Installation Guidance

Battery-Box Res 2.5-10.0
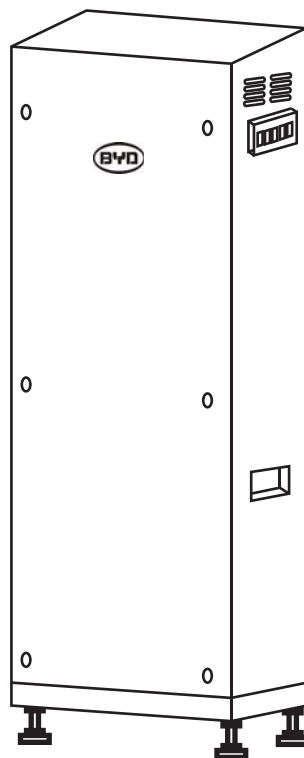
Rev 3.1

Feb. 2018

www.byd.com

Content

Installation Video Website:http://www.byd.com/energy/Battery-Box-25.htm

1 Foreword

Thank you for choosing BYD products. We are committed to providing you with quality and reliable after sales service

To protect users and the product itself, please kindly read this manual carefully which provides detailed information for product features, structures, operating standards, maintenance and troubleshooting.

Note:

This manual can't be taken as basis of requirement for BYD.

BYD reserve the final explanation rights of this manual.

1.1 About this guide

This is the installation guide for the BYD Battery Box product - B-Box Pro 13.8. Users of this device or installers must refer to the installation guide to install and use the product correctly.

1.2 Target Group

This installation guide applies only to the BYD Battery Box product-B-Box Pro 13.8.

1.3 Additional Information

Specification of the product will change without any notice to customers for the purpose of system improvement.

1.4 Symbols Used

Symbols meanings:

CAUTION：
CAUTION represents hazardous situations which can cause light injury, if ignored.

NOTICE：
NOTICE represents the situations which can cause damage to property, if ignored.

INFORMATION：
INFORMATION provides useful tips for optimum installation and operation of the product.

2 Safety

2.1 Warnings and Notification

Installation environment requirements: BYD B-Box Res 2.5-10.0 is designed for household purposes. For installation, it must be installed in a location complying with IP55 regulation. If the Installation location does not comply with IP55, this may cause product failure and it will not be guaranteed for any related accident or damage.

2.2 Safety Guidelines

⚠️**CAUTION:**

Li-Ion battery (energy storage unit) inside. When assembling the system, do not intentionally make a short condition between the positive (+) and negative (-) terminals of the battery box with a metallic object.

All work on the Battery-Box and electrical connections must be carried out by qualified personnel only. Battery-Box provides a safe source of electrical energy when operated as intended and as designed.

Potentially hazardous circumstances such as excessive heat or electrolyte mist may occur under improper operating conditions, damage, misuse and/or abuse. Personnel working with Battery-Box must review applicable federal, state and local regulations as well as the industry standards regarding this product.

Installation personnel cannot wear watches, etc., to avoid short circuit and human damage.

When Increase battery, should power off the battery and other power input first.

Ensure reliable grounding. Do not reverse connect the front panel.

Can't use the deformation battery.

By checking to verify the installation Settings are correct.

The installation should be clean, flat, dry and waterproof .etc.

⚠️ **WARNING:**

Do not crush the battery and always dispose according to safety regulations (Do not dispose in fire or water).

Recharge battery at least every 6 months (when in storage).

Once discharged, recharge battery within 7 days.

Do not expose to temperatures above 55℃ and keep out of direct sunlight.

Ensure secure grounding. Do not reverse the front panel.

Do not short/reverse polarity or connect in series.

Power off battery and disconnect battery from power and load before installation and maintenance.

Only be operated by qualified professionals.

Store according to related standard.

Do not put one battery on top of another when unpackaged.

In the process of transportation and storage, the goods are not allowed to be stacked in layers or at a height greater than specified.

When increasing the battery, users should first power off the battery and other power inputs.

Battery-Box Res products can only be used in home energy storage applications, and their use is not allowed for life-sustaining medical devices and automotive applications.

Notice:

Skilled personnel recognized

This manual and the tasks and procedures described herein are intended use by skilled workers only. A skilled worker is defined as a trained and qualified electrician or installer who has all of the following skills and experience:

Knowledge of the function principles and operation of on-grid systems.

Knowledge of the dangers and risks associated with installing and using electrical devices and acceptable mitigation methods.

Knowledge of the installation of electrical devices

Knowledge of and adherence to this manual and all safety precautions and best practices.

3 Product Overview

3.1 Product Introduction

BYD battery box products Battery-Box Res 2.5~10.0 as the energy storage parts can be used in off-grid & on-grid energy storage system. It is recommended not to use this device for other than the purpose described in this guidance. The substitute use of this product, random change, and use of components other than sold or recommended by BYD will nullify the product guarantee. The system is ideal easy installation and maintenance.
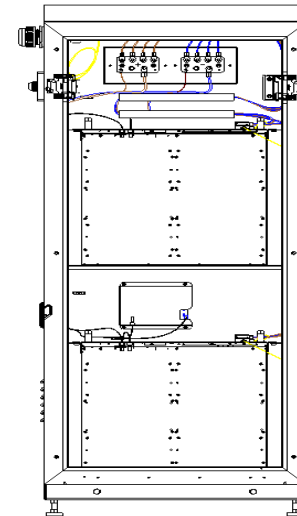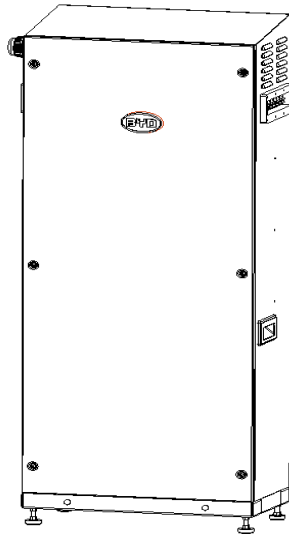
Overview of Battery-Box   Internal view of Battery-Box

3.2 Cabinet introduction

DC BUS: Positive

DC BUS: Negative

Main circuit breaker

Battery breakers

B-Plus 2.5

BMU
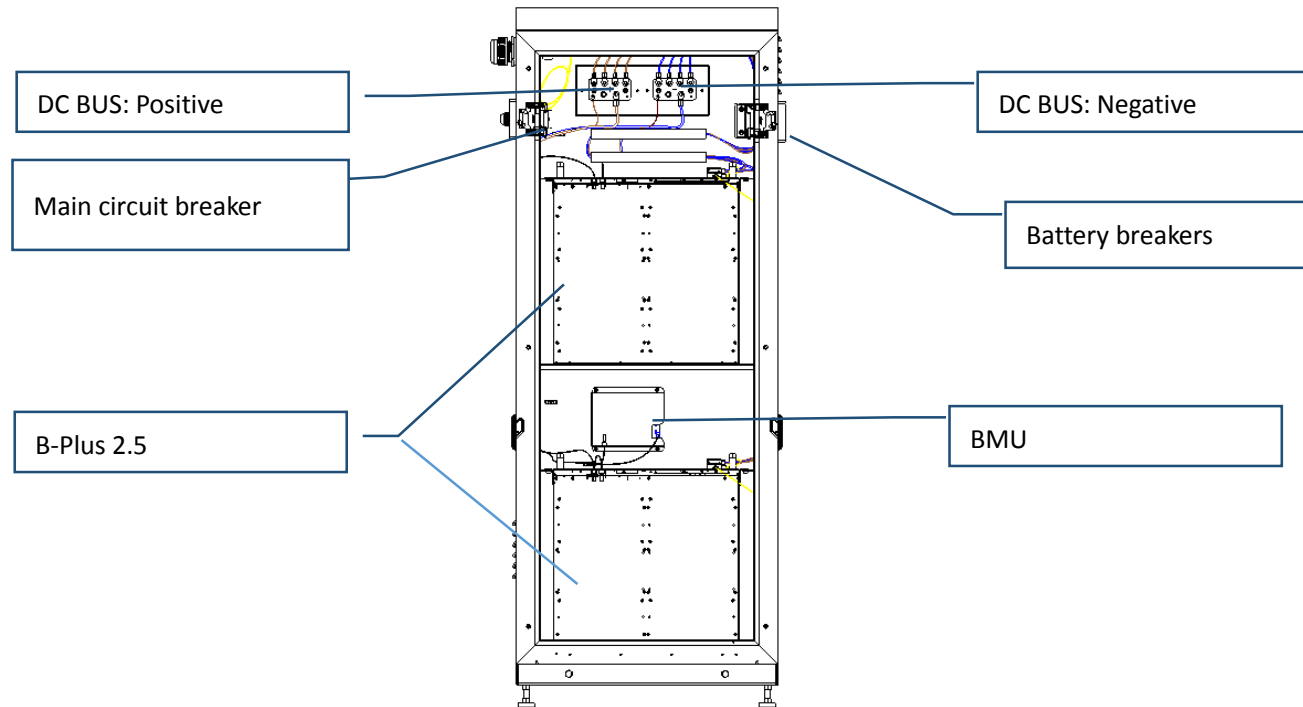
3.3 Cable outlet of cabinet

①Power cable or Grounded cable to inverter

② Grounded cable or communication cable

③Communication cable to inverter
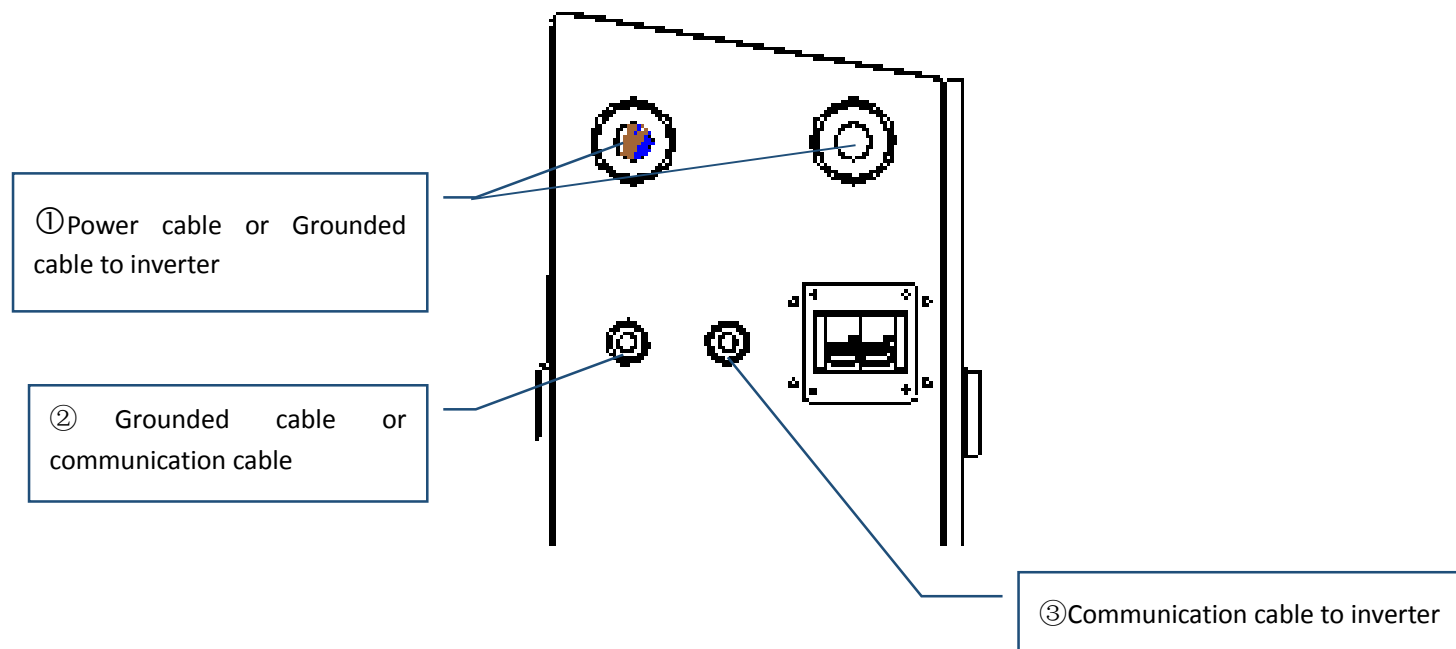
No.	Interface	Mark	Function
①	B+/B-output	B+/B-	Power cable connect with inverter
②	GND	GND	Grounded cable to the GND bus
③	CAN	CAN	CAN communication cable

3.4 B-Plus2.5 interface and terminal introduction

P-:Negative terminal

P+:Positive terminal

GND: Grounded terminal
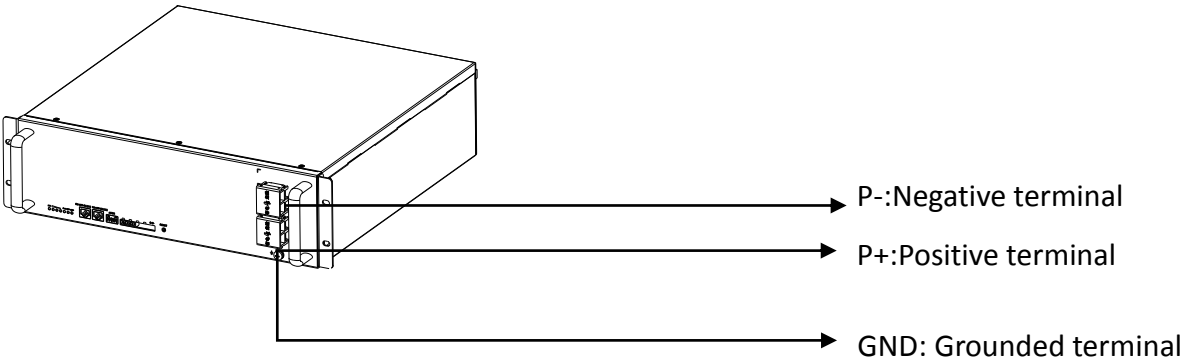
3.5 Display and communicate interface
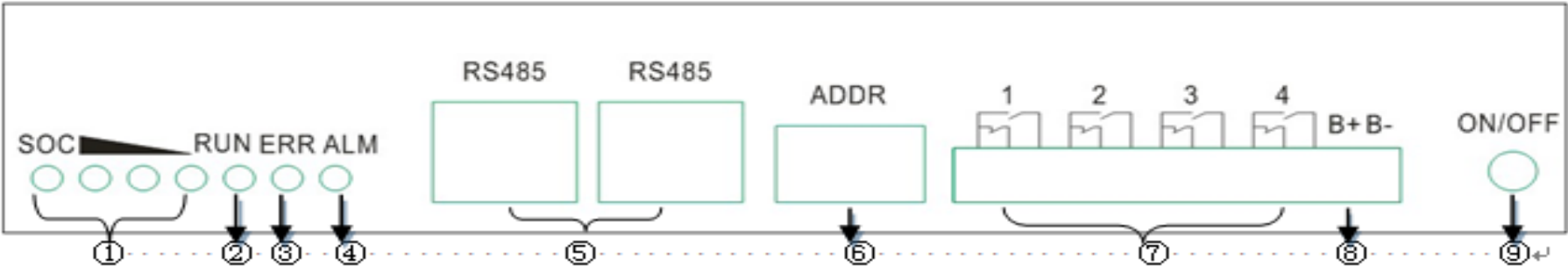
No.	Interface	Mark	Function
①	SOC LED	SOC	Indicate State of capacity of battery
②	RUN LED	RUN	Indicate the Plus is running status
③	ERR LED	ERR ADDR	Indicate error status

④	ALM LED	Alarm	Indicate alarm status
⑤	RJ45 terminal	RS485	Communication ports
⑥	Address	ADDR	When parallel connection, need setting address.
⑦	Alarm relay output	1.2.3.4	Not using
⑧	Test terminal	B- B+	Measure battery voltage when testing.
⑨	ON/OFF	ON/OFF	Activity battery when no external powers addo on battery.

4 Preparations

4.1 Installation notice

a) Battery installation location should be away from heat and avoid produce spark. The safety distance should be above than 1m.

b) Battery installing connecting cables should be as short as possible, to prevent excessive line pressure drop.

c) Batteries with different capacity, different type of products or different manufactures are not allowed to connection.

d) Before connecting the battery, the battery positive and negative poles need to be carefully checked as well to ensure correct installation.

e) The mounting floor should be horizontal.

f) Use tools with insulated handles.

4.2Package information and system configuration list

The cabinet and battery are packaged separately with cartons, the components are taken along with the cabinet or battery package, before

installation, installer should read the system configuration list.

No.	Item Description	Qty	Purpose	Picture
1	Anchor bolt	4	Make a distance from cabinet to ground.	
2	User Manual	1	System information and using method and Warranty items.	\
3	Installation short instruction	1	System installation guidance	\
4	Cable through connector(IP55)	4	Cable through and waterproof	
5	Nylon Cable ties	10	Fixed Cable	

LITHIUM ION BATTERIES
UN3480

4G/Y50/S/16
CN/XXXXXX PI:XXX
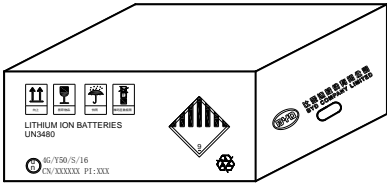
No.	Item Description	Qty	Purpose	Picture
1	Positive cable	1	Battery P+ connection	
2	Negative cable	1	Battery P- connection	
3	GND	1	Connect Battery grounded terminal	
4	Communication cable	1	Battery RS485 port connection	

4.3 Configuration list

Type	Battery-Box Res 2.5	Battery-Box Res 5.0	Battery-Box Res 7.5	Battery-Box Res 10.0
Battery-Box cabinet	1	1	1	1
B-Plus2.5	1	2	3	4
User manual	1	1	1	1
Positive cable	1	2	3	4
Negative cable	1	2	3	4
Communicate cable	1	2	3	4
Grounded cable	1	2	3	4

4.4 Installation Tools

Cross screwdriver

Flat tip screwdriver

Sockets spanner

Diagonal cutters

Adjustable wrench

Crimping pliers

Knife

4.5 Personal protective equipment

Insulated gloves   Safety shoes

5 Installation

5.1 Unpacking

Tools: Knife （换带卡板图）
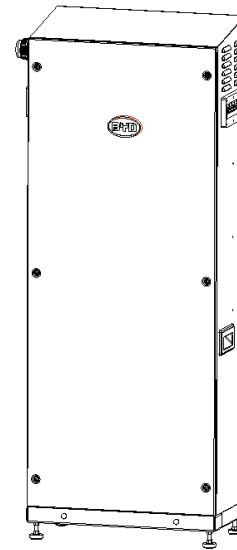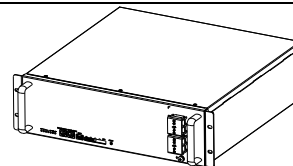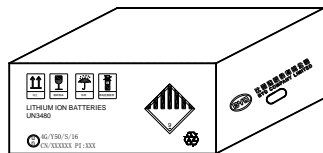
5.2 Disassemble the fixed seat& door and pallet

Tools: screwdriver
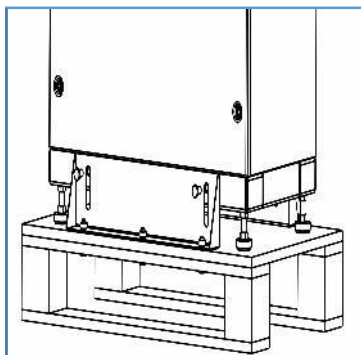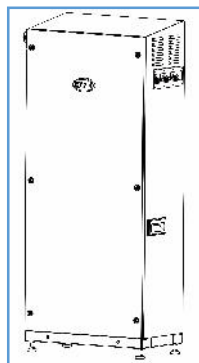
Remove fixed seat	Remove pallet	Take away the door	Take away the screws which are fixing the holder of batteries circuit breaker.	Connect ground wire to GND screw on holder.
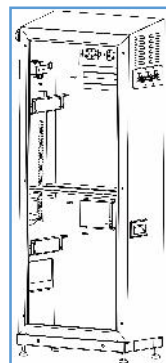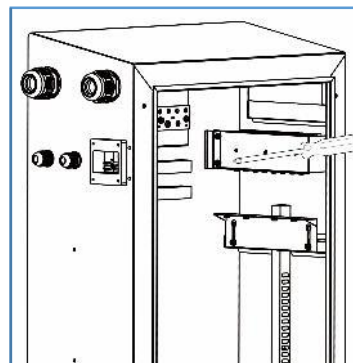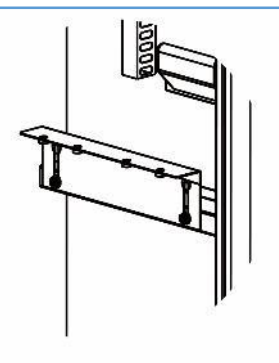
5.3Fix the frame on the wall, then fix the cabinet with the fixing frame

Tools: screwdriver

75mm
115mm
75mm

1280mm
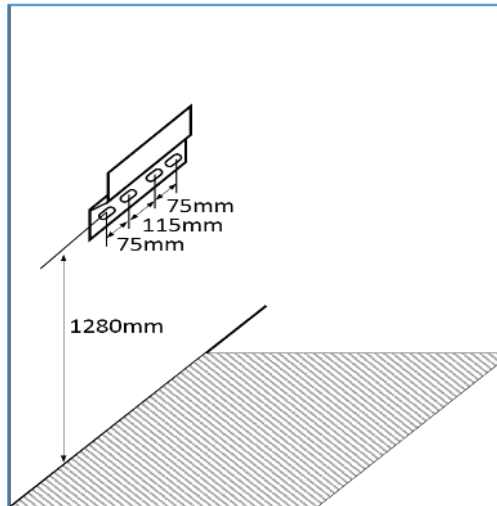
Fix the frame on the wall
Fixing.

5.4Battery installation

Tools: Cross screwdriver and Sockets spanner
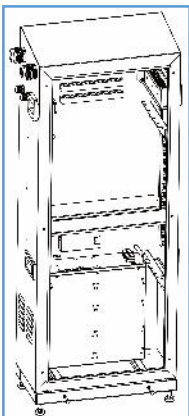
Put the first battery into the cabinet.	Put the second battery into the cabinet.	Put the third battery into the cabinet.	Put the fourth battery into the cabinet.
Correct position is inside the bottom layer,close to back panel.	Correct position is inside the bottom layer,close to front panel.	Correct position is inside the top layer,close to back panel.	Correct position is inside the top layer,close to front panel.
			Fix all batteries with screws.

5.5Connect cables with battery

Tools: Cross screw driver Fixed torque: 20±2kgf.cm(确认扭力)

Attention: The battery can only in parallel connection, do not connect batteries in series. Do not short connect, reverse polarity connect.
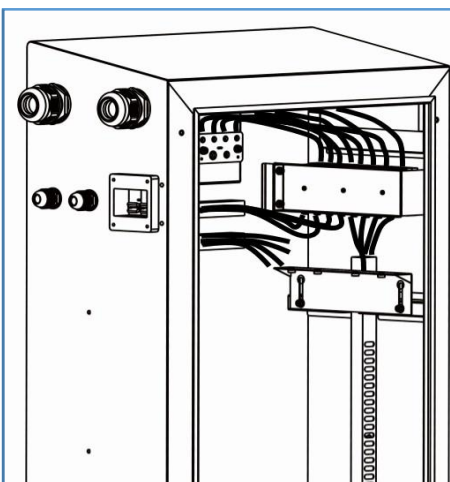
Fix the air circuit breakert.Remark:Tube type terminal stripe side toward the positive corresponding rack (lateral) circuit breaker	Fix the cable through connector	Connect the Positive cable to P+ terminal Connect the Negative cable to P- terminal Connect the grounded cable to GND terminal Connect communication cable between BMU and Inverter.
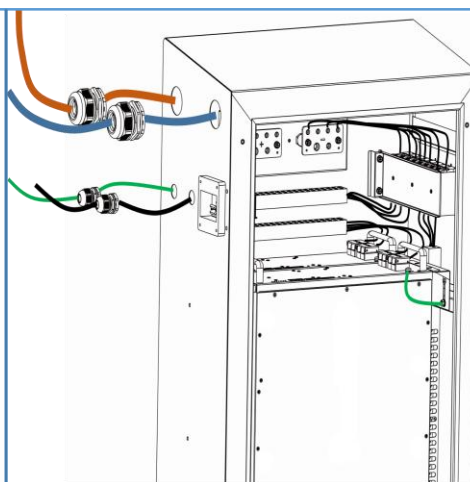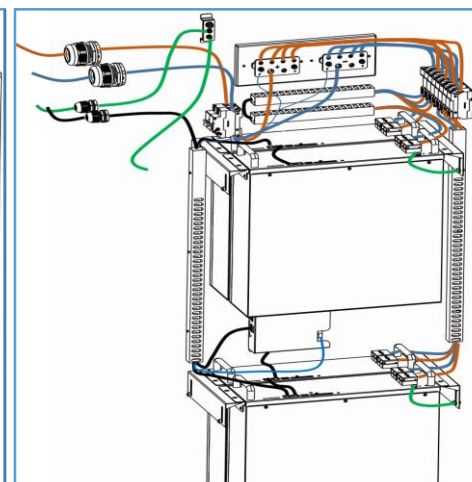
5.6 Battery address set up

5.6.1 "ADDR" switch introduction

Function: Communicate between battery and BMU, BMU will communication with external equipment when using CAN communication.

Each DIP switch definition:

There are 6 bit switches, keep the switch on down side means"0", turn up the switch to "ON" means "1".
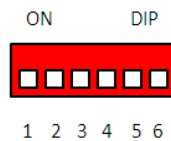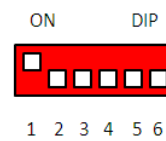
Address: 000000   Address: 100000

For example: when two battery in using "ADDR" setting:
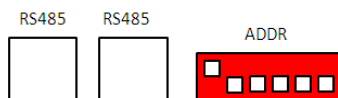
No.1 battery address: 100000   No.2 battery address: 010000
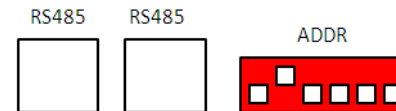
Address setting please according to the configuration list in next page.

Notice: Make sure of the highest address of B-Plus2.5 connect to BMU.

5.6.2 Battery address setting list (from 1~32 batteries)

Battery No.	Address	Battery No.	Address
1	100000	17	100010
2	010000	18	010010
3	110000	19	110010
4	001000	20	001010
5	101000	21	101010
6	011000	22	011010
7	111000	23	111010
8	000100	24	000110
9	100100	25	100110
10	010100	26	010110
11	110100	27	110110
12	001100	28	001110
13	101100	29	101110
14	011100	30	011110
15	111100	31	111110
16	000010	32	000001

5.7 Parallel connection between multi Battery-Box

5.7.1 Communication cable connection drawing

B-Box 1: Master   B-Box 2: Slave   B-Box 3: Slave   B-Boxes: Slave
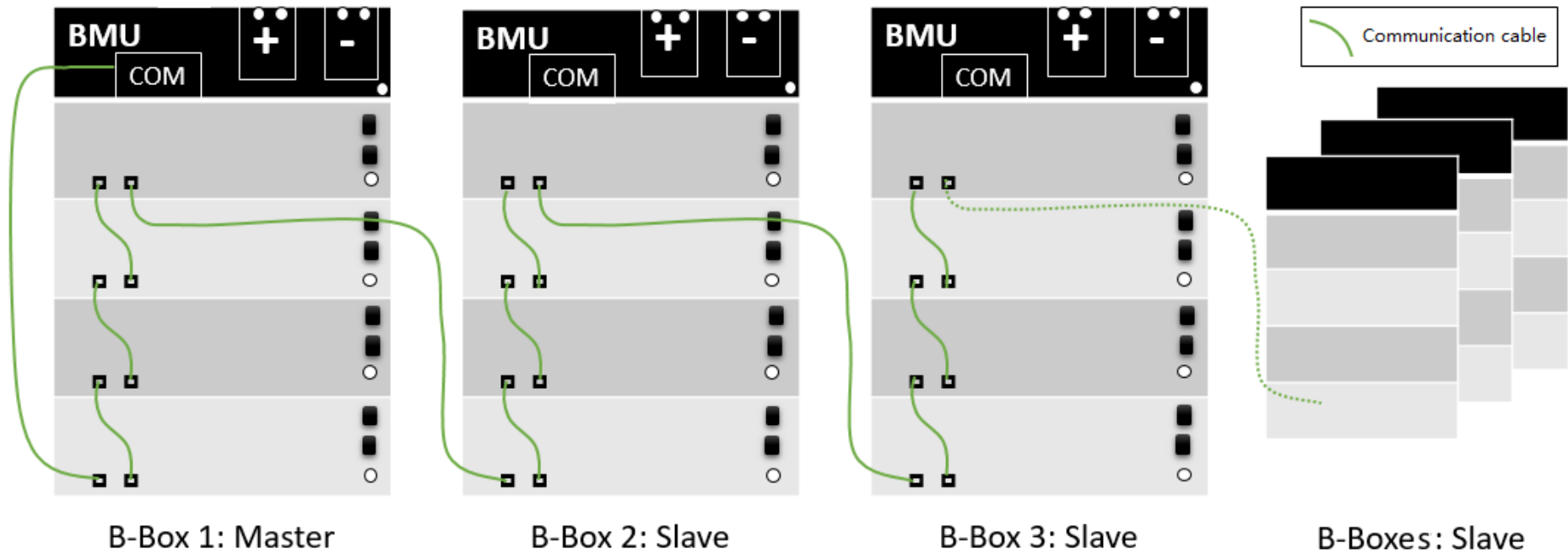
5.7.2Grounded cable connection between several Battery-Box

5.7.3Power cable connection between several Battery-Box

B-Box 1: Master   B-Box 2: Slave   B-Box 3: Slave   B-Boxes : Slave
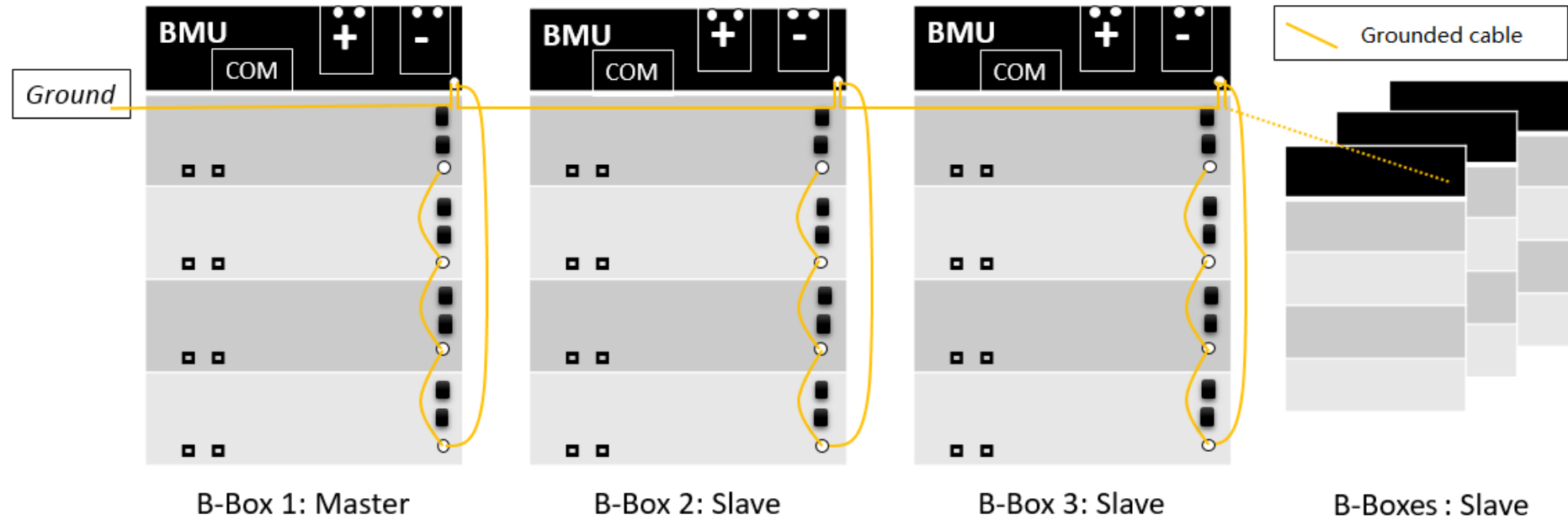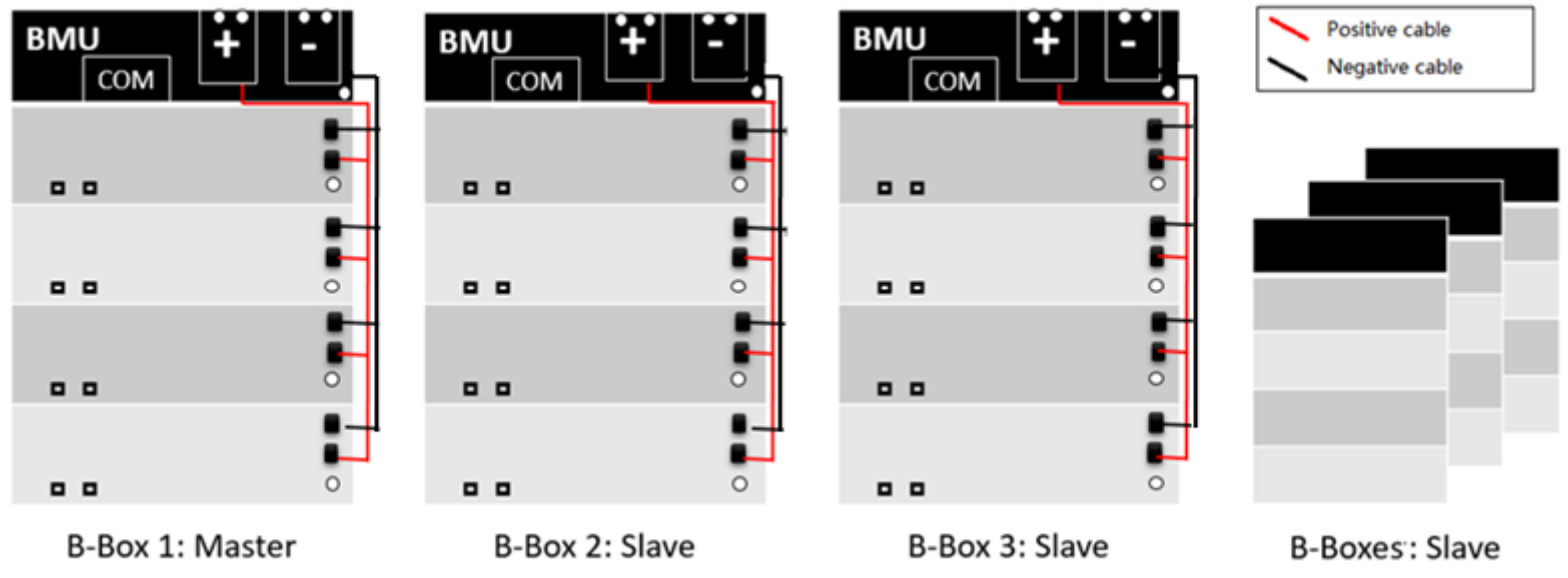
5.8 Connect to inverter

5.8.1 Communication cable connection
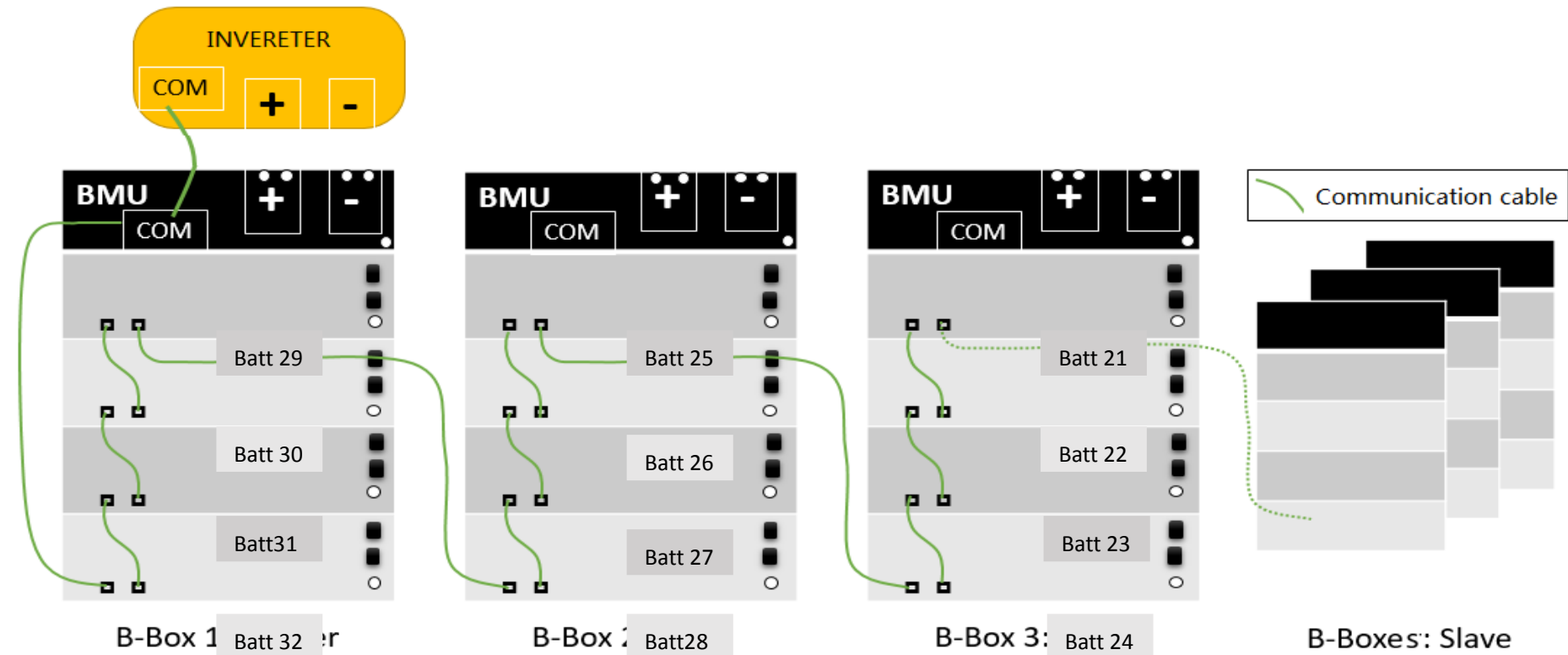
5.8.2 Power cable connection

Tools: Cross screwdriver, fixed torque: 25±2.5Nm

Remark: Each rack is negative line need to use the belt, and between each cabinet and inverter line length is the same. Be careful not to reverse connection.

INVERTER

COM

+ -

Combinet Box

P+ P-

BMU

COM

+ -

B-Box 1: Master

BMU

COM

+ -

B-Box 2: Slave

BMU

COM

+ -

B-Box 3: Slave

B-Boxes : Slave

Positive cable

Negative cable
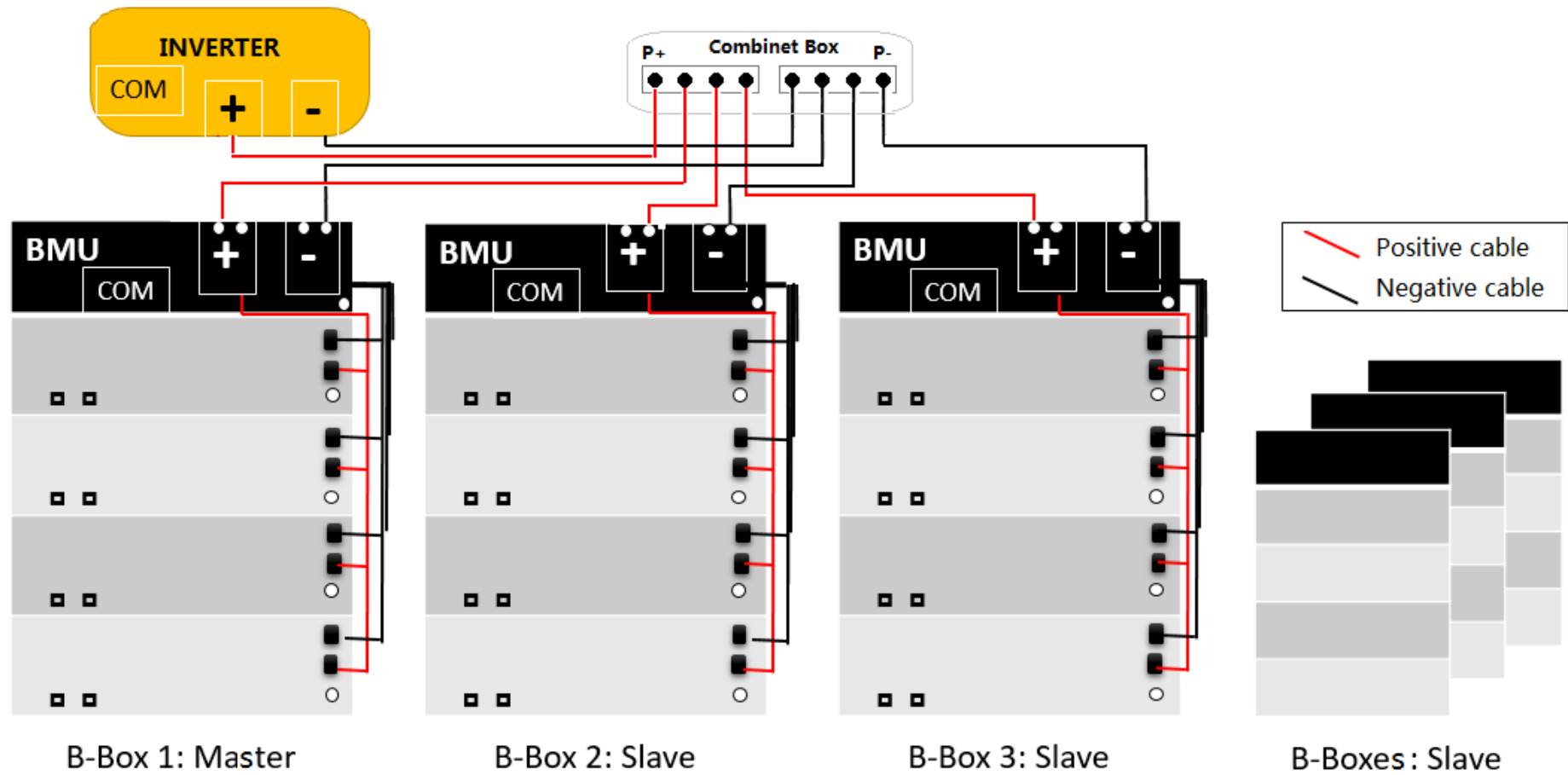
6 Start system

Notice: Before activity the system, please inspection according below items:

Confirm all the batteries are powered OFF.

Confirm all power cables are connected correctly and reliably.

Confirm all communication cables are connected correctly and reliably.

7 Stop system

Notice: Before stop the system, please power off inverter first, then power off battery refer to below items:

   i.   Power off the devices which connect with batteries: Inverter&MPPT, etc.

   ii. Turn the switch of main circuit breaker(QFB0) to" OFF"

   iii. Turn the switch of battery breaker(QFB1、QFB2、QFB3、QFB4) to "OFF".

   iv. Power off all batteries.

After stop the system, please check refer to below items:

✓   Confirm all the batteries are powered OFF.

✓   All the LED are OFF.

✓   Inverter had powered off.

Appendix1

CAN cable connection

RJ45 PIN define

	Battery-Box	SMA	GOODWE	SOLAX	VICTRON
CAN H	4	4	4	1	7
CAN L	5	5	5	2	8
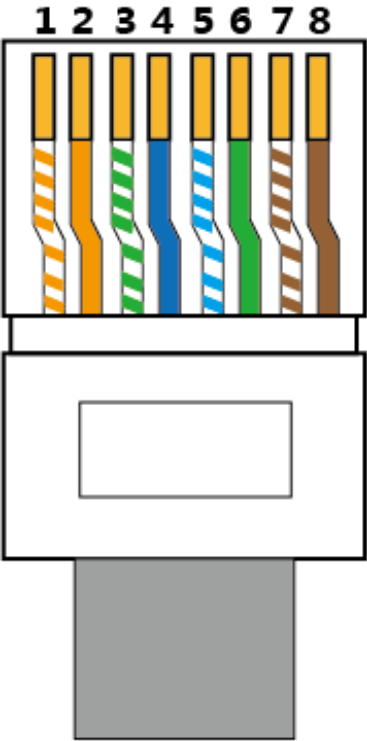
Appendix 2

List of matched inverter vendors

Serial number	name
1	SMA
2	GOODWE
3	Victron
4	Solax

1.System activity procedures when Battery-Box connect to SMA Sunny Island

⑴ Start Battery-Box;

    i.   Turn the switch of main circuit breaker (QFB0) to "ON".

    ii.   Turn the switch of battery breaker (QFB1、QFB2、QFB3、QFB4) to "ON".

    iii.   Press the "ON/OFF" button on front panel of B-Plus 2.5;

    Tips: Press "ON/OFF" button one second can start B-Plus, According to the number of inverters in the following table, as far as possible within 8 seconds of button to activate the batteries.

	Inverter:1~2PCS	Inverter:3~4PCS	Inverter:5~7PCS	Inverter:8~9PCS
The amount of battery	1	2	3	4

Once start, the LED lights of B-Plus 2.5 will be in different status according battery status as below:

LED status when normal start

Item	LED	Status
1	Run	Green
2	SOC	More than one is green. Slow blink is charging and Fast blink is discharging. The flash in order means no communication.

3	ERROR	OFF	
4	Alarm	OFF	

	Status(display interval 2S)	Definition
LED(BMU)	Blinks 1 time	Inverter not connected
	Blinks 2 time	Battery not connected
	Blinks 3 time	Battery disconnect
	Blinks 4 time	Battery failure

Remark:

Slow blink: Indicator light is on and off every 1s (0.5Hz).

Fast blink: indicator light is on and off every 0.25s (2Hz).

SOC status and indicate

Item	Status	Indicate
1	Four lights are all normally on	Capacity is 100%-75% (including)
2	The last three lights are normally on	Capacity is 74%-50% (including)
3	The last two lights are normally on	Capacity is 49%-25% (including)
4	The last one light is normally on	Capacity is 24%-1% (including)

(2)Switching on the Sunny Island;

Procedure:

• For systems with one Sunny Island, press the "On" button on the Sunny Island.

☑The inverter LED on each Sunny Island inverter is glowing orange and the Sunny Island inverters are in standby.

(3)Start inverter;

Procedure:

• Press the start-stop button on the Sunny Island and hold it until an acoustic signal sounds. Or Press and hold the button on the Sunny

Remote Control until an acoustic signal sounds. ☑The inverter LED on each Sunny Island is glowing green.

(4)Set up battery parameters on SRC of inverter;

Please refer to the "Battery Parameter setting" table in Appendix1.
Remark: If the battery capacity is greater than or equal to 200AH, according to the Box10.0 parameter settings

(5)System running.

2 System activity procedures when Battery-Box connect to GOODWE inverter

(1)Open the GOODWE APP and open the home page;

(2)Start Battery-Box;

    i.   Turn the switch of main circuit breaker (QFB0) to "ON".

    ii.   Turn the switch of battery breaker (QFB1、QFB2、QFB3、QFB4) to "ON".

    iii.   Press the "ON/OFF" button on front panel of B-Plus 2.5;

        Tips: Press "ON/OFF" button one second can start B-Plus;

Once start, the LED lights of B-Plus 2.5 will be in different status according battery status as below:

LED status when normal start

Item	LED	Status
1	Run	Green
2	SOC	More than one is green. Slow blink is charging and Fast blink is discharging. The flash in order means no communication.
3	ERROR	OFF
4	Alarm	OFF

	Status(display interval 2S)	Definition
LED(BMU)	Blinks 1 time	Inverter not connected
	Blinks 2 time	Battery not connected
	Blinks 3 time	Battery disconnect
	Blinks 4 time	Battery failure

Remark:

Slow blink: Indicator light is on and off every 1s (0.5Hz).

Fast blink: indicator light is on and off every 0.25s (2HZ)

SOC status and indicate

Item	Status	Indicate
1	Four lights are all normally on	Capacity is 100%-75% (including)
2	The last three lights are normally on	Capacity is 74%-50% (including)
3	The last two lights are normally on	Capacity is 49%-25% (including)
4	The last one light is normally on	Capacity is 24%-1% (including)

(3)Inverter activity;

(4)Go to the home page of APP, enter into the Battery Setting page, select "BYD Battery-Box 2.5/5.0/7.5/10.0" battery, then select "NEXT" until

the last page, at last select "Start".

Remark: If the installed capacity is greater than or equal to 10.0KWh, the App product model is chosen as "BYD Battery-Box 10"

(5)System running;

3 System activity procedures when Battery-Box connect to Victron inverter

(1)Inverter start;

(2)Set the battery DOD at a minimum of 5% on-grid; Set the battery DOD at a minimum of 10% off-grid.

(3)Start Battery-Box;

    i.   Turn the switch of main circuit breaker (QFB0) to "ON".

    ii.   Turn the switch of battery breaker (QFB1、QFB2、QFB3、QFB4) to "ON".

    iii.   Press the "ON/OFF" button on front panel of B-Plus 2.5;

         Tips: Press "ON/OFF" button one second can start B-Plus, According to the number of inverters in the following table, as far as possible within 8 seconds of button to activate the batteries.

	Inverter:1~2PCS	Inverter:3~4PCS	Inverter:5~7PCS	Inverter:8~9PCS
The amount of battery	1	2	3	4

Once start, the LED lights of B-Plus 2.5 will be in different status according battery status as below:

LED status when normal start

Item	LED	Status
1	Run	Green
2	SOC	More than one is green. Slow blink is charging and Fast blink is discharging. The flash in order means no communication.
3	ERROR	OFF
4	Alarm	OFF

	Status(display interval 2S)	Definition
LED(BMU)	Blinks 1 time	Inverter not connected
	Blinks 2 time	Battery not connected
	Blinks 3 time	Battery disconnect
	Blinks 4 time	Battery failure

Remark:

Slow blink: Indicator light is on and off every 1s (0.5Hz).

Fast blink: indicator light is on and off every 0.25s (2HZ)

SOC status and indicate

Item	Status	Indicate
1	Four lights are all normally on	Capacity is 100%-75% (including)
2	The last three lights are normally on	Capacity is 74%-50% (including)
3	The last two lights are normally on	Capacity is 49%-25% (including)
4	The last one light is normally on	Capacity is 24%-1% (including)

(4)System running.

4 System activity procedures when Battery-Box connect to Solax inverter

(1)Open the GOODWE APP and open the home page;

(2)Start Battery-Box;

    i.   Turn the switch of main circuit breaker(QFB0) to "ON".

    ii.   Turn the switch of battery breaker (QFB1、QFB2、QFB3、QFB4) to "ON".

    iii.   Press the "ON/OFF" button on front panel of B-Plus 2.5;

         Tips: Press "ON/OFF" button one second can start B-Plus;

         Once start, the LED lights of B-Plus 2.5 will be in different status according battery status as below:

<div align="center">LED status when normal start</div>

Item	LED	Status
1	Run	Green
2	SOC	More than one is green. Slow blink is charging and Fast blink is discharging. The flash in order means no communication.
3	ERROR	OFF
4	Alarm	OFF

	Status(display interval 2S)	Definition
LED(BMU)	Blinks 1 time	Inverter not connected
	Blinks 2 time	Battery not connected
	Blinks 3 time	Battery disconnect
	Blinks 4 time	Battery failure

Remark:

    Slow blink: Indicator light is on and off every 1s (0.5Hz).

    Fast blink: indicator light is on and off every 0.25s (2HZ)

SOC status and indicate

Item	Status	Indicate
1	Four lights are all normally on	Capacity is 100%-75% (including)
2	The last three lights are normally on	Capacity is 74%-50% (including)
3	The last two lights are normally on	Capacity is 49%-25% (including)
4	The last one light is normally on	Capacity is 24%-1% (including)

(3)Inverter activity;

(4)Go to the home page of APP, and enter into Charger Setting page, select "Battery Type Lithium", then select "Min Capacity" setting 20%, at

last select "Battery awaken".Choosing"YES". Complete battery parameter settings.

(5)System running;

Appendix 3

Parameter setting

1. SMA charger min capacity

Parameter setup for Battery-Box2.5

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	50
262.01ProtResSOC	3
262.02BatResSOC	10

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	50
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	6
262.03BUResSOC	0
262.04PVResSOC	8
262.05MinSlfCsmpSOC	75

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	50
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes

262.01ProtResSOC	3
262.02BatResSOC	6
262.04PVResSOC	8
262.03BUResSOC	0
262.05MinSlfCsmpSOC	75

Parameter setup for Battery-Box 5.0

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	100
262.01ProtResSOC	3
262.02BatResSOC	7

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	100
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	4
262.03BUResSOC	0
262.04PVResSOC	6
262.05MinSlfCsmpSOC	80

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	100
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes

262.01ProtResSOC	3
262.02BatResSOC	4
262.04PVResSOC	6
262.03BUResSOC	0
262.05MinSlfCsmpSOC	80

Parameter setup for Battery-Box7.5

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
262.01ProtResSOC	3
262.02BatResSOC	6

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	4
262.03BUResSOC	0
262.04PVResSOC	4
262.05MinSlfCsmpSOC	85

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes

262.01ProtResSOC	3
262.02BatResSOC	4
262.04PVResSOC	4
262.03BUResSOC	0
262.05MinSlfCsmpSOC	85

Parameter setup for Battery-Box10.0 and more

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
262.01ProtResSOC	3
262.02BatResSOC	6

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	4
262.03BUResSOC	0
262.04PVResSOC	4
262.05MinSlfCsmpSOC	85

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes

262.01ProtResSOC	3
262.02BatResSOC	4
262.04PVResSOC	4
262.03BUResSOC	0
262.05MinSlfCsmpSOC	85

Parameter setup for Battery-Box in off-grid

Protection for the Battery

Parameters	Recommended Value
223.05 BatPro1Soc	12%
223.06 BatPro2Soc	12%
223.07 BatPro3Soc	3%

Gen Autostart Control

Parameters	Recommended Value
235.03 GnSocTm1Str	17%
235.04 GnSocTm1Stp	35%

Parameter setup for Battery-Box7.5

Three-phase

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
262.01ProtResSOC	3
262.02BatResSOC	10

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	6
262.03BUResSOC	0
262.04PVResSOC	8
262.05MinSlfCsmpSOC	75

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	150
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	6
262.04PVResSOC	8
262.03BUResSOC	0
262.05MinSlfCsmpSOC	75

Parameter setup for Battery-Box10.0

Charging the battery Usage through battery backup system without increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
262.01ProtResSOC	3
262.02BatResSOC	10

Charging the battery usage through battery backup system with increased self-consumption

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	6
262.03BUResSOC	0
262.04PVResSOC	8
262.05MinSlfCsmpSOC	75

Charging the battery usage through system for increased self-consumption without a battery backup grid

Parameters	Setup value
003.07Batt Typ	Li Lon-Ext-BMS
003.10Batt Cpynom	200
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	6
262.04PVResSOC	8
262.03BUResSOC	0
262.05MinSlfCsmpSOC	75

2. Solax charger min capacity

Product	in capacity
Battery-Box 2.5	20%
Battery-Box 5.0	15%
Battery-Box 7.5	15%
Battery-Box 10.0	10%
Battery-Box 12.8	10%