



# Installation and configuration manual with Solis-HV

**Pytes Lithium Battery HV48100 SE  
with Solis(50kW)**



**WARNING:** HV48100 SE is a high voltage DC system and must be operated by authorized person only.

## Warning

### Before connecting

- 1 ) Please check products and components according to enclosed packing list after unpacking. Please contact PYTES if there is any damage or missing of products and / or components.
- 2 ) Make sure power sources are cut off and battery system is powered off before installation.
- 3 ) Wiring correctly by identifying positive and negative cables to ensure no short circuit with external devices.
- 4 ) It is forbidden to connect the battery directly with AC power.
- 5 ) Battery system must be well grounding and the resistance must be less than  $0.1\Omega$  ; \_
- 6 ) Make sure the electrical parameters of battery system are compatible with related equipment.;
- 7 ) Keep the battery away from water and fire.

### In Operation

- 1 ) Battery must be physically powered off in case of any move or repair.
- 2 ) It is forbidden to connect HV48100 SE to other types of battery;
- 3 ) It is forbidden to connect the battery to a faulty or incompatible inverter;
- 4 ) It is forbidden to disassemble the battery (QC label removed or damaged);
- 5 ) In case of fire, only dry powder fire extinguisher can be used, liquid fire extinguishers are prohibited ;
- 6 ) Please do not open, repair or disassemble the battery other than staffs from Pytes or authorized by Pytes. Pytes do not undertake any consequences or related responsibility caused by violation of safety operation or design, production and equipment safety standards;

### Caution

- 1 ) Please read this manual carefully before installation and any operation.
- 2 ) Charge the battery every 6 months to keep battery SOC > 90% if long term storage.
- 3 ) Battery must be charged within 12 hours when low voltage alarm triggered.
- 4 ) Battery DC output voltage exceeds 48V. It is vital to pay attention to personal safety in any case when operating.
- 5 ) All battery terminals must be disconnected before maintenance.
- 6 ) Please contact with Pytes within 24 hours if there is anything abnormal.
- 7 ) Battery being damaged directly or indirectly by above cases will result in warranty failure.

**Note** :This part only includes the battery and inverter connection.

Please refer to other documents for the battery installation.



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## Prepare tools for installation

Wear the safety gears listed in the installation manual at all time.

|                                                                                    |                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|   |   |   |
| Wire Cutter                                                                        | Crimping Modular Plier                                                             | Cable Ties                                                                           |
|   |   |   |
| Screw Driver Set                                                                   | Electric Screw Driver                                                              | Insulating Gloves                                                                    |
|  |  |  |
| Adjustable Wrench                                                                  | 1500VDC Isolating nut drivers                                                      | 2000VDC Multimeter                                                                   |

It is recommended to wear the following safety gears when dealing with the system.



绝缘手套



安全护目镜



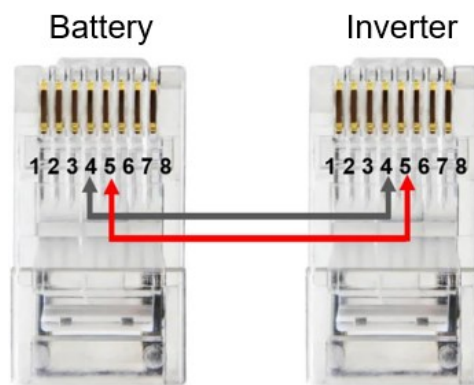
安全鞋

## BOM LIST

Before installation, you should prepare following items.

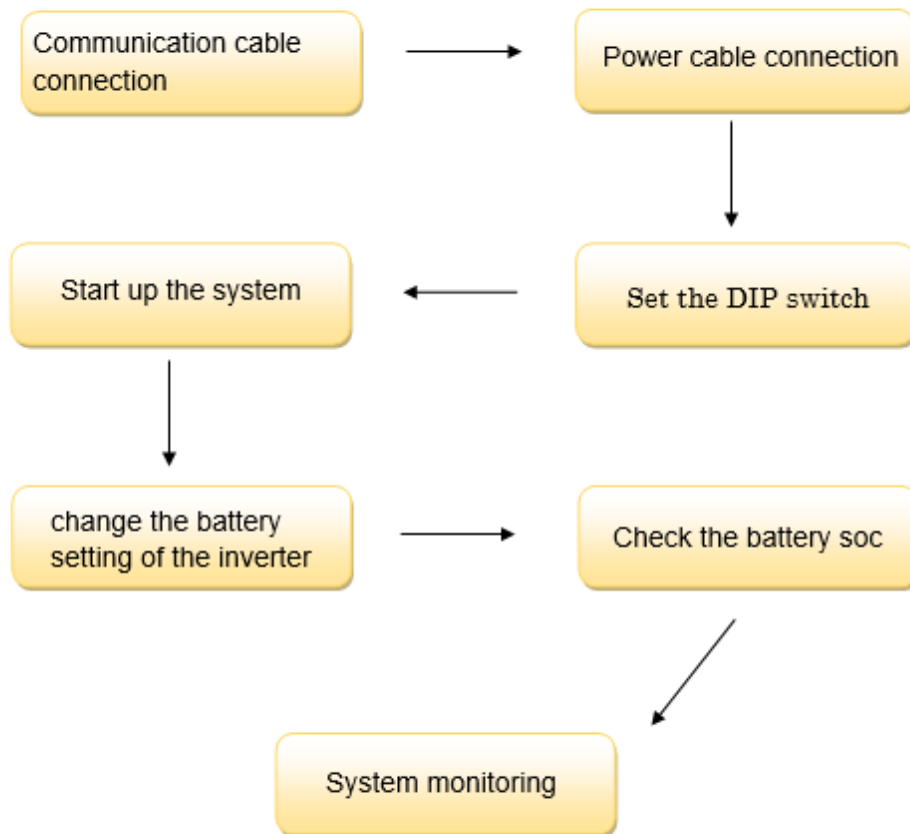
| Item                    | Remarks                                                                                                                                                                                                                                                                                     | Quantity                                |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Power Cable (DC)</b> | <input type="checkbox"/> Cable diameters: 4awg( $\geq 25$ mm)<br><input type="checkbox"/> Only copper cables may be used.<br><input type="checkbox"/> The DC cables must be sized for the maximum battery voltage and the maximum battery current (see battery manufacturer documentation). | 1pair                                   |
| <b>Earthing cable</b>   |                                                                                                                                                                                                                                                                                             | 1                                       |
| <b>Com. Cable</b>       | CAN communication or RS485 communication                                                                                                                                                                                                                                                    | 1                                       |
| <b>Battery</b>          | HV48100 SE series                                                                                                                                                                                                                                                                           | Depends on the number of Battery module |
| <b>Inverter</b>         | <b>Solis 50kw</b>                                                                                                                                                                                                                                                                           | 1                                       |

Definition of RJ45 Port Pin for BMS is as follow.



CAN port definition

## HOW TO INSATLL



**CAUTION:** If you want to get more inverter-related settings, please refer to the inverter user manual first.

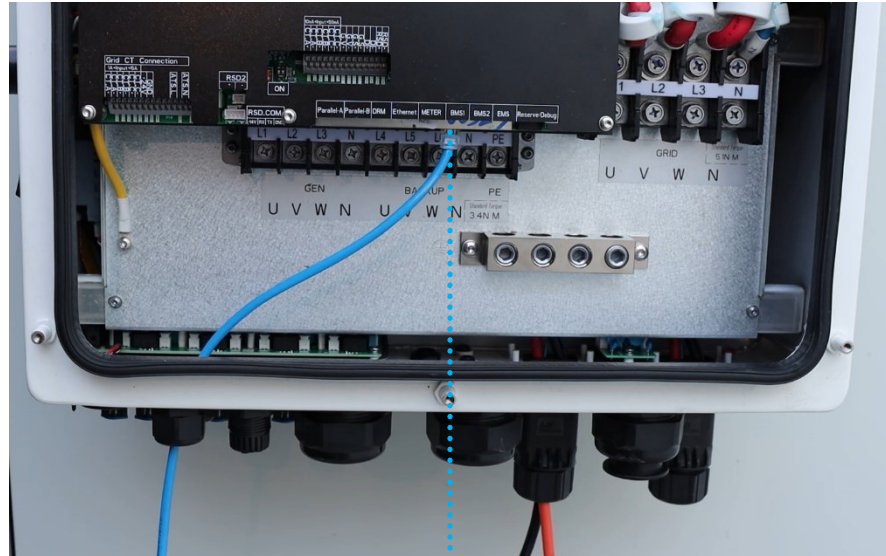
## 1. Communication Cable Connection

Connect the end of the cable to the inverter communication port as shown in pic 1.1.1. Make sure use **BMS1** port.



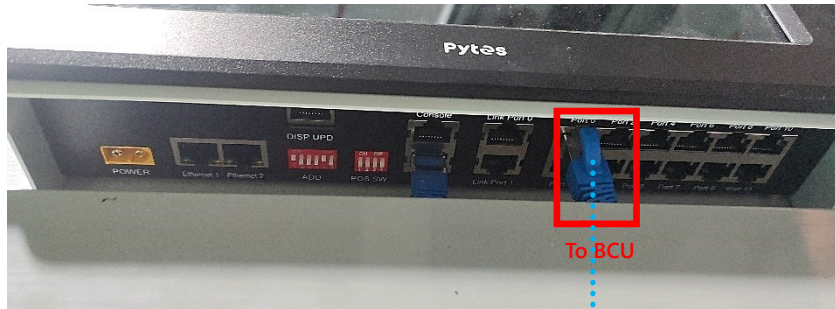
Pic 1.1.1

Connect the other end of the cable to the COM 1 port on the side of the HV48100 SE cabinet as shown in pic 1.1.2. (Ensure the correct sequence of communication cable)

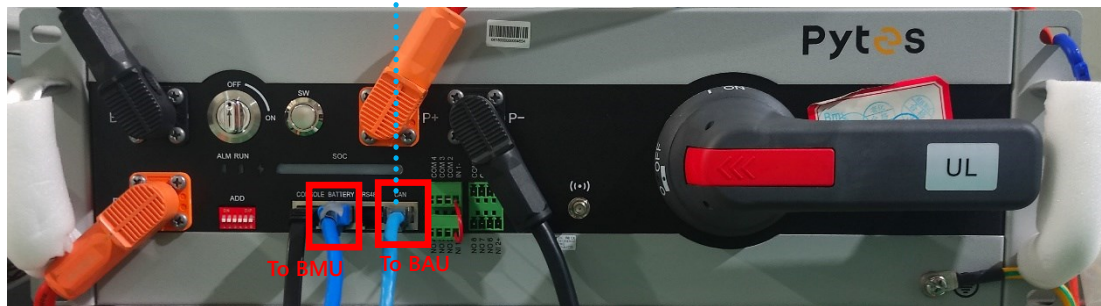


Pic 1.1.2 HV48100 SE COM1 port (outside of cabinet)

**Step 2:** Connect the communication cable from "CAN" port of BCU to "Port 0" on BAU as shown in pic 1.1.3 and pic 1.1.4

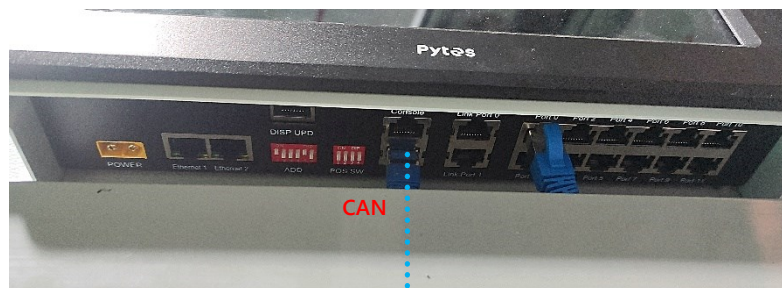


Pic 1.1.3 Port 0 on BAU to BCU



Pic 1.1.4 CAN port on BCU

**Step 3:** Connect the communication cable from "CAN" port of BAU to COM 1 on the bottom of cabinet. as shown in pic 1.1.5 and pic 1.1.6



Pic 1.1.5 CAN port on BAU

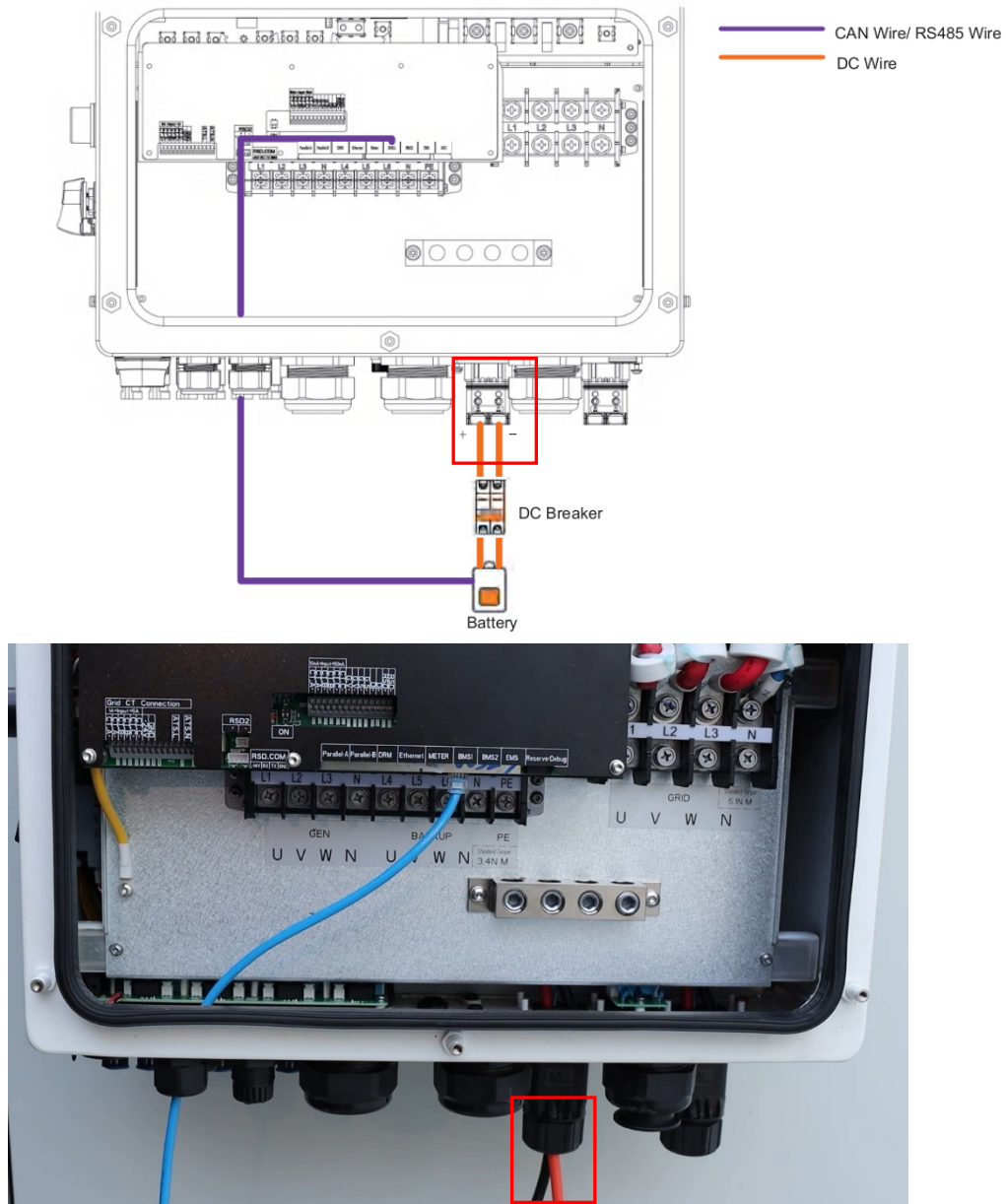


Pic 1.1.6 HV48100 SE cabinet COM 1 port

## 2. Power Cable Connection

### Step.1

Insert the red cable into the positive DC connector, and insert black cable into negative DC connector as shown in Pic 1.2.1.

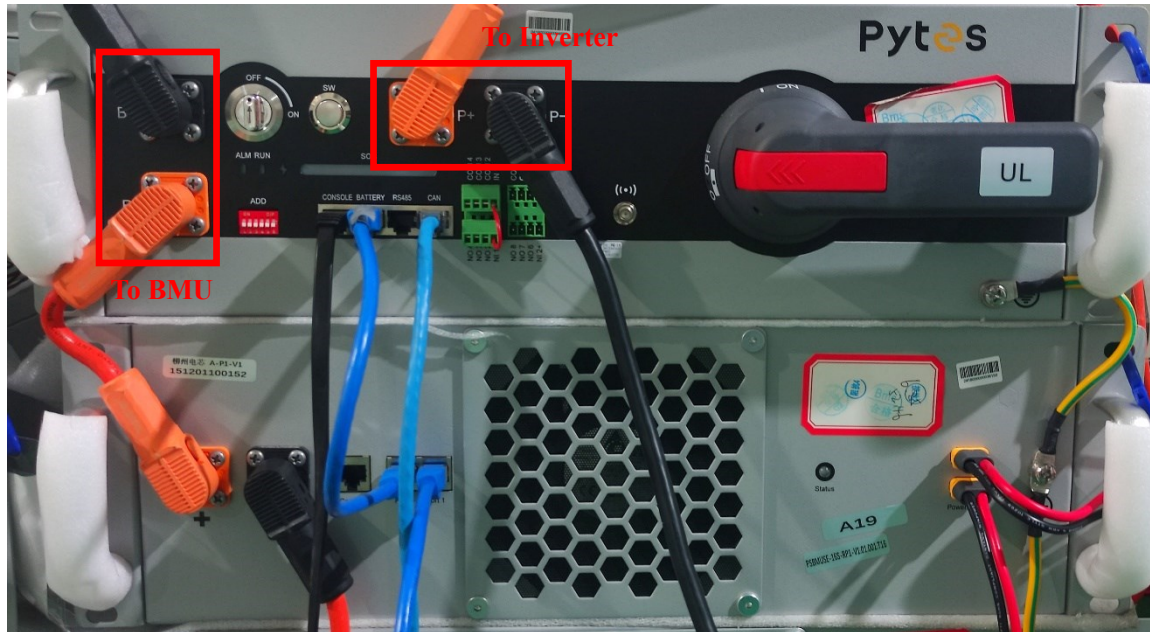


Pic 2.1

### Step.2

At the other end of the cable, connect to the battery as shown Pic

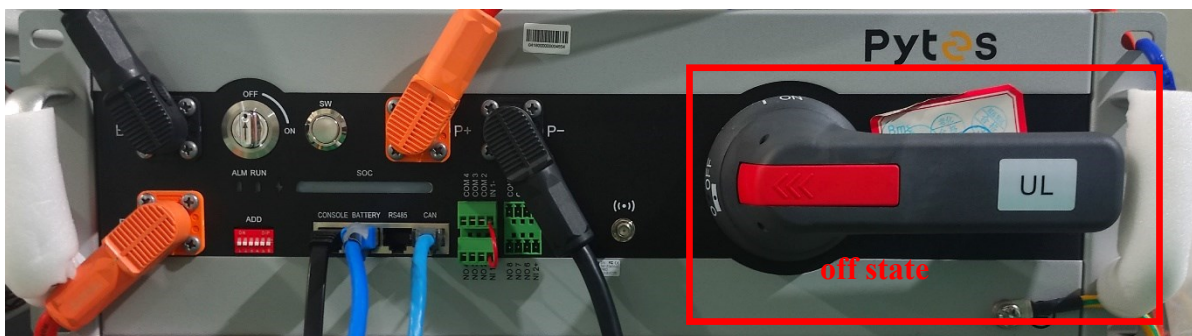
## 2.2. (Ensure that the battery power switch is off)



Pic 2.2

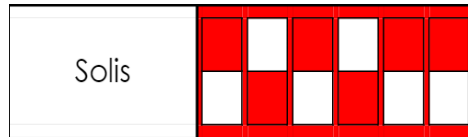
## 3. Set The DIP Switch

Before setting the DIP switch, make sure the isolation switch is in the off state.



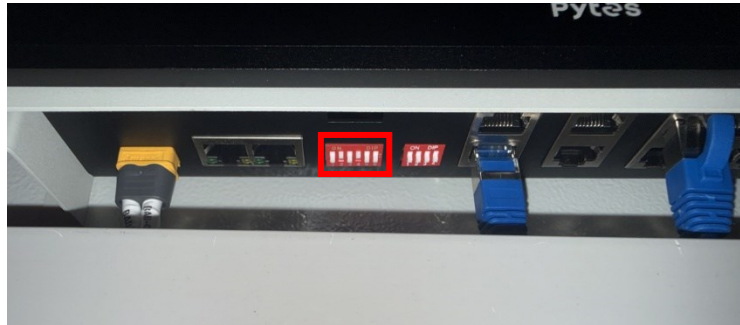
Pic 3.1

Then set the DIP switch of BAU as shown in Pic 3.2



Pic 3.2

down, up, down, up, down, down



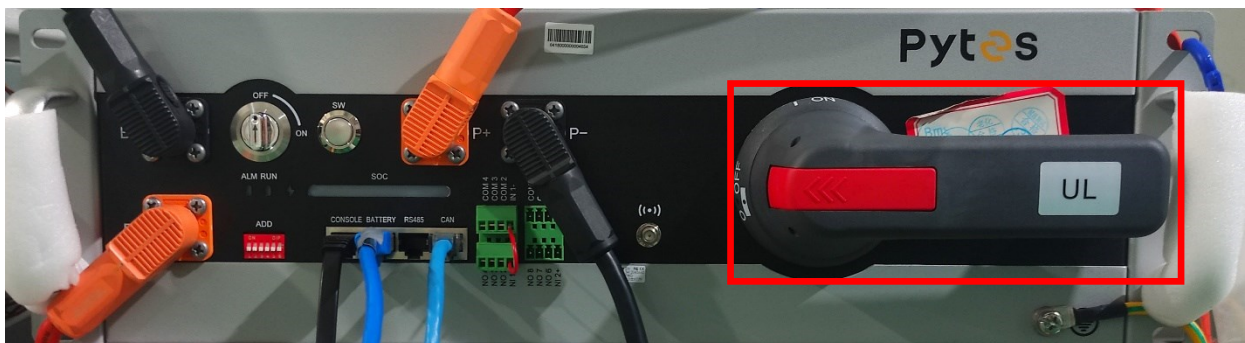
Pic 3.3

## 4.Start up the system

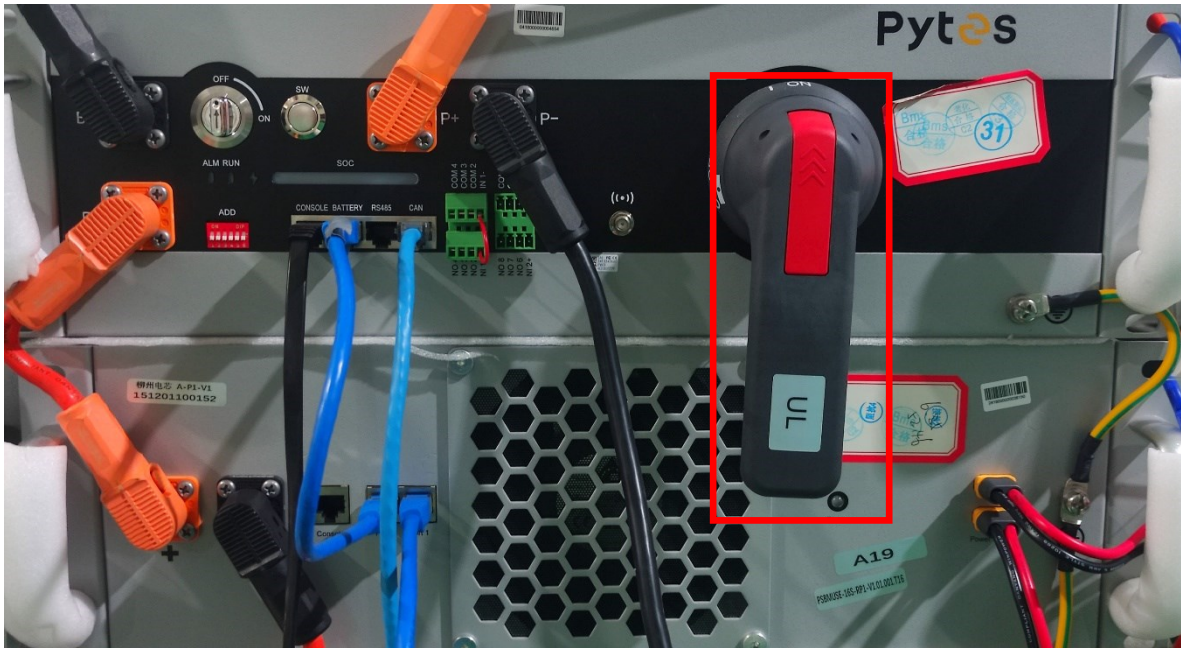
Before Turning on the inverters and batteries, make sure the wires are connected correctly.

### Step.1

Turn on the isolation switch.



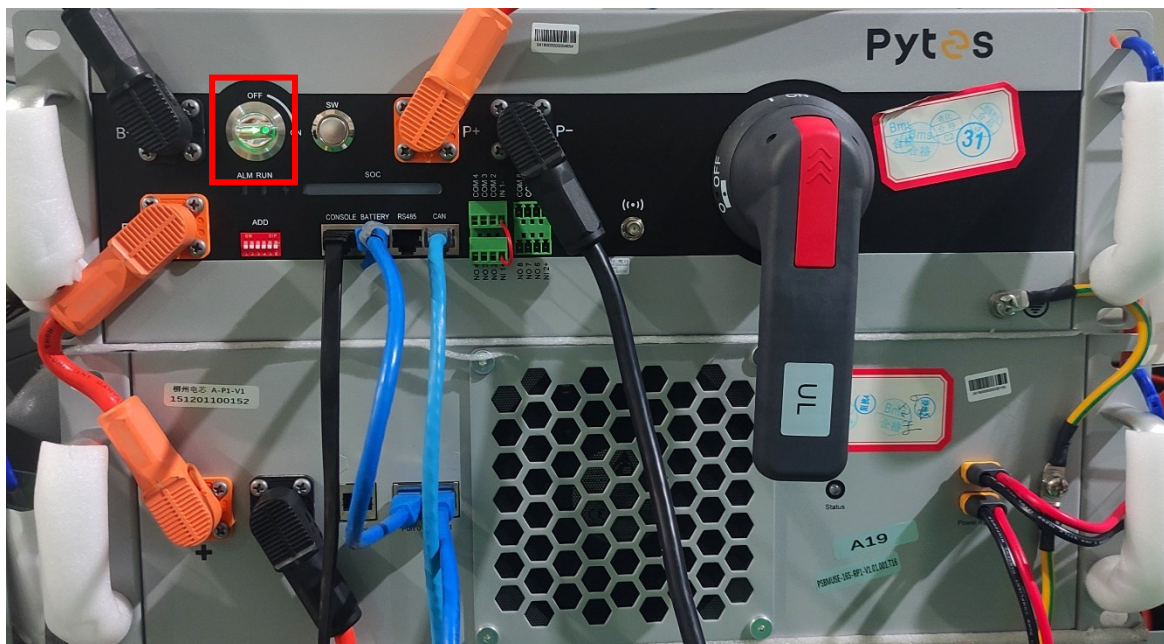
Pic 4.1



Pic 4.2

## Step.2

Turn on the power switch.



Pic 4.3

**Step.3** Short press the **SW** button, the RUN light on main control will flicker.



Pic 4.5

**Step.4** Turn ON the inverter switch to start the inverter.



Pic 4.6

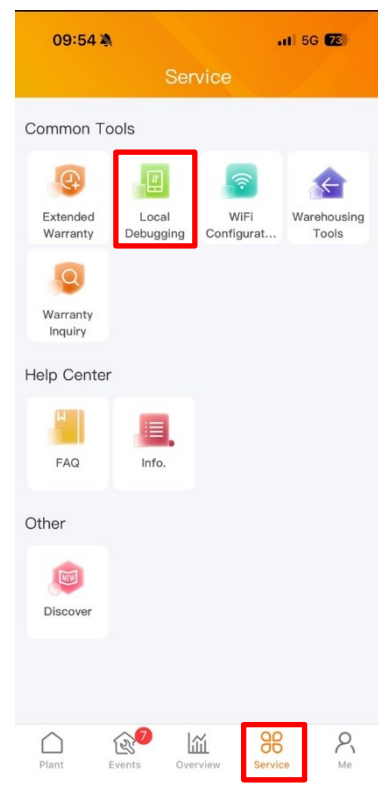
**Note:** When shut down the system, first press the inverter button to turn off the inverter, and then turn off the battery (first press 3S the red button, then turn off the power switch), and finally turn off the isolation switch.

## 5. System monitoring

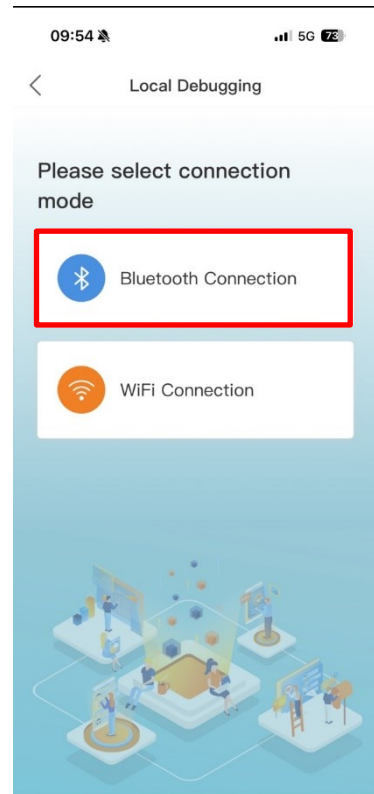
※CAUTION: If you want more details about system monitoring, please check the operating manual of inverters.

Search "**Soliscloud**" in Google Play or APP Store and download app

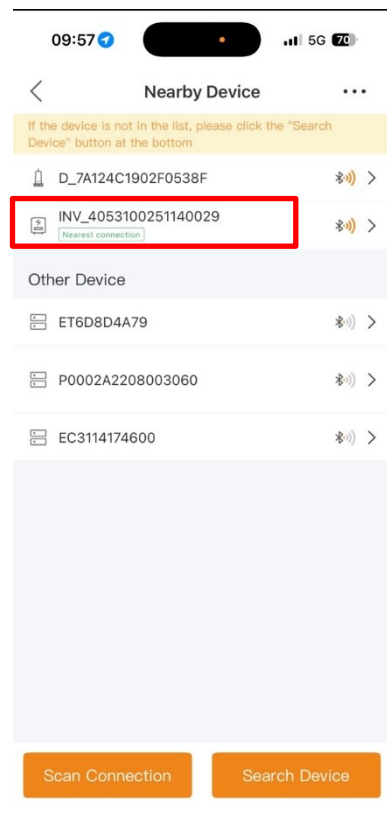
Step 1: Go to "Service" then to "Local Debugging"



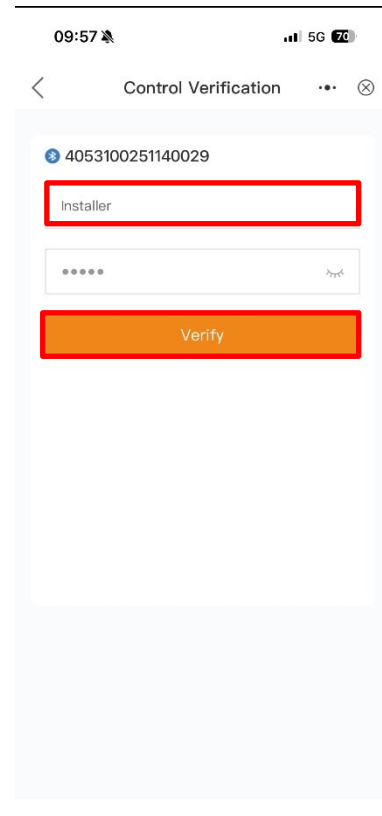
Step 2: Go to "Bluetooth Connection"



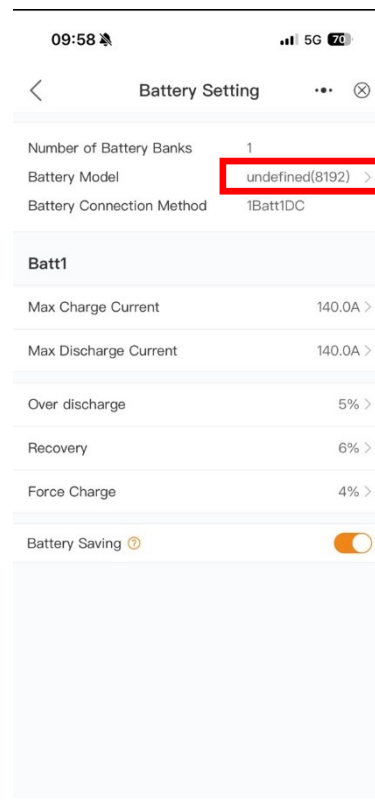
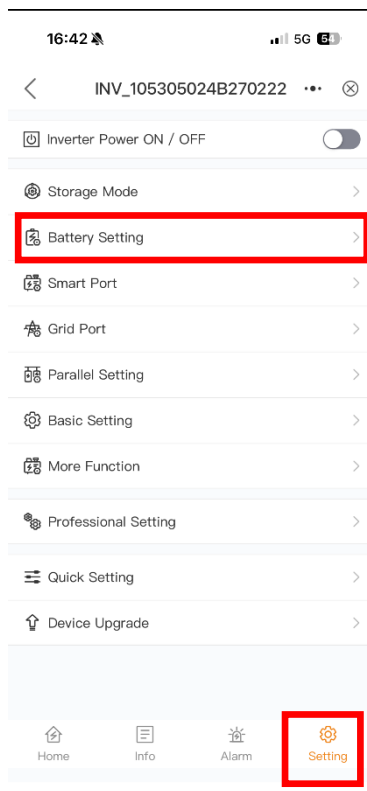
Step 3: Wait for device to be detected and click  
it



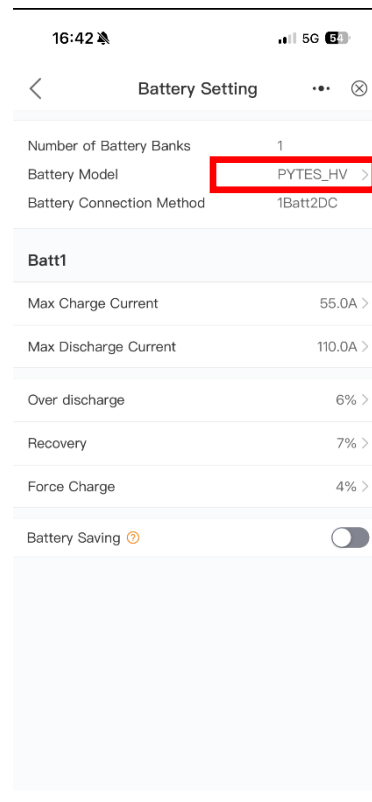
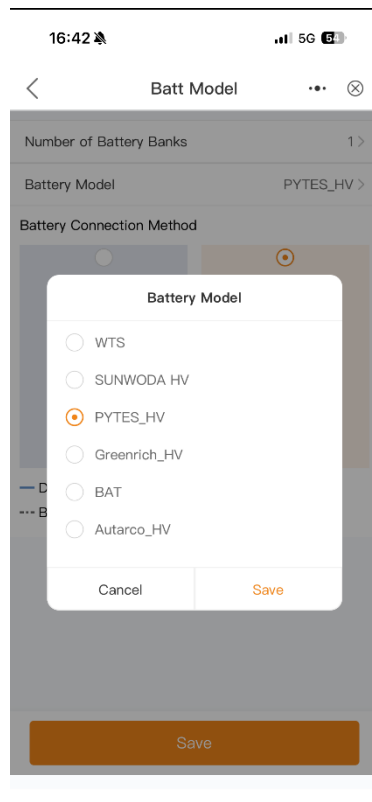
Step 4: Select "installer" and click "Verify"



Step 4: go to "Setting" then select "Battery Setting"



Go to "Battery Model" select "PYTES\_HV" and "Save".



Step 5: Go to info to check battery SOC, SOH and other parameters

