

GRID TIE SOLAR INVERTER

TEG-1000W Solar Grid Tie Inverter
DC 10.8V-28V AC 90-130V/190-260V



1000W USER MANUAL

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.

System Function

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.

Grid-series models	TEG-1000W
Recommend use solar panels	1250W
DC Maximum Input Power	1200W
DC Maximum Input Current	65A
AC maximum Output Power	1000watt
DC maximum input working voltage range	10.8~28v DC
Maximum output power factor	0.99
DC Anti-voltage protection	Fuse
AC standard voltage range	(120V type: 90~130VAC) (230V type:190~260VAC)
AC frequency range	45Hz-63Hz
Output current total harmonic distortion	THDIAC <5%
Phase	<0.5%
Islanding protection	VAC; f AC
Output short circuit protection	Current-limiting
Show	LED display for power indication, voltage indication, and AC frequency indication
Standby Power	<1W
Night Power	<1W
Ambient temperature range	-25C~50C
Humidity	0~99%(Indoor Type Design)
Waterproof	Indoor Type Design
Electromagnetic Compatibility	EN50081.part1 EN50082.part1
Power System Disturbance	EN61000-3-2 EN62109
Network test	DIN VDE 1026
Certificate	CE

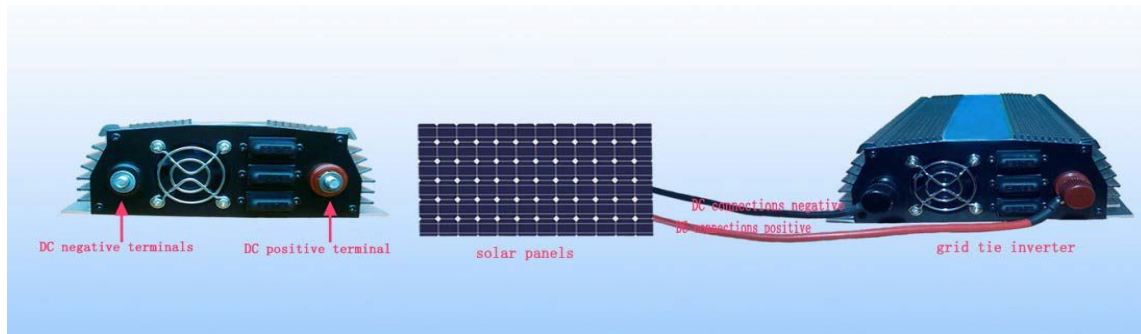
Net weight	2.1kg
G weight	2.8kg
Size (L x W x H)	31*16.5*6cm
Packing(L*W*H)CM	Inner: 40*21*12/pcs Outer:43*41*60/4pcs

User Guide

1、 Installation Connection

1、 Red terminal: Connect DC positive, black terminal: Connect DC negative. Show in Figure 1.

Figure1



2、 AC socket: Connect to the mains. Put the side of the AC cord which has holes into the inverter with 3 foot outlet

and the other side of the AC cord to home 3PIN AC outlet. Show in Figure 2.



Figure 2



Figure 3

3、 Switch: Connect the connections in right way, then turn on the switch. The inverter starts to work.

2、 Grid tied inverter used in the solar street lights.

Use this product, do not need to add solar panel controller, battery.

3、Stack using

In order to achieve higher power use requirements, this product can be stacked, such as: 4 grid inverter1000W stacking can achieve 4000W.And the number of the stacking is unlimited. Used as shown in Figure 4:

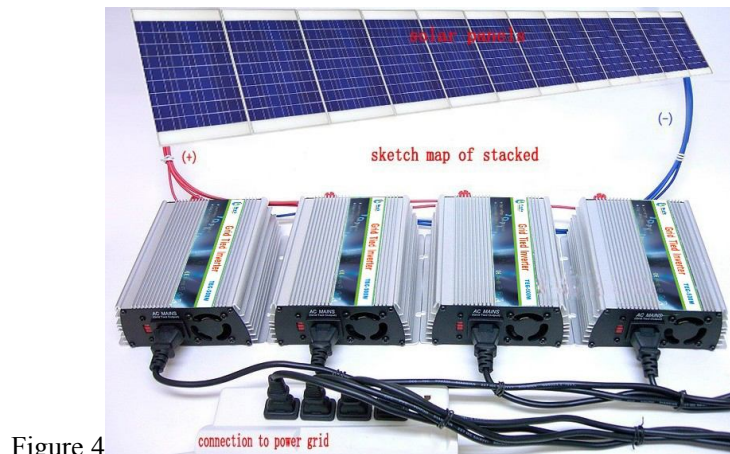


Figure 4

User Guide

4. Input and output

1. DC input limit

& Input voltage range: 10.5V to 30V

Solar Panel: Recommend using the power more than 30W and the standard voltage of 17.5V PV panels.

Recommend using multiple solar panels. Solar panel in series will result in high-input voltage which will exceed the

working voltage range of the inverter.

Wind turbine system: Rated voltage 24VDC, maximum voltage 28VDC.

2. AC output:

Voltage range of the inverter whose output is 220V AC.: 180V - 260V

& Voltage range of the inverter whose output is 110V AC.: 90V - 140V

5. LED Indicator:

1. Red LED:

1. Low-voltage protection (input DC voltage is less than 10.5VDC).
2. Over-voltage protection (Input DC voltage is greater than 30VDC).
3. Over-temperature protection (when the chassis temperature is above 75°C, the temperature dropped about 2-10 minutes to restart automatically after cooling).
4. Fault Protection (when 110VAC or 220VAC power outage or shutdown).
5. Islanding protection: When the electric supply stop, the inverter automatically shut down output.

2. Green LED:

1. Green LED flashing: The inverter is adjusting power output. MPPT is in working condition.
2. Green LED long in time: The inverter is in working condition with the maximum output power.

Notes

- Please pay attention to the voltage when use the product. The voltage is from 10.5—30V, if is not these voltage the product may broken.
- Non-professionals do not disassemble. Only qualified personnel may repair this product.
- Please install inverter in the low humidity and well-ventilated place to avoid the inverter over-heating, and clear around the inflammable and explosive materials.
- When using this product, avoid children touching, playing, to avoid electric shock.
- Recommended Maximum DC input 4AWG cable capable of handling more than 50A of the cable size.
- Optimal length of the DC input line 8M or less, long cable will allow solar panels to the inverter DC voltage drop caused by wear and tear.
- Connected to a power outlet to provide AC.
- Connected solar panels, battery or wind generators DC input DC power supply cable.
- Proposed wind power plant with its own charge controller and load dump