

Product Model:

SNP-48100-1

Specification:

51.2V 100Ah

Please read through this user manual before using the product and keep the manual for future use.

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This product is made of high quality lithium battery as the main energy storage, high cycle life and use the spray of cold rolled steel sheet as enclosure, the built-in battery intelligent management system, higher reliability, to provide comprehensive communication function, Compatible with all kinds of mainstream brands in the market inverter. The product is widely used in various energy storage scenarios and fields.

Rechargeable Lithium-ion Battery Specification

Scope:

This product specification has been prepared to specify the rechargeable Lithium-ion battery to be supplied to the customer by Sunnew Energy Technology Co.,Ltd.

Technical Specifications:

Item	Specification	Remark	
Boundary Dimension (mm) (L x W x H)	L: 420, W: 175, H: 600		
Serial-Parallel Mode	16S1P		
Basic parameter	Nominal Voltage	51.2 V	
	Typical Capacity	100 Ah (5120 Wh)	At 0.2C
	Inner Resistance	≤60 mΩ	AC 1kHz
	Working Voltage Range	44.8~58.4 V	
Charging Input	Charge Method	CC & CV	
	Charge Voltage	58.4 V	
	Standard Charge Current	20 A	
	Max. Continuous Charge Current	100 A	
Discharging Output	Discharge Cut-off Voltage	44.8 V	
	Standard Discharge Current	20 A	
	Max. Continuous Discharge Current	100 A	
Main Shell Material	SPCC		
IP Class	IP51		
Cooling Method	Air Cooling		
Net Weight	Approx. 46kg		
Environmental Requirement	Operation Temperature Range	Charge: 0°C~45°C	
		Discharge: -20°C~60°C	

Environmental Requirement	Storage Temperature Range	15°C~25°C: ≤12 Months
		0°C~35°C: ≤3 Months
	Storage Humidity	-20°C~45°C: ≤1 Months 15% - 85% RH

Standard Test Conditions:

Testing Conditions

- Test should be implemented with new batteries within 7 days of delivery, and the cells shall be cycled less than 5 times before the test.
- Test should be performed per the conditions described in **Environmental Conditions**.

Environmental Conditions

Item	Conditions
Temperature	25 ±2°C
Humidity	60 ±20% RH

Standard Test Method

- Standard Charge:** At standard testing condition, 0.2C constant current charge to FC (Fully Charge Voltage), then constant voltage charge mode, cut off current 0.02C. Charging is to be performed at 25±2 °C unless otherwise noted.
- Standard Discharge:** At standard testing condition, 0.2C constant current discharge, cut off current FD (Fully Discharge Voltage). Discharging is to be performed at 25 °C ± 2 °C unless otherwise noted.
- Cycle life Charge / Discharge Condition:** Battery shall be charged according *point 1* and discharged according to *point 2* within 0.5~1h after full charge, Repeat above steps. Within 0.5~1h shelving period is required after each charge and discharge.

General Performance:

Item	Conditions	Request
Initial Capacity	Battery shall be charged according to the <u>Standard Charge</u> and discharged according to the <u>Standard Discharge</u> within 0.5~1h after full charge.	C (initial) ≥ 98Ah
Capacity Retention	At standard testing condition, battery shall be charged according to the <u>Standard Charge</u> . Lay the battery opened circuit 28 days, and then discharged according to the <u>Standard Discharge</u> .	C (remaining) ≥ C (initial) *85%
Cycle Life	At standard testing condition, battery shall be charged and discharged according to the <u>Cycle life Charge / Discharge Condition</u> , repeat the above steps until 3000 cycles.	C (6000 cycles) ≥ 80% *C (Initial)

Storage Performance	Stored for 1 hour after standard charge, discharge at 0.2C for 2 hours, store the battery for 90 days at 20°C ±5°C. Stored for 1 hour after standard charge, then discharge at 0.2C, at least 5 cycles, one of the 5 cycles reaches the standard means the battery has reached the standard.	Capacity (recovery) ≥ C (initial)* 90%
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Operating Instruction and Requirements:

Charging Input Operation Equirements

1. Charging shall be down by voltage less than that specified in the product specification. Charging beyond the max charging voltage, which is the absolute maximum voltage, must be strictly prohibited. The charger shall be designed to comply with this condition.
2. Charging current should be less than the maximum charge current specified in the product specification.
3. Reverse charging is prohibited. The power shall be connected correctly..
4. The power shall be charged within range in the product specification.

Discharging Output Operation Equirements

1. The battery shall be discharged at less than the maximum discharge current specified in the product specification.
2. The power shall be discharged within range specified in the product specification.

Storage Requirements

1. The power should be stored at room temperature(15~25°C) and humidity: 60 ± 20% RH, charged to about 40% to 60% of capacity.
2. Should be charged for one time every 3 months while storing and power should be fully discharge and fully charge after being stored more than a half year in order to activate it and restore energy.

Cautions:

To prevent the possibility of the power from leaking, heating, fire or explode, Please be sure to follow the following rules:

1. Do not disassemble or alter the outside structure of the power.
2. Do not short-circuit the pack by directly connecting the positive and negative terminal with metal object such wire.
3. Do not transport and store the battery together with metal objects such as necklaces, hairpins etc.
4. Do not strike or throw the pack.
5. Do not strike at pack with any sharp edge parts, and pierce the pack with a nail or other sharp object.
6. Do not immerse the power in water and seawater.
7. Do not use and leave the power near a heat source as fire, heater, for example, at strong direct sunlight or a vehicle in extremely hot conditions etc.
8. Do not use it in a location where static electricity is great, otherwise, the safety devices in the pack may be damaged, which will cause hidden trouble of safety.

9. In case of short circuit, impact or fall of the battery, the battery shall be immediately marked and isolated, and the continued use of the battery shall be prohibited, Even if the battery appears to function normally.
10. If the power takes off an odor, generates heat, becomes discolored or deformed, or in any way appear abnormal during use,, recharging or storage,, immediately remove it from the device or powery charge and stop using it.
11. If the power leaks and the electrolyte get into the eyes, do not rub eyes, instead, rinse the eyes, with clean running water, and immediately seek medical attention. Otherwise, eye injury can result.

Period of Warranty:

The period of warranty is a five year warranty, 6000 cycles. Sunnew Energy guarantees to give a replacement in case of battery with defects proven due to manufacturing process instead of the customer abuse and misuse. If the customer has other special needs, please sign additional business agreements with Sunnew Energy.

Others:

Please read and follow the handling instructions for the battery before use. Improper use of the battery may cause heat, fire, rupture, damage or capacity deterioration of the battery.

1. The customer is requested to contact Sunnew Energy in advance, if and when the customer needs other applications or operating conditions than those described in this document. Additional experimentation may be required to verify performance and safety under such conditions.
 2. Sunnew Energy will take no responsibility for any accident when the battery is used under other conditions than those described in this Document.
 3. Sunnew Energy will inform, in a written form, the customer of improvement regarding proper use and handing of the battery, if it is deemed necessary.
 4. Any matters that this specification does not cover should be conferred between the customer and Sunnew Energy.
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