Jul.2020_Rev.1.0

Statement:

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If you have any questions, please contact us through the after-sales service website.

Jiangsu Weiheng Intelligent Technology Co., Ltd.

ecactus.wifopro.com

CONTENT

# 1 General Information

## 1.1About This Manual

This user manual contains WH-BX series high-voltage box products information, usage guidance, safety information, and details on common faults and subsequent corrective actions. In case of abnormal failure or emergency, users can contact our after-sales service center. This user manual applies to the following products：

WH-BX4.1/WH-BX6.2/WH-BX8.2/WH-BX10.3/WH-BX12.3

## 1.2Target Products

This manual is applicable to WH-BX series high-voltage battery box products.

## 1.3Application

WH-BX series high-voltage box is an energy storage unit that is designed to be used in residential on-grid applications. When WH-BX series high-voltage battery box is connected to different inverters, users should refer to the configuration list and make combination with the specified inverter model.

## 1.4 WH-BX Series High-Voltage Battery Box Definition

WH：Jiangsu Weiheng Intelligent Technology Co., Ltd.

BX：Battery box

BM：Battery module, the nominal capacity of a single battery module is 2.048kWh.

BCU: Battery control unit

Base：Battery box base

## 1.5 Product Identification

The label describes the product identification information, and is attached on the product. For safer usage, the user must be well-informed of the contents in the label.

The label includes: product name, product model, rated voltage, capacity, output power, and operating temperature,etc.

# 2 Safety Precautions

## 2.1 Safety Precautions

Reminder:

Users should strictly follow the user manual and related documents for Weiheng high-voltage battery box;

Weiheng Intelligent Technology Co., Ltd. shall not be held liable for any accident caused by installation and operation that do not in accordance with the user manual.

WARNING

The battery should to be charged at least once within six months during storage;

The battery should be stored at an ambient temperature of -10~45℃;

The battery should work in the environment temperature of -10~55℃;

Do not expose the battery to direct sunlight for extended periods of time;

Ensure reliable grounding;

Do not reverse the polarity;

Do not put the battery into fire or water;

Do not crush, drop or puncture the battery.

Always dispose of the damaged batteries according to local safety regulations;

Disconnect the battery system from power and then power off the inverter before installation and maintenance; in order to avoid danger, do not disassemble the module while the system is running.

The battery shall be repaired or replaced by skilled personnel recognized;

The battery shall be stored according to relevant standards;

Package battery should not be stacked more than 6 layers during transportation and storage;

The WH-BX series high-voltage battery box is intended for use only in residential energy system, but not in other industries such as medical equipment and automobiles, etc.

CAUTION

Do not use damaged, failed or deformed batteries, which may result in dangerous situation and cause severe injury due to electric shock. WH-BX series high-voltage battery box can only work in the condition of no fault, no damage and safe operation.

Check the WH-BX series battery boxes on a regular basis to ensure that all equipment is not damaged and can be used normally. If the WH-BX series battery box is damaged, please do not touch it. If major failure information is displayed on the product or inverter APP, please contact the service provider.

WARNING

Do not touch the battery terminals when disassembling the system. All work related to the electrical connection of the system should be carried out by technical personnel.

In the case of improper operation including battery damage, misuse, and abuse, potentially dangerous situations such as battery overheating or electrolyte fogging may occur. The following safety precautions and warnings in this section must be observed at all times when working on or with batteries. If you do not fully understand any of the following precautions, or if you have any questions, please contact customer service for guidance.

The installation safety guide may not include all regulations in your area; installation and maintenance personnel must operate in accordance with applicable federal, state, and local regulations as well as industry standards in the installation guide for this product.

## 2.2 Installation Safety Guide

WARNING

Do not touch the battery terminals when disassembling the system. All work related to the electrical connection of the system should be carried out by technical personnel.

When the WH-BX series high-voltage tank is in operation, a safe and reliable source of electrical energy should be provided.

In the case of improper operation including battery damage, misuse, and abuse, potentially

dangerous situations such as battery overheating or electrolyte fogging may occur. The following safety precautions and warnings in this section must be observed at all times when working on or with batteries. If you do not fully understand any of the following precautions, or if you have any questions, please contact customer service for guidance.

The installation safety guide may not include all regulations in your area; installation and maintenance personnel must operate in accordance with applicable federal, state, and local regulations as well as industry standards in the installation guide for this product.

The installation personnel must not wear metal fittings, etc. in order to avoid short circuit and personal injury.

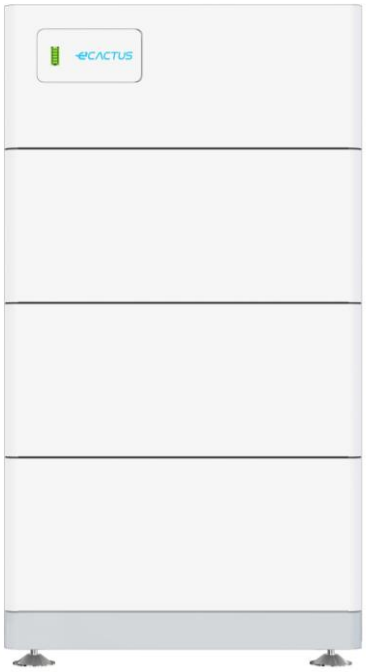
WARNING

In the process of product loading and unloading, be careful to avoid product damage and personal injury caused by product falling.

# 3 Product Overview

## 3.1 WH-BX Series High-voltage Battery Box System Introduction

This product is a high-voltage DC battery system with an operating voltage range of 80~340.8V. It is utilized in household energy storage applications and works together with a high-voltage inverter to achieve the goal of energy storage for the home. A battery system consists of 2 to 6 individual battery modules connected in serial. The product do not have an independent monitoring software, it relies on the inverter monitoring application.



Product overview

| | Length（mm） | Width（mm） | Height（mm） | Diagram |
|---|---|---|---|---|
| BCU | 500 | 258 | 200 |  |
| BM | 500 | 258 | 231.5 |  |
| Base | 500 | 258 | 66 |  |

Major components

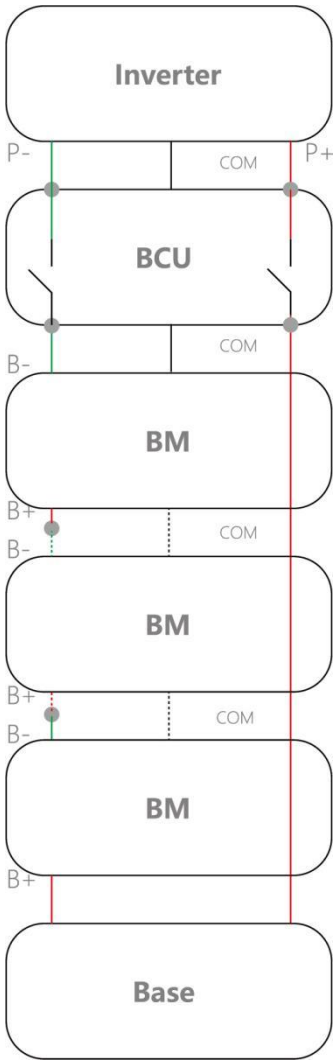
## 3.2 WH-BX Series High-voltage Battery Box Definition

| No. | Name | Definition |
|---|---|---|
| 1 | BM | Battery module, battery pack (including 16 batteries in serial), BMS and structural case. It is the smallest unit of the system. |
| 2 | Battery Control Unit(BCU) | The battery box control module, including the BCU and charge and discharge relays, which is connected to the battery module below and the inverter above. |
| 3 | BMS | Battery management system |
| 4 | Base | Battery box base, including base box body and connecting terminal |
| 5 | WH-BX | Battery system: The entire product contains 2 to 6 battery modules, 1 BCU module, 1 base and other accessories. |

## 3.3 WH-BX Series High-voltage Battery Box Configuration Table

| | | **Configuration** | | | | |
|---|---|---|---|---|---|---|
| **No.** | **Name** | **BCU** | **BM** | **Base** | **Energy (kWh)** | **Voltage（V）** |
| 1 | WH-BX4.1 | 1 | 2 | 1 | 4.10 | 80~113.6 |
| 2 | WH-BX6.2 | 1 | 3 | 1 | 6.15 | 120~170.4 |
| 3 | WH-BX8.2 | 1 | 4 | 1 | 8.20 | 160~227.2 |
| 4 | WH-BX10.3 | 1 | 5 | 1 | 10.25 | 200~284 |
| 5 | WH-BX12.3 | 1 | 6 | 1 | 12.29 | 240~340.8 |

## 3.4 WH-BX Series Battery Box System Application Diagram



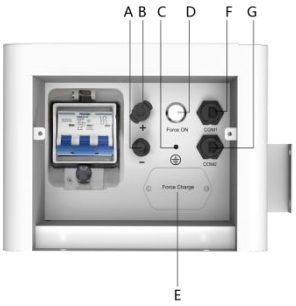

BM:2-6

System diagram

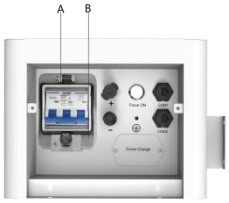
## 3.5 BCU Introduction

BCU is connected to the battery module and the inverter.

| Position | Designation |
|---|---|
| A | - interface |
| B | + interface |
| C | Grounding interface |
| D | Force on button |
| E | Force charge interface |
| F | CAN/RS-485 interface |
| G | CAN/RS-485 interface |




| Position | Designation |
|---|---|
| A | System switch waterproof cover |
| B | System switch |
| | |

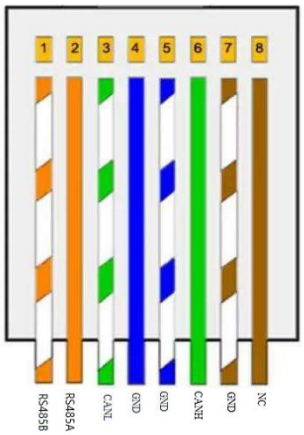



BCU Functional Interface Definition

| No. | Interface Name | Description |
|---|---|---|
| 1 | + | The system positive terminal, connected to the inverter positive terminal for battery |
| 2 | — | The system negative terminal, connected to the inverter negative terminal for battery |
| 3 | ⏚ | Grounding terminal, connected to the ground. |
| 4 | COM1，Test communication | Containing RS485 and CAN signals. |
| 5 | COM2，Inverter communication | Containing RS485 and CAN signals |
| 6 | System switch | The main switch of system, which can be operated manually and has the short circuit protection function |
| 7 | Force on button | Press and hold the button for 5 seconds to power on the battery box forcibly even without connection to inverter. The battery box will power off in 5 minutes if no connection is established. |
| 8 | Force charge interface | This port can be used to forcibly charge the battery pack |

| | | |
|---|---|---|
| | | when SOC of battery box is too low to close up the inside contactors. |

COM1、COM2 Functional Interface Definition

| No. | Color | COM1 | COM2 | Diagram |
|---|---|---|---|---|
| 1 | Orange-and-white | RS485B | RS485B |  |
| 2 | Orange | RS485A | RS485A | |
| 3 | Green-and-white | CANL | CANL | |
| 4 | Blue | GND | GND | |
| 5 | Blue-and-white | GND | GND | |
| 6 | Green | CANH | CANH | |
| 7 | Brown-and-white | GND | GND | |
| 8 | Brown | NC | NC | |



## 3.6 Battery Module Introduction

The electrical parameters of the battery module are designed as follows:

| **Product Model** | **BM** |
|---|---|
| Nominal voltage [V] | 51.2 |
| Capacity [Ah] | 40 |
| Stored energy [kWh] | 2.048 |
| Charge mode | Constant-voltage limited-current |
| Max. charge current | 40A |
| Max. discharge current | Continuous at 40A |
| Operating temperature | -10℃~+55℃ |
| Storage temperature | -10-45℃ (<3 months, SOC: 20%-60%)<br>-10-40℃ (<12 months, SOC: 20%-60%) |

# 4 Installation Instructions

This chapter mainly introduces the installation of the battery box, including the installation process, installation preparation, transportation and unpacking inspection, battery box installation, battery installation, electrical connection, etc.

## 4.1 Installation Process

The installation process of the battery box is shown in Figure 4-1.

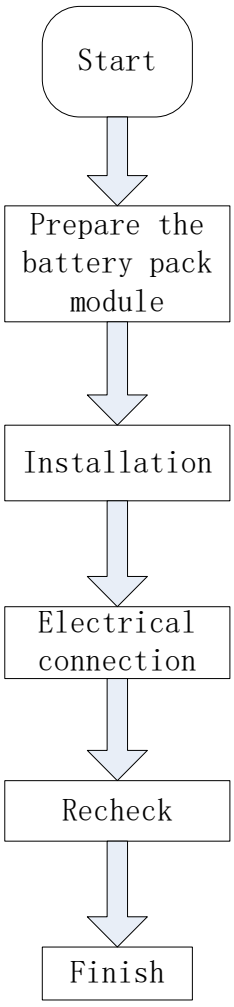
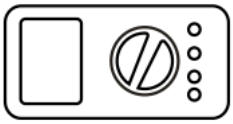



Figure 4-1 Installation process

## 4.2 Installation Preparation

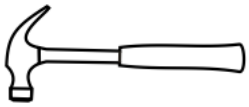
### 4.2.1 Installation Tools

Cross screwdriver

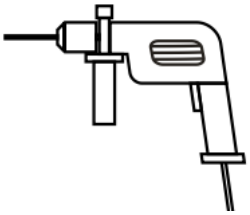


Multimeter

Adjustable wrench

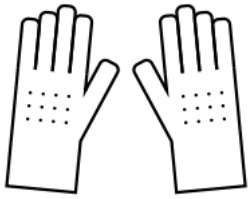


Claw hammer

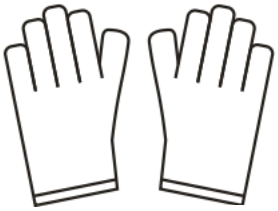


Percussion drill

Diagonal pliers

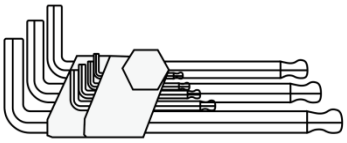


Insulating gloves

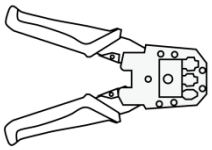


Protective gloves

Wire stripper



Hex wrench

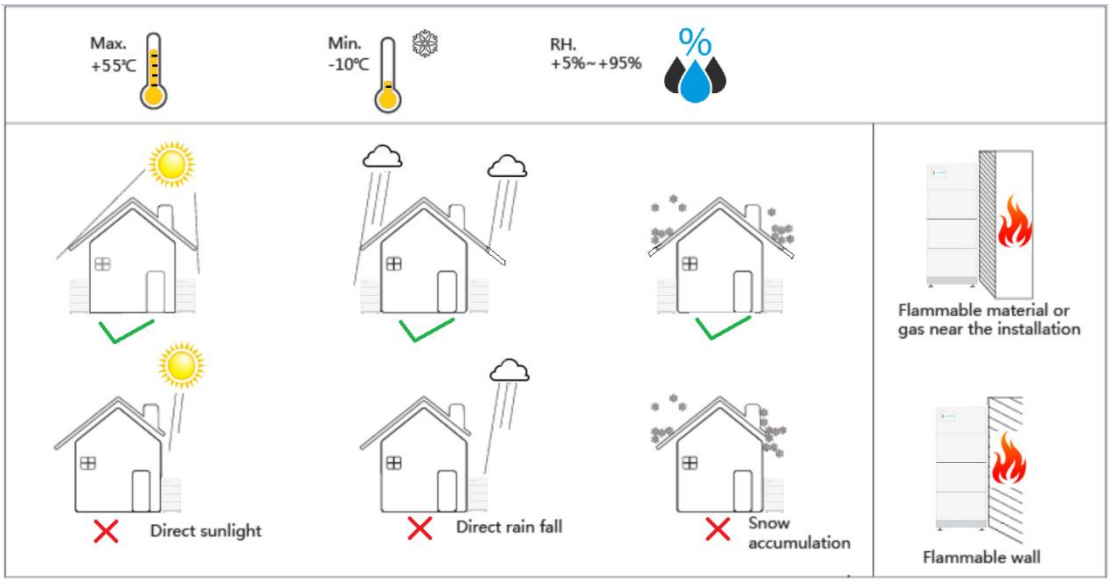


Wire crimper

### 4.2.2 Installation Environment Requirements

It is recommended to install in a place that is dry, ventilated, and flat to ensure adequate heat dissipation.

Install in a place where there is no direct sunlight and direct radiation from other heat sources. If it cannot be avoided, install a cover to prevent direct sunlight.



### 4.2.3 Installation Spacing Requirements

Maintain a distance of at least 400mm between both the left and right side of the battery box and surrounding obstacles or other equipments, and maintain a distance of at least 300mm from the top of the battery box to the ceiling, so as to facilitate heat dissipation or maintenance. Ensure that the battery modules are stacked vertically in the process of installation, and do not lean forward the box in installation. As shown in Figure 4-2.

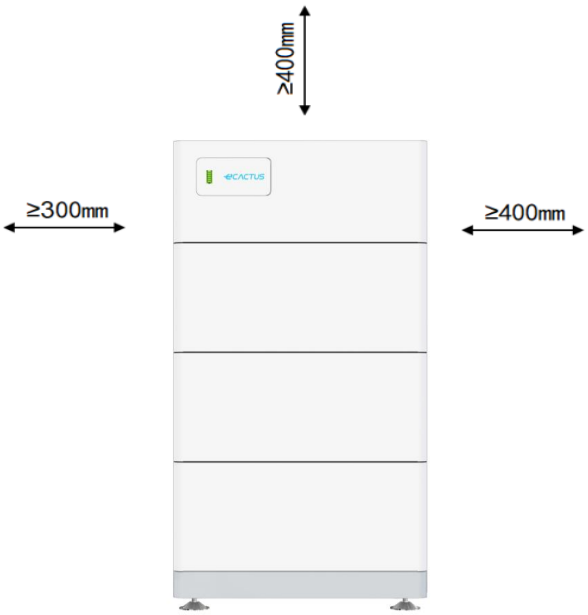



Figure 4-2 Installation spacing

### 4.2.4 Cable Selection

Table 4-1 Recommended cables and terminals

| Cable Type | Wire Specification | Terminal Model | Wiring |
|---|---|---|---|
| Battery box ground wire | 12AWG | OT4-5 | No |
| External battery cable with positive terminal | 10AWG(RED) | Positive DC Plug | No |
| External battery cable with negative terminal | 10AWG(BLACK) | Negative DC Plug | No |
| CAN communication cable | 8-core network cable | RJ45 | No |

## 4.3 Handling and Unpacking Check

### 4.3.1 Handling Requirements

The battery box should be carried to the installation site by professionally trained professionals.

CATION

Move carefully to avoid collision or fall when handling.

Keep the box vertical and do not suddenly put down or lift it when handling.

### 4.3.2 Unpacking Check

INSTRUCTION

Ensure the unpacking location in advance. In principle, it is recommended to choose the unpacking location as closer as possible to the installation location.

Step 1 Check whether the packaging of the device is intact and whether there is any shipping damage. If there is, please inform the carrier immediately.

Step 2 Transport the device to the designated location.

Step 3 Remove the outer packaging of the device and take out the optional accessories and random materials.

Step 4 Check the device integrity.

- Visually inspect the appearance of the device to check whether there is any shipping damage. If there is, please inform the carrier immediately.
- Check whether the accessory is complete and model correct. If you find any lacking of accessories or model inconsistencies, please make on-site records in time and contact the company or local office immediately.

## Configuration List:

| Type | WH-BX4.1 | WH-BX6.2 | WH-BX8.2 | WH-BX10.3 | WH-BX12.3 |
|---|---|---|---|---|---|
| battery module | 2 | 3 | 4 | 5 | 6 |
| Control box/base | 1 | 1 | 1 | 1 | 1 |

| Accessory | Name | Quantity | Figure |
|---|---|---|---|
| Control box/base | Wall-hanging plate | 1 |  |
| | Expansion tube and self-tapping screw combination | 4 |  |
| | User manual | 1 |  |
| | Quick installation | 1 |  |
| | Certification | 1 |  |
| | Positive DC Plug terminal combination | 1 |  |
| | Negative DC Plug terminal combination | 1 |  |
| | Hexagon socket countersunk head screw | 4 |  |
| | OT terminal 6-5/PE | 1 |  |
| | Heat shrinkable number tube | 1 |  |
| | Waterproof Communication Terminal | 1 |  |
| | Adjustable foot | 4 |  |

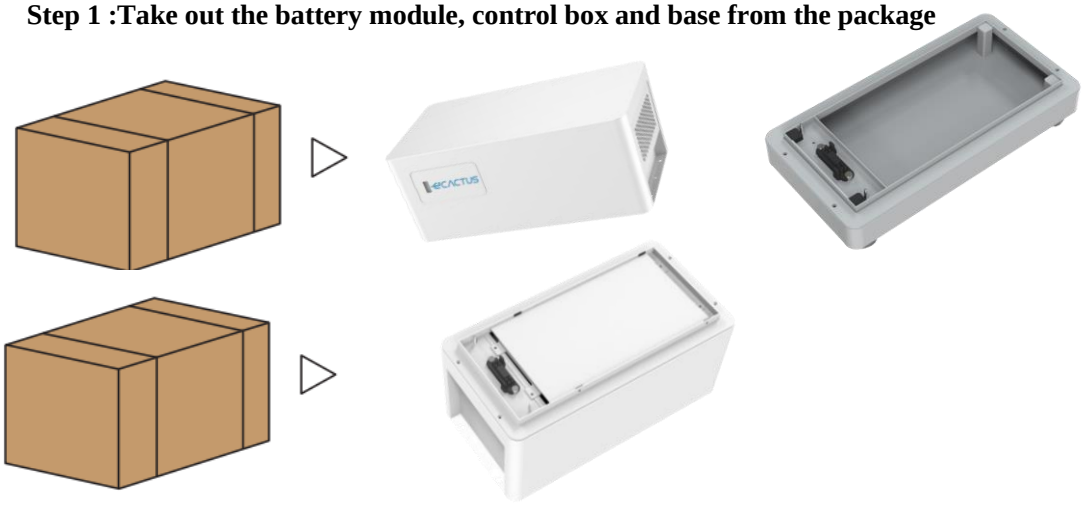
| Accessory | Name | Quantity | Figure |
|---|---|---|---|
| Package of Battery box | Hexagon socket countersunk head screw | 4 |  |

CATION

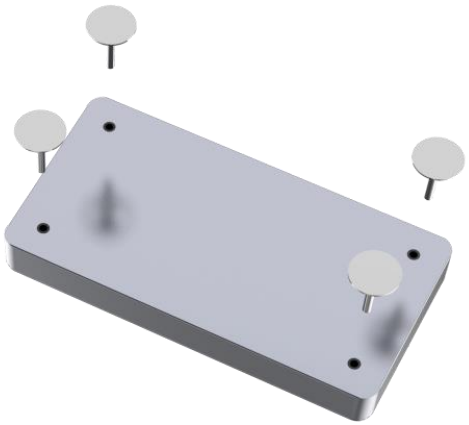
If the equipment needs to be stored for a long time after being unpacked, it is recommended to use the original plastic to wrap the equipment to store.

## 4.4 Battery Box Installation

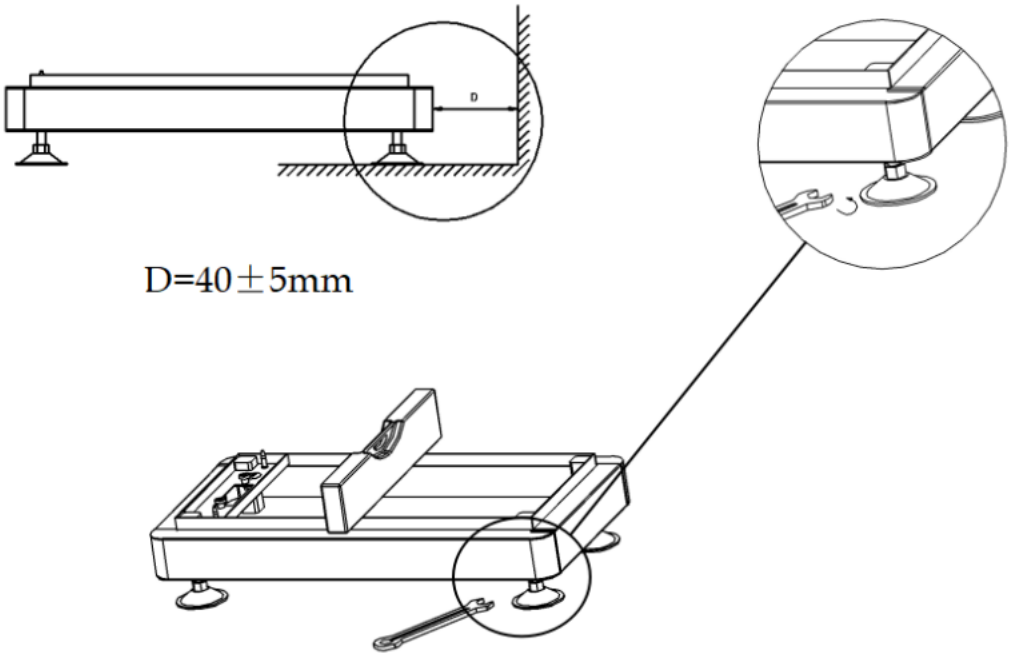
**Step 1 :Take out the battery module, control box and base from the package**



**Step 2: Take out the supporting leg from the accessory package and install the bottom supporting leg on the base module.**

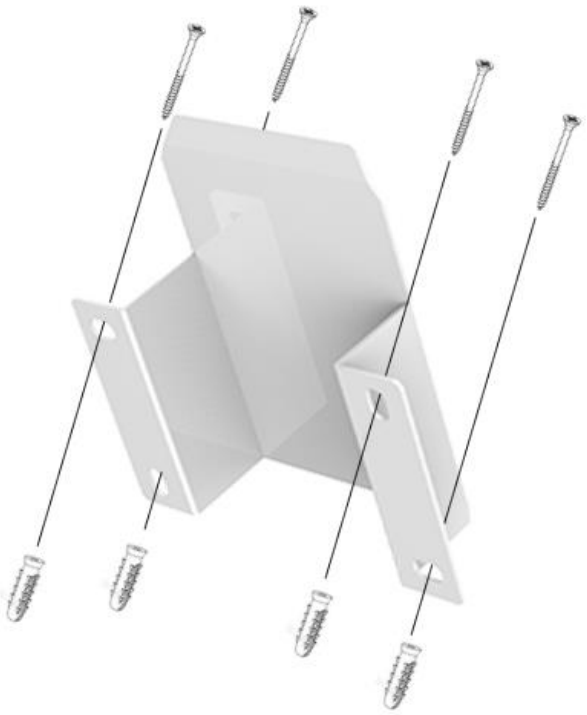


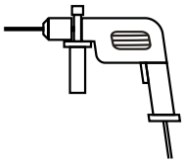
**Step 3: Place the base on the ground and adjust the height of the bottom support leg with a wrench to ensure that they are horizontal.**



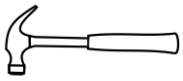
**Step 4 :Install the wall-hanging plate of the control box**

**Drill a hole with a diameter of 10mm at the center of the waist-type hole in the back plate with a hammer, and put it in the plastic expansion tube, then fix the self-tapping screw with a screwdriver.**

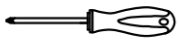




Percussion drill



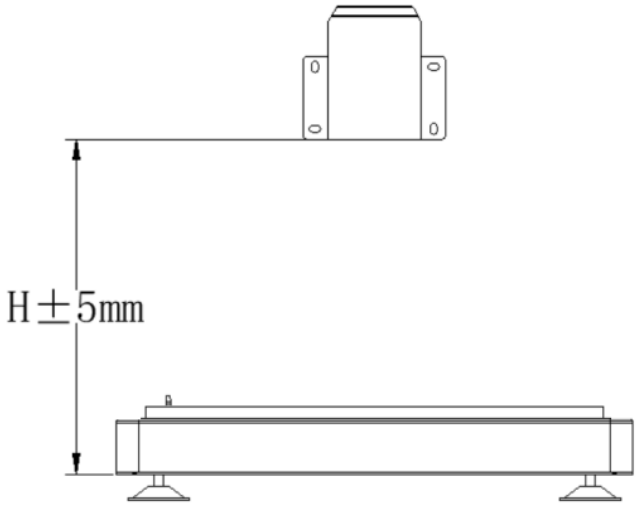
Claw hammer



Cross screwdriver

"n" refers to the number of battery modules

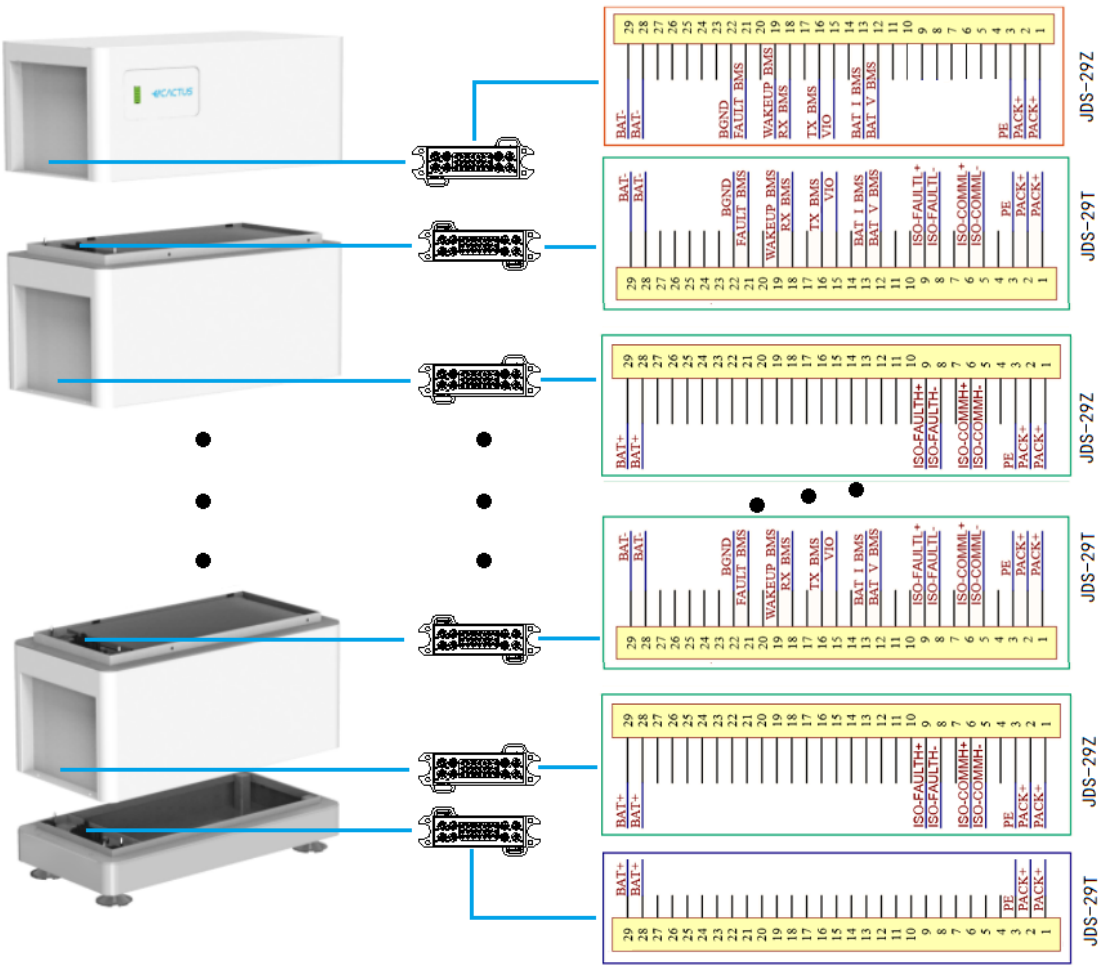
| n | H(mm) |
|---|---|
| 2 | 488 |
| 3 | 704 |
| 4 | 920 |
| 5 | 1136 |
| 6 | 1352 |



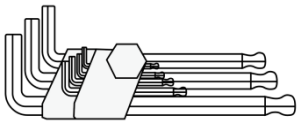
**Step 5: Stack the battery modules and control box in order**

CATION

Make sure that the position of the terminal of plug-in connectors and the locating pins on both sides are accurate. Make sure the base terminal is on the left hand side, the terminal of plug-in connectors of all modules is on the left side before installation, and the control module display is on the left hand side, as shown in the figure.



**Step 6: Fix the screws among the modules with a hex wrench of torque 4N.m**

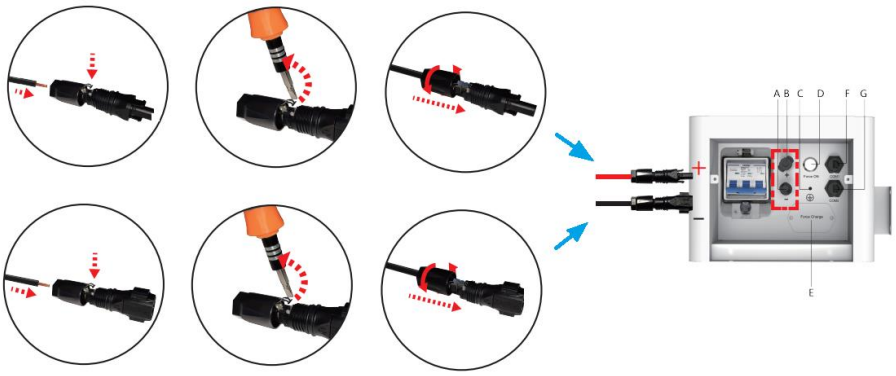


**Step 7: Electrical connections**

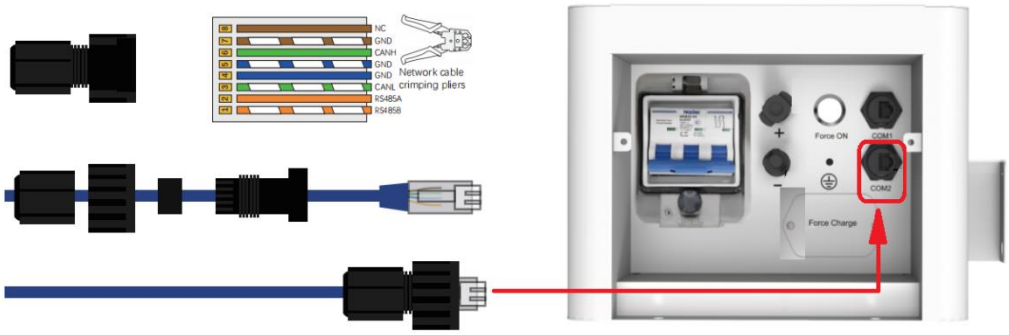
**Connect the battery box to the inverter as shown in the figure below.**

① make power cable:

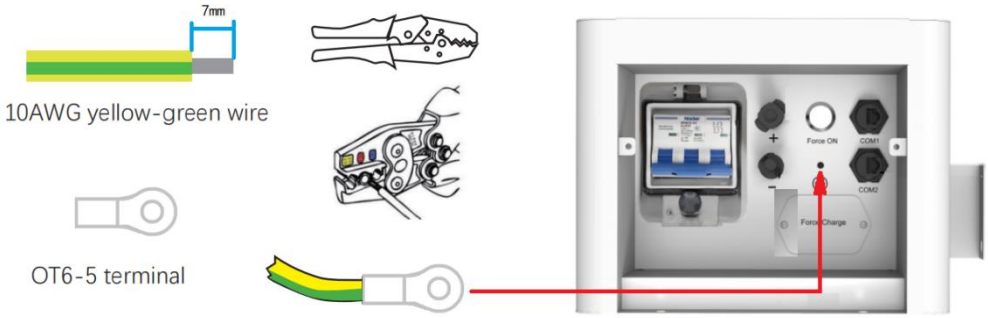
| Grade | Description | Value |
|---|---|---|
| A | Out side Diameter | 5.5-8.0mm |
| B | Conduct Wire Length | 7mm |
| C | Conduct Core Section | 4-6mm² |

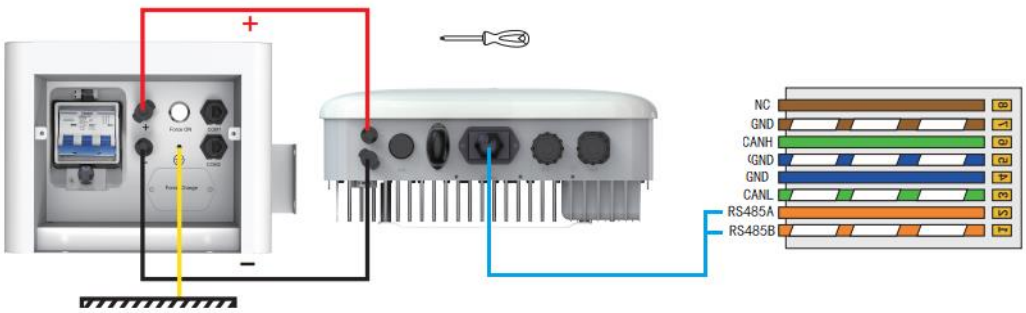

② Make com. Cable:




③ make PE cable:




④Connect the battery box and the inverter:




Battery box Inverter

# 5 WH-BX High-voltage System Electrical Performance

| No. | Item | Description |
|---|---|---|
| 1 | Charge mode | Constant-voltage limited-current |
| 2 | Max. charge current | 40A |
| 3 | Max. short-time discharge current | 44A, 5min |
| 4 | Max. long-time discharge current | 40A |
| 5 | Voltage detection accuracy of a single battery | 5mV |
| 6 | Temperature detection accuracy | 2℃ |
| 7 | Current detection accuracy | 1% |
| 8 | SOC calculation accuracy | 5% |
| 9 | SOH calculation accuracy | 5% |
| 10 | Balancing mode | Passive balancing |
| 11 | Inverter interface | CAN/RS485: The communication line of battery and inverter |
| 12 | IP rating | IP55 |
| 13 | Operating temperature | -10℃ -- 55℃ |
| 14 | Storage humidity | Less than or equal to 80% |
| 15 | Storage temperature | -10℃ ~ 45℃ (<3 months, SOC: 20%-60%)-10℃ ~ 40℃ (<12 months, SOC: 20%-60%) |

a. Under normal circumstances, the charging current is determined by the ambient temperature:

| No. | Temperature | Current |
|---|---|---|
| 1 | Less than -0℃ | 0 |
| 2 | 5℃ | 8A |
| 3 | 10℃ | 20A |
| 4 | 15℃ | 40A |
| 5 | 35℃ | 40A |
| 6 | 40℃ | 8A |
| 7 | Greater than 45℃ | 0 |

b. Generally, the discharge current is determined by the ambient temperature:

| No. | Temperature | Current |
|---|---|---|
| 1 | Less than -10℃ | 0 |
| 2 | -5℃ | 20A |
| 3 | 0℃ | 40A |
| 4 | 10℃ | 40A |
| 5 | 15℃ | 40A |
| 6 | 35℃ | 40A |
| 7 | 45℃ | 40A |
| 8 | 50℃ | 20A |
| 9 | Greater than 55℃ | 0 |

# 6 Cleaning and Maintenance

Shut down procedure :

Step 1：Open the battery breaker cover .

Step 2：Turn off the battery breaker .


## 6.1 Cleaning

When the battery box needs to be cleaned, please power off the system first. If you want to clean the battery case, use a soft dry brush or vacuum cleaner to remove the dirt. Do not use solvents, abrasives, corrosive liquids, etc. to clean the case.

## 6.2 Storage and Maintenance

Since the battery capacity is 30% before transportation, the module needs maintenance after long-term storage. During maintenance, fully discharge the battery with 0.1C current, and then charge the battery to 30% with 0.1C current. Please refer to the table below for details.

Maintenance cycle at different temperatures:

| **Temperature** | **Charging interval (Months)** |
|---|---|
| 25℃ | 18 |
| 35℃ | 12 |
| 45℃ | 6 |

# 7 Special Circumstances Treatment

## 7.1 Maintenance When Over Discharged

If the battery is over-discharged or there is a continuous power failure in rainy days, etc., the energy provided by the battery is limited. Users should pay attention to the backup power supply duration of the battery.

If the battery box cannot work normally due to over discharge of the battery, a forced charge-enable is required to the battery box, and the forced charge-enable needs to be performed by a professional.

## 7.2 Force Majeure

Disasters such as lighting, floods, earthquakes, and fires may cause unpredictable damage to the entire system.

# 8 WH-BX and Different Inverters Configuration List

## 8.1 WH-BX Series Battery Box and Weiheng Inverter Configuration Table

Single-phase energy storage configuration table:

| Inverter Type | BX | BCU | Base |
|---|---|---|---|
| WH-SPA3.68H | 2-6 | 1 | 1 |
| WH-SPA5.0H | 2-6 | 1 | 1 |

# 9 Common Issues and Solutions

Caution:

1. The inverter can respond according to the alarm signal uploaded by the battery.
2. When a situation that may endanger the battery system occurs, the battery system will take appropriate protective measures, such as disconnecting the charge and discharge relay or disconnecting the system switch; if the battery system automatically disconnects the system switch, please contact our technical support.

(Alarms generated by the battery system can be uploaded to the inverter, users can also view the web page of the inverter system)

## 9.1 Uploaded Alarm and Fault

| Code | Level | Comment | Cause of alarm/fault | Solutions |
|---|---|---|---|---|
| 0 | alarm | cell over voltage | Cell overcharged or damaged. | Normal alarm, no further action required. |
| 1 | alarm | cell under voltage | Cell over discharged or damaged. | Normal alarm, no further action required. |
| 2 | alarm | charge over current | Current is too high while charging. | Normal alarm, no further action required. |
| 3 | alarm | discharge over current | Current is too high while discharging. | Normal alarm, no further action required. |
| 4 | alarm | pack over voltage | Battery pack is overcharged or damaged. | Normal alarm, no further action required. |
| 5 | alarm | pack under voltage | Battery pack is over discharged or damaged. | Normal alarm, no further action required. |
| 6 | alarm | over temperature in charging | Cell temperature is too high while charging. | Normal alarm, no further action required. |
| 7 | alarm | under temperature in charging | Cell temperature is too low while charging. | Normal alarm, no further action required. |
| 8 | alarm | over temperature in discharging | Cell temperature is too high while discharging. | Normal alarm, no further action required. |
| 9 | alarm | under temperature in discharging | Cell temperature is too low while discharging. | Normal alarm, no further action required. |

| Code | Level | Comment | Cause of alarm/fault | Solutions |
|---|---|---|---|---|
| 10 | alarm | over temperature | Internal chip temperature is high. | Normal alarm, no further action required. |
| 11 | alarm | pack SOC under threshold | Battery pack SOC is low. | Normal alarm, no further action required. |
| 12 | alarm | flash data reading invalid | Flash data is invalid, or flash is damaged. | Contact technical support. |
| 16 | fault | gauge com error | Internal chip communication is broken. | Contact technical support. |
| 17 | fault | gauge over voltage | Battery pack is overcharged or damaged. | Contact technical support. |
| 18 | fault | gauge under voltage | Battery pack is over discharged or damaged. | Contact technical support. |
| 19 | fault | gauge charge over current | Current is too high while charging. | Contact technical support. |
| 20 | fault | gauge discharge over current | Current is too high while discharging. | Contact technical support. |
| 21 | fault | gauge hardware over voltage | Battery pack voltage is too high. | Contact technical support. |
| 22 | fault | gauge hardware under voltage | Battery pack voltage is too low. | Contact technical support. |
| 23 | fault | balance module SYS error | Hardware fault. | Contact technical support. |
| 24 | fault | balance module DEV error | Hardware fault. | Contact technical support. |
| 25 | fault | balance module com error | Hardware fault. | Contact technical support. |
| 26 | fault | cell over voltage | Cell voltage is too high. | Contact technical support. |
| 27 | fault | cell under voltage | Cell voltage is too low. | Contact technical support. |

| Code | Level | Comment | Cause of alarm/fault | Solutions |
|---|---|---|---|---|
| 28 | fault | charge over current | Current is too high while charging. | Contact technical support. |
| 29 | fault | discharge over current | Current is too high while discharging. | Contact technical support. |
| 30 | fault | pack over voltage | Battery pack voltage is too high. | Contact technical support. |
| 31 | fault | pack under voltage | Battery pack voltage is too low. | Contact technical support. |
| 32 | fault | over temperature in charging | Temperature is too high while charging. | Contact technical support. |
| 33 | fault | under temperature in charging | Temperature is too low while charging or temperature sensor wire breaks. | Contact technical support. |
| 34 | fault | over temperature in discharging | Temperature is too high while discharging. | Contact technical support. |
| 35 | fault | under temperature in discharging | Temperature is too low while discharging or temperature sensor wire breaks. | Contact technical support. |
| 36 | fault | over temperature | Internal chip temperature is too high. | Contact technical support. |
| 37 | fault | cell hardware over voltage LV2 | Cell voltage is too high. | Contact technical support. |
| 38 | fault | cell hardware over voltage | Cell voltage is too high. | Contact technical support. |
| 39 | fault | cell hardware under voltage LV2 | Cell voltage is too low. | Contact technical support. |
| 40 | fault | cell hardware under voltage | Cell voltage is too low. | Contact technical support. |
| 41 | fault | hardware charge over current | Current is too high while charging. | Contact technical support. |
| 42 | fault | hardware discharge over current | Current is too high while discharging. | Contact technical support. |

| Code | Level | Comment | Cause of alarm/fault | Solutions |
|---|---|---|---|---|
| 43 | fault | hardware pack over voltage | Battery pack voltage is too high. | Contact technical support. |
| 44 | fault | hardware pack under voltage | Battery pack voltage is too low or fuse breaks. | Contact technical support. |
| 45 | fault | internal cell open wire | Internal fault of battery management system. | Contact technical support. |
| 46 | fault | com error between pack and host | Communication with upper host breaks. | Contact technical support. |
| 47 | fault | ISO fault | The insulation impedance of pack to PE is too low. | Contact technical support. |
| 48 | fault | chip over temperature | Internal chip temperature is too high. | Contact technical support. |
| 49 | fault | dc breaker open | Internal breaker is open circuit. | Contact technical support. |
| 50 | fault | dc breaker short | Internal breaker is short-circuited. | Contact technical support. |
| 51 | fault | pack voltage mismatch between sensors | Internal fault of battery management system. | Contact technical support. |
| 52 | fault | pack SOC stays under threshold for a period | Battery pack SOC is low for more than 5 minutes. | Contact technical support. |
| 53 | fault | battery discharge under force charge mode | Battery pack discharges under force charge mode is not allowed to protect cells. | Contact technical support. |
| 54 | fault | system initialization error | Internal fault of battery management system. | Contact technical support. |

# 10 Warranty

Weiheng Intelligent only provides warranty when the product is installed and used according to the instructions contain in the User Manual, Installation Manual and Warranty Letter. In order to obtain after-sales service in a timely manner, please keep the product related information properly.
If you have any technical problems or requirements, please contact our installation company.
The following information needs to be provided to customer service in time when contacting.
Product type
Serial number
Selected device
If you have any questions, please contact us at the following address:

**China**
Jiangsu Weiheng Intelligent Technology Co., Ltd.
ecactus.wifopro.com