

产品规格书

Product specification

产品名称 Product name: 48-88V 锂电池充电器

产品编号 Product number: SY-C500W-10A

版本 Edition: V1.0

版本	日期	版本更新记录	核准
V1.0	2026-01-12		

Shenzhen Sany Precision Technology Co., Ltd.

DESCRIPTION:
(规格书) **SPECIFICATION**

Model No.:

SY-C500W-10A

DATE	PREPARED	CHECKED	APPROVED	Document No.:	REV:
2026-01-12					1.0

1. 概述及适用范围 Overview and scope of application

1.1.性能介绍 Performance introduction

本产品是为锂电池开发的充电器，采用 LLC 架构高效率开关电源，本充电器具有完善可靠的短路、过流、过温、过压、等保护，使用更安全、更放心。

This product is a charger developed for lithium batteries, using an LLC architecture high-efficiency switching power supply. The charger features comprehensive and reliable protections against short circuits, overcurrent, overtemperature, and overvol

1.2.适用范围 Scope of application

本产品适用于新能源锂电池磷酸铁锂电池组的充电。

This product is suitable for charging new energy lithium iron phosphate battery packs.

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1. 电气性能要求:Electrical performance requirements

1.1	输入特性: Input characteristics			
序号 Serial number	项目 Items	技术要求 Specifications	单位	条件 Conditions
1.1.1	输入电压范围 Input voltage range	175~245	Vac	连续 Continuously
1.1.2	交流输入电压频率 Input frequency range	47~63	Hz	连续 Continuously
1.1.3	空载功率 No-loadpower	≤ 3	W	220Vac/Out0A
1.1.4	满载输入电流 Input current (full load)	≤ 6	A	Vin=220Vac
1.1.5	PFC 值 Power Factor	≥ 0.5		Vin=220Vac, 额定负载 Rated load
1.1.6	效率 Efficiency	$\geq 90\%$		Vin=220Vac, 额定负载 Rated load
1.2	输出特性: Output and charge characteristics			
序号 Serial number	项目 Items	技术要求 Specifications	单位	条件 Conditions
1.2.1	输出电压范围 Output Voltage Range	48~86.4 \pm 0.3	Vdc	输出空载以 DC 线末端为准 at the output end of DC cable
1.2.2	输出电流 Output current	Max10 \pm 0.3	A	最大功率 500W Maximum power 500W
1.2.3	输出纹波及噪声 Output voltage Ripple and Noise:	≤ 800	mVp-p	Vin=220Vac 限制带宽 20MHz, 负载端并 0.1 μ F 和 10 μ F 电容 Vin=220Vac with bandwidth limited to 20MHz, with 0.1 μ F and 10 μ F capacitors at the load end

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保护特性					
1.3					
序号 Serial number	项目 Items	技术要求 Specifications	条件说明 Conditions		
1.3.1	过流保护 Over-current protection	保护, 无损坏 Protection without damage	当充电器发生内部或外部故障时, 比如短路或者过载, 充电器进入保护状态。故障排除后, 充电器可恢复正常工作 When the charger experiences an internal or external fault, such as a short circuit or overload, it enters a protection mode. After troubleshooting, the charger can resume normal operation.		
1.3.2	短路保护 Short-circuit protection	保护, 无损坏 Protection without damage	当正负极短路, 充电器进入保护状态: 充电器无输出; 故障排除后, 充电器可恢复正常工作。When the positive and negative short-circuit, charger will protect, Charger rework after failure removed		
1.3.3	防反接保护 Anti-reverse connection	保护, 无损坏 Protection without damage	当充电器输出和电池反向连接时, 充电器会自动关闭输出, 充电器无损坏, 故障解除后重启可恢复 When the charger output is connected in reverse to the battery, the charger will automatically shut off the output. The charger is not damaged, and it can resume normal operation after restarting once the issue is resolved.		
1.3.4	限压保护 Software over voltage protection	保护, 无损坏 Protection without damage	充电器设置的最大输出电压不会超过电池的最大充电电压。The charger software limits the maximum output voltage to a level suitable for the connected battery system.		
1.3.5	过温保护 Over-temperature protection	保护, 无损坏 Protection without damage	保护模式: 晶体内部接点温度超过 140°C, 关闭输出, 当温度恢复正常可自动恢复 Protected Mode: crystal internal contact temperature exceeds 140 °C, turn off the output, when the temperature returns to normal automatic recovery		
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1.4 充电灯指示 functional lights instructions:					
序号 No.	项目 Item	状态 Status		备注 Remark	
1	电源 Power on	LED1: 红灯	Red		
2	充电 Charging	LED2: 红灯	Red		
3	充满 Fully charged	LED2: 绿灯	Green		
4	输出电压显示 Charging Voltage Display	否	No		
5	输出电流显示 Charging Current Display	否	No		
2. 绝缘与安全规格: Insulation and Safety specifications					
序号 Serial Number	项目 Items		标准 (或测试条件) Conditions	备注	
2.1	抗电 强度	输入与输出 Input and output	1500Vac (3000Vdc)/10mA/1min	无飞弧、无击穿 No flashover and breakdown	
	Electri cal strengt h	输入与大地 Input and earth	1500Vac (2120Vdc)/10mA/1min	无飞弧、无击穿 No flashover and breakdown	
		输出与大地 Output and earth	500Vac (700Vdc)/10mA/1min		
2.2	绝缘 电阻 Insulat ion resista nce	输入与输出 Input and output	$\geq 50M\Omega @ 500Vdc$	在环境温度为 15—35℃，相对 湿度为 $\leq 90\%$ When the ambient temperature is 15- 35 °C, the relative humidity is $\leq 90\%$	
		输入与大地 Input and earth	$\geq 50M\Omega @ 500Vdc$		
		输出与大地 Output and earth	$\geq 50M\Omega @ 500Vdc$		
2.3	安规认 证 safety certif ic ation		设计符合 EN60950，安规标准要求 Designed to comply with safety standards such as EN60950		
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4. 使用环境 Environmental characteristics					
序号 Serial number	项目 Items	技术指标 Specifications	单位	备注 Conditions	
4.1	工作温度 Operation Temperature	-25~+60	°C	典型值 25°C	
4.2	储存温度 Storage Temperature	-40~+80	°C	典型值 25°C	
4.3	工作湿度 Operation Humidity	10%~95% (无霜)			
4.4	存储湿度 Storage Humidity	5%~95% (无霜)			
5. 机械结构					
序号 Serial number	项目 Items	技术要求 Specifications	单位	备注 Conditions	
6.1	外形尺寸 Shape size	见附图 Attached drawings			
6.2	外观图片 Appearance Picture	见附图 Attached drawings			
6.3	输出连接端子 Output Connection Terminal	客户需求定制 Customized customer needs			
6.4	包装 Packing	独立包装 Individually packaged			
6. 附图					
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外壳尺寸：L195MM*W114MM*H65MM
 （输入输出插头可定制）

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