



# Pure Sine Wave Inverter

Operational Manual

**KOI POWER 350-1200W**



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## I . Operating Instruction

### 1-1. Open-package inspection

1). After opening the package, please check the attached parts and components, including operation manual and checking whether the inverter is in good condition? If found any inverter broken or components missing, do not turn on the machine , feedback to the carrier or supplier.

#### Note:

- 1). Please keep the box and packing materials in case the use in future.
- 2). The product is very heavy (check attachment as reference), please be careful to carry.

### 1-2. Installation notice:

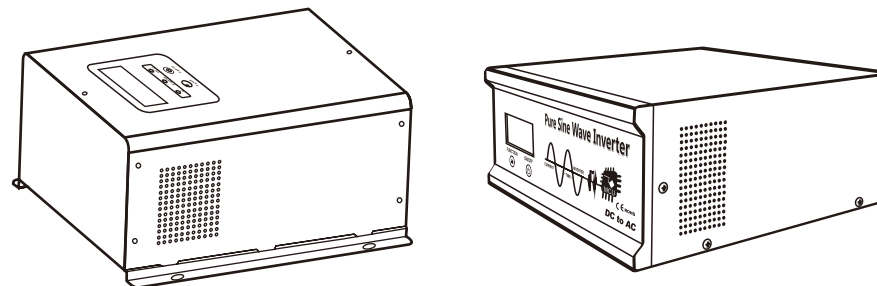
- 1). The products should be well-ventilated, away from water and the corrosive and combustible gases.
- 2). Do not set it in a corner, ensure the bottom of the front panel, the rear panel fan outlet and the side of the machine are well-ventilated.
- 3). The environment temperature should remain -0— 40 °C.
- 4). If the machine operates under low temperature environment, it would cause water condense, only in a absolute dry condition can the machine would work normal, otherwise there will be a electric shock.
- 5). Install the inverter near the mains input socket or nearby the switch, to draw out plugs then cut off mains supply once there is an emergency.

#### Attention:

- 1). Load should be turned off before connecting to inverter and turned on one by one after connecting completed.
- 2). The inverter should be connected to a socket with a corresponding current protection.
- 3). All power sockets should link with ground protection.
- 4). No matter input power cable inserts to mains socket or not, the inverter will also continue outputing possibly, turning off the inverter can not guarantee there is no current inside the machine. In order to make sure to cut off the output of inverter, you should turn off all the switches then turn off the main supply.
- 5). To load inductive appliances such as electromotor, displayer and laser printer, inverter capacity should be twice as loading machine's rated power at least.

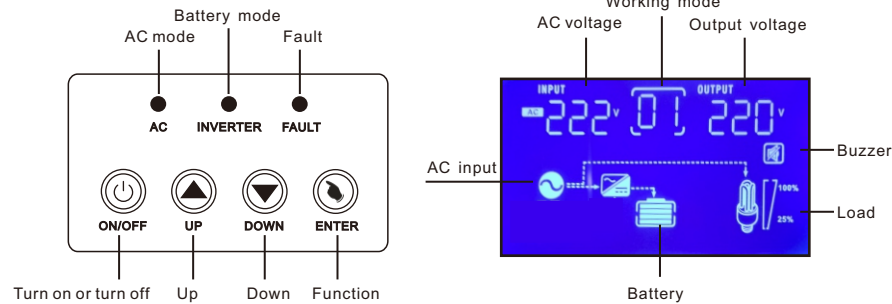
## II . Outlook drawing of inverter

### 1. 350W/500W/700W/1000W/1200W Series



### III. Description of front board

Meaning of indicate lamp&button



### IV. Function setting and meaning of the button

**ON/OFF Button:** 3 sec. → ON 3 sec. → OFF

Press this button to display the data below: Output voltage , Battery capacity , Output frequency , Load capacity

**Function Button :** 5 sec. → setting(P0),  
 → (P1 Working mode, P2 Battery type choose, →OK  
 or press two times can back to the main interface.

**Model P1:** →(01, 02, 03) first 01: AC 02:Auto 03: Battery →OK

**01 Normal Mode** -AC input priority to supply the load and batteries, battery supply the loads without AC input.

**02 Saving Mode** -AC input advanced to supply the load and the battery, battery supply the loads without AC input. But the load must >5% of the inverter capacity. otherwise the machine will continue to startup and shutdown.

**03 Battery Mode** - Battery priority to supply the load, when battery is low of power or voltage, will automatically switch to AC mains supply, when the battery full of charge, automatically transfer to the battery supply.

**Model P2:** → Type →OK

Battery type	Charging current (24V*2;48V*4;96V*8;108V*9;120V*10)
GEL U. S. A.	13. 7V
A. G . M. 1	13. 4V
A. G . M. 2	13. 7V
Sealed Lead Acid	13. 6V
Gel European	13. 8V
Open Lead Acid	13. 8V
Calcium (Open)	13. 6V
De sulphation cycle	14. 5V

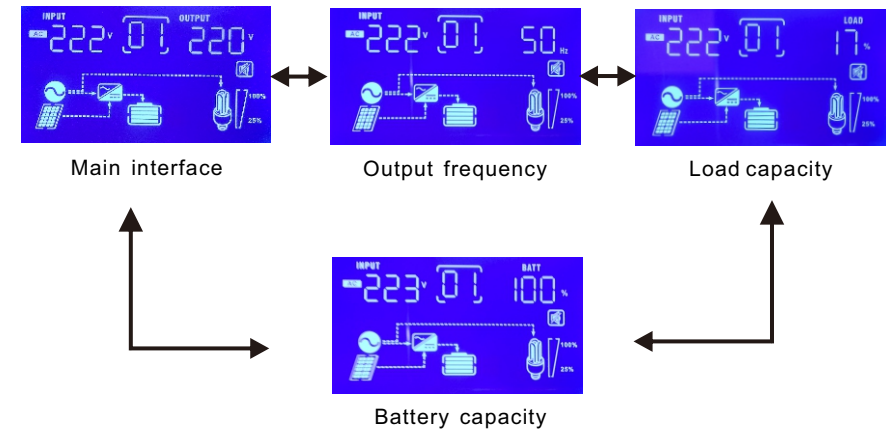
**Model P3:** → 0-15A →OK

**Note:** (The Max. charging current is 15A, from 0% to 100%)

**Model P4:** → or →OK

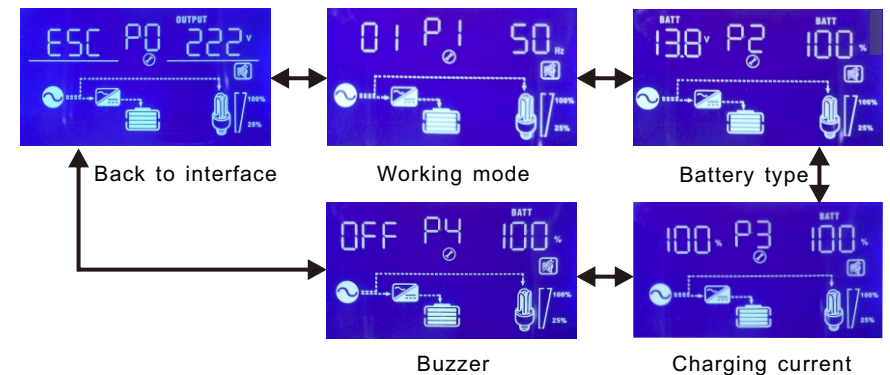
**Note:** Restart the inverter after each setting.

### 1. Main interface data:



Note: Inverter without the data of the solar panels.

### 2.Function setting interface:



## V. Connection way of input & output

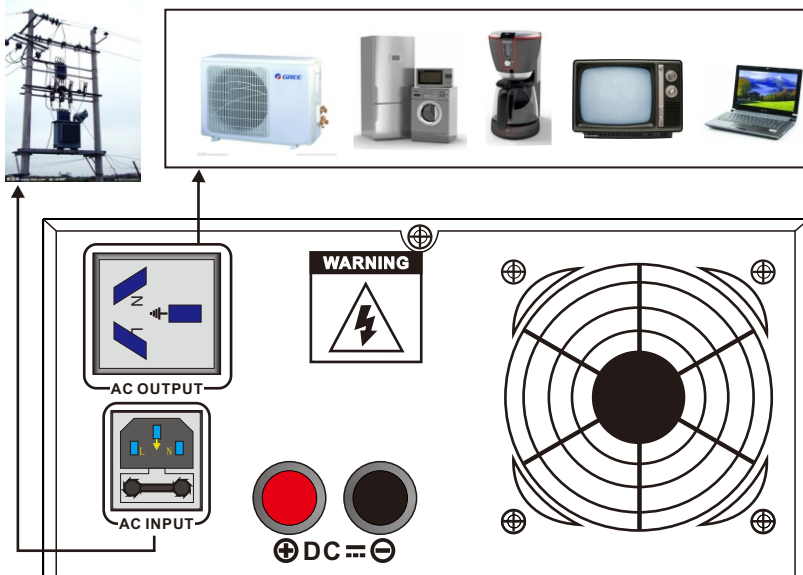
Connect with AC input and load output by connecting terminal, load output can connect both by terminal blocks and output plug.

Note: Output plug only can connect with each load less than 1500W.

### Back panel description

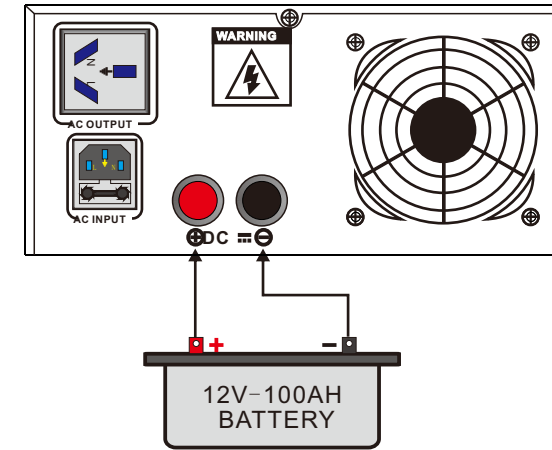
DC ⊖	Battery negative polarity connection
DC ⊕	Battery positive polarity connection
AC INPUT	AC input connection
AC OUTPUT	Universal socket output or connection terminal output
USE ONLY WITH 250V FUSE	AC input and output over current protection

### 1. 350W/500W/700W/1000W/1200W series wiring diagram

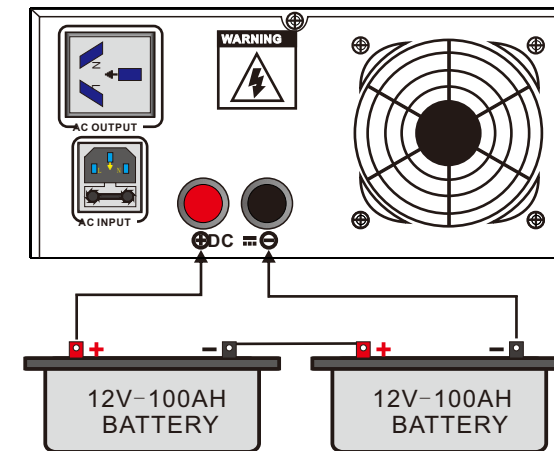


## VI. Battery wiring diagram

### 1. 12V series battery and solar panel wiring diagram



### 2. 24V series battery wiring diagram



## VII. Care and maintenance

- 1). This inverter is low in repair rate. Battery of standard model is valve adjusting, low maintenance, ensuring better life only by charging often. when connecting to mains supply, no matter inverter on or off, it still keeps charging for battery, and provide over charge, over discharge protection.
- 2). If there has been long time no using, please discharging then charging the inverter each 4-6 months
- 3). Usually, the life span of battery is 3-5 years. If any wrong with it, please ask professionals for changing. And do not change it by yourself.
- 4). Don't change the single battery , changing the battery should according to the suppliers instructions.
- 5). Normally, the battery should discharge then recharge every four or six months , charging for it more than 12 hours after discharging.
- 6). At high temperature area, the battery should be discharging and charging every 2 months and the standard charging time is 12hours at least each time.

### Note:

- 1). Before changing battery, must turn off inverter and disconnect the mains supply.
- 2). Remove metal object like ring, watch etc.
- 3). Please don't put the metal objects on the battery.
- 4). This is the normal phenomenon, when connecting the battery wire, the wiring will appear at a small spark.
- 5). Be attention to connecting between anode and cathode.

## VIII. Convenient method of maintenance & fixing :

Fault	Cause	Solution
No city power input	Recoverable fuse popup	Press fuse back
Terminal heating	Fault or loose connection	Fasten again
Switch off with loads	Battery no energy or overload	Charge battery or reduce loads
Switch on failure	Fault connection with city power or battery	Check connection with battery or connect again
Alarm when switch on	Battery no energy or overload	Charge battery or reduce loads
Buzzer scream 2 secs every 1 sec stop	Over temperature alarm (85 alarm-90 shut down)	Check if fan heat dissipation hole jammed
Fan twirls sometimes fast as well as slowly	Fan twirls fast when inside temperature reaches 45 degree, twirls slowly when 42 degree	Normal phenomenon, fan is under intelligent control

## IX. Technical Data

Model	350W	500W	700W	1000W	1200W	
Rate power	350W	500W	700W	1000W	1200W	
input	voltage	(75-135)VAC		(145-265)VAC		
	frequency	45-65Hz				
output	voltage	AC220V±2%(battery mode)				
	frequency	50/60Hz±1% (battery mode)				
output waveform	Pure sine wave					
Efficiency	>85%					
Battery	optional					
Battery rated voltage	12/24VDC					
Max AC charging current	0--15A					
Protection	Overload, short circuit, battery high and low voltage and AC input high and low voltage protection					
Conversion way	Interactive					
Capacity of overload	110%~120%turn to bypass after 30 secs, 160% maintain 300ms and then shut down					
Communication port	RS-232					
Envir- onment	Temperature	-10-+75℃				
	Humidity	10%-90%				
Size L*W*H(mm)	290*258*125mm					
N. W/G. W(kg)	5.8kg	6.3kg	6.9kg	7.8kg	8.4kg	

Above parameter revision change without notification.