

USER MANUAL

PURE SINE WAVE INVERTER

350W-1200W



Inverter & AC Charger

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Chapter 1 Safety Precautions

Safety Of Operation

1. Please read this instruction carefully before use this inverter to ensure correct installation and safe operation.
2. Please pay attention to any warning signs and unusual when using this inverter.
3. Please don't place this inverter under direct sunlight, rain or moisture environment.
4. Please don't install this inverter near heat/heater/furnaces etc.
5. Please Install this inverter in a safe and empty space to ensure ventilation and heat dissipation , also easy to maintenance.
6. Please use dry and insulating rag to clean.
7. In the case of fire, please use a dry powder fire extinguisher to put out fire. Liquid fire extinguisher is prohibited.
8. Please choose a right space for the inverter installation and Battery pack powerful enough for the inverter.
9. Please make sure the appliances and battery capacity matches inverter rated power.

Prohibition

1. Please don't open the inverter shell if without authorization. The inverter inbuilt with high voltage component. If failed to follow instruction, there will be possibilities for electric shock and void of warranty.
2. If your appliances as follow, please consult with your local dealer or distributor before you install this inverter about its application/set-up/management and maintenance.
 - 1) Precision industrial/scientific and medical instruments or equipment.
 - 2) Elevators and other equipment that may endanger personal safety.
 - 3) Equipment that start up with large current and generating negative work.
3. Don't place the battery into fire to avoid explosion.

Safety Of Electric

1. Please make sure inverter been properly grounded and all cable connect in the right socket, also the battery polarity in the right position.
2. To protection your battery , please place a circuit breaker with over-current protection between inverter and battery.
3. If need reconnect the inverter cable, please make sure inverter is completely shut down and input breaker /battery switch is off, failed to follow this procedure , there will be possibilities for electric shock.

Safety Of Battery

1. The life span of the battery will be shortened if environment temperature increases. Replace battery regularly will make sure inverter working normally and ensure enough backup power.
2. The replacement and maintenance of battery must be made by authorized battery expertise. Must be same type of battery and same capacity with the same quantity.
3. There will be possibilities for electric shock and short-circuit, in order to avoid that, please follow below instruction.
 - A. Please remove your watch/ring/earring or any metal accessory.
 - B. Please use insulated tools.
 - C. Please wear rubber shoes and gloves.
 - D. Please don't place any metal tools or any metal component on the battery.
 - E. Please shut down all appliances before remove battery terminals.
 - F. Non-professionals please don't disassemble battery or damage battery, battery contain dangerous acid which could cause damage to the skin and eyes. If touch accidentally, please wash it off with water and go to hospital for more medical examination.
 - G. Please second confirm the battery cable positive and negative terminals before connect to battery.
 - H. Please install circuit breaker on battery to prevent fire and electrical shock.

Operation And Maintenance

1. The operation and storage environment is concerning the inverter life span and reliability. Therefore, please do not place the inverter in following environment:
 - A. Temperature/humidity exceed Inverter working environment standard. Inverter should work in be 0-55°C、 0-95% humidity environment with no condensation.
 - B. Any place where will be vibration and collision.
 - C. Any place where metallic dust/corrosive substances/salt and flammable gasses.
2. Inverter must storage in dry environment if not use for certain amount of time.
3. The environment temperature must increase above 0°C for 2 hours before start up the inverter.
4. Please keep the inverter ventilation holes open, so inverter could ventilate. Insufficient of air will cause inner temperature go up and shorten inner component life span so does the inverter.
5. If not use battery for long time , pls recharge battery for every 3 months.

Chapter 2 Installation

Inspection For Unpacking

1. Open the package, carton should included following item:

- 1) Inverter one set
- 2) User manual one unit

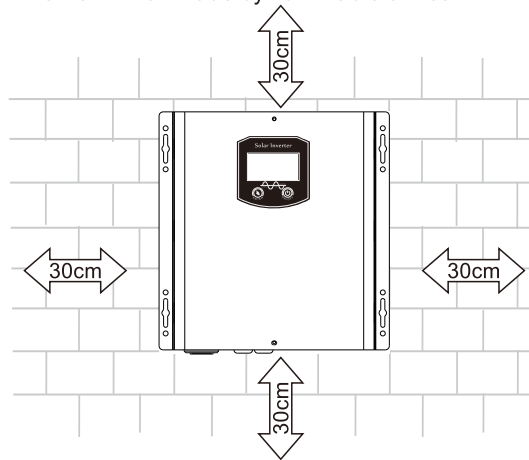
2. Before opening the inverter package, please check and confirm if the inverter damaged during transportation. If any damaged or missing parts, please contact local dealer or distributor.

 **Recycling:** The carton packing is reusable, please don't throw away.

Installation Requirements

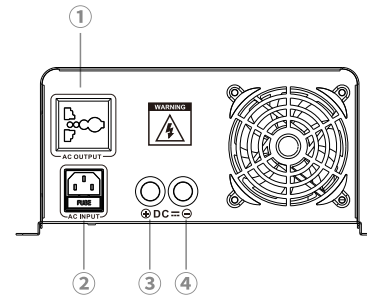
1. Please make sure it's professional electrician install this inverter. With following instruction:

- 1) Please do not place anything on top of the inverter.
- 2) The installation space should match the inverter size.
- 3) Please do not install the inverter on the wall which made by flammable or heat-resistant material.
- 4) Please install the inverter as picture show for easy inspection and maintenance.
- 5) Please do not install the inverter under direct sunlight.
- 6) Install environment humidity should be 0-95% with no condensation.
- 7) Environment temperature should be 0-55°C.
- 8) Please leave enough space between the inverter as picture shown.



 Above mentioned only suitable for ground mounted or other non-flammable surfaces.

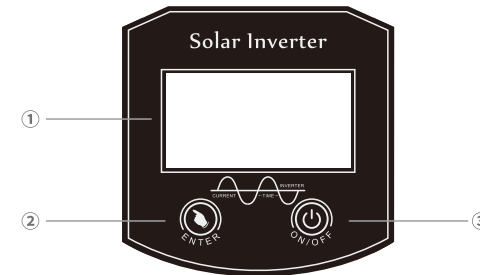
Product Overview



1. AC Output 10A(MAX)
2. AC Input
3. Battery+
4. Battery-

Chapter 3 Operating

Inverter Screen Function

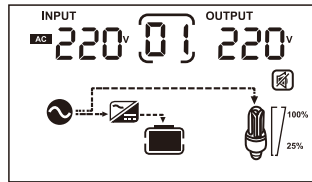


- LCD Display—① : Detailed display information

Identification	Navigation keys	Function
②	Enter	Press for 5 seconds to enter and menu setting, press for 2 seconds to adjust the setting.
③	Turn On/Off	Turn on or turn off the inverter

Explanation For Screen Icon

The main interface as shown.



Icon	Function Description
Input Source Information	
	Indicates the real-time input voltage
Output Information	
	Indicated the real-time output voltage
Battery Information	
	The battery capacity status is 0-10%, 10-35%, 35-60%, 60-85% and 85-100%
Load Information	
	The load capacity status is 0-10%, 10-35%, 35-60%, 60-85% and 85-100%
Mode Operation Information	
	Indicates operating mode
	Indicates AC inputting
	Indicates the AC/DC converting
	Indicates alarm been muted

Setting

Select the working mode by pressing the "Enter" key for 5 seconds.

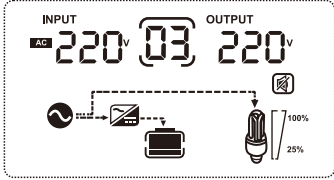
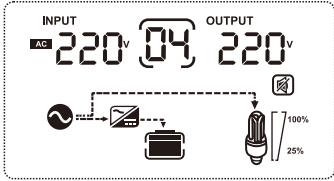
01 AC Priority Mode - The AC input (utility power/city grid) will supply power to AC output (appliances/load) first, and auto charge battery at the same time. Inverter will auto stop charging when battery been fully charged. When there is no AC input, inverter will auto switch to battery power supply.

02 ECO Mode - Similar to AC priority mode. When AC input (utility power/city grid) is off, the inverter will auto enter standby status when appliances capacity under 5% inverter capacity. Inverter will keep auto switch between on and standby status in order to detect if AC output (appliances/load) capacity over 5% of the inverter capacity. If the AC output capacity over this above mentioned limit, inverter will auto switch from standby status to inverting status.

03 Battery Priority Mode - The battery power will supply power to AC output (appliances/load). When battery voltage reach low voltage limit, if AC input is on, inverter will auto switch to AC input supply; If AC input is off, inverter will auto shut down. When battery fully charged, inverter will auto switch back to battery supply.

04 Unattended Mode - Similar AC priority mode. When AC input (utility power/city grid) is off, battery voltage is too low, the inverter will auto shut down AC output and enter STANDBY status. Once battery been charged it back to the restore voltage point, the inverter will restart the AC output. On the other hand, when AC input back on, inverter will auto restart AC output as well.

Icon	Parameter Interface	LCD display
①	AC Priority Mode	
②	ECO Mode	

Icon	Parameter Interface	LCD display
③	Battery Priority Mode	
④	Unattended Mode	

Chapter 4 Trouble Shooting

Trouble Shooting

The following faults may be encountered during the use of the inverter. Please refer to the following methods for simple fault analysis.

Fault Code	Failure Event	Solution
E01	Inverter overcurrent	Check if there are power surge from big capacity appliances , if so ,please shut down or reduce the appliances capacity. If done above mentioned, still showing this error code , please contact local dealer or distributor.
E02	Output short circuit	Check if there are power surge from big capacity appliances , if so ,please shut down or reduce the appliances capacity. If done above mentioned, still showing this error code , please contact local dealer or distributor.
E03	Inverter overload	Please shut down or reduce the appliances capacity. If done above mentioned, still showing this error code , please contact local dealer or distributor.
E04	Inverter over temperature	Please check if the fan working normally, or the ventilation holes whether been blocked . Please keep the inverter away from high temperature environment.
E05	Battery high voltage	Please lower the battery voltage or check if the battery protection limit setting is too low.
E06	Battery low voltage	Please check if the battery protection limit setting is too low.
E07	Abnormal phase sequence	Please check if all the cable been connected correctly.
E08	Output low voltage	The output voltage is too low , but the appliances capacity is too high for the inverter.
E09	ECO mode work	The energy saving function been activated. AC output been turned off waiting for bigger capacity of appliances.

Chapter 5 Protection And Cleaning

Check The Heat Dissipation

Please check environment temperature around the inverter. Make sure there is no clogging of the vents.

Cleaning the inverter will improve the heat dissipation of the inverter.

Cleaning The Inverter

Please turn off AC input first, shut down inverter ,then turn off the DC switch. Make sure all of them is completely off.

You could wipe the inverter with dry and insulated rag. Please don't use water and any liquid such as solvent or abrasive liquid.

Check Connection

Please check all cables or breakers regularly to see if there is abnormal heat. If there any damage of the cable and breaker, pls shut down all of component and contact a professional electrician for inspection.

Chapter 6 Removal

How To Remove The Inverter

- Shut down AC input.
- Shut down inverter.
- Shut down DC breaker.
- Remove all cables off the inverter.
- Carefully remove the inverter.

Inverter Packaging

Please keep the inverter original packaging in case of delivery. If you can't find the original packaging ,please use strong box with correct size to contain this inverter.

Inverter Processing



Please do not throw this in the garbage. In case of dispose this inverter, please follow local regulations about electronic component recycling.

Chapter 7 Technical Data Sheet

Model		350W	500W	700W	800W	1000W	1200W
Capacity	Rated Power	350W	500W	700W	800W	1000W	1200W
	Peak Power	1050W	1500W	2100W	2400W	3000W	3600W
Input	Battery Voltage	12V / 24V					
	DC Input Voltage	10.5-15VDC / 21-30VDC					
	AC Input Voltage	165-275V / 173-288V / 180-289VAC					
	AC Input Frequency	50Hz / 60Hz±5Hz					
Output	Efficiency	≥85%					
	Output Voltage	(Inverter Mode) 220V / 230V / 240VAC±3%					
	Output Frequency	(Inverter Mode) 50Hz / 60Hz±0.5Hz					
	Output Waveform	Pure Sine Wave					
AC Charging	AC Charging Current	15A					
Protection	Battery High Voltage Warning	> 15VDC / > 30VDC					
	Battery High Voltage Protection	> 17VDC / > 34VDC					
	Battery Low Voltage Warning	< 10.5VDC / < 21VDC					
	Low Voltage Battery Shutdown	< 10VDC / < 20VDC					
	Overload, Over Temperature, Short Circuit Protection	Automatic Shutdown					
Other	Switch Time	≤8ms					
	Display	LCD					
	Cooling System	Intelligent cooling system, auto control speed of the fan.					
	Operating Mode	AC Priority Mode / ECO Mode / Battery Priority Mode / Unattended Mode					
Working Environment	Temperature	0~55°C					
	Humidity	0~95%(No Condensation)					
Exterior	Dimensions(mm)	290 x 258 x 125					
	N. W. (Kg)	5.6	6.1	6.7	7.2	7.6	8.2

• The technical specifications of this document are subject to change without any notice