BYD Battery-Box LV

QUICK REFERENCE GUIDE
Valid for Battery-Box L 3.5/7.0/10.5/14.0

Target Group

⚠️ Skilled personnel only
This manual and the tasks and procedures described herein are intended for 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 expenence:
• Knowledge of the functional 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 adherence to this manual and all safety precautions and best oractices.

Installation environment requirements

Max. +50℃   Min. -10℃   RH. +5%~+95%

YES (Sunlight)   **YES** (Rain)   **YES** (Snow)

NO Direct sunlight   **NO** Direct rain fall   **NO** Snow accumulation

NO Flammable material or gas near the installation

NO Flammable wall

Tools

Wire clamp	Torque wrench	Precision screwdriver	Inclinometer	Wrench	Churn drill

Packing list

Packing of BCU+BASE					Packing of B-Plus L 3.5
① 4× M6	② 1×M8	③ 1×M10	④ 3×Expansion bolt M6	⑤ WIFI module	⑥2×M6

Overall structure

Battery-Box L 3.5   Battery-Box L 7.0   Battery-Box L 10.5   Battery-Box L 14.0

BCU

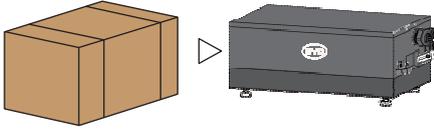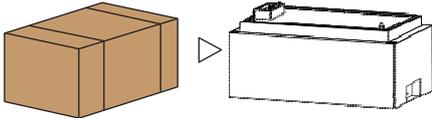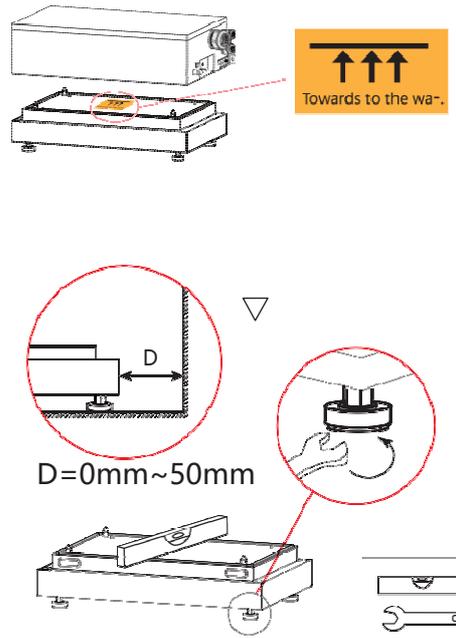B-Plus

Base

Installation steps

1. Unpacking

BCU + Base+Accessories

*n=1-4 B-Plus L 3.5

2. Install anchor bolt & Leveling

Towards to the wa-.

D=0mm~50mm
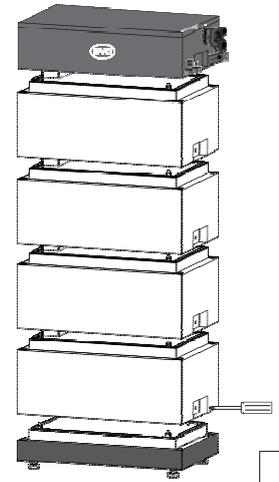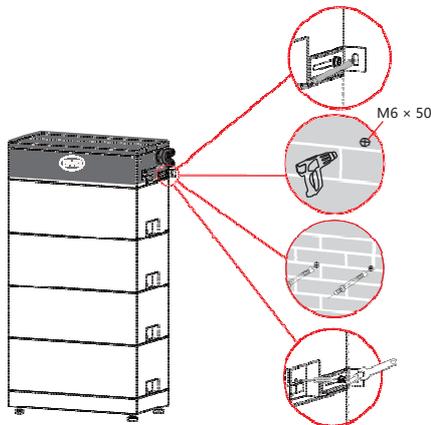
3. Install B-Plus & BCU

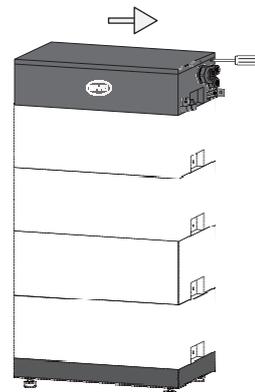The BCU screws are not locked. After installing the hangers, tighten the screws.

4. Install the hangers

4.1 Use a pencil to mark the location of the hole to be drilled.
4.2 Remove the BCU, punch holes in the wall with hammer drill.
4.3 Install expansion bolt in punched holes.
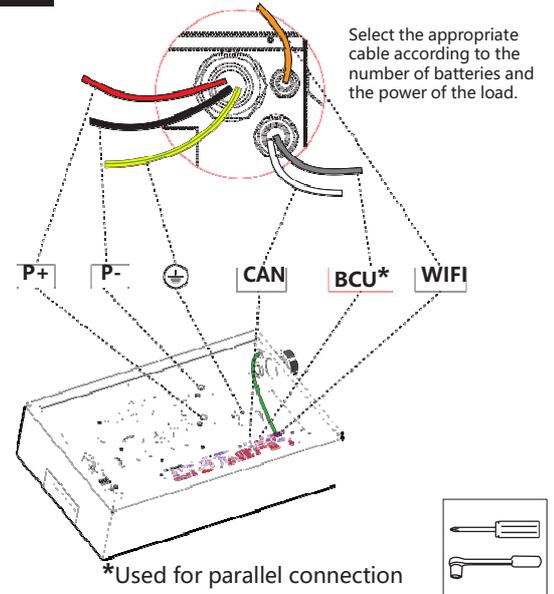4.4 Install the BCU, then lock the crews and expansion bolt.

M6 × 50

5. Open the BCU cover

5.1 Remove the screw from the measuring surface.
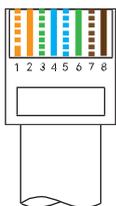5.2 Push the cover to the right, then lift it up.

6. BCU internal overview

Select the appropriate cable according to the number of batteries and the power of the load.

P+   P-   CAN   BCU*   WIFI
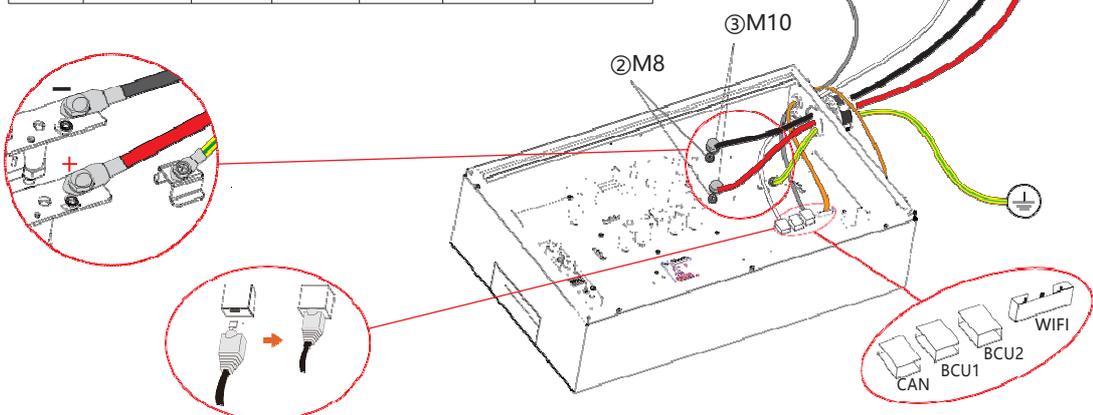
*Used for parallel connection

7. Power cables, ground cable, Comunication cable & WIFI cables connection

1-8

RJ45 Pin define

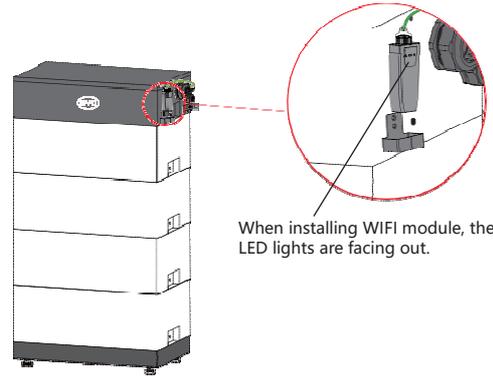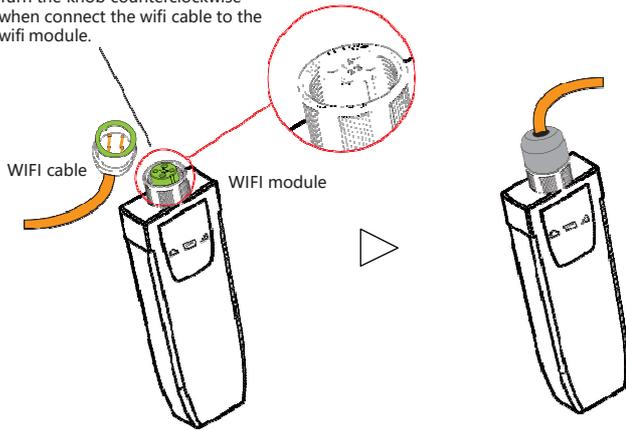|	Battery-Box	SMA	GOODWE	VICTRON	SUNGROW	Solis
CAN H	4	4	4	7	CAN H	4
CAN L	5	5	5	8	CAN L	5

Inverter

CAN   −   +

③M10

②M8

WIFI

BCU2

CAN BCU1

8. Install wifi module

8.1 Connect the wifi cable to the wifi module.
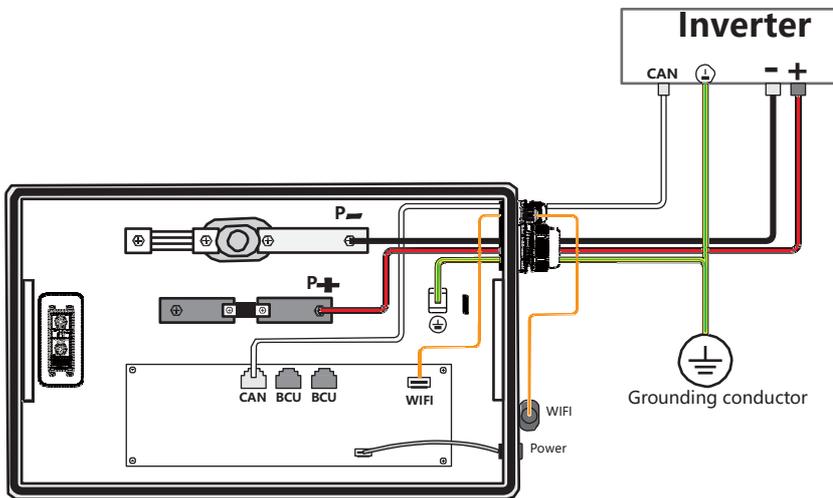8.2 Install the wifi module.

Turn the knob counterclockwise when connect the wifi cable to the wifi module.

WIFI cable

WIFI module

When installing WIFI module, the LED lights are facing out.

9. Installation complete for single system

Inverter

CAN − +

P −

P +

CAN BCU BCU

WIFI

WIFI

Power

Grounding conductor

10. Setting SOC parameters & advice

In order to protect the battery, we recommend that the battery retain some power. Please follow the table

battery damage. And such damage is outside the warranty.

TYPE	On grid	Backup
Battery-Box L 3.5	15%	20%
Battery-Box L 7.0	10%	20%
Battery-Box L 10.5	10%	20%

Please refer to the installation manual of this product and

setting.

11. Installation complete for parallel system

Inverter

CAN
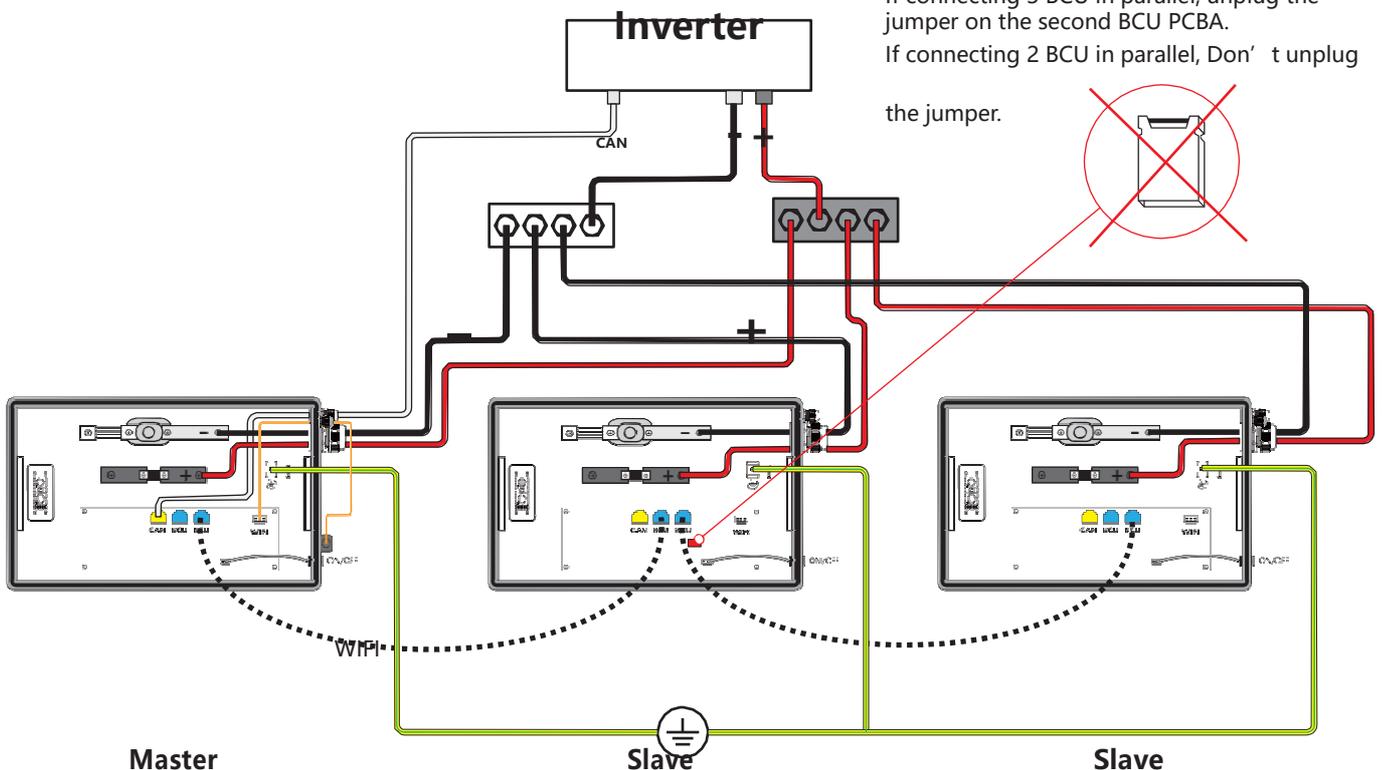
If connecting 3 BCU in parallel, unplug the jumper on the second BCU PCBA.
If connecting 2 BCU in parallel, Don't unplug

the jumper.

+

CAN BCU BCU   WIFI

CAN BCU BCU   WIFI

CAN BCU BCU   WIFI

WIFI

Master

Slave

Slave

12. WIFI setting

You can use a computer, mobile phone or IPAD to set up and configure.
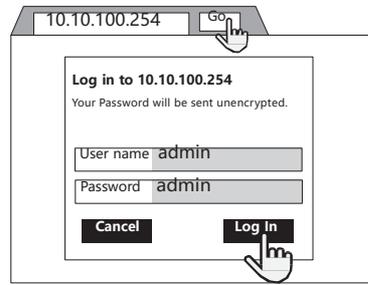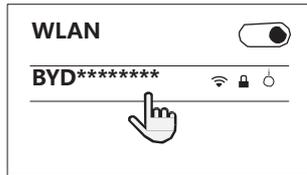
Power

WLAN

BYD********

10.10.100.254 | Go

Log in to 10.10.100.254
Your Password will be sent unencrypted.

User name | admin
Password | admin

Cancel | Log In

13. Update the Battery-Box firmware

Status
Wizard
Quick Set
Advanced
Upgrade ①
Wifi
Battery-Box ②

Battery-Box software

Current version
Browse ③

D:\B-BOX\software

Battery-Box LV firmware ④

⑤ open

Upload ⑥

Reminder:
There are two ways to update the firmware for BCU: over the WIFI connection and over the cable connection.
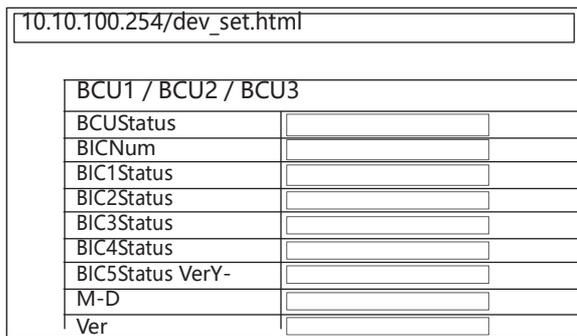
Update via WIFI connection: the entire update process takes about 1 minutes.
Update via cable connection: update methods are available at the following Web site. Or scan the QR code to visit the site for more information.
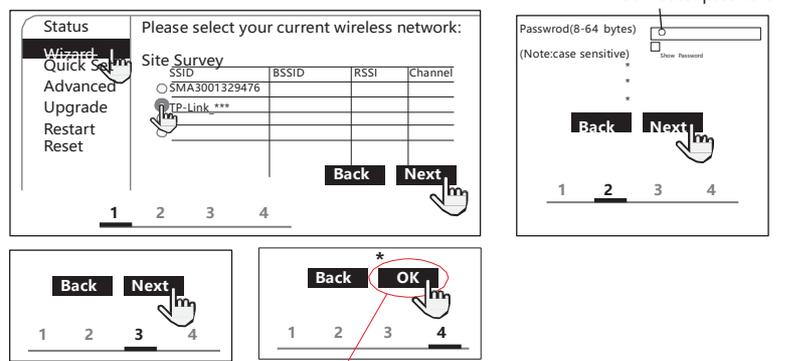http://alpspower.com.au/download/
http://www.eft-systems.de/de/downloads

Australia
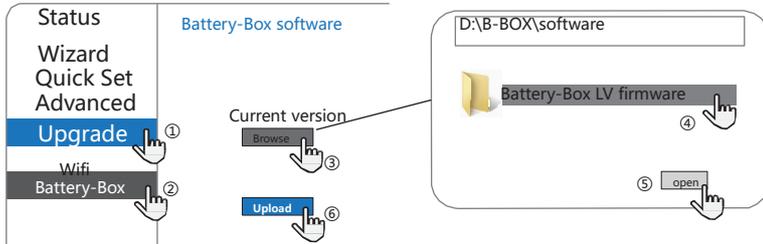
Europe

14. Checking the status of the Battery-Box

checking the battery status by typing the URL

10.10.100.254/dev_set.html

BCU1 / BCU2 / BCU3	
BCUStatus	
BICNum	
BIC1Status	
BIC2Status	
BIC3Status	
BIC4Status	
BIC5Status VerY-	
M-D	
Ver	

15. Configure the network

Status
Wizard
Quick Set
Advanced
Upgrade
Restart
Reset

Please select your current wireless network:

Site Survey

	SSID	BSSID	RSSI	Channel
○	SMA3001329476			
●	TP-Link_***			

Back | Next

1 2 3 4

Your router password

Passwrod(8-64 bytes)
(Note:case sensitive) ☐ Show Password
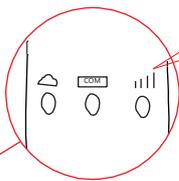
Back | Next

1 **2** 3 4

Back | Next

1 2 **3** 4

*

Back | OK

1 2 3 **4**

*After clicking "OK", you need to wait for 10 seconds to close the webpage.
Otherwise, the configuration is unsuccessful. Need to reconfigure.

16. WIFI status indicator

If your WIFI signal is weak, it is recommended to add a WIFI amplifier.

○ LED off
☼ LED blink
● LED light

LED Status		Meaning	Disposal measures
☁	●	Successful network configuration.	
	○	Network configuration is unsuccessful.	Reconfigure the network. Confirm network password
COM	●	Normal communication between antenna and BCU.	
	○	Communication between antenna and BCU is abnormal.	Check the connection of WIFI and BCU Replace WIFI components.
▁▃▅	☼	WIFI antenna is working properly.	
	○	WIFI antenna failure.	Replace WIFI components.

17. System status indicator

Power

	Diagram	Status	Meaning
1		White blink slow	Charging
2		White blink fast	Discharging
3		White always ON	Idle
4		White blink very slow	Idle
5		Orange blink 2 times	System WIFI is lost
6		Orange blink 3 times	Loss of inverter communication
7		Orange blink 4 times	Lost slave CAN communication
8		Orange blink 5 times	Uncalibrated
9		Orange always ON	BCU or Battery failure