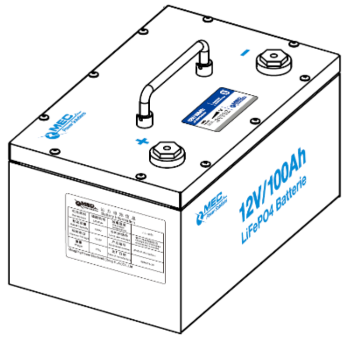
技术参数表 |Technical Data Sheet

磷酸铁锂电池组 | LiFePO4 Battery Packs



12V/100Ah 系列:

IP65 电池组配备智能电池管理系统 (BMS)，以确保稳定和高效率的充电及放电表现。电池组可使用专用的锂电池充电器充电。磷酸铁锂电池组是其中一种最安全的锂离子，以出色的电解表现和耐力而被广泛应用。

12V/100Ah Series:

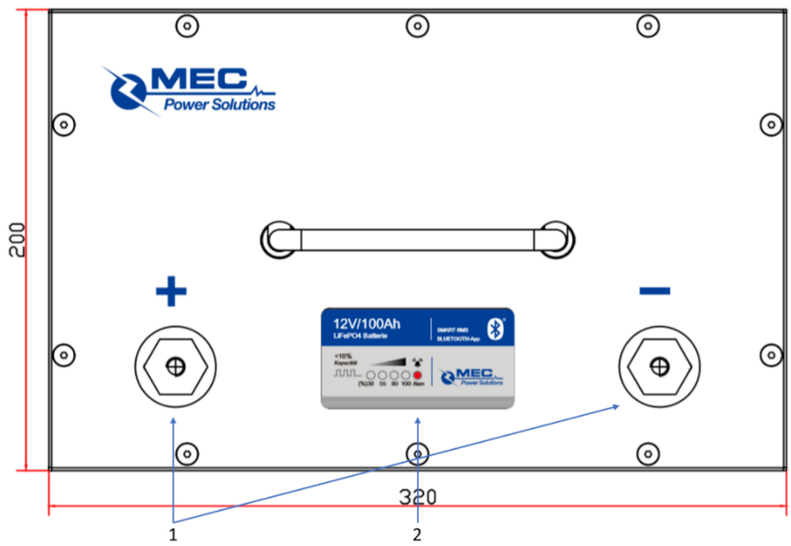
IP65 battery pack equipped with a smart battery management system (BMS) to ensure stable and highly efficient charge and discharge performance. It can be charged by a lithium-based battery charger. LiFePO4 is one of the safest Li-ions, recognized with the outstanding electrochemical performance and endurability.

产品特色 | Special Features

- 被动散热 | Passive cooling
- 自动被动电芯平衡 | Automatic passive cell balancing
- 在放电深度达 80% 状态下，>2000 次循环 | >2,000 cycles at 80% depth of discharge
- 过充、过放自动保护机制 | Automatic protection against overcharge or over-discharge
- 在高低温环境下自动关闭 | Automatic shut-off at unsafe temperatures
- 先进的蓝牙 APP 显示电池状态 | Advanced Bluetooth APP indicating battery status
- LED 指示灯显示电池容量和错误的警告 | LED Warning indicators showing battery capacity and errors

产品结构图 | Product Configuration

1. 充电端子 / 放电端子 **Charge / Discharge Terminal**	**2. LED 指示灯 (LED 4 to LED 0)** **LED Indicators (LED 4 to LED 0)**



技术参数 | Technical Specifications

常规技术参数 | General Specifications	
型号 | Model	12V/100Ah LiFePO4 电池 | Battery
电芯类型 | Cell Chemistry	3.2V/100Ah LiFePO4 棱柱状电芯 | Prismatic Cells
组合方式 | Cell Configuration	4S1P
额定容量 | Rated Capacity (Ah)	100Ah @0.2C 放电倍率 | Discharge Rate
正常电压 | Nominal Voltage (V)	12.8V
额定能量 | Rated Energy (kWh)	1.28kWh
电压范围 | Voltage Range (V)	11.2 – 14.4V
循环寿命 | Cycle Life	在 25ºC、放电深度达 80% 状态下，>2000 次循环 >2,000 cycles with 80% discharge depth at 25ºC
2,000 次充放电循环后的剩余电量 Remaining Capacity (%) after 2,000 Charge / Discharge Cycles	≥80% 初始容量 | of initial capacity

Pb-free RoHS conform

Mainland Energy Conversion Ltd.
电话：+852 2366 9610
邮箱：mec@mec-mainland.com
www.mec-powersolutions.com

充电 | Charging	
低温充电电流 Low Temperature Charge Current (A)	0.1C/10A @0°C to 10°C （充电持续电流 | Constant Current Charging）
标准充电 | Standard Charge Current (A)	0.2C/20A （充电持续电流 | Constant Current Charging）
最大充电电流 | Maximum Charge Current (A)	0.5C/50A （充电持续电流 | Constant Current Charging）
充电条件 | Charge Condition	@0°C to 45°C
放电 | Discharging	
标准放电 | Standard Discharge Current (A)	0.5C/50A （放电持续电流 | Constant Current Discharge）
最大放电电流 | Max. Discharge Current (A)	1C/100A （放电持续电流 | Constant Current Discharge）
放电条件 | Discharge Condition	@-10°C to 60°C
电池管理及通讯 | Battery Management & Communication	
电池管理 | Battery Management	电池管理系统 (BMS) 、电芯平衡、安全防护功能 Battery Management System (BMS) with cell balancing and safety protection features
蓝牙 APP | Bluetooth APP	先进的蓝牙APP显示电池状态 Advanced Bluetooth APP indicating battery status
警示灯 | Warning Indicators	LED 指示灯显示电池容量和错误的警告 LED Indicators showing battery capacity and errors
保护 / 耐用性 | Protection / Durability	
散热系统 | Heat Dissipation	被动散热 | Passive Cooling
电芯平衡 | Cell Balancing	自动 （被动） | Automatic (Passive)
安全 | Safety	过充、过放、过流、高低温保护 | Overcharge, over-discharge, over-current and unsafe operating temp. protection
外壳及端子 | Enclosure & Terminals	
外壳 | Enclosure	1.2mm 經电镀及喷粉处理的铁制外箱 1.2mm iron sheet, electro-plated and powder coated
防水等级 | IP Code	IP65
尺寸及重量 | Dimensions & Weight	200x320x178mm / 15kg
充放电端子 Charge- and Discharging Terminals	开放式接线柱 Opened-ended screw terminals
维护及贮存 | Maintenance & Storage	
维护 | Maintenance	每三个月定期对电池组进行充放电维护，确保电池处于最佳性能状态。 The battery pack should be charged and discharged fully once every 3-month.
在环境温度 -20°C 到 25°C 下 Storage Condition @ -20°C to 25°C	在 100% 电量状态，能储存 3 个月 Can be kept for 3 months at 100% capacity
在环境温度 -20°C 到 45°C 下 Storage Condition @ -20°C to 45°C	在 100% 电量状态，能储存 1 个月 Can be kept for 1 month at 100% capacity
质保及认证 | Warranty	
保修期 | Warranty	3 年 | Years

保护参数设置 | Battery Protection Parameters

指标项目 | Description	参数 | Value	采取措施 | Action
单体过充保护电压 Single Cell Voltage Upper Limit Alarm	3.6V	电池管理系统打开 => 停止充放电 BMS open => Stop charging/discharging
单体过放保护电压 Single Cell Voltage Lower Limit Alarm	2.8V	
总体过充保护电压 Total Voltage Upper Limit Alarm	14.4V	
总体过放保护电压 Total Voltage Lower Limit Alarm	11.2V	
充电 / 放电高温保护温度 Charge / Discharge Temperature Upper Limit Alarm	65°C	
充电 / 放电低温保护温度 Charge / Discharge Temperature Lower Limit Alarm	-20°C	
充电 / 放电过流保护电流 Charge / Discharge Current Upper Limit Alarm	120A	

Mainland Energy Conversion Ltd.
电话：+852 2366 9610
邮箱：mec@mec-mainland.com
www.mec-powersolutions.com

电池組充放电曲线图 | Battery Charge and Discharge Profile

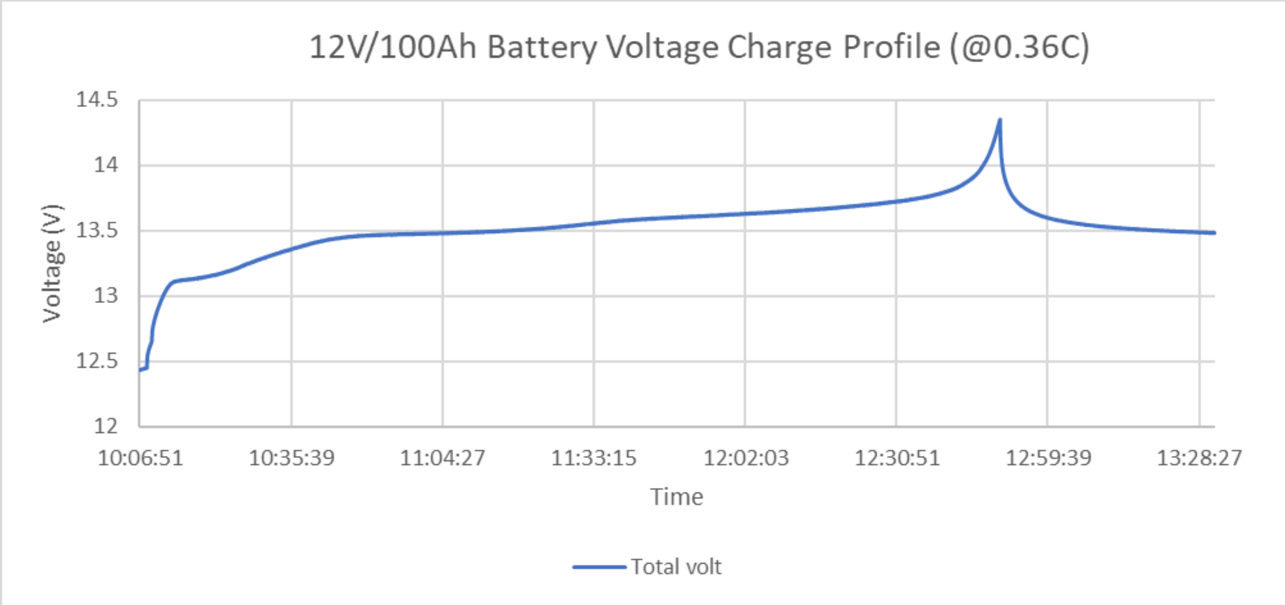


图1 12V/100Ah 电池电压充电曲线 (0.36C) | Figure 1 12V/100Ah Battery Voltage Charge Profile (0.36C)

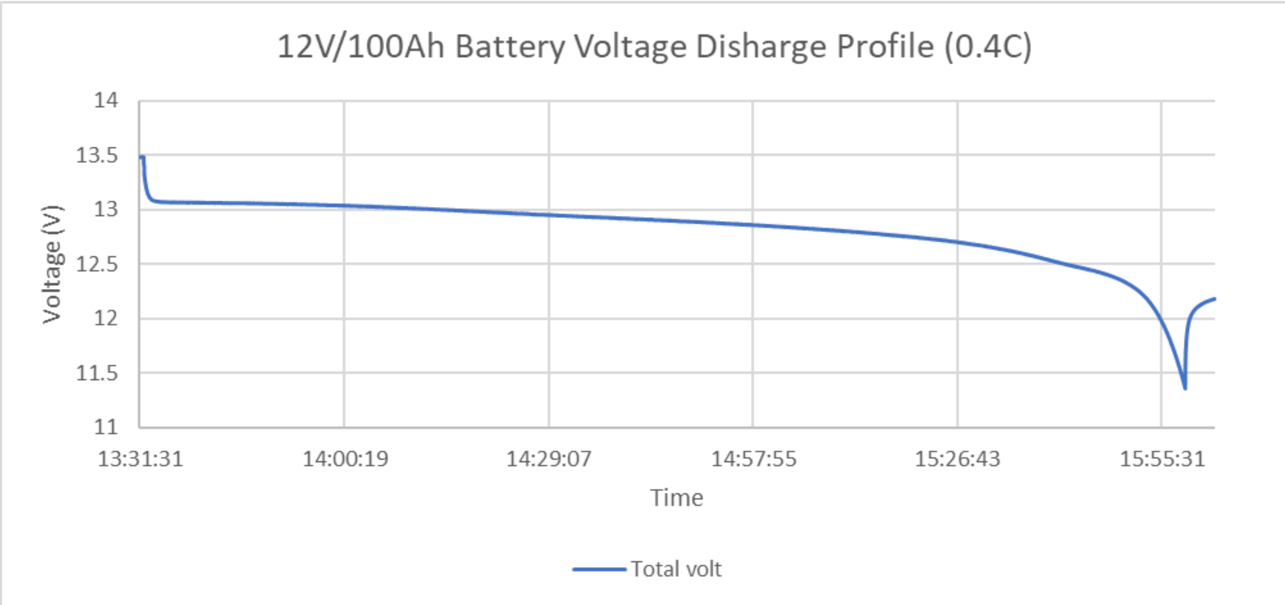


图2 12V/100Ah 电池电压放电曲线 (0.4C) | Figure 2 12V/100Ah Battery Voltage Discharge Profile (0.4C)

Mainland Energy Conversion Ltd.
电话：+852 2366 9610
邮箱：mec@mec-mainland.com
www.mec-powersolutions.com

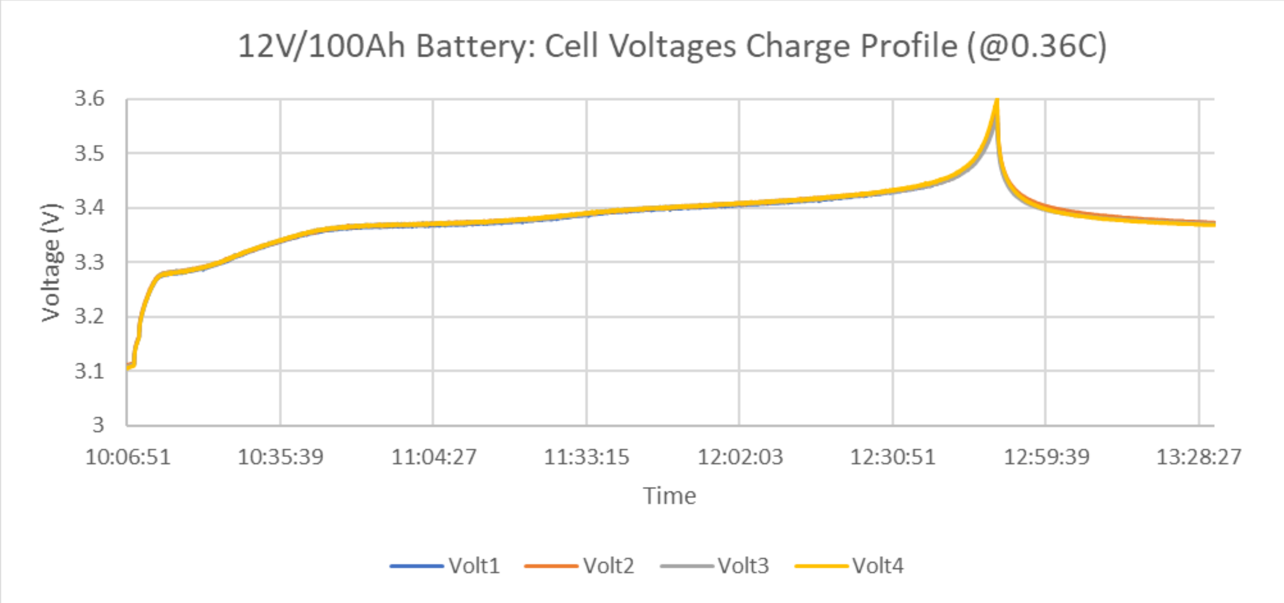


图 3 12V/100Ah 电芯电压充电曲线 (0.36C) | Figure 3 12V/100Ah Battery: Cell Voltages Charge Profile (0.36C)

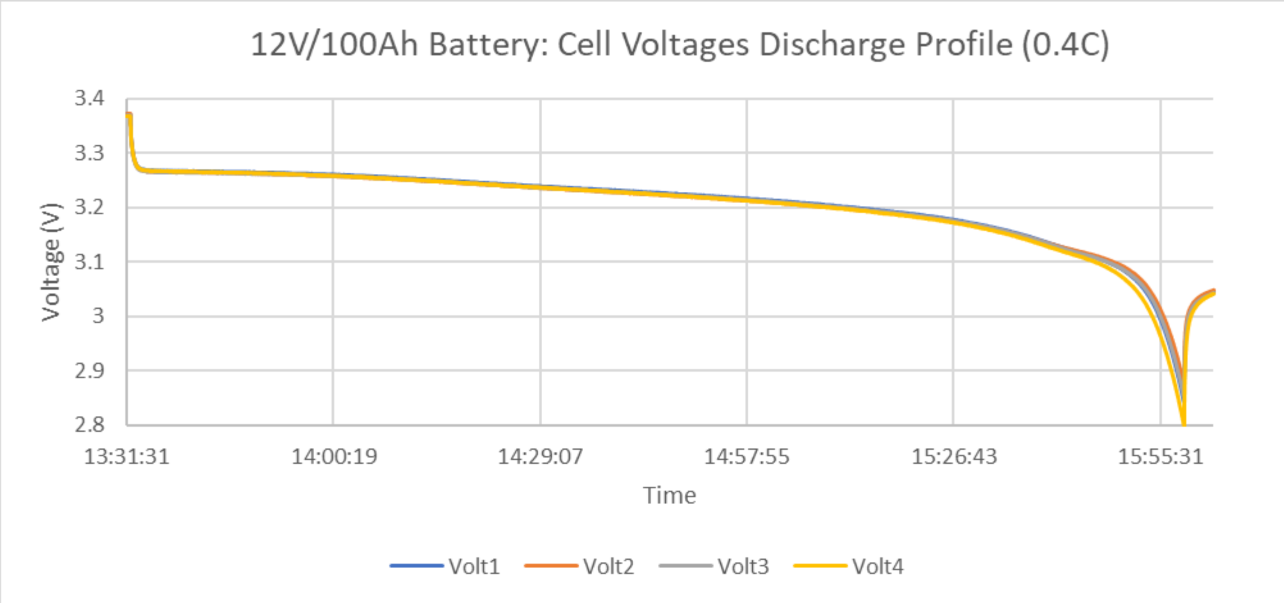


图 4 12V/100Ah 电芯电压放电曲线 (0.4C) | Figure 4 12V/100Ah Battery: Cell Voltages Discharge Profile (0.4C)

如图 1、图 2 所示，12V/100Ah 电池組充电时电压平台为 13V 到 14V，放电时电压平台为 13V 到 12V，电压平稳。此电池組为您的设备运作提供了稳定的电力来源。MEC 就每一个生产的电池組都耐心细致地进行了选择合适的电芯的工序。事实证明，如图 3、图 4 所示，电池組内置的电芯匹配良好。稳定的电芯性能降低了电容量损耗，提升了电池組整体的性能。希望大家喜欢 MEC 电池。

The 12V/100Ah battery pack has a smooth and steady voltage platform from 13V to 14V on charge, and from 13V to 12V on discharge, as shown in Figure 1 and Figure 2. The battery supplies you a stable source of energy for your device operation. MEC patiently and carefully selects the optimal cells for every battery pack produced. Figure 3 and Figure 4 show that the built-in cells within the battery are well matched. The consistent cell performance enhances the overall battery performance with reduced capacity loss. We hope you enjoy the battery packs labelled MEC.

客户支援 | Customer Supports

中国香港
亚太地区销售和客户服务
电话：+852 2366 9610
邮箱：mec@mec-mainland.com

技术咨询
Wilfried Steger
电话：+43 (0) 4242 55100-27
邮箱：w.steger@mec-energietechnik.at

如有技术上的修改，我们不作事先通知。我们不承担任何印刷错误的责任。
Subject to technical modifications. We assume no liability for misprints.