

# BMB 定制模组系列

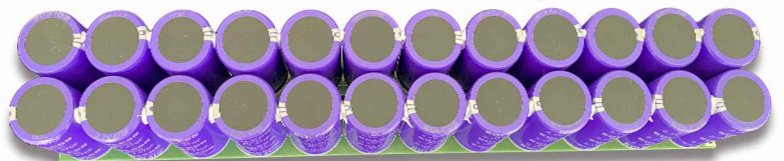
## BMB Customized Module Series

### 定制模组 Custom module

- 根据客户需求定制各种规格、尺寸模组产品，提供完整能源系统解决方案，满足客户不同储能、功率要求。
- According to customer needs, various specifications and sizes of module products are customized to provide complete energy system solutions to meet customers' different energy storage and power requirements.

### 模组设计案例 Designed module examples

产品型号 项目 Item	15V 80F	63V 20F	48V 165F
额定电压 Rated voltage	15.0V	63V	48V
额定容量 Rated capacity	80F	20F	165F
ESR <sub>DC</sub>	≤8.0mΩ	≤130mΩ	≤6.0mΩ
最大峰值电流 Maximum peak current	350A	175A	1990A
外包装方式 Outer packing	塑料套管热缩 Heat-shrinkable plastic sleeve	/	金属外壳 Metal case
绝缘耐压特性 Voltage withstand characteristic	直流DC: 1KV, 交流AC: 2.5KV		
工作温度范围 Operating temp. range	-40~+70℃		
均衡方式 Balancing mode	/	主动 Active	主动 Active
均衡开启电压 Balancing threshold voltage	/	2.70V	2.70V
尺寸 Size	202×36×75mm	433×72×65mm	416×190×217mm
应用领域 Field of application	汽车应急启动电源 The car started the emergency power supply	电力配电网网柜 Power distribution network ring network cabinet	风电变桨及其他储能系统 Wind turbine pitch and other energy storage systems



## 模组设计说明 Description of module design

### ● 单体分选 Cells separation

- ◆ 超级电容单体按容量及内阻进行分档，并对漏电流和自放电进行分选，以提高超级电容单体配组的精准度，提高模组产品的可靠性及稳定性。
- ◆ Cells can be classified by capacitance, internal resistance, leakage current and self discharge to improve precision of the group matching, so as to improve the reliability and stability of the module.

### ● 电路设计 Circuit design

- ◆ 功能：根据客户需求专门设计
- ◆ 性能：根据客户应用负载特性优化设计
- ◆ 均衡：主动+被动均衡
- ◆ 检测：单体过充检测、过温检测、反充检测等
- ◆ 通讯：根据客户需求，可设计 SPI、RS232、RS485、CAN、12C、SMBUS、以太网及光纤通讯等多种通讯方式同
- ◆ PCB：用料扎实，牢固，内阻小、过电流高、散热好
- ◆ 附加功能：监测每并模组电压、计算模组剩余容量、甚至每只单体剩余容量及健康状况等
- ◆ Function: design by client's requirement.
- ◆ Property: design by client's applicated load characteristic
- ◆ Balance mode: active and passitive
- ◆ Detection: cell's over-charge test, over temperature test, counter charging test, etc.
- ◆ Communication mode: designed according to client's requirement, such as mode of SPI、RS232、RS485、CAN、12C、SMBUS ethernet or optical fiber communication
- ◆ PCB: sturdy, firm, low internal resistance, high overcurrent, good property of heat dissipation
- ◆ Additional function: monitoring voltage of every parallel module, calculate surplus capacitance of module, and even surplus capacitance and conditions of each cell

### ● 结构设计 Structure design

- ◆ 单体与模组互相配合
- ◆ 采用CAM三维设计
- ◆ 结构简单，方便易装
- ◆ 牢固结实，强度高，抗破坏性强
- ◆ 辅助配件精挑细选，保证在恶劣的环境中也能正常使用
- ◆ Cells and module work in coordination
- ◆ Design by CAM 3D
- ◆ Simple structure, easy for packing
- ◆ Firm, high strength, good property of damage resistance
- ◆ Carefully choose accessories to ensure normal use in hostile environment.