1-800-831-9889
www.richsolar.com
support@richsolar.com
5550 Jurupa St, Ontario, CA 91761

ALPHA 2 PRO

12.8V 200Ah LiFePO4 Battery

FEATURES

- Internal heat technology
- Longevity of service
- ETL Certification
- Real-Time Monitoring

  Monitors the battery operation status on mobile devices in real time with the built-in Bluetooth module
- IP55 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)

Intertek 5029113

CONFORMS TO ANSI/CAN/UL 1973

BMS OPERATION

Typical Charging Current	100A
Maximum Charging Current	200A
Typical Discharge Current	100A
Maximum Discharge Current	200A
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±0.05V
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	Charge recovery or Voltage self recovery within 60s±20s
Over-Current Charge	
Primary Charge Over Current Protection Value	220A±10A
First Stage Charge Over Current Delay	10s±3s
Over-current Charge Release Conditions	Automatic recovery after a delay of 32s±7s
Over-Current Discharge	
Primary Discharge Over Current Protection Value	220A±10A
Primary Discharge Over Current Protection Delay	10s±3s
Secondary Discharge Over Current Protection Current Value	660A±160A
Secondary Discharge Over Current Protection Delay	320ms±150ms
Over-current Discharge Release	Automatic recovery after a delay of 32s±7s
Short Circuit	
Short Circuit Protection Value	2000±500A
Short Circuit Protection Delay Time	560μs-960μs
Short Circuit Protection Recovery	Recovery by releasing load after approximately 5s±2s
Discharge High Temperature Protection	
Temperature Protection Value	149°F±9°F / 65°C±5°C
Temperature Protection Release Value	140°F±9°F / 60°C±5°C
Low Temperature Protection Of Discharge	
Temperature Protection Value	-4°F±9°F / -20°C±5°C
Temperature Protection Release Value	14°F±9°F / -10°C±5°C

RICH SOLAR | ALPHA™ Series Batteries

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Charging High Temperature Protection	
Temperature Protection Value	131˚F±9˚F / 55℃±5℃
Temperature Protection Release Value	122˚F±9˚F / 50℃±5℃
Charging Low Temperature Protection	
Temperature Protection Value	41˚F±9˚F / 5℃±5℃
Temperature Protection Release Value	50˚F±9˚F / 10℃±5℃
High Temperature Protection Of FET(Built-in)	
Temperature Protection Value	212˚F-230˚F / 100℃-110℃
Temperature Protection Release Value	176˚F-194˚F / 80℃-90℃
Balance Function	
Equalizing Opening Voltage	3.45V±0.05V
Equalize The Opening Pressure Difference	15mV
Min Balance Current	40mA
Max Balance Current	100mA
Operation Temperature	-4˚F-167˚F / -20℃-75℃
Storage Temperature	23˚F-104˚F / -5℃-40℃ (Humidity below 70%, time ≤ 1 year)
Heating Function	
Heat the Opening Temperature	≤5℃
Heating Opening Conditions	charge
Heating And Closing Conditions	Disconnect the charger or Temperature ≥10℃
Heating Function	100W

SPECIFICATIONS

Battery Type	LFP Battery
Nominal Voltage	12.8V
Nominal Capacity	200Ah
Minimum Capacity	200Ah
Nominal Energy	2560Wh
Charging Voltage	14.4V
Discharging Cutoff Voltage	11.2V
Standard Charging Current	100A
Maximum Charging Current	200A
Standard Discharge Current	100A
Continuous Discharge Current	200A
Maximum Discharge Current	200A
Shell Material	Plastic Shell
Weight	About 52.9lb/24.0kg
Initial AC (1000HZ) Internal Resistance	≤50mΩ, New battery within 3 months, ACIR, 1000HZ
Monthly Self-Discharge Rate	≤5%
Overall Dimensions	20.9x8.1x8.5in
Cycle Life(Times)(25℃±2℃)	≥7000
Communication Mode	Bluetooth
Charging Temperature	
60A	32˚F-50˚F / 0℃-10℃
100A	50˚F-68˚F / 10℃-20℃
200A	68˚F-104˚F / 20℃-40℃
60A	104˚F-131˚F / 40℃-55℃
Discharge Temperature	-4˚F-140˚F / -20℃-60℃ (The surface temperature of the cell should not exceed 60℃)
Storage Temperature	-22˚F-131˚F / -30℃-55℃ 90%RH Max (Less than 1 month) 14˚F-113˚F / -10℃-45℃ 90%RH Max (More than 3 months)
Recommended Storage Temperature	14˚F-95˚F / -10℃-35℃ 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%.