JKS-B19237-CS
JKS-B28837-CS
JKS-B38437-CS
JKS-B48037-CS
JKS-B57637-CS

User MANUAL

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Content

Statement of Law

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- This product complies with the design requirements of environmental protection and personal safety. The storage, use and disposal of the products shall be carried out in accordance with the product manual, relevant contract or relevant laws and regulations.
- Customer can check the related information on the website of JinkoSolar Co., Ltd. when the product or technology is updated.

  Web URL：http://www.jinkosolar.com
- Please note that the product can be modified without prior notification.
- Any damage resuling from non-compliance with the informaion contained in this manual will void the warranty.
- Total discharge of the battery is not recommended. In the event that this happens, it must be recharged within the next 12h.
- For battery expansion module, all modules must be precharged at 100% SOC.
- Any actions about battery system parallel connections are not permitted without consulting Jinko beforehand.
- If the battery is stored for a long time, it is required to charge every six month.

Safety handling of lithium batteries Guide

This is a high voltage DC system, and it must be operated only by a qualified person. Please, read carefully the Operation Menu and User manual before installation.

Symbol

	Danger (High level of risk)	● Battery strings will produce high voltage DC power and can cause a lethal voltage and electric shock.
	Warning (Medium level of risk)	● Risk of battery system damage or personal injury. ● DO NOT pull out the connectors while the system is operating! ● De-energize from all multiple power sources and verify that there is no voltage.
	Caution (Low level of risk)	● Risk of battery system failure or life cycle reduction.

Before Connecting

- Please check product and packing list first after unpacking, if product is damaged or has missing parts, please contact with the local distributor.
- Before installation, cut off the grid power and make sure the battery is in the turned-off mode.
- To avoid any short circuit connection do not confuse the positive and negative wires, making sure that they do not come into contact with each other or with other wires or devices with charge.
- NOT connect the battery to AC power directly.
- Battery system must be well grounded and the resistance must be less than 1Ω .
- Please ensured the electrical parameters of battery system are compatible to related equipment.
- Keep the battery away from water and fire.

In Using

- If the battery system needs to be moved or repaired, the power must be cut off and ensure the battery is completely shut down.
- It is forbidden to connect Jinko's battery with different type of battery.
- It is forbidden to connect and operate the batteries working with faulty or incompatible inverter.
- It is forbidden to disassemble the battery (Warranty tab can not be removed or damaged).

- In case of fire, use only dry power fire extinguisher. Liquid fire extinguisher are forbidden.
- It is forbidden to open, repair or disassemble the battery except for JinkoSolar experts or experts expressly authorised by Jinko to do so. We are not responsible for any consequences or liability arising from the violation of operational or equipment safety regulations.

Caution

- Please read the user manual carefully (in the accessories).
- If the battery is stored for a long time, charge it every six month to avoid possible damage on the system. Check section 5. Storage Recommendation for further information.
- To avoid serious damage on the battery, it must be recharged within 12 hours after being fully discharged.
- Do not expose cable outside.
- All the battery terminals must be disconnected and the whole system must be turned off for maintenance.
- Please contact the supplier within 24 hours if there is something abnormal.
- Direct or indirect damage resulting from not following above points is excluded from the warranty.
- For the expanding the battery, all the modules must be precharged up to 100% SOC.

1 Introduction

1.1 Brief Introduction

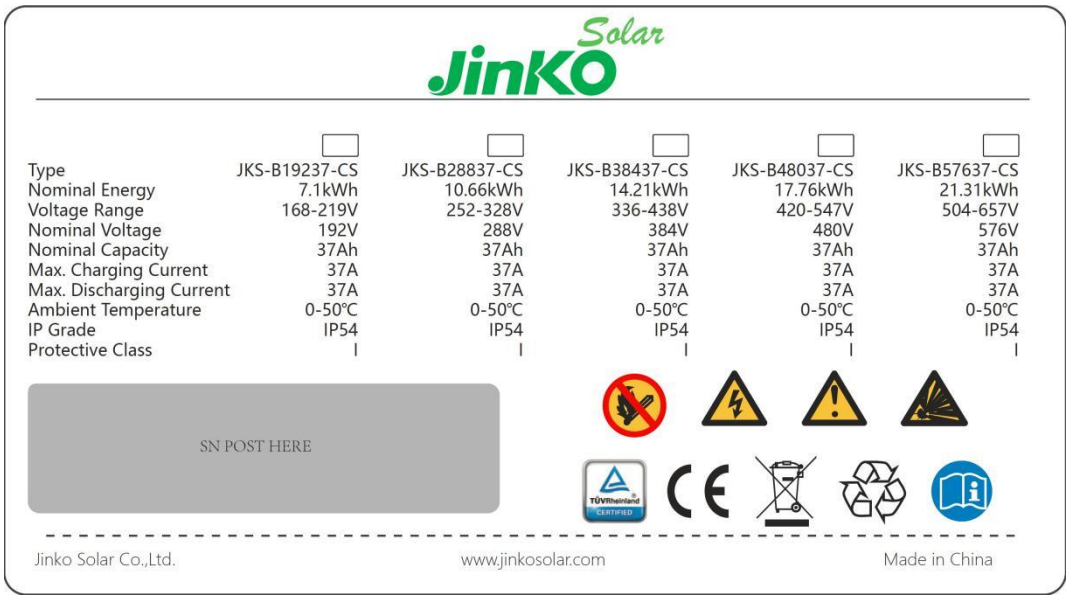
JKS-BXXX37-CS is a high voltage lithium iron phosphate battery, develop and produced by JinkoSolar. The system is specially suitable for applications scenes of high power, limited installation space, restricted load-bearing and long cycle life.

1.2 Product Properties

- The whole module is non-toxic, non-polluting and environmentally friendly;
- Anode material is made from LiFePO4 with safety performance and long cycle life;
- Battery management system (BMS) has protection functions including over-discharge, over-charge, over-current and high/low temperature;
- The system can automatically manage charge and discharge state with balance current and voltage of each cell;
- Flexible configuration, multiple battery modules can be connected in serial for expanding voltage and Capacity;
- The battery has a self-cooling mode that quickly reduces the noise of the entire system;
- Less self-consumption, standing up to 6 months without being charged; no memory effect and excellent charge and discharge performance and cycle life;
- Working temperature range is from 0 to 50℃;
- Small size and light weight, which allows a comfortable installation and maintenance of the modules;

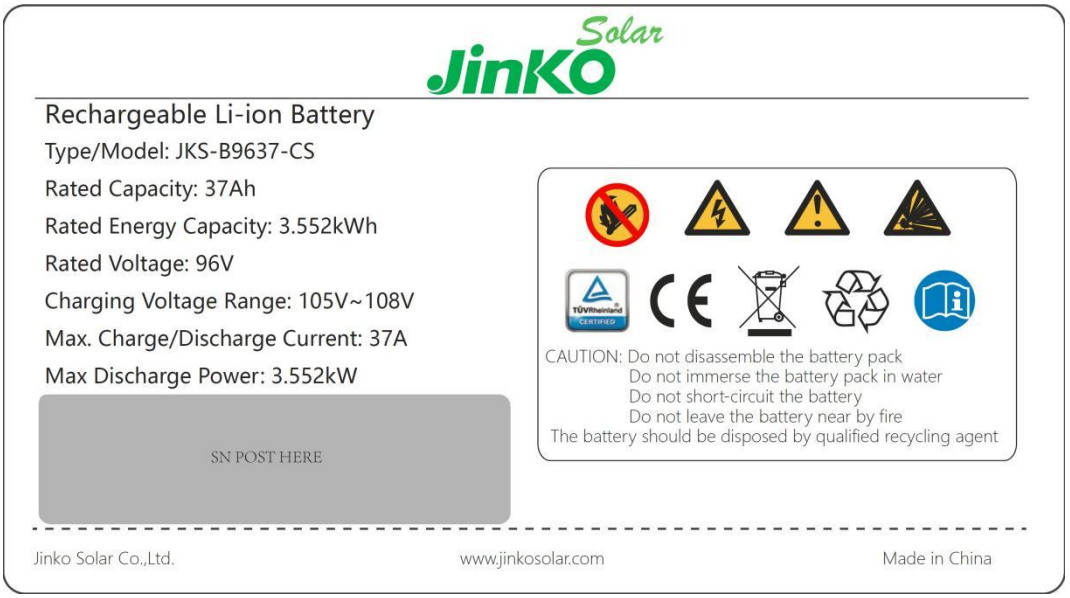
1.3 Product identity definition

Figure 1-1 Battery Energy Storage System nameplate



	Risk of electric shock. Battery voltage is higher that safety voltage.
	Be aware of the potential hazards when handling the product and act according to safety.
	Read the user manual before installing, setting or operating the system.
	The discarded battery or equipment must be recycled by processional personnel or insstitutes. Never dispose of the battery in waste containers.
	Once the battery has reached the end of its useful life, it can continue to be used after it has been recycled by the professional recycling Organisation.
	This battery product meets European directive requirements.
	This battery product passed the TUV certification test.
	Keep away from fire.
	Do not place near open flame or incinerate.

Figure 1-2 Battery module label



2 Product Specification

2.1 System Performance Parameter

Table 2-1 The parameter of JKS-BXXX37-CS system

System List	JKS-B57637-CS	JKS-B48037-CS	JKS-B38437-CS	JKS-B28837-CS	JKS-B19237-CS
Module Type	LFP	LFP	LFP	LFP	LFP
Total Storing Energy [kWh]	21.31	17.76	14.21	10.66	7.10
Usable Capacity [kWh]	19.17	15.98	12.78	9.59	6.39
Recommend Depth of Discharge	90%	90%	90%	90%	90%
Module configuration	6 Series	5 Series	4 Series	3 Series	2 Series
Voltage Range[Vdc]	504~657	420~547	336~438	252~328	168~219
Battery System Voltage (Vdc)	576	480	384	288	192
Battery System Capacity (Ah)	37	37	37	37	37
Battery System Charge Voltage (Vdc)	657	547.5	438	328.5	219
Battery System Charge Current [A] (Normal)	18.5	18.5	18.5	18.5	18.5
Battery System Charge Current [A] (Max)	37	37	37	37	37
Battery System Discharge lower-Voltage (Vdc)	504	420	336	252	168
Battery System Discharge Current [A] (Normal)	18.5	18.5	18.5	18.5	18.5
Battery System Discharge Current [A] (Max)	37	37	37	37	37
Battery System Max. Charge& Discharge Current [A] (when used in communication with the inverter)	22.5	22.5	22.5	22.5	22.5
Discharge condition	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~50℃
Charge condition	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Max. Discharge Power [kW]	21.31	17.76	14.21	10.66	7.1
Max. Charge& Discharge Power [kW] (when used in communication with the inverter)	12.78	10.65	8.52	6.39	4.26
Short Circuit Current [kA]	1.5	1.5	1.5	1.5	1.5
Enclosure Protection (IP)	IP54	IP54	IP54	IP54	IP54
Size [mm]	1500 *504*380	1300 *504*380	1100 *504*380	900*504*380	700*504*380

System List	JKS-B57637-CS	JKS-B48037-CS	JKS-B38437-CS	JKS-B28837-CS	JKS-B19237-CS
Weight [kg]	269	228	187	146	105
Battery Module Name	JKS-B9637-CS	JKS-B9637-CS	JKS-B9637-CS	JKS-B9637-CS	JKS-B9637-CS
Battery Module Quantity(pcs)	6	5	4	3	2

JKS-B38437-CS

2.2 Battery Module

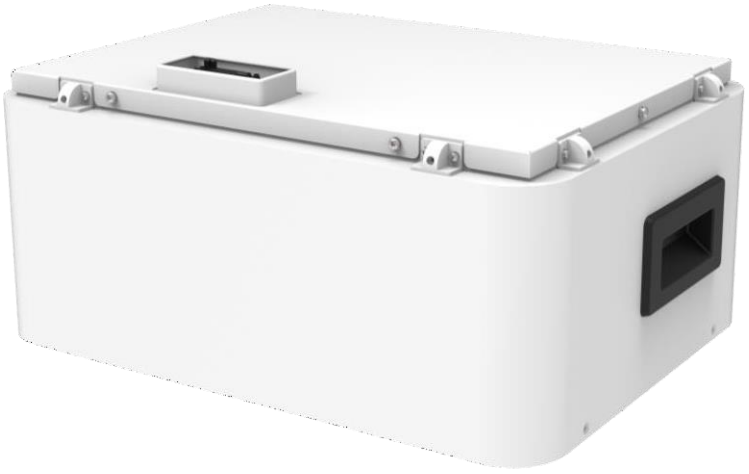


Table 2-2 Product parameters

Module Name	JKS-B9637-CS
Cell Technology	Li-ion(LFP)
Battery Module Capacity (kWh)	3.552
Battery Module Voltage (Vdc)	96
Battery Module Capacity (Ah)	37
Battery Module Cell Quantity (pcs)	30
Battery Cell Capacity (Wh)	118.4
Battery Cell Voltage (Vdc)	3.2
Battery Cell Capacity (Ah)	37
Battery Module Cell Quantity in Series (pcs)	30
Battery Module Charge Voltage (Vdc)	105~108
Battery Module Charge Current (Standard) [A]	7.4
Battery Module Charge Current (Normal) [A]	18.5
Battery Module Charge Current (Max.) [A]	37
Battery Module Discharge lower-Voltage (Vdc)	84
Battery System Discharge Current (Standard) [A]	7.4
Battery Module Charge Current (Normal) [A]	18.5
Battery Module Charge Current (Max.) [A]	37
Enclosure Thickness (mm)	≥1.5
Dimension (W*D*H, mm)	504*380*240
Communication mode	CAN
Pollution Degree (PD)	II
Ambient Temperature(℃)	0~50
IP Grade	IP54
Weight(kg)	41

JKS-B9637-CS top interface

JKS-B9637-CS bottom interface

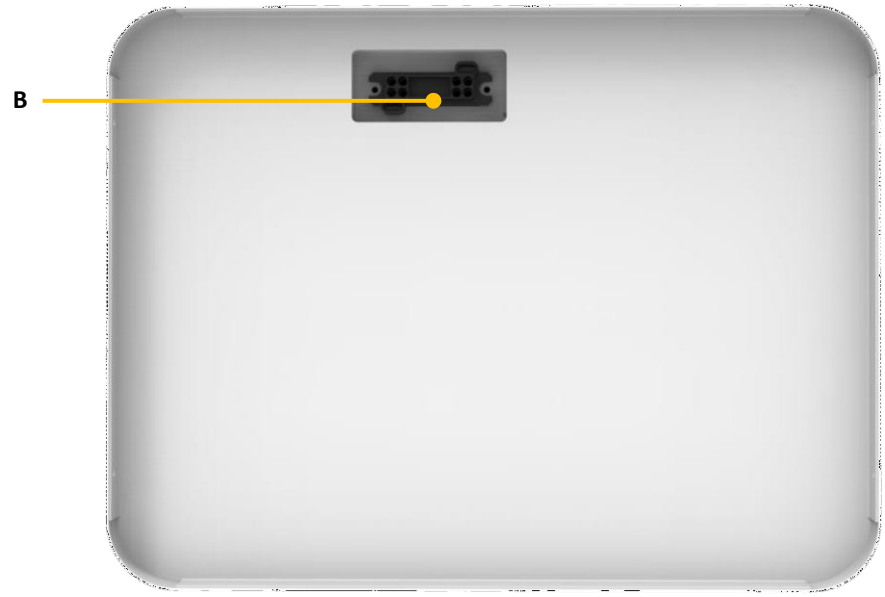
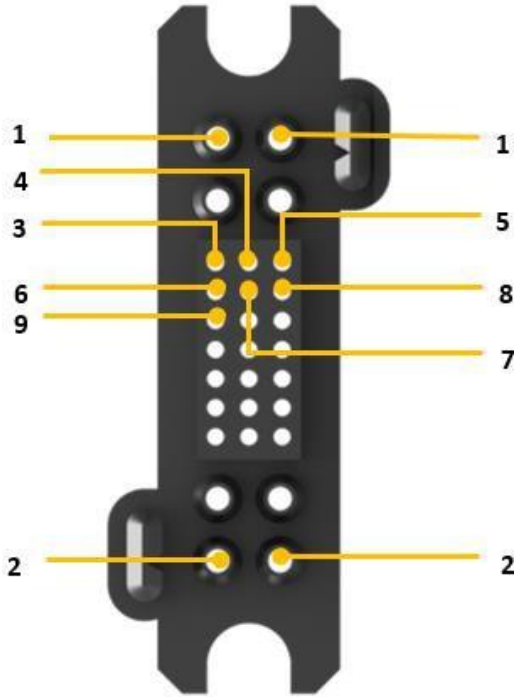
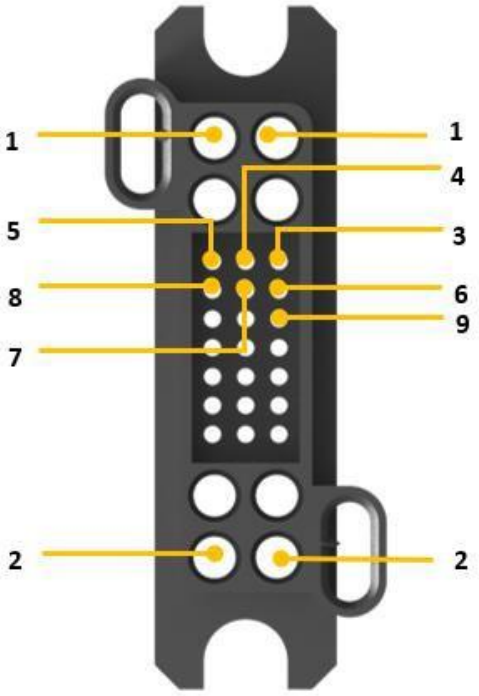


Table 2-3 Interface Definition

Item	Name	Definition
A	Composite connector-Plug	Battery module output and communication interface
B	Composite connector-Socket	Battery module output and communication interface



Composite connector-Plug



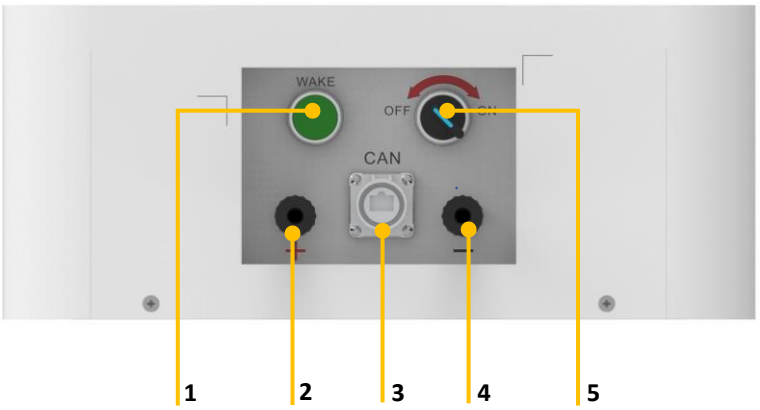
Composite connector-Socket

Table 2-4 Port Definition

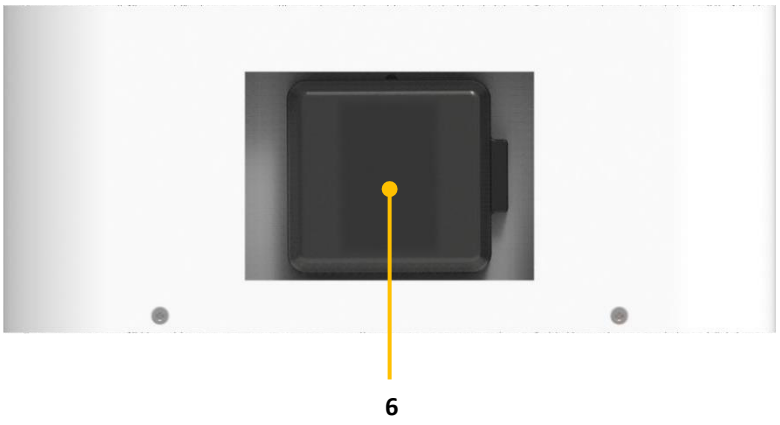
NO	Composite connector-plug	Composite connector-socket
1	Negative output	Negative output
2	Module positive	Module negative
3	SWAKE	SWAKE
4	SCANSG	SCANSG
5	SCANL	SCANL
6	SCANH	SCANH
7	24V-	24V-
8	24V+	24V+
9	SCANIN	SCANOUT

2.3 Battery Controller

HVB right interface



HVB left interface



HVB bottom interface

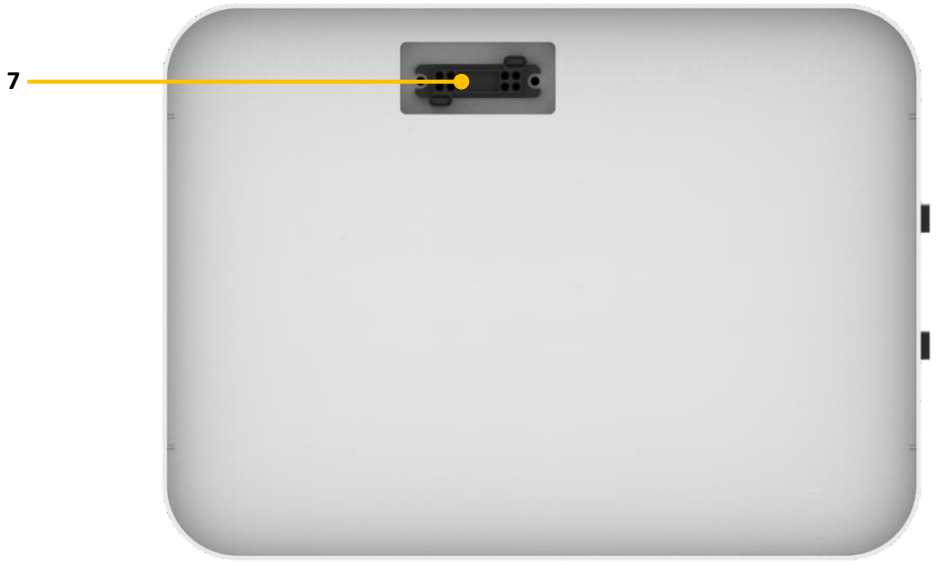
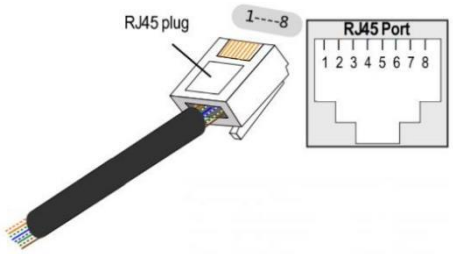


Table 2-5 Interface Definition

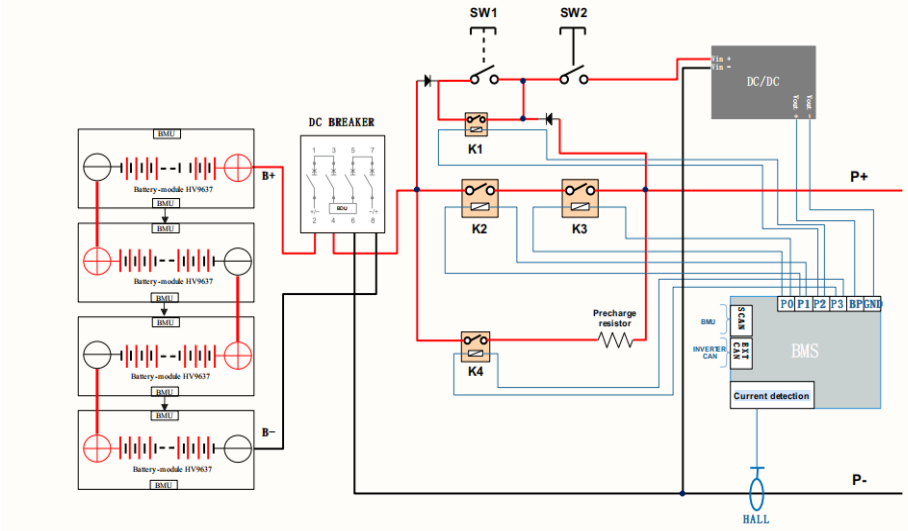
Item	Name	Definition
1	Power Wake Button	Allows you to reset the battery after pressing and holding for 8~10s.
2	External Positive socket	Connection of the battery with the positive terminal of the inverter.
3	EXT-CAN Communication Port	RJ45 communication port between the battery system and inverter.
4	External Negative socket	Connection of the battery with the negative terminal of the inverter.
5	Power On switch	Turn on the switch to power the BMS system.
6	DC Breaker	Master switch of the battery system and short circuit protection. It must be switched on before switching the Power On (5) and Power Wake (1) switchs.
7	Composite connector-Socket	Battery module output and communication interface

Definition of “EXT-CAN” port pin



PIN	Color	Definition
PIN1	Orange/White	Reserved
PIN2	Orange	XGND
PIN3	Green/White	Reserved
PIN4	Blue	CANH
PIN5	Blue/White	CANL
PIN6	Green	NC
PIN7	Brown/White	Reserved
PIN8	Brown	NC

DC Circuit Breaker Diagram



NOTE:
The DC circuit breaker is capable of isolating both + and - conductors, as shown in the circuit diagram above.

3 Installation and Configuration

3.1 Environmental Requirement

3.1.1 Cleanliness

The battery system has high voltage connectors. The environment condition will affect the isolation performance of the system.
Before installation and powering the system on, any dust or iron scurfs must be removed tokeep a clean environment. The system must be installed in an environment with certain anti-dust conditions and dust and humidity should be checked periodically during the system operation.
Dust and humidity condition shall be periodic checked during the system continuous operation.

3.1.2 Temperature

JKS-BXXX37-CS system working temperature range goes from 0℃ to 50℃, while the optimum temperature range is from 18℃ to 30℃;

Caution: Working out of the working temperature range will trigger system alarms or protections which may lead to reduction of the battery life cycle

3.1.3 Cooling System

It is essential to equip a cooling system to keep the battery system in a relevant temperature range.

3.1.4 Heating System

When working under low temperatures below 0℃, the system may suffer shut downs for self protection. To avoid this, please always keep the temperature over 0℃.

3.1.5 Fire-extinguisher System

The room must be equipped with fire-extinguisher system for safety purpose. The fire system needs to be regularly checked to be in normal condition. Refer to the using and maintenance requirements of the fire-extinguisher systems and follow local fire equipment guidance.

3.1.6 Grounding System

Make sure the grounding point for battery system is stable and reliable before the battery installation. If the battery system is installed in an independent equipment cabin (e.g. container), ,it must be ensured that the grounding of the cabin is stable and reliable.In any case,the resistance of the grounding system must≤100mΩ

3.2 Installation clearance requirements

For a proper ventilation to dispate the heat of battery, allow a clearance of approximately 300mm to the side and approximately 50mm to the wall.

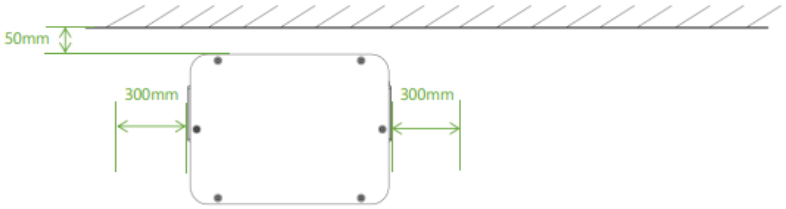
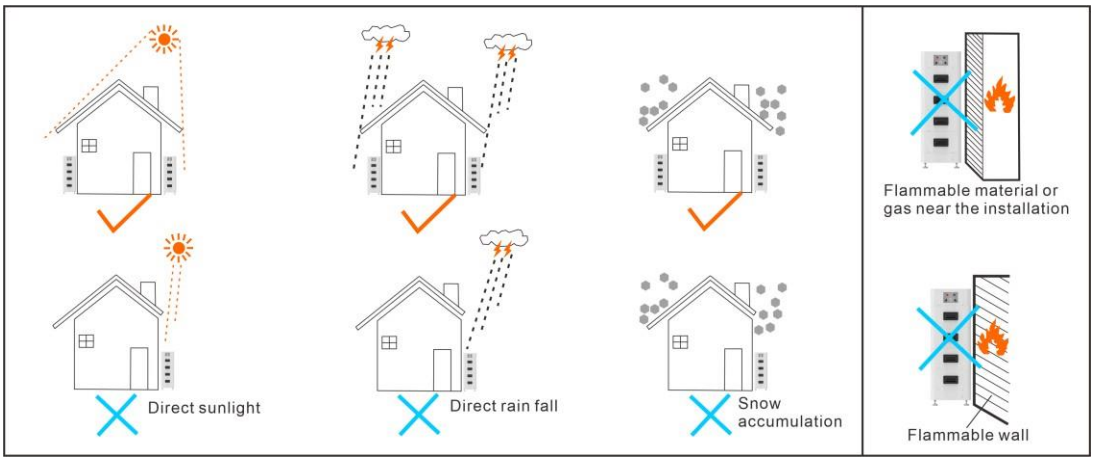


Figure 3-1 The Minimum Clearance Diagram

3.3 Installation location precautions



The battery could be installed both indoor or under the outdoor eaves where is not in direct sunlight, rain fall and snow accumulation. And the clearance to flammable materials or gas should be more than 1 meter.

3.4 Tools

The following tools are required to install the battery pack:

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Power Cable Clamp


Pen


Phillips Screwdriver Bit


Flat-Head Screwdriver

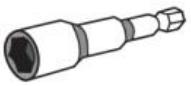

Wire Stripper


Crimping Pliers


Wrench


Tape Measure


Hair Dryer


Cylinder Screwdriver


Torque Wrench


Drill

NOTE:
Use properly insulated tools to prevent accidental electric shock or short circuits.
If insulated tools are not available, cover the entire exposed metal surfaces with available insulated alternatives, except their tip, with electrical tape.

3.5 Safety Gear

It is recommended to wear the following safety gear when dealing with the battery pack


Insulated Gloves


Safety Goggles


Safety Shoes

3.6 Unpacking inspection

- When the equipment arrives at the installation site, loading and unloading should be performed according to the rules and regulations, to prevent from being exposed under sunlight. Battery must not be installed in direct sunlight. Please refer to Section 3.3
- Before unpacking, check that there are no missing packages according the shipping list attached to each package. Check the condition of the received goods to ensure that there are not damaged packages. Contact our technical support in case of missing or faulty packages before installing the system.
- In the process of unpacking, handle with care and protect the surface coating of the object.
- After opening the package, the installation personnel should read the technical documents,verify the list, according to the configuration table and packing list and ensure goods arecomplete and intact. If the internal packing is damaged, it should be examined and recorded in detail, and report the case to your distributor or Jinko's technical support.

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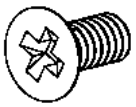
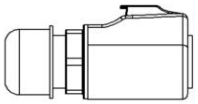
Packages for each model

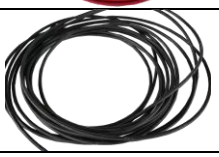
Model	Number of JKS-B9637-CS	Number of HVB&Base
JKS-B19237-CS	2	1
JKS-B28837-CS	3	1
JKS-B38437-CS	4	1
JKS-B48037-CS	5	1
JKS-B57637-CS	6	1

Packing list for JKS-B9637-CS

Item	Specification	Quantity	Figure
Battery Module JKS-B9637-CS	96V/37Ah 504*380*240mm	1 PCS	
Cross recessed countersunk head screw	M4*10	4 PCS	

Packing list for HVB Box

Item	Specification	Quantity	Figure
HVB	504*380*156.5mm	1 PCS	
Base	504*380*186mm	1 PCS	
Communication cable to inverter	Standard, Black /L2000mm /RJ45 plug at both sides	1 PCS	
Communication connector to HVB	RJ45 Waterproof connector	1 PCS	

Cross recessed countersunk head screw	M4*10	4 PCS	
M6 3 sets of combined screws	M6*14	1 PCS	
Ground terminal	OT 4-6	2 PCS	
User manual	~30Page	1 PCS	
Power cable connector	To positive pole of battery	1 PCS	
Power cable connector	To negative pole of battery	1PCS	
Power cable	Positive cable 6mm²,red,2m	1 PCS	
Power cable	Negative cable 6mm²,black,2m	1PCS	

3.7 Equipment installation

Caution: When the DC breaker is tripped off because of over current or short circuit, wait for 30min before turning it on again to avoid damages on the breaker.

Power On Button: Generally when it is at ON state, you can't turn off it during normal running condition.

Danger: Ensure Power On Switch is turned on before waking up the battery. Otherwise it will affect automatic checking process and cause danger.

Danger: DO NOT turn off the "Power On Switch" during normal running condition, only in emergency case it could be turned off directly. Otherwise will cause this battery string current surge by another battery strings.

3.7.1 Installation preparation

1. Check that the installation environment meets all technical conditions described at this manual in sections 3.1.1 to 3.1.6.
2. Prepare the equipment and tools for installation.
3. Confirm that the DC breaker is in the OFF state to ensure that it is no live operation.

3.7.2 Mechanical installation

Step 1 Place the base

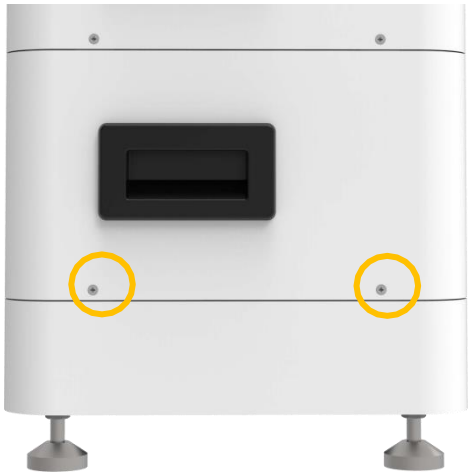
Separate the HVB from the base by untightening the screws between them.
Choose an appropriate place to set the base and adjust the base legs until it is balanced (horizontal).
Place the base at a minimun distance of 30 cm from the wall.

Step 2 Battery module installation

Warning: Single battery module is 41kg. It's necessary to arrange more than 1 person to install battery module if without lifting equipment, more than 2 persons when install battery module in higher position.

- Install all the JKS-B9637-CS modules on the base from bottom to up, Referring to the following figure depending on the battery model.

- Fix each module by tighten the four screws at it's right and left side.



3.7.3 Electrical installation

Caution: When the DC breaker is tripped off because of over current or short circuit, wait for 30min before turning it on again to avoid damages on the breaker.

Power On Button: Generally when it is at ON state, you can't turn off it during normal running condition.

Danger: Ensure Power On Switch is turned on before waking up the battery. Otherwise it will affect automatic checking process and cause danger.

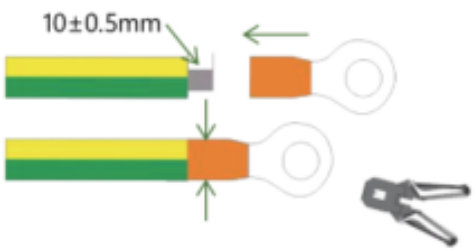
Danger: DO NOT turn off the "Power On Switch" during normal running condition, only in emergency case it could be turned off directly. Otherwise will cause this battery string current surge by another battery strings.

Step 1 Fix the modules

After the JKS-B9637-CS module is stacked up and down, it is fixed by two screws on the leftand right sides. After the screw is fixed, the shell surface of the upper and lower modules is fixedand contacted together through screws.

Step 2 Grounding

There is a special docking point at the bottom of the battery base, as shown in the following figure. Connect the grounding port of the battery to the ground using a grounding cable.



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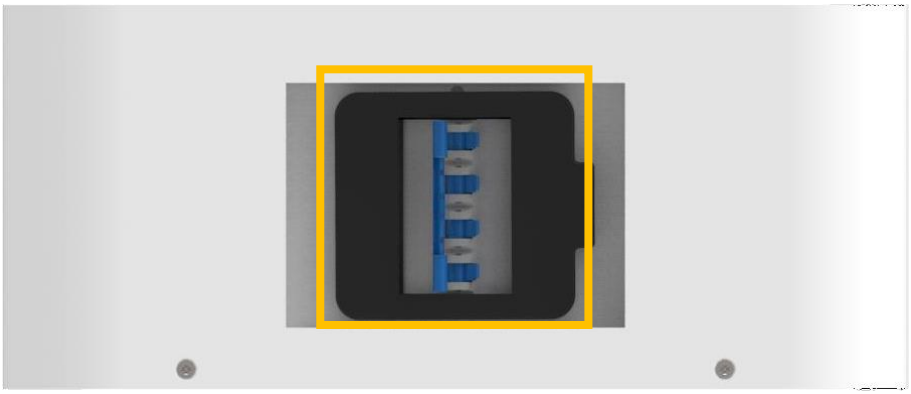
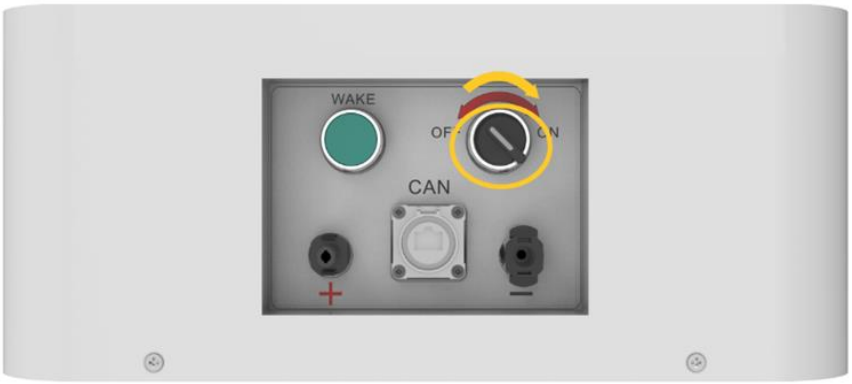
3.7.4 Battery system self-test

Step 1 Switch the HVB DC BREAKER to the "ON" state



Step 2 Switch on the “POWER ON” switch



Step 3 Press the “POWER WAKE” button for about 8~10S and the system will start-up

Step 4 Use a multimeter to measure the output voltage on the positive and negative ports of the HVB

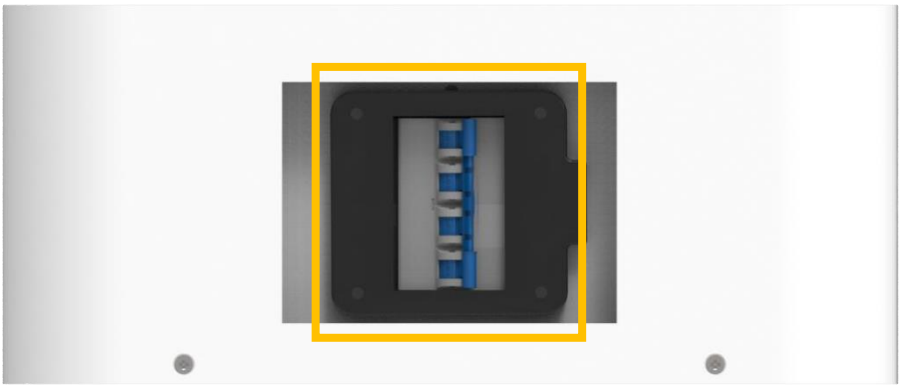
Step 5 The output voltage should conform to the voltage range in the table “Table 2-1 The parameter of JKS-BXXX37-CS system”. Otherwise, the system will be not working properly.

Danger: The voltage of the battery is too high, please pay attention to do self-protection during the measurement.

3.7.5 Shut down the system

- Switch off the “POWER ON” switch.

- Switch the HVB “DC BREAKER” to the "OFF" state .



3.7.6 Connecting inverter

Caution: A external DC Breaker that operates both positive and negative conductors simultaneously between the HVB and inverter on the power cable is needed. After waking up the HVB and ensure that the HVB is pre-charged, it can be turned on.

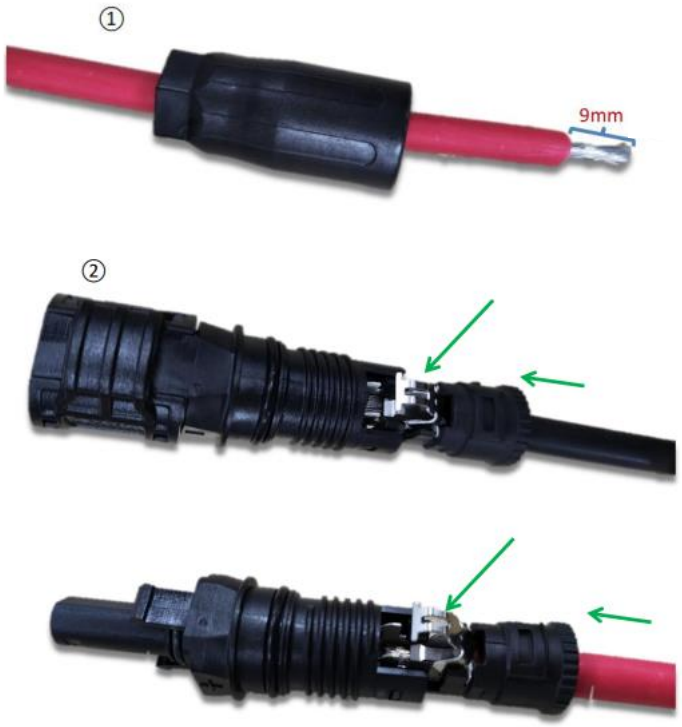
Danger: Please confirm that the battery system is in the off state before connecting. It maybe cause electric shock to personnel and damage to the inverter when connecting the battery directly without power off.

- Connect the positive and negative battery connectors with the positive and negative power cablestogether. Both ends must have connectors, and the connector on the inverter side is provided by the inverter. If that 2m power cable is not long enough, please find another power cable of the same specification, the length cannot be longer than 3m.

Materials in the packing list.

Positive connector *1 Negative connector *1
Tail sleeve *2
Standard red positive wire *1
Standard black negative electrode wire *1

Steps as being followed:



①First, install the tail sleeve on the red or black cable
②Insert the cable core into the internal lock after installation
Note: 1.The depth of the core wire head should exceed the locking position to prevent the wire from being unable to be locked.
2.The length of the stripped copper core of the cable is 9mm.

- Connect External Power Cable to the inverter;

- Connect the EXT-CAN communication cable to the inverter RJ45 CAN port.

Warning: Double check the connection of all the power cables and communication cable. Make sure thevoltage of the Inverter is in the same level with the battery system.

- Switch on the inverter, to make sure all the power equipments can work normally.
- Start the battery system. Refer to the section “3.5.4”

4 Battery Expansion(With DC Charger)

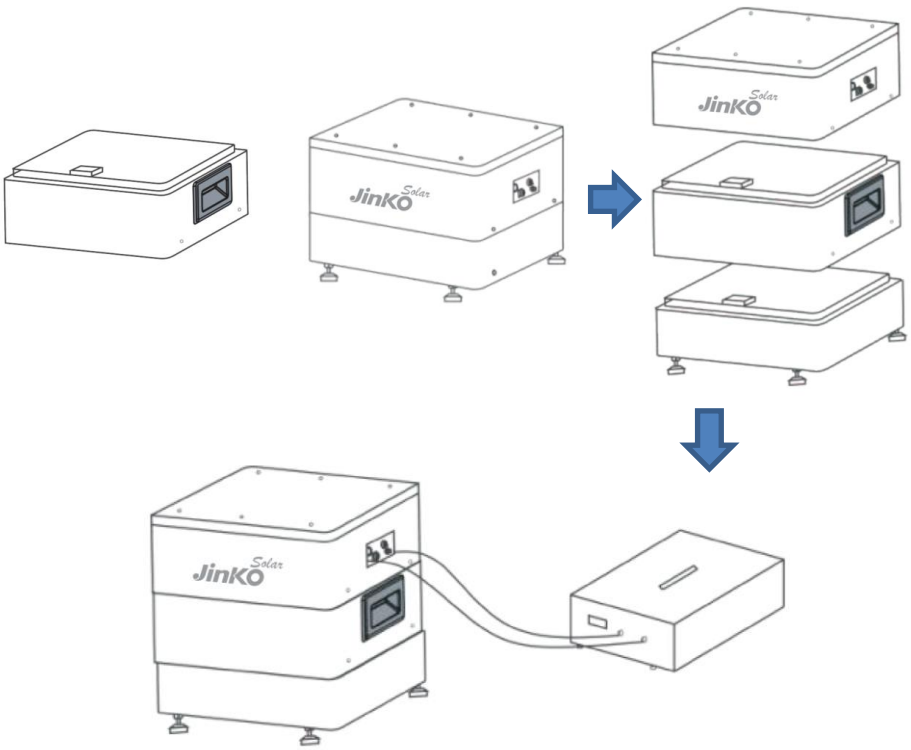
Caution

- When the system has been in operation for over six months, it is advisable to refrain from introducing new batteries for expansion purposes. If you intend to expand the battery capacity, we kindly request you to proactively consult with Jinko. It is important to note that the expansion process is considerably time-consuming, and any expenses incurred due to the extended duration of the expansion solution will not be covered by Jinko.
- DC charger is needed for battery expansion

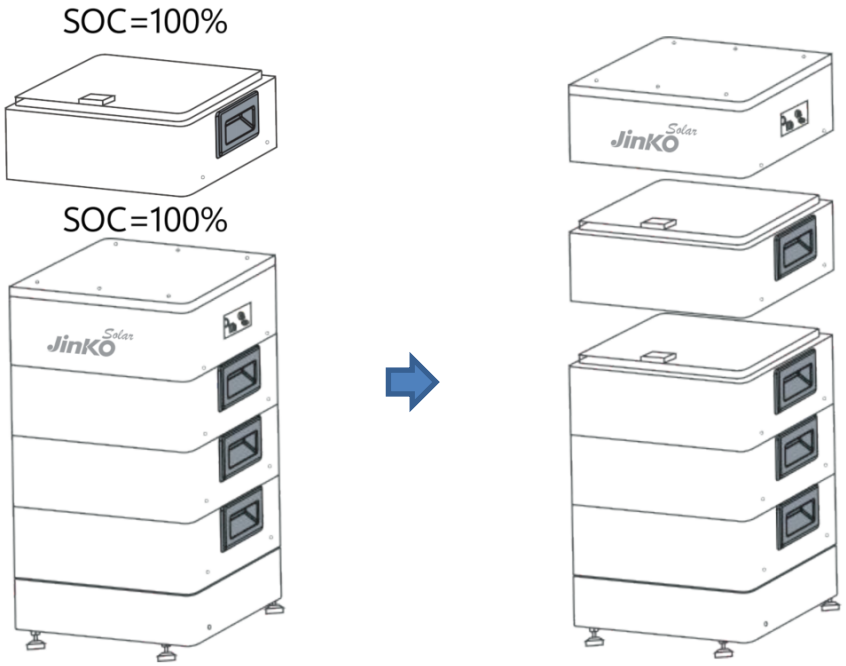
Step 1: Initial Preparation
(1) Ensure all safety precautions are in place, including personal protective equipment.
(2) Verify that the existing battery tower is safely disconnected from the power system.

Step 2: Charge the original battery tower to SOC 100%
Adjust the state of charge (SOC) of the original battery system to reach SOC 100%. This can be achieved by using an inverter to charge the tower until the SOC reaches 100%.

Step 3: Charge the new battery module to 100% with a DC charger
Add the new module JKS-B9637-CS between the base and HVB (High Voltage Box). Please note that the factory SOC of the module is initially set at 50%. A DC charger is needed. Configure the charging voltage of DC charger to 110V. Continue charging the battery until the HVB automatically terminates the charging process



Step 4: Add the new battery module to the system



Step 5： Finalizing Expansion

(1) Perform a final assessment of the entire battery system's performance, including the new module and the original batteries.

(2) Verify that all components are functioning correctly, and that the system stability is maintained

Step 6: Documentation and Reporting

(1) Create a detailed report of the expansion process, including integration steps, system performance evaluations, and any adjustments made.

(2) Store the documentation for future reference and warranty purposes.

Battery Expansion(Without DC Charger)

Caution

- When the system has been in operation for over six months, it is advisable to refrain from introducing new batteries for expansion purposes. If you intend to expand the battery capacity, we kindly request you to proactively consult with Jinko. It is important to note that the expansion process is considerably time-consuming, and any expenses incurred due to the extended duration of the expansion solution will not be covered by Jinko.

- We recommend adhering to the following steps for the expansion process (excluding the need for a DC charger). Please be aware that the entire procedure is expected to take approximately 3 hours to complete.

For instance, if the initial battery configuration consists of three sets, and you plan to introduce two additional sets of batteries for expansion purposes.

Step 1 Initial Preparation

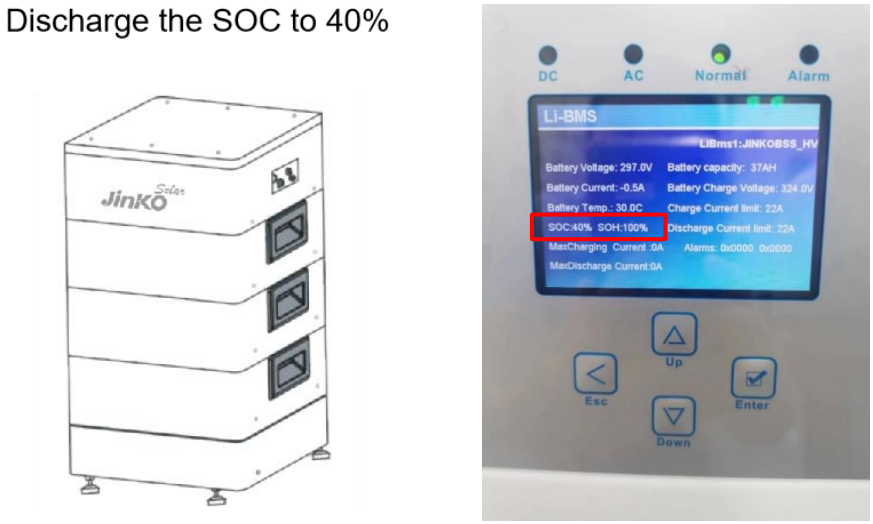
(1) Ensure all safety precautions are in place, including personal protective equipment.

(2) Verify that the existing battery tower is safely disconnected from the power system.

Step 2: Preparing for Expansion

(1) Discharge the original battery tower to 40% State of Charge (SOC)

(2) Perform a thorough inspection of the new battery module to ensure it's in proper condition for integration.



Step 3: Integrating the New Battery Module

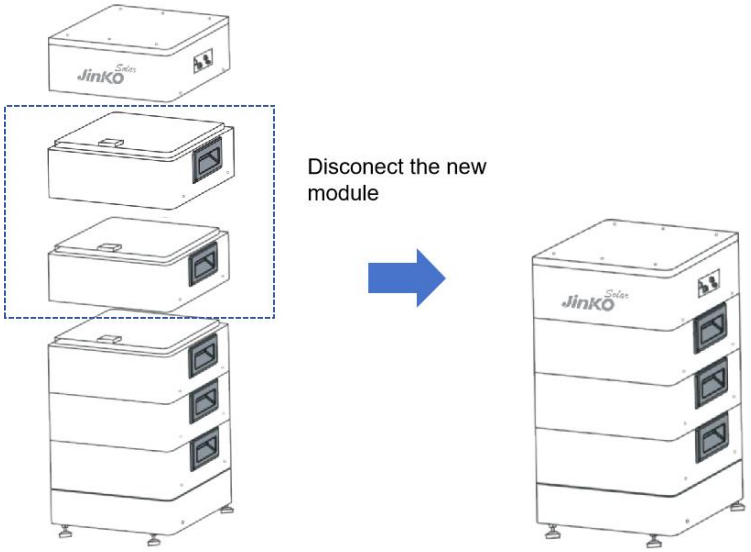
(1) Add the new battery modules into the existing battery tower.

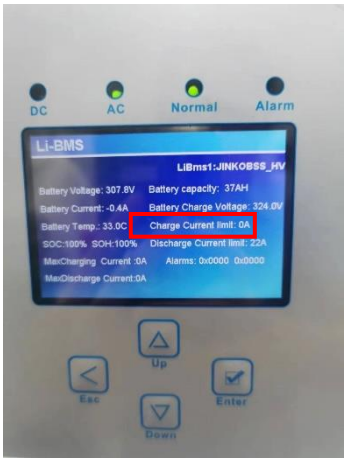
(2) In cases of insufficient photovoltaic (PV) power generation, enable grid charging to the batteries in the inverter setting. Continue charging until the battery state of charge (SOC) reaches 100% or the charge current limit reaches 0A.

Step 4: Removing the new battery modules and keep charge the original batteries to SOC 100%

(1) Carefully disconnect and remove the new battery module from the integrated system.

(2) Restart the charging process for the original battery tower until battery state of charge (SOC) reaches 100% or until the charge current limit reaches 0A.





Step 5: Reintroducing the New Battery Module

(1) Reconnect the new battery module, which is already at 100% SOC, to the original battery system.

(2) Ensure that the new module is securely integrated into the original system.

Furthermore, please remember to restore the original settings of the inverter

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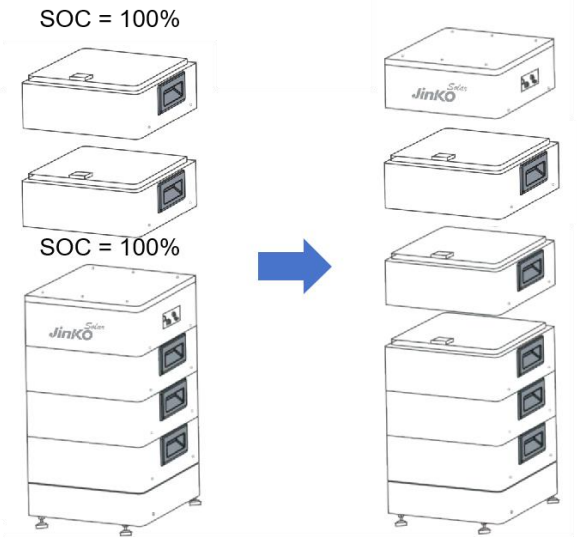


Step 6： Finalizing Expansion

（1）Perform a final assessment of the entire battery system's performance, including the new module and the original batteries.

(2) Verify that all components are functioning correctly, and that the system stability is maintained

Step 7: Documentation and Reporting

(1) Create a detailed report of the expansion process, including integration steps, system performance evaluations, and any adjustments made.

(2) Store the documentation for future reference and warranty purposes

5 Maintenance

4.1 Trouble Shooting:

Danger: The JKS-BXXX37-CS battery system is a high voltage DC system, operated by professional and authorized person only.

Danger: Before checking the following failure solution, check that all cable connection and switches are under this user manual guidance. If no, make appropriate adjustments and check if the battery system can be woken up normally.

No	Problem	Possible Reason	Solution
1	The battery has no voltage output, and “POWER ON”/ “POWER WAKE” Light is off.	The DC breaker of the HVB wasn't turned on	Turn on the DC breaker of HVB
2		The "POWER ON" switch of the HVB box was not switched on	Switch on the "POWER ON" button
3		Battery is in sleep state.	Long press the "POWER WAKE" button for about 3S
4		Battery gets into over-discharged protection	Charge the battery to relieve the protection state
5	The battery has no voltage output, but “POWER ON”/“POWER WAKE” are on	Battery pack undervoltage or module communication failure	Check the voltage of the battery pack and check if the communication interface between the battery modules is connected properly
6	When the battery is connected to the inverter, the DC breaker trips automatically	The circuit between the battery and the inverter has a short circuit point	Check whether there is a short circuit in the circuit between the battery and the inverter； Check if the inverter is faulty
7	Communication failure between battery and inverter	The wrong battery model type is selected on the inverter	Select correct battery model type on the inverter

4.2 Replacement of main component

Danger: The JKS-BXXX37-CS battery system is a high voltage DC system, only can be operated by professional and authorized person.

4.2.1Replacement of Battery Controller (HVB)

Step 1 Turn off the whole battery system. Following the shut-down process described at section 3.5.5. Ensure the Negative and Positive terminals have no power using a multimeter.
Step 2 Remove the four screws on the HVB and remove the HVB from the system.

Step 3 Replace the old HVB with a new one. Fix the four screws.

4.3 Battery Maintenance

Danger: The maintenance of battery only can be operated by professional and authorized person.

Danger: Turn off the battery system and ensure that there is no power at it before doing any maintenance.

4.3.1 Voltage Inspection:

1. Check the voltage of battery system through the monitor software. For example: Check Single cell's voltage isout of rated range or not.

2. Check the SOC of battery system through the monitor software. Checkthe SOC of battery string is normal or not.

4.3.2 Wires Inspection:

Visually inspect all the wires of battery system. Check the wires have been broken, aged, got loose or not.

4.3.3 Balancing:

The battery system will become unbalanced if have not be charged fully for a long time. To solve this problem, perform the balancing maintenance (fully charged) every 3 month.

Generally this maintenance progress needs to be completed when external devices such as the monitor software and battery and inverter are in good communication.

4.3.4 Output Relay Inspection:

Under low load condition (low current), turn the output relay OFF
and ON until hearing "click", which means the relay can turn on and off normally. In case the sound cant be heard and the battery is not working properly, please contact Jinko.

6 Storage Recommendations

- For long-term storage (more than 3 months), the battery modules should be stored in a non-corrosive gas atmosphere and within a temperature range of 5 to 45℃ and relative humidity lower than 65% .
- The battery module should arranged dry, clean and well ventilated environment. The battery must be charged to 50~55% SOC before storage.
- It is recommended to active the battery system (discharge and charge) every 3 months, and the longest duration of storage without charge and discharge cannot exceed 6 months.

Caution: The cycle life of the battery will have relative heavily reduction if not follow the above instructions to store the battery for a long term.

7 Shipment

Battery module will pre-charged to 50% SOC or according to customer requirement before shipment. The remaining capacity of battery cell is determined by the storage time and condition after shipment.

- The battery modules meet the UN38.3 certificate standard.
- In particular, special rules for the carriage of goods on the road and the current dangerous goods law, specifically ADR (European Convention on the International Carriage of Dangerous Goods by Road), as amended, must be observed.

8 Contact

If you have any technical problems concerning our products,please contact Jinko service. We require the following information in order to provide you with the necessary assistance:

- Device model
- Device serial number
- Error code
- Mounting location
- Installation date

Jinko ESS Service

HQ

Service email:G_ESS.Service@ jinkosolar.com

EU

Email: ESS.EU@jinkosolar.com

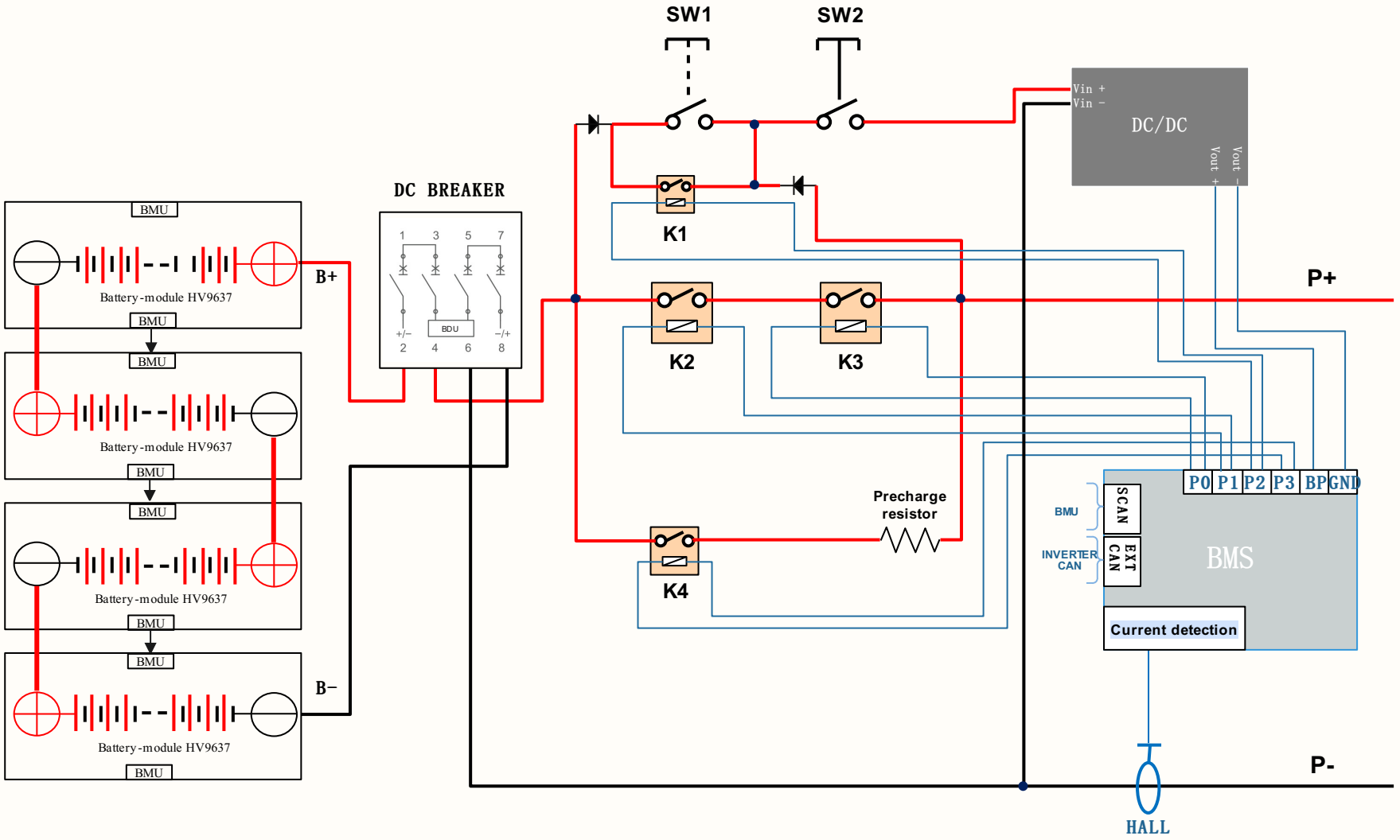
AU

Email: BESS_AU@ jinkosolar.com

https://www.jinkosolar.com/site/consulting

Enclosure Thickness Measured Picture

Appendix II


SW1
SW2
DC BREAKER
BMU
Battery-module HV9637
B+
B−
K1
K2
K3
K4
Precharge resistor
DC/DC
Vin +
Vin −
Vout +
Vout −
P+
P-
P0 P1 P2 P3 BP GND
SCAN
EXT CAN
BMU
INVERTER CAN
BMS
Current detection
HALL

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