

51.2V 100Ah

Lithium Iron Phosphate Battery

MODEL: RS-A10BT



FEATURES

- Internal heat-dissipation technology
- Long service life
- IP65 waterproof and dustproof
- Flame retardant certification: UL94 V-0
- Green energy without metal contaminants
- Exceptionally high charge / discharge cycle durability
- Superior safety in extreme performance tests: no fire, explosion, or leakage risks
- Sophisticated Battery Management System (BMS)
- Independent battery design / Scalable expansion of lithium-ion battery

SPECIFICATIONS

Nominal Voltage	51.2V
Typical Capacity	100Ah
Dimensions	24.5×21.7×8.4in
Weight	About 116.8lb
Discharge Current	150A
Recommend UPS Discharge Termination Voltage	40V
Recommend Charging Voltage	56V
Maximum Charging Current	100A

Recommend Charging Current

Battery pack at 32°F~41°F	20A
Battery pack at 41°F~113°F	30A
Above 113°F	20A

Standard Charging Method	0.2C CC(constant current) to FC, then CV(constant voltage FC) till the charging current drops to ≤0.05C
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Inner Resistance	≤20mΩ
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Operation Environment Temperature Range

Charge	32°F~122°F (Temperature Protection values is 32°F & 140°F on the cell surface)
Discharge	32°F~122°F (Temperature Protection values is -4°F & 176°F on the cell surface)

Storage Temperature Range

-4°F~77°F	< 18 months (Max. 80%RH)
77°F~113°F	< 3 months (Max. 80%RH)
113°F~140°F	< 1 month (Max. 80%RH)

68°F±9°F	The recommended storage temperature
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Shelf Life	18 months in ship mode(-4°F~77°F, Max. 80%RH)
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Environment humidity Range	20%RH~80%RH
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IP rating requirement	IP20
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BMS OPERATION

Balancing

Balance Start Voltage	Cell ≥ 3380 mV
Balance Start Voltage Difference	Active: ≥50mV, Rest: ≥25mV
Balance Off Voltage Difference	Active: ≤40mV, Rest: ≤20mV

Current

Charge Balance Current for Single Cell	40~60mA
Self-discharge Current (Active mode)	≤50mA
Self-discharge Current (Shutdown mode)	≤50uA
Pre-charge Current (For parallel connection)	2A
Max Charge/Discharge Current	100A/150A

Over Charge Protection

Over Charge Protection Voltage	3.8V±0.025V/Cell
Over Charge Protection Delay Time	2s
Over Charge Release Voltage	3.45V±0.025V/Cell

Over Discharge Protection

Over Discharge Protection Voltage	2.3V±0.1V/Cell
Over Discharge Protection Delay	1s
Over Discharge Release Voltage	2.5V ± 0.1V/Cell. The battery will start charging or recover automatically when the minimum cell voltage recovers to 3.35V ± 0.1V/Cell.

Charge Over Current Protection

Charge Over Current Protection Current (1)	110A±11A
Charge Over Current Protection Delay (1)	10s
Charge Over Current Protection Current (2)	125A±12A
Charge Over Current Protection Delay (2)	2s
Charge Over Current Protection Release	After 5s release

Discharge Over Current Protection

Discharge Over Current Protection Current (1)	240A±24A
Discharge Over Current Protection Delay (1)	2s
Charge Over Current Protection Current (2)	After 5s release

Short-circuit Current Protection

Short-circuit Current Protection Current	600A (typical)
Short-circuit Current Protection Release	1, If output voltage>4V, release and enter predischage. 2, Other, release after 60s

Charge Over Temperature Protection

Charge High Temperature Protection	>140±5.4°F
Charge High Temperature Release	<131±5.4°F
Charge Low Temperature Protection	<32±5.4°F
Charge Low Temperature Release	>37.4±5.4°F

Discharge Over Temperature Protection

Discharge High Temperature Protection	>176±5.4°F
Discharge High Temperature Release	<140±5.4°F
Discharge Low Temperature Protection	<-4±5.4°F
Discharge Low Temperature Release	>5±5.4°F

FET Over Temperature Protection

FET High Temperature Protection	>248±5.4°F
FET High Temperature Release	<194±5.4°F