



12.8V 100Ah LiFePO₄ Battery

Model: W-B100

FEATURES

- Longevity of service
- IP65 waterproof and dustproof
- Flame retardant rating: UL94 V-0 (Plastic shell)
- Green energy without metal contaminant
- Extremely high number of charge / discharge cycles
- Lightweight, small size
- In the extreme performance safety test, the battery will not catch fire, explode, or leak, and will be safer to use
- Sophisticated Battery Management System (BMS)



BMS OPERATION

Typical Charging Current	50A
Maximum Charging Current	100A
Typical Discharge Current	50A
Maximum Discharge Current	100A
Maximum Charge Voltage(CC/CV)	14.4V

Over Charge Protection

Voltage(Cell)	3.75V±0.03V
Delay Time	1000ms±500ms
Recovery Voltage(Cell)	3.55V (Min 3.40V, Max 3.60V)

Over Discharge Protection

Voltage(Cell)	2.20V±0.08V
Delay Time	1000ms±500ms
Recovery Voltage(Cell)	2.70V±0.10V
Over Discharge Protection Release Conditions	Disconnect load or charge release

Over-Current Charge

Primary Charge Over Current Protection Value	180A±50A
First Stage Charge Over Current Delay	1000ms±500ms
Over-current Charge Release Conditions	Disconnect the charger

Over-Current Discharge

Primary Discharge Over Current Protection Value	900A±200A
Primary Discharge Over Current Protection Delay	10ms±5ms
Secondary Discharge Over Current Protection Current Value	1800A±400A
Secondary Discharge Over Current Protection Delay	1000us±500us
Over-current Discharge Release	Disconnect load or charge release

Short Circuit

Short Circuit Protection Value	3600±600A
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Short Circuit Protection Delay Time 200µs~800µs

Short Circuit Protection Recovery Disconnect load or charge release

Discharge High Temperature Protection

Temperature Protection Value 167°F±9°F / 75°C±5°C

Temperature Protection Release Value 136.4°F±9°F / 58°C±5°C

Charging High Temperature Protection

Temperature Protection Value 129.2°F±9°F / 54°C±5°C

Temperature Protection Release Value 120.2°F±9°F / 49°C±5°C

Charging Low Temperature Protection

Temperature Protection Value 32°F±9°F / 0°C±5°C

Temperature Protection Release Value 41°F±9°F / 5°C±5°C

High Temperature Protection Of FET(Built-in)

Temperature Protection Value 179.6°F~208.4°F / 82°C~98°C

Temperature Protection Release Value 122°F~176°F / 50°C~80°C

Balance Function

Equalizing Opening Voltage 3.50V±0.05V

Min Balance Current 150mA

Max Balance Current 250mA

Operation Temperature -4°F~167°F / -20°C~75°C

Storage Temperature 23°F~104°F / -5°C~40°C
(Humidity below 70%, time ≤ 1 year)

Heating Function

The voltage of the charger must be greater than 1V compared to the battery voltage. When the charging low temperature protection is reached, the heating is turned on. When the temperature reaches the charging low temperature protection release value, the heating is turned off.

SPECIFICATIONS

Battery Type LFP Battery

Nominal Voltage 12.8V

Nominal Capacity 100Ah

Minimum Capacity 100Ah

Nominal Energy 1280Wh

Charging Voltage 14.4V

Discharging Cutoff Voltage 11.2V

Standard Charging Current 50A

Maximum Charging Current 100A

Standard Discharge Current 50A

Continuous Discharge Current 100A

Maximum Discharge Current 100A

Shell Material Plastic Shell

Weight About 24.3lb/11.0kg

Initial AC (1000HZ) Internal Resistance ≤50mΩ, New battery within 3 months, ACIR, 1000HZ

Monthly Self-Discharge Rate ≤5%

Overall Dimensions 10.2x6.6x8.3in

Cycle Life(Times)(77°F±3.6°F) ≥3200

Charging Temperature

30A 32°F~50°F / 0°C~10°C

50A 50°F~68°F / 10°C~20°C

100A 68°F~104°F / 20°C~40°C

30A 104°F~131°F / 40°C~55°C

Discharge Temperature -4°F~140°F / -20°C~60°C (The surface temperature of the cell should not exceed 140°F)

Storage Temperature -22°F~131°F / -30°C~55°C 90%RH Max (Less than 1 month)
14°F~113°F / -10°C~45°C 90%RH Max (More than 3 months)

Recommended Storage Temperature 14°F~95°F / -10°C~35°C 85%RH Max (Battery life decreases when stored in high temperature)

If the battery needs to be stored for a long time (more than 3 months), it should be stored in an environment which require temperature at a range of 14°F to 95°F (-10 to 35°C) @ 85% RH Max and no corrosive gases. It is recommended to charge and discharge the battery every 3 months and keep the SOC between 40~50%.