Inverter Setting Guide

for SIMPO 5000

ZYC ENERGY
ZERO YOUR CARBON

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Contents

Foreword

1. This manual contains the configuration methods for the inverters matched to the SIMPO 5000. Please read this manual carefully during installation.

2. If your inverter is listed in the recommended minimum battery modules table of ZYC SIMPO 5000, indicating support for communication with the SIMPO 5000 BMS, we strongly recommend utilizing the communication mode. This ensures a better and more stable operating system for you.

3. For using selectronic inverter. The SIMPO 5000 is not in the 'Model No' list yet, so please choose 'Pylontech US5000B' for current setting. However, there is a difference between SIMPO 5000 module cells and Pylontech cells, so the settings still need to be made according to the following manual.

4. If your installation is in non-communication mode with Selectronic inverters, please read the chapter Selectronic Inverter (**Self-Managed**) carefully.

5. When configuring with Selectronic inverter access in **Self-Managed** mode, make sure that the firmware version of the SIMPO 5000 is upgraded to **V2.7.0 or above via ZYC Portal, ZYC Assist(APP), or ZYC Assist Pro** before installation.

6. Due to our ongoing process of improvement, settings may be altered without prior notice and are accurate at the time of their release/publishing.

7. When the load is small, the battery is easier to be fully charged, and it is easier to trigger over-voltage of the battery in **Self-Managed** mode. In this situation, it is highly recommended to use the communication mode

8. When designing the system, please satisfy the following conditions at the same time while meeting the recommended minimum SIMPO 5000 modules for full performance of inverter chargers:

   Daily PV power generation - Daily power consumption of the load < Battery capacity

1. Victron Inverter (Managed Mode)

Topological Diagram of ZYC + Victron
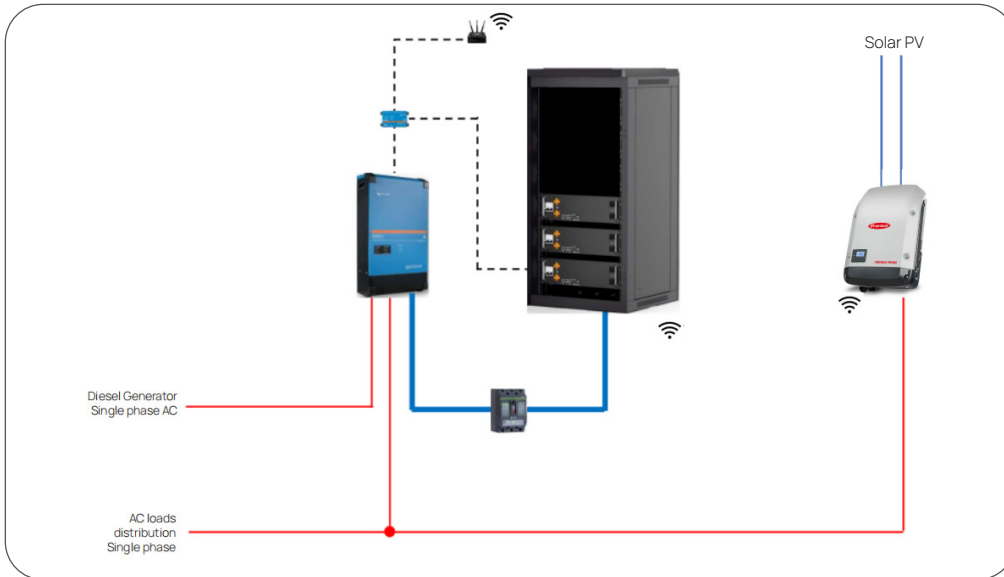
Commissioning Process

Step 1: Change pin NO. of communication cable

For communication cable, it is suggested to **use VE.Can to CAN-bus BMS type A cable** Change the pin of commucation cable according to *SIMPO 5000 Installation&Operating Manual* or follow the guide below.
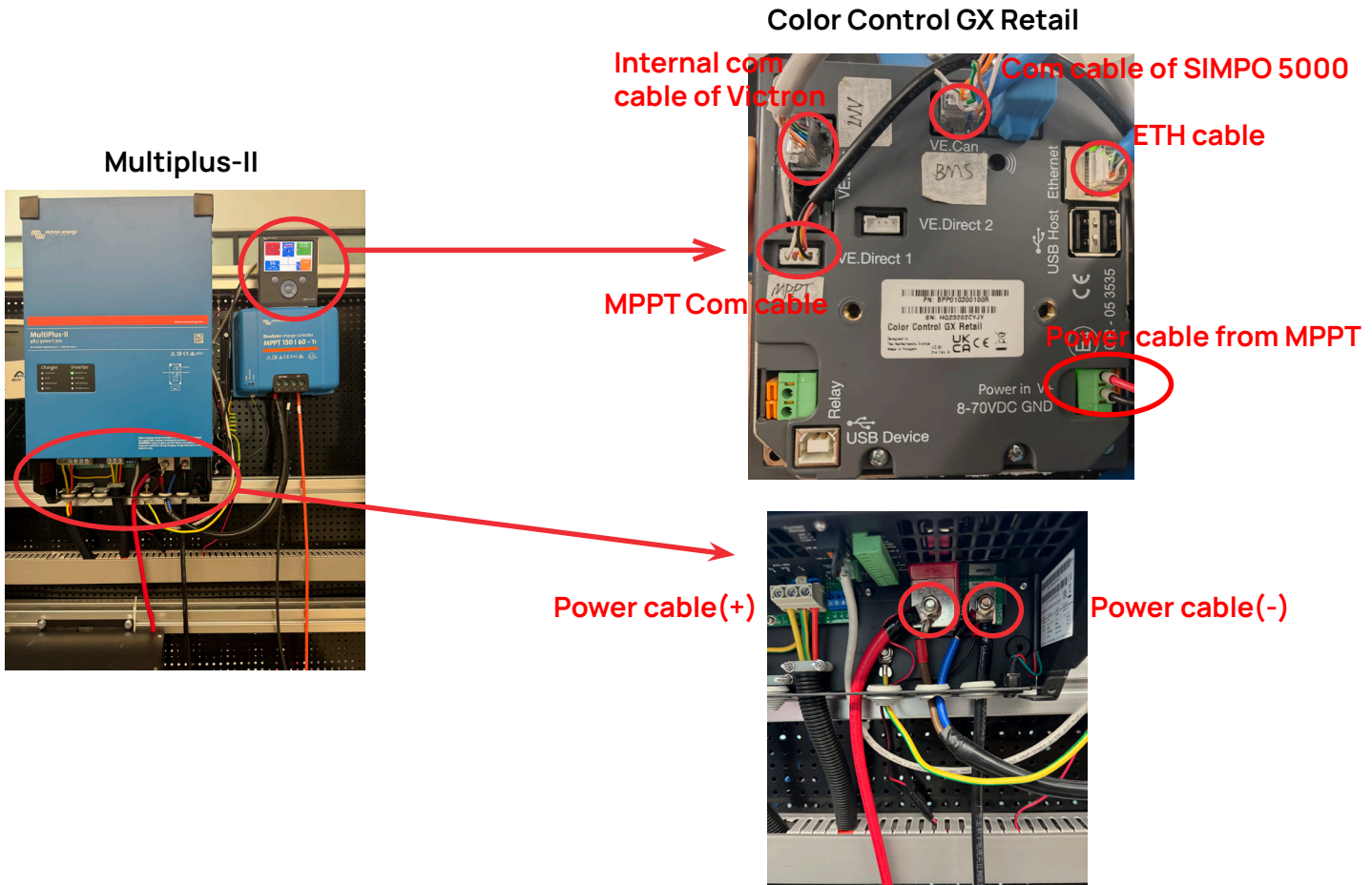

	SIMPO 5000	Victron
CAN_H	4	7
CAN_L	5	8

Step 2: Connect power cables and communication cable

Connect the power cables and communication cable according to *SIMPO 5000 Quick Start* or *SIMPO 5000 Installation & Operating Manual* and Manual of Victron Inverters.

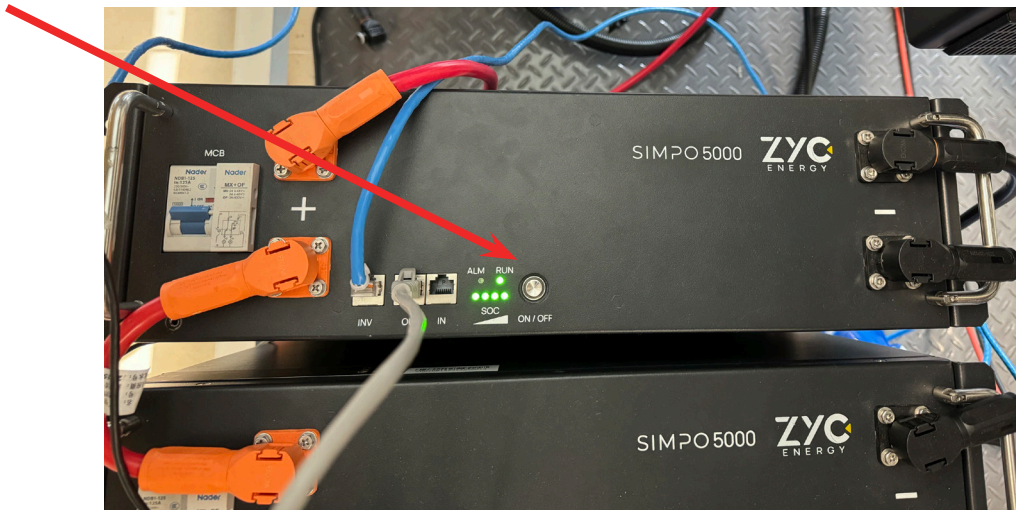The following are two examples of connection between SIMPO 5000 and Victron inverter.

## Connecting with Victron Multiplus-II + Color Control GX Retail

Color Control GX Retail

Multiplus-II

Internal com cable of Victron
Com cable of SIMPO 5000
ETH cable
MPPT Com cable
Power cable from MPPT
Power cable(+)
Power cable(-)

Connecting with Victron RS Solar + Ekrano GX

RS Solar

Ekrano GX

Com cable of SIMPO 5000
Internal com cable of Victron
Power cable to Ekrano GX
Power cable(+)
Power cable(-)
Com cable to Ekrano GX
Power cable to Ekrano GX
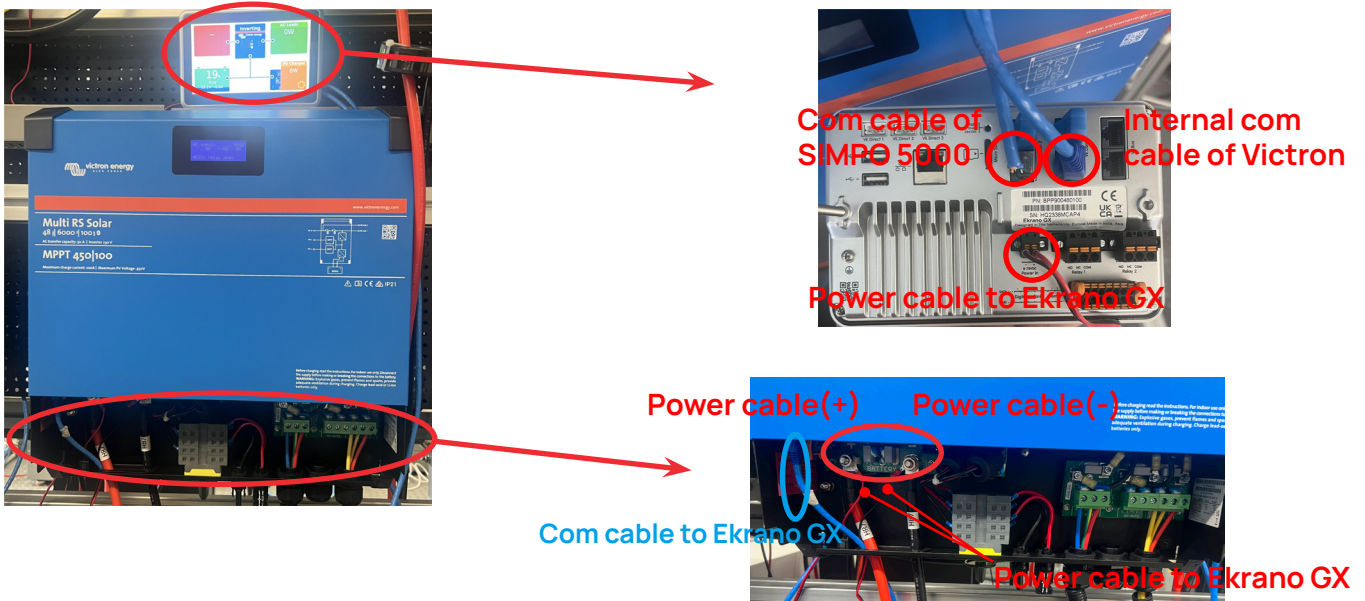
Setp 3: System start up

Turn on the air switch first, then press and hold the ON/OFF button to start the system.
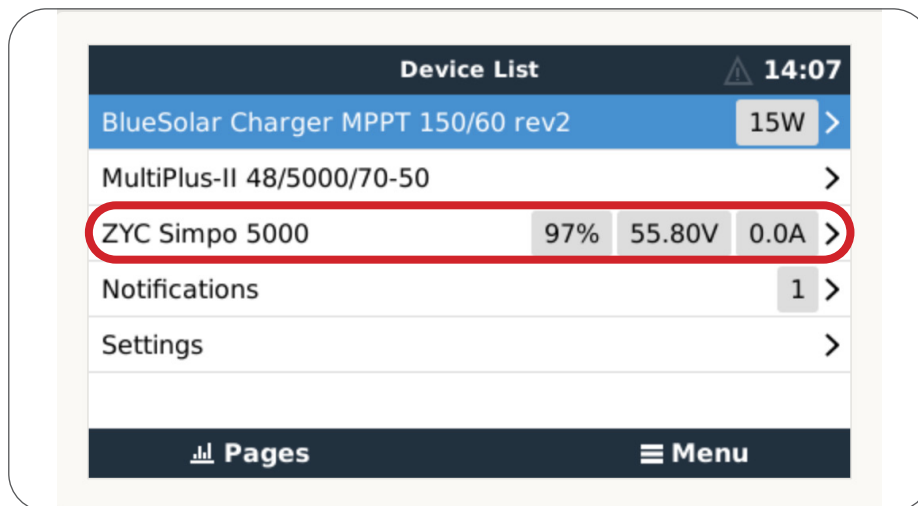

See the Menu on VRM. **ZYC SIMPO 5000 should be automatically detected by Victron inverter.**

If not, check the cables connection and restart the system. If still can not connect successfully, contact us at **Service@zyc.energy** or via our portal at **www.zycportal.com**
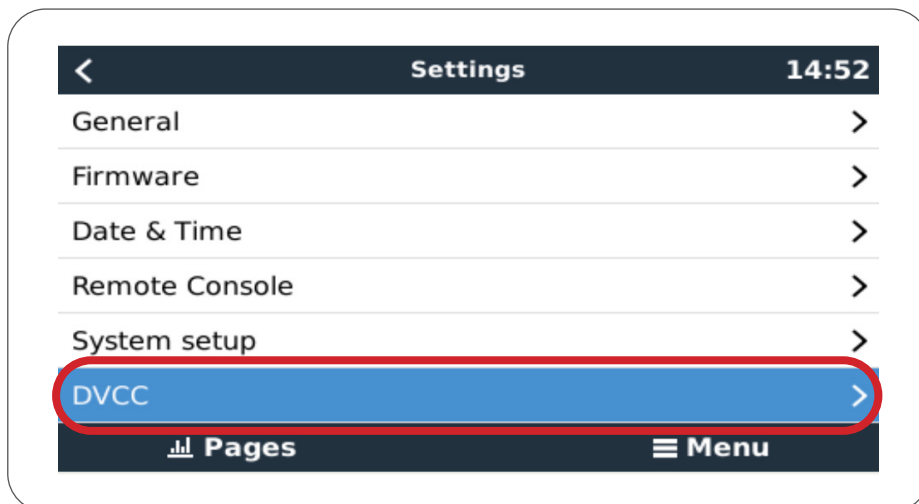
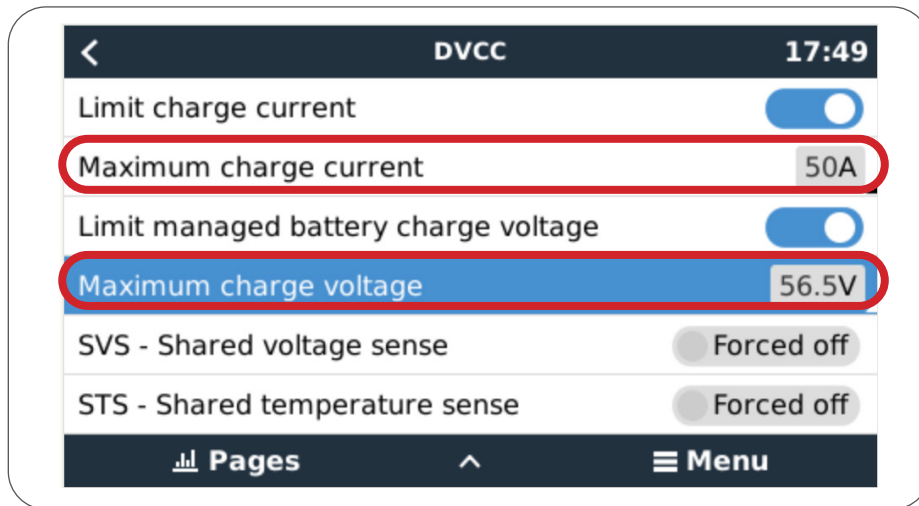When the setting is successful, the main page will show the battery operation data as below.
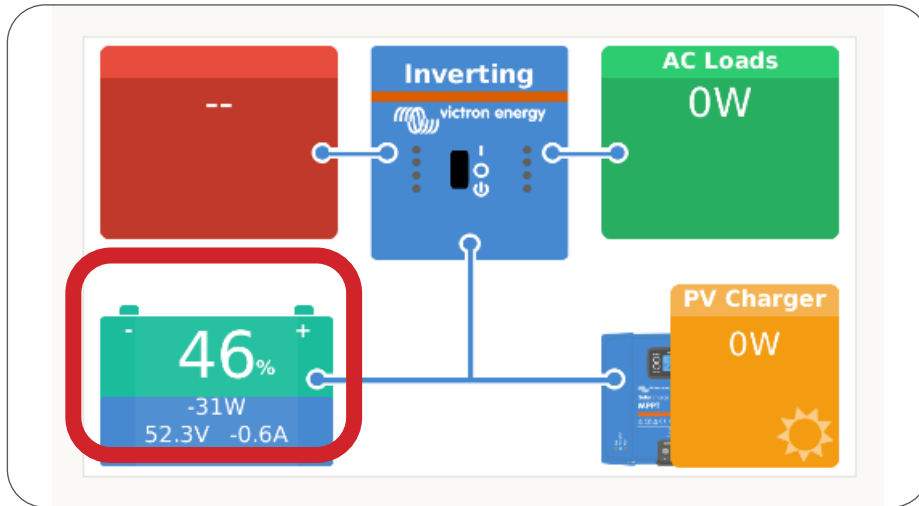
Step 4: DVCC settings
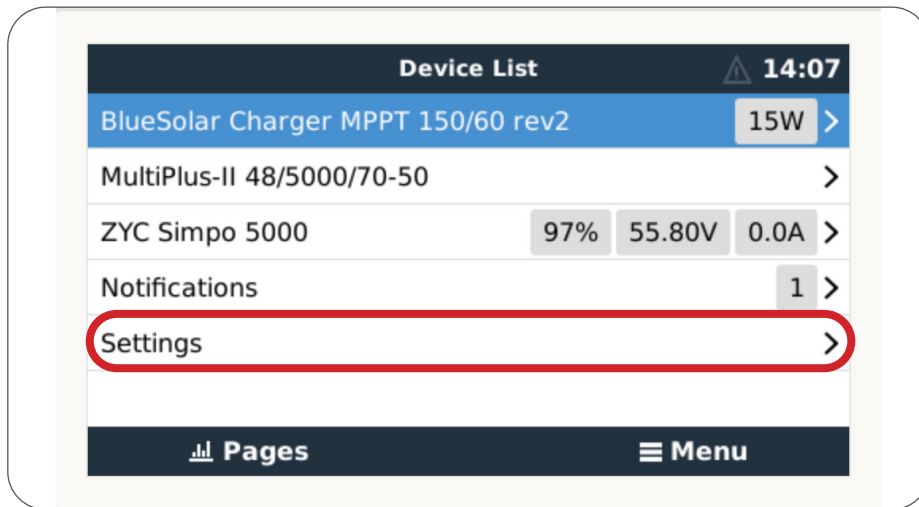
Click settings to check all the settings after automatic settings.

Click DVCC

Set '**Maximum charge current**' base on the actual situation or keep the default as 50A.

'**Maximum charge voltage**' can affect the charging process of batteries. With **sufficient PV energy**, if you find that the battery **cannot** be charged to 100% SOC, set '**Maximum charge voltage**' to **56.5V** to fully charge the batteries.
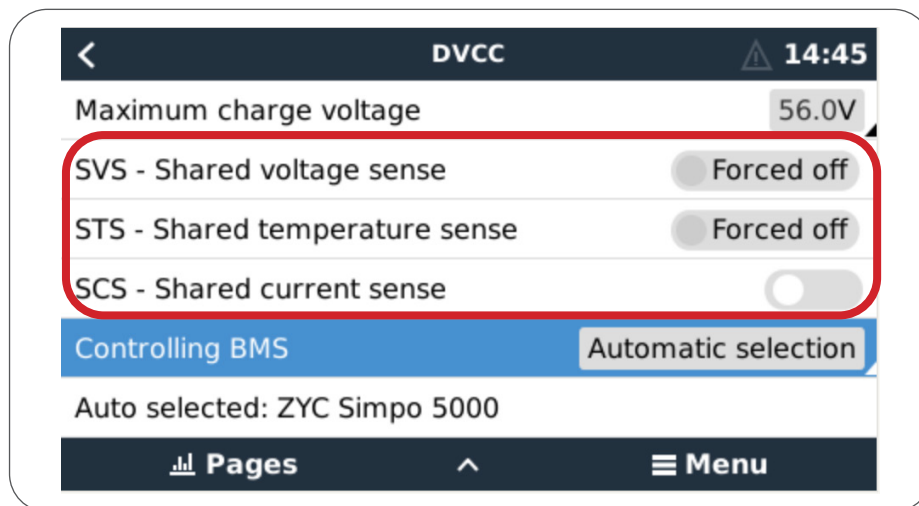

'**SVS/STS/SCS**' is the settings for lead acid batteries. They should all be 'Forced off' by default, if not , **turn them off**.

2. SMA Inverter (Managed Mode)

Step 1: SIMPO 5000 to SMA Inverter Connection

Please follow the below figure to remove the front cover of SMA inverter, and connect the power cable, communication cable and network cable. For SIMPO 5000 connection, please refer to the '**SIMPO 5000 Quick Start Manual**'.
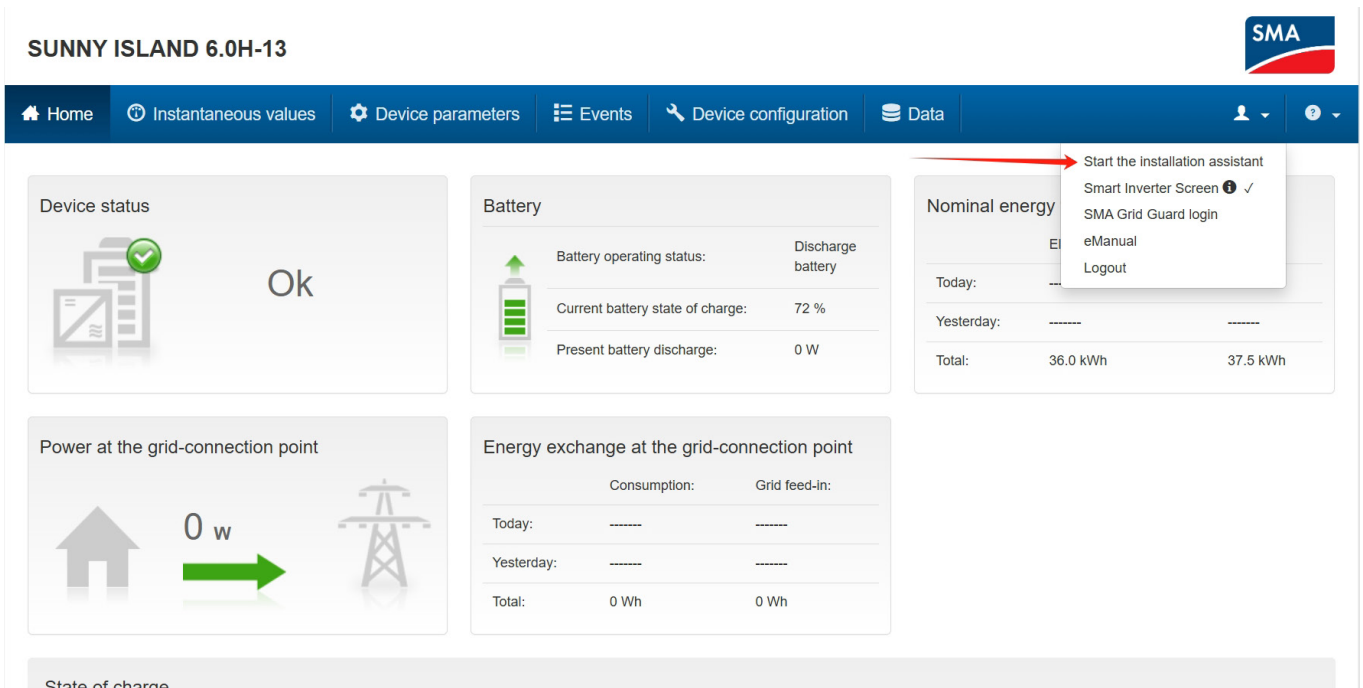

Positive power cable — Negative power cable — Network cable — Communication cable
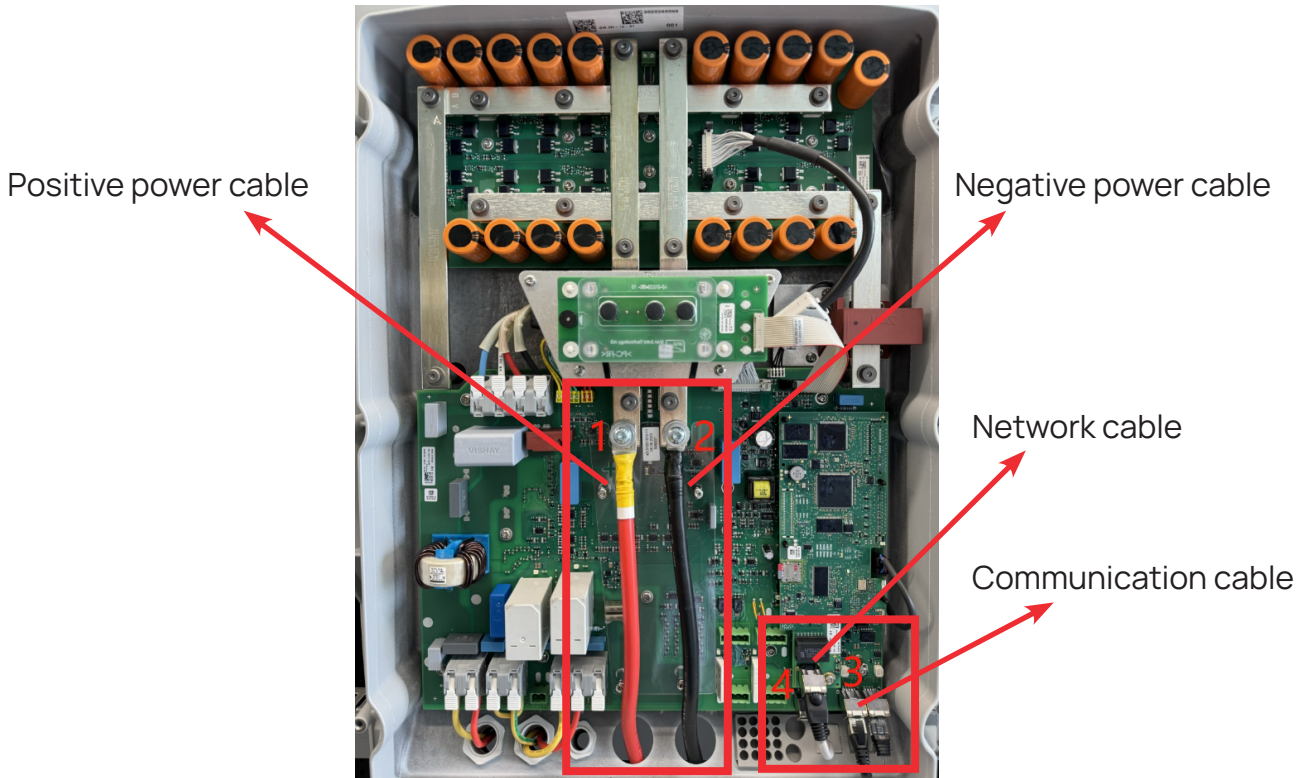
Step 2: Connect to the SMA Device

Firstly, according to step 1, connect the SMA inverter to the local network with a network cable, and then enter the IP address of the SMA device through the IP of the local network.
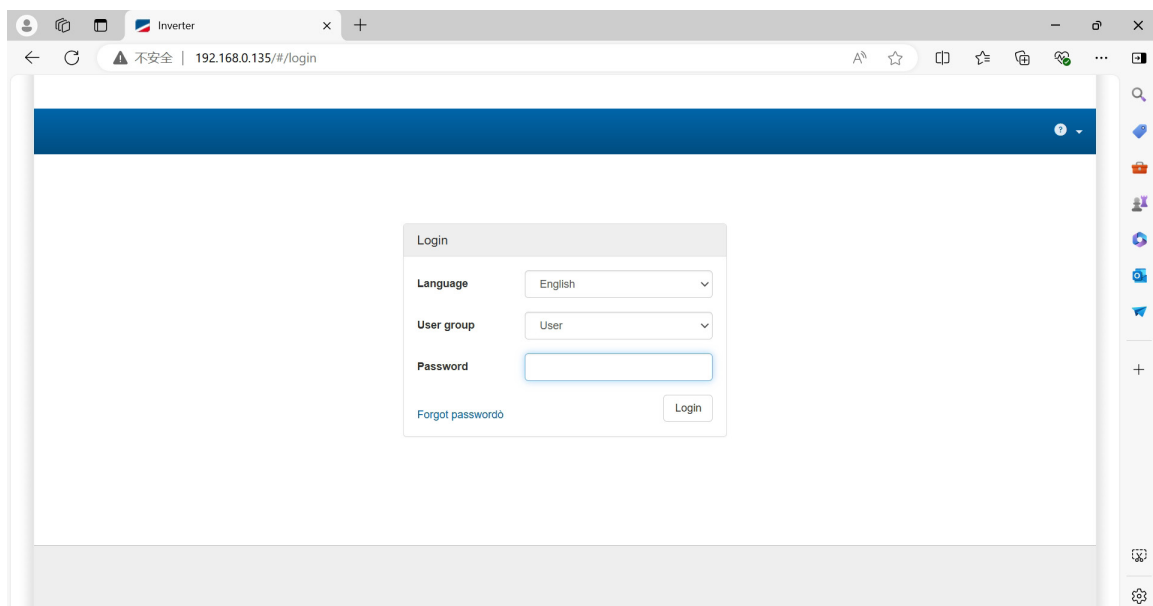
Step 3: Start the Installation Assistant

With the communication mode installation, access to SMA configuration via local network. And please follow the steps below to set up to complete the configuration of the SMA inverter with SIMPO 5000.

Step 4: System Configuration

Please refer to the SMA Inverter User Manual for steps 1 to 5.

Network configuration

Networks configured

Network name	Type of communication	IP address of the device	Status
	WLAN	0.0.0.0	❌ No connection
	Ethernet	192.168.0.135	✅ Ok

Type of communication

Ethernet   WLAN

Automatic configuration switched on ℹ

Yes   No

Save and next

ℹ **User information**

Network configuration

You can integrate the product, depending on its features, either into your local network via Ethernet using a cable or wireless via WLAN. Select the respective option under **Type of communication**.

Configuring Communication via Ethernet

You can either obtain the network settings automatically from a DHCP server or configure them manually. Select the desired option under **Automatic configuration switched on**.

If you want to configure the network settings manually, you have to enter the required network data additionally.

Direct Ethernet Connection

If you want to establish a direct connection to the device via a network cable, you need to activate the automatic configuration of the Ethernet interface. Select the option **Yes** under **Automatic configuration switched on**.

Information: You will find the IP address of the

Step 5: Battery Configuration

Select the **Lithium-Ion(Li-Ion)**, and fill in the nominal capacity according to the actual battery set capacity.

Successful setup

When the setting is successful, the main page will show device status and the battery operation as shown in the figure below.

As shown below, if the settings are incorrect, the device status will show a **warning** and no battery status. Please try to make the setting again. If still can not connect successfully, please login **ZYC Portal** to contact ZYC support team or via email **service@zyc.energy** or our portal at **www.zycportal.com**.

SUNNY ISLAND 6.0H-13

🏠 Home | ⊙ Instantaneous values | ⚙ Device parameters | ☰ Events | 🔧 Device configuration | 🗄 Data

Device status

❌ **Fault**

Battery error

Battery

Battery operating status:	Discharge battery
Current battery state of charge:	0 %
Present battery discharge:	0 W

Nominal energy throughput of the battery

	Electric discharge:	Charge:
Today:	-------	-------
Yesterday:	-------	-------
Total:	36.0 kWh	37.5 kWh

Power at the grid-connection point

🏠 0 W ➡

Energy exchange at the grid-connection point

	Consumption:	Grid feed-in:
Today:	-------	-------
Yesterday:	-------	-------
Total:	0 Wh	0 Wh

3. Selectronic Inverter (Managed Mode)

Step 1: SIMPO 5000 to Selectronic Inverter Connection

Please remove the front cover of Selectronic inverter, and connect the power cable, communication cable and network cable. For SIMPO 5000 connection, please refer to the '**SIMPO 5000 Quick Start Manual**'.

Positive power cable

Negative power cable

Communication cable
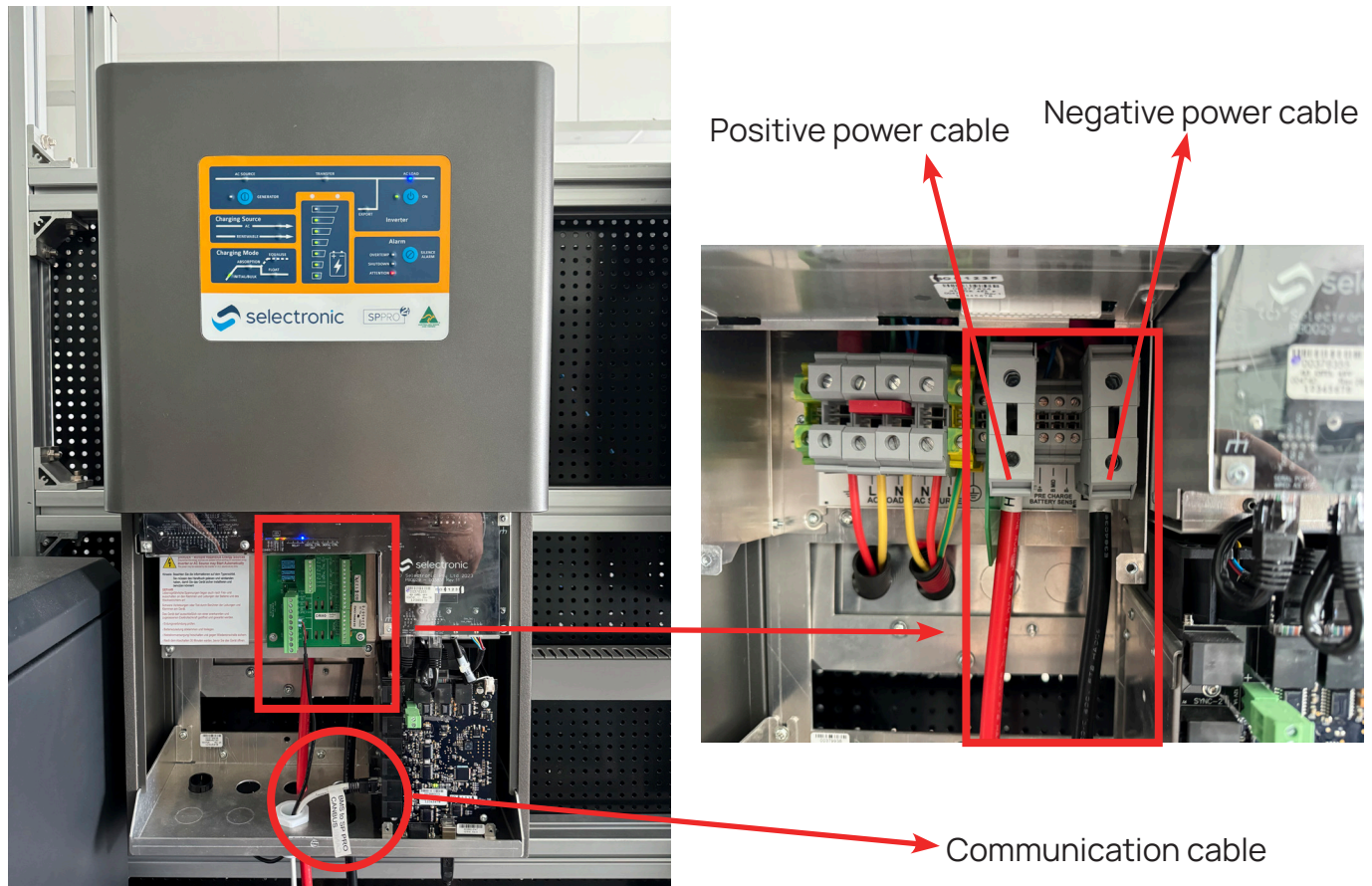
Step 2: Communication Cable Wires Order

If the battery system is required to enter the communication mode, please make the PIN No. selection according to the following table, SIMPO 5000 '**INV**' port on battery matching with the Selectronic **CAN Communication** inverter as below.

PIN No.	SIMPO 5000	Selectronic
CAN_H	4	1
CAN_L	5	2

Note: If the system is in No-communication mode, please just ignore this step.

Step 3: PC to Inverter Connection for SP LINK

At the bottom of the inverter, use the USB Device to connect the inverter to your computer, then SP LINK will automatically read the inverter's model.
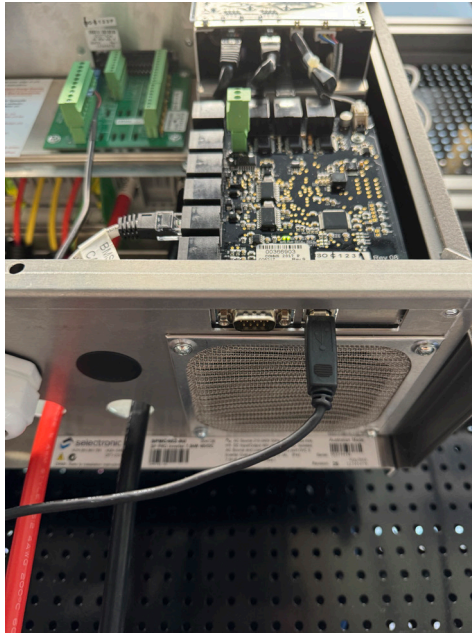
Step 4: Commissioning

After connecting all the cables, switch the battery on. And then open the software 'Selectronic SP LINK' and select 'Site Configuration Wizard'.
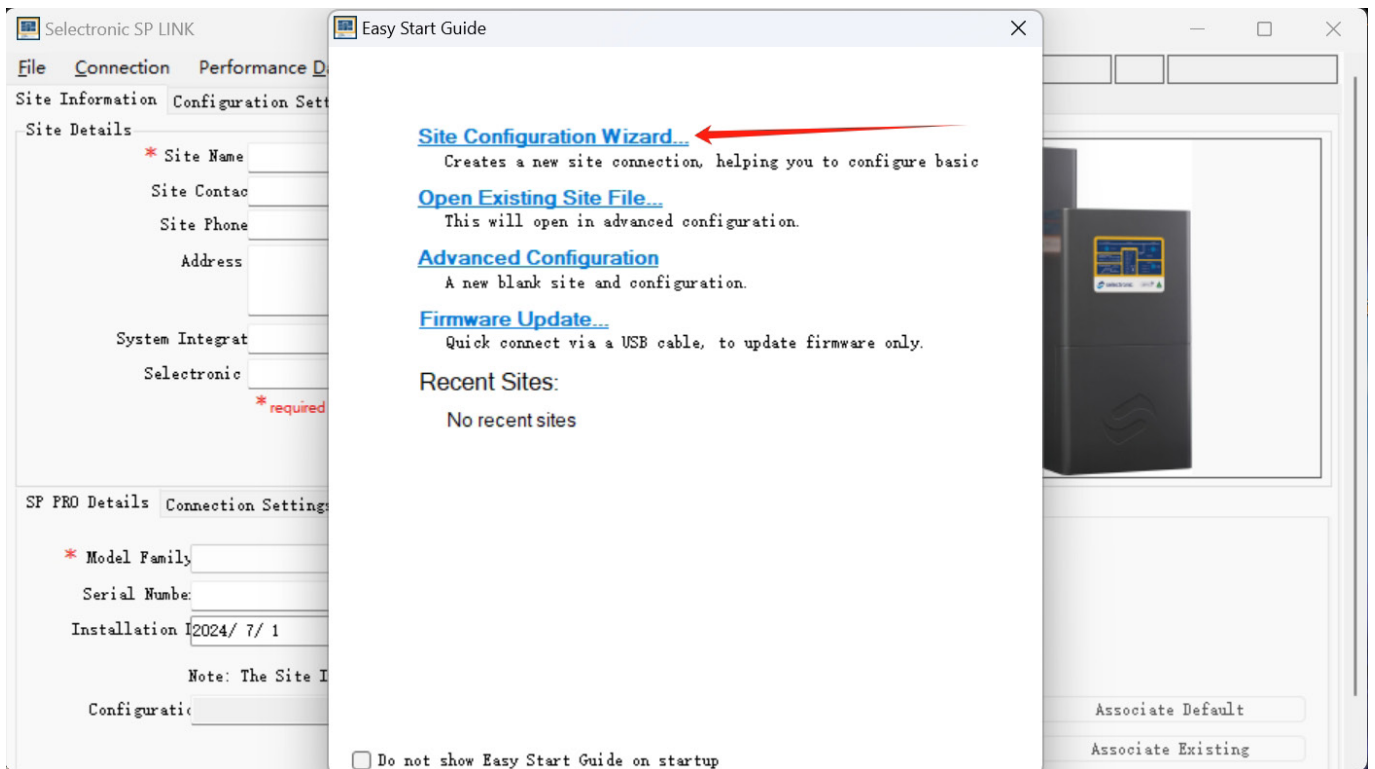
SIMPO 5000 is not in the '**Model No**' list yet, so please choose '**Pylontech US5000B**' for current setting. Once SIMPO 5000 is added to the list, you can just select it and everything is automatically configured.
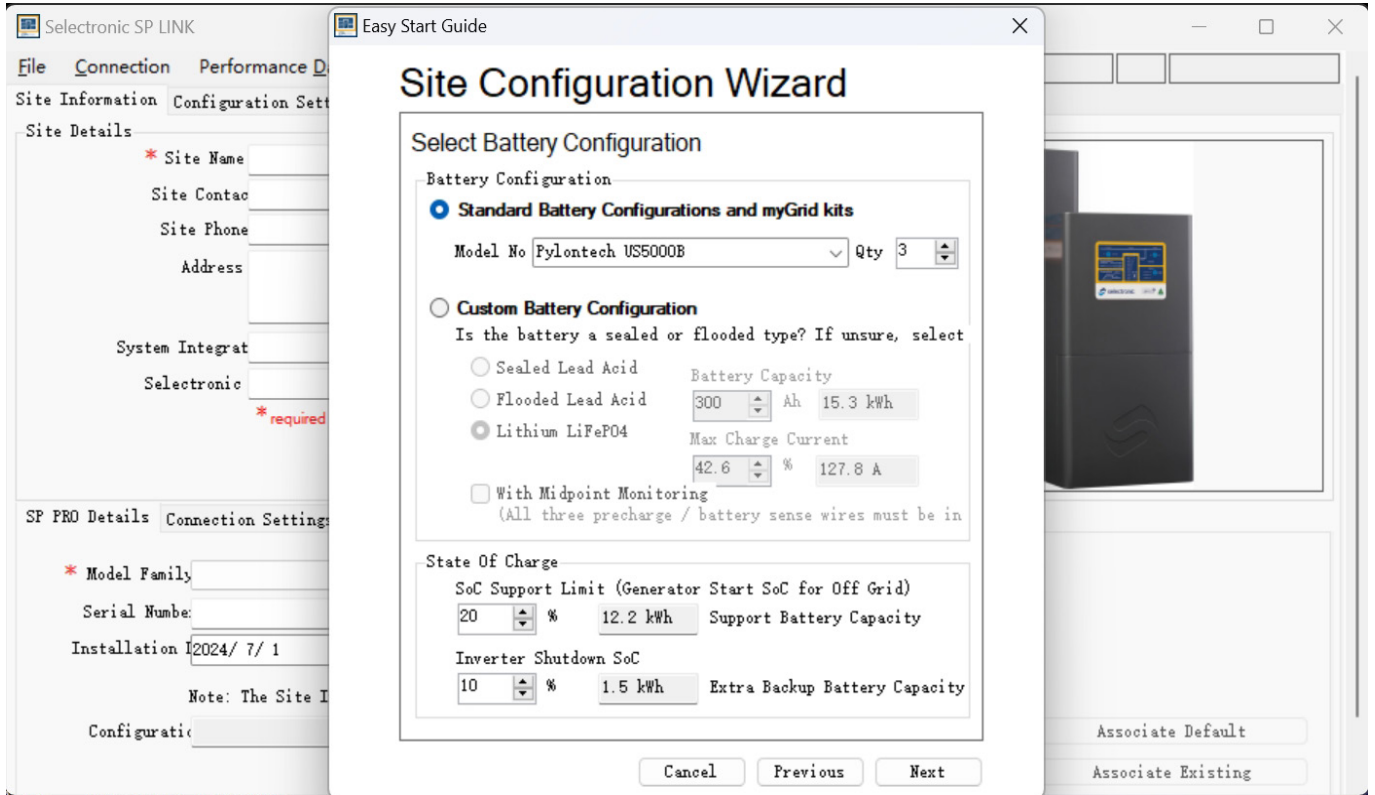
Complete the **Site Configuration Wizard** based on the actual installation. Then click on **Connect** to connect your computer to inverter via USB.

Once your computer is conncected to the inverter successfully. select the '**Configuration Settings**' and fill in all the parameters in '**Inverter**' according to the **red font** below.

Battery Setting:

Charger Setting:

Fill in the capacity of your battery Bank.
(100 Ah / module)

AC Source-Generator Auto Start Setting:

Important! After completing the parameter setting by the above steps, you must click on **Configure SP PRO** to complete the parameter configuration.

When the setting is successful, the page is shown as the figure below. If not, please try to make the setting again. If still can not connect successfully, please login **ZYC Portal** at **www.zycportal.com** to contact ZYC support team or via email **service@zyc.energy**.

4. Selectronic Inverter (Self Managed)

Important:

- Before connect SIMPO 5000 to Selectronic inverter, please make sure the firmware version of SIMPO 5000 is upgraded to **2.7.0 or above via ZYC Portal, ZYC Assist(APP), or ZYC Assist Pro.**

- **SIMPO WIFI Dongle** is required for Self-Managed installation. If you do not have a SIMPO WIFI Dongle, please contact us by **ZYC Portal**.

Step 1: SIMPO 5000 to Selectronic Inverter Connection

Remove the front cover of Selectronic inverter. For **Self-Managed Mode**, just connect the power cables and network cable. And refer to the '**SIMPO 5000 Quick Start Manual**' to connect SIMPO 5000.
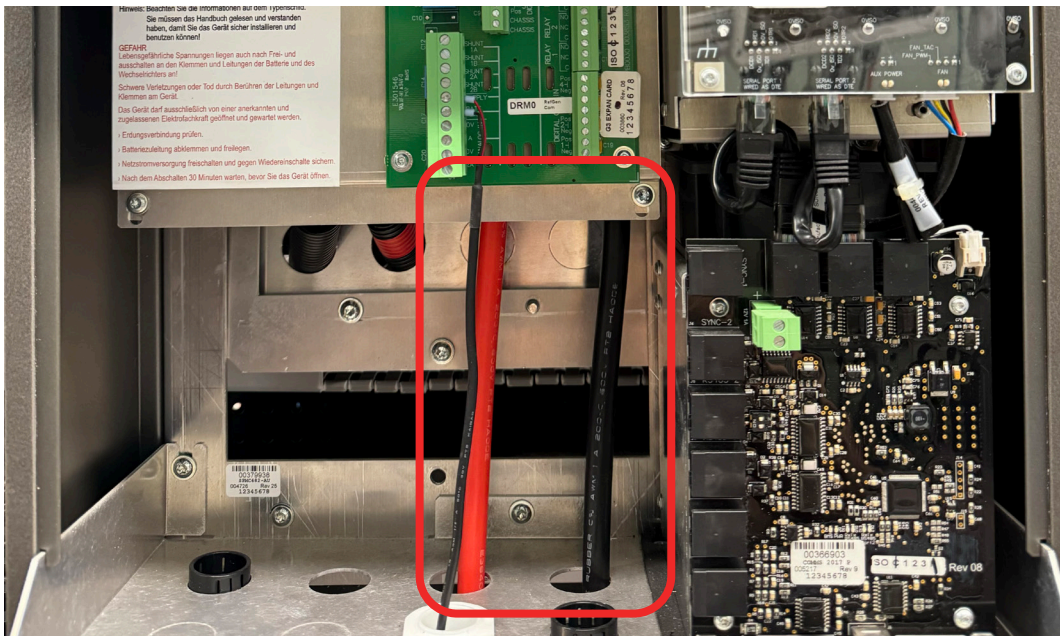
Step 2: Power Up SIMPO 5000 and Switch to Self-Managed Mode

When the battery is ON, **double click the "ON/OFF" button** to switch SIMPO 5000 to **Self-Managed** Mode. The **SOC** indicators will **flash two times**, and **RUN** indicator will flash every **1.5s**. This indicates the successful mode switch.

Step 3: Commissioning

After connecting all the cables, switch the battery on. Open the software '**Selectronic SP LINK**' and select '**Site Configuration Wizard**'.

Then select '**Custom Battery Configuration-Lithium LiFePO4**', and fill in the '**Battery Capacity and Max Charge Current**' according to the actual installation system.
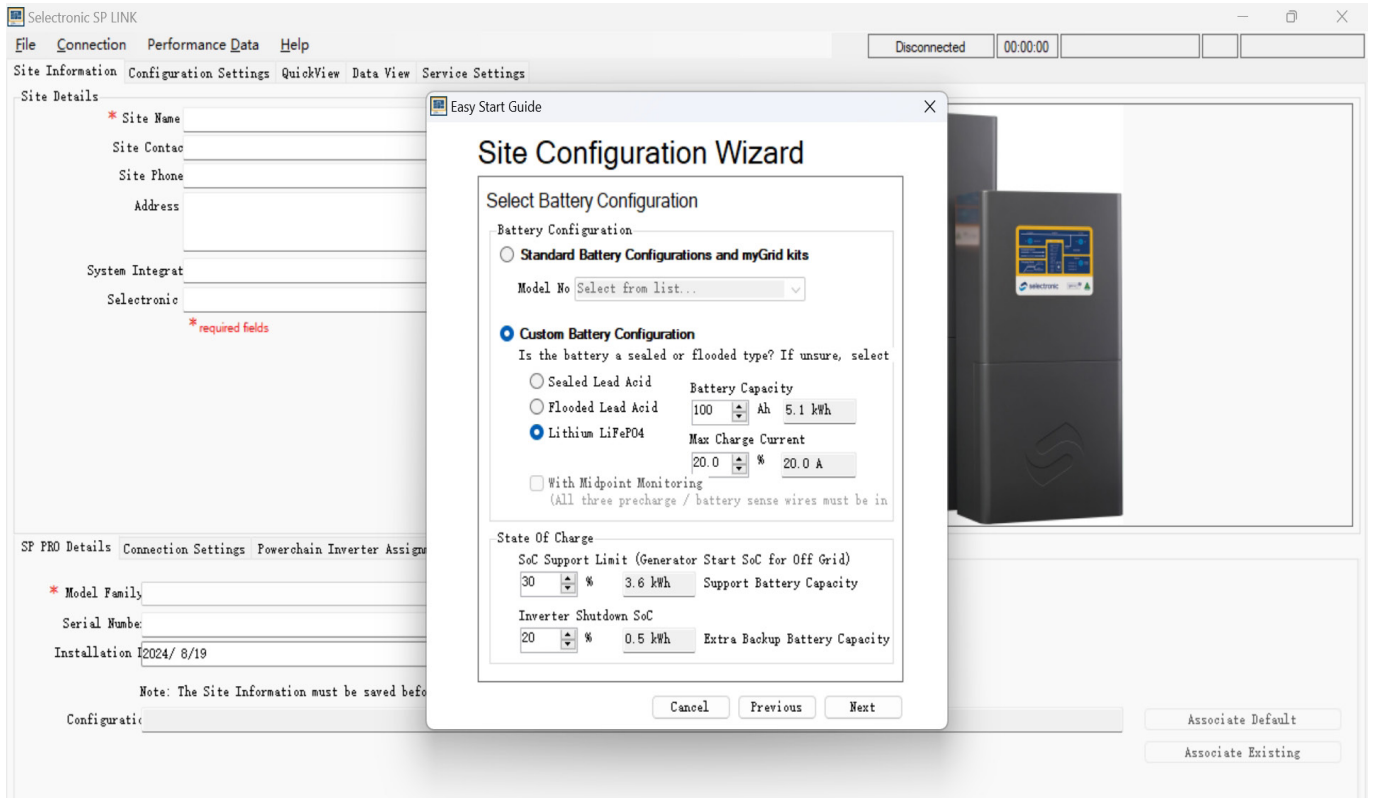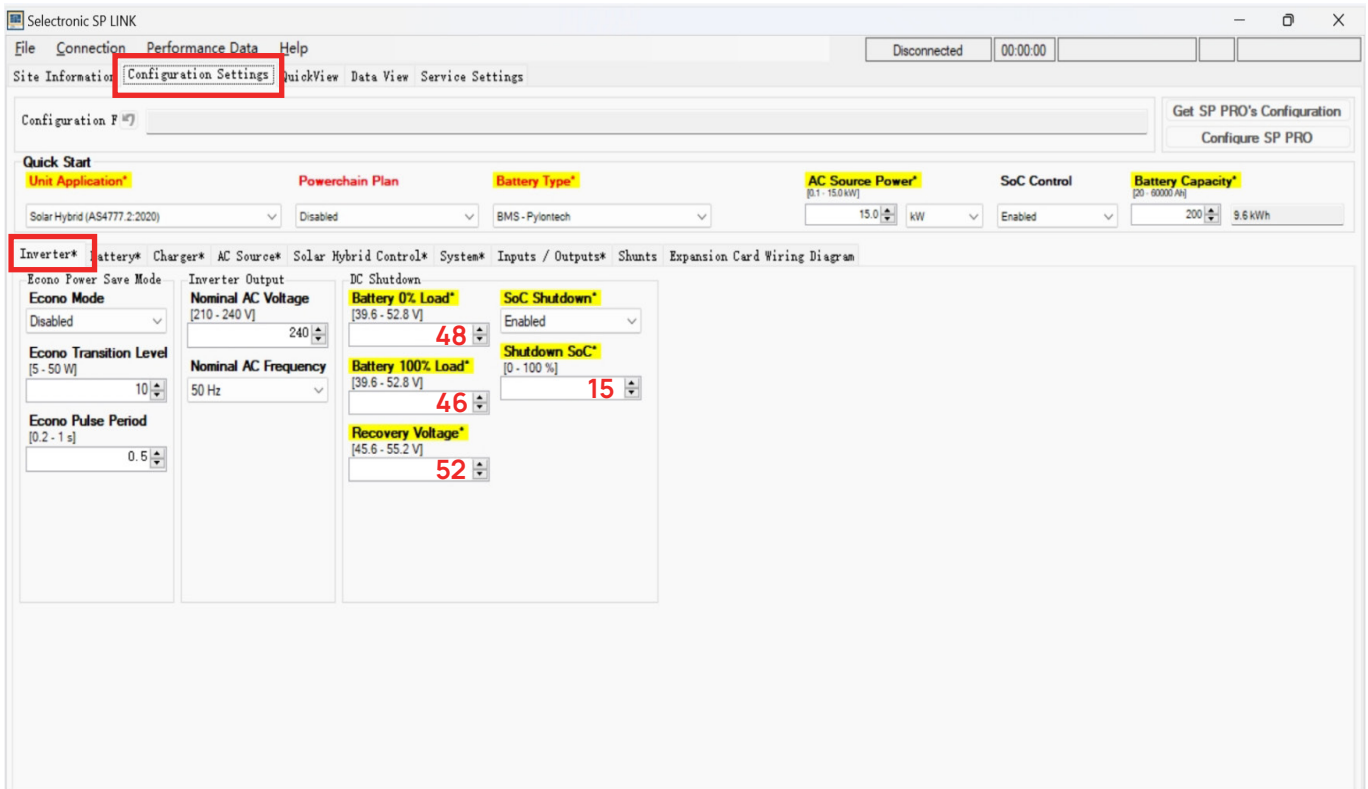

The SOC indicator on the inverter will also flash, indicating that it is in **Self-Managed** mode.

Complete the **Site Configuration Wizard**. Then click on **Connect** to connect your computer to inverter via USB.

Once your computer is conncected to the inverter successfully. select the '**Configuration Settings**' and fill in all the parameters in '**Inverter**' according to the **red font** below.

Battery Setting:

Charger Setting:

Fill in the capacity of your battery Bank
(100 Ah / module)

Important! After completing the parameter setting by the above steps, you must click on **Configure SP PRO** to complete the parameter configuration.
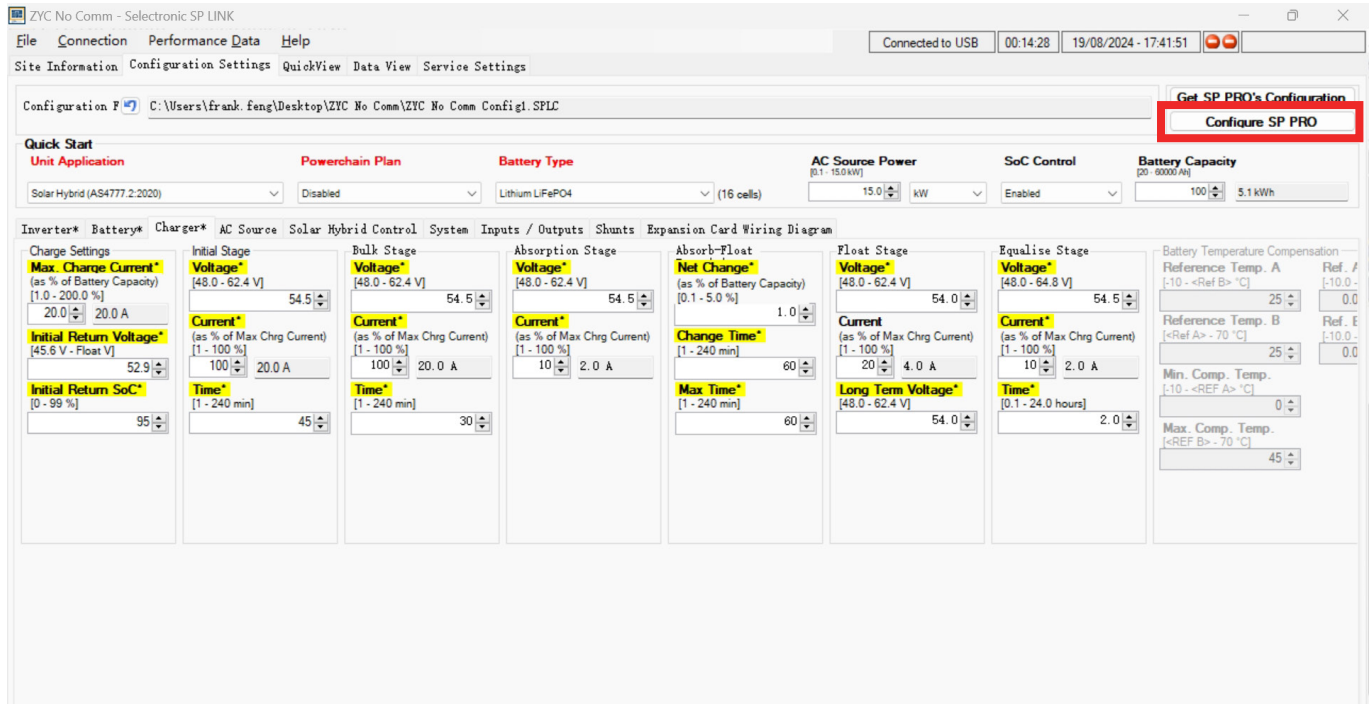
When the setting is successful, the page is shown as the figure below. If not, please try to make the setting again. If still can not connect successfully, please login **ZYC Portal** at **www.zycportal.com** to contact ZYC support team or via email **service@zyc.energy**.
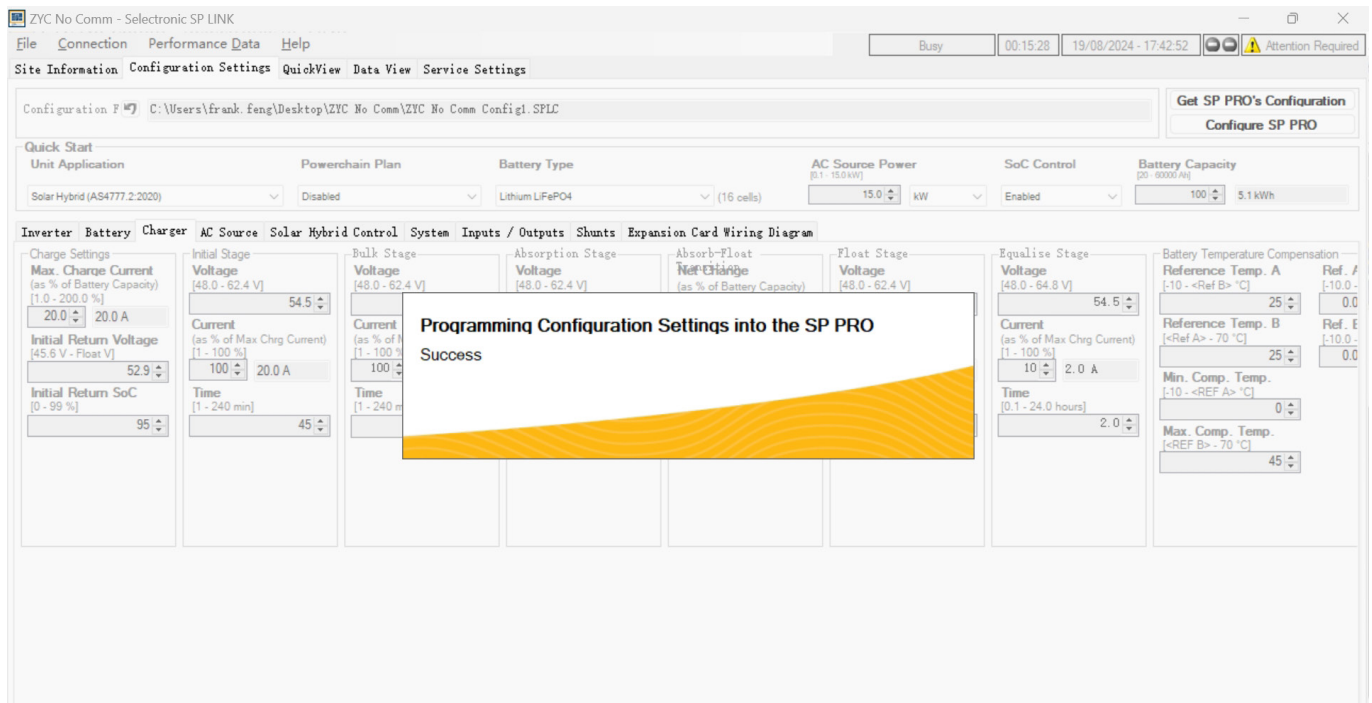

Important:

If there is any MPPT connecting in the system, please set its **Bulk State Voltage** to **54.5V**, and the **Float State Voltage** is **54V**.

5. Noark Inverter (Managed Mode)

Step 1: SIMPO 5000 to Deye Inverter Connection

Please follow the **SIMPO 5000 Quick Star Manual** for SIMPO 5000 installation. Then follow the below figure to remove the front cover of Noark inverter, and connect the power cable and communication cable to SIMPO 5000.
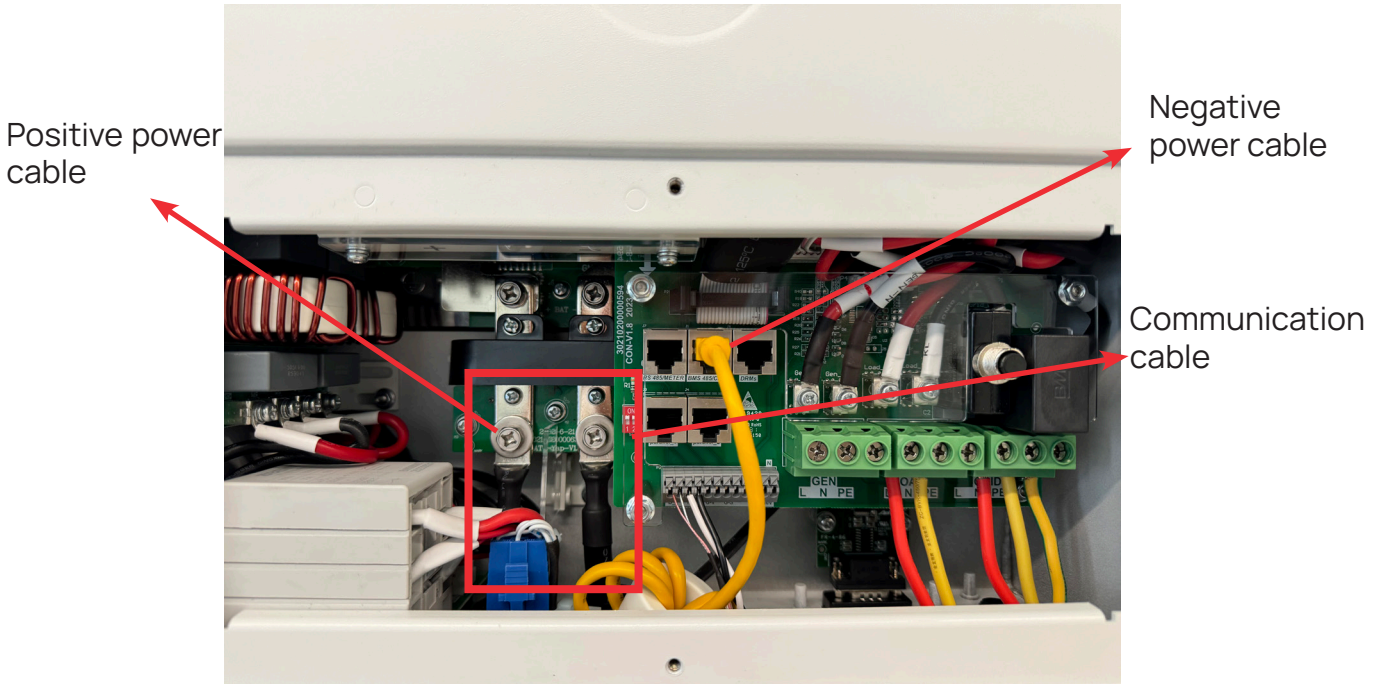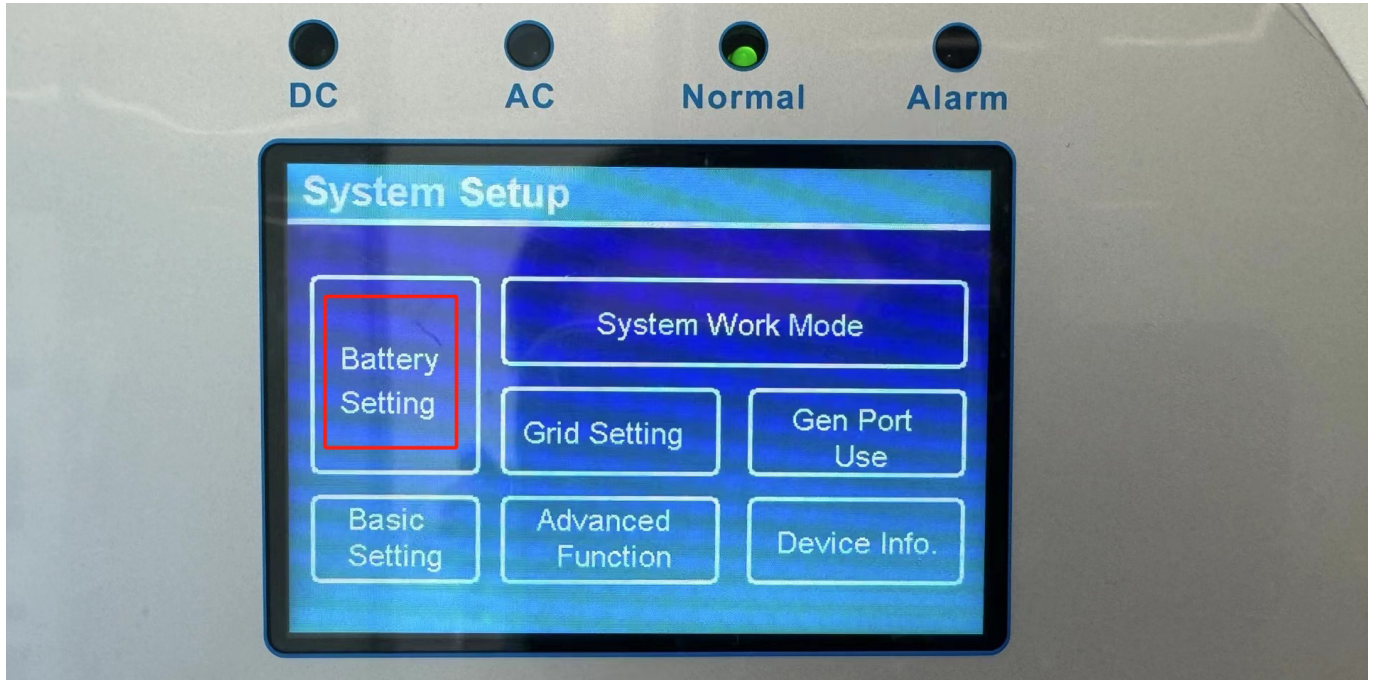

Step 2: Power Up SIMPO 5000

Once the battery is switched on, the inverter will automatically switch on.
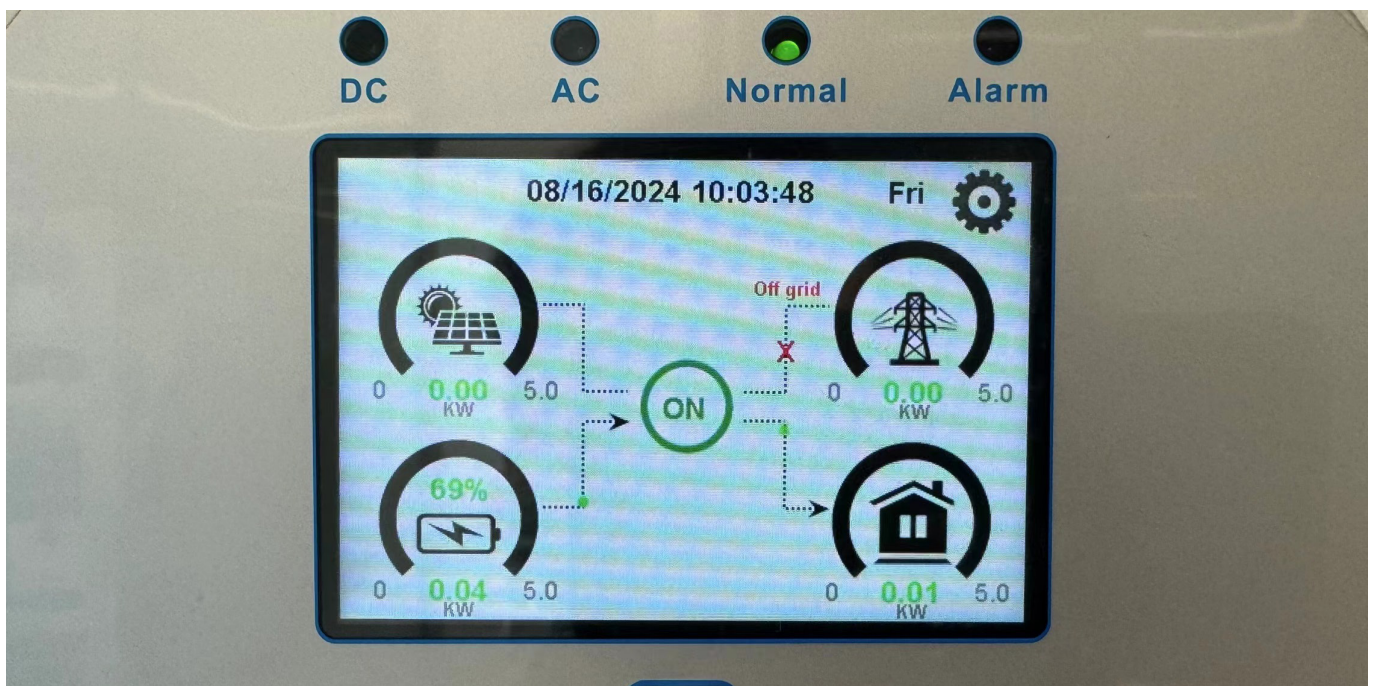
Step 3: System Setup

Access to Deye **System Setup**. With the communication mode installation, please follow the steps below to set up to complete the configuration of the Noark inverter with SIMPO 5000.
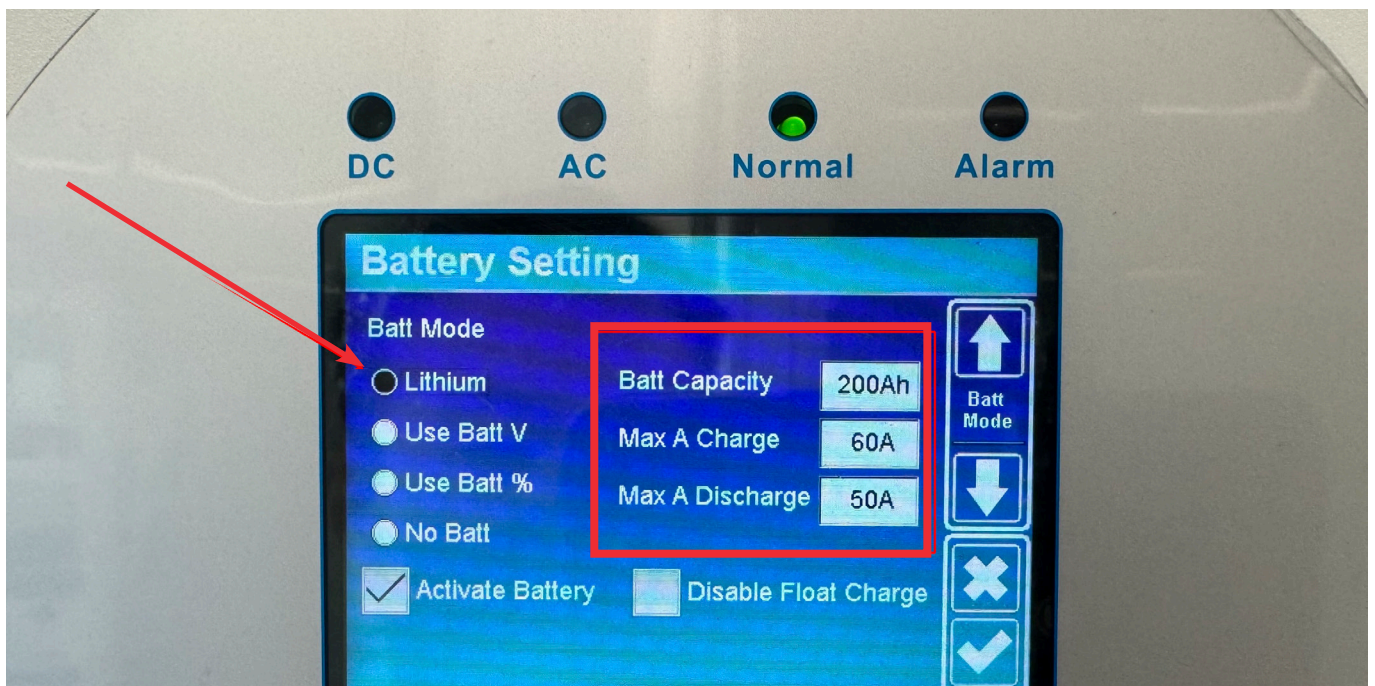
Step 3.1: Select **Battery Setting**

Step 3.2: Tick **Lithium**
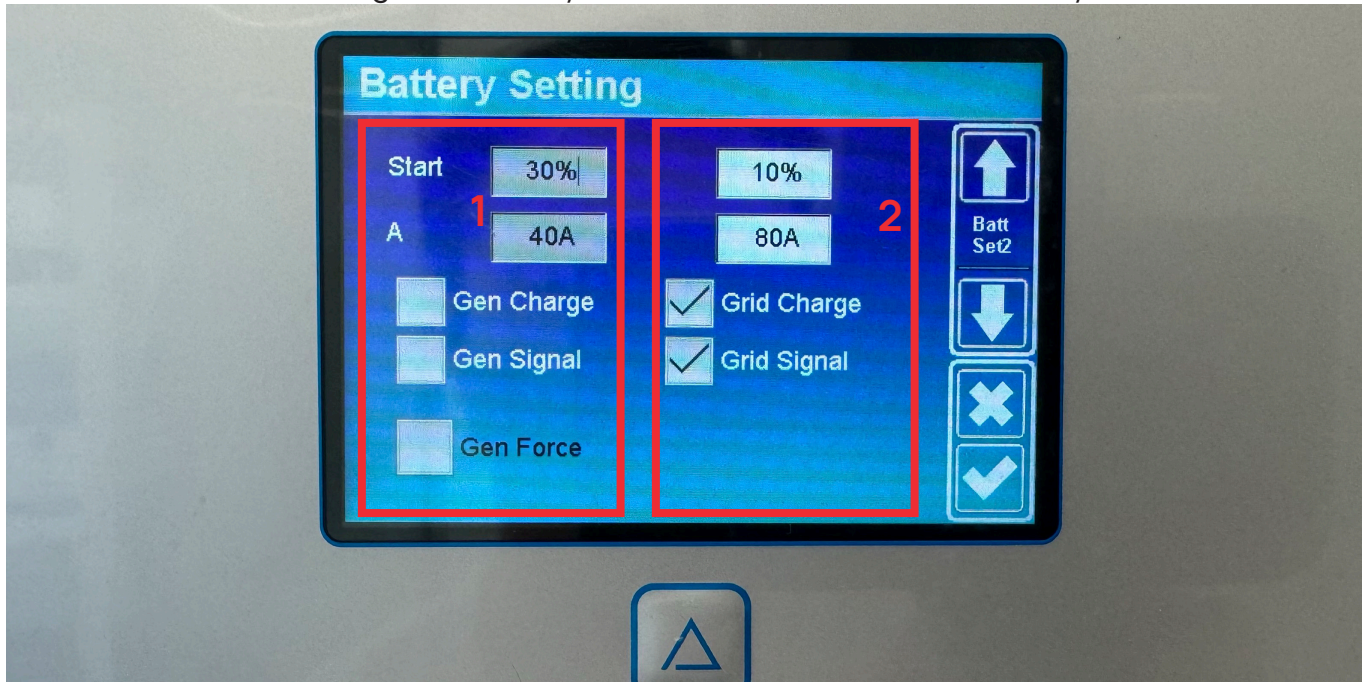**Batt Capacity** tells Noark inverter what the battery bank size is.
Max A charge/Discharge: For SIMPO 5000, we recommend Ah battery size x 50%
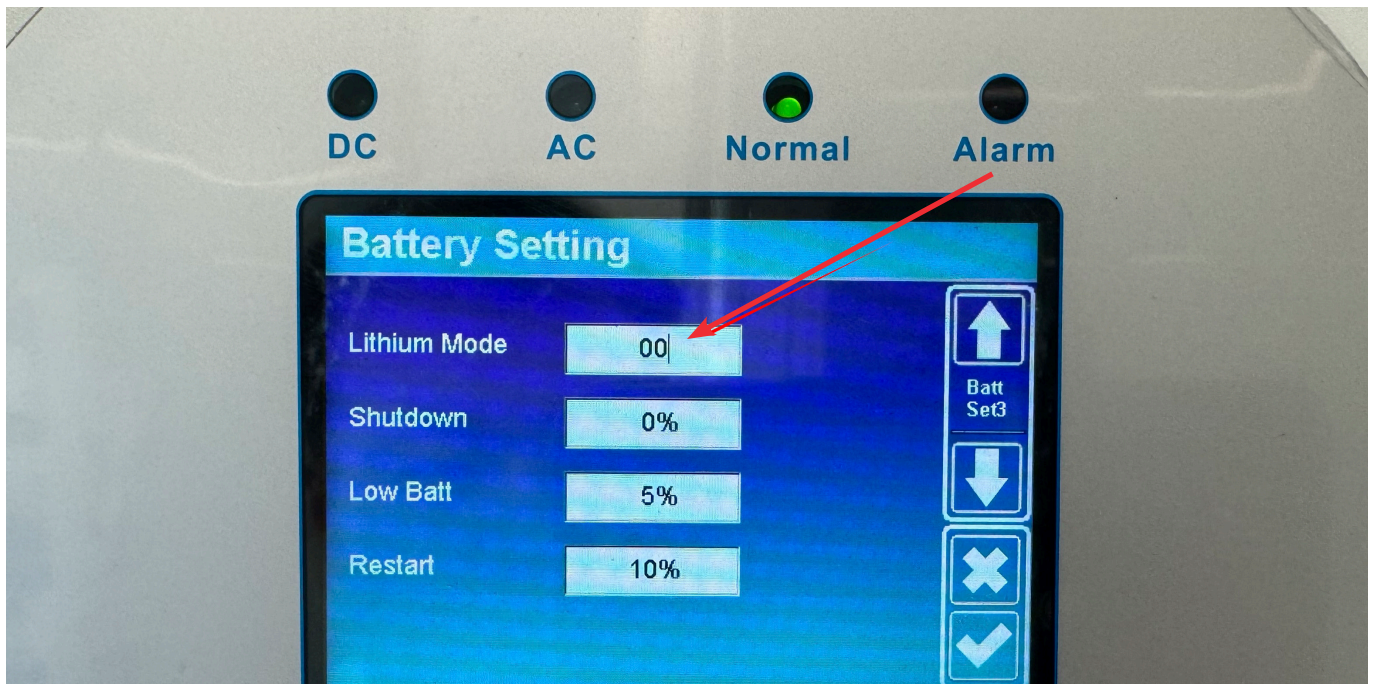
Step 3.3: Set the generator and grid parameters according to the actual installation.

According to Noark's inverter user manual.

- 1 is the setup to charge the battery with the **generator**. **Start** at 30% and **A** is 40A means system will **AutoStart** to charge the battery with 40A current when the battery S.O.C at 30%.

- 2 is the setup to charge the battery with the **Grid**. **Start** at 10% and **A** is 80A means system will **AutoStart** to charge the battery with 80A current when the battery S.O.C at 10%.
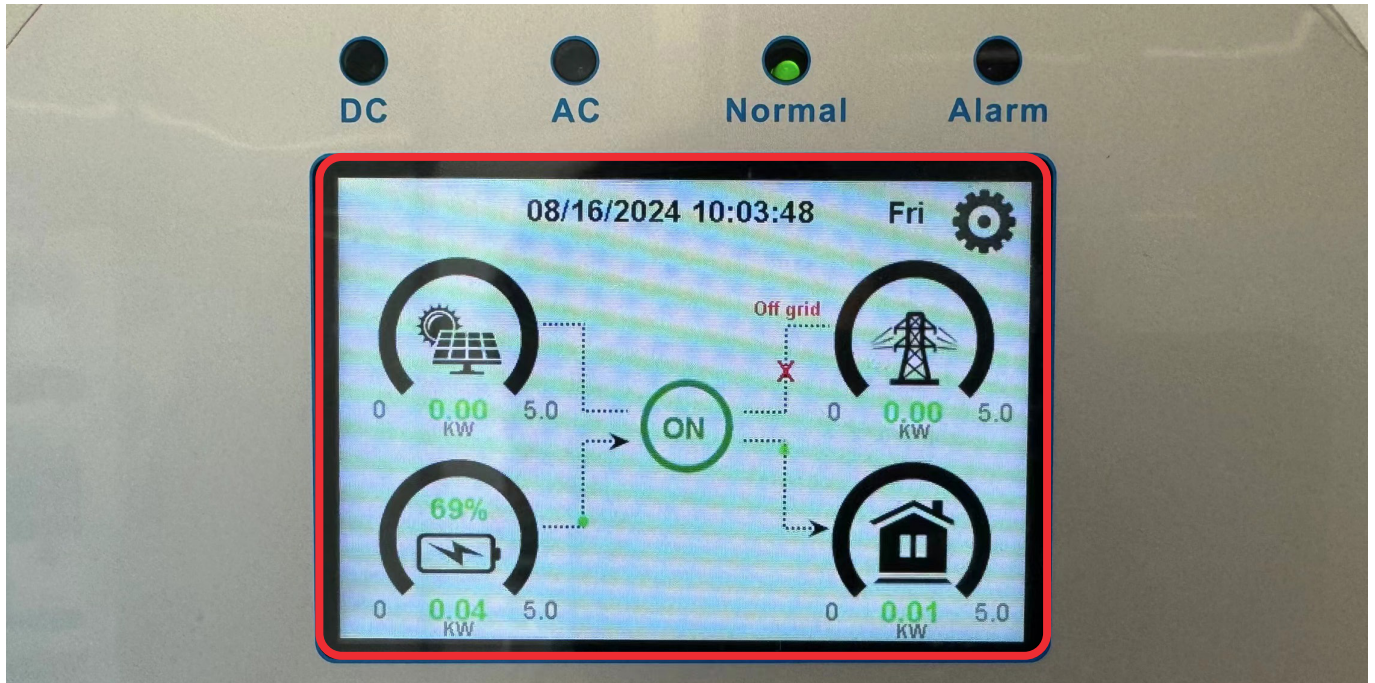

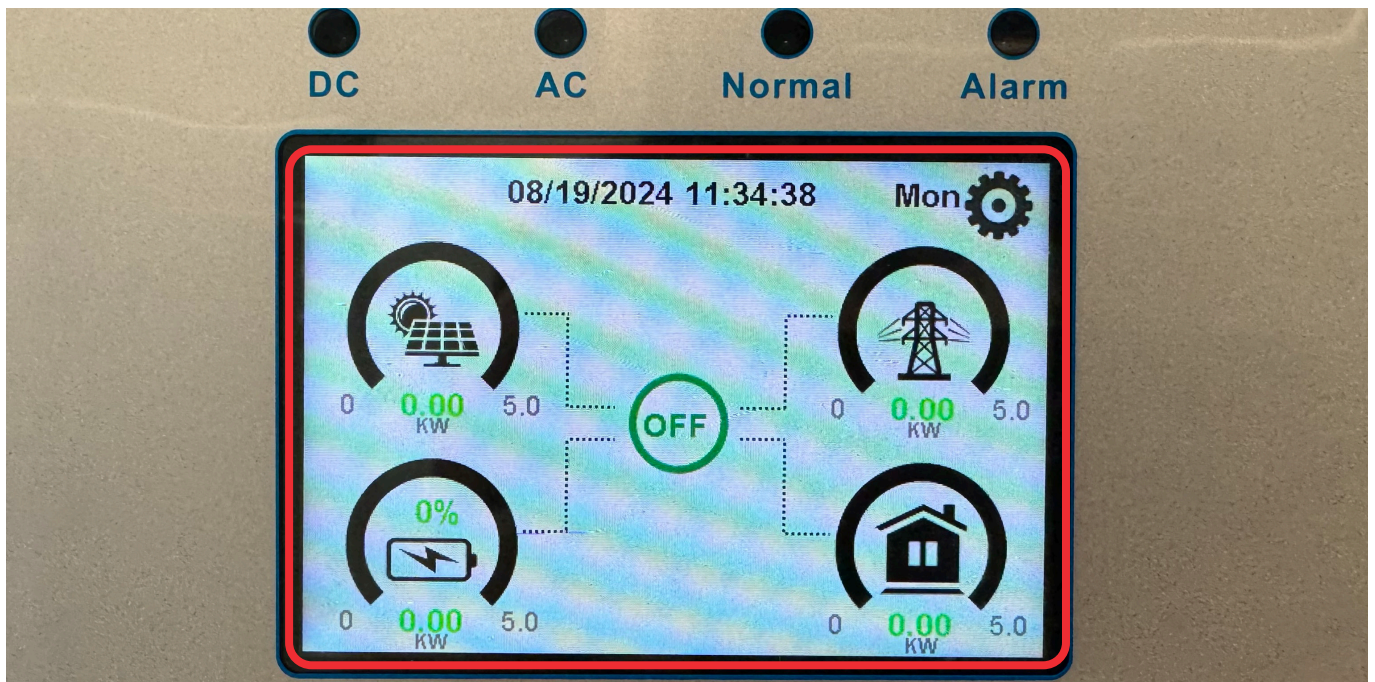**Step 3.4:** Select **Lithium Mode to 00**

Successful setup

After completing the settings, go back to the setup page to check each parameter to confirm the successful setup.

The following interface appears, the connection state is **ON** and the arrow on the battery side points to the inverter side, it means the communication is successful.


As shown below, if the inverter is not communicating properly with SIMPO 5000, the inverter interface will show **OFF** and no battery data. Please check the cables connection and try to make the setting again. If still can not connect successfully, please contact ZYC ENERGY via **service@zyc.energy** or via our portal at **www.zycportal.com**.

6. Deye Inverter (Managed Mode)

Step 1: SIMPO 5000 to Deye Inverter Connection

Please follow the **SIMPO 5000 Quick Star Manual** for SIMPO 5000 installation. Then follow the below figure to remove the front cover of Deye inverter, and connect the power cable and communication cable to SIMPO 5000.
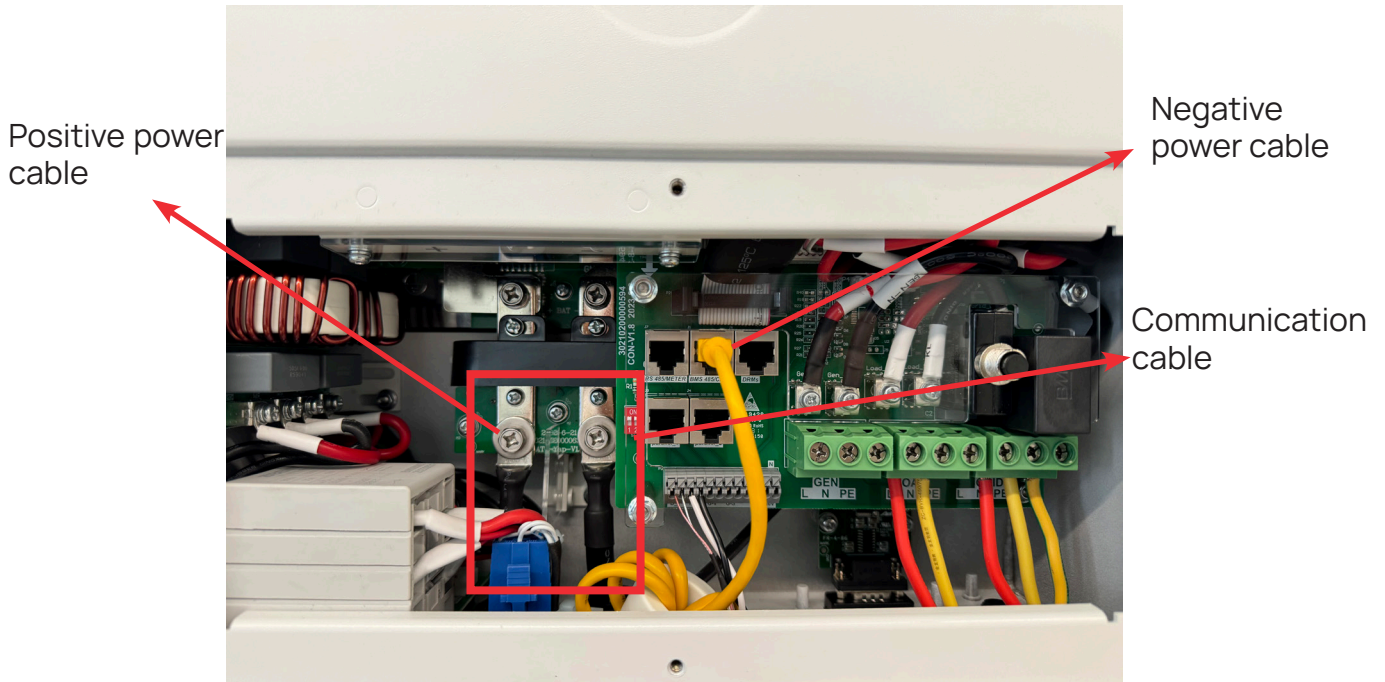
Positive power cable

Negative power cable

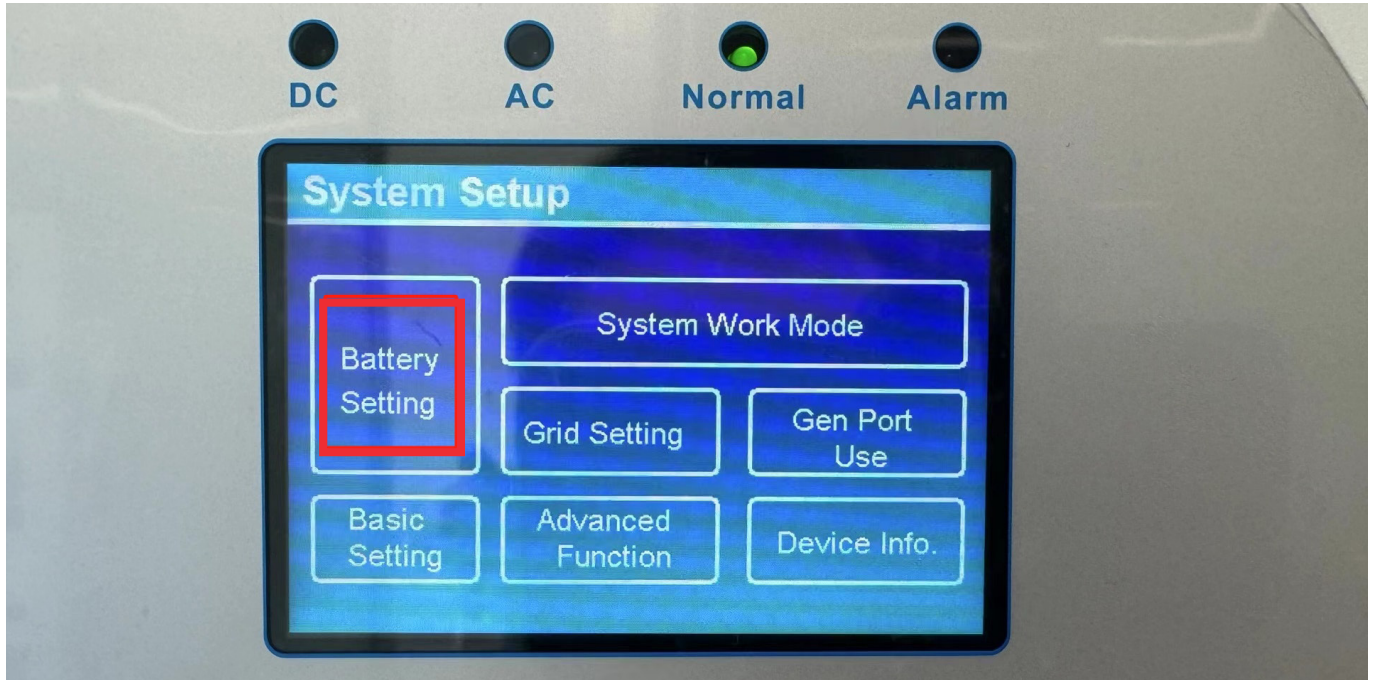Communication cable

Step 2: Power Up SIMPO 5000

Once the battery is switched on, the inverter will automatically switch on.
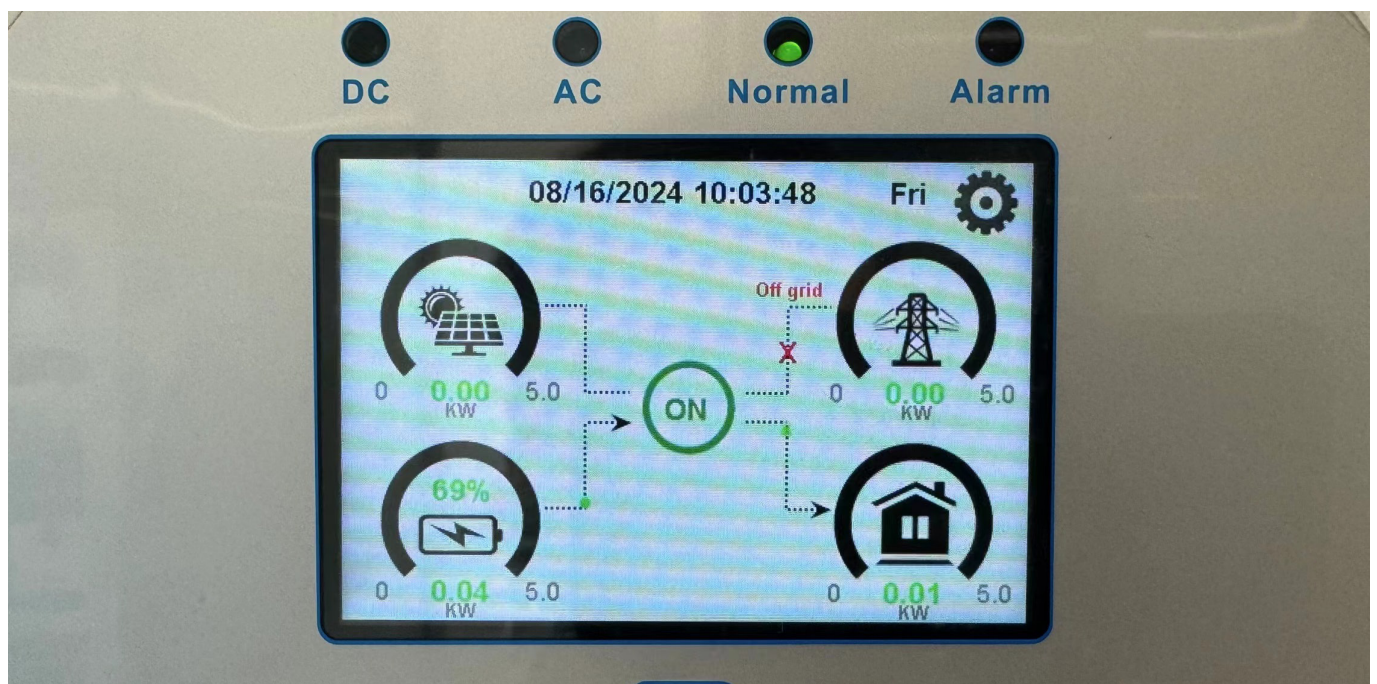
Step 3: System Setup

Access to Deye **System Setup**. With the communication mode installation, please follow the steps below to set up to complete the configuration of the Deye inverter with SIMPO 5000.
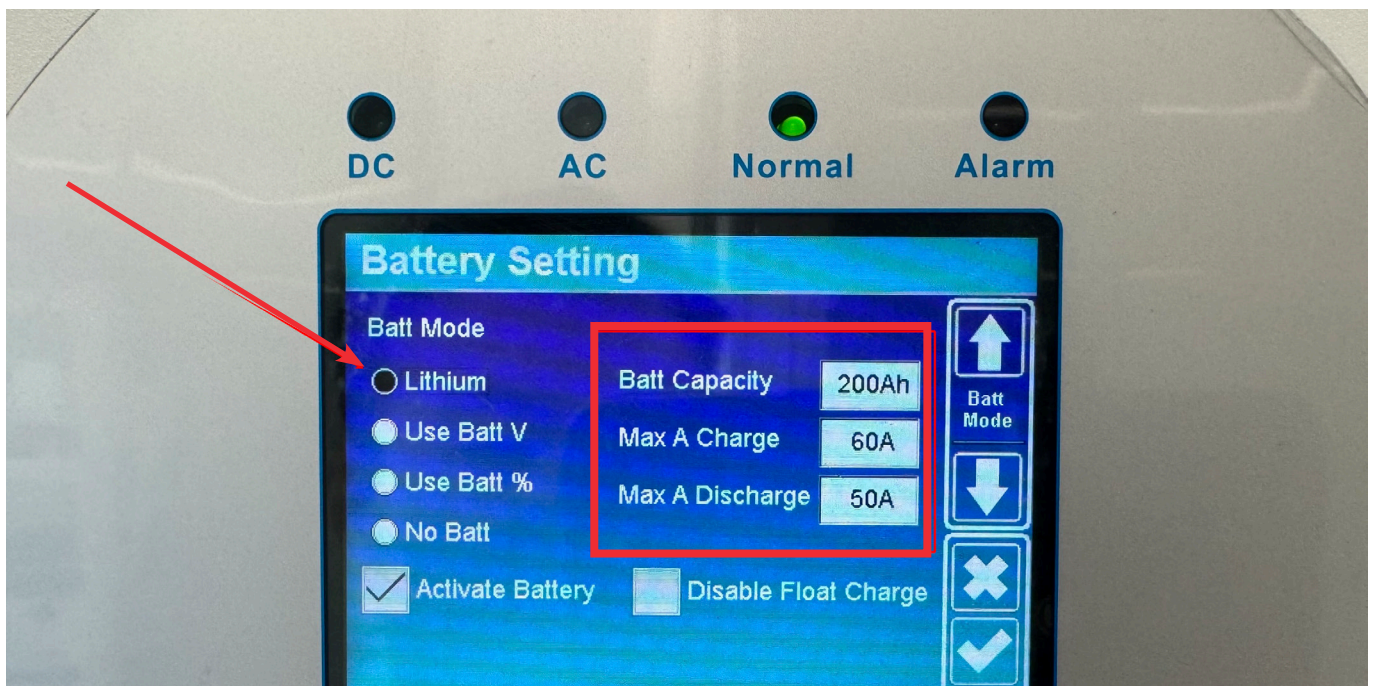
Step 3.1: Select **Battery Setting**

Step 3.2: Tick **Lithium**
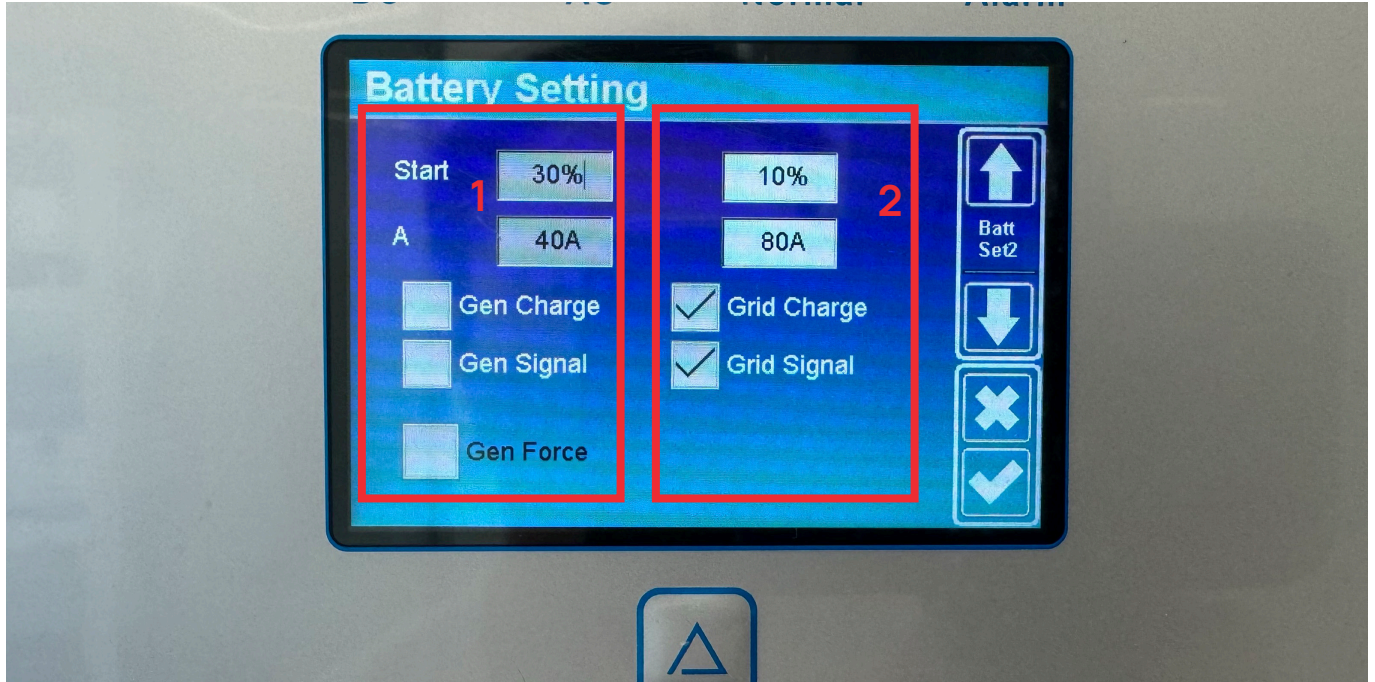**Batt Capacity** tells Deye inverter what the battery bank size is.
Max A charge/Discharge: For SIMPO 5000, we recommend Ah battery size x 50%
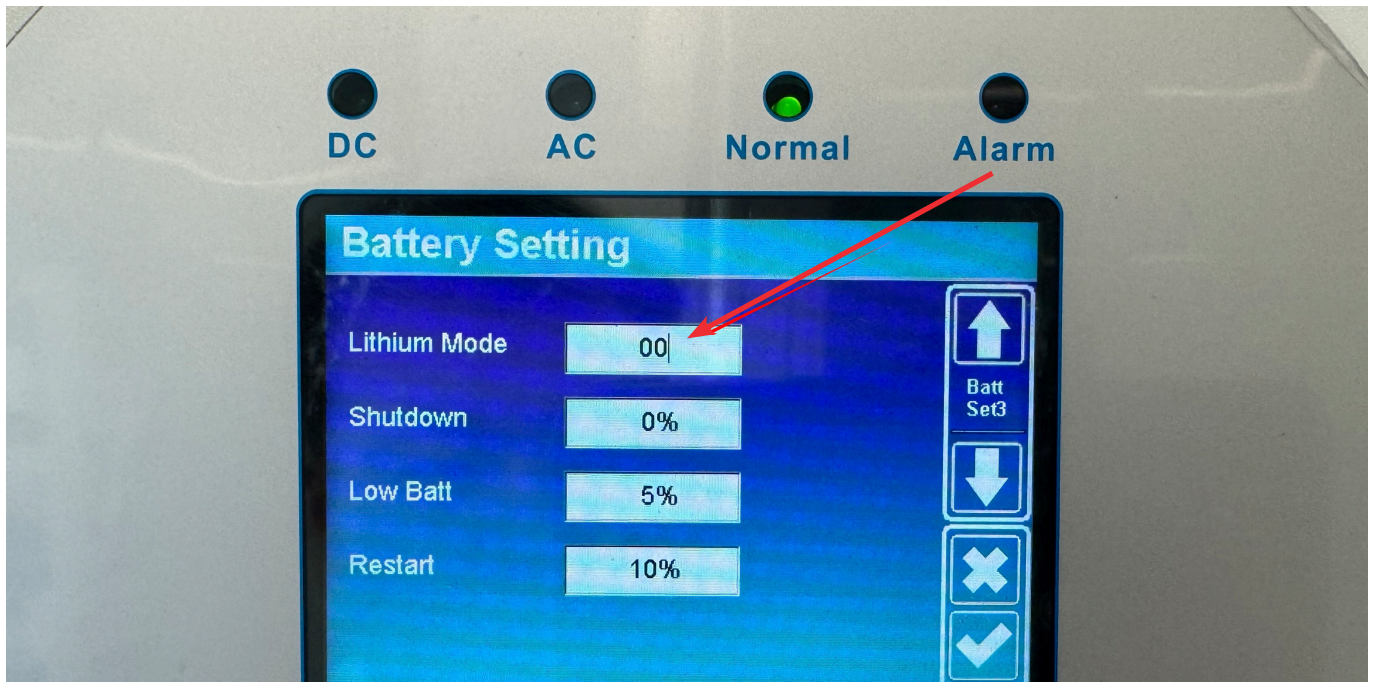
Step 3.3: Set the generator and grid parameters according to the actual installation.

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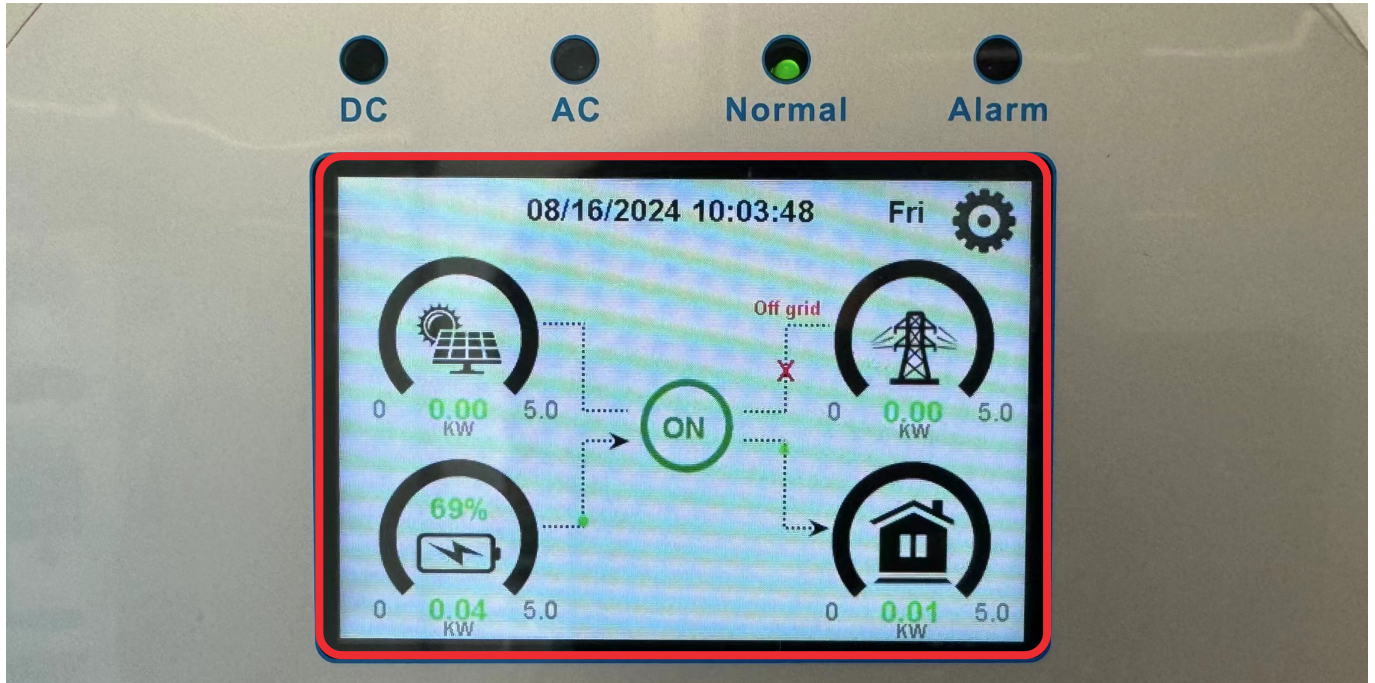

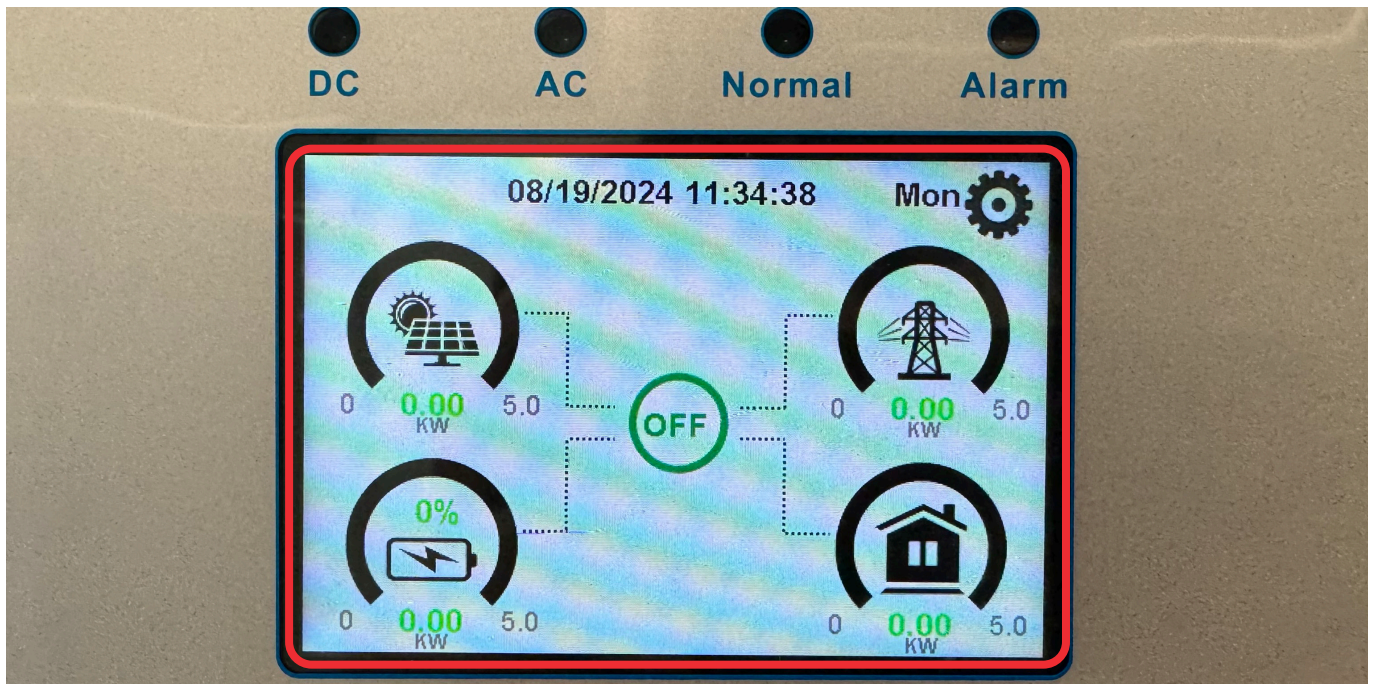**Step 3.4:** Select **Lithium Mode to 00**

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7. Contact Us

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