ALPHA 1

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
- 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, or leak, and will 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 Charge 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 Discharge Protection Release Conditions	Voltage self-recovery or charge recovery
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 recover after a delay of 32S
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 recover 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℃±5℃
Temperature Protection Release Value	60℃±5℃
Low Temperature Protection Of Discharge	
Temperature Protection Value	-20℃±5℃
Temperature Protection Release Value	-10℃±5℃
Charging High Temperature Protection	
Temperature Protection Value	55℃±5℃
Temperature Protection Release Value	50℃±5℃
Charging Low Temperature Protection	
Temperature Protection Value	5℃±5℃
Temperature Protection Release Value	10℃±5℃
High Temperature Protection Of Fet(Built-in)	
Temperature Protection Value	95℃-110℃
Temperature Protection Release Value	60℃-90℃
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	100A
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℃±2℃)	≥3200; Capacity Retention≥80%
Charging Temperature	
(0℃~10℃)	30A
10℃~20℃	50A
20℃~40℃	50A
40℃~55℃	30A
Discharge Temperature	-20℃~60℃ (The surface temperature of the cell should not exceed 60℃)
Storage Temperature	-30℃~55℃ 90%RH Max (Less than 1 month) -10℃~45℃ 90%RH Max (More than 3 months)
Recommended Storage Temperature	-10℃~35℃ 85%RH Max (Battery life decreases when stored in high temperature)