

# Quick Installation Guide

## BMS Parallel Box-II

### Installation Prerequisites

Ensure that the installation location meets the following conditions:

- The building is designed to withstand earthquakes
  - The location is far from the sea to avoid salt water and humidity, over 0.62 miles/997.79 meters
  - The floor is flat and level
  - There are no flammable or explosive materials, at a minimum of 3 ft/0.91 m
  - The ambience is shady and cool, away from heat and direct sunlight
  - The temperature and humidity remains at a constant level
  - There is minimal dust and dirt in area
  - There are no corrosive gases present, including ammonia and acid vapor
  - Where charging and discharging, the ambient temperature ranges from 32°F/0°C to 113°F/45°C
- In practice, the requirements of battery installation may be different due to environment and locations. In that case, follow up the exact requirements of the local laws and standards.



#### Note!

The company's battery module is rated at IP55 and thus can be installed outdoors as well as indoors. However, if installed outdoors, the battery pack shall not be exposed to direct sunlight and moisture.



#### Note!

If the ambient temperature exceeds the operating range, the battery pack will stop running to protect itself. The optimal temperature range for operation is 59°F/15°C to 86°F/30°C. Frequent exposure to harsh temperatures may deteriorate its performance and lifetime.

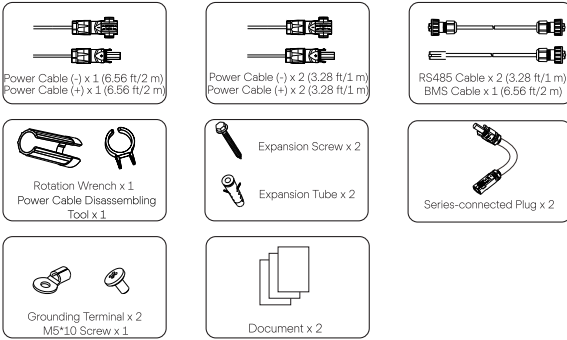


#### Note!

For the first installation, the interval among manufacture dates of battery modules shall not exceed 3 months.

### Packing List (BMS Parallel Box-II)

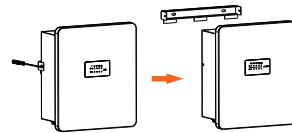
Note: The Quick Installation Guide briefly describes required installation steps. If you have any questions, refer to the Installation Manual for more detailed information.



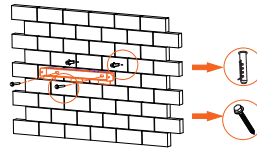
### IV

### Battery Installation

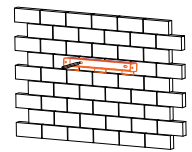
The bracket needs to be removed from the box.



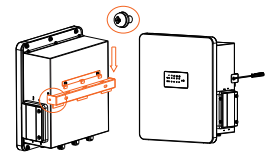
Insert expansion tubes to the wall, then fix the wall bracket to the expansion tubes using ST6.0 \*L55 screws



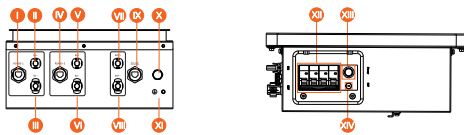
- Drill two holes with drilller (ø 0.39 inch/10 mm)
- Depth: at least 3.15 in/80.00 mm



- Fix the box to the bracket with M4 screws.



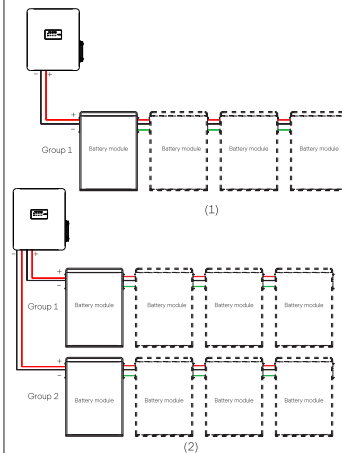
### Terminals of the BMS Parallel Box-II



Object	Mark	Description
I	RS485-1	Battery module communication of group 1
II	B1+	Connector B1+ of Box to + of battery module of group 1
III	B1-	Connector B1- of Box to - of battery module of group 1
IV	RS485-2	Battery module communication of group 2
V	B2+	Connector B2+ of Box to + of battery module of group 2
VI	B2-	Connector B2- of Box to - of battery module of group 2
VII	BAT+	Connector BAT+ of Box to BAT+ of inverter
VIII	BAT-	Connector BAT- of Box to BAT- of inverter
IX	BMS	Connector BMS of Box to BMS of inverter
X	/	Air Valve
XI	⊕	GND
XII	ON/OFF	Circuit Breaker
XIII	POWER	Power Button
XIV	DIP	DIP Switch

### V

### Overview of Installation



The recommended installation distance between the box and the battery group (incl. group 1 and group 2) is 11.81-23.62 inches/300-600 mm, and the distance between the modules is 9.84 inches/250.00 mm.



#### Note!

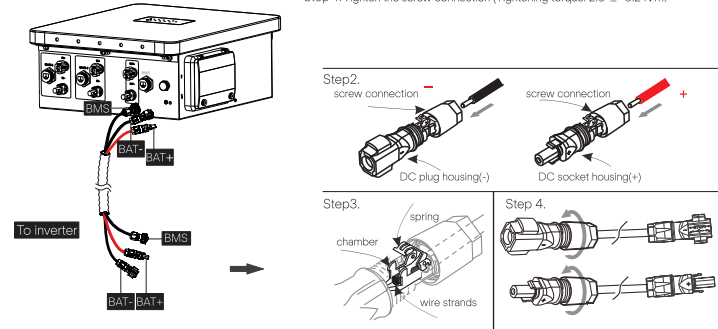
- If the batteries have not been used for more than 9 months, these batteries must be charged to at least SOC 50 % each time.
- If a battery is replaced or added for capacity expansion, each battery's SOC should be consistent. The max. SOC difference should be between ±5%.
- If users want to increase their battery system capacity, please ensure that the SOC of the existing system capacity is about 40%. The manufacture date of the new battery shall not exceed 6 months; in case of exceeding 6 months, please charge the new battery to around 40%.
- Before installation, please make sure that the wall can bear the weight of the batteries installed. If not, please take the mode of floor installation.

## VI

### Connecting Cables to Inverter

Box to Inverter:  
BAT+ to BAT+;  
BAT- to BAT-;  
BMS to BMS

- Strip the cable (A/B:5.56 ft/2 m) to 0.59 in/15 mm.
- Insert the stripped cable up to the stop (negative cable for DC plug (-) and positive cable for DC socket (+) are live). Hold the housing on the screw connection.
- Press down the spring clamp until it clicks audibly into place (You should be able to see the fine wire strands in the chamber).
- Tighten the screw connection (Tightening torque:  $2.0 \pm 0.2$  N·m)



## IX

### Communication Cable Connection

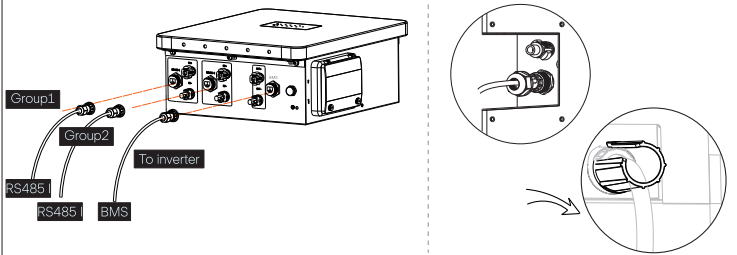
For Box:

Insert one end of the BMS communication cable without cable nut directly to the BMS port of the Inverter. Assemble the cable gland and tighten the cable cap.

For battery models:

Connect the RS485 II communication system on the right side to RS485 I of the subsequent battery module on the left side.

Note: There is a protection cover for the RS485 connector. Unscrew the cover and plug one end of the RS485 communication cable to the RS485 connector. Tighten the plastic screw nut which is set on the cable with a rotation wrench.



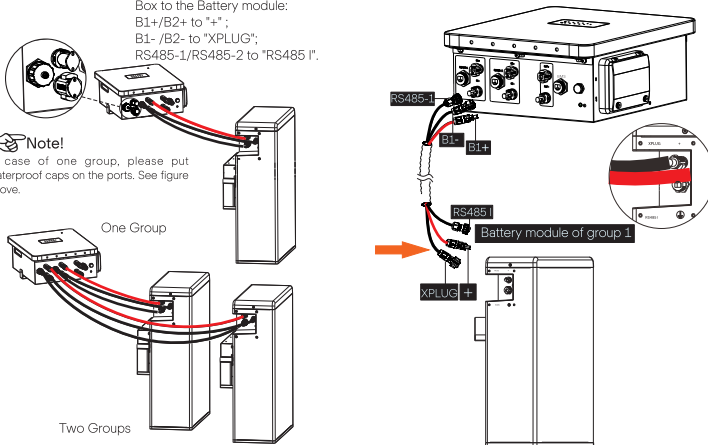
## VII

### Connecting to Battery Modules

Box to the Battery module:  
B1+ /B2+ to "+";  
B1- /B2- to "XPLUG";  
RS485-I/RS485-2 to "RS485 II".

Note!

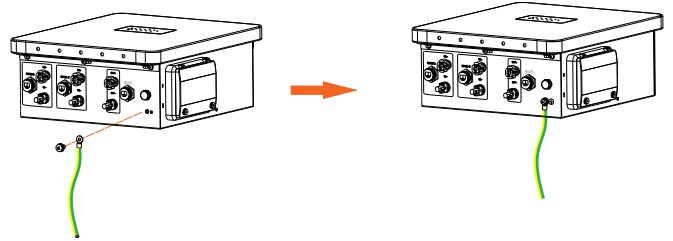
In case of one group, please put waterproof caps on the ports. See figure above.



## X

### Ground Connection

The terminal point for GND connection is shown as below (Torque: 1.5 N·m):



Note!

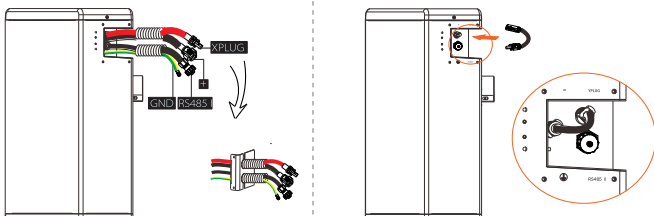
GND connection is mandatory!

## VIII

### Battery Module to Battery Module

Battery module to battery module (Get the cables through the conduit):

- "XPLUG" on the right side of HV11550 to "XPLUG" on the left side of the next battery module.
- "-" on the right side of HV11550 to "+" on the left side of the next battery module.
- "RS485 I" on the right side of HV11550 to "RS485 II" on the left side of the next battery module.
- The rest battery modules are connected in the same way.
- Insert the series-connected cable at "-" and "XPLUG" on the right side of last battery module to make a complete circuit.



Note!

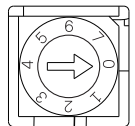
Please don't forget to put a waterproof cap on the port after wiring is completed. See figure above.

## XI

### Commissioning

After all battery modules are installed, please follow the following steps to start the box:

- Configure the DIP to the corresponding number according to the number of battery module(s) that has(have) been installed;
- Remove the cover board of the box;
- Move the circuit breaker switch to "ON";
- Press the POWER button to start the box;
- Reinstall the cover board to the box;
- Turn on the inverter AC switch;
- After starting the box, please confirm that the waterproof cap is closed again.



Configuration activated by inverter:  
0- Matching a single battery group (group 1 or group 2)  
1- Matching both battery groups (group 1 and group 2)

Caution!

If DIP switch is 1, the number of batteries in these both groups must be the same.

Note!

To adjust the DIP switch, a small flat-head screwdriver shall be prepared by users themselves.

