# SmartGen 众智
## MAKING CONTROL SMARTER
### Stock Code 股票代码301361

# NEW ENERGY PRODUCT CATALOGUE
# 新能源产品选型样册

MAKING CONTROL SMARTER | 2026

![SmartGen EST.1998]

# ABOUT US  关于我们

| 始建于<br>ESTABLISHED IN 1998<br>**1998** | 公司总部<br>HEADQUARTERS: ZHENGZHOU, CHINA<br>**中国·郑州** | 产品类别<br>PRODUCT CATEGORIES<br>**1000+** | 客 户<br>CUSTOMERS<br>**3000+** |

众智科技始建于1998年，创业板（股票代码301361）上市企业。

主要从事发动机、发电机和发电机组控制系统、新能源微网控制系统、智能电网控制系统等相关产品的研发、生产、销售和服务。产品广泛应用于矿山石油开采、智算中心、船舶、海岛、智能大厦、零碳园区、电信、基建、工商储等领域，业务范围遍布全球，在50多个国家和地区设有办事机构。

拥有数百项专利，有超过30%的员工致力于研发工作，坚持"让控制更智能"的核心理念，以推动行业技术进步为使命，不断创新与自我超越，为打造优质、安全、绿色、低碳可持续发展的产业生态链而不懈努力！

Established in 1998, SmartGen is a listed public company (stock code: 301361). The company specializes in the research and development, manufacturing, sales, and service of control systems for engines, generators and generator sets, new energy microgrid and smart grid. SmartGen's products are widely used across a broad range of industries including mining and oil extraction, AI data centers, ships, offshore islands, smart buildings, zero-carbon industrial parks, telecommunications, infrastructure, and commercial & industrial energy storage. With a global presence, we have set offices in more than 50 countries and regions. Holding hundreds of patents and with over 30% of its workforce engaged in R&D, SmartGen remains committed to its core philosophy of "Making Control Smarter". Driven by a mission to lead technological progress in the industry, SmartGen continually innovates and evolves, striving to build a high-quality, safe, green, low-carbon, and sustainable industrial ecosystem.

郑州雪梅街工厂  Zhengzhou Xuemei Street Factory                    郑州金梭路工厂

# QUALIFICATIONS 资质

## 产品认证 Product Certification

CCC认证、CE认证、UL认证；CCS（中国船级社）认证、BV（法国船级社）认证、ABS(美国船级社)认证、NK(日本船级社)认证等

CCC certification, CE certification, UL certification; CCS certification, BV certification, ABS certification, NK certification, etc.

## 管理体系 Management System

质量管理体系ISO9001、CCSR9001，环境管理体系ISO14001，职业健康管理体系ISO45001，知识产权管理体系GB/T29490，两化融合管理体系GB/T23001，双重预防管理体系等

The company has successively passed ISO9001 Quality Management System, CCSR9001 Professional Quality Management System Requirements for Marine Product Manufacturer, ISO14001 Environmental Management System, ISO45001 Occupational Health and Safety Management System, GB/T 29490 Intellectual Property Compliance Management System, GB/T23001 Integration of Informatization and Industrialization Management System, Dual Prevention Management System, etc.

Zhengzhou Jinsuo Road Factory
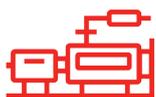
土耳其伊斯坦布尔工厂　Türkiye Istanbul Factory

# BUSINESS SECTORS
## 业务板块

**新能源** New Energy
BMS、EMS、PCS、储能柜，AC/DC，DC/DC，保护板
BMS, EMS, PCS, Energy Storage Cabinets, AC/DC, DC/DC, Protection Boards

**发电机组控制** Genset Control
单机自起动，AMF，多机并联，并网，灯塔控制，燃油/电加热器，充电器
Standalone Self-starting, AMF, Multi-unit Parallel, Grid connection, Lighting Tower Control,
Fuel/Electric Heater, Chargers

**交流发电机控制** Alternator Control
数字电压调节，模拟电压调节
DVR, AVR

**工程机械控制** Engineering Machinery Control
消防泵控制，空压机控制，发动机控制，CAN监控仪，手油门，遥控器
Fire Pump Control, Air Compressor Control, Engine Control, CAN Monitor, Manual Throttle Control,
Remote Controller

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## 智能电网控制  Smart Grid Control

双/多路电源切换、旁路切换，两进线一母联，三进线两母联，ATS

Dual/Multi-power Supply Switching, Bypass Switching, Two-income One Bus, Three-income Two Bus, ATS

## 船舶控制  Marine Control

EMS，PMS，机旁，电子电位器，传感器

EMS, PMS, Local Control, Electronic Potentiometer, Sensors

## 云监控  Cloud Monitoring

公有云，私有云，云猫，SCADA，HMI

Public Cloud, Private Cloud, Cloud Monitoring Modem, SCADA, HMI
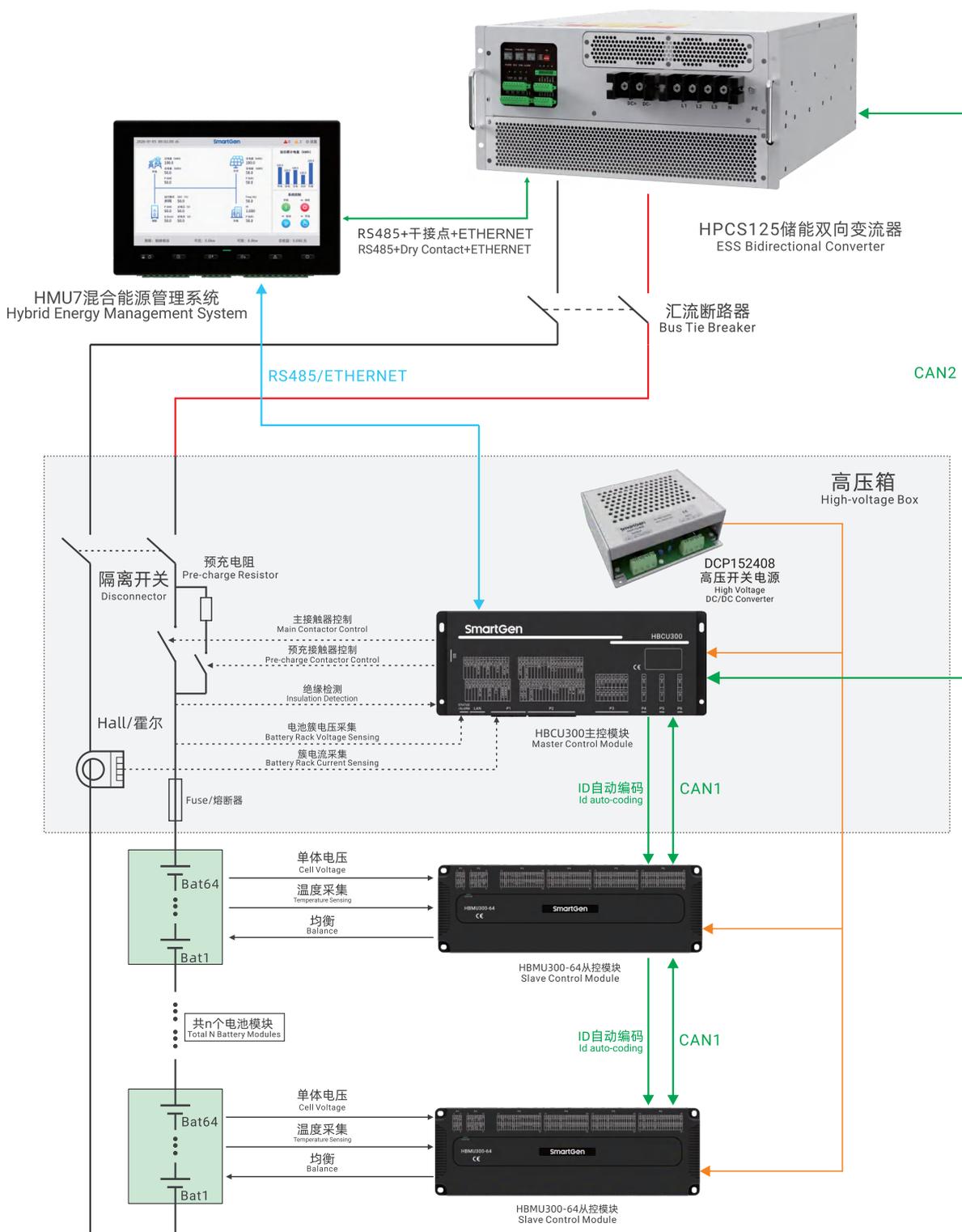
## 模块  Modules

继保，安保，同步，负载均分，USB，CANBUS，RS485，Ethernet，DI/DO/AI/AO，光纤，蓝牙，Wifi

Protection Relay, Redundant Protection, Synchronization, Load Sharing, USB, CANBUS, RS485, Ethernet, DI/DO/AI/AO, Fiber Optic, Bluetooth, Wi-Fi

HPCS125储能双向变流器
ESS Bidirectional Converter

HMU7混合能源管理系统
Hybrid Energy Management System

RS485+干接点+ETHERNET
RS485+Dry Contact+ETHERNET

汇流断路器
Bus Tie Breaker

CAN2

RS485/ETHERNET

高压箱
High-voltage Box

预充电阻
Pre-charge Resistor

隔离开关
Disconnector

主接触器控制
Main Contactor Control

预充接触器控制
Pre-charge Contactor Control

绝缘检测
Insulation Detection

电池簇电压采集
Battery Rack Voltage Sensing

簇电流采集
Battery Rack Current Sensing

DCP152408
高压开关电源
High Voltage
DC/DC Converter

HBCU300主控模块
Master Control Module

Hall/霍尔

Fuse/熔断器

ID自动编码
Id auto-coding

CAN1

Bat64

单体电压
Cell Voltage

温度采集
Temperature Sensing

均衡
Balance

HBMU300-64从控模块
Slave Control Module

Bat1

共n个电池模块
Total N Battery Modules

ID自动编码
Id auto-coding

CAN1

Bat64

单体电压
Cell Voltage

温度采集
Temperature Sensing

均衡
Balance

Bat1

HBMU300-64从控模块
Slave Control Module

HBMU200
Slave Control Module
从控模块



HBMU300-32
Slave Control Module
从控模块



HBMU300-64
Slave Control Module
从控模块



HBMU300-64D
Slave Control Module
从控模块

| Model/型号 | HBMU200 | HBMU300-32 | HBMU300-64 | HBMU300-64D |
|---|---|---|---|---|
| Main Functions<br>主要功能 | Battery management module plays an important role in BMS. In the charging and discharging process of battery packs, it can monitor the operating status (voltage, temperature, etc.), detect and report the status to BCU in real time to provide timely warnings of under/over voltage, under/over temperature, etc.the module is suitable for systems of independent energy storage station, wind & solar energy storage station and hybrid energy storage station. It can be used for testing platform of LFP, NCM, NCA, LMO, and LTO battery packs.<br><br>电池管理模块是BMS的重要组成部分，在电池组进行充放电时，监控电池的工作状态(电压、温度等)，进行实时检测和上报BCU，以便对欠压、过压、欠温、过温等进行报警。本模块适用于独立储能、风光储能以及混合能源等系统，也适用于磷酸铁锂电池组、三元锂电池组、锰酸锂电池组和钛酸锂电池组的测试平台。 | | | |
| Operating Voltage/工作电压 | DC 12V/24V | | | |
| Voltage Sampling Range/电压采样范围 | DC(0~5)V | | | |
| Number Of Voltage Detection Strings/电压检测串数 | 5~16 | 16~32 | 32~64 | |
| Temperature Sampling Range/温度采样范围 | (-40~+125)℃ | | | |
| Temperature Detection Channel/温度检测通道 | 16+2 | 32+2 | 64+4 | |
| Output Port/输出口 | 1 | | | |
| Input Port/输入口 | 1 | | | |
| Status Indicator/状态指示灯 | ● | | | |
| Broken Wire Detection/断线检测 | ● | | | |
| Communication Method/通信方式 | CAN | | | isoSPI |
| Passive Balance Current/被动均衡电流 | 100mA | | | |
| Module Address Setting/模块地址设置 | Slide DIP switch/拨码开关 | Id auto-coding /Id自动编码 | | |
| IP/防护等级 | IP20 | | | |
| Case Dimensions/外形尺寸(mm) | 125*106*21(L*W*H) | 223*100*31(L*W*H) | 287*95*25(L*W*H) | |
| Panel Cutout/安装尺寸(mm) | 112.5*93.5 | 212*68.5 | 274.5*82.5 | |
| Operating Temp./工作温度 | (-40~+70)℃ | | | |
| Weight/重量 | 0.16kg | 0.58kg | 0.36kg | 0.36kg |

**HBCU200**
Master Control Module
主控模块



**HBCU300**
Master Control Module
主控模块



**HBCU300D**
Master Control Module
主控模块

| Model/型号 | HBCU200 | HBCU300 | HBCU300D |
|---|---|---|---|
| Main Functions<br>主要功能 | The slave control module can collect the voltage and temperature of battery cells (LFP, NCM, NCA battery is supported), and upload the data to the master control module. After receiving the data, the master control module can calculate the SOC, SOH, SOE, maximum cell voltage/temperature, minimum cell voltage/temperature and insulation resistance.It can provide protection of under/over voltage, low/high temperature, over current during charging & discharging through 3-level protection system and external relay in main circuit.<br>BMS主控模块通过采集BMU从控模块上传的电池模块单体电芯(支持磷酸铁锂、三元锂)的电压、温度，计算出 SOC、SOH、SOE、最高单体电压/温度，最低单体电压/温度、绝缘阻值等数据。通过三级故障保护系统以及对外置主回路继电器的控制，实现对电芯的过欠压、温度过高/过低、充放电过流等保护。 | | |
| Operating Voltage Range/工作电压范围 | DC 12V/24V | | |
| Current Sampling Range/电流采样范围 | Max. 1000A/最大支持1000A | | |
| Voltage Sampling Range/电压采样范围 | DC(20~1000)V | DC(10~1500)V | |
| Current Detection Mode/电流检测方式 | Hall current sensor or shunt/霍尔电流传感器或分流器 | | |
| Insulation Detection/绝缘检测 | ● | | |
| Status Indicator/状态指示灯 | ● | | |
| Communication Method/通信方式 | RS485/ETHERNET/蓝牙/CAN | CAN/RS485/ETHERNET | isoSPI/CAN/RS485/ETHERNET |
| Output Port/输出口 | 7 | 8 | |
| Input Port/输入口 | 4 | 7 | |
| Event Log/历史记录 | ● | | |
| Three-level Fault Alarm Protection/三级故障报警保护 | ● | | |
| HV Control Box Temperature Sample/高压控制箱温度采集 | 1 | 4 | |
| Case Dimensions/外形尺寸(mm) | 253*54*106(L*W*H) | 282*109*43(L*W*H) | |
| Panel Cutout/安装尺寸(mm) | 271*78 | | |
| Operating Temp./工作温度 | (-40~+70)℃ | | |
| Weight/重量 | 0.5kg | 0.9kg | |

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## Hybrid Energy PV-ESS-Gen Solution
## 混合能源光储柴解决方案

Load/负载

智云平台
Cloud Monitoring Platform

SmartGen

HEMS200    7英寸屏/7-inch Screen

能量管理系统
Energy Management System

DCP152408高压开关电源
High Voltage DC/DC Converter

HGM9510N
发电机组并联控制器
Paralleled Genset Controller

HGM9510N
发电机组并联控制器
Paralleled Genset Controller

发电机组/Genset    ● ● ●    发电机组/Genset

ESSL261-832-05C
液冷一体储能柜/Liquid-Cooled ESS Cabinet

光伏逆变器
PV Inverter

光伏系统
Solar Panel

## Hybrid Energy PV-ESS-Charging Solution
## 混合能源光储充解决方案

双向电能表
Bidirectional Energy Meter

智云平台
Cloud Monitoring Platform

SmartGen

HEMS200能量管理系统
Energy Management System

7英寸屏/7-inch Screen

充电桩
Charging Pile

ESSL261-832-05C
液冷一体储能柜/Liquid-Cooled ESS Cabinet

光伏逆变器
PV Inverter

光伏系统
Solar Panel

SmartGen
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### HEMS150
Hybrid Energy Management System
混合能源管理系统

### HEMS200
Hybrid Energy Management System
混合能源管理系统

| Model/型号 | HEMS150 | HEMS200 |
|---|---|---|
| Main Functions<br>主要功能 | HEMS series is designed for micro-grid hybrid energy management. It is developed based on Linux operating system, which will make electric power system work intelligently and efficiently, and achieve more functions via intelligent modules expansion. HEMS series has a user-friendly interface with various functions. It can realize management and real-time communication of different system or equipment, such as PCS, solar system, wind system, diesel engine, ESS, smart circuit breaker, ATS, electric meter, etc. After acquiring, processing and analyzing all essential data from slave stations, it can control the entire micro-grid system, and make it work normally and stably through the logical operation of the internal program.<br><br>HEMS系列是一款微网混合能源管理控制器，它是基于linux操作系统开发，该系统可以让电力系统以智能、高效的方式工作，并且可以扩展智能部件以实现更多的功能。HEMS系列提供更强大、用户友好且易于使用的界面，支持PCS、太阳能、风力、柴油机、储能、智能断路器、ATS、电能表等设备的管理功能和实时通讯，收集所有通讯子站的重要数据，通过对数据的采集、处理、分析，经过内部程序逻辑运算，控制整个微网系统有序、稳健运行。 ||
| Operating Voltage/工作电压 | DC(12~24)V ||
| Power Consumption/整机功耗 | <9W | <12W |
| CPU/处理器 | 1.2GHz双核 | 1.1GHz多核 |
| RAM/内存 | 1GB | 2GB |
| ROM/存储器 | 8GB ||
| CAN | 2 | 3 |
| RS485 | 5/6 | 8 |
| RS232 | 2/1 | 3 |
| Programmable Input Port/可编程输入口 | 8 | 18 |
| Programmable Output Port/可编程输出口 | 12 | 8 |
| ETHERNET | 2 | 4 |
| USB | 2 ||
| 4G | ● ||
| WiFi | ● ||
| RTC/实时时钟 | ● ||
| Expanded Hard Disk/支持外扩硬盘 | | ● |
| TF Card/TF卡 | ● ||
| PV+ESS+Charging Pile System/光储充系统 | ● ||
| PV+ESS+Diesel Genset System/光储柴系统 | ● ||
| Cloud Platform/云平台 | ● ||
| Operating Temp./工作温度 | (-40~+60)℃ ||
| Case Dimensions/外形尺寸(mm) | 190*115*52.4(L*W*H) | 232*113*59(L*W*H) |
| Weight/重量 | 0.97kg | 1.4kg |

HMU7
Hybrid Energy Management System
混合能源管理系统

| Model/型号 | HMU7 |
|---|---|
| Main Functions<br>主要功能 | Suitable for mains, PV-ESS-DG hybrid energy management, with built-in function logic to reduce programming. It supports local monitoring via touchscreen, cloud-based web access, mobile app, and external data interfaces (Modbus). Data and alarm supports local storage via the touchscreen, USB drive or cloud. Compatible with 4G, WIFI, I/O, and CAN expansion modules.<br><br>适用市电、光储柴混合能源管理，内置业务逻辑，减少编程；支持触摸屏本地监控、云端Web、移动端App及对外数据接口（Modbus）；数据及报警支持触摸屏本地存储、U盘存储、云端存储。可扩展4G、WIFI、I/O模块、CAN。 |
| Operating Voltage/工作电压 | DC(10~35)V |
| Display/显示 | 7-inch /7英寸 |
| Resolution/分辨率 | 1024*600 |
| Language/控制器语言 | Chinese/中文 |
| Overall Consumption/整机功耗 | 7W |
| RS485 | 4 |
| ETHERNET/以太网 | 2 |
| USB | 2 |
| CAN | 2 |
| Digital Input/开关量输入口 | 4 |
| Relay Output/继电器输出口 | 2 |
| PLC/用户可编辑逻辑 | ● |
| RTC & Event Log/实时时钟及历史记录 | ● |
| Case Dimensions/外形尺寸(mm) | 191*131*73(L*W*H) |
| Panel Cutout/安装尺寸(mm) | 182*122 |
| Operating Temp./工作温度 | (-25~+70)℃ |
| Storage Temperature/贮存温度 | (-30~+80)℃ |
| IP/防护等级 | IP65 |
| Weight/重量 | 0.85kg |

**HP16S100-10**
Lithium-ion Battery Protection Board
锂电池保护板



**HP16S200-20**
Lithium-ion Battery Protection Board
锂电池保护板

| Model/型号 | HP16S100-10 | HP16S200-20 |
|---|---|---|
| Main Functions<br>主要功能 | The product is used for communication backup power of 15-series to 16-series lithium-ion battery base station and household energy storage system. It can monitor the operating status (voltage, current, temperature, etc.) of battery pack to provide over/under voltage, over current, over temperature warnings and protection. In addition, the cell balancing function can extend the cell's cycle life.<br>用于15-16串锂电池基站通信备用电源和户用储能等系统，可监控电池组的工作状态（电压、电流、温度等），以便对过压、欠压、过流、过温、等报警和保护，还可以提供电芯的均衡保护功能以延长电芯寿命。 | |
| Modules Configuration/支持电芯串数 | 15/16 | |
| Voltage Sampling Range/电压采样范围 | DC(0~5)V | |
| Passive Balance Current/被动均衡电流 | 85mA | 100mA |
| Temperature Sampling Range/温度采样范围 | (-40~+125)℃ | |
| Temperature Sampling Channel/温度采样通道 | 4+1+1 | |
| Rated Charge/Discharge Current/额定充放电电流 | 100A | 200A |
| Power Consumption/整机功耗 | Operating power≤1.6W, maximum power≤2.8W, sleep mode power≤15mW<br>正常工作功耗≤1.6W；最大功耗≤2.8W；休眠功耗≤15mW | |
| Output Port/输出口 | 2 | |
| Module Address Setting/模块地址设置 | Slide DIP switch/拨码开关 | |
| Current Limiting Function 限流功能 | 10A/20A | |
| Communication Method/通信方式 | RS232/RS485/CAN | |
| Sleep And Wakeup/休眠与唤醒 | ● | |
| Heating Function/加热功能 | ● | |
| RTC &Event Log/实时时钟及历史记录 | ● | |
| Black Box/黑匣子 | ● | |
| Case Dimensions/外形尺寸(mm) | 280*110*33.5(L*W*H) | 350*110*33.5(L*W*H) |
| Panel Cutout/安装尺寸(mm) | 271*102 | 341*102 |
| Operating Temp./工作温度 | (-40~+70)℃ | |
| Weight/重量 | 0.55kg | 0.77kg |

HPA100-16系列控制板
HPA100-16 Series Control Board



HPA100-16系列50A功率板
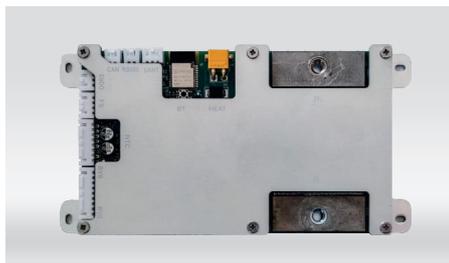HPA100-16 Series 50A Power Protection Board
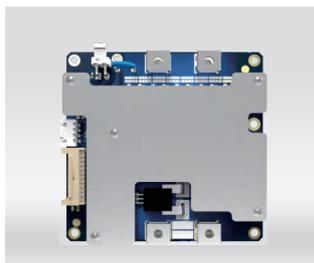


HPA100-16系列80A功率板
HPA100-16 Series 80A Power Protection Board



HPA100-16系列300A功率板
HPA100-16 Series 300A Power Protection Board



| Model/型号 | HPA100-16-050 | HPA100-16-080 | HPA100-16-300 |
|---|---|---|---|
| Main Functions 主要功能 | HPA100-16 series split-type Lithium-ion battery protection board is an important role in low voltage Lithium-ion battery module, and mainly used for 7-series to 16-series battery pack as base station backup power, AGV traction battery pack, and household energy storage system. It can monitor the operating status (voltage, current, temperature, etc.) of battery pack to provide over/under voltage, over current, over temperature warnings and protection. In addition, the cell balancing function can extend the cell's cycle life. It can realize functions of data monitor, parameter setting and firmware update via RS485 and CANBUS ports. HPA100-16系列分体式锂电池保护板是低压锂电池模块的重要组成部分，主要用于7-16串锂电池基站通信备用电源、AGV 动力锂电池组和户用储能等系统，可监控电池组的工作状态（电压、电流、温度等），以便对过压、欠压、过流、过温、等报警和保护，还可以提供电芯的均衡保护功能以延长电芯寿命，并可通过RS485、CANBUS等接口实现数据监控、参数配置和固件升级。 | | |
| Modules Configuration/支持电芯串数 | 7~16 | | |
| Cell Voltage Sampling Range/电芯电压采样范围 | DC(0~5)V | | |
| Passive Balance Current/被动均衡电流 | 77mA | | |
| Temperature Sampling Range/温度采样范围 | （-40~+125）℃ | | |
| Temperature Sampling Channel/温度采样通道 | 4+1+1 | | |
| Rated Charge/Discharge Current/额定充放电电流 | 50A | 80A | 300A |
| Power Consumption/整机功耗 | Operating power≤1.2W, maximum power≤2.6W, sleep mode power≤15mW 正常工作功耗≤1.2W，最大功耗≤2.6W，休眠功耗≤15mW | | |
| Current Limiting Function 限流功能 | ● | | |
| Communication Method/通信方式 | CAN/RS485*2 | | |
| Sleep And Wakeup/休眠与唤醒 | ● | | |
| Heating Function/加热功能 | ● | | |
| RTC & Event Log/实时时钟及历史记录 | ● | | |
| Black Box/黑匣子 | ● | | |
| Case Dimensions/外形尺寸(mm) | 89.3*74.2*16.7(L*W*H) | 93*90*18.7(L*W*H) | 100*70*24.2(L*W*H) |
| Panel Cutout/安装尺寸(mm) | 80*65.5 | 85*82 | 92.9*62.7 |
| Operating Temp./工作温度 | （-40~+70)℃ | | |
| Weight/重量 | 0.1kg | 0.2kg | 0.05kg |

HPE100-8-150
Starting Protection Board
启动保护板

| Model/型号 | HPE100-8-150 |
|---|---|
| Main Functions<br>主要功能 | The HPE100-8-150 Starting Protection Board is a crucial component of the starting power module, primarily designed for 8-series lithium batteries. It can monitor the operation status of the battery pack (voltage, current, temperature, etc.) to provide alarms and protection against conditions of overvoltage, undervoltage, overcurrent, and over temperature. And balancing protection function helps to extend the lifespan of the battery cells.<br><br>HPE100-8-150启动保护板是启动电源模块的重要组成部分，主要用于8串锂电池。监控电池组的工作状态（电压、电流、温度等），以便对过压、欠压、过流、过温等报警和保护，提供电芯的均衡保护功能以延长电芯寿命。 |
| Modules Configuration/支持电芯串数 | 8 |
| Rated Charge/Discharge Current/额定充放电电流 | 150A |
| Power Consumption/整机功耗 | Minimum power≤1.2W, maximum power≤2.6W, sleep mode power≤10mW<br>最小功耗≤1.2W，最大功耗≤2.6W，休眠功耗≤10mW |
| Cell Voltage Sampling Range/电芯电压采集范围 | DC(0~5)V |
| Temperature Sampling Range/温度采样范围 | （-40~+125）℃ |
| Communication Method/通信方式 | 蓝牙/RS485*2/CAN |
| Current Sampling Range/电流采集范围 | 最大1500A |
| One-Click Forced Start/一键强启 | ● |
| Heating Function/加热功能 | ● |
| Case Dimensions/外形尺寸(mm) | 175*92*20(L*W*H) |
| Panel Cutout/安装尺寸(mm) | 165*76 |
| Operating Temp./工作温度 | (-40~+70)℃ |
| Working Humidity/工作湿度 | (20~93)%RH |
| Weight/重量 | 0.38kg |

BPA系列风冷电池模块
BPA Series Air-Cooled Battery Module



BPL系列液冷电池模块
BPL Series Liquid-Cooled Battery Module

| Model/型号 | BPA16-314 | BPL48-314 | BPL52-314 |
|---|---|---|---|
| Main Functions 主要功能 | The air-cooled/liquid-cooled battery module serves as the energy storage unit of the ESS cabinet. The battery module contains built-in battery cells and a BMU slave controller. The BMU collects data of cell voltage and temperature and uploads it via the CAN interface. 风冷/液冷电池模块是储能柜的储能装置。电池模块内置电芯与BMU从控，通过BMU采集电芯的电压、温度等，通过CAN接口上传。 | | |
| Cell Type/电芯类型 | LFP/磷酸铁锂 | | |
| Cell Specification/电芯规格 | 3.2V/280Ah | 3.2V/314Ah | |
| Cell Configuration/成组方式 | 1P16S | 1P48S | 1P52S |
| Rated Energy/额定能量 | 16.077kWh | 48.2kWh | 52.2kWh |
| Rated Voltage/额定电压 | DC 51.2V | DC 153.6V | DC 166.4V |
| Operating Voltage Range/工作电压范围 | DC(44.8~57.6)V | DC(134.4~172.8)V | DC(145.6~187.2)V |
| Max. Continuous Charge/Discharge Rate 最大持续充放电倍率 | 0.5C/0.5C | | |
| Built-in Pack Level Fire Safety/内置PACK级消防 | Perfluoro(2-methyl-3-pentanone)全氟己酮 | | |
| Cooling Method/散热方式 | Air Cooling/风冷散热 | Liquid Cooling/液冷散热 | |
| IP/防护等级 | IP67 | | |
| Case Dimensions/外形尺寸(mm) | 490*737*235(L*W*H) | 808*1172*245(L*W*H) | |
| Weight/重量 | 120kg | 400kg | |



HVB1000-200-S高压控制箱
High Voltage Control Box



HVB1000-250/1500-250 高压控制箱
High Voltage Control Box

| Model/型号 | HVB1000-200-S | HVB1000-250 | HVB1500-250 |
|---|---|---|---|
| Main Functions 主要功能 | The main functions of the high voltage control box is to collect data such as DC bus voltage, total battery pack voltage, charge/discharge current, and internal temperature. The built-in BCU module receives data uploaded by the BMU module via the CAN interface, enabling it to calculate the overall battery pack's SOC and SOH. Through the host computer, relevant parameters for battery pack protection can be set. 高压控制箱主要功能是采集直流母排电压，电池组总电压和充放电电流，机箱内温度等，内置的BCU模块通过CAN接口接收BMU模块上传的数据，可计算整组电池的SOC，SOH;通过上位机可设置对电池组保护的相关参数。 | | |
| Max. Operating Voltage/最大工作电压 | DC 1000V | | DC 1500V |
| Max. Operating Current/最大工作电流 | 200A | 250A | |
| Auxiliary Power Supply/辅助电源 | DC24V | | |
| Applicable Series/适用系列 | Air-Cooled ESS Cabinet/风冷柜系列 | Liquid-Cooled ESS Cabinet/液冷柜系列 | |
| Case Dimensions/外形尺寸(mm) | 235*757*594(L*W*H) | 566*840*140(L*W*H) | |
| Weight/重量 | 29kg | | |

![SmartGen EST.1998]

# ESS CONVERTER / 储能变流器



HPCS125
ESS Bidirectional Converter
储能双向变流器

| Model/型号 | HPCS125 |
|---|---|
| Main Functions 主要功能 | HPCS125 bidirectional AC/DC converter adopts three-level topology structure to realize bidirectional transfer of DC-AC, AC-DC. It not only can convert AC to DC to charge the battery, but also can convert DC to AC to supply load or power grid.<br><br>HPCS125储能双向AC/DC变流器，采用三电平拓扑结构，可以实现直流到交流、交流到直流的双向变换，既可以将交流电转化为直流电为蓄电池充电，也可将直流电转化为交流电，为负载供电或回馈给电网。 |
| Max. Operating Voltage/最大工作电压 | DC 950V |
| Full Load Operating Voltage Range/满载工作电压范围 | 并网DC(630~950)V　离网DC(680~950)V |
| Maximum Current at DC Side/直流侧最大电流 | 203A |
| Rated AC Output/额定交流输出 | 125kW |
| Maximum AC Output/最大交流输出 | 138kW |
| AC Rated Voltage/交流侧额定电压 | AC 400V±15% |
| Rated Frequency/额定频率 | 50Hz/60Hz |
| THDu/交流电压畸变率 | <3% |
| THDi/总电流波形畸变率 | <3% |
| Maximum Efficiency/最高效率 | 98% |
| IP/防护等级 | IP20 |
| Cooling/冷却方式 | Intelligent Air-cooled/智能风冷 |
| Communication Method/通信方式 | BMS:CAN/RS485  EMS:Ethernet/RS485/WIFI |
| Operating Temp./工作温度 | (-20~60)℃（No Derating@45℃)/(-20~60)℃（45℃无降额) |
| Storage Temperature/贮存温度 | (-40~+70)℃ |
| Operating Altitude/工作海拔 | ≤4000m(Over 2000m derating)/≤4000m(超过2000m降额) |
| Safety Standard/安规 | GB/T34120-2023,GB/T34133-2023 |
| Case Dimensions/外形尺寸(mm) | 790*560*260(L*W*H) |
| Weight/重量 | 70kg |

DCP102410
High Voltage DC/DC Converter
高压开关电源



DCP152408
High Voltage DC/DC Converter
高压开关电源

| Model/型号 | DCP102410 | DCP152408 |
|---|---|---|
| Main Functions<br>主要功能 | DCPXX Series is a high voltage isolated DC/DC converter with multiple protections, which is suitable for equipment requiring DC24V isolated power. Its maximum rated output current is 8A/10A.The product has the characteristics of wide voltage range, small size, light weight, high efficiency, high isolated voltage, etc. It has input under voltage, reverse connection, output over voltage, overcurrent, short circuit and others protection.<br><br>DCPXX系列是一款高压型、多重保护的DC/DC隔离电源，适用于需要DC24V隔离供电的设备，额定输出电流为8A/10A。具有电压范围宽，体积小，重量轻，效率高，隔离电压高等特点。具有输入欠压，输入反接，输出过压，输出过流，输出短路等保护。 | |
| Max. Charging Current/最大输入电压范围 | DC(200~1000)V | DC(450~1500)V（＜550V Reduce rated power/小于550V降额使用） |
| Max. Input Power/最大输入功率 | 280W | 220W |
| Max. Input Current/最大输入电流 | 1.5A | 0.45A |
| Max. Efficiency/最大效率 | 93% | 91% |
| Rated Output Voltage/额定输出电压 | DC 24V | |
| Rated Output Current/额定输出电流 | 10A | 8A |
| Rated Output Power/额定输出功率 | 240W | 192W |
| Input Under Voltage Protection/输入欠压保护 | ● | |
| Input Reverse Voltage Protection/输入过压保护 | ● | |
| Input Reverse Connection Protection/输入反接保护 | ● | |
| Output Over Voltage Protection/输出过压保护 | ●（Shut off output voltage, and recover after auto reboot/关闭输出电压，自动重启后恢复） | |
| Output Over Current Protection/输出过流保护 | ●（Shut off output voltage, and recover after auto reboot/关闭输出电压，自动重启后恢复） | |
| Short Circuit Protection/短路保护 | ●（Shut off output voltage, and recover after auto reboot/关闭输出电压，自动重启后恢复） | |
| Operating Temp./工作温度 | (-40~+55)°C | (-30~+55)°C |
| Working Humidity/工作湿度 | 20%RH~93%RH(无凝露) | 20%RH~93%RH |
| Case Dimensions/外形尺寸(mm) | 210*131*55(L*W*H) | 142*156*55(L*W*H) |
| Panel Cutout/安装尺寸(mm) | 190*120 | 132*80 |
| Weight/重量 | 1.2kg | 0.8kg |

### HBP300 防逆流电表
#### Zero Export Meter

It collects power information and calculates power, voltage, and current in real-time. The meter can be integrated with EMS to implement the system's zero-export function.

防逆流电表通过采集电量信息，实时计算功率、电压、电流.可与EMS配置实现系统的防逆流功能。

Case Dimensions
外观尺寸(mm): 107.6*89.7*60.7

### MDIO16/32开关量输入输出模块
#### Digital Input/Output Module

An expansion module providing 8-way digital inputs and 8-way digital outputs.

扩展8路开关量输入、8路开关量输出的模块。

Case Dimensions
外观尺寸(mm): 123.4*93.3*25

### HAT600P双电源智能切换控制器
#### Dual Power ATS Controller

With a brand-new appearance design, it features load voltage monitoring function, and has obtained UL certification. The controller is suitable for PC, CB, and CC class ATS. HAT600PS supports parallel transfer to achieve uninterrupted power supply. It can be widely used in telecommunication, rail transport, data centers, smart buildings and other occasions which requires high quality power supply.

全新外观设计，具有负载电压监测，且通过UL认证，适用PC级、CB级、CC级开关。HAT600PS可实现并联转换，不间断供电。广泛应用于电信、轨道交通、数据中心、智慧大厦等供电要求高的场合。

### HGM6110CAN 发电机组控制器
#### Genset Controller

It is used for automatic control and monitoring system of single genset. The controller can carry out functions of automatic start/stop, data measurement, alarm protection and "Three Remote" (remote control, remote measurement and remote communication). It adopts LCD display, optional language interface including Chinese, English, Spanish, Russian, Portuguese, Turkish, Polish and French with easy and reliable operation.

用于单台发电机组自动化及监控系统，实现发电机组的自动开机/停机、数据测量、报警保护及"三遥"功能。控制器采用大屏幕液晶(LCD)显示，中文、英文、西班牙文、俄文、葡萄牙、土耳其、波兰语、法语8种语言可选界面操作，操作简单，运行可靠。

### HGM9510N发电机组并联控制器
#### Paralleled Genset Controller

It is used for manual/automatic parallel system for multiple gensets of the same capacity or different capacities, and suitable for constant power output and mains power grid connection of a single genset, realizing automatic start and stop, parallel operation, data measurement, alarm protection and "three remote" functions of gensets. The controller adopts liquid crystal (LCD) graphic display, which can display Chinese, English and other languages. The operation is simple and reliable.

用于多台同容量或不同容量的发电机组的手动/自动并联系统以及适用于单台发电机组恒功率输出和市电并网，实现发电机组的自动开机停机、并联运行、数据测量、报警保护及"三遥"功能。控制器采用大屏幕液晶(LCD)图形显示器，可显示中文、英文及其他多种语言，操作简单，运行可靠。

ESSA系列风冷一体储能柜
ESSA Series Air-Cooled All-In-One ESS Cabinet

| Model/型号 | ESSA241-768-05C |
|---|---|
| Main Functions<br>主要功能 | The ESS is suitable for multiple applications. With solar power system, it can realize applications of new energy utilization, peak shaving and load shifting.It is designed in accordance with standard electrical cabinet to meet customers' requirement of economic efficiency and reliability.<br><br>本储能系统可应用于多种场景，可配合光伏发电系统，实现新能源消纳、削峰填谷等应用场景。可满足客户对经济性、可靠性等要求。储能系统采用标准化电气柜设计。 |

| AC Side Parameters (Grid Connection)<br>交流侧参数(并网) | Rated Power/额定功率 | 100kW |
|---|---|---|
| | Rated Voltage/额定电压 | AC(230/400)V |
| | External Wiring Method/对外接线方式 | 3P4W+PE/三相四线+PE |
| | Voltage Deviation/电压偏差 | -15%～+15% |
| | Rated Grid Frequency/额定电网频率 | 50Hz/60Hz |
| | Power Factor Range/功率因数范围 | 1 (lead)～1 (lag)/1（超前）～1（滞后） |
| System Parameters<br>系统参数 | Total Capacity/系统容量 | 241kWh |
| | Rated C-Rate/额定充放电倍率 | 0.5C |
| | Nominal Voltage/标称电压 | DC 768V |
| | Battery Voltage Range/电池电压范围 | DC(672~864)V |
| | Battery System Configuration/电池系统配置 | 1P240S |
| | Battery Type/电池类型 | LFP/磷酸铁锂 |
| | Nominal Capacity/标称容量 | 314Ah |
| | Operating Temp. Range/工作温度范围 | -20~50℃ |
| | Cooling/冷却方式 | AC+Forced Air-Cooled/空调+强制风冷 |
| | Fire-fighting Methods/消防灭火方式 | Perfluoro(2-methyl-3-pentanone)/全氟己酮 |
| | Communication Method/通信方式 | RS485/ETHERNET/4G |
| | IP/防护等级 | IP54 |
| | Operating Altitude/工作海拔 | ≤2000m |
| | Case Dimensions/外形尺寸(mm) | 1500*1338*2200(L*W*H) |
| | Weight/重量 | 2.8t |

## INDUSTRIAL AND COMMERCIAL ESS / 工商业储能系统




ESSL系列液冷一体储能柜
ESSL Series Liquid-Cooled All-In-One ESS Cabinet

| Model/型号 | ESSL514-819-05C | ESSL241-768-05C | ESSL261-832-05C |
|---|---|---|---|
| Main Functions<br>主要功能 | The ESS is suitable for multiple applications. With solar power system, it can realize applications of new energy utilization, peak shaving and load shifting.It is designed in accordance with standard electrical cabinet to meet customers' requirement of economic efficiency and reliability.<br>本储能系统可应用于多种场景，可配合光伏发电系统，实现新能源消纳、削峰填谷等应用场景。可满足客户对经济性、可靠性等要求。储能系统采用标准化电气柜设计。 | | |

| AC Side Parameters (Grid Connection)<br>交流侧参数(并网) | | | |
|---|---|---|---|
| Rated Power/额定功率 | 250kW | 125kW | |
| Rated Voltage/额定电压 | AC(230/400)V | | |
| External Wiring Method<br>对外接线方式 | 3P4W+PE/三相四线+PE | | |
| Voltage Deviation/电压偏差 | -15% ~ +15% | | |
| Rated Grid Frequency/额定电网频率 | 50Hz/60Hz | | |
| Power Factor Range/功率因数范围 | 1 (lead) ~ 1 (lag)/1（超前）~ 1（滞后） | | |

| System Parameters<br>系统参数 | | | |
|---|---|---|---|
| Total Capacity/系统容量 | 514kWh | 241kWh | 261kWh |
| Rated C-Rate/额定充放电倍率 | 0.5C/0.5C | | |
| Nominal Voltage/标称电压 | DC 819V | DC 768V | DC 832V |
| Battery Voltage Range/电池电压范围 | DC(716~921)V | DC(672~864)V | DC(728~936)V |
| Battery System Configuration<br>电池系统配置 | 2簇1P256S | 1P240S | 1P260S |
| Battery Type/电池类型 | LFP/磷酸铁锂 | | |
| Nominal Capacity/标称容量 | 314Ah | | |
| Operating Temp. Range/<br>工作温度范围 | -20~50℃ | | |
| Cooling/冷却方式 | Liquid-Cooled/液冷 | | |
| Fire-Fighting Methods<br>消防灭火方式 | Perfluoro(2-methyl-3-pentanone)/aerosol/全氟己酮/气溶胶 | | |
| Communication Method/通信方式 | RS485/ETHERNET/4G | | |
| IP/防护等级 | IP54 | | |
| Operating Altitude/工作海拔 | ≤2000m | | |
| Case Dimensions/外形尺寸(mm) | 1900*1750*2050(L*W*H) | 1000*1350*2270(L*W*H) | |
| Weight/重量 | 6t | 3.1t | 3.2t |

EPVAS系列光储一体柜
EPVAS Series PV & ESS All-In-One Cabinet

| Model/型号 | | | EPVAS140-448-05C | EPVAS120-384-05C |
|---|---|---|---|---|
| | | Main Functions 主要功能 | The ESS cabinet supports multi-string PV panel input and MPPT function. Integrated with STS, it enables uninterrupted transfer. It is suitable for various applications, including peak load shifting, green electricity consumption, demand management, and backup power supply. 本储能柜支持多路光伏输入，具有MPPT功能。集成有STS,可实现不间断切换。可应用于多种场景，包括削峰填谷、绿电消纳、需量管理、备用电源等。 | |
| PV Parameters 光伏参数 | | Mppt Voltage Range/MPPT电压范围 | DC(150~900)V | |
| | | Mppt Number/MPPT数量 | 4 | |
| | | Dc Input String Number/直流输入组串数 | 8 | |
| | | Maximum Input Current/最大输入电流 | 4*40A | |
| | | PV Power/光伏功率 | 90kW | 75kW |
| AC Side Parameters (Grid Connection) 交流侧参数(并网) | | Rated Power/额定功率 | 60kW | 50kW |
| | | Rated Voltage/额定电压 | AC 230V/400V | |
| | | External Wiring Method/对外接线方式 | 3P4W+PE/三相四线+PE | |
| | | Voltage Deviation/电压偏差 | -15% ~ +15% | |
| | | Rated Grid Frequency/额定电网频率 | 50Hz/60Hz | |
| System Parameters 系统参数 | | Total Capacity/系统容量 | 140kWh | 120kWh |
| | | Rated C-Rate/额定充放电倍率 | 0.5C | |
| | | Nominal Voltage/标称电压 | DC 448V | DC 384V |
| | | STS | ● | |
| | | Battery Voltage Range/电池电压范围 | DC(392~504)V | DC(336~432)V |
| | | Battery System Configuration/电池系统配置 | 1P140S | 1P120S |
| | | Battery Type/电池类型 | LFP/磷酸铁锂 | |
| | | Nominal Capacity/标称容量 | 314Ah | |
| | | Operating Temp. Range/工作温度范围 | -20~50℃ | |
| | | Cooling/冷却方式 | AC+Forced Air-Cooled/空调+强制风冷 | |
| | | Fire-Fighting Methods/消防灭火方式 | Perfluoro(2-methyl-3-pentanone)/aerosol/全氟己酮/气溶胶 | |
| | | Communication Method/通信方式 | RS485/ETHERNET/4G | |
| | | IP/防护等级 | IP54 | |
| | | Operating Altitude/工作海拔 | ≤2000m | |
| | | Case Dimensions/外形尺寸(mm) | 1250*1200*2000(L*W*H) | |
| | | Weight/重量 | 2.0t | 1.8t |

EPVLS261-832-05C系列光储一体柜
PV & ESS All-In-One Cabinet



| Model/型号 | EPVLS261-832-05C |
|---|---|
| Main Functions<br>主要功能 | The ESS cabinet supports multi-string PV panel input and MPPT function. It is suitable for various applications, including peak load shifting, green electricity consumption, demand management, and backup power supply.<br>本储能柜支持多路光伏输入，具有MPPT功能。可应用于多种场景，包括削峰填谷、绿电消纳、需量管理、备用电源等。 |

| PV Parameters<br>光伏参数 | | |
|---|---|---|
| | Mppt Voltage Range/MPPT电压范围 | DC(600~900)V |
| | Mppt Number/MPPT数量 | 8 |
| | Dc Input String Number/直流输入组串数 | 8 |
| | Maximum Input Current/最大输入电流 | 8*50A |

| AC Side Parameters<br>(Grid Connection)<br>交流侧参数(并网) | | |
|---|---|---|
| | Rated Power/额定功率 | 125kW |
| | Rated Voltage/额定电压 | AC 400V |
| | External Wiring Method/对外接线方式 | 3P4W+PE/三相四线+PE |
| | Voltage Deviation/电压偏差 | -15%～+15% |
| | Rated Grid Frequency/额定电网频率 | 50Hz |

| System Parameters<br>系统参数 | | |
|---|---|---|
| | Total Capacity/系统容量 | 261kWh |
| | Rated C-Rate/额定充放电倍率 | 0.5C |
| | Nominal Voltage/标称电压 | DC 832V |
| | Battery Voltage Range/电池电压范围 | DC(728~936)V |
| | Battery System Configuration/电池系统配置 | 1P260S |
| | Battery Type/电池类型 | LFP/磷酸铁锂 |
| | Nominal Capacity/标称容量 | 314Ah |
| | Operating Temp. Range/工作温度范围 | -20~50℃ |
| | Cooling/冷却方式 | Liquid-Cooled/液冷 |
| | Fire-Fighting Methods/消防灭火方式 | Perfluoro(2-methyl-3-pentanone)/aerosol/全氟己酮/气溶胶 |
| | Communication Method/通信方式 | RS485/ETHERNET/4G |
| | IP/防护等级 | IP54 |
| | Operating Altitude/工作海拔 | ≤2000m |
| | Case Dimensions/外形尺寸(mm) | 1600*1400*2200(L*W*H) |
| | Weight/重量 | 3t |

CESSL1045-832-05C　1MWh液冷一体储能集装箱
1MWh Liquid-Cooled All-In-One ESS Container

| Model/型号 | CESSL1045-832-05C |
|---|---|
| Main Functions<br>主要功能 | This ESS cabinet adopts a string-series structure, uniformly managing the working status of battery packs to ensure efficient energy distribution. Its convenient deployment and integrated design enhance the overall protection of the system. It is suitable for various applications, including peak shaving and valley filling, green power consumption, demand management, and backup power supply.<br><br>本储能柜采用组串式结构，统一调度电池组的工作状态，确保能量的高效分配，方便部署，集成化设计，提高系统的整体防护性。可应用于多种场景，包括削峰填谷、绿电消纳、需量管理、备用电源等。 |

| AC Side Parameters (Grid Connection)<br>交流侧参数(并网) | Rated Power/额定功率 | 500kW |
|---|---|---|
| | Rated Voltage/额定电压 | AC 400V |
| | External Wiring Method/对外接线方式 | 3P4W+PE/三相四线+PE |
| | Voltage Deviation/电压偏差 | -15% ~ +15% |
| | Rated Grid Frequency/额定电网频率 | 50Hz |
| | Power Factor Range/功率因数范围 | 1 (lead) ~ 1 (lag)/1（超前）~ 1（滞后） |
| System Parameters<br>系统参数 | Total Capacity/系统容量 | 1045kWh |
| | Rated C-Rate/额定充放电倍率 | 0.5C |
| | Nominal Voltage/标称电压 | DC 832V |
| | Battery Voltage Range/电池电压范围 | DC(728~936)V |
| | Battery System Configuration/电池系统配置 | 4簇1P260S |
| | Battery Type/电池类型 | LFP/磷酸铁锂 |
| | Nominal Capacity/标称容量 | 314Ah |
| | Operating Temp. Range/工作温度范围 | -20~50℃ |
| | Cooling/冷却方式 | Liquid-Cooled/液冷 |
| | Fire-Fighting Methods/消防灭火方式 | Perfluoro(2-methyl-3-pentanone)/全氟己酮 |
| | Communication Method/通信方式 | RS485/ETHERNET/4G |
| | IP/防护等级 | IP54 |
| | Operating Altitude/工作海拔 | ≤2000m |
| | Case Dimensions/外形尺寸(mm) | 3005*2600*2896(L*W*H) |

# ATS Controllers 智能切换控制器



经济型双电源控制器
Dual Power ATS Controlle
(Economical type)



双电源同步切换控制器
Dual Power Synchronous ATS Controller



双电源母联自动切换控制器
Dual Power Bus Tie Controller



三电源母联自动切换控制器
Three Power Bus Tie Controller

# Genset Controllers 发电机组控制器



单机自起动发电机组控制器
Self Starting Genset Controller



增强型发电机组控制器
Enhanced Genset Controller



冗余并联发电机组控制器
Redundant Parallel Genset Controller



发电机组远程监控控制器
Remote Monitoring Controller

# Marine Engine Controllers 船用机旁控制器



游艇发动机控制器
Yacht Engine Controller



增强型船用发动机控制器
Enhanced Marine Diesel
Engine Controller



分体式功率管理控制器
Split Type Power Management Controller



发动机监控仪
Engine Monitoring Controller

## Construction Machinery Controllers  工程机械控制器

**工程机械控制器**
Construction Machinery
Engine Controller

**发动机控制器**
Engine Controller

**柴驱泵组控制器**
Diesel Drive Pump Unit Controller

**柴驱空压机控制器**
Diesel Air Compressor Controller

## Chargers/Heaters 充电器/加热器

**数显型蓄电池充电器**
Digital Display Battery Charger

**蓄电池充电器**
Battery Charger

**液体加热器**
Hydronic Heater

**强制循环水加热器**
Forced Circulation Heater

## Others 其他

**数字电压调节器**
Digital Voltage Regulator

**双电源自动转换开关**
Dual Power Automatic
Transfer Switch

**4G云监控通信模块**
4G Cloud Monitoring
Communication Module

**电量综合保护模块**
Power Integrated Protection Module

## SmartGen 众智

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