JKS10.2K-5HLVS

User Manual

Contents

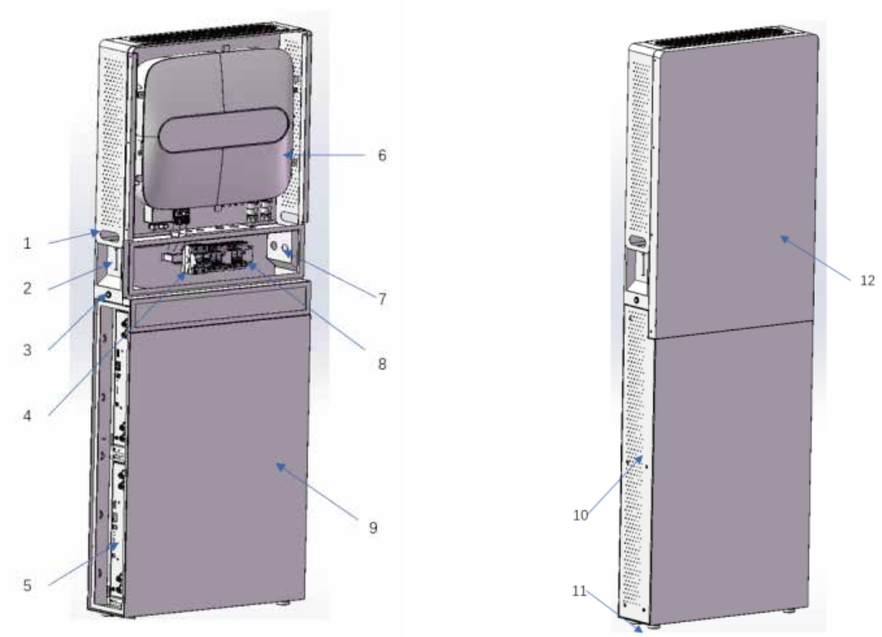
1.Product Introduction

1.1 Product Overview

Intended Use

Each JKS10.2K-5HIVS consists of 50Ah PACK, Cabinet, switch, single-phase energy mete, cable and PCS. ect. This household energy storage system can store 10 kWh of electricity. In the nighttime when there is no solar energy, the internal battery supplies power to the household load through PCS. When solar energy is available during the day, the solar energy supplies power to the load first, and stores the remaining solar energy to the JKS-B51100- CI battery system.

System Overview

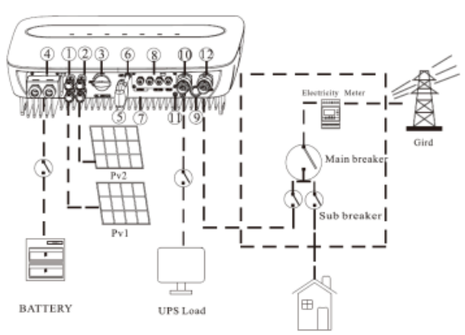


(1) PV channel	(2) Wifi connection terminals	(3) Power button
(4) Battery breaker	(5) Battery pack	(6) Inverter
(7) AC channel	(8) AC breaker	(9) Cabinet
(10) Side covers	(11) Supporting leg	(12) Front cover

Battery Interface Overview

Item	Name	Definition
1	Power switch	· OFF/ON,
2	Positive socket	· Must be in the "ON" state when in use
3	ADD	Battery output positive or parallel positive line
4	SW(battery wake/sleep switch)	DIP switch
5	SOC	When the "OFF/ON" switch button is in the ON state, press and hold this button
		for 3 seconds to put the battery into the power-on or off state.
		The number of green lights shows the remaining power.
6	ALM	Red light flashing when an alarm occurs, red light always on during protection
		status. After the condition of trigger protection is relieved, it can be automatically
		closed.
7	RUN	Green light flashing during standby and charging mode. Green light always on
		when discharging.
8	Com	Communication cascade port , support RS232
9	CAN/RS485	Communication cascade port, support CAN/RS485
10	DRY CONTACT	/
11	Negative socket	Battery output negative or parallel negative line
12	Grounding	Shell ground connection

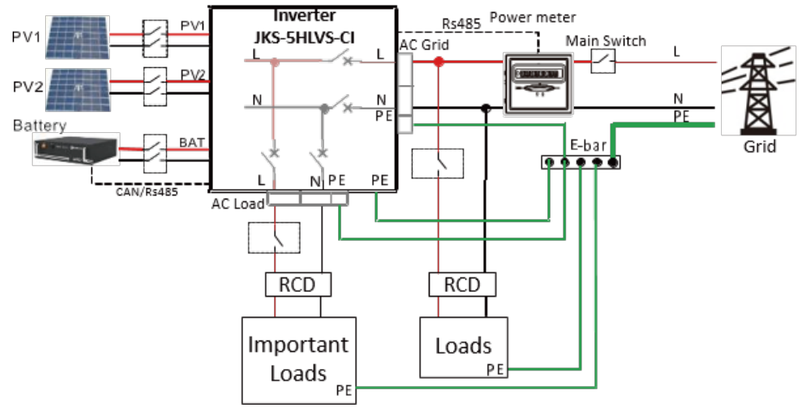
Inverter Interface Overview



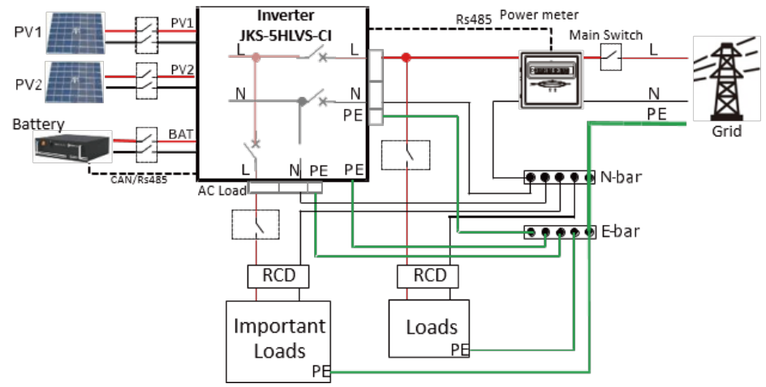
1.PV1 Connector
2.PV2 Connector
3.PV Switch
4.Battery Connector
5.GPRS Module
6.Wi-Fi Antenna
7.DRED Interface
8.Communication Interface
9.Waterpoof vent valve
10.AC Load Connector
11.PE Connection Point
12.AC Grid Connector

1.2 Electrical Connection

System connection Diagram:



Grid-connected system diagram for non-Australian and non-South African markets.

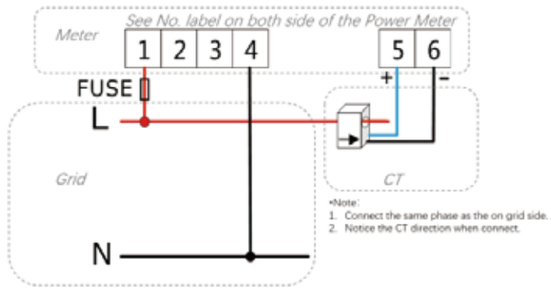


the Australian and South African markets of grid connection system diagram.

System connection Diagram:

Recommended DC Switch		
	PV (option)	Battery(option)
Rated Voltage	≥580VDC	≥60VDC
Rated Current	13A	125A
Recommended AC Switch		
	AC Load	AC Grid
Rated Voltage	≥250VAC	≥250VAC
Rated Current	40A	40A

Power Meter connection diagram:



Note: Please install the suitable DC switch on the PV side;

An RCD of the appropriate TYPE B for the backup port is recommended.

2.Safety Instructions

Please read the manual carefully and follow the safety precautions specified in this manual. The safety precautions mentioned in this manual are only supplements to local safety regulations.

2.1 Safety Precautions

· The product must be installed and maintained by professionals in accordance with local standards and regulations, and strictly follow the manual installation steps.

· Before installation and maintenance, please ensure that the storage capacitor is fully discharged, that is, the power supply internal battery input, photovoltaic input and AC grid are disconnected for at least 5 minutes to prevent electric shock or fire.

· When the PV modules are exposed to light, a DC voltage is supplied to this inverter.

· During operation, it is strictly forbidden to directly touch the output, input and other terminals to avoid the danger of electric shock.

· Do not open the machine shell directly during operation, otherwise it will cause electric shock.

· Keep the equipment away from flammable and explosive materials and heat sources.

· It is forbidden to modify the equipment by yourself to avoid serious accidents.

2.2 Safety Requirement

This system can only be installed by personnel who have been trained in the power supply system and have sufficient knowledge of the power system.

· All circuits connected to this power system with an external voltage of less than 51.2V must meet the SELV requirements defined in the IEC60950 standard.

· Iif operating within the power system cabinet, make sure the power system is not charged. Battery devices should also be switched off.

· Distribution cable wiring should be reasonable and has the protective measures to avoid touching these cables while operating power equipment.

· When installing the battery system, must wear the protective items below:

The isolation gloves

Safety goggles

Safety shoes

2.3 Tools and data

Tools and meters that may be used are shown in table 1-1.

Table 1-1Tool instrument

Name	
Screwdriver(Slotted 、Phillips)	Multimeter
Torque wrench	Clamp current meter
Diagonal pliers	Insulation tape
Pointed nose pliers	Temperature meter
Pliers to hold the wire	Anti-static bracelet
Stripping pliers	Cable tie
Electric drill	Tape measure

2.4 Symbolic Interpretation

	Attention. Operate not according to the requirements, may result in personal injury.		The equipment can not be discarded with other household garbage, must be sent to the appropriate institution for recycling.
	Danger: Be careful of electric shock, high voltage.		Recyclable and reusable
	No smoking		This side up
	No trampling		Please read the manual carefully before use
	High temperature of equipment outlet, be careful to touch.		Protective grounding
5 min	After power off, wait for 5 minutes to ensure full discharge of the machine.		Grounding
	Refer to operating instructions		This battery product meets European directive requirement
TÜV SÜD	This battery product passed the TUV certification test.		

Situation Occurs	Description and Action Need
Leakage	Avoid touch of leaking liquid or gas. If you touch leaking electrolyte, do as below immediately.
	Inhalation: Evacuate the contaminated area, and seek medical help.
	Eye contact: Rinse eyes with flowing water for 15minutes, and seek medical help.
	Skin contact: Rinse contacted area thoroughly with soap and water, and seek medical help.
	Ingestion: Vomiting, and seek medical help.
Fire	It's hard for PACK systems ignite spontaneously. If the PACK has caught a fire, do not try to
	extinguish the fire but evacuate people immediately.
Wet Packs	If PACK is flooded or submerged, do not access it. Contact Jinko or distributor for technical
	assistance immediately.
Damaged PACKS	Damaged PACKS are dangerous and must be handled with special attention. They are no
	longer suitable for use and may cause danger to people. If the PACK damaged, stop use it
	and then contact the Jinko or distributor.

3.Packing, Transportation, Storage

3.1 Packing

Products are shipped by split deliver:

· The cabinet is packed in wooden case with desiccant inside.

· Each battery is packed in a separate carton, and the outer box must be checked for integrity.

· The inverter is packaged in a carton alone, and it is necessary to check whether the outer packaging box is intact during on-site installation.

3.2 Transportation

· Transport must comply with the dangerous goods transport requirements of UN38.3 and local laws and regulations.

· The equipment is heavy and must be moved mechanically.

· Equipment and packaging cannot be wet, so cannot be transported in the open air.

3.3 Storage

· Storage temperature: -10℃～35℃, ≤6month;

(The SOC is kept in the range of 40% to 60% before storage)

· Storage humidity: 10%~80%RH

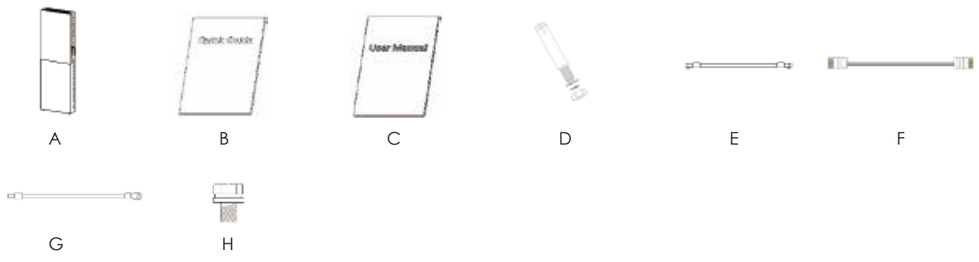
· The storage room must be ventilated, clean and dry, and protected from dust and moisture.

· The maximum storage time should not exceed 6 months, and it is recommended to charge and discharge the battery after this time.

· The sunlight in the storage room cannot directly illuminate the device.

4. Components Checking

4.1 Cabinet Package

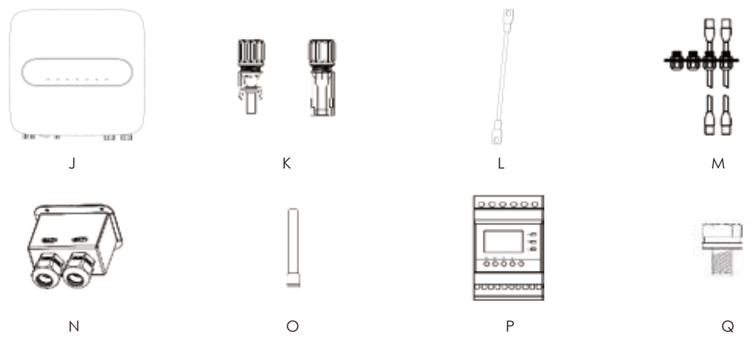


ITEM	DESCRIPTION	QTY.
A	Preinstalled cabinet	1
B	Quick installation guide	1
C	User manual	1
D	M8 explosive screw	4
E	Positive and negative parallel power cable (Red and black)	2
F	Communication cable between batteries	1
G	Positive and negative cable between inverter and DC breaker (Red and black)	2
H	M6 batteries fixing screw	8

4.2 Battery Packages

ITEM	DESCRIPTION	QTY.
I	Battery pack	2

4.3 Inverter Package



ITEM	DESCRIPTION	QTY.
J	Inverter	1
K	Positive and negative PV plug	2
L	PE line (GND)	2
M	Communication cable	1
N	Battery water proof box	1
O	Wifi antenna (Including the extended wire)	1
P	Power meter	1
Q	Ground screw	2

5.Product Installation

NOTICE

· Ensure to read the guidance before installation in order to understand product information and safety cautions.

· Operators should be well trained technicians and fully understand the whole photovoltaic system, grid network, working principle and national regional standards.

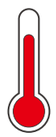
· Installers must use insulating tools and wear safety equipment.

· Device damages caused by failure to comply with storage, transportation, installation and use requirements specified in Guidance are not coved by Warranty.

· Build sun& rain shade to avoid direct exposure to the sunlight and rain.

· Ensure the batteries, the grid and the PV are isolated or powered off before connecting wires.

Installation Environment



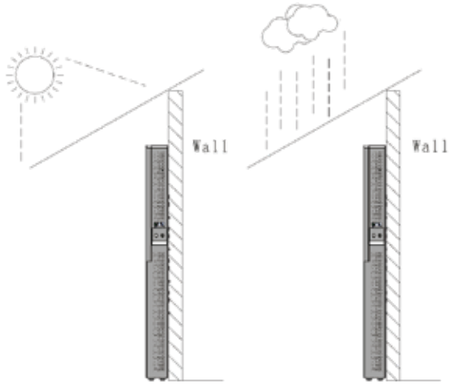
Max.+50℃

Min.-10℃

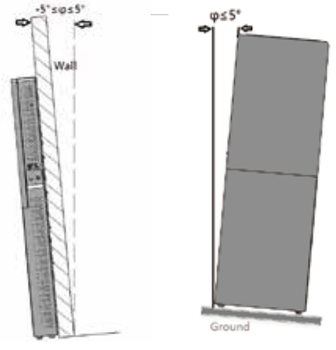
RH.+5%~+95%

Installation Tools

Installation Position，sun& rain for all-in-one product



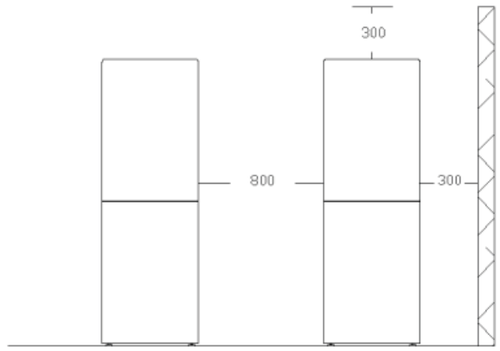
Wall Mounted Notice



5.2 Installation Instruction

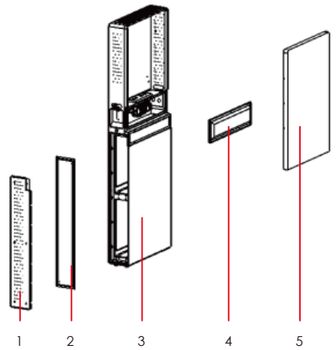
The cabinet is installed on the ground and fixed against the wall with expansion screws to prevent the cabinet from being unstable and tipping over. There must be no less than 800mm installation and maintenance space on the left side of the cabinet, and 300mm installation and maintenance space on the right side of the cabinet. It is recommended to leave 300mm of natural ventilation convection space at the top of the cabinet.

· Note: In principle, the top of the cabinet is equipped with rain protection facilities.



5.3 Installation Steps

5.3.1 Take off screws of the cabinet to take off all the 4 covers.



1 · Battery outside cover

2 · Battery inside cover

3 · Main part of cabinet

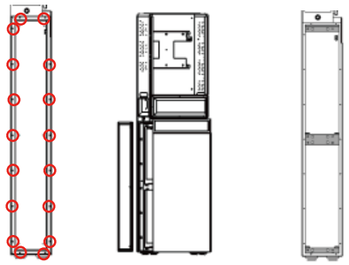
4 · Front-mid cover

5 · Front cover

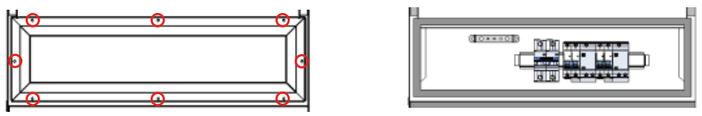
1) Take off the 10 screws of front cover from both side, then take off the front cover

2) Take off the 6 screws of battery outside cover, then take off the cover

3) Take off the battery inside cover

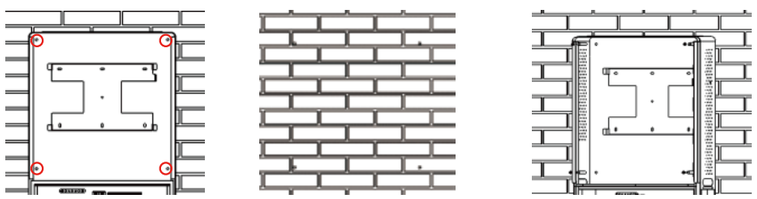


4) Take off the front-mid cover

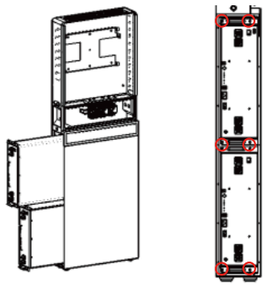


5.3.2 Fix the cabinet to the wall

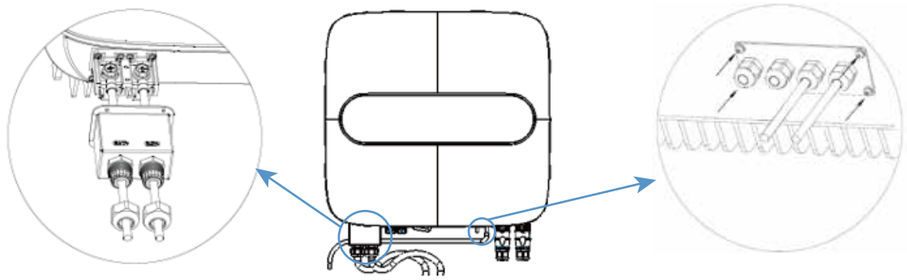
1) Mark the position of the fixing holes, drill holes according to the marks, fix the cabinet by Component "C" to the wall.



5.3.3 Install the batteries, keep the positive (Red) connectors upward, then fix batteries by the 8 screws



5.3.4 Pre-install the inverter before mount it into the cabinet

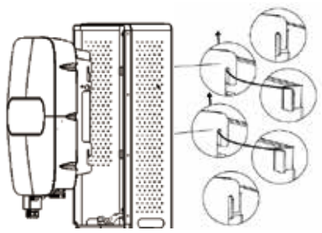


Install the battery DC cable and the water proof

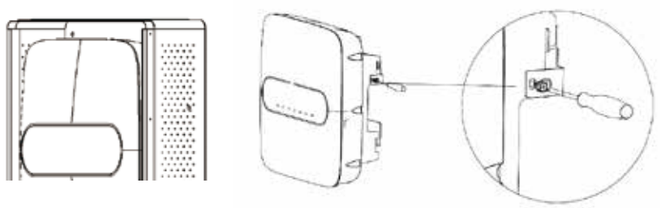
Plug in the BMS and Meter RJ45 terminal first then fix the water proof

5.3.5 Mount the inverter

1) Mount the inverter

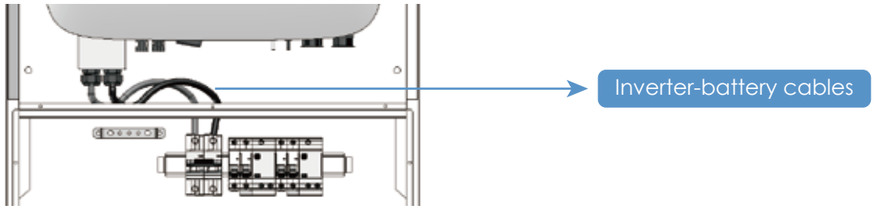


2) Fix the inverter with screw

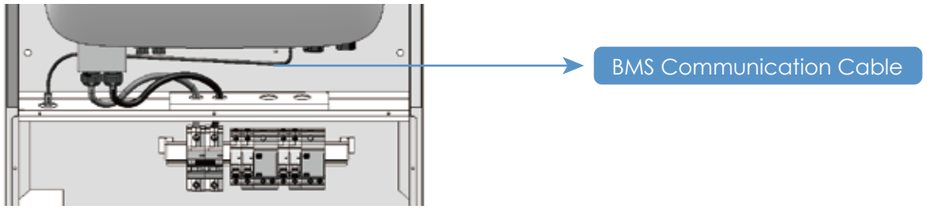


5.3.6 Connect inverter wires

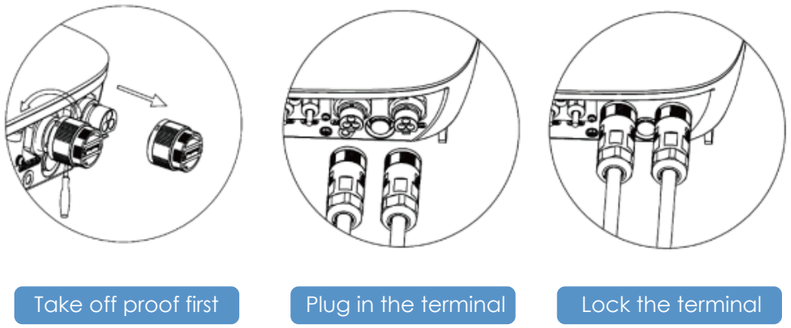
1) Connect the inverter-battery cables to the isolator



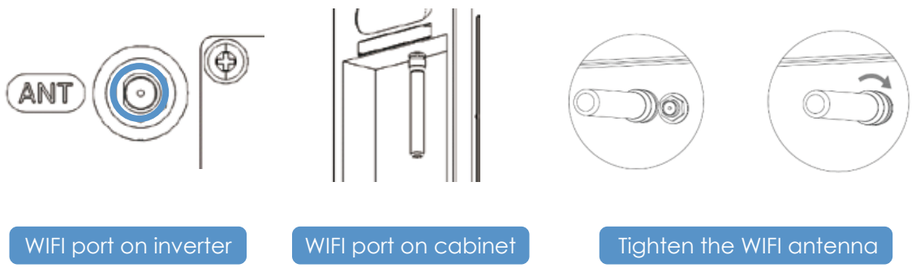
2) Connect the inverter-BMS communication cable to the cabinet BMS port.



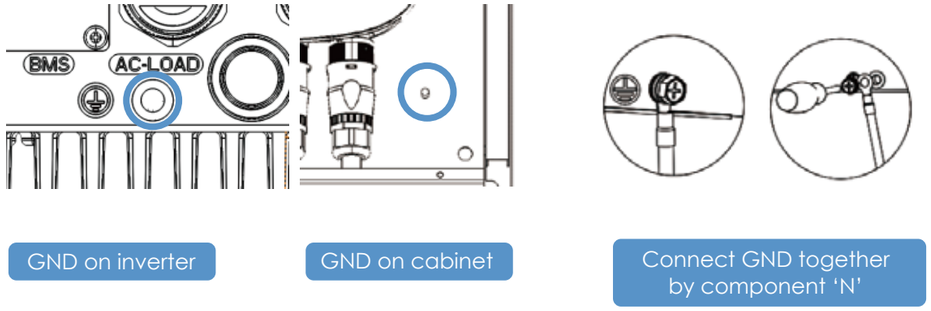
3) The inverter AC connectors are pre-installed, just rotate and lock them.



4) Install the antenna to the antenna interface, one side is to the inverter, another side is to the cabinet.

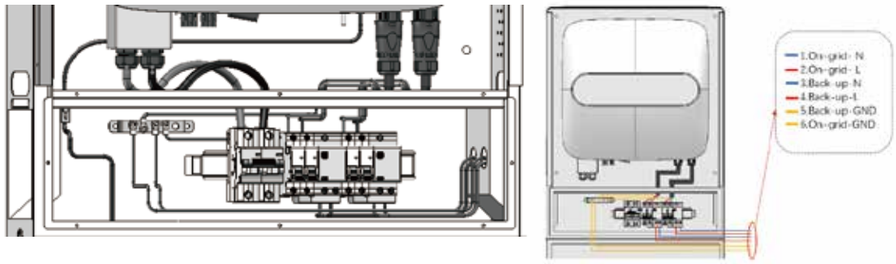


5) Connect inverter GND and the cabinet GND together



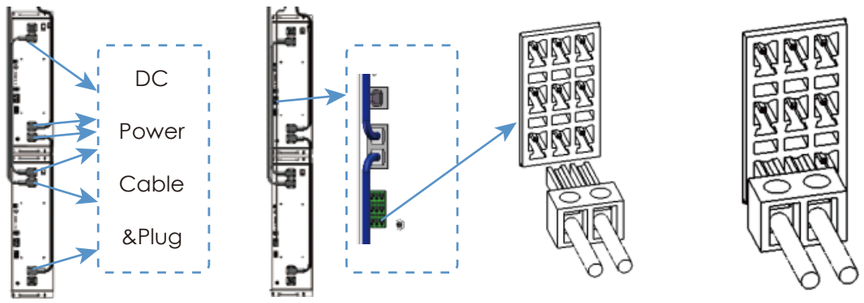
5.3.7 Connect AC wires

* AC-LOAD is to connect important loads.



5.3.8 Connect Battery wires

1) Connect DC power cable, communication cable, power button cable.



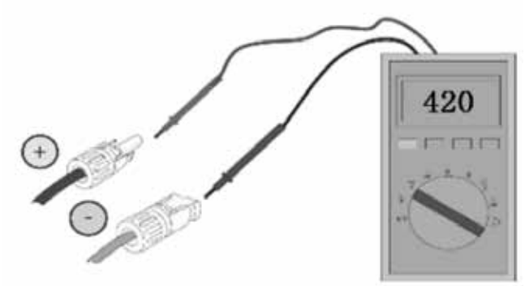
2) Use the component "N" to connect the GND of cabinet and batteries together.

5.3.9 Install PV cable

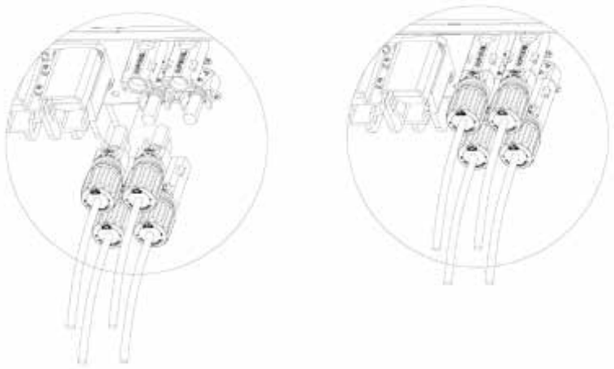
1) Check and verify PV rotary switch is at OFF position.

2) Connect PV connectors.

3) Use multi-meter to measure PV side voltage and verify correct polarity, ensure open-circuit voltage is less than 580V.



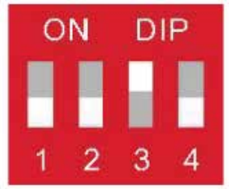
4) Connect PV terminals to the corresponding interfaces.



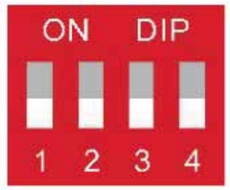
5.4. Configuration

1) Set the batteries' DIP switch

The first battery:



The second battery:

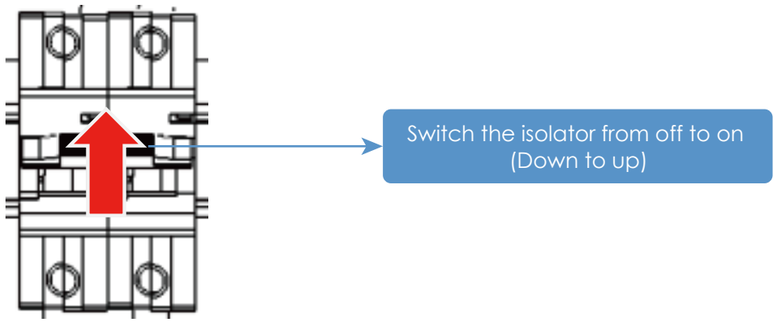


5./4. Start up the system

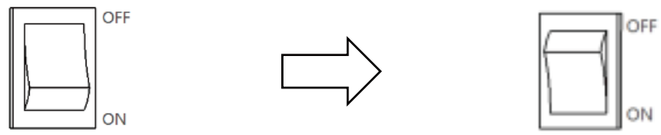
NOTICE

· We strongly suggest user to start the system according to the steps in order in this document.

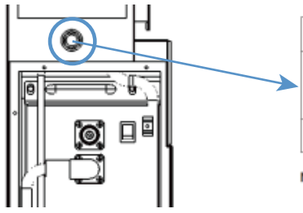
1）Switch on the battery DC isolator firstly



2) Switch on the battery power button on batteries



3) Keep pushing the power for over 3s, and confirm both batteries' lights are on



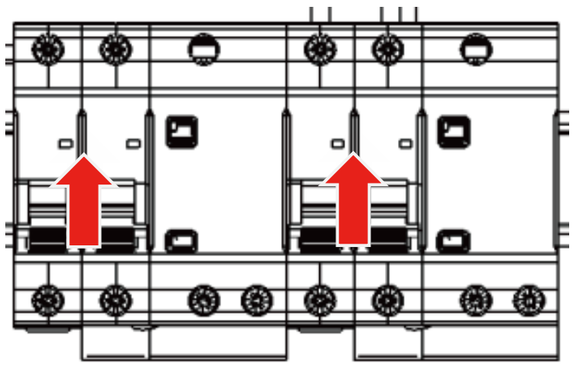
Situation	Touch	Definition
System off	Press(<2S)	No reaction
	Press(>2S)	Power on
System on	Press once	Shut down

Press →

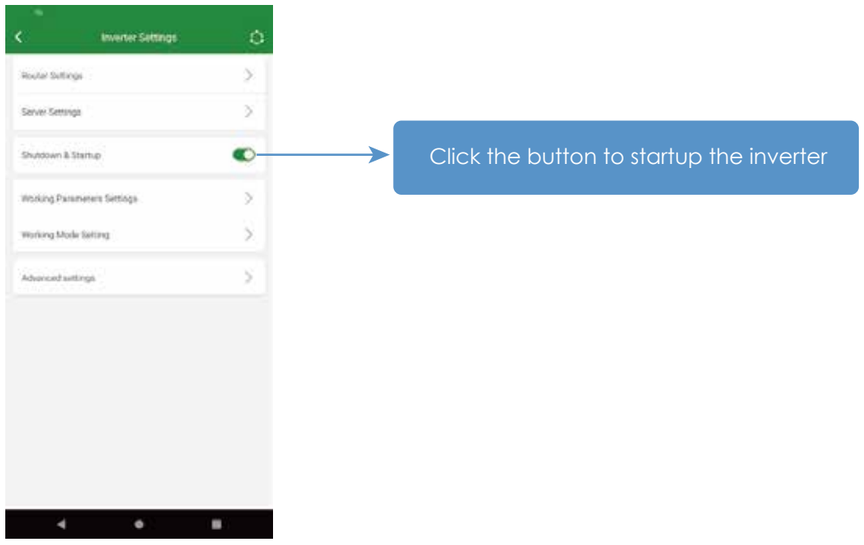
Note: When multiple battery modules are used in parallel connection, you only need to press one key of any module to start the system, and also press one key to shut down the battery system. ALM/RUN light turns green when powered on

4) Switch on the PV DC switch

5) Switch on the two AC isolators, just push them up.



6) Use "Jinko RESS Cloud APP" to connect, check and set the inverter, after that, power on the inverter by the APP.



7) Detailed settings, please refer to APP operation manual.

5.5 Power off

（1）Press the POWER button to power off, and the battery pack indicator goes off to complete the battery shutdown.

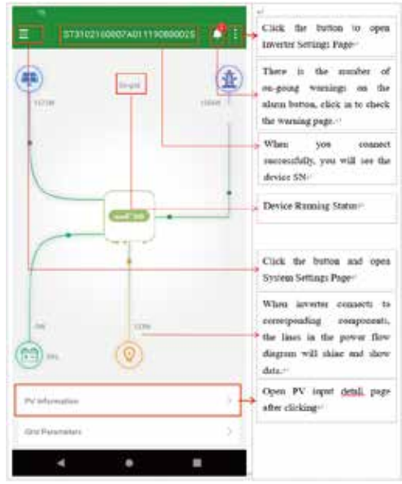
（2）When there is no power in PV or AC Grid or battery, the inverter will shut down.

6.APP introduction

In Local Connection Mode, please connect your inverter to the App with Inverter WiFi, access to the Internet is not required. Please click the 'Local Connection Mode' button to go to Local Connection Mode. (When you are using Local Connection Mode, if you have connected your device to the Cloud, you will first need to turn off "Whether to Connect to Cloud".

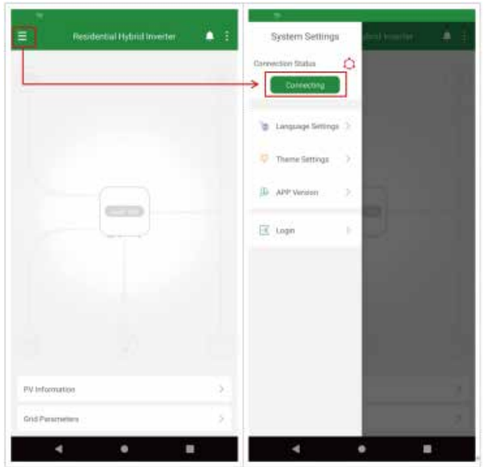
Home Page Description

Local Connection Mode, includes Home Button, Device Running Status and related data.



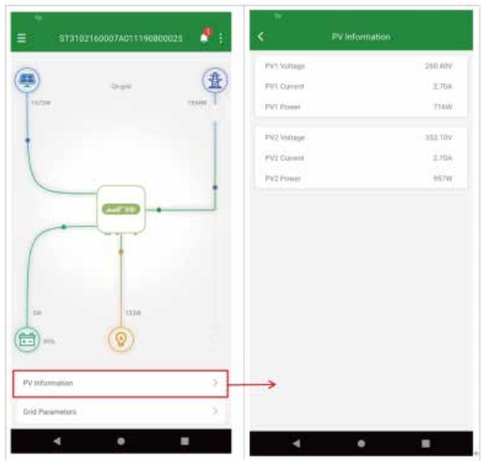
Connect to Device

Firstly, please use your phone to connect to the Inverter WiFi, and then please click the button on the toolbox to see the side menu. And click the 'Connect' Button. When you connected to the inverter successfully, the homepage will show some data, and the number of warnings will be shown on the alarm button on the toolbox.



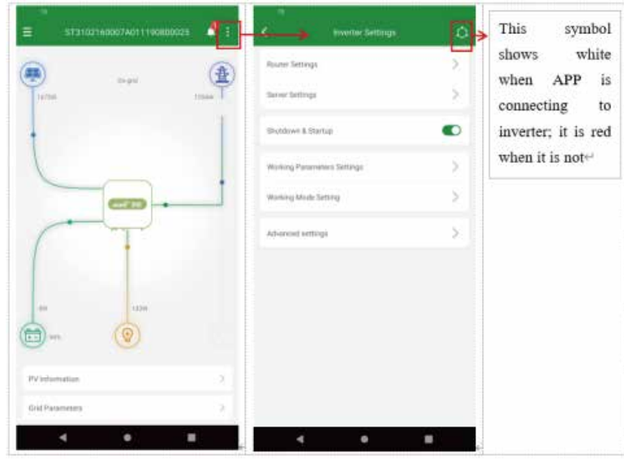
Detail Data

There are detail data lists below in the flow diagram, including: PV information, grid information, Back-up Loads, Battery Parameters, System Information, Parallel Information. When you click in, you will see the corresponding data page.



Inverter Settings (Local Connection Mode)

Settings include: Router Settings, Server Settings, Shutdown & Startup, Working Parameters Settings, Working Mode Setting, Advanced Setting. Advanced Settings need dealer's password to do the settings.



Router Settings

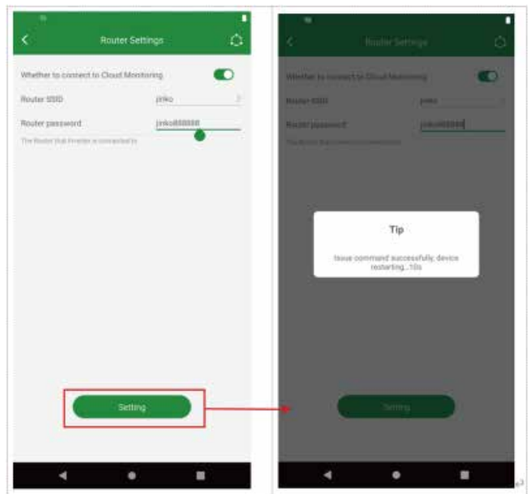
(1) Router Settings can make the inverter connect to available Internet, so that the device can connect to the Web Cloud Monitoring System.

(2) If PCU software version is higher than 601, when you open the page, you will be able to check all of the parameters that have been set before.

(3) Enable 'Whether to Connect to Cloud Monitoring', and then input Router SSID and Password and then click 'Setting' button. The inverter will restart after setting succeeds. (After the inverter restarts, phone may not be able to connect to the inverter WIFI shortly, please try again after 2-10 minutes).

(4) If you disable 'Whether to connect to Cloud Monitoring', then the inverter will disconnect from the Cloud.

(5) Before upgrading PCU or DSP, please firstly disable 'Whether to connect to Cloud Monitoring'.

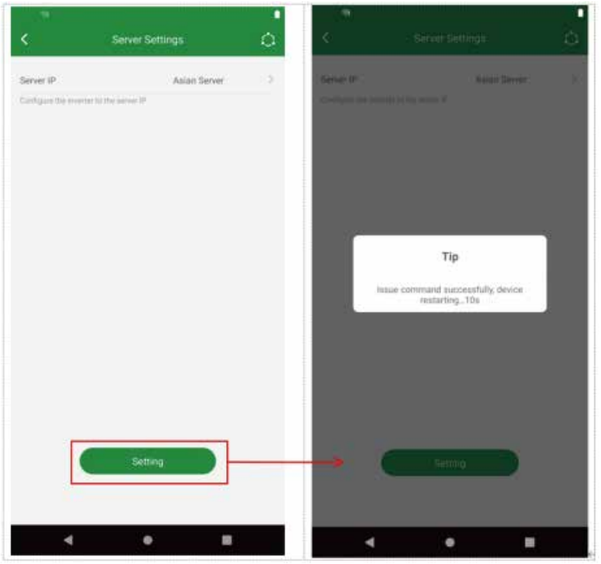


Server Settings

(1) Server Settings are used for the inverter to connect to the Cloud Monitoring System Server.

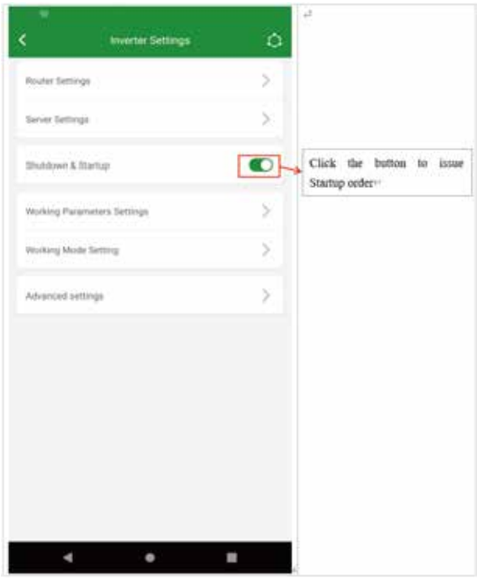
(2) Choose Server IP, and then click 'Setting' button, and the inverter will restart after setting succeeded.

(3) If PCU software version is higher than 601, when you open the page, you will be able to check all of the parameters that have been set before.



Shutdown & Startup

lease click the button on the right of 'Shutdown & Startup', you will be able to issue Shutdown or Startup order to the inverter.

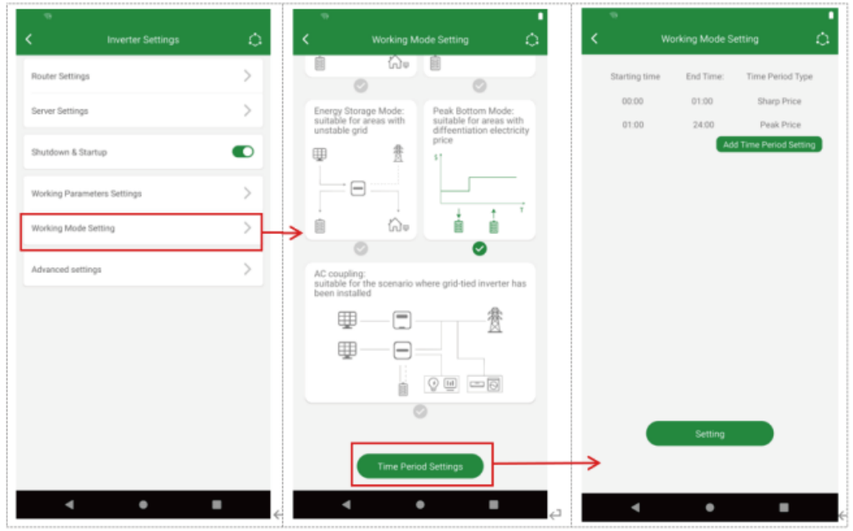


Working Mode Setting

Set the Working Mode of the device, including General Mode, Micro-grid Mode, Energy Storage Mode, Peak and Bottom Mode and AC Coupling Mode.

（1）After you select the working mode(None Peak and Bottom Mode), click the 'Setting' button.

（2）If it is 'Peak and Bottom' Mode, you will need to set time periods for 'Peak and Bottom Mode'. All the time periods must add up to exactly 24 hours.



APP Detailed operation guide, please refer to《Jinko RESS Cloud User Manual》

Set the Working Mode of the device, including General Mode, Micro-grid Mode, Energy Storage Mode, Peak and Bottom Mode and AC Coupling Mode.

（1）After you select the working mode(None Peak and Bottom Mode), click the 'Setting' button.

（2）If it is 'Peak and Bottom' Mode, you will need to set time periods for 'Peak and Bottom Mode'. All the time periods must add up to exactly 24 hours.

Others

(1) Radio equipment operates frequency band from 2.412GHz to 2.484GHz;

(2) Radio equipment operates maximum radio-frequency power of 19/18/17 dBm;

7.Maintenance and troubleshooting

7.1 Routine maintenance

· Please charge the battery every six months from the date of manufacture.

· When the device is not in use for a long time, discharge the battery to 45% to 60% of its capacity and disconnect the battery output to avoid battery emptying.

· The whole machine does not involve maintenance.

7.2 Troubleshooting

Fault phenomenon	Fault cause	Solution
POWER button does not respond	Starting-wire damaged or poor contact	Open the side door and press the SW button of any battery pack for 3 seconds to power on all battery packs.
Short discharge time	Low battery	Please contact the manufacturer.
	Battery overload	Keep the battery charged for more than 4 hours to fully charge the battery.
	The battery ages and its capacity decreases	Check load status and remove non-critical loads.
Unable to charge or discharge	Internal failure	Contact the manufacturer to replace the battery pack and its components
	The battery temperature is too High.	Please contact the manufacturer.
Battery pack communication is abnormal	Communication-wire damaged or poor contact	Let the battery pack stand at room temperature for more than 3 hours
The indicator does not respond after The power on	Total voltage lower than 39V	Check whether battery pack communication is normal.
No DC output	Battery status is abnormal.	Check the total voltage
	Battery gets into over-discharged protection	Read the battery information on the monitor
The DC power supply time is too short	Battery capacity become smaller	Storage battery replacement or add more modules
The battery can't be fully charged to 100%	Charging voltage is too low	Adjust charging voltage at 56.5V or 57V
The power cable sparks once power on and ALM light RED	Power connection short-circuit	Turn off the battery, check the cause of the short circuit
Grid locking failed	Abnormal frequency or voltage of grid	Shut down and turn on when the power grid is normal
AC Output Short Circuit	Short circuit of the load or grid	Shut down and check the circuit，restart after troubleshooting
Output Leakage Current Failure	Abnormal electrical connection	Shut down and check the circuit，restart after troubleshooting
	Leakage current of load exceeds standard	Make sure leakage current of load meets the standard
Output Overload	The output current exceeds the limit value due to too large load power	1.Please check load power，resistive load is not more than 10kW(Each phase is not more than 3.3kW). Inductive load is not more than
		3kW (Each phase is not more than 1kW).
		2. Auto-recover within 10 minutes after fault elimination
Inverter Soft Start Failure	Inverter Damage	1. Occasional failures can be automatic recovery.
		2.The Inverter cannot be automatic recovery，shut down and turn on when the power grid is normal. If it still can't be self-recovery，
		please contact the service.
Low Grid Frequency	The frequency of grid is lower than lower limit	Check power grid, resume to work when go back to permitted range of grid frequency
High Frequency Grid	Frequency of grid is higher than upper limit	Check power grid, resume to work when go back to permitted range of grid frequency
Low Grid Voltage	The voltage of the grid is lower than lower limit	Check power grid, resume to work when go back to permitted range of grid voltage
High Grid Voltage	The voltage of the grid is higher than upper limit	Check power grid, resume to work when go back to permitted range of grid voltage
PV2 Under voltage	PV2 Without voltage	Make sure the PV2 connection is normal and the switch is closed.
	The voltage of PV2 is lower than lower limit	Check PV2 configuration, increase PV2 open-circuit voltage
PV2 Over voltage	The voltage of PV2 is higher than upper limit	Check PV2 configuration, reduce PV open circuit voltage

Fault phenomenon	Fault cause	Solution
PV1 Under voltage	PV1 Without voltage	Make sure the PV1 connection is normal and the switch is closed.
	The voltage of PV1 is lower than lower limit	Check PV1 configuration, increase PV2 open-circuit voltage
PV1 Over voltage	The voltage of PV2 is higher than upper limit	Check PV1 configuration, reduce PV1 open-circuit voltage.
Reverse PV2	PV2 positive and negative poles reversed connected	Check cable connection, resume to work when go back to normal
Reverse PV1	PV1 positive and negative poles reversed connected	Check cable connection, resume to work when go back to normal
Bus software soft fault	Inverter Damage	1. Occasional failures can be automatic recovery.
		2.The Inverter cannot be automatic recovery，shut down and turn on when the power grid is normal. If it still can't be autorecover. Please
		contact the distributor
Bus hardware fault	Inverter Damage	1. Occasional failures can be automatic recovery.
		2. The Inverter cannot be automatic recovery, shut down and turn on when the power grid is normal. If it still can't be autorecover, please
		contact the distributor.
DC Bus Capacitor Under voltage	Inverter Damage	1. Occasional failures can be automatic recovery.
		2. The Inverter cannot be automatic recovery, shut down and turn on when the power grid is normal. If it still can't be automatic recovery,
		please contact the service.
DC Bus Capacitor Over voltage	Inverter Damage	1. Occasional failures can be automatic recovery.
		2.The Inverter cannot be automatic recovery，shut down and turn on when the power grid is normal. If it still can't be autorecover, please
		contact the service.
DC Bus Voltage Imbalance	The load is a half wave load.	1. Occasional failures can be automatic recovery.
	Inverter Damage	2.Please shut down if the inverter cannot be automatic recovery，make sure the load is not a half wave load, the inverter is still failure,
		please contact the service.
The SOC of the battery is lower than the limit to stop discharging	Low Battery	1.Short time failure is normal, waiting for PV or grid charging
		2. It is recommended to turn off the inverters when there is no PV or power grid for a long time. Turn on when PV or grid is normal.
		3.User Chooses“General Mode”，When the PV power is maximum, it can only be used for load. Batteries can't be recharged. We
		recommend that users reduce load or use "Battery mode".
Battery charge/discharge over current	Inverter Damage	1. Occasional failures can be automatic recovery.
	Load current exceeds the rated range of inverter	2.The Inverter cannot be self-recovery，shut down and turn on when the power grid is normal. If it still can't be automatic recovery,
		please contact the service
		reduce load
The grid side and load side connectors are connected in reverse	Connector Installation Errors on Grid Side and Load Side	Grid side connectors and load side connectors are installed in the correct position
Battery Overvoltage	Battery DC voltage is higher than the upper limit	Check battery configuration, reduce battery open-circuit voltage
Battery Under Voltage (EOD)	Battery DC voltage is lower than lower limit	Check battery configuration, increase battery open-circuit voltage
Positive bus Insulation impedance fault	Insulation impedance is less than limit value	Make sure the insulation impedance of PV module is greater than 33kΩ.
Negative bus Insulation impedance fault	Insulation impedance is less than limit value	Make sure the insulation impedance of PV module is greater than 33kΩ
PV bus software soft start fault	Inverter Damage	1.Occasional failures can be self-recovery
		2.The Inverter cannot be auto-recover，shut down and restart .If it still can't be auto-recover，please contact the service
PV1 bus hardware soft start fault	Inverter Damage	1.Occasional failures can be self-recovery 2.The Inverter cannot be auto-recover，shut down and restart .If it still can't be auto-recover，
		please contact the service.
Relay self checking fault	Internal relay cannot be disconnected or closed	Shut down and restart .If it still can't be auto-recover, please contact the service

Fault phenomenon	Fault cause	Solution
IGBTA/B/C temperature sensor fault	Actual ambient temperature is too low	No operation required. When the temperature rises, it will recover by itself.
	Temperature sensor failure	Shut down and restart .If it still can't be auto-recover，please contact the distributor
IGBTA/B/C temperature too high	There are obstruction or shelter around installation position.	Check if there are any obstruction or shelter around installation position.
	There are heat sources around，cause ambient tempera-	Keep away from heat sources and reduce ambient temperature. If it still can't be recover after temperature is reduce. Shut down and
	ture to be too high	restart .If it still can't be autorecover，please contact the distributo
	Temperature sensor failure	Shut down and restart .If it still can't be automatic recovery, please contact the service

· If the fault persists, contact the manufacturer as soon as possible.

Note: Do not disassemble the product yourself!

· When you need to report a fault to the customer service , record and inform the following information:

a.Model;

b.Serial No.; Date of failure, complete problem description (including LED display, working status before failure, etc.)

Server and contact

Jinko Solar Co., Ltd

No.1, Jinko Road, Shangrao Economic Development Zone Shangrao City,

Jiangxi Province, 334100, P.R. China

www.jinkosolar.com

Appendix A Technical Parameters

Model	**JKS10.2K-5HLVS**	
System Capacity	5kW/10kWh	
PV String Input	Max. DC input power (W)	6000
	Max. DC Input voltage & nominal voltage (V)	580 & 360
	Startup voltage & MPPT voltage range (V)	90 & 125-550
	Number of MPPT	2
	Max.input current per MPPT (A)	13
	Max.input backfeed current to the array(A)	12
	Max.short-circuit current per MPPT (A)	14
Battery Input	Battery type	LFP (LiFePO4)
	Nominal battery voltage (V)	51.2
	Charging Voltage range (V)	44.8-57.6
	Max. charging current & discharging current (A)	70 & 100
	Battery capacity (Ah)	100*2
	Energy capacity (kWh)	10.24
	Usable capacity (kWh)	9.216
AC Grid Input/Output	Nominal AC output power (W)	5000
	Nominal AC voltage & AC grid frequency	230Vac & 50/60Hz±5Hz
	Maximum output fault current a.c. A (peak and duration), or RMS	129Apeak,8.5Arms
	Maximum current (A)	22.8
	Maximum output overcurrent protection(A)	26
	Power factor (cosΦ)	0.8leading-0.8lagging
	Maximum continuous input current (Aa.c)	22.7
	Rated input current (Aa.c)	21.7
	Maximum continuous input power (W)	5000
	Maximum continuous input current (Aa.c)	22.7
	Rated output current (A)	21.7
	inrush current	8.0A peak@100us
	Maximum continuous input power (W)	5000
AC Output (Backup)	Max. output power (W)	4600W(4800W 5min；6000W 5sec)
	Nominal AC voltage & AC grid frequency	230Vac & 50/60Hz±5Hz
	Rated output current (A)	20
	max. continuous (A)	20
	Maximum output fault current a.c. A (peak and duration), or RMS	98Apeak,45Arms
	inrush current	8.0A peak@100us
	Maximum output overcurrent protection(A)	60
Efficiency	Max. PV efficiency	97.8%
	Euro. PV efficiency	97%

Model	JKS10.2K-5HLVS	
Protection	Anti-islanding protection	Yes
	Output over current	Yes
	DC reverse polarity protection	Yes
	String fault detection	Yes
	AC/DC surge protection	DC Type II ; AC Type III
	Insulation detection	Yes
	AC short circuit protection	Yes
General Specifications	Dimensions W x D x H	623*170*1843mm
	Cabinet weight	52kg
	Inverter weight	25kg
	Packs weight	88kg
	Isolation type	Transformerless
	Operating temperature range	-20℃~+55℃
	Noise level	<30dB
	Cooling type	Natural Convection
	Operation altitude	≤2000m
	Operation humidity	0%~95% RH
	Ingress protection class	IP65(Inverter & battery cabinet)
	Communication	RS485/CAN2.0/WIFI
	Display	APP
	Certification & standard	IEC62109 EN61000 IEC 62619 IEC 63056 UN 38.3 NRS 097

JKS10.2K-5HLVS

Jinko Solar