

离网光伏产品系列

OFF-GRID PV PRODUCTS SERIES

光伏逆变控制一体机

Photovoltaic controller & inverter integrated power supply



产品简介 Introduction

光伏逆变控制一体机是将光伏充电控制器和逆变器有机组合在一起的新型光伏发电装置，由充电控制器、逆变器、市电旁路、市电充电补偿、输出转换及保护电路组成，输出为纯净的正弦波电压。具有总安装空间小，连接线少，安全可靠等优点。

控制器采用模块化设计，可灵活配置光伏充电功率。系统支持市电/柴油发电机输入，可以根据客户要求设置输出模式为旁路优先或者光伏优先。

PV controller & inverter integrated machine is the new PV installations PV charge controller and inverter combined organic by the charge controller, inverter, Grid power bypass, Grid power charger compensated output conversion and protection circuits composition, pure sine wave output voltage. Small installate space, less cable, safe and reliable.

The controller uses a modular design, can be flexibly configured photovoltaic charger power. The system supports electricity / diesel generator input, you can set the output mode according to customer requirements for a bypass or photovoltaic priority.

功能特点 Features

- ◆ 光伏输入采用MPPT跟踪技术，自动让光伏组件工作在最佳发电功率点
 - ◆ 三阶段充电（恒流、恒压、浮充），有效延长了蓄电池的寿命
 - ◆ 具有发电量统计功能、事件记录功能
 - ◆ 根据配置电池的容量，自动调整电池充电电流
 - ◆ 纯正正弦波输出，足功率输出
 - ◆ 保护功能完善：输出过载保护、输出短路保护、防反接保护、输入过欠压、过温保护等一系列报警和保护功能
 - ◆ 瞬态响应好、波形失真小、逆变效率高、输出电压稳定、具有极佳的EMI指标
 - ◆ 本系列产品带载能力强，除了可带动各类阻性负载，还可带载各类感性型设备，比如马达，空调，电钻，日光灯，气体灯等；几乎可以带动所有的负载
 - ◆ 体积更小，安装和维护简易、快捷，满足室内、室外安装要求
 - ◆ 智能空载自动休眠功能
 - ◆ 电池市电转换电压可以设置，从而可以灵活调整电池和市电的使用优先顺序
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- ◆ Using MPPT PV input tracking technology to automatically make PV power generation in the best spot
 - ◆ Three-stage charging (constant current, constant voltage, float), effectively extending the battery life.
 - ◆ Generating capacity of statistical functions, event logging function.
 - ◆ Capacity of the battery depending on the configuration, to automatically adjust the battery charging current
 - ◆ Pure sine wave output, enough power output
 - ◆ Protection function: output overload protection, output short circuit protection, reverse polarity protection, input over voltage, over temperature protection and a series of alarm and protection functions
 - ◆ Transient response, waveform distortion, high efficiency inverter, output voltage stability, with excellent EMI Index
 - ◆ This series of strong load capacity, in addition to drive all kinds of resistive load, but also all kinds of perceptual load type equipment, such as motors, air conditioning, electric drills, fluorescent lamps, gas lamps, etc; you can drive almost all Load
 - ◆ Smaller, installation and maintenance easy, fast, to meet indoor and outdoor installation requirements
 - ◆ Intelligent empty load automatic sleep function
 - ◆ Battery & Grid voltage converter can be set, which can be flexibly adjusted using the battery or Grid priorities

技术参数(单相) Technical data (single phase)

技术参数\型号 Technical Parameters \ Model	GSA24-500W	GSA48-1K	GSA48-2K	GSA48-3K	GSA48-4K
额定输出功率 Rated output power	500W	1KW	2KW	3KW	4KW
蓄电池输入 Battery input					
额定电压 Rated voltage (VDC)	24.0				48.0
浮充电压 Float voltage (VDC)	27.0				54.0
均充电压 Bulk voltage (VDC)	28.4				56.8
光伏输入 PV input					
控制器类型 Controller Type	PWM		MPPT		
最大输入功率 Maximum input power (kW)	0.6	1.2	3.4		
最大充电电流 Maximum charging current (A)	20		60		
工作电压范围 Operating voltage range (VDC)	25-40	70-150			
最大输入电压 Maximum input voltage (VDC)	50	160			
推荐工作电压 Recommended Operating Voltage (VDC)	30	120			
市电旁路 (选配) Mains bypass (optional)					
输入电压允许范围 Input voltage range (Vac)	220±15%/110±15%				
输入频率 Input Frequency (Hz)	50/60±3%				
市电充电电流 (选配) Mains charging current (optional)	标准: 5A Standard: 5A				
交流输出 AC output					
输出波形 Output waveform	纯正弦波 Pure sine wave				
输出电压 Output voltage	220VAC±1%; 110VAC±1% (可定制其他输出电压) (Other output voltages can be customized)				
输出频率 Output frequency(Hz)	50/60±1%				
输出波形失真率 Output waveform distortion (THD)	≤2% (线性负载) (Linear load)				
逆变效率 (80%阻性负载) Inverter efficiency (80% resistive load)	≥85%				
电流峰值系数 Current peak factor	3:1				

过载能力 Overload capacity	105-110%, 600秒; 110-125%, 60秒; >125%, 1秒 (105-110%, 600Seconds; 110-125%, 60 Seconds; >125%, 1 Second)				
显示方式 Display mode	LED		LCD+LED		
保护功能 Protection	输入反接保护、输入欠压保护、输入过压保护、输出过载保护、输出短路保护 (不自动恢复, 需重启机器)、机器过热保护。 Input reverse polarity protection, input under-voltage protection, input overvoltage protection, output overload protection, output short circuit protection (no automatic recovery, need to restart the machine manually), overheating protection.				
通讯功能 Communication	RS485(选配) (optional)				
环境 Environment					
防护等级 Protection degree	IP20				
使用海拔 Using altitude (m)	≤4000 (1000m以上每100m降额1%) (1000m above derating 1% per 100m)				
允许相对湿度 Permissible relative humidity	<95% 无凝露 No condensation				
环境温度 Ambient Temperature (°C)	-10 ~ +50				
噪音 Noise (1m)	≤50dB				
体积和重量 Size and weight					
深x宽x高 (D x W x H) mm	180 x 305 x 285		580 * 221 * 515		
重量 Weight (Kg)	8	15	31	38	45

以上数据为参考数据, 若有变动, 恕不另行通知。特殊电压可定制。
Above information is just for reference, no inform if there is any change. Special voltage can be customized.

技术参数\型号 Technical Parameters \ Model	GSA96	GSA110	GSA192	GSA220	
额定输出功率 Rated output power	4-6KW	4-7KW	4-10KW	4-10KW	12-20KW
蓄电池输入 Battery input					
额定电压 Rated voltage (VDC)	96.0	110.0	192.0	220.0	
浮充电压 Float voltage (VDC)	108.0	121.5	216.0	243.0	
均充电压 Bulk voltage (VDC)	113.6	127.8	227.2	255.6	
光伏输入 PV input					
控制器类型 Controller Type	MPPT				
最大输入功率 Maximum input power (kW)	5.7	6.3	11.4	12.8/25.5	
最大充电电流 Maximum charging current (A)	50			50/100	
工作电压范围 Operating voltage range (VDC)	180	220	300	330	
最大输入电压 Maximum input voltage (VDC)	150-300	170-320	220-420	250-450	
推荐工作电压Recommended Operating Voltage (VDC)	310	330	430	460	
市电旁路 (选配) Mains bypass (optional)					
输入电压允许范围 Input voltage range (Vac)	220±15%/110±15%				
输入频率 Input Frequency (Hz)	50/60±3%				
市电充电电流 (选配) Mains charging current (optional)	标准: 5A Standard: 5A				
交流输出 AC output					
输出波形 Output waveform	纯正弦波 Pure sine wave				
输出电压 Output voltage	220VAC±1%; 110VAC±1% (可定制其他输出电压) (Other output voltages can be customized)				
输出频率 Output frequency (Hz)	50/60±1%				
输出波形失真率 Output waveform distortion (THD)	≤2% (线性负载) (Linear load)				

逆变效率 (80%阻性负载) Inverter efficiency (80% resistive load)	≥85%	
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显示方式 Display mode	LCD+LED	
保护功能 Protection	输入反接保护、输入欠压保护、输入过压保护、输出过载保护、输出短路保护 (不自动恢复, 需重启机器)、机器过热保护。 Input reverse polarity protection, input under-voltage protection, input overvoltage protection, output overload protection, output short circuit protection (no automatic recovery, the need to restart the machine manually), overheating protection.	
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允许相对湿度 Permissible relative humidity	<95% 无凝露 No condensation	
环境温度 Ambient Temperature (°C)	-10 ~ +50	
噪音 Noise (1m)	≤50dB	
体积和重量 Size and weight		
深x宽x高 (D x W x H) mm	305*630*780	450*750*1100
重量 Weight (Kg)	80-130	

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