



MQ2200

MQ2200-M-H / MQ2200-M-AC / MQ2200-S

In order to prevent improper operation before use, please carefully read this manual.

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1. Introduction

The document describes the installation, commissioning, maintenance and troubleshooting of the following micro storage system listed below.

MQ2200 = MQ2200-M + MQ2200-S

Note: MQ2200-M = MQ2200-M-H or MQ2200-M-AC

Please read the document carefully before you use the product to ensure that you completely understand the product and can correctly use it. After reading, please keep the document properly for future reference.

Hereby, FOXESS CO., LTD. declares that the radio equipment type [MQ2200-M-H or MQ2200-M-AC] is in compliance with Directive 2014/53/EU.

2. Symbols

	Symbol Explanation CE mark. The inverter complies with the requirements of the applicable CE guidelines.
	Caution, risk of electric shock.
	Do not place nor install near flammable or explosive materials.
	Install the product out of reach of children.
	Prohibit the use of water to extinguish fires.
	Prohibition of private maintenance.
	Prohibit connector reversal.
	Disconnect the equipment before carrying out maintenance or repair.
	Read the instruction manual before starting installation and operation.
	Do not dispose of the product with household wastes.

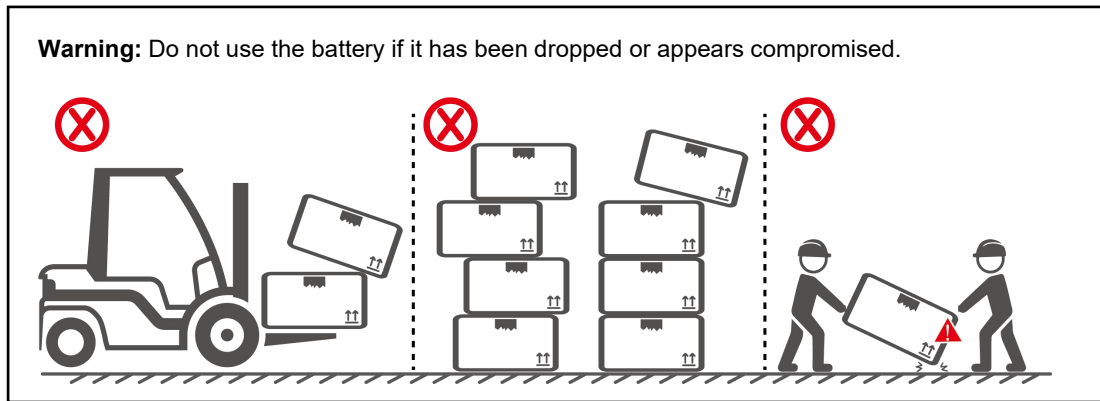
	Caution, risk of electric shock, energy storage timed discharge.
	Beware of hot surface. The inverter can become hot during operation. Avoid contact during operation.
	Danger of high voltages. Danger to life due to high voltages in the inverter!

3. Safety

Electrical regulations vary by region. Comply with national laws and grid operator requirements when installing, commissioning, and operating this micro storage system. Installers should be familiar with this manual before performing any maintenance or installation on the system.

- For VDE-standard regions (e.g. Germany), follow DIN VDE V 0126-95:2025-12, VDE-AR-N 4105:2 018-11, DIN VDE V 0100-551-1, DIN VDE 0100-712, DIN VDE 0100-410 and DIN VDE V 0628-1.
- All household circuit modifications must be done by qualified electricians only.
- Please report and register in a timely manner in accordance with local regulatory requirements.
- Recommend to check the new batteries mounted on-site comply to the warranty scope.
- Always wear insulated gloves when installing, servicing or maintaining this product.
- Do not touch leaked liquid exuding from the unit (electric shock/skin damage risk).
- Do not perform any installation or disassembly work while the product is in operation.
- Do not drag, squeeze, step on this product or place foreign objects on it.
- Do not put fingers or hands into the product.
- Do not clean the product with flammable or toxic solvents. Wipe it with a dry soft cloth.
- Recommend to store the product out of reach of children and animals.
- Store in a cool and dry place with ample ventilation.
- Do not store the product near water sources.
- Do not expose the product to open flame.
- Do not open the product to repair or disassemble.
- Do not install with other batteries or cells.
- Only Type A RCDs are compatible with this product.
- Do not use any unofficial or unrecommended components and accessories.
- Not recommended to use cables with a length of 3 meters or longer.
- Do not use any damaged cords or cables with this product.
- Do not pull cables, do not bury them in soil, and do not lay them in damp bathrooms.
- Consider the wind load and snow load requirements according to the installation location.
- Do not insert the plug into the coupler socket of an extension cord.
- The plug shall not be inserted into a coupling socket or a multi hole socket.
- No equipment shall be installed in fire exits or emergency escape stairwells.
- Do not use the product in high static or strong magnetic environments that may damage the product.
- Avoid the presence of flammable debris around the battery, such as cotton, fabric, haystacks, etc. which may be ignited by sparks and then lead the fire source to the battery, thus causing the battery to burn.

- Avoid the presence of hot or flammable objects around the battery, such as hydraulic bottles (natural gas, oxygen, etc.), heat pumps and so on.
- Avoid direct sunlight, rain exposure, snow laying up during installation and operation.
- In case of fire, use only dry powder fire extinguisher. Liquid extinguishers should not be used.
- Do not subject this product to severe impacts, vibrations, or drops to prevent physical damage.



4. Product Information

1. MQ2200-S is the battery module, and MQ2200-M-H includes inverter, MPPTs and battery module; MQ2200-M-AC includes inverter, battery module.
2. MQ2200-M-H or MQ2200-M-AC contains the controller of the entire system, so each system must have one MQ2200-M-H or MQ2200-M-AC.

4.1 MQ2200-M-H Specifications

Specifications for MQ2200-M-H	
PV INPUT	
Max. input power (W)	2600
Max. input voltage (V d.c.)	60
MPPT voltage range (V d.c.)	10~60
Nominal voltage (V d.c.)	38
Max. input current (A d.c.)	20/20/20/20
Isc PV (A d.c.)	25/25/25/25
BATTERY	
Battery type	LFP (LiFePO ₄)
Expandable battery quantity	4
Battery energy (kWh)	2.11
Nominal capacity (Ah)	60
Battery rated voltage (V d.c.)	35.2
Voltage range (V d.c.)	31.9~40.1
Max.charge/discharge current (A d.c.)*1	60/60
Warm up function	Optional
AC INPUT	
Max. apparent power (VA)	1200
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Max. input current (A a.c.)	5.4
AC OUTPUT	
Rated power (W)	800
Rated apparent power (VA)	800
Max. apparent power (VA)	800
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Rated output current (A a.c.)	3.6/3.5/3.3
Power factor	0.8 leading to 0.8 lagging
EPS OUTPUT	
Max. apparent power (VA)	1200
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Max. output current (A a.c.)	5.4
Max. bypass output current (A a.c.)	10
Max. bypass output power (W)	2200
Power factor	0.8 leading to 0.8 lagging
GENERAL DATA	
Topology	Isolated
Ingress protection	IP65
Operating temperature range (°C)	-20~55
Dimensions (W×H×D) (mm)	420×255×285

Weight (kg)	26.5±5%
Protective class	Class I
Overvoltage category	III (AC side), II (DC side)
Communication interface	Wi-Fi, LAN, Bluetooth, RS485, USB

4.2 MQ2200-M-AC Specifications

Specifications for MQ2200-M-AC	
BATTERY	
Battery type	LFP (LiFePO ₄)
Expandable battery quantity	4
Battery energy (kWh)	2.11
Nominal capacity (Ah)	60
Battery rated voltage (V d.c.)	35.2
Voltage range (V d.c.)	31.9~40.1
Max.charge/discharge current (A d.c.)*1	60/60
Warm up function	Optional
AC INPUT	
Max. apparent power (VA)	1200
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Max. input current (A a.c.)	5.4
AC OUTPUT	
Rated power (W)	800
Rated apparent power (VA)	800
Max. apparent power (VA)	800
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Rated output current (A a.c.)	3.6/3.5/3.3
Power factor	0.8 leading to 0.8 lagging
EPS OUTPUT	
Max. apparent power (VA)	1200
Nominal voltage (V a.c.)	220/230/240
Nominal frequency (Hz)	50/60
Max. output current (A a.c.)	5.4
Max. bypass output current (A a.c.)	10
Max. bypass output power (W)	2200
Power factor	0.8 leading to 0.8 lagging
GENERAL DATA	
Topology	Isolated
Ingress protection	IP65
Protective class	Class I
Overvoltage category	III (AC side), II (DC side)
Communication interface	Wi-Fi, LAN, Bluetooth, RS485, USB
Display	APP, LCD, LED, Website
Operating temperature range (°C)	-20~55
Dimensions (W×H×D) (mm)	420×255×285

4.3 MQ2200-S Specifications

Specifications for MQ2200-S	
Battery type	LFP (LiFePO ₄)
Rated capacity (Ah)	60
Nominal energy (kWh)	2.11
Nominal voltage (V d.c.)	35.2
Voltage range (V d.c.)	31.9~40.1
Max.charge/discharge current (A d.c.)*1	40/40
Ingress protection	IP65
Protective class	Class I
Operating temperature range (°C)	-20~55
Warm up function	Optional
Dimensions (W×H×D) (mm)	420×270×220
Weight (kg)	23.0±5%

*1 : It depends on the charge and discharge conditions, such as temperature and SOC.

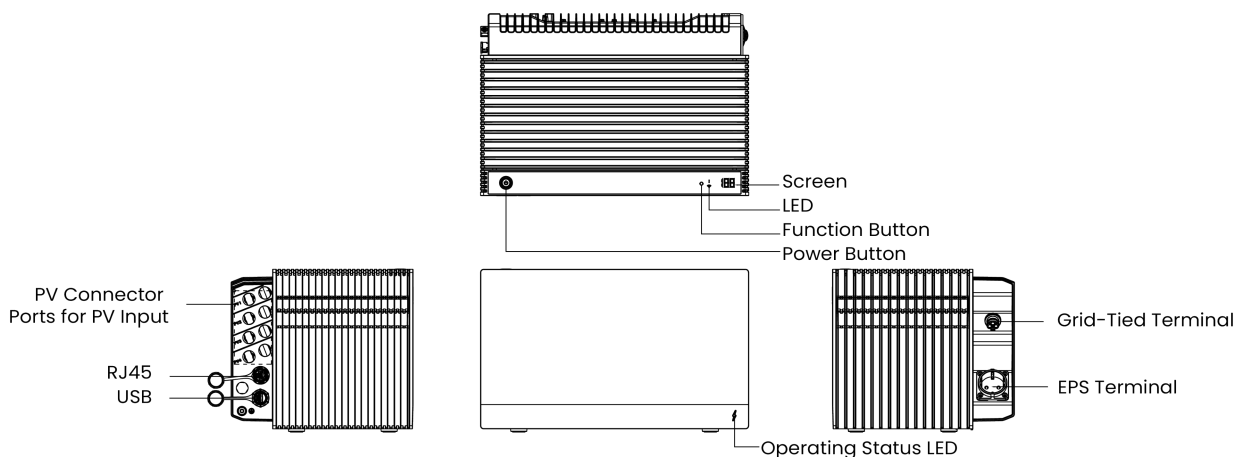
5. Product Features

5.1 System Features

The product has been fitted with multiple protection systems to ensure the safe operation of the system. Some of the protection systems include:

- Inverter protection: Over voltage, Over current, External short circuit, Over temp, In rush current, Anti - islanding protection.
- Battery protection: Over voltage, Over current, Over temp, Under voltage, Under temp.

MQ2200-M Features:



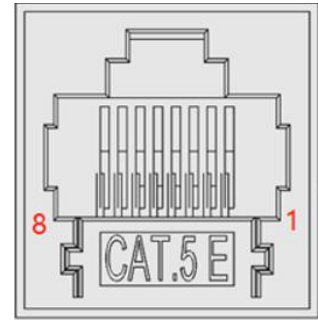
PV Connector Ports for PV Input 1~4 (Only applicable to MQ2200-M-H)

Connect each set of PV modules to each set of PV input ports in MQ2200-M-H.

RJ45

Connect to the smart meter through RS485 communication. If you use wireless meter, you don't need to connect it.

RJ45 Port	PIN	PIN definition
	1	TD2_P
	2	TD2_N
	3	RD2_P
	4	TD2_T
	5	RD2_T
	6	RD2_N
	7	Meter_485A
	8	Meter_485B



USB

Connect to a USB flash drive to upgrade firmware.

This upgrade function is not authorized for end users and is only available to manufacturer personnel under restricted scenarios.

Power Button

Button	Action	Function
	Press for 2 seconds (in power off state)	Turn on the battery
	Press for 2 seconds (in power on state)	Enable/disable EPS output
	Press for 5 seconds (in power on state)	Turn off the battery
	Press for 2 seconds (in screen off state)	Light up the screen
	Press for 2 seconds (in screen on state)	Switch the screen page
	Press for 20 seconds	Reset bluetooth and Wi-Fi

Screen LED

OLED screen displays inverter data, PV data, battery data, fault information, etc.

After 10 minutes, the OLED screen will turn off until the function button is pressed again.

Network connection status and meter connection status:

Icon	Status	Description
	Icon is on	Meter is disconnected
	Icon is off	Meter is connected
	Icon is on	Wi-Fi connected and connected to the cloud
	Icon is off	Wi-Fi not connected or not connected to the cloud

Operating Status LED

Status	Red	Green	Description
Self check	/	■	Green light flashing
Charge	/	◆	Dual lights flashing quickly
Discharge/Idle	/	●	Green light always on
Fault	●	/	Red light always on

Symbol	Status
■	LED flash display (on: 0.5s, off: 0.5s)
/	LED off display
•	LED on display
◆	LED flash display (on: 2s, off: 1s)

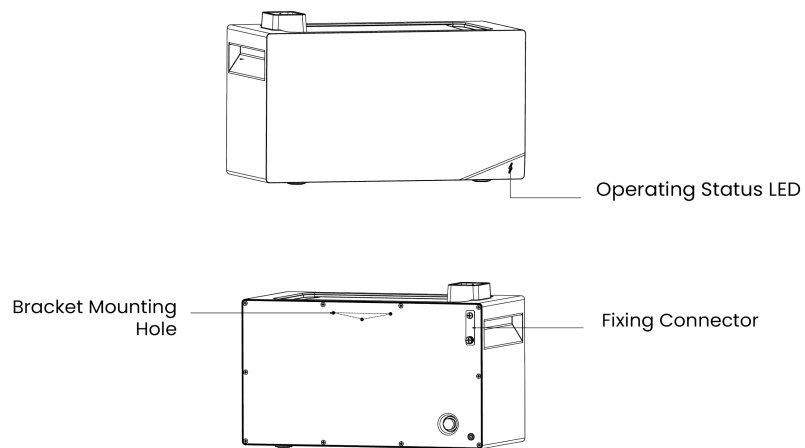
Grid-Tied Terminal

Connect to grid.

EPS Terminal

Connect to backup load.

MQ2200-S Features:



Operating Status LED

The LED displays the running or fault status of the product. The displayed information is the same as that of the MQ2200-M.

Bracket Mounting Hole

Fix the product to the wall together with bracket.

Fixing Connector

For securing two vertically stacked finished products to improve their stability.

6. Installation

6.1 Select an Installation Site

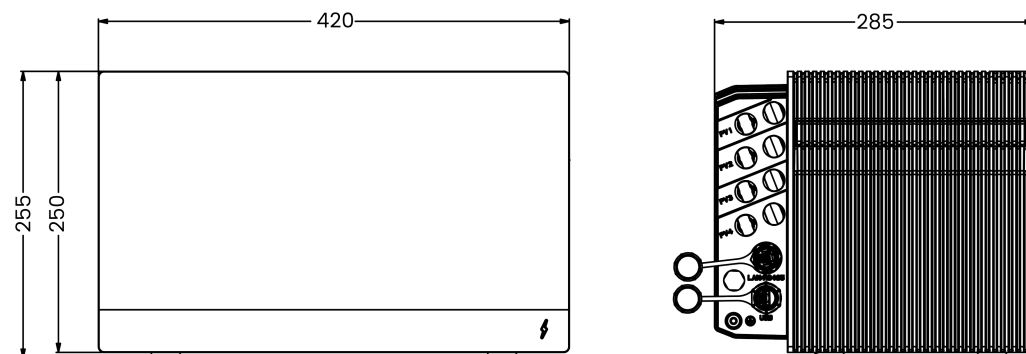
Installation Requirements

Before installation or operation, please check local regulations and consult a qualified electrician to ensure all installations are safe and compliant.

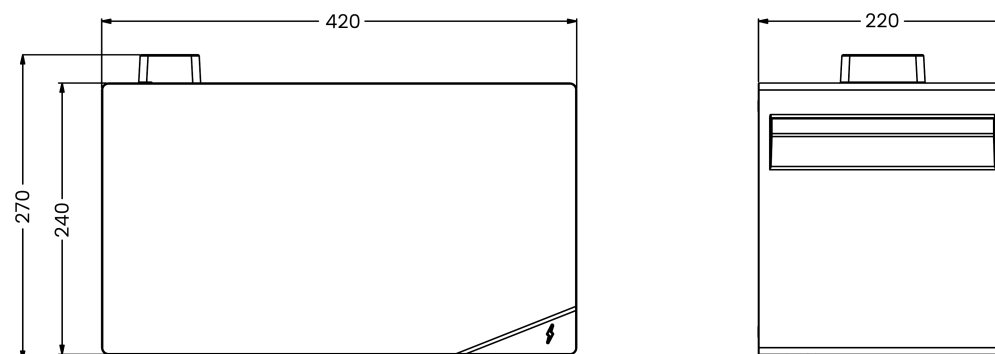
- Always wear insulated gloves when installing, servicing or maintaining this product.
- Do not perform any installation or disassembly work while the product is in operation.
- Do not drag, squeeze, step on this product or place foreign objects on it.
- Consider the wind load and snow load requirements according to the installation location.
- Position the installation area away from television antennas or antenna cables to avoid lightning strikes and electromagnetic interference.
- Not in potential explosive areas.
- No equipment shall be installed in fire exits or emergency escape stairwells.
- Avoid the presence of flammable debris around the battery, such as cotton, fabric, haystacks, etc. which may be ignited by sparks and then lead the fire source to the battery, thus causing the battery to burn.
- Avoid the presence of hot or flammable objects around the battery, such as hydraulic bottles (natural gas, oxygen, etc.), heat pumps and so on.
- Avoid direct sunlight, rain exposure, snow laying up during installation and operation.

Product Dimensions

MQ2200-M: 420 (W) × 255 (H) × 285 (D) mm

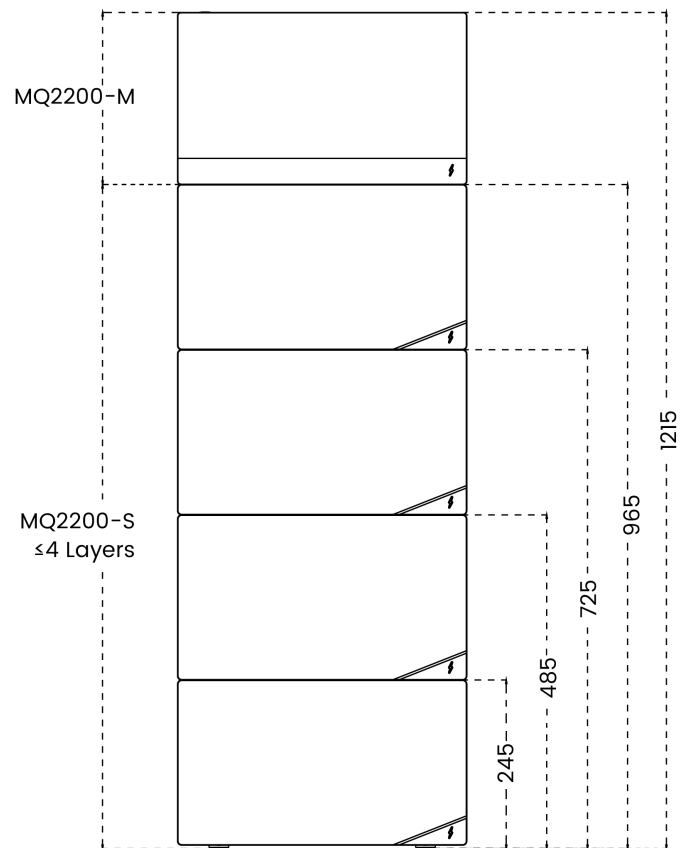


MQ2200-S: 420 (W) × 270 (H) × 220 (D) mm



Stacking Requirements

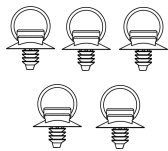
Ensure that each system has only one unit of MQ2200-M and a maximum of four units of MQ2200-S. The following installation steps are applicable for installing extended batteries.



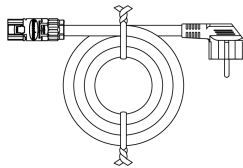
6.2 Items in the package

Please check if the following items are including with the package:

For MQ2200-M



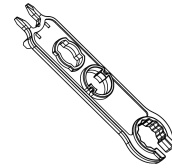
Cable tie buckles*5



AC cable*1



Sealing head*1

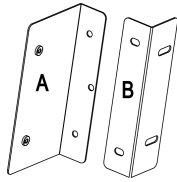


PV connector puller*1
(Only applicable to
MQ2200-M-H)

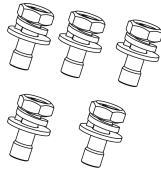


Installation guide*1

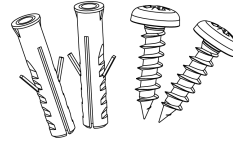
For MQ2200-S



Bracket A and B*1



Mounting screw
pack(M4*10) *5



Expansion tube*2 &
Expansion screw(M6*40) *2

6.3 Tools

The following tools will be required to installation.



6mm magnetic
phillips screwdriver



Hammer drill
@φ8mm



Marker

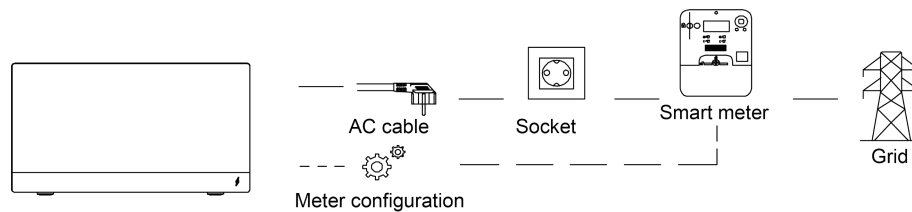


Rubber mallet

6.4 Installation Steps

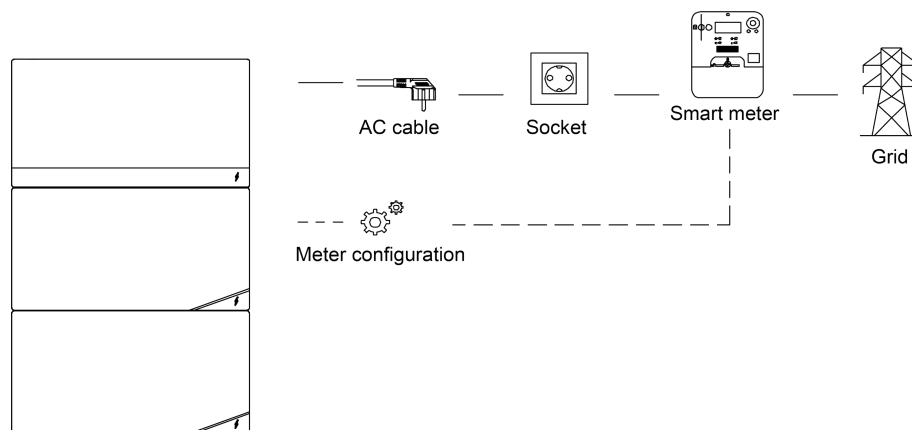
Scenario 1 - Use MQ2200-M-AC alone:

The following figure shows an example of a single MQ2200-M-AC.



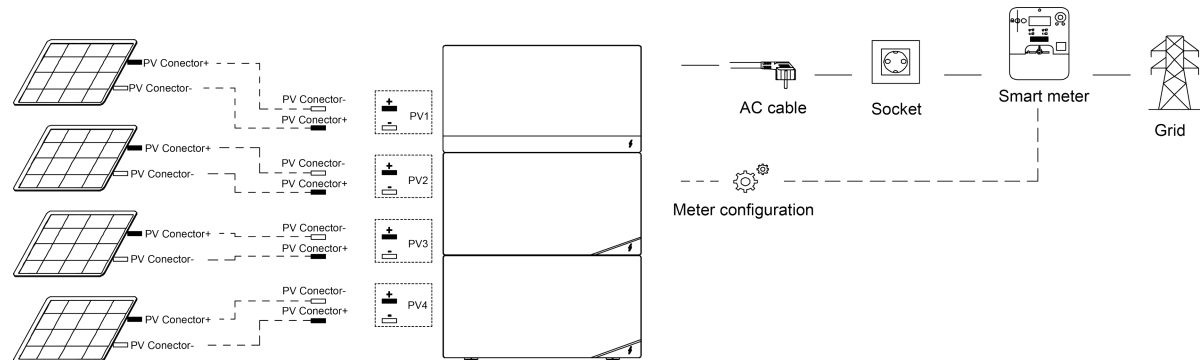
Scenario 2 - Use MQ2200-M-AC and MQ2200-S stacked:

The following figure shows an example of one MQ2200-M-AC paired with two MQ2200-S.



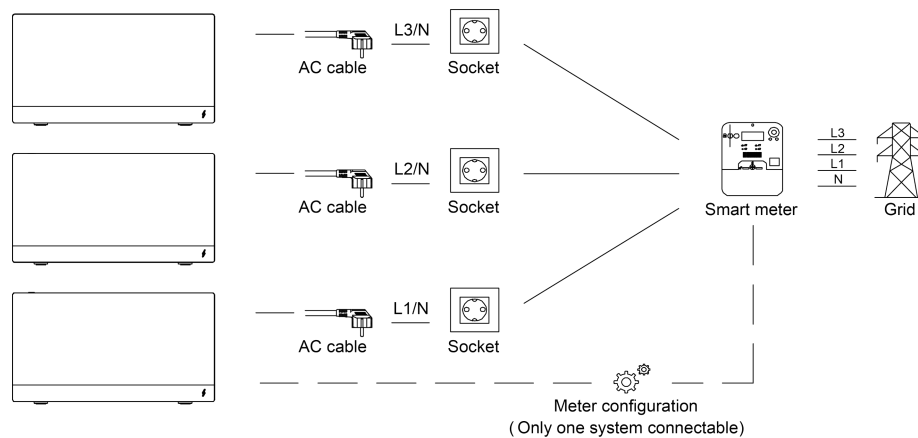
Scenario 3 - Use MQ2200-M-H and MQ2200-S stacked:

The following figure shows an example of MQ2200-M-H paired with four PV panels.



Scenario 4 - Use MQ2200-M paralleled on the AC side:

The figure below shows an example of three MQ2200-M systems paralleled on the AC side.



WARNING

Warning!

All the following conditions shall be met simultaneously. Otherwise, the system will report AC parallel alarm and stop charging and discharging.

- (1) No more than three systems shall be connected to the same Wi-Fi network.
- (2) It is suggested that the three systems be connected to different phases of the three-phase power supply.
- (3) Only one smart meter may be configured among the three systems. The other systems must select "No Meter" in the APP configuration.
- (4) The workmode of all three systems must be set to self-use mode, and the scheduler mode must be turned off.

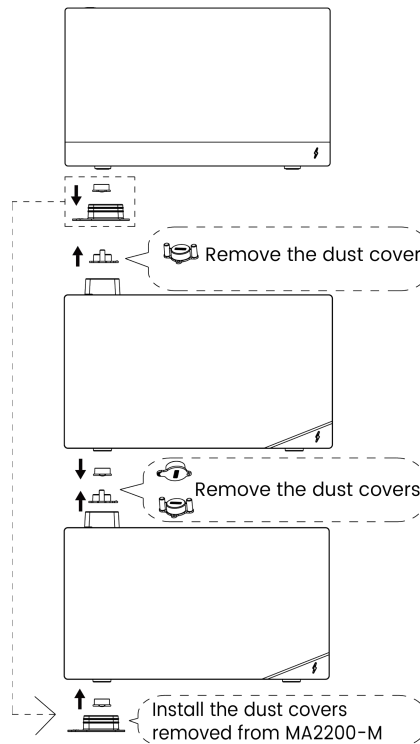
NOTE

Note!

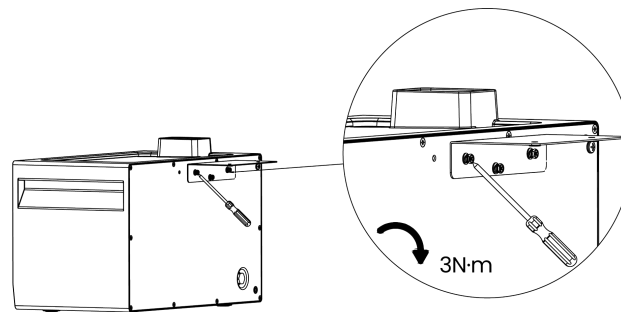
Before installing the system, familiarize yourself with local regulations and consult a qualified professional. All installation or operation must be performed safely and in compliance with applicable laws and regulations.

The following installation steps are applicable for installing extended batteries.

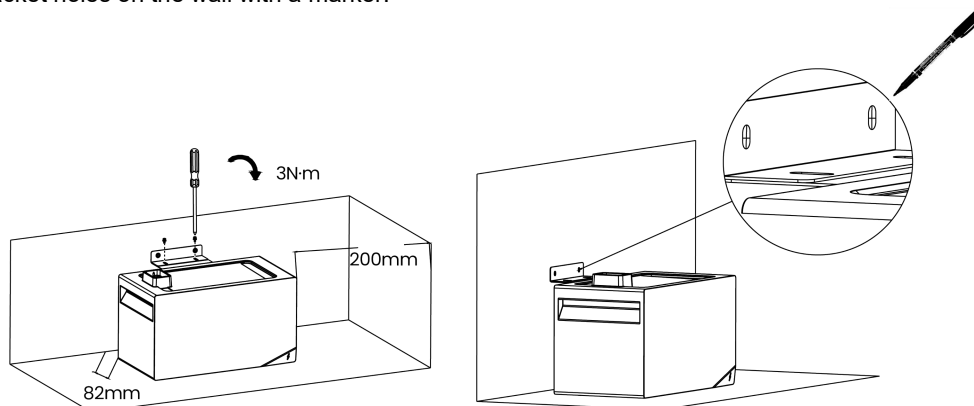
Step 1: Install the dust covers of the bottom MQ2200-S and remove the other dust covers.



Step 2: Lock bracket A to the rear cover of the battery with screws (M4*10).

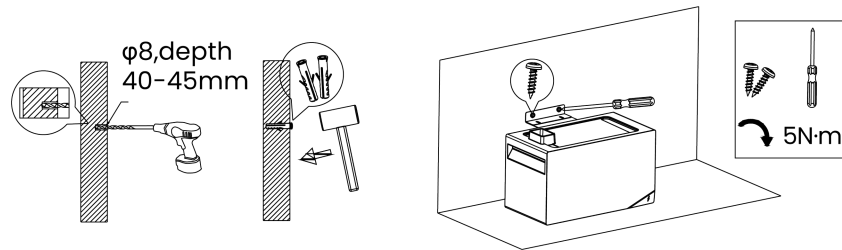


Step 3: Lock bracket B to bracket A and move the battery to a suitable position against the wall and mark the bracket holes on the wall with a marker.

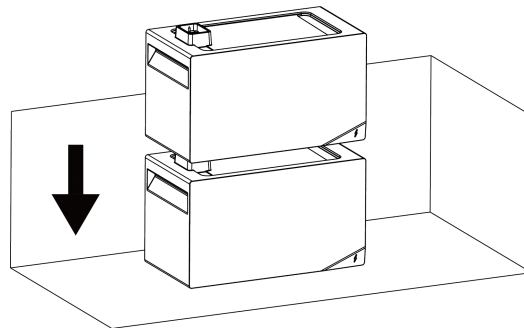


Step 4: Remove the battery before drilling.

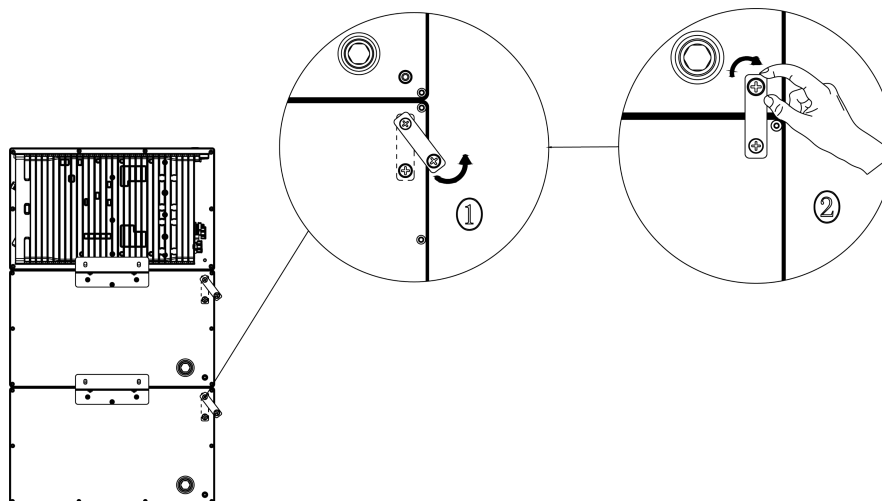
Drill $\phi 8 \times 40$ mm or deeper holes at the two markers, hammer the expansion tubes into the holes, and then use a screwdriver to fasten the two M6*40 expansion screws to the bracket B.



Step 5: Install the required stacked battery in the orientation shown in the figure.

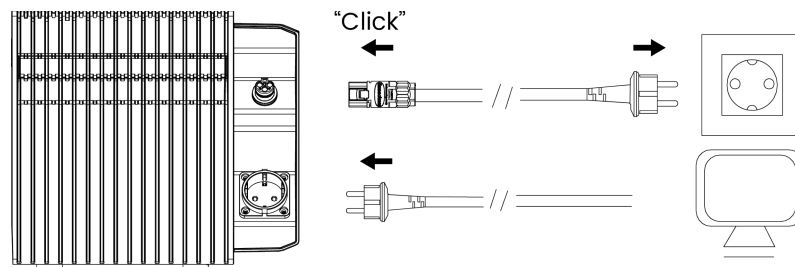


Step 6: Rotate the fixing connector to the corresponding hole of the upper battery and tighten the screw to fix it.



6.5 Electrical Connections

Step 1: Connect MQ2200-M to a home outlet using the included AC Cable.

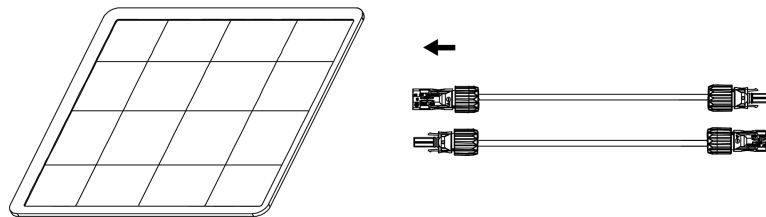


WARNING

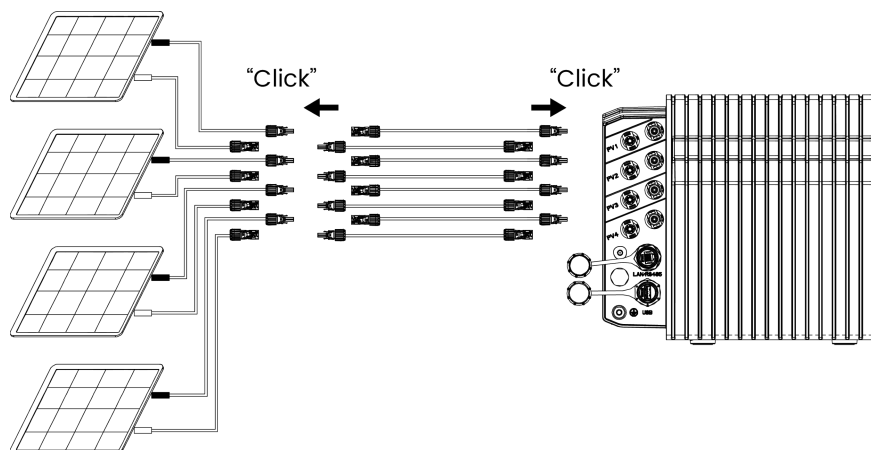
Warning!

- (1) Do not use any unofficial or unrecommended components and accessories.
- (2) For outdoor use, connect the device to an IP68-rated weatherproof power outlet.
- (3) Do not insert the plug into the coupler socket of an extension cord.
- (4) The plug shall not be inserted into a coupling socket or a multi hole socket.

Step 2: Find the PV connector ports of your solar panels.



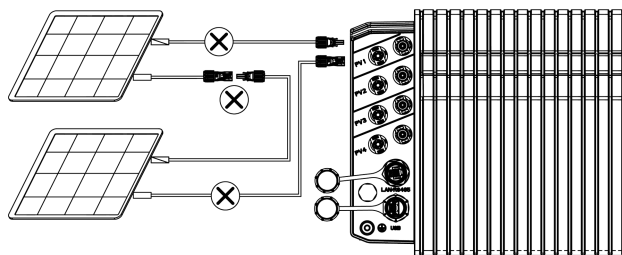
Step 3: Connect each PV module directly to the same set of PV input ports. Please ensure that the connection is securely fastened.



WARNING

Warning!

- (1) Never connect the same set of PV connectors to different sets of PV input ports.
- (2) When connecting PV modules in parallel, please check the specifications of the PV modules and ensure that the total short-circuit current does not exceed 25A.
- (3) Never connect PV modules in series because this causes the input voltage to exceed 60V and will damage the equipment.

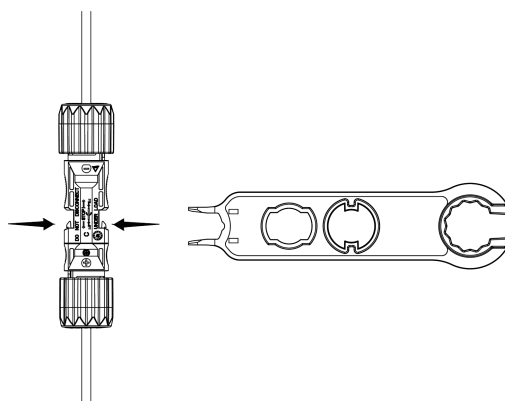


NOTE

Note!

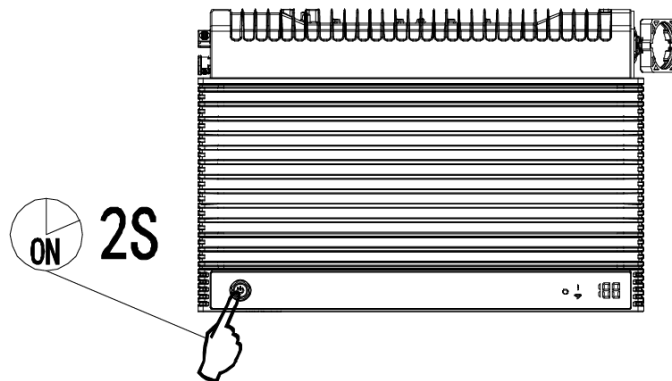
- (1) Not recommended to use cables with a length of 3 meters or longer.
- (2) Ensure that unused PV ports on the product are sealed with waterproof caps.
- (3) Due to varying national and regional regulations on photovoltaic system power limits, please consult a qualified local electrician before installation to confirm applicable requirements. For example, in Germany:
 - a. The maximum total power of the connected photovoltaic system must not exceed 2000W, provided that the plug device on the AC side is connected to the household installation in compliance with DIN VDE 0100-551-1 (VDE 0100-551-1) and uses a dedicated energy socket-outlet (Wielandsocket), for example as specified in accordance with DIN VDE 0628-1 (VDE 0628-1). Meanwhile, installation and inspection shall be performed by qualified electricians only.
 - b. The maximum total power of the connected photovoltaic system must not exceed 960W, provided that the plug device connected on the AC side to the household installation is a standard household socket.

Step 4: If you want to unplug the PV connector: After ensuring the system is turned off, use the included wrench to safely remove the PV connector.



6.6 Turn on the system

Press and hold the power button on the MQ2200-M for 2 seconds to power on and enable network pairing. If pairing is successful, the "WiFi" LED of the MQ2200-M will light up.

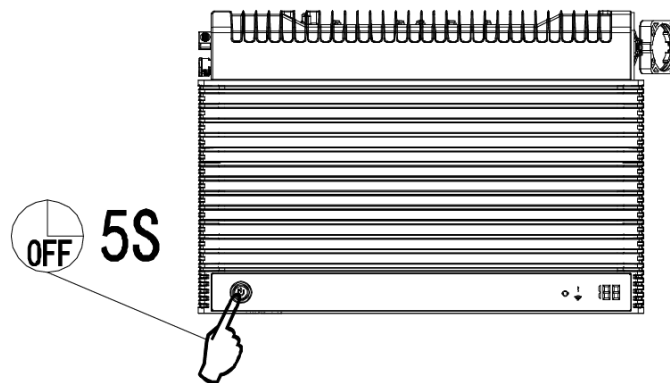


6.7 Adding an Expansion Battery

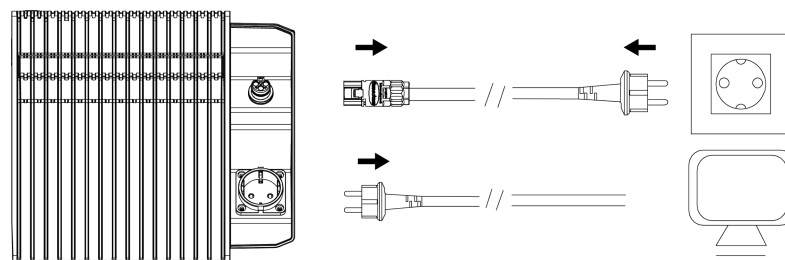
To protect yourself and the equipment, ensure the system is powered off before installing or adding expansion batteries. Installation while the system is powered on is not covered under warranty. Follow the steps below to add an expansion battery to the system. The example system includes one MQ2200-M and two expansion batteries.

Step 1: Disassemble the System.

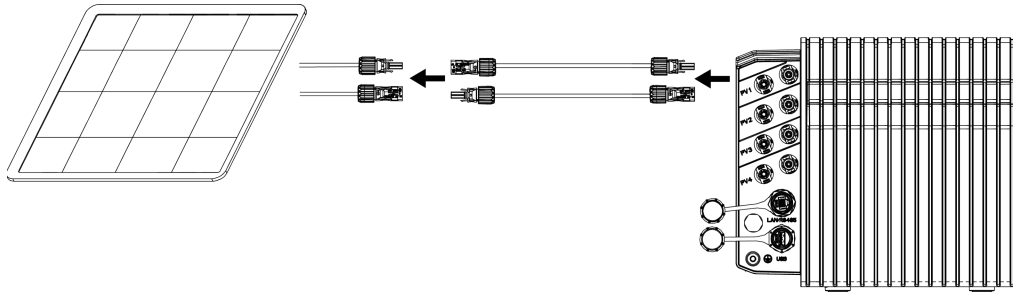
1. Ensure MQ2200-M is turned off. To turn it off, press the power button for 5 seconds.



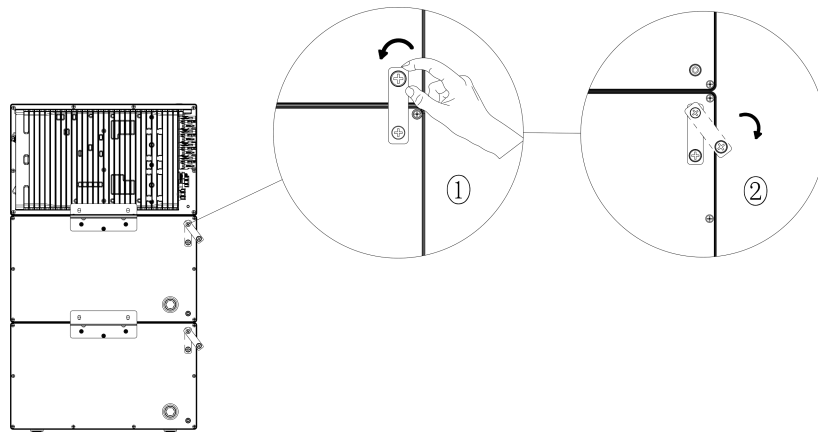
2. Unplug MQ2200-M from the home outlet and any connected device.



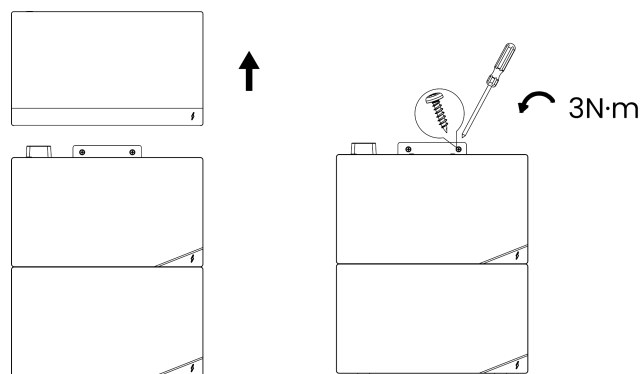
3. Disconnect MQ2200-M-H from PV.



4. If applicable, remove the wall-mounted bracket from the first expansion battery cover below the MQ2200-M.

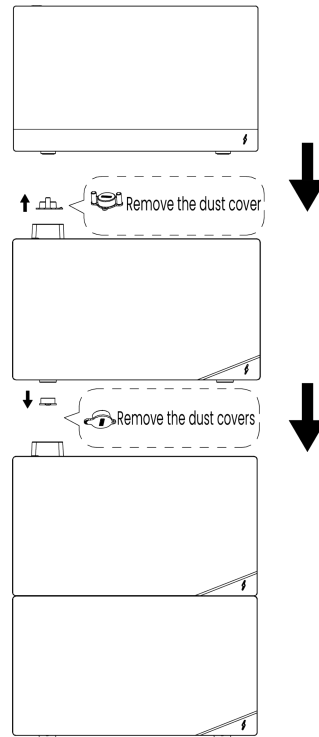


5. If applicable, remove the fixing bracket from the back cover of the extended battery.



Step 2: Mount the Expansion Battery.

1. Unfasten the screws(if applicable) and remove the dust cover.
2. Stack the new expansion battery under MQ2200-M.
3. Please follow the assembly process in sections 6.4 and 6.5 to complete the assembly.



7. APP Configuration

Use the FoxCloud2.0 application to remotely monitor and control your MQ2200 storage system. Please note that the user interface images displayed are for illustration purposes and may differ from your actual view based on the software version.

7.1 Download the App

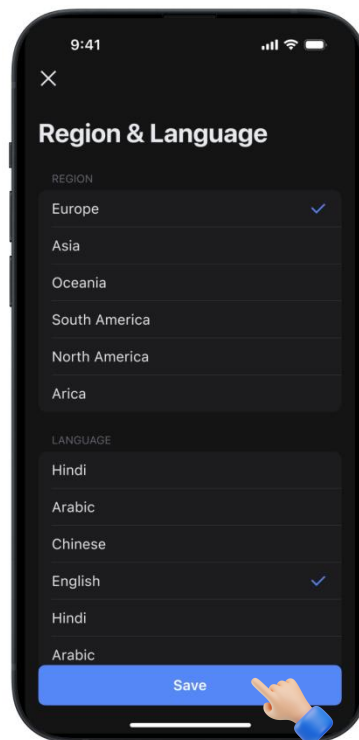
Download the FoxCloud2.0 on App Store and Google Play.



7.2 Configuration Guide

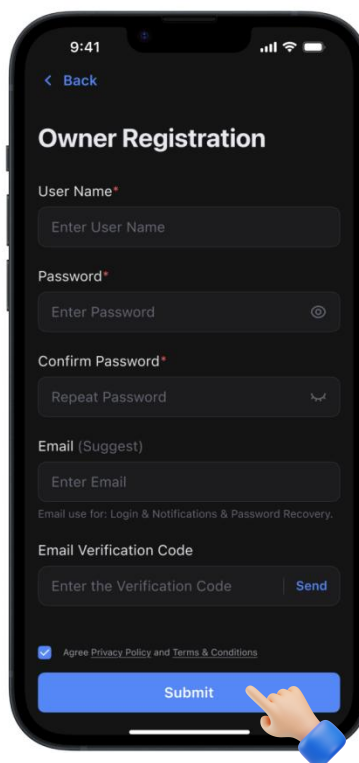
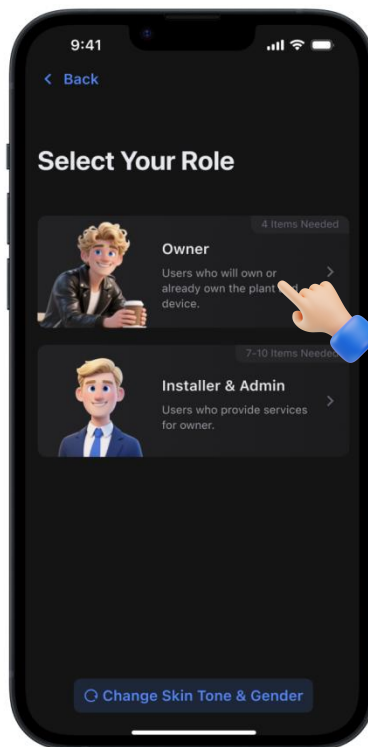
Step 1: Select your region.

Open FoxCloud2.0, tap "Register", choose your region and language, then tap "Save".



Step 2: Create an account.

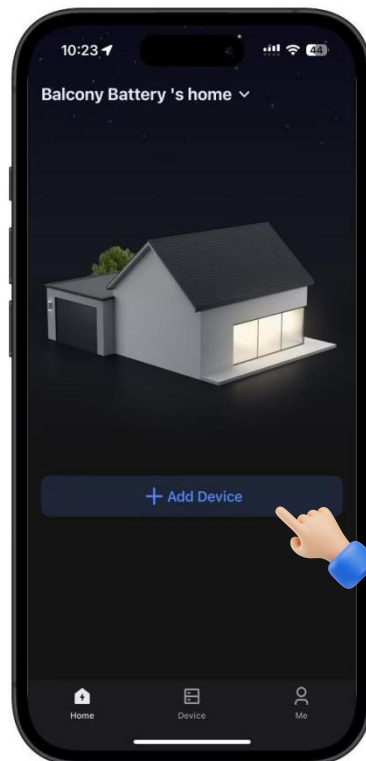
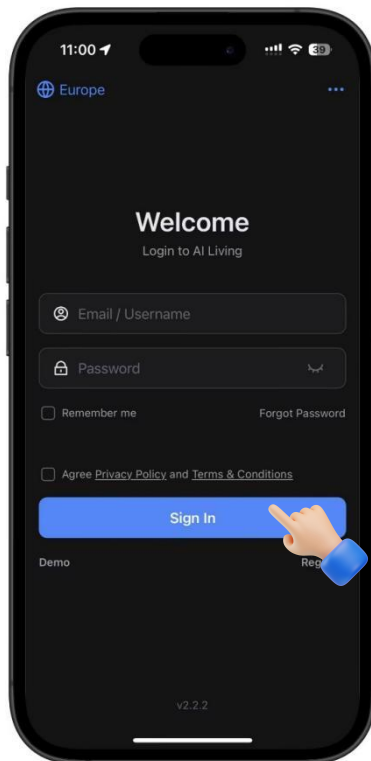
Select your role (Owner or Installer), fill in the required information and tap "Submit" to finish registration.



Step 3: Sign in and add devices.

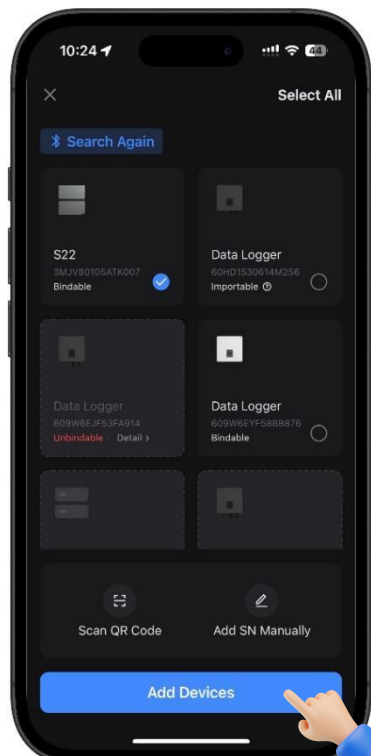
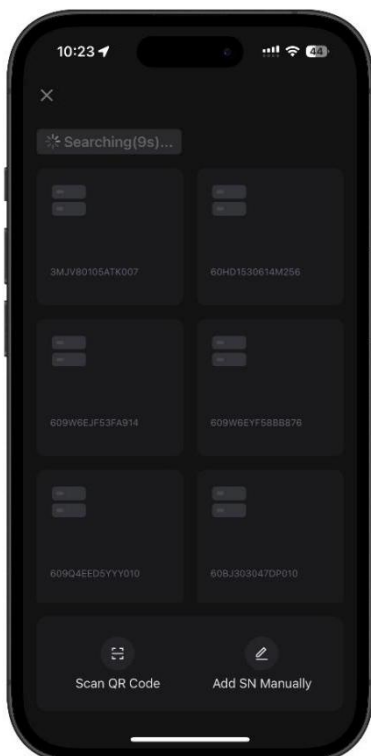
Sign in to your account, then tap "Add Device".

Upon completion of registration, the system will automatically create a plant named "[Username]'s home" for end users. Devices can be directly added to this ready-to-use plant.

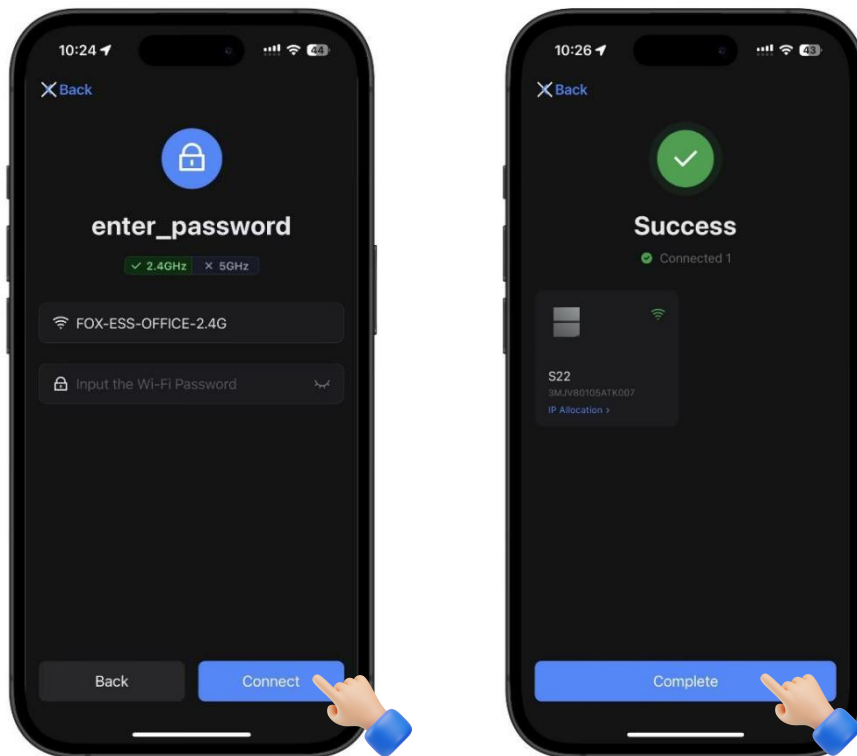


Step 4: Connect to network.

Wait for the system to search for devices. Once the search is complete, tap "Add Devices".



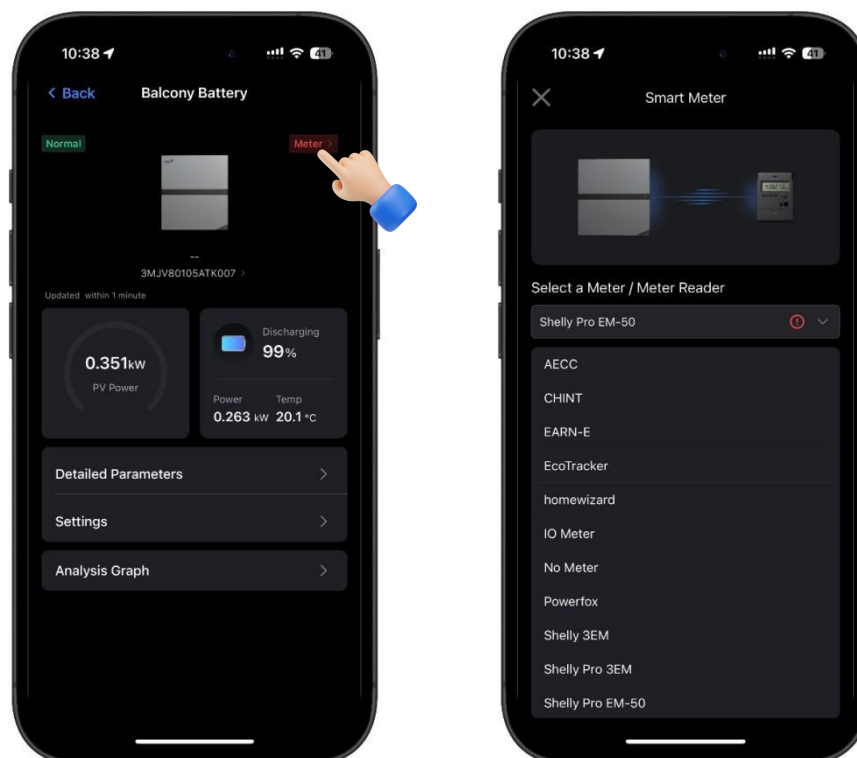
Select the Wi-Fi and enter password. Please wait for a while during the connection process. After successfully adding the device(s), tab "Complete".



Step 5: Configure the meter.

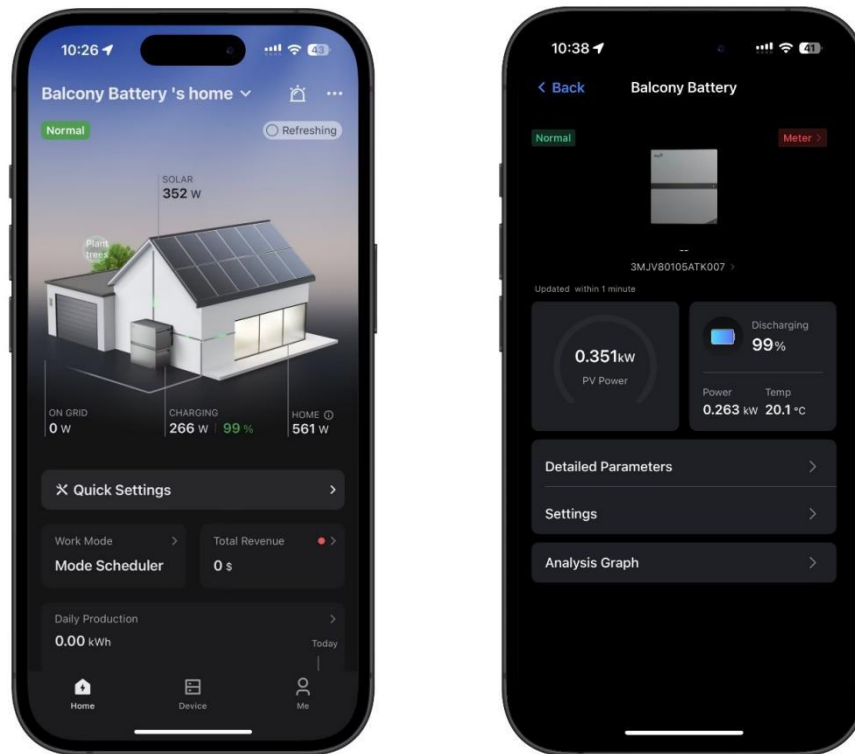
Select a wireless meter/ meter reader. Then tab "Confirm".

For a wired meter, no meter selection is required. Please select "No Meter".



Step 6: Finish.

Device data will appear online within 5 seconds. Please wait, then swipe down to refresh the page.



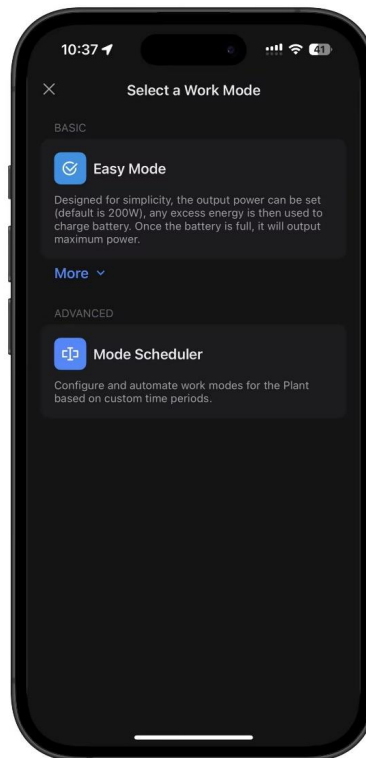
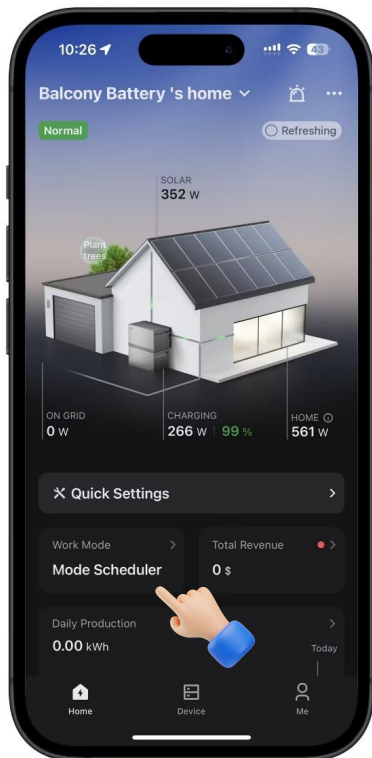
7.3 Set Operation Mode

Basic Work modes

User can set different work modes for the system.

Work mode	Description
Easy mode	1. Easy mode is only for use when there is no electricity meter. The default virtual load power is 200W, and the virtual load power can be set; its operating logic is consistent with that of Selfuse.
Load Priority	Priority: Load > Grid > Battery 1. When there is PV power, the PV power is prioritized for use by the load. After meeting the load's usage requirements, excess power is prioritized for grid connection. When there is excess PV power after grid connection, charge the battery. When the PV power is insufficient for the load power, the remaining power is supplied from the battery. 2. When there is no PV power or AC mode, the load power is provided by the battery.
Battery Priority	1. On-grid state, PV power is given priority to charging the battery. When the PV power is higher than the charging power, the remaining PV power is used by the load. When there is excess PV power, it will be fed to the grid. When the remaining power of the PV system after deducting the charging power is lower than the load power or when there is no PV power, the battery does not discharge. 2. Off-grid state, the battery discharges normally to supply power to the EPS load.

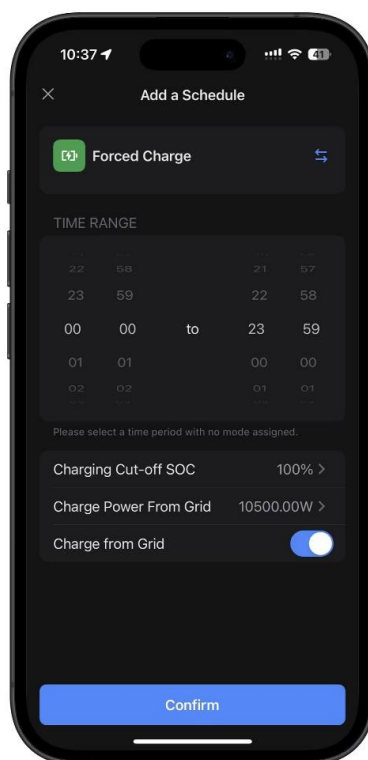
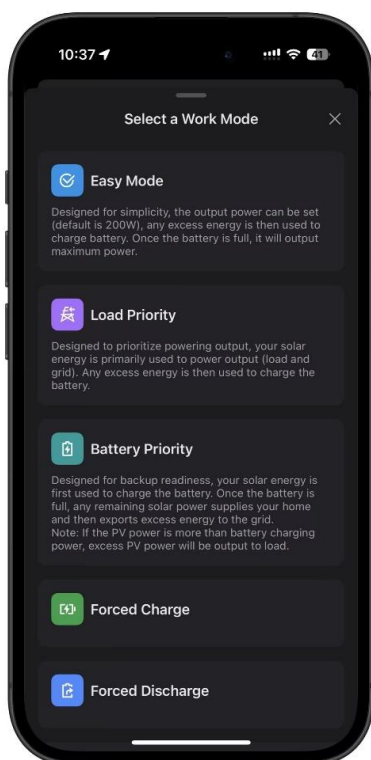
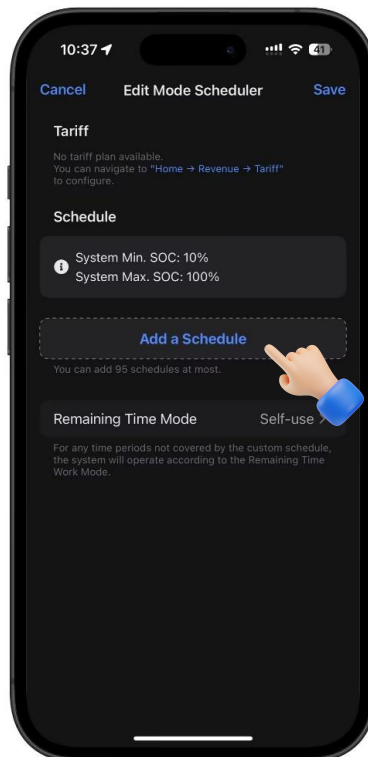
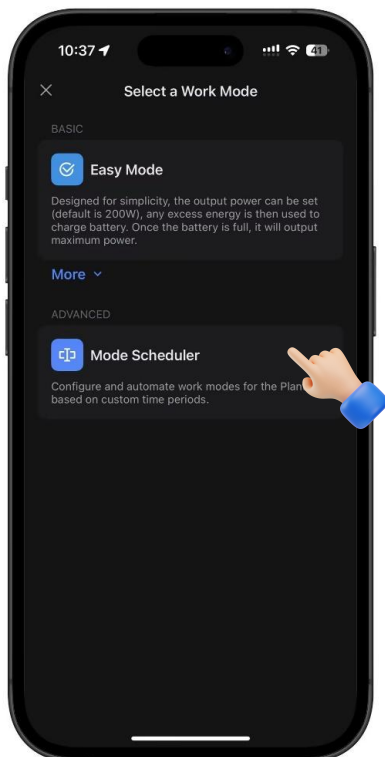
Self-use	Priority: Load > Battery > Grid 1. When there is PV power, the PV power is prioritized for use by the load. After meeting the load power, the excess power is used to charge the battery, and when there is more excess PV power, it is fed back to the grid. When the PV power is insufficient for the load power, the remaining power is supplied from the battery. 2. When there is no PV power or AC model, the load power is provided by the battery. 3. When multiple systems are paralleled on the AC side, only Self-use mode is available.
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Mode Scheduler

Mode Scheduler supports configuration of multiple time periods and various operating modes. The system will run automatically in accordance with your custom time settings.

Work mode	Description
Easy mode	For details, refer to the section "Basic Work Modes".
Load Priority	
Battery Priority	
Self-use	
Forced Charge	During this time period, prioritize charging the battery, and the charging power of the inverter is the set power. Battery won't discharge during charging time period.
Forced Discharge	During this time period, set the inverter to discharge at the set power. Battery won't charge during discharging time period.



8. Maintenance and Troubleshooting

8.1 Maintenance

- 1) Please use non flammable and non-toxic solvents to clean the product. Wipe with a dry soft cloth.
- 2) Please recharge batteries that have been stored for more than 6 months in a timely manner.
- 3) For the first installation, the interval among manufacture dates of battery modules shall not exceed 3 months.
- 4) Regularly check whether the service environment of the battery meets the requirements, and the installation position should be far away from the heat source.
- 5) The battery module should be stored in an environment with a temperature range between -20°C~55°C, and charged regularly according to the table below with no more than 0.5 C(C-rate is a measure of the rate at which a battery is discharged relative to its maximum capacity) to the SOC of 50% after a long time of storage.

Storage environment temperature	Relative humidity of the storage environment	Storage time	SOC
Below -20°C	/	Not allowed	/
-20~0°C	10%~90%	≤ 1 months	20%≤SOC≤50%
0~35°C	10%~90%	≤ 6 months	20%≤SOC≤50%
35~55°C	10%~90%	≤ 1 months	20%≤SOC≤50%
Above 55°C	/	Not allowed	/

NOTE

If the battery is stored over one year, 5% - 8% of the capacity may lose irreversibly.

- 6) Every 6 months after installation. The connection of power connector, power cable and screw are suggested to be checked. Make sure there is no loose, no broken, no corrosion at connection point. Check the installation environment such as dust, water, insect etc.

8.2 Storage with Low SOC

After the product is powered off, static power consumption and self-discharge loss may occur in internal modules. Therefore, charge batteries in a timely manner and do not store the product in low SOC. Otherwise, the product may be damaged due to over discharge, and battery modules need to be replaced.

Storage in low SOC may occur in the following scenarios:

- The power button on the power control module is off.
- The batteries cannot be charged due to a system fault after discharge.
- The batteries cannot be charged due to incorrect configurations in the system.
- The batteries cannot be charged due to no PV input and long-term mains failure.

Regardless of scenarios, the batteries must be charged within the longest interval corresponding to the SOC when the batteries are powered off. If the batteries are not charged within the specified interval, they may be damaged due to over discharge.

Storage environment temperature	Power-Off SOC before storage	Maximum charge interval
0~35°C	0% ≤ SOC < 5%	7 days

NOTE

When the battery SOC decreases to 0%, charge the batteries within seven days. Permanent battery faults caused by delayed charge due to customer reasons are beyond the warranty scope.

8.3 Troubleshooting

When the red/green LED is flashing or normally on, it does not mean that the product is abnormal, it may be just an alarm or protection. Please check the fault information in the below table for the detailed faulty definition before any trouble-shooting steps. In general, the alarm indication is normal without manual intervention. When the alarm triggering state is removed, product will automatically return to normal use.

Fault code	Fault definitions	Solutions
7181	AC parallel alarm	Ensure all the following conditions are met simultaneously: 1. No more than three systems may be connected to the same Wi-Fi network. 2. It is suggested that the three systems be connected to different phases of the three-phase power supply. 3. Only one smart meter may be configured among the three systems. The other systems must select "No Meter" in the APP configuration. 4. The workmode of all three systems must be set to self-use mode, and the scheduler mode must be turned off.
7047	INV OT	After waiting for the battery to cool down naturally, it will automatically restore. If the fault persists for more than 3 hours, please contact the local dealer and the technical team.
7132/7124/ 7164/7156	PV OT	
7175	Battery temperature difference fault	
7194	Battery over temperature protection	
7224	Battery pre-charge resistor temperature high	
7225	Battery balance resistor temperature high	
7226	Battery cell temperature super high	
7173	Battery fuse fault	Please contact the local dealer and technical team.
7184	Battery type not match	
7231	Battery SOH low	
7015	INV OP	Restart the product, if this phenomenon appears repeatedly after restoring for several times, please contact the local dealer and technical team.
7048	INV temperature sample fail	
7052	INV BAT sample fail	
7097	INV relay2 adjoin	

7098	INV relay1 adjoin	Restart the product, if this phenomenon appears repeatedly after restoring for several times, please contact the local dealer and technical team.
7099	INV bypass relay adjoin	
7117/7149	MPPT BAT short current	
7121	PV2 current sensor abnormality	
7129	PV1 current sensor abnormality	
7153	PV4 current sensor abnormality	
7161	PV3 current sensor abnormality	
7180	Communication failure between battery and MPPT	
7186	Battery current sensor fault	
7187	Battery temperature sensor fault	
7188	Battery volt sensor fault	
7189	Battery other fault	
7199	Battery internal communication fault	
7200	Communication failure between battery and PCS	
7217	Battery parallel address fault	
7222	Battery AFE communication fault	
7228	Battery permanent failure of battery under voltage	
7232	Battery relay drive failure	
7240	PV4 NTC abnormality	
7247	PV3 NTC abnormality	
7256	PV2 NTC abnormality	
7264	PV1 NTC abnormality	
7014	INV CBC	Restore automatically, if this phenomenon appears repeatedly after restoring for several times, please contact the local dealer and the technical team.
7016	INV OC	
7022	DCDC pre-charge fail	
7023	DCDC start fail	
7024	PFC start fail	
7027	Grid OC	
7028	Grid OFF	
7029	Grid UF	
7030	Grid OF	
7031	Grid UV	

7032	Grid OV	Restore automatically, if this phenomenon appears repeatedly after restoring for several times, please contact the local dealer and the technical team.
7038	Bus HW OV	
7039	Bus UV	
7040	Bus OV	
7050	INV BAT ODC	
7051	INV BAT OCC	
7054	INV BAT DOV	
7055	INV BAT CUV	
7056	INV BAT COV	
7061	INV bypass OC	
7062	INV bypass UV	
7063	INV bypass OV	
7064	INV PLL fail	
7066	Offgrid reverse flow	
7067	Off grid start fail	
7068	Off grid OP	
7069	Off grid short current	
7070	Off grid OC	
7071	Off grid UV	
7072	Off grid OV	
7100	INV AC HW OV	
7101	INV supply UV	
7102	INV supply OV	
7103	INV CT OC	
7104	INV self check fail	
7119	MPPT1 BAT UV	
7118/7150	MPPT BAT OC	
7120/7152	MPPT BAT OV	
7134/7126/ 7166/7158	PV OC	
7135/7127/ 7167/7159	PV UV	
7172	Battery pre-charge fault	
7177	Battery parallel power fault	

7179	Battery force charge unresponsive	Restore automatically, if this phenomenon appears repeatedly after restoring for several times, please contact the local dealer and the technical team.
7185	Battery relay fault	
7191	Battery hardware protect	
7195	Battery discharging over current	
7196	Battery charging over current	
7198	Battery over voltage	
7221	Battery AFE UV/OV/UT/OT fault	
7223	Battery short current	
7227	Battery cell voltage super high	Please ensure timely recharging. If the problem persists after 2-3 hours of recharge, please contact the local dealer and the technical team.
7053	INV BAT DUV	
7197	Battery under voltage	Please check if the insulation of electric wires is damaged.
7112/7144	MPPT insulation fault	
7192	Battery cell unbalance	Wait for the battery to balance automatically. If the fault persists for more than 7 days, please contact the local dealer and technical team.
7193	Battery under temperature protection	Please move the product to a warmer spot or connect it to PV power before use.

9. Decommissioning

9.1 Dismantling

- Press the power button to turn off the product.
- Disconnect from AC output and DC input. Wait for 5 minutes for the product to fully de-energize.
- Disconnect communication and optional connection wiring. Remove the product from the bracket.
- Remove the bracket if necessary.

9.2 Packaging

If possible, please pack the product with the original packaging. If it is no longer available, you can also use an equivalent box that can fully enclose the product and all accompanying accessories.

9.3 Storage and Transportation

Store the product in dry place where ambient temperatures are always between 0°C ~ 35°C. Take care of the product during the storage and transportation. When the product or other related components need to be disposed of, please strictly follow the local electrical equipment waste disposal requirements.

Exclusion

The warranty shall not cover the defects caused by normal wear and tear, inadequate maintenance, handling, storage faulty repair, modifications to the product by a third party other than manufacturer or agent, failure to observe the product specification provided herein or improper use or installation, including but not limited to the following.

- Damage during transport or storage.
- Incorrect Installation of battery into product or maintenance.
- Use of product in inappropriate environment.
- Improper, inadequate, or incorrect charge, discharge or production circuit other than stipulated herein.
- Incorrect use or inappropriate use.
- Insufficient ventilation.
- Ignoring applicable safety warnings and instructions.
- Altering or attempted repairs by unauthorized personnel.
- In case of force majeure (ex: lightning, storm, flood, fire, earthquake, etc.).
- There are no warranties-implied or express-other than those stipulated herein. Manufacturer shall not be liable for any consequential or indirect damages arising or in connection with the product specification, inverter,MPPTs, battery or pack.

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FOXESS CO., LTD.

Add: No.939, Jinhai Third Road, New Airport Industry Area, Longwan District,
Wenzhou, Zhejiang, China

Tel: 0510- 68092998

Web: WWW.FOX-ESS.COM