



为全球伙伴提供更多的能源解决方案
Give More Energy Support to Our Pal



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ESS-CENTRIC INNOVATION
储能擎动未来

End-to-End Energy Storage Solutions Provider
全场景储能系统解决方案专家

CORPORATE CULTURE

企业文化



客户至上 Customer-Centric

坚持"以客户为中心"的核心准则
Pursued as company's lifeline



长期主义 Long-Term Vision

秉承可持续发展长期愿景
Attach importance to brand building



技术创新 Technological Innovation

以"技术驱动革新"为根本动力
Committed as a core driver



品质为基 Quality & Safety

追求"极致安全稳定"的产品信仰
Pursued as company's lifeline



社会使命 Social responsibility

推动人类进步与环境可持续性深度协同
Driving contributions to human and
environmental sustainability

MesPal

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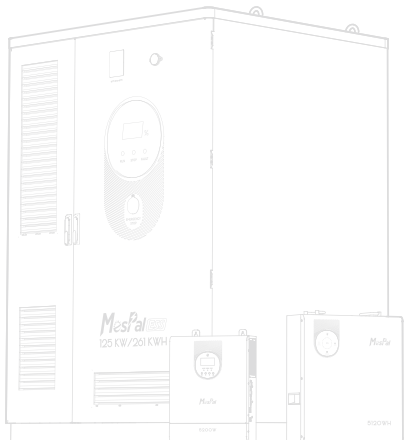
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COMPANY PROFILE

公司简介

广东麦斯帕尔科技有限公司，南控电力集团全资子公司。注册资本5000万元，在佛山、深圳两地设立研发中心，拥有数百名研发专家，年研发投入超营收10%。其超10000 m²自动化工厂配备先进生产及检测设备。

Guangdong MesPal Technology Co., Ltd., a full-holding subsidiary of Namkoo Power Group. 50M million capital, operates dual R&D centers in Foshan&Shenzhen with hundreds of R&D experts and >10% annual revenue invested in R&D. Its 10,000+m² automated factory features advanced production and testing equipment.

119
Patents Obtained

20+
Manufacturing Experience

10000+
Global Projects

100+
R&D Engineers

OUR JOURNEY

发展历程

2025年
立基 / Establishing Foundations

佛山新大楼生产基地落成，多条全自动化产线正式启用，产品研发完成系列化、稳定化，全面转向规模化交付。

The new Foshan headquarters production base was completed. Multiple fully automated production lines officially commenced operation. Product R&D achieved serialization and stabilization, shifting comprehensively toward large-scale delivery.

2024年
拓界 / Expanding Horizons

构建“双研发中心”协同格局，深圳研发基地成立，SmartInver-5.2K、SmartStor-005、SmartEss-261，相继试产成功。

A "dual R&D center" collaborative framework was formed with the founding of the Shenzhen R&D Base. Products including the SmartInver-5.2K, SmartStor-005, and SmartEss-261 successively completed successful trial production.

2022年
深耕 / Deep Cultivation

企业布局再度扩张，佛山研发中心成立，聚焦储能技术，以高品质产品研发为未来蓄能。

The enterprise further expanded its footprint with the establishment of the Foshan R&D Center. Focusing on energy storage technology, it dedicated efforts to high-quality product development, laying the groundwork for the future.



2023年
破局 / Breakthrough

首款储能产品SmartStor-001面世，突破技术创新，完成从研发端到市场端的关键跨越。

The debut energy storage product, SmartStor-001, was launched. Breaking through technological innovation, it marked a critical leap from R&D to market deployment.



2013年
起航 / Setting Sail

麦斯帕尔的母公司南控集团正式成立，从设计到运维，从EPC到EMC，开启新能源赛道的数年征程，海内外上千个大型电站项目相继建成。

Namkoo Group, the parent company of MesPal, was officially established. Embarking on a years-long journey in the new energy sector—spanning design to operations and maintenance, EPC to EMC—thousands of large-scale power station projects were completed both domestically and internationally.



GLOBAL NETWORK

全球布局



MesPal Headquarters
Distributors
Overseas Offices

Global Presence
出口全球
100+
国家和地区
Countries And Regions



公司展示 Company Sight



HONORS&AWARDS

荣誉资质

MesPal 严格遵循 ISO 国际质量管理体系，并建立了全流程合规管控机制；旗下光伏储能产品已全面通过 UL、CE、IEC、ROHS、SONCAP、SASO、PVOC 等多项国际权威认证，合规资质覆盖全球主要市场。我们始终以“绿色低碳”为核心导向，致力于为全球用户提供兼具高效率、高安全性的光伏储能解决方案，助力实现可持续能源应用。

MesPal strictly adheres to the ISO international quality management system and has established a full-process compliance control mechanism. Our solar energy storage products have obtained comprehensive international certifications including UL, CE, IEC, ROHS, SONCAP, SASO, and PVOC, ensuring compliance with major global market requirements. Guided by a commitment to "green and low-carbon" principles, we are dedicated to providing global users with high-efficiency and high-safety solar storage solutions, contributing to the application of sustainable energy.



PRODUCTION ADVANTAGE

生产优势

MesPal凭借垂直整合能力和专业工程团队，在光伏与储能领域建立了坚实的技术竞争力，为全球市场提供高品质解决方案。通过布局整合前沿技术的全球化先进制造基地，MesPal实现了全价值链垂直整合——自主研发、生产电池管理系统（BMS）、模块及电池组，全程实施严格的质量管控。这一模式不仅提升了生产效率、保障了顶级产品品质，还能针对全球市场的多样化需求提供定制化方案。此外，它减少了对外部供应商的依赖，从而增强了供应链的灵活性与市场响应速度。依托深厚的行业专业知识和丰富的实践经验，MesPal的工程团队擅长快速创新。他们能巧妙地将市场趋势转化为可行方案，缩短开发周期，助力客户快速实现量产。结合针对性能、安全与成本需求的定制化服务，以及在高功率逆变技术上的持续研发投入，MesPal始终保持行业领先地位，为全球客户的成功提供强有力的支持。

MesPal has established robust technical competitiveness in the photovoltaic (PV) and energy storage sectors, leveraging its vertical integration capabilities and a dedicated engineering team to deliver high-quality solutions to global markets. Through the deployment of globally advanced manufacturing facilities integrated with cutting-edge technologies, MesPal has realized full-value-chain vertical integration — independently researching, developing, and producing BMS (Battery Management Systems), modules, and battery packs with stringent quality control throughout the entire process. This framework not only enhances production efficiency and guarantees top-tier product quality but also enables customized solutions tailored to the diverse demands of global markets. Furthermore, it reduces dependency on external suppliers, thereby fortifying supply chain agility and market responsiveness. Supported by profound industry expertise and extensive practical experience, MesPal's engineering team excels in rapid innovation. They adeptly translate market trends into viable solutions, shorten development cycles, and facilitate clients' swift transition to mass production. Coupled with customized services addressing performance, safety, and cost requirements, as well as sustained R&D investments in high-power inverter technology, MesPal maintains its industry-leading position and provides robust support for the success of global clients.



CLOUD EMS

云端EMS

收益分析 Revenue Analytics

自动对比各电站的收益与支出，深入分析成本产生原因（如设备损耗或用电高峰），并生成个性化用电指导建议。帮助您优化开支，提升整体盈利能力。

Automated cross-plant revenue/expenditure benchmarking with root-cause cost analysis (e.g., asset degradation or peak demand periods), generating tailored consumption optimization strategies to streamline expenditures and enhance profitability.

电站管理 Plant Management

以地图和列表视图，直观展现所有电站的运行状态。点击任何电站，即可进入详细管理页面，查看实时数据和历史记录。告别杂乱报表，一手掌握全局。

Intuitive visualization of all plant operations via map and list views. Click any station to access detailed management pages displaying real-time data and historical records. Eliminate scattered reports – holistic control at your fingertips.



运维管理 O&M Management

实时采集故障告警，自动生成工单派发给工程师；工程师提交维护报告后，系统闭环处理。更智能的是，相似故障发生时，MesPal检索历史报告，提供即时维护建议，加速问题解决。

Real-time fault alerts trigger automated work order dispatch to field engineers. Upon submission of maintenance reports, the system completes closed-loop processing. Intelligently, when functionally analogous incidents occur, MesPal retrieves historical cases to deliver actionable maintenance protocols—accelerating resolution by 68%.

日程管理 Intelligent Scheduling Hub

专属入口查看和管理个人任务，集成运维和收益活动日程。让您的工作流无缝衔接，关键行动永不错漏。Your dedicated portal for integrated task oversight — unifying maintenance operations and revenue activities into one seamless workflow, ensuring mission-critical actions never slip through.

MesPal专为能源运营商、电站管理团队和绿色电力企业设计。无论是小型分布式电站所有者（如社区光伏站），还是大型集中式电站集团，平台都能通过智能化管理，帮您实现多电站的高效协同。MesPal is specifically designed for energy operators, power plant management teams, and green energy enterprises. Whether you operate a small-scale distributed power station (e.g., community solar plant) or manage a large centralized power generation group, our platform enables intelligent multi-plant coordination to streamline your operations.

OUR SMART SERIES PRODUCT FAMILY

Smart系列产品



PV-STORAGE HYBRID SYSTEM

光储一体柜

SmartESS 30~60KW / 128KWH



产品特性 Features

-  可选配是否带隔离变，提高系统的抗干扰能力
The system can be optionally equipped with an isolation transformer to improve its anti-interference capability.
-  自带DCDC模块，光伏通过直流耦合的方式接入系统，效率高
It comes with a built-in DC-DC module, and the photovoltaic system is connected to the system via DC coupling, which is highly efficient.
-  自研的EMS，具有智慧远程运维能力，为运维节省时间和成本
The self-developed EMS has intelligent remote operation and maintenance capabilities, saving time and costs for operation and maintenance.
-  采用智能风冷，减少能耗，提高能效，提高电芯使用寿命
Intelligent air cooling is adopted to reduce energy consumption, improve energy efficiency, and extend the service life of the battery cells.

应用场景 Application scenarios

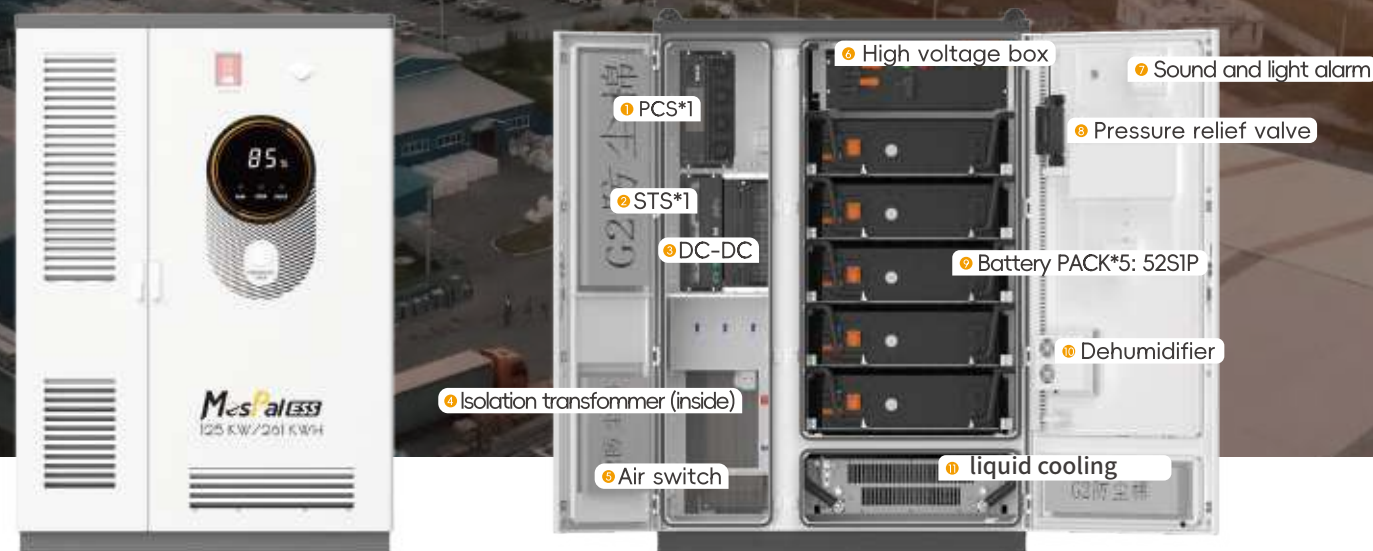


产品参数 Product parameters

Product Name	PV-Storage Hybrid System	
Model	ESS-30kW-128kWh-C1	ESS-60kW-128kWh-C1
AC side (off-grid/on-grid)		
Rated AC power(kW)	30	60
Maximum power(kW)	33	66
Rated current(A)	43.5	87
Rated voltage(V)	400 / 230	
Wiring method	3P4L	
Grid voltage range	-20% ~ 15%	
Rated power grid frequency Hz	50/60	
Total current harmonic distortion rate(%)	≤3 (rated power)	
Power factor	-1~1	
Photovoltaic input		
Rated power (kW)	19.2*2 route	19.2*4 route
Maximum PV voltage	850V	
PV start-up voltage	250V	
MPPT voltage range	200V ~ 800V	
MPPT Channels	2	4
Battery parameters		
Cell type	LFP 314Ah (Optional configuration)	
Rated capacity (kWh)	96~128	
Charge and discharge power	0.5P	
Cycle life	8000 Cycles @25°C, 0.5P, DOD90%, EOL70%	
System parameters		
Operating mode	On-grid and off -grid	
Wiring method	3P4L+PE	
Protection level	≥IP54	
Cooling method	Intelligent air cooling	
Dimensions (mm)	1184*950*2412 (Without rings)	
Operating ambient temperature	-20~55 ℃ (Use at 45℃ with reduced capacity)	
Working environment humidity	0 %~95% (non-condensing)	
Operating noise	≤65dB	
Working altitude	≤2000m (reduction in allowance for distances above 2000m)(>2000m Reduced usage)	
fire protection	aerosol	
Isolation transformer	Optional configuration	
Certifications	CE/UN38.3	

PV-STORAGE HYBRID SYSTEM

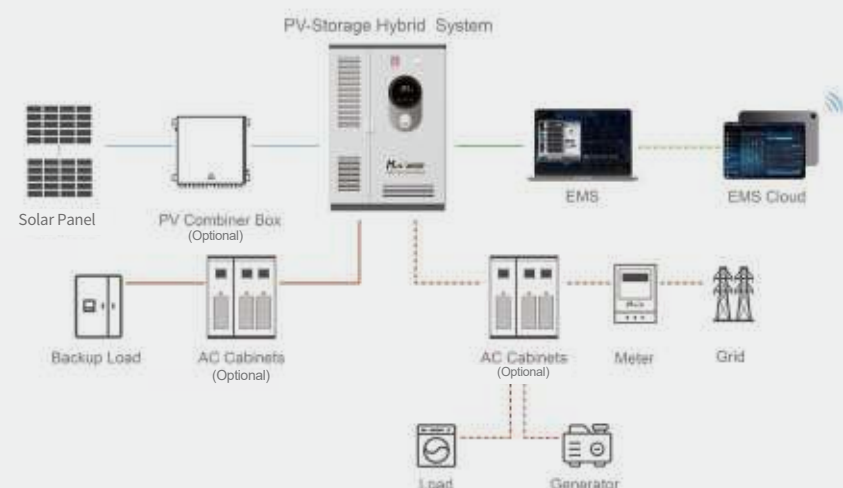
光储一体柜 SmartESS 125KW / 261KWH



产品特性 Features

-  模块化设计，可以选择不同的配置，快速响应客户需求
The modular design allows for different configurations to be selected, enabling a quick response to customer needs.
-  采用风液智冷架构，减少能耗，提高能效，提高电芯使用寿命
Adopting a wind-liquid intelligent cooling architecture reduces energy consumption, improves energy efficiency, and extends the lifespan of battery cells.
-  自研的EMS，具有智慧远程运维能力，为运维节省时间和成本
The self-developed EMS has intelligent remote operation and maintenance capabilities, saving time and costs for operation and maintenance.
-  兼顾成本和安全，采用PACK级、柜级和水消防共三级消防，提高产品的安全性
Balancing cost and safety, a three-level fire protection system is adopted, consisting of PACK level, cabinet level, and water fire protection, to improve product safety.

应用场景 Application scenarios



产品参数 Product parameters

Product Name	PV-Storage Hybrid System
Model	ESS-125kW-261kWh-C1
AC output parameters (On /Off -grid)	
Rated AC power(kW)	125
Maximum power(kW)	150
Rated voltage (V)	400
Wiring method	Three-phase four-wire
Rated powergrid frequency Hz	50/60
Total current harmonic distortion rate(%)	≤3 (rated power)
Photovoltaic input	
Rated power (kW)	120
Maximum power (kW)	130
Operating voltage range (V)	200V~900V
Maximum DC current (A)	200 or 50*4
MPPT Channels	Route 1 or Route 4
Battery Parameters	
Cell type	LFP 314Ah
Rated capacity (kWh)	261
Rated voltage (V)	832
Battery cluster configuration	52S1P*5
Charge and discharge power	0.5P
Cycle life	8000 Cycles @25°C, 0.5P, DOD90%, EOL70%
System Parameters	
Operating mode	On-grid and off -grid
Protection level	≥IP54
Cooling method	Pack liquid cooling, PCS air cooling
size	1534mm*1400mm*2180mm (Without rings)
Operating ambient temperature	-20~ 55 ℃ (Use at 45 ℃ with reduced capacity)
Working environment humidity	0 %~95% (non-condensing)
Operating noise	≤75dB
Working altitude	≤2000m (reduction in allowance for distances above 2000m)(>2000m Reduced usage)
fire protection	aerosol
Certifications	CE/UN38.3

PV-STORAGE HYBRID SYSTEM

光储一体柜

SmartESS 125KW / 261KWH



产品特性 Features

- 模块化设计，可以选择不同的配置，快速响应客户需求
The modular design allows for different configurations to be selected, enabling a quick response to customer needs.
- 自带DCDC模块，光伏通过直流耦合的方式接入系统，效率高
It comes with a built-in DC-DC module, and the photovoltaic system is connected to the system via DC coupling, which is highly efficient.
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应用场景 Application scenarios



Microgrid
微电网



Factory
工厂



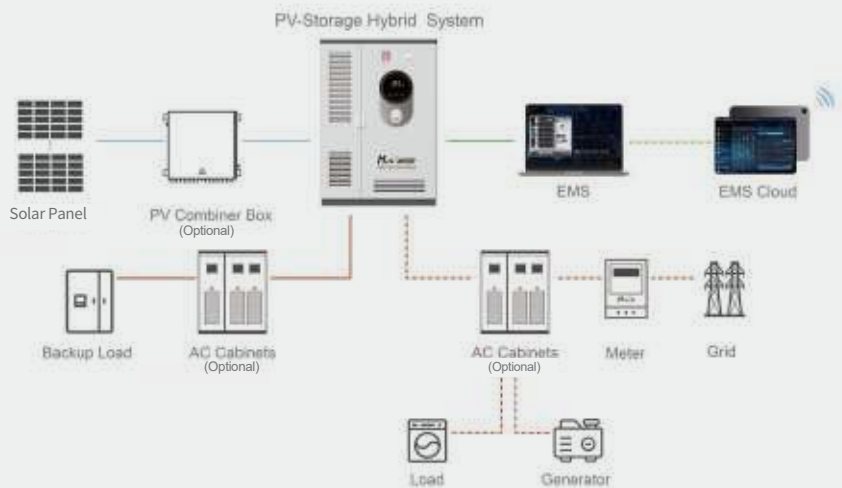
Shipping
运输



EV charging
汽车充电桩



Power supply systems in
remote areas
偏远地区供电系统



产品参数 Product parameters

Product Name		PV-Storage Hybrid System		
Model		ESS-125kW-261kWh-C2		
Max Power (kVA)		150		
Rated Power (kVA)		125		
Max Output Curent (A)		300A	328A	150.5A
Rated Grid Voltage(VAC)		240V	Wye: 220V	Wye :480V
Rated Frequency(Hz)		50/60		
Power Facor Range		[-0.99~0.99]		
Grid Type		3W+N+PE		
Rated Power (kW)		120		
Max Power(kW)		130		
Voltage Range(V)		200-900		
Battery type		LFP 314Ah		
Battery Cluster Configuration		1P52S*5S		
Charge and Discharge Rate		0.5P		
Cycle life		8000 Cycles @25°C, 0.5P, DOD90%, EOL70%		
Rated Energy(kWh)		261		
Voltage Range(V)System		728-949		
IP Rating		≥IP54		
Dimension (mm)		1534*1404*2180(Without hook)		
Operating Temperature(℃)		-20℃~55℃		
Operating Humidity		0-95%(No condensation)		
Noise		≤75dB		
Weight		>3t		
Certifications		CE/UN38.3		

C&I ALL-IN-ONE ESS CABINET

工商储一体柜 SmartESS 125KW / 261KWH



产品特性 Features

-  占地面积小，单柜面积仅需1.4m²
It occupies a small area, with each cabinet requiring only 1.4 square meters.
-  积木式扩容，多柜并联，集群控制，容量按需配置
Modular expansion, parallel connection of multiple cabinets, cluster control, and on-demand capacity configuration.
-  自研的EMS，具有智慧远程运维能力，为运维节省时间和成本。
The self-developed EMS has intelligent remote operation and maintenance capabilities, saving time and costs for operation and maintenance.
-  兼顾成本和安全，采用PACK级、柜级和水消防共三级消防，提高产品的安全性。
Balancing cost and safety, a three-level fire protection system is adopted, consisting of PACK level, cabinet level, and water fire protection, to improve product safety.

应用场景 Application scenarios



Microgrid
微电网



Factory
工厂



Shipping
运输

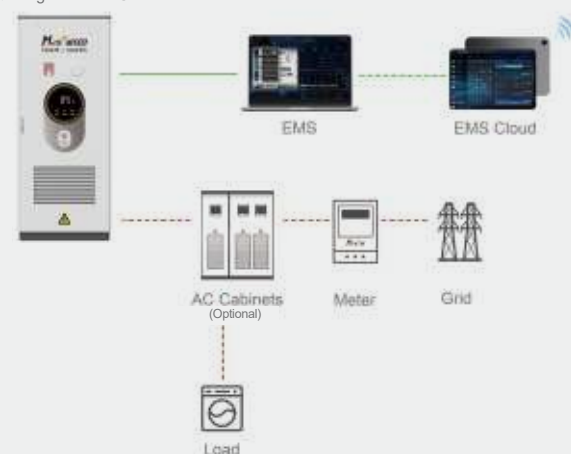


EV charging
汽车充电桩



Power supply systems in
remote areas
偏远地区供电系统

C&I Integrated ESS Cabinet



产品参数 Product parameters

Product Name	C&I Integrated ESS Cabinet	
Model	ESS-125kW-261kWh-C3 (CN)	ESS-125kW-261kWh-C3 (EU)
AC output parameters (On /Off -grid)		
Max Power (kVA)	137.5	
Rated Power (kVA)	125	
Max Output Curent (A)	200A	
Rated Grid Vollage(VAC)	230/400	
Rated Frequency(Hz)	50/60	
Power Facor Range	[-0.99~0.99]	
Grid Type	3W+N+PE	
Battery parameters		
Battery type	LFP 314Ah	
Battery Cluster Configuration	1P52S*5S	
Charge and Discharge Rate	0.5P	
Cycle life	8000 Cycles @25°C, 0.5P, DOD90%, EOL70%	
Rated Energy(kWh)	261	
Voltage Range(V)System	728-949	
System		
IP Rating	≥IP54	
Dimension (mm)	1006*1406*2502 (Without hook)	
Operating Temperature(℃)	-20℃~55℃	
Operating Humidity	0-95%(No condensation)	
Noise	≤75dB	
Weight(kg)	2700	
Certifications	CE/UN38.3	



HYBRID INVERTER

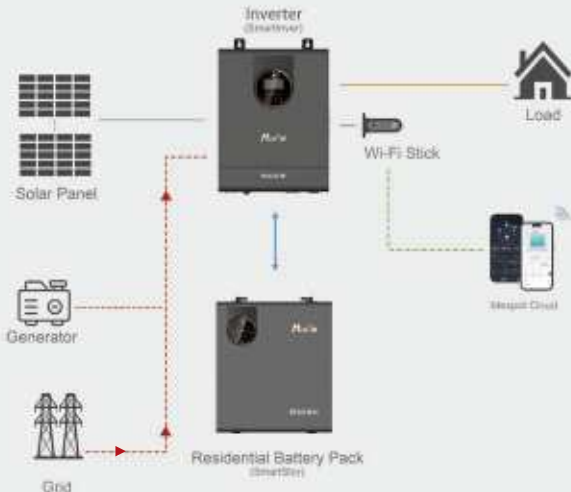
混合逆变器 SmartInver 3.5~5.2KW



产品特性 Features

- 模块化设计 / MODULAR DESIGN**
模块化设计，便于快速定制；
Modular design for quick customization;
- 多场景适用 / APPLICABLE TO MULTIPLE SCENARIOS**
可拆卸防尘罩，适用于恶劣环境；
Detachable dust cover, suitable for hash environment;
- 独立使用 / USED INDEPENDENTLY**
无需电池即可工作；
Can work without batteries;
- 安全可靠 / SAFE AND RELIABLE**
本地实时监控，确保系统稳定运行；
Local real-time monitoring ensures the stable operation of the system;

应用场景 Application scenarios



产品参数 Product parameters

Model	SP-3K5-EP1	SP-5K2-EP1
Rated Output Power	3500VA/3500W	5200VA/5200W
Parallel	Yes, 9 units	
AC Input(Grid)		
Rated Input Voltage	230Vac	
Voltage Range	170~280Vac (UPS); 90~280Vac (Appliances)	
Frequency Range	40~65Hz	
Maximum Bypass Load Current	40A	
Maximum Charge Current	60A	80A
Load Output		
Output Voltage	(220/230/240)Vac±5%	
Output Frequency	50/60Hz±1%	
Surge Power	7000VA	10000VA
Maximum Efficiency	93%	
Overload Protect	5S@ ≥150% Load; 10S@110%~150% Load	
Transfer Time	10ms(UPS); 20ms(Appliances)	
Battery		
Battery Voltage	48VDC(Lead-acid)/51.2VDC Lithium)	
Maximum Charge Current(AC+PV)	60A	100A
Maximum Discharge Current	85A	115A
PV Array		
Maximum Open Circuit Voltage	500VDC	
Maximum PV Power	4000W	6000W
MPPT Voltage Range	100VDC~450VDC	
Maximum Input Current	16A	18A
Maximum PV Charge Current	60A	100A
General Specifications		
Dimensions W × H × D	420×325×138 mm	
Net Weight	10.9KG	
Communication	RS485/CAN/Dry contact	
Cooling	Air Cooling	
Max. Operating Altitude	4000m (Derating from > 3000m)	
Noise	≤55dB	
Ingress Protection Rating	IP21	
Operation Humidity	5% ~95% Relative humidity (No Condensation)	
Storage Temperature Range	-15℃ ~60℃	
Operating Temperature Range	-10℃ ~50℃	
Certifications	CE	

HYBRID INVERTER

混合逆变器

SmartInver 12KW



产品特性 Features

-  **模块化设计 / MODULAR DESIGN**
模块化设计，便于快速定制；
Modular design for quick customization;
-  **多场景适用 / APPLICABLE TO MULTIPLE SCENARIOS**
可拆卸防尘罩，适用于恶劣环境；
Detachable dust cover, suitable for hash environment;
-  **独立使用 / USED INDEPENDENTLY**
无需电池即可工作；
Can work without batteries;
-  **安全可靠 / SAFE AND RELIABLE**
本地实时监控，确保系统稳定运行；
Local real-time monitoring ensures the stable operation of the system;

应用场景 Application scenarios



产品参数 Product parameters

Model	SP-12K-EP1
Rated Output Power	12000VA/12000W
Parallel	Yes, 9 units
AC Input(Grid)	
Rated Input Voltage	230Vac
Voltage Range	170~280Vac (UPS); 90~280Vac (Appliances)
Frequency Range	40~65Hz
Maximum Bypass Load Current	70A
Maximum Charge Current	120A
Load Output	
Output Voltage	(220/230/240)Vac±5%
Output Frequency	50/60Hz±1%
Surge Power	24000VA
Maximum Efficiency	94%
Overload Protect	5S@ ≥150% Load; 10S@110%~150% Load
Transfer Time	10ms(UPS); 20ms(Appliances)
Battery	
Battery Voltage	48VDC(Lead-acid)/51.2VDC Lithium)
Maximum Charge Current(AC+PV)	200A
Maximum Discharge Current	215A
PV Array	
Maximum Open Circuit Voltage	500VDC
Maximum PV Power	6000W+6000W
MPPT Voltage Range	100VDC~450VDC
Maximum Input Current	23A+23A
Maximum PV Charge Current	200A
Other Parameters	
Noise	≤60dB
Ingress Protection Rating	IP54
Operating Ambient Temp	-10℃~+55℃ (derating above 45℃)
Storage Ambient Temp	-15℃~+60℃
Relative Humidity	5% ~ 95% (non-condensing)
Altitude	4000m (derating above 3000m)
Product Dimensions (HWD)	660mm*505mm*136mm
Package Dimensions (HWD)	750mm*595mm*244 mm
Weight	24.5kG
Other Information	
Warranty Period	2.5 years

HYBRID INVERTER

混合逆变器

SmartInver 30KW



产品特性 Features

- 方便快捷 / USER-FRIENDLY AND QUICK**
100%三相不平衡输出;
100% three-phase unbalanced output;
- 高效率 / HIGH EFFICIENCY**
高压电池, 高效率;
High voltage battery high efficiency;
- 灵活使用 / FLEXIBLE USE**
6个可配置充放电时段;
6 configurable charging and discharging time periods;
- 安全可靠 / SAFE AND RELIABLE**
防护等级 IP65, 质保期 5 年;
Ingress protection rating is IP65, the warranty period is 5 years;

应用场景 Application scenarios



产品参数 Product parameters

Model	TH-30K-EPI
Rated Output Power	30000W / 30000VA
Rated Output Voltage	220/380V, 230/400V; 0.85Un - 1.1Un
Rated Output Frequency	50Hz / 60Hz ± 5Hz
Grid Type	Hybrid (On/Off-Grid)
Parallel Interface	Yes, ARJ45 interface
Transfer Time	< 10ms
Inverter Topology	High-frequency scheme
Peak Power	1.5 times of rated power, @ 10s
Overload Capacity	≥150% load @ 10s; 110%~150% load @ 60s
Rated Output Voltage	Inverter Mode: 230/400VAC ± 5%
Output Frequency	Inverter Mode: 50Hz / 60Hz (Selectable)
AC Output Interface	3L, N, PE
Max. Efficiency	98.5%
European Efficiency	98%
MPPT Efficiency	> 99%
THDi	< 3%
DCi	< 0.5% In
AC Input (Grid/Generator)	
Rated AC Input Voltage	220/380V, 230/400V
AC Input Voltage Range	170VAC ~ 280VAC ± 7V
Rated AC Input Frequency	50/60Hz (Auto-detection)
Input Frequency Range	45 ~ 65Hz ± 5Hz Configurable
Grid Input Interface	3L, N, PE
Max. Bypass Overcurrent	80A
Battery	
Battery Voltage Range	160 - 700VDC
Max. Charging Current / Max. Discharging Current	75A*1 Channel
PV Input	
Max. Solar Input Power	16KW × 3 Channels
Max. PV Open Circuit Voltage	1000Vdc
Startup Voltage	180V
MPPT Voltage Range	150 - 850Vdc
MPPT Current Range	0 ~ 36A
Other Parameters	
Noise Level	≤ 55dB
IP Rating	IP65
Operating Temperature	-40°C to +55°C (Derating occurs above 45°C)
Storage Temperature	-45°C ~ +60°C / -45°C to +60°C
Relative Humidity	0% ~ 100% (Non-condensing)
Dimensions (WxDxH)	686mm*491mm*266.5mm
Weight	50kg
Installation Type	Wall-mounted
Additional Info	
Certification	CE, Grid-tied certifications
Warranty	5 years
Grounding Point	Yes

SPLIT-PHASE HYBRID INVERTER

裂相混合逆变器 SmartInver 6KW



产品特性 Features

- 防护等级 / IP RATING**
IP65 防水防尘设计
IP65 waterproof and dustproof design
- 移动端 APP 监控 / MOBILE APP MONITORING**
内置 Wi-Fi 模块, 支持移动端 APP 监控
Comes with built-in Wi-Fi for mobile monitoring (app available)
- 安全保护 / SAFETY**
内置电弧故障检测与快速断电
Built-in arc fault detection (AFD) and rapid shutdown (RSD)
- 并联运行 / PARALLEL OPERATION**
支持最多 6 台设备并联运行
Allows parallel operation of up to 6 units

应用场景 Application scenarios



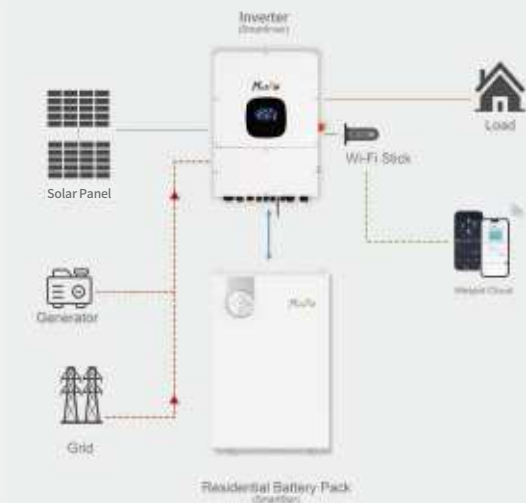
Household Appliances
家电



Light
灯



Communication Tools
通讯工具



产品参数 Product parameters

Model	TH-6K-AP0
Phase	120/240V Split phase, 120V/208V Split phase
Maximum PV Input Power	7500W
Rated Output Power	6000VA/6000W
Maximum Charging Power	6000W
Grid-tie Operation	
PV Input (DC)	
Maximum DC Voltage	600 VDC
Start-up Voltage / Initial Feeding Voltage	125 VDC / 160 VDC
MPP Voltage Range	120 VDC – 550 VDC
Number of MPP Trackers / Maximum Input Current	2 / 15A
Grid Output (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Output Voltage Range	105.5 VAC - 132 VAC (per phase)
Nominal Output Current	25A per phase
Power Factor	0.9 lag to 0.9 lead
Efficiency	
Maximum Conversion Efficiency (DC/AC)	96%
Off-grid, Hybrid Operation	
PV Input (DC)	
Maximum DC Voltage	600 VDC
Start-up Voltage / Initial Feeding Voltage	125 VDC / 160 VDC
MPP Voltage Range	120 VDC – 550 VDC
Number of MPP Trackers / Maximum Input Current	2 / 15A
Grid Output (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Output Voltage Range	105.5 VAC - 132 VAC (per phase)
Nominal Output Current	25A per phase
AC Input	
AC Start-up Voltage / Auto Restart Voltage	85 VAC (per phase) / 90 VAC (per phase)
Acceptable Input Voltage Range	85 - 140 VAC (per phase)
Maximum AC Input Current	40 A per phase
Battery Mode Output (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Efficiency (DC to AC)	91%
Battery & Charger	
Nominal DC Voltage / Nominal DC Voltage	40-62 VDC / 48 VDC
Maximum Solar Charging Current	120A
Maximum AC Charging Current	120A
Maximum Charging Current	120A
General	
Physical	
Dimension, D x W x H (mm)	215.5 x 515 x 700
Net Weight (kgs)	41
Interface	
Parallel Function	Yes, 6 units
Communication Port	RS232, RS485, WI-FI, USB
Environment	
Operating Temperature	-25℃ to 60℃ (>45℃ derating)
Protection & Certificate	
Safety	UL1741SA, UL1741SB, CSA 22.2 107.1, CEC, CRD
Grid Connection Standard	IEEE1547.1-2020
EMC	FCC CRF47 PART15 B
Rapid Shutdown	Yes (Brand: Tigo & AP)

SPLIT-PHASE HYBRID INVERTER

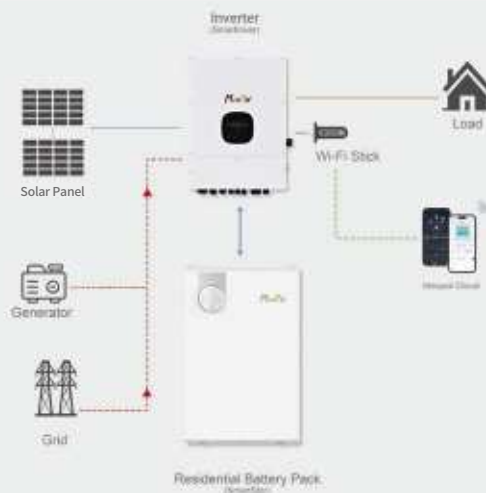
裂相混合逆变器 SmartInver 12KW



产品特性 Features

- 精准管理 / PRECISE MANAGEMENT**
外置 CT 传感器, 确保 100% 自发自用
External CT sensor to guarantee 100% self-consumption.
- 移动端 APP 监控 / MOBILE APP MONITORING**
内置 Wi-Fi 模块, 支持移动端 APP 监控
Comes with built-in Wi-Fi for mobile monitoring (app available)
- 防护等级 / IP RATING**
IP65 防水防尘设计
IP65 waterproof and dustproof design
- 并联运行 / PARALLEL OPERATION**
支持最多 6 台设备并联运行
Allows parallel operation of up to 6 units

应用场景 Application scenarios



产品参数 Product parameters

MODEL	TH-12K-AP0
PHASE	120V/240V Split phase, 120V/208V Split phase
Maximum PV Input Power	12000W
Rated Output Power	10000VA/10000W
Maximum Charging Power	10000W
GRID-TIE OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	600 VDC
Start-up Voltage / Initial Feeding Voltage	120 VDC / 160 VDC
MPP Voltage Range	120 VDC ~ 550 VDC
Number of MPP Trackers / Maximum Input Current	2 / 18A (MAX 30A)
GRID OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Output Voltage Range	105.5 VAC - 132 VAC (per phase)
Nominal Output Current	41.7 A per phase
Power Factor	0.9 lag to 0.9 lead
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%
OFF-GRID, HYBRID OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	600 VDC
Start-up Voltage / Initial Feeding Voltage	120 VDC / 160 VDC
MPP Voltage Range	120 VDC ~ 550 VDC
Number of MPP Trackers / Maximum Input Current	2 / 18A (MAX 30A)
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	85 VAC (per phase) / 90 VAC (per phase)
Acceptable Input Voltage Range	85 - 140 VAC (per phase)
Maximum AC Input Current	60 A per phase
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Efficiency (DC to AC)	91%
BATTERY & CHARGER	
DC Voltage Range / Nominal Voltage	40-62 VDC / 48 VDC
Maximum Solar Charging Current	200A
Maximum AC Charging Current	200A
Maximum Charging Current	200A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	215.5 x 515 x 800
Net Weight (kgs)	49.8
ENVIRONMENT	
Operating Temperature	-25° C to 60° C (>45° C derating)
PROTECTION & CERTIFICATE	
Safety	UL1741SA, UL1741SB, CSA 22.2.107.1, CEC
Grid Connection Standard	IEEE 1547.1:2020; IEEE 1547:2018, California Rule 21, HECO Rule 14H
EMC	FCC Part 15 Class B
PV DC Switch - NEC 250.15	Yes
Ground Fault Detection — NEC 690.5	Yes
PV Rapid Shutdown Protection - NEC 690.12	Yes
PV Arc Fault Detection — NEC 690.11	Yes
PV Input Lightning Protection	Yes

SPLIT-PHASE HYBRID INVERTER

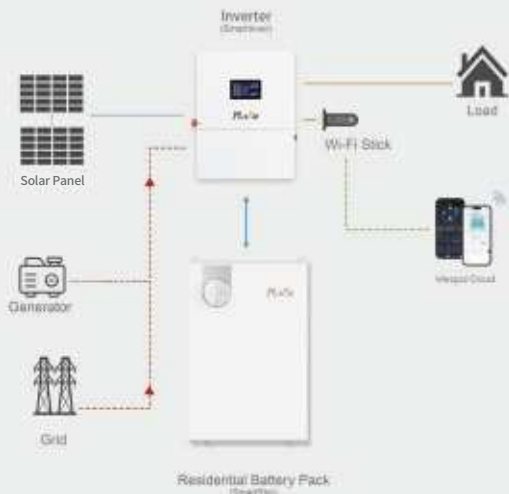
裂相混合逆变器 SmartInver 15KW



产品特性 Features

- 防护等级 / IP RATING**
IP65 防水防尘设计
IP65 waterproof and dustproof design
- 移动端 APP 监控 / MOBILE APP MONITORING**
内置 Wi-Fi 模块, 支持移动端 APP 监控
Comes with built-in Wi-Fi for mobile monitoring (app available)
- 安全保护 / SAFETY**
内置电弧故障检测与快速断电
Built-in arc fault detection (AFD) and rapid shutdown (RSD)
- 并联运行 / PARALLEL OPERATION**
支持最多 6 台设备并联运行
Allows parallel operation of up to 6 units

应用场景 Application scenarios



产品参数 Product parameters

MODEL	TH-15K-AP0
PHASE	120V/240V Split phase, 120V/208V Split phase
Maximum PV Input Power	22000W
Rated Output Power	15000VA/15000W
Maximum Charging Power	12000W
GRID-TIE OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
Start-up Voltage / MPP Voltage Range	120VDC / 150 VDC ~ 450VDC
Number of MPP Trackers / Number of Strings Per MPP Trackers	4 / 2 + 2 + 2 + 2
Maximum Input Current	26A + 26A + 26A + 26A
GRID OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Output Voltage Range	105.5 VAC - 132 VAC (per phase)
Nominal Output Current	62.5A per phase
Power Factor	0.9 lag to 0.9 lead
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	97.5%
OFF-GRID, HYBRID OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
Start-up Voltage / MPP Voltage Range	120VDC / 150 VDC ~ 425 VDC
Number of MPP Trackers / Number of Strings Per MPP Trackers	4 / 2 + 2 + 2 + 2
Maximum Input Current	26A + 26A + 26A + 26A
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	85 VAC (per phase) / 90 VAC (per phase)
Acceptable Input Voltage Range	90 - 140 VAC (per phase)
Pass Through	200A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N), 208 VAC (P-P), 240 VAC (P-P)
Output Waveform	Pure sine wave
Efficiency (DC to AC)	93%
BATTERY & CHARGER	
DC Voltage Range / Nominal Voltage	42-60 VDC / 51.2VDC
Maximum Charging Current	250A
Maximum Discharging Current	300A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	267.5 x 575 x 800
Net Weight (kgs)	65
INTERFACE	
Parallel Function	Yes, 6 units
Communication Port	RS232, RS485, WI-FI, USB, Dry contact,BMS
ENVIRONMENT	
Operating Temperature	-25°C to 60°C
PROTECTION & CERTIFICATE	
Safety	UL1741SA, UL1741SB
Grid Connection Standard	IEEE 1547.1:2020; IEEE 1547:2018
EMC	FCC Part 15
PV DC Switch - NEC 250.15	Yes
Ground Fault Detection — NEC 690.5	Yes
PV Rapid Shutdown Protection - NEC 690.12	Yes
PV Arc Fault Detection — NEC 690.11	Yes
PV Input Lightning Protection	Yes

RESIDENTIAL BATTERY

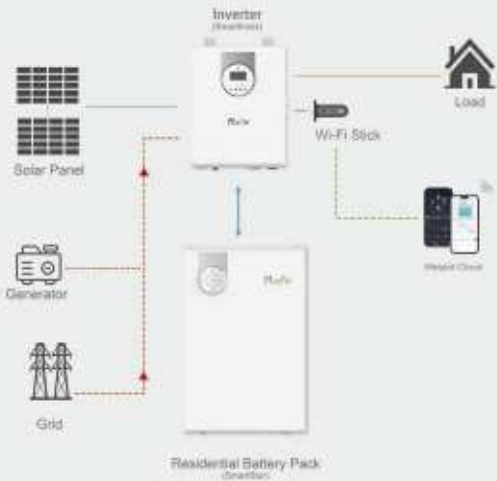
户储电池包 SmartStor 5KWH~16KWH



产品特性 Features

-  **智能监控 / INTELLIGENT MONITORING**
远程诊断、升级与维护;
Remote diagnosis, upgrade & maintenance;
-  **灵活使用 / FLEXIBLE USE**
多达16个并联电池组, 容量灵活;
UP to 16 parallel battery packs for flexible capacity;
-  **安全可靠 / SAFE AND RELIABLE**
配备专有 BMS 的磷酸铁锂电池 (保障安全);
LFP cells with proprietary BMS for safety;
-  **多种安装方式 / MULTIPLE MOUNTINGS**
壁挂或落地安装选项;
Wall or floor mounting options;

应用场景 Application scenarios



产品参数 Product parameters

Model	BP-5.0-LV2	BP-16.0-LV1
Battery Cell		
Cell Type	LFP	
Cell Rated Capacity (Ah)	100	314
Cell Rated Voltage (VDC)	3.2	
Battery Pack		
Rated Capacity(Wh)	5120	16076
Configuration	16S1P	16S1P
Rated Voltage (VDC)	51.2	
Operating Voltage Range (VDC)	44.8~57.6	
Maximum Charging Voltage(VDC)	57.6	
Discharge Cut-off Voltage(VDC)	44.8	
Charging Method	CC-CV	
Maximum Continuous Charging Current(A)	50A	155A
Maximum Continuous Discharging Current(A)	100A	220A
Activation Method	Button Activation, Charging Activation	
Parallel Connection	Max. 16 packs in parallel (Series connection prohibited)	
Communication	RS485 / CAN / dry contact	
Communication Interface	RJ45	
Charging Temperature Range	0~55℃	
Discharging Temperature Range	-20~55℃	
Power Switch	Rocker Switch	
Reset Button	Yes, Tactile Switch (on communication board)	
Cycle Life	4000 Cycles @25℃, 0.5P, DOD90%, EOL70%	8000 Cycles @25℃, 0.5P, DOD90%, EOL70%
Net Weight	45kg	116±1kg
Dimensions W×H×D (mm)	460×543×202 (±2)	463×881×271 (±2)
Protection Rating	IP21	
Cooling Method	Natural Cooling	
Installation	Wall Mounted and Floor	Wall Mounted and Floor (wheels optional)
Certifications	CE/UN38.3	



C&I ESS BMS

工商储BMS



产品特性 Features

- Real-time pack SOC/SOH/SOE computation
电池组实时 SOC/SOH/SOE 计算
 - Multi-protocol interfaces (CAN/RS-485/Ethernet)
多协议接口 (CAN 总线 / RS-485 总线 / 以太网)
- Isolated modular architecture for plug-and-play maintenance
支持即插即用维护的隔离式模块化架构
 - Field-upgradable firmware: Bootloader; OTA; CAN
支持现场固件升级的功能 (基于 Bootloader 引导程序、OTA 空中升级、CAN 总线升级)

BMU产品参数 BMU Product parameters

Model	MP-BMU		
Operating Power(VDC)			
Minimum Value		9	
Typical Value		/	
Maximum Value		32	
Cell Voltage	Voltage Range (VDC)	Measurement Channels (CHANNELS)	Measurement Accuracy (VDC)
Minimum Value	0	32	/
Typical Value	/	/	±3
Maximum Value	5	64	±5
Remarks	/	Minimum 8 cells per connector, corresponding battery pack voltage must be >16V	/
Temperature Sampling	Temperature Range (°C)	Measurement Channels (CHANNELS)	Measurement Accuracy (°C)
Minimum Value	-40	/	/
Typical Value	/	/	±1
Maximum Value	125	64	/
Passive Balancing	Current (mA)		
Maximum Value		100	

BCU产品参数 BCU Product parameters

Model	MP-BCU		
Operating Power(VDC)			
Minimum Value		9	
Typical Value		/	
Maximum		32	
Power Output(Vdc/mA)			
Minimum Value		/	
Typical Value		5/300、12/300	
Maximum		/	
Pack Voltage Sensing(Vdc)	Measurement Range		Measurement Accuracy
Minimum Value		0	
Maximum		1500	
Current Sensing(Vdc)		Acquisition Accuracy	
Minimum Value		0	
Maximum		±500	
Temperature Sampling	Temperature Range	Number of Channels	Acquisition Accuracy
Minimum Value		-40	
Typical Value		/	
Maximum		125℃	
Insulation Resistance(Vdc)	Measurement Range		Acquisition Accuracy
Minimum Value		0	
Typical Value		/	
Maximum		10	
Digital Input Signal	Number of Channels		Input Voltage Value
Minimum Value		/	
Maximum		8(Channel)	
CAN	Number of Channels		Data Rate
Minimum Value		/	
Typical Value		/	
Maximum		3(Channel)	
LIN	Number of Channels		Data Rate
Typical Value		1	
485	Number of Channels		Data Rate
Minimum Value		1(Isolation)	
Typical Value		/	
Maximum		/	

产品参数Product parameters

Model	NK-BMS-16S100A-02	
Cell Voltage Detection		
Cell Voltage Detection Temperature Range	-50~125℃	
Cell Voltage Detection Range	1~5V (@ -10~50℃)	
Voltage Sampling Accuracy	±5mV	
Individual Voltage Sampling Frequency	≤100ms	
Balancing	Passive Balancing (Max 80mA)	
Battery Pack Temperature Detection		
Temperature Detection Range	-50~125℃	
Temperature Detection Accuracy	≤±2℃ (NTC, @-50~125℃)	
Temperature Sampling Frequency	≤1000ms	
Number of Temperature Sensors	8	
Battery Pack Current Detection		
Current Sampling Range	-200A~+200A	
Current Detection Accuracy	≤±0.5A (-30A~30A)	≤±1.0A (<-30A or >30A)
Current Sampling Frequency	≤250ms	
Battery Pack Total Voltage Detection		
Total Voltage Detection Range	16~65V	
Total Voltage Detection Accuracy	<1% FSR (Full Scale Range)	
Total Voltage Sampling Frequency	≤100ms	
BMS Power Supply and Activation		
Power Supply Voltage Range	16~65V	
Standby Power Consumption	<400 μA	
Operating Power Consumption	<55mA	
Signal Activation	Power-on and Charging Activation	
Inverter Charging Activation	30~65V	
Additional Parameters		
Air Switch Detection	None	
Continuous Charge/Discharge Current	100A (Temperature Rise ≤70℃ @25℃)	
Parallel Connection	Supports Parallel Connection, Number ≤16 Groups	
BMS Operating Temperature Range	-30~60℃	
BMS Storage Temperature Range	-30~85℃	
BMS Operating Humidity Range	5~90%RH (No Condensation)	
BMS Storage Humidity Range	5~90%RH (No Condensation)	

RESIDENTIAL ESS BMS
户储BMS



- 宽工作电压范围 / Wide Operating Voltage Range
- 隔离电源电路 / Isolated Power Supply Circuit
- 集成多通道串口集成电路 / Integrated Multi-channel Serial Port IC
- 高精度电压采集 / High-precision Voltage Acquisition

MESPAL CASE

项目案例

凭借在太阳能行业超过13年的丰富经验，MesPal始终以极具竞争力的价格和全面的服务，为全球100多个国家提供高品质的产品与解决方案。到2025年，我们预计全球将有超过10万户家庭和10000+企业安装使用我们的产品。以下是一些典型安装案例。

Leveraging over 13 years of extensive experience in the solar industry, MesPal consistently delivers high-quality products and solutions to over 100 countries worldwide at highly competitive prices with comprehensive services. By 2025, it's estimated that more than 100,000 households and 100,00+ enterprises globally will have adopted our products. Below are some representative installation cases.

光伏项目 PV station project cases



2072.09 kW



Xi'an ABB Power Capacitor



616.245 kW



GAC Aion



453.08 kW



Foshan Fullwei Auto Parts Company Limited



324.8 kW



Siemens



6478.7 kW



Vanward Group



ZHAOQING DINGHU SPRING

Installed Capacity: 9276kWp



Midea Global Innovation Center
Installed Capacity: 5500kWp



Hsu Fu Chi International Co., Ltd.
Installed Capacity: 5170kWp



Shuncheng Ceramic Group
Installed Capacity: 5112.7kWp



Guangzhou Baiyun International Airport
Installed Capacity: 2243.45kWp



Xinhui: Capital of Classical Chinese Furniture
Installed Capacity: 1800kWp



Vipshop Logistics Co., Ltd.
Installed Capacity: 1265kWp

工商业储能项目 C&I Energy Storage Project Cases



0.92MW/1.832MWH in Huzhou Tianlin Textile factory



0.46MW/0.916MWH in Huzhou Siyi factory



250KW/522KWH in Mespal Head quarters project



500KW/1MWH ESS in Central Africa



4sets 150KW/150KWH in Philippines



500KW+1MWH BESS project in Tanzania

户用光储项目 Energy Storage Station Project Cases



20KW on-grid solar system in Mexico



6.6KWP solar+8.5KW/10.24KWH offgrid solar system in Kenya



30KW off-grid solar system in DRC



10KW solar + 20KWH lithium battery hybrid solar system in Solomon Islands



22KW on-grid solar system in Ecuador



8KW solar+20KW/20KWH Off-Grid Solar System in Accra, Ghana

其他工程项目 Other Engineering Projects Cases



232.26KW photovoltaic carport project at Foshan Century Auto City



569.16KW photovoltaic carport project at Guangzhou JFE Steel Plate Co., Ltd.



153.29KW photovoltaic carport project at Foshan Geely Plaza



1,572 sets solar street lights in Tanzania



1,000 sets solar street light project for Mali government



500 sets solar street light in Mali



147KW solar water pump system in Saudi Arabia



4KW solar water pump system in Philippines



30KW solar water pump system in Myanmar



26000btu off-grid solar air conditioner system in Saudi Arabia



24000btu on-grid solar air conditioner system in Africa



18000btu solar air conditioner System in Kenya

COMPREHENSIVE SERVICES 综合服务

一站式专业太阳能解决方案
One-stop Professional Solar Soluton



全套证书
Full Certificates



超 10000 个太阳能项目
10000+ Solar Project



全天候专业服务
24/7 Professional Service



快速交付
Fast Delivery

