

产品规格书

Product Specification

产品名称 (PN) : 储能电源 M5000 系列

产品编号 (PCBA version) :

版 本 (version) : V1.0

拟 制 (Issued by) :

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1	V1.0			伍毅

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一、应用场景及价值

储能应用场景多样，在不同场景下，储能在市场上体现的价值也有所不同。

There are various application scenes of energy storage. Under different scene, the value of energy storage in the market is also different.

1.1 用户户外办公，可连接手机、平板电脑、笔记本等消费类数码设备。

Users can work outdoors and connect mobile phones, tablet computers, notebooks and other consumer digital devices.

1.2 户外摄影、越野爱好者野外用电、电视台的摄录设备的户外补电。

Outdoor photography, off-road lovers field electricity, TV station recording equipment outdoor power supplement.

1.3 矿山、油田、地质勘探、地质灾难救援应急用电。

Mine, oil field, geological exploration, geological disaster rescue emergency use of electricity.

1.4 电信部门野外检修应急用电。

Telecom department field maintenance emergency electricity.

1.5 医疗设备小型微型急救仪器应急用电。

Medical equipment, small and miniature first aid instruments, emergency electricity.

1.6 用户侧 User-side

1.6.1 电力自发自用。光伏在白天发电，提高自发自用水平，降低用电成本。

Spontaneous self use of electricity. Photovoltaic during the day, improve the level of spontaneous self use and reduce the cost of electricity.

1.6.2 峰谷价差套利。低电价时给储能系统充电，高电价时储能系统放电，实现峰谷电价差套利，降低用电成本。

Peak-to-valley spread arbitrage. Charge the energy storage system at low price and discharge the energy storage system at high price, so as to realize peak-to-valley price difference arbitrage and reduce power consumption cost.

1.6.3 容量费用管理。储能系统在用电低谷时储能，在高峰负荷时放电，从而降低整体负荷，达到降低容量电费的目的。

Capacity cost management. The energy storage system stores energy when the power consumption is low and discharges at the peak load, so as to reduce the overall load and reduce the capacity electricity charge.

1.6.4 提升供电可靠性。发生停电故障时，能够将储备的能量供应给终端用户，以保证供电可靠性。

Improving power supply reliability. In case of power failure, the reserved energy can be supplied to end users to ensure the reliability of power supply.

二、功能特点 Functional Features

2.1 磷酸铁锂电池，能量密度和功率密度较高，安全性能好。

Li-iron phosphate battery, Higher energy density and power density, safer.

2.2 匹配单相/三相选择，可进行设备扩容。

Matching single-phase/three-phase selection and expanding equipment capacity.

2.3 全面的保护：过充/过放、过压/过流、过载、欠压、短路、过温。

Comprehensive protection: over-charge/over-discharge, over-voltage/
over-current, overload, under-voltage, short circuit, over-temperature.

2.4 工作温度：0℃～50℃；储存湿度：5%～95%RH 无冷凝现象（无结露）；海拔高度≤2000米。

Operating temperature: 0℃～50℃; Humidity: 5%-95%RH no condensation (no condensation); Altitude ≤2000 meters, natural cooling.

三、产品说明 Product Description

3.1 产品概要 Product General Data:

序号 Item	基本参数 Basic Parameters	型号 Model
		M5000
1	防护标准 International Protection	IP65 (Outdoor)
2	冷却方式 Cooling Strategy	Natural Convection(自然对流)

3	待机功率 Standby Power	<2W (Work) /< 5mW (Sleep)
4	产品尺寸(有底座) Dimension (with base)	722*399*809mm(L*W*H)
5	产品重量 Weight	91kg
6	海拔高度 Altitude	≤2000m
7	工作温度 Operating Temperature	0°C~50°C
8	存储湿度 Storage Humidity	5%~95%

3.2 产品特征 Product Features:

序号 Item	基本参数 Basic Parameters	型号 Model
		M5000
1	寿命 Lifespan	10+ Years (55°C/77°F)
2	认证 Certificate	IEC 62109/1EC 62040
3	电磁兼容性 EMC	EN61000-6-1/-2/-3/-4
4	电网标准 Grid Regulation	AS4777.2/CEI0-21/G99/G100/NRS097/EN50549/PEA

四、性能&参数 Performance & Parameters

4.1 DC 输入 DC Input:

1	最大输入功率 Max. Input Power	7.0kW
2	最大输入电流 Max. Input Current	14A/14A
3	PV 最大电压 Max. PV Voltage	550V
4	MPPT 范围/标称 MPPT Range/Nominal	125V~500V/360V
5	MPPT 串数 MPPT Tracker/Strings	2/1

4.2 AC 输出 AC Output:

1	额定功率 Rated Power	5.0 kW
2	最大输出电流 Max. Output Current	21.7A
3	标称电压/范围 Nominal Voltage/Range	230V/176V~270V

4	频率 Frequency	50/60Hz
5	功率因数 Power Factor (PF)	0.99(Leading~0.99 Lagging
6	总谐波电流畸变率 THDI	<3%
7	AC 输出拓扑结构 AC Output Topology	L+N+PE

4.3 转换效率 Conversion Efficiency:

序号 Item	基本参数 Basic Parameters	型号 Model
		M5000
1	DC 最大转换效率 DC Max.Efficiency	97.6%
2	欧洲效率 Euro Efficiency	97%
3	MPPT 效率 MPPT Efficiency	99.9%

4.4 应急电源输出 EPS Output:

1	额定功率 Rated Power	5.0 kW
2	额定电流 Rated Current	21.7A
3	额定电压 Rated Voltage	230Vac
4	额定频率 Rated Frequency	50Hz
5	总谐波电压畸变率 THDU	<2%
6	并联工作 Parallel Operation	Yes
7	自动切换时间 Automatic switchover time	<20ms

4.5 电池规格 Battery Specification:

1	电池电压范围 Battery Voltage Range	44V~58.4V
2	最大充电电压 Max. Charging Voltage	58V
3	充电/放电电流 Charge/Discharge Current	95A/104.2A
4	电池类型 Battery Type	LiFeO ₄
5	循环寿命 (次) Life Cycle (Times)	>6000(25°C)
6	单个模组容量 Single Module Capacity	5120Wh

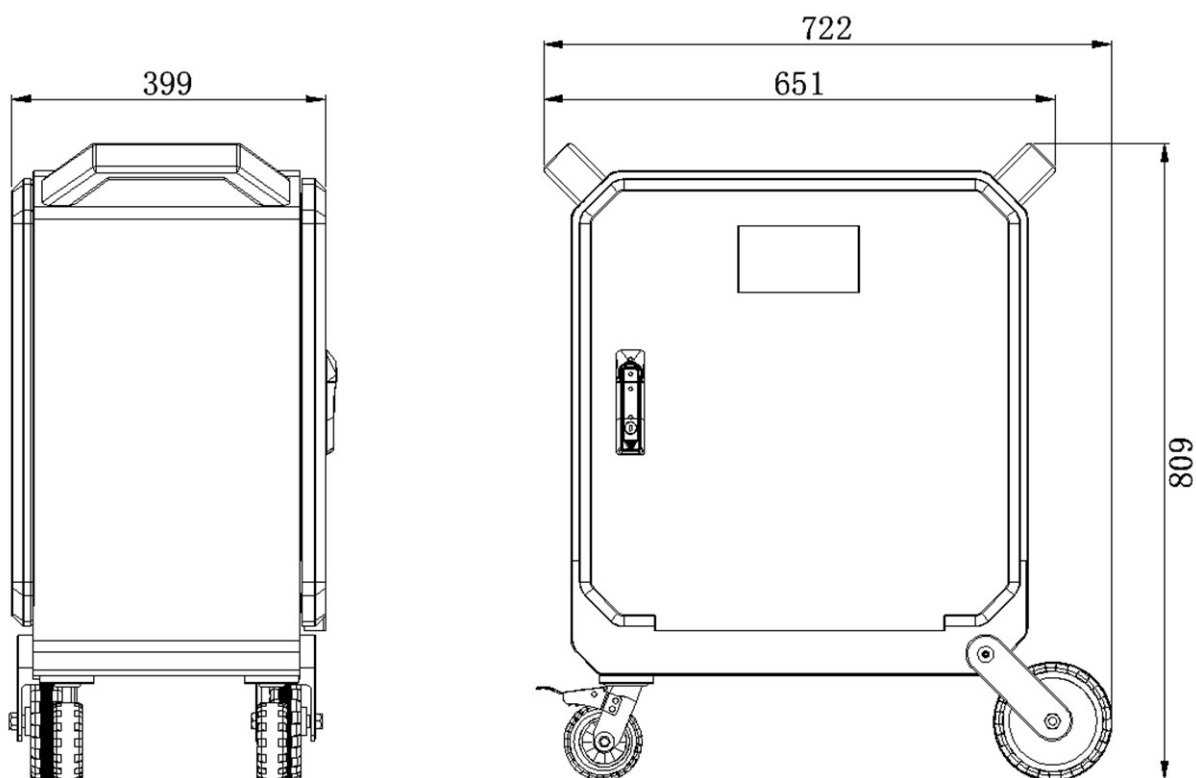
7	放电深度 DoD	95%
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五、TFT 交互说明 TFT Communication Description:

1	尺寸 Size (inch)	7.0
2	分辨率 pixels resolution	1024*600
3	色度 Colors	16.7M
4	屏的类型 Type	IPS-TFT-LCD, Capacitive touch screen
5	界面交互 Communication	Touch panel

六、产品尺寸及重量 Product Size and Weight

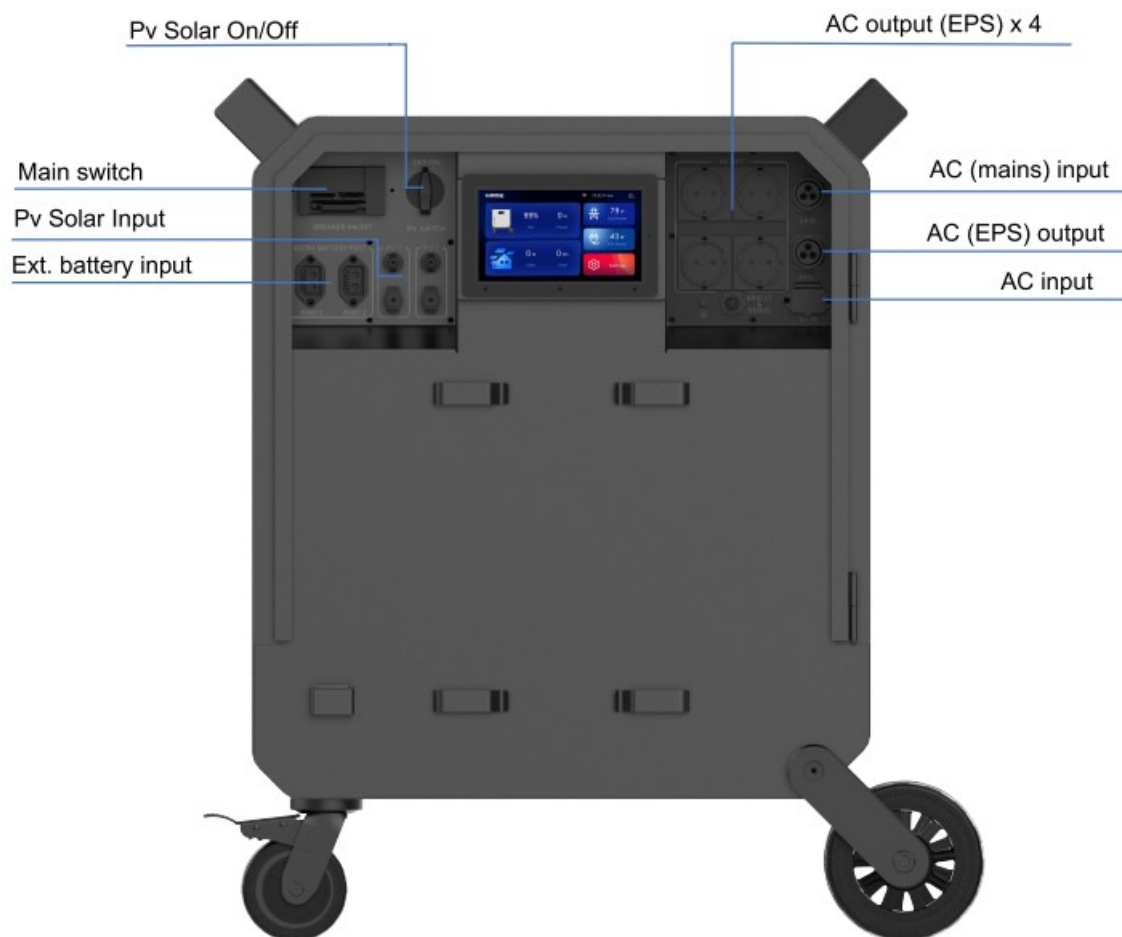
6.1 成品 2D 视图 2D View (单位 unit: mm 公差 tolerance: $\pm 0.5\text{mm}$)



6.2 成品重量 weight: $95 \pm 1.0\text{kg}$

HAME Specification of storage energy power

七、产品图及端口定义 Product Drawing and Port Definition



Input	PV(MPPT Solar)	7000W Max(500V/14A) for 2 strings in total
	AC#1(Grid)	2000W Max(220~240V@50Hz/60Hz)
	AC#2(Grid)	5000W Max(220~240V@50Hz/60Hz)
Output	AC#2(Grid)	5000W Max(230V@50Hz)
	AC#3(EPS)	5000W Max(230V@50Hz)
		Automatic Switch over Time<20ms
	AC#4(EPS)	2000W Max for each(230V@50Hz), total 5000W for 4 sockets

八、注意事项 Attention Matters

- 请勿放在高温环境中或火边烘烤，或在太阳底下爆晒；
- Do not bake in high temperature or near fire, or burst in the sun;

- 请勿置于水中或在室外淋雨；
- Do not put in water or in the rain outside;
- 请勿在使用环境范围以外的环境使用；
- Do not use it in an environment outside the scope of use;
- 当应用逆变器时，请消费者使用获得官方认证许可的电气和电子设备；
- When applying inverters, consumers should use officially certified electrical and electronic equipment;
- 禁止用钉子或其它尖锐物体刺穿电源壳体，禁止锤击或脚踏电源；
- Do not use nails or other sharp objects to Pierce the power supply housing, do not hammer or pedal the power supply;
- 禁止以任何方式分解电源；
- Do not disassemble the power supply in any way;
- 如果电源发出异味、发热、变形、变色或出现其它任何异常现象时不得使用；
- If the power supply emits peculiar smell, heat, deformation, discoloration or any other abnormal phenomenon shall not be used;
- 如果电源泄漏或发出异味，应立即将其从接近明火处移开；
- If the power supply leaks or gives off an odor, remove it immediately from the vicinity of an open flame.
- 如果设备长期不用，将电源放置在凉爽、干燥的地方并每隔 3~6 个月对其进行充放电，否则，会影响电源的性能、缩短电源的使用寿命。
- If the device is not used for a long time, place the power supply in a cool and dry place and charge and discharge it every 3~6 months. Otherwise, the performance of the power supply will be affected and the service life of the power supply will be shortened.

九、产品规格书的修订 Revision of Product Specification

本公司有权对本产品规格书进行修订，并可能不再另行通知。

The Company reserves the right to amend this product specification without prior notice.