

JN-HS series Pure Sine Wave DC-AC hybrid All-In-One User Manual

Firstly, thank you very much to purchasing our product, JN-H pure sine wave inverter.

Please read this user manual clearly before installing and using the equipment.

You need following this manual when install and debug the inverter.

It may damage the inverter or your body if improper or wrong connection.



Warnings

1. Electric shock should be avoided and also keep it away from children!

This inverter with standard pure sine wave AC power and output socket with general domestic standard. Inverter with high voltage alternating current and potential danger .Stay away and don't touch it because it may cause serious consequences or death.

Please keep away from the children and intellectual disabilities, or it may cause dangerous.

2. Do not close to flammable explosive.

Do not use this inverter where there's flammable and explosive gas. Such as, gasoline ship hull or propane tanks, etc.

3. High voltage risk. Please do not tear down and touch inverter without out permission or following instruction of professional technicians.

There is high voltage inside the inverter and it may cause serious accidents. Do not touch it , or it electronic shock may occur.

4. Do not connect the wire whatever you want.

This series of inverter is used for off –grid solar system. Both of the CND line of inverter and electronic equipment should be connected to the ground.

AC output zero line shouldn't be regarded as GND wire. It's not allowed to connect ac inverter to electricity grid. (eg: family 220v AC line).

Otherwise, inverter maybe damaged even though power switch of inverter closed, moreover, fire may be happen.

5. Please do not arbitrarily dial code switch within the machine and plug connections.

The machine all corresponding parameters have been set up according to user requirements before leave factory, the user need not change, arbitrarily change dial code switch, is likely to lead to machine can't work normally or failure, and even cause damage. If user need to modify the supply priority way or the other parameters, please read carefully the instructions according to it for use after all steps (priority parameter Settings) modify or after consulting our technical personnel in the case of the machine power can be operation. The whole machine with high pressure, it is strictly prohibited charged operation! Otherwise the consequence is proud!

I. Product brief introductions

JN-HS series adopts intelligent IC control, have perfect defensive function.(Overload protection, over current protection, high temperature protection ,short circuit protection , the battery reverse connect protection, battery over voltage and under voltage protection are included. At the same time with built fuses). It also with working indicator and fault alarm functions. It takes import high quality double sizes PCB circuit and components to produce high quality product with high-performances.

This inverter with pure sine wave output so that can be applied to any type AC loads. With beautiful shape and also can be taken easily because of the small size. Please kindly check product features as below:

1. Unique front and back double soft start technology
2. Core of CUP and the pulse width control technology of SPWM.
3. Special constant power technology.
4. Technology Of prevent the reverse Diode
5. With USB charge interface
6. Quarantine of front and back level
7. Perfect powerful fault protection function (including the overload protection, over current protection, high temperature protection, short circuit protection, the battery reverse connect protection, and it is also equipped with inbuilt fuse)

8. Battery protective function (Battery over-voltage under-voltage protection, over voltage, under voltage recovery and related function)
9. Shock-protect function
10. AC pure sine wave output has no effect on the use lifetime of equipment
11. This inverter with Aluminum shell, surface of sandblasting anodize oxidation treatment, high hardness and perfect shape.
12. Safely and quickly, automatic switching power supply, loaded with no power outage

II. Usage



The installation should be operated by a person with enough electrical theory knowledge or somebody who acquire practical experience.

1. Connection Steps:

(1) Check if all the components are all included. Such as, enclose bags and use manual. At the same time inspect whether battery voltage is accordance with the rated input voltage.

Enough current should be offered from the input battery voltage. Details calculate is that the output power /input voltage/0.85=output current

For example: load of 1000w, the output voltage is 12v, so the input current =1000/12/0.85=98 (Ampere).

Appropriate connection wires should be chosen according to the current rule that within 1 meter 8A/mm. 12mm connect wires should be regarded as the 1000w inverter with input voltage 12v. Others must also match with each other.

2) The GND wire of inverter should be connected to ground firstly before using. Do not regarded zero wire as the ground connect line.

3) Close the power of inverter, ie, press down the button "OFF"

4) Confirm the positive and negative polarity of battery, high voltage is the positive and low one is negative

5) Pull out the inverter input terminal, red means positive polarity (+) and black refers to negative polarity (-).

6) Choosing the suitable black area line according to the first step and then connect to black wire of inverter input terminal and pull tight at last.

7) Choosing the suitable red area line according to the first step and then connect to red wire of inverter input terminal and pull tight at last.

8) Connect the black wire on the other side of the battery negative pole and ensure connection is firm.

9) Connect the red wire on the other side of the battery positive pole and make sure connection is firm.

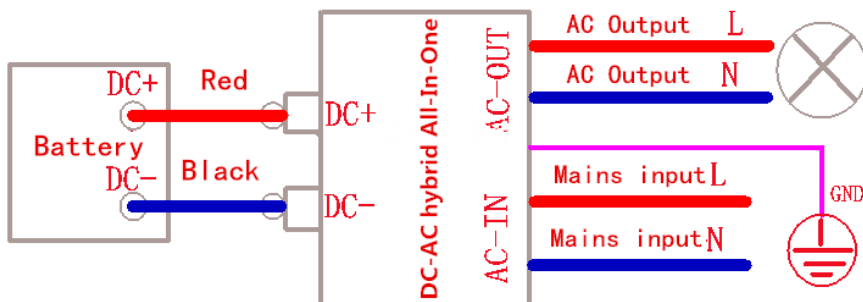
10) The power of electronic equipment which connected to the AC socket of inverter shouldn't be exceed rated power of inverter.

11) Will mains connect AC-IN(Grid input) terminals (plug).

12) Check and make sure all the connection are in right order and then the inverter power, just press the button "ON" is ok.

13) Press the button "ON" and then the power switch of load will be opened.

2. Connection Diagram



3.priority parameter Settings

parameter position	Set the priority work mode	
	DC Priority	AC Priority
JP1	2,4 - ON, 1,3 - OFF	1,3 - ON, 2,4 - OFF
JP2	DC - ON, AC - OFF	AC - ON, DC - OFF
JP3	JP3 - OFF	JP3 - ON
Relay long-open terminal	Connect Mains input	Connect DC input
Relay long-off terminal	Connect DC input	Connect Mains input
Relay output terminal	Connect Mains output	Connect Mains output

III. Technical Parameters

Sheet1. Inverter Technical Parameters:

Power Level	300W	500W	1000W	2000W	3000W	4000W	5000W	6000W
Rated Power	300W	500W	1000W	2000W	3000W	4000W	5000W	6000W
Peak Power	600W(<1S)	1KW(<1S)	2KW(<1S)	4KW(<1S)	6KW(<1S)	8KW(<1S)	10KW(<1S)	12KW(<1S)
Input Voltage	12V/24V/48V (Can custom)	12V/24V/48V (Can custom)	12V/24V/48V (Can custom)	12V/24V/48V (Can custom)	24V/48V (Can custom)	24V/48V (Can custom)	24V/48V (Can custom)	24V/48V (Can custom)
Output Voltage	100VAC±5%/110VAC±5%/120VAC±5% or 200VAC±5%/220VAC±5%/240VAC±5%(Can custom)							
Output Frequency	50HZ±0.5HZ or 60HZ±0.5HZ							
Output Waveform	Pure Sine Wave							
Wave form distortion	THD<3%(linear load)							
Output Peak Efficiency	Maximum 94%							

Starting Mode	Before and after the bipolar soft stat	
Switching Time	<=10mS	
Switching Way	DC/AC can be automatically set priorities	
Cooling	Intelligent air cooled (fan start over 45 degrees)	
Protect Function	Under voltage /Over voltage	LED red light turn on , automatic recovery,buzzer alarm,DC-AC priority automatically switch to the mains, switch indicator light.Automatically restored automatically switch to the inverter power supply, switch indicator light.
	Over-Load	LED red light turn on , lock, buzzer alarm,DC-AC priority automatically switch to the mains, switch indicator light.Automatically restored automatically switch to the inverter power supply, switch indicator light.
	Over-Temperature	LED red light ,self-recovery, buzzer alarm,DC-AC priority automatically switch to the mains, switch indicator light.Automatically restored automatically switch to the inverter power supply, switch indicator light.
	Short Circuit	LED red light ,self-recovery ,buzzer alarm,DC-AC priority automatically switch to the mains, switch indicator light.Automatically restored automatically switch to the inverter power supply, switch indicator light.
	Input Reverse Connection	Diode,fuse
Working Temperature	- 20°—+50°	
Stock Temperature	- 30°—+65°	

Sheet 2.Input DC voltage of inverter (Error<1v)

	12V Series	24V Series	48V Series
Start Voltage	11.0V-14.5V	22.0V-29.5V	44.0V-59.0V
Working Voltage	10.5V-15.0V	21.0V-31.0V	42.0V-61.0V
Under-Voltage Recovery	13.0V	25.5V	52.0V
Over-Voltage Recovery	14.5V	29.5V	59.5V

 **IV. Notice**

- (1) The inverter only can be connected the load with the power which less than rated power.

Notice: Three or Five times power of inverter should be chosen for some electronic equipment with high start current. Refrigerators, freezers, color TV, water pump, motor, air conditioning, air compressor, computer and similar appliances are included.

- (2) Battery voltage must match with the input voltage of inverter, otherwise, it will damage the inverter with high voltage.
- (3) Please avoid too long input wire because of the high current from the input current of inverter.
- (4) Power of inverter should be closed firstly and load power also need to be reduced, if inverter is opened and output too large make inverter protection opened. Turn on inverter after 10 to 15 seconds. Inverter may be damaged permanently if overload start it frequently.
- (5) It is forbidden to connect inverter with electricity grid, otherwise, inverter may be damaged permanently.
- (6) Do not use your wet hand to touch the inverter and operate it in a moist environment. It should be used in a cool and ventilated environment.



Notice: Do not block the air outlet and inlet of inverter cooling fans, keep it in a good ventilation environment.

- (7) Inverter should be closed if it's not in working status. Disconnect the inverter and battery if long time using or go outside for long time.
- (8) Output voltage and frequency of inverter should match with the electric equipment. Or, it will damage the electric equipment.
- (9) If used in a place where elevation is above 1000 meters, increase 1000 meters above sea level per time, the output power should decrease 5% ~ 10%.

V. Common troubleshooting (just for your reference)

1. The indicator light is off and not in working status after inverter started.
 - (1) Check if the connection is tight, or re-connection it.
 - (2) Check whether wire between battery and inverter is reverse or not, if yes, please re-connection and change a new and same specification fuse for inverter.
2. Warning indicator light turns red and no output from inverter after it started.
 - (1) Please check if voltage specification for battery is matched with inverter rated input voltage, if not, please kindly change it with a right one.
 - (2) Check whether battery with enough power or not, otherwise, please change a new one.
 - (3) Check if the temperature too high, ie, more than 70 Celsius degree, or, please cool down the inverter and then put it in a ventilated place. Restart it after inverter come to a normal temperature.
 - (4) Check if the load power exceed inverter rated power, if yes, please decrease load power or change a higher power inverter and then restart it.
 - (5) Check and make sure output and load terminal aren't short circuit and then restart it.
 - (6) Please restart it 10 seconds later after power on if starting inverter failed first time.

VI. Cleanliness & Maintenance

- (1) Wipe off the dust on the surface of inverter cabinet gently with a dry towel
- (2) Please dip appropriate cleaner to wipe if too much dust or oil

- (3) Cleaning outlet and inlet of fan with brush regularly

VII. Product Guarantee Maintenance

The JN-HS series sine wave inverter produced by us with high quality and checked strict and carefully before send out. Good quality and complete components are assured in this warranty card which offered by us.

Free after-sell service will be offered by us within one year after products are confirmed with quality problem.

Please kindly check warranty rules as below:

1. Products will be repaired or changed with new components for free if it is broken or with breakdown within one year from the day customer bought. This should be checked and confirmed by our technicians. And this must be because of the problem of products itself. Customer will be response for transportation cost.
2. Products aren't under warranty condition in following cases.
 - (1) Our company brand is changed by customer without our permission
 - (2) Don't following user manual and operate in improper method.
 - (3) The damage caused by wrong operation, inattentive using and unavoidable factors.
 - (4) Someone not our professional technician who open and repair, modify or change it ,remove seal number without our permission.
 - (5) Install products un-following our instructions.
 - (6) We'll reverse our rights to update and change products without notice.

This manual is only used to install instructions. Please contact with our technicians if it's not same model products. Operations should be done by professional person.

Service Promise: One year repair for free and the lifelong maintenance. Please take it as standard if any special instructions in the contact.

Statement: we reserve the right to change and update products without notice!

Client Stub

In order to maintain your rights, please fill in the following information carefully and keep it save. This is regarded as after sales record.

Department: _____ Contact Person: _____

Telephone: _____ Purchasing Time: _____

Product Model: _____ Email: _____

Address: _____