USER MANUAL

On-Grid PV Inverter

SPS3KTL, SPS3.6KTL, SPS4KTL, SPS4.6KTL, SPS5KTL, SPS6KTL

EN

Table of Contents

Important Safety Instructions

Please keep this manual for future reference.

This manual contains instructions on safety, installation, and operation for SPS3-6KTL On-Grid PV Inverter (hereinafter referred to as the "inverter").

1. Explanation of symbols

To ensure the user's personal and property safety while using this product, relevant information is provided in the manual and highlighted with the following symbols. Please read the relevant texts carefully when you encounter the following symbols in the manual.

DANGER

Indicates a high-level hazard that, if not avoided, will result in serious injury or death.

WARNING

Indicates a medium-level hazard that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a low-level hazard that, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates an important reminder during the operation which, if ignored, may result in an equipment error alarm.

Tip	Indicates recommendation for reference.
	Read through the user manual before any operations.

2. Requirements for professional and technical personnel

- Professionally trained.
- Familiar with related safety regulations of the electrical system.

- Read this manual carefully and master the related safety precautions.

3. Operations for professional and technical personnel

- Install the inverter to a specified position.
- Conduct trial operations for the inverter.
- Operate and maintain the inverter.

4. Safety precautions before installation

DANGER

- Keep the inverter out of the reach of children.
- When installing the inverter, end-users must evaluate whether the operation area exists arc danger.

NOTICE

- After receiving the inverter, please check if there is any damage during transportation. If you find any problem, please contact the transportation company, our local distributor or our company in time.
- When installing or moving the inverter, follow the instructions in the manual.

5. Safety precautions for mechanical installation

DANGER

- Before installation, ensure the inverter has no electrical connection.
- Avoid direct sunlight. When the photovoltaic array is exposed to light, it supplies a DC voltage to the PCE.

NOTICE

- Ensure enough heat dissipation space for installing the inverter. Do not place flammable or explosive objects around the inverter, or install the inverter on the heat-intolerant buildings.
- The inverter must be placed horizontally on the level floor.

6. Safety precautions for electrical connection

DANGER

Electric shock hazard! High voltage at Utility input and AC output terminals. Do not touch wire connections.

WARNING

Check whether wiring is tight to avoid the danger of heat accumulation caused by loose connection.

NOTICE

The inverter shell should be connected to the ground, and the cross-sectional area of the wire connecting the ground terminal to the earth should not be less than 4mm^2.

7. Safety precautions for inverter operation

WARNING

- The inverter generates much heat during operation with a high cabinet temperature. Do not touch the unit and keep it far away from the materials and devices that are sensitive to high temperature.
- When the inverter is working, do not open its shell for any operation.
- When troubleshooting faults that affect the safety performance of the inverter or disconnecting DC input, turn off the power switch of the inverter and wait until the LCD screen is completely off.

8. Dangerous operations causing an electric arc, fire, or explosion

- Touch the uninsulated ends of potentially live cables;
- Touch the live wiring copper busbars, terminals, or internal components of the inverter;
- Loose connection of power cables;
- Accidental dropping of screws or other components inside the inverter;
- Improper operations by untrained non-professional or technical personnel.

DANGER

Once an accident occurs, it must be handled by professionals. Improper operation would cause a more serious accident.

9. Safety precautions for stopping the inverter

- Disconnect the circuit breakers of PV input and AC output first, and then turn off the DC switch on the inverter.
- After the input and output wires are disconnected for ten minutes, the internal conductive modules can be touched.
- The inverter does not contain repair parts internally. If any maintenance service is required, please get in touch with our after-sales service personnel.

DANGER

Do not touch or open the shell after the inverter is powered off within ten minutes.

10. Safety precautions for inverter maintenance

- It is recommended to test the inverter with testing equipment to ensure there is no voltage or current.
- When conducting the electrical connection and maintenance, post a temporary warning sign or put up barriers to prevent unrelated personnel from entering the electrical connection or maintenance area.
- Improper maintenance of the inverter may cause injury to personnel or damage to the equipment.
- It is recommended to wear an antistatic wrist strap or avoid unnecessary contact with the circuit board.

CAUTION

The safety mark, warning label and rating plate on the inverter should be clearly visible, not removed or covered.

Disclaimers

The warranty does not apply to the following conditions:

- Damage caused by improper use or inappropriate environment (Do not place flammable or explosive objects around the inverter, or install the inverter on the heat-intolerant buildings or under the direct sunlight).
- The actual current/voltage/power exceeds the limit value of the inverter.
- Damage caused by working temperature exceeding the rated range.
- Electric arc, fire, explosion and other accidents caused by failure to follow the inverter stickers or manual instructions.
- Unauthorized disassembly and maintenance of the inverter.
- Damage caused by force majeure.
- Damage occurred during transportation or loading/unloading the inverter.

1 General Information

1.1 Overview

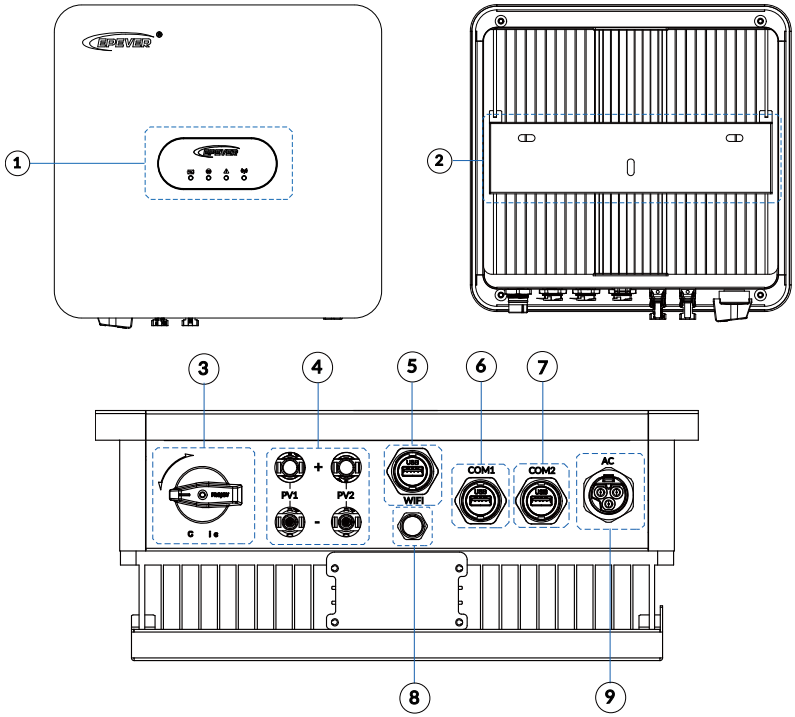
SPS3-6KTL series is an on-grid photovoltaic (PV) inverter designed to convert direct current (DC) generated by the PV array into alternating current (AC) and feed power back to grid. The PV input adopts an advanced maximum power point tracking (MPPT) control algorithm, which can track the maximum power point of the PV array in real time. Meanwhile, the inverter output can meet the grid requirements in different regions and directly realizes the on-grid PV power feeding. It features a built-in AC output relay that automatically disconnects from the grid in the event of a fault in the inverter or the grid, thereby ensuring system safety.

In terms of hardware configuration, the SPS3-6KTL series selects key components of high power density and long service life, providing continuous, full and stable power output. Moreover, it includes user-friendly app interfaces that allow users to monitor and control the inverter's operating parameters in real-time. Additionally, its electromagnetic compatibility (EMC) characteristics make it suitable for applications with high power quality requirements.

Features

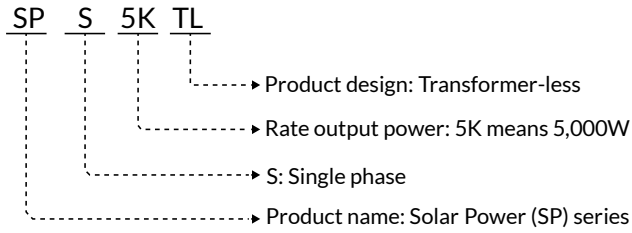
- Fully digital voltage and current dual-loop control with fast response speed and high stability
- Excellent EMC characteristics, suitable for applications with high power quality requirements
- Selecting components of high power density and long service life to ensure the stability
- Support multiple PV inputs to improve PV utilization
- Equipped with circuit breakers at the PV input terminal to ensure the safe operating of the equipment
- Maximum DC input voltage of 600VDC, string maximum input current of 16A
- 110% long term overload
- Equipped with relays at the AC output terminal to disconnect from the grid when in failure
- USB communication port with optional GPRS and WiFi modules to realize remote monitoring
- Full failure detection and protection functions to ensure the reliable and stable operation
- High protection level of IP65, suitable for harsh outdoor environments
- Working temperature ranging from -25℃ to 60℃ to offer a wider scope of application
- Natural convection heat dissipation

1.2 Appearance

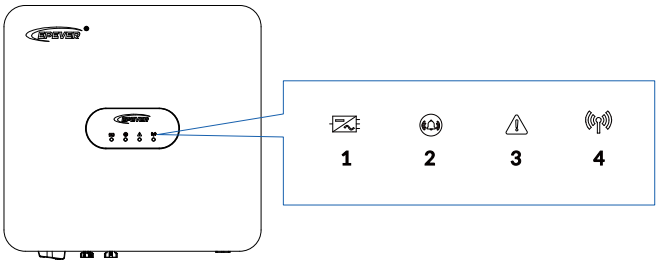


No.	Description	No.	Description
1	Indicators	6	COM1 (CT/METER) port
2	Wall mounting bracket	7	COM2 (DRMS) port
3	DC switch	8	Air valve
4	PV input port	9	AC output port
5	USB communication port (Local com port)		

1.3 Naming rules

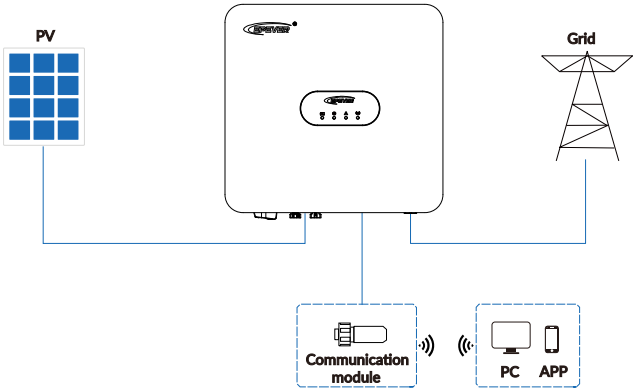


1.4 Indicator

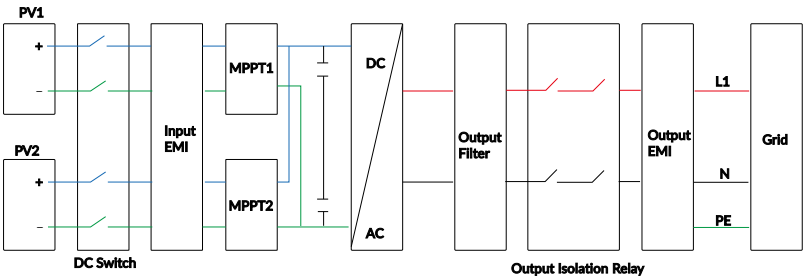


No.	Indicator	Status	Description
1	Power/Operating	Solid green	Grid-connected power generation
		Flashing green for 0.5s	Grid-connected power generation is stopped, indicating the system should be powered on.
2	Alarm	Flashing yellow for 0.5s	System alarm
		OFF	Alarm is cleared.
3	Fault	Solid red	System fault
		OFF	Fault is cleared.
4	Communication	Solid green	Normal external communication
		OFF	Interrupted external communication
		Flashing green for 0.5s	Program upgrade

1.5 System wiring diagram



1.6 Electrical block diagram



2 Installation

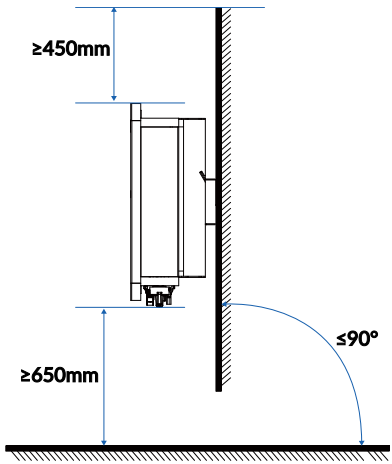
2.1 Precautions

Prohibited installation environments

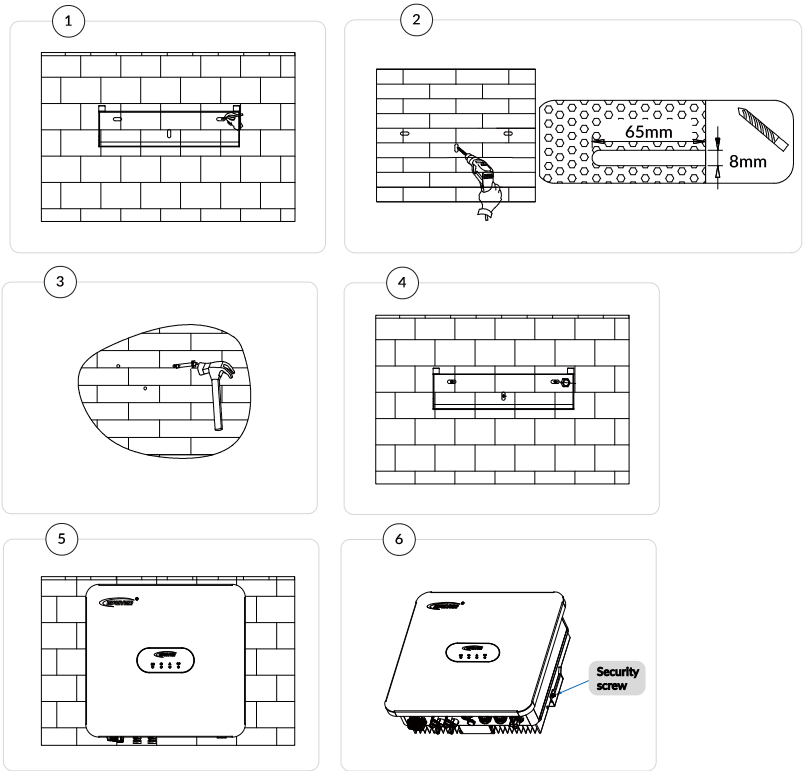
1. Do not install the inverter in the flammable, explosive, dust accumulative or other harsh environments.
2. Do not install the inverter on a hollow brick wall.
3. Do not place the inverter close to flammable materials or gases.

Recommended installation environments

1. When wall-mounted, it is recommended to fix the inverter on concrete and solid brick walls.
2. When installing the inverter, please leave enough space around it for heat dissipation, the distance below, on the left, and on the right is not less than 650mm, and the upper clearance is not less than 450mm.
3. The inclination angle between the inverter and the horizontal ground is less than or equal to 90 degrees.
4. When drilling holes in the wall, avoid plumbing pipelines and electrical wiring.



2.2 Installation steps



Operation steps:

Step 1: Mark the installed position with the mounting plate.

Step 2: Drill holes (hole size: 65mm × 8mm) at the marked positions。

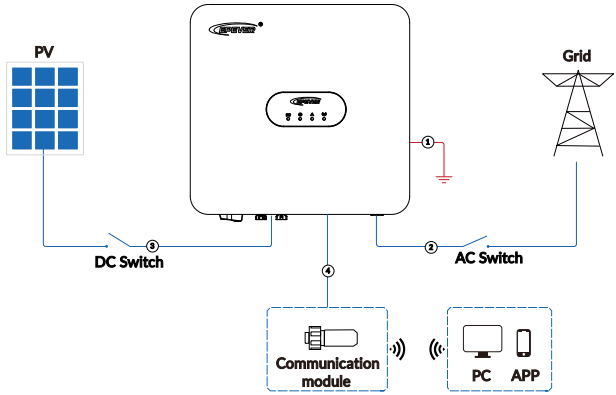
Step 3: Insert the expansion bolts into the holes.

Step 4: Fix the mounting plate with screws.

Step 5: Fix the inverter to the mounting plate.

Step 6: Tighten the inverter with the included security screws.

3 Electrical Connection

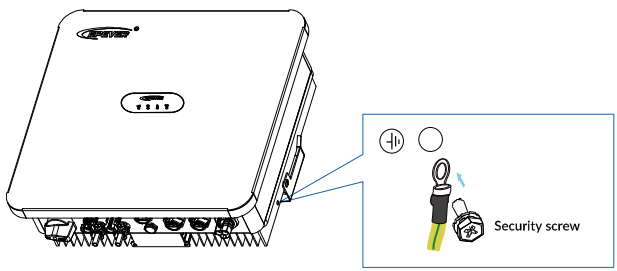


- Disconnect all the AC and DC switches before wiring.
- Follow the wiring sequence of "1. Grounding > 2. AC wiring > 3. PV wiring > 4. Communication modules."

3.1 Cable connection

3.1.1 Connect the ground protection cable

In the PV power generation system, all non-current-carrying metal components (e.g. brackets, shells of combiner box/distribution cabinet/inverter etc.) should be connected to the ground. It is recommended to use a yellow-green grounding cable with a cross-sectional area of not less than 4 mm^2 to ensure the reliable and safe grounding connection.



NOTICE

- The inverter is designed without a transformer. In this case, both the positive and negative terminals of the PV array on the inverter cannot be grounded; otherwise, the inverter failure will occur.
- The ground terminal on the side of the inverter must be grounded correctly.

3.1.2 Connect AC output cable

Connect the inverter with AC distribution cabinet or grid by AC output cable; the AC output cable connection must comply with the of the local grid service provider. Recommended specifications for AC output cable and Earth-Leakage Circuit Breaker(ELCB) are as follows:

Model	Cross-sectional area (mm^2)	ELCB
SPT3KTL	4–8	32A/230V/2P, leakage protection, 0.1A
SPT3.6KTL		
SPT4KTL		
SPT4.6KTL		
SPT5KTL	6-10	40A/230V/2P, leakage protection, 0.1A
SPT6KTL		50A/230V/2P, leakage protection, 0.1A

NOTICE

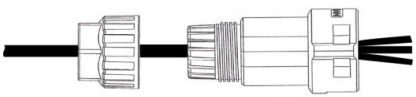
- It is prohibited for multiple inverters to share the same circuit breaker.
- It is prohibited to connect the load between the inverter and the circuit breaker.

AC output cable connection steps are as follows:

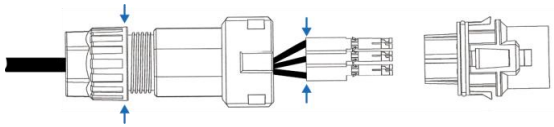
Step 1: Prepare the AC output cable, and the cable length is determined according to the actual situation.

Step 2: Strip the insulation of one end of the AC cable by 8mm to 10mm.

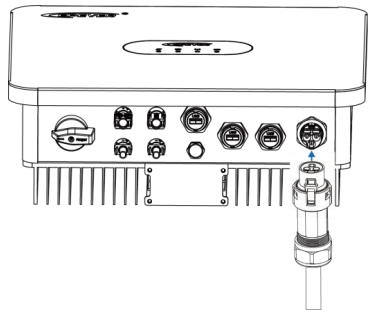
Step 3: Pass the AC cable through the sleeve.



Step 4: Tighten the sleeve, and connect and fix the L, N, and PE wires to the corresponding terminals respectively.



Step 5: Insert the cable into the AC port.



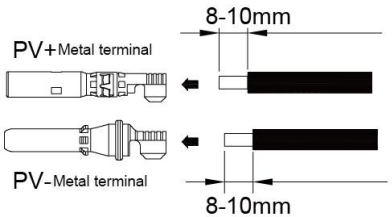
3.1.3 Connect PV cable

The recommended specifications of DC input cable: copper core cross-sectional area: 2.5–6mm^2, maximum withstand voltage: 600VDC. **Connecting steps are as follows:**

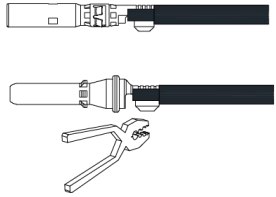
Step 1: Prepare PV input cable, the cable length and quantity are subject to actual situation.

Step 2: Remove the insulation layer of 8–10mm at one end of the PV input cable.

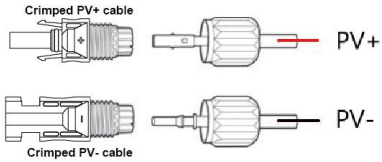
Step 3: Install the bare cable end to the metal PV positive/negative terminals respectively as illustrated below.



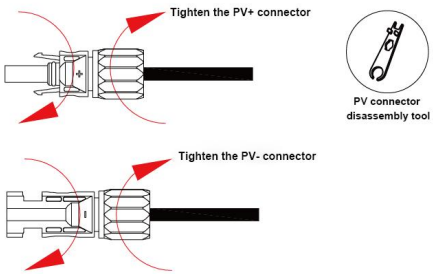
Step 4: Crimp the PV input cable with the metal terminals tightly with crimping pliers.



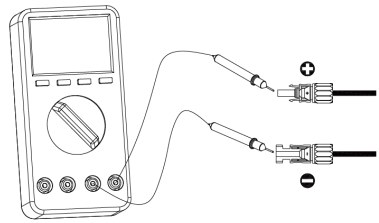
Step 5: Thread the crimped PV positive and negative cables through the locking nut and insert them into the corresponding plastic housings until you hear a "click" sound, which indicates that the metal cores have been snapped into place. Be careful to distinguish the positive and negative terminals.



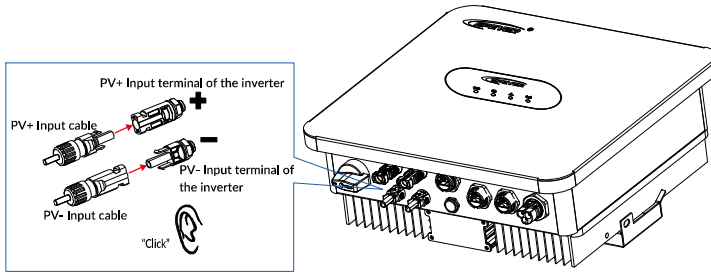
Step 6: Use the PV connector disassembly tool (optional accessory) to lock the nut tightly, and pull the PV cables gently to ensure the terminal is not wobbly or disconnected.



Step 7: Please use a multimeter to check the open-circuit voltage between the PV+ and PV- terminals to ensure the PV cable polarities are correct and the open-circuit voltage is less than or equal to 600VDC.



Step 8: Connect the PV input cable to the inverter terminal.



NOTICE

- Before installing the PV input terminals, ensure that the PV input voltage and current do not exceed the inverter limits.
- When installing the PV input terminals, pay attention to the positive and negative terminals.
- When the terminals are connected, you can hear the "click" sound, After terminals connection is completed, pull the PV cables gently to ensure the terminal is not wobbly or disconnected.

3.2 Communication connection

Remote monitoring can be realized on the APP by connecting the WiFi modules with the USB communication port; or the remote data collection can be realized by connecting the GPRS modules, which can also be used for inverter upgrades and data monitoring.

3.2.1 WiFi port

The position and pins of the WiFi communication port are as follows:

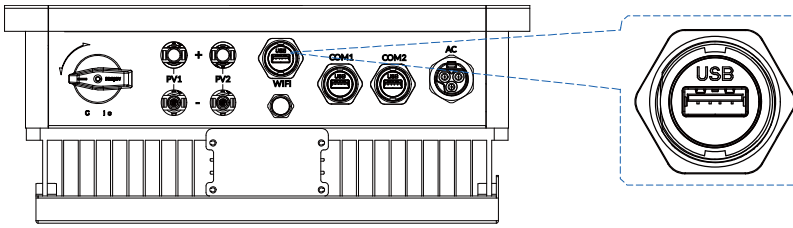
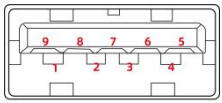


Figure	PIN	USB-A 3.0	Description
	1	+5V	+5V
	2	Idle	-
	3	Idle	
	4	GND	Power GND
	5	RS485-A	RS485 communication
	6	RS485-B	
	7	Idle	
	8	Idle	
	9	Idle	

3.2.2 COM1 (CT/METER) port

The position and pins of the COM1 (CT/METER) communication port are as follows:

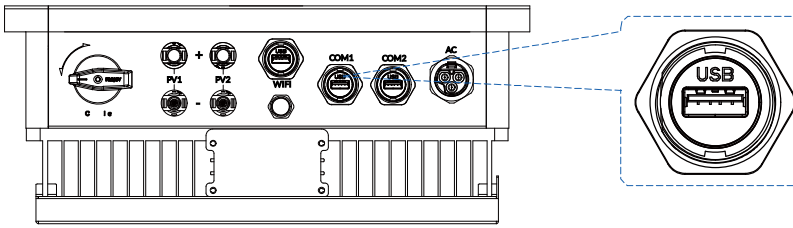
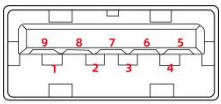
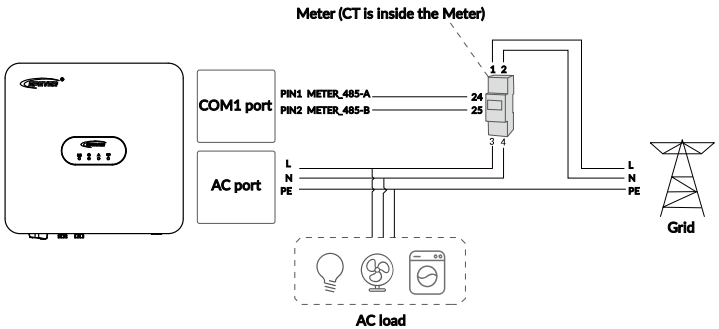
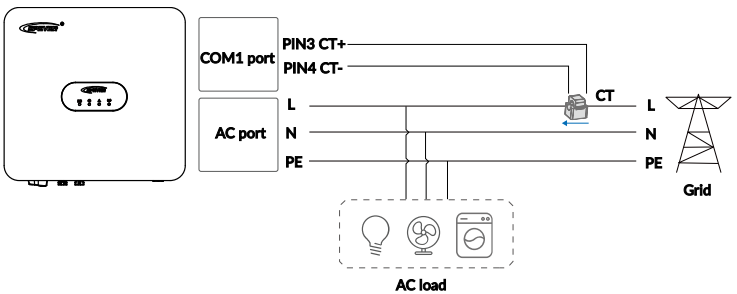


Figure	PIN	USB-A 3.0	Description
	1	METER_485-A	Meter 485 communication
	2	METER_485-B	
	3	CT+	Connect the current sensor
	4	CT-	
	5	Idle	-
	6	Idle	-
	7	Idle	-
	8	Idle	-
	9	Idle	-

The system schematic when connecting the Meter is as follows:



The system schematic when connecting the CT is as follows:



3.2.3 COM2 (RDMS) port

The position and pins of the COM2 (RDMS) communication port are as follows:

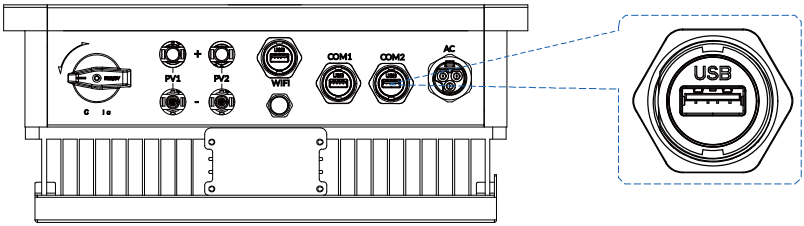
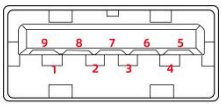


Figure	PIN	USB-A 3.0	Description
	1	+5V	+5V
	2	GND	Power GND
	3	DRM0	Connect the current sensor
	4	DRM1/5	DRMS logical interface
	5	DRM2/6	
	6	DRM3/7	
	7	DRM4/8	
	8	Idle	-
	9	Idle	-

4 APP Remote Monitoring

After adding the SPS3-6KTL series to the cloud platform through APP or WEB, users can remotely monitor and set parameters for the on-site equipment by APP. The following is an example of connecting SPS3-6KTL series inverter to WiFi module and remote monitoring by APP.

4.1 Download APP

iOS

Search for “Solar Guardian” in the App Store

Apple App Store

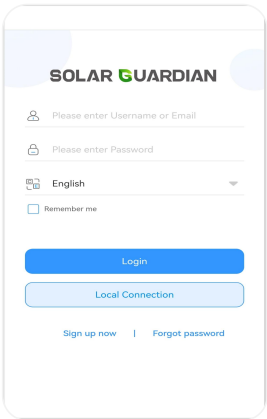
Android

应用宝

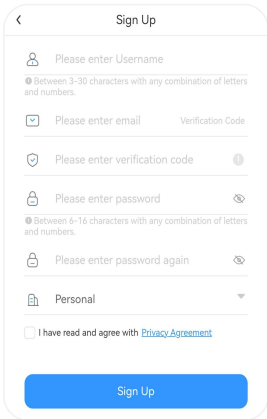
4.2 Sign up & Log in

4.2.1 Sign up

End users can register a new account for free on the cell phone.

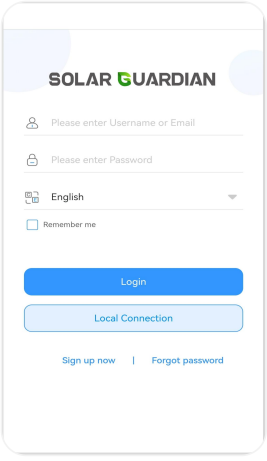


1. Click “Sign up now” on the initial interface of the APP.

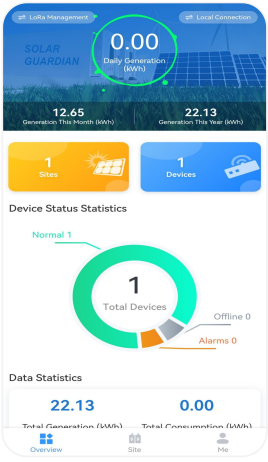


2. Enter your username, email address or mobile phone number, verification code, password and reconfirm password; check and agree to the privacy policy; click "Sign Up" to complete the registration of the new account.

4.2.2 Log in



1. Open the APP, enter your account name and password; select the language, check "Remember me" (so that you can log in quickly next time), and click "Login" to enter the APP main interface.

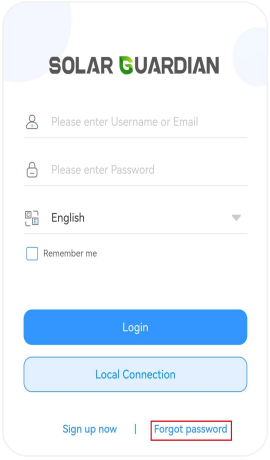


2. The main interface of the APP includes "Overview, Site, Me".

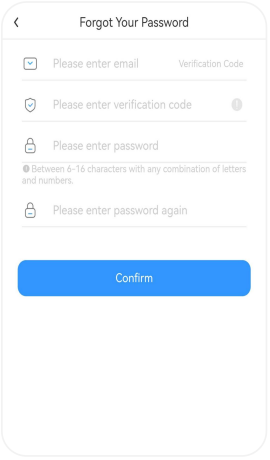
Note: The App data and the WEB data are synchronized in real time, and the operations performed through the APP will also be synchronized to the WEB.

4.2.3 Reset password

If you forget your login password for your account, you can reset your password by the following steps.



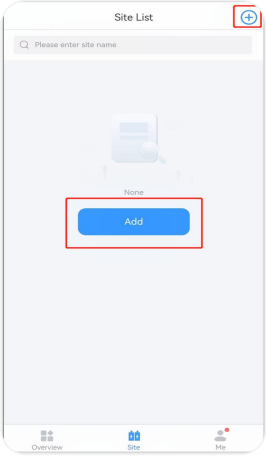
1. Click “Forgot password” on the initial login interface.



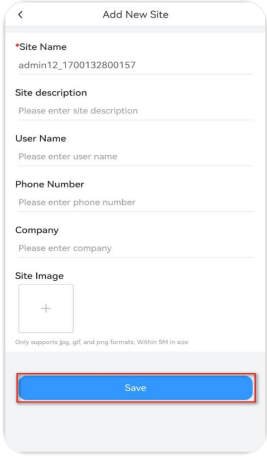
2. Enter the new password, mobile phone number or email address, click "Verification Code", then enter the verification code received in your phone or email , click "Confirm ", and the new password is set successfully.

4.3 One Click Add gateways and devices

The gateways and devices should be correctly connected and powered on before adding them by the “One Click Add” on the App (The following is an example of adding WiFi module).

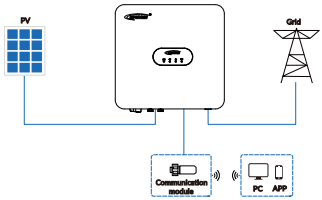


1. After logging in, enter “Site” interface, click “Add” or ⊕ icon to enter “Add New Site” interface.

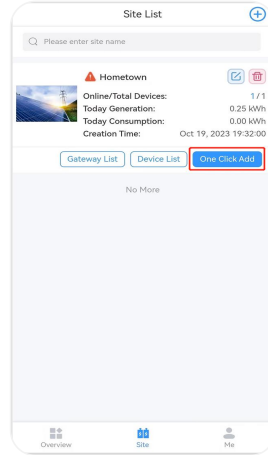


2. Fill in the “Site Name” (or use the default site name of the App) and click "Save" to complete the creation of the site after filling in the remaining site information (optional).

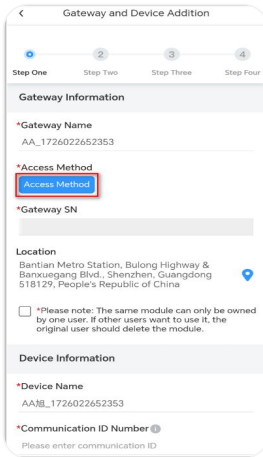
Tip	Items marked with * are required. Items not marked with * are optional and can be left blank. If the user does not upload power station pictures, the default pictures will be displayed.



3. Connect the WiFi module to the USB communication port on the inverter (the USB-A 3.0 WiFi module can connect with the inverter directly, for other communication modules, please purchase the appropriate communication cables according to the communication port type).



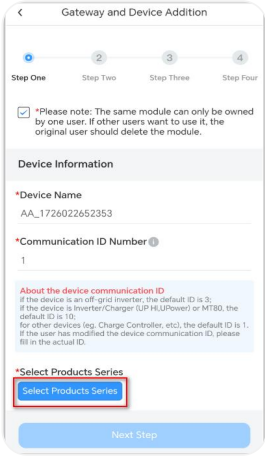
4. Click “One Click Add” in the site interface to add gateways and devices under this site.

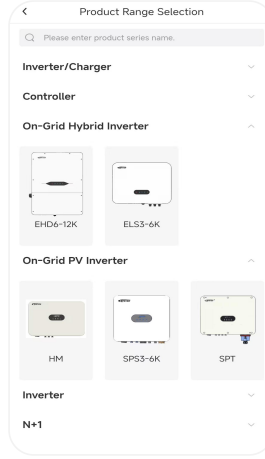


5. Enter “Gateway and Device Addition” interface, fill in the “Gateway Name” (or use default name of the App), click “Access Method” to enter “Internet Gateway Select” interface.

6. Select “EPEVER WiFi 2.4G USB3.0 D”, it will automatically return to the “Gateway and Device Addition” interface in Step 5. Scan the QR code(1) on the gateway label or manually enter the 22-digit gateway SN; Select the “Location” (optional), check the information prompt.

(1) If the “Gateway SN” is entered by scanning the QR code, please allow the App to access camera on your phone to scan the QR code on the gateway. The system will verify the gateway SN automatically and only the gateway that have been added to the production management system can be added to the cloud platform successfully. If you are prompted with "Gateway already exists", please contact technical support for assistance.

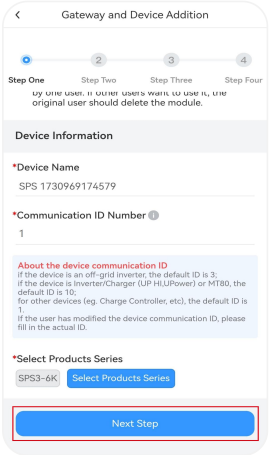




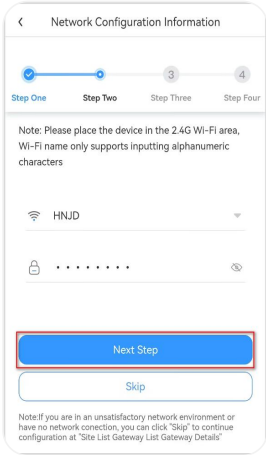
7. On the “Gateway and Device Addition” interface, fill in the “Device Name” (or use default name of the App) and “Communication ID Number”(2), click “Select Products Series” to enter the device selection interface.

8. Select the current connected device, it will automatically return to the “Gateway and Device Addition” interface in Step 7. If the "Next" button is grayed out and cannot be clicked. Please check whether the information filled in is correct or whether the required fields are completed.

(2) For device communication ID, the default ID is 3 for inverter, 10 for UP-HI or UPower, 1 for other devices. Please fill in the actual ID value if you have modified the device communication ID.



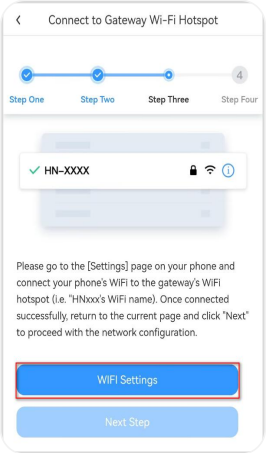
9. When you have filled all the information, click “Next” to finish adding the gateway and devices, and enter the “Network Configuration Information” interface.



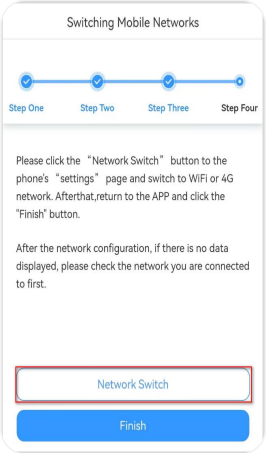
10. Enter your local WiFi account and password and click "Next".

Note:

- If you are using an Android phone, click the WiFi icon to display the WiFi searched by the phone. If you are using an iPhone, you need to enter the WiFi name manually.
- If you need to check or verify if the WiFi password is correct, click to enter the password in plain text.
- If the WiFi signal is weak or there is no network, you can click "Skip" to complete the network configuration in the gateway details later. Please refer to Section 4.4 Gateway details for more details. If the network configuration of the WiFi module has not completed and cannot establish a connection with the cloud platform, the WiFi module will not be able to go online.



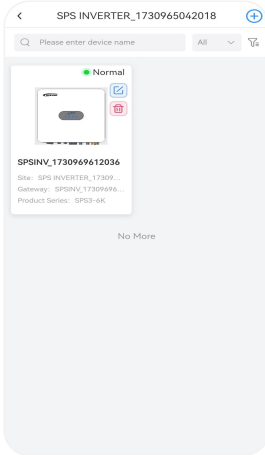
11. Click "WiFi Settings" to connect your phone to the gateway WiFi (Name: HN_EPxxx, password: 12345678), return to the App when connection is successful. Click "Next Step" for network connection.



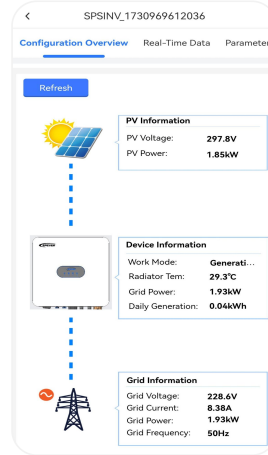
12. Click "Network Switch" to return to the "Settings" interface of your phone, switch the phone to a WiFi network or 4G network that can access the Internet, and then click "Finish" to enter the device list.

Note:

- Ensure the GPS is turned on and the APP is allowed to access the location in the phone, otherwise the phone cannot search for the hotspot of the WiFi module.
- The hotspot network name of EPEVER WIFI RJ45 A/B/C is HN_xxxxxx, and the hotspot network name of EPEVER WIFI RJ45 D is HN_EPxxxxxx. When connecting to the hotspot of the WiFi module for the first time, the default password is 12345678.
- The WiFi hotspot network does not have access to the Internet. When the phone asks whether to allow or trust the network, please allow or trust it. Otherwise, the connection to the WiFi hotspot will fail and you will be unable to proceed to the next step.

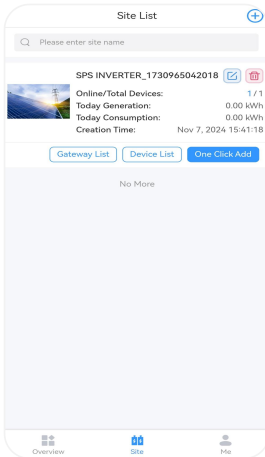


13. When it is added, it will automatically switch to the “Device List”, click the device to view its real-time data.

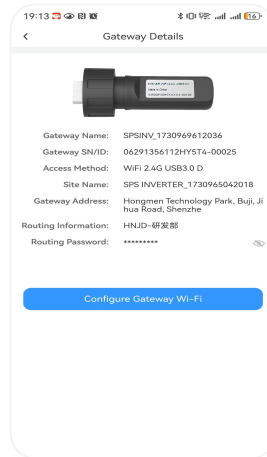


14. Enter the device interface to view the real-time device data. The default interface is “ Configuration Overview”.

4.4 Gateway details



1. Enter the "Site List" interface and click on the "Gateway List" of a certain power station.



2. Enter the “Gateway List” interface, click the gateway that you want to view.

3. Enter the "Gateway Details" interface to view the related gateway information. After the network configuration of the WiFi module is completed, the WiFi name and password of the router are displayed. Click the icon to switch to displaying the password in plain text to verify the correctness. Click "Configure Gateway WiFi" to enter the network configuration process, the network configuration of the WiFi module is completed or corrected.

4.5 Commissioning

4.5.1 Check before powering on

- Whether the inverter is installed correctly and securely;
- Whether L (live wire), N (neutral wire) and PE (ground wire) wires of the AC grid are connected properly;
- Whether PV input polarities are correct;
- Whether the communication module or WiFi module is connected correctly and securely;
- Whether the "DC SWITCH" and all switches connected to the inverter are "OFF".

4.5.2 Inverter operating

NOTICE

Before powering on the inverter, please check whether the DC terminal voltage and AC terminal voltage are within the specified range of the inverter.

Operating steps are as below:

Step 1: Connect the DC switch between the PV module and the inverter.

Step 2: Connect the switch between the AC grid and the inverter.

Step 3: Turn the "DC SWITCH" of the inverter to "ON".

Step 4: Check the operating status of the inverter by its LED indicators (refer to Section 1. 4 Indicator in the manual).

5 Troubleshooting and Maintenance

5.1 Faults

No.	Faults	Causes and measures
1	Inverter Over Temperature	Check if the ambient temperature in the inverter installation position exceeds the maximum ambient temperature. If it exceeds the maximum ambient temperature, please improve the ambient ventilation and heat dissipation;
2	Boost Over Temperature	
3	DC Bus Overvoltage	It is the internal fault of the inverter. Please disconnect the DC switch of the inverter, wait for 5 minutes, then connect the DC switch again, and check whether the fault has been cleared after restarting the inverter; if it is still not cleared, please contact the manufacturer.
4	DC Component Fault	
5	DC Bus Undervoltage	
6	Relays Fault	
7	Hardware DC Bus Overvoltage	
8	Inverter Hardware Overcurrent	
9	COM Error (DSP with ARM)	
10	Grid Overvoltage Fault	If it occurs occasionally, it might be a temporary grid abnormality, the inverter will resume normal operation after detecting a normal power grid without manual intervention. If it occurs frequently, please check the grid voltage and frequency are within the specified range of the inverter. If not, please contact the manufacturer; if yes, please check if the connection between the AC circuit breaker and output cable is normal. If the grid voltage and frequency are within the specified range of the inverter, and the AC wiring is correct, the alarms still occurs frequently, please contact the manufacturer to modify the grid undervoltage and overvoltage protection value of the
11	Grid Undervoltage Fault	
12	Grid Overfrequency Fault	
13	Grid Underfrequency Fault	

		inverter after getting the approval from the local grid service provider.
14	Inverter Software Overcurrent	It is the internal fault of the inverter. Please disconnect the DC switch of the inverter, wait for 5 minutes, then connect the DC switch again, and check whether the fault has been cleared after restarting the inverter; if it is still not cleared, please contact the manufacturer.
15	Param Config Failure	
16	Islanding Fault	
17	Inverter Overvoltage Fault	
18	Leakage Current Fault	If it occurs occasionally, it may be caused by an accidental abnormality of the external circuit, the inverter will resume normal operation after the fault is cleared, without manual intervention. If it occurs frequently or the inverter cannot resume normal operation for a long time, please check whether the ground impedance of the PV string is too low and whether the insulation of the PV cable is damaged.
19	Leakage Current Sensor Fault	It is the internal fault of the inverter. Please disconnect the DC switch of the inverter, wait for 5 minutes, then connect the DC switch again, and check whether the fault has been cleared after restarting the inverter; if it is still not cleared, please contact the manufacturer.
20	Leakage Current Consistency Error	
21	Voltage Consistency Error	
22	Insulation Resistance Low	Please check whether the ground impedance of the PV string is too low and whether the insulation of the PV cable is damaged. If it is still not cleared, please contact the manufacturer.
23	Grounding Warning	
24	PV1 Overvoltage	The PV array is misconfigured, with too many strings connected in series, and the open-circuit voltage is higher than the maximum operating voltage of the equipment.
25	PV2 Overvoltage	
28	AFCI Error	Please check whether there is arcing or poor contact in the PV string wiring.
31	PV1 Overcurrent	It is the internal fault of the inverter. Please disconnect

32	PV2 Overcurrent	the DC switch of the inverter, wait for 5 minutes, then connect the DC switch again, and check whether the fault has been cleared after restarting the inverter; if it is still not cleared, please contact the manufacturer.

5.2 Alarms

No.	Alarms	Causes and measures
1	PV1 Short Circuit	Please power off the equipment completely first before conducting the following operations: Check whether the PV polarities are short circuited or connected in reverse, if yes, correct the PV polarities connection.
2	PV2 Short Circuit	
3	PV1 Reverse Connected	Please power off the equipment completely first before conducting the following operations: Check whether the PV polarities are connected in reverse, if yes, correct the PV polarities connection.
4	PV2 Reverse Connected	
5	User Shutdown	-
6	Device Locking	-
8	Boost NTC Open Circuit	-
9	Inverter NTC Open Circuit	-

5.3 Routine maintenance

To maintain long-term working performance, it is recommended to have the following items inspected once half a year.

- Make sure the airflow around the inverter is not blocked, and remove dirt or debris from the fan.
- Check for damage to exposed wires caused by sun exposure, friction with surrounding objects, dry rot, or insect and rodent activity. Repair or replace damaged wires as necessary.
- Verify whether the indicator and display are consistent with the actual operation of the equipment, and note that corrective action should be taken in case of inconsistency or error.
- Check for signs of corrosion, insulation damage, high temperature or burning/discoloration on the terminal screws. Tighten the terminal screws.
- Check for signs of dirt, insect nesting and corrosion, and clean up as required.
- Check and confirm that the lightning arrester is in good condition. Replace a new one in time to avoid damaging the inverter and even other equipment.

⚠ DANGER

Electric shock hazard! Make sure that the power supply of the inverter is disconnected when performing the above operations, and wait for 10 minutes for the power in the capacitor to be discharged before performing the corresponding checks or operations.

6 Technical Specifications

Model	SPS3KTL	SPS3.6KTL	SPS4KTL	SPS4.6KTL	SPS5KTL	SPS6KTL
PV Input						
Maximum Input Power	4,500W	5,400W	6,000W	7,500W	7,500W	9,000W
Maximum Open-circuit Voltage	600VDC					
Starting Voltage	90V					
Rated Input Voltage	360V					
MPPT Voltage Range	70-550V					
Number of MPPTs	1		2			
Number of Strings per MPPT	1					
Maximum Input Current	16A					
Maximum Short Circuit Current	20A					
AC Output						
Rated Output Power	3,000W	3,600W	4,000W	4,600W	5,000W	6,000W
Maximum Output Power	3,300W	3,960W	4,400W	4,600W	5,500W	6,000W
Rated Output Current	13.1A	15.7A	17.4A	20.0A	21.7A	26.1A
Maximum Output Current	14.4A	17.3A	19.1A	22.0A	24.0A	28.6A
Rated Voltage	230VAC					
Voltage Range	161 – 276VAC					

Rated Grid Frequency	50Hz/60Hz	
THDi (Total Harmonic Current Distortion)	< 3%	
Load Power Factor	1 (± 0.8)	
Efficiency		
Maximum Efficiency	97.90%	
EU Efficiency	97.00%	97.10%
Protections		
PV Reverse Polarity	YES	
PV Insulation Resistance	YES	
PV String Current Monitoring	YES	
Anti-islanding Function	YES	
AC Output Overvoltage	YES	
AC Output Overcurrent	YES	
AC Output Short Circuit	YES	
DC Switch	YES	
SPD Protections	YES	
Grid Monitoring	YES	
AFCI	Optional	
General Info		

Dimensions	369mm × 389mm × 140mm	
Net Weight	11.5kg	12kg
Nighttime Self-consumption	< 1W	
Topology	Transformer-less	
Ingress Protection	IP65	
Operating Temperature Range	-25℃ to 60℃	
Relative Humidity	0 – 100%	
Cooling Method	Natural	
Maximum Altitude	3,000m (> 2,000m derating)	
Display	LED + LCD (Optional)	
PV Input	MC4 (4mm^2–6mm^2)	
AC Output	Plug-and-Play Connectors (Up to 6mm^2)	

Any changes without prior notice! Version number: V1.0

HUIZHOU EPEVER TECHNOLOGY CO., LTD.

+86 - 752-3889706

info@epever.com

www.epever.com