

# C&I ESS Installation Guide

## HYX-EF215P2

### - General Version

Delivery and Service Center

V2.0 – 2026/02



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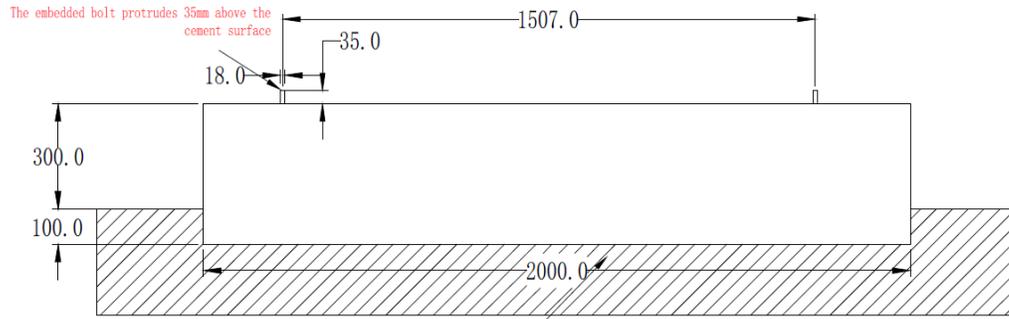
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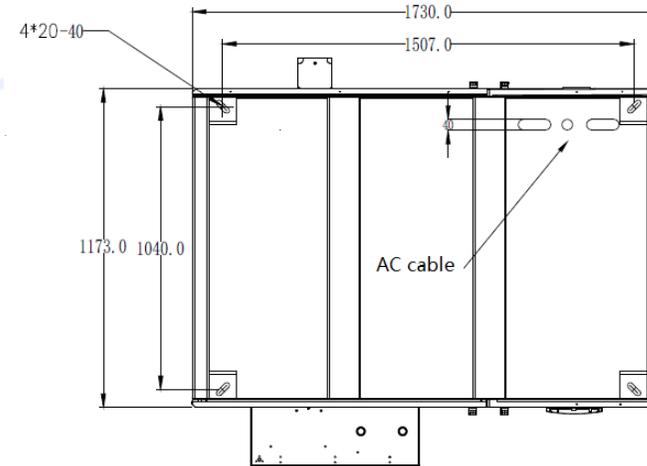
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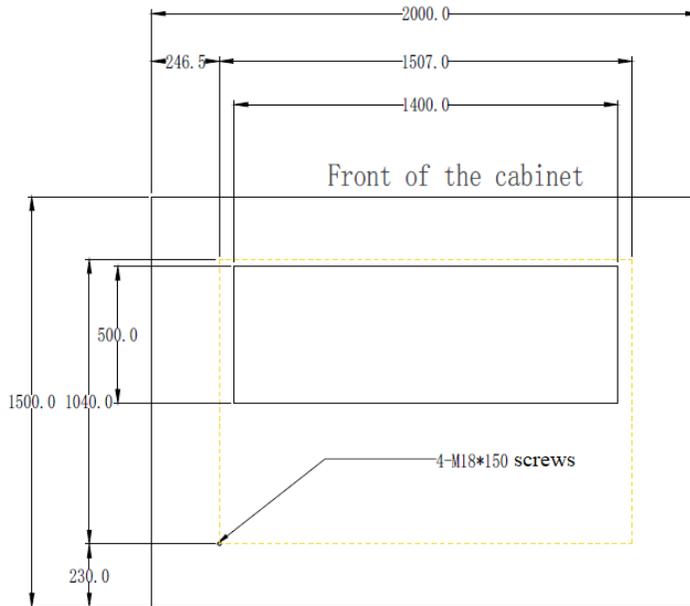
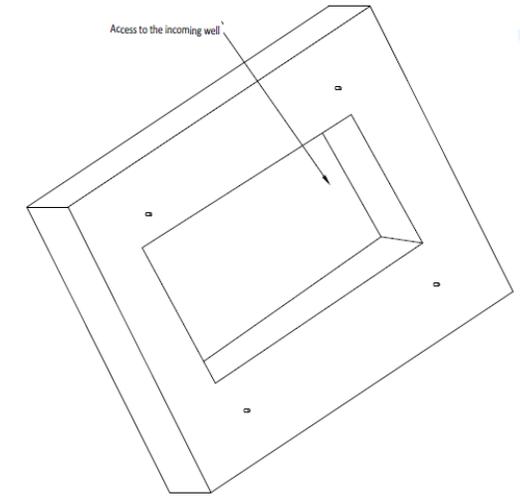
# Preparation-Foundations



The cement base is embedded 100mm underground and 300mm above ground  
According to the project requirements, appropriate modifications shall be made, and the above-ground height shall not be lower than the highest local 25-year water level



Auxiliary reference view at the bottom of the cabinet



## Foundation Description:

1. Concrete shall be of grade C30, and reinforcement shall be HRB400. The concrete cover thickness shall be 40 mm.
2. The bearing stratum for the isolated foundation shall have a characteristic bearing capacity not less than 100 kPa. The foundation base shall rest on undisturbed soil. If loose fill is encountered, it shall be excavated and replaced with a 3:7 lime-soil mixture, with a replacement thickness not less than 500 mm and a compaction coefficient not less than 0.94. The top elevation of the lime-soil cushion shall be measured from the bottom of the plain concrete blinding layer beneath the foundation. A 100 mm thick C15 plain concrete blinding layer shall be provided beneath the foundation, extending 100 mm beyond each side of the foundation. The anchorage length of foundation reinforcement shall be 35 times the diameter of the rebar (35d). Lightning protection grounding shall be embedded at foundation corners; grounding lengths shall be detailed in the electrical drawings.
3. Upon completion of foundation concrete pouring and underground concrete works, backfilling of the foundation pit shall be carried out promptly. Prior to backfilling, accumulated water, loose soil, and construction debris shall be removed. Backfilling shall be done with plain soil, compacted in layers not exceeding 300 mm in thickness, symmetrically, with each layer achieving a compaction coefficient greater than 0.94.
4. Before commencing foundation construction, coordination with all relevant service drawings (e.g., for conduits and pipelines) shall be performed. Construction shall proceed only after verifying consistency with these drawings.
5. For any matters not covered in these drawings, construction shall comply with the current national and regional codes, standards, and design manuals

# Preparation-Tools

## Industrial and Commercial Banking Station Tools List

Classification	Product Name	Purpose
General Tools	Multimeter	Measuring voltage, resistance, etc.
	Phase sequence table	Used to detect the phase sequence from combiner cabinet to energy storage cabinet
	Network cable pliers	Network cable production
	6mm\3mm cross screwdriver	Disassembly and fixing screws
	Slotted screwdriver 2.5mm\5mm	Disassembly and fixing screws
	Network cable (network port expansion dock)	cmu or ems
	tape measure	Site survey, etc.
	Diagonal pliers	Wire cutting, wire stripping, strip cutting, etc.
	Adjustable wrench	Disassembly and fixing screws
	Socket Set	Disassembly and fixing screws
	Sleeve extension rod	Removing and installing the fixing screws
	Hexagon socket set	Connect AC power cable

# Preparation-Tools

Continued from the table above

Classification	Product Name	Purpose
Debugging Tools	CAN Box	BMS Communication
	Jlink burning tool	If the cmu upgrade fails, use jilink to restore to default on site
	USB-RS485	485 communication debugging
	PCS serial port tool	Used for PCS host computer debugging
Supplementary materials	Cable Ties	Fixed field external wiring
	Insulation tape	Enhanced insulation
	Electrician gloves	Safety equipment for opening and closing the AC main switch of the equipment
	Crystal Head	Network cable production

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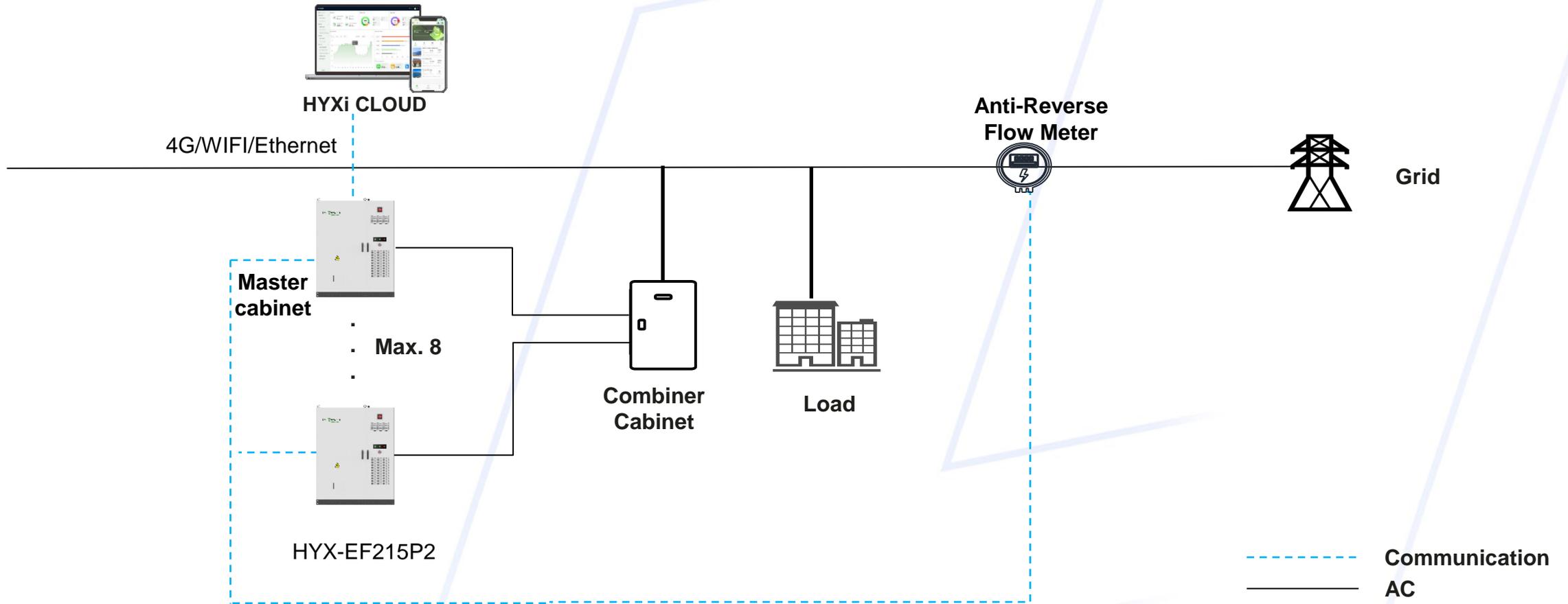
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# Product Introduction-Topology-HYX-EF215P2-On Grid



# Product Overview-Front



# Product Overview-Back



# Product Introduction-Hardware-Component

No.	Name	Model	Quantity	Unit	Remark
1	Battery Packs	215kWh	1	Set	Includes 15 battery insertion boxes, 240 cells of 280Ah
2	BMS System	Two-level architecture	1	Set	Passive balancing
3	PCS	100kW	1	Set	One 100kW PCS
4	Temperature Control System	5000W cooling capacity	1	Set	
5	Fire Protection System	Aerosol, etc.	1	Set	
6	Energy Management System	Human-machine interface (LC), monitoring host, data acquisition, communication, local display	1	Set	Includes port control and communication, system parameter and operating strategy settings
7	Distribution System	Corresponding distribution circuit equipment	1	Set	
8	Energy Storage Cabinet	1750*1250*2340mm	1	unit	
9	Other Accessories	Wiring harnesses and others	1	Set	

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# Equipment Installation-Base



1. Inspection before installation:
  - a) The concrete grade is C30 if not specified, the floor thickness is 200mm, the protruding edge on each side is 300mm, and the grade 3 steel is used to meet the double-layer and two-way requirements.
  - b) The steel bar adopts HRB400 grade (grade 3 steel symbol), and after rust removal, it should be treated with anti-corrosion in accordance with relevant specifications.
  - c) The floor slab thickness is 100mm, and the concrete strength thickness is C15.
  - d) The bearing layer of the foundation should be original soil, with a bearing capacity characteristic value of not less than 100KPa. If the bearing layer of the foundation is soft soil, it should be replaced with sand and stone. The replacement depth should not be less than 500mm. The replacement soil layer must be compacted layer by layer. The layer thickness should not be greater than 300mm. The compaction coefficient should be greater than 0.97. The edge of the replacement layer should exceed the foundation edge by 300mm. The bearing capacity characteristic value after replacement should not be less than 100KPa. During replacement, the content of particles with a particle size of less than 0.75mm should not be greater than 10%.
  - e) During the foundation construction, precipitation measures should be taken. It is strictly forbidden to soak the foundation pit in water. Safe and reliable support measures should be taken for the excavation of the foundation pit.
  - f) Ground leveling requirements: The flatness deviation within 2m is less than  $\pm 4$ mm.

# Equipment Installation-Forklift & Lifting

1. Forklift precautions:
  - a) Use a 5T forklift and keep a safe distance during transportation.
  - b) It is necessary to add protection to the forklift wall to prevent dirt from contaminating the forklift wall or the forklift from scratching the cabinet bottom.
2. Lifting precautions:
  - a) No one is allowed to stand under the boom, and make fine adjustments after the lifting height is lowered.
  - b) Confirm the lifting position and placement direction to see if they are neat and consistent.
3. Each cabinet foot is fixed with M12 bolts, and the tightening torque is set to 55~100N.M.



# Equipment Installation-Open the Cabinet for Inspection

1. Check if the wiring harness is clean and tidy;
2. Check if the interfaces of each terminal and the screw fixing ports are loose;
3. Check for any obvious damage or missing equipment inside the cabinet;
4. Whether the auxiliary materials and accessories are complete;
5. Confirm that all circuit breakers inside the cabinet are in the disconnected state.

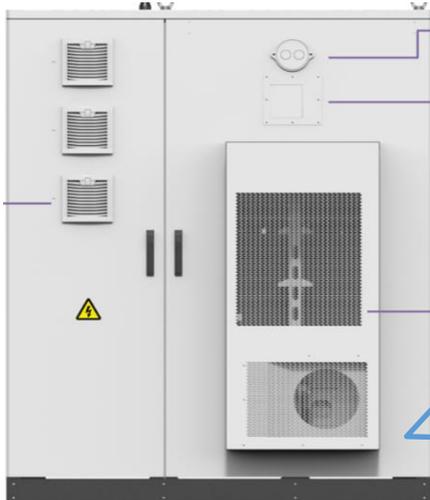


# Equipment Installation-Ground Cable Wiring



1. Power grounding wire
2. Cabinet grounding wire
3. Grounding requirements:

- a) Drive the grounding angle iron 3 meters into the ground.
- b) The recommended diameter of the grounding wire harness should be no less than 50 mm<sup>2</sup> (copper conductor) or meet local regulations.
- c) The grounding resistance value must be  $\leq 4\Omega$ .



# Equipment Installation-Grid Cables



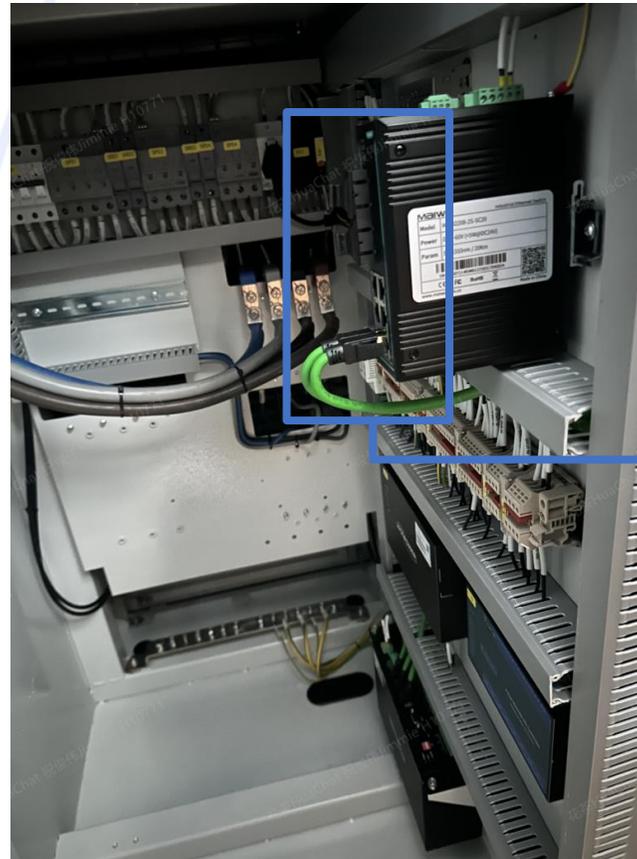
Uu Uv Uw N  
From grid side

1. Confirm the power-off status:
  - a) The grid-side circuit breaker connected to the upper level of the energy storage cabinet is in the disconnected state;
  - b) All circuit breakers inside the cabinet are in the disconnected state.
2. According to the diagram, confirm the order of the live wire and the neutral wire.
3. The wire harness is introduced through the wire entry hole at the bottom of the equipment and led to the connection point through the wire trough. It is recommended to use a cable specification of ZC-YJV22-0.6/1KV-95mm<sup>2</sup> (the wire diameter can be appropriately increased according to the on-site environment).
4. After the wiring construction is completed and passed the inspection, use protective mud to seal the wire entry hole.

# Parallel Connection Installation

HYX-EF215P2:

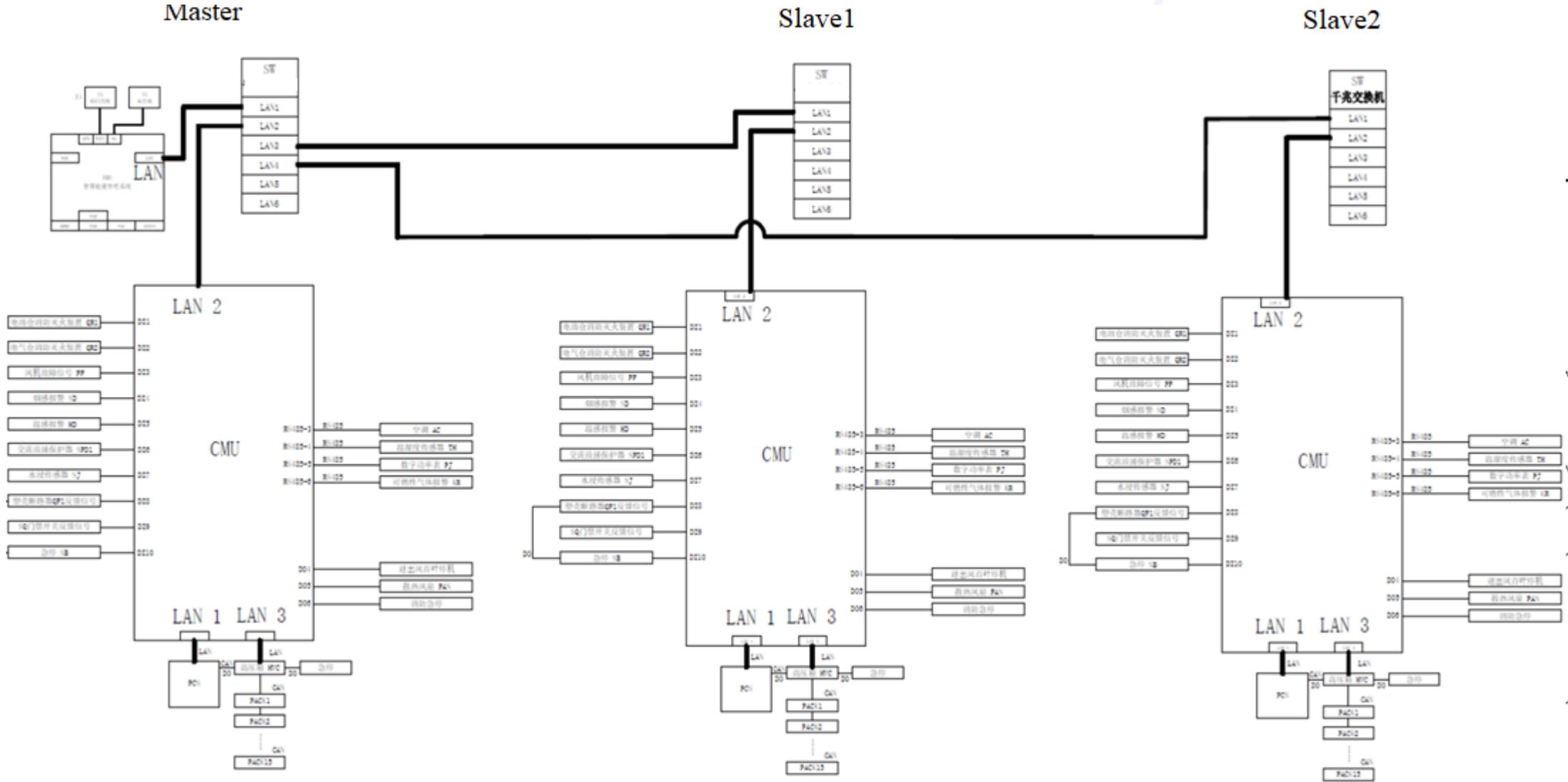
This model can support a maximum of **8** units devices operating in parallel connection.



If the BESS system has two or more cabinets, the connection is different as follows:

1. Select a network cable of appropriate length.
2. All the slave **CMUs** need to connect to the **master network switch**.

# Parallel Connection (EMS Internet Cable Connection)



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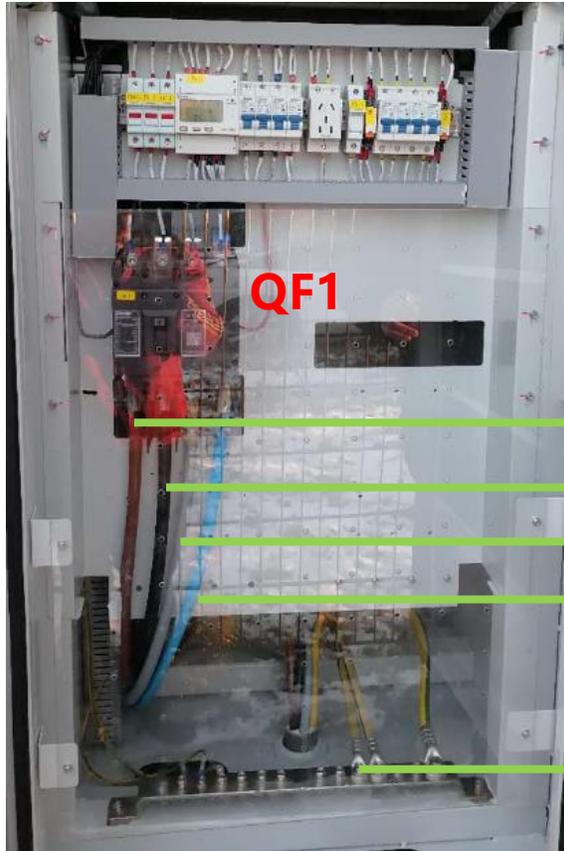
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# System Operation-Power On



**A**  
**B**  
**C**  
**N**  
**G**

1. Before System Power on, Measure the voltages of each group using a multimeter.

Make sure that all voltages are normal before closing the QF1 switch.

A-B;A-C;B-C

A-N;B-N;C-N

A-G;B-G;C-G;N-G

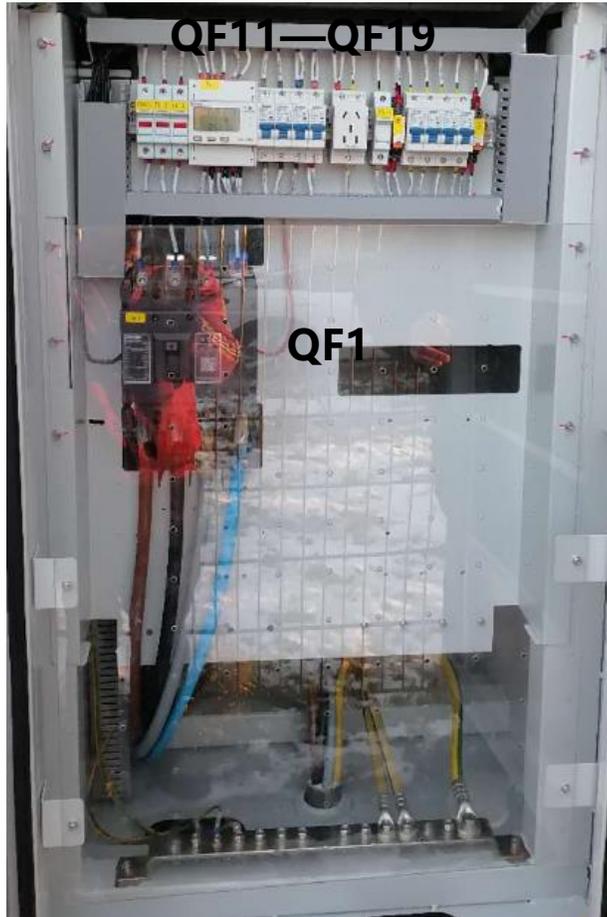


# System Operation-Power On



2. Press the ON button for more than 3 seconds, wait for the screen to light up. Press FUNC to make sure that the UPS have voltage output.

# System Operation-Power On



3. Check the status of the big breakers.

Turn on QF1 breaker;

4. Turn on all the control breakers.

QF11: Air Conditioner;

QF12: UPS;

QF13: Fans of the battery;

QF14: Lights;

QF15: Power Supply 1;

QF16: High voltage box of battery;

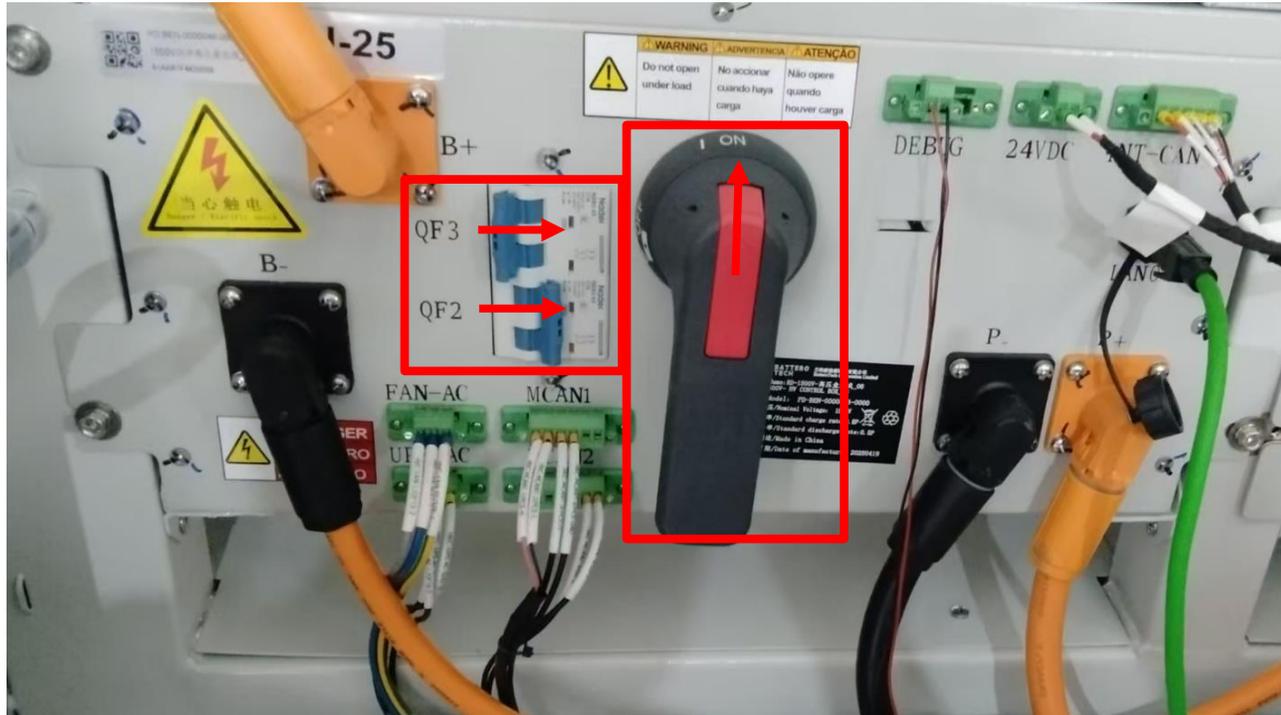
QF17: Power Supply 2;

QF18: Power Supply 3;

QF19: Fire exhaust fans

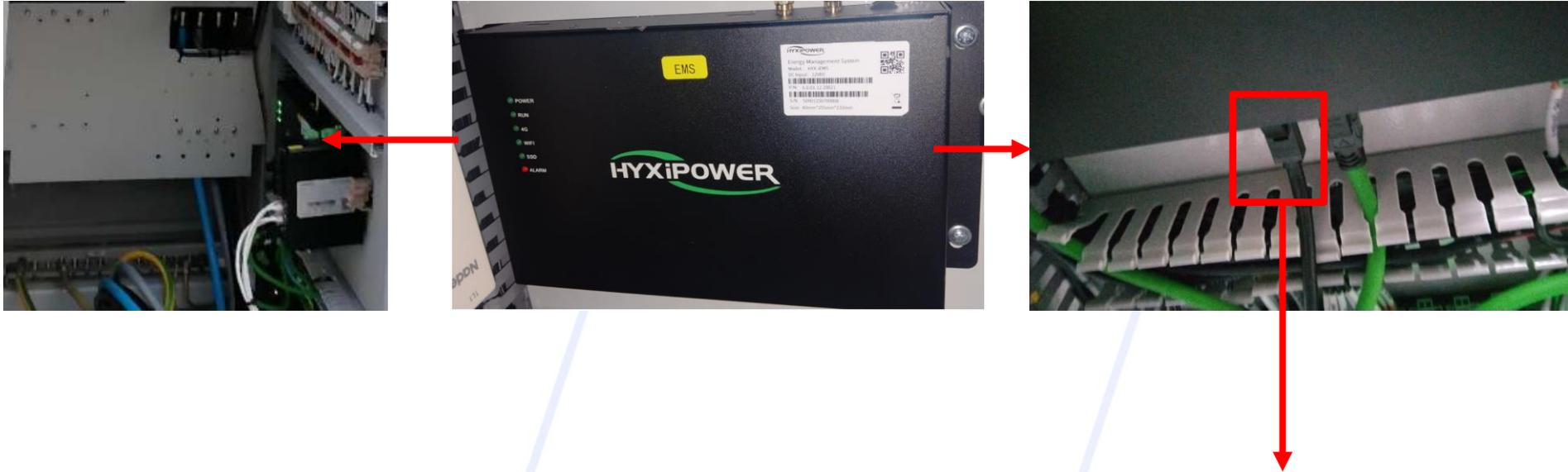
Confirm that the corresponding equipment has been powered.

# System Operation-Power On



5. Turn on all the breakers on the high voltage box of battery system.

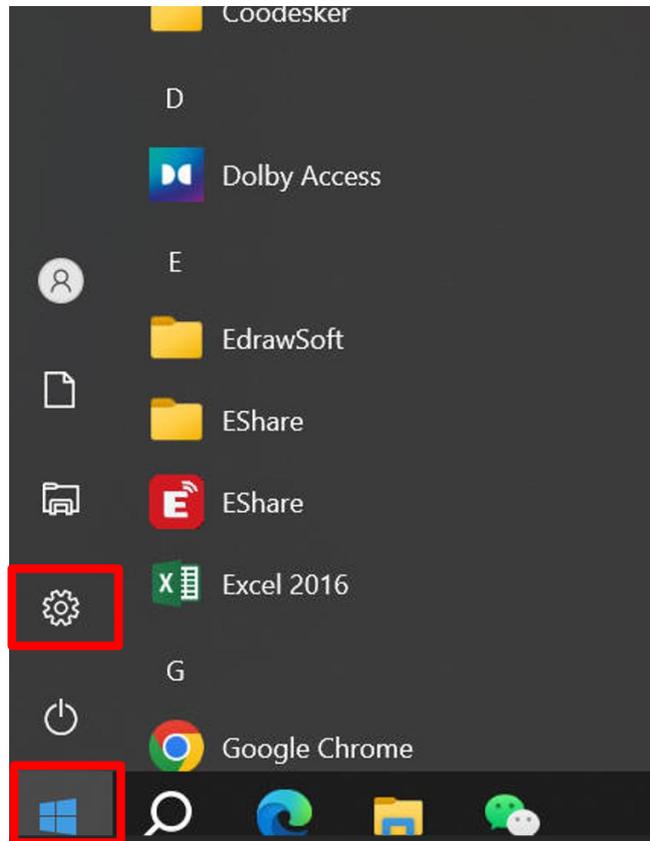
# System Operation-Registration



1. Use a regular network cable, plug one end into the computer and the other end into the EMS interface.

# System Operation-Registration

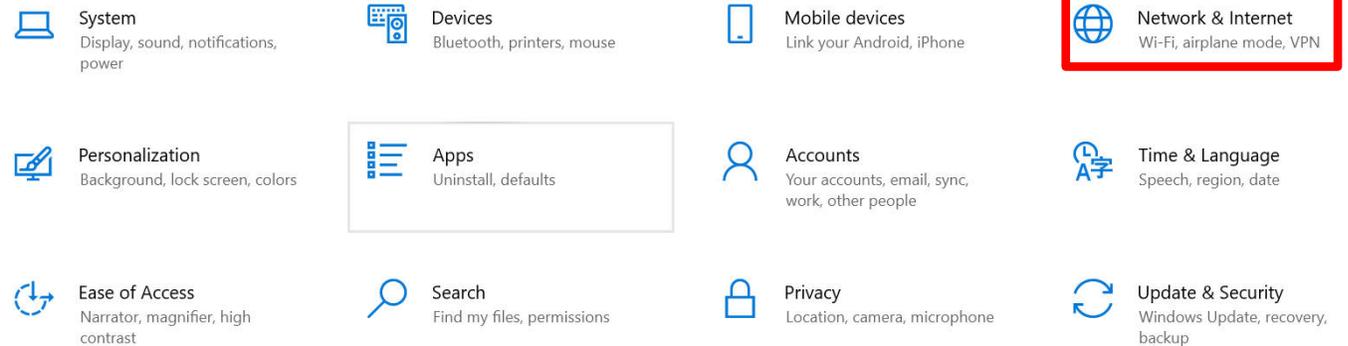
2. In order to establish communication with EMS, we need to set our computers to a unified network segment: Settings- Network & Internet. And then set the computer IP to 192.168.101.100.



Settings

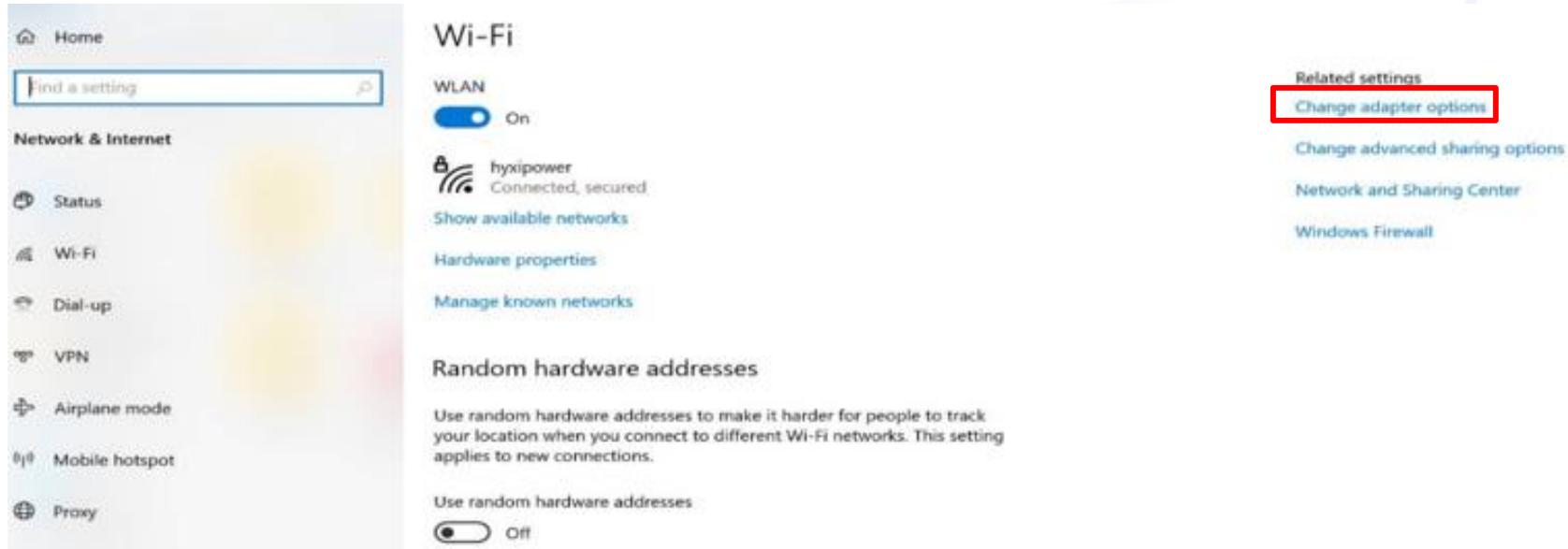
## Windows Settings

Find a setting

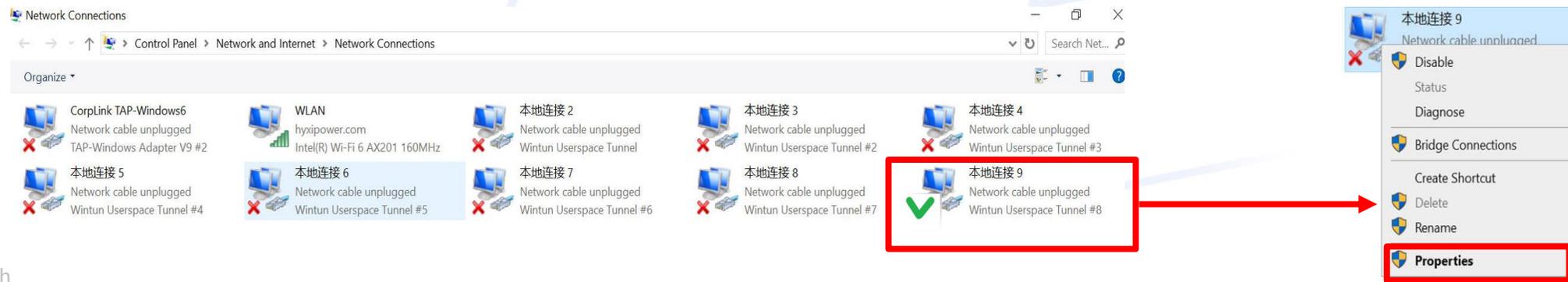


# System Operation-Registration

## 2.1 Select : Change adapter option.

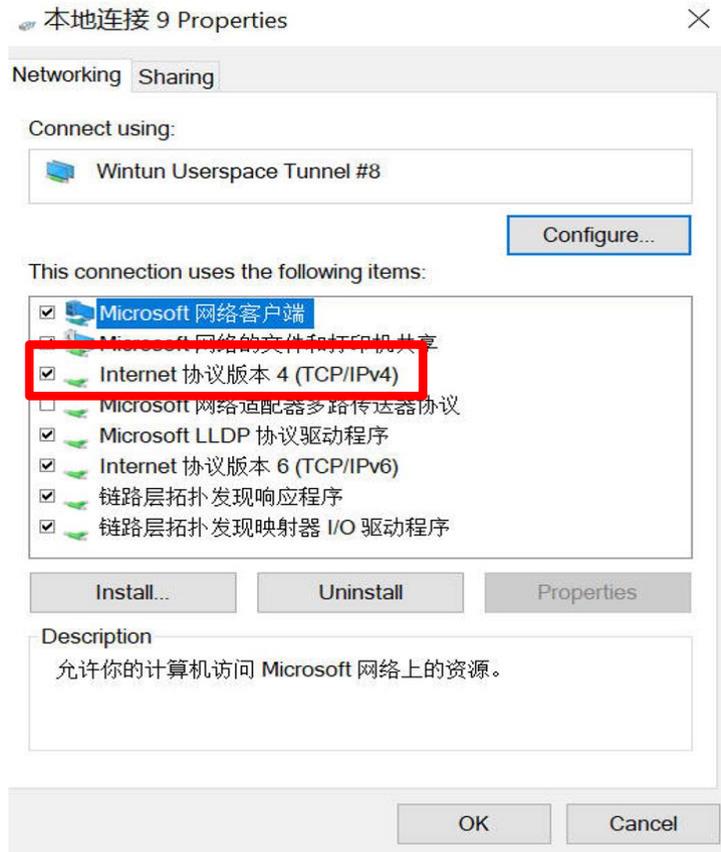


## 2.2 Select the icon that the computer is currently connected to.

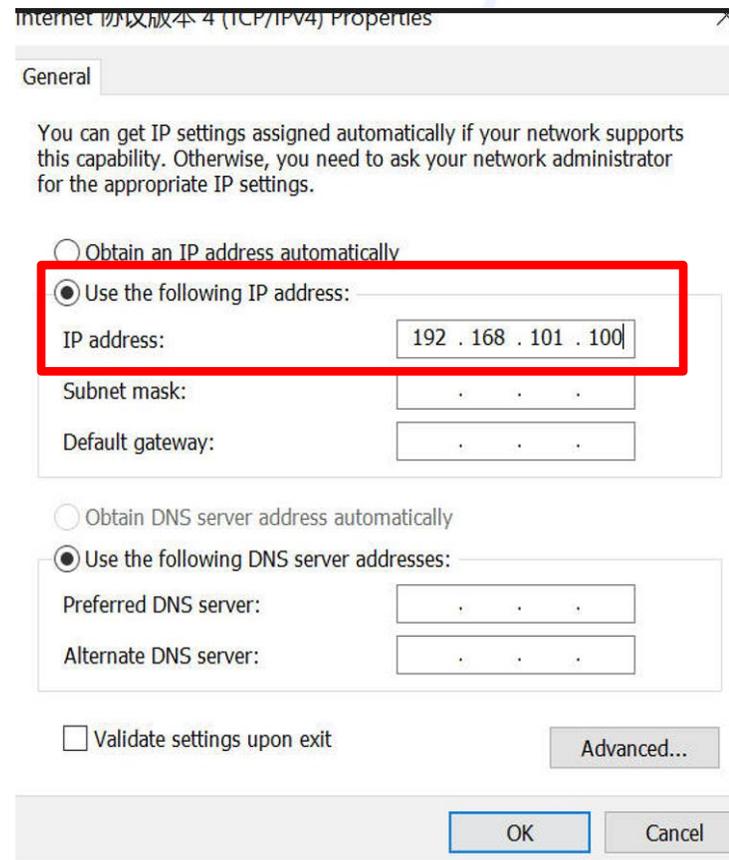


# System Operation-Registration

## 2.3 Select : TCP/IPv4



## 2.4 Change the IP address as : 192.168.101.100



# System Operation-Registration

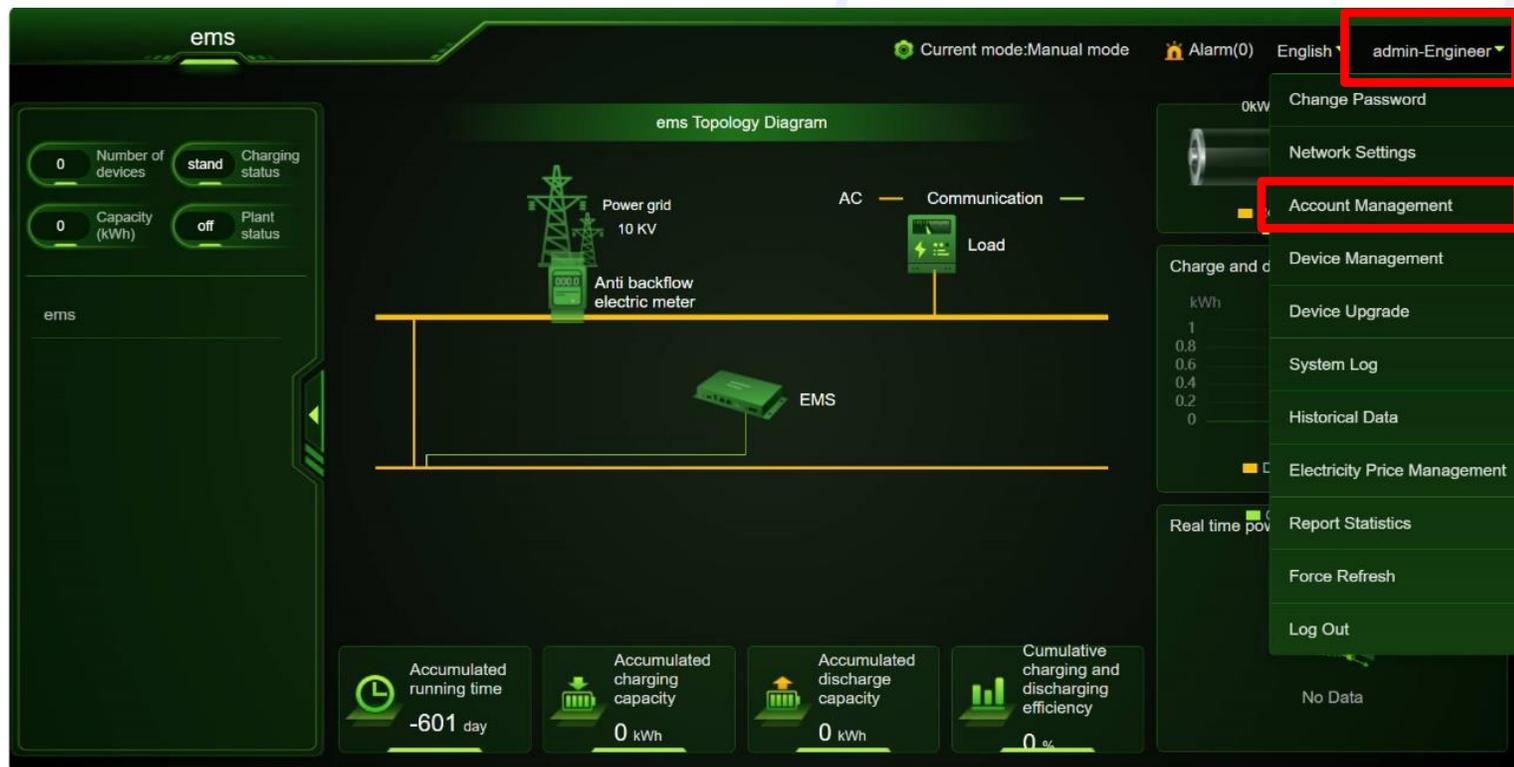
3. Enter 192.168.101.1:8888 in the browser.



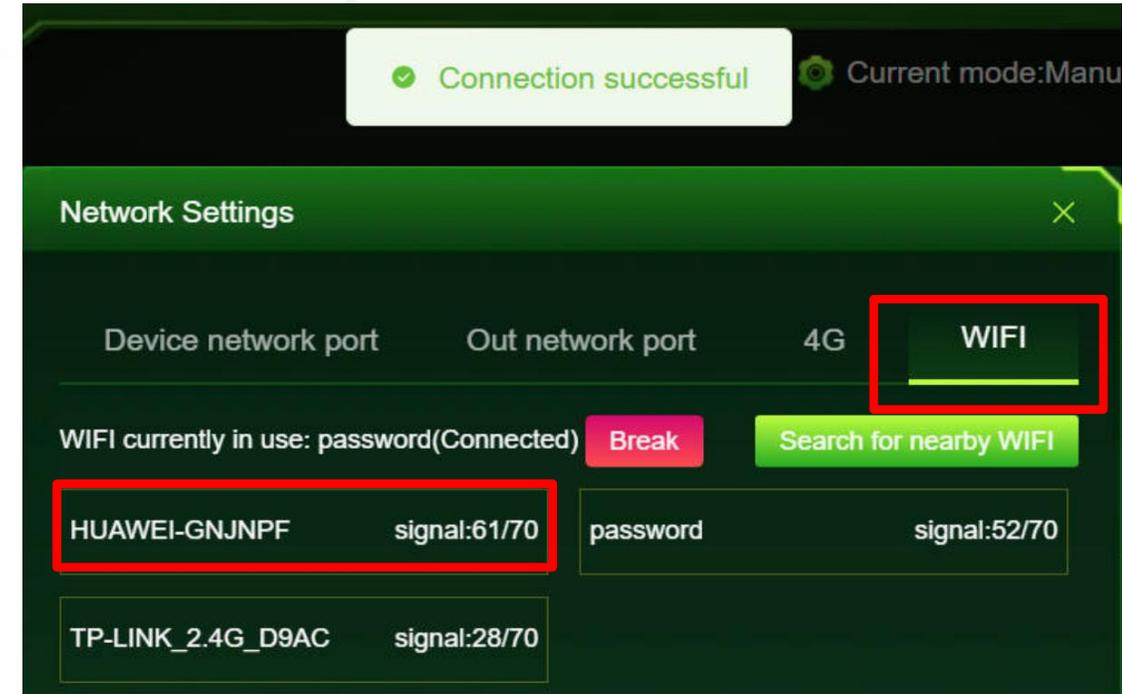
4. For Hyxipower engineer, the default account and password: Account: admin, Password: admin123.

5. Set up an operator account for the distributor:

Admin-Engineer --Account Management--Operator--Create the operator.



# System Operation-Registration



6. Network Settings
7. WIFI
8. Choose corresponding WIFI signal
9. Enter account and password
10. Connection successful.

# System Operation-System Test

**For this part, a special functional test document will be issued in future , which will record in detail each step of the operation.**

If everything is normal , Hyxipower staff signs the documents with the customer :

<Commissioning Acceptance Report> < Charge and Discharge Capacity Test Report)

System Test Contents		
No.	Communication test	Introduction
1	Power-on check	
2	Power distribution system power on	The voltage is stable and meets the power distribution requirements.
3	Communication debugging	Check that the communication data is displayed normally, there is no problem with the communication point, no jump, and the refresh frequency meets the requirements of the communication protocol.
4	EMS Data	
5	BMS Data	
6	PCS Data	
7	Temperature control system data	
8	Fire protection system data	
9	MPPT Data	
10	Electricity meter data	
11	Temperature and humidity data	
12	Combustible gas data	

# System Operation-System Test

No.	Signal test	Introduction
13	DC molded case circuit breaker status test	Test that the status display of the EMS environmental control interface meets the design working status requirements of the equipment. No alarm is required, it is only used as a status display
14	AC molded case circuit breaker status test	
15	Access switch status test	
16	Aerosol state test	
No.	Subsystem test	Introduction
17	Temperature control strategy	
18	Fan operation strategy	1.PACK cooling fan, starts when the core temperature is greater than 25°C, turns off when the core temperature is lower than 22°C, and the temperature can be modified in the EMS interface. 2.PCS cooling fan, when the IGBT temperature of PCS is greater than 70°C, DO5 outputs, and the fan is powered and rotates. The fan stops when the IGBT temperature is less than 60°C.
19	Air conditioning operation strategy	When the return air temperature of the air conditioner is higher or lower than the set value, the EMS remotely controls the air conditioner to turn on. When the return air temperature reaches the cooling or heating conditions, the air conditioner automatically turns on cooling or heating. When the return air temperature is lower than the return difference value, the air conditioner automatically turns off cooling or heating.
20	Fire protection system simulation test	
21	BMS system three-level protection strategy	For detailed debugging and testing steps, see the BMS protection strategy and threshold table

# System Operation-System Test

No.	Subsystem test	Introduction
22	DI input test	
23	Emergency stop input	PCS shuts down, BMS trips, QF circuit breaker trips, and EMS alarms are displayed
24	Smoke, temperature, or combustible gas detection signals can trigger any one of them	PCS shuts down, BMS trips, and EMS alarms are displayed
25	Smoke and temperature sensors are triggered simultaneously	PCS shuts down, BMS trips, QF circuit breaker trips, and EMS alarms are displayed.
26	Flood Trigger	PCS shuts down, BMS trips, and EMS alarms are displayed
27	Photovoltaic surge	PCS shuts down, BMS trips, and EMS alarms are displayed
28	AC surge	PCS shuts down and EMS alarm is displayed.
29	Combustible gas signal input	Start the air inlet and outlet shutter control. If the temperature and smoke sensor is triggered first, close the shutter, directly trigger the BMS to trip, the PCS to stop, the QF circuit breaker to trip, and the EMS to display an alarm.
30	PCS charging and discharging	/
31	First 0.5C discharge	/
32	First 0.5C charging	/
33	Second 0.5C discharge	/
34	Second 0.5C charge	/

# System Operation-System Test

No.	Linkage protection test	Introduction
35	BMS and EMS communication failure	PCS shuts down, BMS trips, QF circuit breaker trips, and EMS alarms are displayed  After the signal is triggered,the PCS shuts down and the EMS generates an alarm
36	Communication failure between PCS and EMS	
37	BMS and PCS communication failure	
38	Air conditioner and EMS communication failure	
39	Communication failure between the meter and EMS	
40	System efficiency test	
41	According to 3.4 system charge and discharge data analysis	
42	Complete system operation strategy testing	<p>In the grid-connected state: When the PV power is less than the Load power,the ESS and PV are output together.When the battery SOC is lower than the PV is greater than the load power,the excess PV automstically charges the ESS.After the ESS is fully charged,the power generation power is less than the load power,and the ESS+PV power are required to supply power to the load at the same time.</p> <p>When the ESS triggers the second-level ban,the PV is fully charged for the ESS until the ESS SOC is charged to 30%,and the ESS will output power.The PV power generation power is greater than the load power,and the ESS is charged while supplying power to the load.When the ESS is full,the MPPT power is limited so that the PV only supplies power to the load.</p>

# System Operation-System Test

No.	Linkage protection test	Introduction
43	Load following mode test	Build a test scenario,connect to the grid-side electric meter and load,and test the real-time changers in load power to test the ESS ability to track load changes and adjust power output. Obverse the PCS tracking load power range and response rate.
No.	Anti-backflow function test	Introduction
44	Demand control function test	
No.	Full charging and discharging test	Introduction
45	Full charging and discharging test	Do one cycle of charging to full SOC and discharging to lowest SOC to balance battery

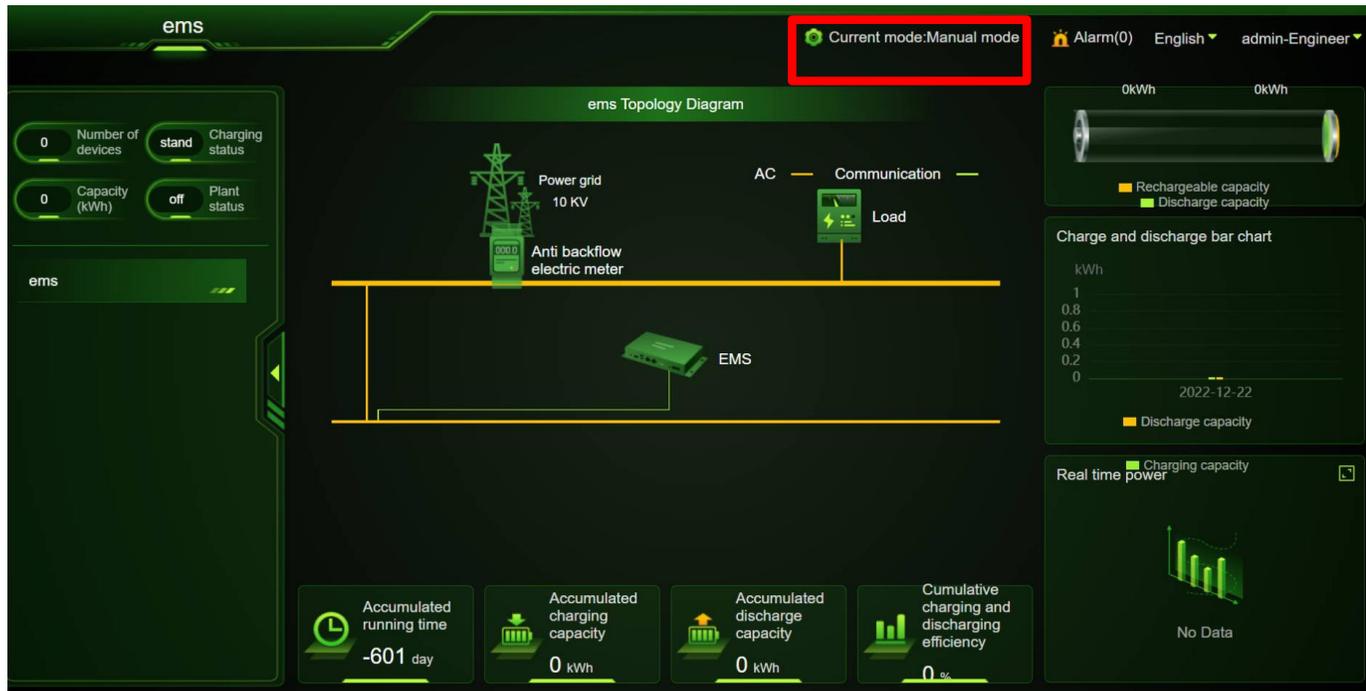
# System Operation-Parameter Setting

The screenshot shows the HYXiPOWER Plants Monitoring interface. The main content area is titled 'EMS' and includes a search bar for 'EMS Number' with a 'Search' button and a 'Reset' button. Below the search bar is a table with the following columns: EMS Name, EMS Number, Status, Operating Power, Daily Battery Chargin..., Daily Battery Dischar..., and Control. The table contains one row with the following data: EMS Name: 50901250700013, EMS Number: 50901250700013, Status: Normal, Operating Power: 2.1kW, Daily Battery Chargin...: 0 kWh, Daily Battery Dischar...: 324 kWh. The 'Control' column for this row contains two links: 'Control' and 'Local Monitoring'. The 'Local Monitoring' link is highlighted with a red box, and a red arrow points to it from the right.

EMS Name	EMS Number	Status	Operating Power	Daily Battery Chargin...	Daily Battery Dischar...	Control
50901250700013	50901250700013	Normal	2.1kW	0 kWh	324 kWh	<a href="#">Control</a> <a href="#">Local Monitoring</a>

If we want to log in the cloud platform, could click here ([Local Monitoring](#)) log in the EMS page.

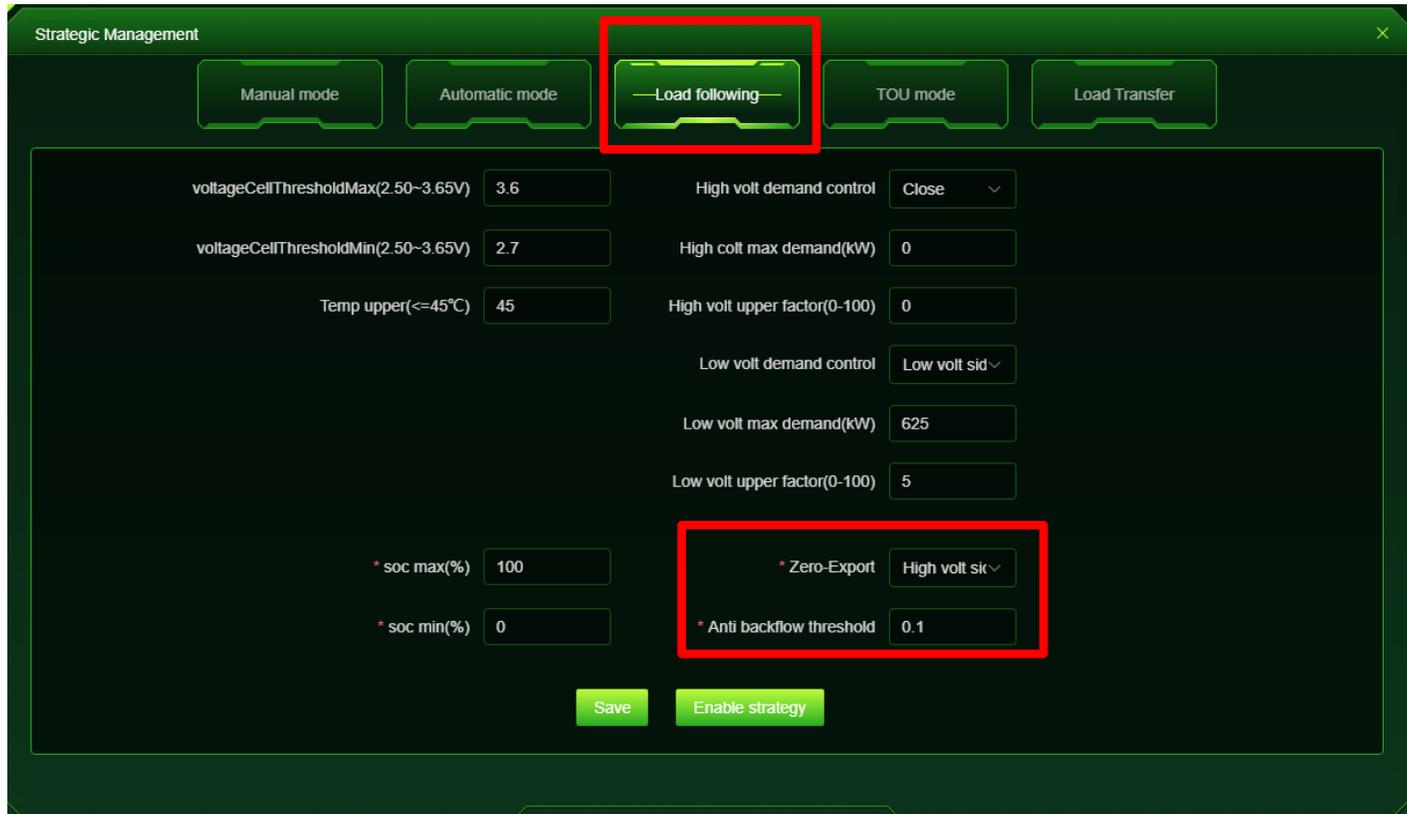
# System Operation-Parameter Setting



After all the above functional tests pass normally, we can set the system parameters and make preparations before the official operation:

Click the setting icon in the upper right  
Current Mode:

# System Operation-Parameter Setting

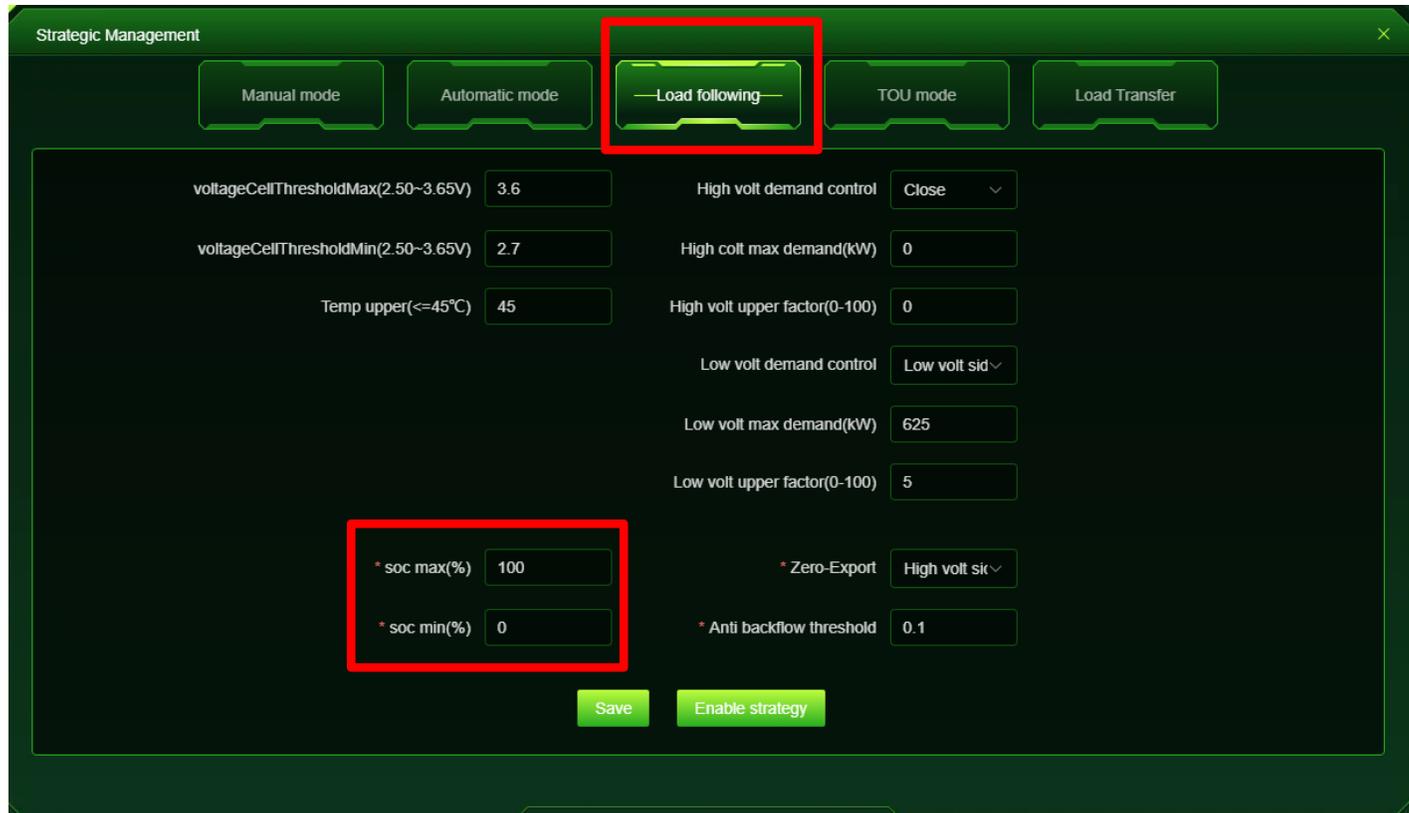


1. Export control:

**Zero-Export:** High volt side

**Anti backflow threshold:** 0-0.1 (KW)

# System Operation-Parameter Setting



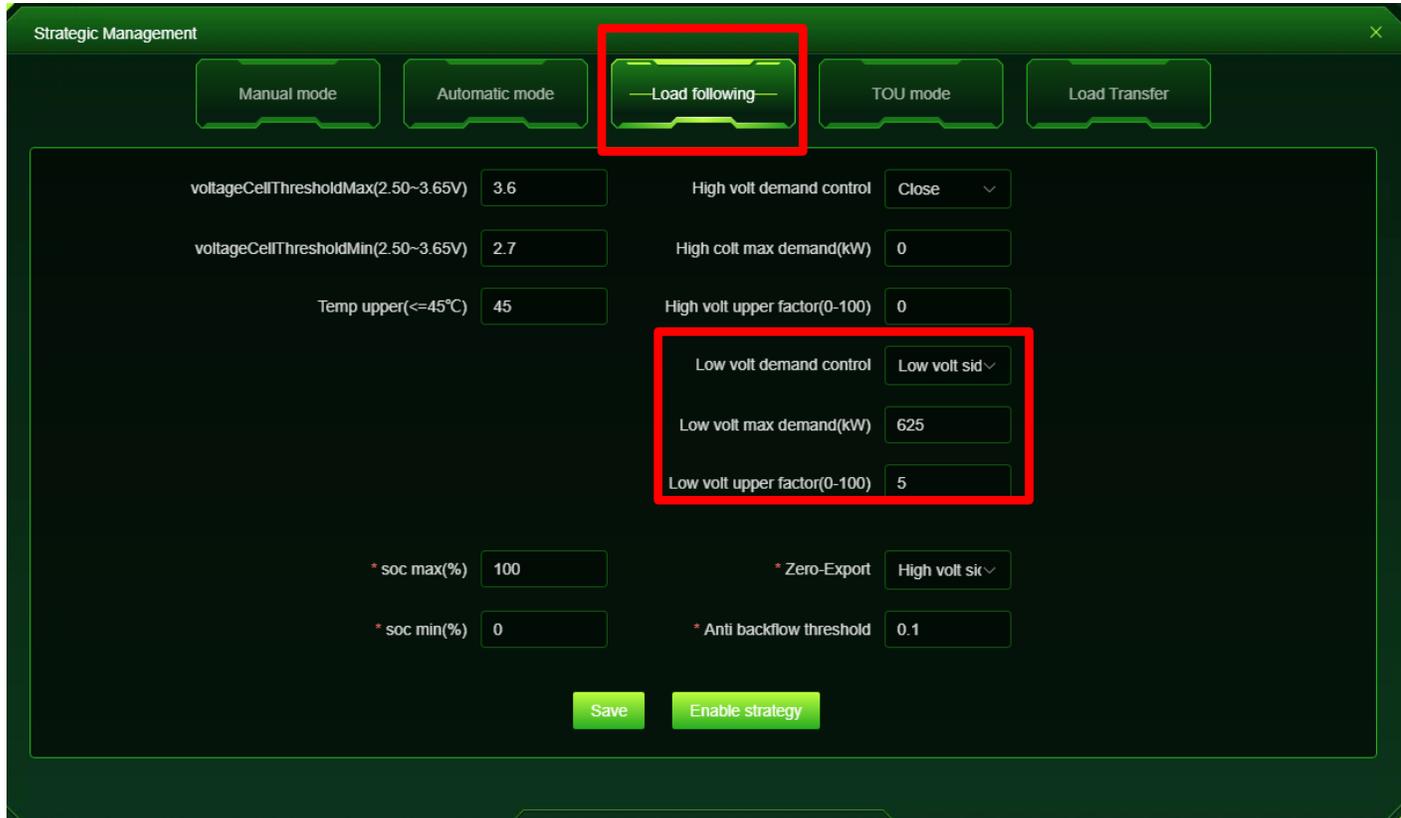
2. SOC settings in Self Use mode:

**Soc max(%)**: The maximum battery energy charged by the photovoltaic panel and the grid. It is recommended to set it to 100%

**Soc min(%)**: The minimum discharged value of the battery energy.

It is recommended to set it to 10%

# System Operation-Parameter Setting



3. When the SOC value is lower than the set value, if we hope the grid will automatically charges the battery, could set the following parameter setting:

**Low volt demand control:** Low volt side  
(ESS cabinet to transformer)

**Low volt max demand(KW) :**625  
(Lower than the capacity of transformer)

**High volt upper factor (0-100):** 5  
(Charge power will be  $625\text{KW} * 5\% = 31.25\text{KW}$ )

Low voltage side & High voltage side,  
meaning the 2 sides of the utility transformer.

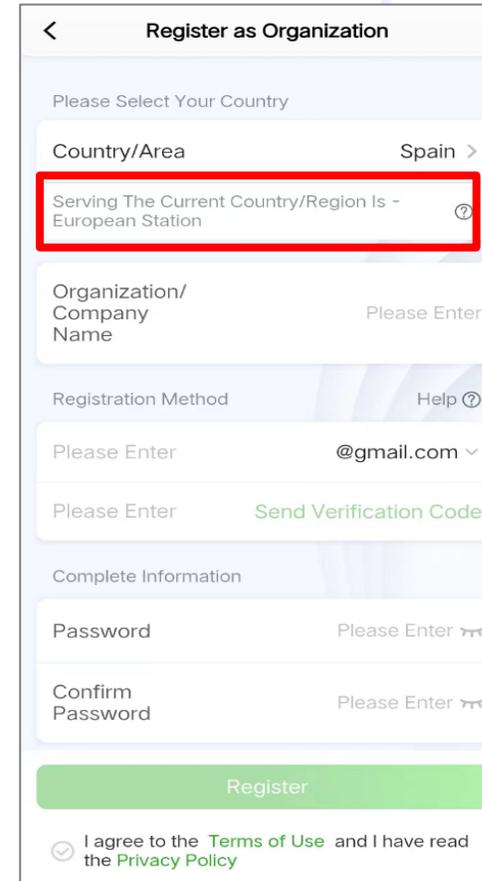
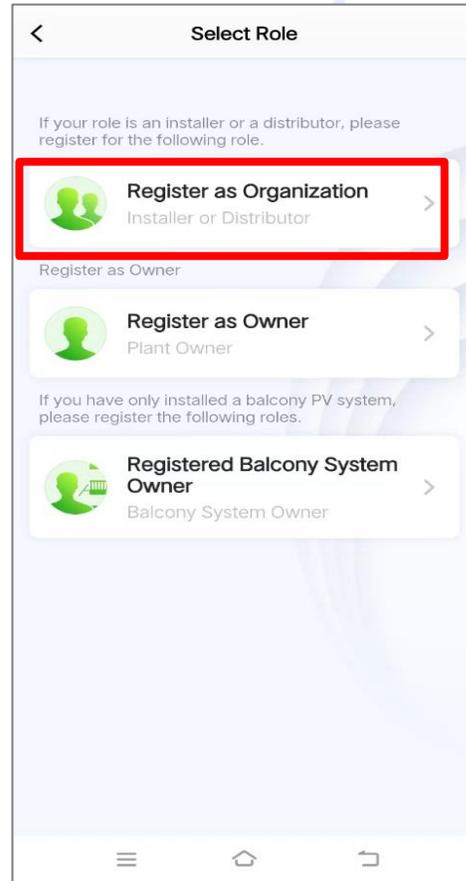
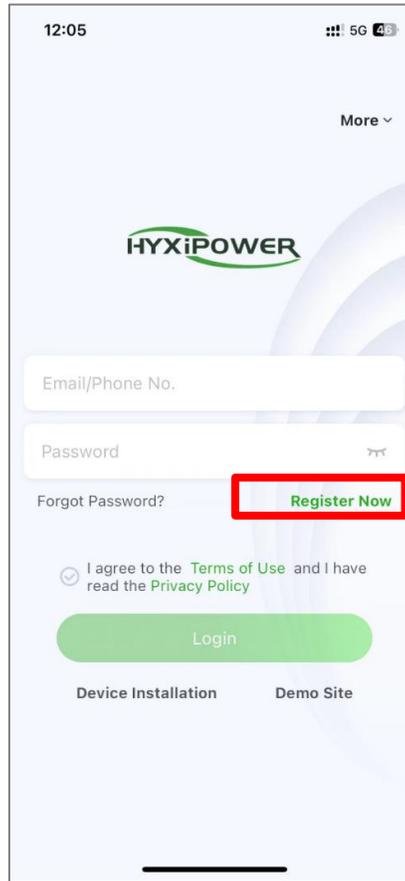
# System Operation-Registration on APP

## Step 1:

Install **Hyxipower** APP in APP store or Google play

## Step 2:

Register Now - Register as Organization

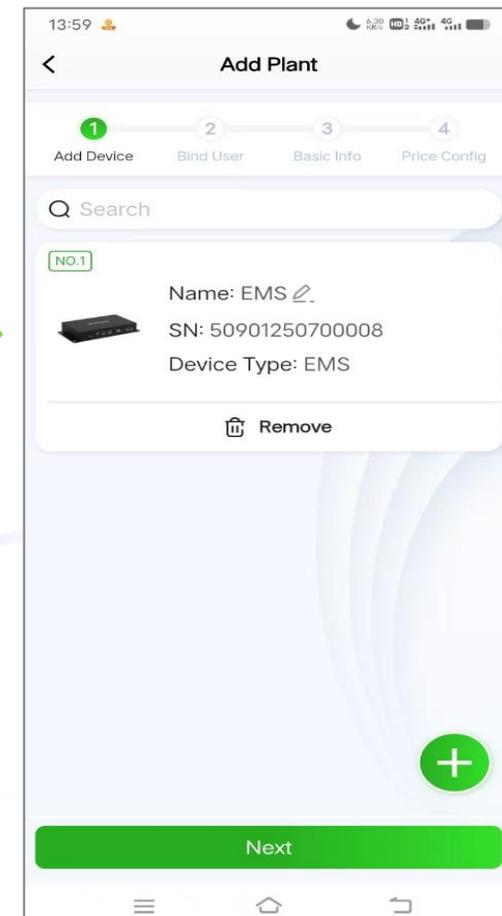
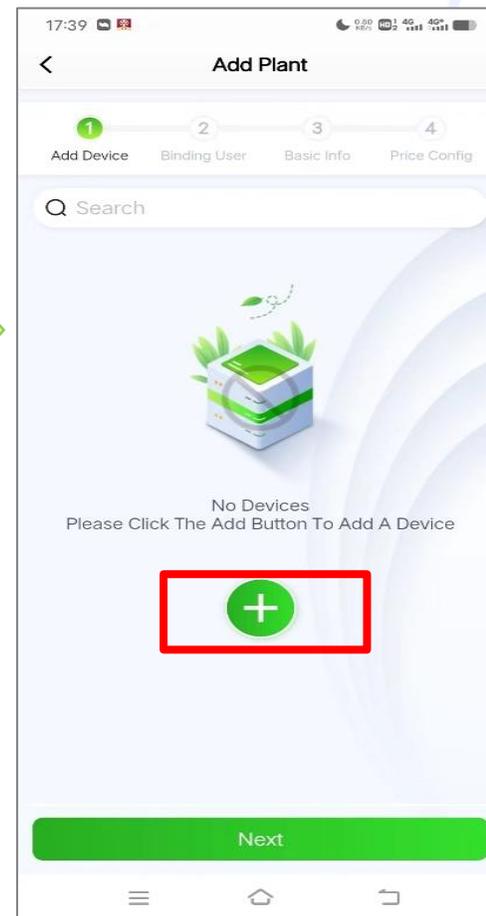
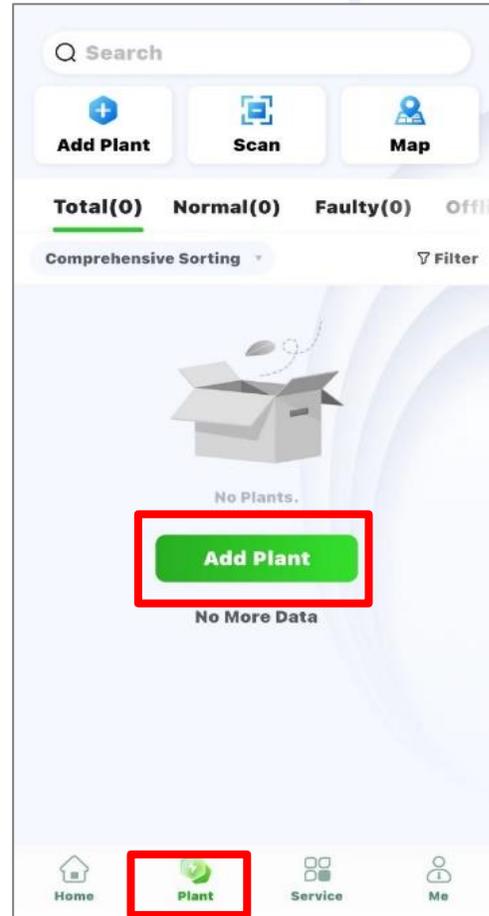
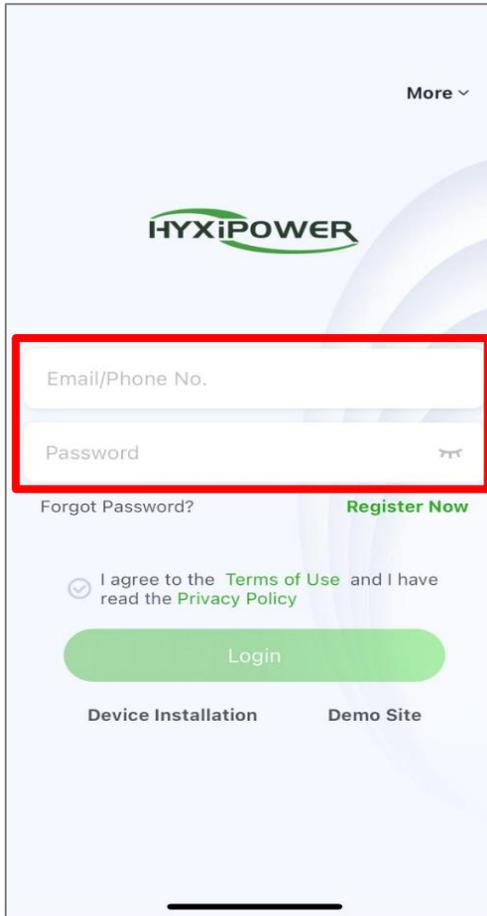


# System Operation-Registration on APP

**Step 3:**  
Log in your account

**Step 4:**  
Click Plant- Add Plant

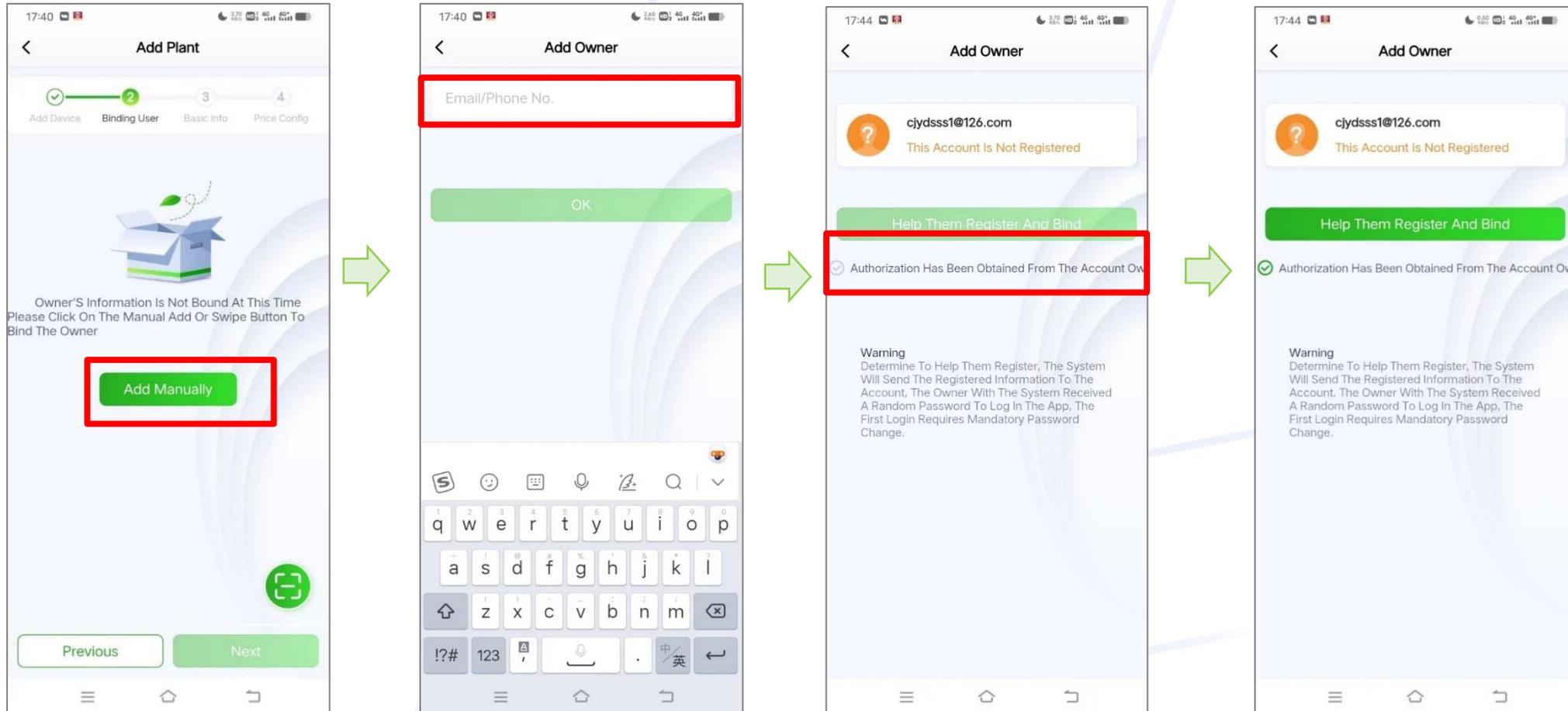
**Step 5:**  
Manually enter the serial number of the EMS.  
Select the energy storage system for the power plant type.



# System Operation-Registration on APP

**Step 6:** Bind the end user.

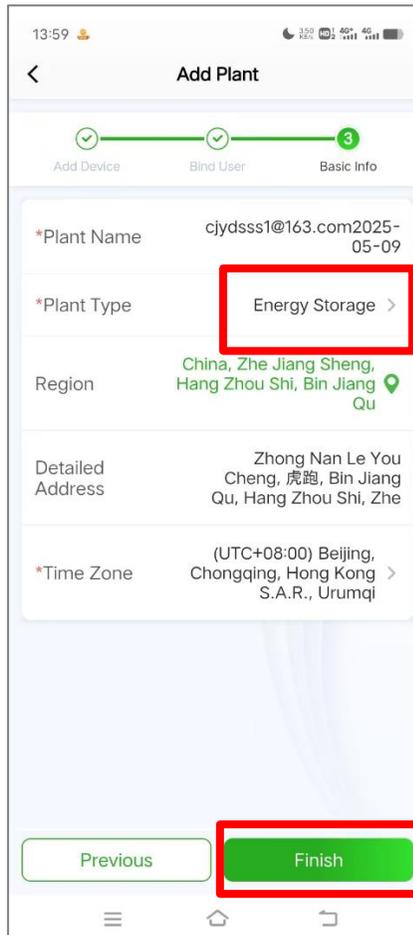
The system will send the password to the email address.



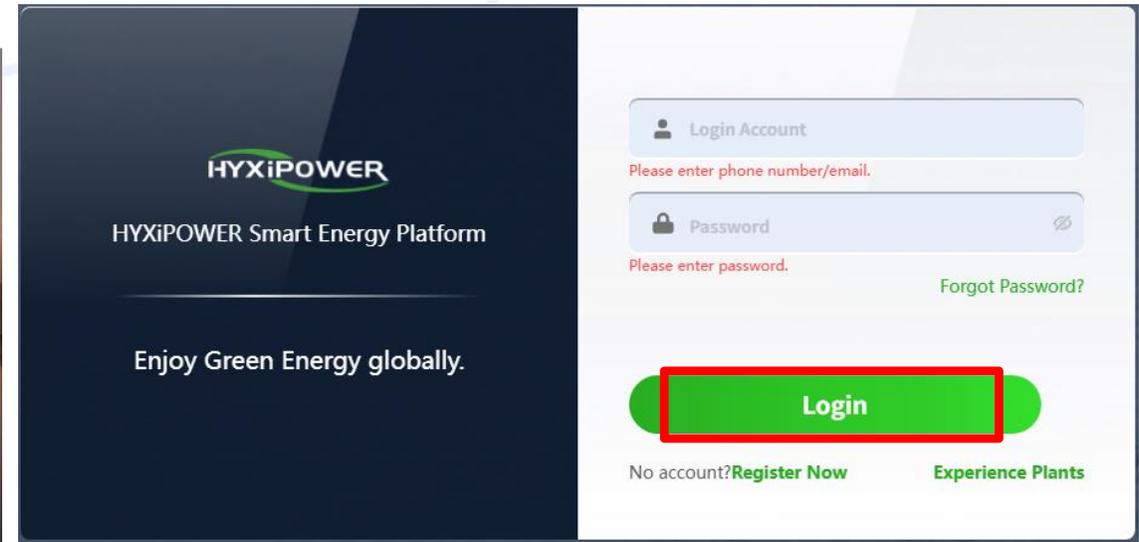
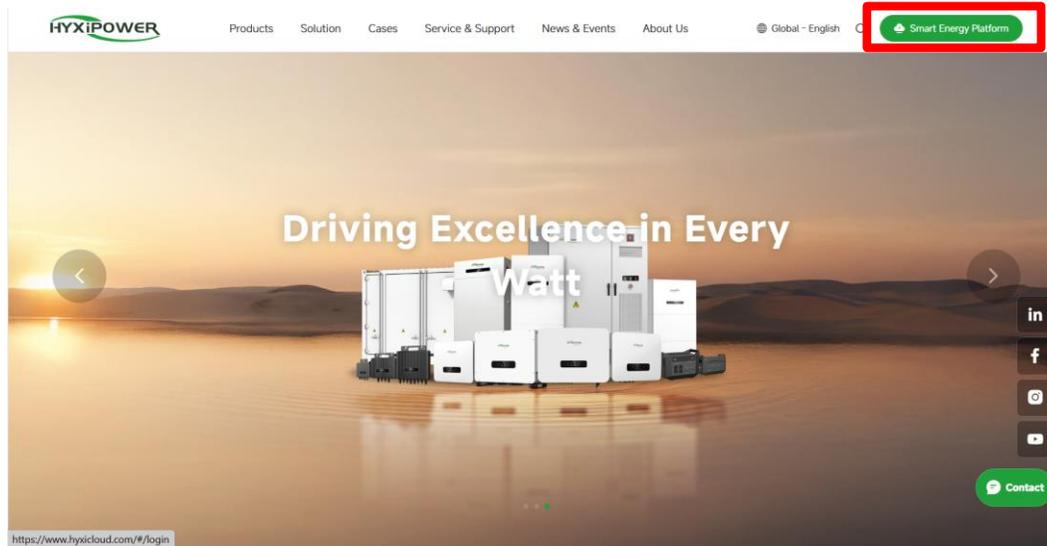
# System Operation-Registration on APP

## Step 7:

Choose the Plant Type as: **Energy Storage**, and then click **Finish**.



# System Operation-Registration on Web



1. Enter this URL in your browser.  
<https://en.hyxipower.com/en>
2. Click: Smart Energy Platform
3. Click : Register Now

# System Operation-Registration on Web



### Distributor/Installer

Distributor/Installer is the person who install or/and manage the plant and supply service to owner.



### Register as Owner

Owner is the person who will own or has owned one inverter or more.

\* Country  
Please Select

\* Organization Name  
Please Enter

\* Registration Method  
Email Register

\* Email  
Please Enter @gmail.com

\* Verification Code  
Please Enter [Send Code](#)

\* Password  
Please enter password.

\* Confirm Password  
Please confirm the password.

I have read [Privacy Policy](#)

[Cancel](#) [Register](#)

4. Choose :Distributor/Installer

5. Fill in the information and register.

**Please note that one email address can only register one account on Hyxicloud.**

# System Operation-Registration on Web

The screenshot displays the HYXiPOWER web interface. At the top, the 'Photovoltaic Overview' menu is highlighted. Below it, the 'Monitoring' menu is selected, and the 'Plants Monitoring' sub-menu is active. The main content area shows a navigation bar with 'Plants Monitoring' and a list of filters: All (3), Follow (0), Alarm (0), Normal (1), Offline (1), Unfinished (1), and Visitor (0). Below the filters, there are input fields for 'Plant Name', 'Plant ID', 'Location Area', and 'Plant Type'. A green '+ Add Plant' button is highlighted with a red box. Below this, a 'Create Plant' modal window is open, showing a four-step process: 1. Add Device, 2. Bind User, 3. Basic Info, and 4. Price Config. The first step, 'Add Device', is highlighted with a red box, and a green '+ Add Device' button is visible. A search bar for 'SN' is also present.

6. Photovoltaic Overview- Monitoring- Plant Monitoring

7. Add Plant

8. Add Device

# System Operation-Registration on Web

Create Plant

1 Add Device      2 Bind User      3 Basic Info

+ Add Device

NO.1

\* SN: Please Enter      Device Name: Please Enter



SN

9. Enter the serial name of the EMS.

10. Bind user. Enter the end user's email address.

Create Plant

✓ Add Device      2 Bind User      3 Basic Info      4 Price Config

+ Add

**i** Add the owner. Only one owner can be bound to one plant.

# System Operation-Registration on Web

Create Plant

Progress: Add Device (1) ✓, Bind User (2) ✓, Basic Info (3) 3

\* Plant Name: cjydsss1@163.com2025-05-09

\* Plant Type: Energy Storage

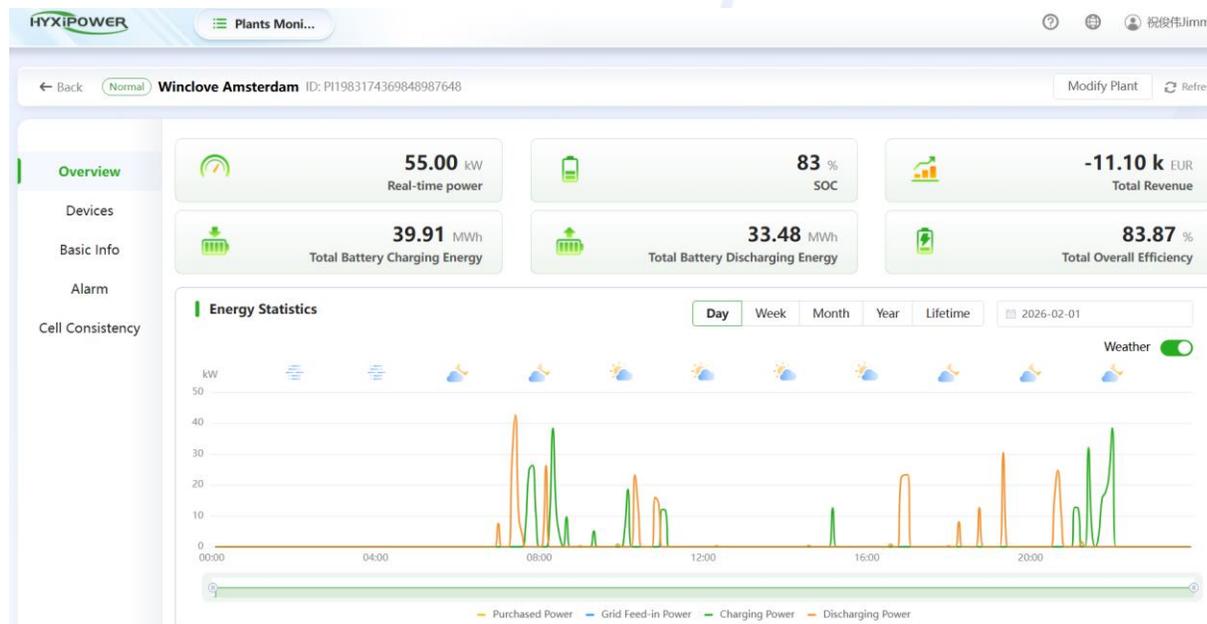
Region: Click to get map location

Detailed Address: Please Enter

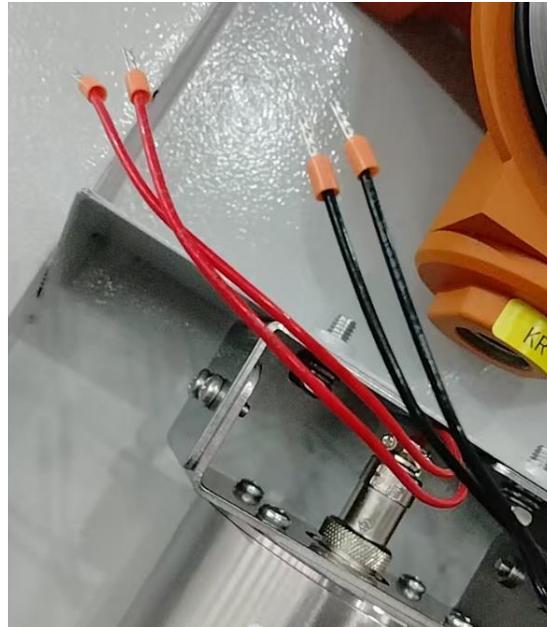
\* Time Zone: (UTC+08:00) Beijing, Chongqing, Hong Kong S.A.R., Uru

11. Fill in the Basic Info of the plant.

**Please note that the plant type is selected as: Energy Storage.**



# System Operation-Normal Operating Mode



After the system is tested and found to be normal, it can be put into formal operation.

1. Connect the line to the aerosol fire extinguisher.

**CMU-DI 1+    Black wire**

**CMU-DI 1-    Black wire**

Note: There are no positive or negative poles

**SD-2            Red wire**

**HD-2            Red wire**

Note: There are no positive or negative poles

# System Operation-Online Monitoring & Alarm

Based on the actual situation, after the system has been running for a period of time, edit the <System Trial Operation Report> and issue it.

**The daily monitoring content is as follows:**

Time	Check Items	Standard
Daily	System alarm records	No unprocessed alarms
Daily	MPPT, PCS, STS,AC status	Normal operation status

There are three levels of alarms, the highest level is level 1, and the component will stop working.

Below are alarm level explanations:

Level 1 alarm: 1	The device is shut down and can be operated after reset
Level 2 alarm: 2	The equipment does not stop, but gives an alarm
Level 3 alarm: 3	The equipment does not stop, but gives an alarm

# System Operation-Online Monitoring & Alarm

There are common alarms and the corresponding solutions:

Fault Name	Possible cause of failure	Treatment measures	Remark
The system is not functioning properly Work	<ol style="list-style-type: none"> <li>1.The secondary circuit of the system is not powered</li> <li>2.The circuit breaker of some equipment is not closed</li> <li>3.Other reasons</li> </ol>	<ol style="list-style-type: none"> <li>1.Check if the monitoring power supply indicator light is on</li> <li>2.Refer to the monitoring electrical diagram to see if there is any equipment circuit breaker that is not closed</li> <li>3.If it still does not work,properly,please contact the manufacturer for after-sales service</li> </ol>	After troubleshooting, you can restart it
System single pressure shutdown protection	<ol style="list-style-type: none"> <li>1 System single cell voltage is higher than the protection value</li> <li>2.The battery sampling harness is broken or the sampling plug in connection is unreliable</li> <li>3. BMU working abnormally</li> </ol>	Reinstall the BMU.Sampler power supply plug,Check the system battery voltage,If the battery is damaged please replace damaged batteries.	After troubleshooting,refer to "Main-Machine Manual Grid-connected operation,execution completed After that the system can be run again.
System single unit lack Pressure shutdown protection	<ol style="list-style-type: none"> <li>1 System single cell voltage is lower than the protection value</li> <li>2.The battery sampling harness short wire or the sampling plug in connection is unreliable</li> <li>3. BMU working abnormally</li> <li>4.Other reasons</li> </ol>	Re-plug BMU sampler power supply plug.check the system battery voltage.if the battery is damaged Please replace damaged batteries.	/
Charge and discharge over temperature stop machine protection	<ol style="list-style-type: none"> <li>1 The System temperature is high than the protection value</li> <li>2.The temperature sampling harness is broken or the sampling</li> <li>3. BMU is not working properly</li> <li>4.Other reasons</li> </ol>	Re-plug BMU sampler power supply plug.check whether the air conditioner is operating normally. If it is abnormal.Please contact the manufacturer's after-sales service.	/

# System Operation-Online Monitoring & Alarm

Fault Name	Possible cause of failure	Treatment measures	Remark
Charge and discharge stop due to under temperature machine protection	<ol style="list-style-type: none"> <li>1 The System temperature is lower than the protection value</li> <li>2.The temperature sampling harness is broken or the sampling plug in connection is unreliable</li> <li>3. BMU is not working properly</li> <li>4.Other reasons</li> </ol>	Re-plug BMU sampler power supply plug.check whether the air conditioner is operating normally. If it is abnormal.Please contact the manufacturer's after-sales service.	/
Charge and discharge overcurrent stop Machine protection	<ol style="list-style-type: none"> <li>1 The System charge and discharge current is higher than the protection value</li> </ol>	Check if the PCS is working properly.Please contact the manufacturer for the after-sales	/
System insulation failure	<ol style="list-style-type: none"> <li>1.Insulation detection failure</li> <li>2.System leakage</li> </ol>	Use remote background to shut down PCS,BMS Electrical appliances and contact the manufacturer's after-sales service	/
BCU and BMU Communication failure	<ol style="list-style-type: none"> <li>1.BMS system is not powered</li> <li>2.The corresponding CAN communication line is loose</li> </ol>	Check whether the BMS system is powered normally.View the corresponding BCU and BMU communication plug-ins is it loose or the wiring harness is damaged	After troubleshooting,you can restart the cabinet
BCU and BAU Communication failure	<ol style="list-style-type: none"> <li>1.BMS system is not powered</li> <li>2.The corresponding CAN communication line is loose</li> </ol>	Check whether the BMS system is powered normally.View the corresponding BCU and BMU communication plug-ins is it loose or the wiring harness is damaged	After troubleshooting,you can restart the cabinet

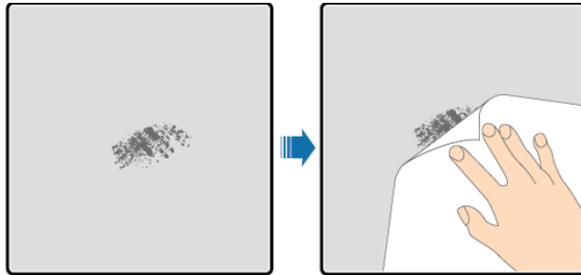
# System Operation-Online Monitoring & Alarm

Fault Name	Possible cause of failure	Treatment measures	Remark
BMS and PCS Communication failure	1.BMS system is not powered 2.PCS system is not powered 3.The corresponding communication network cable is loose	Check whether the power supply of the entire energy storage system is normal. Check whether the corresponding BAU and PCS communication plug-ins are loose and whether the wiring harness is damaged	After troubleshooting,you can restart the cabinet
Air conditioner and BMS communication failure	1.The energy storage system is not powered on 2.The corresponding communication line is loose	Check whether the entire energy storage system is powered normally and whether the wiring harness is damaged	After troubleshooting,you can restart the cabinet
SOC display abnormal	1.SOC Not calibrated 2.SOC Error Accumulaion	Perform a complete charge and discharge cycle on the system	

# Appendix: How to repair paint

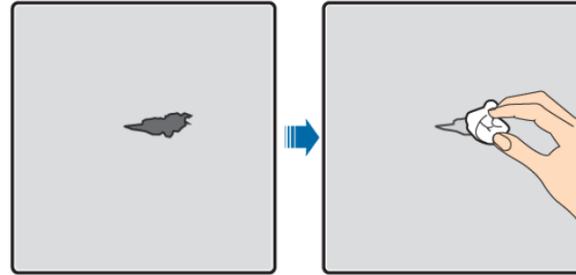
## Step1 :

Gently sand the damaged area with fine sandpaper to remove dirt or rust.



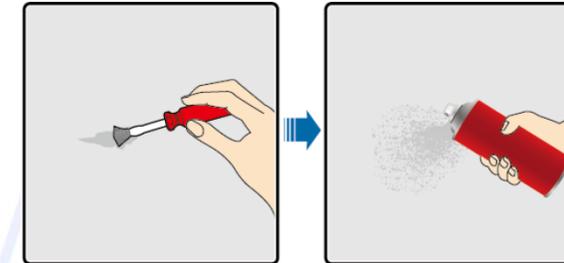
## Step2:

Moisten a cotton cloth with anhydrous ethanol and wipe the area to be sanded or repaired to remove surface dirt and dust, then wipe it dry with a clean cotton



## Step3:

Depending on the extent of paint damage, choose one of the following methods—spray painting, brush painting, or spray gun painting—to evenly touch up the damaged areas until the damage is no longer visible.



## Step4:

After painting, let it sit for about 30 minutes, then observe whether the touched-up area meets the requirements.

## Note:

Visually inspect the extent of paint damage on the equipment, and prepare the necessary tools and materials. The quantity of materials will be assessed on-site based on the specific needs of the touch-up work.

Touch-up painting is strictly prohibited outdoors in inclement weather conditions such as rain, snow, strong winds, and sandstorms.

The paint that meets the requirements has been prepared according to the color swatch provided at the time of shipment.

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