



五星品质 源自索尔科技  
Five star quality, derived from suoer technology



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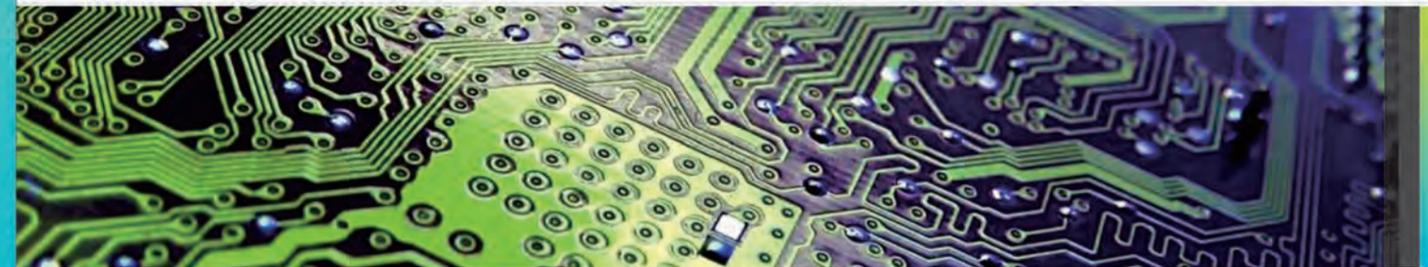
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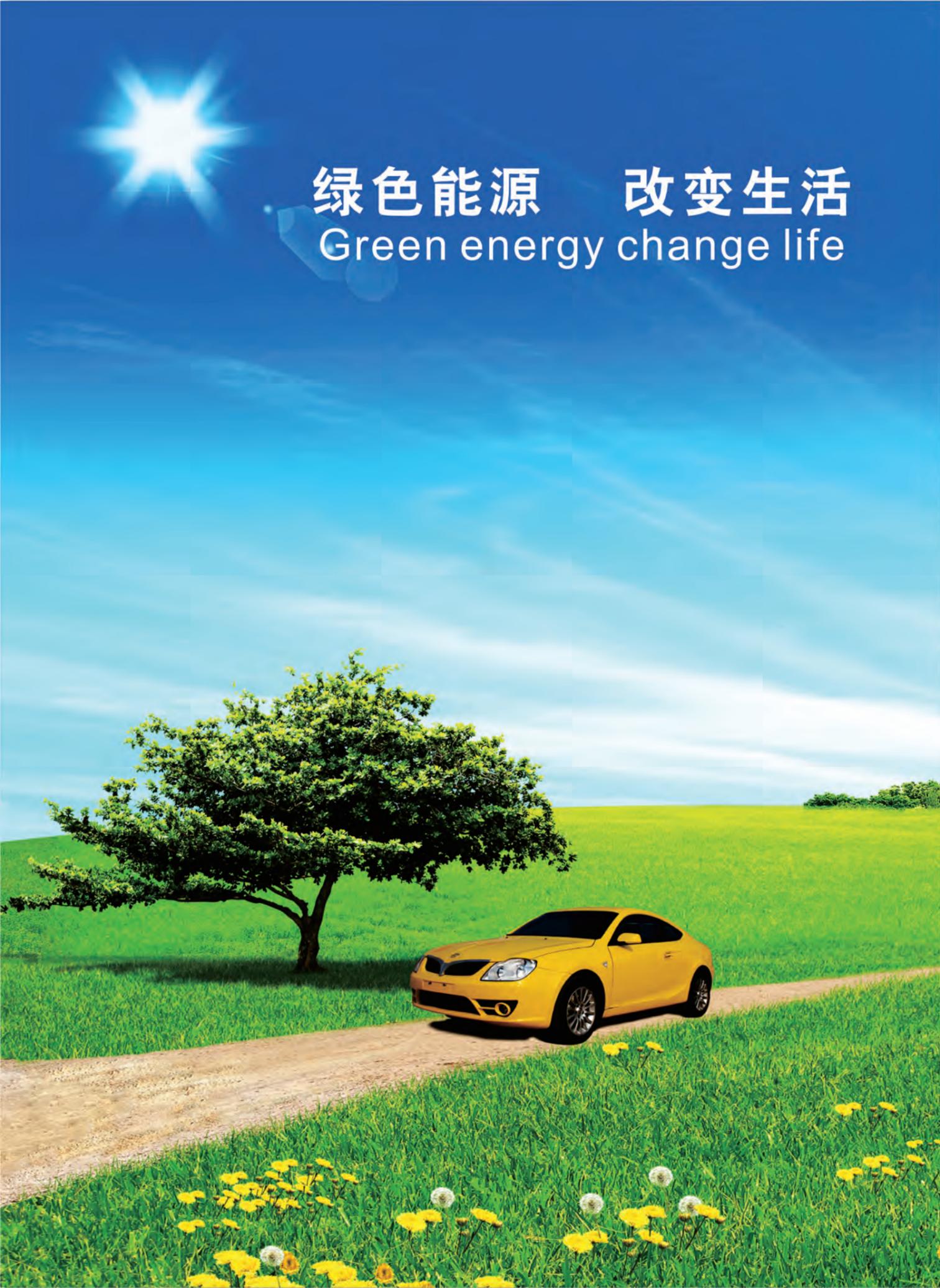
SUNCHONGLIC® | 索尔 SUOER®



Power Supply Series  
Solar charge controller  
Solar Inverter/battery Charger

电源产品  
太阳能控制器  
逆变器/充电器

Foshan Suoer Electronic Industry Co.,Ltd  
佛山索尔电子实业有限公司



# 绿色能源 改变生活

Green energy change life

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# ABOUT US

## 关于我们

# 26<sup>Th</sup>

26年电源行业经验,历史成就专业,专业铸就品质  
26 years experience in home power supply industry,  
professional achieved from history;specialization enhances quality.

佛山市索尔电子实业有限公司是一家集电子类产品科研、开发制造和销售于一体的综合企业。公司总部位于广东省佛山市南海大沥,距广州市区20公里,交通便利,环境优美,公司自建占地2万平方米的工业园,拥有标准的厂房、先进的生产设施、高标准的研发大楼。

公司最新推出世界领先的电源逆变器、车载电源逆变器、充电器、工频逆变器、风光互补控制逆变器、风力发电机等产品。

本着“创新发展,诚信共赢”的企业宗旨和“技术求精、团结向上、注重效益、共发展”的原则,凭借严格规范的管理制度和日臻完善的售后客服体系,以打造同行业著名品牌为己任竭诚为广大客户不断提供优质的产品和一流的服务。

Suoer Electronic Industrial Company Limited integrates R&D, manufacture and sales together. Located at Dali town, Nanhai district, Foshan city, Guangdong province, it is 20 kilometers away from Guangzhou with convenient transportation and beautiful scenery. We have built a 20,000 square meters industrial park with standard workshops, advanced equipments and leading R&D center.

The company pushes forward many world's leading products, including power inverter, car power inverter, battery charger, power frequency inverter, scenery complementary control inverter, wind generator and other products.

Suoer sticks to the spirit of "innovative development, win-win benefit" and the principle of "technical refinement, upward unity, and joint development". We adhere to the virtue of strict management system, perfect after-sale service system and regard creating a famous industry brand as our duty. We try our best to provide quality products and first-class service for our customers.

# CORE COMPETENCE

## 核心竞争力



研发团队  
The r&d team



程序开发  
Application development



电路设计  
circuit design



维护  
maintain



模型设计  
mold design



平面设计  
Graphic design



研发团队  
The r&d team

行业领先的仓储物流中心  
整个公司的仓储面积超过2万平方米,库存产品超过10万种,尽最大努力为客户节省采购成本和时间,以满足客户需要为己任,选择最好的的产品,最优惠的价格,为客户提供快捷高效的一站式采购服务。

leading warehouse logistics center in the industry  
The company's storage area is more than 20,000 square meters and product inventory is more than 100,000 kinds. We try our best to meet customers' need and save their purchasing time, providing them with good products, preferential price and efficient one-stop purchasing service.



生产  
Production



模具  
Model



库存  
inventory

销售网络  
产品畅销国内市场并远销非洲、美洲、欧洲、东南亚及中东地区等;产品成熟,销售网络完善,在行业的知名度越来越高;产品质量得到国内外客户一致肯定,索尔品牌已经深入人心。

Distribution network  
The products are sold well both in domestic market and international market. Our overseas markets are mainly Africa, America, Europe, Southeast Asia, Middle East, and so on. Our brand "Suoer" goes deeply into the common aspiration of the people because of its high quality, good service and perfect sales network.



销售团队  
The sales team



对外贸易办公室  
The foreign trade office

# HIGH PRECISION EQUIPMENT

## 高精度设备



electrostatic discharge generator  
静电放电发生器



solar battery simulator  
太阳能电池模拟器



vibration measurement instrument  
振动测量仪



salt spray test chamber  
盐雾试验箱



oscilloscope  
示波器



temperature and humidity testing chamber  
高低温湿热试验箱

# RELIABLE QUALITY ASSURANCE

## 值得信赖的品质保证



ISO9001:2000认证



中国优质名牌产品证书  
China High Quality Name Brand Product Certificate



广州市产品质量检验网  
成员单位  
Guangzhou Product Quality Testing Alliance



CTA品质验证证书  
CAT Certificate of Quality Inspection



DAS(达卫师)认证



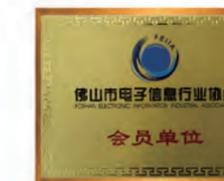
CE认证



RoHS认证



中国国家强制性产品  
认证证书  
China Compulsory Certification



佛山市电子信息行业协会  
会员单位



先进企业



十大优秀非公企业支部



最佳供应商



优胜奖



最具市场潜力奖



EAN



佛山市电子信息行业协会

索尔一直坚持以“创新发展, 技术求精”为开发理念, 创造一系列得到国内外客户一致认可的产高科技产品。已荣获多项国际专利是索尔实力的见证。

Suor sticks to the idea of "innovative development and technical refinement", and it has developed series of high-tech product which are popular and approbated by both of domestic and abroad customers. It proves its strength by obtaining several international patents.



# INDEPENDENT INNOVATION 自主创新



人力资源是企业最宝贵的财富, 公司始终把吸引和培养人才作为企业领导者的最重要职责。我们主张用人所长, 扬长避短, 我们看到的是一个进步的一面, 积极的一面, 公司致力于打造一支国际一流的设计研发团队。

Human resource is the most precious fortune of the enterprise, the company always put the attraction and cultivation of talents as the most important duty of the enterprise leader. We advocate the use of advantages, avoiding disadvantages, we see a progressive side, the positive side, the company is committed to build a first-class international design team.



# TALENTS AND MANAGEMENT 人才与管理

技术开发部  
Technical development department

工程部  
Engineering dept

产品生产部  
Production department

仓务库  
Warehouse

IQC检验室  
IQC test room

仓务部  
Storehouse department

财务部  
General accounting department

后勤部  
Logistics department

采购部  
The purchasing department

市场推广部  
Marketing department

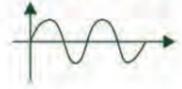
人事行政部  
The department of personnel administration

市场外贸部  
Ministry of foreign trade market

产品销售部  
Product sales

# Solar power inverter 太阳能电源逆变器

SDB-1000A SDB-2000A



NEW



智能强功率启动  
Intelligent power starting



直观功率, 电池电量显示  
Directly to see the porwe, battery electric power display



航天级静音技术  
智能变速节能风扇  
Aerospace grade mute technology, intelligent energy-saving fan



微电脑节能控制  
Microcomputer energy-saving control

### 产品适用范围 Range of application

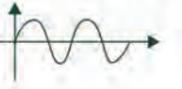


### 技术数据/Technicai data

型号 Model	SDB-500A	SDB-500B	SDB-1000A	SDB-1000B	SDB-1500A	SDB-1500B	SDB-2000A	SDB-2000B
输出电压 Output voltage	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V
额定功率 output power	300W	300W	600W	600W	1000W	1000W	1500W	1500W
瞬时功率 instantaneous power	500W	500W	1000W	1000W	1500W	1500W	2000W	2000W
频率 Frequency	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
USB	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A
空载电流 No-load current	<0.3A	<0.2A	<0.5A	<0.3A	<1A	<0.5A	<1A	<0.5A
工作电压 working volt	DC12V	DC24V	DC12V	DC24V	DC12V	DC24V	DC12V	DC24V
电压范围 voltage range	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	21-30V

# Solar charger inverter all-in-one 太阳能充电逆变一体机

SUS-1000A



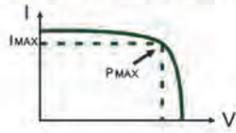
### 技术数据/Technicai data

型号 Model	SUS-500A	SUS-500B	SUS-1000A	SUS-1000B
内置控制器 Built-in solar controller	12V10A	24V/10A	12V/20A	24V/20A
推荐太阳能板规格 Solar panel SPECS	100~150W/18V	100~150W/36V	100~200W/18V	200~300W/36V
外置蓄电池 External battery	12V100Ah~150Ah	24V 100Ah~150Ah	12V 100Ah~150Ah	24V 100Ah~150Ah
USB输出电流 USB input Ampere	1000MA	1000MA	1000MA	1000MA
USB输出电压 USB output Voltage	5.0 +/-0.3V	5.0 +/-0.3V	5.0 +/-0.3V	5.0 +/-0.3V
逆变器输出电压 Inverter output voltage	AC 220V +/-5%	AC 220V +/-5%	AC 220V +/-5%	AC 220V +/-5%
最大持续功率 MCR	350W	350W	600W	600W
峰值功率 peak power	500W	500W	1000W	1000W
无负载电流 No load current	<0.5A	<0.3A	<0.5A	<0.3A
直流输入电压 DC input voltage	DC9.7V~15.5V	DC20V~32V	DC9.7V~15.5V	DC20V~32V
输出频率 frequency of output	50 +/-3Hz	50 +/-3Hz	50 +/-3Hz	50 +/-3Hz
转换效率 transfer efficiency	> 90%	> 90%	> 90%	> 90%
高压切断 high voltage cutout	15V +/-0.5V	31V +/-0.5V	15V +/-0.5V	31V +/-0.5V
低压报警 Low Voltage Alarm	11.2V +/-0.3V	22V +/-0.3V	11.2V +/-0.3V	22V +/-0.3V
低压切断 Low voltage cutout	10V +/-0.3V	20V +/-0.3V	10V +/-0.3V	20V +/-0.3V
过载/短路保护 Overload/short-circuit protection	有	有	有	有
输出波形 output waveform	修正波	修正波	修正波	修正波
冷却方式 type of cooling	风扇冷却	风扇冷却	风扇冷却	风扇冷却
工作环境温度 environment humidity	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C
相对湿度 relative humidity	<90%RH	<90%RH	<90%RH	<90%RH

# Hybrid High-frequency Photovoltaic Inverter

混合型高频光伏逆变一体机

SON-SUW1500VA



## UPS

带MPPT光伏充电

With MPPT PV charge



■ DC 12V→AC 220V  
■ DC 24V→AC 220V **1000W**

### 产品特点:

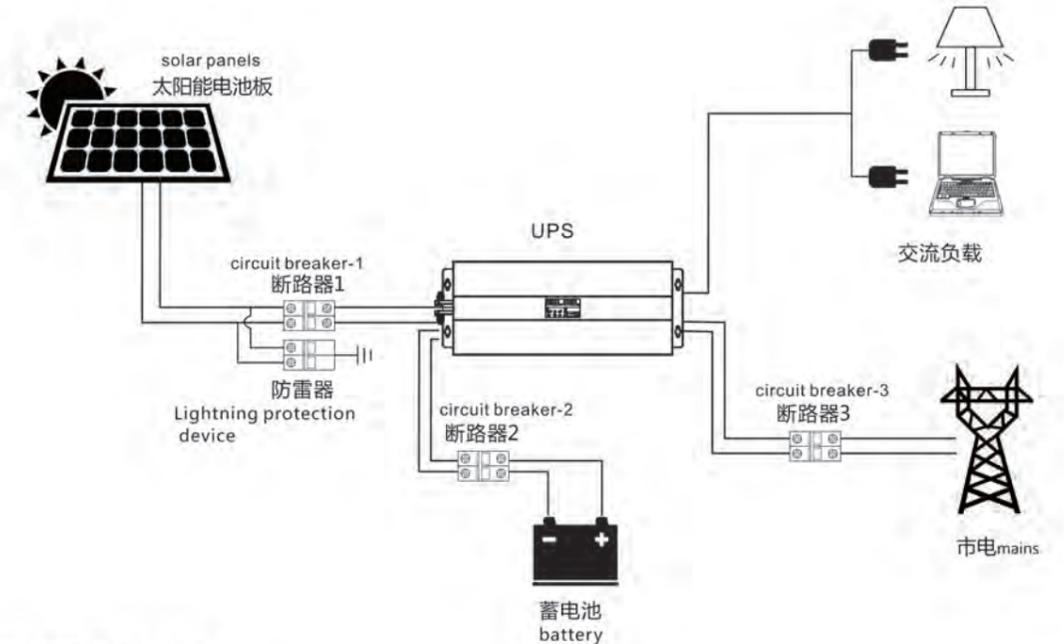
- 纯正正弦波输出，输入输出完全隔离设计。
- 内含三段式充电模块，充电电流高达15A。
- 高逆变效率达88%以上，具有省电节能模式。
- 可搭配市电，混合使用。
- 可耐受2倍额定功率启动，带载能力卓越。
- LCD显示工作和充电状况。
- 内置交流旁路继电器，真正实现交流电不间断输出。
- 高级微处理控制系统设计。
- 输入反接/欠压/过压/短路/过载超温保护。

- Pure sine wave output, input and output fully isolation design.
- Contains three-stage charging module, charging current up to 15A.
- High inverter efficiency of more than 88%, with energy saving mode.
- \* Can be used with mains, mixed use.
- Can withstand twice the nominal power to start, with a carrying capacity of excellence.
- LCD display working and charging status.
- \* Built-in AC bypass relay, truly uninterruptible AC output.
- Advanced microprocessor control system design.
- Input reverse / undervoltage / overvoltage / short circuit / overload overtemperature protection.

### 概述:

该产品为我公司自主研发的集MPPT充电控制器，逆变器，市电充电器为一体的多功能一体机。高速芯片集中控制，实现过载保护，过流保护，高温保护，短路保护，电池高、低压保护。LCD显示屏显示机器运行状态和设置参数。采用优质的元器件，保证产品高质量、高性能。本机的输出波形为纯正正弦波。

The product is developed by our company set MPPT charge controller, inverter, mains charger as one of the MFP. High-speed chip centralized control, overload protection, overcurrent protection, high temperature protection, short circuit protection, battery high and low voltage protection. LCD display shows the machine operation and setup parameters. Using high-quality components to ensure product quality, high performance. The machine's output waveform is pure sine wave.



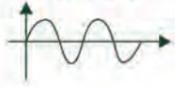
### 技术数据/Technical data

型号 Model		SON-SUW1500
内置控制器	Built-in solar controller	500W (降压型控制) Buck type control
推荐太阳能板规格	Solar panel SPECS	30V~120V 500W(最大max.)
外置蓄电池	External battery	24V 100Ah~150Ah
容量 capacity		1500VA
交流输入 Ac input	电压 voltage	AC 180~240V
	频率 Frequency	50Hz±10%
DC 输入 DC entered	电压(外接电池)Voltage (external battery)	DC24V
	低压保护 Low voltage protection	DC20V
	过压保护点 Over voltage protection point	DC29V
交流输出 AC	电压 voltage	AC220V±5% (DC模式) 190-240V (AC模式)
	功率 power	1000W
	频率 Frequency	50±0.5Hz (DC模式) 同步市电 (AC模式) Synchronous mains
	波形 waveform	正弦波 (失真度≤3%) Sinewave
充电时间 Charging time	效率 Efficiency	≥88% (DC TO AC)
	充电电流 Charging current	最大充电电流15A(可按客户要求更改) Maximum charging current 15A (can change according to customer's request)
转换时间 Conversion time	充电效率 Charging efficiency	8~15小时,回充90%
	转换时间 Conversion time	≤6ms
保护 protection	保护 protection	过载、短路、电池高低压保护
	报警声 alarm	当电池电压接近关机点时报警声由慢变快，直到设备自动关机 When the battery voltage shutdown point near the end of the alarm by slow faster, until the device has automatic shutdown
环境 environment	噪声 noise	≤45dB
	温度 temperature	0°C±40°C
	湿度 humidity	10%±90%

# Smart digital power inverter

## 智能数码电源逆变器

### HAA series



智能双风扇  
Intelligent double fan



功率/电池电压显示  
The power/battery voltage display



HAA -1000A



HAA -2000A



HAA -3000A



### 特性:

智能风扇, 风扇由负载控制, 输出没有接负载, 风扇不转。

低待机功耗, 高转换效率。

完善的输入、输出保护、高可靠性。

人性化的USB (1000mA) 充电插口, 更方便。

直观功率显示, 电池电压显示。

电池低压保护, 电量低的状态下会引发警报并自动关闭, 数码管显示 "UL"; 必须关闭电源开关, 重新打开电源开关重启逆变器电源。

过载和短路保护, 如果输出负载过载或短路, 会自动关闭; 必须关闭电源开关, 重新打开电源开关重启逆变器电源。

外壳温度保护, 如果发生温度过热情况下, 会启动安全关闭。

逆变器具有先进的抗干扰技术, 功能齐全的保护电路和软启动电路, 方便的操作模式。

软启动电路具有在启动时逐步提升输出电压, 以消除冷启动失败, 同时具有输出电压瞬间下降和快速恢复功能; 减少负载开机瞬间超载。

### Features:

The smart fan is controlled by the load, and it will not work if the output side is not connected to a load.

Low standby power cost, high conversion efficiency.

Perfect input and output protection, high reliability.

Humanized USB (1000MA) charging socket.

It displays the power value and battery voltage.

Battery low voltage protection, it will induce the alarm when the battery capacity is low and the device will shut down automatically; the LED displays "UL"; the user must reopen the power switch and restart inverter power supply.

Overload and short circuit protection, the device will shut down automatically if there appears overload or short circuit; the user must reopen the power switch and resupply the power.

Shell temperature protection, the device will shut down safely if the temperature is too high.

The inverter has advanced anti-jamming technology, soft start circuit and convenient operating mode. The soft start circuit can increase the output voltage step by step and avoid start failure.

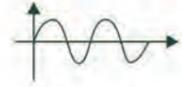
It also has the function of instantaneous output voltage dropping and fast recovery. It can decrease the instant overload when starting up.

型号 Model	HAA-1000A	HAA-1000B	HAA-2000A	HAA-2000B	HAA-3000A	HAA-3000B	
输出 Output	输出电压 Output voltage	AC220V(or 110V)					
	额定功率 Output power	1000W	1000W	2000W	2000W	3000W	
	峰值功率 Peak power	2000W	2000W	4000W	4000W	6000W	
	频率 Frequency	50Hz(or 60Hz)					
输入 Input	USB	DC5V 1A					
	空载电流 No-load current	<0.5A	<0.3A	<0.5A	<0.3A	<0.8A	
	工作电压 Working volt	DC12V	DC24V	DC12V	DC24V	DC12V	
	电压范围 Voltage range	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	
	报警电压 Alarm voltage	10.5V	21V	10.5V	21V	10.5V	
	低压保护 Low-voltage protection	10V	20.5V	10V	20.5V	10V	
	过压保护 Overvoltage protection	16V	31V	16V	31V	16V	
	效率 Efficiency	>85%	>90%	>85%	>90%	>85%	
	产品尺寸 Product size	24X15X7.5cm		36X15X7.5cm		49X15X7.5cm	
	重量 Weight	1.95kg		3kg		4.28kg	

# Smart digital power inverter

## 智能数码电源逆变器

### SQA series



直观功率, 电池电压显示  
Power display, battery voltage display.

内置挡口片, 预防触摸。  
Built-in mouth piece, prevent touch.



USB (1000mA) 充电插口, 更方便  
Humanized USB (1000mA) charging socket, more.

增加舒风散热孔, 散热性能更好。  
Increase ventilation, heat dissipation performance is better.



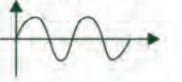
技术数据/Technical data

型号 Model	SQA-300A	SQA-300B	SQA-600A	SQA-600B	SQA-1000A	SQA-1000B
输出电压 Output voltage	AC220V(or110V)	AC220V(or110V)	AC220V(or110V)	AC220V(or110V)	AC220V(or110V)	AC220V(or110V)
额定功率 output power	300W	300W	600W	600W	1000W	1000W
峰值功率 Peak power	600W	600W	1200W	1200W	2000W	2000W
频率 Frequency	50Hz(or60Hz)	50Hz(or60Hz)	50Hz(or60Hz)	50Hz(or60Hz)	50Hz(or60Hz)	50Hz(or60Hz)
USB	DC5V 1A					
空载电流 No-load current	<0.3A	<0.2A	<0.3A	<0.2A	<0.5A	<0.3A
工作电压 working volt	DC12V	DC24V	DC12V	DC24V	DC12V	DC24V
电压范围 voltage range	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	21-30V
报警电压 Alarm voltage	10.5V	21V	10.5V	21V	10.5V	21V
低压保护 low-voltage protection	10V	20.5V	10V	20.5V	10V	20.5V
过压保护 overvoltage protection	16V	31V	16V	31V	16V	31V
效率 Efficiency	>85%	>90%	>85%	>90%	>85%	>90%
产品尺寸 product size	18X9.5X5.5cm		22X9.5X5.5cm		24X9.5X5.5cm	
重量 Weight	0.54Kg		0.74Kg		0.9Kg	

# High frequency pure sine wave inverter series

## 高频纯正弦波太阳能逆变器系列

### FPC-300A/B/F



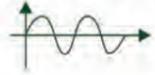
技术数据/Technical data

型 号 Model	FPC-300A	FPC-300B	FPC-300F
峰值功率 Peak power	600W(短时1S)		
额定功率 Rated power	300W		
输出波形 Output waveform	纯正弦波 Pure sine wave		
输出电压 Output voltage	220V/230±5V		
谐波失真 Harmonic distortion	< 3% ( 阻性负载 Impedance load )		
输出频率 Output frequency	50HZ(可选 or 60HZ )		
待机电流 Standby current	< 0.8A	< 0.4A	< 0.3A
转换效率 Conversion efficiency	最大 Maximum 94%		
额定电压 Rated voltage	12V	24V	< 48V
最大输入电流 Maximum input current	32A	16A	8A
输入电压范围 Input voltage range	9V-16V	18V-32V	38V-62V
欠压保护 Under voltage protection	9.5±0.5V	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	10.2±0.5V	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	12.5±0.5V	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	15±0.5V	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	14.8±0.5V	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	蜂鸣/LED提示 Buzzer/LED warning		
输出短路保护 Output short circuit protection	蜂鸣/LED提示 Buzzer/LED warning		
输出过载 Output overload	智能控制 Smart control		
负载功率因数 Load power factor	0.98		
USB 输出 USB output	5V / 1000mA		
输入反接保护 Battery reverse protection	保险丝保护 Fuse protection		
散热方式 Cooling way	温控风冷 Temperature control		
工作温度 Working temperature	-20~60℃		
储存温度 Storage temperature	-20~80℃		
工作湿度 Working humidity	10~90% ( 无冷凝 No condensation )		
产品尺寸 Product size(mm)	195X95X55 mm		
净重/毛重kg N.W/G.W(kg)	0.69Kg		

## High frequency pure sine wave inverter series

高频纯正弦波太阳能逆变器系列

FPC-500A/B/F



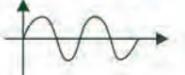
### 技术数据/Technicai data

型 号 Model	FPC-500A	FPC-500B	FPC-500F
峰值功率 Peak power		1000W(1S)	
额定功率 Rated power		500W	
输出波形 Output waveform	Pure sine wave		
输出电压 Output voltage	220V/230±5V		
谐波失真 Harmonic distortion	< 3% ( Impedance load)		
输出频率 Output frequency	50HZ( or 60HZ)		
待机电流 Standby current	< 1A	< 0.5A	< 0.3A
转换效率 Conversion efficiency	Maximum 94%		
额定电压 Rated voltage	12V	24V	< 48V
最大输入电流 Maximum input current	52A	26A	12.5A
输入电压范围 Input voltage range	9V-16V	18V-32V	38V-62V
欠压保护 Under voltage protection	9.5±0.5V	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	10.2±0.5V	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	12.5±0.5V	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	15±0.5V	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	14.8±0.5V	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	Buzzer/LED warning		
输出短路保护 Output short circuit protection	Buzzer/LED warning		
输出过载 Output overload	Smart control		
负载功率因数 Load power factor	0.98		
USB 输出 USB output	5V / 1000mA		
输入反接保护 Battery reverse protection	Fuse protection		
散热方式 Cooling way	Temperature control		
工作温度 Working temperature	-20~60°C		
储存温度 Storage temperature	-20~80°C		
工作湿度 Working humidity	10~90% (No condensation)		
产品尺寸 Product size(mm)	225X95X55mm		
净重/毛重kg N.W/G.W(kg)	0.84Kg		

## High frequency pure sine wave inverter series

高频纯正弦波太阳能逆变器系列

FPC-1000A/B/F



最大功率2400W,  
轻松启动发动机负载。  
Max power 2400W,  
Easy to start the motor load.

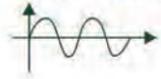
### 技术数据/Technicai data

型 号 Model	FPC-1000A	FPC-1000B	FPC-1000F
峰值功率 Peak power		2000W(短时1S)	
额定功率 Rated power		1000W	
输出波形 Output waveform	纯正弦波 Pure sine wave		
输出电压 Output voltage	220V/230±5V		
谐波失真 Harmonic distortion	< 3% (阻性负载 Impedance load)		
输出频率 Output frequency	50HZ(可选 or 60HZ)		
待机电流 Standby current	< 0.9A	< 0.4A	< 0.3A
转换效率 Conversion efficiency	最大 Maximum 94%		
额定电压 Rated voltage	12V	24V	< 48V
最大输入电流 Maximum input current	120A	60A	30A
输入电压范围 Input voltage range	9V-16V	18V-32V	38V-62V
欠压保护 Under voltage protection	9.5±0.5V	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	10.2±0.5V	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	12.5±0.5V	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	15±0.5V	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	14.8±0.5V	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	蜂鸣/LED提示 Buzzer/LED warning		
输出短路保护 Output short circuit protection	蜂鸣/LED提示 Buzzer/LED warning		
输出过载 Output overload	智能控制 Smart control		
负载功率因数 Load power factor	0.98		
USB 输出 USB output	5V / 1000MA		
输入反接保护 Battery reverse protection	保险丝保护 Fuse protection		
散热方式 Cooling way	温控风冷 Temperature control		
工作温度 Working temperature	-20~60°C		
储存温度 Storage temperature	-20~80°C		
工作湿度 Working humidity	10~90% (无冷凝 No condensation)		
产品尺寸 Product size(mm)	325X180X85mm		
净重/毛重kg N.W/G.W(kg)	2.77Kg		

# High frequency pure sine wave inverter series

高频纯正弦波太阳能逆变器系列

FPC-2000A/B/F



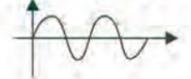
技术数据/Technical data

型号 Model	FPC-2000A	FPC-2000B	FPC-2000F
峰值功率 Peak power	4000W(短时1S)		
额定功率 Rated power	2000W		
输出波形 Output waveform	纯正弦波 Pure sine wave		
输出电压 Output voltage	220V/230±5V		
谐波失真 Harmonic distortion	< 3% (阻性负载 Impedance load)		
输出频率 Output frequency	50HZ(可选 or 60HZ)		
待机电流 Standby current	< 0.9A	< 0.7A	< 0.5A
转换效率 Conversion efficiency	最大 Maximum 94%		
额定电压 Rated voltage	12V	24V	< 48V
最大输入电流 Maximum input current	250A	125A	62.5A
输入电压范围 Input voltage range	9V-16V	18V-32V	38V-62V
欠压保护 Under voltage protection	9.5±0.5V	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	10.2±0.5V	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	12.5±0.5V	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	15±0.5V	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	14.8±0.5V	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	蜂鸣/LED提示 Buzzer/LED warning		
输出短路保护 Output short circuit protection	蜂鸣/LED提示Buzzer/LED warning		
输出过载 Output overload	智能控制 Smart control		
负载功率因数 Load power factor	0.98		
USB输出 USB output	5V / 1000mA		
输入反接保护 Battery reverse protection	保险丝保护 Fuse protection		
散热方式 Cooling way	温控风冷 Temperature control		
工作温度 Working temperature	-20~60°C		
储存温度 Storage temperature	-20~80°C		
工作湿度 Working humidity	10~90% (无冷凝 No condensation)		
产品尺寸 Product size(mm)	365X180X85 mm		
净重/毛重kg N.W/G.W(kg)	4.78Kg		

# High frequency pure sine wave inverter series

高频纯正弦波太阳能逆变器系列

FPC-2500A/B/F



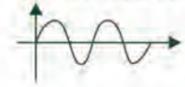
技术数据/Technical data

型号 Model	FPC-2500A	FPC-2500B	FPC-2500F
峰值功率 Peak power	5000W(短时1S)		
额定功率 Rated power	2500W		
输出波形 Output waveform	纯正弦波 Pure sine wave		
输出电压 Output voltage	220V/230±5V		
谐波失真 Harmonic distortion	< 3% (阻性负载 Impedance load)		
输出频率 Output frequency	50HZ(可选 or 60HZ)		
待机电流 Standby current	< 0.9A	< 0.7A	< 0.5A
转换效率 Conversion efficiency	最大 Maximum 94%		
额定电压 Rated voltage	12V	24V	< 48V
最大输入电流 Maximum input current	250A	125A	62.5A
输入电压范围 Input voltage range	9V-16V	18V-32V	38V-62V
欠压保护 Under voltage protection	9.5±0.5V	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	10.2±0.5V	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	12.5±0.5V	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	15±0.5V	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	14.8±0.5V	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	蜂鸣/LED提示 Buzzer/LED warning		
输出短路保护 Output short circuit protection	蜂鸣/LED提示Buzzer/LED warning		
输出过载 Output overload	智能控制 Smart control		
负载功率因数 Load power factor	0.98		
USB输出 USB output	5V / 1000MA		
输入反接保护 Battery reverse protection	保险丝保护 Fuse protection		
散热方式 Cooling way	温控风冷 Temperature control		
工作温度 Working temperature	-20~60°C		
储存温度 Storage temperature	-20~80°C		
工作湿度 Working humidity	10~90% (无冷凝 No condensation)		
产品尺寸 Product size(mm)	405X180X85mm		
净重/毛重kg N.W/G.W(kg)	4.78Kg		

# High frequency pure sine wave inverter series

高频纯正弦波太阳能逆变器系列

FPC-3000B/F



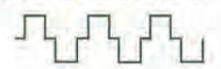
技术数据/Technicai data

型号 Model	FPC-3000B	FPC-3000F
峰值功率 Peak power	6000W(短时1S)	
额定功率 Rated power	3000W	
输出波形 Output waveform	纯正弦波 Pure sine wave	
输出电压 Output voltage	220V/230±5V	
谐波失真 Harmonic distortion	< 3% (阻性负载 Impedance load)	
输出频率 Output frequency	50HZ(可选60HZ)	
待机电流 Standby current	< 0.8A	< 0.5A
转换效率 Conversion efficiency	最大 Maximum 94%	
额定电压 Rated voltage	24V	48V
最大输入电流 Maximum input current	150A	75A
输入电压范围 Input voltage range	18V-32V	38V-62V
欠压保护 Under voltage protection	19.9V±0.2V	40.2V±0.2V
欠压提示 Under voltage tip	20.9V±0.2V	42.2V±0.2V
欠压恢复 Under pressure recovery	24.7V±0.2V	48.2V±0.2V
过压保护 Over voltage protection	30.2V±0.2V	60.4V±0.2V
过压恢复 Over voltage recovery	29.8V±0.2V	60.1V±0.2V
高温保护 High temperature protection	蜂鸣/LED提示 Buzzer/LED warning	
输出短路保护 Output short circuit protection	蜂鸣/LED提示Buzzer/LED warning	
输出过载 Output overload	智能控制 Smart control	
负载功率因数 Load power factor	0.98	
USB 输出 USB output	5V / 1000mA	
输入反接保护 Battery reverse protection	保险丝保护 Fuse protection	
散热方式 Cooling way	温控风冷 Temperature control	
工作温度 Working temperature	-20~60°C	
储存温度 Storage temperature	-20~80°C	
工作湿度 Working humidity	10~90% (无冷凝 No condensation)	
产品尺寸 Product size(mm)	470X180X85cm	
净重/毛重kg N.W/G.W(kg)	5.33kg	

# High frequency correction wave of solar inverter series

高频修正波太阳能逆变器系列

SUB series



智能风扇，风扇由负载控制。  
低待机功耗，高效转换效率。  
完善的输入、输出保护、高可靠性。  
人性化的USB(1000MA)充电插口，更方便。

Smart fan, controlled by the load.  
Low standby power cost, high conversion efficiency.  
Perfect input and output protection, high reliability.  
Humanized USB (1000Ma) charging socket, and so on.

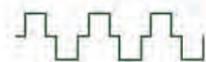
技术数据/Technicai data

型号 Model	输出电压 Output voltage	输出功率 output power	峰值功率 Peak power	频率 Frequency	USB 输出 USB output	空载电流 no-load current	工作电压 working volt	电压范围 voltage range	效率 Efficiency	产品尺寸 product size	重量 Weight
SUB-500A	AC220V	500W	1000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	18X9.5X5.5cm	0.54Kg
SUB-500B	AC220V	500W	1000W	50Hz	1000mA	<0.3A	DC24V	21-30V	>90%	18X9.5X5.5cm	0.54Kg
SUB-500F	AC220V	500W	1000W	50Hz	1000mA	<0.3A	DC48V	42-60V	>90%	18X9.5X5.5cm	0.54Kg
SUB-1000A	AC220V	1000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	22X9.5X5.5cm	0.74Kg
SUB-1000B	AC220V	1000W	2000W	50Hz	1000mA	<0.3A	DC24V	21-30V	>90%	22X9.5X5.5cm	0.74Kg
SUB-1000F	AC220V	1000W	2000W	50Hz	1000mA	<0.3A	DC48V	42-60V	>90%	22X9.5X5.5cm	0.74Kg
SUB-1500A	AC220V	1500W	3000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUB-1500B	AC220V	1500W	3000W	50Hz	1000mA	<0.3A	DC24V	21-30V	>90%	24X9.5X5.5cm	0.90Kg

# High frequency correction wave of solar inverter series

## 高频修正波太阳能逆变器系列

### STA series



适用于灯泡  
Suitable for Light bulb



冰箱压缩机完美启动  
The refrigerator compressor starts up perfectly.



智能强功率启动  
Smart power starting



微电脑节能控制  
Energy saving control microcomputer



直观功率, 电池电量显示  
Power display, battery electric power display



航天级静音技术智能变速节能风扇  
Aerospace-grade silence technology smart fan with energy saving

#### 技术数据/Technicai data

型号 Model		STA-500A	STA-500B	STA-1000A	STA-1000B	STA-1500A	STA-1500B	STA-2000A	STA-2000B
输出 Output	输出电压 Output voltage	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V	AC230V
	额定功率 output power	400W	400W	650W	650W	1000W	1000W	1500W	1500W
	瞬时功率 Peak power	500W	500W	1000W	1000W	1500W	1500W	2000W	2000W
	频率 Frequency	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
输入 Input	USB	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A	DC5V 1A
	空载电流 no-load current	<0.3A	<0.2A	<0.5A	<0.3A	<0.5A	<0.3A	<0.5A	<0.3A
	工作电压 working volt	DC12V	DC24V	DC12V	DC24V	DC12V	DC24V	DC12V	DC24V
	电压范围 voltage range	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	21-30V	10.5-15V	21-30V
	报警电压 Alarm voltage	10.5V	21V	10.5V	21V	10.5V	21V	10.5V	21V
	低压保护 low-voltage protection	10V	20.5V	10V	20.5V	10V	20.5V	10V	20.5V
	过压保护 overvoltage protection	16V	31V	16V	31V	16V	31V	16V	31V
	效率 Efficiency	>85%	>85%	>85%	>85%	>85%	>85%	>85%	>85%
尺寸 Size	18X11.2X5.5cm		22.5X11.2X5.5cm		24.5X12.5X7.5cm		32X18X8.5cm		
重量 Weight	0.56Kg		0.81Kg		1.37Kg		2.47Kg		

# High frequency correction wave of solar inverter series

## 高频修正波太阳能逆变器系列

### HDA series



HDA-1000A/B



HDA-1500A/B



HDA-2500A/B



HDA-3000A/B



HDA-1000C/D



HDA-1500C/D



HDA-2500C/D



HDA-3000C/D

#### 技术数据/Technicai data

型号 Model	HDA-1000A	HDA-1500A	HDA-2000A	HDA-2500A	HDA-3000A
	HDA-1000B	HDA-1500B	HDA-2000B	HDA-2500B	HDA-3000B
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input				
输出电压 Output voltage	220V~240V				
额定功率 Rated power	1000W	1500W	2000W	2500W	3000W
峰值功率 Peak power	2000W	3000W	4000W	5000W	6000W
效率 Efficiency	>90%				
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection				
装箱数 Packed qty	4PCS				
外形尺寸 Dimensions	265X175X125mm	315X175X125mm	335X175X125mm	405X175X125mm	455X175X125mm
重量 N.W	3.5 kg	4.0 kg	4.6 kg	5.3 kg	6.0 kg
认证 Certification	ISO, CTA, CE				

#### 技术数据/Technicai data

型号 Model	HDA-1000C	HDA-1500C	HDA-2000C	HDA-2500C	HDA-3000C
	HDA-1000D	HDA-1500D	HDA-2000D	HDA-2500D	HDA-3000D
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input				
输出电压 Output voltage	220V~240V				
额定功率 Rated power	1000W	1500W	2000W	2500W	3000W
峰值功率 Peak power	2000W	3000W	4000W	5000W	6000W
效率 Efficiency	>90%				
充电电流 Charge current	20A (带充电功能和UPS功能) / 20A (with charge and UPS)				
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection				
装箱数 Packed qty	4PCS				
外形尺寸 Dimensions	265X175X125mm	315X175X125mm	335X175X125mm	405X175X125mm	455X175X125mm
重量 N.W	3.5 kg	4.0 kg	4.6 kg	5.3 kg	6.0 kg
认证 Certification	ISO, CTA, CE				

# FDA-600F/G



# FDA-500B



#### 技术数据/Technicai data

型号 Model	FDA-500A-110	FDA-600A	FDA-1000A	FDA-600F	FDA-600G
	FDA-500B-110	FDA-600B	FDA-1000B		
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input			48V	60V
输出电压 Output voltage	220V~240V				
额定功率 Rated power	500W	600W	1000W	600W	
峰值功率 Peak power	1000W	1200W	2000W	1200W	
效率 Efficiency	>90%				
功能 Function	电池正负极接反保护 Reverse battery + - protection				
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection				
装箱数 Packed qty	6PCS			20PCS	
外形尺寸 Dimensions	210X145X80mm	210X145X80mm	286X145X80mm	210X145X80mm	
重量 N.W	1.13kg	1.03kg	1.49kg	1.05Kg	
认证 Certification	ISO, CTA, CE				

# FAA-1000G



# FAA-1000A



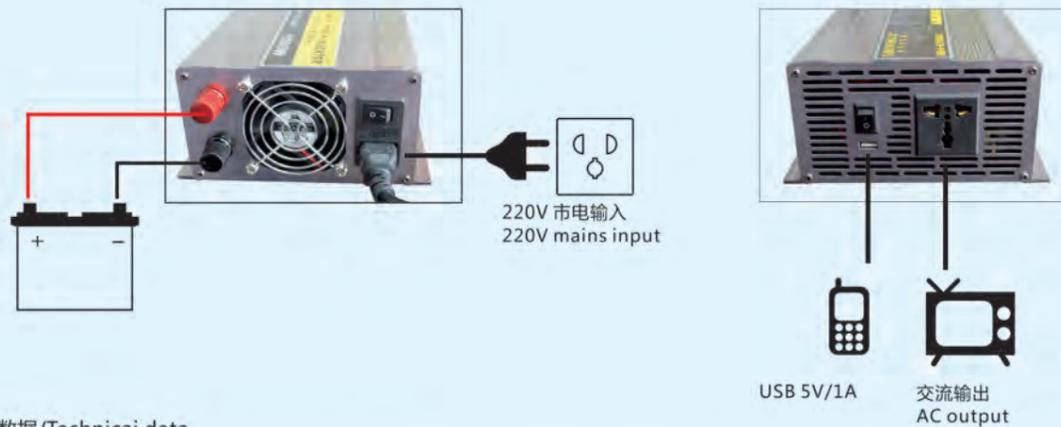
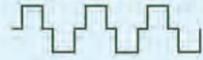
#### 技术数据/Technicai data

型号 Model	FAA-350A	FAA-500A	FAA-800A	FAA-1000A	FAA-1000F	FAA-1000G
	FAA-350B	FAA-500B	FAA-800B	FAA-1000B		
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input					
输出电压 Output voltage	220V~240V					
额定功率 Rated power	350W	500W	800W	2000W	1000W	
峰值功率 Peak power	700W	1000W	1600W	2000W	2000W	
效率 Efficiency	>70%					
功能 Function	电池正负极接反保护/带USB输出 Reverse battery + - protection/with USB output					
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection					
装箱数 Packed qty	8PCS				20PCS	
外形尺寸 Dimensions	175X115X58mm		215X115X58mm		215X115X58mm	
重量 N.W	0.53kg		0.72kg		0.72Kg	
认证 Certification	ISO, CTA, CE					

# Charging and inverter all-in-one

充电和逆变一体机

HBA series



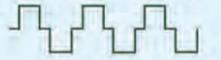
## 技术数据/Technicai data

型号	Model	HBA-1000C	HBA-1000D	HBA-2000D	HBA-3000F
输出 Output	输出电压 Output voltage	AC220V	AC220V	AC220V	AC220V
	输出功率 Output power	1000W	1000W	2000W	3000W
	峰值功率 Peak power	2000W	2000W	4000W	6000W
	USB USB	DC 5V 1A	DC 5V 1A	DC 5V 1A	DC 5V 1A
输入 Input	频率 Frequency	50Hz	50Hz	50Hz	50Hz
	空载电流 No-load current	< 1A	< 0.6A	< 0.6A	< 0.6A
	工作电压 Working voltage	DC12V	DC24V	DC24V	DC48V
	电压范围 Voltage range	10.5~15V	21~30V	21~30V	42~60V
	报警电压 Alarm voltage	10.5V	21V	21V	42V
	低压保护 low-voltage protection	10V	20.5V	30V	60V
	过压保护 Overvoltage protection	16V	31V	31V	31V
	效率 Efficiency	> 90%	> 90%	> 90%	> 90%
	充电电压 Charging voltage	14V	28V	28V	56V
	充电电流 Charging current	5A、10A、15A、20A、25A、30A			
充电 Charging	输入电压 Input voltage	AC 220V			
	输入电压范围 Input voltage range	AC 220V~±10%			
	输出电压 Output voltage	同当时的输入电压 with the time of the input voltage			
	转换电压 Convert the voltage	低电压 Low voltage 165±5V ; 高电压 high voltage 265±5V			
	市电转逆变启动时间 City power inverter start up time	≤1S			
产品尺寸 Size	40.5X18X8.5cm				
重量 Weight	2.72Kg				

# Charging and inverter all-in-one

充电和逆变一体机

MDA series



## MDA Series



## 技术数据/Technicai data

型号 Model	MDA-500A	MDA-600A	MDA-1000A	MDA-1100A
	MDA-500B	MDA-600B	MDA-1000B	MDA-1100B
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input			
输出电压 Output voltage	220V			
额定功率 Rated power	500W	600W	1000W	1100W
峰值功率 Peak power	1000W	1200W	2000W	2200W
效率 Efficiency	>90%			
保护电路 Protection	超负荷保护电路、输入高压切断电路、输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection			
装箱数 Packed qty	8PCS			
外形尺寸 Dimensions	205X120X60mm		245X120X60mm	
重量 N.W	0.94kg	0.94kg	1.27kg	1.4kg
认证 Certification	ISO, CTA, CE			

## LDA Series



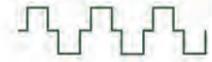
## 技术数据/Technicai data

型号 Model	LDA-1000C	LDA-1000D
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 / A series is 12V input, B series is 24V input	
输出电压 Output voltage	220V~240V	
额定功率 Rated power	1000W	
峰值功率 Peak power	2000W	
效率 Efficiency	> 90%	
保护电路 Protection	超负荷保护电路、输入高压切断电路、输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection	
装箱数 Packed qty	4PCS	
外形尺寸 Dimensions	422X193X70mm	
重量 N.W	3.4Kg	
认证 Certification	ISO, CTA, CE	

# High frequency correction wave of solar inverter series

高频修正波太阳能逆变器系列

SDA series



## 技术数据/Technicai data

型号 Model	SDA-300A		SDA-350A		SDA-400A		SDA-500A		SDA-600A		SDA-800A		SDA-1000A	
	SDA-300B		SDA-350B		SDA-400B		SDA-500B		SDA-600B		SDA-800B		SDA-1000B	
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 A series is 12V input,B series is 24V input													
输出电压 Output voltage	220V~240V													
额定功率 Rated power	300W		350W		400W		500W		600W		800W		1000W	
峰值功率 Peak power	600W		700W		800W		1000W		1200W		1600W		2000W	
效率 Efficiency	>70%													
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。						Overload protection,Input over-voltage protection, Input low-voltage protection,Over-temperature protection							
装箱数 Packed qty	20PCS													
外形尺寸 Dimensions	160X95X54mm						200X95X54mm							
重量 N.W	0.54kg						0.77kg							
认证 Certification	ISO、CTA、CE													

# High frequency correction wave of solar inverter series

高频修正波太阳能逆变器系列

SFA series



- 太阳能板/SOLAER PANEL
- 高效转换, 快速输出输入/  
Efficient conversion, output input quickly
- **USB** 接口

## 技术数据/Technicai data

型号 Model	SFA-500A	SFA-1000A
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 A series is 12V input,B series is 24V input	
输出电压 Output voltage	220V~240V	
额定功率 Rated power	500W	1000W
峰值功率 Peak power	1000W	2000W
效率 Efficiency	>70%	
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection,Input over-voltage protection, Input low-voltage protection,Over-temperature protection	
装箱数 Packed qty	20PCS	
外形尺寸 Dimensions	160X95X55mm	200X95X55mm
重量 N.W	0.8kg	1.03kg
认证 Certification	ISO、CTA、CE	

# High frequency correction wave of solar inverter series

## 高频修正波太阳能逆变器系列

### SAA Series



#### 技术数据/Technical data

型号 Model	SAA-500A	SAA-500B	SAA-1000A	SAA-1000B	SAA-500C	SAA-1000C
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 A series is 12V input, B series is 24V input					
输出电压 Output voltage	220V~240V					
额定功率 Rated power	500W		1000W		500W	1000W
峰值功率 Peak power	1000W		2000W		1000W	2000W
效率 Efficiency	>70%			>85%		
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection					
装箱数 Packed qty	20PCS					
外形尺寸 Dimensions	160X95X55mm		200X95X55mm		226X95X55mm	267X95X55mm
重量 N.W	0.8kg		1.03kg		0.75kg	0.9kg
认证 Certification	ISO, CTA, CE					



#### 技术数据/Technical data

型号 Model	SAA-500AF	SAA-1000AF
输入电压 Input voltage	A系列为12V输入, B系列为24V输入 A series is 12V input, B series is 24V input	
输出电压 Output voltage	220V~240V	
额定功率 Rated power	500W	1000W
峰值功率 Peak power	1000W	2000W
效率 Efficiency	>70%	
保护电路 Protection	超负荷保护电路、输入高压切断电路、 输入低压切断电路、异常温度检测切断电路。 Overload protection, Input over-voltage protection, Input low-voltage protection, Over-temperature protection	
装箱数 Packed qty	20PCS	
外形尺寸 Dimensions	160X95X55mm	200X95X55mm
重量 N.W	0.8kg	1.03kg
认证 Certification	ISO, CTA, CE	

# High frequency correction wave of solar inverter series

## 高频修正波太阳能逆变器系列

### SUA series



智能风扇, 风扇由负载控制。  
低待机功耗, 高效转换效率。  
完善的输入、输出保护、高可靠性。  
人性化的USB(1000MA)充电插口, 更方便。

Smart fan, controlled by the load.  
Low standby power cost, high conversion efficiency.  
Perfect input and output protection, high reliability.  
Humanized USB (1000Ma) charging socket, and so on.

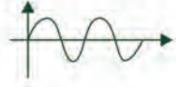
#### 技术数据/Technical data

型号 Model	输出电压 Output voltage	输出功率 output power	峰值功率 Peak power	频率 Frequency	USB 输出 USB output	空载电流 no-load current	工作电压 working volt	电压范围 voltage range	效率 Efficiency	产品尺寸 product size	重量 Weight
SUA-1500A	AC220V	1500W	3000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUA-1500B	AC220V	1500W	3000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUA-2000A	AC230V	2000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUA-2000B	AC230V	2000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUA-2000B	AC230V	2000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	24X9.5X5.5cm	0.90Kg
SUA-2000C	AC230V	2000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	30.5X12.7X6.7mm	1.6kg
SUA-2000 <sup>+</sup>	AC230V	2000W	2000W	50Hz	1000mA	<0.3A	DC12V	10.5-15V	>90%	30.5X12.7X6.7mm	1.6kg

# Smart car power inverter

## 车载智能电源逆变器

### STA-E300A



#### 1 LED 显示面板 LED display

直观功率，精准显示电量  
Accurate display power



- |              |                             |
|--------------|-----------------------------|
| 1 输出负载功率过高   | Overload                    |
| 输入电压过低       | Low Voltage                 |
| 输入电压过高       | High Voltage                |
| USB可充电       | USB uSB亮                    |
| 2 风扇启动       | Start -Fan                  |
| 3 过温保护       | over-temperature protection |
| 4 输出功率       | output power                |
| 5 "V" 交流电压输出 | "V" ac voltage output       |
| "VDC" 直流电压输出 | "VDC" dc voltage output     |
| 6 电池电压显示     | The battery voltage display |
| 7 1.输入电压     | The input voltage           |
| 2.输出电压       | The output voltage          |
| 3.输出功率       | The output power            |

#### 2 自带点烟头 Bring cigarette lighter

自带点烟头无需外购专为车载设计  
Special design for the car



#### 3 多重保护技术 Multiple protection technology

不怕使用错误而损坏逆变器  
Never afraid to use error lead to damage the inverter

- |  |                                    |  |   |
|--|------------------------------------|--|---|
|  | 超温保护<br>Overtemperature protection |  | 短路保护<br>Short circuit protection        |
|  | 过载保护<br>Overload protection        |  | 输入高压保护<br>input high voltage protection |
|  |                                    |  | 输入低压保护<br>input-low voltage protection  |

#### 安装使用方法 Installation and using way



#### 技术数据/Technicai data

		型号	Model	STA-E300A
输出 Output	输出电压	Input voltage		AC210~240V
	输出功率	output power		300W
	峰值功率	Peak power		600W
	频率	frequency		50Hz
	USB			DC5V 2.1A,1A
输入 Input	空载电流	No-load current		<1A
	工作电压	Working voltage		DC12V
	电压范围	Voltage range		10~15V
	报警电压	Alarm voltage		11.1V
	低压保护	Low voltage protection		9.5V
	过压保护	Over voltage protection		15.8V
	最大效率	Maximum efficiency		>90%
产品尺寸		Size		130X81.5X53mm
		weight		0.45kg

# Car power inverter UPS series

## 高频率太阳逆变器系列

### SON-1400VA



NEW



### 产品特点

- 小于15MS的切换时间。
- 800W大功率逆变输出。
- 30A PWM光伏自动充电，自动开关机。
- 20A 或10A 市电自动充电，自动开关机。
- 宽电压市电工作范围90V---280V。
- 自感应式逆变输出频率50HZ 或60HZ。
- LCD+LED 丰富多彩的显示。
- 多重的保护功能，电池电压低关机保护；
- 负载过载保护；过充保护；过压保护；
- 短路保护。

### 简介

这是一台包括一个DC TO AC 逆变器，一个太阳能控制的光伏充电器，一个市电可选充电电流的恒流充电器，具有输出自动切换功的UPS电源设备。具有对电池有完善的保护的电源设备。具有特别适合容性负载的电源设备。

### Introduction

It is a DC-to-AC inverter with auto line-to-battery transfer and integrated charging system, serving as an extended run UPS, a standalone power source or an automotive inverter, it supplies power from AC power and DC source. When AC cable is connected to a wall socket, utility power goes to connected equipment(s) and/or charges the battery set via charging system. In battery mode, It automatically converts battery energy into AC power for backing up the connected devices.

### Specification

MODEL		SON-1000VA	SON-1400VA	SON-2400VA
1CAPACITY	VA/W	1000VA/660W	1400VA/800W	2400VA/1440W
BATTERY	VDC	12VDC		24VDC
INPUT 输入	Nominal Voltage	230V		
	Voltage Range	170-280VAC (Narrow Range) 90-280VAC (Wide Range)		
	Voltage	230V AC		
OUTPUT 输出	Voltage Regulation (Bat. Mode)	+10% ~ -18%		
	Frequency	50Hz or 60Hz		
	Frequency Regulation (Bat. Mode)	+/- 1 Hz		
	Output Waveform	Modified Sine-wave		
BATTERY & CHARGER 电池充电器	Charger Current	15 Amp or 20Amp Selectable ±2A	10 Amp	
	Overcharge Protection	15V		
TRANSFERTIMET	Typical	<15ms		
EFFICIENCY 效率	AC to AC	>95%		
	DC to AC	>80%		
DISPLAY INDICATOR 显示/指标	AC Mode	Display output power, output voltage		
	Battery Mode	The mark will flicker every 1 second.		
	Battery Charging Mode	Display the battery capacity		
	Fault	Display fault		
AUDIBLE ALARM 听得见的/报警	Low battery at battery mode	Sounding every 2 seconds		
	Overload	Sounding every 0.5 seconds		
	Fault	Continuously sounding		
PROTECTION 保护	Full Protection	Discharge, overcharge, overload, over temperature protection.		
PHYSICAL 物理	Dimension	277* 64,3*91.5mm		
	Net Weight(kgs)			
ENVIRONMENT 环境	Operating environment	0~50°C, 5%~90% relative humidity (non-condensing)		
	Storage environment	-15 to 55, 5% to 95% humidity (non-condensing)		
	Noise Level	Less than 50dB		

# High frequency correction wave of solar inverter series

## 快速智能新型充电器

### A03-1224/A04-1240



国家专利 假冒必究

NEW

推荐 / 新产品

- 1.输入电压：220VAC +/-20%(176V-264V)。
- 2.输出电压：12-24V自适应识别。
- 3.输出电流：最大20A/600W。
- 4.充电方式：标准三段式，监控电池电压控制，随着电池电量的增加而调整充电电流，充满后转脉冲充电使电池保持充满状态。
- 5.充电电流0A-20A连续线性电位器可调。
- 6.可根据电池类型选择水电池和免维护电池。

### Technical parameter

- 1 Input voltage: 220V AC +/-20% (176V-264V)
- 2 Output voltage: 12-24v Automatic Identification
- 3 Output current: Max 20A/600W
- 4 Charging Mode: Three Phase Charging Mode which will monitor battery voltage all the time. When the battery capacity increases, the charging current will be refreshed again. After the battery is fully charged, the charger will automatically convert to PWM charging mode to keep the battery charged.
- 5 Continuous linear potentiometer is adjustable when the charging current is 0A-20A.
- 6 Two type of batteries can be supported, water-activated battery or maintenance-free battery.

### 产品特点：

#### 功能特点：

- 1.满电自停：智能充电，电池饱和后充满灯亮起提示，风扇由高速运转变为低速运转，电流自动减到最小，更好的保护电池。
- 2.数码显示：高清数码显示，灵敏度超高可以测到0.1A及以下的电流通过，数码显示为0时，表示充满状态。
- 3.多重保护：反接保护、短路保护、过热保护、低压保护。4.智能识别电压：操作方便，自动识别电池电压功能，充12V电池，显示12。充24V电池，显示24，避免因电压问题造成电池和充电器损坏。
- 5.自动灭火花：旧款充电器在正负极对接时，立刻出现火花，存在人身安全隐患，重则发生火灾。而本产品有自动“灭火”和短路保护功能，接口反接时不会有火花，并自动保护充电器，不会因短路烧坏充电器。

#### Features:

- 1 Auto stop charging after fully charged. Adopt intelligent charging system, the indicator lights up when the battery is full. Fan speed is changing from high-speed to low-speed, charging current is automatically reduced to the minimum mode, which better protects the battery.
- 2 LED display: High definitions LED display and High sensitivity make sure to detect more than 0.1A charging current. It means the battery gets fully charged when the LED display shows "0".
- 3 Multi-protections: Reverse polarity protection, short circuit protection, overheating protection, low-voltage protection.
- 4 Battery voltage intelligent identification: Easy operation, the LED display shows the "12" or "24" when you are charging a 12V or 24V battery. For the most part, this can prevent the battery and charger from damaging because of charging voltage.
- 5 Spark elimination function: When you use an old charger to charge your battery, sparks will appear as soon as when the clips connect the anode and the cathode of the battery, which may exist potential safety problems. But this new charger has the function to eliminate sparks automatically, which largely protects the charger omnidirectionally.



- 满电自停
- 数码显示
- 多重保护
- 自动灭火花
- 自动识别电池电压

- Auto stop when full recharge
- Digital display
- Multiple protection
- Automatic fire extinguishing Automatically
- identify the battery voltage

# Smart fast charger

智能快速充电器

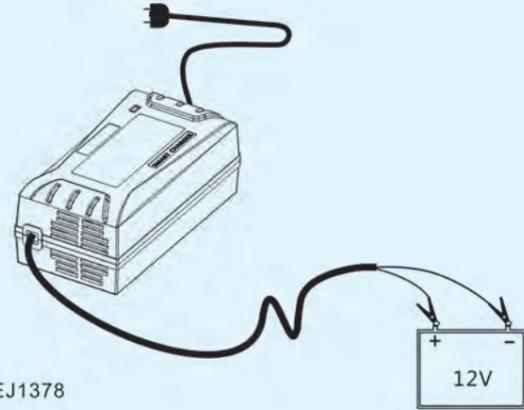
SON-1206D (5A)  
SON-1210D (10A)



## 技术指标 Technical Parameters

- 最大充电电流: 5~10A
- 适用电池电压(DC): 12V
- 额定输入电压(AC): 110~240V
- 额定频率: 47~63HZ
- 满载效率: ≥87%
- 机械冲击及抗震动等级: 符合SAEJ1378要求
- 温度范围: -40~+95°C
- Peak charge current: 5~10A
- Battery voltage(DC): 12V
- Rated input voltage: 110V-240V
- Rated frequency: 47-63Hz
- Full load efficiency: > 87%
- Mechanical shock & seismic levels: meet the requirement of SAEJ1378
- Working Temperature: -40~+95°C

交流输入: 110V~240V



## 产品特性 Product feature

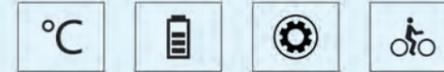
1. 本充电器产品采用微控制器MCU智能控制和管理蓄电池的充电过程，蓄电池充满自动停止充电。
2. 三段式（恒流、恒压、涓流）PWM调制充电方式；
3. 具有蓄电池在线检测，短路、过流、过压和反接保护等功能；
4. 详实的充电指示灯显示，直观反映充电过程，方便用户快速了解蓄电池当前状态。

1. This battery charger adopts micro MCU controller to manage the process of the battery charging. The charger will automatically stop charging when it is getting fully charged.
2. This battery charger adopts three-phase charging mode(PWM charging mode), which includes constant current charging phase, constant voltage charging phase, floating charging phase.
3. With online battery detection, short circuit protection, over voltage protection, Anti-reverse connecting protection, etc.
4. The smart charging indicator shows charging process directly, which facilitates users to master the status of the battery.

# Pulse fast charger

脉冲快速充电器

SON-4803



- 智能温度补偿 / 电池电量显示 / 一键快充 / 电动车专用
- Intelligent temperature compensation
  - Power display
  - Fast charge
  - Electric vehicles dedicated

充满自动断电 保护电池  
Battery Protection. The charger will stop work when battery full of power.



## 产品特性 Product feature

- 特有一键快速充电，迅速缩短充电时间
- 智能温度补偿功能，冬天让电池充得更满
- 内嵌脉冲修复、保养模式，能有效防止电池硫化
- 防反接，防短路，无电池自动关闭输出，安全实用
- 特有电池电量显示；电池电量一目了然
- 充满自动停止充电，适用于任何新旧电池

## 技术指标 Technical indicators

- |                     |                                       |
|---------------------|---------------------------------------|
| 充电电流: 2.5A / 3A(最大) | Charging current: 2.5 A/3A(MAX)       |
| 适用电池电压(DC): 48V     | The suitable battery voltage(DC): 48V |
| 输入电压(AC): 180~240V  | Input voltage (AC): 180~240V          |
| 适用电池容量: 12AH~24AH   | Apply to battery capacity: 12AH~24AH  |

Product features :

- A key characteristic quick charge, shorten the charging time quickly.
- Intelligent temperature compensation function, let more full battery charge in the winter.
- Built-in pulse repair and maintenance mode, can effectively prevent battery sulfide.
- prevent the reverse, prevent short circuit, no battery automatically shut down output, safe and practical.
- Specific LED battery capacity display, the battery capacity be clear at a glance.
- The charger will stop work when battery full of power, It apply to any new and old batteries.

# Smart Battery Charger

智能蓄电池充电器 全自动/手动+智能修复

Fully automatic/manual operation+Intelligent repair

A02-1224

# Smart Battery Charger

智能蓄电池充电器 全自动/手动+智能修复

Fully automatic/manual operation+Intelligent repair

A01-0612



12V/24V  
自适应

专利产品，  
质量保证！



6V/12V  
自适应

专利产品，  
质量保证！



电池医生  
(修复电池)



极速充电



安全保证

智能快速充电器是我们公司根据蓄电池特性而专业设计研发的，它采用先进的微电控制技术，具有五星级全方位保护电池，充满自动断电，保护电池；三段式智能充电，充电速度快；防反接，防短路；自动识别有无电池。本产品适用于铅酸蓄电池/胶体电池。

## 技术数据/Technical data

型号 Model	A02-1224B
充电电流 Charging current	手动2A, 4A, 6.9A或全自动充电
适用电池电压(DC) Apply to the battery voltage(DC)	12V/24V 自适应
额定输入电压(AC) rated input voltage(AC)	170V~250V
额定频率 Rated frequency	50Hz
满载效率 Rated frequency	≥87%
机械冲击及抗震动等级 Mechanical shock and vibration resistance level	符合SAEJ1378要求
温度范围 Temperature range	-40~+90°C

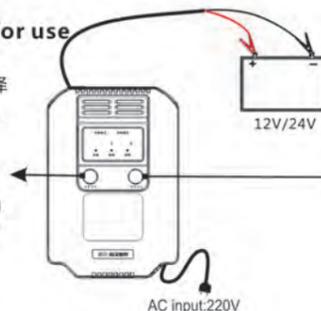
## 技术数据/Technical data

型号 Model	A01-0612A
充电电流 Charging current	手动1A, 2A, 4A, 6.9A或全自动充电
适用电池电压(DC) Apply to the battery voltage(DC)	6V/12V 自适应
额定输入电压(AC) rated input voltage(AC)	170V~250V
额定频率 Rated frequency	50Hz
满载效率 Rated frequency	≥87%
机械冲击及抗震动等级 Mechanical shock and vibration resistance level	符合SAEJ1378要求
温度范围 Temperature range	-40~+90°C

## 使用说明 Directions for use

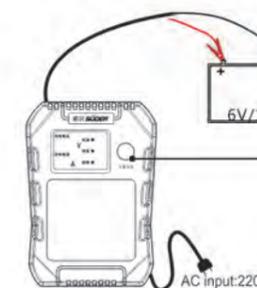
●手动充电/自动充电选择：按容量选择键：OU=2A慢充，OU=4A常规充，OU=6.9A快充，OU=AU全自动充。

●Manual operation/automatic charging options: by volume selection key: OU = 2A slow charge, OU = 4A conventional charge, OU = 6.9A fast charge, automatic charge.



●修复充电：按修复键显示RE=ON表示打开修复功能，修复指示灯常亮表示修复功能开始充电，RE=OF表示关闭修复功能(修复时间为90分钟)。

●Repair Charge: Press Repair to display RE = ON means open repair, indicator light indicates repair start charging, RE = OF means closed repair(Repair time is 90 minutes).



●容量选择/修复开关：短按选择电流OU=1A, OU=2A, OU=4A, OU=6.9A, OU=AU全自动充，长按3秒以上后打开修复功能(显示RE=ON)，修复指示灯常亮表示开始修复充电，再长按3秒以上关闭修复功能(显示RE=OF)，修复充电时短按也可选择修复电流，修复时间为90分钟。

●Capacity selection / repair switch: Short pressing for electric current selection (OU=1A, OU=2A, OU=4A, OU=6.9A, OU=AU fully-automatic charge); press 3 seconds for opening the repair function (display RE = ON); repair indicator light is often said to start repairing charge, press 3 seconds again for closing the repair function (display RE=OF); when the charger is in the mode of repairing, short press can also turn to repair electric current, repair time is 90 minutes.

# Fully automatic digital charger

## 全自动脉冲数显充电器

### MC Series

电量/电流/电压/显示  
Power/voltage/current/show



#### 产品特点:

1. 全程脉冲充电：充电快，充得满。
2. 电池寿命长。
3. 充电电流，电池电压数字显示。
4. 直观的灯条显示电池电量指示。
5. 短路，过流保护。
6. 电池反接保护。

#### Product features:

1. full pulse charging: fast charging, charging a full.
2. long battery life.
3. It displays charging current and battery's voltage.
4. The light bar displays battery's capacity intuitively.
5. The function of short circuit protection and over current protection.
6. Reverse connecting protection.



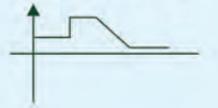
#### 技术数据/Technicai data

型号 Model	MC-1230A	MC-1230B	MC-1240A	MC-1240B
输入电压 Input voltage	220V			
输入频率 Input frequency	50Hz			
充电电流 Charging current	5/10/15/20/25/30A 可任意设置Any Settings		5/10/15/20/25/30/35/40A 可任意设置Any Settings	
电池电压 Battery's voltage	12V	24V	12V	24V
充电模式 Charging mode	三段式 three-steps			
浮充电压 Float charge	13.5/27V±0.2V DC			
尺寸 Size	285X165X100MM			
认证 Certification	ISO CTA CE			

# Fully Auto Digital Charger / Engine Starts

## 全自动数码充电器+引擎启动

### DC series



The following problems encountered when your car, can use this product.

1. The car is without electricity and breaks down.
2. The engine oil becomes thicker in winter, which makes it difficult to start up.
3. The car's engine is aging and it cannot help to start up.

In the premise of:

Input voltage AC 220V 50Hz

当你的汽车遇到以下问题，可以使用本产品。

1. 蓄电池没有电，无法启动。
2. 冬天发动机机油变稠，汽车很难启动。
3. 汽车的发动机老化，不能启动。

使用前提：

输入电压(AC):220V 50Hz交流电



#### 产品特点：

1. 三段式恒流、恒压、浮充（涓流）快速充电
2. 30A强力引擎启动功能
3. 高效率电量转换技术
4. 简洁和轻便的设计
5. 各种工作状态的直观数码显示
6. 智能数码电池修复激活功能
7. 数字式多种电源内部保护电路
8. 铝镁合金外壳、平面拉丝及金属阳极氧化工艺

#### Product features:

1. Three-phase constant current, constant voltage, floating (trickle) quick charge
2. Powerful engine start function
3. High efficient power transfer technology
4. Compact and lightweight design
5. All kinds of working state digital display
6. Intelligent digital battery repair and active function
7. Various of digital power circuit protection
8. Aluminum magnesium shell, plane drawbench and metal anodic oxidation technology



#### 技术数据/Technicai data

型号 Model	DC-1220A	DC-1236A	DC-2410A	DC-2420A	DC-1210A	DC-1230A	DC-1240A
输入电压 Input voltage	AC:220V 50Hz				AC:220V 50Hz		
输入电流 Input current	5A	8A	2.5A	5A	2.5A	8A	8A
最大输出电流 Maximum output current	20A±3A	36A±3A	18A±1.5A	20A±3A	10A±3A	20A±3A	30A±3A
恒压输出电压 Constant voltage output voltage	14.6±0.3V DC		29±0.6V DC		15.2±0.2V DC		
电池类型 The battery type	12V/24V, >24AH						
工作温度 Working temperature	-10°C~40°C						
储存温度 Storage temperature	-20°C~70°C						
尺寸 Size	183X96X55MM	211X96X55MM	183X96X55MM	211X96X55MM	153X128X68MM	188X128X68MM	235X128X68MM
重量 Weight	约 0.95kg				约 1.20kg		

Digital display charger  
数显充电器  
SON series



SON-20A



SON-20A<sup>+</sup>



SON-10A



SON-10A<sup>+</sup>

FAST ↔ AUTO



Smart fast charger  
智能快速充电器  
SON series



son-1203  
son-1205  
son-1207  
son-1208  
150X70X45 MM



son-1210  
180X80X45 MM



son-1230  
235X105X56 MM



son-1220  
200X95X56 MM

技术数据/Technicai data

型号 Model	输入电压 Input voltage	额定电压 Rated voltage	恒流充电电流 Constant charge current	恒定充电电压 Constant charge voltage	尺寸 Size
SON-10A	AC220V±10% 50Hz	6V/12V	10A± 5%	6.8V/13.6V	128X92X53MM
SON-20A	AC220V±10% 50Hz	12V/24V	20A± 5%	13.6V/27.8	180X126X73MM
SON-10A <sup>+</sup>	AC220V±10% 50Hz	6V/12V	10A± 5%	6.8V/13.6V	130X96X60MM
SON-20A <sup>+</sup>	AC220V±10% 50Hz	12V/24V	20A± 5%	13.6V/27.8	185X120X68MM

最大充电电流(MAX): 3A/5A/7A/8A/10A/20A/30A  
适用电池电压(DC):12V  
输入电压(AC):100~240V

五星级全方位保护电池

- 充满自动断电, 保护电池
- 三段式智能充电, 充电速度快
- 防反接, 防短路
- 自动识别有无电池, 无电池自动关闭输出
- 悬挂式设计, 方便安装

The maximum charging current(MAX): 3A/5A/6A/7A/10A/20A  
The suitable battery voltage(DC):12V  
Input voltage (AC):100~240V

Omni-directional battery protection functions.

- The power will be turned off automatically when the battery gets fully charged.
- Three-phase charging mode makes it charge quickly.
- Reverse connect protection and short circuit protection.
- It can judge whether there is a battery, and will shut down automatically if there is no one,
- No spark appears when connecting, very safe.
- Hanging style design makes it easy to install.

# Battery Charger

## 电池充电器

### MA-1210A



### MA-1230A



技术数据/Technical data

型号 Model	MA-1210A	MA-1230A/MA-1230E	MA-2410	MA-2415
输入电压 Input voltage	220V~240V			
额定频率 Rated frequency	47~63HZ			
充电电流 Charge current	10A	30A	10A	15A
输出电压 Output voltage	12V	12V	24V	24V
充电模式 Charge mode	三段式three-steps	四段式four-steps		三段式three-steps
装箱数 Packed qty	20PCS	6PCS	6PCS	6PCS
认证 Certification	ISO、CTA、CE			

### MA-1220A



### MA-1204



技术数据/Technical data

型号	MA-1220A	MA-1204(MA-1220)
输入电压 Input voltage	220V~240V	
输出电压 Output voltage	12V	
额定频率 Rated frequency	47~63HZ	
满载效率 Full load efficiency	≥91%	
充电电流 Charge current	20A	
装箱数 Packed qty	8PCS	
外形尺寸 Dimensions	190X130X60mm	
重量 N.W	0.8kg	1.03kg
充电模式 Charge mode	三段式 three-steps	四段式 four-steps
认证 Certification	ISO、CTA、CE	

# Castle UPS series

## 电源管理专家系列

硬件展示

可灵活安装超强LCD显示

用户可以选择横向或者纵向安装显示屏，通过LCD实时查询输入，输出电压，电池电量，负载比例，市电状态和停电状态，故障指示等实时信息。

NEW



● 技术数据/Technical data

型号 Model	SON 1KD	SON 1KSD	SON 2KSD	SON 3KSD	SON 4KSD	SON 5KSD
额定容量	1KVA		2KVA		3KVA	
输入 Input	电压	(110-300)VAC				
	频率	40-70HZ				
	输入功因	≥0.98				
电池 The Battery	外接电池标称电压	-	36V	-	72V	-
	电池形式	阀控式铅酸蓄电池				
	电池数量	2PCS	-	4PCS	-	6PCS
输出 Output	电压	220*(1±2%)VAC				
	频率	与输入同步 市电模式 50±0.05HZ 电池模式				
	输出功因	40C 环境温度下0.8, 30C 环境温度下0.9				
	过载能力	105%-150%,47S-25S; 150%-200%,25S-300ms; 200%以上200ms (输出功因0.8)				
	插座形式 数量	国标插座2				
转换时间Conversion Time	停电 复电	0ms				
后备时间80载, 08功因	>4.5min	-	>4.5min	-	>4.5min	-
指示灯 Indicator light	负载指示灯、电池供电指示灯、UPS运行状况指示灯等					
报警声音 Alarm sound	当输入电压断电时每四秒一叫，当电池将用尽时每一秒一叫 异常 长鸣					
自动重启 Automatic restart	电池耗尽 shutdown后，市电恢复正常时，可以自动重启					
通讯界面 Communication interface	监控功能					
	选购件	webpower卡, As400 卡				
环境 The environment	温度	0C-40C				
	湿度	<95%				
重量净重The weight of the	主机	11	7.2	17.5	8.9	21.6
	电池模块	-	20.0	-	20.0	-
外观尺寸 Appearance of size	主机	438*420*87	438*420*87	438*570*87	438*420*87	438*570*87
	电池模块	-	438*420*87	-	438*420*87	-

● 电池包备电时间表/Battery pack for electric schedule

机型	SON 1KSD	SON 2KSD	SON 3KSD
电池数量12V36 松下电池 或同等容量其他电池	3节* 2组	6节* 1组	8节* 1组
1	13	6	5
2	3	18	16
3	63	33	2
4	111	51	6
5	10	66	57
6	160	8	83

# Portable solar generator series

## 便携式太阳能发电机系列

### ST-A

# The sample application

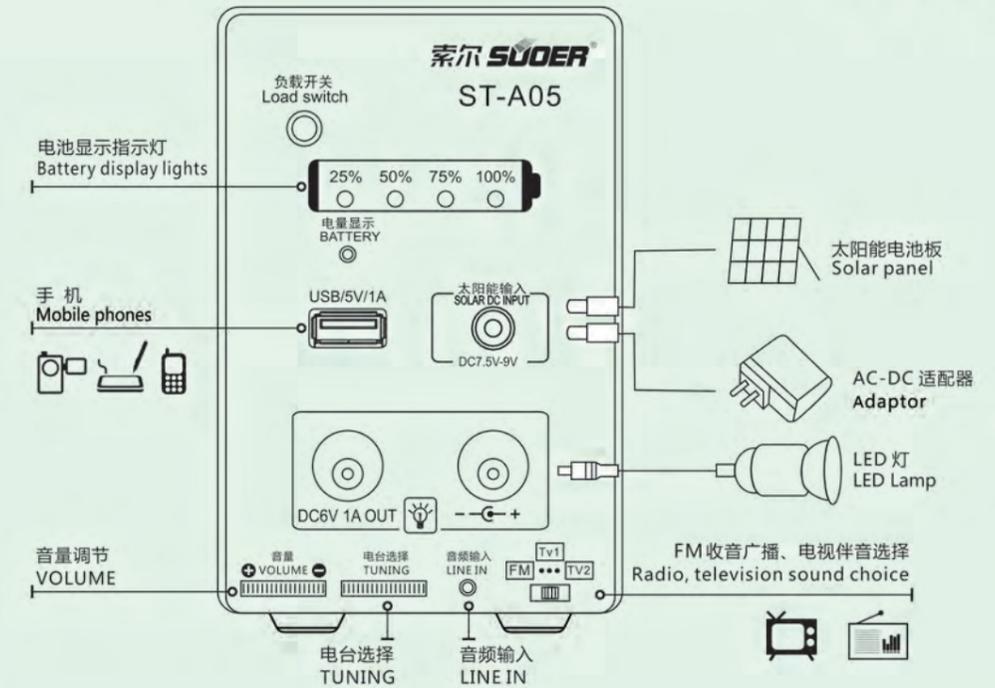
## 应用示例



接收天线  
随时随地收听FM广播、电视伴音  
Listen to FM radio, television sound anytime and anywhere



套机配件  
Set of machine parts



### 技术参数 / Technical data

型号	Model	ST-A01	ST-A02	ST-A03	ST-A05	ST-A07
电池容量	Battery capacity	12V/4AH	12V/7AH	6V/4AH	6V/4AH	12V/7AH
额定充电电流	Rating charging current	3A				1.5A
DC接口	DC interface	2	4	2	2	4
Dc座总输出	DC total output	12V/3A		6V/3A	6V/3A	12V/5A
反接保护	Reverse connect protection			✓		
输出保护	Output protection			✓		
USB输出接口	USB output interface			1		
USB输出	USB output			5V/1A		
USB输出保护	USB output protection			✓		
空载损耗	Excitation loss			5MA (AC:300MA)		
待机损耗	Standby loss			0.2MA		0.5MA
充电回路压降	Charging circuit pressure drop			≤0.26V		
放电回路压降	Discharge circuit voltage drop			≤0.15V		
充电控制方式	Charging control mode	PWM脉宽调制 PWM Pulse Width Modulation				
放电恢复电量	Restore electricity discharge	≤15%				
直充电压	Charging voltage	13.6V		7.5V		
均充电压	Even charging voltage	14.2V		7.5V		14.2V
浮充电压	Float charging voltage	13.8V		7.3V		
电池过压保护	Battery over-voltage protection	17V		8V		
放电截止电压	Discharge cut-off voltage	10.5V		5V		
交流输入电压	The AC input voltage					110V~240V
音响功能	Audio function				FM:87.5~108MHZ TV1 Sound:56.25~91.75MHZ. TV2 Sound:174.75~222.25MHZ.	
额定功率	Power			3W		
额定阻抗	Impedance			4Ω		
放电截止电压	Distortion measure			≤0.8%		
信噪比	S/N ratio			≥60DB		
频率响应	Frequency			30Hz-15KHz		
噪声灵敏度	Sensibility			3UV		
放电截止电压	Selective			50DB(±200KHz)		5V
输入接口	Line in			3.5mm		
尺寸	Size					205X80X120mm

# Portable solar generator series

## 便携式太阳能发电机系列

### ST-B

ST-B01



ST-B02



ST-B03



太阳能电池板/照明/功放/MP3/USB+SD+FM+数码管LED显示+记忆功能+红外远程遥控+蓝牙

With multi-function, it is more than a portable solar charger. We provide the buyer with solar panel, lighting, power amplifier, Mp3, USB/TF/Bluetooth/FM/digital tube LED display together with the solar charger for free.



#### 技术参数 / Technical data

型号	Model	ST-B01	ST-B02	ST-B03
电池容量	Battery capacity	12V/12AH	12V/4AH	12V/4AH
额定充电电流	Rating charging current	4A	3A	3A
DC接口	DC interface	6	3	3
DC座总输出	DC total output	12V/4A	12V/3A	12V/3A
反接保护	Reverse connect protection		√	
输出保护	Output protection		√	
USB输出接口	USB output interface	2		1
USB输出	USB output		5V/1A	
USB输出保护	USB output protection		√	
空载损耗	Excitation loss		5mA ( AC:300MA )	
待机损耗	Standby loss		0.2MA	
充电回路压降	Charging circuit pressure drop		≤0.26V	
放电回路压降	Discharge circuit voltage drop		≤0.15V	
电池过压保护	Battery over-voltage protection		17V	
直充电压	Charging voltage		13. 6V	
均充电压	Even charging voltage		14. 2V	
浮充电压	Float charging voltage		13.8V	
充电控制方式	Charging Control mode		PWM Pulse Width Modulation	
放电截止电压	Discharge cut-off voltage		10. 5V	
放电恢复电量	Restore electricity discharge		≤15%	
音响功能	Audio function		FM:87. 5~108MHZ USB/TF/LINE IN	FM:87. 5~108MHZ USB/TF/Bluetooth/ Line in
额定功率	Power		10W+10W	
额定阻抗	Impedance		4Ω	
放电截止电压	Distortion measure		≤0. 3%	
信噪比	S/N ratio		≥80DB	
频率响应	Frequency		40Hz-40KHz	
USB标准	USB standard		USB2.0/1.0	
放电截止电压	Selective		90DB±2DB	
输入接口	Line in		3.5mm	
红外遥控	Ir remote		√	
尺寸	Size		210X112X122 mm	

# Portable solar generator series

## 便携式太阳能发电机系列

### ST-C

ST-C01



ST-C02



ST-D01S



- 适用于电视 ·Suitable for television
- 风机上的应用 ·Application of fan
- 电钻中的应用 ·Application of electric drill
- 适用于直流灯 ·Suitable for DC lamp
- USB 5V/1A ·USB 5V/1A



太阳能充电  
Solar charging

市电输入  
Mains input

#### 技术参数 / Technical data

型号	Model	ST-C01	ST-C02
电池容量	Battery capacity	12V/17AH	
额定充电电流	Charging current rating	3A	
DC接口	DC interface	8	
DC座总输出	DC total output	12V/5A	
反接保护	Reverse connect protection	√	
输出保护	Output protection	√	
交流输出	AC output	220V~240V / 500W (peak power) / 150W(output power)	
交流输出接口	USB output interface	1	
效率	Efficiency	>70%	
USB输出	USB output	5V/2A	
USB输出接口	USB output interface	2	
USB输出保护	USB output protection	√	
空载损耗	Excitation loss	5MA (AC:300MA)	
待机损耗	Standby loss	0.2MA	
充电回路压降	Charging circuit pressure drop	≤0.26V	
放电回路压降	Discharge circuit voltage drop	≤0.15V	
电池过压保护	Battery over-voltage protection	17V	
提升充电电压	Enhance the charging voltage	14. 8V	
直充电压	Charging voltage	13. 6V	
均充电压	Even charging voltage	14. 2V	
浮充电压	Float charging voltage	13.8V	
充电控制方式	Charging control mode	PWM Pulse Width Modulation	
放电截止电压	Discharge cut-off voltage	10. 5V	
放电恢复电量	Restore electricity discharge	≤15%	
尺寸	Size	260X100X195mm	

减少生活噪音污染 养生族力荐静音家电  
It is very suitable for people who pay much attention to health maintenance since it can reduce the noise pollution.

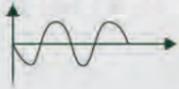


#### 技术参数 / Technical data

型号	Model	ST-D01S
电池容量	Battery capacity	12V/24AH
额定充电电流	Rating charging current	2A
DC接口	DC interface	4
交流输出	AC output	AC:230V/350W/50HZ
峰值功率	Peak power	500W
DC座总输出	DC total output	DC:12V/3A
反接保护	Reverse connect protection	√
输出保护	Output protection	√
USB输出接口	USB output interface	2
USB输出	USB output	5V/2A
USB输出保护	USB output protection	√
空载损耗	Excitation loss	5MA (AC:300MA)
待机损耗	Standby loss	0.2MA
充电回路压降	Charging circuit pressure drop	≤0.26V
放电回路压降	Discharge circuit voltage drop	≤0.15V
电池过压保护	Battery over-voltage protection	17V
提升充电电压	Enhance the charging voltage	14. 8V
直充电压	Charging voltage	13. 6V
均充电压	Even charging voltage	14. 2V
浮充电压	Float charging voltage	13.8V
充电控制方式	Charging control mode	PWM Pulse Width Modulation
放电截止电压	Discharge cut-off voltage	10. 5V
放电恢复电量	Restore electricity discharge	≤15%
市电输入电压	The AC input voltage	110V~240V
效率	Efficiency	>70%
尺寸	Size	305X180X165 mm

# UPS frequency inverter series UPS工频逆变器系列

## HPA series



For solar



HPA-500/1000

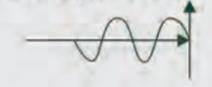
HPA-500CT/1000CT

内置太阳能控制器  
built-in solar controller



# UPS frequency inverter series UPS工频逆变器系列

## HPA-500/1000



### 技术数据/Technical data

型号 Model		HPA-500	HPA-1000
容量 Capacity(W)		500W	800W
交流输入 AC input	电压 Voltage	AC 145~275V	
	频率 Frequency	50Hz±10%	
DC 输入 DC input	电压(外接电池) Voltage	DC12V / DC24V / DC48V	
	低压保护 Low-voltage protection	DC10.5V / DC21V / DC42V	
	过压保护点 Overvoltage protection	DC15V / DC28V / DC60V	
交流输出 AC output	电压 Voltage	AC220V±5% (DC模式) 190-240V (AC模式)	
	频率 Frequency	50±0.5Hz (DC模式) 同步市电 (AC模式)	
	波形 Waveform	正弦波 (失真度≤3%) Sinewave	
	效率 Efficiency	≥80% (DC TO AC)	
外形尺寸 Dimensions		338X146X215cm	
充电时间 Charge	充电电流 Charge current	最大充电电流15A(可按客户要求更改) Maximum charge current 15A could change according to customer requirement	
	充电效率 Charge efficiency	8-15小时,回充90% 8-12hours, recharge90%	
转换时间 Conversion time		≤4ms	
保护 Protect		过载、短路、电池高低压保护 Overload, short circuit, battery of high and low voltage protection	
报警声 Alarm		过载、短路、电池高低压保护 Overload, short circuit, battery of high and low voltage protection 当电池电压接近关机点时报警声由慢变快,直到设备自动关机 When the voltage of battery gets to the closing point, the alarm rings faster and faster till the equipments switch off automatically.	
显示 Display		市电下显示市电工作状态,负载及充电情况,电池下显示电池工作状态,电池容量等 Under commercial electricity, it displays electricity working status, loading and charging state, if in battery mode the battery working status and capacity will be displayed	
环境 Environment	噪声 Noise	≤45dB	≤50dB
	温度 Temperature	0°C±40°C	
	湿度 Humidity	10%±90%	

## HPA-500CT/1000CT

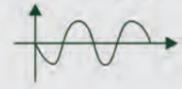
### 技术数据/Technical data

型号 Model		HPA-500CT	HPA-1000CT
容量 Capacity(W)		500W	800W
交流输入 AC input	电压 Voltage	AC 145~275V	
	频率 Frequency	50Hz±10%	
太阳能充电 Solar charger		20A	
DC 输入 DC input	电压(外接电池) Voltage	DC12V / DC24V / DC48V	
	低压保护 Low-voltage protection	DC10.5V / DC21V / DC42V	
	过压保护点 Overvoltage protection	DC15V / DC28V / DC60V	
交流输出 AC output	电压 Voltage	AC220V±5% (DC模式) 190-240V (AC模式)	
	频率 Frequency	50±0.5Hz (DC模式) 同步市电 (AC模式)	
	波形 Waveform	正弦波 (失真度≤3%) Sinewave	
	效率 Efficiency	≥80% (DC TO AC)	
外形尺寸 Dimensions		338X146X215cm	
充电时间 Charge	充电电流 Charge current	最大充电电流15A(可按客户要求更改) Maximum charge current 15A could change according to customer requirement	
	充电效率 Charge efficiency	8-15小时,回充90% 8-12hours, recharge90%	
转换时间 Conversion time		≤4ms	
保护 Protect		过载、短路、电池高低压保护 Overload, short circuit, battery of high and low voltage protection	
报警声 Alarm		过载、短路、电池高低压保护 Overload, short circuit, battery of high and low voltage protection 当电池电压接近关机点时报警声由慢变快,直到设备自动关机 When the voltage of battery gets to the closing point, the alarm rings faster and faster till the equipments switch off automatically.	
显示 Display		市电下显示市电工作状态,负载及充电情况,电池下显示电池工作状态,电池容量等 Under commercial electricity, it displays electricity working status, loading and charging state, if in battery mode the battery working status and capacity will be displayed	
环境 Environment	噪声 Noise	≤45dB	≤50dB
	温度 Temperature	0°C±40°C	
	湿度 Humidity	10%±90%	

# UPS frequency inverter series

## UPS工频逆变器系列

### ST-E series



All-in-one solar charging and inversion device  
一体化太阳能充电和逆变装置



#### 技术参数/Technicai data

型号	Model	ST-E01	ST-E02
电池容量	Battery capacity	24V/24AH	24V/60AH
额定充电电流	Rating charging current	5A	10A
DC接口	DC interface	1	1
交流输出	AC output	AC:230V/1000W ( peak power ) /650W(output power)/50HZ	AC:230V/1500W ( peak power ) /1000W(output power)/50HZ
DC座总输出	DC total output	24V/5A	24V/5A
反接保护	Reverse connect protection	✓	✓
输出保护	Output protection	✓	✓
USB输出接口	USB output interface	2	2
USB输出	USB output	5V/2A	5V/2A
USB输出保护	USB output protection	✓	✓
空载损耗	Excitation loss	5MA (AC:300MA)	5MA (AC:300MA)
待机损耗	Standby loss	0.2MA	0.2MA
充电回路压降	Charging circuit pressure drop	≤0.26V	≤0.26V
放电回路压降	Discharge circuit voltage drop	≤0.15V	≤0.15V
充电控制方式	Charging control mode	PWM pulse width modulation	Pwm pulse width modulation
市电输入电压	The AC input voltage	110V~240V	110V~240V
效率	Efficiency	>70%	>70%
尺寸	Size	433X210X384 mm	

# PWM waterproof solar charge controller

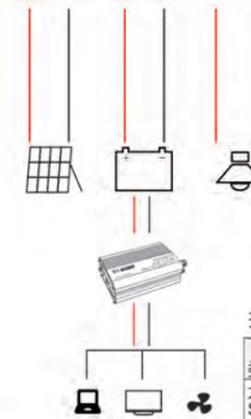
## PWM 防水太阳能充电控制器

### ST-F ST-H



- 防雨
- 防尘
- 防晒
- 防寒
- 防风沙
- 防潮
- 防虫子
- rain
- dust
- sunscreen
- cold
- sand
- moisture
- anti worm

NEW



#### 保护功能：

- 1.太阳能板反接保护
- 2.电池反接保护
- 3.太阳能充电为PWM充电
- 4.负载过载保护
- 5.充电防倒流

#### Protection function:

1. Solar panels reverse connection protection
- 2.Reverse battery protection
- 3.Solar charging charging for PWM
- 4.Overload protection
5. Charging backflow prevention

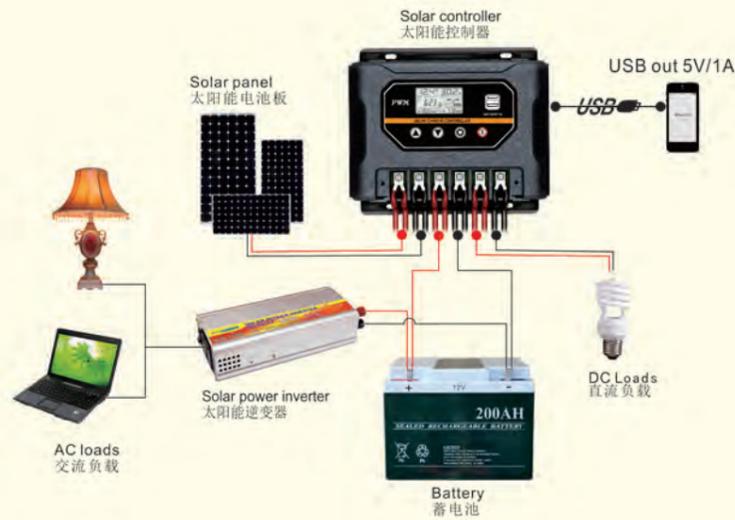
#### 技术参数/Technicai data

类别Type	型号 Model	ST-F1205	ST-F1210	SH-F1220	SH-F1230
太阳能板电压范围 Solar panel voltage range		15V-40V		15V-40V	
适应电池电压 To adapt to the battery voltage		12V/24V		12V/24V	
最大输出电流 The maximum output current		5A	10A	20A	30A
最大充电电流 The maximum charge current		5A	10A	20A	30A
推荐太阳能板功率 Recommended solar panels power		12V 24V (40W)(80W)	12V 24V (80W)(160W)	12V 24V (100W)(180W)	12V 24V (150W)(200W)
最大太阳能板功率 The maximum output power of solar panel		12V 24V (60W)(120W)	12V 24V (120W)(240W)	12V 24V (100W)(180W)	12V 24V (150W)(200W)
推荐电池容量 Recommended battery capacity		24AH	60AH	100AH	150AH
尺寸 Size		74X24.2X134mm			

# Solar charge controller series

## 太阳能充电控制器系列

### ST-W



High efficiency, powerful function.  
效率高, 用途广

型号 Model	ST-W 1210	ST-W 1220	ST-W 1230	ST-W 4810	ST-W 4820	ST-W 4830	ST-W 6010	ST-W 6020	ST-W 6030	ST-W 1240	ST-W 1250	ST-W 1260	ST-W 4840	ST-W 4850	ST-W 4860	ST-W 6040	ST-W 6050	ST-W 6060
类别 Category	12V/24V			48V			60V			12V/24V			48V			60V		
适应电池电压 Adapt to battery voltage	12V/24V			48V			60V			12V/24V			48V			60V		
最大输出电流 Maximum current output	10A	20A	30A	10A	20A	30A	10A	20A	30A	40A	50A	60A	40A	50A	60A	40A	50A	60A
推荐太阳能板功率 Solar panels power	12V (90W) 24V (180W)	12V (180W) 24V (360W)	12V (270W) 24V (540W)	360W	720W	1000W	450W	900W	1250W	12V (360W) 24V (720W)	12V (450W) 24V (900W)	12V (540W) 24V (1080W)	1440W	1800W	2160W	1800W	2250W	2700W
尺寸 Size	125X86X33.5mm									200X173X63mm								

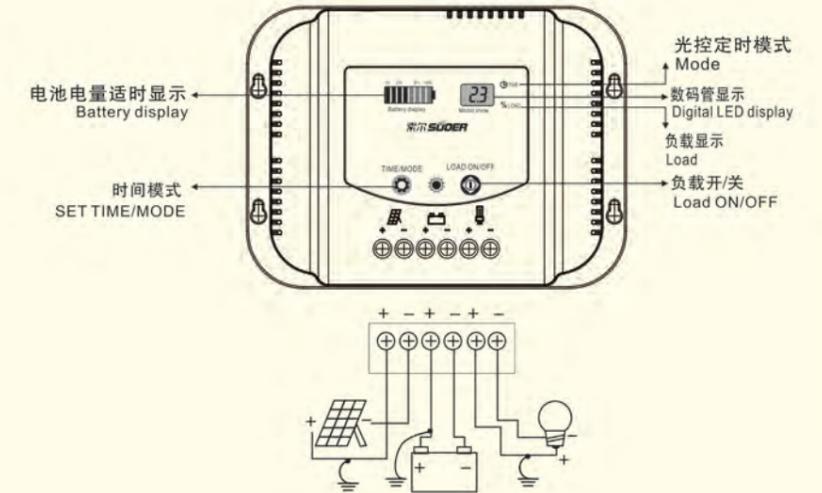
# Solar charge controller series

## 太阳能充电控制器系列

### ST-G



- ◆单片机控制
- ◆负载轮流工作, LVR可以自行设置
- ◆过载保护
- ◆短路保护
- ◆反向放电保护
- ◆极性接反保护
- ◆雷电保护
- ◆过放电保护
- ◆过充保护
- ◆MCU control
- ◆Load turns on work, LVR can be seted up
- ◆Overloading protection
- ◆Short circuit protection
- ◆Reverse discharge protection
- ◆Reverse polarity connection protection
- ◆Thunder and Lighting protection
- ◆Overdischarge protection
- ◆Overcharge protection



#### 技术参数 / Technical data

型号 Model	ST-G1205	ST-G1210	ST-G1215	ST-G1220	ST-G1230
额定充电功率 Rated charging power	60W	120W	180W	240W	360W
额定充电电流 Rating charging current	5A	10A	15A	20A	30A
电池电压 Battery voltage	12V / 24V				
直充电压 Charging voltage	13.6V / 27.2V				
浮充电压 Float charging voltage	13.8V / 27.6V				
放电截止电压 Discharge cut-off voltage	10.5V / 21V				
电池过压保护 Battery over-voltage protection	17V / 34V				
输出保护 Output protection	大于1.25倍额定电流60秒保护		>1.25 times rated current 60s protection		
	大于1.5倍额定电流5秒保护		>1.5 times rated current 5s protection		
	大于3倍额定电流立刻保护		>3 times rated current straightway protection		
	短路立刻保护		> Short circuit immediately protection		
空载损耗 Discharge cut-off voltage	10MA				
待机损耗 Standby loss	0.2MA				
充电回路压降 Charging circuit pressure drop	≤0.26V				
放电回路压降 Discharge circuit voltage drop	≤1.5V				
充电控制方式 Charging control mode	PWM脉宽调制 PWM Pulse Width Modulation				
尺寸 Size	167X124X50MM				

# Solar charge controller series

## 太阳能充电控制器系列

### SON-MPPT



SON-MPPT-10A



SON-MPPT-20A

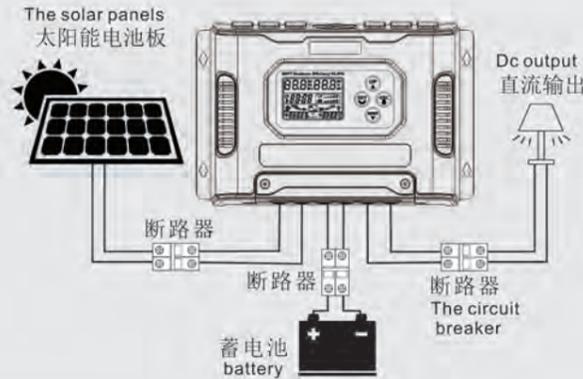


SON-MPPT-30A



SON-MPPT-40A

As shown in the figure below:  
接线如下图所示/:



NEW

#### 技术参数/Technical data

MPPT控制器型号: SMART2-10/20A/30A/40A-系列		10A	20A	30A	40A
充电模式 charging mode	MPPT自动最大功率点跟踪				
充电方式 charging way	三阶段: 恒流 (MPPT), 恒压, 浮充				
系统类型 system type	DC12V/24V/48V	自动识别			
系统识别电压 system identification of voltage	12V系统	DC9V~DC15V			
	24V系统	DC18V~DC30V			
	48V系统	DC36V~DC60V			
软启动时间 soft start time	12V/24V/48V系统	≤10S			
动态响应恢复时间 response time to recover	12V/24V/48V系统	500us			
整机效率 the machine efficiency	12V/24V/48V系统	≥96.5%, ≤99%			
光伏组件利用率 photovoltaic utilization	12V/24V/48V系统	≥99%			
输入特性 the input features					
MPPT工作电压及范围 mppt working voltage and scope	12V系统	DC18V~DC150V			
	24V系统	DC34V~DC150V			
	48V系统	DC65V~DC150V			
输入低压保护点 the input low voltage protection	12V系统	DC16V			
	24V系统	DC30V			
	48V系统	DC60V			
输入低压恢复点 the input low pressure recovery points	12V系统	DC22V			
	24V系统	DC34V			
	48V系统	DC65V			
最高极限输入电压 Maximum input voltage	12V/24V/48V系统	DC160V			
输入过压保护点 input overvoltage protection	12V/24V/48V系统	DC150V			
输入过压恢复点 input overvoltage recovery points	12V/24V/48V系统	DC145V			
最大太阳能板输入功率 the largest solar panels power input	12V系统	570W	700W	900W	
	24V系统	1130W	1400W	1700W	
	48V系统	2270W	2800W	3400W	
充电特性 The charging characteristics					
可选择的电池类型 battery types to choose from (默认为GEL胶体电池) (the default for gel battery)	12V/24V/48V系统	密封铅酸电池, 排液式电池, 胶体电池, 镍镉电池 (还可以自定义为其它种类的电池充电)			
恒压电压 constant pressure voltage	12V/24V/48V系统	请参考电池类型的充电电压参数表			
浮充电压 float charging voltage	12V/24V/48V系统				
过充保护电压 the overcharge protection voltage	12V系统	14.6V			
	24V系统	29.2V			
	48V系统	58.4V			
输出额定电流 the output current rating	12V/24V/48V系统	40A	50A	60A	
	12V/24V/48V系统	44A	55A	66A	
	12V/24V/48V系统				
限流保护 current limiting protection	12V/24V/48V系统				
温度系数 the temperature coefficient of	12V/24V/48V系统	±0.02%/°C			
温度自动补偿 automatic temperature compensation	12V/24V/48V系统	14.2V~(最高温度-25°C)*0.3			
输出电压纹波峰-峰值 peak-peak	12V/24V/48V系统	200mV			
输出稳压精度 the output voltage accuracy	12V/24V/48V系统	≤±1.5%			

# Waterproof solar controller series

## 太阳能防水控制器系列

### ST-C



NEW



#### 产品特点

- 1) 12V/24V电池系统自动识别
- 2) 支持学习型红外遥控负载控制
- 3) 直观液晶显示
- 4) 0-24小时光控模式、开关模式、无线遥控模式等多种负载模式可选
- 5) 各种保护齐全, 稳定可靠 (充电过压保护, 充电过流保护, 负载过流保护, 负载短路保护, 负载欠压保护)
- 6) 便捷充电电压切换, 兼容多种不同类型电池, 省去复杂菜单设置, 自动记忆用户设置
- 7) 内置双USB输出
- 8) 内置充电限流保护, 无需担心太阳能板功率过大损坏控制器和电池系统

#### PRODUCT FEATURES

- 1) the 12 v / 24 v battery system automatic recognition
- 2) support the learning of infrared remote control load control
- 3) direct liquid crystal display (LCD)
- 4) 0-24 hours optical mode, switch, wireless remote control mode, etc Load mode optional
- 5) all kinds of complete protection, stable and reliable (charging over voltage protection, charging flow Protection, over-current protection, load load short circuit protection, under-voltage protection)
- 6) convenient charging voltage switching, compatible with a variety of different types of batteries, save complex Menu Settings, automatic memory user Settings
- 7) built-in double USB output
- 8) built-in charging current limiting protection, without having to worry about solar panels power up too much damage control Controller and battery system

#### 技术参数/Technical data

	ST-C1210	ST-C1220	ST-C1230
适应电池电压 To adapt to the battery voltage	12V/24V自适应 (电池<16V: 12V系统 电池>18V: 24V系统)		
最大充电电压 Maximum charging voltage	12V: 开环18-24V标准规格太阳能板 (24V电池*2)		
最大充电电流 Maximum charging current	10A	20A	30A
最大充电电压 Maximum charging voltage	便捷切换: (24V电池*2, 参数可以设置菜单调整) 14.2V (密封铅酸电池) 14.5V (常规铅酸电池) (默认切换设置电压) 15.3V (液体铅酸电池)		
最大输出电流 The largest output current	13A	26A	39A
低压保护电压 Low voltage protection voltage	10.5V (24V电池*2, 参数可以设置菜单调整)		
低压恢复电压 Low pressure recovery voltage	12.5V (24V电池*2, 参数可以设置菜单调整)		
负载过载自动恢复 Load overload automatic recovery	30S		
双USB输出 Double USB output	5V2.1A		
负载光控开启时间 Load relating to open time	0-24小时可选		
红外遥控距离 Infrared remote control distance	>5米		

# Timer, the bosom friend for refrigerator

冰箱知音

SON-IS01

SON-IS02(USB 5V/1A)

调整范围 Adjustment range	停机downtime 3~120minutes, 开机boot 3~120minutes
额定电压 Rated voltage	AC 220V/50Hz
最大电流 Maximum current	10A
最大功率 Maximum power	2200W
产品尺寸 Product size	85X70X85mm

环保节电  
延时保护  
保持新鲜

Energy-saving and environmental protection  
Delay protection  
Keep it fresh



# Timer, the bosom friend for refrigerator

冰箱知音

SON-196C



调整范围 Adjustment range	停机downtime 5~120minutes, 开机boot 5~120minutes
额定电压 Rated voltage	AC 220V/50Hz
最大电流 Maximum current	10A
最大功率 Maximum power	1000W

- 用户也可以根据需要自行设定开、停时间, 冰箱(柜)在室内常温下, 开、停机时间。
- 比例为: 夏季1:3, 冬季1:4为好。如冰箱(柜)需要快速冷冻食品, 请按快速启动按钮。
- The user can set when the machine should start up and halt, the working hours and shut up time according to his own needs at room temperature.
- Suitable proportion: 1:3 in summer and 1:4 in winter, if you want the refrigerator frozen the foods quickly, please push the "quick start" button.



饮水机  
Dispenser

路由器  
Routers

电车  
Tram

风扇  
Fan

冰箱  
Refrigerator

鱼缸  
Fish tank

蔬菜大棚  
Vegetable greenhouse