

MODEL:

60V 31.2Ah NMC NON CAN

LITHIUM-ION BATTERY



SB50
CONNECTOR



CABLE
GLANDS

SALIENT FEATURES



NON CAN BATTERY

Simple, reliable and easy integration with any EV system.



60V NOMINAL VOLTAGE

High voltage for efficient power delivery and performance.



31.2Ah CAPACITY

Delivers long runtime and consistent power for your applications.



SB50 CONNECTOR

High current capacity with secure and reliable connection.



CABLE GLANDS

Ensures safe cable management and dust & water resistance.



SAFE & RELIABLE

Built with premium NMC cells and advanced protection for safe operation.



ECO FRIENDLY

Environment friendly and recyclable battery solution.



HIGH
PERFORMANCE



3000+
CYCLES
@ 80% DOD



LIGHTWEIGHT
& COMPACT



SAFE &
RELIABLE



WIDE OPERATING
TEMP
-10°C TO 60°C



ECO
FRIENDLY

NMC Battery

Technical Data Sheet

Battery Rating: 60V, 31.2Ah

Battery Model: AS-NMC-06000312

Prepared By	Checked By	Approved By

Effective Date: 26.11.2025

1. Scope:

This specification describes the technical parameters, testing standard, storage, handling and precautionary instructions for the **Lithium Rechargeable Battery** manufactured and supplied by **Ascend Powerpacks Pvt Ltd**.

2. Cell details:

Cell chemistry	NMC
Cell Type	Cylindrical
Cell nominal voltage	3.7V
Cell minimum voltage range	2.5V
Cell maximum voltage range	4.2V
Standard discharging current	1C
Max discharging current	3C
Standard charging current	0.5C
Max charging current	1C
Cell capacity	2.6Ah
Cell physical dimensions	18650
Cell Internal Resistance	$\leq 25\text{m}\Omega$
Cell Manufacture Name	DMEGC

3. Basic Characteristics:

Battery nominal Voltage	60V
Battery nominal Capacity	31.2Ah
Total Energy	1872Wh
Operating life/ Life cycles projected	≤ 800 Cycles
Operating temperature range	-10°C to 60°C
Storage temperature range	-20 to 25°C
Weight of the battery	Approx 13kg
Battery Output Connector & wire lengths	SB50 & C13 Connector

Effective Date: 26.11.2025

4. Battery pack dimensions:

Battery pack dimensions (LXWXH)	185Lx180Wx225H (± 2 mm tolerance)
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5.Charger details:

Recommended charger voltage (VDC)	67.2V
Nominal charging current of charger (A)	10.4A

6. BMS Details:

Battery Configuration	16S
Single cell volt-high protection	4.25 $\pm$ 0.05V
Single cell volt-high protection release	4.15 $\pm$ 0.05V
Single cell volt-high protection delay	1sec
Single cell volt -low protection	2.7 $\pm$ 0.1V
Single cell volt- low protection release	3 $\pm$ 0.1V
Single cell volt -low protection delay	1sec
Total over charge volt-protection	68 $\pm$ 0.1V
Total over charge volt-protection release	66.4 $\pm$ 0.1V
Total over charge volt-protection delay	1sec
Total over discharge volt-protection	43.2 $\pm$ 0.1V
Total over discharge volt-protection release	48 $\pm$ 0.1V
Total over discharge volt-protection delay	1sec
Standard charging current	10.3A
Standard discharging current	31.2A
Over current protection in charging	60 $\pm$ 10A
Over current protection in charging delay	1sec
Over current protection in discharging	120 $\pm$ 30A
Over current protection in discharging delay	1sec
Short circuit delay	250us
Charging high temperature protection	55°C
Charging high temperature protection release	50°C
Charging high temperature protection delay	1sec
Discharging high temperature protection	75°C
Discharging high temperature protection release	65°C
Discharge high-temperature protection delay	2sec
Current consumption	100uA
Balance function	Passive
Buzzer enabled	No

Effective Date: 26.11.2025

NTC	1 No
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7. Communication:

Bluetooth enabled	No
Communication method	NA
Baud rate	NA
IoT Integrated	NA

8. Safety performance:

Test Name	Test Procedure	Requirements
Short circuit test	The battery is to be short-circuited by connecting the positive and negative terminals of the battery pack directly.	No fire, no explosion.
Over-charge protection test	The Battery is permitted to charge until the BMS ends the charge.	The charging is successfully terminated by BMS when any one of the cell reaches its upper limit.
Over-current protection test	The Battery is made to charge and discharge more than the rated current	BMS terminates to charge and discharge when it exceeds the rated current >80 & >100.
Over-discharge protection test	The Battery is permitted to discharge until the BMS ends the discharge.	The discharging is successfully terminated by BMS when any one of the cell reaches its lower limit.
Over -temperature protection test (Applicable only for BMS with NTC)	Battery is made to charge until it reaches the specified temperature.	The BMS is successfully terminated from the charge condition when it exceeds the specified temperature 55°C.
	Battery is made to discharge until it reaches the specified temperature.	The BMS is successfully terminated from the discharge condition when it exceeds the specified temperature 75°C.
Vibration test (based on application)	As per AIS 156 NORMS PHASE II	NA
IP (Ingress protection) (If required by customers)	As per AIS 156 NORMS PHASE II	NA

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CAUTION!**1. Charging the Battery:**

- Always use the dedicated/recommended charger supplied by Ascend Powerpacks Pvt. Ltd and adhere to the specified charging conditions.
- Do not connect the battery directly to an electric outlet or cigarette lighter charger.
- Avoid charging or discharging the battery in environments with temperatures exceeding 60°C.

2. Proper Usage:

- Use the battery only for the application it is meant for.
- Do not incorrectly place the battery in a device, ensure the (+) and (-) terminals are properly aligned.
- Avoid using a battery that shows scratches, swelling, or damage.

3. Environmental Precautions:

- Do not expose the battery to extreme temperatures. Keep it away from fire, direct sunlight.
- Do not immerse, throw, or wet the battery in water.
- Store the battery in a cool, dry place.

4. Physical Handling:

- Do not disassemble, modify, or solder the battery.
- Avoid piercing the battery with sharp objects, hitting it with a hammer, stepping on it or dropping it.
- Do not short-circuit the (+) and (-) terminals with metal objects like hairpins, coins, screws etc.

5. Storage and Disposal:

- Store batteries out of reach of children to prevent accidents.
- When disposing of a battery, ensure it is non-conducting by applying insulation tape to the (+) and (-) terminals.

6. Transportation:

- Do not subject the battery to violent shaking, bumps, rain, and direct sunlight during transport. Keep the battery half-charged (i.e., SOC should be 50%).

7. Temperature Guidelines:

- Use the battery within the following temperature ranges:
 1. Charge temperature range: 0°C to 60°C
 2. Discharge temperature range: -20°C to 60°C
- Avoid exceeding these ranges to prevent damage or hazardous conditions.

8. General Safety:

- Keep the battery away from objects or materials with static electric charges during charging, usage, and storage.
- If the battery terminals become dirty, wipe them with a dry cloth before use. Do not use wet cloth.
- Before using the battery or charger, thoroughly read the caution and handling instructions.
- Strict supervision is required if the battery is handled by children of specified age group.

9. Long-term Storage:

- A Fully charged Battery should not be stored for longer periods as it may deteriorate Battery Capacity. If the user doesn't want to use Battery for a long time always charge the Battery pack to 50% for better performance. Never leave the fully discharged battery pack for more than a day.

By following these guidelines, you can ensure the safe and effective use of your battery while minimizing risks of damage or injury.

Important!

* We recommend charging the battery to 50% of its total capacity every 15 days after receiving it. Keep the voltage between 60V and 63V. Failure to do so may result in reduce battery performance, and **Ascend Powerpacks Pvt Ltd** will not be responsible for any issues related to this battery.