12V/24VSolar Power System   12V/24V 太阳能系统

（built-in inverter、solar controller、battery）/（内置逆变器、控制器、电池）

Features and function：

- **Pure sine wave output**
- **CPU control technology; SCM control**
- **Strong ability of impact resistance**
- **Have UPS function and AC charger**
- **Wide input voltage range: 145-275V; three step AVR (two step -up, one step -down)**
- **Protection against overload, short-circuit, overvoltage, under-voltage and over-temperature, etc.**
- **Anti reverse connection protection and high-low voltage protection(option)**
- **Special overload protection: when it is overload, it will lock the unit automatically，when it restores，it will restart the unit automatically again.**
- **Strong inverter ability. It can change frequency immediately and it is able to drive the inductive load such as air conditioner, refrigerator, motor, etc.**
- **LCD display**
- **Meet the need of different power supply**
- **Use MOSFET and IGBT**
- **Can choose working mode by yourself**

Working　Mode　Option：

1、The city power priority: when city power is available ,the inverter will work AC output , city power will supply to load ; when have both city power and sun power , inverter will charges 2 kinds power to battery . when city power failed, sun power charges the battery and use battery power(solar power) talk the load .

2、Solar power priority :when it have sun power , sun power charges the battery and take the load , when it does not have sun power , inverter will use battery power take the load , when battery power is lower ,inverter will automatically use ups function to supply power to load and charge the battery

特性：

☆　纯正弦波输出。
☆　微电脑（CPU）控制技术，单片机控制，性能卓越。
☆　抗冲击能力强。
☆　具有 UPS 功能和市电充电功能
☆　宽范围稳压：145V-280V, 三级稳压（二级升压，一级降压）。
☆　具有过载、短路、过压、欠压、过温等保护功能，可靠性高。
☆　电池可选防反接保护、高低电压保护。
☆　逆变能力强，可立刻改变频率功能，可带感性负载如空调，冰箱，马达等。
☆　全面个性化的 LCD 液晶显示
☆　采用先进进口 MOSFET 和 IGBT 管。
☆　可自由选择工作模式

工作方式选择（可自选）：

1 、市电优先：
　　当有市电时逆变器直接市电输出，市电直接给负载供电，市电与太阳能同时给电池充电，没有市电时,只有太阳能给电池充电，电池（太阳能）给负载供电.

2、太阳能优先/电池优先:
　　当太阳能系统有电时,太阳能给电池充电和给负载供电，当太阳能系统没有输入时，电池给负载供电，当电池没电时，逆变器转到市电，直接由市电给负载供电和给电池充电.

Application of solar energy system：

This is a new type of PV system, designed to resolve the problem of power shortage for the families, companies and other places. It is mainly contain case, inverter, solar controller, breaker, fuse, input/output terminal. It can use for light, radio, DVD, TV set, fans, freezer, computers, small hand-drill, and communication equipment. The AC system is widely used in the field of family houses, schools, hospitals, offices, etc.

太阳能系统的适用范围 ：

这是一种新型的光伏系统，旨在解决，家庭，公司等场所电力短缺的问题。它主要包含:逆变器，太阳能控制器，断路器，熔断器，输入/输出端子。它可以用于照明，收音机，DVD，电视机，电风扇，冰箱，电脑，小手电钻，和通信设备等，交流系统被广泛用于家庭住宅，学校，医院，办公室等领域

Technical Specifications/技术参数

型号 Model	SP1000	SP 1500	SP 2000	SP 3000
尺寸 Size (L*W*H)	550*550*650mm			
包装尺寸 Packing Size (L*W*H)	600*600*700mm			
PWM 控制器/MPPT 控制器 （可选）PWM Controller/MPPT Controller （Optional）				
额定直流电压 Rated DC Voltage	12V/24V	24V		
额定电流 Rated Current（**option** 可选）	20A/30A	30A/40A/50A/60A		
太阳能输入 Solar Input — 峰值功率 Maximum Power（WP）	240/360 480/720	720/960/1200/1440		
太阳能输入 Solar Input — 工作电压 Nominal Operating Voltage(V)	17.2 /36.5	36.5		
Inverter 逆变器				
额定容量 Rated Capacity	1000W	1500W	2000W	3000W
输入 Input — 市电电压范围 Commercial Power range(VAC)	100/110/120/220/230/240（+25%，-35%）			
输出 Output — 自动电压调节 AVR voltage range（VAC）	100/110/120/220/230/240±10%（自动调节 Auto-sensing）			
输出 Output — 转换时间 Transfer time	典型 Typical：5ms(自动调节 Including detection time)			
输出 Output — 波形 Wave from	Pure sine wave 纯正弦波			
输出 Output — 频率 Frequency(Hz)	市电:与市电同频 逆变: 50/60±0.5 Commercial power supply: shared frequency with the commercial inversion state:60/50±0.5			
输出 Output — 交流电压 Voltage(VAC)	100/110/120/220/230/240±2%			
输出 Output — 超载保护 Over Load Protection	负载超过 120% 210 秒,逆变器自动关机 10 seconds delay shutdown for 120% exceeded			
电池 Battery — 容量 Capacity	2PCS*200AH			
电池 Battery — 直流电压 DC Voltage	12V/24VDC	24VDC		
电池 Battery — 类型 TYPE	密封式免维护铅酸蓄电池 Sealed, maintenance-free lead acid			
电池 Battery — 市电充电电流 AC charge current	15A(最大 Maximum)		20A(最大 Maximum)	
电池 Battery — 电池保护 Battery protection	自动检验及放电保护,过充保护,智能管理 Automatic self-test, discharge protection, over-charge protection, smart management system.			

Inspection and Maintenance

The following inspection and maintenance test are recommended for best system performance.

1. Frequently inspection on the solar panel Clean away dust and so on.

2. When the system is in the non working state, at least every three months to charge the battery to prevent the battery from discharged.

3. Tighten all the terminals. Inspect for loosen, broken, or burnt wire connections. Be certain no loose strands of wire are touching other terminals.

检查和维护

下面为系统性能检查和维护测试最佳的推荐

1。经常在太阳能面板上的检查清理掉灰尘等。

2。当系统处于非工作状态，至少每三个月对电池进行充电以防止电池损坏。

3。拧紧所有的连接，检查是否有松动、断裂或烧毁导线连接。