



User Manual

B-Box 2.5~10.0

20160516

Version: 1.0

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1 INFORMATION IN THIS MANUAL

1.1 About this manual

This user manual introduces the B-Box product information, using guidance, safety caution items and normal failure and actions can be done by user. When using the B-BOX, if had any abnormal failure or urgent occurs, please contact with the after service center.

1.2 Target Group

This user manual applies for the B-BOX 2.5, B-BOX 5.0, B-BOX 7.5, B-BOX 10.0.

1.3 Intend usage

The B-BOX can be used in household energy storage application ,includes on/off grid system. When B-BOX works with different inverter, user should refer to the configuration list with different inverters which are suggested by BYD.

1.4 B-BOX&B-Plus definition

BYD battery box products- B-Box2.5~B-Box10.0 are defined as below:

B-Box: Battery Box

B-Plus2.5: battery unit with nominal capacity is 2.56Kwh, Will be installed inside the cabinet as an energy storage module.

B-Box2.5: Battery nominal capacity is 2.56 Kwh (Includes 1pcs B-Plus 2.5)

B-Box 5.0: Battery nominal capacity is 5.12 Kwh (Includes 2pcs of B-Plus 2.5)

B-Box 7.5: Battery nominal capacity is 7.68 Kwh (Includes 3pcs of B-Plus 2.5)

B-Box 10.0: Battery nominal capacity is 10.24 Kwh (Includes 4pcs of B-Plus 2.5)

1.5 Identifying The Product

The Type Label describe the product identity and attached on the product. For safe usage, the user must be well-informed of the contents in the Type Label. The Type Label includes:

Product Name:

Product Type:

Rated output voltage:

Rated current:

Operation temperature range:

Serial Number (P/N No.):

Caution:

Certification marks:

2 SAFETY

2.1 Safety precaution

Warning, notice and caution

Users are kindly requested to use the battery which is delivered from BYD COMPANY LIMITED in strict accordance with the Datasheet and remarks include at the end of the document.

BYD COMPANY LIMITED will not guarantee against any accidents occurring due to use outside those written in this Datasheet.

WARNING

Do not crush, dispose according to safety regulations (Do not dispose in fire or water).

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

Once discharged, recharge battery within 48hours.

Do not expose to temperatures above 60°C (140°F) .

Must be grounded correctly. Do not put front panel face down.

Do not short, reverse polarity or connect in series.

Disconnect from power and load before maintenance.

May only be used by qualified professionals.

Storage according to related standard.

Do not put one battery on another when unpackaged.

In Transport and storage, the goods must not be stacked at a height or layers above the specification.



NOTICE

Inadvertent operation of damaged B-Box can lead to a hazard situation that may result in serious injury due to electrical shock. Only can operate B-Box when it is technically faultless and in an operationally safe stat.

Regularly check the B-Box for visible damage. Make sure that all safety equipment is freely accessible at all time. If B-Box is damaged, do not touch it.

Please contact your after sale service if a significant event message is shown on LCD or APP of inverter, please immediately contact your after service center.

CAUTION

Li-ion battery inside, when disassemble the system, do not intentionally short the positive(+) and negative(-) terminals with metallic objects.

All works on system and electrical connections must be carried out by qualified personnel only. B-Box provide a emergency switch when urgent things happen.

A potentially hazard circumstance such as excessive heat or electrolyte mist may occur due to incorrect operation, damage, abuse. The safety precautions and the warning messages described are not fully understood, or if you have any questions, please contact after service for guidance. The safety section may not include all regulations for your locale.

Personnel working with B-Box must review applicable federal, state and local regulations as well as the industry standards regarding this product.

When transport the system with package type, remove the battery from cabinet and transport them separately.

2.2 Safety guidelines for installation



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 B-Box and electrical connections must be carried out by qualified personnel only. B-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. The following safety precautions and the warning messages described in this section must be observed. If any of the following precautions are not fully understood, or if you have any questions, contact Customer Support for guidance. The Safety Section may not include all regulations for your locale; personnel working with B-Box must review applicable federal, state and local regulations as well as the industry standards regarding this product.

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



CAUTION:

Due to high weight of BYD B-Box 2.5~10.0, please use hard package and do safety protection when transport, please also pay attention to the safety to avoid human damage.

3 TECHNICAL PARAMETERS

	B-Box 2.5	B-Box 5.0	B-Box 7.5	B-Box 10.0
Battery Type	Lithium Iron phosphate battery			
Battery module type	B-Plus2.5			
Rated battery energy (0.2C charge & discharge at @+25℃)	2.56 kWh	5.12 kWh	7.68 kWh	10.24 kWh
Output power	Max 2.5 kW	Max 5.0 kW	Max 7.5 kW	Max 10.0 kW
Usable battery energy	2.45 kWh	4.91 kWh	7.37 kWh	9.83 kWh
Nominal voltage	51.2V			
Working voltage range	44.8V-57.6V			
Communication	RS485/CAN			
Cabinet Net Dimension	Width 600* depth 510* mm height 820 (Without ground feet)			
Net Weight	78Kg	116Kg	154Kg	192Kg
IP level	IP20			

When B-BOX works in different temperature, charge and discharge current will be adjusted automatically, detail parameters setting please refer to below table:

Parameter setting of charge current in various temperature	
Protect temp./Resume temp.(℃)	Normal current(A)
-7~2	0.06C*N
2~12	0.12C*N
12~55	0.7C*N
Remark: 1.Effective time is 2mins when change from one temperature range to another.) 2.N=B-Plus2.5 battery quantity	
Discharge current control with temperature	
Protect temp./Resume temp.(℃)	Normal current(A)
-20~60/(-15~55)	0.7C*N
Remark: 1.N= B-Plus2.5 U battery quantity	

4 TECHNICAL NOUN EXPLANATION

No.	Terms	comment
1	Discharge	Battery output power to load or other equipment
2	Charge	Battery get power from power supply(such as DC charger)
3	Full charged	Battery had been full charged, SOC is 100%.
4	Idle	Battery is on status of neither charge nor discharge and had not full charged.
5	Shutdown mode	Power off
6	SOC	Status of capacity
7	SW	Software
8	HW	Hardware
9	Battery voltage	The voltage between B+/B-
10	Pack voltage	The voltage between P+/P-
11	Cell voltage	single cell voltage
12	Failure	Battery or BMS are broken, to need change new unit
13	Alarm	Battery will stop charge or discharge immediately
14	Protect	Battery stop charge or discharge (e.g cell is over voltage), and it is resumable.

5 PRODUCT OVERVIEW

5.1 B-BOX System Brief introduction

B-Box is short name of battery box, as the energy storage part in the electric power system in household, the box carries BYD's lithium ferrum battery with excellent performance. There are 1/2/3/4 pcs batteries modules in each box, and the box support parallel connection to expend capacity from 2.5Kwh to 80Kwh, can meet various capacity requirement from users.



Figure 1 External drawing



Figure 2 Internal drawing



Figure 3 Structure dimension drawing

5.2 B-BOX configuration table

No.	Component	Name	Description
1	Cabinet	B-Box Cabinet	The Cabinet to install the B-Plus 2.5 inside and provide DC output(Each cabinet can install max 4pcs B-Plus2.5)
2	Battery	B-Plus2.5	Battery module with 51.2V50Ah, BYD's P/N is: U3A1-50P-A.
3	BMU	BMU	Battery management unit. Provide communication with external equipment.

Table 1 configuration list

5.3 B-BOX System diagram

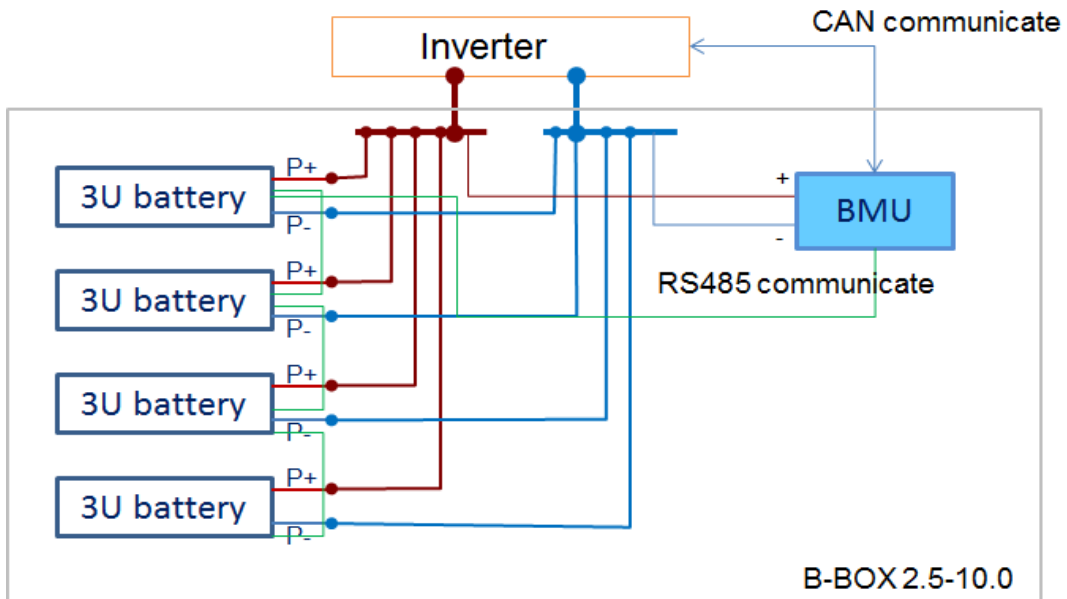


Figure 4 System diagram

5.4 General introduction of BMU

BMU is battery management unit which installed in cabinet, it as an function part in B-BOX system to manage the battery's charge and discharge, select information from battery and report to inverter.

Main function:

- ✓ CAN /RS485 communicate with inverter
- ✓ RS485 communicate with battery/BMS
- ✓ Dry contact terminal
- ✓ Other Communication interface for maintenance
- ✓ Charge and discharge management



5.5 General introduction of B-Plus 2.5

5.5.1 B-Plus 2.5 brief introduction

B-Plus is the commercial name of BYD U3A1-50P-A backup battery with 51.2V& 50Ah which is designed for energy storage application. B-Plus 2.5 is an integrated battery which consist of shell, BMS and cells.



Figure 5 B-Plus 2.5 overview



Figure 6 Display and communicate interface

Table 3 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	Alarm LED	Alarm	Indicate alarm status
⑤	RJ45 terminal	RS232/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	Reset	RESET	Activity battery when no external power add on battery.

5.6 Battery technical parameters

5.6.1 Charge & Discharge performance parameters

Table 4 Charging parameters

No.	Item	Requirement			Unit	Remark
		Min.	Max.	Typical		
1	Charge voltage (equalized charge)		58.5 (protect level)	56.5	V(DC)	
	Charge voltage (floating charge)	54.4		55.2	V(DC)	
2	Charge current	0	50	25	A	-10 °C ~0 °C recommend charge current is 5A 0 °C ~10 °C recommend charge current is 12.5A. 10 °C ~60 °C recommend charge current is 50A.

Table 5 Discharging parameters

No.	Item	Requirement			Unit	Remark
		Min.	Max.	Typical		
1	Discharge voltage	40	58	51.2	V(DC)	
2	Discharge current		50		A	

5.6.2 Operating environment

Table 6 Operating environment parameters

No.	Item	Requirement			Unit	Remark
		Min.	Typical	Max.		
1	Discharging temperature	-20	25	55	°C	
2	Charging temperature	-10	25	50	°C	
3	Relative humidity	5		95	%	
4	Absolute humidity	0.26		25	g/m ³	
5	Elevation	-	2000	-	m	
6	Cooling	Do not need peripheral cooling equipment				
7	IP level	20				
8	Storage and Temperature	When storage temperature is 25°C, should charge-discharge battery at least one cycle every 12 months or charge battery according to the "NEXT CHARGE" label in package.				
		When storage temperature is 35°C, should charge-discharge battery at least one cycle every 6 months.				
		When storage temperature is 45°C, should charge-discharge battery at least one cycle every 3 months.				
9	Low voltage maintenance	Must charge the battery within 15 days at the conditions of battery exit the system automatic cause by low voltage protection with working temperature is 25°C.				
		Must charge the battery within 7days at the conditions of battery exit the system automatic cause by low voltage protection with working temperature is 45°C.				

5.7 B-Plus 2.5 address switch introduction

After finish the battery installation, installer should setup battery address by “ADDR” switch.
“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”.

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 **Appendex1**.

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

6 START SYSTEM

Notice : Before activity the system, operator should check the cable connection strictly till make sure of the cable connection is hard, and check the batteries address had been setup correctly.

6.1 System activity procedures when B-BOX connect to SMA Sunny island

- Press the all the “Reset” button on front panel of B-Plus 2.5;
Tips: Press “Reset” 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.
3	ERROR	OFF

4	Alarm	OFF
---	-------	-----

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%-0% (including)

ii. **Switching on the Sunny Island**

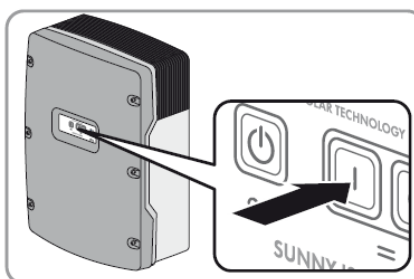
Requirements: ☐ The load-break switch in the DC cable must be closed. ☐ The Sunny Island must not have switched itself.

Procedure:

• For systems with one Sunny Island, press the "On" button on the Sunny Island. • For systems with up to three Sunny Island inverters, press and hold the "On" button on the master until an acoustic signal sounds.

• For multicuster systems, press and hold the "On" button on each master until an acoustic signal sounds.

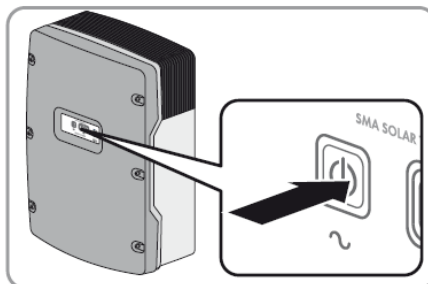
☒ The inverter LED on each Sunny Island inverter is glowing orange and the Sunny Island inverters



are in standby.

i. **Start the inverter;**

Requirement: ☐ All Sunny Island inverters must be switched on.



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.

- ii. System start;
- iii. Set up battery parameters on SRC of inverter.

Please refer to the “Battery Parameter setting” table in Appendix 2;

- iv. System running;

6.2 System activity procedures when B-BOX connect to GOODWE ES

- i. Download the APP on user’s cell phone and open the home page;
- ii. Press the all the “Reset” button on front panel of B-Plus 2.5;

Tips: Press 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.
3	ERROR	OFF
4	Alarm	OFF

Remark:

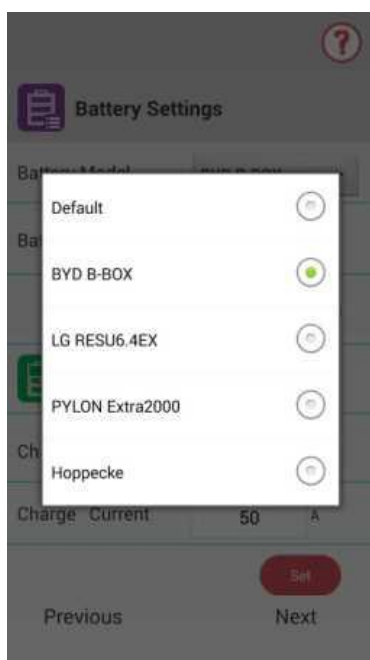
Slow blink: Indicator light is on and off every 1s (0.5Hz).

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%-0% (including)

- iii. Inverter activity;
- iv. Go to the home page of APP, enter into the Battery Setting page, select “BYD B-BOX” battery, then select “NEXT” until the last page, at last select “Start”.



- i. System running;

7 STOPPING THE SYSTEM

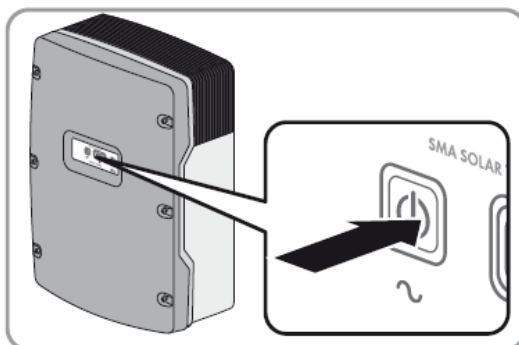
7.1 Stopping the system when B-BOX working with SMA SUNNY ISLAND

If you stop the system, the Sunny Island switches from operation into standby mode. In standby mode, the Sunny Island discharges the battery due to its standby consumption.

Tip: For longer shut-down periods, switch off the Sunny Island .

- i. Stopping the system

Procedure • Press and hold the start-stop button on the Sunny Island until the inverter LED is glowing orange. **or** Press and hold the button on the Sunny Remote Control until the progress bar has run down.



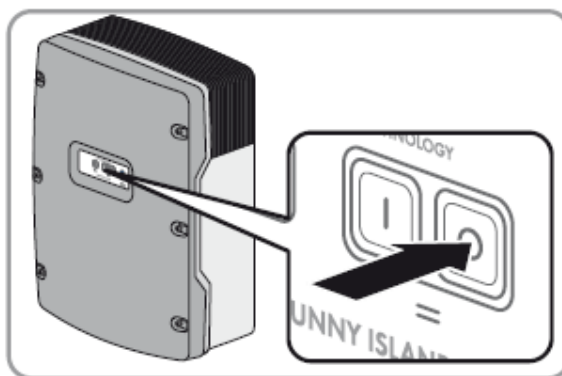
☑ The inverter LED on each Sunny Island is glowing orange. The Sunny Island inverters are in standby.

ii. Switching off the Sunny Island

Requirement: ☐ The system is stopped.

Procedure: • Press and hold the "Off" button on the Sunny Island until an acoustic signal sounds.

☑ The inverter LED is off on all Sunny Island inverters.



iii. Stopping the B-Plus 2.5;

Press all the "RESET" on front panel of B-Plus2.5 until all the led are off.

iv. The system stopping;

7.2 Stopping the system when B-BOX working with GOODWE inverter

- i. Disconnect the load from inverter;
- ii. Disconnect the solar panel from inverter;
- iii. Disconnect the AC grid from inverter;
- iv. Stopping the B-PLUS2.5: Press all the "RESET" on front panel of B-Plus2.5 until all the led are off;
- v. System stopping;

8 CLEANING AND MAINTENANCE

8.1 Cleaning



CAUTION:

When user need cleaning the B-BOX, please stopping the system first.

The B-BOX system is recommended to be cleaned periodically. If the enclosure is in a dirty condition, please use a soft and dry brush or a vacuum to remove the dirt. Do not use liquids such as solvents, abrasives or corrosive liquids in the enclosures.

8.2 Maintenance

The B-BOX should be installed in position with temperature range of $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$. And the humidity is less than 80%. The load-bearing of battery's package is less than 300Kg. So don't let 7 modules in stack. The capacity of module before delivery is 70% (35AH). So after long time storage the module need do maintenance. Charge battery with 0.1C (5A) for 5 hours when maintenance. Detail information please check table 10.

Table 10 Maintenance time

Temperature	Months
25°C	12
35°C	6
45°C	3

When module over discharged to 37.5V. The module will damaged after several days if do not charge the module in time, so Detail information please check table 11.

Table 11 Left time after Over discharged to 37.5V

Temperature	Left time
25°C	15 days
45°C	7 days

9 DISPOSE SPECIAL SITUATION

9.1 Battery over discharged maintenance

When battery over discharge which may caused by black out, continuously rainy day, etc, the battery can provide energy is limited, user should pay attention to the backup time of the battery, please refer to "Item 9" in table 6.

9.2 Catastrophic accidents

Catastrophic accidents, including lightning, floods, earthquakes, fires and other disasters, can bring unpredictable damage to the whole system.

10 BOX CONFIGURATION LIST WITH DIFFERENT INVERTER

10.1 B-BOX configuration list with SMA sunny island

1 Phase on Grid		
Inverter Type	B-Plus 2.5	Cabinet
SI 3.0M	≥1	≥1
SI 4.4M	≥1	≥1
SI 6.0H	≥1	≥1
SI 8.0H	≥1	≥1
Remark: Maximum B-Plus quantity is 32,Cabinet quantity is 8.		
3 Phase on Grid		
Inverter Type	B-Plus 2.5	Cabinet
SI 3.0M	≥3	≥1
SI 4.4M	≥4	≥1
SI 6.0H	≥4	≥1
SI 8.0H	≥4	≥1
1 Phase off Grid		
Inverter Type	B-Plus 2.5	Cabinet
SI 3.0M	≥3	≥1
SI 4.4M	≥3	≥1
SI 6.0H	≥5	≥2
SI 8.0H	≥5	≥2
3 Phase off Grid		
Inverter Type	B-Plus 2.5	Cabinet
SI 3.0M	≥8	≥2
SI 4.4M	≥8	≥2
SI 6.0H	≥12	≥3
SI 8.0H	≥12	≥3
Remark: Maximum B-Plus quantity is 32,Cabinet quantity is 8.		

10.2 B-BOX configuration list with GOODWE ES inverter

1 Phase on Grid		
Inverter Type	B-Plus 2.5	Cabinet
4.6kW	≥1¹	≥1
1 Phase off Grid		
Inverter Type	B-Plus 2.5	Cabinet
4.6kW	≥2	≥1
Remark: Maximum B-Plus quantity is 32,Cabinet quantity is 8.		

11 NORMAL ISSUES AND SOLUTIONS

11.1 Normal alarm and solution display on SMA sunny island SRC

SMA SRC	Reason	Solution
F221	External Alarm-Invalid BatType	Reset battery type to "Li" on SRC.
F920(XA01General)	1.All the batteries are failed to communicate at the same time; 2.BMU and battery are failed to RS485communicate;	1.Inspect whether the RS485 communicate cable had been connected correctly and reliability; 2.Inspect DIP switch setting according to the DIP switch setting table in user manual; 3.Change BMU in cabinet;
F930(XA11Short)	External Alarm - Short circuit	1.Power off; 2.Inspect short connection of cable between P+&P-; 3.If short connection is confirmed, please reconnect cable correctly; 4.restart battery;
F952	External Alarm –ExtBMS Timeout	1.Check the CAN communication, should connect well. 2.Change BMU.
W936(XW01General)	External Warning - General	1.Inspect whether the RS485 communicate cable had been connected correctly and reliability; 2.Inspect DIP switch setting according to the

¹ This configuration is only for self consumption application.

		Address setting table;
W937(XW02DcHiVolt)	External Warning - Battery High Voltage	Normal alarm and do not need to deal with;
W938(XW03DcLoVolt)	External Warning - Battery Low Voltage	Normal alarm and do not need to deal with;
W939(XW04DcHiTmp)	External Warning - Battery High Temp	Normal alarm and do not need to deal with;
W940(XW05DcLoTmp)	External Warning - Battery Low Temp	Normal alarm and do not need to deal with;
W941(XW06DcHiTmpC)	External Warning - Battery High Temp Charge	Normal alarm and do not need to deal with;
W942(XW07DcLoTmpC)	External Warning - Battery Low Temp Charge	Normal alarm and do not need to deal with;
W943(XW08DcHiCur)	External Warning - Battery High Current	Normal alarm and do not need to deal with;
W944(XW09DcHiChgCur)	External Warning - Battery High Current Charge	Normal alarm and do not need to deal with;
W953	External Warning – ExtBMS Timeout	1.Check the CAN communication, should connect well. 2.Change BMU.

11.2 Normal alarm and solution display on B-Plus 2.5

	B-Plus display info	Reason	Solution
LED	Yellow led(Alarm) blinks for 0.5Hz , other led are on off continuously;	Battery power off abnormal;	1.Press "RESET" button for 2-3 secs untill battery can work normal; 2.If yellow blink continuously, need change battery;
	Yellow led(Alarm),Yellow led on and buzzing with 4 times.	Protected or external connection incorrect;	1.Power off the battery; 2.Inspect short/reverse connection of cable between P+&P-; 3.If short/reverse connection is confirmed, please reconnect cable correctly;

			4.restart battery;
Buzzer	Buzzing for 4 times	Short/reverse connection ;	1.Power off; 2.Inspect short/reverse connection of cable between P+&P-; 3.If short/reverse connection is confirmed, please reconnect cable correctly; 4.restart battery;

12 WARRANTY

BYD provide warranty when this product is installed and used do not beyond description in user manual, installation manual and warranty letter.

13 LOGIN IN AFTER SERVICE WEB

In order to get after service in time, after installation, please login your B-BOX information in our after service operator web:

<http://www.eft-systems.de/de/content/1/unternehmen>

14 CONTACT

For technical problems or inquiries for usage, please contact our installation company.

To receive customer support, the following information is required.

Product type

Serial Number

Connected PV module type and number

Option equipment

Any using problem please contact us by below address:

Contact us:

China

BYD LITHIUM BATTERY Co.,LTD

Customer Service Mailbox: eubatterygrp@byd.com

Telephone:+86 0755 89888888

Address: No.1,Baoping Road,Baolong Industrial Town Longgang Shenzhen, 518116, P.R.China

Germany

EFT Energy for tomorrow

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APPENDIX 1 : BATTERY ADDRESS SETTING LIST

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

APPENDIX 2 : BATTERY PARAMETER SETTING TABLE

Battery Parameter setting table for B-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	6
262.02BatResSOC	12
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	2
262.03BuresSOC	0
262.04PVResSOC	5
262.05MinSlfCsmpSOC	70
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	2
262.04PVResSOC	5
262.03BuresSOC	0
262.05MinSlfCsmpSOC	70
Charging the battery protection mode in off-grid system	
Parameters	Setup value
003.07Batt Typ	Li Lon_Ext-BMS
003.10Batt Cpynom	50
223.05BatPro1Soc	18

223.06BatPro2Soc	12
223.07BatPro3Soc	6

Battery Parameter setting table for B-BOX5.0:

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	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	100
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	2
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	100
261.01SlfCsmpIncEna	Enable
261.03Saisonenable	Yes
262.01ProtResSOC	3
262.02BatResSOC	2
262.04PVResSOC	4
262.03BUREsSOC	0
262.05MinSlfCsmpSOC	85
Charging the battery protection mode in off-grid system	
Parameters	Setup value
003.07Batt Typ	Li Lon_Ext-BMS
003.10Batt Cpynom	100
223.05BatPro1Soc	9
223.06BatPro2Soc	6
223.07BatPro3Soc	3

Battery Parameter setting table for B-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	4
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	2
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	2
262.04PVResSOC	4
262.03BuresSOC	0
262.05MinSlfCsmpSOC	85
Charging the battery protection mode in off-grid system	
Parameters	Setup value
003.07Batt Typ	Li Lon_Ext-BMS
003.10Batt Cpynom	150
223.05BatPro1Soc	9
223.06BatPro2Soc	6
223.07BatPro3Soc	3

Battery Parameter setting table for B-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	4
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	2
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	2
262.04PVResSOC	4
262.03BuresSOC	0
262.05MinSlfCsmpSOC	85
Charging the battery protection mode in off-grid system	
Parameters	Setup value
003.07Batt Typ	Li Lon_Ext-BMS
003.10Batt Cpynom	200
223.05BatPro1Soc	9
223.06BatPro2Soc	6
223.07BatPro3Soc	3

