

System Function

- **Directly connected to the solar panels (do not need to connect the battery)**

Using precise MPPT function, APL functions, the inverter automatically adjust the solar panels of maximum output power, simply connect the solar panel to the grid inverters. Do not need to connect the battery.

- **AC 0 angle with high precision auto-detection**

AC phase angle of 0 through isolation amplifier then input to the MCU for high-precision detection and analysis. The phase shift rate is less than 1%, thus achieve high-precision with phase modulation AC output together.

- **Synchronous High-frequency Modulation**

In the process of the grid, usually adapt the same phase angle in parallel. (ie, When the two-phase alternating current total is equal to 0. Use switch to combination the two AC fusion) and the product is rectified AC half-frequency AC to 100Hz first, then the machine use the high frequency current in the circuit and semi-100Hz frequency alternating current generated combination, to achieve high-frequency modulation.

- **Pure Sine Wave Output** Use SPWM directly to make pure sine wave output.

- **Automatic Sensing Function Solar Luminosity**

Use the latest luminosity perception operation technology. The different illuminate angle and intensity of the solar panel will produce different current output. Use advanced CPU to operate the different illuminance and the data can be directly displayed on the LCD. Then you can visually see the sense of the strength of the sun unit. Used more convenient.

- **Power Automatically Locked (APL)**

In different current fluctuations, we should use the MPPT function. When the MPPT function adjusted to the maximum power point, the product automatically powers locked in maximum power point, then made the output power more stable.

- **Maximum Power Point Tracking (MPPT)**

Because the current intensity and the voltage changes at any time, if there is no power point tracking, there will be a lot of problems. In the past time, usually adopt a solar controller, but this product uses high-precision MPPT operation power, automatic and immediate adjust the solar panels output power at the maximum output point, then achieve a stable output purposes.

- **Automatically Adapt To Different Load Power Factor**

Adapt to any of the power load.

- **Constant Current, Constant Power**

This product is constant current, constant output power, without any overload, over-current phenomenon.

- **Automatically Shut Down When The Power Output Of a Fault**

When the city power system is in failure, the inverter will automatically turn off the output.

- **Current Limit Protection** Current limit

- **Stack Multiple Machines**

Multiple small power inverters in parallel can achieve large output power.

- **High-Frequency High Conversion Rate**

Adapt high frequency converter, the output more efficient.

Parameter Table

Grid-series models	300W	500W	600W	800W	1000W
Recommend use solar panels	420Wp/V mp= 18V/Voc=2 1V	620Wp/ Vmp= 18V/Voc =21V	720Wp/ Vmp= 18V/Voc =21V	1050Wp /Vmp= 18V/Voc =21V	1250Wp /Vmp= 18V/Voc =21V
DC Maximum Input Power	400W	600W	700W	900W	1200W
DC maximum voltage	VpvDC30.2VDC				
DC voltage range	Vpv 10.5V~28VDC				
Maximum output power factor	99%				
Maximum input current	20A	30A	40A	45A	65A
AC output power	300W	500W	600W	800W	1000W
AC maximum output power	300W	500W	600W	1000W	
Anti-voltage protection	Fuse				
AC standard voltage range	90~140VAC/180~260VAC				
AC frequency range	55Hz~63Hz/ 45Hz-53Hz				
Output current total harmonic distortion	THDIAC <5%				
Phase	<1%				
Islanding protection	VAC;f AC				
Output short circuit protection	Current-limiting				
Show	LED				
Installation	Wall hanging				
Cooling	Fan				
Standby Power	<1W				
Night Power	<1W				
Ambient temperature range	-25 °C~60 °C				
Humidity	0~99%(Indoor Type Design)				
Waterproof	Indoor Type Design				
Electromagnetic Compatibility	EN50081.part1		EN50082.part1		
Power System Disturbance	EN61000-3-2		EN60950-1		
Network test	DIN VDE 1026				
Certificate	CE				

Packing and Weight

N. W	0.77kg (300W)	1.3kg(500—600W)	2.1kg(800—1000W)
G. W	1.15kg (300W)	1.8kg(500—600W)	2.6kg(800—1000W)
Size (L x W x H)	18.7 x 12.6 x 5.1 cm	21 x 16.5 x 5.3cm	31 x 16.5 x 5.5cm
Packing (L x W x H)CM	Inner: 27.5x18 x 8(1) Outer: 43x38x 32(10)	Inner: 31.5x19x9(1) Outer: 45x41x35(10)	Inner: 39.5x 21x11.5(1) Outer: 43.5x41x27 (4)
G. W (Outer)	13KG	18.2KG	11.4KG

Installation instruction

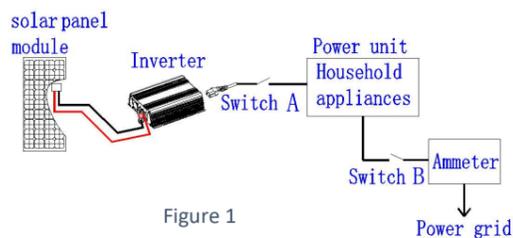


Figure 1

1、 Please read the below notes carefully before installation.

- Make sure the open voltage and operation voltage is in the range of 10.5-28V, and we recommend the 18V rated voltage solar panel or 24V battery.
- Make sure the inverter's AC voltage and frequency is the same with power grid voltage and frequency.
- Installation inverter in the low humidity and well-ventilated place to avoid the inverter damp and overheating, And clear the inflammable and explosive materials around.
- Recommended to use 4AWG DC input cable that can handle more than 50A current.
- DC input cable no more than 8M, because long DC cable will reduce the voltage from solar panel to inverter, then make some loss.
- There must be a circuit breaker between solar power generation and power grid (show like the "switch A" in figure 1). And there will be no load before the circuit breaker.
- Before connect all the connections, you must disconnect the utility power. After make sure the all connections are right then connect the utility power.
- If you need to disconnect the mains switch when the solar power generation is in operation, you must disconnect the control switch first (show like the "switch A" in figure 1).
- Avoid children touch or play the inverters, in order to prevent electric shock.
- Non-professional do not disassemble the inverter, only qualified serviceman can repair it.

2、 Connection DC terminal

Connect the solar panels positive terminal to inverter's positive terminal, and negative to negative. And you must screw up the nut to avoid the bad contact. Show in figure 2:

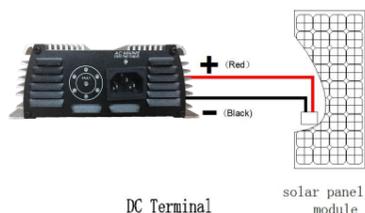


Figure 2

3、 Connection of AC terminal

Before connect the inverter's AC cable to the socket, you must disconnect the utility power. Then put the AC cable which has holes terminal into the inverter's 3 feet port and the pin terminal to the socket. Please make sure both of the terminal are connect fastness to avoid bad contact. Show like figure 3:

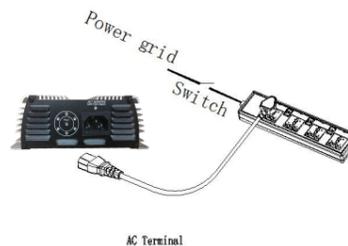


Figure 3

4、 Operation

After all connection, first open the mains switch, then open the inverter. When the inverter's green LED shows, it means the inverter start to work.

5、 Several or many inverters used in parallel.

In order to achieve higher power, we can use this inverter in stack. For example: 4 pcs of 300W grid tie inverter used in stack can achieve 1200W. And the stacking number is unlimited. Show as figure 4:

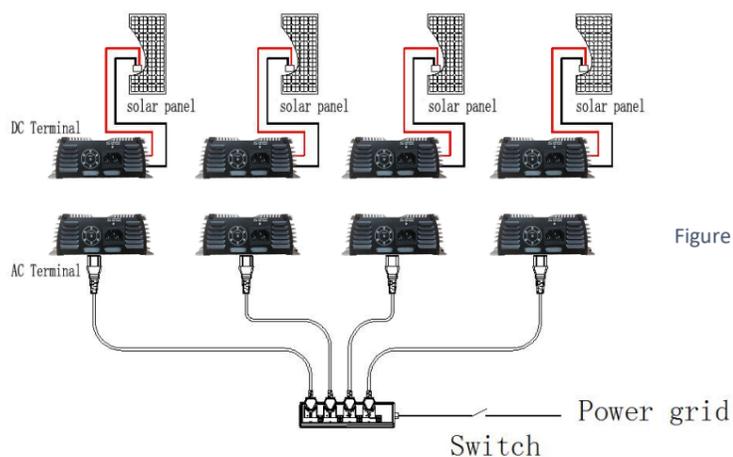


Figure 4

6、 Single-phase connection

Connection electrical diagram of the solar inverter used in single-phase power generation system

Indicator light instruction



Red Light

The red light indicates that there is no AC input and only DC photovoltaic panel is connected.



Green Light

When the green light is on and turning, it means that AC and DC are connected and working normally.



Yellow Light

When the yellow light is on, AC is connected, DC is not connected.