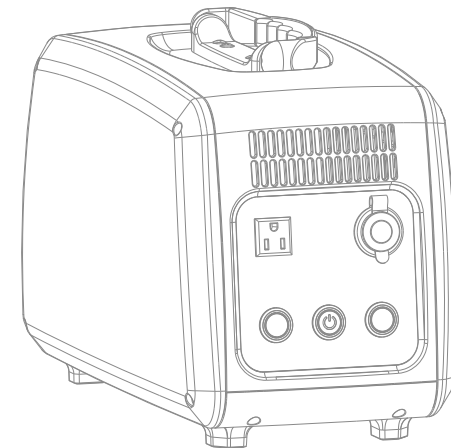


***POWER*OAK**

Portable Power Station

Operating Manual

***POWER*OAK**



Many thanks for buying ***POWER*OAK** Portable Power Station. In order to use this product safely, please read this manual carefully; and please safekeep this manual (including letter of guarantee) so that you can read it any time you need. Please refer and keep the additional detail file together with this manual if it's offered.

Note:

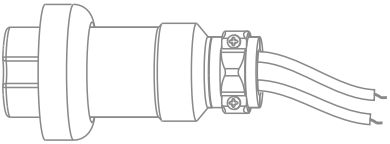
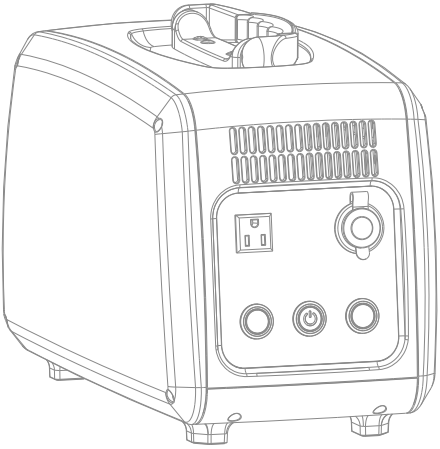
Disobeying safety considerations may cause human injury such as fire hazard or electric shock, etc.

Contents

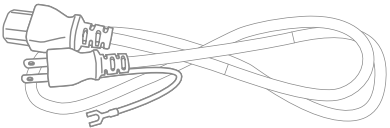
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Attachment: Product Guarantee

1.The confirmation of products and accessories



Solar Input Plug × 1



AC input Plug × 1

Product specifications
and guarantee

× 1

2. Preface

Please pay attention to the following content when reading the operating instruction.

- Whether the content of the product manual content is changed without information.
- In the case that appearance and specifications of some products have changed, whether the reason of the change informed or not.
- We have tried our best to make this manual. Please contact us if any unclear elaboration, mistake, and omission found.
- Except for personal use, this manual is not allowed to copy and reprint.




Disclaimer (For guarantee content please refer to letter of guarantee)

- Our company is not liable for the damage caused by fires, earthquakes, thirdparty's use, or other accidents, customer's willful misconduct, misuse, and other abnormal conditions.
- Please do not repair the connector failure when using the product.
- Letter of guarantee covered all the guarantee content, matters excluded of the guarantee is beyond our scope of responsibility.
- Our company refuses to take responsibility for damages caused by operation that disobey our operation manual.
- Our product is not suitable for equipment that concerns personal safety such as medical equipment, Atomic energy equipment, Aerospace equipment, etc, neither is it suitable equipment that highly dependent on electricity. We refuse to take responsibility for personal safety accidents, fire accidents or machine breakdown that caused by applying our product to the equipment mentioned above.

3. Safety considerations

Please follow the instructions for safely use.

Display description




 Danger indicates that	Incorrect operation will very likely to result in death or serious injury.
 Warning indicates that	Incorrect operation will lead to the possibility of death or serious injury.
 Notice indicates that	Incorrect operation may result in injury or property damage.

Serious injury: refers to blindness, injury, burns, electric shock, fractures, poisoning that may lead to complications, hospitalization or regular treatment.





Harm: refers to injuries, burns, electric shock that does not need hospitalization or regular treatment.

Goods damage: refers to damage to houses, family property, and pet, etc.

Symbol indicator

	Triangular means attention to fire breakout, fracture, and high temperature, etc. The picture describes the specific attention content.
	Means the behavior is prohibited during the operation of the product. The specific prohibited behavior is illustrated or described in the picture.
	Circle means the behavior that is required during the operation of the product. The specific required behavior is illustrated or described in the picture.

- For safe use of PS10B, we pasted notice label, please use the product with reference to the manual content and label.
- Please do not make the label on the product dirty or drop off.

 Dangerous	
	Do not disassemble, repair and reform this product. It may cause electric shock, fever, fire etc.
	Do not put this product close to fire or in fire and heat it It may cause fire or burn injury.
	Do not charge, use and store this product in the bathhouse, rain or the place with dew. It may cause electric shock, fever, fire etc.

Dangerous



Do not touch this product and connector socket, when your hands are wet
It may cause electric shock.



Do not connect the metal to AC input and AC output
It may cause electric shock, fever, fire etc



Do not wipe when the liquid inside of this product gets into your eyes.
Please rinse and seek medical advice urgently. It may cause blindness.



Do not disposal this product as a normal waste.
It may cause electric shock, fever, fire etc in dumping ground or waste collector.



Do not connect the AC wire in twice. Do not insert the AC wire to the AC input socket
when it already has connected to AC input socket.
It may cause electric shock, fever, fire etc.



Do not connect the output socket to metallic conductor like distribution wire directly
(Output socket is connected to AC socket of machine)
It may cause electric shock, fever, fire etc.



Do not use the un-specified AC connector wire
It may cause electric shock, fever, fire etc.



Do not work this product over the rated specification of connector or machine.
It may cause electric shock, fever, fire etc.



Do not attack this product, such as drop it down and hit it by hammer.
It may cause electric shock, fever, fire and product damaged etc.



Do not store and use this product in the place where easy to fall down (like high shelf)
It may cause electric shock, fever, fire and product damaged etc.



Please do not use it when it is in a suspended state
It may cause electric shock, fever, fire and product damaged etc.



Please do not move the product when it is in charging or using.
When you move it may happen the following appearance fire or electric shock and other injuries or damage the product.

Warning



CAUTION

Please keep the place clean where you use or storage the product.
It may cause short circuit, smoke or fire accident if powdered or small metal object contact the terminal.



ENFORCE

Pls check the products before using
When you found the products have damage, rupture, cracks, fever and other abnormal, stop using it and contact selling shop or our customer service center.



BAN

Pls notice when the AC line is damaged.
Do not move AC line.
Do not unplug the AC line from the input port.
Do not let AC line near to heat sources
Do not stampede and pull the AC line.
These are the reason of AC line damage, fire and heat shock.



ENFORCE

Do not let children use this product.
It may lead to an accident or injury.



BAN

If the plug is loose or deformation pls do not use it,
it may cause shock, over heat and fire.



BAN

Pls do not use it in coastal and dusty places,
it may cause smoke and fire.



BAN

Pls do not use or storage the product in the following place, in a car, trunk, loading
countertop or high temperatures environment,
it may cause the products deterioration and over heat.



ENFORCE

When the liquid inside the product is stained to skin or cloth, please wash and clean with tap water.
It may lead to skin hurt.



NOTE SENSE
OF POWER

When thundering , please pull out the AC cable from the socket.
When thunder ,big current from the socket may cause heating, fire, or other accidents.



BAN

Please do not charge the device beyond AC 100-240V.
It may cause heating, fire, etc.



BAN

When using or storing, please do not put the product up-side-down or sideways.
May cause leak, heating, fire etc accidents.

⚠ Caution



BAN

For unusual conditions such as rusting, rare smell, heating, please stop using the product immediately and contact the agent shop or Customer Service Center of our company.



BAN

This product is very heavy, please mind when operation.
It may cause lumbar pain or hurt.



BAN

Please do not make the label stuck to the product dirty or fall.



ENFORCE

For transportation, the product conforms with all the legal requests about the dangerous goods.

The capacity of the li-polymer batteries inside this product has exceeded 100WH, which is the standard set by the UN, when ship this product by air or vessel, it must be according to IATA standard packaging, instructions, label and fill in the declarations.



ENFORCE

Please make the product stable when ship it by automobile.

It may cause product damage, which may cause electric shock, heating, fire etc. accidents.



ENFORCE

Product must connect to AC ground wire when charging.



BAN

Do not make product wet or AC ground wire wet by water or other liquid.
It may cause short-circuit, heating or fire etc.



ENFORCE

Please charge, use and keep within the temperature environment of 0~40°C.

It will cause low efficiency or heating if product used beyond this temperature range.



ENFORCE

Please stop using the product immediately if it fall off or stroke by mistake in order to prevent accident, please contact the seller or our company customer service center to ask for checking and repairing.



ENFORCE

Please read carefully the instructions of electrical facilities you need to connect to.



ENFORCE

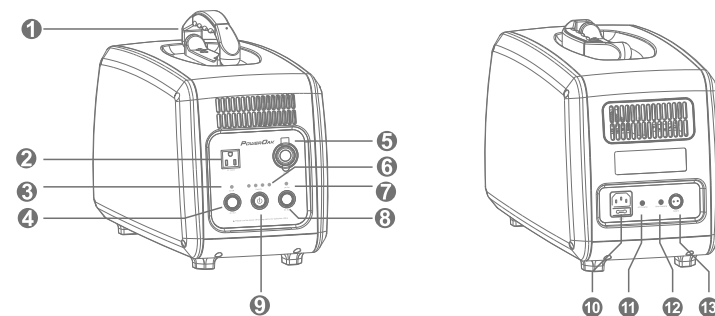
Please ensure that the facility is turned off before connecting.
Sudden start of the facility may lead to accident or injury.



ENFORCE

In case of protection function start and the product stopped, please pluck the electrical appliances plug off the AC output socket. Do turn off the power button when preservation. To prevent unnecessary discharge of the battery, also prevent electric shock and fever, etc.

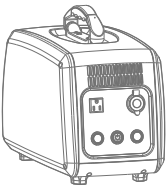
4. The name of the parts



- | | | | |
|---|----------------------|---|----------------------|
| ① | Handle | ⑧ | DC output button |
| ② | AC output socket | ⑨ | Power Button |
| ③ | AC output indicator | ⑩ | AC input socket |
| ④ | AC output button | ⑪ | AC input indicator |
| ⑤ | DC 12V output socket | ⑫ | Solar inputIndicator |
| ⑥ | Capacity Indicator | ⑬ | Solar input Socket |
| ⑦ | DC output indicator | | |

5. Lifting & Handling

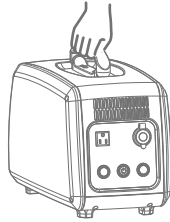
1. Pull The Handle Up



Notice

Keep the product away from anything when moving.

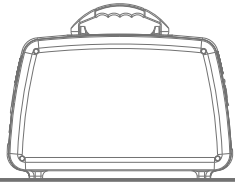
2. Moving by carry handle



Notice

Hold the handle steady.

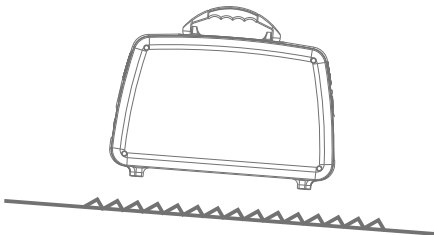
3. Placed at smooth surface



Notice

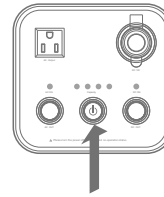
Please put the product at smooth surface.
And indicator be easier to see.

4. Do not placed where unsteady

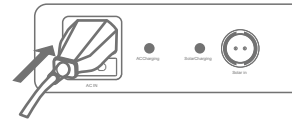


6. AC Charging

1. Press the power button: Power button indicator lights, also the capacity status is shown.



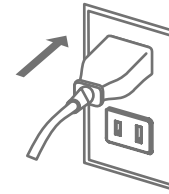
2. Connect AC cable



Notice

Make sure the AC cable plug is inserted into the AC input socket

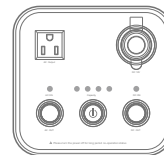
3. Connect AC cable plug with socket: Please make sure AC cable plug is inserted into the 100V socket. Capacity indicator flash every 2 seconds, AC input indicator lights.



Notice

Please charge under the temperature 0~40°C

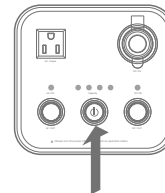
4. After fully charged: 4 green indicators will light.



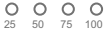






Notice

Charging time alters based on ambient temperature or charger internal state.

5. Press Power on/off button, stop charging: Power off, stop charging, and disconnect the AC connector of the wire from AC charging socket.

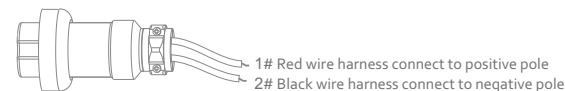


6.Light indicator

	Indicator State	Indication
Normal		4 indicators off Power off, no electric inside
		1 green on Twinkle per second, charging, SOC 0%~25%
		2 green on Twinkle per second, charging, SOC25%~50%
		3 green on Twinkle per second, charging, SOC50%~75%
		4 green on Twinkle per second, charging, SOC75%~100% 4 lights on, charged fully; stop charging
Need confirmation		Green on Normal Ac Input
		Light off Abnormal Ac Input
		Red on AC charging short-circuit protection
		Red twinkle AC charging over temp protection
		Orange on Fan failure
		Orange twinkle Battery failure
		Green on Normal Solar Input
		Light off Abnormal Solar Input
		Red on Solar charging short-circuit protection
		Red twinkle Solar charging over temp protection
		Orange on Fan failure
		Orange twinkle Battery failure

7.Solar Charging

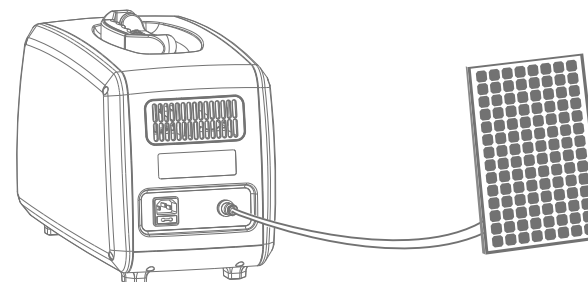
1.Special solar input connector



2.Connect the solar panel to solar input connector: Red wire harness connect to positive pole and black wire harness connect to negative pole of solar panel.(attention: solar panel voltage: DC18V-DC54V)

3.Press power on/off: power indicator lights up and also SOC indicator

4.Plug the solar input connector into solar energy input port: SOC indicator twinkle once a second ,and also solar input indicator light up ,it's normal case that if with power station heating (charging ambient temperature: 0~40°C)



⚠ Notice

Please charge under the temperature 0~40°C

5.Fully charged by solar panel: 4 green indicators light up(PV max power 210 watt)

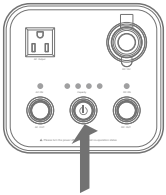
⚠ Notice

Charging time may be different because of environment temperature or solar charger internal factor

6.Power off and stop charging.
unplug solar input connector from solar input port of power station, press the power on/off

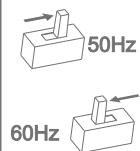
8.AC output

1.Press the on/off button



2.Match the frequency of thee electronic appliance.(50Hz or 60Hz)

⚠ Note



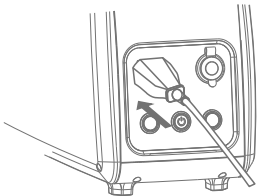
Standard frequency : 50Hz . Different frequency may lead to abnormal operation of the electronic product, it may also lead to the breakdown of the electronic appliance.

Switch frequency: please contact the agent, or please operate with the auth orization of agent.

Switch method: In power-off mode, open the cover on the left side, and push the button of on the inverter to the corresponding frequency.

3.Connect the plug of the electronic product to the AC output port.

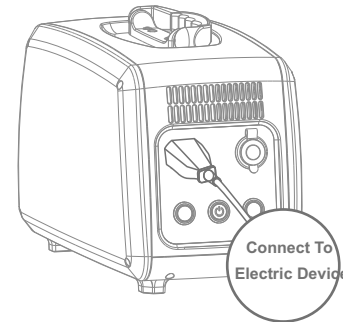
Make sure the plug of the electronic product is certainly inserted into the AC output port.



⚠ Note

Connect electric appliance to AC output port and check whether well connected(make sure the electric appliance is power off before connecting)

4.Using of electrical appliances



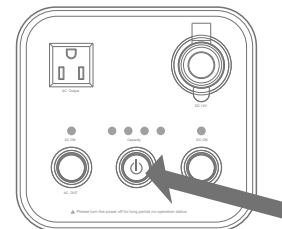
Make sure electric appliances is powered off before using them.
Confirm the battery level according to indicator 1-4 lights during the processing
Usage time is varied due to the ambient temperature or change of the li-ion battery state.
It's normal if the product is heat in the output process

⚠ Note

Please make sure the electric appliance operate well before using the product.
the max AC load of power consumption for electric appliance is 500 watt.
Due to the different electrical appliances, there are circumstances that it don't work even if in or less than 500 watt.
Compared with household AC power source (AC 100V), it's also possible happen that low capacity at electrical products.
After the product is connected to the radio or video player or TV screen, etc., there might be some noise.
Please stop using it immediately when repeated output stops, and then contact the retail store or consult customer service center of our company for help.

5.Stop using the appliance.








Power off: pull out the connector of electric appliance, press power on/off button;



⚠ Note

When the product operates more than 12 hours without load, AC output will cut down automatically to avoid self-consuming of electronic. Please restart the product when you use it.

6. Discharging SOC indicators

	Indicator State	Indication
Normal	 25 50 75 100	4 green on Discharging, SOC 75 100%
	 25 50 75 100	3 green on Discharging, SOC 50 75%
	 25 50 75 100	2 green on Discharging, SOC 25 50%
	 25 50 75 100	1 green on Discharging, SOC 0 25%
	 AC output indicator	Green Output 50Hz Red Output 60Hz
Abnormal	 AC output indicator	Twinkle between green and red Inverter over load, over temp; battery low voltage, over voltage; fan failure; general alarm if inverter outputs still. Red twinkle Wrong inverter model, no output from inverter: bad alarm Cut off load, check if there is over load, short-circuit.
	 DC output indicator	Light off Abnormal DC12V output.

 Light on
  Twinkle
  Light off

9. Estimated Backup Time

Please ensure the load for power station is no more than 500 watt, matching to electrical appliances with AC100V(50Hz/60Hz).

● Estimated Backup Time

Power consumption	Estimated back up time
20W	70hours
50W	28 hours
100W	14hours
200W	7hours
300W	4.5hours
400W	3.5hours

Smart Phone
25 pieces
5.6 hours
10Wh

LED Light
70 hours
20Wh

LCD TV
(32model)
18 hours
75Wh

Electric Kettle
3 hours
430Wh

Electric Tool
17.5 hours
80Wh

Refrigerator
15.5 hours
90Wh

Model PS10B back up calculation

$$1400 \div \boxed{\text{Power Consumption W}} \approx \boxed{\text{Hours}}$$

⚠ Note

Above data as a reference. we collect the approx values when we develop it with ambient temperature of 25°C and full charged, these values may vary regarding to different electrical appliance manufacturer or other else.

It may not work even the load for power station is less than 500 watt depending on different electrical appliances.

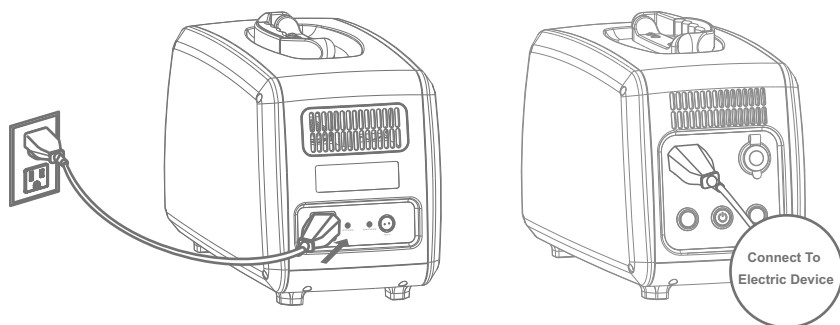
No output and power off automatically if with overload.

power consumption 10W or less in the case, about 12 hours after the output is automatically stopped, restart output button, then restart output.

When plasma TV, LCD TV above 41 type, desktop computers started with high power, or load variation appliances, PFC circuit equipped with devices etc., it may not work even the load for power station is less than 500 watt.

10.Function of Charging & Discharging Simultaneously

PS10B power station can be discharged while charging
In the condition of charging, it can supply power to electric appliance at the same time.



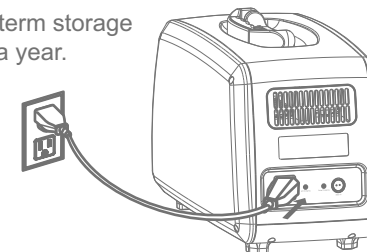
10.Storage method

1.Full charge

Fully charge the power station before long term storage
Fully charge the power bank at least once a year.

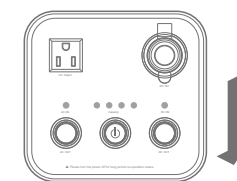
⚠ Note

please refer to the content in page 11



2.Shut down all the buttons

After fully charged, pull out AC input connector from AC input port, Shut down on/off buttons

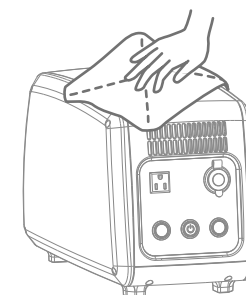


3.Clean

Mop the unclean spot by not dripping duster

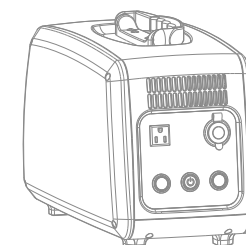
⚠ Note

Gasoline, naphtha, diluent, kerosene et
c. have the effect of the soluble resin, p
lease do not use.



4.Storage

Try to storage the power station in dry and less dust
environment. Suitable storage temperature: 0~45°C,
avoid direct sunshine .
Please store the product at stable place



12.Long Using Life of Polymer Lithium Battery

- **Charge, discharge and storage at 0~40°C**

Using battery with too low or high temperature shorten battery cycle life

- **Don't connect the load more than 500W continually**

Over load makes PS10B stop discharging automatically and shorten battery cycle life.

- **Don't charge battery after it's fully charged**

Pay attention to the SOC indicators, don't charge battery after be fully charged or finishing fully charged. Otherwise, it shortens cycle life of lithium battery.

- **Don't discharge battery when SOC is 0**

PS10B cuts off discharging automatically. But electric device connecting to AC output port shortens cycle life of lithium battery.

- **Shut it down when no need to use**

Wasting the electricity inside the battery is another reason of less cycle life of lithium battery.

- **Fully charge the product for storage**

For long-time no-use state, please keep the product fully charged for storage, and recharge it at least once a year.

13.Recycle of lithium ion battery.

After use, complete lithium-ion batteries can be recycled .

Please do not disassemble, be sure to contact the retail store or our "customer service center"



Li-ion

14. Malfunction & Maintenance

For the occasions that the following "corresponding disposal" is not available, please stop using the product immediately and contact the retail store or "customer service center" of our company.

Phenomenon	Status	Main reason	Corresponding disposal
Non-rechargeable	Can not start charging	No enough power supply	AC wire is not connected or not connected well
		No solar input	Check whether the wiring is normal
	Charging more than two hours of battery shows no increase	The Product Internal Temperature Anomalies	0~40°C degrees (begin charging automatically at an appropriate temperature)
	Light indicator shown as the state of "need confirmation" in page 10	Refer to "need confirmation" in page 10	In compliance with "need confirmation" in page 10
	The state that is not shown in "need confirmation" in page 10	Charging stop due to the circuit fault	Please stop charging immediately and contact retail store or our customer service center
Electric do not work	Electric do not work correctly after connected	No power supply for electric	Confirm electric plug is inserted into ac socket
	Electric do not work correctly	No matching frequency	Confirm the matching frequency
	Electric start but stop just a minute	Overload protection function start, output stop	Restart AC output button , lower the total power of electric (Output stop when electric power is over 500W)
		Electric power less than 10w	Restart AC output button, confirm the total power (when the power is less than 10w for more than 12 hours, the product is checked as no load and the output stop)
Electric work but short time	Light indicator shown as the state of "need confirmation" 10 in page	Refer to "need confirmation" 10 in page	In compliance with "need confirmation" in page 10
	The state that is not shown in "need confirmation" in page 10	Charging stop due to the circuit fault	Please stop to charge immediately and contact retail store or our customer service center.
	Remaining capacity quickly reduce	Electric overload	Lower total power of electric
		Battery cycle life	Please stop to charge immediately and contact retail store or our customer service center.

15. Specification

	System Modle	PS10B-P1			PS10B-P2		
	System storage capacity	700Wh	1200Wh	1500Wh	700Wh	1200Wh	1500Wh
OUTPUT FEATURES	Rated output power	500 VA					
	Peak output power(10s)	750 VA					
	Rated output voltage	100/110/120Vac			220/230/240Vac		
	Nominal frequency	50/60Hz					
	Overload ability	120%<load<130% @10min; 130%<load<150% @10s					
	UPS function	No					
	System Work Model	OFF-GRID					
	Maximum efficiency	90%(>70% Load)					
AC CHARGE	Input voltage range	88 ~ 264Vac					
	Power factor	≥0.94(full load)					
	Input frequency range	50/60Hz ±5 Hz					
	Maximum charge power	327W					
	Maximum efficiency	>92%					
PV CHARGE	Maximum input power	210 W					
	Start-up voltage	18Vdc					
	Number of MPPT input	1					
	MPPT voltage range	18-50 Vdc					
	Maximum input voltage	54 Vdc					
	MPPT efficiency	99.50%					
	Maximum efficiency	>95%					
	Solar production use	MPPT					
GENERAL	Conditions of use	Relative humidity: 5%-90%					
		Temperature: 0-40 C°					
	Dimensions(mm)	405*215*261 (Product Size)					
		485*296*390(Packing Size)					
	Weight(Kg)	7.8/10/12Kg (Net Weight)					
		9.4/11.4/13.6Kg (Gross Weight)					

Due to improvement, there are cases of function and appearance change without revealed in advance.

16. Guarantee & After-service

■ Warranty brochure

Take the warranty brochure from retail store, you need to register [retail store name • purchase date] etc.

The warrant is 1 year from the date of purchase.

FREE REPAIR REGULATIONS

1. For product failure caused by manufacturing reasons, please bring the guarantee and vouchers of purchase date (invoices, etc.) to retail store. It is free to repair or replace the product during the 1 year warranty period under normal use. In addition, customer should bear the necessary shipping costs when needed.
2. The repair is not free for the following circumstances, even within warranty period.
 1. No warranty brochure and vouchers of purchase date (invoices, etc.) is provided.
 2. Product failure caused by operation mistake. (Such as operation mistake beyond the notice in the manual.)
 3. Product failure caused by repair, modification, dismantling etc.
 4. Product failure caused by inadvertent operation (fall/ impact/soaking/sediment attached outside or inside of the machine), improper maintenance (mildew, dust, etc.).
 5. other accessories and consumables besides the body.
 6. Damage caused by special purpose usage (such as business with significant continuous use, the ship carrying, etc.)
 7. Product failure that is not caused by ontology reason, such as the power supplying or other electric appliance, or damage caused by inspection or repair.
 8. Failure caused by reasons besides all above conditions mentioned above, is also not our responsibility.
3. Please note that we will not bear compensation related to the secondary damage (expected damages, mental damage, etc.)