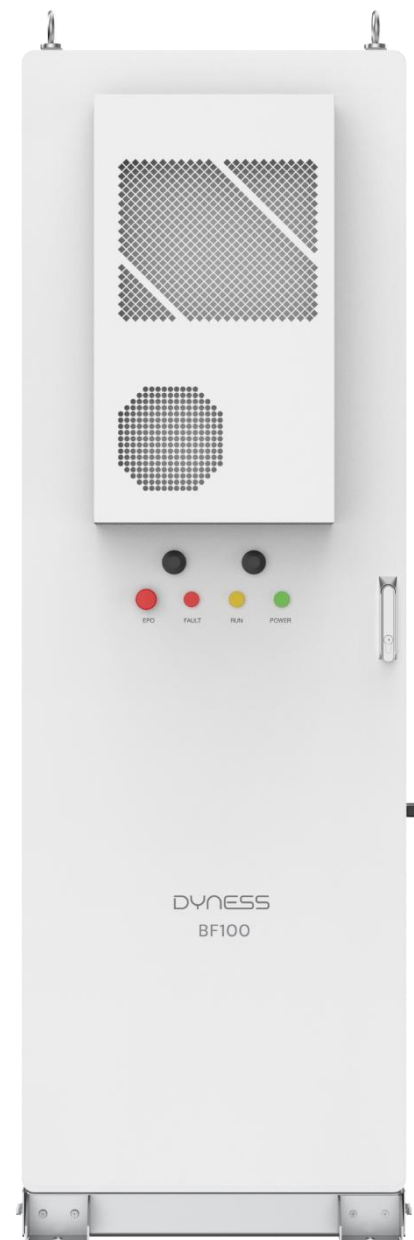


BF100 交付指导手册

BF100 Guidebook



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1 开关机指引| Power On/ Off

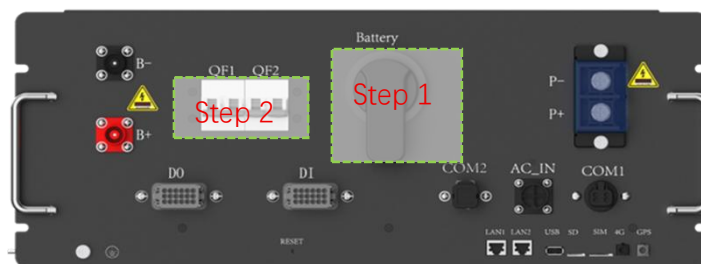
1.1 开机 Power On

第一步： 闭合 BDU 上的电池电路断路器 ("Battery"断路器);

Step1: Close the battery circuit breaker ("Battery" breaker) on the BDU.

第二步： 依次闭合 BDU 上的“QF1”和“QF2”开关。

Step2: Sequentially Close the "QF1" and "QF2" switches on the BDU.



1.2 关机 Power Off

第一步： 依次断开 BDU 上的“QF1”和“QF2”开关;

Step1: Sequentially Open the "QF1" and "QF2" switches.

第二步： 断开 BDU 上的电池电路断路器 ("Battery"断路器)。

Step2: Open the "Battery" circuit breaker on the BDU.

1.3 急停 Emergency Shutdown

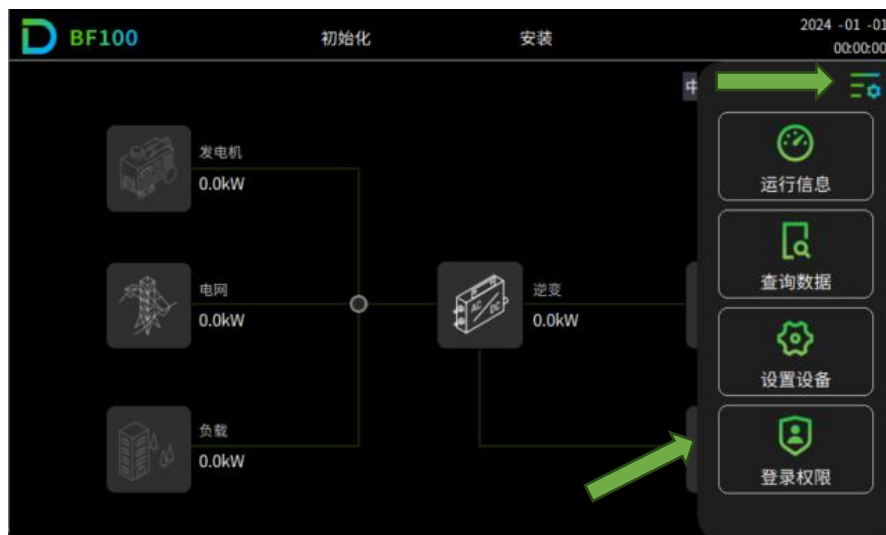
在紧急情况下，请按下机柜门上的红色紧急停止按钮（标有“EPO”）。

In emergencies, press the red emergency stop button (marked "EPO") on the cabinet door.

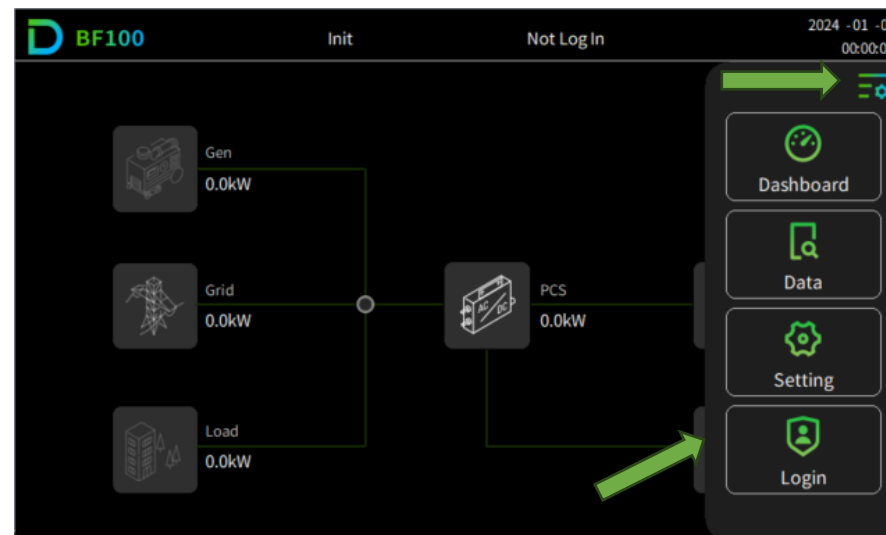
2 设置操作 Settings

2.1 登录设置 Log in

1. 点击屏幕右上角  点击登录



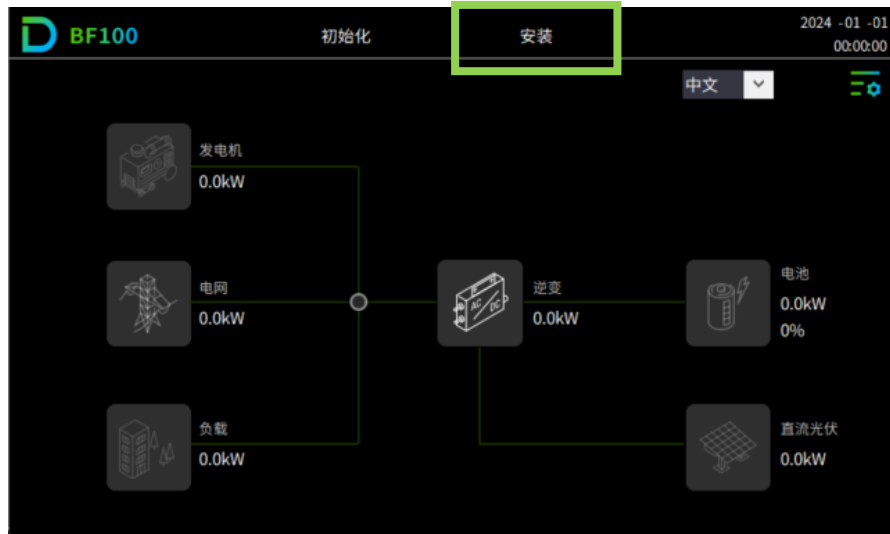
- 1 Click  in the upper right corner of the screen, then click Log In.



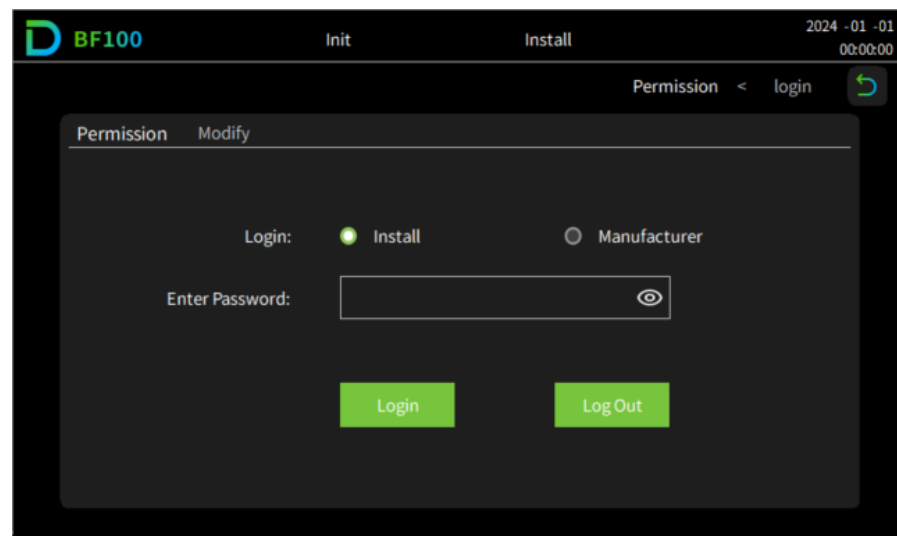
2. 选择安装商, 登录密码 1111



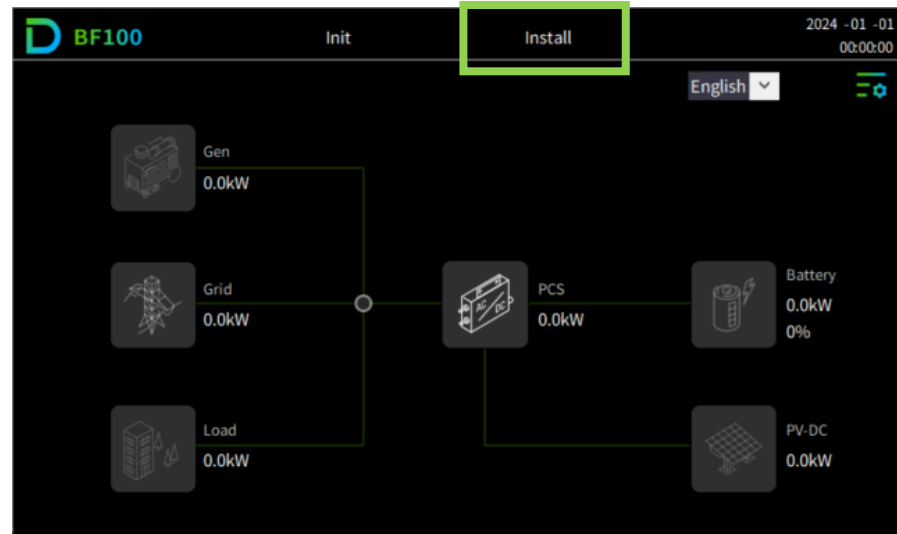
登录成功后, 显示用户为“安装”



2. Select installer, login password 1111

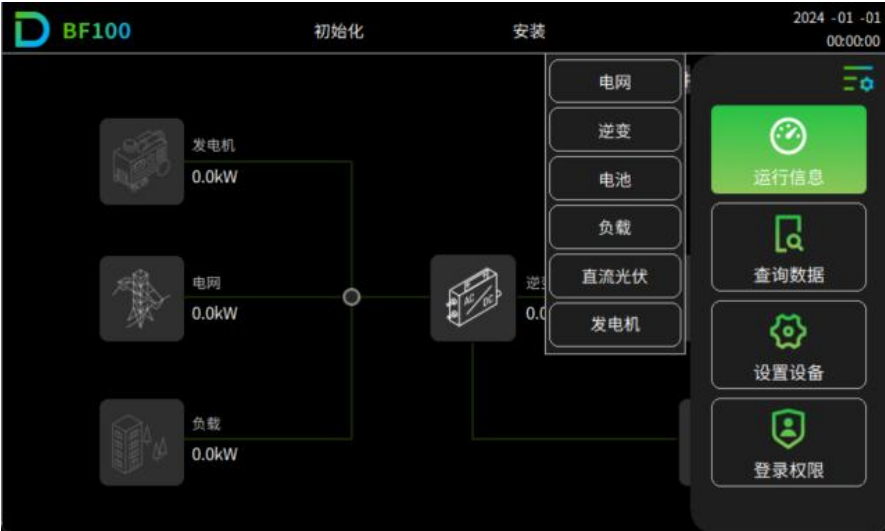


After successfully logging in, the user is displayed as “Install.”

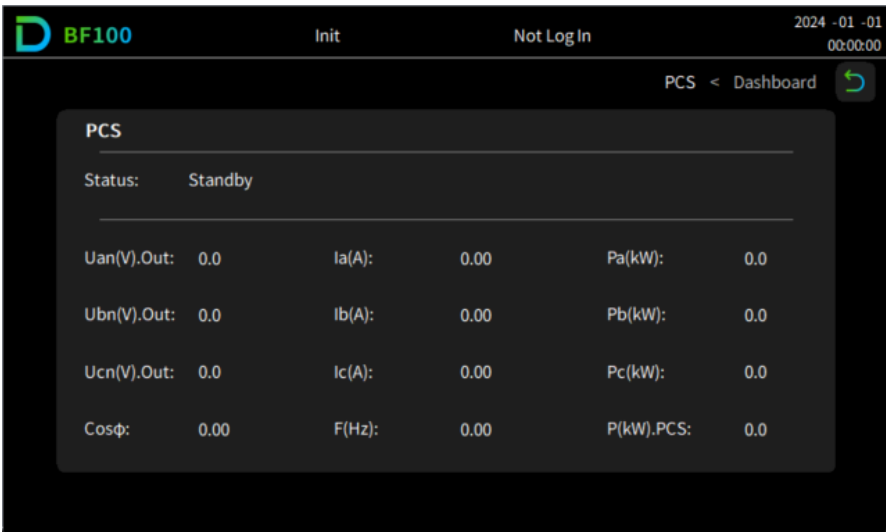
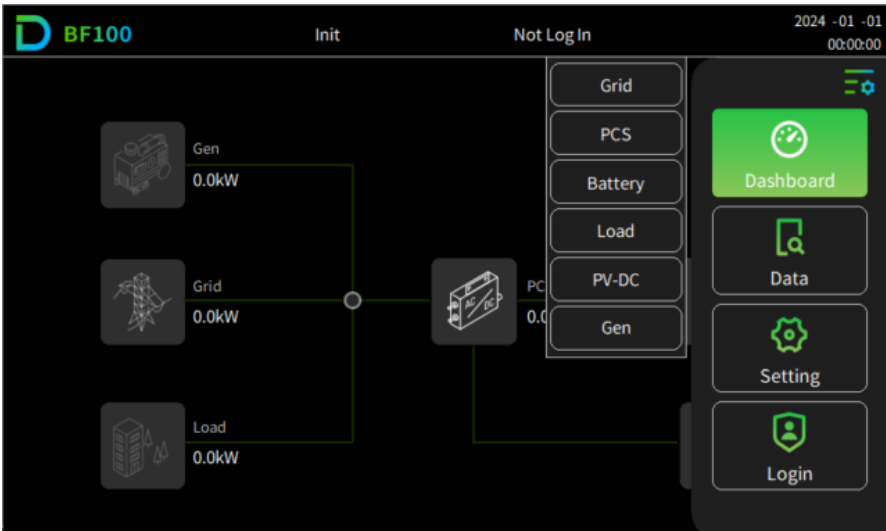


2.2 查看信息 Information

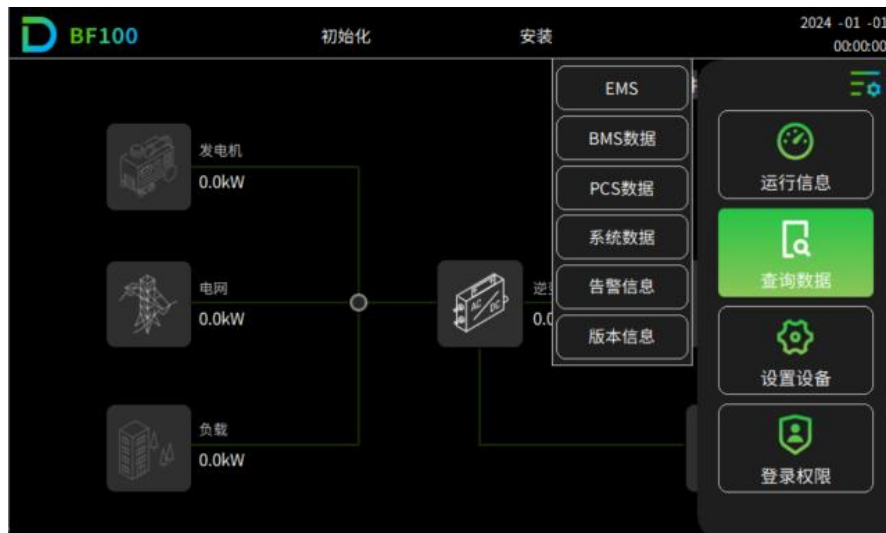
1. 点击  -运行信息，可查看各模块运行信息



1. Click  -“Dashboard” to view the running information.



2. 点击  -查询数据，可查看模块详细数据

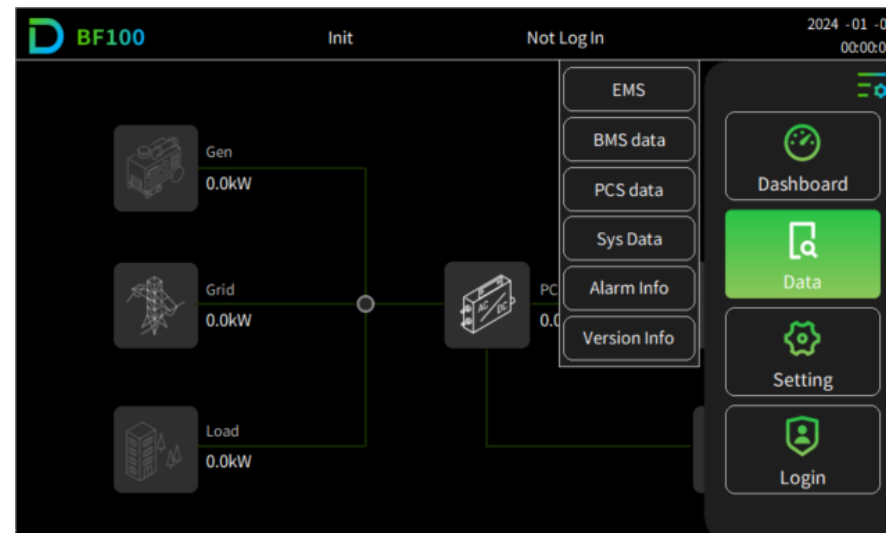


BF100 初始化 安装 2024 -01 -01 00:00:00

联机状态 并机状态 充放电数据 尖峰平谷数据 EMS < 查询数据

联机状态		
PCS模块: 离线	PC: 离线	DCDC: 离线
BMS模块: 离线	GPS模块: 离线	MPPT: 离线
液冷机组: 离线	4G模块: 离线	STS: 离线
消防模块: 离线	WiFi模块: 离线	空调: 离线
电表: 离线	蓝牙模块: 离线	LAN1: 离线
温湿度模块: 离线	并机: 失联	LAN2: 离线
联网: 掉线		

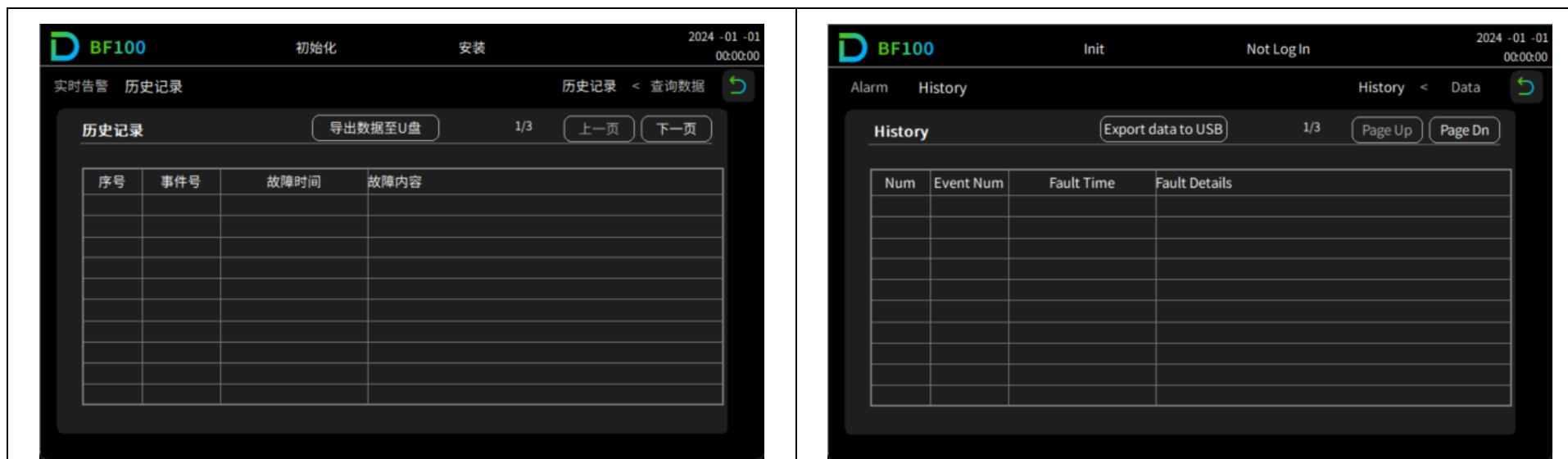
2. Click  -"Data" to view detailed module data.



BF100 Init Not Log In 2024 -01 -01 00:00:00

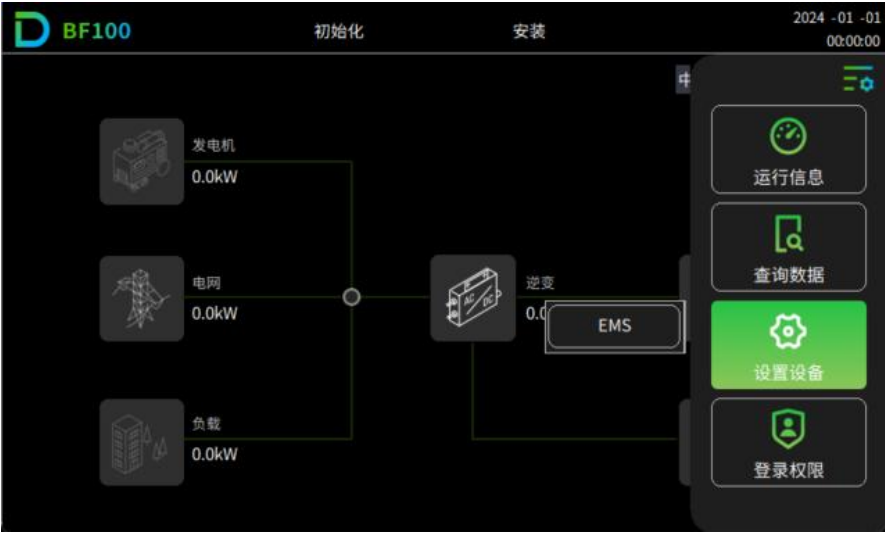
Status Parallel INV/CHG data S-P-F-V Data EMS < Data

Status		
PCS: Offline	PC: Offline	DCDC: Offline
BMS: Offline	GPS: Offline	MPPT: Offline
L-cooling: Offline	4G: Offline	STS: Offline
FFS: Offline	WiFi: Offline	Air Mod: Offline
Meter: Offline	Bluetooth: Offline	LAN1: Offline
TempHumi: Offline	Parallel: Lost contact	LAN2: Offline
Network: Offline		

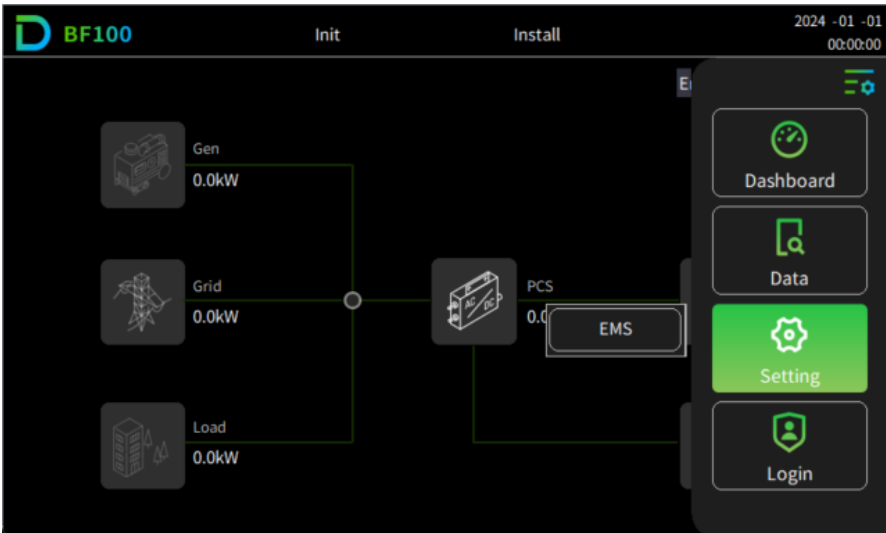


2.3 通讯设置 Communication Settings

1. 点击  -设置设备-EMS



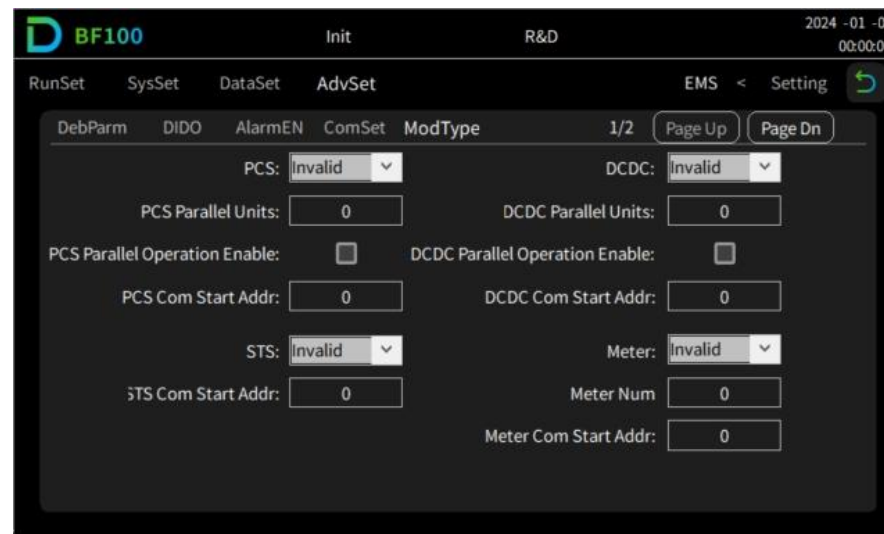
1. Click  - Setting- EMS.



2. 点击“模组选型”，PCS 通讯起始地址需跟随逆变器；如仅有一台逆变器则选择“1”；如多台逆变器并机，则跟随逆变器地址设置。



2. Click “ModType.” The “PCS com start add” must follow the inverter; if there is only one inverter, select “1”; if there are multiple inverters in parallel, follow the inverter address settings.



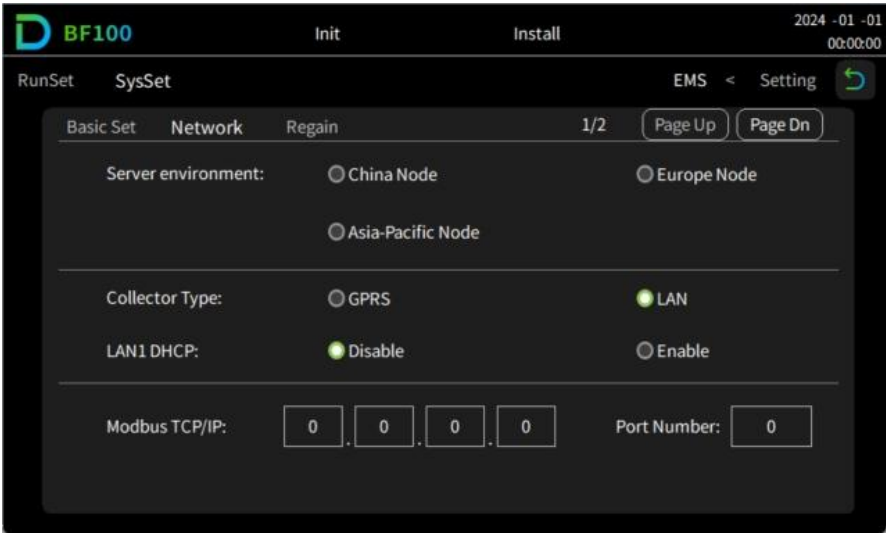
2.4 上云设置 Cloud servers

2.4.1 联网设置 Network

1. 根据所在地区，选择服务器环境，并选择采集器类型（4G 和以太网）



1. Select the server environment based on your location, and select the collector type (GPRS and LAN).



2. 使能 LAN1 DHCP，可以自动获取网络 IP 地址

The screenshot shows the 'BF100' configuration interface. At the top, there are tabs for '初始化' (Init) and '安装' (Install). Below the tabs, there are sections for '运行设置' (RunSet) and '系统设置' (SysSet). The '系统设置' section is active, and the '联网设置' (Network) tab is selected. Under '联网设置', there are three radio button options: '中国站' (China Node), '欧洲站' (Europe Node), and '亚太站' (Asia-Pacific Node). Below these, there are two radio button options for '采集器类型' (Collector Type): 'GPRS' and 'LAN'. The 'LAN' option is selected. Below that, there are two radio button options for 'LAN1 DHCP': '禁用' (Disable) and '使能' (Enable). The '使能' option is selected and highlighted with a green box. At the bottom, there are input fields for 'Modbus TCP/IP' (0.0.0.0) and '端口号' (Port Number) (0).

2. Enable LAN1 DHCP to automatically obtain a network IP address.

The screenshot shows the 'BF100' configuration interface. At the top, there are tabs for 'Init' and 'Install'. Below the tabs, there are sections for 'RunSet' and 'SysSet'. The 'SysSet' section is active, and the 'Network' tab is selected. Under 'Network', there are three radio button options: 'China Node', 'Europe Node', and 'Asia-Pacific Node'. Below these, there are two radio button options for 'Collector Type': 'GPRS' and 'LAN'. The 'LAN' option is selected. Below that, there are two radio button options for 'LAN1 DHCP': 'Disable' and 'Enable'. The 'Enable' option is selected and highlighted with a green box. At the bottom, there are input fields for 'Modbus TCP/IP' (0.0.0.0) and 'Port Number' (0).

3. 可以选择手动输入 IP 地址及网关访问网络，点击查询后输入 IP 地址，点击设置

The screenshot shows the 'BF100' configuration interface. At the top, there are tabs for '初始化' (Init) and '安装' (Install). Below the tabs, there are sections for '运行设置' (RunSet) and '系统设置' (SysSet). The '系统设置' section is active, and the '联网设置' (Network) tab is selected. Under '联网设置', there are three radio button options: '中国站' (China Node), '欧洲站' (Europe Node), and '亚太站' (Asia-Pacific Node). Below these, there are two radio button options for '采集器类型' (Collector Type): 'GPRS' and 'LAN'. The 'LAN' option is selected. Below that, there are two radio button options for 'LAN1 DHCP': '禁用' (Disable) and '使能' (Enable). The '使能' option is selected. Below these, there are input fields for '本地IP' (Local IP) (0.0.0.0), '子网掩码' (Subnet mask) (0.0.0.0), '默认网关' (Default gateway) (0.0.0.0), and 'MAC' (0.0.0.0.0.0.0.0). To the right of these fields, there are buttons for '本地端口号' (Local Port Number) (0), '查询' (Read), and '设置' (Setting).

3. Choose to manually enter the IP address and gateway to access the network. Click "Read," enter the IP address, and then click "Setting."

The screenshot shows the 'BF100' configuration interface. At the top, there are tabs for 'Init' and 'Install'. Below the tabs, there are sections for 'RunSet' and 'SysSet'. The 'SysSet' section is active, and the 'Network' tab is selected. Under 'Network', there are three radio button options: 'China Node', 'Europe Node', and 'Asia-Pacific Node'. Below these, there are two radio button options for 'Collector Type': 'GPRS' and 'LAN'. The 'LAN' option is selected. Below that, there are two radio button options for 'LAN1 DHCP': 'Disable' and 'Enable'. The 'Enable' option is selected. Below these, there are input fields for 'Local IP' (0.0.0.0), 'Subnet mask' (0.0.0.0), 'Default gateway' (0.0.0.0), and 'MAC' (0.0.0.0.0.0.0.0). To the right of these fields, there are buttons for 'Local Port' (0), 'Read', and 'Setting'.

2.4.2 云平台添加 Cloud platform added

区域 region	端口 port	网址 URL
中国 China	伙伴 partner	https://partner.dyness.cn
中国 China	用户 user	https://ems.dyness.cn
欧洲 Europe	伙伴 partner	https://partner.dyness.com
欧洲 Europe	用户 user	https://ems.dyness.com
亚太/澳洲 Asia Pacific/Australia	伙伴 partner	https://apacpartner.dyness.com
亚太/澳洲 Asia Pacific/Australia	用户 user	https://apacems.dyness.com

云平台使用教程在登录界面右上角/ The tutorial on using the cloud platform is in the upper right corner of the login interface.

3 逆变器调试 Inverter Debugging

3.1 逆变器 APP 登录 PCS Log in

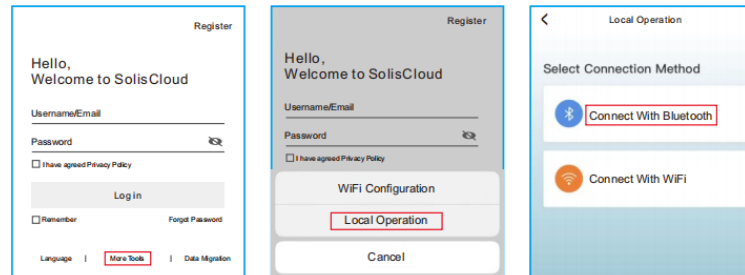
第一步：登录锦浪云 APP 使用蓝牙连接

Step 1: (Log in to the App via Bluetooth)

步骤1：使用蓝牙连接。

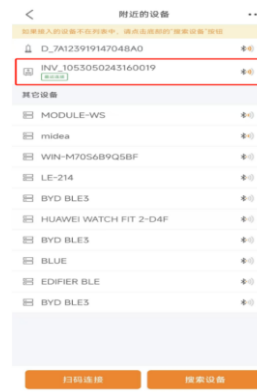
打开手机上的蓝牙开关，然后打开**Soliscloud APP**。

点击“更多工具”->“本地操作”->“蓝牙连接”



第二步：选择与逆变器 SN 相同的蓝牙账户

Step 2: Select the Bluetooth signal from the inverter (Bluetooth: Inverter SN)



第三步：登录账户

Step 3: Login Account



3.2 APP 快速设置 Quick Settings via App

a. 设置逆变器当前时间-选择自动跟随当前时区/ Set Inverter Time : Adjust to match the local time zone.

如果这是您第一次对逆变器进行调试，您需要先完成快速设置。完成后，您可以稍后再调整这些设置。

If debugging the inverter for the first time, you need to go through the quick settings. After completing this, you can adjust these settings later.

顺序：逆变器时间 -> 电表/电流互感器 -> 电网标准 -> 能量存储模式 -> 电池类型。

Sequence: Inverter Time -> Energy Meter/CT -> Grid Standard -> Energy Storage Mode -> Battery Model.

逆变器时间设置/Inverter Time:

- 设置逆变器日期和时间/Set the inverter's date and time.
- • 切换“与手机时间同步”旁边的设置/ Toggle the slider next to "Sync with Phone Time."
- 点击“下一步”/ Click "Next" in the bottom-right corner to proceed.



b. 电池设置/ Battery

- 选择电池数量：1 / Select Battery Quantity : 1.
- 选择电池类型：高压锂电池/ Select Battery Model: "Lithium battery HV".
- 选择连接方式：如下图所示/ Select Connect Method : As illustrated in following figure.



c. 电表/互感器设置 Energy Meter/ CT Settings:

- 1) 电表类型设置：三相电表/ Set energy meter type to "Eastron Standard Three-Phase".
- 2) 电表安装位置选择：电网侧/ Install the meter on the grid side.
- 3) 设置 CT 比例：默认值 60（Solis 提供 ESCT-T50-300A/5A CT） / Configure CT ratio: Default value is "60"（Solis offered ESCT-T50-300A/5A CT）；
- 4) 确认 CT 方向/ Ensure correct CT direction.



d. 电网标准/ Grid Standards:

选择当地电网标准/ Configure according to local requirements.



e. 储能模式/ Energy Storage Mode:

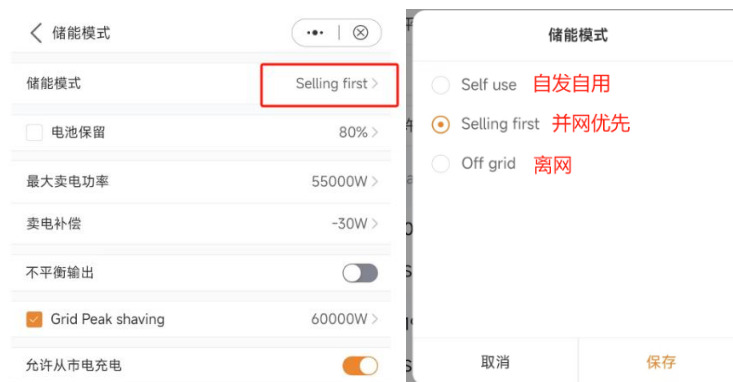
- 设置电网优先/ Set to "Grid Priority".



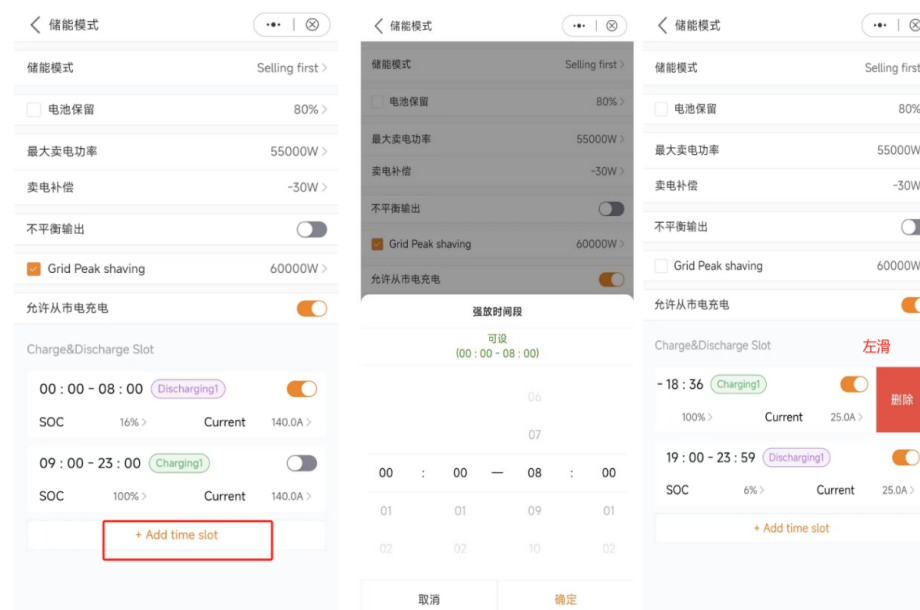
- 快速设置完成后，点击“完成”，应用程序将进入主页/ After the quick setting ,click "Finish" and the APP will enter the home page.



- 设置储能模式/ Set Energy storage mode



- 添加时间段/ Adding a Time range

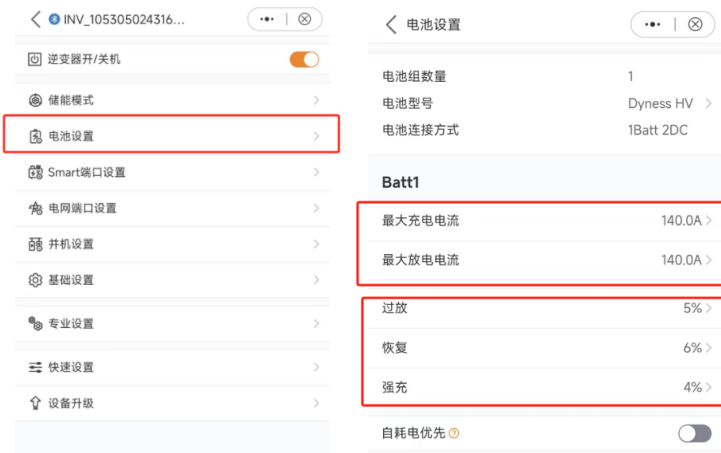


- 通过向屏幕左侧滑动，用户可以删除当前时间段的设置/ By swiping to the left side of the screen, users can delete the current time period Settings.
- 充电状态 (SOC) 达到 100%/ Charging SOC 100%
 - 当电池的充电状态 (SOC) 达到设定的 100%时，充电将自动停止/ When the battery's State of Charge (SOC) reaches the set value of 100%, charging will

automatically stop.

- 这是为了防止过充而设置的保护机制，从而延长电池寿命并确保安全/ This is a protection mechanism to prevent overcharging, thereby extending the battery's lifespan and ensuring safety.
- **放电状态 (SOC) 达到 6%/ Discharging SOC 6%**
 - 当电池的电量状态 (SOC) 降至设定的 6% 时，放电将自动停止/ When the battery's State of Charge (SOC) drops to the set value of 6%, discharging will automatically stop.
 - 此设置可防止过放电，避免电池单元受损或电池容量下降/ This setting prevents over-discharging, avoiding damage to battery cells or a decrease in battery capacity.

f. 电池参数设置/ Battery parameter setting

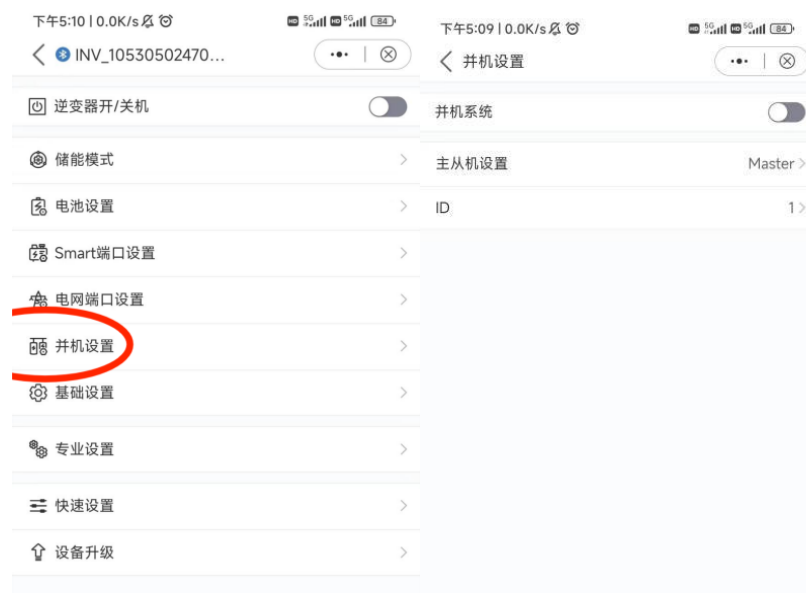


- 最大充电电流/ Maximum Charging Current: 140A
- 最大放电电流/ Maximum Discharging Current: 140A
- 过放电 SOC/ Over-discharge SOC: 5%
- 恢复 SOC/ Recovery SOC: 6%
- 恢复 SOC/ Recovery SOC: 4%
- ✓ 配置完成。现在您可以通过屏幕控制 PCS（电源转换系统）进行开机/ Configuration is complete. You can now use the screen to control the PCS (Power Conversion System) to power on.
- ✓ 系统成功启动后，使用移动应用程序发送 50kW 充电指令/ Once the system has successfully started, use the mobile app to send a 50kW charging command.

3.3 并机设置 Parallel Configuration

a. 逆变器扩容 Inverter expansion

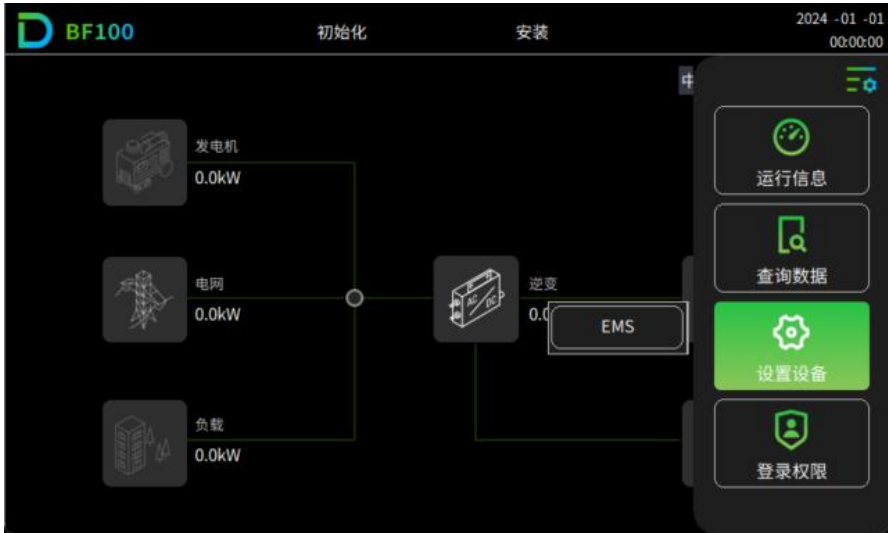
1. 通过蓝牙在 PCS 主机上启用并行操作/ Enable parallel operation on the PCS host via Bluetooth:
 - 将主机设置为“主机”，ID 为“1”/ Set the host as "Master" with ID "1".
 - 将“从机”设置为 ID“2”/ Set the "Slaves" with ID "2".
2. 调整电池柜地址以匹配 PCS 单元，确保通信正常/ Adjust battery cabinet addresses to match the PCS units for proper communication.



b. 电池柜扩容 Dc Cabinet Expansion

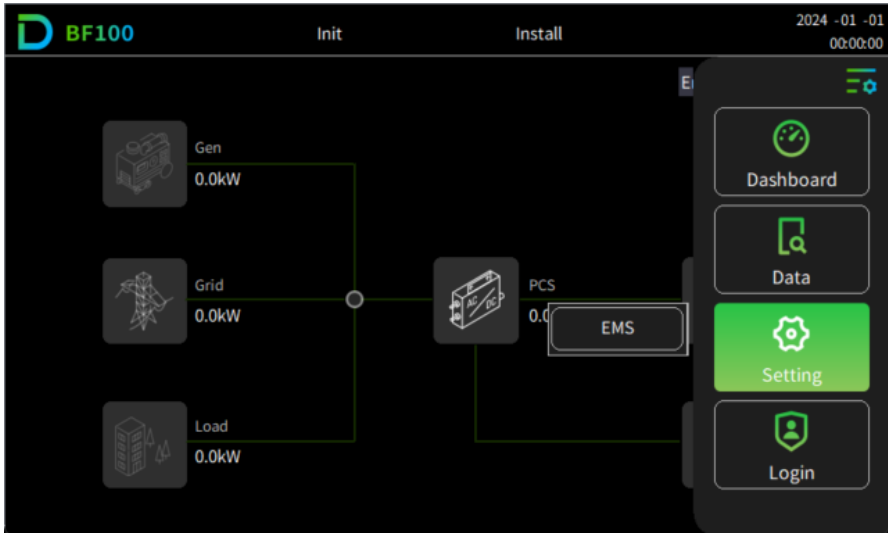
3. 主机电池设置/ Master battery settings:

1. 点击  -设置设备-EMS

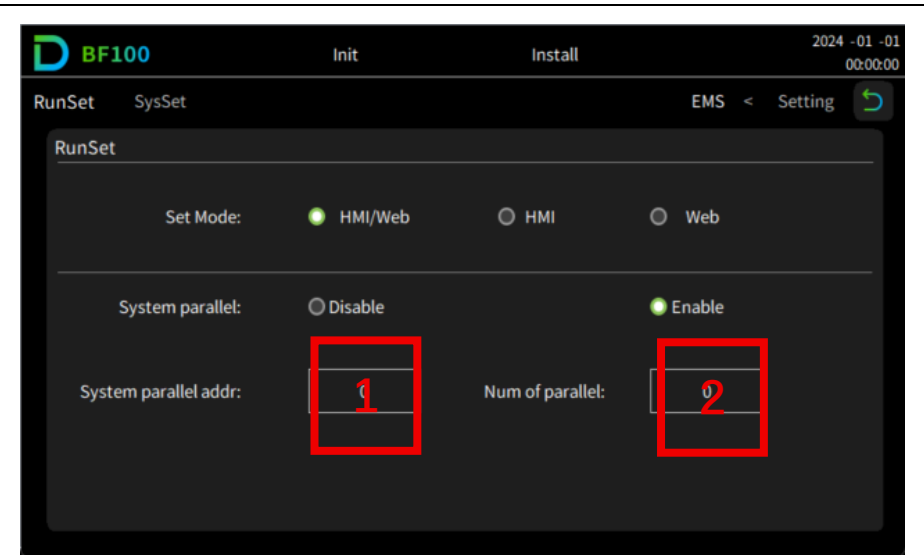


2. 系统并机使能选择“使能”，设置系统并机地址为“1”，系统并机数目为“2”

1. Click  - Setting- EMS.



2. Select “Enable” for system parallel operation, set the system parallel operation address to “1,” and set the number of system parallel operations to “2.”



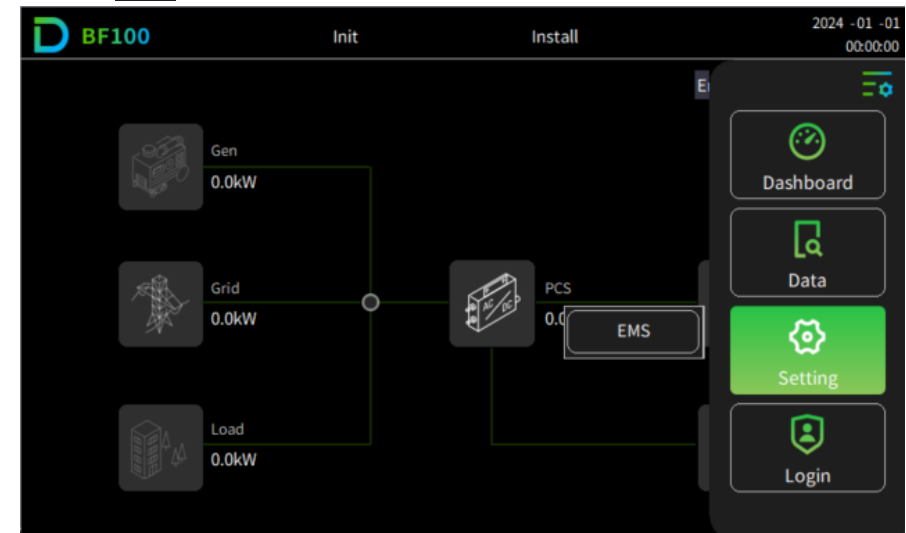
2. 从机电池设置/ Slave battery settings:

1. 点击  -设置设备-EMS

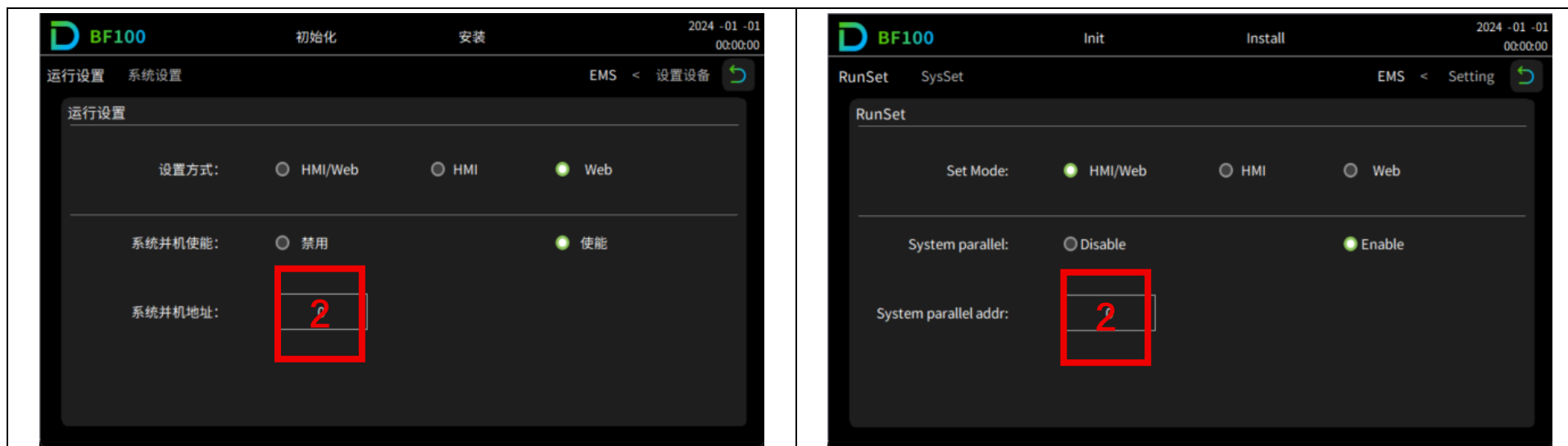


2. 系统并机使能选择“使能”，设置系统并机地址为“2”

1. Click  - Setting- EMS.



Select “Enable” for system parallel operation, set the system parallel operation address to “2,”

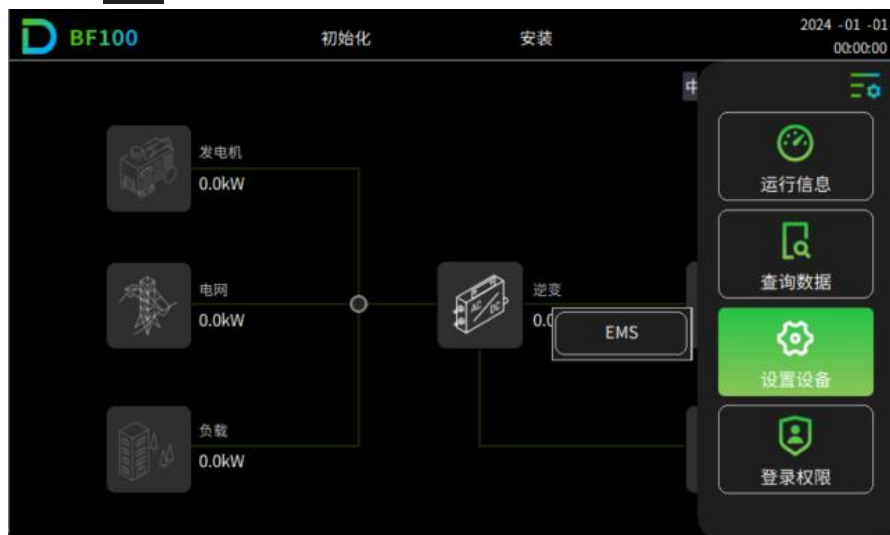


c. 多机柜并联/ Multiple Cabinets in Parallel

在多路并联连接的情况下，以两台 PCS 单元和两个电池扩展柜为例，每个电池柜的地址应与对应的 PCS 单元相匹配。请参见下图：

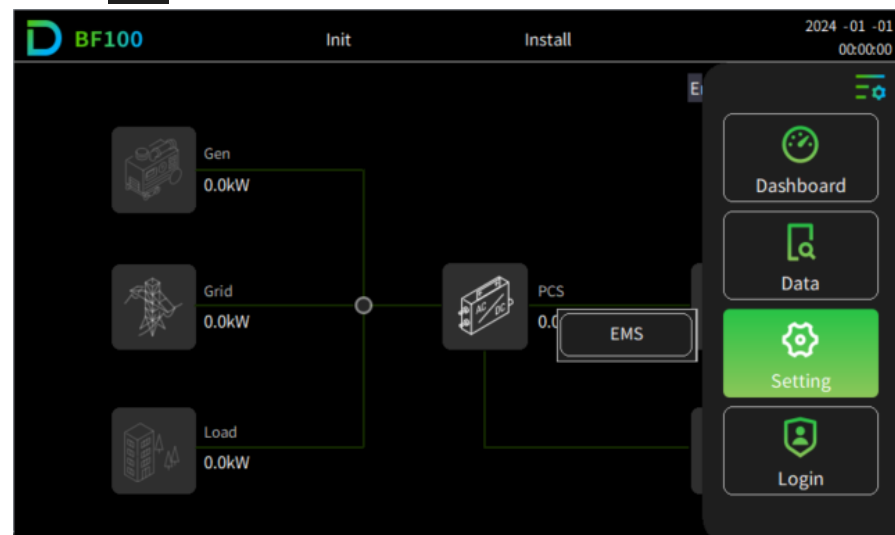
In the case of multiple parallel connections, taking two PCS units and two battery expansion cabinets as an example, the address of each battery cabinet should match its corresponding PCS unit. See the diagram below:

1. 点击  -设置设备-EMS

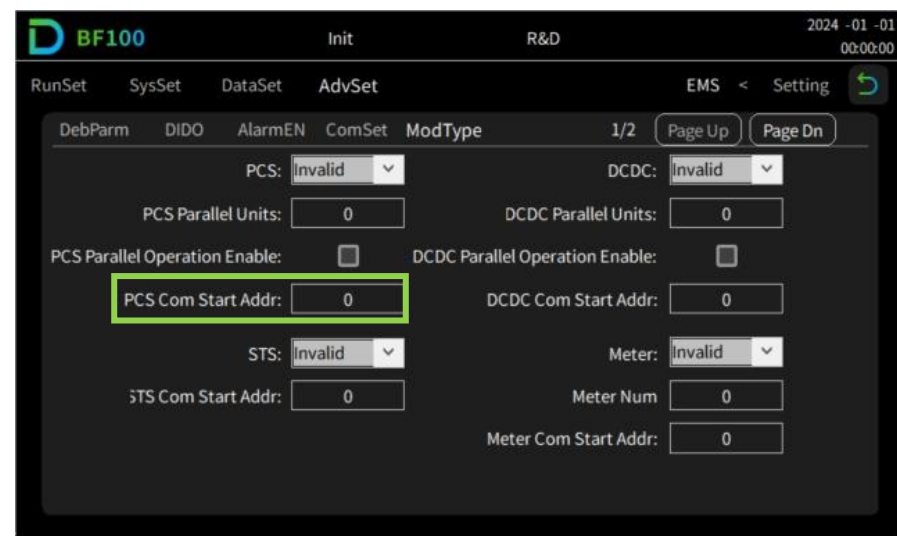
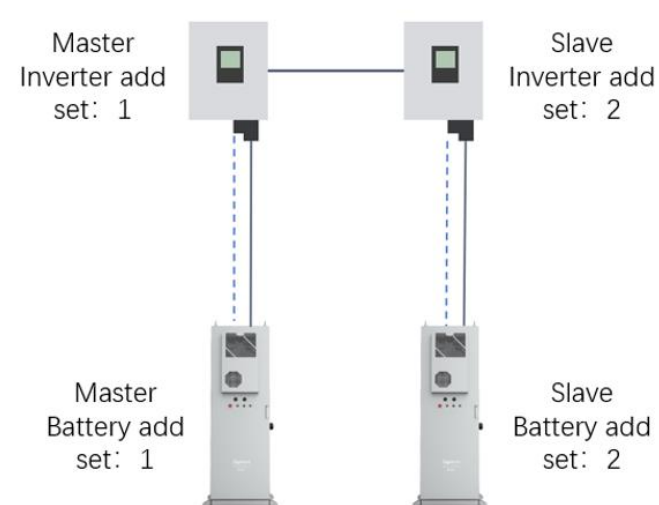


2. 点击“模组选型”，PCS 通讯起始地址需跟随逆变器；如仅有一台逆变器则选择“1”；如多台逆变器并机，则跟随逆变器地址设置。

1. Click  - Setting- EMS.



2. Click “ModType.” The “PCS com start add” must follow the inverter; if there is only one inverter, select “1”; if there are multiple inverters in parallel, follow the inverter address settings.



4 软件升级 Software upgrades

U 盘升级 USB flash drive upgrade

升级注意事项:

Upgrade Notes:

1.所有程序升级工况下，设备不能处在运行!!

1. Under all program upgrade conditions, the equipment cannot be running!

2.USB 升级文件名不允许更改，大小写必须要正确，正确文件名称为 “EMS_APP.bin”、“tcpbackup”

2. The USB upgrade file name is not allowed to be changed, the case must be correct, and the correct file name is "EMS_APP.bin" and "tcpbackup"

3.U 盘插在柜子上时，不允许开机或关机

3. When the USB flash drive is plugged into the cabinet, it is not allowed to turn on or off

4. U 盘内仅可存在升级文件

4. Only upgrade files can exist in the USB flash drive

5.U 盘格式需要为 FAT，内存要 32G 以下

5. The format of the USB flash drive needs to be FAT, and the memory must be less than 32G

4.1.1 EMS 升级步骤 EMS Upgrade Steps

1、将升级文件拷贝到 U 盘根目录中，操作如下：

1. Copy the upgrade file to the root directory of the USB flash drive as follows:

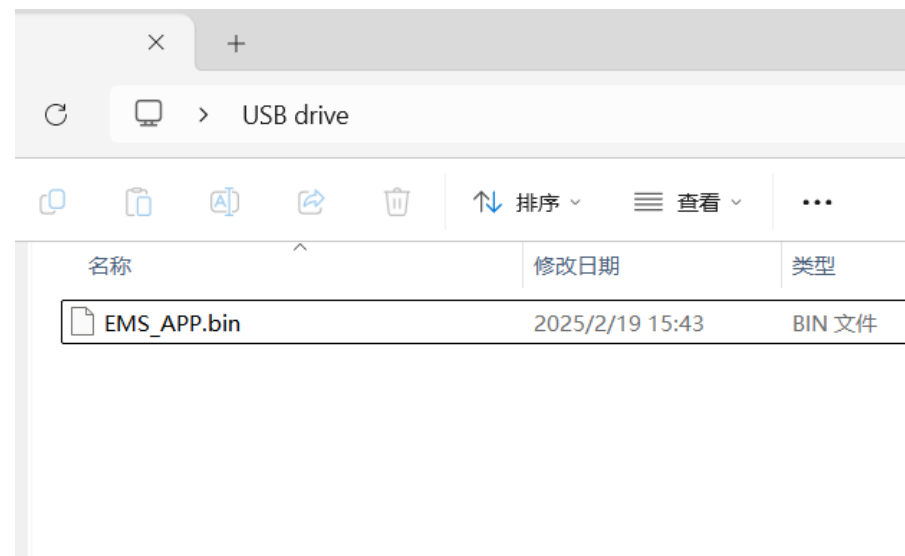


图 4-1 升级文件拷贝入 U 盘首页

Figure 4-1 Copying the upgrade file to the home page of the USB flash drive

将 U 盘插入 EMS 板的 USB 接口，操作如下图所示：

Plug the USB flash drive into the USB port of the EMS board, as shown in the figure below:



图 4-2 DH200F-EMS 模块图片

Figure 4-2 Picture of DH200F-EMS module

2、查看屏幕了解升级进度，升级过程中屏幕上显示为“升级”状态，升级完成后三个指示灯常亮一秒且屏幕恢复为“初始化”状态，最后确认 SN 码和版本号。

如下图所示：

Check the screen to understand the upgrade progress, the screen is displayed as "Upgrade" during the upgrade process, the three indicators are solid for one second after the upgrade is completed, and the screen returns to the "Initialization" state, and finally confirm the SN code and version number. As shown in the following figure:



图 4-3 程序升级中

Figure 4-3 Program upgrade



图 4-4 程序初始化

Figure 4-4 Program initialization

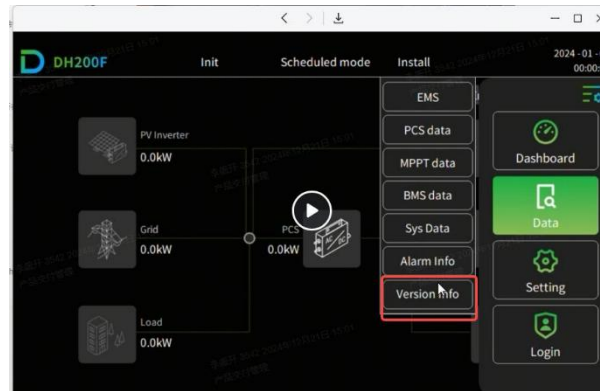


图 4-5 查询程序版本

Figure 4-5 Query program version



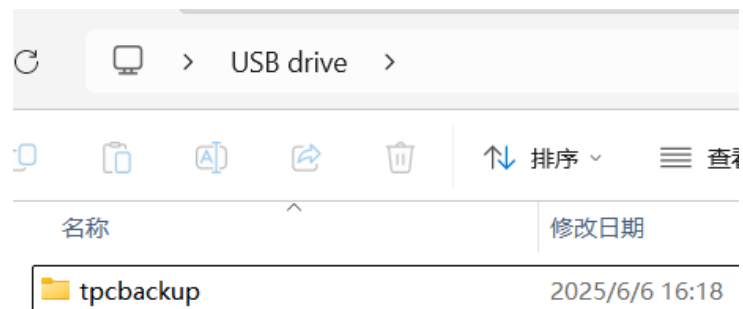
图 4-6 核对程序版本

Figure 4-6 Check program version

4.1.2 屏幕升级步骤 Screen upgrade steps

1、将升级文件拷贝到 U 盘根目录中，操作如下：

Copy the upgrade file to the root directory of the USB flash drive as follows:



2、将 U 盘插入显示屏背面

Copy the upgrade file to the root directory of the USB flash drive as follows:



3、屏幕 Screen



图 4-7 屏幕自动识别升级程序，弹出选项框，点击确认

Figure 4-7 The screen automatically recognizes the upgrade program, pops up the options box, and clicks Confirm

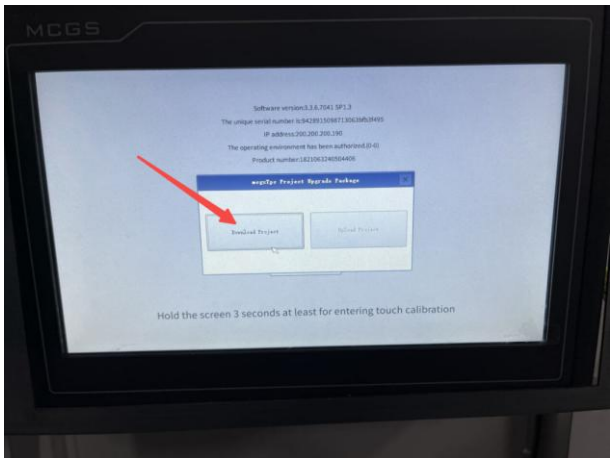


图 4-8 点击下载

Figure 4-8 Click to download

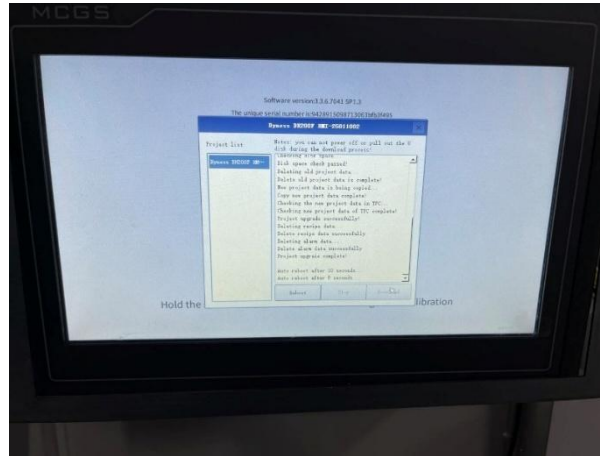


图 4-9 点击下载程序，耐心等待

Figure 4-9 The program is downloading, wait patiently

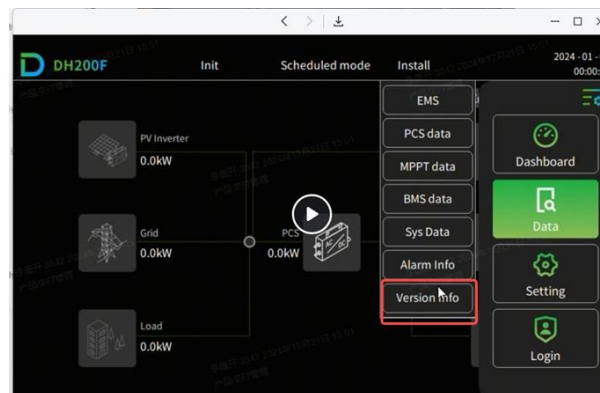


图 4-10 查询程序版本

Figure 4-10 Query Program Version



图 4-11 程序版本核对，检查程序版本号与是否与升级版本一致，版本一致则说明升级成功

Figure 4-11 Program version checking, check whether the program version number is consistent with the upgraded version, if the version is consistent, the upgrade is successful