

# Off Grid All-In-One System

## User Manual

**SNE3000-10.24**



**Sunnix Energy Co., Ltd**

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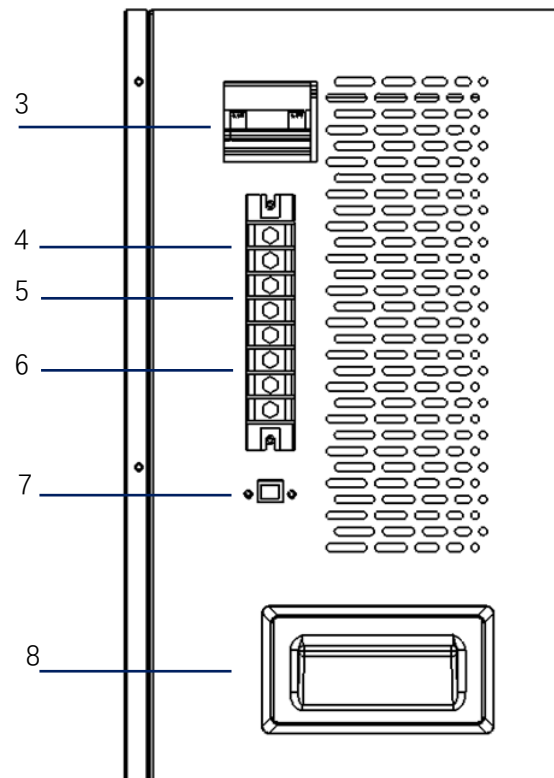
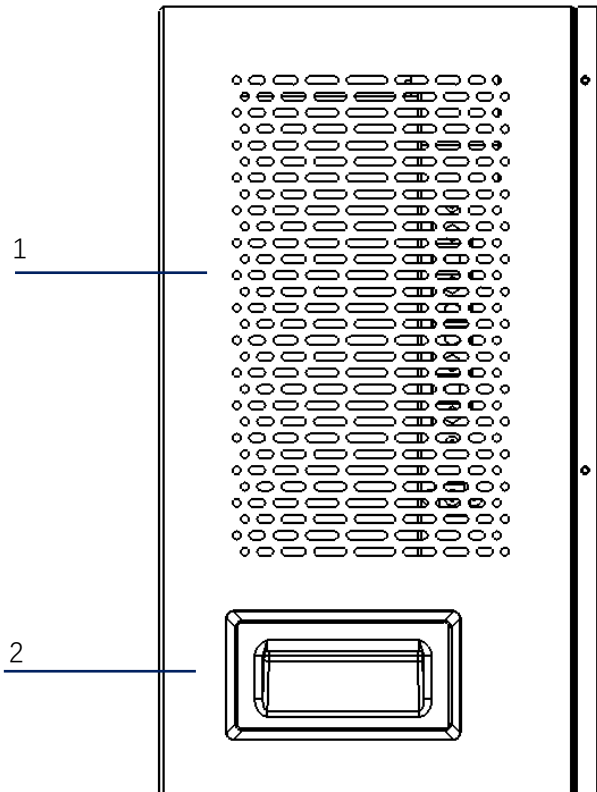
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## Product Introduction

The off grid All-In-One system integrated with MPPT solar charge controller, pure sine wave inverter, AC charger and lithium batteries. It adopts CPU control technique and achieves the RS485 communication among charger and inverter modules and BMS. The independent modularization design improves the reliability and extendibility greatly. It is really easy to do installation and move. This product has various kinds of functions such as strong shock proof, solar/grid/ battery complementary, automatically battery charging & monitoring, auto-selection to the work mode, AVR functions, etc. The lithium batteries can be charged by PV modules or AC and switch automatically to power home.

## Product Components



1. Cooling holes
2. Moving handle
3. Switch
4. PV input

5. AC input
6. AC output
7. RS485
8. Moving handle

## Installation Instruction

### 1. Open package inspection

- 1) After opening the package and lift the machine out, please check random accessories, including 1 pc user manual, 4 pair of connectors. And check whether the machine is still kept well after transportation, if find any broken or component missing, do not turn on the machine, feedback to the carrier and factory.

Note: Please keep the packing box and material, can be used for next delivery if need. This machine is heavy, please handle with care when carrying.

### 2) Installation notice

Install in an area of well ventilated, free of water, burning gas and corrodent. Not good to put on the side, better keep good air ventilation from front panel's bottom air intake, or air outlet from back panel's fan, and side face of machine. Around environment temperature should remain 0 to 50°C.

If disassembling and operate under low temperature environment, may happen water condense, only can work till through dry of machine inside and outside, otherwise will be shock risk.

If the machine is place for a long time, it should be confirmed that the machine is completely dry, and no corrosion can be installed and used.

### 3) Installation steps

Environmental requirements

Open the package and place the machine in a reasonable working environment.

Wire diameter selection

Use a cable with suitable wire diameter, which cannot be lower than the national safety standard. The general wire diameter is selected according to the current density of not less than  $5A/mm^2$ , and the length of the connecting wire is minimized to reduce the loss.

## Connecting the load

Turn off ON/OFF button and SWITCH firstly, then connect the AC load to the AC output of the machine (AC OUTPUT), confirming that the load polarity is not reversed, and ensure the load is lower than the standard power of the machine, and the starting current cannot exceed the peak starting power of the machine (2 to 3 times the rated power).

## Connecting PV

Connecting the PV, the PV array voltage and current should be lower than the maximum PV input voltage and current of the rated charge controller. Connect the PV cable to the circuit breaker that meets the breaking capacity, and then connect it to the PV input terminal of the machine.

Note: Be careful not to reverse the polarity.

## Connecting to the mains

Disconnecting the grid voltage firstly, connect the mains input cable to the devices which has over current protection, and then connect it to the AC input of the machine. Be careful not to reverse the phase and polarity.

Note: Before connecting the load to the machine, please turn off the loads firstly.

This product can only protect high-voltage surges with low energy. In areas with high lightning output, it is recommended to install lightning protection devices outside the PV input terminals

To ensure the personal safety of the user and ensure the correct use of the product, please confirm that it is properly grounded before starting the machine.

If user want to load an inductive load such as a motor or a laser printer which operating power is too large, the machine rated capacity should be selected according to its peak power. The load starting power is generally 2 to 3 times of its rated power.



# LCD Display



Key	Function
<b>UP/DOWN</b>	<p>Press the UP or DOWN button, the setting value of the corresponding setting item can be adjusted.</p> <p><b>Noted:</b> Value of charging current, PV charging current, value of battery type and working mode takes effect immediately.</p>
<b>ON/OFF</b>	<p>1. Powered by battery: press ON/OFF button for 2 seconds, inverter gives the notification tone and turn on; press ON/OFF button for 2 seconds, inverter makes notification tone and shut down.</p> <p>2. Powered by city power: inverter starts up automatically connecting to city power; press ON/OFF button for 2 seconds, inverter sets indicating voice, stop AC output, and shut down after city power is disconnected.</p>
<b>FUNCTION</b>	<p>1. Mute function:</p> <p>1.1 Press the FUNCTION button for 1 second to switch the machine's on/off mute function.</p> <p>2. Setting function:</p> <p>2.1 At the "OUTPUT interface", press the FUNCTION button for 2 seconds, the working mode can be set, then press UP or DOWN buttons can select the working model.</p> <p>2.2 At the "BATT interface", press the FUNCTION button for 2 seconds, at this time you can set the battery model, then press UP or DOWN buttons can select the battery model.</p> <p>2.3 At the "INPUT interface", press the FUNCTION button for 2 seconds, the AC charging current can be set, then press UP or DOWN buttons can select the AC charging current.</p> <p>2.4 At the "PV interface", press the FUNCTION button for 2 seconds, can set the controllers charging current, then press the UP or DOWN button to select increase or decrease the charging current.</p>

## Operation Instruction

### 1) SWITCH

The switch controls the battery power connect to inverter. Lift the switch, the battery starts to power, and it will stop if turn switch off.

### 2) ON/OFF Button

ON/OFF button controls the inverter function. Press ON/OFF button for 1 second, you will hear one remind voice then the inverter starts to work. Press ON/OFF button again, inverter makes notification and shut down.

### 3) AC Charge

AC charge function means the machine need connect to grid or diesel generator by special cable (if available). Lithium battery can be charged by grid or diesel generator if short of power. The All-In-One machine can power home and charged by AC at the same time, also it can work without PV.

### 4) RS485

The RS485 port connecting to BMS (battery management system), you can use computer and connect with RS485 port to set and read all data of lithium batteries, like voltage, current, temperature, energy output capacity. It is helpful for checking whether batteries' problem if the machine does not work.

## Technical Parameters


Model	SNE3000-10.24
Rated AC Output Power	5KW
Peak Power (20ms)	15KW
AC Output Voltage	100-120V/220-240V
Output Frequency	50/60Hz
Output Waveform	Pure Sine Wave
USB Output	5V 2A
Max AC Charge Current	40A
Max PV Input Power	3120W
Max PV Input Voltage	150V
MPPT Charging Current	48V 60A
Battery Type	LiFePo4
Battery Capacity	10.24KWh
Nominla Voltage	51.2V
Operating Voltage	44.8 – 58.5V
Communication	RS485
Cooling Method	Auto Fan Cooling
Protection	Short Circuit,Over Charge/Discharge, Over Current/Temp
Working Temperature	-20 – 60°C
Enclosure Protection Rating	IP40
Dimension(W*H*D, mm)	642*1129*280
Weight	140Kg
Warranty	3 Years
Certificates	CE ,TUV,IEC, RoHs


# Sunnix Energy Off Grid All-In-One System

## Warranty

Your SNE3000-10.24 has two-year limited warranty from the date of purchase. This limited warranty does not cover problems caused by incorrect operation, self-dismantling or modification. We offer free replacement service to the defective product within 7 days from the date of purchase, except for the force majeure or non-artificial factors.

## Warning

 As utility power, the AC output of this product has potential danger. Keep it away from children, use it cautiously, risk of electrical shock.

 Before using your All-In-One machine, read the user's manual carefully and operate it correctly. Don't expose the inverter in rain, snow or spray. keep it away from potential source of flammable fumes, gases or clothing, or it will cause the failure of power inverter, and even damage your electrical devices or lead to other unpredictable consequences!

⚠ Don't disassemble or refit this unit. The manufacturer will not be responsible for all consequences caused by the unauthorized modification!

⚠ Although with over-voltage protection, don't connect this product with the supply whose voltage exceeds inverter's rated voltage, otherwise it will result in permanent damage to this product.

⚠ Handle with care and avoid violent vibration.

⚠ The product should be able to operate all AC loads rated at or below its power rating.