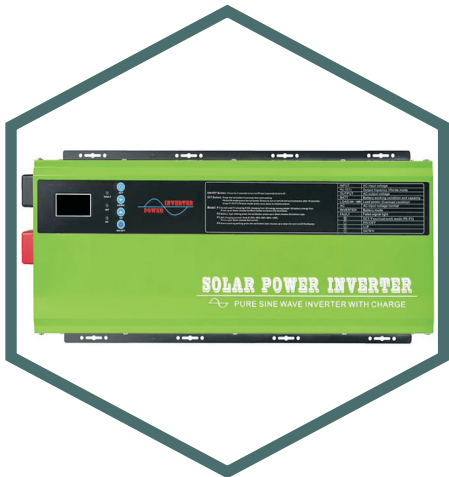


# Low Frequency Off grid inverter Pure Sine Wave Solar Inverter Power Inverter with Charger

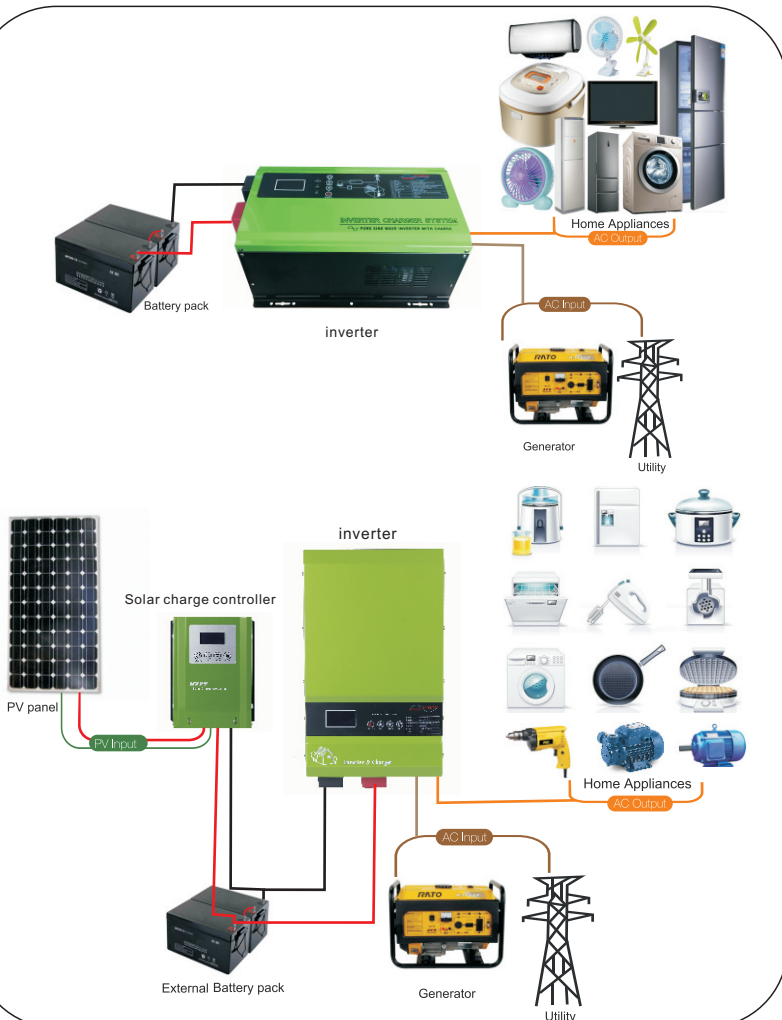


## Features and function:

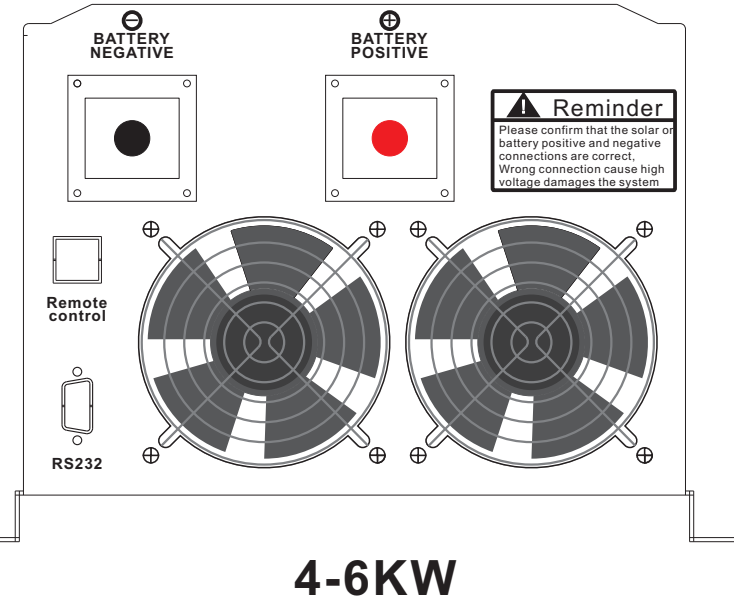
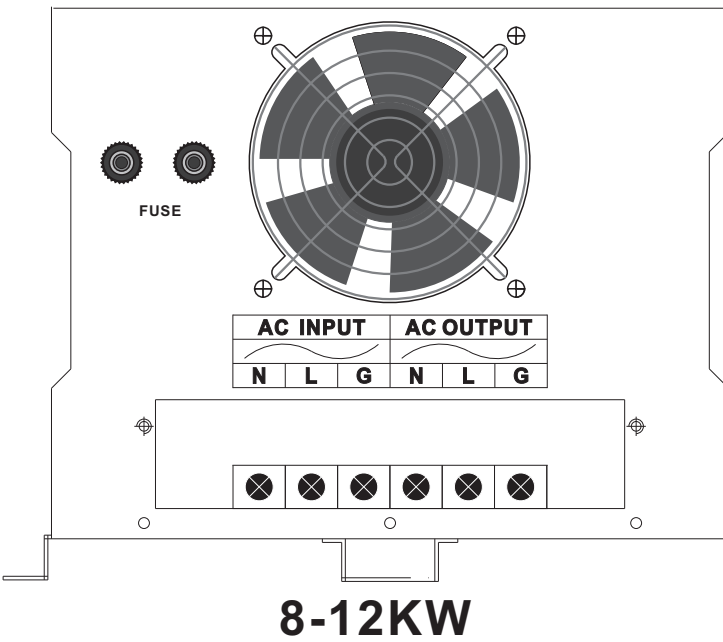
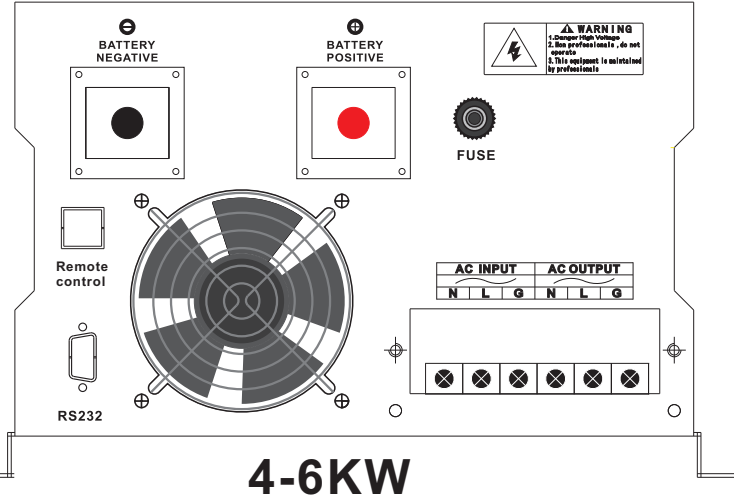
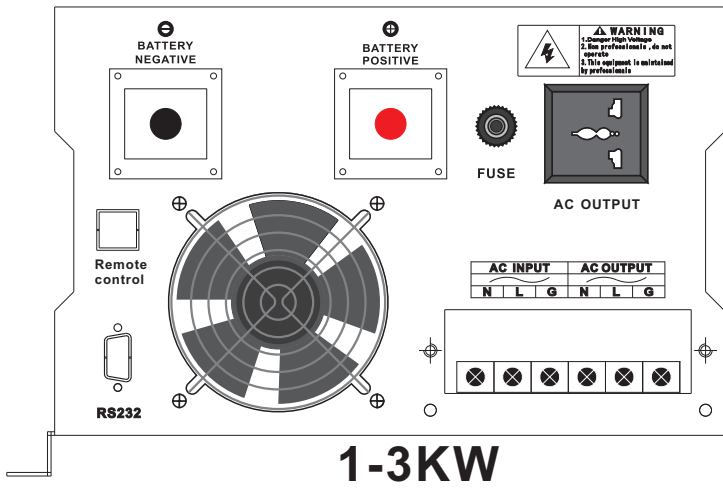
- Pure sine wave output. Rated power: 1KW to 12KW(12V/24V/48V/96V)
- Big AC Charging current 5-35A,5-40A,5-50A,5-60A(optional)
- Have UPS function AC to DC automatic conversion
- Wide AC voltage & frequency for AC and generator input
- Can adjust battery voltage for different types of batteries, such as LD: lead-acid battery (default), GEL: gel battery, LI: lithium battery,
- DC Start & Automatic Self-Diagnostic function, 5 working modes can choose 01 Mains priority /02 Energy saving /03: Battery priority 04 Unattended mode /05 solar priority
- High Efficiency Design & "Power Saving Mode" to Conserve Energy
- Smart LCD display and setting (Working modes, Charge Current, Charge Voltage, AC range input, battery voltage, Battery low voltage shutdown etc.)
- High-low voltage protection, overload, short-circuit Protection, under-voltage and over-temperature protection, over voltage, battery reverse connection (optional) etc.
- Support RS232, RS485 monitoring function with free program, remote monitoring (optional)

## Application of solar energy system :

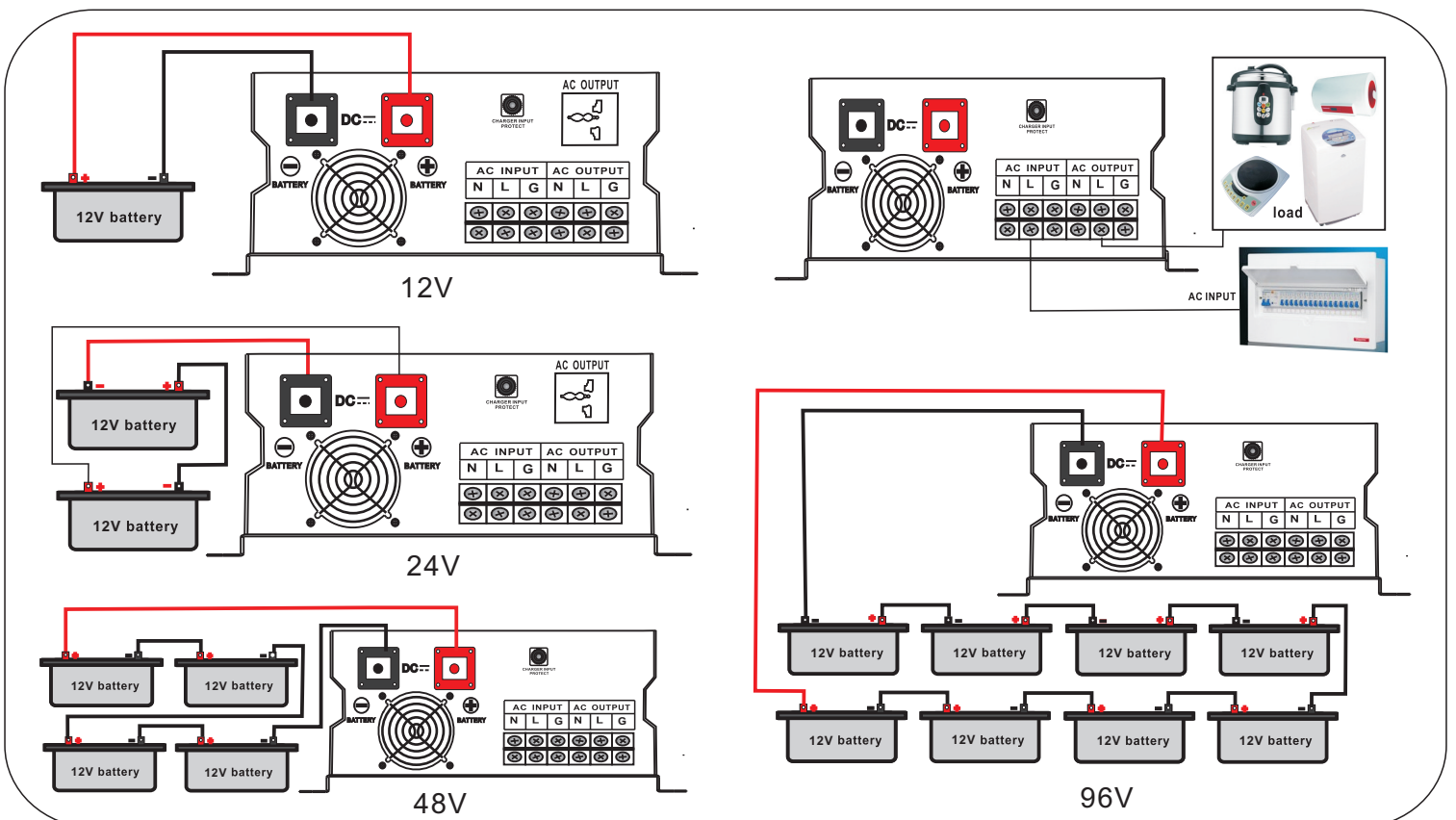
The inverter is suitable for unstable mains power, the mains power is often off, and important equipment that requires backup power. This product adopts high-precision DSP control chip, precise detection circuit, advanced control technology, modular design is more convenient installation and maintenance. Intelligent temperature-regulating fan, efficient heat dissipation, extending system life. The output is stable, clean and pure sine wave output. It can use for solar power system, light, radio, DVD, TV set, fans, freezer, computers, small hand-drill, Air conditioner, water pump, motor, communication equipment and the other house appliance.



## Back panel:

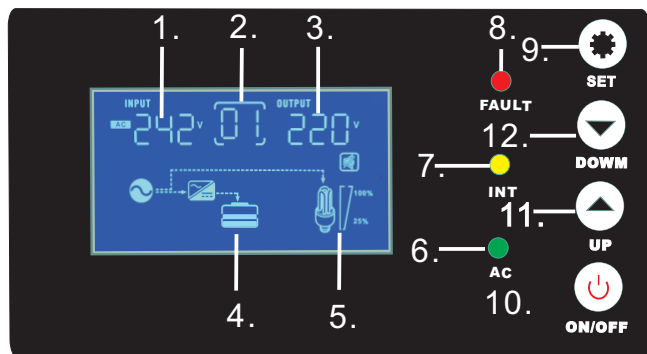


## Connection:





## LCD display information:

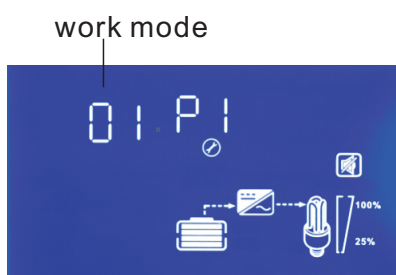


1.	INPUT	AC input voltage
2.	Hz/(01)	output frequency / Working mode
3.	OUTPUT	AC output voltage
4.	BATT	Battery working condition and capacity
5.	LOAD 25%--100%	Load power Overload condition
6.	AC	AC input voltage normal
7.	INVERTER	Battery mode
8.	FAULT	False signal light
9.	⊗	MUTE/FUNCTION
10.	⊙	ON/OFF
11.	⊕	UP
12.	⊖	DOWN



### P0: Set work mode menu:

Press the SET button 3S to enter the setting menu, the menu selection icon is flashing. If need save and exit, press the SET button 3S to save and exit



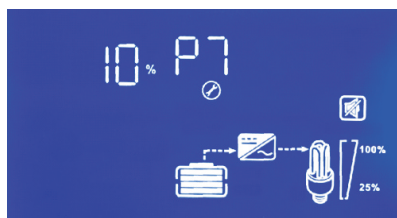
### P1: Work mode setting:

#### 01 Mains priority

When the mains power is available, the mains power supply power to the load, and when the mains power is off, the battery will supply power to the load. You can set the mains power charge the battery or not (PC set).

#### 02 Energy saving mode

When the inverter is in battery priority mode and the output load is less than 1%-10% of the power (set by the P7, 10% default), the AC output will be turn off, The inverter restarts every 1 minute, and checks whether the load is greater than the set power. When the connected load is greater than the minimum setting, the inverter restarts output. This function is to reduce the battery loss and extend the battery backup time.

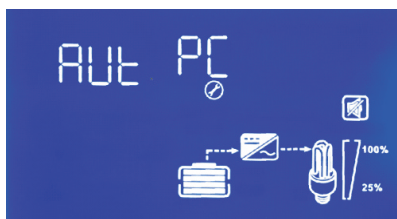


#### 03 Battery priority mode

The battery supply power to the load. When the battery voltage is lower than the set battery voltage (voltage set by PA item), use mains power supply power to the load. When the battery voltage is restored, the battery will supply power to the load again (mains power is charging or not set by PC).

#### 04 Unattended mode

Inverter automatically turn on when connected to mains power or battery voltage is normal (not include inverter first time use). But when the battery discharge voltage lower than battery voltage by set F4 (F4: set the battery low voltage power is turn off), the power will be turned off. Inverter on only mains power is coming or turn on by hand. (mains is charging is or not set by PC)



**PC:** battery priority mode, mains is charged or not: AUOT default, ON (battery priority with AC charging), OFF (battery priority without AC charging), Automatic detection solar priority or city power priority, select solar charging, the mains will charge when the solar charging current is small

#### 05 Solar priority mode

When the battery voltage is normal, the inverter automatically turn on and battery supply power to the load. When the battery is low voltage, mains power supply power to the load. When the battery discharge to battery low voltage shutdown (PL setting), the inverter enters standby and waits for the mains power or solar charging to battery. When the battery voltage is restored (PN setting), the inverter automatically turn on. But when the battery discharge voltage is lower than battery voltage (set by F4), power will be turn off. Inverter on only mains power is coming or turn on by hand,

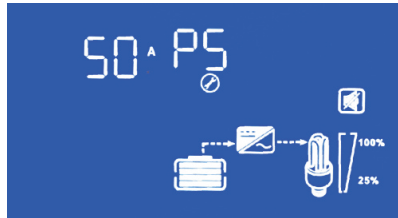


**P2:** Battery type & charging voltage setting:  
 SLD: lead-acid battery (default), GEL: gel battery, LI: lithium battery, USE: user mode. Select USE user mode to adjust battery voltage in P3 and P4 menus. If you do not select the USE user mode, the P3 and P4 menus will not appear.

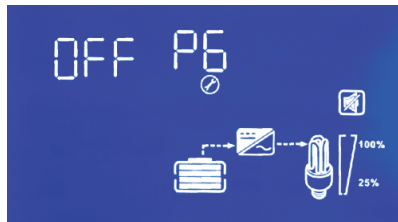


**P3:** Battery voltage uniform charge setting: 13.6V ~ 15.9V (single)

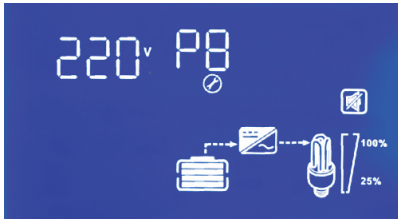
**P4:** Battery voltage floating charge setting: 12.9 ~ 13.6 (single)



**P5:** Maximum mains charging current setting:  
 5-35A( 40A, 50A, 60A,70A Optional)



**P6:** Buzzer sound setting:  
 ON: Turn on the buzzer, OFF: Turn off the buzzer(overvoltage, undervoltage, overload, overtemperature, except faults)



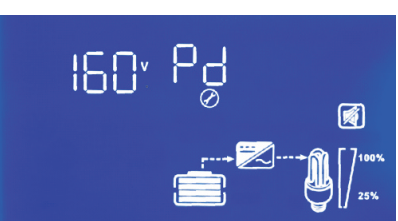
**P8:** Inverter AC output voltage setting

**P9:** AC Output frequency setting: 50Hz default, (50Hz, 60Hz)



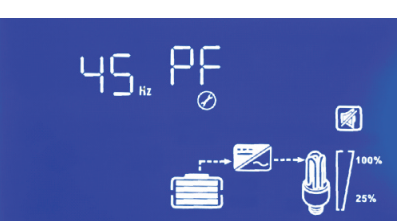
**PA:** Battery priority mode battery undervoltage to mains voltage setting:  
 10.5V-11.5V

**Pb:** Battery priority mode, when battery voltage is restored inverter from mains power conversion inverter voltage setting : 13.2V- 14.4V



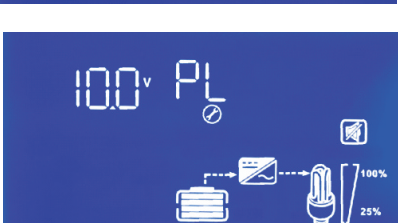
**Pd:** AC input lowest voltage setting

**PE:** AC input highest voltage setting



**PF:** AC input minimum frequency setting

**PH:** AC input maximum frequency setting



**PL:** Battery low voltage shutdown setting: 9.5V- 10.9V

**PN:** Unattended mode, battery under voltage restores the startup voltage setting: 12.6V-14.4V



# Specification:

Model		1000W	1500W	2000W	3000W	4000W	5000W	6000W	8000W	10000W	12000W		
Inverter Input	Rated capacity	1000W	1500W	2000W	3000W	4000W	5000W	6000W	8000W	10000W	12000W		
	peak power	3000W	4500W	6000W	9000W	12000W	15000W	18000W	24000W	30000W	36000W		
	Commercial Power range	110VAC:83V-137VAC 120VAC:90V-150VAC 220VAC:165V-275VAC 230VAC:173V-287VAC							110VAC:88V-132VAC 120VAC:96V-144VAC 220VAC:176V-264VAC 230VAC:184V-276VAC				
	AC frequency range	45-65HZ											
	Efficiency	>85%											
Battery	Type	lead-acid battery GEL battery lithium battery											
	DC Voltage	12VDC /24VDC			24VDC/48VDC			48VDC/96VDC					
	Input voltage range	12VDC:10.5-15VDC 24VDC:21-30VDC 48VDC:42-60VDC 96VDC:84-120VDC											
	Floating charge set	12V:12.9 ~ 13.6 V		24V:25.8V~27.2V			48V:51.6V~54.4V			96V:103.2V~108.8V			
	Low voltage restored	12VDC:12.6-14.4VDC		24VDC:25.2-28.8VDC			48VDC:50.4-57.6VDC			96VDC:100.8-115.2VDC			
	Low voltage shutdown set	12VDC:10-10.9V		24VDC:20-21.8V			48VDC:40-43.6V			96VDC:80V-87.2V			
	over voltage protection	12VDC:16.7VDC 24VDC:33.4V 48VDC:66.8V											
	over voltage alarm	12VDC:15VDC 24VDC:30V 48VDC:60V											
	AC charging	5A-35A(40A, 50A, 60A,70A Optional)											
Inverter Output	Capable of starting electric motor	0.5HP	1HP	1.5HP		2HP			3HP				
	AVR voltage range (VAC)	110/120/220/230/240±10% (Auto-sensing)							Without				
	Power factor	100%											
	Transfer time	Typical: 5ms(Including detection time)											
	Temperature protection	≥85℃ alarm ≥90℃ machine shut off											
	overload	IPS automatically shut down if overload exceeds 110%-120% of normal value for 30 seconds, IPS automatically resume work if overload comes to rated load.											
	Wave form	Pure sine wave											
	Frequency	Commercial power supply: shared frequency with the commercial inversion state:60/50±0.5											
	Output frequency range (electric supply mode)	Tracking automatically											
Protection	Overload, short circuit, battery high and low voltage, AC input high and low voltage protection												
temperature	Conversion method	Interactive											
	Operating Temperature	0℃~70℃											
Appearance	Thermal method	Cooling fan in intelligent control≤42℃ fan rotates slowly to ≥45℃ fan rotates fast											
	External Size(mm) (L*W*H)	510*325*215mm				645*325*215mm				765*320*250mm			
	Gross Size(mm) (L*W*H)	560*380*280mm				730*400*290mm				840*405*320mm			
	Net weight(kg)	14	15	18	20	31	34	35	52	54	56		
Gross weight(kg)	16	17	20	22	35	37	38	56	58	60			

