



Wind grid tie inverter user manual

DC wind grid tie inverter

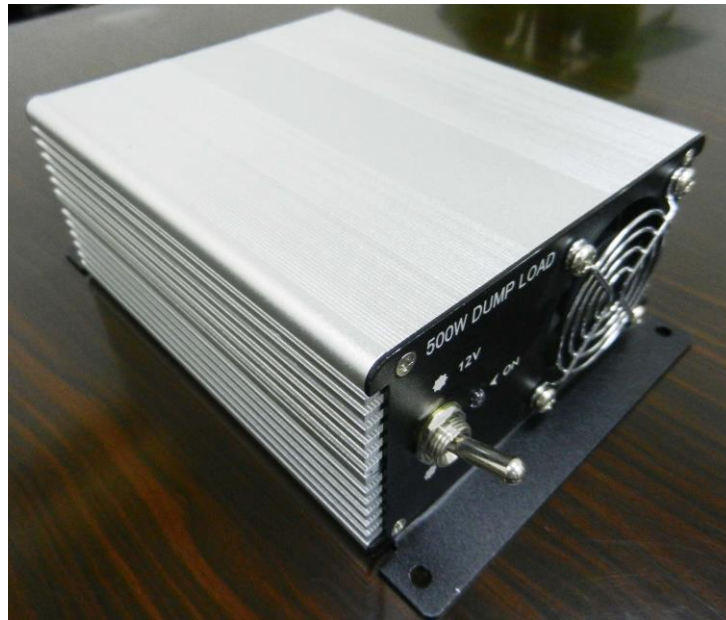


AC wind grid tie inverter





DUMP LOAD 1 (for 500w/600w inverter)



DUMP LOAD 2



**Foreword:**

We have 2 series of small wind grid tie inverter according to the input methods :

- 1、 DC wind grid tie inverter ;
- 2、 AC wind grid tie inverter 。

1、 System function**➤ Built-in rectification device****➤ Can connect handling charge resistance****➤ Display function****A) LED**

a) When the red LED on, maybe below status:

1. Power off
2. Power fault
3. low DC voltage (Low-voltage protection)
4. High DC voltage (Over-voltage protection)
5. Over temperature (Over temperature protection)
6. Inverter fault

b) Green LED on: It means the inverter start to work. The more power the inverter output, the quicker the green LED flashing.

B) LCD (Optional)

LCD display the power voltage, current, active power and grid electric energy. LCD display function:

- 1、 Electric parameters measurement function (voltage, current and active power, electric energy).
- 2、 Running time function (record load cumulative working hours).
- 3、 Power down data save function (save the number of kWh, operation time).

➤ High frequency two-way grid, one-way grid function

1. high-frequency modulation, AC half wave synthesis
2. grid way: one-way reverse transmission AC current

➤ Multi frequency output function

Apply to 50Hz/60Hz AC current,
Frequency range: 48Hz~63Hz

➤ 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.

1. AC phase shift: < 1%
2. Over-zero protection: 0.2 VAC
3. AC switching: 50Hz / 60Hz

➤ Pure Sine Wave Output

Use SPWM directly to make pure sine wave output.

1. Output waveform: Adopt complementary PWM to push-pull pure sine wave.
2. Generate means: enhancement-mode SPWM

➤ Islanding protection function

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

➤ Current Limit Protection

Current limit, this product is constant current, constant output power, without any overload,

➤ 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.

- **AC output**

Voltage range of the inverter whose output is 220V AC.: 190V - 260V, 50HZ

Voltage range of the inverter whose output is 110V AC.: 90V - 160V, 60HZ

2、Parameter

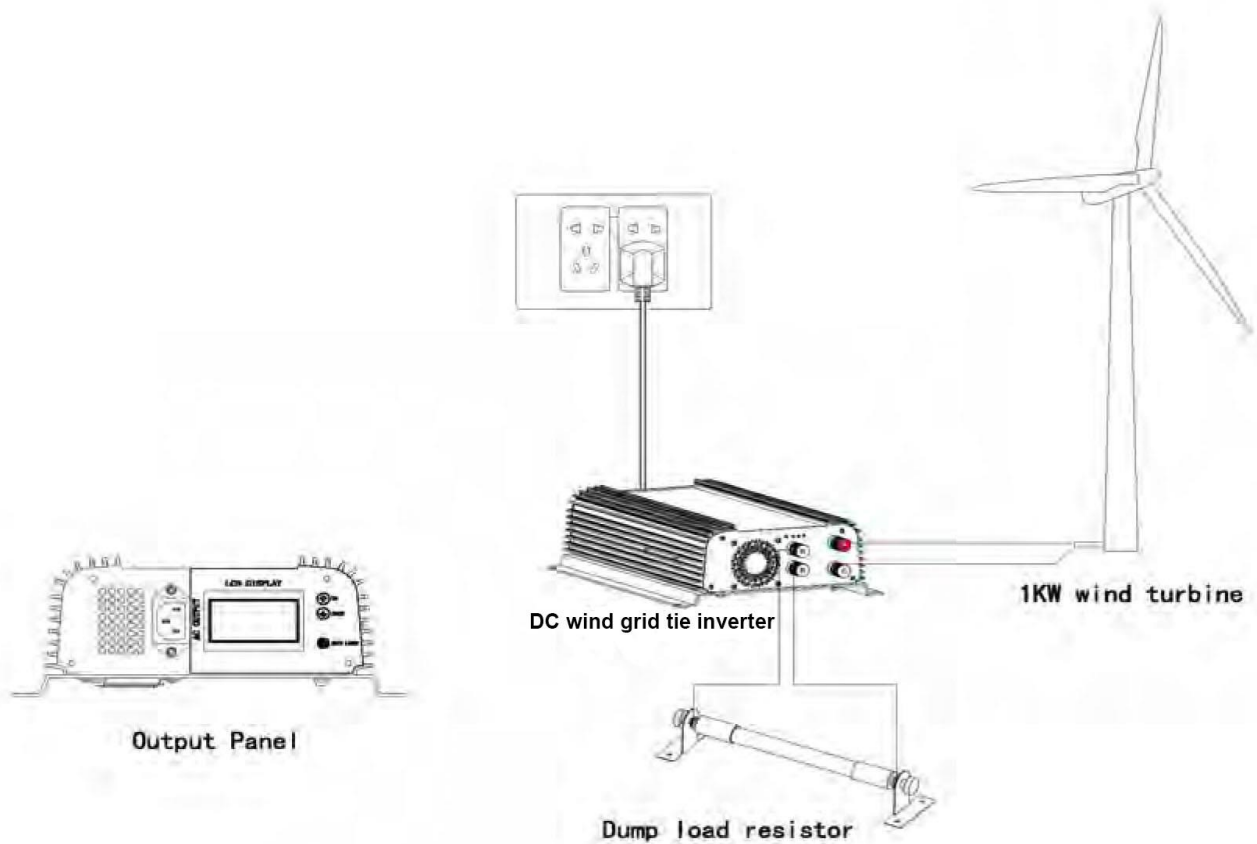
Wind grid-series models	WG300W-WAL	WG500W-WAL	WG1000W-WAL	WG1500W-WAL	WG2000W-WAL
Rated AC output power	300W	500W	1000W	1500W	2000W
DC Input Voltage Range (the test point is at the output of the rectifier)	10.5-30VDC/22-60VDC			45-90VDC	
Max output power factor	99%				
DC input Reverse voltage protection	Fuse				
AC output voltage range	90~160VAC/180~260VAC				
AC frequency range	46Hz~65Hz				
Islanding protection	Yes				
Output short circuit protection	Current-limiting				
Display	LED	LCD OR LED			
Cooling	Fan				
Night Power	<1W				
Ambient temperature range	-10 ℃~45℃				
Waterproof	Indoor Type Design				
dump load resistors parameter	$R=V^2/P=54^2/600 = 4.9$ (ohm)				
Electromagnetic Compatibility	EN50081.part1 EN50082.part1				
Power System Disturbance	EN61000-3-2 EN60950-1				
Network test	DIN VDE 126				



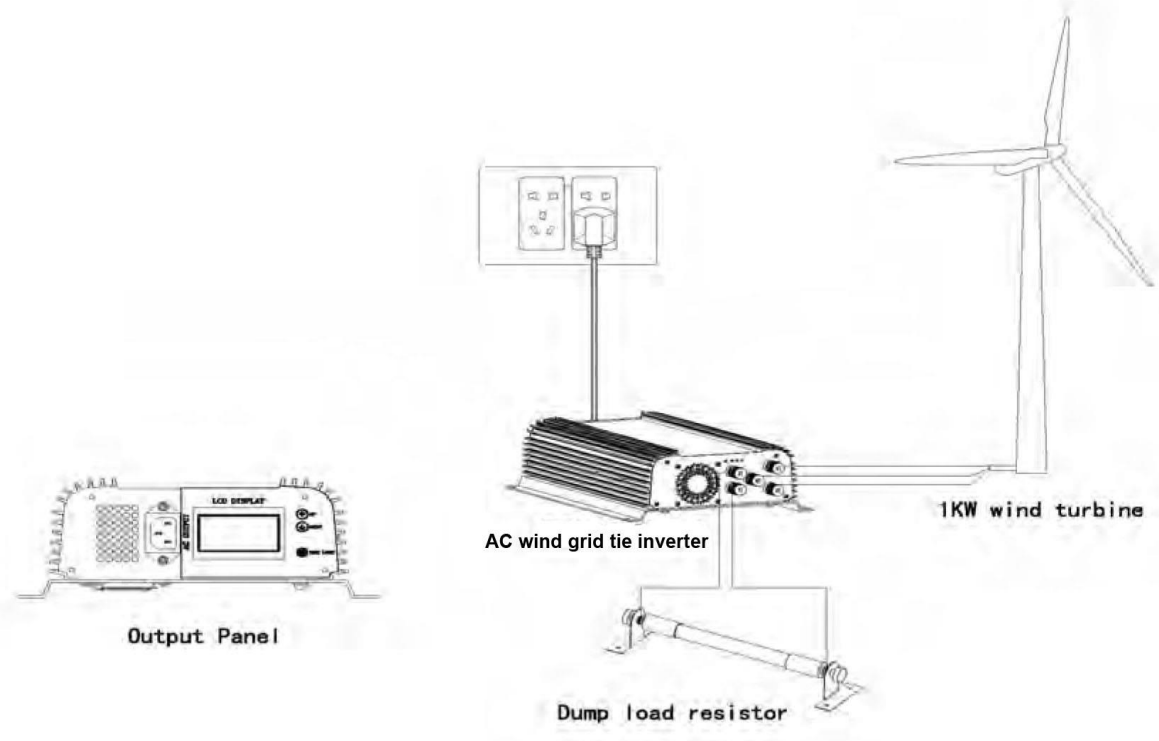
3、Package

Model	WG300W-WAL	WG500W-WAL WG600W-WAL	WG1000W-WAL	WG1500W-WAL	WG2000W-WAL
Unit N.W	1.8kg	3.8kg	5.0kg	6.2kg	7.0kg
Unit G.W	2.2kg	4.2kg	5.5kg	6.7kg	7.6kg
Product Size (L x W x H cm)	30*19*10cm	34* 27 * 14cm	40*27*14cm	45*28*14cm	45*28*14cm
Package size(L x W x H cm)	58*31*31(9pcs)	55*35*30(4pcs)	41*28*30(2pcs)	48*30*30 (2pcs)	48*30*30CM (2pcs)
Package G.W (kg)	17.5kg	16.2kg	9.9kg	14.2kg	15.8kg

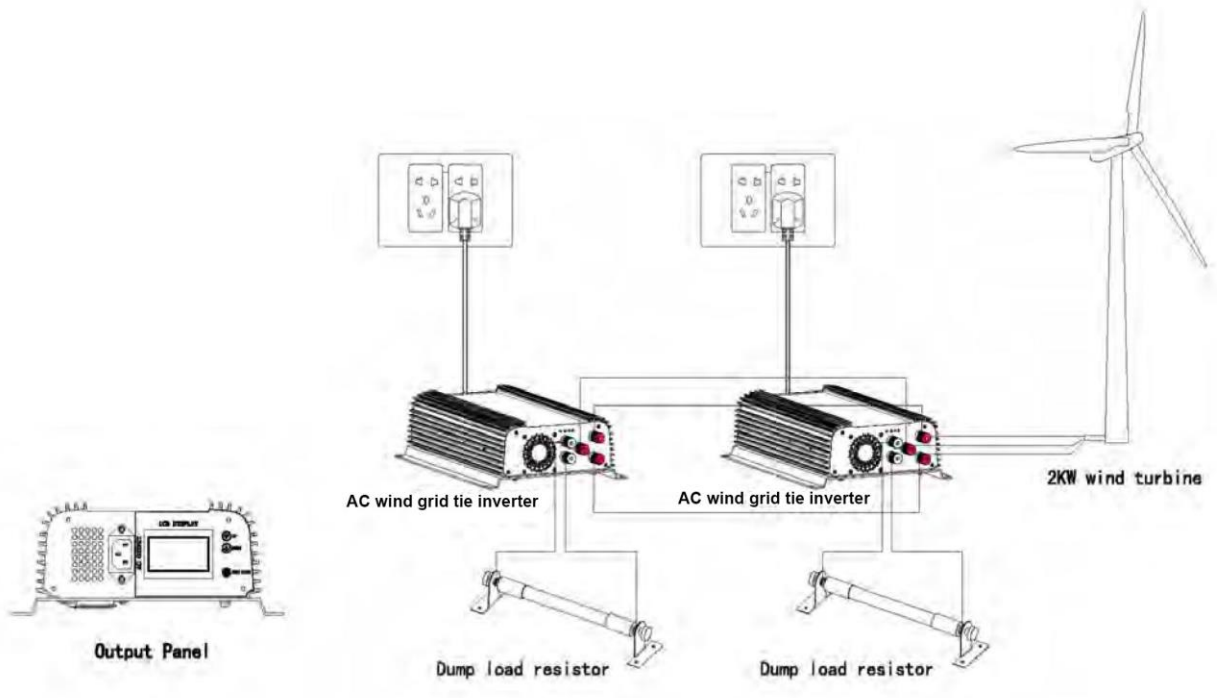
4、System description



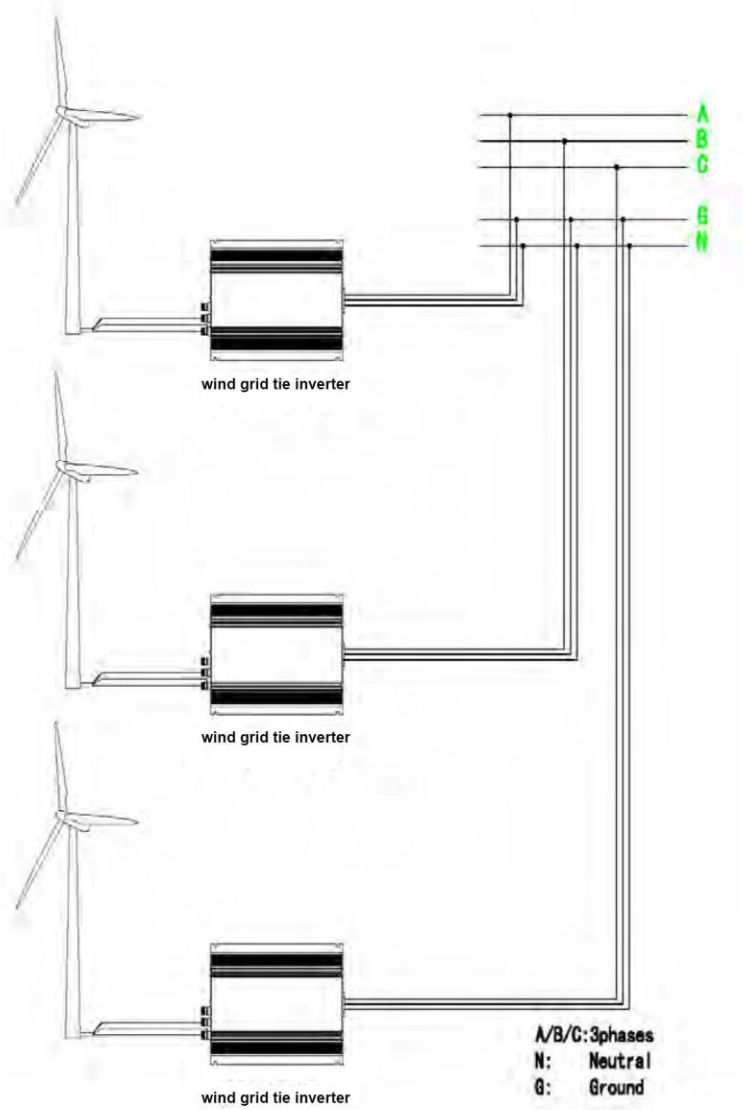
WDL model of SUN series grid tie inverter connected with DC output type of wind turbine.



WAL model of SUN series grid tie inverter connected with AC output type of wind turbine



Connecting two wind grid tie inverter with a max. power wind turbine



Three Phases Grid Tie Power System



Handling charge resistance connection terminal

3 phase AC input connection terminal



Output terminal

LCD display

LCD control button

Layout description

5、Accessories

- 1 Standard AC cable
- 1 user manual
- 1 Handling charge resistance