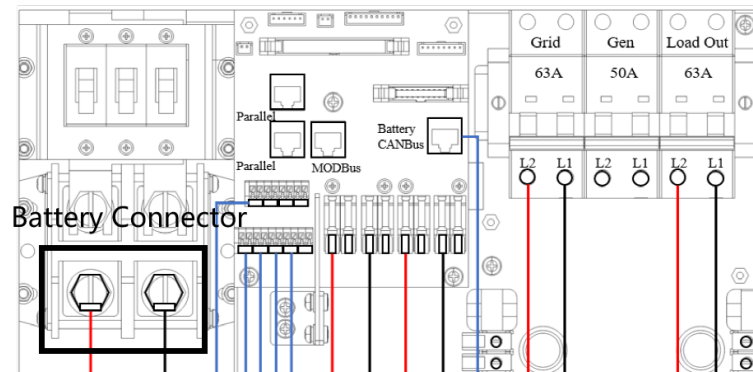




Connect the cables

Connect the power cables between inverter and battery or the Busbars as mentioned.

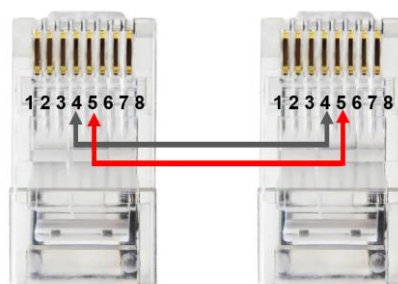
Figure 2.1 Sol-Ark Battery Connector



As for the cable gauge that connects the busbar to the inverter, 4/0 gauge power cable is commended for Sol-Ark 15K model and 3/0 gauge power cable is commended for 8K/12K model.

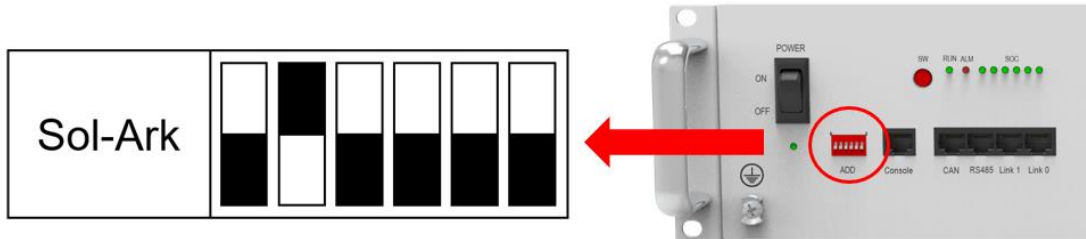
A standard ethernet cable can be used for the communication since Sol-Ark inverter pin assignment is the same as Pytes E-BOX battery.

Figure 2.2 Sol-Ark Custome ethernet cable



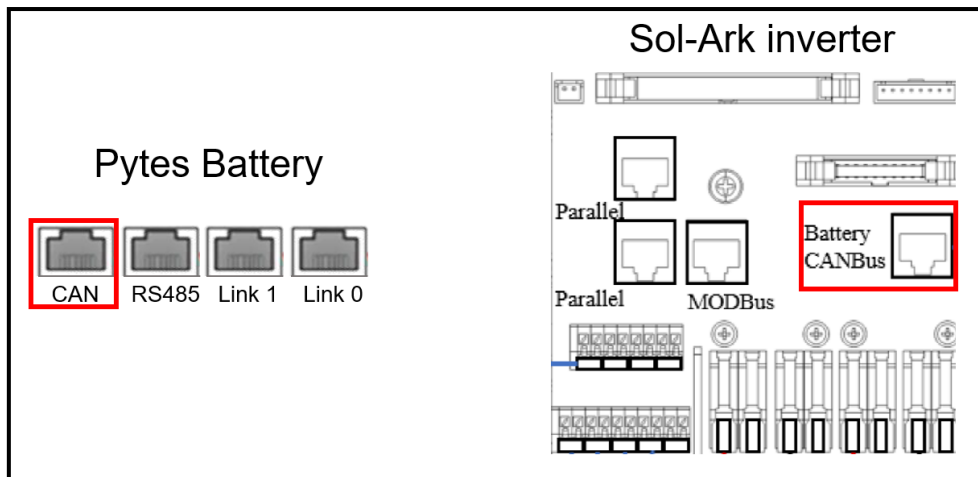
Set the DIP Switch of every master battery as Figure 2.3 shown. If your battery only have four levers, please just set the first levers shown in the figure.

Figure 2.3 Sol-Ark inverter DIP Switch Setting



Plug in the battery end into the **CAN port** of the Pytes E-BOX battery and plug in the inverter end into Sol-Ark Battery **CANBus** Port as shown in the Figure 2.4.

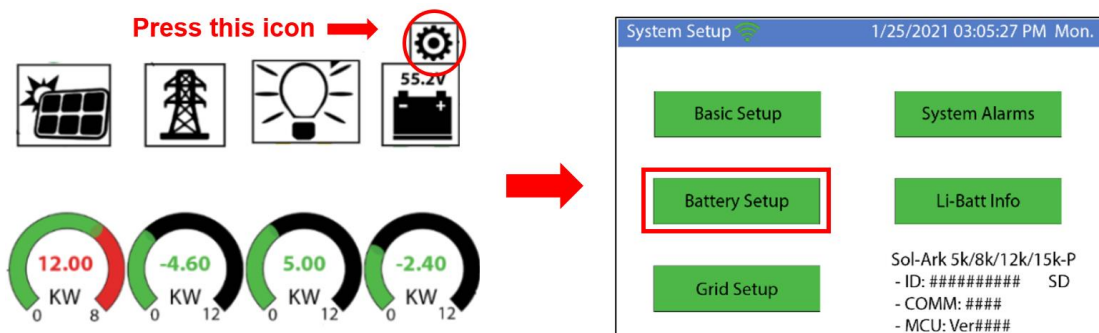
Figure 2.4 Sol-Ark inverter comm cable connection



Program the inverter

Press the gear icon on the top right of the screen and then press battery set up menu.

Figure 2.5 Sol-Ark Batt Setup



Set the battery parameters

- Batt Capacity: 100Ah per unit
- Max A Charge/Discharge: 185A is the max amps that Sol-Ark 8K/12K mode supports and the corresponding number is 275A for 15K mode. Fill in the max amps or (50A*unit numbers) which is lower. (For example, there are three Pytes E-BOX batteries and one 12K Sol-Ark inverter in a system. The max amps of 12K is 185A and three batteries can support 150A(50*3). So the number should fill in is 150A.)
- Select “Use Batt% Charged”.
- Enable “BMS Lithium Batt” and set its value to “00”.
- Turn on “Activate Battery”.

Note that enabling BMS Lithium Batt 00 will adjust some values and make other values unadjustable (like the temperature coefficient above). Just ignore those values - the BMS is in control.

Figure 2.6 Batt Setup

The figure displays two screenshots of the 'Batt Setup' interface. The left screenshot shows the 'Batt' tab with fields for Batt Capacity (100Ah per unit), Max A Charge (185A), Max A Discharge (185A), TEMPCO (-0mV/C/Cell), and checkboxes for 'Use Batt V Charged', 'Use Batt % Charged', 'No Battery', 'BMS Lithium Batt' (00), and 'Activate Battery'. The right screenshot shows the 'Charge' tab with fields for StartV (49.0V), Start% (15%), A (40A), Float V (55.6V), Absorbtion V (56V), Equalization V (56V), 30 Days (0.0 Hours), and checkboxes for 'Gen Charge' and 'Grid Charge'. It also includes a 'Generator Exercise Cycle Day & Time' field set to Mon 08 :00 20min.

Program the Charge tab in Batt Setup

See the right picture in Figure 2.6.

- Start%: 15%
- A: Same as the Max A Charge in Batt Setting
- Float V: 55.6V
- Absorption V: 56V
- Equalization V: 56V

Program the Discharge tab in Batt Setup

- Shutdown: 10%
- Low Batt: 20%

➤ Batt Empty: 47.5V

Figure 2.7 Batt Discharge Setup

Batt Setup			
Batt	Charge	Discharge	Smart Load Wind
Shutdown	51V	10%	Batt Resistance 5 mOhms
Low Batt	51.4V	20%	Batt Charge Efficiency 98%
Restart	51.8V	25%	BMS_Err_Stop <input type="checkbox"/>
Batt Empty V	47.5V		

Please refer to the [Sol-Ark inverter manual](#) for more setting such as Grid Setup, PV Setting, Time-of-Use, etc.

Confirm Inverter-Battery Communication

Figure 2.8 communication confirm

The image illustrates the process of confirming inverter-battery communication. It is divided into three main sections:

- Left Section:** A red-bordered box labeled "Click Here for Setup Menu" with a red arrow pointing to a gear icon. Below it are four icons representing different system components (PV, Grid, Load, Battery) and four circular gauges showing power levels: 12.00 KW, -4.60 KW, 5.00 KW, and -2.40 KW.
- Middle Section:** A screenshot of the "System Setup" menu. A red arrow points from the gear icon in the left section to the "Lithium Batt Info" option in the "Battery Setup" category. The "Lithium Batt Info" screen displays: "Sol-Ark 8k/12k-P", "- ID: ##### SD", "- COMM: ####", and "- MCU: Ver####".
- Right Section:** A screenshot of the data output window. A red arrow points from the "Lithium Batt Info" screen to this window. The text reads: "Header data appears here 56V 185A etc...." followed by a list of data points: "1: 0000000000000000", "2: Battery Data appears here when successful", "3: 0000000000000000", "4: 0000000000000000", ".....", and "16. 0000000000000000".