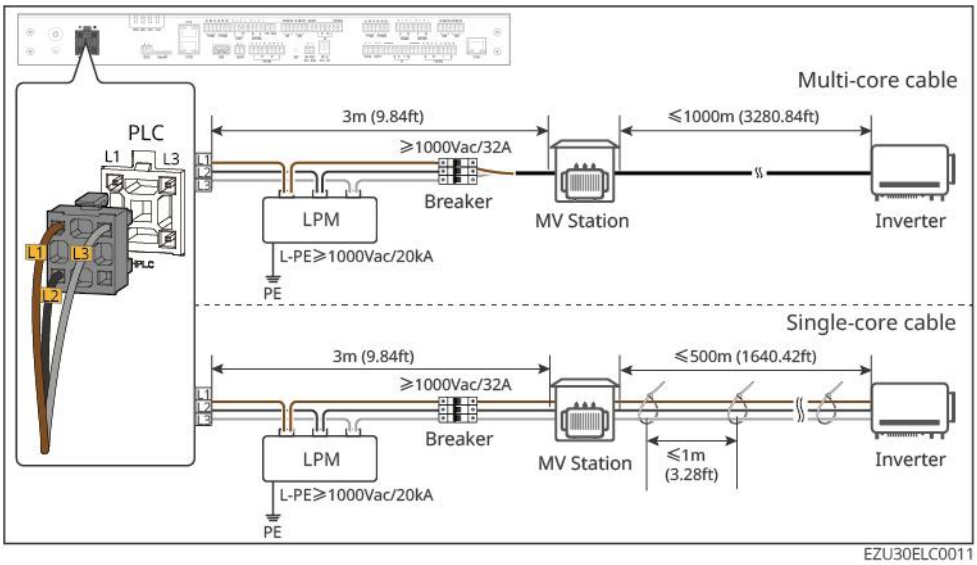


7.2. (Optional) Connecting the Three-phase AC Cable

WARNING
Before connecting the three-phase AC cable, ensure that the upstream circuit breaker is disconnected.

NOTICE

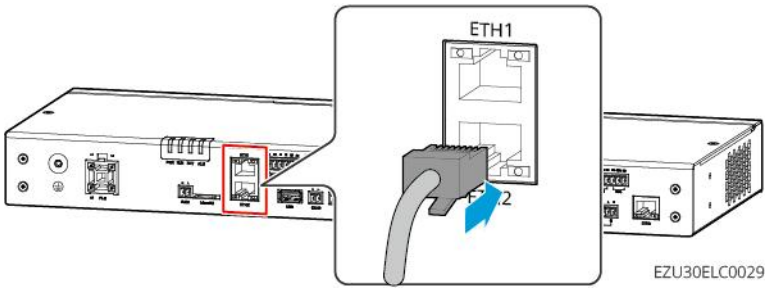
- When using PLC communication, it is recommended to use multi-core cables. The maximum supported communication distance between the inverter and the box-type transformer is 1000 meters.
- When using single-core cables, the three-phase cables must be bundled at intervals of 1 meter. The maximum supported communication distance between the inverter and the box-type transformer is 500 meters.
- The distance from the EzLogger to the busbar sampling cable of the box-type transformer should preferably not exceed 3 meters.
- The AC cable included in the package is 5 meters long. If the cable length is insufficient, please purchase an extension cable separately. Recommended specifications: 0.75-4mm² (18-11AWG).



7.3. Connecting Ethernet Cable

NOTICE

- The ETH1 port is set to dynamic IP mode by default and can be connected to computers, Routers, switches, and other devices.
- The ETH2 port is set to dynamic IP mode by default and can be connected to computers, routers, switches, and other devices. It also retains a virtual fixed IP: 172.18.0.12, which can be used to connect to a computer and log in to the embedded web interface to configure relevant parameters.
- The ETH1 and ETH2 ports cannot be configured with IP addresses in the same subnet, and the assigned IPs must not be in the same subnet as the virtual fixed IP.
- ETH3 port function is reserved.
- To modify the IP parameters of the ETH1 and ETH2 ports, please refer to the **Port Parameter Configuration** section for operation.



7.4. Connecting the Communication Cable

NOTICE
Communication function is optional; please wire according to the actual application scenario.

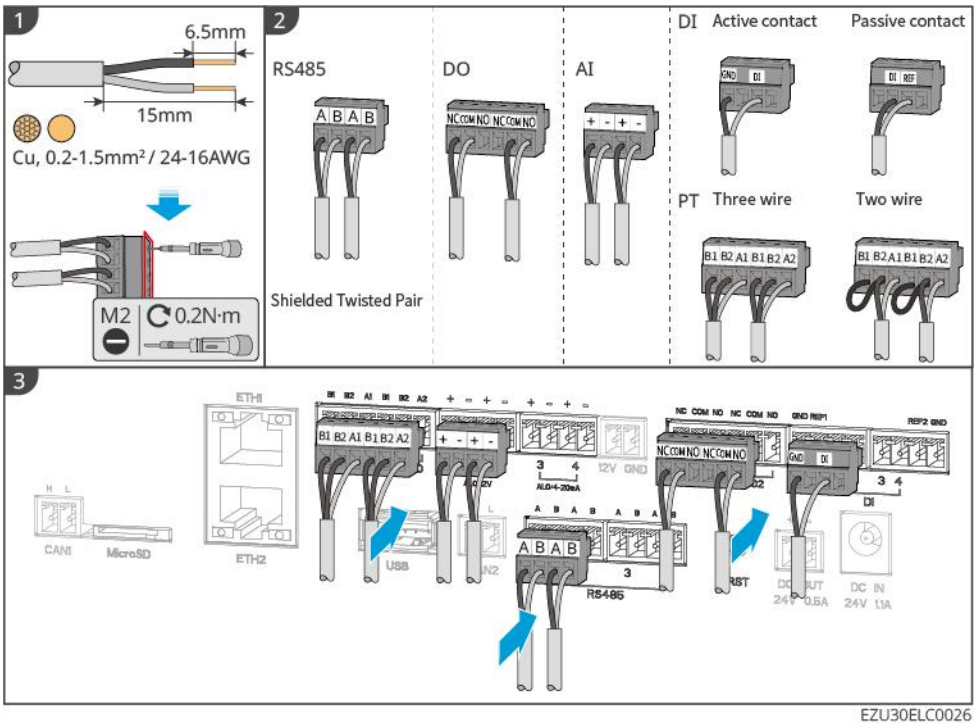
Communication Port Definition

No.	Port Definition	Description
1	PT100/PT1000 B1	• Temperature sensor connection port. • Supports connection of 2-wire or 3-wire PT100/PT1000 temperature sensors. • When connecting a 2-wire PT100/PT1000 temperature sensor, short the B1 and B2 terminals.
2	PT100/PT1000 B2	
3	PT100/PT1000 A1	
5	RS485_A1/2/3/4	• RS485 communication connection port. • Supports connection to RS485 communication devices such as inverters and environmental monitors via the RS485 port. • When using shielded twisted pair cables, the maximum supported communication distance with external devices is 1000 meters. • During wiring, ensure that the RS485A port on the data collector is connected to the RS485A signal of other communication devices, and the RS485B port is connected to the RS485B signal of other communication devices.
6	RS485_B1/2/3/4	
7	RS485_A5/6/7/8	
8	RS485_B5/6/7/8	
9	AI_0-12V -	Supports analog input signals with 0-12V voltage.
10	AI_0-12V +	
11	AI_0/4-20mA+	Supports input of 0-20mA or 4-20mA current analog signals.
12	AI_0/4-20mA-	
13	AI_0-100mA+	Supports the input of 0-100mV voltage analog

14	AI_0-100mA-	signals.
15	CAN_H	CAN communication connection port.
16	CAN_L	
17	DO_NC	• The DO port supports connection to passive contact signal output. • The DO port supports a maximum signal voltage of 30V/1A. NC/COM is the normally closed terminal, and NO/COM is the normally open terminal. • It is recommended that the signal transmission distance does not exceed 10m.
18	DO_COM	
19	DO_NO	
20	DI_GND	• Digital signal input port. • Supports connection of both active contact signals and passive contact signals. • It is recommended that the transmission distance of DI signal cables does not exceed 10m.
21	DI_REF 1/2/3/4	
22	DI_1/5	
23	DI_2/6	
24	DI_3/7	
25	DI_4/8	

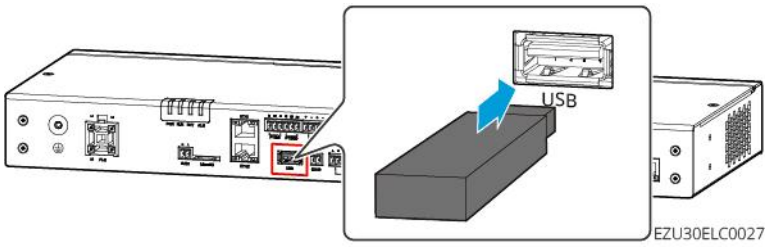
Communication Cable Connection Steps:

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.



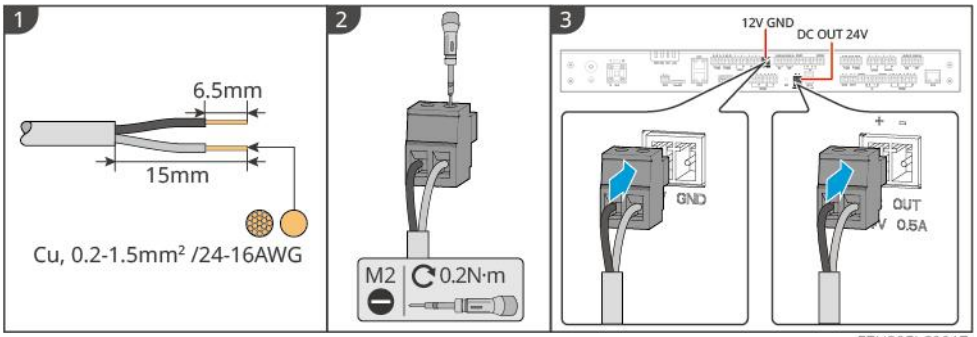
7.5. Connecting the USB port

NOTICE
• The device software version can be updated by connecting a USB flash drive via the USB interface. • For software upgrade packages, please contact the after-sales service center. • Please bring your own USB flash drive. It is recommended to use a USB 3.0 flash drive for matted in FAT32.



7.6. Connecting DC Output Cables

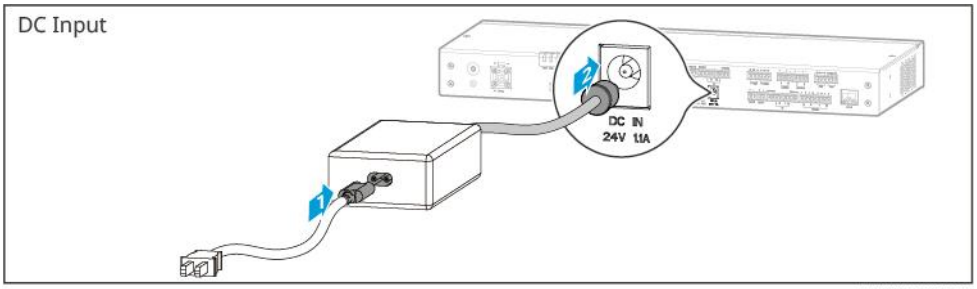
NOTICE
• Supports powering other devices via a 24V/0.5A DC output port. • Supports powering devices via a 12V DC output port.



EZU30ELC0017

7.7. Connecting the Power Adapter

NOTICE
• Please use the included power adapter to connect to the DC input port of the device for power supply. • Power adapter specifications: Input AC 100V~240V, 50Hz/60Hz; Output DC 24V, 1.5A.



EZU30ELC0013

8. System Commissioning

8.1. Check Before Power ON

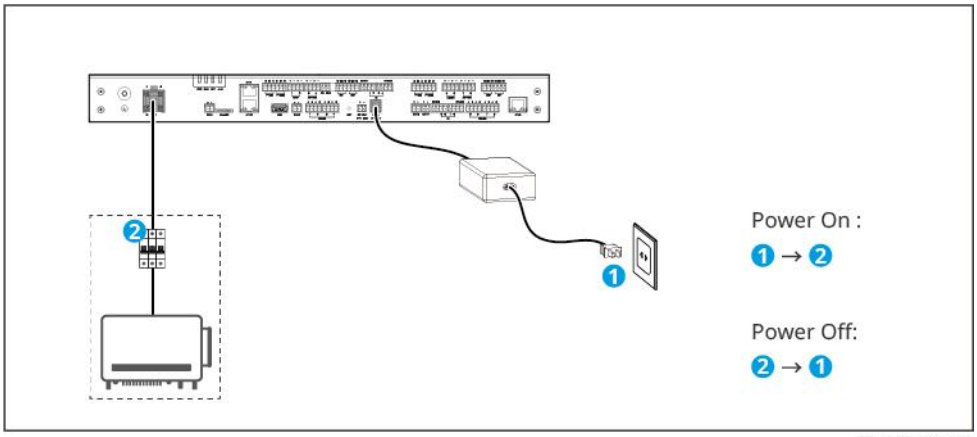
No.	Inspection Item
1	The equipment is securely installed, with the installation location facilitating operation and maintenance, the installation space allowing for proper ventilation and heat dissipation, and the installation environment being clean and tidy.
2	The PE cable, DC input cable, DC output cable, and communication cable are correctly and securely connected.
3	The cable ties meet the wiring requirements, are reasonably distributed, and show no signs of damage.

4	The input signal and power supply parameters of the equipment are with in the operational range.

8.2. Power ON

Operation steps:

1. Connect the power adapter to the AC outlet and close the switch on the outlet side.
2. (Optional) Close the upstream switch of the three-phase AC input port when using PLC signal communication.



9. System Commissioning

9.1. Indicator Description

Indicators

Indicator	Indicator Status	Description
PWR		Green light steady on: Normal power supply to the equipment.
		Green light off: Equipment power off or abnormal power supply
RUN		Green light steady on/off: Equipment operation abnormal
		Green light slow flashing: The device is operating normally.
NET		Green light steady on: Device is connected

		normally to the server.
		Green light flashing: The device is connected to the router but has an abnormal connection with the server.
		Green light slow flashing: Device not connected to router
ALM		Steady red: All inverters are in operational fault status.
		Red light flashing rapidly: Data logger is upgrading
		Red light off: At least one inverter in the system is operating normally.

Button function description

RST Button	Functional Definition
Press and hold for 1-3S	Equipment restart
Press and hold for 6-20S	The device restarts and restores the factory default network settings, such as resetting the embedded web login password.

9.2. Introduction to WEB Interface

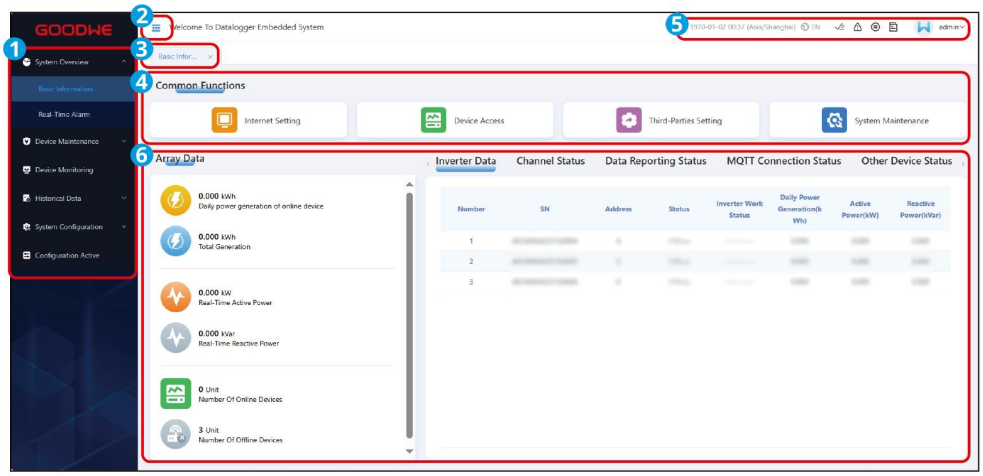
The device supports setting relevant parameters through the local WEB interface, viewing operational information and error messages, and promptly under standing the system status.

WARNING
• The interface images in this document correspond to the WEB software version V1.7.9. The images are for reference only and are subject to the actual version. • The parameter names, ranges, and default values may be subject to future changes or adjustments, and the actual display shall prevail. • Issuing reset, shutdown, or upgrade commands to the inverter may prevent it from connecting to the grid, the reby affecting power generation. • The grid parameters, protection parameters, characteristic parameters, and power regulation parameters of the inverter must be configured by professionals. Incorrect settings of grid parameters, protection parameters, or characteristic parameters may prevent the inverter from connecting to the grid. Incorrect power regulation parameter settings may result in the inverter failing to connect to the grid as required by the grid standards, the reby

affecting power generation.

- Grid dispatch parameters must be configured by professionals. Incorrect settings may result in the power station failing to connect to the grid as required, affecting power generation.

9.2.1. WEB Interface Layout

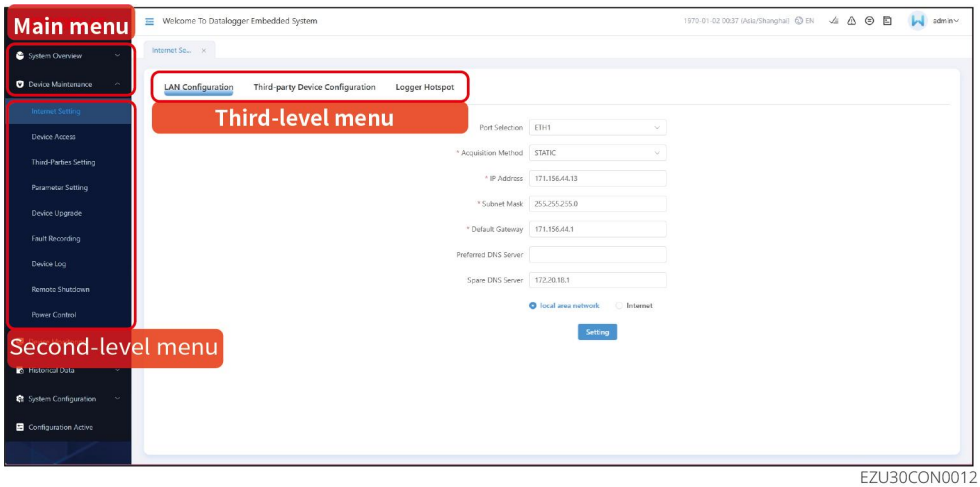


EZU30CON0011

No.	Functional Area	Description
1	Menu List	Interface menu area. You can select the primary menu as needed, and the secondary menu will be displayed after selection. Some primary menus do not have secondary menus.
2	Menu list button	Click the menu list button to expand or collapse the menu list.
3	Tag List	Display the opened menu tabs.
4	Common functions	Displays commonly used settings for easy operation. Configuration can be performed via the menu list.
5	System Status	• Switch system language. • Display alarm information, click to view real-time fault alarms. • Display product version information. • Display account login information. Click to log out of the account. • Startup Wizard.

6	Data Information	• Display the corresponding function modules or parameter settings under each menu. • Sub-array data: sub-array power generation, active power, reactive power, and other information. • Inverter data: Inverter SN, address, communication status, operating status, power generation, and other information. • Channel status: IEC104 or Modbus-TCP for warding status. • Data reporting status: FTP/SFTP or Email status. • MQTT Connection Status: The status of the MQTT connection to the server. • Other Equipment Status: Information such as the address and communication status of environmental monitors, box-type substations, and other devices.

9.2.2. WEB Interface Menu



EZU30CON0012

Primary Menu	Secondary Menu	Third-level Menu	Description
System Overview	Basic Information	-	• Common function settings, such as: port settings, device access, for warding service configuration, Maintenance. • Query basic information, such as: today's online equipment power generation, cumulative power generation, real-time active power, real-time reactive power, number of online devices, number of offline devices, etc.
	Real-time Fault Alarm	-	Display fault alarm name, device SN, and occurrence time. Click the manual refresh button to update and display the latest alarm list.
Equipment Maintenance	Port Settings	LAN Configuration	Configure wired network parameters. Supports connecting to northbound network management devices via wired network.
		RS485 configuration	Set RS485 parameters. Supports connecting to third-party devices via RS485.
		PT100 PT1000	Calibrate the temperature sensor temperature.
	Equipment connection	-	Add devices such as inverters and meters through automatic search or manual addition.
	For warding configuration	IEC104	Set IEC parameters.
		Modbus-TCP	Set Modbus-TCP for warding parameters.
		Email	Configure Email parameters.
		FTP/SFTP	Configure FTP/SFTP parameters.
		GOOSE	Set GOOSE parameters.
	Parameter settings	Data Logger	Set the data logger operation log parameters, array capacity, sample machine, PID-IMD, sub-array capacity offset, etc.
		Inverter	Set the inverter grid parameters,

			protection parameters, characteristic parameters, and power regulation parameters.
		electricity meter	Set meter parameters such as CT ratio, PT ratio, and wiring method.
		Box-type Substation	Remote control settings for the control box transformer.
	Equipment upgrade	Data Logger	Upgrade the data logger version.
		Inverter	Upgrade the inverter version, including DSP version, ARM version, module version, etc.
		Others	Upgrade MAIN-CCO, CAN-CCO, CAN-EZIO, etc. in HPLC communication scenarios.
	Equipment Log	-	Check the equipment operation logs, operation logs, and maintenance logs, such as login/logout from the web, password changes, etc.
Device Monitoring	-	Inverter	View inverter parameter information.
		Environmental Monitor	View the parameter information of the environmental monitoring device.
		MV Station	Check the parameters of the MV station.
		IEC104	View IEC104 parameter information.
Historical data	Historical faults and alarms	-	View historical faults and alarm information.
	Historical Data Export	-	Export real-time operational data or attribute data of the inverter.
	Grid Dispatch Log	-	Query the grid dispatching records.
Data Acquisition Configuration	Maintenance	-	• Restart data acquisition • Restore factory settings • Data Clearance • Import full configuration file • Export full configuration file
	System time	-	Set the system time synchronization source, currently supporting GoodWe Cloud Platform synchronization, NTP, Modbus-TCP, and manual time setting.

	Safety Settings	-	Set security parameters, such as account passwords.
	Version Information	-	Check the data logger version information, such as SN, main program version, firmware version, etc.
Configuration takes effect	-	-	Save the setting parameters. After modifying the networking or parameters, click "Configuration Effective" to confirm the settings.

9.2.3. Log in to the WEB interface

NOTICE

• Please ensure that all equipment in the photovoltaic system is properly installed and powered on for operation.
• Before logging in to the WEB interface, ensure that the device meets the following requirements:
  ○ Supports operating systems from Windows 7 and above.
  ○ Browser: Chrome 68, Firefox 78 or higher versions are recommended.
  ○ The computer's network port has been connected to the switch port of the device using an Ethernet cable.

Method 1: Access the WEB Interface Using the Default IP

Operation steps:

1. Connect the computer to the ETH2 port of the data logger using an Ethernet cable.
2. In the computer system, select "Network and Internet" > "Change adapter options." In the pop-up Network Connections dialog, right-click and select "Properties," the n configure the computer and device IP addresses to be on the same subnet.

No.	IP Parameters	Factory Default Settings	Computer Setting Value Example
1	IP address	172.18.0.12	172.18.0.22
2	Subnet Mask	255.255.255.0	255.255.255.0
3	Default Gateway	172.18.0.1	172.18.0.1

3. Enter the login interface by typing in the browser's address bar.
4. Select the language based on actual needs. Log in to the WEB interface using the initial username and password. Initial username: admin; initial password: 123456.

Option 2:Log in to the WEB interface using a dynamic IP

Operation steps:

1. Connect the data logger and the computer to the router simultaneously via an Ethernet cable.
2. Check the IP address assigned by the router to the data collector through the router management page.
3. Enter https://xxx. xx. xx:443 (where xxx. xx. xx is the IP address assigned by the router) in the browser's address bar to access the login interface.
4. Select the language based on actual needs. Log in to the WEB interface using the initial username and password. Initial username: admin; Initial password: 123456.

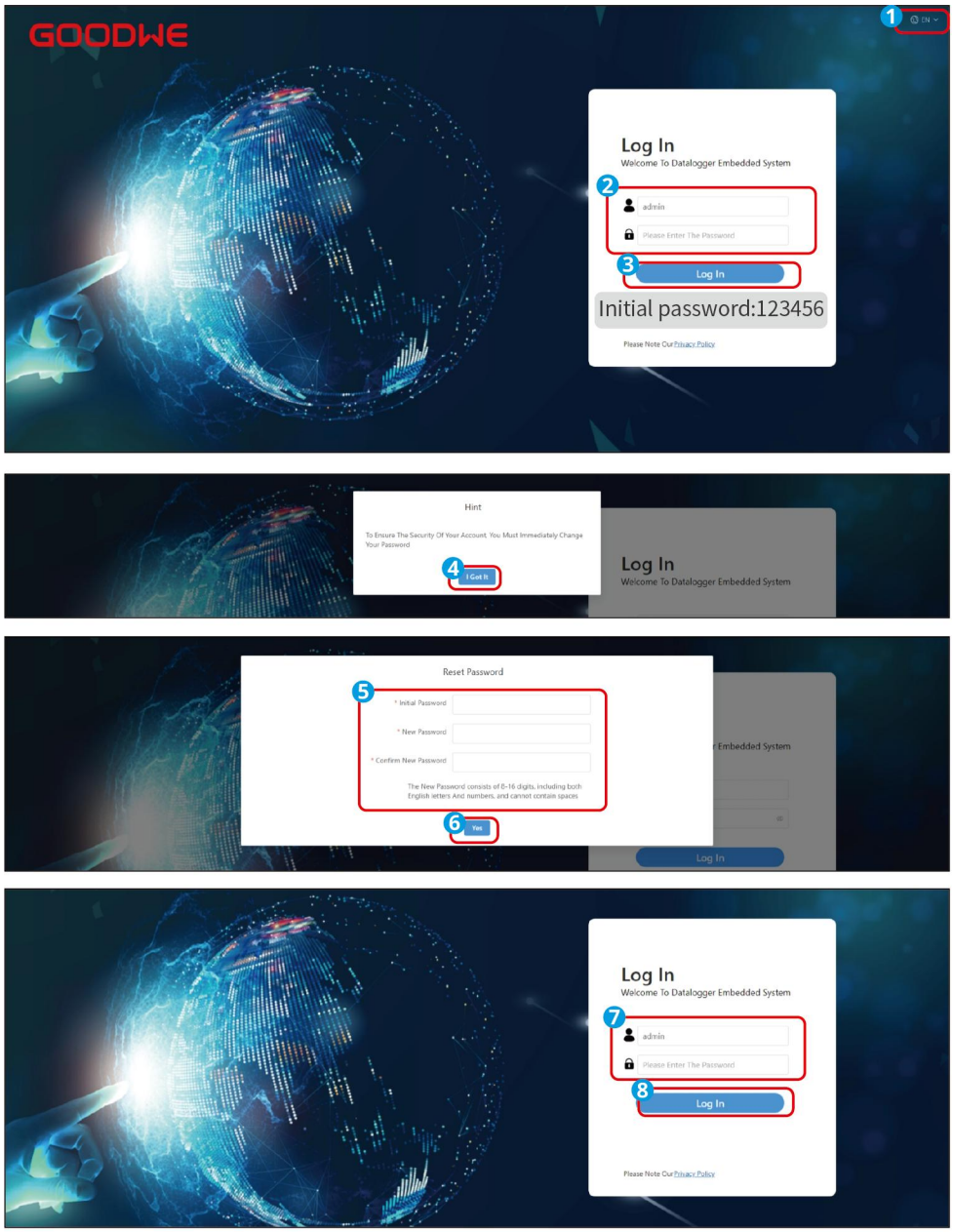
Method 3:Log in to the WEB interface using WiFi

Step 1 Connect the computer to the default WiFi name of the data logger: Log-***, where *** is the device serial number. The default WiFi password is: 12345678.

Step 2 Enter in the browser address bar to access the login interface.

Step 3 Select the language as needed. Log in to the WEB interface using the initial username and password. Initial username: admin; Initial password: 123456.

NOTICE
• For the first login, please use the initial password and change it as soon as possible. Remember your password. To ensure account security, it is recommended to change your password regularly. • If you for get the modified password, press and hold the RST button on the EzLogger for 6-20 seconds to restore the default password.



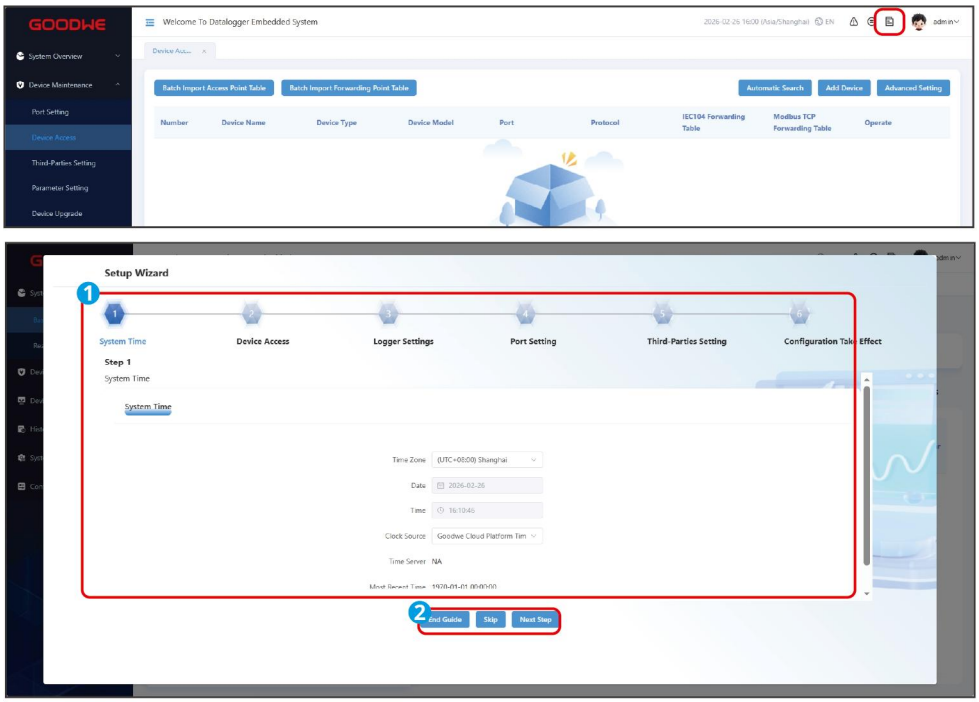
EZU30CON0014

9.3. Startup Wizard Configuration

- When logging in for the first time, the interface will prompt the user to quickly configure the system through the setup wizard. Please follow the on-screen instructions and actual requirements to complete the configuration. It supports connecting devices, setting data acquisition parameters, port parameters, and third-party for warding parameters, among others.
- If you do not need to configure the system for now, click Finish Wizard; if you do not need to configure a specific function temporarily, click Skip.
- For detailed information on setting functions, please refer to the corresponding section in the manual for functional explanations.

Operation steps:

1. When a user logs in for the first time, the y will be directed to the setup wizard interface after logging in. If the wizard interface has been exited, it can be accessed again by clicking the corresponding option.
2. During the parameter setup process, click Previous, Next, or Skip as needed to proceed with the corresponding configuration.



EZU30CON0082

9.4. Managing Equipment

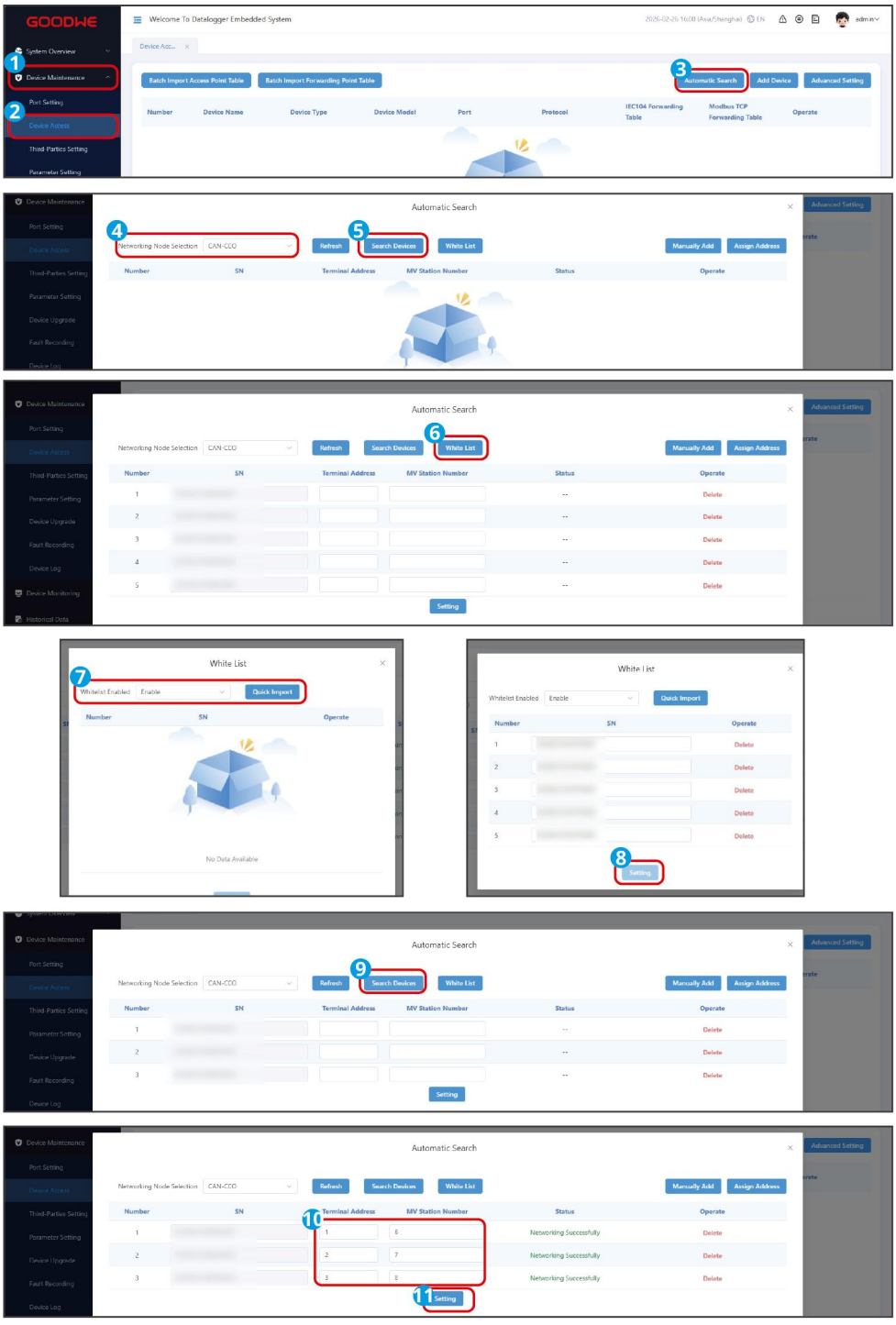
9.4.1. Auto Search and Add Devices

NOTICE

- Before setting up the network, ensure that the inverter's operating status and communication status are normal.
- Devices in the system can for m a network via HPLC, PLC, or RS485 communication methods. HPLC: EzLogger3000U-A or an intelligent communication box with built-in EzLogger3000U-A; PLC: EzLogger3000U or an intelligent communication box with built-in EzLogger3000U.
- When communicating via HPLC, please note the following:
    - The whitelist function is only applicable to HPLC communication scenarios. Please add the inverter to the whitelist according to different networking nodes, namely MAIN-CCO and CAN-CCO, respectively.
    - If new equipment needs to be added, it can be directly included in the whitelist before searching again to set the terminal address and box transformer number.
    - Adding new devices to the active whitelist does not affect or over write the existing devices.
- When adding new devices via PLC or RS485 communication, please search for devices again and set the terminal address for the new equipment.

Operation steps:

1. Navigate to the automatic network search interface via "Device Maintenance" > "Device Access" > "Automatice Search".
2. Select the nodes to be networked based on actual requirements and click "Search Device". Supported networking nodes: RS485-1/2/3/4, CAN-CCO, MAIN-CCO.
3. When the interface displays the number of searched devices matching the actual device count, click "End Search."
4. (Applicable only to HPLC communication) Click the Whitelist to enter the Whitelist addition interface.
5. (Applicable only to HPLC communication) Enable the whitelist function. Based on the searched device serial numbers, add the serial numbers of the inverters actually used in the current networking nodes to the whitelist. If any device cannot be searched or needs to be added to the network in advance, manually enter the device serial number in the whitelist.
6. (Applicable only to HPLC communication) Click "Set" to complete the whitelist configuration.
7. (Applicable only to HPLC communication) Return to the automatic search interface, select the networking node, and click "Search Device" again to search for devices that have been added to the whitelist.
8. Set the device terminal address and box transformer number according to the actual situation, ensuring that the terminal address and box transformer number are not duplicated. If any device cannot be detected, click the "Add Device" button and enter the device serial number and address. Click "Setting" to complete the networking configuration.



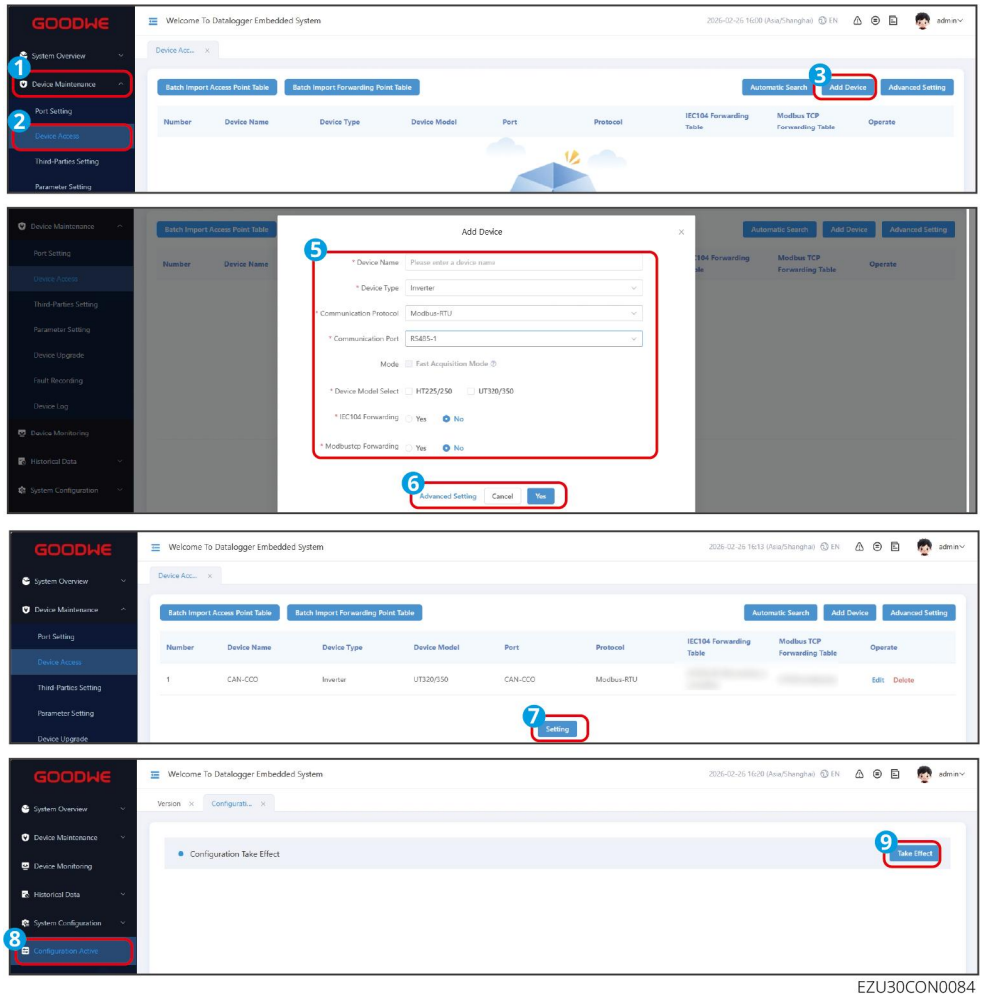
EZU30CON0083

9.4.2. Manually Add Device

NOTICE
• EzLogger supports importing the access point tables and for warding point tables of third-party devices such as box transformers and environmental monitors. Before adding devices, it is recommended to import all point tables of inverters, environmental monitors, and other devices connected to EzLogger. • The equipment access point list and for warding point list can be obtained by contacting the after-sales service center. • When the communication method is consistent, some inverter models support mixed connections. Please refer to the actual specifications. • When adding equipment, if you need to set related parameters in the advanced settings, please contact the after-sales service center.

Operation steps:

1. Access the device addition interface via "Device Maintenance" > "Device Access" > "Add Device".
2. Set the equipment parameters according to actual requirements.
3. Return to the "Device Access" interface and click "Setting".
4. Click "Apply Configuration" to complete the addition.



EZU30CON0084

Add Inverter

Parameter Name	Description
Equipment Name	Supports custom device naming based on actual conditions.
Equipment Type	Set to inverter.
Equipment Subtype	Select the inverter series for connection. Supported models: HT225/250, UT320/350.
Communication protocol	Set according to the inverter's communication protocol. Supported: Modbus-RTU.
When the communication protocol is set to Modbus-RTU, please configure the following parameters according to actual requirements:	
Fast acquisition mode	Quickly collect device information. Only applicable to certain scenarios via HPLC/PLC communication. For details, please contact after-sales service.
Communication interface	• Configure according to the actual port where the device is connected to the EzLogger. RS485-1~RS485-4: When the inverter's RS485 port is connected to the RS485-1~RS485-4 ports of the EzLogger, select the actual connected port. • CAN-EZIO: Select CAN-EZIO when the inverter's RS485 port is connected to the RS485-5 to RS485-8 ports of the EzLogger. • CAN-CCO/MAIN-CCO: In a dual-split scenario, when the inverter is connected to the PLC port, select CAN-CCO or MAIN-CCO based on the actual situation.
Terminal Address	The device address of the inverter should be set according to the actual power plant planning. It supports rapid continuous input or manual interval input.
Equipment Number	When selecting the CAN-EZIO communication interface, configure it according to the actual port number of the EzLogger connected.
Box Transformer Number	Display when selecting CAN-CCO or MAIN-CCO communication interface, set according to the actual box transformer number.
IEC 104 for warding	Select based on the imported device for warding point list.
Modbus-TCP for warding	Select based on the imported device for warding point list.

Add Other Equipment

Parameter Name	Description
Equipment Name	Supports custom device naming based on actual conditions.
Equipment Type	Set to other devices.
Communication protocol	According to the device's communication protocol settings, it supports Modbus-RTU, GW-XPH, and 104master.
When the communication protocol is set to Modbus-RTU, please configure the following parameters according to actual requirements:	
Communication interface	Configure according to the actual port where the device is connected to the EzLogger. When the RS485 port of other devices is connected to ports 5-8 of the RS485, select CAN-EZIO.
Equipment Model	• Set device subtype. Supported: environmental monitoring instrument, box-type substation. • To add an environmental monitor, please manually click the "Add Environmental Monitor" button and enter the environmental monitor address and point list.
Box Transformer Subtype	When the equipment subtype is selected as a box-type transformer, set the box-type transformer subtype to conventional or split-type.
Terminal Address	Device address, set according to the actual power plant planning. Supports rapid continuous input or manual interval input.
Equipment Number	When selecting the CAN-EZIO communication interface, configure it according to the actual port number of the EzLogger connected.
Protocol Type	Select the protocol type used by the equipment based on the device.
Access Point Table	Import the access point table of the access device.
IEC 104 for warding	Select based on the imported device for warding point list.
Modbus-TCP for warding	Select based on the imported device for warding point list.
Power mapping of the box-type substation	Map the power of the opposite box transformer according to the actual imported point table.
When the communication protocol is set to GW-XPH, configure the following parameters according to actual requirements:	
Communication interface	Configure according to the actual port where the device is connected to the EzLogger.

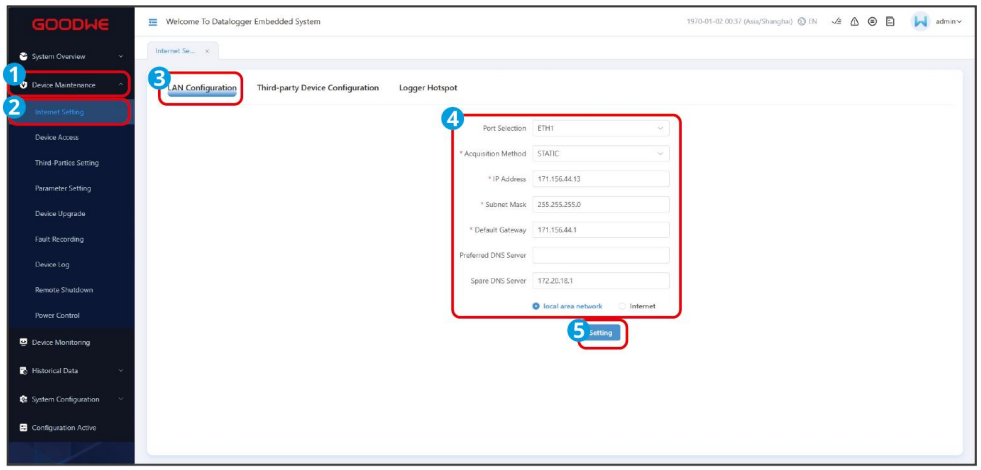
Terminal Address	Device address, set according to the actual power plant planning. When no manual setting is required, automatic generation can be selected.
New environmental monitoring device	To add an environmental monitor, please click the "Add Environmental Monitor" button and enter the environmental monitor address and point list.
IEC 104 for warding	Select based on the imported device for warding point list.
Modbus-TCP for warding	Select based on the imported device for warding point list.
When the communication protocol is set to 104master, please configure the following parameters according to actual requirements:	
Local IP Address	Set the IP address corresponding to the Ethernet port of the data logger.
Local port	It is recommended to set it to 0.
Peer IP Address	Set to the IP address of the peer device collected via the 104master protocol.
peer port	Set to the port number of the peer device collected via the 104master protocol.
Opposite Side Common Address	Set to the 104 common address of the peer device collected via the 104 master protocol.
Source Address	Set the 104 source address of the data logger.
Access Point Table	Set as the 104 protocol point list used by the peer device.
IEC 104 for warding	The 104 address mapping table used by the data collector to for ward peer device data.
Modbus TCP for warding	The Modbus TCP address mapping table used by the data collector to for ward peer device data.
Power mapping of the box-type substation	Power data mapping table of the remote device.

9.5. Setting Port Parameters

9.5.1. Setting LAN Communication Parameters

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Port Settings" > "LAN Configuration".
2. Set the ETH port parameters according to actual requirements.



EZU30CON0017

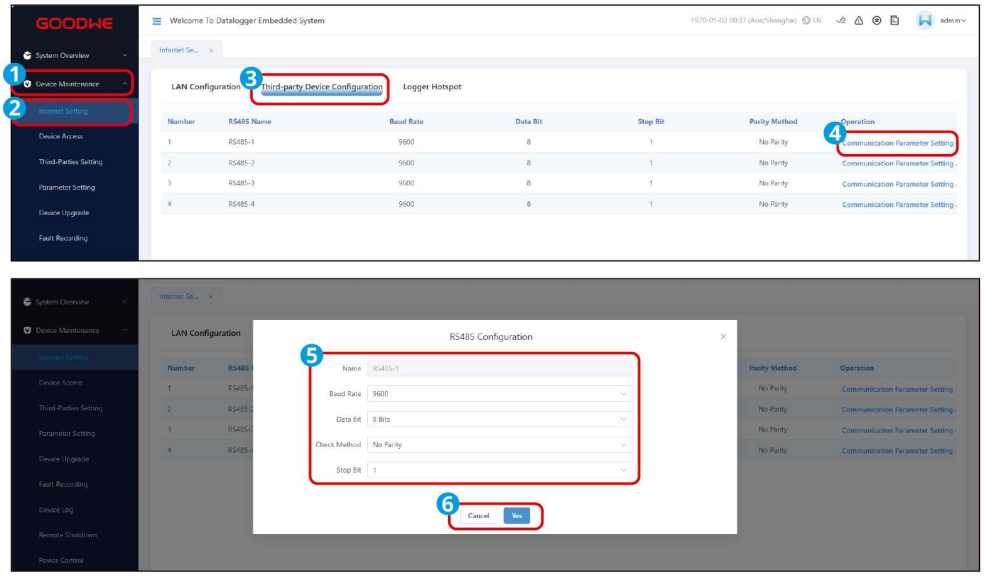
Parameter Name	Description
Port selection	Set the actual network port connected to the data collector. Options: ETH1, ETH2.
Aquisition method	• When using the STATIC mode, the relevant network parameters are fixed and need to be manually configured. • When using the DHCP method, the IP address can be automatically obtained and registration is completed automatically.
Port selection	Select according to the actual network port connected to the EzLogger.
IP address	Set according to the power plant plan. If the IP address is modified, you need to log in again using the new IP address.
Subnet Mask	Set according to the actual subnet mask of the EzLogger's local area network.
Default Gateway	Set according to the actual gateway of the EzLogger's local area network.
Preferred DNS Server	This parameter setting can be ignored when connecting to a local area network (LAN). Configure this parameter when connecting to a public network (e. g., connecting to hosted cloud, Email, third-party FTP, etc., where the server address uses a domain name). Set it to the IP address of the LAN router.
Spare DNS Server	Under normal circumstances, this parameter setting can be ignored. When the primary DNS server fails to resolve the domain name, the secondary DNS server is used.
LAN/Internet	To transfer data to GoodWe Cloud, select Internet if you need to connect to the server. To set up for warding parameters for connecting to

	third-party monitoring platforms, select Local Area Network (LAN).

9.5.2. Setting RS485 Communication Parameters

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Port Settings" > "RS485 Configuration".
2. Configure communication parameters according to actual requirements.



EZU30CON0018

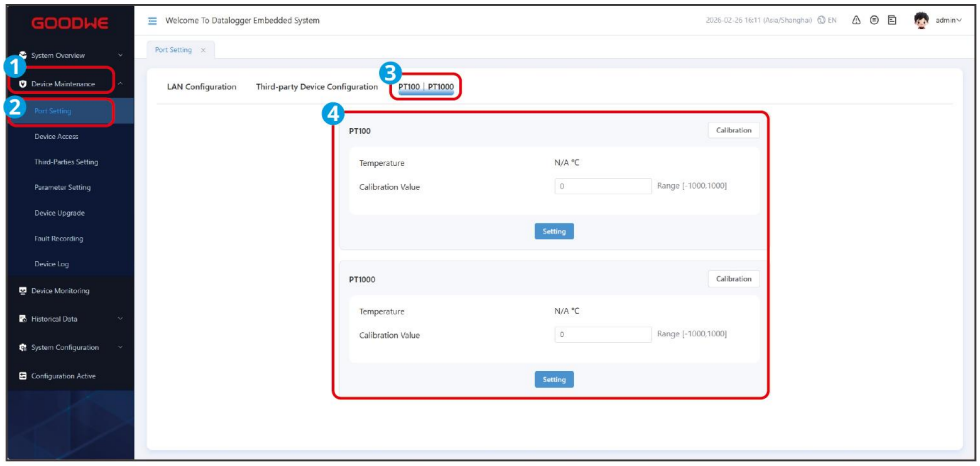
Parameter Name	Description
Name	Select according to the actual RS485 port to which the device is connected.
Baud rate	Set according to the baud rate of the connected device. Currently supported: 300, 1200, 2400, 9600, 19200, and 115200.
Data bit	Currently supported: 7-bit, 8-bit.
Check method	Set according to the verification method of the connected device. Currently supported: No parity, Odd parity, Even parity, 0 parity, and 1 parity.
Stop bit	Set according to the stop bit of the connected device. Currently supported: 1, 1.5, and 2.

9.5.3. Setting PT100/PT1000 Parameters

Supports calibration of PT100/PT1000 temperature sensors using the temperature values corresponding to standard reference resistors.

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Port Settings" > "PT100/PT1000".
2. Connect the standard resistor, click "Calibration" and enter the "Calibration Temperature" according to the temperature value corresponding to the standard resistor.
3. After calibration is completed, connect the temperature sensor.

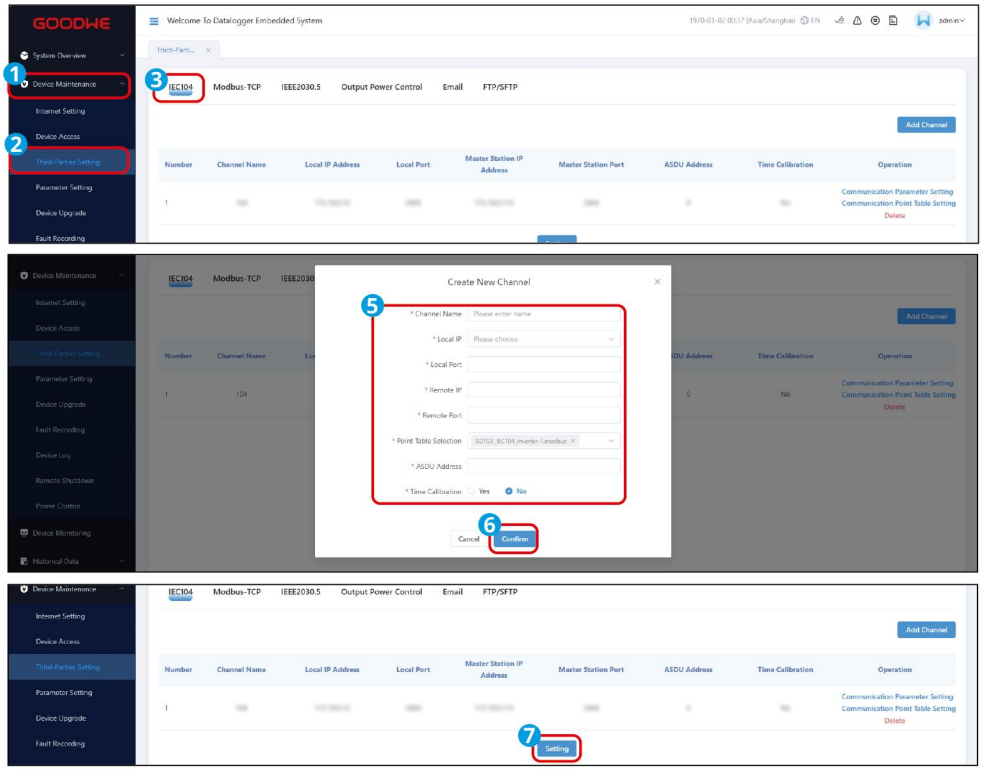


EZU30CON0089

9.6. Setting Third Party Forwarding Parameters

9.6.1. Setting IEC104 Parameters

When the data collector connects to the management system via the IEC 104 protocol, IEC 104 parameters need to be configured.



EZU30CON0006

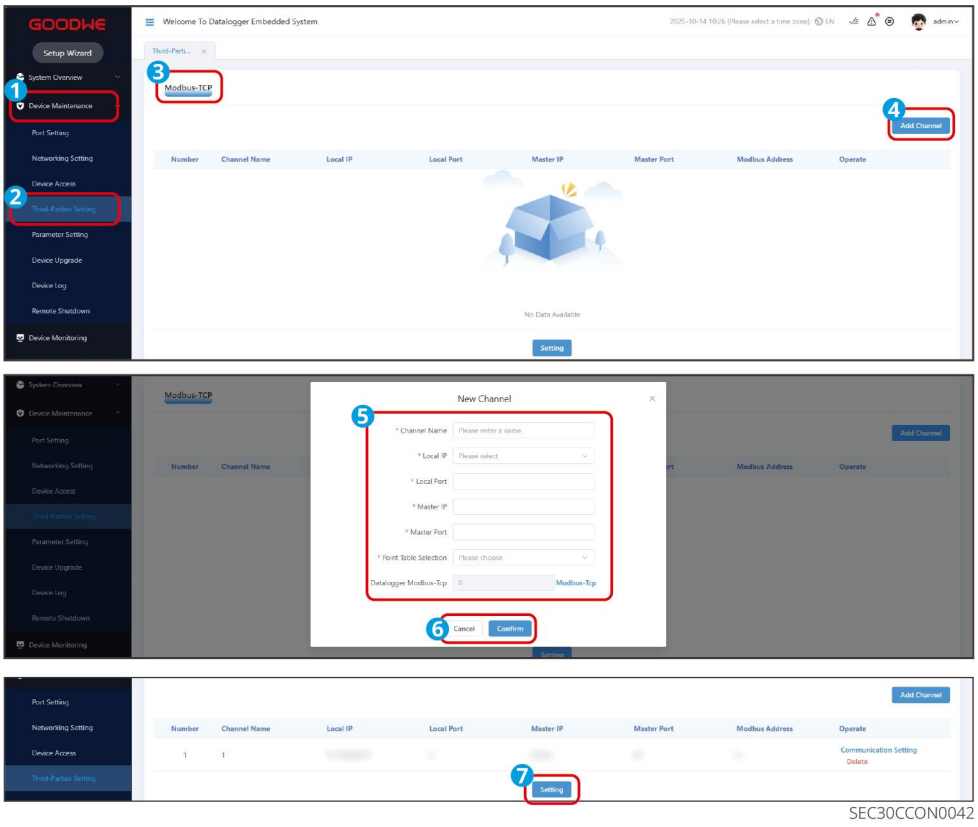
Parameter Name	Description
Channel Name	Supports custom device naming based on actual conditions.
Local IP	Set the IP address for the data logger.
Local port	Set as the port number for the data logger.
Remote IP	Set as the IP address for the IEC104 management system.
Remote port	Set as the port number for the IEC104 management system. Enter "0" when the peer port number is not fixed.
Point Table Selection	After importing the for warding point table for device access, when setting up the for warding configuration, the management system for warding point table can be mapped. Please select according to actual requirements.
ASDU address	IEC 104 management system address.
Time Calibration	Set whether to synchronize time with the opposite side equipment based on actual conditions.

9.6.2. Setting Modbus-TCP Parameters

Configure for warding parameters to transmit the data collected by the control box to a third-party monitoring platform via the Modbus-TCP protocol.

Step 1: Navigate to the parameter setting interface via "Device Maintenance" > "Third Parties Setting" > "Modbus-TCP".

Step 2: Add Modbus-TCP channels according to actual requirements and configure communication parameters.



SEC30CCON0042

Parameter Name	Description
Channel Name	Supports custom device names, allowing customization based on actual conditions.
Local IP	Set as the IP address of the control box.
Local port	Set as the port number of the control box, with a default value of 502.
Master IP	Set the IP address for the Modbus-TCP management system.
Master port	Set as the port number for the Modbus-TCP management system.
Point Table Selection	Import the point list according to the actual situation.

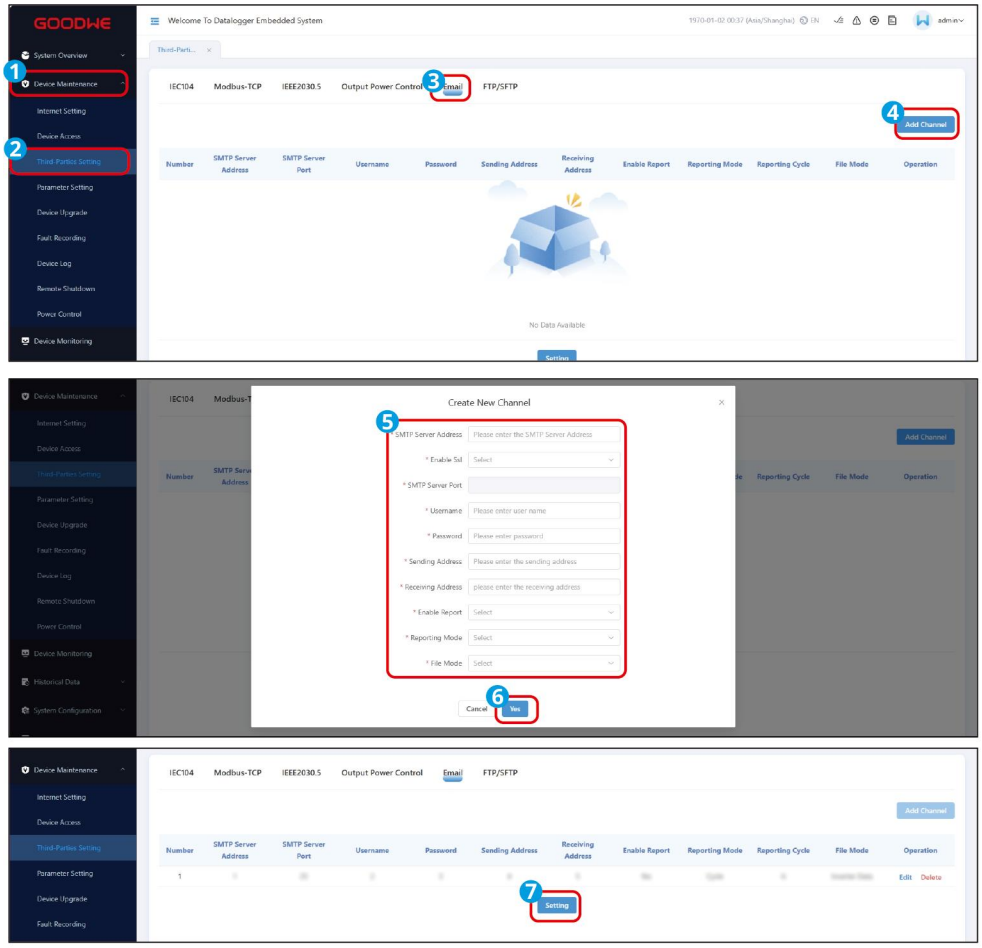
Datalogger Modbus-tcp	Set the Modbus-TCP management system address. To modify the address, click "Modbus-Tcp".

9.6.3. Configuring Email Parameters

NOTICE
• EzLogger supports sending emails to users, informing the m of the current power generation data, alarm information, and equipment status of the PV plant system, enabling users to stay updated on the system's operational status in real time. • Please use an email that supports SMTP, such as 163 email, 126 email, etc.

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Third Parties Setting" > "Email".
2. Set parameters according to actual requirements.



EZU30CON0047

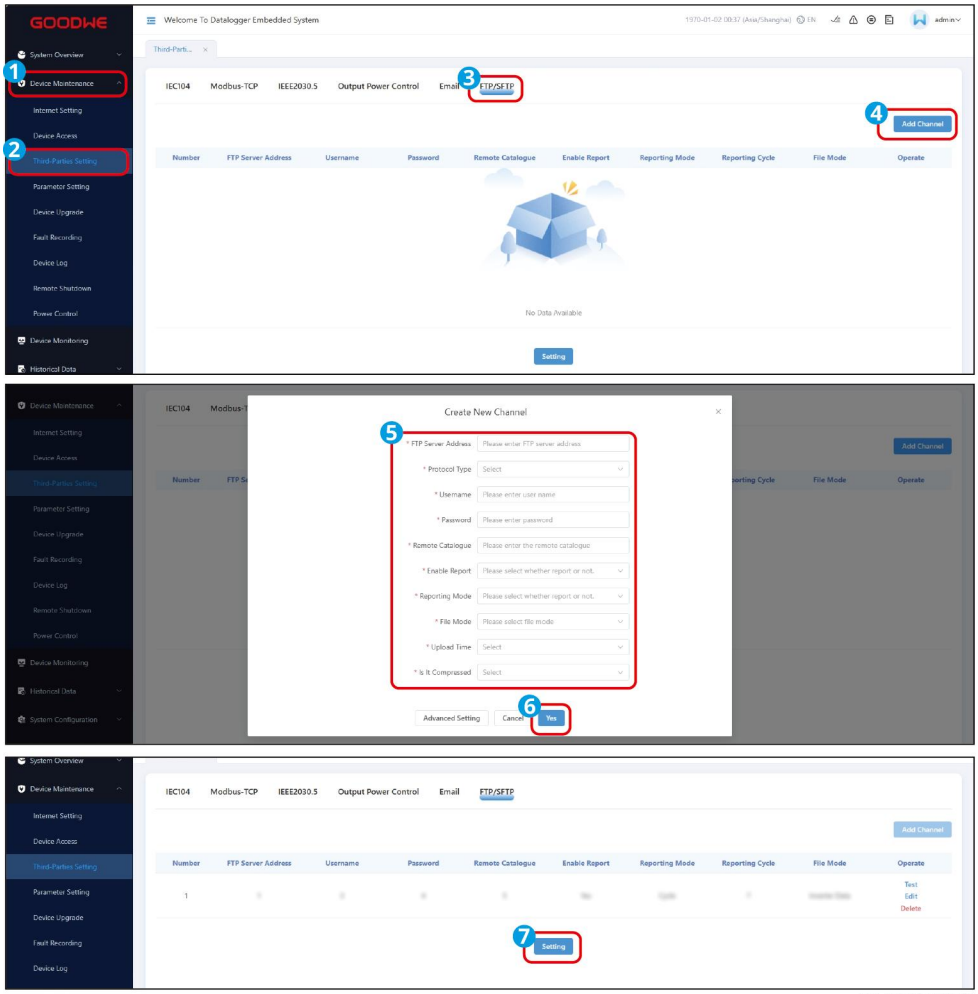
Parameter Name	Description
SMTP server address	Set as the domain name or IP address of the SMTP server.
Enable SSL	Set whether to enable SSL encryption.
SMTP server port	Set as the port number for the mail sending server.
Username	Set as the username for logging into the SMTP server.
Password	Set as the password for logging into the SMTP server.
Sending address	Set up the email account for sending emails.
Receiving address	Set up the email address for receiving messages.
Enable report	Set whether to send emails.
Reporting mode	• Set the mode for email reporting, currently supported: periodic or scheduled. • When the reporting mode is set to periodic, please configure the interval for periodic reporting. • When the reporting mode is set to scheduled, configure the scheduled reporting time.
File mode	Set the email to include device data, currently supported: inverter data.

9.6.4. Configuring FTP/SFTP Parameters

The FTP/SFTP function is primarily used to connect to third-party network management systems. The data collector can upload the configuration information and operational data of the managed power plant system via FTP/SFTP. Third-party network management systems only need to perform corresponding adaptations to interface with the data collector.

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Third Parties Setting" > "FTP/SFTP".
2. Set parameters according to actual requirements.



EZU30CON0046

Parameter Name	Description
FTP server address	Set to the domain name or IP address of the FTP server.
Protocol Type	Set to plaintext or non-plaintext protocol. Supports: FTP/SFTP.
Username	Set as the username for logging into the FTP server.
Password	Set as the password for logging into the FTP server.
Remote Catalogue	Create a subdirectory with the same name under the default directory for data upload (the default directory is specified by the FTP server).
Enable report	Set whether to allow data reporting.
Reporting mode	• Set the mode for reporting data, currently supported: periodic or scheduled. • When the reporting mode is set to periodic, please configure the interval for periodic reporting. • When the reporting mode is set to scheduled, configure the scheduled reporting time.

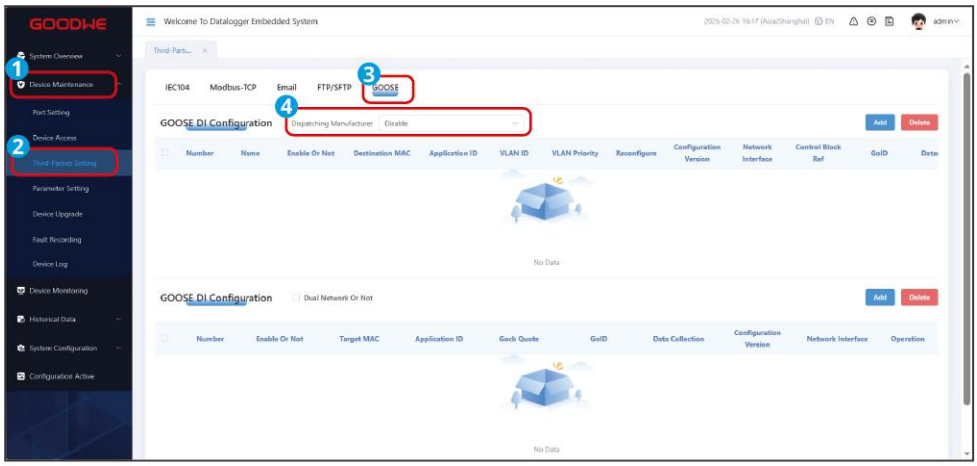
File mode	Set the type of data to be reported in the file. Currently supported: inverter data.

9.6.5. Configuring GOOSE Parameters

When the EzLogger connects to a third-party monitoring system platform via the GOOSE protocol, GOOSE parameters need to be configured.

Operation steps:

1. Access the parameter settings interface via "Device Maintenance" > "Third Parties Setting" > "GOOSE".
2. Set parameters according to actual requirements. The default status of "Dispatch Manufacturer" is "Disabled".



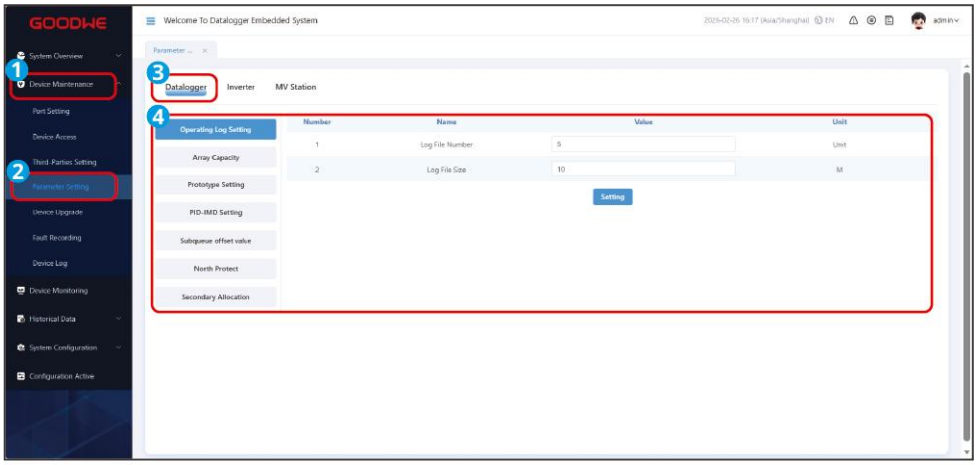
EZU30CON0088

9.7. Setting Device Parameters

9.7.1. Setting Data Logger Parameters

Operation Steps:

1. Access the parameter settings interface via "Device Maintenance" > "Parameter Setting" > "Data Logger".
2. Set parameters according to actual requirements.



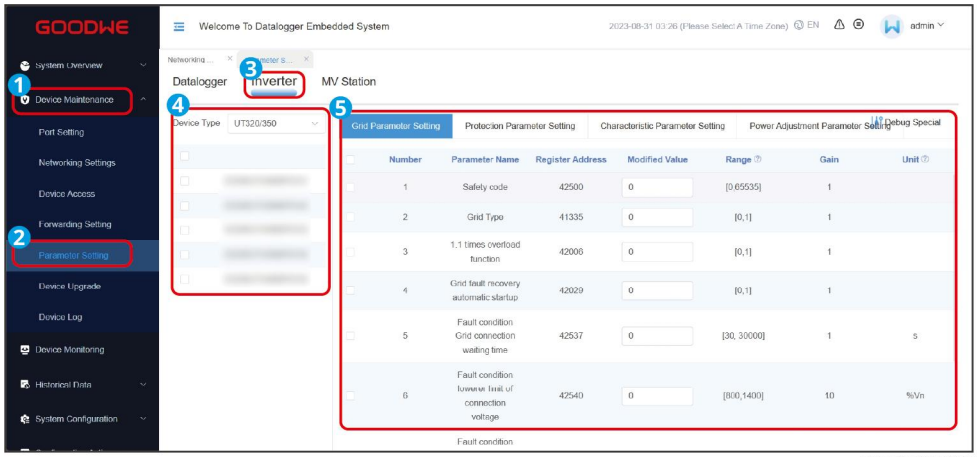
EZU30CON0087

Parameter Tab	Parameter Name	Description
Operation log setting	Log file size	Set the size and number of log files to be stored based on actual needs.
	Log file number	
Array capacity	Array capacity	Set according to the actual array capacity.
Prototype capacity	Modbus address	After enabling, input the device address that needs to serve as the reference unit. This device can act as a standard reference and will not accept any power scheduling.
PID-IMD setting	IMD status	When the data collector is connected to the box-type substation, this function needs to be enabled due to the mutual exclusion between the inverter's PID function and the box-type substation's IMD function.
	Access Port	The IMD is connected to the DO port of the data logger, selected based on the actual port being used.
	PID & IMD switch cycle	Set the operation duration for PID or IMD, after which PID and IMD will switch to each other. For example, if set to 60 minutes, PID will run for 60 minutes before switching to IMD, and IMD will run for 60 minutes before switching back to PID.
	PID & IMD switch protection duration	Set the buffer time for switching between PID and IMD. For example, if set to 5s, after the PID operation cycle ends, the re will be a 5s buffer before switching to IMD.

Subqueue capacity offset	Subqueue capacity offset	• When the re is shading on the PV system or the actual connected power of the PV string is insufficient, the bias value should be set based on the actual connected sub-array capacity to ensure reasonable power distribution among the inverters. For example: If the re are 10 inverters of 320kW each in the sub-array, with a total capacity of 3200kW, but the actual connected capacity is 3000kW, the n the bias value should be -200kW. • After setting the sub-array capacity offset value, please set the parameter value to the actual connected capacity via "Parameter Settings" > "Inverter" > "Power Regulation Parameters" > "Actual Installed Capacity". • Please set this parameter with caution as incorrect settings may affect actual power generation. If necessary, please contact the after-sales service center.
North Protect	Link protection function switch	After activation, if the northbound communication is disconnected, the device will execute the preset plan.
	Protected link node number	Select the communication link for protection. Currently supported: IEC104 and Modbus-TCP.
	Control Strategy Selection	When the protected communication link is disconnected, executable strategies include: No Action, Shutdown, Output According to Preset Values, QU Mode, QP Mode.
Secondary Allocation	Power secondary distribution function switch	When this function is enabled, if the actual PV generation power does not meet the set target power, the system will readjust or redistribute to maximize power output toward the target value.

9.7.2. Setting Inverter Parameters

NOTICE
• Different inverter models require different parameter settings. Please refer to the actual interface. • Supports selecting multiple inverters and simultaneously configuring parameters for the selected inverters. • To enable or disable a function, enter 0 or 1. 0 indicates turning off a function, while 1 indicates turning it on.



EZU30CON0085

Grid Parameters

Parameter Name	Description
Safety code	Set according to the grid standards of the country/region where the inverter is located, as well as the application scenario of the inverter.
Lightning Protection Module Detection Switch	Enable or disable the lightning protection module detection function.
Power on (Allow on-grid self-check)	Issue startup command, allowing grid connection self-check
Shutdown (Grid connection self-test not allowed)	Issue shutdown command to halt grid-connection self-test.
Output Method	Based on the application scenario of the inverter, configure whether the inverter output includes a neutral (N) line. 0"3" represents a three-phase four-wire system (3W/PE), and "1" represents a three-phase five-wire system (3W/N/PE).
Shadow MPPT Function Switch 1	When the inverter is used in scenarios where the PV strings are significantly shaded, enabling this function will cause the inverter to perform a global MPPT scan at

	regular intervals to locate the maximum power point.
Fixed active power derating	Adjust the active power output of the inverter according to a fixed value.
Active Power Percentage Derating (0.1%)	Adjust the active power output of the inverter as a percentage of the rated power.
Reactive Power Compensation (PF)	Set the power factor of the inverter.
Reactive Power Compensation (Q/S)	Set the reactive power output of the inverter.
Reactive power compensation fixed value	Adjust the reactive power output of the inverter according to a fixed value.
Nighttime Reactive Power Function Switch	Enable or disable the nighttime reactive power function. In certain specific application scenarios, grid operators may require inverters to perform reactive power compensation at night to ensure the local grid's power factor meets the required standards.
Nighttime reactive power parameters take effect	When this setting is enabled, the inverter outputs reactive power according to the fixed value set for nighttime reactive power scheduling compensation; otherwise, the inverter follows the remote scheduling command.
Nighttime reactive power dispatch percentage (0.1%)	During nighttime reactive power compensation, reactive power dispatch is performed in percentage for m.
Fixed value for reactive power compensation during nighttime scheduling	During nighttime reactive power compensation, reactive power dispatch is performed in the for m of a fixed value.

Protection Parameters

Parameter Name	Description
Over voltage trigger N-threshold value (0.1%)	Set the grid N-level over voltage protection point.
Over voltage trigger N-stage trip time	Set the grid N-level over voltage protection time.
Under voltage trigger N-step value (0.1%)	Set the N-level under voltage protection point for the grid.
Under voltage trigger N-stage trip time	Set the grid N-level under voltage protection time.
10min over voltage trigger value (0.1%)	Set the 10-minute over voltage protection point.
10min over voltage trip time	Set a 10-minute over voltage protection time.

Over-frequency triggering N-threshold value	Set the N-level over-frequency protection point for the grid.
Over-frequency triggers N-stage trip time	Set the N-level over-frequency protection time for the grid.
Under frequency trigger N-threshold value	Set the grid N-level under frequency protection point.
Under frequency trigger N-stage trip time	Set the grid N-level under frequency protection time.
Start-up and grid-connection voltage upper limit	Certain national/regional standards require that when the equipment is first powered on and connected to the grid, it is not allowed to connect if the grid voltage exceeds the set upper limit of the startup and grid-connection voltage.
Lower limit of grid connection voltage for startup	Certain national/regional standards require that when the equipment is first powered on and connected to the grid, it must not be allowed to connect if the grid voltage is below the set lower limit for startup and grid connection.
Start-up and grid connection frequency upper limit	Certain national/regional standards require that when the equipment is first started and connected to the grid, it is not allowed to connect if the grid frequency exceeds the set upper limit of the startup and grid-connection frequency.
Lower limit of grid connection frequency for startup	Certain national/regional standards require that when the equipment is first started and connected to the grid, it must not be allowed to connect if the grid frequency is below the set lower limit for startup and grid connection.
Start-up and grid connection waiting time	Set the waiting time for the first grid-connected startup of the equipment.
Start-up and grid-connection power loading rate (0.1%Pn/min)	Set the initial grid connection upon startup, and the ramp-up rate for power gradually increasing when the equipment is activated.
Reconnection voltage upper limit for grid connection	Certain national/regional standards require that when the inverter is in fault protection shutdown, it must not reconnect to the grid if the grid voltage exceeds the set upper limit of the reconnection voltage.
Reconnection grid voltage lower limit	Certain national/regional standards require that after the inverter's fault protection shutdown, the inverter is not allowed to reconnect to the grid unless the grid voltage is below the set lower limit for reconnection.
Upper limit of reconnection	Certain national/regional standards require that after

grid frequency	the inverter's fault protection shutdown, the inverter must not reconnect to the grid when the grid voltage exceeds the set value of the reconnection frequency upper limit.
Lower limit of reconnection grid frequency	Certain national/regional standards require that after the inverter's fault protection shutdown, the inverter is not allowed to reconnect to the grid when the grid frequency is below the set lower limit of the reconnection frequency.
Reconnection and grid-connection waiting time	The time interval for the inverter to reconnect to the grid after the grid voltage and frequency return to normal.
Reconnection and grid-connection power loading rate (0.1%Pn/min)	According to the standards of certain countries or regions, the percentage of power output increase per minute that the inverter can achieve during non-first grid connection. For example: when set to 10, it indicates that the reconnection load ramp rate is: 10% P/Srated%%.
LVRT enable bit	Low voltage ride-through (LVRT) refers to the requirement that the inverter must not immediately disconnect from the grid during transient low voltage conditions caused by grid anomalies, but instead provide support for a certain period. Enabling this function activates the inverter's LVRT capability.
Low voltage ride-through depth n	Set the voltage percentage of the low voltage ride-through (LVRT) curve characteristic points.
Hold-up time n	Set the duration of the low voltage ride-through (LVRT) curve characteristic points.
Low voltage ride-through (LVRT) judgment threshold	Set the threshold for triggering low voltage ride-through. The threshold setting must comply with the requirements of the local grid standards.
Judgment threshold for exiting low voltage ride-through	Set the threshold for exiting low voltage ride-through. The threshold setting must comply with the requirements of local grid standards.
LVRT Positive Sequence Reactive Power K Factor	During the low voltage ride-through process, the inverter needs to inject positive-sequence reactive power to support the grid. This parameter is used to set the magnitude of the positive-sequence reactive power output by the inverter.
Low voltage ride-through zero current mode enable bit	Some national/regional standards have requirements for output current during low voltage ride-through (LVRT). This parameter needs to be enabled. After configuration, the output current during LVRT will be

	less than 10% of the rated current.
Low voltage ride-through zero current mode entry voltage threshold	After enabling the low voltage ride-through (LVRT) zero current mode, during the LVRT process, if the grid voltage is below the entry voltage threshold of the zero current mode, the zero current mode will be executed.
High ride-through enable bit	High voltage ride-through (HVRT) refers to the capability of equipment to remain connected to the grid and provide support for a certain period when grid anomalies cause transient high voltage, rather than disconnecting immediately. Enabling this function activates the inverter's HVRT capability.
High ride-through depth n	Set the voltage percentage of the high voltage ride-through curve characteristic points.
Hold-up time n	Set the duration of the high voltage ride-through curve characteristic points.
Threshold for determining high impedance crossing	Set the threshold for triggering high voltage ride-through. The threshold setting must comply with local grid standard requirements.
Judgment threshold for exiting high impedance	Set the threshold for exiting high voltage ride-through. The threshold setting must comply with local grid standard requirements.
HVRT Positive-Sequence Reactive Power K	During the high voltage ride-through process, the equipment needs to inject positive-sequence reactive power to support the grid. This parameter is used to set the magnitude of the positive-sequence reactive power output by the equipment.
High crossing zero current mode enable	Certain national/regional standards have requirements for the output current during high voltage ride-through. This parameter must be enabled, and once set, the output current during high voltage ride-through will be less than 10% of the rated current.
High ride-through zero current mode entry voltage threshold	After enabling the high voltage ride-through zero current mode, during the high voltage ride-through process, if the grid voltage exceeds the entry voltage threshold of the zero current mode, it will operate in the zero current mode.
Current distribution mode	Set the allocation mode of reactive current and active current. 0Represents reactive power priority; 1 represents active power priority; 2 represents constant current mode.

End of ride-through active power recovery mode	During the fault ride-through recovery process, the active current recovery mode supports slope recovery, first-order low-pass filter recovery, no requirement, and other modes. 00 represents off; 1 represents slope response; 2 represents time constant; 3 represents response time
Active power recovery rate after crossing completion	The speed at which the active current returns to the pre-fault active current level during the fault ride-through recovery process.
End of ride-through active power recovery first-order low-pass filter	After the fault ride-through is completed, the active current recovers with a first-order low-pass filter characteristic response.
Reactive power recovery mode after crossing ends	After the fault ride-through is completed, the recovery method of reactive current supports modes such as slope recovery, first-order low-pass filter recovery, and no requirement. 00 represents off; 1 represents slope response; 2 represents time constant; 3 represents response time
Reactive power recovery rate after crossing completion	After the fault ride-through is completed, the reactive current recovers according to the slope value.
End of ride-through reactive power recovery first-order low-pass filter	After fault ride-through, the reactive current recovers with a first-order low-pass filter characteristic response.
Frequency ride-through enable bit	When frequency ride-through is enabled, the inverter can continue generating power with in the required time frame during abnormal grid frequency conditions.
Nth-order under frequency ride-through frequency point_UFn	Trigger under-frequency ride-through frequency point.
N-order under frequency ride-through time_UTn	Under-frequency ride-through hold time.
Nth-order over-frequency crossing point_OFn	Trigger over-frequency ride-through frequency point.
Nth-order over-frequency ride-through time_OTn	Over-frequency ride-through hold time

Characteristic Parameters

Parameter Name	Description
Europe One-Key Shutdown Enable	Enable or disable the European one-key shutdown function.
PID prevention function switch	Enable or disable the PID prevention function.

PID recovery function switch	Enable or disable PID recovery function.
Anti-reverse flow switch	Enable or disable the anti-backflow function.
Reverse power flow upstream percentage setting	Set the reverse power flow uplink power as a percentage.
Three-phase anti-reverse power flow mode selection	Set the anti-backflow mode. 00 represents that the total three-phase power cannot reverse flow; 1 represents that any single phase cannot reverse flow.
External Meter CT Ratio	Set the CT ratio of the energy meter.
ISO threshold setting	To ensure equipment safety, the inverter performs an insulation resistance test between the input side and ground during startup self-check. If the measured value falls below the ISO threshold setting, the inverter will not connect to the grid.
NPE Voltage Over voltage Fault Detection Switch	Enable or disable N-PE voltage over voltage fault detection.
N-PE error reporting threshold	N-PE over voltage fault threshold.
Active power dispatch response mode	Set active power dispatch response mode. Supported: Slope mode or first-order low-pass filter mode. 0:Disabled; 1 represents slope mode; 2 represents first-order low-pass time constant; 3 represents first-order low-pass response time.
Active power change gradient	Set the rate of change for the inverter's active power.
Active power dispatch low-pass filter time constant	Set the active power dispatch low-pass filter time parameter.
Reactive power dispatch response mode	Set the reactive power dispatch response mode. Supported: Slope mode or first-order low-pass filter mode. 0:Disabled; 1 represents slope mode; 2 represents first-order low-pass time constant; 3 represents first-order low-pass response time.
Reactive power change gradient	Set the rate of change for the inverter's reactive power.
Reactive power scheduling low-pass filter time parameter	Set the low-pass filtering time parameter for reactive power dispatch.

Power Regulation Parameters

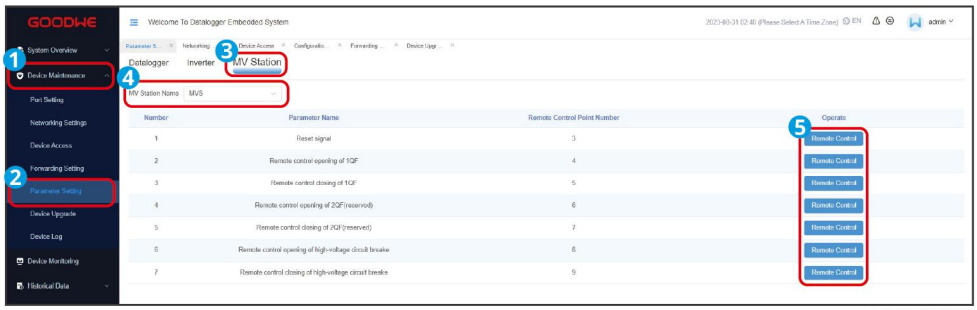
Parameter Name	Description
Over-frequency starting point	Certain national/regional standards require that when the grid frequency exceeds the over-frequency point, the active power output of the inverter must be derated.
Over-frequency power slope (Slope)	In Slope mode, the rate at which the active power output of the inverter is derated when the grid frequency exceeds the over-frequency point.
P(F) curve enable	Enable or disable over-frequency derating.
Under frequency starting point	Certain national/regional standards require that when the grid frequency falls below the under-frequency point, the active power output of the inverter must be increased.
Power recovery slope	Set the power recovery slope for exiting over-frequency load shedding.
Frequency hysteresis point	Over-frequency hysteresis function frequency corresponding point.
Tentional Delay Ta	Over-frequency hysteresis function silent waiting time.
Over frequency endpoint	Set the exit frequency for over-frequency derating.
Reference Power (Slope)	In Slope mode, the power reference value for the rate of change of active power derating when the grid frequency exceeds the over-frequency point.
Frequency hysteresis point	Under frequency hysteresis function frequency corresponding point.
Power recovery slope	Set the power recovery slope for exiting under-frequency load shedding.
Under frequency endpoint	Set the exit frequency for under-frequency power increase.
Reference power (Slope)	In Slope mode, when the grid frequency is below the under-frequency point, the inverter's output active power is derated according to the power reference value of the change slope.
Under frequency power slope (Slope)	In Slope mode, the slope at which the inverter's active power output derates when the grid frequency falls below the under-frequency point.
Tentional Delay Ta	Under frequency hysteresis function silent waiting time.
PU curve enable	PU curve enable switch.
Vn voltage value (0.1%)	Set the voltage percentage corresponding to the PU curve.

Vn active power value (0.1%)	Set the power percentage corresponding to the PU curve.
PU curve output response mode	Set the PU curve output response mode. Supported: Slope mode or first-order response mode.
PU curve power output rate of change	When the PU curve output response mode is in slope mode, set the corresponding power change slope.
PU curve response time parameters	When the PU curve output response mode is a first-order response mode, set the corresponding response time.
QU curve enable bit	QU curve enable switch.
Vn voltage value (0.1%)	Set the voltage percentage corresponding to the QU curve.
Vn active power value (0.1%)	Set the percentage of reactive power corresponding to the QU curve.
QU curve response time parameter	Response time corresponding to the first-order response mode of the QU curve.
Enter curve power (0.1%)	Enter the power percentage in the QU curve.
Exit curve power (0.1%)	Exit QU curve power percentage.
cos φ (P) curve enable bit	cosφ(P) curve enable switch.
n-point power (0.1%)	The power percentage corresponding to the cosφ(P) curve.
n-point cos φ value (pf, 0.001)	The cosφ value corresponding to the cosφ(P) curve.
cosφ(P) curve response time constant	When the cosφ(P) curve is in first-order response mode, the corresponding response time.
Enter curve voltage (0.1%)	Percentage of voltage entering the cosφ(P) curve.
Dropout voltage (0.1%)	Voltage percentage for exiting the cosφ(P) curve.
QP curve enable bit	QP curve enable switch.
QP curve Pn	The percentage of active power corresponding to the QP curve.
QP curve Qn	The percentage of reactive power corresponding to the QP curve.
QP curve output response time constant	When the QP curve is in first-order response mode, the corresponding response time.

9.7.3. Setting MV Station Parameters

NOTICE

- Before setting the parameters of the MV station, ensure that its communication status is normal.
- Operation and control of the box-type substation must be performed by professionals; unauthorized modifications are prohibited.



EZU30CON0086

10. Maintenance

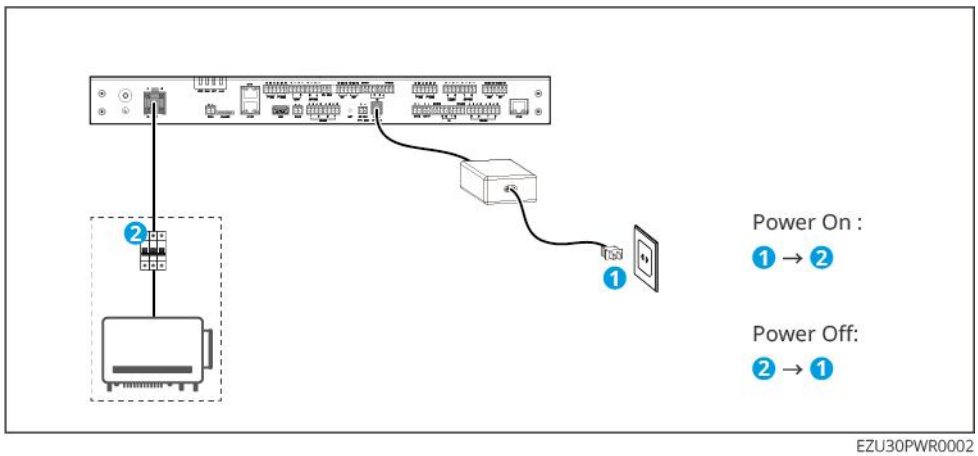
10.1. Power OFF the System

DANGER

- When performing operation and maintenance on the equipment, please de-energize it. Operating live equipment may cause equipment damage or electric shock hazards.
- After the equipment is powered off, a minimum interval of 60 seconds is required before it can be powered on again.

Operation Steps:

1. (Optional) When using PLC signal communication, disconnect the upstream switch of the PLC cable in the data logger.
2. Unplug the power adapter from the socket.



EZU30PWR0002

10.2. Removing the Equipment

DANGER
• Ensure the equipment is de-energized. • When operating the equipment, please wear personal protective equipment.

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

Step 2: Dismantle the equipment.

Step 3: Store the equipment properly. If it is to be put into use again, ensure that the storage conditions meet the requirements.

10.2.1. Disposing of the Equipment

When the equipment can no longer be used and requires scrapping, it must be disposed of in accordance with the electrical waste disposal regulations of the country/region where the equipment is located. The equipment must not be treated as general household waste.

10.2.2. Routine Maintenance

DANGER		
When performing operation and maintenance on the equipment, please de-energize it. Operating the equipment while energized may cause equipment damage or electric shock hazards.		
Maintenance Content	**Maintenance Method**	**Maintenance Cycle**
System Cleaning	Check the air inlet/outlet for any for eign objects or dust.	Once every six months to once a year
Electrical connection	Check for loose electrical connections, damaged cable insulation, and exposed copper wires.	Once every six months to once a year
Environmental Inspection	Check for any strong electromagnetic interference devices or heat sources around the EzLogger.	Once every six months to once a year

10.3. Maintenance (WEB)

10.3.1. Upgrade Equipment

Upgrade via USB DriveOperation Steps:(Applicable only for data logger upgrade)

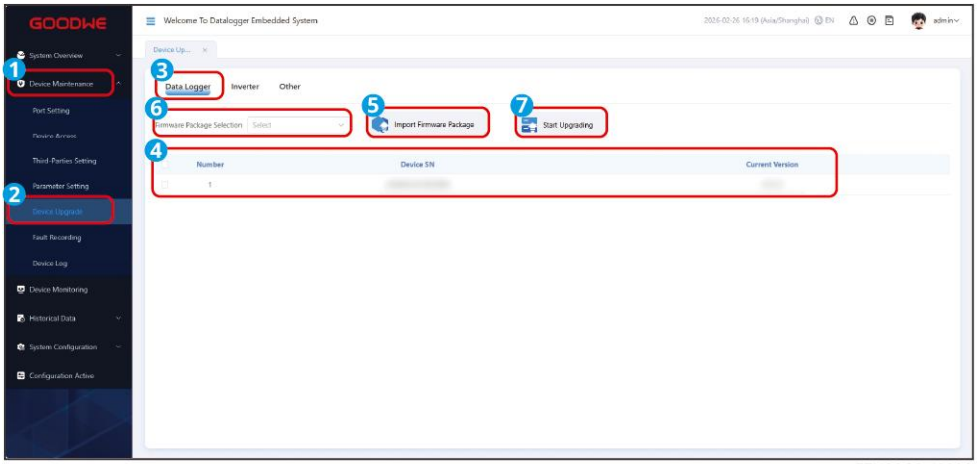
1. Contact after-sales service to obtain the device upgrade package and prepare a FAT32-for matted USB flash drive with a capacity not exceeding 32GB.
2. Create a new folder named "collector" in the root directory of the USB flash drive, and store the device upgrade package in the "collector" folder.
3. Insert the USB flash drive into the USB port of the data logger. After the data logger detects the device upgrade package and starts the upgrade, the fault indicator will switch to rapid flashing. If the fault indicator does not switch to rapid flashing, the upgrade has not started. Please check the upgrade package and the status of the USB flash drive. Once the upgrade is complete, the fault indicator will either remain steadily lit or turn off.
4. After the upgrade is completed, the data logger will automatically restart.

Steps for Web-based Upgrade Operation:

1. Contact after-sales service to obtain the device upgrade package.
2. Save the device upgrade package to the local computer and follow the instructions below to upgrade the device.
3. After the upgrade is completed, the interface will automatically jump to the login page. Please log in to the web again.

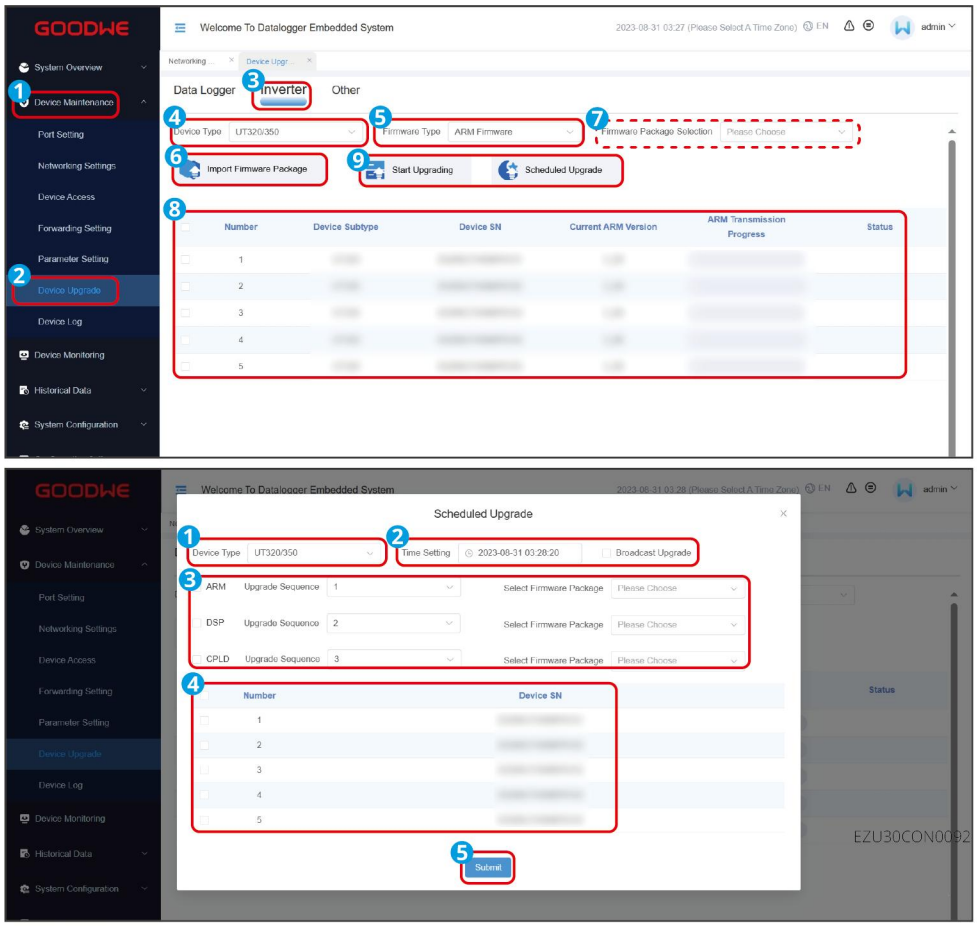
Please refer to the following figure for the operation interface:

- Upgrade the data logger



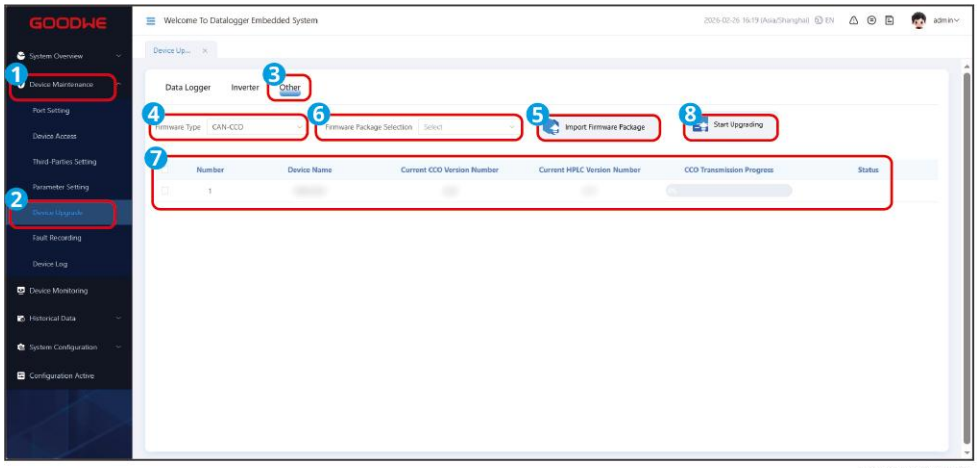
EZU30CON0090

- Upgrade the inverter



EZU30CON0092

- Upgrade other equipment



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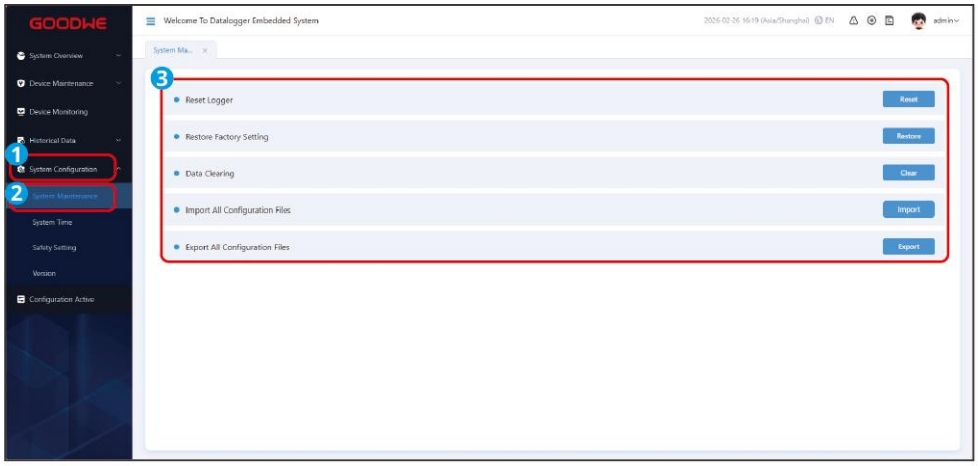
10.3.2. Maintenance System



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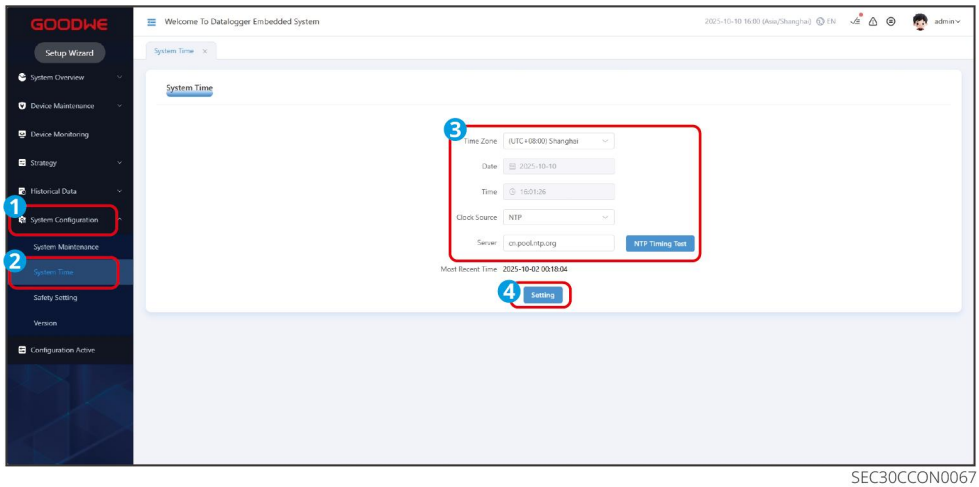
Parameter Name	Description
Restart data acquisition	The data logger will automatically shut down and restart, while clearing cached data such as imported firmware packages.
Restore factory settings	● Restore Factory Settings: Clears device access information, for warding configurations, login passwords, and other related data. ● Restore communication configuration: (Optional) Restore network card settings. ● Restore data acquisition data: (Optional) Clear logs, historical alarms, historical data, etc.
Data Clearance	Clear historical data, temporary files, operation logs, and system logs from the data logger, the n restart the data logger.
Import full configuration file	● After replacing the data logger, you can import the configuration file exported locally into the new data logger. Once the import is successful, the data logger will restart, and the configuration file will take effect. Verify that the device parameters have been correctly configured. ● Only applicable to data collectors of the same version.
Export full configuration file	● Before replacing the data logger, export the configuration file to the local system. ● Only applicable to data collectors of the same version.

10.3.3. Set System Time

NOTICE
• Modifying the date and time may affect the integrity of system power generation and performance data records. Do not arbitrarily change the time zone or system time. • When the clock source is set to IEC104 or ModbusTCP, please enable the corresponding time synchronization function in the for warding configuration interface.



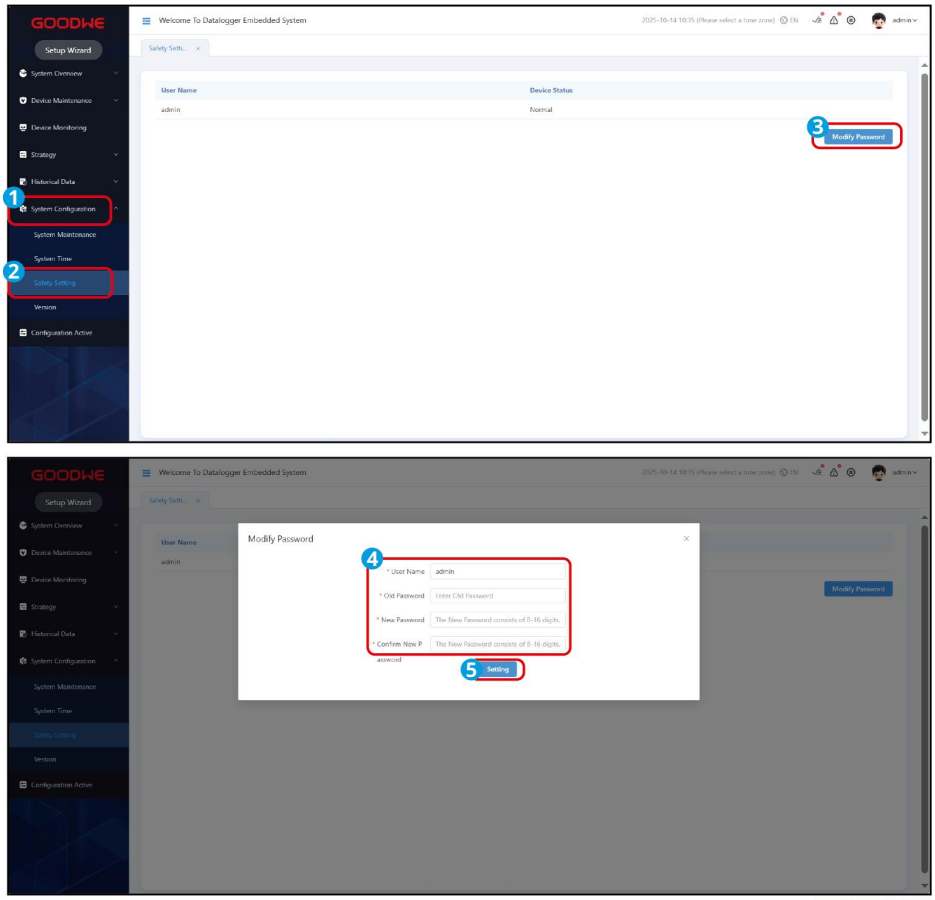
SEC30CCON0067

No.	Parameter Name	Description
1	Time zone	Manual modification is only allowed when the clock source is set to manual synchronization.
2	Date	
3	time	
4	clock source	Set clock source. Supported: NTP, Modbus-TCP, manual time synchronization, GoodWe cloud platform time synchronization.

10.3.4. Change Login Password

Operation Steps:

1. Go to the "System Configuration" > "Security Setting" to access the password modification interface.
2. Click "Modify Password", enter the old and new passwords as required, and then click "Setting".



SEC30CCON0068

10.4. Troubelshooting

Please follow the troubleshooting methods below. If the methods do not resolve the issue, 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, equipment installation time, fault occurrence time, fault occurrence frequency, etc.
2. Equipment installation environment, such as weather conditions, whether the modules are shaded or have shadows, etc. It is recommended to provide photos, videos, and other files to assist in problem analysis.
3. Grid status.

No.	Fault	Cause	Solutions
1	Equipment fails to power on	• The power input port of the equipment is not securely connected. • The power adapter is not securely connected to the socket. • Power adapter abnormality • Equipment failure	• Reconnect the power input port. • Reconnect the power adapter to the socket. • Replace the power adapter. • If the problem persists, please contact your dealer or after-sales service center.
2	ETH communication abnormality	• Network cable connection is not properly connected. • The device failed to communicate with the IP address of the peer device. • Switch or router malfunction • Equipment failure • ETH port damaged	• Reconnect the network cable. • Recheck and configure the device IP address to ensure successful communication. • Replace the switch or router. • Reconnect the network cable to another ETH port. • If the problem persists, please contact your dealer or after-sales service center.
3	RS485 communication abnormality	• RS485 wiring abnormality • Abnormal RS485 communication parameter settings • Equipment failure	• Check whether the cable connection ports are correct and securely fastened. • Recheck the RS485 communication parameter settings. • If the problem persists, please contact your dealer or after-sales service center.

4	HPLC/PLC communication abnormality	• HPLC/PLC wiring abnormality • Abnormal PLC communication parameter settings • Equipment failure	• Ensure the HPLC/PLC cable is properly connected and the switch is normally closed. • Check whether the Modbus address and the box transformer number in the grid are correct. • Check whether the HPLC/PLC communication mode is correctly configured, including the device ID, etc. • Check the master-slave HPLC and PLC versions. • Check the ARM version of the inverter. • If the problem persists, please contact your dealer or after-sales service center.
5	The WEB homepage shows the device is offline or displays the device as online but does not refresh data.	• The detection time for determining whether the equipment is offline is relatively long. • Equipment switches, programs, circuits, and other issues	• Check whether the box transformer number and the RS485 address of the equipment are correctly configured. • Check whether all communication link switches are turned on. • Check if the inverter has failed. • Check if the inverter ARM version meets the requirements. • If the problem persists, please contact your dealer or after-sales service center.

6	Embedded WEB login failure	• Incorrect IP and port information entered • The new and old versions of the program are incompatible.	• Check whether the IP addresses are on the same subnet and with in the same local area network. • Clear browser cache. • Log in via https://XXX:443. • Check whether the IP and port number are entered correctly. • Restart the device. • If the problem persists, please contact your dealer or after-sales service center.
7	When networking via HPLC or PLC, the inverter cannot be detected.	• Abnormal equipment wiring • Data logger model mismatch Inverter firmware version is outdated	• Check the wiring status of the equipment. • Check the master-slave HPLC and PLC versions. • Check the data collector model to confirm whether the communication method matches HPLC/PLC. • Ensure the current network connection is active.
8	The actual power generation of the inverter is inconsistent with the web interface.	Inverter time setting abnormality	Set the time via web configuration, perform multiple calibrations, or use an APP module to set the inverter time.
9	The web homepage displays an abnormal MQTT connection status.	No connection to router or MQTT server	When the server refuses the connection, please check if the router network is properly connected. When the server connection fails, please check whether the MQTT configuration parameters are correct and confirm whether the Internet option is selected in the LAN configuration on the web interface.

11. Technical Parameters

Technical Parameter	EzLogger3000U	EzLogger3000U-A
Equipment Management		
Maximum number of connected devices	200	200
power supply		
AC input	100~240V, 50/60Hz	100~240V, 50/60Hz
DC input	24V	24V
Power Consumption (W)	⩽27	⩽27
Communication interface		
Ethernet	2	2
PLC	1*PLC	1*HPLC
RS485	COM x 8	COM x 8
Digital/Analog Input/Output	DI×8, DO×4, AI×8	DI×8, DO×4, AI×8
PT100/PT1000	PT100×2, PT1000×2	PT100×2, PT1000×2
Power output port	12V，100mA	12V，100mA
Communication Protocols		
Ethernet	Modbus-TCP, IEC 60870-5-104	Modbus-TCP, IEC 60870-5-104
RS485	Modbus-RTU, IEC 60870-5-103 (Standard), DL/T645	Modbus-RTU, IEC 60870-5-103 (Standard), DL/T645
User Interface		
LED	LED×4	LED×4
Web	Embedded Web	Embedded Web
USB	USB 2.0 x 1	USB 2.0 x 1

Mechanical Parameters		
Dimension (W×H×D mm)	430*44*161	430*44*161
Weight (kg)	1.2	1.2
Mounting Method	Wall-mounted, rail-mounted, desktop	Wall-mounted, rail, desktop
Environmental parameters		
Operating Temperature Range (℃)	-30~+60	-30~+60
Storage temperature range (℃)	-40~+70	-40~+70
Relative Humidity	5~95%	5~95%
Max. Operating Altitude (m)	5000	5000
Ingress Protection Rating	IP20	IP20

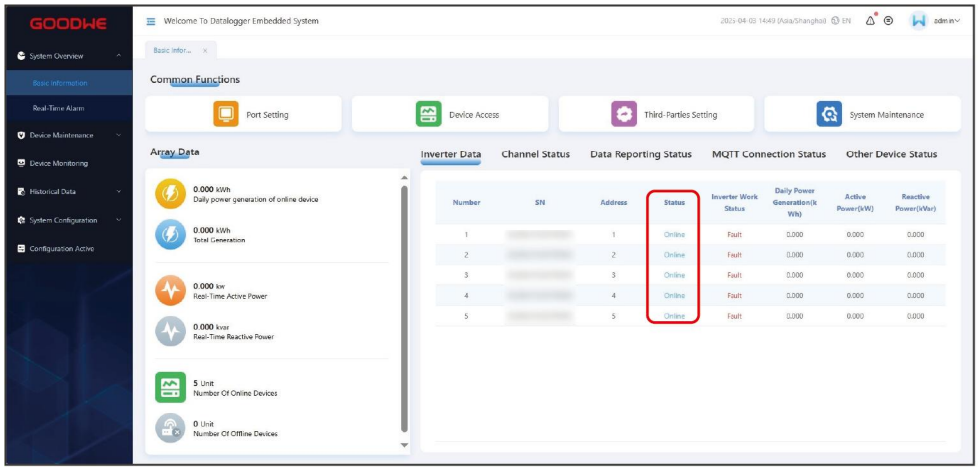
12. Appendix

12.1. FAQ

12.1.1. How to Check the Current Inverter Communication Status

Method 1:

After logging into the web, check the "Communication Status" in the inverter data section on the homepage. If it shows "Online," it indicates that the inverter's communication status is normal.



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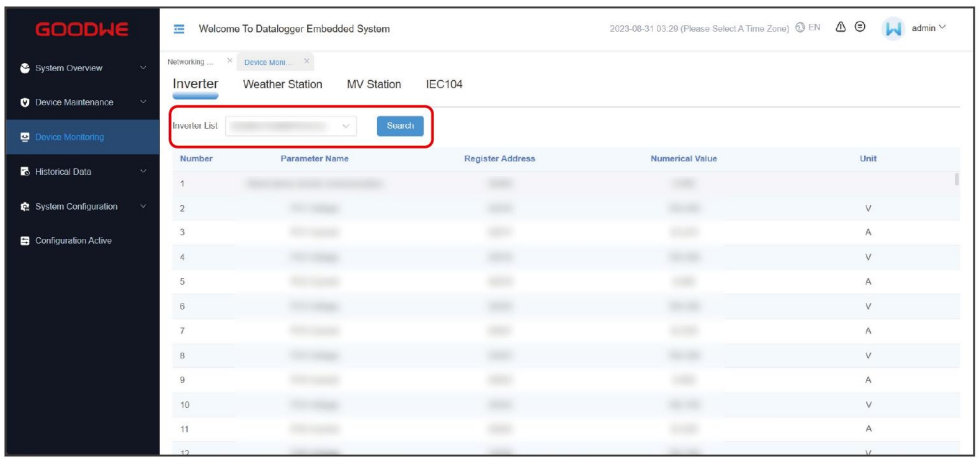
Method 2:

After logging into the web interface, check the inverter in the device monitoring section to confirm whether the inverter can be detected.



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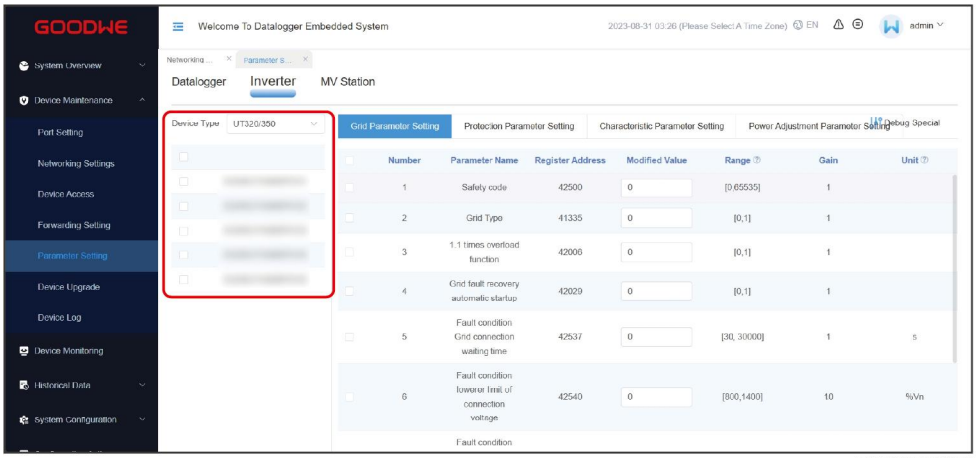
Method 3:

Navigate to the Inverter parameter settings interface via "Device Maintenance" > "Parameter Settings" > "Inverter" and confirm whether the required Inverter parameters can be viewed.



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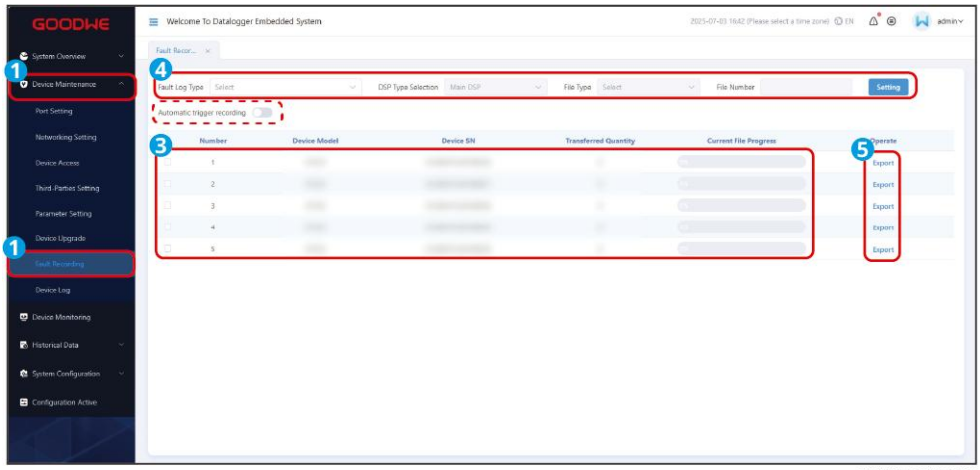
12.1.2. How to Set Up or Export Fault Recording

Manual Fault Recording Operation Steps:

1. Access the settings interface via "Equipment Maintenance" > "Fault Recording".
2. Select the devices that require fault recording.
3. Set the relevant parameters for manual trigger recording according to actual requirements.
4. If needed, click Export to export the fault log.

Automatic Fault Recording Operation Steps:

1. Enable automatic trigger recording.
2. If needed, click Export to export the fault log.



EZU30CON0097

12.2. Explanation of Terms

Definition of Over voltage Category

Over voltage Category I: Equipment connected to circuits with measures to limit

transient over voltages to a relatively low level.

Over voltage category II: Energy-consuming equipment supplied by fixed distribution installations. This category includes appliances, portable tools, and other household and similar loads. If special requirements for reliability and suitability of such equipment are specified, over voltage category III shall be applied.

Over voltage Category III: Equipment in fixed electrical installations where the reliability and suitability of the equipment must meet special requirements. This includes switching devices in fixed electrical installations and industrial equipment permanently connected to fixed electrical installations.

Over voltage category IV: Equipment used in the power supply of distribution installations, including measuring instruments and preceding over current protection devices, etc.

Definition of Damp Location Categories

tal Parameters	**Level**		
	3K3	4K2	4K4H
ge	0~+40℃	-33~+40℃	-33~+40℃
range	5% to 85%	15% to 100%	4% to 100%

Explanation of Environmental Categories

Outdoor inverter: Ambient air temperature range from -25°C to +60°C, suitable for pollution degree 3 environments;

Indoor Type II Inverter: Ambient air temperature range from -25°C to +40°C, suitable for environments with Pollution Degree 3;

Indoor Type I Inverter: Ambient air temperature range of 0 to +40°C, suitable for environments with pollution degree 2.

Definition of Pollution Degree Categories

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

Pollution degree 2: Normally only non-conductive pollution occurs, but temporary conductivity caused by condensation must be expected.

Pollution degree 3: Conductive pollution occurs, or non-conductive pollution becomes conductive due to condensation;

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

13. Contact Information

GoodWe Technologies Co., Ltd.

No. 90 Zijin Road, High-Tech Zone, Suzhou, China

400-998-1212

www.goodwe.com

service@goodwe.com