

LITHIUM IRON PHOSPHATE BATTERY



Cost Effectiveness



Fast Charge



Guaranteed Safety



Longer Service Life



Drop-in Replacement



BATTERY MODULE SPECIFICATION

Item		Specification	Conditions
Nominal	Voltage	48V	25°C, 0.2C
	Capacity	100Ah	
Module weight		45 KG	±0.3 KG
Dimensions(W*D*H), mm		442*440*134.5 (3U)	±2 mm
Operating parameters	Charging Voltage	53.5V	
	Discharging Voltage	42V	
	Charging current	Max constant charge: 50A	Recommend
	Discharging current	Max constant discharge: 50A Pulse discharge: 60A for 20S	Recommend 10A
Temperature	Charge range	0°C~45°C	
	Discharge range	-20°C~60°C	
	Storage range	-20°C~45°C	
BMS	Built-in BMS	Voltage, Current, Temperature management & cell balance	RS485 communication
Service life	Design life	> 10 years	
	Cycle life (90%DOD to 80% end)	> 4000 times	0.2C, 25°C
	Cycle life (100%DOD to 50% end)	> 6000 cycles	@0.5C, 25°C

BMS SPECIFICATION

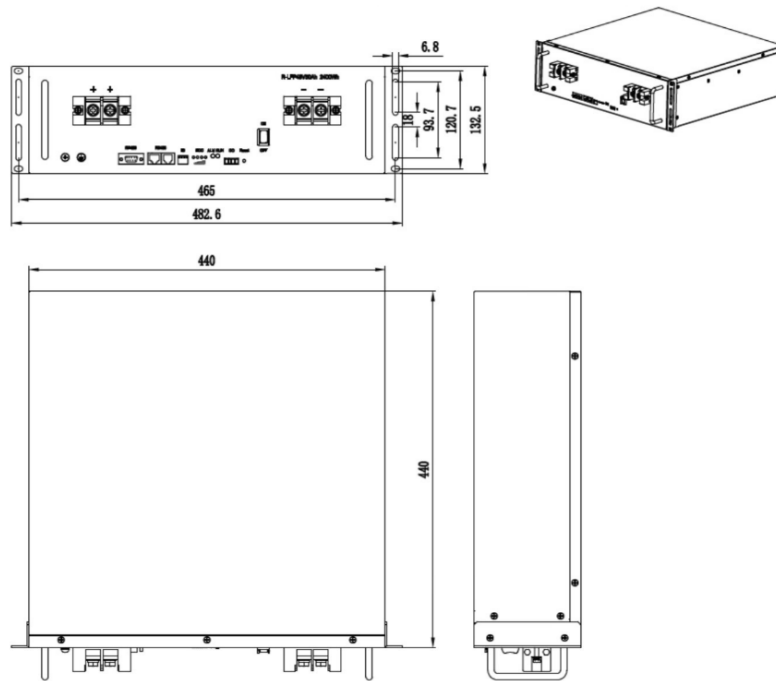
BMS provides complete management and protection for the battery

- Voltage warning and protection for module and each single cell.
- Current warning and protection, and the maximum operating current can be customized.
- Temperature warning and protection, 2sensors for battery pack and 1 sensor for BMS.
- Battery module SOC and SOH calculation, display the accurate battery status.
- Communicate with the SMPS or monitor device, report the battery data.
- Pre-charge logic, make sure safety charge for the module if under low voltage condition.
- Switch-off mode, sleep mode, and operating mode, different mode for different condition.

BMS parameters

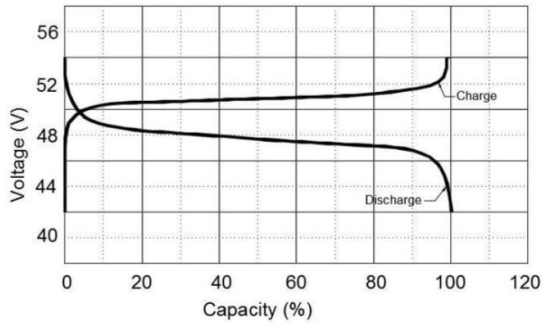
Item		Parameters		Condition
Charge	Cell voltage protection	3.8V	Delay 1~2S	Recover when charge current > 1A or Cell voltage < 3.6V or module voltage < 54V
	Module voltage protection	57.0V	Delay 1~2S	
	Over discharging current	≤ 100A		Turn to pre-charge mode and try to recover in every 3min
	Temperature protection	< -10°C or > 70°C	Delay 1~2S	Recover when > 0°C or < 60°C
Discharge	Cell voltage protection	2.3V		Recover when charge current > 1A or Cell voltage > 3.1V or module voltage > 46.5V
	Module voltage protection	42.0V	Delay 1~2S	
	Over discharging current 1	110A~120A	Delay 20S	Recover when charging current > 1A, or recover in every 60S
	Over discharging current 2	180A~600A	Delay 2~3S	
	Short circuit	> 600A	Delay 0.3mS	
	Temperature protection	< -20°C or > 75°C	Delay 1~2S	Recover when > -10°C or < 65°C
BMS	PCB Temp protection	> 90°C	Delay 1~2S	Recover when < 75°C
	Cell balance	150mA	Passive balance	Cell voltage difference > 40mV
	Temperature accuracy	±2°C	Cycle measurement	Measuring range -40~100°C
	Voltage accuracy	±20mV	Cycle measurement	For cells and module
	Current accuracy	FSC±5%	Cycle measurement	Measuring range -200~+200°C
	SOC	5%		Integral calculation
	Power consumption with different condition	< 300uA	Switch-off mode	Storage & Transportation
		< 500uA	Sleep mode	Protection & Stand-by
		< 15mA	Operating mode	Operating
< 28mA		Pre-Charge mode	Low voltage to start Pre-charge	
Communication ports	RS485		Can be customized to match the device	

PICTURES

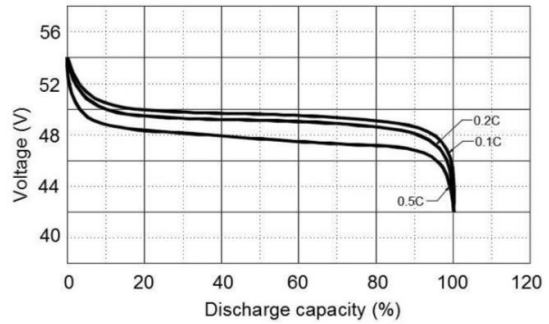


BATTERY MODULE PERFORMANCE CURVE

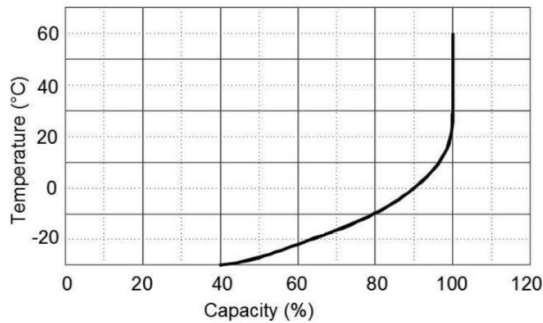
Charge & Discharge curve with 0.5C @ 25°C



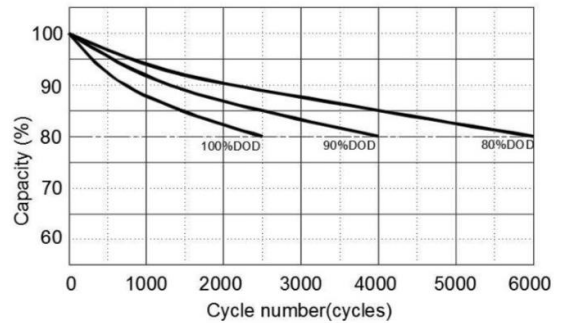
Discharge performance with different rate @ 25°C



Discharge capacity with different temperature @ 0.5C



Cycle life with DOD @ 0.5C, 25°C



Self-discharge @ different temperature

