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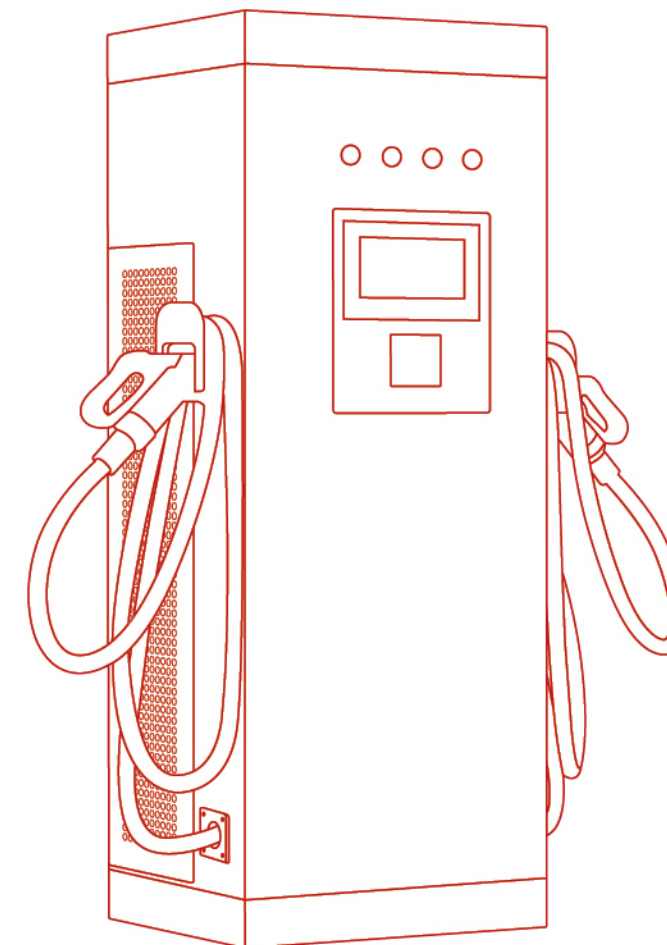
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## New Energy Products Selection Guide

**新能源产品 选型手册**

汽车充电桩 | 光伏储能设备

Vehicle charging pile  
Photovoltaic complete equipment



本样本资料由浙江华朴电气有限公司印刷,仅用于说明本系列产品的相关信息。公司随时可能因技术升级或采用更新的生产工艺而改进本手册相关内容,或对本手册的印刷错误及不准确的信息进行必要的改进和更新,恕不另行通知。商家订货时请随时联系本公司,以证实相关信息。

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# Company Profile

## 公司简介



浙江华朴电气有限公司自 2018 年成立以来，始终扎根于充满创新活力的浙江省温州市。公司致力于为新能源汽车提供高效、智能的充电解决方案，产品涵盖光伏储能交流充电桩、直流充电桩、便携式充电设备等，广泛应用于公共停车场、住宅小区、商业综合体等场景。公司以“绿色能源、智能充电”为理念，推动新能源汽车充电基础设施的普及与发展。

在产品技术攻关方面，公司汇聚了一批来自电气、自动化、软件等多领域的专业人才，组建了一支实力雄厚的技术团队。他们不断探索和突破技术瓶颈，致力于将创新性的科技融入到充电桩产品中。为了确保工作的高效开展。

在生产环节中，公司拥有现代化的生产基地和完善的生产设备，严格遵循 ISO 质量管理体系，从原材料采购到产品组装、测试，每一个环节都进行了严格的质量把控。我们的生产团队不仅具备丰富的实践经验，还始终保持着高度的责任心和严谨的工作态度，确保每一台出厂的充电桩都符合高品质的标准。

在销售与服务上，我们构建了完善的销售网络和售后服务体系。销售团队深入了解客户需求，为不同类型的客户提供个性化的充电解决方案，无论是个人用户、商业场所还是公共设施，都能得到适合的产品和服务。售后服务团队 24 小时待命，随时响应客户的需求，为客户提供及时、高效的技术支持和故障排除服务，让客户无后顾之忧。

展望未来，公司将继续加大在技术和创新方面的投入，不断提升产品的性能和品质，拓展业务领域，致力于成为全国知名的新能源汽车充电解决方案提供商，为推动新能源汽车产业的发展和实现绿色出行的美好愿景而不懈努力。

Since its establishment in 2018, Zhejiang Huapu Electric Co., Ltd. has always been rooted in the innovative and dynamic city of Wenzhou, Zhejiang Province. The company is committed to providing efficient and intelligent charging solutions for new energy vehicles, with products including AC charging piles, DC charging piles, portable charging devices, etc., widely used in public parking lots, residential communities, commercial complexes, and other scenarios. The company promotes the popularization and development of new energy vehicle charging infrastructure with the concept of "green energy and intelligent charging".

In terms of product technology research and development, the company has gathered a group of professional talents from multiple fields such as electrical, automation, and software, and formed a strong technical team. They constantly explore and break through technological bottlenecks, committed to integrating innovative technology into charging pile products. To ensure the efficient implementation of work.

In the production process, the company has a modern production base and complete production equipment, strictly follows the ISO quality management system, and conducts strict quality control in every link from raw material procurement to product assembly and testing. Our production team not only has rich practical experience, but also maintains a high sense of responsibility and rigorous work attitude, ensuring that every charging station leaving the factory meets high-quality standards.

In terms of sales and service, we have established a comprehensive sales network and after-sales service system. The sales team has a deep understanding of customer needs and provides personalized charging solutions for different types of customers, whether they are individual users, commercial venues, or public facilities, they can all receive suitable products and services. The after-sales service team is on standby 24 hours a day, responding to customer needs at any time, providing timely and efficient technical support and troubleshooting services, so that customers have no worries.

Looking ahead to the future, the company will continue to increase investment in technology and innovation, continuously improve product performance and quality, expand business areas, and strive to become a nationally renowned provider of new energy vehicle charging solutions, making unremitting efforts to promote the development of the new energy vehicle industry and achieve the beautiful vision of green travel.

### 始于 2018 年 专注电力设备 6 年

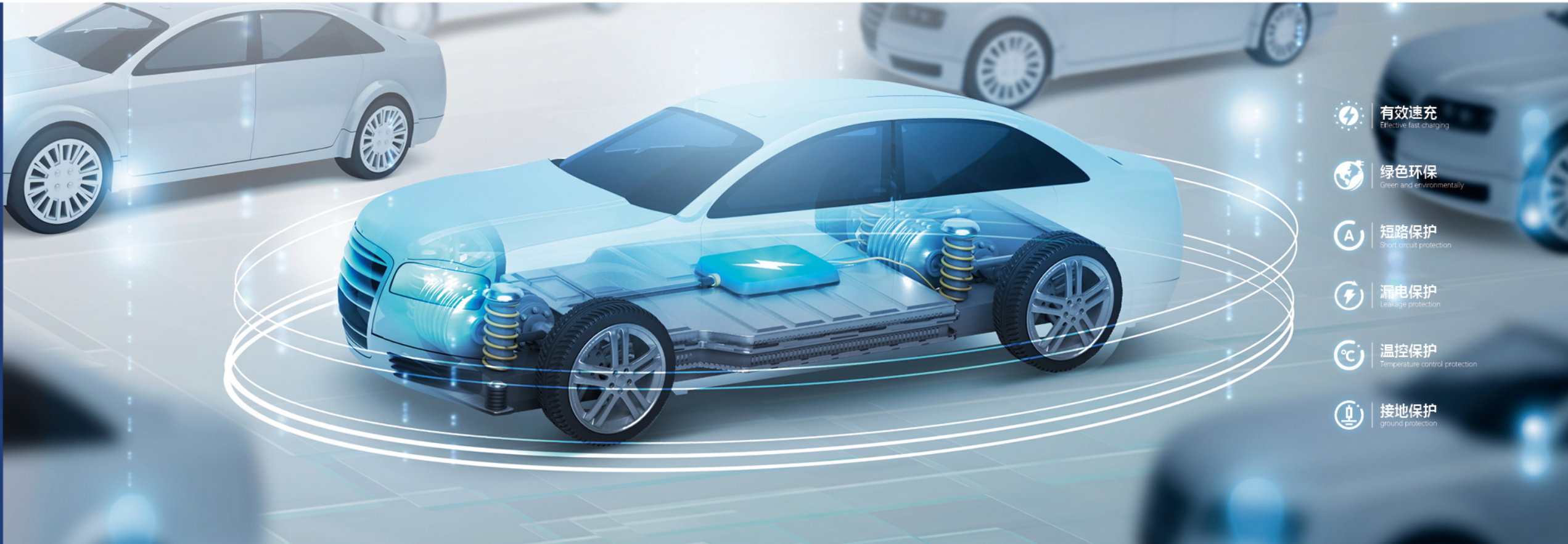
Started in 2018, focused on power equipment for 6 years

### 研发、制造、销售、服务 一体的技术型企业

A technology-based enterprise that integrates research and development, manufacturing, sales, and service

### 密切关注质量提升 和行业发展趋势

Pay close attention to quality improvement and industrial development trends



 有效速充  
Effective fast charging

 绿色环保  
Green and environmentally

 短路保护  
Short circuit protection

 漏电保护  
Leakage protection

 温控保护  
Temperature control protection

 接地保护  
ground protection



## 为客户提供更适用的产品 与系统解决方案

Provide customers with more applicable products and system solutions



开物 创新开发  
Innovative development



成器 细致打造  
Meticulous creation



致用 广泛应用  
extensive use



## Product Catalogue

### 产品 目录



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DC split charging stack
- 05 四枪一体式直流充电桩  
Four-gun integrated DC charging pile
- 07 电动重载车辆专用大功率直流充电桩  
High-power DC charging pile specially designed for electric heavy-duty vehicles
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华朴电气  
HUAPU  
HUAPUQIANGI



## 直流分体式 充电堆

DC split charging  
stack

### 产品简介

柔性直流分体式充电堆由充电堆整流柜和充电堆终端组成：为模块化配置。充电堆采用充电功率柔性分配技术，可根据新能源汽车充电需求进行功率智能分配，智能识别高、低压自动分配输出功率，可满足各种车型、不同功率的充电需求，任意直流模块可调至任意充电桩。在满足首先接入充电车辆功率需求的前提下，可以根据充电过程中功率需求变化，智能分配多余功率，给后接入的充电车辆，可实现全矩阵充电。



充电堆单终端  
Charging pile single terminal

直流充电堆（整流柜）  
DC charging pile (rectifier cabinet)



#### 功率共享 Power sharing

所有功率模块集中控制，按需输送至每个充电堆终端，任意直流模块均可调至任意充电堆终端。All power modules are centrally controlled and delivered to each charging pile terminal as needed. Any DC module can be adjusted to any charging pile terminal.



#### 柔性充电 Flexible charging

根据车辆 BMS 所发出的充电需求，充电功率自动分配，分配策略灵活多样。According to the charging demand issued by the vehicle BMS, the charging power is automatically allocated, and the allocation strategy is flexible and diverse.



#### 平滑扩展 Smooth expansion

随着电池电充倍率的提升，充电功率需求的增大，可扩充功率柜的功率以满足充电的需求。With the increase of battery charging rate and the demand for charging power, the power of the power cabinet can be expanded to meet the charging needs.

### Product introduction

The flexible DC split type charging pile consists of charging pile rectifier cabinet and charging pile terminal: it is a modular configuration. The charging pile adopts flexible charging power distribution technology, which can intelligently allocate power according to the charging needs of new energy vehicles. It can intelligently identify high and low voltage and automatically allocate output power to meet the charging needs of various vehicle models and different powers. Any DC module can be adjusted to any charging pile. On the premise of meeting the power demand of the first connected charging vehicle, excess power can be intelligently allocated according to changes in power demand during the charging process, and full matrix charging can be achieved for the charging vehicle that is connected later.



充电堆双终端  
Charging pile dual terminal



#### 集中控制 Centralized control

统一调度，统一管理，实现削峰填谷，减小对电网的冲击，提升功率因数。Unified scheduling and management achieve peak shaving and valley filling, reduce impact on the power grid and improve power factor.



#### 适用性强 High applicability

智能调配超宽电压模块到各个充电终端，可同时为不同品牌和电压等级的电动车辆充电，同时支持 10 枪在线使用。Intelligent allocation of ultra wide voltage modules to various charging terminals is capable of simultaneously charging electric vehicles of different brands and voltage levels, and supporting 10 guns for online use.



#### 节能高效 Energy saving and high efficiency

不论充电需求如何，都应保证充电设备可以工作在最佳的负载率区间。Regardless of the charging requirements, it should be ensured that the charging equipment can operate in the optimal load rate range.



技术参数 Technical parameter

1、直流充电堆（整流柜）DC charging pile (rectifier cabinet)

序号 No.	名称 Item	技术指标 Technical data					
1	产品型号 Product model	HPTB-240A	HPTB-360A	HPTB-400A	HPTB-480A	HPTB-600A	HPTB-720A
2	额定功率 Rated power	240kw	360kw	400kw	480kw	600kw	720kw
3	输入电流 Input current	384A	576A	640A	768A	960A	1152A
4	输出枪数 Number of output guns	4 路 /4-way	6 路 /6-way	8 路 /8-way	8 路 /8-way	10 路 /10-way	12 路 /12-way
5	约重量 Approx. weight	240kg	360kg	400kg	480kg	600kg	720kg
6	设计标准 Design standard	GB/T18487、GB/T20234					
7	最大输出电流 Max output current	804A	1206A	1340A	1608A	2010A	2412A
8	最大输出电流 Max output current	0-600A ( 液冷 ) / 0-600A (liquid cooled)					
9	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	1000*1850*900mm				1500*1850*900mm	
10	输入电压 Input voltage	AC380V±15%					
11	输入频率 Input frequency	50Hz±10%					
12	输出电压范围 Output voltage range	输出 DC200-750V(1000V) , 恒功率范围 : DC300-750V(1000V) 选择可调 Output DC200-750V (1000V), constant power range: DC300-750V (1000), adjustable for selection					
13	输出电压误差 Output voltage error	≤ ±0.5%					
14	输出电流误差 Output current error	≤ ±1%					
15	稳压精度 Voltage stability accuracy	≤ +0.5%					
16	稳流精度 Current stability accuracy	≤ ±1% ( 输出负载 20%-100% 定额范围 ) / ≤ ±1% (output load 20% -100% rated range)					
17	谐波含量 Harmonic content	≤ 5%					
18	功率因数 Power factor	≥ 0.99 ( 50%-100% 满载输出功率 ) / ≥ 0.99 (50% -100% full load output power)					
19	效率 Efficiency	≥ 95% ( 50%-100% 满载输出功率 ) / ≥ 95% (50% -100% full load output power)					
20	电能计量 Electric energy metering	1.0 级 , 符合 GB 标准 / Class 1.0, in compliance with GB standard					
21	保护功能 Protection function	充电枪温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、 低温保护、绝缘监测保护、极性反接保护、防雷保护、急停保护、漏电保护 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging gun					
22	绝缘电阻 Insulation resistance	≥ 20MQ					
23	噪音 Noise	≤ 65dB					
24	防护等级 Protection level	IP54					
25	ITHD	≤ 5% ( 50%-100% 满载输出功率 ) / ≤ 5% (50% -100% full load output power)					
26	与终端通信方式 Communication method with terminal	CAN 通信 / CAN communication					
27	使用环境 Usage environment	室内或室外 / Indoor or outdoor					
28	冷却方式 Cooling method	风冷 / Air-cooled					
29	运行温度 Operating temperature	-20℃ ~+50℃					
30	存储温度 Storage temperature	-40℃ ~+70℃					
31	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation					
32	海拔高度 Altitude	≤ 2000m					
33	安装方式 Installation method	落地 / Floor type					

2、直流充电堆（终端）DC charging pile (terminal)

序号 No.	名称 Item	技术指标 Technical data		
1	产品型号 Product model	HPTB-ZD250	HPTB-ZD250/2	HPTB-ZD600
2	输出电流 Output current	0-250A	0-500A	0-600A
3	输出枪数 Number of output guns	1 把 / 1 piece	2 把 / 2 piece	1 把 / 1 piece
4	输出电压范围 Output voltage range	200-750/1000VDC	200-750/1000VDC	200-750/1000VDC
5	恒功率输出电压范围 Constant power output voltage range	300-750/1000VDC	300-750/1000VDC	300-750/1000VDC
6	额定输出功率 Rated output power	0-250kW	0-500kW	0-600kW
7	进线电缆 Incoming cable	YJV22-0.6/1-2*95+1*50	YJV22-0.6/1-4*95+1*50	YJV22-0.6/1-2*240+1*120
8	辅助电源 Auxiliary power supply	12/24V/YJV-2*2.5		
9	充电方式 Charging method	全功率充、AB 均充 / Full power charging and AB equalization charging		
10	人机界面 Man-machine interface	7 英寸触摸显示屏 / 7-inch touch screen display		
11	联网方式 Networking method	以太网、4G（选配）/ Ethernet, 4G (optional)		
12	充电模式 Charging mode	自动充满、按时间、按电量、按金额 Automatic charging, by time, by electric quantity, by amount		
13	启动方式 Starting method	刷 IC 卡、微信扫码、VIN、密码 / IC card, WeChat QR code, VIN, password		
14	平台管理 Platform management	支持云快充、蔚来云、达克云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging		
15	枪线长度 Gun wire length	5 米（含枪头）/ 5 meters (including gun head)		
16	保护功能 Protection function	充电枪温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、低温保护、绝缘监测保护、极性反接保护、防雷保护、急停保护、漏电保护 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging gun		
17	与整流柜通信方式 Communication method with rectifier cabinet	CAN 通信 /RVVP-4*1.5 / CAN communication/RVVP-4*1.5		
18	设计标准 Design standard	GB/T18487、GB/T20234		
19	外形尺寸（W*H*D） Outline dimension (W*H*D)	400*1600*330mm		500*1600*330mm
20	电能计量 Electric energy metering	1.0 级，符合 GB 标准 / Class 1.0, in compliance with GB standard		
21	绝缘电阻 Insulation resistance	≥ 20MQ		
22	噪音 Noise	≤ 65dB		
23	防护等级 Protection level	IP54		
24	使用环境 Usage environment	室内或室外 / Indoor or outdoor		
25	冷却方式 Cooling method	风冷 / Air-cooled		
26	运行温度 Operating temperature	-20℃ ~+50℃		
27	存储温度 Storage temperature	-40℃ ~+70℃		
28	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation		
29	海拔高度 Altitude	≤ 2000m		
30	安装方式 Installation method	落地 / Floor type		



## 四枪一体式 直流充电桩

Four-gun integrated DC  
charging pile

### 产品简介 Product introduction

该系列直流充电桩是由具有有源功率因数自动校正功能的充电模块并机而成，可以实现四枪同时充电功能。广泛应用于矿山、工厂、物流园区停车场等各种室内外充电站中。

This series of DC charging pile is composed of charging modules with active power factor automatic correction function, which can achieve simultaneous charging of four guns. Widely used in various indoor and outdoor charging stations such as mines, factories, logistics park and parking lots.



#### 兼容性强 High compatibility

兼容新老国标车型 兼容大小车充电  
Compatible with new and old  
national standard vehicle models  
Compatible with small and large  
vehicle charging



#### 多种通信 Multiple communications

提供CAN、2G、4G 以太网等多种通信  
It provides various communications  
such as CAN, 2G, 4G, Ethernet for  
wired or wireless networking



#### 实时记录 Real time recording

采样充电电压电流、电池SOC电池类型、  
已充电量/金额等记录整个充电过程  
Sampling charging voltage and current,  
battery SOC. It records the entire  
charging process, including battery type,  
charged electricity quantity/amount, etc



#### 人机交互 Human-machine interaction

智能计费、采用触摸屏  
(满足国标要求7英寸、LVDS接口)  
Intelligent billing, adoption of  
touch screen (meeting national  
standard requirements of 7 inches  
and LVDS interface)



#### 充电方式 Charging method

APP、充电卡、微信公众号  
小程序、VIN码充电  
APP, charging card, WeChat  
official account applet, VIN code  
charging



#### 灵活组合 Flexible combination

模块化组合、系统可靠性高模块支持  
热插拔、维护方便  
Modular combination and high  
system reliability. The module  
supports hot swapping and is  
easy to maintain



#### 节能模式 Energy saving mode

具有节能模式具有语音、蓝牙等功能  
With energy-saving mode capable  
of voice, Bluetooth and other  
functions



#### 新增功能 New features

增加新国标锁枪功能及枪温度检测功能  
It adds new national standard  
gun locking function and gun  
temperature detection function

## 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data			
1	产品型号 Product model	HPTB-240A/4	HPTB-320A/4	HPTB-360A/4	HPTB-400A/4
2	额定功率 Rated power	240kw	320kw	360kw	400kw
3	约重量 Approx. weight	440kg	480kg	500kg	520kg
4	设计标准 Design standard	GB/T18487、GB/T20234			
5	单枪最大输出电流 Max output current of single gun	0-250A			
6	四枪最大输出电流 Max output current of four guns	1000A			
7	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	680*1700*900mm			
8	人机界面 Man-machine interface	7 英寸触摸屏 / 7-inch touch screen display			
9	联网方式 Networking method Networking method	以太网、4G ( 选配 ) / Ethernet, 4G (optional)			
10	充电模式 Charging mode	自动充满、按时间、按电量、按金额 Automatic charging, by time, by electric quantity, by amount			
11	启动方式 Starting method	刷 IC 卡、微信扫码、VIN、密码 / IC card, WeChat QR code, VIN, password			
12	平台管理 Platform management	支持云快充、蔚来云、达客云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging			
13	保护功能 Protection function	充电桩温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、低温保护、绝缘 监测保护、极性反接保护、防雷保护、急停保护、漏电保护 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging guns			
14	输入电压 Input voltage	AC380V±15%			
15	输入频率 Input frequency	50Hz±10%			
16	枪线长度 Gun wire length	5 米 ( 含枪头 ) / 5 meters (including gun head)			
17	输出电压范围 Output voltage range	输出 DC200-750V(1000V) , 恒功率范围 :DC300-750V(1000V) 选择可调 / Output DC200-750V (1000V), constant power range: DC300-750V (1000V), adjustable for selection			
18	输出电压误差 Output voltage error	≤ ±0.5%			
19	输出电流误差 Output current error	≤ ±1%			
20	稳压精度 Voltage stability accuracy	≤ +0.5%			
21	稳流精度 Current stability accuracy	≤ ±1%			
22	谐波含量 Harmonic content	≤ 5%			
23	功率因数 Power factor	≥ 0.99 ( 50% 负载以上 ) / More than 50% load			
24	效率 Efficiency	≥ 95%			
25	电能计量 Electric energy metering	1.0 级, 符合 GB 标准 / Class 1.0, in compliance with GB standard			
26	绝缘电阻 Insulation resistance	≥ 20MQ			
27	噪音 Noise	≤ 65dB			
28	防护等级 Protection level	IP54			
29	使用环境 Usage environment	室内或室外 / Indoor or outdoor			
30	冷却方式 Cooling method	风冷 / Air-cooled			
31	运行温度 Operating temperature	-20℃ ~ +50℃			
32	存储温度 Storage temperature	-40℃ ~ +70℃			
33	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation			
34	海拔高度 Altitude	≤ 2000m			
35	安装方式 Installation method	落地 / Floor type			



## 电动重载车辆专用 大功率直流充电桩

High-power DC charging pile specially  
designed for electric heavy-duty vehicles

### 产品简介 Product introduction

大功率直流充电桩，是我公司面向新能源电动重载运输市场研制推出的新一代高端智能直流一体式双枪充电桩。可同时双枪并充为新能源电动重载车辆进行直流快速补电，体积小安装方便节省空间，该产品采用DC200-750V/DC300-1000V最新恒功率直流充电模块，在提供安全、可靠、稳定、高效的充电服务的基础上，进一步完善了人机交互功能，具备超强的扩展性和适应性，能够满足不同大功率车型的快速充电需求。

The high-power DC charging pile is a new generation of high-end intelligent DC integrated dual gun charging pile developed and launched by our company for the new energy electric heavy-duty transportation market. It can simultaneously charge dual guns for fast DC charging of new energy electric heavy-duty vehicles, with small size, convenient installation and small occupied area, this product adopts the latest constant power DC charging module of DC 200-750V/DC 300-1000V. On the basis of providing safe, reliable, stable and efficient charging services, it further improves the human-machine interaction function, has superstrong scalability and adaptability, and can meet the fast charging needs of different high-power vehicle models.



#### 兼容性强 High compatibility

兼容新老国标车型 兼容大小车充电  
Compatible with new and old  
national standard vehicle models  
Compatible with small and large  
vehicle charging



#### 多种通信 Multiple communications

提供CAN、2G、4G 以太网等多种通信  
It provides various communications  
such as CAN, 2G, 4G, Ethernet for  
wired or wireless networking



#### 实时记录 Real time recording

采样充电电压电流、电池SOC电池类型、  
已充电量/金额等记录整个充电过程  
Sampling charging voltage and current,  
battery SOC. It records the entire  
charging process, including battery type,  
charged electricity quantity/amount, etc



#### 人机交互 Human-machine interaction

智能计费、采用触摸屏  
(满足国标要求7英寸、LVDS接口)  
Intelligent billing, adoption of  
touch screen (meeting national  
standard requirements of 7 inches  
and LVDS interface)



#### 充电方式 Charging method

APP、充电卡、微信公众号  
小程序、VIN码充电  
APP, charging card, WeChat  
official account applet, VIN code  
charging



#### 灵活组合 Flexible combination

模块化组合、系统可靠性高模块支持  
热插拔，维护方便  
Modular combination and high  
system reliability. The module  
supports hot swapping and is  
easy to maintain



#### 节能模式 Energy saving mode

具有节能模式具有语音、蓝牙等功能  
With energy-saving mode capable  
of voice, Bluetooth and other  
functions



#### 新增功能 New features

增加新国标锁枪功能及枪温度检测功能  
It adds new national standard  
gun locking function and gun  
temperature detection function

### 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data				
1	单枪产品型号 Single gun product model	HPTB-240A	HPTB-280A	HPTB-320A	HPTB-360A	HPTB-400A
2	双枪产品型号 Dual gun product model	HPTB-240A/2	HPTB-280A/2	HPTB-320A/2	HPTB-360A/2	HPTB-400A/2
3	额定功率 Rated power	240kw	280kw	320kw	360kw	400kw
4	约重量 Approx. weight	440kg	460kg	480kg	500kg	520kg
5	设计标准 Design standard	GB/T18487、GB/T20234				
6	单枪最大输出电流 Max output current of single gun	0-250A				
7	双枪最大输出电流 Max output current of dual guns	500A				
8	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	680*1700*840mm				
9	人机界面 Man-machine interface	7 英寸触摸显示屏 / 7-inch touch screen display				
10	联网方式 Networking method	以太网、4G ( 选配 ) / Ethernet, 4G (optional)				
11	充电模式 Charging mode	自动充满、按时间、按电量、按金额 Automatic charging, by time, by electric quantity, by amount				
12	启动方式 Starting method	刷 IC 卡、微信扫码、VIN、密码 / IC card, WeChat QR code, VIN, password				
13	平台管理 Platform management	支持云快充、蔚来云、达克云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging				
14	保护功能 Protection function	充电枪温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、 低温保护、绝缘监测保护、极性反接保护、防雷保护、急停保护、漏电保护、 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging gun				
15	输入电压 Input voltage	AC380V±15%				
16	输入频率 Input frequency	50Hz±10%				
17	枪线长度 Gun wire length	5 米 ( 含枪头 ) / 5 meters (including gun head)				
18	输出电压范围 Output voltage range	输出 DC200-750V(1000V)，恒功率范围：DC300-750V(1000V) 选择可调 / Output DC200-750V (1000V), constant power range: DC300-750V (1000V), adjustable for selection				
19	输出电压误差 Output voltage error	≤ ±0.5%				
20	输出电流误差 Output current error	≤ ±1%				
21	稳压精度 Voltage stability accuracy	≤ +0.5%				
22	稳流精度 Current stability accuracy	≤ ±1%				
23	谐波含量 Harmonic content	≤ 5%				
24	功率因数 Power factor	≥ 0.99 ( 50% 负载以上 ) More than 50% load				
25	效率 Efficiency	≥ 95%				
26	电能计量 Electric energy metering	1.0 级，符合 GB 标准 / Class 1.0, in compliance with GB standard				
27	绝缘电阻 Insulation resistance	≥ 20MQ				
28	噪音 Noise	≤ 65dB				
29	防护等级 Protection level	IP54				
30	使用环境 Usage environment	室内或室外 / Indoor or outdoor				
31	冷却方式 Cooling method	风冷 / Air-cooled				
32	运行温度 Operating temperature	-20℃ ~+50℃				
33	存储温度 Storage temperature	-40℃ ~+70℃				
34	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation				
35	海拔高度 Altitude	≤ 2000m				
36	安装方式 Installation method	落地 / Floor type				



## 一体式 直流充电桩

Integrated  
DC charging pile

### 产品简介 Product introduction

直流充电桩把 AC380V 三相交流电转化为直流电，通过标准直流充电插头和充电插座输送给车辆，直接给汽车动力电池充电。产品适用于公交车、出租车、公务车、环卫车、物流车、轿车等各类新能源电动汽车。

The DC charging pile converts AC380V three-phase AC power into DC power, which is transmitted to the vehicle through standard DC charging plugs and sockets, directly charging the vehicle's power battery. The product is suitable for various new energy electric vehicles such as buses, taxis, government vehicles, sanitation vehicles, logistics vehicles, sedans, etc.



#### 兼容性强 High compatibility

兼容新老国标车型 兼容大小车充电  
Compatible with new and old national standard vehicle models  
Compatible with small and large vehicle charging



#### 多种通信 Multiple communications

提供CAN、2G、4G 以太网等多种通信  
It provides various communications such as CAN, 2G, 4G, Ethernet for wired or wireless networking



#### 实时记录 Real time recording

采样充电电压电流、电池SOC电池类型、已充电量/金额等记录整个充电过程  
Sampling charging voltage and current, battery SOC. It records the entire charging process, including battery type, charged electricity quantity/amount, etc



#### 人机交互 Human-machine interaction

智能计费、采用触摸屏  
(满足国标要求7英寸、LVDS接口)  
Intelligent billing, adoption of touch screen (meeting national standard requirements of 7 inches and LVDS interface)



#### 充电方式 Charging method

APP、充电卡、微信公众号  
小程序、VIN码充电  
APP, charging card, WeChat official account applet, VIN code charging



#### 灵活组合 Flexible combination

模块化组合、系统可靠性高模块支持热插拔，维护方便  
Modular combination and high system reliability. The module supports hot swapping and is easy to maintain



#### 节能模式 Energy saving mode

具有节能模式具有语音、蓝牙等功能  
With energy-saving mode capable of voice, Bluetooth and other functions



#### 新增功能 New features

增加新国标锁枪功能及枪温度检测功能  
It adds new national standard gun locking function and gun temperature detection function

## 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data					
1	单枪产品型号 Single gun product model	HPTB-40A	HPTB-60A	HPTB-80A	HPTB-120A	HPTB-160A	HPTB-180A
2	双枪产品型号 Dual gun product model	HPTB-40A/2	HPTB-60A/2	HPTB-80A/2	HPTB-120A/2	HPTB-160A/2	HPTB-180A/2
3	额定功率 Rated power	40kw	60kw	80kw	120kw	160kw	180kw
4	约重量 Approx. weight	200kg	240kg	260kg	300kg	340kg	380kg
5	设计标准 Design standard	GB/T18487、GB/T20234					
6	单枪最大输出电流 Max output current of single gun	134A	201A	250A			
7	双枪最大输出电流 Max output current of dual guns	134A	201A	500A			
8	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	680*1700*570mm					
9	人机界面 Man-machine interface	7 英寸触摸显示屏 / 7-inch touch screen display					
10	联网方式 Networking method	以太网、4G ( 选配 ) / Ethernet, 4G (optional)					
11	充电模式 Charging mode	自动充满、按时间、按电量、按金额 Automatic charging, by time, by electric quantity, by amount					
12	启动方式 Starting method	刷 IC 卡、微信扫码、VIN、密码 / IC card, WeChat QR code, VIN, password					
13	平台管理 Platform management	支持云快充、蔚来云、达克云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging					
14	保护功能 Protection function	充电枪温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、低温保护、绝缘监测保护、极性反接保护、防雷保护、急停保护、漏电保护 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging gun					
15	输入电压 Input voltage	AC380V±15%					
16	输入频率 Input frequency	50Hz±10%					
17	枪线长度 Gun wire length	5 米 ( 含枪头 ) / 5 meters (including gun head)					
18	输出电压范围 Output voltage range	输出 DC200-750V(1000V)，恒功率范围 :DC300-750V(1000V) 选择可调 / Output DC200-750V (1000V), constant power range: DC300-750V (1000V), adjustable for selection					
19	输出电压误差 Output voltage error	≤ ±0.5%					
20	输出电流误差 Output current error	≤ ±1%					
21	稳压精度 Voltage stability accuracy	≤ +0.5%					
22	稳流精度 Current stability accuracy	≤ ±1%					
23	谐波含量 Harmonic content	≤ 5%					
24	功率因数 Power factor	≥ 0.99 ( 50% 负载以上 ) More than 50% load					
25	效率 Efficiency	≥ 95%					
26	电能计量 Electric energy metering	1.0 级，符合 GB 标准 / Class 1.0, in compliance with GB standard					
27	绝缘电阻 Insulation resistance	≥ 20MQ					
28	噪音 Noise	≤ 65dB					
29	防护等级 Protection level	IP54					
30	使用环境 Usage environment	室内或室外 / Indoor or outdoor					
31	冷却方式 Cooling method	风冷 / Air-cooled					
32	运行温度 Operating temperature	-20℃ ~+50℃					
33	存储温度 Storage temperature	-40℃ ~+70℃					
34	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation					
35	海拔高度 Altitude	≤ 2000m					
36	安装方式 Installation method	落地 / Floor type					



## 小型化一体式 直流充电桩

Miniaturized integrated  
DC charging pile

### 产品简介 Product introduction

直流充电桩把 AC380V 三相交流电转化为直流电，通过标准直流充电插头和充电插座输送给车辆，直接给汽车动力电池充电。产品适用于公交车、出租车、公务车、环卫车、物流车、轿车等各类新能源电动汽车。

The DC charging pile converts AC380V three-phase AC power into DC power, which is transmitted to the vehicle through standard DC charging plug and socket, directly charging the vehicle's power battery. The product is suitable for various new energy electric vehicles such as buses, taxis, government vehicles, sanitation vehicles, logistics vehicles, sedans, etc.



#### 兼容性强 High compatibility

兼容新老国标车型 兼容大小车充电  
Compatible with new and old national standard vehicle models  
Compatible with small and large vehicle charging



#### 多种通信 Multiple communications

提供CAN、2G、4G 以太网等多种通信  
It provides various communications such as CAN, 2G, 4G, Ethernet for wired or wireless networking



#### 实时记录 Real time recording

采样充电电压电流、电池SOC电池类型、已充电量/金额等记录整个充电过程  
Sampling charging voltage and current, battery SOC. It records the entire charging process, including battery type, charged electricity quantity/amount, etc



#### 人机交互 Human-machine interaction

智能计费、采用触摸屏  
(满足国标要求7英寸、LVDS接口)  
Intelligent billing, adoption of touch screen (meeting national standard requirements of 7 inches and LVDS interface)



#### 充电方式 Charging method

APP、充电卡、微信公众号  
小程序、VIN码充电  
APP, charging card, WeChat official account applet, VIN code charging



#### 灵活组合 Flexible combination

模块化组合、系统可靠性高模块支持热插拔、维护方便  
Modular combination and high system reliability. The module supports hot swapping and is easy to maintain



#### 节能模式 Energy saving mode

具有节能模式具有语音、蓝牙等功能  
With energy-saving mode capable of voice, Bluetooth and other functions



#### 新增功能 New features

增加新国标锁枪功能及枪温度检测功能  
It adds new national standard gun locking function and gun temperature detection function

### 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data		
1	产品型号 Product model	HPTB-20A	HPTB-30A	HPTB-40A
2	额定功率 Rated power	20kw	30kw	40kw
3	约重量 Approx. weight	80kg	90kg	100kg
4	设计标准 Design standard	GB/T18487、GB/T20234		
5	单枪输出电流 Single gun output current	0-67A	0-100A	0-133A
6	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	450*1600*330mm		500*1600*33mm
7	人机界面 Man-machine interface	7 英寸触摸显示屏 / 7-inch touch screen display		
8	联网方式 Networking method	以太网、4G ( 选配 ) / Ethernet, 4G (optional)		
9	充电模式 Charging mode	自动充满、按时间、按电量、按金额 Automatic charging, by time, by electric quantity, by amount		
10	启动方式 Starting method	刷 IC 卡、微信扫码、VIN、密码 / IC card, WeChat QR code, VIN, password		
11	平台管理 Platform management	支持云快充、蔚来云、达客云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging		
12	保护功能 Protection function	充电枪温度检测、过压保护、欠压保护、过载保护、短路保护、接地保护、过温保护、低温保护、绝缘监测保护、极性反接保护、防雷保护、急停保护、漏电保护 Temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reversal protection, lightning protection, emergency stop protection and leakage protection for charging gun		
13	输入电压 Input voltage	AC380V±15%		
14	输入频率 Input frequency	50Hz±10%		
15	枪线长度 Gun wire length	5 米 ( 含枪头 ) / 5 meters (including gun head)		
16	输出电压范围 Output voltage range	输出 DC200-750V(1000V)，恒功率范围 :DC300-750V(1000V) 选择可调 / Output DC200-750V (1000V), constant power range: DC300-750V (1000V), adjustable for selection		
17	输出电压误差 Output voltage error	≤ ±0.5%		
18	输出电流误差 Output current error	≤ ±1%		
19	稳压精度 Voltage stability accuracy	≤ +0.5%		
20	稳流精度 Current stability accuracy	≤ ±1%		
21	谐波含量 Harmonic content	≤ 5%		
22	功率因数 Power factor	≥ 0.99 ( 50% 负载以上 ) More than 50% load		
23	效率 Efficiency	≥ 95%		
24	电能计量 Electric energy metering	1.0 级，符合 GB 标准 / Class 1.0, in compliance with GB standard		
25	绝缘电阻 Insulation resistance	≥ 20MQ		
26	噪音 Noise	≤ 65dB		
27	防护等级 Protection level	IP54		
28	使用环境 Usage environment	室内或室外 / Indoor or outdoor		
29	冷却方式 Cooling method	风冷 / Air-cooled		
30	运行温度 Operating temperature	-20℃ ~+50℃		
31	存储温度 Storage temperature	-40℃ ~+70℃		
32	相对湿度 Relative humidity	5%-95% 无凝露 / 5%-95% without condensation		
33	海拔高度 Altitude	≤ 2000m		
34	安装方式 Installation method	落地 / Floor type		



## 一体式 交流充电桩

Integrated  
AC charging pile

### 产品简介 Product introduction

交流充电桩，俗称“慢充”，固定安装在电动汽车外、与交流电源连接，为电动汽车车载充电机提供交流电源的充电装置。产品适用于各类新能源电动汽车私家车、小容量乘用车等。安装在居民小区、购物广场、电力营业场所等各种场所。

The AC charging pile, commonly known as "slow charging", is a charging device that is fixedly installed outside electric vehicle and connected to AC power source to provide AC power for the on-board rechargeable battery of the electric vehicle. The product is suitable for various types of new energy electric vehicles, private cars, small capacity passenger cars, etc. It can be installed in various places such as residential areas, shopping malls and power business sites.



#### 极简

产品采用钢化玻璃面板+全金属机身简洁精致，由外而内展现品质追求



#### 智能

通过 APP 可以实现查找，预约，快速充电等功能并支持微信、支付宝等多种支付方式



#### 稳定

机身防护等级达到 IP65 高于行业标准，并采用防 UV 设计，在台风、暴雨、沙尘、暴晒环境下不加任何防护装置也能正常使用



#### 安全

独创侧倒防护，在电动车主倒车中误撞充电桩倾斜 >30°时设备自动断电，故障上报运营管理系统，解除安全隐患



#### 可靠

产品适应极端恶劣环境，适用于-30°C的冰天雪地或 55°C 的酷暑沙漠，内核采用工业级元器件



#### 节能

待机功耗低，比市面同等级产品节能效率提升 2 倍以上，减少运营成本

#### Simplified

The product adopts tempered glass panels and whole metal body, simple and exquisite, showcasing quality pursuit from the outside to the inside

#### Intelligent

Search, reservation, fast charging and other functions can be realized through APP, and it also supports multiple payment methods such as WeChat and Alipay

#### Stable

The protection grade of the machine body reaches IP65, higher than the industry standard, and it adopts UV protection design. It can be used normally without any protective device in typhoon, rainstorm, sand and dust, and exposure environment

#### Safe

The innovative side-tilt protection feature automatically cuts off power when the charging pile tilts more than 30° due to accidental impact by an electric vehicle during reversing. It simultaneously reports the fault to the operation management system, effectively eliminating safety hazards.

#### Reliable

The product is suitable for extremely harsh environments, suitable for ice and snow at -30°C or hot deserts at 55°C. The core uses industrial grade components

#### Energy saving

Low standby power consumption and more than twice the energy-saving efficiency of products of the same level on the market reduce the operating costs

## 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data			
1	产品型号 Product model	HPTB-007C	HPTB-014C	HPTB-011C	HPTB-021C
2	额定功率 Rated power	7kw	14kw	11kw	21kw
3	输入电压 Input voltage	AC220V±15%	AC220V±15%	AC380V±15%	AC380V±15%
4	输出电流 Output current	32A	2*32A	3*16A	3*32A
5	输出电压 Output voltage	AC220V±15%	AC220V±15%	AC380V±15%	AC380V±15%
6	约重量 Approx. weight	25kg	30kg	30kg	30kg
7	枪数 Number of guns	单枪 / Single gun	双枪 / Dual gun	单枪 / Single gun	单枪 / Single gun
8	进线电缆 Incoming cable	YJV-3*10	YJV-3*16	YJV-4*10+1X6	YJV-4*16+1X10
9	设计标准 Design standard	GB/T18487、GB/T20234			
10	输入频率 Input frequency	50Hz±1%			
11	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	300*1400*150mm			
12	人机界面 Man-machine interface	4.3 英寸触摸显示屏 / 4.3-inch touch screen display			
13	联网方式 Networking method	以太网、4G、蓝牙、WiFi ( 选配 ) / Ethernet, 4G, Bluetooth, WiFi (optional)			
14	充电模式 Charging mode	自动充满、定时 / Automatic filling and timing			
15	启动方式 Starting method	刷 IC 卡、微信扫码、小程序 / IC cards, WeChat QR code and applet			
16	平台管理 Platform management	支持云快充、蔚来云、达克云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging			
17	保护功能 Protection function	过压保护、欠压保护、过载保护、短路保护、接地保护 过温保护、低温保护、防雷保护、急停保护、漏电保护 Overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, lightning protection, emergency stop protection and leakage protection			
18	枪线长度 Gun wire length	5 米 ( 含枪头 ) 5 meters (including gun head)			
19	主板电能计量 Main board energy metering	1.0 级，符合 GB 标准 Class 1.0, in compliance with GB standard			
20	噪音 Noise	≤ 60dB			
21	防护等级 Protection level	IP54			
22	使用环境 Usage environment	室内或室外 / Indoor or outdoor			
23	冷却方式 Cooling method	自然冷却 / Natural cooling			
24	运行温度 Operating temperature	-20°C ~ +50°C			
25	存储温度 Storage temperature	-40°C ~ +70°C			
26	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation			
27	海拔高度 Altitude	≤ 2000m			
28	进线方式 Incoming method	下进下出 / Lower incoming and lower outgoing			
29	安装方式 Installation method	落地 / Floor type			



## 交流充电桩

AC charging pile

### 产品简介 Product introduction

钣金外壳系列交流充电桩适用于私家小区、安置小区、商业写字楼、城市综合体等停车场或城市公共充电桩（私家车、小容量乘用车等）可以较长时间慢速充电的场合。此外也适用于新能源汽车4S店、车间调试区、新能源汽车道路救援等需要经常交换充电站场地或临时性补电的场合。

The sheet metal shell series AC charging pile is suitable for private residential areas, resettlement communities, commercial office buildings, urban complexes and other parking lots or urban public charging stations (private cars, small capacity passenger cars, etc.) that can be charged slowly for a long time. In addition, it is also suitable for new energy vehicle 4S stores, workshop debugging areas, new energy vehicle road rescue and other occasions that require frequent exchange of charging station sites or temporary power replenishment.



#### 极简

产品采用钢化玻璃面板 + 全金属机身简洁精致，由外而内展现品质追求



#### 智能

通过 APP 可以实现查找，预约，快速充电等功能并支持微信、支付宝等多种支付方式



#### 稳定

机身防护等级达到 IP65 高于行业标准，并采用防 UV 设计，在台风、暴雨、沙尘、暴晒环境下不加任何防护装置也能正常使用



#### 安全

独创侧倒防护，在电动车主倒车中误撞充电桩倾斜 > 30° 时设备自动断电，故障上报运营管理系统，解除安全隐患



#### 可靠

产品适应极端恶劣环境，适用于 -30° C 的冰天雪地或 55° C 的酷暑沙漠，内核采用工业级元器件



#### 节能

待机功耗低，比市面同等级产品节能效率提升 2 倍以上，减少运营成本

#### Simplified

The product adopts tempered glass panels and whole metal body, simple and exquisite, showcasing quality pursuit from the outside to the inside

#### Intelligent

Search, reservation, fast charging and other functions can be realized through APP, and it also supports multiple payment methods such as WeChat and Alipay

#### Stable

The protection grade of the machine body reaches IP65, higher than the industry standard, and it adopts UV protection design. It can be used normally without any protective device in typhoon, rainstorm, sand and dust, and exposure environment

#### Safe

The innovative side-tilt protection feature automatically cuts off power when the charging pile tilts more than 30° due to accidental impact by an electric vehicle during reversing. It simultaneously reports the fault to the operation management system, effectively eliminating safety hazards.

#### Reliable

The product is suitable for extremely harsh environments, suitable for ice and snow at -30°C or hot deserts at 55°C. The core uses industrial grade components

#### Energy saving

Low standby power consumption and more than twice the energy-saving efficiency of products of the same level on the market reduce the operating costs

## 技术参数 Technical parameter

序号 No.	名称 Item	技术指标 Technical data				
1	产品型号 Product model	HPTB-007AJ	HPTB-007A	HPTB-014A	HPTB-011A	HPTB-021A
2	额定功率 Rated power	7kw	7kw	14kw	11kw	21kw
3	输入电压 Input voltage	AC220V±15%	AC220V±15%	AC220V±15%	AC380V±15%	AC380V±15%
4	输出电流 Output current	32A	32A	2*32A	3*16A	3*32A
5	输出电压 Output voltage	AC220V±15%	AC220V±15%	AC220V±15%	AC380V±15%	AC380V±15%
6	约重量 Approx. weight	5kg	5kg	8kg	7kg	7kg
7	枪数 Number of guns	单枪 Single gun	单枪 Single gun	双枪 Dual gun	单枪 Single gun	单枪 Single gun
8	安装方式 Installation method	壁挂式 / 立柱式 Wall mounted/Column mounting				
9	版本 Version	简易版 Simplified ver	运营版 Operation ver			
10	人机界面 Man-machine interface	无 None		4.3 英寸触摸显示屏 4.3-inch touch screen display		
11	联网方式 Networking method	无 None	以太网、4G、蓝牙、WiFi ( 选配 ) Ethernet, 4G, Bluetooth, WiFi (optional)			
12	启动方式 Starting method	刷 IC 卡 / 即插即充 Card/Plug and charge	刷 IC 卡、微信扫码、小程序 IC cards, WeChat QR code and applet			
13	平台管理 Platform management	无 None	支持云快充、蔚来云、达克云、E 充电 It supports cloud fast charging, NIO Cloud, DakCloud, E-charging			
14	主板电能计量 Main board energy metering	无 None		1.0 级，符合 GB 标准 Class 1.0, in compliance with GB standard		
15	设计标准 Design standard	GB/T18487、GB/T20234				
16	输入频率 Input frequency	50Hz±1%				
17	外形尺寸 ( W*H*D ) Outline dimension (W*H*D)	240*340*110mm		260*400*120mm		
18	保护功能 Protection function	过压保护、欠压保护、过载保护、短路保护、接地保护 过温保护、低温保护、防雷保护、急停保护、漏电保护 Overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, lightning protection, emergency stop protection and leakage protection				
19	枪线长度 Gun wire length	5 米 ( 含枪头 ) / 5 meters (including gun head)				
20	噪音 Noise	≤ 60dB				
21	防护等级 Protection level	IP54				
22	使用环境 Usage environment	室内或室外 / Indoor or outdoor				
23	冷却方式 Cooling method	自然冷却 / Natural cooling				
24	运行温度 Operating temperature	-20℃ ~+50℃				
25	存储温度 Storage temperature	-40℃ ~+70℃				
26	相对湿度 Relative humidity	5%-95% 无凝露 / 5% -95% without condensation				
27	海拔高度 Altitude	≤ 2000m				
28	进线方式 Incoming method	下进下出 / Lower incoming and lower outgoing				
29	进线电缆 Incoming cable	YJY-3*10	YJY-3*10	YJY-3*16	YJV-4*10+1×6	YJV-4*16+1×10
30	外壳材质 Shell material	钣金 Sheet metal				
31	立柱 Post	立柱 100*1200*50mm ( W*H*D ) 底板 100*200*7mm ( W*H*D ) ( 选配 ) Post 100*1200*50mm (W*H*D) Base plate 100*200*7mm (W*H*D) (optional)				



## 分布式模块化 储能应用

Distributed modular  
energy storage  
application

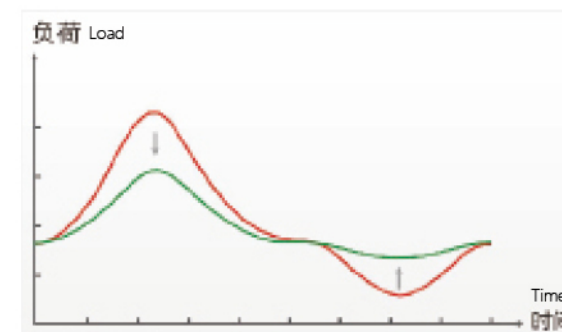
### 产品简介 Product introduction

分布式模块化储能系统是英飞源针对工商业用电场景而设计的储能系统，系统内 PCS、PACK、BMS、EMS 均为公司自行研发生产，耦合度极高，可在各种应用场景下安全高效运行。储能系统由电源柜和电池柜组成，主要特点为占地面积小、配置灵活等，可分布式部署在各类工商业储能应用场景，实现削峰填谷、动态扩容、参与电网调配、应急用电等功能。

The distributed modular energy storage system is designed by INFY POWER for industrial and commercial electricity sites. The PCS, PACK, BMS and EMS in the system are all independently developed and produced by the company with extremely high coupling, and can operate safely and efficiently in various application sites. The energy storage system consists of power cabinet and battery cabinet, with the main characteristics of small occupied area and flexible configuration. It can be distributed and deployed in various industrial and commercial energy storage application sites, achieving functions such as peak shaving and valley filling, dynamic expansion, participation in power grid allocation, and emergency power consumption, etc.

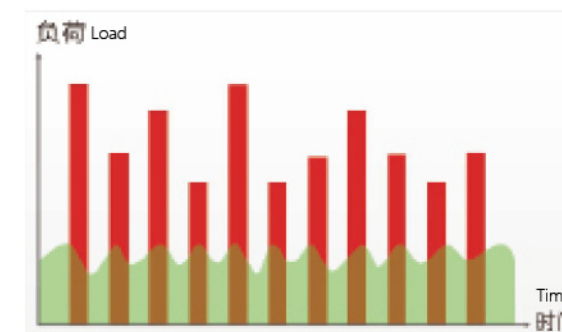


## 产品功能 Product features



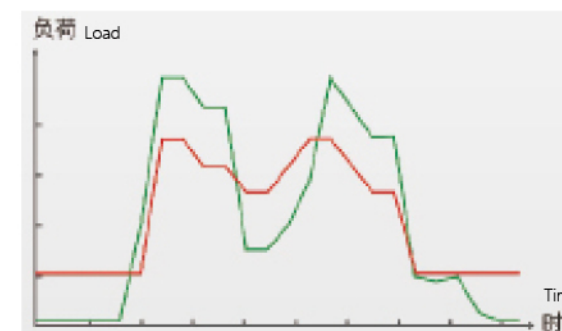
### 削峰填谷 Peak shaving and valley filling

谷期充电、峰期放电，减小电网负荷峰谷差实现峰谷套利或削减用电成本  
Charging during valley periods and discharging during peak periods to reduce the difference between peak and valley loads in the power grid, so as to realize peak valley arbitrage or reduce electricity costs



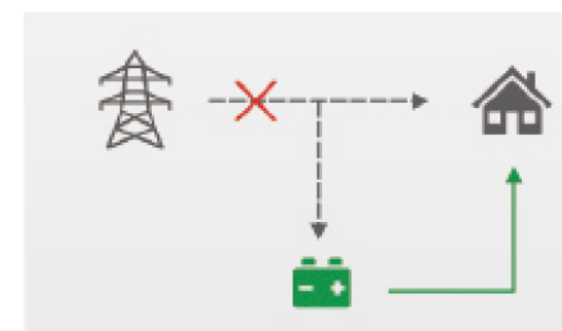
### 动态扩容 Dynamic expansion

对于间歇性大功率负载，储能系统可平衡负载输出  
For intermittent high-power loads, the energy storage system can balance the load output



### 需量管理 Demand management

减小峰值功率，节省基本电费参与负荷侧响应，获取政策补贴  
It reduces peak power and saves basic electricity costs. It participates in load side response and obtains policy subsidies



### 应急用电 Emergency electricity

电网异常中断时，储能系统为重要负载不间断供电避免经济损失  
When the power grid is abnormally interrupted, the energy storage system provides uninterrupted power supply to important loads to avoid economic losses

## 典型配置 Typical configuration

英飞源工商业储能系统可根据实际应用需求配置电源柜及电池柜。电源柜可选择传统的非隔离型或高频隔离型，非隔离型系统可配置一套或多套 215kWh 的电池柜，高频隔离型系统则可配置一套或多套不同容量的电池柜。典型的系统配置如下所示：

非隔离型 Non-isolated type		
A: 1 电源柜 +4 电池柜	A: 1 power cabinet+4 battery cabinets	500kW/860kWh
B: 1 电源柜 +3 电池柜	B: 1 power cabinet+3 battery cabinets	375kW/645kWh
C: 1 电源柜 +2 电池柜	C: 1 power cabinet+2 battery cabinets	250kW/430kWh
D: 1 电源柜 +1 电池柜	D: 1 power cabinet+1 battery cabinet	125kW/215kWh
高频隔离型 High frequency isolated type		
A: 1 电源柜 +3 电池柜	A: 1 power cabinet+3 battery cabinets	330kW/容量可选
B: 1 电源柜 +2 电池柜	B: 1 power cabinet+2 battery cabinets	220kW/容量可选
C: 1 电源柜 +1 电池柜	C: 1 power cabinet+1 battery cabinet	110kW/容量可选

1 电源柜 +1 电池柜  
1 power cabinet+1 battery cabinet



1 电源柜 +2 电池柜  
1 power cabinet+2 battery cabinets



1 电源柜 +3 电池柜  
1 power cabinet+3 battery cabinets



INFY Power industrial and commercial energy storage system can be configured with power cabinets and battery cabinets according to actual application needs. The power cabinet can choose traditional non-isolated or high-frequency isolated types. Non-isolated systems can be equipped with one or more sets of 215kWh battery cabinets, while high-frequency isolated systems can be equipped with one or more sets of battery cabinets with different capacities. The typical system configuration is as follows:

1 电源柜 +4 电池柜  
1 power cabinet+4 battery cabinets



### 模块化设计 Modular design

- ◆ 可选择不同功率等级隔离或非隔离模块
- ◆ 可选择 AC/DC、DC/DC 单向或双向变换模块
- ◆ 可选择 MPPT 模块，实现光伏接入
- ◆ 可选配 STS 模块，实现并网切换
- ◆ Isolated or non-isolated modules of different power levels are optional
- ◆ AC/DC, DC/DC unidirectional or bidirectional conversion modules are optional
- ◆ MPPT modules are optional for photovoltaic access
- ◆ STS modules are optional for on-grid and off-grid switching

### 独立分支输入 Independent branch input

- ◆ 单簇（单柜）电池独立匹配 1 组电能变换设备多电池柜对应电源柜内多组电能变换设备无环流隐患
- ◆ Single cluster (single cabinet) battery is independently matched with 1 set of electrical energy conversion equipment, multiple battery cabinets correspond to multiple sets of electrical energy conversion equipment in the power cabinet, with no circulating current hazards

### 安全可靠 Safe and reliable

- ◆ 电池柜防护等级 IP55，电源柜 IP54
- ◆ 四级消防系统为电池系统安全稳定运行保驾护航
- ◆ 电池柜小容量设计，柜体物理隔离，故障可控
- ◆ The protection level of the battery cabinet is IP55, and the power cabinet is IP54
- ◆ The 4-level fire protection system provides protection for the safe and stable operation of the battery system
- ◆ Small capacity design of battery cabinet, physical isolation of cabinet body, and controllable faults

### 灵活配置 Flexible configuration

- ◆ 户外机柜式设计，占地面积小，可根据实际需求配置电源柜和电池柜
- ◆ 灵活增减容量，可多电源柜及电池柜并机，实现更大容量应用
- ◆ Outdoor cabinet design with small occupied area allows for the configuration of power and battery cabinets according to actual needs
- ◆ Flexibly increasing or decreasing capacity allows for parallel operation of multiple power cabinets and battery cabinets, achieving larger capacity applications



## 液冷 储能系统

Liquid-cooled energy  
storage system

### 产品简介 Product introduction

液冷储能系统是为满足工商业储能需求而设计的一体式储能设备。设备具有节能、占用空间小、能量密度高、环境适应力强等特点，尤其在节能方面具有较为突出的表现。储能系统由柜体、液冷机组、PCS 变流器、EMS 能量管理系统、BMS 电池管理系统、锂电池簇、储能高压箱、消防系统、电气系统及安全辅助系统等集成。

Liquid-cooled energy storage system is an integrated energy storage equipment designed to meet the needs of industrial and commercial energy storage. The equipment has the characteristics of energy saving, small space occupation, high energy density, strong environmental adaptability, especially in energy saving. The energy storage system is integrated by cabinet, liquid cooling unit, PCS converter, EMS energy management system, BMS battery management system, lithium battery cluster, energy storage high voltage box, fire protection system, electrical system and safety auxiliary system, etc.



采用一线品牌系统集成，效率高，更加有保障 Adopt the first-line brand system integration, high efficiency, more guaranteed



PACK 级消防，系统更安全 PACK class fire protection, with a safer system



液冷系统，系统效率运行更稳定 Liquid cooling system, the system efficiency and operation is more stable



灵活部署，接线方便，安全更便捷 Flexible deployment, convenient wiring, safe and more convenient

### 技术参数 Technical parameter

产品型号 Product model	液冷 215 Liquid cold 215	液冷 232 Liquid cold 232
产品规格 Size of product	768V280Ah	832V280Ah
PACK 组合 PACK assemble	48S1P	52S1P
PACK 数量 PACK quantity	5PCS	5PCS
电池系统容量 Battery systemcapacity	215kWh	232kWh
电池电压范围 Battery voltagerange	636-864V DC	689~936V DC
电芯类型 Cell type	LFP 3.2V/280Ah	
额定功率 Power rating	100kW	
最大输出功率 Maximumoutp ut	110kW	
额定电网电压 Rated power grid voltage	380V AC	
额定电网频率 Rated power grid frequency	50/60Hz ±5Hz	
电池循环寿命 Battery cycle life	>6000 次 (0.5C@25° ) 能量保持率≥ 80% > 6,000 times (0.5C @25° ) Energy retention rate of 80%	
充放电倍率 Charge and discharge rate	≤ 0.5C	
系统效率 System effectiveness	最高效率 86% @100kW/1 充 1 放 Maximum efficiency is 86% @100kW / 1 charge 1 put	
充放电转换时间 Charge and discharge conversion time	≤ 200ms	
热管理 Heat management	智能液冷 Intelligent liquid cooling	
消防 Extinguishing and protection	PACK 气溶胶 / 柜体全氟己酮 PACK aerosol / cabinet perfluorhexanone	
UPS	备电时间：15 分钟 Power-up time: 15 minutes	
控制方式 Control method	远程 / 本地 Remote / Local	
运行模式 Running mode	并网 / 离网 (手动离网) Grid-connected / off-grid (manual	
通讯方式 Communication mode	CAN//Eth/RS485(4G 选配 optional)	
接入方式 Access method	交流底部进线 / 三相四线 AC bottom incoming line / three-phase four-wi	
使用环境温度 Use ambient temperature	0°C ~ +50°C	
使用环境湿度 Use ambient humidity	0~95%RH	
存储温度 Storage temperature	-20°C ~+60°C	
工作海拔 Working altitude	2000m ( > 2000m 降额使用 ) ( > 2000m derated use)	
防护等级 International Protection	IP54	
产品尺寸 Product size	1414*1450*2180mm( 不含吊环高度 )(Without ring height)	
产品重量 Product weight	2700kg	2850kg

\* 以上参数为出厂标准，可根据客户需求提供电芯、电压、容量、外形尺寸 / 颜色定制，以及 OEM/ODM 服务

\*Customized different brands of inverters, cell and different voltage, capacity, dimensions/color , OEM/ODM services



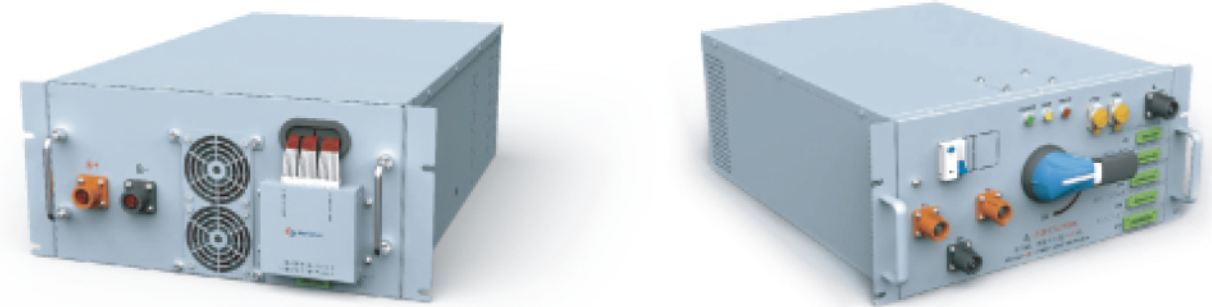
## 储能 电池柜

Energy storage battery  
cabinet

### 产品简介 Product introduction

电池柜为储能系统的储能部分，采用高品质磷酸铁锂电池，寿命长、可靠性高。单套储能系统可配置多套电池柜，各电池柜独立接入电源柜内的电能变换模块，无环流隐患。电池柜体积小，容量可灵活配置，便于分布式部署。

The battery cabinet is the energy storage part of the energy storage system, and it uses high-quality lithium iron phosphate batteries with long life and high reliability. A single energy storage system can be configured with multiple battery cabinets, each of which is independently connected to the energy conversion module inside the power cabinet, without any circulating current hazards. The battery cabinet has a small volume and flexible capacity configuration, making it easy for distributed deployment.



### 技术参数 Technical parameter

类别 Category	HPTB215K1CK		HPTB200K1CK	HPTB186K1CK
环境条件 Environment condition				
工作温度 Working temperature		-20℃ ~+50℃		
相对湿度 Relative humidity		≤ 95%( 无凝露 )(without condensation)		
海拔高度 Altitude		≤ 2000m ( 2000m 以上降额 ) (derating above 2000m)		
基本参数 Basic parameter				
电池类型 Battery type		磷酸铁锂 ( LFP ) /280Ah    Lithium iron phosphate (LFP)/280Ah		
额定容量 Rated capacity		215kWh	200kWh	186kWh
额定电压 Rated voltage		768Vdc	716.8Vdc	665.6Vdc
工作电压范围 Working voltage range		672Vdc~864Vdc	627.2Vdc~806.4Vdc	582.4Vdc~748.8Vdc
电池组数量 Number of battery packs		15	14	13
电芯充放电次数 Number of charge and discharge cycles of battery cells		≥ 6000 次		
额定充电电流 Rated charging current		140A(0.5C，实际与系统控制策略有关) (0.5C, actually related to system control strategy)		
额定放电电流 Rated discharge current		140A(0.5C，实际与系统控制策略有关) (0.5C, actually related to system control strategy)		
其他 Others				
噪声 Noise		≤ 70dB		
消防系统 Fire protection system		主动预警 / 气溶胶    Active forewarning/aerosol		
温控方式 Temperature control method		智能空调    Intelligent air conditioning		
防护等级 Protection level		IP55		
通信方式 Communication mode		CAN		
重量 Weight		2450kg	2350kg	2250kg
尺寸 ( 宽 * 深 * 高 ) Dimension (W*D*H)		1200*1150*2200mm ( 不含空调外凸部分 ) 1200*1150*2200mm (excluding the protruding part of the air conditioner)		
		1200*1400*2200mm ( 含空调外凸部分 ) 1200*1400*2200mm (including the protruding part of the air conditioner)		
认证信息 Certification information				
电池模组 Battery module		满足 (It meets) UN38.3、IEC62619、UL9540A、GB/T36276		
储能电池柜 Energy storage battery cabinet		满足 (It meets) IEC62619、IEC62477、GB/T36276、UL9540A、UL9540		
可非标定制 172kWh/157kWh/143kWh/129kWh/114kWh/100kWh，适配隔离型电源柜 Non-standard customization of 172kWh/157kWh/143kWh/129kWh/114kWh/100kWh, suitable for isolated power cabinet				



#### 灵活配置 Flexible configuration

- ◆ 户外机柜式设计，占地面积小，可根据实际需求分布或集中部署
- ◆ 单柜容量灵活选配，更适合工商业储能应用场景
- ◆ Outdoor cabinet design with small occupied area, capable of distributed or centralized deployment according to actual needs
- ◆ Flexible selection of single cabinet capacity is more suitable for industrial and commercial energy storage application sites



#### 安全可靠 Safe and reliable

- ◆ 柜体 IP55 设计，工业空调恒温控制
- ◆ 四级消防系统为电池系统安全稳定运行保驾护航
- ◆ 电池柜小容量设计，柜体物理隔离，故障可控
- ◆ Cabinet IP55 design, industrial air conditioning constant temperature control
- ◆ The 4-level fire protection system provides protection for the safe and stable operation of the battery system
- ◆ Small capacity design of battery cabinet, physical isolation of cabinet body, and controllable faults



#### 独立分支输入 Independent branch input

- ◆ 单簇（单柜）电池独立匹配 1 组电能变换设备，多电池柜对应电源柜内多组电能变换设备，无环流隐患
- ◆ Single cluster (single cabinet) battery is independently matched with 1 set of electrical energy conversion equipment, multiple battery cabinets correspond to multiple sets of electrical energy conversion equipment in the power cabinet, with no circulating current hazards



#### 智能高效 Intelligent and efficient

- ◆ 智能分区热管理系统，减少柜内电芯温差，提高电池运行寿命
- ◆ 开放灵活的软件架构，更易于匹配不同场景的应用
- ◆ SOS 分级管理算法，实时电池健康体检，确保电池系统安全运行
- ◆ Intelligent zoning thermal management system reduces temperature difference between battery cells in the cabinet and improves battery service life
- ◆ Open and flexible software structure, making it easier to match applications in different places
- ◆ SOS level-to-level management algorithm, real-time battery health check ensures safe operation of battery system



## HPPV-BWX 光伏并网箱

HPPV-BWX photovoltaic  
grid-connected box

### 产品优点

- 所有金属箱体采用冷轧钢板或不锈钢板材料，箱体的防护等级达到 IP54 以上，适用于户外安装
- 箱体采用上下 3 层设计，顶层设计为箱体的帽檐，防止下雨有雨水进入箱体；中间层设计为光伏计量电表，通过透明的玻璃板可观察到电表上的各类数据，并在门锁上设计有封签接口；底层设计为控制及保护区域，方便维护人员维护检修
- 箱体的电网进线孔设计可从底部进线或侧边进线，侧边进线时安装 IP66 防水接头，保证箱体的防护等级
- 箱体的逆变器进线孔设计在底部，方便现场直接接线
- 箱体内的隔离开关采用知名品牌，并具有断开明显的断点，设计容量为逆变器最大输出电流的 1.5 倍以上
- 箱体内设计有光伏过欠压保护装置及电压恢复重合保护装置，该产品除了失压保护外，还可对电网电压不稳定进行保护
- 箱体设计有防雷浪涌保护，浪涌保护器的标准最大放电电流为 40KA，在雷雨频发地区可选用更大的防雷浪涌保护器，最大放电电流可达 100KA
- 箱体设计有过电流保护断路器，保证系统出现过载和短路时，断路器能可靠的分断
- 箱体内部的安装板可根据客户要求配置环氧树脂绝缘板，绝缘板的厚度至少 5mm 以上
- 可根据客户要求配置防孤岛装置



### Product advantages

- All metal boxes are made of cold-rolled steel plates or stainless steel plates, with a protection level of IP54 or above, suitable for outdoor installation
- The box adopts a three-layer design, with the top layer designed as the brim of the box to prevent rainwater from entering the box during raining; the middle layer is designed as a photovoltaic metering meter, and various data on the meter can be observed through a transparent glass plate, and a sealing interface is designed on the door lock; the bottom layer is designed as a control and protection area, which is convenient for maintenance personnel to maintain and repair
- The power grid inlet hole in the box is designed to be entered from the bottom or the side. When entering from the side, an IP66 waterproof joint is installed to ensure the protection level of the box
- The inverter inlet hole of the box is designed at the bottom, making it convenient for direct on-site wiring
- The isolation switch inside the box adopts a well-known brand and has a clear breaking point. The designed capacity is more than 1.5 times the maximum output current of the inverter
- The box is designed with photovoltaic overvoltage and undervoltage protection device and voltage recovery reclosing protection device. In addition to voltage loss protection, this product can also protect the unstable voltage of the power grid
- The box design has lightning surge protection, and the standard maximum discharge current of the surge protective device is 40KA. In areas with frequent thunderstorms, larger lightning surge protectors can be selected, and the maximum discharge current can reach 100KA
- The box is designed with overcurrent protection circuit breaker, ensuring that the circuit breaker can reliably open in case of overload and short circuit in the system
- The mounting plate inside the box can be equipped with epoxy resin insulation board according to customer requirements, and the thickness of the insulation board should be at least 5mm or more
- Anti islanding devices can be configured according to customer requirements

### 技术参数 Technical parameter

HPPV-BWX	10	10	25	30	50	60
基本参数 Basic parameter						
逆变器输入路数 Number of inverter inputs	1					
输出路数 Number of outputs	1					
额定电流电压 Rated current and voltage	230V	400V				
最大额定输入电流 Max rated input current	63A	32A	50A	63A	100A	125A
额定频率 Rated frequency	50Hz					
电能表输入 Electric meter input	直接输入 Direct input				二次接入 Secondary access	
外壳箱体 Housing box						
箱体材质 Box body material	冷轧钢板 / 不锈钢 Cold rolled steel plate/stainless steel					
防护等级 Protection level	IP65					
箱体尺寸 Box body size	定制 Customization					
隔离开关 Isolation switch						
额定电压 ( AC ) Rated voltage (AC)	230V	400V				
额定电流 ( AC ) Rated current (AC)	63A	63A	63A	100A	160A	
类型 Type	单投开关 Single throw switch					
执行标准 Executive standard	GB/T 14018.3					
光伏并网专用断路器 Special circuit breaker for photovoltaic grid connection						
断路器类型 Circuit breaker type	2P	4P				
额定电压 ( AC ) Rated voltage (AC)	220	400V				
额定电流 ( AC ) Rated current (AC)	63A	32A	63A	80A	100A	125A
过压保护值 ( 相电压 ) Overvoltage protection value (phase voltage)	≥ 290V					
欠压保护值 ( 相电压 ) Undervoltage protection value (phase voltage)	≤ 160V					
失压保护值 ( 相电压 ) Voltage loss protection value (phase voltage)	< 45V					
额定频率 Rated frequency	50Hz					
执行标准 Execution standards	GB/T 14048.2					
交流浪涌保护器 AC surge protective device						
最大工作电压 ( AC ) Maximum working voltage (AC)	230V	400V				
最大放电电流 ( AC ) Maximum discharge current (AC)	40kA					
执行标准 Execution standards	GB/T8170					
交流断路器 AC circuit breaker						
断路器类型 Circuit breaker type	2P	4P				
额定电压 ( AC ) Rated voltage (AC)	230V	400V				
额定电流 ( AC ) Rated current (AC)	63A	32A	63A	80A	100A	125A
额定频率 Rated frequency	50Hz					
执行标准 Execution standards	GB/T 16917.1、GB/T16917.22、GB/T 22794					
环境参考 Environmental reference						
工作温度 Working temperature	-20℃ ~ +60℃					
工作湿度 Working humidity	90%					
海拔高度 Altitude	2000m(2000m 以上降载 ) (load shedding above 2000m)					
安装方式 Installation method	挂壁安装 Wall mounted installation					
可选功能 Optional features						
交流熔断器 AC fuse	可选 Optional					
过欠压保护器 Over/undervoltage protector	可选 Optional					
交流漏电保护器 AC leakage protector	可选 Optional					



## HPPV-BWG

### 光伏并网柜

HPPV-BWG photovoltaic  
grid-connected cabinet

#### 产品优点

- 既可采用固定安装式设计、也可采用插入式设计；
- 采用国内外知名品牌断路器和元件组合成功能单元，具有优良的技术性能，安全可靠；
- 可分别组成各种标准单元模块，供客户任意选用组装；
- 采用区域之间的隔离以及功能单元进线和出线之间的相互隔离，有效的加强安全防护性能；
- 组合装配式结构，框架的全部结构件均用螺丝坚固连接，框架及门、面板均经磷化处理静电喷涂处理，不喷漆部件全部镀锌并经钝化处理。能满足各种元件的要求并能符合不同工作环境，达到相应的防护等级；
- 骨架采用优质钢板，骨架上可带有模数为 25mm 的孔，可供各种用途扩展，进线方式有上、下侧进线两种方式；
- 分断能力高、动热稳定性好，电气方案组合灵活方便、实用性强，主要参数达到国际先进水平；
- 重量轻，机械强度和装配精度高，外形美观。



#### Product advantages

- It can be fixed installation design or plug-in design;
- We use well-known domestic and foreign brand circuit breakers and component combinations to successfully assemble functional units, which have excellent technical performance and are safe and reliable;
- It can be assembled into various standard unit modules for customers to choose and assemble at will;
- With isolation between zones and mutual isolation between incoming and outgoing lines of functional units, it effectively enhances safety protection performance;
- With combination assembly structure, all structural components of the frame are firmly connected with screws, and the frame, doors and panels are treated with phosphating and electrostatic spray coating. Non spray coating components are all galvanized and passivated. It can meet the requirements of various components and meet different working environments requirement, achieving corresponding protection levels;
- The frame is made of high-quality steel plate, which can have holes with a module of 25mm on the frame, which can be expanded for various purposes. There are two ways for line incoming: upper and lower incoming;
- With high breaking capacity, good dynamic and thermal stability, flexible and convenient electrical solution combination and strong practicality, the main parameters reach international advanced level;
- Light weight, high mechanical strength and assembly accuracy, beautiful appearance.

#### 技术参数 Technical parameter

HPPV-BWG	100	200	300	400	500	600	800
基本参数 Basic parameter							
最高输入电压 Max. input voltage	400V						
测量数据 Measured data	三相电流、三相电压、有功功率、视在功率、功率因素、频率、电表 / Three phase current, three phase voltage, active power, apparent power, power factor, frequency, electric meter						
通讯方式 / 协议 Communication method/protocol	RS485 总线 / 标准的 MODBUS-RTU 协议 / RS485 bus/standard MODBUS-RTU protocol						
输入路数 Number of inputs	按用户要求定制 Customized according to user requirements						
输出路数 Number of outputs	1						
额定交流电压 Rated AC voltage	400V						
最大额定输入电流 Max rated input current	250A	400A	630A	800A	1000A	1250A	1600A
额定频率 Rated frequency	50Hz						
电能表接入 Electric meter access	二次接入 Secondary access						
外箱壳体 Housing box							
箱体材质 Box body material	热镀锌钢板 / 不锈钢 / 冷轧钢板 Hot dip galvanized steel plate/stainless steel/cold-rolled steel plate						
防护等级 Protection level	IP30/IP65						
壳体尺寸 Shell size	定制 Customization						
隔离开关 Isolation switch					框架断路器 Air circuit breaker		
额定电压 ( AC ) Rated voltage (AC)	400V						
额定电流 ( AC ) Rated current (AC)	250A	400A	630A	1000A	1000A	1250A	1600A
类型 type	单投开关 Single throw switch				抽屉式、固定式、检有压合闸 Draw-out type, fixed type, closing after voltage detected		
执行标准 Execution standards	GB/T14048.3				GB/T14048.2		
剩余电流保护断路器 Residual current operated circuit breaker							
断路器类型 Circuit breaker type	4P				使用万能式断路器 With air circuit breaker		
额定电压 ( AC ) Rated voltage (AC)	400V						
最大电流 ( AC ) Maximum current (AC)	250A	400A	630A	800A			
过压保护值 ( 相电压 ) Overvoltage protection value (phase voltage)	250~320V 可调 adjustable						
欠压保护器 ( 相电压 ) Undervoltage protector (phase voltage)	145~200V 可调 adjustable						
缺相保护值 Phase loss protection value	<50V						
执行标准 Executive standard	GB/T14048.2-2008						
交流浪涌保护器 AC surge protective device							
最大工作电压( AC )Max working voltage (AC)	400V						
最大放电电流 AC Max discharge current (AC)	40kA						
执行标准 Executive standard	GB/T8170-2008						
塑壳断路器 Molded case circuit breaker							
额定电压 ( AC ) Rated voltage (AC)	400V						
额定电流 ( AC ) Rated current (AC)	按用户要求选配 Optional according to user requirements						
通讯协议 Communication protocol	通讯协议 : DTL645、拓扑识别、电参数计量、载波通讯 / Communication protocol: DTL645, topology recognition, electrical parameter measurement, carrier wave communication						
执行标准 Executive standard	GB/T14048.2						
环境参数 Environmental parameter							
工作温度 Working temperature	-20℃ ~+60℃						
工作湿度 Working humidity	90%						
海拔高度 Altitude	2000m(2000m 以上降载 )(load shedding above 2000m)						
安装方式 Installation method	落地安装 Floor type						
可选功能 Optional features							
交流熔断器 AC fuse					可选 Optional		
交流漏电保护器 AC leakage protector					可选 Optional		
放孤岛装置 Anti islanding device					可选 Optional		



## HPPV-HLX

### 光伏直流汇流箱

HPPV-HLX photovoltaic DC combiner box

#### 产品优点

- 汇流箱的防护等级达到 IP65，具备防水、防灰、防锈、防盐雾，满足室外安装的要求；
- 可同时接入多至 32 路电池串列；
- 每路电池串列的正负极都配有光伏专用熔丝，对组件串出现故障时进行保护，熔断器底座及熔丝配套使用，减少业主后期维护成本，有效保护维修人员的人身安全；
- 采用光伏专用高压防雷器能对汇流后的母线正极对地、负极对地进行保护，持续工作电（Uc）可达到 DC1500V；
- 汇流箱内的电源模块能够接入最高 DC1500V 的光伏电压；
- 汇流箱测控模块采用性能可靠的霍尼韦尔霍尔元件（直流 CT 传感器），对每一路光伏组串进行电流、母线电压进行采集监测、报警和本地故障定位，并能对汇流箱内的温度进行测量，防雷器及输出断路器的状态检测等；
- 汇流箱内的监测模块具备数码显示功能，能在设备上显示每串组件串的电流，母线电压，汇流箱内的温度，断路器防雷器的状态，系统功率及设备地址等相关信息；
- 具备 RS485/MODBUS-RTU 串口通信；
- 与外部接口部分均有防雷保护；
- 能接收本地监控装置的数据下载，进行分析处理；
- 汇流箱工作电源可选择外另 220VAC/DC 或者由汇流箱本身提供的电源供电，如果采用汇流箱本身提供电源，现场可以不需要针对供电、单独布线。



适用于户用、工商业、地面集中式光伏发电系统	Suitable for household, industry and commerce, ground centralized photovoltaic power generation systems
电压范围最高可达DC1500V	The voltage range can reach up to DC1500V
满足客户定制化需求	It meets customization need
最大可做到 32 路输入	Up to 32 inputs can be achieved

#### Product advantages

- The protection level of the combiner box reaches IP65, which is waterproof, dustproof, rust proof and salt spray resistant, meeting the requirements for outdoor installation
- It can simultaneously connect up to 32 battery strings;
- Each positive and negative pole of the battery string is equipped with photovoltaic dedicated fuses to protect the module string from faults. The fuse base and fuse are used together to reduce maintenance costs for the owner and effectively protect the personal safety of maintenance personnel;
- The use of photovoltaic dedicated high-voltage lightning arrester can protect the positive pole to ground and negative pole to ground of the busbar after junction, and the continuous working voltage (Uc) can reach DC1500V;
- The power module inside the combiner box can be connected to a photovoltaic voltage of up to DC1500V;
- The measurement and control module of the combiner box adopts reliable Honeywell Hall elements (DC CT sensors) to collect, monitor, alarm and locate local faults for the current and bus voltage of each photovoltaic string. It can also measure the temperature inside the combiner box, detect the status of lightning arresters and output circuit breakers, etc;
- The monitoring module inside the combiner box has digital display function, which can display the current of each component string, bus voltage, temperature inside the combiner box, status of circuit breaker lightning arrester, system power and equipment address on the equipment;
- Equipped with RS485/MODBUS-RTU serial communication;
- The external interface is equipped with lightning protection;
- It can receive parameter downloads from local monitoring devices for analysis and processing;
- The working power supply of the combiner box can be selected from external 220VAC/DC or from the power supply provided by the combiner box itself. If the power supply is provided by the combiner box itself, there is no need for specific power supply and separate wiring on site.

#### 技术参数 Technical parameter

HPPV-HLX	4/1	6/1	8/1	10/1	12/1	14/1	16/1	18/1	20/1	22/1	24/1	26/1	28/1	30/1	32/1
基本参数 Basic parameter															
直流输入组串 DC input string	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
直流输出组串 DC output string	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
最大输入电压 ( DC ) Max input voltage (DC)	1500V														
最大直流短路电流 ( DC ) Max DC short-circuit current (DC)	15A/20A ( 可选 ) (optional)														
最大直流输出电流 ( DC ) Max DC output current (DC)	80	120	160	200	240	280	320	360	400	440	480	520	560	600	640
外壳箱体 Housing box															
箱体材质 Box body material	金属 Metal														
抗紫外线 ( PC/ABS ) UV resistance (PC/ABS)	是 Available														
防护等级 Protection level	IP65														
碰撞防护等级 Collision protection level	IK10														
箱体尺寸 Box body size	定制 Customization														
直流输入端口 DC input port	M16 ( Φ4-8mm )														
直流输出端口 DC output port	M40 ( Φ23~32mm )					M50 ( Φ32.7~38mm )					M63 ( Φ37~40mm )				
接地端口 Grounding port	M20 ( Φ6.7~12mm )														
直流断路器 DC circuit breaker															
额定绝缘电压 ( DC ) Rated insulation voltage (DC)	1000V/1500V														
额定电流 ( DC ) Rated current (DC)	80	120	160	200	240	280	320	360	400	440	480	520	560	600	640
执行标准 Executive standard	IEC60947-1、GB/T14048-2、IEC60898-2、GB/T14048.1														
直流浪涌保护器 DC surge protective device															
最大工作电压( DC )Max working voltage (DC)	1000V/1500V														
最大放电电流 ( DC ) Max discharge current (DC)	40kA														
执行标准 Executive standard	EN 50539-11 Type2														
直流熔断器 DC fuse															
额定工作电压 Rated working voltage	1000V/1500V														
额定电流 Rated current	15/20A ( 可选 ) (optional)														
尺寸 ( mm ) Size (mm)	Φ10*65/10*85														
环境参数 Environmental parameters															
工作温度 Working temperature	-20℃ ~+60℃														
工作湿度 Working humidity	99% ( 无凝霜 ) (without condensation)														
海拔高度 Altitude	2000m(2000m 以上降载 )(load shedding above 2000m)														
安装方式 Installation method	挂壁安装 Wall mounted installation														
可选功能 Optional functions															
直流监控 DC monitoring	可选 Optional														
防反二极管 Anti reflection diode	可选 Optional														
MC4 接头 MCA connector	可选 Optional														





浙江华朴电气有限公司

## Engineering Case

### 工程案例



Intelligent Fast Charging  
电动时代，智能速充，一触即达

#### 应用场景多样化

华朴可以根据用户的不同需求，提供充电桩服务。应用场景多样多变，根据公交车的充电需求建设公交充电站，主要服务公交车辆。也可承接停车场充电项目，充电运营面向社会通勤车辆。

#### 智充，速达，安全，无忧

华朴直流（DC）充电桩具备快速充电能力，能够在较短时间为电动汽车补充大量电能，大大缩短了充电时间，提高了充电效率。充电桩配备智能管理系统，支持远程监控和管理功能，管理员可以通过后台系统实时查看充电桩的工作状态、充电数据等信息，进行远程控制和故障诊断，确保充电安全和电池寿命。