

# MERITSUN<sup>®</sup>

## Powerwall Home Battery

### Product Specification



This Specification is Applied to the MeritSun Powerwall Home Battery Series Only.

## Product & Model

Product Name : LiFePO4 Battery Pack

Model : LFP100-48/51.2      48/51.2V 100Ah (5KWH)

LFP150-48/51.2      48/51.2V 150Ah (7KWH)

LFP200-48/51.2      48/51.2V 200Ah (10KWH)

## 48V Package



Battery Model		LFP100-48	LFP150-48	LFP200-48
Configuration Method		3.2V 15S		
Rated Capacity	Typical	100Ah	150Ah	200Ah
	Minimum	100Ah	150Ah	200Ah
Nominal Voltage		49.5-50.5V		
Cut-Off Voltage		40-42.5V		
Charging Voltage		53.2-54V		
Internal Impedance		≤50mΩ		
Standard Charge		Constant Current 20A Constant Voltage 0.01CA Cut-off		
Standard Discharge		Constant Current : 20A End Voltage		
Max. Continuous Charge Current		100A		
Max. Continuous Discharge Current		100A		
Operation Temperature		Charge: 0~45°C Discharge: -20~55°C		
Storage Temperature		Less than 12 Months : -10~35°C Less than 3 Months: -10~45°C Less than 7 Day : -20~65°C		
Volumetric Specific Energy		100 WH/L	95WH/L	127WH/L
Gravimetric Specific Energy		99WH/KG	90WH/KG	109WH/KG
Cycle Life		≥6000 Cycle		
Parallel Connection		Support 15pcs (Max. 16pcs)		
Dimensions		480*450*222 mm	480*650*242mm	480*650*242 mm
Net Weight		48kg	70kg	88kg

## 51.2V Package



Battery Model	LFP100-51.2	LFP150-51.2	LFP200-51.2	
Configuration Method	3.2V 16S			
Rated Capacity	Typical	100Ah	150Ah	200Ah
	Minimum	100Ah	150Ah	200Ah
Nominal Voltage	52.8-53.9V			
Cut-Off Voltage	42.5-45.5V			
Charging Voltage	56.8-57.6V			
Internal Impedance	≤50mΩ			
Standard Charge	Constant Current 20A Constant Voltage 0.01CA Cut-off			
Standard Discharge	Constant Current : 20A End Voltage			
Max. Continuous Charge Current	100A			
Max. Continuous Discharge Current	100A			
Operation Temperature	Charge: 0~45°C Discharge: -20~55°C			
Storage Temperature	Less than 12 Months : -10~35°C Less than 3 Months: -10~45°C Less than 7 Day : -20~65°C			
Volumetric Specific Energy	65 WH/L	95WH/L	127WH/L	
Gravimetric Specific Energy	61.2WH/KG	90WH/KG	109WH/KG	
Cycle Life	≥6000 Cycle			
Parallel Connection	Support 15pcs (Max. 16pcs)			
Dimensions	480*650*242 mm	480*650*242mm	480*650*242 mm	
Net Weight	51kg	74.5kg	92.75kg	

## BMS Features

1. This BMS is Designed For 15/16 Series Lithium Battery.
2. This BMS is Features With:
  - Overcharge Detection Function
  - Over Discharge Detection Function
  - Over Current Detection Function
  - Short Detection Function
  - Temperature Detection Function
  - Balance Function
  - Communicate Function
  - Alarm Function

## BMS Parameter

### 48V 15S / 16S Typical Value Specifications

Items	Details	Standard
Cell Overcharge Protection	Overcharge Detection Voltage	3.70±0.025V
	Overcharge Detection Delay Time	Typical:1.0s
	Overcharge Release Voltage	3.45±0.02V
Cell Over-Discharge Protection	Over-Discharge Detection Voltage	2.75±0.02V
	Over-Discharge Detection Delay Time	Typical:1.0s
	Over-Discharge Release Voltage	3.05±0.02V or Charge Release

## 48V 15S / 16S Typical Value Specifications

Items	Details	Standard
Over-Current Protection	Discharge Over-Current Protection Current1	120±10A
	Discharge Over-Current Detection Delay Time 1	1S
	Discharge Over-Current Protection Current2	150±10A
	Discharge Over-Current Detection Delay Time2	3.45±100ms±0.02V
	Charge OC Protection Current	120±10A
Short Protection	Short Protection Current	350±10A
	Protection Condition	Load short
	Detection Delay Time	≤800us
	Protection Release Condition	Charging release
Temperature(T) Protection	Charge High (T) Protection	65±2 ℃
	Charge High (T) Recover	60±5 ℃
	Discharge High (T) Protection	65±2 ℃
	Discharge High (T) Recover	60±5 ℃
	Charge Low (T) Protection	-5±2 ℃
	Charge Low (T) Recover	0±2 ℃
	Discharge Low (T) Protection	-20±5 ℃
	Discharge Low (T) Recover	-15±5 ℃
Balance	Balance Threshold Voltage	3.45V
Communication	It Has RS232 And RS485 Standard Communication Interface, It Can Real-Time Monitoring The Capacity Of Battery Bank, The Voltage, Current, Environment Temperature, And Charging / Discharging Current.	
Alarm	It Has Over-Temperature, Over Charge, Under-Voltage, Over-Current, Short Circuit Alarm Function.	



## Discharge & Charge Curve





