ALPHA 1
Lithium Battery
Lithium Iron Phosphate Battery

1280Wh
Nominal Energy

100Ah
Nominal Capacity

12.8V
Nominal Voltage

50A
Max Charge Current

FEATURES

- Internal heat technology
- Longevity of service
- Real-Time Monitoring
  Monitors the battery operation status on mobile devices in real time with the built-in Bluetooth module.
- IP65 waterproof and dustproof rating
- Flame retardant rating: UL94 V-0 (Plastic shell)
- Green energy without metal contaminant
- Extremely high number of charge / discharge cycles
- Light weight, Small size
- In the extreme performance safety test, the battery will not catch fire, explode, leak, and be safer to use
- Sophisticated Battery Management System (BMS)
BMS OPERATION

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

Over Charge Protection
Voltage (Cell) 3.65V±0.05V
Delay Time 2000mS±1000mS
Recovery Voltage (Cell) 3.55V±0.10V

Over Discharge Protection
Voltage (Cell) 2.50V±0.10V
Delay Time 2000mS±1000mS
Recovery Voltage (Cell) 3.00V±0.10V

Over-Current Charge
Primary Charge Over Current Protection Value 110A±5A
First Stage Charge Over Current Delay 10S±3S
Over-current Charge Release Conditions Automatic recovery after a delay of 3S

Over-Current Discharge
Primary Discharge Over Current Protection Value 110A±5A
Primary Discharge Over Current Protection Delay 10S±3S
Secondary Discharge Over Current Protection Current Value 350A±90A
Secondary Discharge Over Current Protection Delay 300mS±200mS
Over-current Discharge Release Automatic recovery after a delay of 32S

Short Circuit Protection Delay Time 560μS-960μS
Short Circuit Protection Recovery Recover by releasing load after approximately 5s

Discharge High Temperature Protection
Temperature Protection Value 65°C±5°C
Temperature Protection Release Value 60°C±5°C

Low Temperature Protection Of Discharge
Temperature Protection Value -20°C±5°C
Temperature Protection Release Value -10°C±5°C

Charging High Temperature Protection
Temperature Protection Value 55°C±5°C
Temperature Protection Release Value 50°C±5°C

Charging Low Temperature Protection
Temperature Protection Value 5°C±5°C
Temperature Protection Release Value 10°C±5°C

High Temperature Protection Of Fet (Built-in)
Temperature Protection Value 95°C-110°C
Temperature Protection Release Value 60°C-90°C
Balance Function
Equalizing Opening Voltage 3.45V±0.05V
Equalize The Opening Pressure Difference 15mV
Min Balance Current 150mA
Max Balance Current 300mA
Storage Temperature Passive equalization
Heating Function 100W

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 50A
Standard Discharge Current 50A
Continuous Discharge Current 100A
Maximum Discharge Current 100A
Shell Material Plastic Shell
Weight 24.0lb
Initial AC (1000HZ) Internal Resistance ≤50mΩ
Monthly Self-Discharge Rate ≤5%
Overall Dimensions 10.2x6.6x8.3in
Cycle Life (Times) (25°C±2°C) ≥3200; Capacity Retention ≥80%
Charging Temperature (0°C-10°C) 30A
10°C-20°C 50A
20°C-40°C 50A
40°C-55°C 30A
Discharge Temperature -20°C-60°C (The surface temperature of the cell should not exceed 60°C)

Storage Temperature
-30°C-55°C 90%RH Max (Less than 1 month)
-10°C-45°C 90%RH Max (More than 3 months)
Recommended Storage Temperature -10°C-35°C 85%RH Max (Battery life decreases when stored in high temperatures.)