Power wall Battery (IP20)

User Manual

Best Solution Lithium Battery

Product Name: 5/10/15KWh Power wall Battery (IP20)

Model No: B-LFP48-100/200/300PW

Version No: V3.8

Content

1. Safety Precautions

It is very important and necessary to read the user manual carefully before installing or using the battery. Failure to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or may damage the battery and the whole system.

The battery needs to be recharged within 12 hours after fully discharging.

Do not expose cable outside.

All battery terminals must be disconnected before maintenance.

Do not use cleaning solvents to clean the battery.

Do not expose the battery to flammable or harsh chemicals or vapors.

Do not connect battery with PV solar wiring directly.

Any foreign object is prohibited to be inserted into any part of the battery.

Any warranty claims are excluded for direct or indirect damage due to items above.

If the battery is stored for a prolonged time, it is requirement that they are charged every three months, and the SOC should be no less than 30%.

Symbol	Description
	Caution, risk of electric shock
	Heavy enough may cause severe injure
	Keep the battery away from open flame or ignition sources
	Keep the battery away from children
	Do not dispose of the product with household waste
	Recycling
	Read this manual before installation and operation

1.1. Note Before Installation

When receiving, please check the battery and packing list first, if the battery is damaged or spare parts are missing, please contact the dealer.

Before installation, be sure to cut off the grid power and make sure the battery is in the turned-off mode.

Wiring must be correct, do not mix-connect the positive and negative cables, and ensure no short circuit with the external device.

It is prohibited to connect the battery with AC power directly.

The embedded BMS in the battery is designed for 51.2 VDC, please do not connect battery in series.

It is prohibited to connect the battery with different type of battery.

Please ensure the electrical parameters of battery system are compatible to inverter.

Keep the battery away from fire or water.

1.2. During Operation

If the battery system needs to be moved or repaired, the power must be cut off first and the battery

must be completely shut down.
It is prohibited to connect the battery with different type of battery.
It is prohibited to put the batteries working with faulty or incompatible inverter.
In case of fire, Water-based fire extinguisher and dry powder fire extinguisher can be used, liquid fire extinguishers are prohibited.
Please do not open, repair, or disassemble the battery without permission. We do not undertake any consequences or related responsibility due to violation of safety operation or violating of design, production, and equipment safety standards.

2. System Application Introduction

This product is a household energy storage battery pack. The system is matched with a 5.1kwh/10.2kwh/15.3kwh lithium iron phosphate battery pack. This product can be used in conjunction with electricity, so that electricity consumption can be adjusted. This product supports a variety of application modes, such as PV self-use surplus power to grid, peak shaving and valley filling, standby power supply, etc. The specific operation logic is as follows.

2.1. PV Self-use Surplus Power to Grid

Under the condition of good illumination in the daytime, the DC power from PV panel is changed into AC through inverter to supply power for household load. If the household load cannot run out of photovoltaic power, the remaining power will be stored in the battery. If the battery is full, photovoltaic power will be supplied to the grid. In the night or rainy days, photovoltaic cannot generate electricity. The battery supplies power to the home load through an inverter. If the battery SOC is low, the household load will take power from the grid.

2.2. Peak Shaving and Valley Filling

In some countries and regions where peak valley time of use price is implemented, if the difference between peak price and low price is large, the application mode of peak shaving and valley filling can be adopted in energy storage system. In the low electricity price period, the energy storage system is charged; in the peak period of electricity price, the energy storage system supplies power to the household load. It can avoid users using too much power grid when the electricity price is high and save energy expenditure.

2.3. Standby Power Supply

In some extreme weather (such as tornadoes, typhoons, hail), or substation operation failure, power supply will be interrupted. If the energy storage system is installed, the user can still enjoy sufficient power guarantee under this situation.

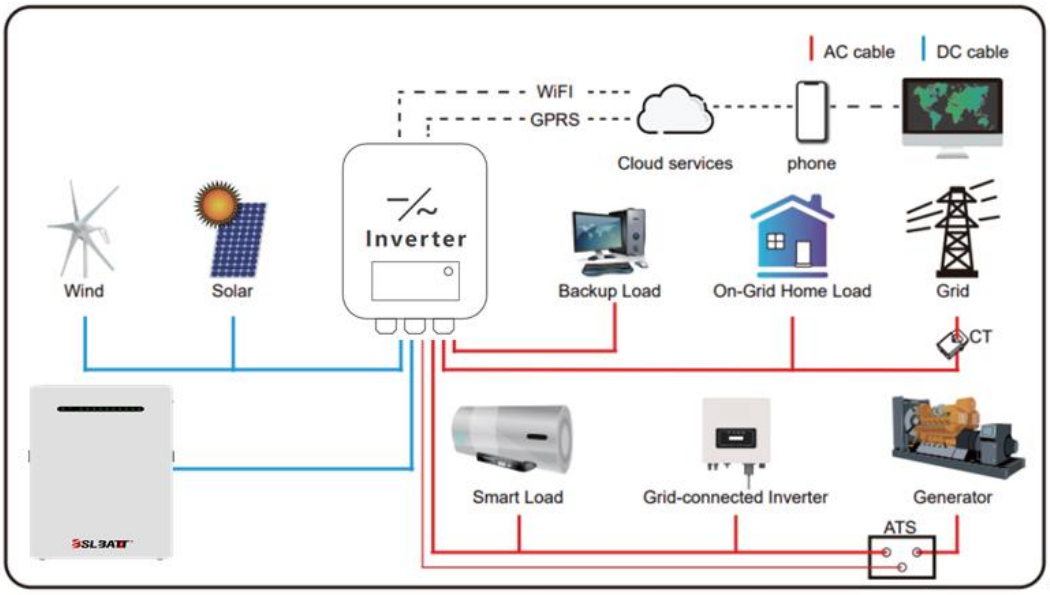


Figure1. System Connection Diagram

3. Product Specification

No	Item	General Parameter		
1	Nominal Voltage	51.2V		
2	Rated Capacity (Ah)	100	200	300
3	Cell Model（LFP-3.2V）	100Ah	100Ah	300Ah
4	Pack Configuration	16S1P	16S2P	16S1P
5	Rate Power (Wh)	5120	10240	15360
6	Charging Voltage	55V		
7	Float Charge Voltage	54.5V		
8	Discharge Cut-off Voltage	47V		
9	Recommended Charge Current	50A	100	150
10	Recommended Discharge Current	50A	100	150
11	Charge Over Current Protect	110A	210	210
12	Discharge Over Current Protect	120A	220	220
13	Nw Pack Weight	50kg	91.5kg	115kg（wheels）/ 117kg（no wheels）
14	Communication protocol	CAN / RS485		
15	Host software and Communication	RS232		
16	Operation Temperature Range	Charge:0~55℃		
		Discharge: -20~60℃		

17	Storage Temperature Range(recommend)	20%~40% SOC, 0℃~35℃, humidity≤60%
Note: Parameters can be adjusted according to customer requirements		

3.1. Suggested number of batteries to match inverters of different Specifications.

5.12kWh(100Ah)

Inverter size	Recommended N.O. batteries	Minimum N.O. of batteries
15kVA	4	3
10kVA	3	2
8kVA	2	2
5kVA	2	1
3kVA	1	1

10.24kWh(200Ah)

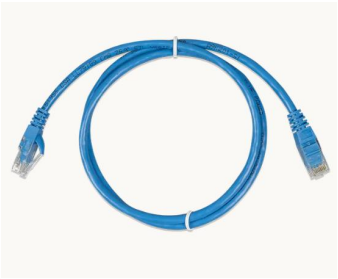
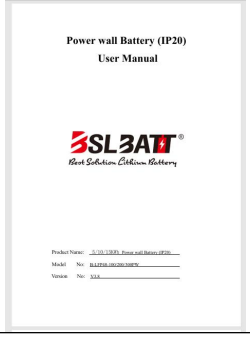
Inverter size	Recommended N.O. batteries	Minimum N.O. of batteries
15kVA	4	3
10kVA	3	2
8kVA	2	2
5kVA	1	1
3kVA	1	1

15.36kWh(300Ah)

Inverter size	Recommended N.O. batteries	Minimum N.O. of batteries
15kVA	4	3
10kVA	3	2
8kVA	2	2
5kVA	1	1
3kVA	1	1

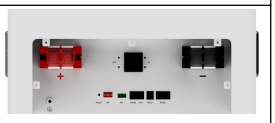
3.2. Packing List

Item	Specification	Quantity	Figure
Battery	51.2V/100Ah	1	
	51.2V/200Ah	1	

	51.2V/300Ah		1	
	51.2V/300Ah		1	
Power cable-positive	51.2V/100Ah	Red/25 mm^2/L1500mm	1	
Power cable-negative		Black /25 mm^2/L1500mm	1	
Power cable-positive	51.2V/200Ah	Red/35 mm^2/L1500mm	1	
Power cable-negative		Black/35 mm^2/L1500mm	1	
Power cable-positive	51.2V/300Ah	Red/50 mm^2/L1500mm	1	
Power cable-negative		Black/50 mm^2/L1500mm	1	
Universal inverter communication cable inverter -to battery	51.2V/100Ah/200Ah /300Ah	Black /L1500mm /Double RJ45 plug	1	
VICTRON inverter communication cable inverter -to battery	51.2V/100Ah/200Ah /300Ah	Blue/L1500mm /Double RJ45 plug	1	
User Manual	User Manual		1	 Power wall Battery (IP20) User Manual SL3ATT

Expansion screw	M8-50mm Expansion screws	6	
Wall bracket	Wall bracket	1	

3.3. Battery Drawing

51.2V 100Ah	51.2V 200Ah	51.2V 300Ah	51.2V 300Ah
			
			
Product size: 590*460*147mm	Product size: 860*510*147mm	Product size: 778*510*270	Product size: 844*510*240

3.4. Interface Description

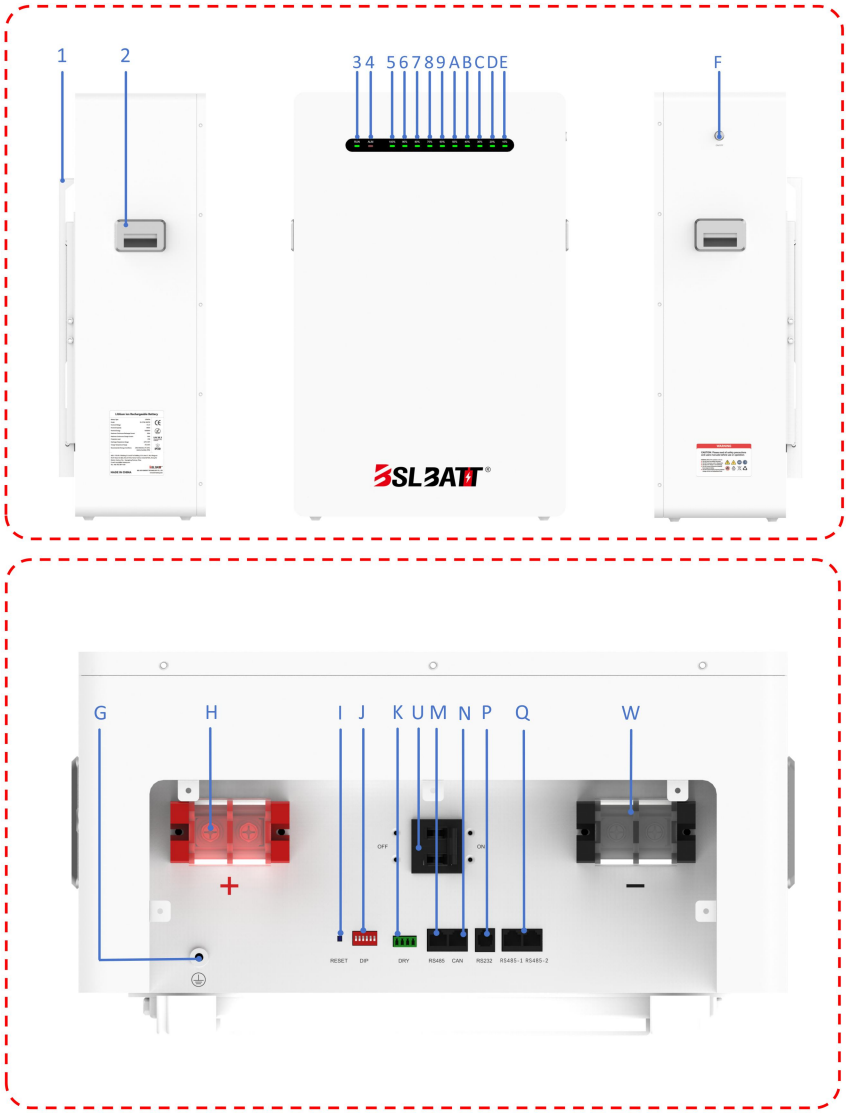


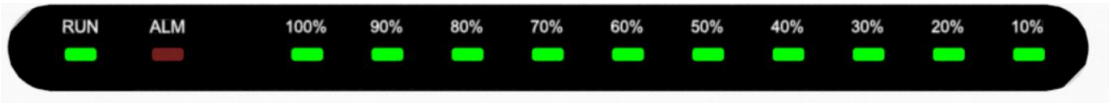
Figure2． Interface Definition Description

Table1.Battery Pack Front Panel Port Definition

No.	Illustration	Silk-screen	Remark
1	Mounting bracket	/	Mounting bracket for securing the module in place
2	Handle	/	Used to lift the battery
3	Running indicator light	Run	After startup, the LED blinks green See Table 2, Table 4
4	Alarm indicator light	ALM	The fault is displayed in red See Table 2, Table 4
5~E	Capacity indicator light	SOC	Refer to Table 2

F	Power	On/off	Power on/off the battery
G	Ground Terminal	⏚	Grounding is used to prevent electric leakage
H	Battery positive	+	positive output
I	Reset	RESET	Reset battery
J	Dial switch	DIP	Address setting, range 1~63
K	Dry connection	DRY	Default: Pin1 to pin2 usually open, closed when SOC≤10%.pin3 to pin4 usually open, closed when SOC≥100%.
M	RS485 Port	RS485	RS485 communication with monitoring equipment or inverter
N	CAN bus port	CAN	CAN bus and inverter connection ports
P	RS232 port	RS232	Communicate with the upper computer
Q	RS485-1/2 port	RS485-1/RS485-2	RS485 paralleling communication port
U	Breaker	ON/OFF	Control the on/off of the battery main circuit
W	Battery negative	-	negative output

3.5. LED Display Definition



Run-LED	Alarm-Led	Led-10	Led-9	Led-8	Led-7	Led-6	Led-5	Led-4	Led-3	Led-2	Led-1
Run	ALM	Capacity indicator light									
		100%	90%	80%	70%	60%	50%	40%	30%	20%	10%

Table 2 LED Working Status Indicators

Status	Normal/alarm /Protection	RUN	ALM	Electricity indicator LED									
		●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
Power off	sleep or Under voltage	off	off	off	off	off	off	off	off	off	off	off	off
Standby	Normal	●Steady	off	●Display according to the battery SOC									
	Alarm or SOC<20%	●Steady	●Flash										
Charge	Normal	●Flash	off	●Display according to the battery SOC (The remaining SOC indicators display a flowing effect)									
	Alarm	●Flash	●Flash										
	Protection	●Flash	●Flash										

Discharge	Normal	●Flash	off	●Display according to the battery SOC (The remaining SOC indicators display a flowing effect)										
	Alarm	●Flash	●Flash											
	Protection	●Flash	●Flash											
Invalid	Normal	off	●Steady	off	off	off	off	off	off	off	off	off	off	

3.6. Battery Connection and Communication Instructions

RS485：With dual isolation CAN communication, default communication rate 9600bps, active communication portal between battery and inverter.

CAN: With dual isolation CAN communication, default communication rate 500 Kbps, active communication portal between battery and inverter.

RS232：BMS can communicate with the upper computer through the RS232 Port to monitor all kinds of information of the battery at the upper computer end, including battery voltage, current, temperature, state, SOC, SOH, and battery production information, etc., the default baud rate is 9600bps.

RS485-1/RS485-2：With a dual RS485 interface to check PACK information, with a default baud rate of 9600bps. To communicate with the monitoring equipment through the RS485, the monitoring equipment as the host, according to the address polling data, address setting range of 1~63.

Dial switch settings: when the PACK is used in parallel, different PACK can be distinguished by setting the address on the BMS dial switch, avoid setting the same address. The definition of the dial switch refers to the following table5（A maximum of 63 groups can be configured）

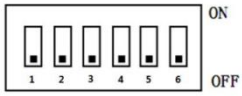


Table 3 Set the Address of Pack

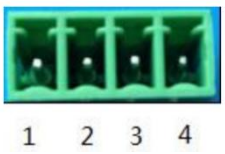
Address	Dial switch position						Remark
	#1	#2	#3	#4	#5	#6	
1	ON	OFF	OFF	OFF	OFF	OFF	Set as main Pack1
2	OFF	ON	OFF	OFF	OFF	OFF	Set as subordinate Pack2
3	ON	ON	OFF	OFF	OFF	OFF	Set as subordinate Pack3
4	OFF	OFF	ON	OFF	OFF	OFF	Set as subordinate Pack4
5	ON	OFF	ON	OFF	OFF	OFF	Set as subordinate Pack5
6	OFF	ON	ON	OFF	OFF	OFF	Set as subordinate Pack6
7	ON	ON	ON	OFF	OFF	OFF	Set as subordinate Pack7
8	OFF	OFF	OFF	ON	OFF	OFF	Set as subordinate Pack8
9	ON	OFF	OFF	ON	OFF	OFF	Set as subordinate Pack9
10	OFF	ON	OFF	ON	OFF	OFF	Set as subordinate Pack10
11	ON	ON	OFF	ON	OFF	OFF	Set as subordinate Pack11
12	OFF	OFF	ON	ON	OFF	OFF	Set as subordinate Pack12
13	ON	OFF	ON	ON	OFF	OFF	Set as subordinate Pack13
14	OFF	ON	ON	ON	OFF	OFF	Set as subordinate Pack14

15	ON	ON	ON	ON	OFF	OFF	Set as subordinate Pack15
16	OFF	OFF	OFF	OFF	ON	OFF	Set as subordinate Pack16
17	ON	OFF	OFF	OFF	ON	OFF	Set as subordinate Pack17
18	OFF	ON	OFF	OFF	ON	OFF	Set as subordinate Pack18
19	ON	ON	OFF	OFF	ON	OFF	Set as subordinate Pack19
20	OFF	OFF	ON	OFF	ON	OFF	Set as subordinate Pack20
21	ON	OFF	ON	OFF	ON	OFF	Set as subordinate Pack21
22	OFF	ON	ON	OFF	ON	OFF	Set as subordinate Pack22
23	ON	ON	ON	OFF	ON	OFF	Set as subordinate Pack23
24	OFF	OFF	OFF	ON	ON	OFF	Set as subordinate Pack24
25	ON	OFF	OFF	ON	ON	OFF	Set as subordinate Pack25
26	OFF	ON	OFF	ON	ON	OFF	Set as subordinate Pack26
27	ON	ON	OFF	ON	ON	OFF	Set as subordinate Pack27
28	OFF	OFF	ON	ON	ON	OFF	Set as subordinate Pack28
29	ON	OFF	ON	ON	ON	OFF	Set as subordinate Pack29
30	OFF	ON	ON	ON	ON	OFF	Set as subordinate Pack30
31	ON	ON	ON	ON	ON	OFF	Set as subordinate Pack31
32	OFF	OFF	OFF	OFF	OFF	ON	Set as subordinate Pack32
33	ON	OFF	OFF	OFF	OFF	ON	Set as subordinate Pack33
34	OFF	ON	OFF	OFF	OFF	ON	Set as subordinate Pack34
35	ON	ON	OFF	OFF	OFF	ON	Set as subordinate Pack35
36	OFF	OFF	ON	OFF	OFF	ON	Set as subordinate Pack36
37	ON	OFF	ON	OFF	OFF	ON	Set as subordinate Pack37
38	OFF	ON	ON	OFF	OFF	ON	Set as subordinate Pack38
39	ON	ON	ON	OFF	OFF	ON	Set as subordinate Pack39
40	OFF	OFF	OFF	ON	OFF	ON	Set as subordinate Pack40
41	ON	OFF	OFF	ON	OFF	ON	Set as subordinate Pack41
42	OFF	ON	OFF	ON	OFF	ON	Set as subordinate Pack42
43	ON	ON	OFF	ON	OFF	ON	Set as subordinate Pack43
44	OFF	OFF	ON	ON	OFF	ON	Set as subordinate Pack44
45	ON	OFF	ON	ON	OFF	ON	Set as subordinate Pack45
46	OFF	ON	ON	ON	OFF	ON	Set as subordinate Pack46
47	ON	ON	ON	ON	OFF	ON	Set as subordinate Pack47
48	OFF	OFF	OFF	OFF	ON	ON	Set as subordinate Pack48
49	ON	OFF	OFF	OFF	ON	ON	Set as subordinate Pack49
50	OFF	ON	OFF	OFF	ON	ON	Set as subordinate Pack50
51	ON	ON	OFF	OFF	ON	ON	Set as subordinate Pack51
52	OFF	OFF	ON	OFF	ON	ON	Set as subordinate Pack52
53	ON	OFF	ON	OFF	ON	ON	Set as subordinate Pack53
54	OFF	ON	ON	OFF	ON	ON	Set as subordinate Pack54
55	ON	ON	ON	OFF	ON	ON	Set as subordinate Pack55
56	OFF	OFF	OFF	ON	ON	ON	Set as subordinate Pack56
57	ON	OFF	OFF	ON	ON	ON	Set as subordinate Pack57

58	OFF	ON	OFF	ON	ON	ON	Set as subordinate Pack58
59	ON	ON	OFF	ON	ON	ON	Set as subordinate Pack59
60	OFF	OFF	ON	ON	ON	ON	Set as subordinate Pack60
61	ON	OFF	ON	ON	ON	ON	Set as subordinate Pack61
62	OFF	ON	ON	ON	ON	ON	Set as subordinate Pack62
63	ON	ON	ON	ON	ON	ON	Set as subordinate Pack63

Note: Suggested parallel groups no big than 30

3.7. Interface Diagram

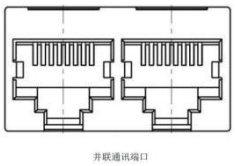
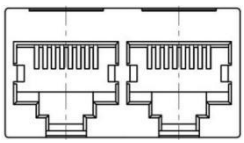


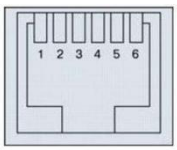
Dry Connection Port

The default definition of dry connection port： Pin1 to pin2 usually open, closed when SOC≤ 10%. pin3 to pin4 usually open, closed when SOC≥100%.

3.8. RJ45 Definition of Discipline

Table 4 Communication interface table

Parallel communication		RS485-1 Port		RS485-2 Port	
		RJ45		RJ45	
		1,8	RS485-B	9,16	RS485-B
		2,7	RS485-A	10,15	RS485-A
		3,6	GND	11,14	GND
		4,5	NC	12,13	NC
External communication		RS485 port		CAN port	
		RJ45		RJ45	
		1,8	RS485-B1	1,2,3,6,8	NC
		2,7	RS485-A1	5	CAN-L
		3,6	GND	4	CAN-H
		4,5	NC	7	GND
Communication with host		RS232-6P6C			
		RJ11			
		1	NC	4	RX

computer		2	NC	5	GND
		3	TX	6	NC

4. Preparation before Installation

4.1. Selection of Installation Location

The installation location selected for the rechargeable battery is quite critical in the aspect of the guarantee of machine safety, service life and performance.

It has the IP20 ingress protection, which only allows it to be installed indoor.

Before installing the battery system, lay out available floor space or wall space including aisles for installation, maintenance and possible battery pack replacement.

4.2. Environment Requirement

Make sure the installation site meets the following conditions:

1) The operating temperature: -20°C to +55°C.

2) The humidity shall be between 5-95%.

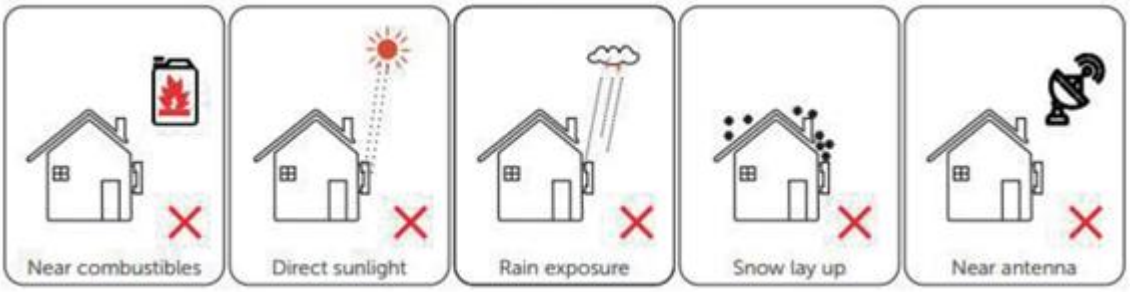
3) Do not install the rechargeable battery in the areas where the altitude exceeds 2000 m.

4) Install the rechargeable battery in a well-ventilated environment for heat dissipation.

5) Do not install rechargeable batteries in areas with flammable, explosive and corrosive materials.

6) Do not install rechargeable batteries in areas near combustibles and antenna.

7) This series of products is only suitable for indoor installation.



5. Battery Installation Instructions

5.1. Installation location

Make sure that the installation location meets the following conditions:

- The building is designed to withstand earthquakes.
- Far away from the sea to avoid salt water and humidity.
- The floor is flat.
- No flammable or explosive materials nearby.
- Optimal ambient temperature is around 25°C.
- Temperature and humidity stay at a constant level.
- Minimal dust and dirt in the area.

◆ No corrosive gases present, including ammonia and acid vapor.

BSL batteries are IP20 waterproof, so the battery could be installed indoor. If the ambient temperature is outside the operating range, battery will protect itself by shutting down. The battery optimal operate temperature is around 25°C. Frequent exposure to severe operating condition would exacerbate the performance and lifetime of the battery.

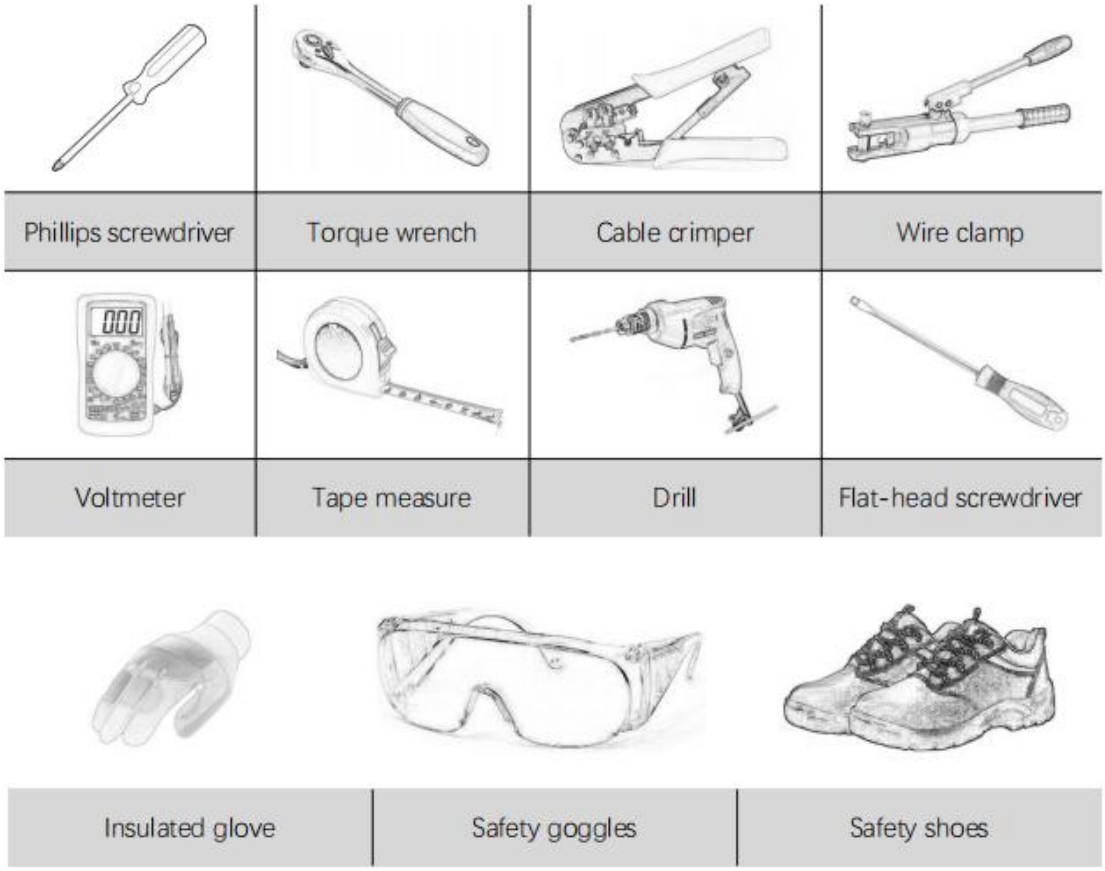
NOTICE

Make sure that the cross-sectional area of charging cables is 25 to 35 mm^2

A breaker between BSL battery and inverter was recommended to install and the breakers min. current should meet twice the rated current of the system or following with local regulations.

5.2. Installation Tools

To install the battery pack, those following tools are probably required:



5.3. Installation Carrier Requirement

The mounting location must be suitable for the weight and dimensions of the product and the support surface for installation must be made of a non-flammable material:

1) Solid brick/concrete.
2) Either floor mounting or wall mounting, the bearing capacity of the area to place or install a battery pack must be over 200 kg.

3) Please ensure that the thickness of any part of the wall should not be less than 100 mm.

4) The device must not be installed on the wood wall.

5.4. Clearance Requirement

To guarantee proper heat dissipation and ease of disassembly, the minimum space around the rechargeable battery must meet the standards indicated below:

1) No matter which floor mounting or wall mounting is chosen, a distance between 200 and 300 mm wide shall be provided from the wall to the edge of the battery Pack.

2) No matter which floor mounting or wall mounting is chosen, a distance 300 mm wide shall be provided from the left side edge of a battery pack to the right-side edge of the neighboring battery packs.

3) In the case of floor mounting, 55 mm shall be provided from the rear side of the battery pack to the wall.

4) In the case of wall mounting, the distance between 300 and 350 mm shall be provided from the ground to the bottom of the battery pack.

5) There should be no water pipes in the wall where the battery is installed to prevent excessive moisture for the battery.

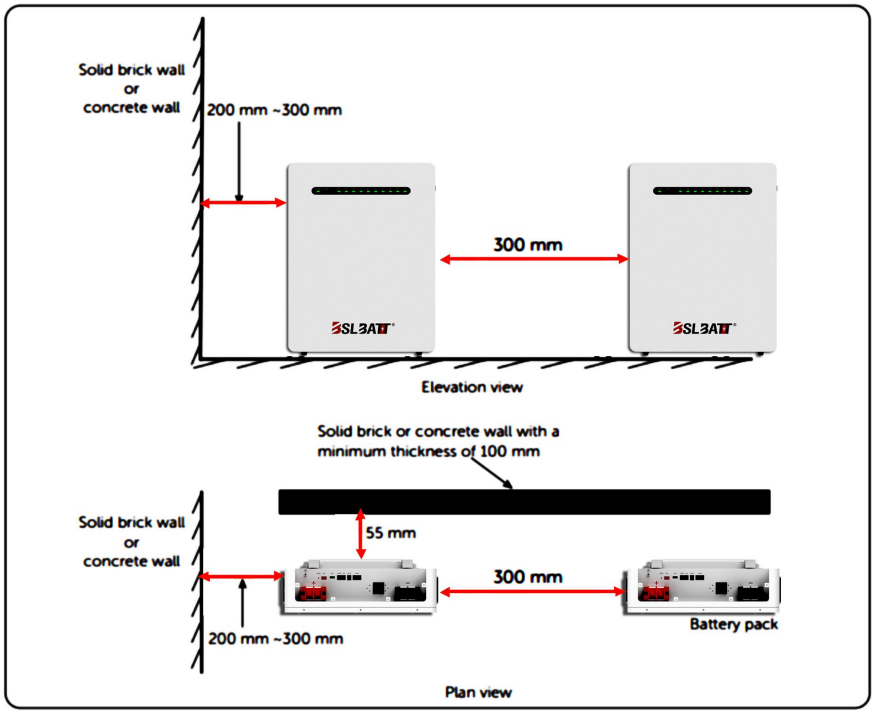


Figure: Clearance requirement about floor mounting

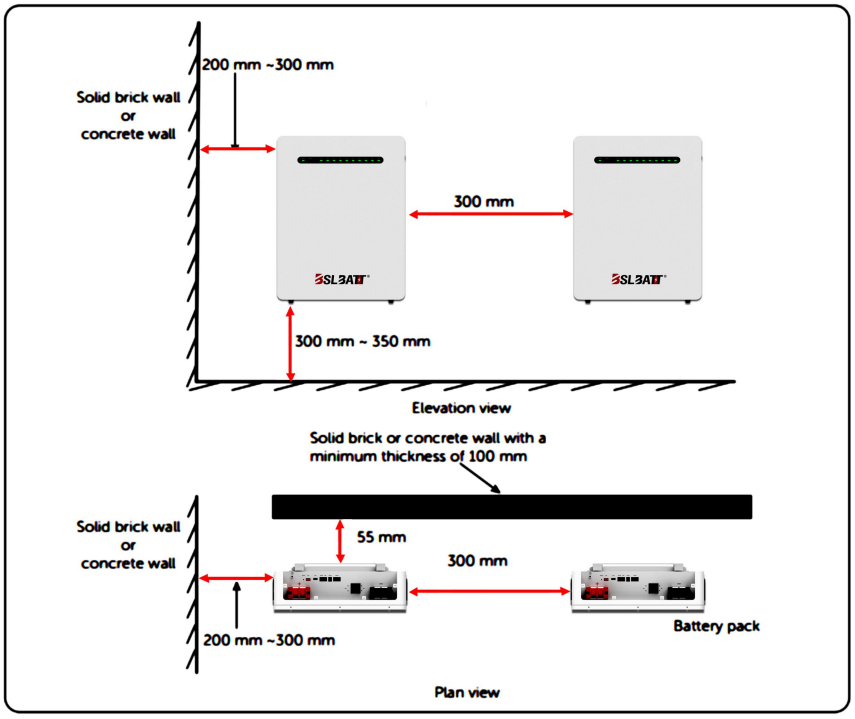


Figure: Clearance requirement about wall mounting

5.5. Installation steps

Unpacking:

The rechargeable battery undergoes 100% testing and inspection before shipping from the manufacturing facility. However, transport damage may still occur. Before unpacking the rechargeable battery, please verify that the model and outer packing materials for damage, such as holes and cracks.

Unpacking the battery pack according to the following figures. If there are other Cartons, such as the rack carton, cabinet carton, cables carton, or cartons about Wall mounting, the unpacking procedure can also be referred to the following Figures.

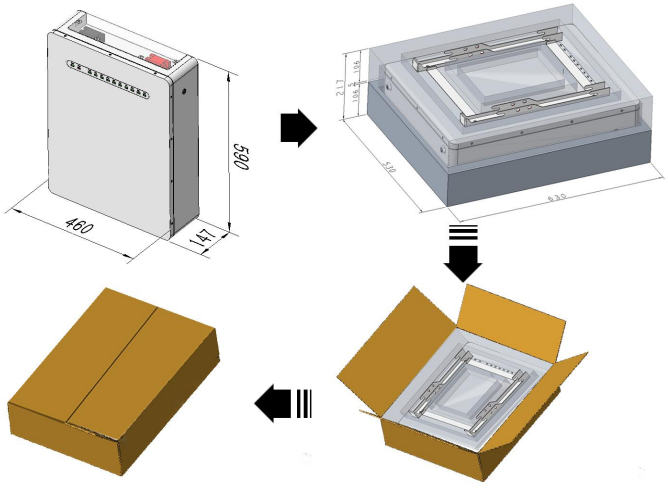


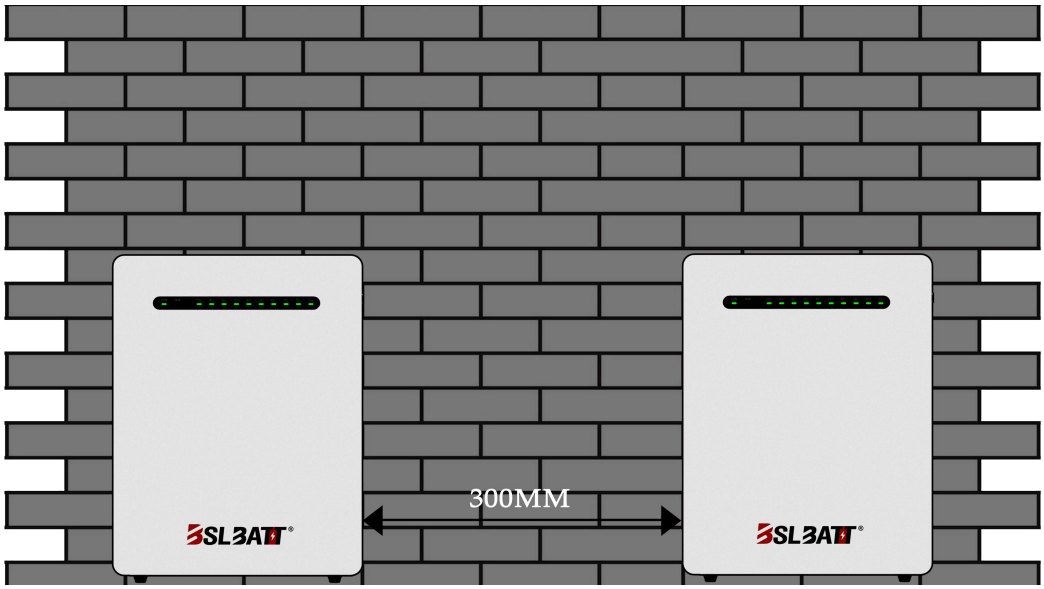
Figure: Unpacking the battery pack

1) Be careful when dealing with all package materials which may be reused for storage and relocation of the rechargeable battery in the future.
2) Upon opening the package, check whether the appearance of the rechargeable Battery is damaged or lack of accessories. If any damage is found or any parts are missing, contact your dealer immediately.

5.6. Installation Options

There are two installation options (floor mounting and wall mounting) are available, with Details as follows.

Option A: Stand Mounting



Option B: Wall Mounting

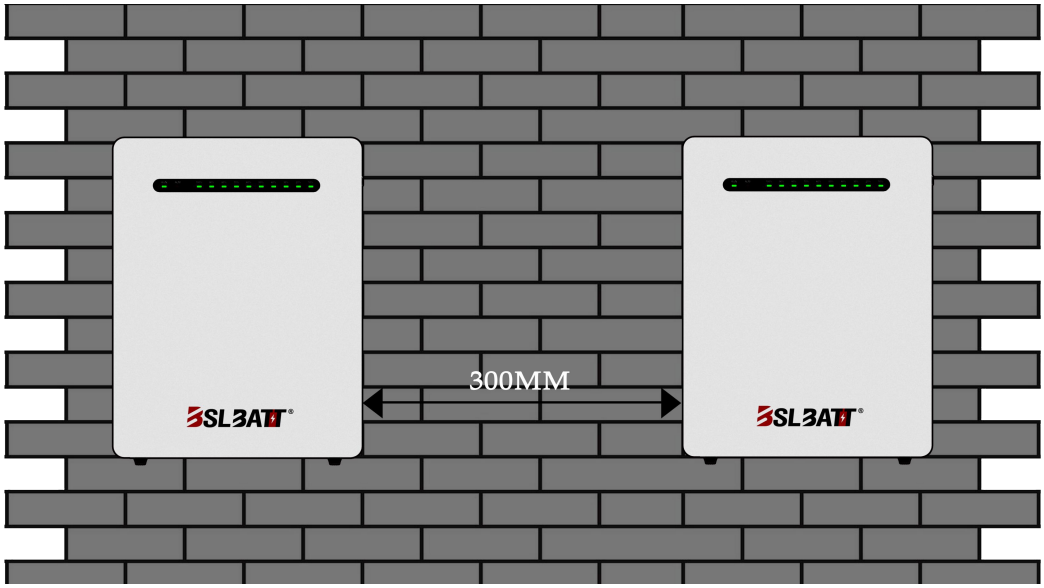


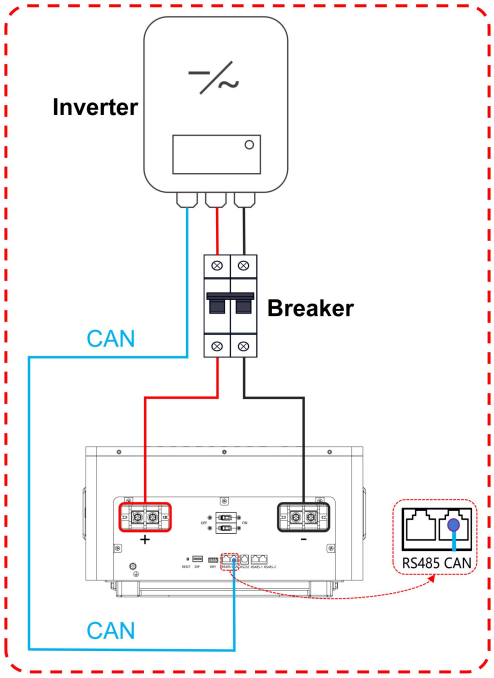
Figure: Installation options

5.7. Installing battery strings in parallel.

Taking two 51.2V100Ah batteries as an example, two parallel power lines（25 square） are used to combine the positive and negative outputs of two batteries.

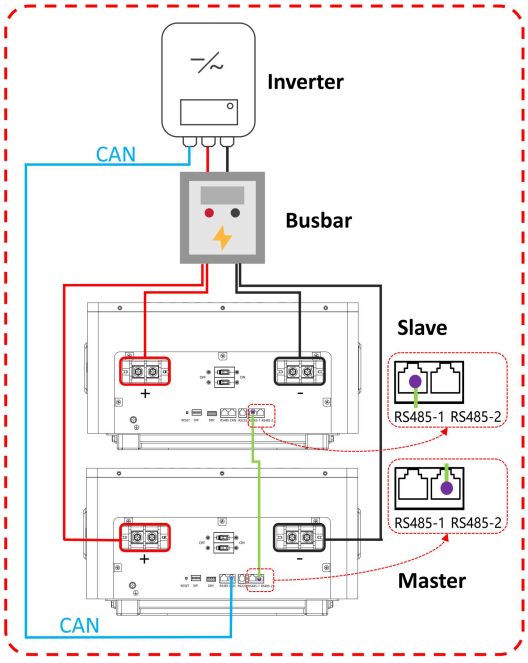
One battery pack's positive relates to another battery pack's positive; negative relates to negative. The communication between the battery packs adopts RJ45 network wire to connect through the RS485, the battery packs dial code address were set as table 5.

5.7.1. 1pack---1 Inverter. Single mode.



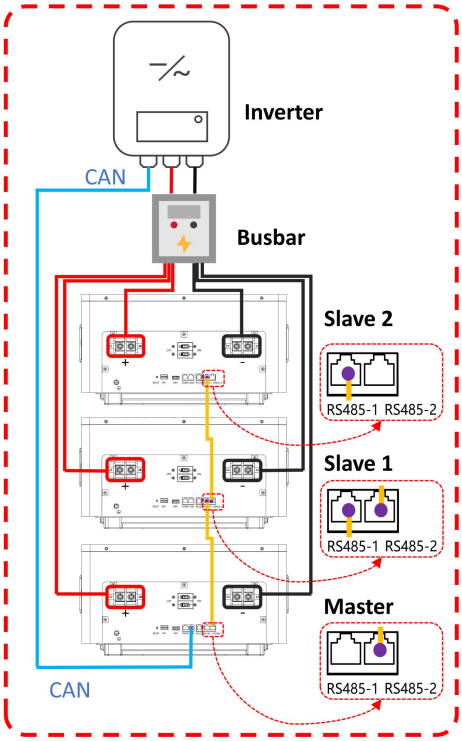
5.7.2. 2pack---1 Inverter.

Pack 1 is master; pack 2 is slave; Multiple positive or negative wires should maintain the same length.



5.7.3. 3pack---1 Inverter.

Pack 2 ,3 is slave; pack 1 is master. More packs are paralleled, one pack is master, other are slave. Negative and Positive power cable has the same length.



Note: when a single unit is used, the inverter uses the battery as the main machine to communicate; when multiple batteries are used in parallel, the batteries inside are connected in parallel through the RS485-1/2 hardware interface, RS485/CANBUS communicates with the inverter.

6. Appendix1

When the equipment manufacturer confirms that it is necessary, it can authorize to provide the customer with the host software and operating instructions.

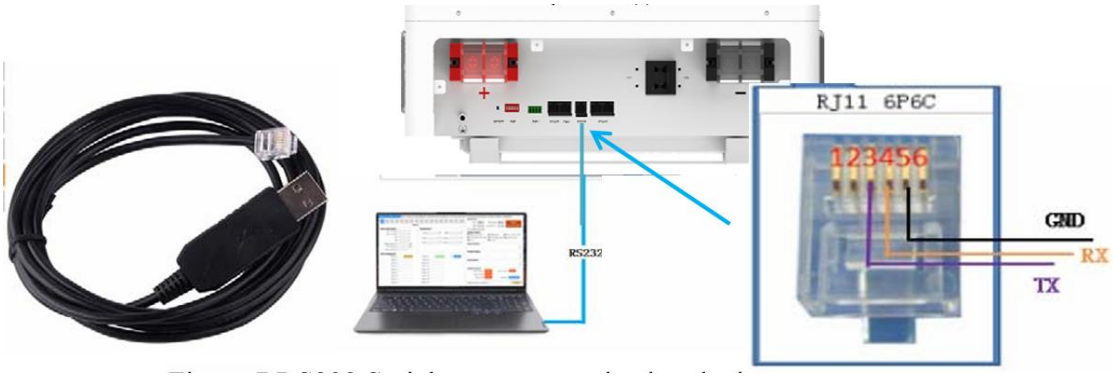


Figure 7 RS232 Serial port communication device

Host soft operation:

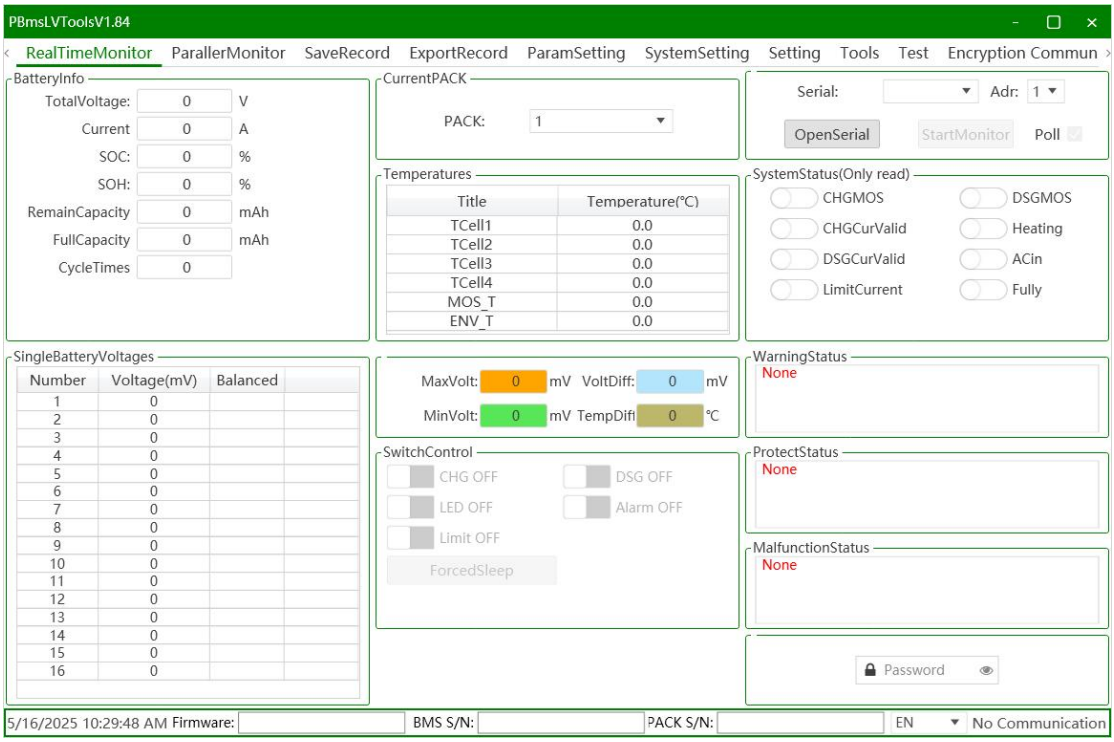


Figure 8

7. Appendix2

Multi Inverter protocol support.

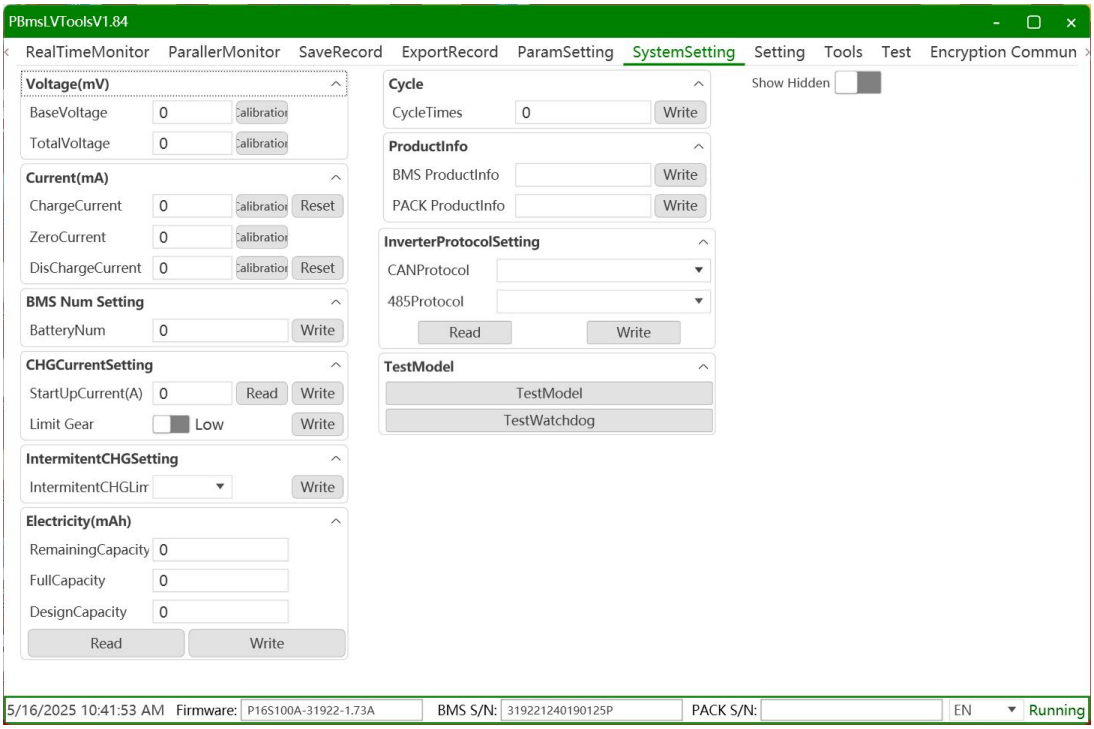
Default setting: CANBUS - Victron, RS485-Pylon.

NO	Type	Inverter		Protocol
1	CAN	Pylon	PYLONTECH	PYLON CAN LV V1.3-2019.03.01
2		DEYE/Sun synk	Deye 德業	PYLON CAN LV V1.3-2019.03.01
3		Growatt	GROWATT 古瑞瓦特	Growatt CAN LV V1.09-2020.10.22
4		Victron	victron energy BLUE POWER	Victron CAN 2021.01.07
5		Luxpower	LUXPOWERTEK	Luxpowertek CAN V1.0-2020.02.11
6		SMA	SMA	SMA CAN V2.0
7		Goodwe	GOODWE 固德威	GoodWe CAN Inverter LV V1.7-2020.02.28

8		Studer		STUDER CAN V1.02-2018.06.14
9		Sofar		SofarSolar CAN inverter V6
10		Ginlong/ Solis		GINLONG CAN LV V1.0-2019.12.28
11		TBB_LITHIUM		TBB CAN V1.05-2021.04.20 TBB CAN V1.1-2021.10.21
12		Daneng		DANENG CAN V10-2022.10.10
13		Aiswei		AISWEI CAN V1.0
14		SAJ		SAJ CAN V1.9-2022.06.30
		Sorotec		Sorotec CAN Inverter V1.22-2017.11.28
15		MUST		MUST CAN V2.0.2-2021.06.02
16		Megarevo		PYLON CAN LV V1.3-2019.03.01
17		Schneider		Schneider can2.0
18		Afore		Afore Communication protocol CAN
19		Solax		PYLON CAN LV V1.3-2019.03.01

1	RS485	Pylon		PYLON RS485 LV-BPB V3.5-2019.08.07
2		DEYE/Sunsynk		PYLON RS485 LV-BPB V3.5-2019.08.07
3		Growatt		Growatt RS485 V2.01-2019.02.13
4		Voltronic		Voltronic RS485 Inverter V1.0-2018.09.11

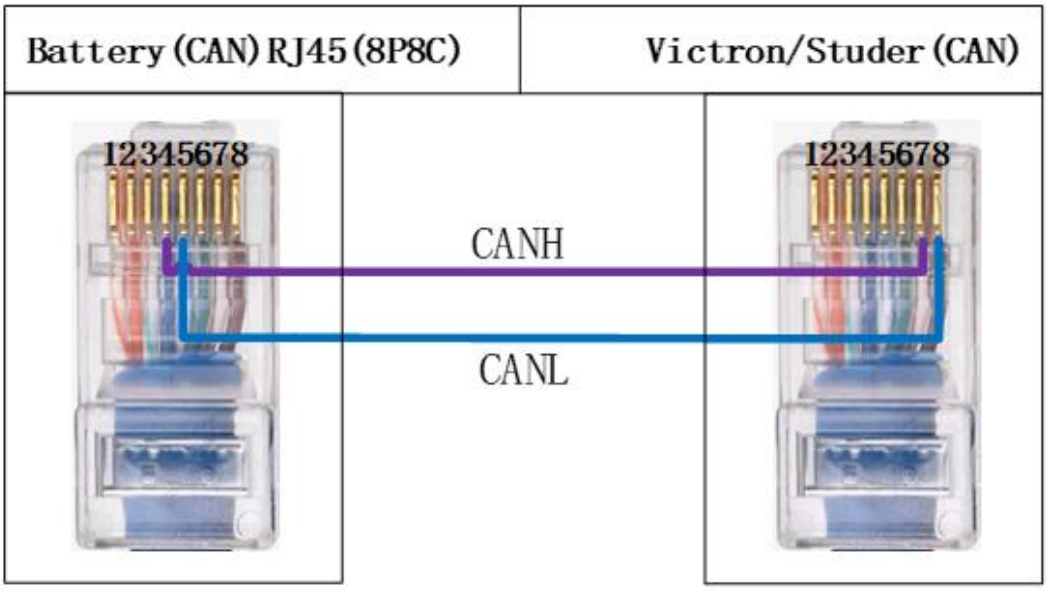
5		Phocos		Phocos RS485 2021.04.07
6		Luxpower		Luxpowertek RS485 inverter V0.3-2020.07.06
7		SRNE		WOW RS485 Modbus V1.3-2017.06.27
8		Sorotec		Sorotec RS485 Inverter V1.22-2017.11.28
9		Hypon		HYPONTECH RS485 Modbus V2.0-2023.06.29
10		SUNPLAIN		Communication protocol for 8-11KW energy storage inverters
11		Epever		Lithium Battery BMS-Link Communication Address Table V1.6
12		TALEGENT		B Communication Protocol from Inverter to BMS
13		ELTEK		BatteryModbusDataDefinitions (REV14)
14		Techfine		PYLON 485 Communication Protocol V3.5
15		SMKSOLAR		Lithium Battery Agreement GT Version 24 Year 7 1.0 Version
16		Gospower		PYLON 485 Communication Protocol V3.5
17		AOHAI		PYLON 485 Communication Protocol V3.5
18		SUNGERY		PYLON 485 Communication Protocol V3.5

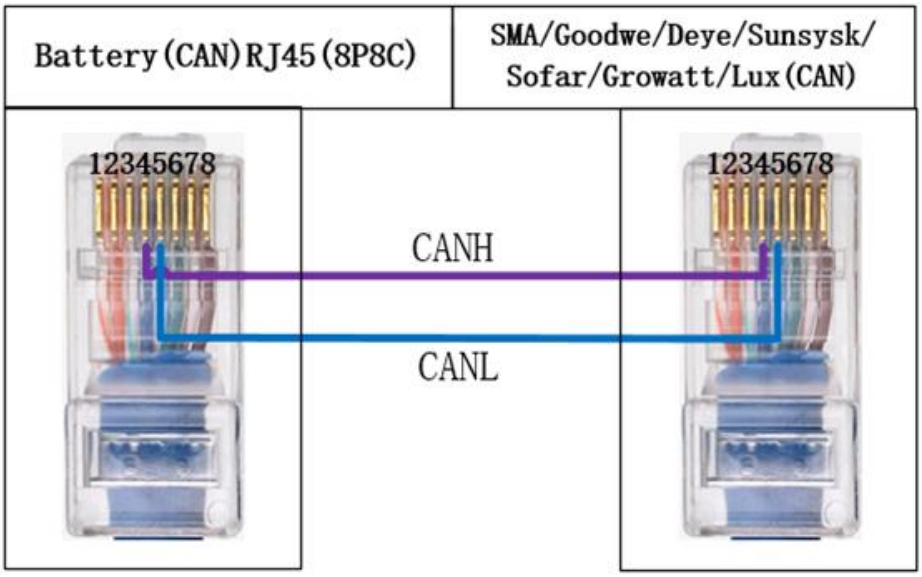


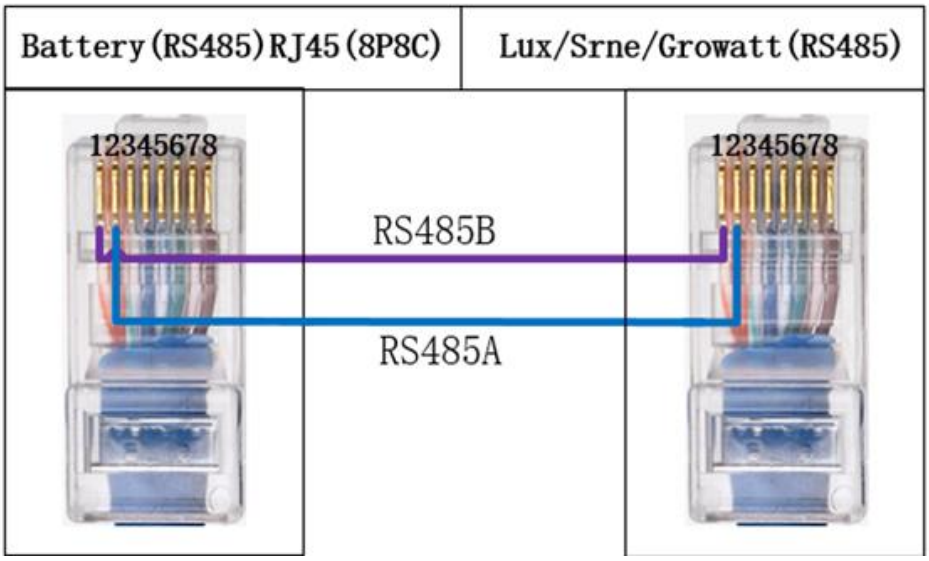
Remark：

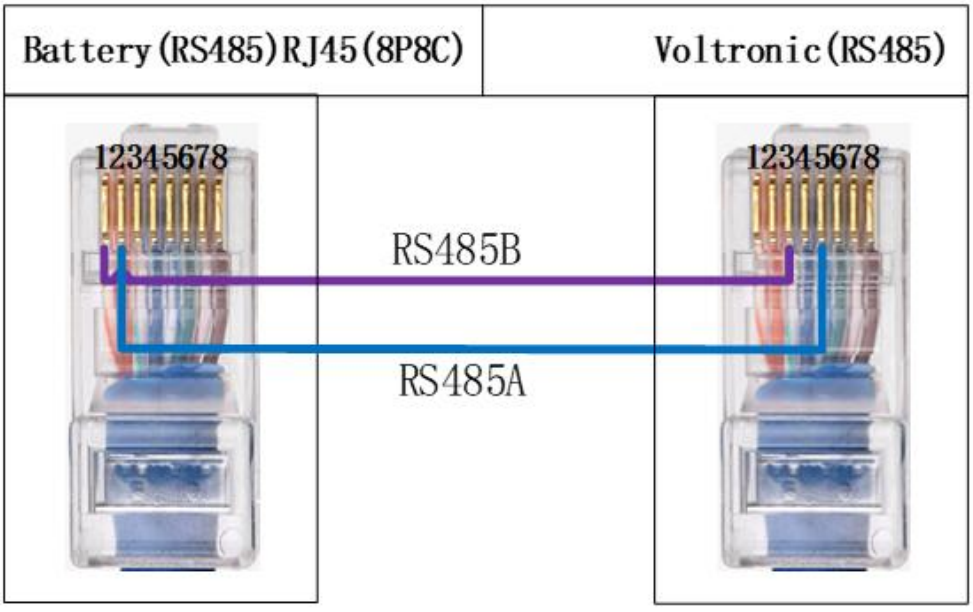
- Please ask your sales team to provide password for host computer software administration enter.
- Different inverters the pin assignment is not the same, please contact inverter supplier for detailed RJ45 cables of pin assignment.

Connector pin configurations for the above-mentioned inverter manufacturers are listed below:




Battery(CAN)RJ45(8P8C)
SMA/Goodwe/Deye/Sunsysk/
Sofar/Growatt/Lux(CAN)
12345678
12345678
CANH
CANL


Battery(RS485)RJ45(8P8C)
Lux/Srne/Growatt(RS485)
12345678
12345678
RS485B
RS485A


Battery(RS485)RJ45(8P8C)
Voltronic(RS485)
12345678
12345678
RS485B
RS485A

8. Appendix3

Abnormal Situation Addressing

1.What if the battery pack does not work properly after power on?
A: The most direct way is to connect to the upper computer, through the upper computer to find the fault phenomenon, causes can be roughly analyzed from the upper computer interface prompt alarm, protection, fault, and other information, it can also provide necessary reference for further testing.

2.Under what circumstances will RS232 communication fail?
A: The following steps can be taken to eliminate the problem:
1) Confirm that at least one of the indicator lights of the battery pack is on or flashing, that is, the battery pack is in normal working condition.

2) Confirm that the host computer software selects correct COM port (view device manager);

3) Confirm whether the RS232 communication line is fully inserted into the corresponding communication interface of the battery pack.

3.Under what circumstances will RS485 fail to parallel batteries communication?
A: The possibility of failure of parallel batteries communication is as follows: first ensure whether the parallel RS485 communication port has been connected, and then make sure that the address dialing position of the battery pack is correct, and make sure that the RS485 terminal Plug-in in the right place.

4.What is the fault alarm mechanism?
A: battery pack has fault alarm function, can be checked through upper computer software.

Failure includes:
1) Sampling failure: analog front-end and main control chip communication failure. When the fault occurs, the charge and discharge function is turned off, and the fault alarm can be automatically cleared after the fault is cleared.

2) Temperature NTC failure mainly detects whether the temperature NTC is short-circuited or disconnected. When the fault occurs, the charge and discharge function is turned off, and the fault alarm can be automatically cleared after the fault is cleared.

3) Cell failure: the voltage difference of the cell exceeds 1V, or the difference between the total voltage detection voltage and the sum of single cell voltage is more than 5V, or the minimum voltage is less than 0.5V. The voltage sampling line disconnect also reports the same fault. When the fault is cleared, the fault alarm can be automatically cleared.

After the battery is connected to the system and shows over-current protection or short circuit protection. This is not a problem with the battery pack, but the capacity load of the electrical

equipment is too large. Charging can remove the alarm or extend the battery pack pre-charge circuit delay time.

Product Responsibilities and Consulting

We will not be liable for the accidents resulting from operation breaking this specification and user manual.

We will not send separate notice, provided that the contents of this specification are changed due to improvement of product quality or technological upgrading, if you want to understand the latest information of this product, please contact us.

The shelf life of this product is within 60 months after it is delivered; we will maintain the product, which is in the warranty period, for free of charge.

If there's any product quality problem within the specified operation range; we may replace the relevant parts; if we fail to maintain it, so as to achieve the purpose of sustainable use without performance reduction; our after-sales service personnel will propose the specific maintenance and troubleshooting methods.

In case of any questions, please contact us.

If you encounter a situation that may require warranty service, please read our company's warranty document <BSLBATT Lithium Battery Limited Warranty Letter>.

THANK YOU FOR CHOOSING

LET'S DEVELOP TRUST AND BUSINES