

PRODUCT SELECTION GUIDE

产品选型手册

浙江三迪电气有限公司
Zhejiang Sandi Electric Co., Ltd



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地址：浙江省乐清市经济开发区滨海南四路 66 号博通慧谷

Add: Building 13-2, Botong Huigu, No. 66, Binhai South 4th Road, Yueqing
Economic Development Zone, Zhejiang Province

<http://www.lgis.cc>

本选型手册刊载的型号、规格等因产品更新而变化，恕不另行通知。本手册仅供参考之用，一切依实物为准，最终解释权归浙江三迪电气有限公司。
The models and specifications published in this model selection manual are subject to change without notice due to product updates. This manual is for reference only, and everything is subject to the actual object. Zhejiang Sandi Electric Co., Ltd. reserves the right of final interpretation.

COMPANY PROFILE

公司简介

浙江三迪电气有限公司从 2008 年创立至今已有 15 年，是一家专业从事新能源电源领域的研发、生产制造及销售和服务为一体的高新技术企业

公司产品依照国家有关标准，自主研发出各类功能齐全、性能稳定、保护功能完善的高品质产品被广大客户所认可，目前公司生产的主要产品有：离网逆变器、光伏逆控一体机、储能锂电池系统，光伏水泵逆变器、光伏防雷汇流箱、太阳能控制器、单相转三相转换器、车载船舶逆变器、AC/DC 电池充电器等系列公司产品主要应用于太阳能、工业自动化控制、民用、火车、船舶、消防电力、光伏油田系统及国家重点工程建设等各领域得到广泛应用。

公司严格控制产品质量，力争尽善尽美，把质量作为公司的生命线，不断完善质量管理体系，并且获得 ISO9001 质量管理体系认证，不断引进国际先进生产设备及检测设备，保证产品的质量和及时的发货，我们以人为本，以踏实诚信和完善的服务让客户更放心的使用三迪产品，并得到客户的一致好评。

三迪电气自成立以来，一直秉承高效，严谨，专业的工作理念，规范管理、精心制造、质量至上、竭诚服务的质量方针。追求卓越，创新价值！坚持走自主创新的道路，通过技术创新、产品创新和服务创新，不断提高自身的竞争力，其产品远销北美洲、大洋洲、欧洲、南美洲、非洲等多个国家，靠其优越的性能广受用户好评。

Zhejiang Sandi Electric Co., Ltd. has been established for 15 years since 2008. It is a high-tech enterprise specializing in the research and development, production, manufacturing, sales, and service of new energy power sources

According to relevant national standards, the company has independently developed various high-quality products with complete functions, stable performance, and complete protection functions, which are recognized by customers. Currently, the main products produced by the company include: off grid inverters, photovoltaic reverse control integrated machines, energy storage lithium battery systems, photovoltaic water pump inverters, photovoltaic lightning protection combiner boxes, solar controllers, single-phase to three-phase converters, vehicle mounted ship inverters The products of AC/DC battery chargers and other series of companies are mainly used in various fields such as solar energy, industrial automation control, civil use, trains, ships, fire power, photovoltaic oil field systems, and national key engineering construction.

The company strictly controls product quality, strives for perfection, regards quality as the lifeline of the company, continuously improves the quality management system, and obtains ISO9001 quality management system certification. We continuously introduce international advanced production and testing equipment to ensure product quality and timely delivery. We are people-oriented, with down-to-earth integrity and perfect service, allowing customers to use Sandi products more confidently and receive unanimous praise from customers.

Since its establishment, Sandi Electric has always adhered to the work philosophy of efficiency, rigor, and professionalism, with a quality policy of standardized management, meticulous manufacturing, quality first, and dedicated service. Pursue excellence and innovate value! Adhering to the path of independent innovation, we continuously improve our competitiveness through technological innovation, product innovation, and service innovation. Our products are exported to many countries such as North America, Oceania, Europe, South America, and Africa, and are widely praised by users for their superior performance.



HONORSANDI QUALIFICATIONS

荣誉资质



三迪品牌是我们企业向前发展的追求目标，我们导入了国际化质量管理体系，坚持每个细节的一丝不苟与精益求精。努力实现产品质量的标准化及系统化管理，使品牌因质量而更加出类拔萃。荣誉源于用心，每份认可的资质证书凝聚三迪人奋力拼搏的结晶，每份荣誉都是我们的金名片和通行证，那是我们一个个路标，那是我们一次次的历程。

Sandi brand is the pursuit goal of our enterprise's forward development. We have introduced an international quality management system and insisted on meticulous and continuous improvement in every detail. Strive to achieve standardization and systematic management of product quality, and make the brand more outstanding due to quality. Honor comes from heart. Each recognized qualification certificate is the crystallization of Sandi people's hard work. Each honor is our golden business card and pass. That is our road sign, that is our journey time after time.

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Storage Energy Lithium Battery & BMS System 储能锂电池 & BMS 系统介绍



模组式锂电逆变一体机
Modular lithium battery inverter



集中式 256kwh 锂电池系统
Centralized 256kwh lithium battery system



集装箱电池储能系统
Container battery energy storage system



光储充一体机
LiFePO4 Lithium Battery & Charger Integrated System



户外型光储充一体机
Outdoor PV Lithium Battery & Charger Integrated System



光储充双向 PCS 系统
PV storage and charging Bidirectional PCS



光储逆控一体机
Lithium Battery Inverter Charger & Integrated System



★产品简介 Product Introduction

三迪 SPVLI 系列磷酸铁锂电池系统是针对光伏储能、备电应用而研发推出的新型环保备用电源。系统采用环保的磷酸铁锂电池、配置定制化的 BMS 系统对电芯进行有效管理，与传统电池相比具有更加优异的产品性能和安全性。产品充放电循环次数多，功率密度高、使用年限长。在兼容性、能量密度、动态监控、安全性、可靠性及产品外观上都进行了独特的设计和创新，可以为用户带来更好的储能应用体验。产品采用一体化设计，集成度高，节省安装空间；采用国内知名高性能磷酸铁锂电芯，电芯一致性好，设计使用寿命 10 年以上；输入输出断路器硬开关更安全可靠，前置接线，安装维护方便，操作简单；功能多样，具有单体过压 / 欠压，告警信息本地显示、充 / 放电过流、智能电芯恒温保护、绝缘及短路保护和恢复功能；兼容性强，与逆变器、光伏发电控制器，市电充电器，充电桩等主要设备无缝对接；通讯接口采用 CAN2.0，可根据客户需求定制，方便系统远程监控，使用灵活。高能、低功耗锂电设备，实现更高的能源供应，更低的能耗，减少环境污染；采用全方位、多级的电池保护策略和故障隔离措施，确保系统安全运行。

Sandi SPVLI series LiFePO4 lithium battery system is a new environment-friendly standby power supply developed for PV energy storage and power reserve applications. The system uses the environment-friendly lithium iron phosphate battery and the customized BMS system to effectively manage the battery cells. Compared with the traditional battery, it has more excellent product performance and safety and reliability. The product has many charging and discharging cycles, high power density and long service life. It has carried out unique design and innovation in compatibility, energy density, dynamic monitoring, security, reliability and product appearance, which can bring better energy storage application experience to users. The product adopts integrated design, with high integration and saving installation space; Domestic well-known high-performance lithium iron phosphate battery power cell is adopted, with good consistency and design service life of more than 10 years; The the input and output circuit breaker is safer and more reliable, with front wiring, convenient installation and maintenance, and simple operation; It has various functions, including single power celf overvoltage/undervoltage, first-level and second-level alarm protection, charging/discharging overcurrent, high temperature, low temperature, insulation and short circuit protection and recovery functions; Strong compatibility, seamless connection with inverter, photovoltaic power generation controller, municipal charger, charging pile and other major equipment; The form of communication interface, CAN2.0, etc. can be customized according to customer needs, which is convenient for remote monitoring of the system and flexible to use. High-energy and low-power lithium-ion equipment can achieve higher energy supply, lower energy consumption and reduce environmental pollution; Adopt comprehensive and multi-level battery protection strategy and fault isolation measures to ensure the safe operation of the system.

★产品优势 Product advantages

- ◎一体化设计、集成度高、安装简单、节约安装空间
- ◎采用高性能磷酸铁锂正极材料，电芯一致性好，设计使用寿命 10 年以上
- ◎充电，放电单独控制，方便可靠控制充放电，过充的时候不会断开放电口，过放的时候不会断开充电口，系统稳定性好
- ◎主从模式、被动均衡，可以对均衡电阻进行管理，可设置均衡启动压差电压，均衡电阻温度进行监测，更加智能，安全，减低木桶效应对系统储能影响
- ◎BMS 采用美国恩智浦 (NXP) 汽车级高性能芯片，抗干扰强，可靠性好，温度范围广
- ◎CAN 通信接口，具有实时性强、传输距离较远、抗电磁干扰能力强等优点
- ◎可以通过上位机对系统一些参数设置，比如风扇启停温度，充电器最大电流设置，充放电电流校正，SOC 校正等，带绝缘漏电检测功能，防止电芯漏油短路
- ◎可集成太阳能控制器，市电充电器，充电桩并可以联机通信控制，更加安全可靠
- ◎电芯温度管理，可以与空调加热器按电芯状况进行自动控制让电芯工作在最适合的温度，可按需要与消防系统进行联动
- ◎All-in-one design, high integration and space saving installation
- ◎Using high-performance lithium iron phosphate cells, laser welding, good cell consistency, designed service life of more than 10 years
- ◎Charging and discharging are controlled separately, which is convenient and reliable to control charging and discharging. The discharge port will not be disconnected when over-charging, and the charging port will not be disconnected when over-discharging, the system has good stability
- ◎Master-slave mode, passive equalization, can manage the equalization resistance, can set the equalization start voltage difference, and monitor the equalization resistance temperature, more intelligent and safe, and reduce the impact of barrel effect on system energy storage
- ◎BMS adopts NXP(USA) automotive-grade high-performance chips, with strong anti-interference, good reliability and wide temperature range
- ◎CAN2.0 communication interface, has the advantages of strong real-time performance, long transmission distance, strong anti-electromagnetic interference ability

专业 专注 尽善 尽美

Professional dedicated perfect perfect



- ◎System parameters can be set through the host computer, such as fan start/stop temperature, charger maximum current setting, charge and discharge current correction, SOC correction, with insulation leakage detection function to prevent oil leakage and short circuit of the cell
- ◎Integrate Solar charge controller or AC charger optional, BMS communication control, more safe and reliable;
- ◎Cell temperature management, can be automatically controlled with the air conditioner heater according to the cell condition to make the cell works at the most suitable temperature, and can be linked with the fire protection system as needed

★性能特点 Performance characteristics

- ◎环保无污染材料，不含重金属，绿色环保
- ◎准确估测电池组的荷电状态，即电池剩余电量，保证电池组的电量维持在合理的范围内
- ◎内置 BMS 管理系统，具有全面保护和监测控制功能
- ◎5 寸 LCD 液晶屏显示，操作简单方便、可以查看单体电芯的温度、电压、工作状态、放电电流，动静态 SOC 算法，告警信息本地显示，告警等级区分，异常电芯精准定位
- ◎主控 MCU 可以方便集中控制，可以管理外围设置（交流充电模块，逆变器模块，太阳能充电模块）按照电池充电曲线来调整外围设备充电电流电压，系统更加可靠
- ◎BMS 电池管理系统，具有 SOC 自动校准和大电流被动平衡功能，结合完善的运营控制和管理策略，实现精准高效的管理
- ◎EMS 能量管理系统，BMS 与太阳能控制器，逆变器集中管理充放电有效控制充放电电流在电芯使用条件内，保护电芯延长使用寿命
- ◎可按要求定制容量范围 20-500KWH
- ◎Environmental protection and pollution-free materials, no heavy
- ◎Accurately estimate the state of charge of the battery pack, that is, the remaining power of the battery, to ensure that the power of the battery pack is maintained within a reasonable range
- ◎Built-in BMS management system with comprehensive protection and monitoring control functions
- ◎5" LCD screen display, easy to operate, can check the temperature, voltage, working status, discharge current, dynamic and static SOC algorithm of a single cell, local display of alarm info, alarm level distinction, accurate positioning of abnormal cells
- ◎Main control MCU can be centrally controlled and manage peripheral settings (AC charging module, inverter module, solar charging module) to adjust the charging current and voltage of peripheral devices according to the battery charging curve, making the system more reliable
- ◎BMS battery management system, with SOC automatic calibration and high current passive balance function, combined with perfect operation control and management strategy, to achieve accurate and efficient management
- ◎EMS energy management system, BMS with solar controller/AC charger, inverter centrally manages charge and discharge, effectively controls the charge and discharge current within the cell usage conditions, protects the cell and extend its service life

Low frequency off-grid inverter

工频逆变器

Low frequency off-grid inverter 工频离网逆变器



SDP-5KW~25KW



SDP-30KW~80KW



SDP-100KW~500KW

Outdoor inverter 户外型逆变器

户外光伏逆控一体机
Outdoor Inverter& controller integrated户外逆变器
Outdoor Inverter

★产品简介 Product Introduction

我公司研发的工频离网逆变器是通过全桥逆变将直流电能转换成交流电的智能电源设备，该系列产品满足 5KW-500KW 功率负载使用。本产品适用于太阳能 / 风能、储能电站发电系统。输出波形为纯正弦波，完善的保护功能，整机效率高，空载损耗低。为无电山区、牧区、边防、海岛等电力缺乏和电网电压不稳定的地区提供多能源供电解决方案。产品具有人性化设计、外观大方、操作方便、液晶指示直观、工作稳定、无噪音、无污染。输出的纯正弦波交流电适用于大多数工业电器及家用电器，例如：工业自动化控制、民用、火车、船舶、汽车、消防电力等电器设备。它主要针对电力控制系统的特点和要求设计制造，适合电力控制系统对供电设备高质量、高可靠性控制的要求，能满足电力控制系统中各种终端设备的需求，同时也适合于其它需要稳定的交流输电电压的场合。

The low frequency off-grid inverter developed by our company is an intelligent power supply device that converts DC power into AC power through full-bridge inverter. This series of products can meet the use of 5KW-500KW power load. This product is applicable to the power generation system of solar/wind power and energy storage power stations. The output waveform is pure sine wave, with perfect protection function, high overall efficiency and low no-load loss. Provide multi-energy power supply solutions for areas without electricity, such as mountainous areas, pastoral areas, border areas, islands, and other areas with power shortage and unstable grid voltage. The product has humanized design, generous appearance, convenient operation, intuitive LCD indication, stable operation, noiseless and pollution-free. The pure sine wave AC output is applicable to most industrial and household appliances, such as industrial automation control, civil, train, ship, automobile, fire power and other electrical equipment. It is mainly designed and manufactured according to the characteristics and requirements of the power control system. It is suitable for the requirements of the power control system for the high quality and high reliability control of the power supply equipment, and can meet the requirements of various terminal equipment in the power control system. It is also suitable for other occasions requiring stable AC transmission voltage.

★性能特点 Performance characteristics

- ◎核心元件均为进口器件，采用三菱的第 6 代 IPM 模块性能稳定，使用寿命长，保护功能强大，更换维修方便。采用美国 TI 中央处理器 DSP28335 芯片，响应迅速准确，给负载提供稳定干净的电源提供保障
- ◎整机采用模块化设计，结构简单、插拔式设计，便于维修，减少机器故障来回维修的隐形成本
- ◎据产品配置条件、调整系统的使用模式：逆变优先或市电旁路优先可任意设置
- ◎双模式启动选择功能，通过液晶设置可以设置降压启动和变频启动两种方式。这样可以充分发挥逆变器的功率，再也不需要在带电机，感性负载时扩大逆变器的容量，给用户节省了费用
- ◎输出频率可以自行设置，例如想控制电机转速设置为 30HZ，逆变器就输出 30HZ，此功能非常方便客户使用于不同的负载类型
- ◎输出频率 50HZ & 60HZ 和输入直流电压范围可以设置，例如过压点，欠压点，过压恢复点，欠压恢复点都可通过液晶屏来设置。此功能方便可以增加或减少蓄电池，光伏组件灵活使用
- ◎输出保护功能完善，有输出过压、过载、过温、短路、自诊断保护等多种保护
- ◎人性化安全设计，采用隔离变压器设计方案，输入输出完全电气隔离，并配有塑壳断路器，为用户节省开关，安装方便安全。带电部位全封闭，防止触电
- ◎LCD+LED 显示，可以显示输入输出电压，电流，用电量，故障代码，方便用户迅速查找故障指导维修
- ◎采用 SVPWM 空间矢量算法，高转换效率、高瞬间功率及低无负载损耗转换效率可以到 93% 以上
- ◎宽电压输入可按照客户要求定制，输入电压范围从 100-400V,200-500V,300-600V 或 450-850VDC，适用于太阳能 / 风能系统无储能蓄电池，直流输入直接接太阳能板 / 风力发电机，在线式切换时间为 0 秒
- ◎本产品通过欧洲 CE (EMC 和 LVD) 和 ISO9001 质量管理体系认证

注：可选配 RS485 和 CAN 通信接口

- ◎The core components are all imported components. Mitsubishi's 6th generation IPM module has stable performance, long service life, strong protection function and convenient replacement and maintenance. With the TI central processor DSP28335 chip, the response is fast and accurate, providing a stable and clean power supply for the load
- ◎The whole machine is modular in design, simple in structure and plug-and-drop in design, which makes maintenance easy and reduces the hidden cost of back and forth maintenance of machine failures
- ◎Adjust the use mode of the system according to the product configuration conditions: Inverter priority or by-pass priority can be set arbitrarily
- ◎Dual mode startup selection function, through the LCD settings, you can set the two modes of Step-down voltage startup and VFD startup. In this way, the power of the inverter can be fully utilized, and the capacity of the inverter can be expanded when there is an inductive load, thus saving the user's expenses
- ◎The output frequency can be set for example, if you want to control the speed of the motor to be set to 30HZ, the inverter will output 30HZ, which is very convenient for customers to use in different load types
- ◎Output frequency 50HZ & 60HZ and input DC voltage range can be set, such as the overvoltage point, undervoltage point, overvoltage recovery point, undervoltage recovery point can be set through LCD screen. This function is convenient to increase or decrease the storage battery, and the photovoltaic components can be used flexibly
- ◎The function of output protection is perfect, which includes protection of output overvoltage, overload, overtemperature, short circuit and self-diagnosis
- ◎Human-friendly safety design, using isolation transformer design, fully electrical isolation of input and output, input and output are equipped with plastic case circuit breaker, saving switches for users, easy and safe installation. The charged part is completely

closed to prevent electric shock

◎LCD+LED display, can display input and output voltage, current, power consumption, fault code, so that users can quickly find the fault to guide maintenance

◎Using SVPWM space vector algorithm, the conversion efficiency of high conversion efficiency, high instantaneous power and low no load loss can be more than 93%

◎Wide voltage input can be customized according to customer requirements, with input voltage range from 100-400V, 200-500V, 300-600V or 450-850VDC, suitable for solar/wind energy system without storage batteries, direct DC input connected to solar panels/wind generators, on-line switching time of 0 seconds

◎This product has been certified by European CE (EMC and LVD) and ISO9001 quality management system

Note: RS485 and CAN communication interfaces are optional

★技术参数 technical parameter

型号规格 Model		SDP-3KW~500KW
隔离 Isolation mode		工频隔离变压器 Low Frequency Transformer
直流输入 DC Input	额定电压 Rated voltage(VDC)	48V- 900V(可定制 Can be customized)
交流输入 AC Input	额定电压 Rated voltage(VAC)	120/220/240V/380V/400V/415/440/480V(可选 Optional)
交流输出 AC output	输出波形 Output waveform	纯正弦波 Pure sine wave
	输出电压 Rated output voltage	120/220/240V/380V/400V/415/440/480V(可选 Optional)
	输出频率 Output frequency	50Hz/60Hz±0.05Hz
	输出相数 Phases	单相 / 二相 / 三相 1 phase/2 phase /3 phase
	功率因数 Power Factor (PF)	>0.99
	过载能力 Overload Ability	150%, 10 秒 seconds
	逆变效率 Efficiency	>94%(根据输入电压 accordng to the Input voltage)
	波形失真率 Waveform distortion rate (THD)	<3% (线性负载 Linear load)
	动态响应 (负载 0- 100%) Dynamic Response time (Load 0*--100%)	5%, ≤ 50ms
	显示 Display	LCD+LED
	通讯 Communication interface	RS485 (可选 Optional)
	运行方式 Running mode	可 7*24h 连续运行 7* 24h Working continuously
	绝缘强度 Electrical insulation properties	2000VaC, 1 分钟 Minute
	工作温湿度 Working temperature	-20- +50° C
	相对湿度 Relative humidity	0-90%, 不凝结 non- condensing
工作环境 Work Environment	保护功能 Protection Function	输入防反、欠压保护、过压保护、输出过载、短路保护、过热保护 Input anti inversion, undervoltage protection, overvoltage protection, output overload, short circuit protection, overheat protection
	冷却方式 Cooling method	风扇 Fan-cooled
	噪音 (dB,1 米)Noise (1 meter)	≤ 50dB
工作环境 Work Environment	防护等级 Degree of protection	IP20 (室内 indoor)
	海拔高度 Working Altitude (m)	<3500 米 (meters)
备注 Remark	以上参数仅供参考，可根据客户要求定制！ The above parameters are for reference only, can be customized to customer's requirement!	

船用逆变器 Marine inverter



★性能特点 Performance characteristics

- ◎已获得中国船级社 CCS 型式认可证书
- ◎采用三菱 IPM 模块设计，安装可靠易维修，设计寿命长
- ◎工作电压广泛，直流输入 48~950VDC
- ◎工频隔离型，转换效率≥ 93%，抗电磁干扰，零序电压电流低，漏电流小与锂电系统完美结合
- ◎两种启动模式：降压启动和变频启动，抗冲击，负载特性好，电机，LED 灯等都能可靠工作，可选择 RS485，CAN 通信
- ◎Obtained CCS type approval certificate from China Classification Society
- ◎Adopt Mitsubishi IPM module design, reliable installation, easy maintenance, and long design life
- ◎Wide operating voltage, DC input 48~950VDC
- ◎Power frequency isolation type, conversion efficiency ≥ 93%, anti electromagnetic interference, low zero sequence voltage and current, low leakage current, perfect combination with lithium battery system
- ◎Two startup modes: reduced voltage startup and variable frequency startup, shock resistant, good load characteristics, reliable operation of motors, LED lights, etc
- ◎Selectable RS485, CAN communication

防爆逆变器 Explosion-proof inverter



★性能特点 Performance characteristics

- ◎已获得湖南长沙防爆合格证书
- ◎采用三菱 IPM 模块设计，安装可靠易维修，设计寿命长
- ◎防护等级 IP65，良好的防尘，防水，防震性能，可应用多种特殊场合
- ◎工频隔离型安全可靠，转换效率≥ 93%
- ◎两种启动模式：降压启动和变频启动，抗冲击，负载特性好，电机，LED 灯等都能可靠工作
- ◎Obtained explosion-proof certificate
- ◎Adopt Mitsubishi IPM module design, reliable installation, easy maintenance, and long design life
- ◎Protection grade: IP65, good dustproof, waterproof, shockproof performance, suitable for various special occasions
- ◎Power frequency isolation type is safe and reliable, with conversion efficiency ≥ 93%
- ◎Two startup modes: reduced voltage startup and variable frequency startup

机架式逆变器 Rack Mount Inverter



★性能特点 Performance characteristics

- ◎标准 6U、7U、9U 机箱，适合各种标准机柜安装，及车载房车等
- ◎采用三菱 IPM 模块设计，安装可靠易维修，设计寿命长
- ◎体积小，功率密度大，工频隔离设计，转换效率≥ 93%
- ◎重量轻，产品净重约 75~120kg
- ◎两种启动模式：降压启动和变频启动
- ◎可选择 RS485，CAN 通信
- ◎Standard 6U, 7U, 9U chassis, suitable for installation in various standard cabinets, as well as in car campers, etc
- ◎Adopt Mitsubishi IPM module design, reliable installation, easy maintenance, and long design life
- ◎Small size, high power density, power frequency isolation design, conversion efficiency ≥ 93%
- ◎Light weight, net weight of the product is about 75~120kg
- ◎Two startup modes: reduced voltage startup and variable frequency startup
- ◎Selectable RS485, CAN communication

PV Inverter & Controller Integrated

光伏逆控一体机



PV Pump Inverter

光伏水泵逆变器



MPPT 水泵逆变器
MPPT Pump Inverter



30KW 水泵逆变器
Pump Inverter



63KW 水泵逆变器
Pump Inverter

★产品简介 Product Introduction

光伏水泵系统有别于传统的交流水泵应用系统，光伏水泵系统是利用太阳能电池直接将太阳能转化为电能，然后由光伏水泵逆变器来驱动交流电机带动水泵，从深井、江、河、湖等水源取水，再输送到目的地，以满足我们对水的需求。

光伏水泵系统主要由四部分组成：光伏阵列、光伏水泵逆变器、三相交流水泵，以及储水装置。

光伏阵列吸收日照辐射能量，将其转化为电能，为整个系统提供动力电源。

光伏水泵逆变器是光伏水泵系统中的重要组成部分，它将光伏阵列输出的直流电转换为交流电并驱动水泵，并根据日照强度的变化实时地调节输出电压和频率，实现最大功率点跟踪，最大限度地利用太阳能。

光伏水泵系统广泛适用于生活用水、农林浇灌、沙漠治理、草原畜牧、海岛供水、水处理工程等，亦可用于市政工程、城市广场、宾馆饭店以及住宅社区等处的景观喷水系统中。

Sandi PV pump system is different from traditional AC pump application system, PV pump system is using solar cells to directly convert solar energy into electrical energy, then PV pump inverter drive the AC motor to drive pump getting water from deep well, river, lake etc., finally transport to the destination to meet our demand for water.

PV pumping system consists of four parts: PV array, PV pump inverter, three-phase AC pump and storage device.

PV array absorb sunshine radiation energy and convert it into electrical energy, supply power for whole system.

PV pump inverter is an important part of PV pump inverter system, which convert the output DC from PV array into AC for driving pump, and according to the changes of sunlight intensity in real time to adjust the output voltage and frequency to achieve max. power point tracking and max the use of solar energy.



SPIC 5KW~30KW

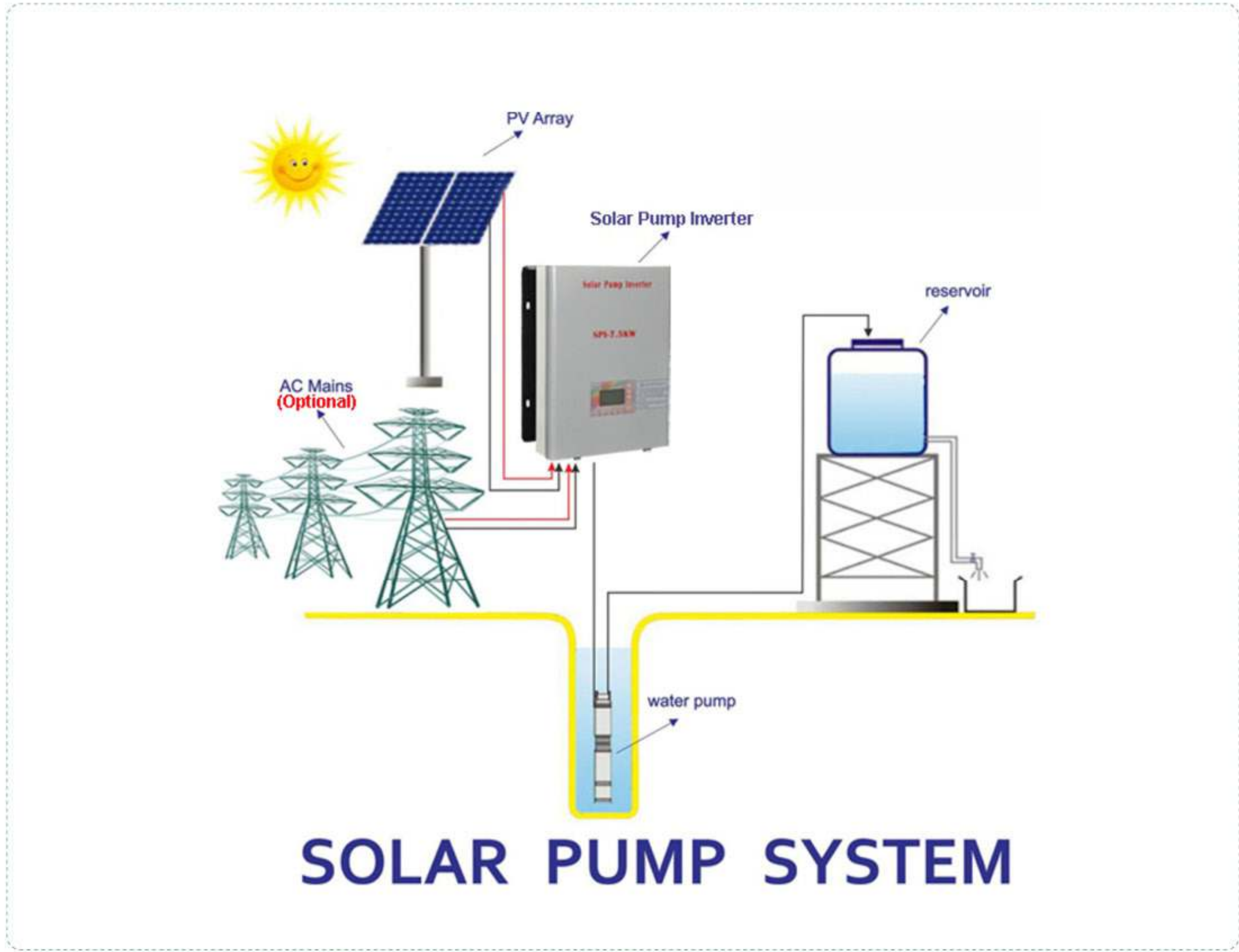


SPIC 40KW~100KW



户外光伏一体机

★系统图 System Diagram



★性能特点 Performance characteristics

- ◎采用动态 VI 最大功率点跟踪 (MPPT) 控制方法和优化的 SVPWM; 响应速度快
- ◎运行稳定; 转换效率达到 99.9%
- ◎采用日本三菱公司的高效率 IPM 智能功率模块, 可靠性高, 使用寿命长
- ◎模块化设计, 运行稳定, 安全可靠, 安装维护十分便捷
- ◎系统自动运行, 无需人工值守, 节约大量人力
- ◎变频驱动 (VFD) 设计, 可根据日照的强度变化实时地调节输出频率控制电机的转速, 大大提高了效率, 并更好地保护水泵和太阳能电池板的最大利用率
- ◎LCD 液晶显示功能, 可查看和设置多种运行参数
- ◎可以根据实际系统情况自由设定水泵调速范围
- ◎高防护等级适用于各种应用环境, 安装成本低
- ◎强大的保护功能, 如欠压、过压、DC 过流、过载、短路、防干烧, 防溢流和干抽、堵转保护等保护功能
- ◎可选配 RS485 通讯接口, 实现远程数据监控
- ◎本产品通过欧盟 CE(EMC, LVD) 和 ISO9001 认证

- ◎Using dynamic VI maximum power point tracking (MPPT) control method and optimized SVPWM; Fast response time
- ◎Stable operation; The conversion efficiency reaches 99.9%
- ◎Adopt high-efficiency IPM intelligent power module from Mitsubishi Corporation of Japan, featuring high reliability and long service life
- ◎Modular design, stable operation, high safety and reliability, and very convenient installation and maintenance
- ◎The system operates automatically, eliminating the need for manual attendance, saving a lot of manpower
- ◎The variable frequency drive (VFD) design can adjust the output frequency to control the rotational speed of the motor in real-time according to the intensity of sunlight, greatly improving efficiency and better protecting the maximum utilization of water pumps and solar panels
- ◎LCD display function, which can view and set various operating parameters
- ◎The speed range of the water pump can be freely set according to the actual system situation
- ◎High protection level is suitable for various application environments, with low installation cost
- ◎Powerful protection functions, such as undervoltage, overvoltage, DC overcurrent, overload, short circuit, dry burn prevention, overflow prevention, dry extraction, locked rotor protection, and other protection functions
- ◎Optional RS485 communication interface for remote data monitoring
- ◎This product has passed the EU CE (EMC, LVD) and ISO9001 certification

★技术参数 technical parameter

型号 Model	允许电机最大输入 Adapted pump motor		推荐光伏输入 功率 (KWP) Recommend PV input power	最大直流输入 电压 (V) MPPT Tracking Voltage	推 MPPT 电压 (VDC) Max. DC input voltage	输出电流 (A) Rated output current	输出频率 (HZ) Output frequency
	额定功率 (KW) Rated power	额定电压 (V) Rated Voltage					
SPI-3700W	3.7KW	380 ~ 440V	4.8KW	850V	500 ~ 850V	7A	0 ~ 50 (60)
SPI-5500W	5.5KW	380 ~ 440V	7KW	850V	500 ~ 850V	10A	0 ~ 50 (60)
SPI-7500W	7.5KW	380 ~ 440V	10KW	850V	500 ~ 850V	14.5A	0 ~ 50 (60)
SPI-11KW	11KW	380 ~ 440V	14KW	850V	500 ~ 850V	21A	0 ~ 50 (60)
SPI-15KW	15KW	380 ~ 440V	20KW	850V	500 ~ 850V	28A	0 ~ 50 (60)
SPI-18KW	18KW	380 ~ 440V	24KW	850V	500 ~ 850V	33A	0 ~ 50 (60)
SPI-25KW	25KW	380 ~ 440V	33KW	850V	500 ~ 850V	46A	0 ~ 50 (60)
SPI-30KW	30KW	380 ~ 440V	39KW	850V	500 ~ 850V	55A	0 ~ 50 (60)
SPI-37KW	37KW	380 ~ 440V	48KW	850V	500 ~ 850V	68A	0 ~ 50 (60)
SPI-45KW	45KW	380 ~ 440V	59KW	850V	500 ~ 850V	82A	0 ~ 50 (60)
SPI-55KW	55KW	380 ~ 440V	72KW	850V	500 ~ 850V	102A	0 ~ 50 (60)
SPI-75KW	75KW	380 ~ 440V	98KW	850V	500 ~ 850V	137A	0 ~ 50 (60)
SPI-90KW	90KW	380 ~ 440V	117KW	850V	500 ~ 850V	164A	0 ~ 50 (60)
SPI-110KW	110KW	380 ~ 440V	143KW	850V	500 ~ 850V	204A	0 ~ 50 (60)
SPI-132KW	132KW	380 ~ 440V	172KW	850V	500 ~ 850V	240A	0 ~ 50 (60)
SPI-150KW	150KW	380 ~ 440V	195KW	850V	500 ~ 850V	274A	0 ~ 50 (60)
SPI-200KW	200KW	380 ~ 440V	260KW	850V	500 ~ 850V	364A	0 ~ 50 (60)

PV Combiner Box

光伏防雷汇流箱



1~4 路
1~4 strings (ABS box)



5~6 路
5~6 strings (ABS box)



4~6 路
4~6 strings



8~12 路
8~12 strings



14~18 路
14~18 strings



20~28 路
20~28 strings

★产品优势 Product advantages



- ◎2.0 冷轧钢板喷塑工艺
- ◎DC1000V 防反模块
- ◎IP65 防水型
- ◎ABB& 施耐德断路器
- ◎使用寿命长达 15 年以上
- ◎可选配 RS485 通讯
- ◎耐高温硅胶线
- ◎输入 4 路 -28 路可定制
- ◎带 LED 故障指示直流熔断座
- ◎铜排布线整齐 copper bar wiring
- ◎整体散热模块
- ◎1000V 直流专用浪涌保护器

- ◎2.0 cold-rolled steel plate spray process
- ◎DC 1000V Anti-reverse module
- ◎IP65 waterproof
- ◎ABB& Schneider circuit breaker.
- ◎Service life is more than 15 years.
- ◎RS485 Optional
- ◎High temperature resistant silicone wire
- ◎Input4 string to 28 string can be customize
- ◎DC fuse holder with LED fault indicat
- ◎copper bar wiring
- ◎Overall cooling module
- ◎1000V DC special SPD

Solar controller

太阳能控制器



MPPT 太阳能控制器
MPPT Solar Controller



PWM 太阳能控制器
PWM Solar Controller



机架式控制器
Rack mount controller

★产品简介 Product Introduction

三迪系列太阳能充电控制器是一个智能型光伏控制器专为离网光伏发电系统而设计的。LCD 液晶显示屏，操作方便等良好的运行性能，并且还能自动地控制太阳能电池的断开和连接根据电池电压的变化。该控制器使得充分利用太阳能电池的资源，并保持电池安全可靠。

The PV charge controller is a smart device which designed for off-grid PV power system. It has great running performance with LCD display and convenient operation. The controller also automatically control cell cut or connect ordinarily according to the change of battery voltage. The charge controller is very important for solar power system, the performance will affect the life of system directly, especially the battery life. Anyway, the battery's life will be shorted when battery being charged or discharged. The SANDI series PV charge controller adopts PWM charge model which can improve battery life greatly. The controller is widely used for independent off grid solar power system, such as telecommunications base stations, fishermen and herdsman of electricity, as well as PV power supply in remote mountainous and border.

★性能特点 Performance characteristics

- ◎使用高速高性能的 32 位处理器，优良的 EMC 设计
- ◎采用先进 PID 算法，具有更精准的电池能量管理系统
- ◎三阶段式充电方式，最大化提升光伏组件和蓄电池利用率
- ◎全 IGBT 模块化设计，保证控制器和系统性能更稳定可靠
- ◎具有完善的蓄电池保护功能，多阶段充电，提高蓄电池使用寿命
- ◎具有电压环和电流环双环路控制，可设置限流充电
- ◎全密闭风道结构设计，高速智能风扇散热，适用于各种恶劣环境
- ◎具有发电量统计及实时功率曲线功能，随时了解系统发电情况
- ◎彩色 LCD 显示、触控按键、多语言选择，人机交互更便捷
- ◎环境温度显示、自动温度补偿功能、RTC 实时时钟
- ◎专利二次保护功能，防止功率开关故障导致蓄电池损坏（可选）
- ◎基于 RS-485 通讯总线的标准 Modbus 通讯协议（可选）
- ◎本产品通过欧盟 CE 认证

Solar controller 太阳能控制器

- ◎The solar controller uses high performance 32-bit chips which is excellent EMC design
- ◎The controller adopts advanced PID algorithm which has more accurate battery energy management system to improve the battery efficiency 45% at least
- ◎The controller adopts three charging stages (buck charging, equalize charging and float charging) which can maximize the utilization of photovoltaic modules and batteries
- ◎IGBT Modular design ensure stable and efficiency performance of solar controller and solar power system
- ◎The controller has perfect battery protection function and with multi-stage charging technology to improve battery life 35% at least
- ◎The controller has double loop control function of voltage loop and current loop, user can set the limiting charging current
- ◎Fully enclosed duct design and high-speed fan for cooling makes the controller working under harsh environments
- ◎The controller has power generation statistics and real-time power curve function, so we can know power generating information at any time
- ◎Colorful LCD display, touching key and multi-language option makes the HMC (Human Machine communication) easy and convenient. Users also can set working parameters through the LCD panel and touching keys according to different battery feature
- ◎The controller also has temperature compensation function and RTC real time clock function,
- ◎Standard Modbus protocol for RS-485 or GPRS communication to extend the communication distance (optional function)
- ◎The patent of second protection function which can protect battery from over charging due to power switch failure (optional function)
- ◎This product has passed CE and ISO9001 certification

★技术参数 technical parameter

型号 Model	SDC48V-650V / 50-150A
系统参数 system parameter	
适用电池类型 Suitable for battery type	铅酸、胶体、锂电池等 Lead acid, Gel, lithium battery, etc.
蓄电池组额定电压 (Vdc) Rated voltage of battery pack	48V-650V
额定电流 (A) Rated Current	30A 50A 60A 80A 100A 120A 150A
光伏阵列最大电压 (Vdc) Maximum voltage of photovoltaic array	系统额定电压的 2 倍 2 times the system rated voltage
光伏阵列输入路数 Photovoltaic Array Input Paths	1 路 1 way
电性能参数 Electrical Performance Parameters	
三阶段充电方式 1 way three stage charging mode	快充、均充、浮充 Fast charging, even charging, floating charging
夜间待机损耗 (W) Night standby loss of 1-way three-stage charging	< 0.5W
工作温度范围 (°C) Operating temperature range	-25°C ~ +55°C
存储温度 (°C) Storage temperature	-25°C ~ +80°C
通信接口 communication interface	MODBUS RTU 协议 RS485 接口 (可选) Protocol RS485 interface (optional)
机械参数 Mechanical parameters	
接线端子 Wiring terminal	TC 系列栅栏式接线 TC series fence connection
显示方式 Display Mode	LCD 彩色液晶屏 + 触摸按键 LCD color LCD screen + touch keys
防护等级 Protection Level	IP32(室内 Indoor)
冷却方式 Cooling mode	温控风扇强制风冷 Temperature-controlled fan forced cooling
噪声 (dB) Noise (dB)	< 30dB
使用海拔 (m) Use elevation (m)	≤ 3000m
安装方式 Installation method	壁挂式 / 机架式 Wall/rack type
外形尺寸 [宽深高] Shape size [width, depth and height]	420*342*175mm/482.6*350*155 (3.5U 机箱 Chassis)
净重 (kg) Net weight	11.5KG
所有充电参数用户都可以根据蓄电池特性进行调整, 针对锂电池的充电参数, 需要根据锂电池的特性来定制 All charging parameters can be adjusted according to battery characteristics For the charging parameters of lithium batteries, it needs to be customized according to the characteristics of the lithium batteries	

AC/DC Charger AC/DC 充电器



大功率充电柜
High-power charger



单相充电器
1 phase Charger



三相充电器
3 phase Charger

★产品简介 Product Introduction

SD 系列充电器是采用专利电路设计和创新工艺的直流充电模块, 具有恒功率电压范围宽、高效率、高功率因数、高功率密度、电磁辐射和干扰极小、高可靠性等优点, 满足各种电池的快速充电需求, 节能环保效果显著, 达到国际领先水平。

SANDI AC/DC Charger is specially developed for DC chargers module. It has high efficiency, high power factor, high power density, high reliability advantage. AC input 3 phase or single phase, DC output voltage range from 50 to 750VDC can be set, compliant with CE safety requirements, EMC standard EN61000-6-3 and EN61000-6-1 Class A, it is an advanced international level charger module.

★性能特点 Performance characteristics

- ◎超宽的输出电压范围: 50~1000Vdc, 满足各种电池的快速充电需求
- ◎内置专利智能放电电路: 自动泄放残留电荷, 简化系统设计, 提高系统可靠性
- ◎全负载范围高效率: 全负载范围高效率运行, 比业界产品最高效率点在低载区且满载充电时反而低效率的运行模式, 更节能
- ◎独特的三防设计: 独特的防盐雾、防潮湿、防霉变等防护和工艺设计, 使模块适应各种充电站应用场景
- ◎适用于锂电池、铅酸电池的充电需求
- ◎全负载范围高效率运行和超低待机功耗, 满载效率 95%, 有效降低电能损耗, 实现节能环保
- ◎超宽输入电压范围: 320Vac~450Vac, 适应各种不同的电网环境
- ◎三相无中线交流输入: 简化系统设计, 消除中线电流过大的风险, 同时降低系统成本
- ◎先进的有源功率因数校正技术: 高功率因数, 低谐波含量, 减少谐波对电网的干扰, 优于工业应用标准
- ◎全数字化控制: 双 DSP 设计, 实现了充电模块的全数字化控制, 确保控制的高可靠性
- ◎具有防电池电流反灌保护功能: 有效保护电池, 同时确保充电桩可靠安全运行
- ◎彩色 LCD 显示、触控按键、人机交互更便捷
- ◎系统参数设置灵活使用, 可设置充电电压、充电电流、充电时间都可通过 LCD 来设置

AC/DC Charger AC/DC 充电器

- ◎Ultra-wide output voltage range: 100V-1000Vdc, meeting the rapid charging requirements of various batteries
- ◎Built-in patented intelligent discharge circuit: automatically discharge residual charge, simplify system design and improve system reliability
- ◎High-efficiency in full load range: High-efficiency operation in full load range is more energy-saving than the operation mode in which the highest efficiency point of the industry's products is in the low load zone and the efficiency is lower when fully charged
- ◎Unique three-proofing design: unique protection and process design against salt fog, moisture and mildew, so that the module can adapt to various charging station application scenarios
- ◎It is applicable to the charging requirements of lithium batteries and lead-acid batteries.
- ◎High-efficiency operation and ultra-low standby power consumption in full load range, 95% efficiency in full load, effectively reducing power consumption and realizing energy conservation and environmental protection
- ◎Ultra-wide input voltage range: 320Vac-450Vac, suitable for various power grid environments
- ◎Three-phase non-neutral AC input: simplify the system design, eliminate the risk of excessive neutral current, and reduce the system cost
- ◎Advanced active power factor correction technology: high power factor, low harmonic content, reducing harmonic interference on the power grid, superior to industrial application standards
- ◎Full digital control: dual DSP design realizes full digital control of charging module to ensure high reliability of control
- ◎It has the function of anti-battery current back-irrigation protection: effectively protect the battery and ensure the reliable and safe operation of the charging pile
- ◎Color LCD display, touch keys and human-computer interaction are more convenient
- ◎The system parameters can be set flexibly. The charging voltage, charging current and charging time can be set through LCD

★技术参数 technical parameter

类别 category	名称 name	参数 parameter	
交流输入 AC input	输入制式 Input format	单相 single-phase	三相 three-phase
	电压范围 Voltage range	210Vac ~ 280Vac	260Vac ~ 480Vac
	额定电压 Rated voltage	220Vac	380Vac
	额定频率 Rated frequency	50Hz/60Hz	
直流输出 DC output	输出功率 output power	7kW~300kW	
	电压范围 Voltage range	100VDC ~ 1000VDC (可设置) Settable	
	额定电压 Rated voltage	400VDC	
	输出电流 Output current	10~300A(可设置)Settable	
	稳压精度 Voltage stabilization	< ±0.5%	
	稳流精度 Steady current accuracy	≤±1% (输出负载 20% ~ 100%额定范围) ≤ ± 1% (output load 20%-100% of rated range)	
	负载调整率 Load adjustment rate	≤±0.5%	
功率因数和 THD Power factor and THD	功率因数 power factor	≥ 0.95 @20% ~ 50%满载输出功率 Full load output power ≥ 0.98 @50% ~ 100%满载输出功率 Full load output power ≥ 0.99 @100%满载输出功率、标称输入电压和频率 Full load output power, nominal input voltage and frequency	
	THD	≤ 5% @50% ~ 100%满载输出功率 Full load output power	
噪声 Noise		不大于 65dB (A) (离开 1m 处) Not more than 65dB (A) (1m away)	
效率 efficiency		≥ 95.2%	
显示 display		LCD	
工作环境 work environment	工作温度 working temperature	- 20°C ~ + 50°C	
	储存温度 Storage temperature	- 20°C ~ + 50°C	
	相对湿度 relative humidity	≤ 95% RH, 无冷凝 non-condensing	
	冷却方式 Cooling mode	风冷 Air cooling	
	海拔高度 Altitude	2000m, 2000m 以上需降额使用 The above needs to be derated	

power phase converter 单三相转换器



SDT 5KW-20KW



SDT 30KW-60KW



P54 户外转换器
IP54 Outdoor Converter

★产品简介 Product Introduction

三迪 SDT 系列单相逆变电源是采用交 - 直 - 交的电路结构, 使用 SVPWM 调制控制技术, 将普通的单相电转为工业用的三相电的智能电源设备。经 SDT 系列单相电源转换后的三相电为标准的纯正弦波, 完善的保护功能, 整机效率高, 空载损耗低, 谐波失真率 (THD) 小于 2%, 完全满足国家三相电能质量标准, 输出的交流电适用于各种类型的三相负载, 同时也针对电力控制系统的特点和要求设计制造, 适合电力控制系统对供电设备高质量、高可靠性控制的要求, 能满足电力控制系统中各种终端设备的需求, 也适合于其它需要稳定的交流输电电压的场合, 为一些地区因为三相电限电给生产带来的不便和电网电压不稳定的地区提供多能源供电解决方案。

The Sandi SDT series three-phase to single-phase converter, adopted AC-DC-AC circuit structure and using SVPWM modulation control technology, which can convert ordinary single-phase power to industrial three-phase power. After through SDT series single-phase to three phase converter power conversion, the three-phase power output is standard pure sine wave, the harmonic distortion rate (THD) is less than 2%, totally meet the national standards of three-phase power quality, applicable to all types of load.

The SDT series single-phase to three-phase converter can solve production inconvenience because of some areas with the three-phase electric power restrictions, also solved some user requirements that can't apply for the three-phase electric because of space limitation.



★性能特点 Performance characteristics

- ◎核心元件均为进口器件,采用三菱的第6代IPM模块性能稳定,使用寿命长,保护功能强大,更换维修方便。采用美国TI中央处理器DSP28335芯片,响应迅速准确,给负载提供稳定干净的电源提供保障
- ◎整机采用模块化设计,结构简单、插拔式设计,便于维修,减少机器故障来去维修的隐形成本
- ◎双模式启动功能:降压启动和变频启动两种模式可自行设置。用户可根据自己的负载类型设置启动模式。此功能特别适用于三相感性负载这样可以充分发挥逆变器的功能,用户不需要在使用感性负载时扩大逆变器的容量,该功能对于用户来说非常方便,同样也降低了变频器的使用从而减少设备的投资成本给用户节省了费用
- ◎人性化安全设计,采用隔离变压器设计方案,输入输出完全电气隔离,并配有塑壳断路器,为客户节省开关,安装方便安全。带电部位全封闭,防止小孩触电
- ◎输出保护功能完善,有输出过压、过载、过温、短路、自诊断保护等多种保护
- ◎内置工频隔离变压器,耐冲击性强,可带电机、马达、空调等冲击性强的设备。同时直流母线与交流母线完全隔离,避免了交直流之间的干扰
- ◎LCD+LED显示,可以显示输入输出电压,电流,用电量,故障显示,方便客户迅速查找故障,指导维修
- ◎电源同时具有滤除市电扰动、干扰的功能,是一个性能优异的稳频稳压电源,为后端设备提供一个更稳定、更纯净的供电环境
- ◎输入宽电压范围80-320VAC,也可以按要求定制特殊电压,适应各地区普遍市电电压偏低的工作环境
- ◎普通单相市电输入,输出三相工业用电省去申请三相电的繁琐手续及各种人工成本费用
- ◎输出使用的是工业用三相电,但是按民用单相电计费,经济性好
- ◎The core components are all imported, adopting the sixth generation IPM module from Mitsubishi, which has stable performance, long service life, strong protection functions and convenient replacement and maintenance
- ◎Adopt the central processor DSP28335 chip from American TI Company, respond quickly and accurately, and provide stable and clean power for the load to provide protection
- ◎Two kinds of start mode: Step Down Voltage Start and Variable Frequency Start. Customers can set start mode according to the type of their load. This function is very convenient for users and also reduce frequency converter's usage, which reduced the cost of equipment investment, easy to connect wires and control
- ◎The whole machine adopts modular design and plug-in design, which is convenient for maintenance and reduces the hidden cost of machine failure to repair
- ◎Pure sine wave output with good transient response, little harmonic distortion, higher conversion efficiency and stable output voltage features
- ◎Using SVPWM space vector algorithms, high conversion efficiency, high instantaneous power and low losses conversion efficiency up to 95%
- ◎Output AC Power is suitable for all types of three phase appliances, electric tools, electric motors etc. It has higher efficiency and higher capability of driving load
- ◎Converter has the function of filtering the mains disturbance and interference, it's a stable frequency and stabilizing voltage with excellent performance, to provide a more stable and pure power supply environment for the back-end equipment
- ◎Humanized safety design, using isolation transformer design, input and output are completely electrically isolated, input and output are equipped with circuit breaker, which saving costs for the user and easy to installation, the electric parts are completely closed to prevent electric shock
- ◎Complete output protection function, with multiple protections such as output over-voltage, overload, over-temperature, short-circuit, self-diagnostic protection
- ◎LCD + LED display, can display input and output voltage, current, KWH, fault display, convenient for customers to quickly find faults and guide maintenance
- ◎The input voltage, output voltage, frequency and phase can be custom made
- ◎lightning protection device inside the converter
- ◎Wide voltage input 80-320VAC, can also customize the special voltage according to the requirements, to adapt to the working environment of the regional grid voltage is low
- ◎Optional DC input function to supplement the AC energy deficiencies

专业 专注 尽善 尽美
Professional dedicated perfect perfect



★技术参数 technical parameter

Technical Parameter SDT-3KW~100KW

Model 型号	SDT-5KW ~100KW
Isolation mode 隔离方式	Low Frequency Transformer(工频隔离)
AC Input 交流输入	
Rated voltage (Vac) 额定电压 (Vac)	220V single phase(单相)
Input rated voltage range 输入额定电压范围	110/120/220/230/240V optional(可选)
AC Output 交流输出	
Rated power (Kw) 额定功率 (KW)	5KW ~100KW
Rated voltage 额定电压 (V)	380VAC
Output voltage range 输出电压范围 (V)	220/380/400/415/440/480V optional(可选)
Output phases 输出线制	3 phase + Neutral wire(三相 + 零线)
Output frequency 输出频率	50Hz/60Hz±0.05Hz (Can be set) 可设置
Waveform 输出波形	Pure sine wave 纯正弦波
Voltage accuracy 电压精度	Load balancing 负载平衡≤1%、Unbalanced load 负载不平衡≤5%
Waveform distortion rate (THD)	≤5%
Unbalance ability 负载不平衡能力	≤20% (long-term unbalanced load will affect the life of equipment)
Dynamic Response 动态响应	5%, ≤50ms (load 0 ~ 100%)
Power Factor (PF) 功率因素	0.99
Inverter Efficiency 逆变效率	>87%
Electrical insulation properties 电气绝缘	2000Vac、1 Minute 分
Protection Function 保护功能	
Overload Ability 过载能力	150%、10s
Protection 保护	Input under voltage, overvoltage, output over-current, short circuit, overheating etc. 输入反接保护、欠压保护、过压保护、输出过载保护、短路保护、过热保护
Display 显示	LCD+LED
Method of working 运行方式	Working continuously 工作连续
Cooling method 冷却方式	High speed fan 高速风扇
Short-circuit protection 短路保护	No automatic recovery, need to restart the machine
Working Environment & Mechanical dimension 工作环境 & 机械尺寸	
Degree of protection 防护等级	IP20 (indoor 室内)
Working Altitude (m) 使用海拔	≤3000m
Working temperature (°C) 工作温度	-20 ~ +50°C
Relative humidity (°C) 相对温度	-25 ~ +85°C
Noise 噪音	≤55dB

APPLICATION CASES

应用案例

节能
energy conservation

安全
Safe and secure

应用广泛
Widely used

船用 / 车载 Marine/Vehicle Applications



太阳能 Solar system application



储能锂电池系统 Energy storage lithium battery system

