HOPETREK

Installation guide

Product Model：ESS-LB5-W01

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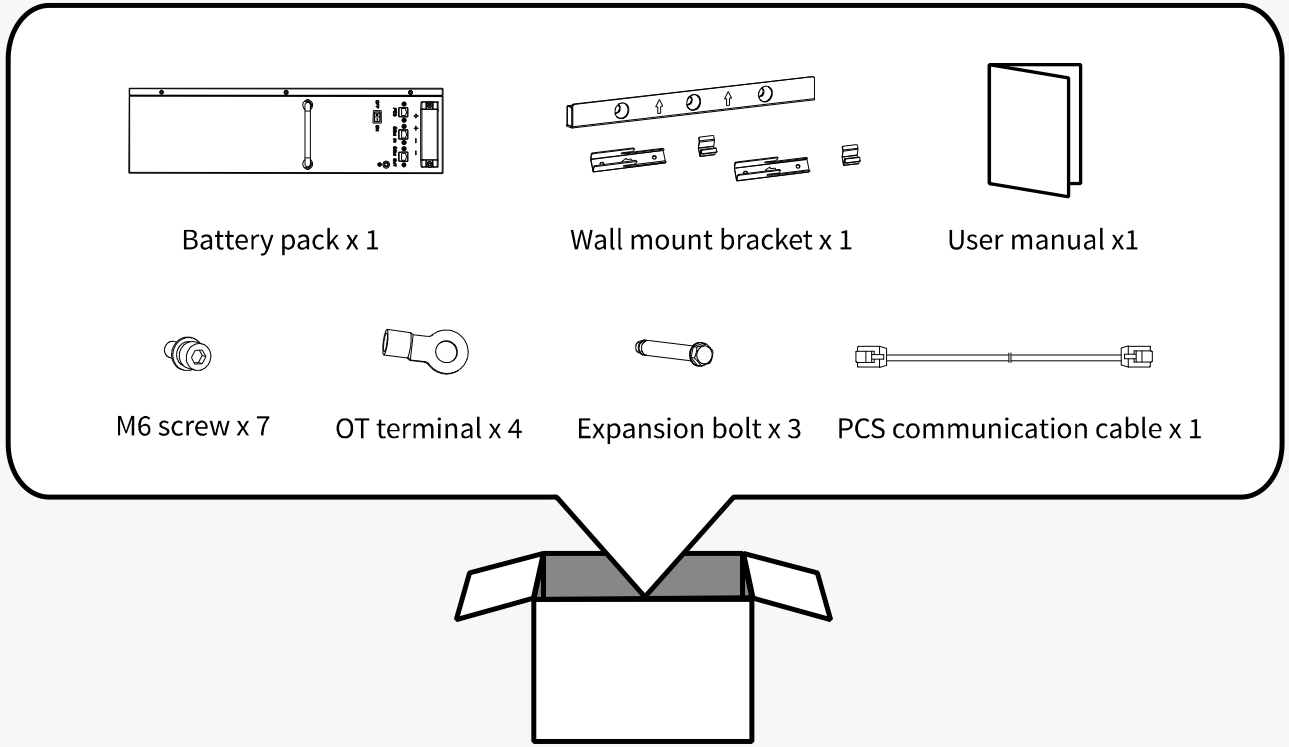
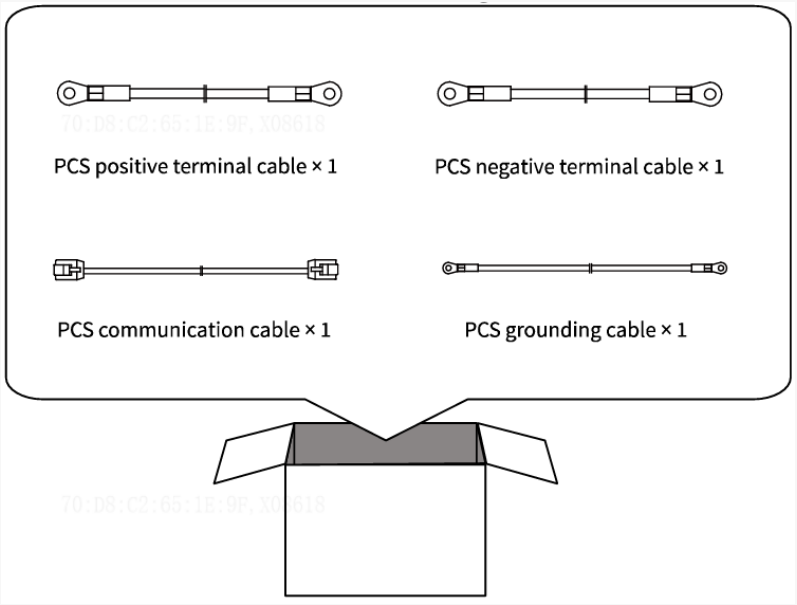
PART 01

Preparation & Requirement

1.1 Packing List



1.2 Packing List



Battery-Inverter Cable Package
(Sold separately)

Cable	Length	Color	Standard	Core Diameter
PCS positive terminal cable	1.5m	Orange	UL10269	2AWG
PCS negative terminal cable	1.5m	Black	UL10269	2AWG
PCS communication cable	1.5m	White	CAT 5e	26AWG
PCS grounding cable	1.5m	Yellow/green	UL10269	10AWG

ESA-CA-RLP-A

1.3 Environment Requirements

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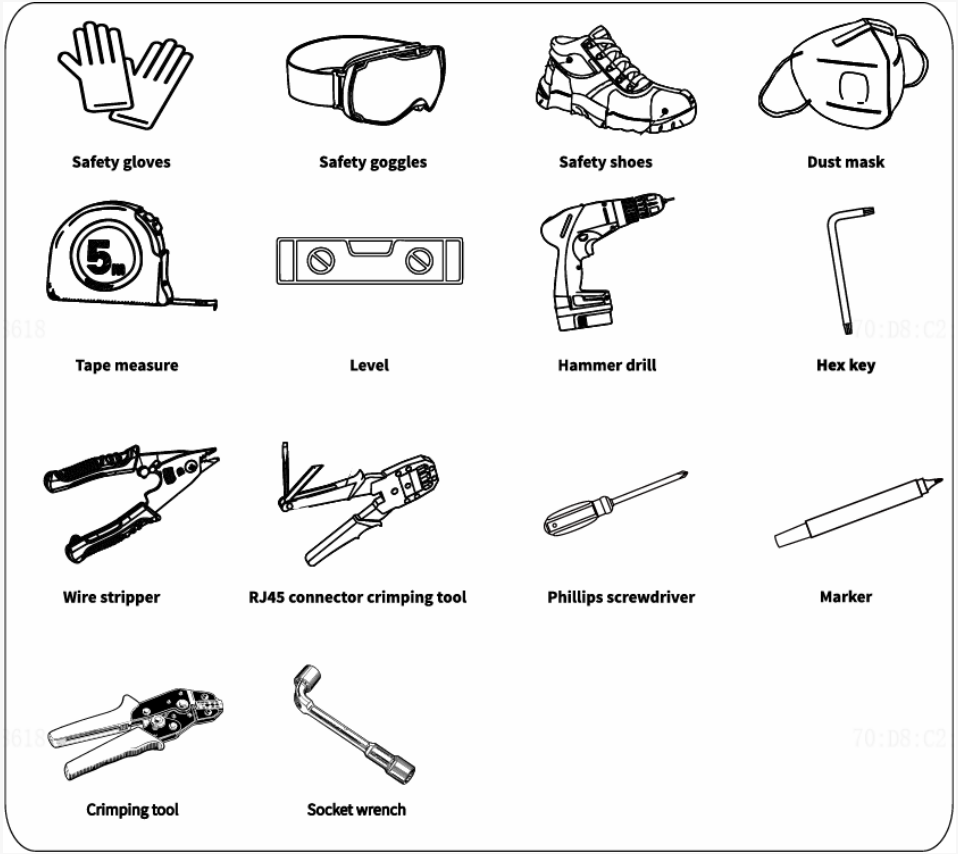
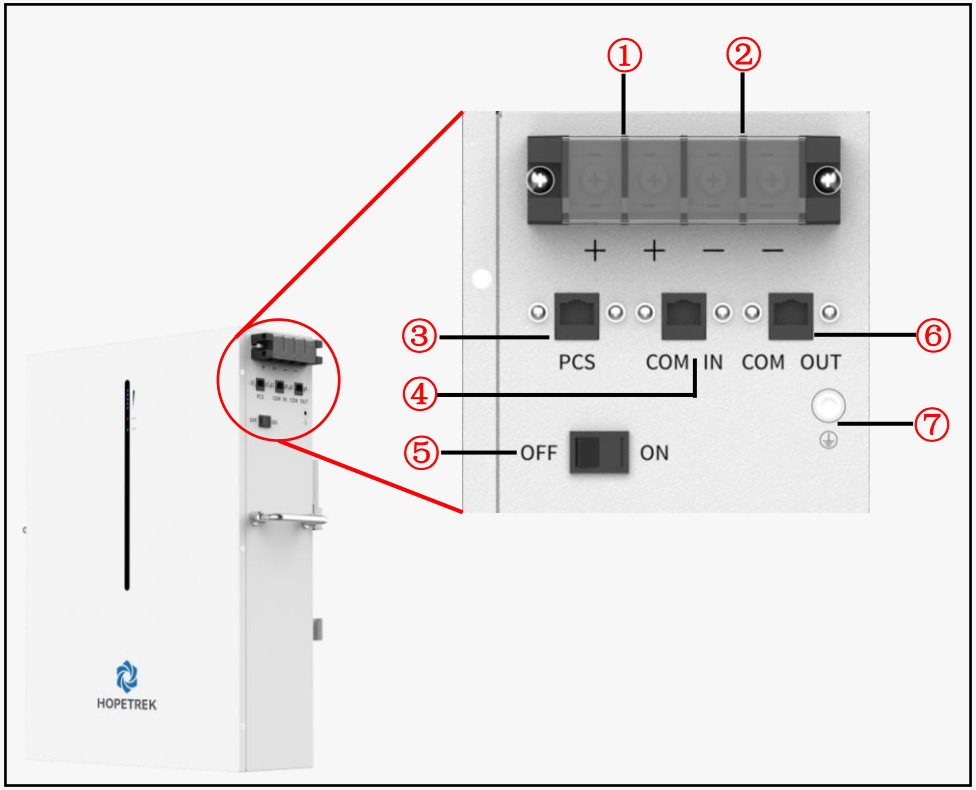
- Do not install the device in easily accessible areas or near children's activity zones.
- Flammables and explosives must be kept away from the device; independent fire alarm devices must be provided.
- Do not expose the battery pack to sunlight or near any heat sources.
- Do not install the device in areas prone to water accumulation. Do not expose the device to rain.
- The device should be installed in a place with sufficient load-bearing capacity and levelness, and should not be tilted, laid down, or placed upside down.
- The optimal operating condition of the device is at an ambient temperature of around 25° C. Operation in high temperatures should be avoided.
- The installation altitude of the device should not exceed 2000m.
- Sufficient space should be kept around the device for efficient ventilation and heat dissipation.

1.4 Tools Preparation



1.5 Battery Interface



No.	Name	Description
①	BAT+	Positive terminal of battery.
②	BAT-	Negative terminal of battery.
③	PCS	BMS communication interface for inverter connection.
④	COM IN	Used for inter-battery pack communication, connecting to the COM OUT interface of the previous battery pack.
⑤	Power button	Power on/off switch of battery.
⑥	COM OUT	Used for inter-battery pack communication, connecting to the COM IN interface of the next battery pack.
⑦	Grounding	Grounding protection.

PART 02

Battery Installation & Wiring

2.1 Mounting the battery

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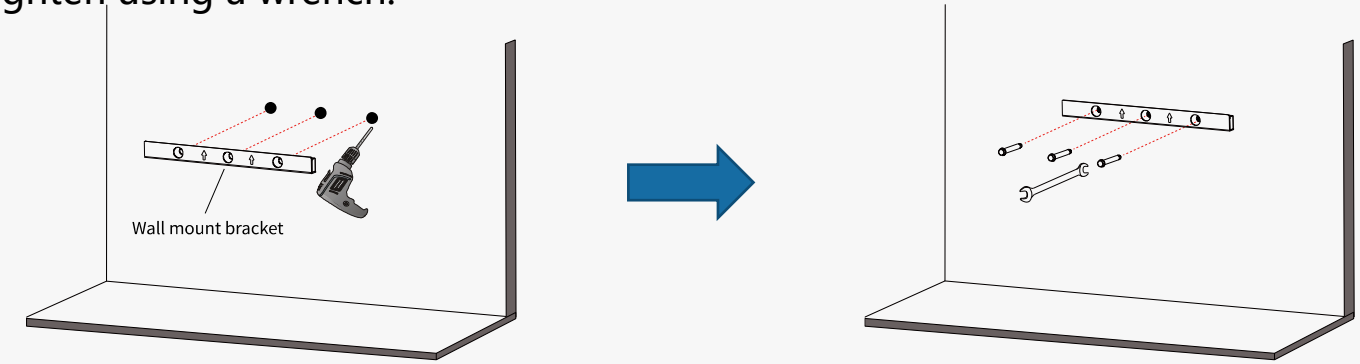
Step 1: Install the wall mount bracket.

- Determine the hole positions on the wall according to the three holes on the wall mount bracket. Choose a drill bit with a diameter that matches the outer diameter of the expansion bolts. Drill holes in the wall, ensuring the hole depth matches the length of the expansion bolts.
- Align the bracket with the holes on the wall, insert the three expansion bolts into the holes, and tighten using a wrench.



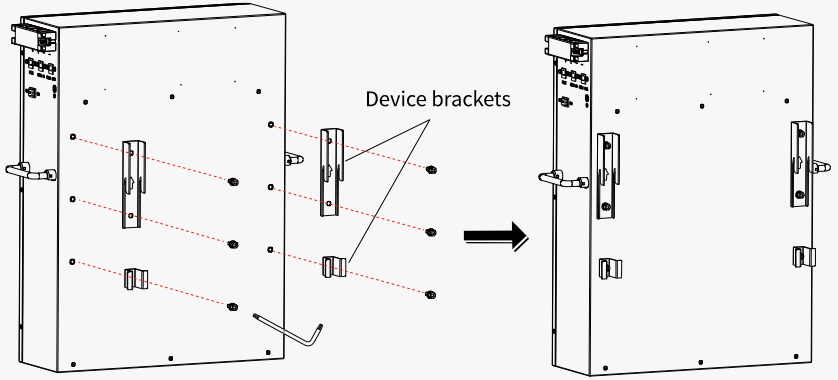
NOTICE

Install the wall mount bracket with the arrows facing upwards.

2.1 Mounting the battery

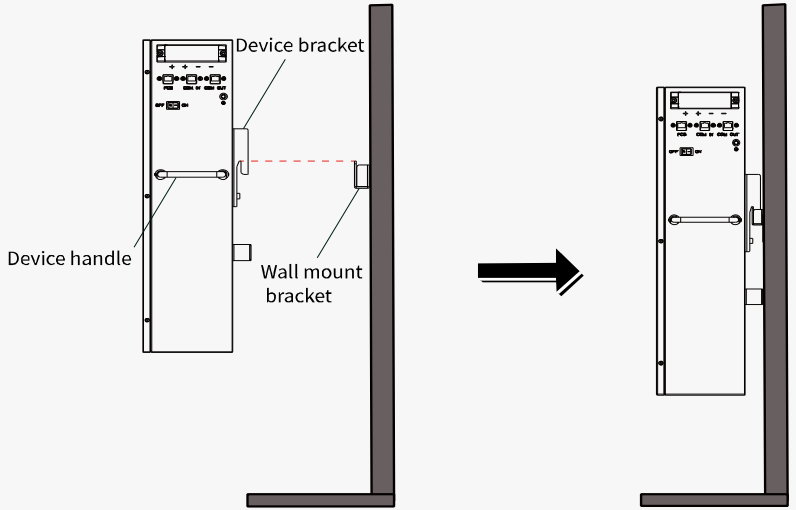
Step 2: Install device brackets.

- Attach both brackets to the device and tighten all **six M6 screws** using the hex key.

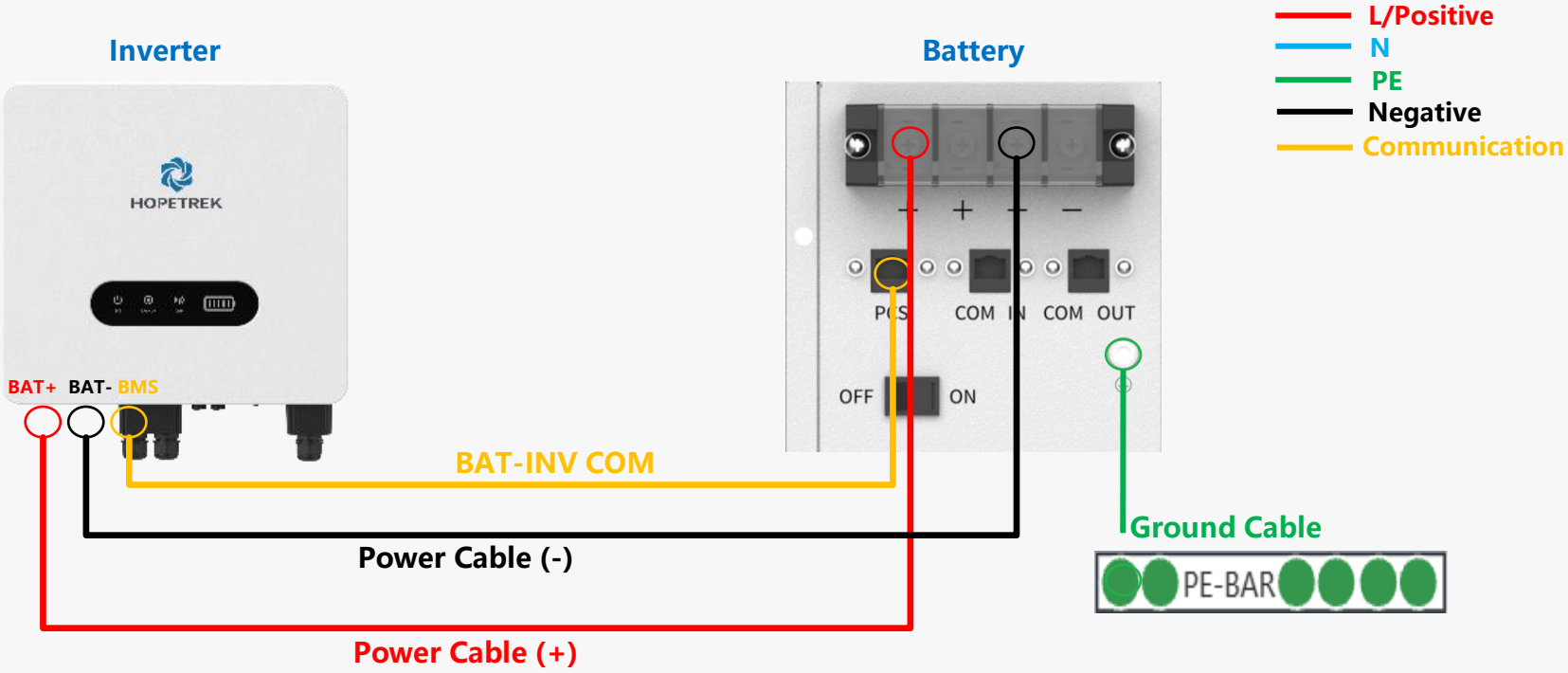


Step 3: Mount the device on the wall.

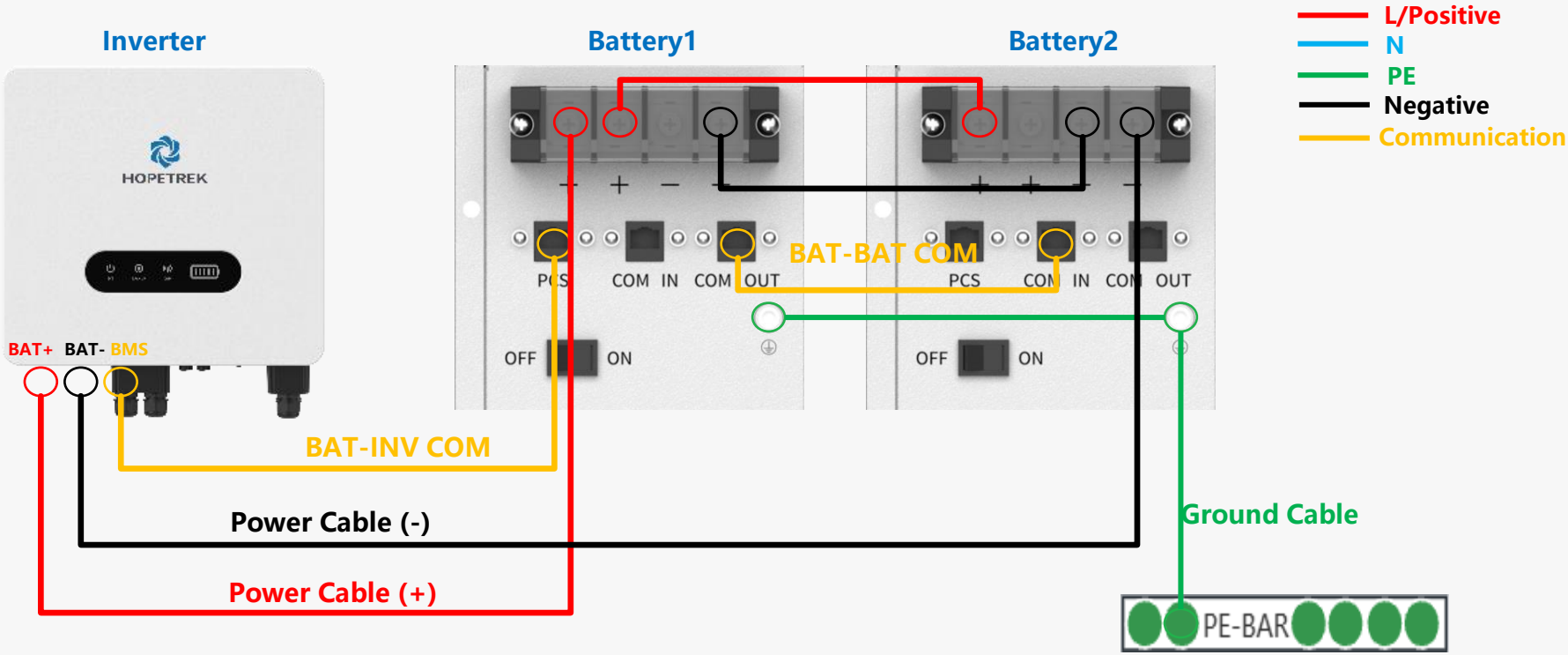
- Lift the device by holding the two handles, align the two brackets with the wall mount bracket, and slot them into place as shown below.



2.2 Battery Wiring (1 Battery)



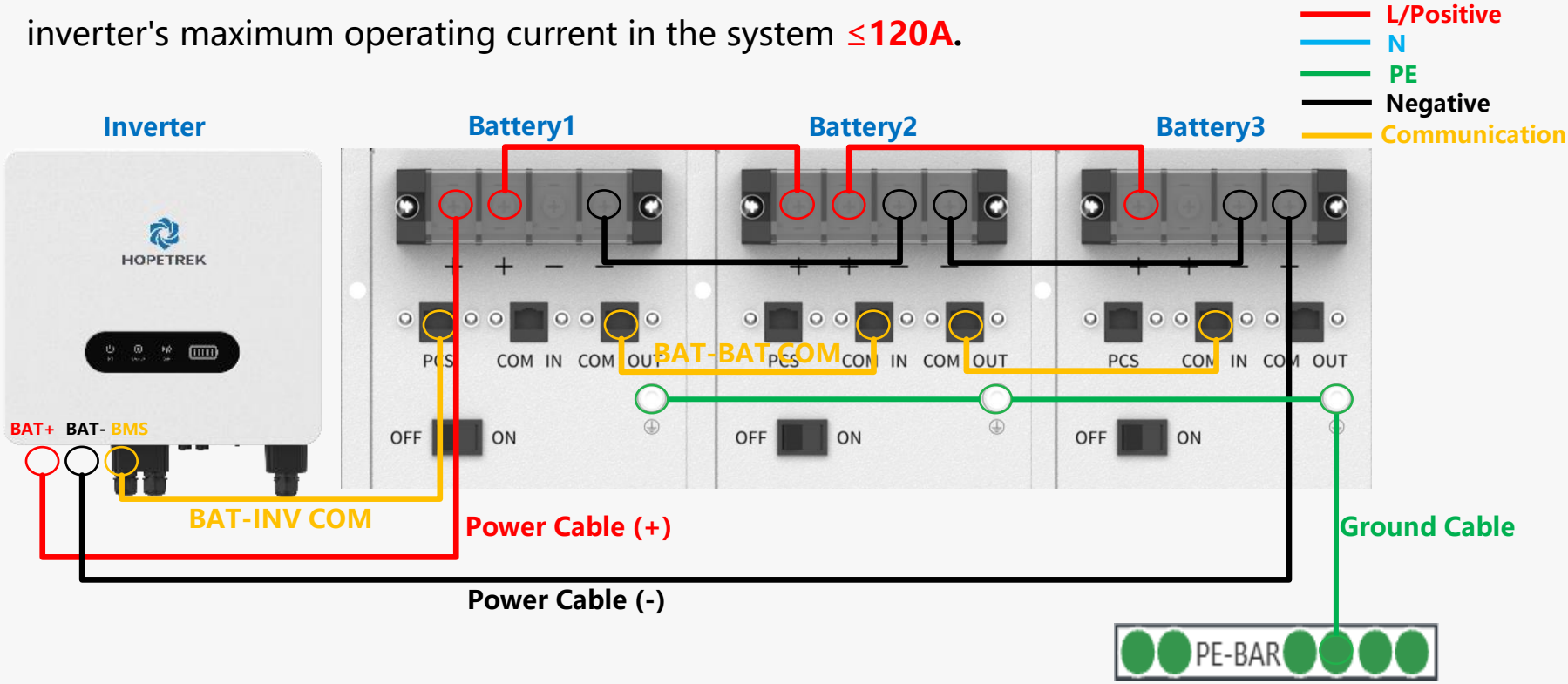
2.2 Battery Wiring (2 Batteries)



2.2 Battery Wiring (>3 Batteries)

➢ Method 1

inverter's maximum operating current in the system ≤120A.



2.2 Battery Wiring (3 Batteries)

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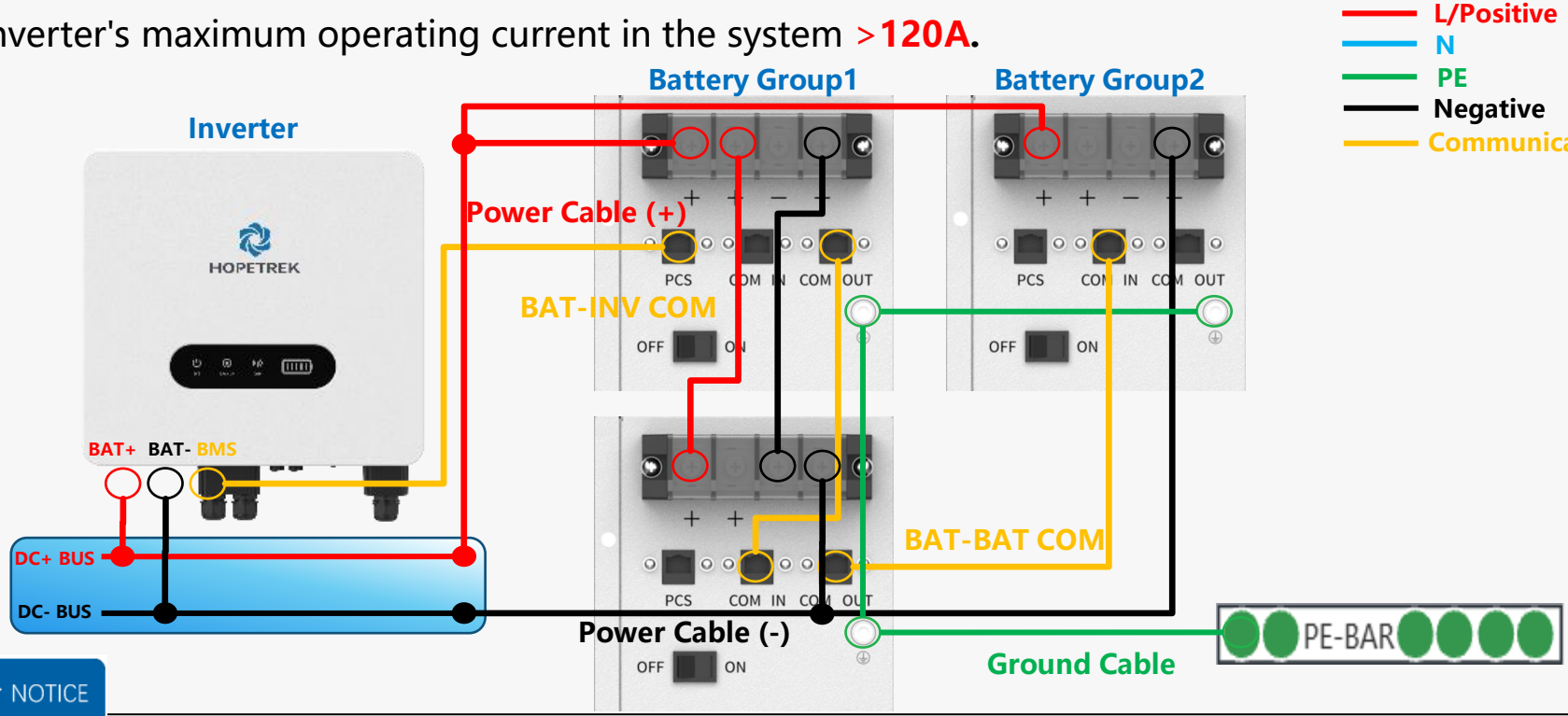
➢ Method 2

inverter's maximum operating current in the system **>120A**.



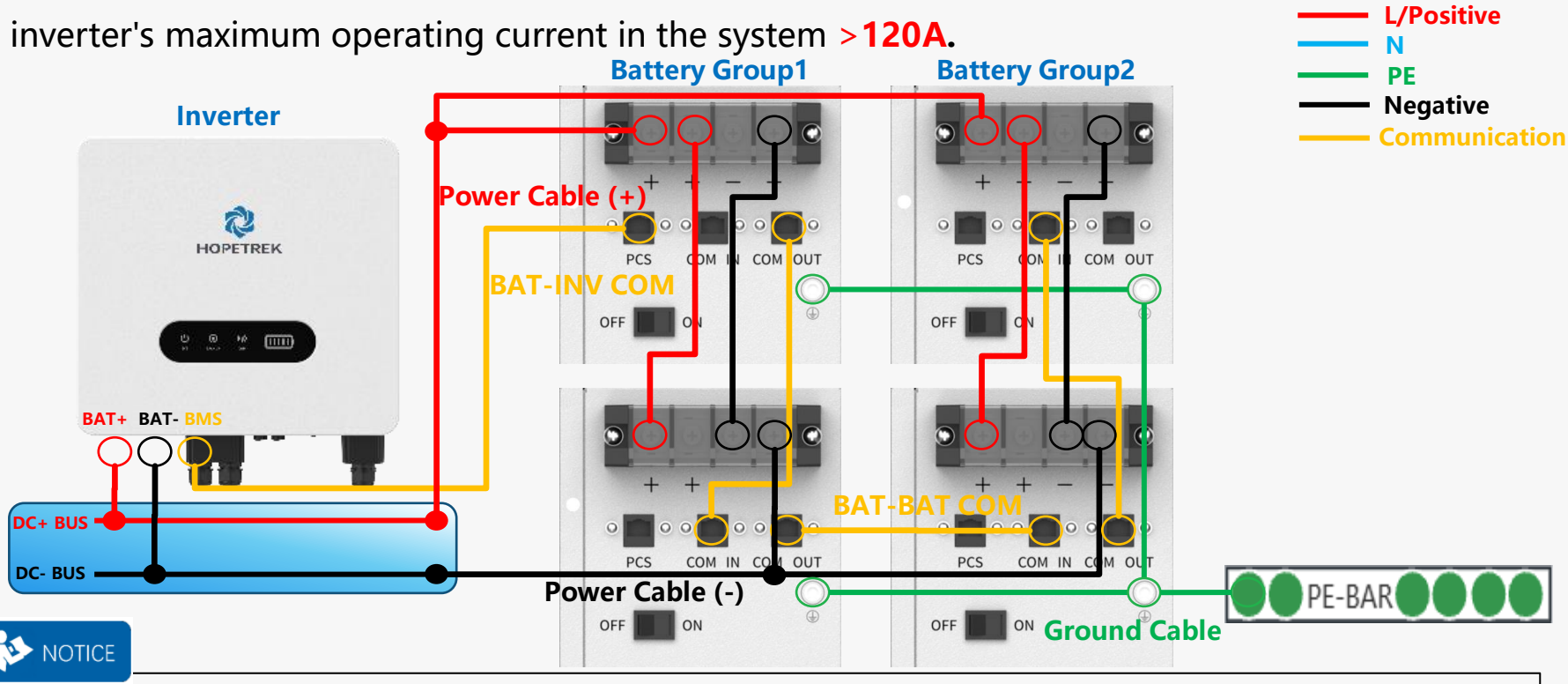
NOTICE

The specification of the battery combiner box shall be greater than the inverter's maximum operating current.

2.2 Battery Wiring (4 Batteries)

➢ Method 2

inverter's maximum operating current in the system **>120A**.



NOTICE

The specification of the battery combiner box shall be greater than the inverter's maximum operating current.

2.3 Electrical Connection

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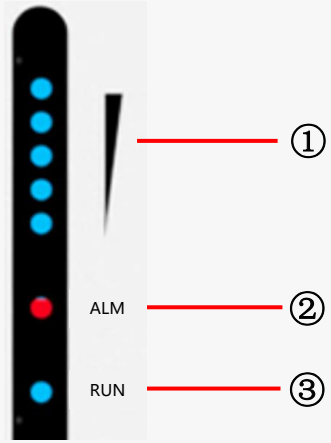
Definitions of Communication Interfaces

No.	PCS	COM IN	COM OUT
1	485_B_PCS	ADD_IN_COM	ADD_OUT_COM
2	485_A_PCS	AGND	AGND
3	-	232_TX	-
4	CAN_H	AGND	-
5	CAN_L	-	-
6	-	232_RX	-
7	485_A_PCS	485_A_COM	485_A_COM
8	485_B_PCS	485_B_COM	485_B_COM

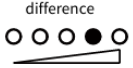
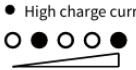
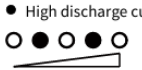
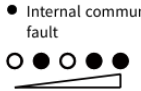
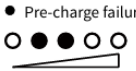
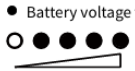
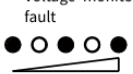
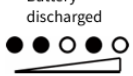
2.4 Battery Indicators



Indicator Light	Description
①SOC	Battery indicator light
②ALM	Alarm indicator light
③RUN	Status indicator light

2.5 Troubleshooting

Fault information can be viewed through the SOC sequence. When a fault occurs, both the ALM and SOC lights remain on; if multiple faults are present, the SOC will cycle through them.

Fault	● Low battery voltage 	● Abnormal cell voltage difference 	● Low system voltage 
	● High charge current 	● High discharge current 	● Internal communication fault 
	● Pre-charge failure 	● AFE fault 	● Battery voltage fault 
	● BMS and PCS communication fault 	● Charging MOS fault 	● Discharging MOS fault 
	● Voltage monitoring line fault 	● Overcurrent lockout 	● Battery deeply discharged 
Solution	1. Turn off the system power and wait for 5-10 minutes. 2. Check the battery pack and cables for any damage. 3. Check that the system wiring is correct. 4. After the above items are checked correct, turn on the system power. 5. If the alarm persists, please contact technical support.		

Fault	● High battery discharge temperature 	● Low battery discharge temperature 	● High battery charge temperature 
	● Low battery charge temperature 	● Abnormal cell temperature difference 	● Cell temperature fault 
	● High MOS temperature 	● MOS temperature fault 	
Solution	1. Check whether the ambient temperature at the installation site is within the permissible operating temperature range for the device. 2. If there is no ventilation or the ambient temperature is too high, enhance ventilation and cooling; if the ambient temperature is too low, increase the ambient temperature or change the installation location. 3. If the ambient temperature is normal, please contact technical support.		

THANKS