

12.4 V 80 Ah Sodium-Ion Starting Battery

High-power sodium-ion starting battery with 160 A continuous discharge and 1,600 A cold-cranking capability

FINAL TECHNICAL SPECIFICATION

DOCUMENT NUMBER	REVISION	ISSUE DATE	STATUS
AMP-SPEC-BAT-011	A	01 October 2026	Final

Amped General Trading FZ-LLC | info@amped.ae | www.amped.ae

1 Product Overview

The Amped 12.4 V 80 Ah Sodium-Ion Starting Battery is a high-power rechargeable starting battery designed for cars, trucks and marine applications requiring strong cold-cranking performance and reliable high-current output. The battery provides 992 Wh nominal energy, 160 A maximum continuous discharge, 1,600 A cold-cranking capability and an IP67 ABS enclosure.

12.4 V NOMINAL VOLTAGE	80 Ah NOMINAL CAPACITY	992 Wh STORED ENERGY
160 A CONTINUOUS DISCHARGE	9.5 ±0.5 kg PACK WEIGHT	3,000 SPECIFIED CYCLES

KEY FEATURES

- Sodium-ion cylindrical-cell construction
- 160 A maximum continuous discharge
- 1,600 A cold-cranking capability
- Up to 80 A maximum charge current
- Integrated cell-balancing protection
- Optional heating system
- IP67 ABS enclosure

TYPICAL APPLICATIONS

- Automotive engine starting
- Cars and light trucks
- Commercial vehicle starting systems
- Marine engine-starting applications
- High-current 12 V battery systems
- Applications requiring high cold-cranking capability

APPLICATION NOTE

System compatibility, cable sizing, external fusing, isolation devices and charger settings must be confirmed by a competent installer. Use outside the stated operating limits or in applications not validated for this battery is not approved by this document.

Product identification

Product model: Amped 12/80Na. Technical values in this final specification are based on the approved 12 V 80 Ah sodium-ion starting-battery product specification. Optional heating configuration and charger compatibility must be confirmed for the ordered battery before commissioning.

2 Electrical Specification

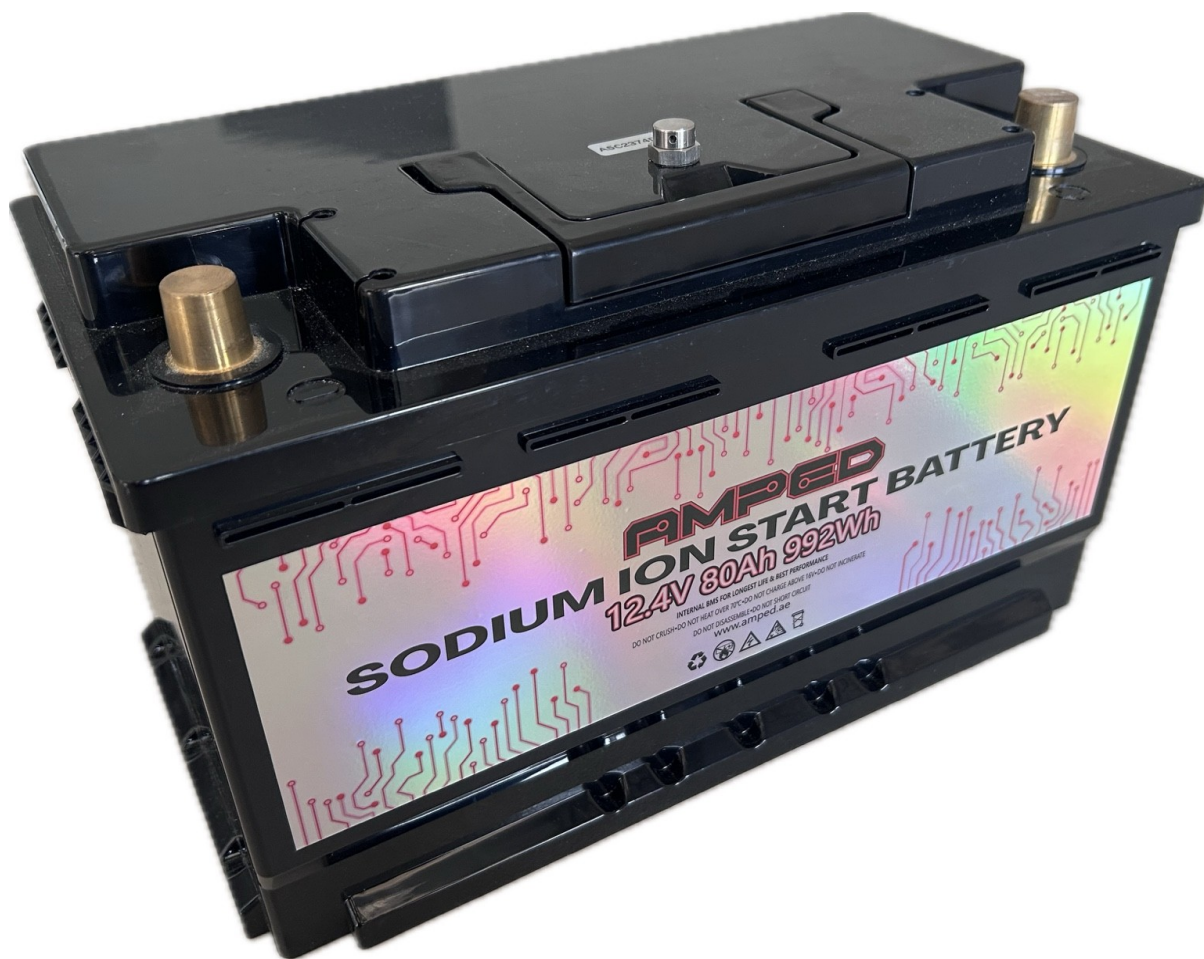
Parameter	Specification
Cell chemistry	Sodium-ion, cylindrical cells
Cell configuration	4S8P

Parameter	Specification
Nominal voltage	12.4 V
Nominal capacity	80 Ah at 0.5 C discharge rate
Nominal energy	992 Wh
Operating voltage range	6 V to 15.8 V
Cycle life	3,000 cycles at 80% DOD; stated test rates 0.5 C / 0.5 C
Charge method	CC-CV
Standard charge current	0.2 C
Maximum charge current	80 A
Maximum continuous discharge current	160 A
Cold cranking amps	1,600 A CCA

2.1 Battery Management and Protection

Parameter	Specification
Balance function	Yes
Communication	None
Heating system	Optional; available by configuration
Power terminals	M8

CHARGING REQUIREMENT
Use a charger compatible with the battery's sodium-ion CC-CV charging requirements and 6-15.8 V operating range. Standard charge current is 0.2 C and maximum charging current is 80 A. Charging voltage must not exceed 15.8 V. Confirm charger compatibility and final charge settings before commissioning.



Parameter	Specification
Dimensions (L × W × H)	314 × 174 × 188 mm
Pack weight	9.5 ±0.5 kg
Enclosure	ABS case, IP67
Charging temperature	-20 °C to 70 °C
Discharge temperature	-20 °C to 70 °C
Recommended storage state of charge	Approximately 50% SOC
Storage maintenance	Recharge / cycle at intervals not exceeding three months

Before installation, confirm that the enclosure, terminals and identification label are free from visible damage, contamination, swelling or deformation. Do not use a battery damaged during transport or handling.

4 Safety, Installation and Storage

This battery can deliver very high fault current. Incorrect installation, charging, short-circuiting, physical damage or operation outside the stated limits may cause fire, equipment damage, serious injury or death.

- Never short-circuit the battery terminals.

- Installation must use correctly rated cables, terminals,

- Confirm correct polarity before connection.
- Do not pierce, puncture, crush, distort or disassemble the battery pack.
- Do not immerse the battery in water.
- Do not operate outside the specified temperature limits.
- Discontinue use if the battery swells, leaks, overheats or emits an unusual odour.

- fuses and isolation devices.
- Use only compatible sodium-ion CC-CV charging equipment and settings.
 - Maximum continuous discharge current is 160 A.
 - Protect terminals against accidental short circuit.
 - Confirm optional heating configuration before installation where applicable.
 - Keep the enclosure protected from physical damage.

4.1 Storage and Handling

Topic	Requirement
State of charge	Store at approximately 50% SOC.
Maintenance	Recharge / cycle the battery at intervals not exceeding three months.
Terminals	Protect terminals from short circuit and contamination during handling and transport.
Abnormal condition	Quarantine damaged, swollen, overheated or leaking batteries and contact Amped for guidance.

STORAGE NOTE

For long-term storage, keep the battery in a clean, dry and ventilated environment. The source specification recommends approximately 50% state of charge and maintenance at intervals not exceeding three months.

5 Warranty, Compliance and Document Control

WARRANTY

Warranty period: Three years.

- Warranty eligibility remains subject to correct installation, charging and operation within this specification.
- Damage caused by misuse, incorrect charging, short circuit, physical damage or operation outside the specified limits may invalidate warranty coverage.
- Specifications are subject to change as the product is improved or upgraded.
- Amped is not responsible for damage arising from use contrary to this specification or applicable installation instructions.

COMPLIANCE AND TRANSPORT DOCUMENTATION

Compliance, transport and safety documentation is issued separately where applicable. Contact Amped for the current approved documents for this model.

5.1 Ordering and Identification

Parameter	Specification
Product description	Amped 12.4 V 80 Ah Sodium-Ion Starting Battery
Product / model code	Amped 12/80Na
Document number	AMP-SPEC-BAT-011
Document revision	A - Final
Power terminals	M8 terminals
Starting rating	1,600 A CCA

Recommended charger Sodium-ion CC-CV charger; max battery voltage 15.8 V

5.2 Revision History

Rev	Date	Description	Approved by
A	01 Oct 2026	Initial 80 Ah specification approved for final issue.	

CONTROLLED DOCUMENT

Before use, verify that this is the current approved revision. Printed or locally saved copies may become obsolete when the controlled master is updated.

TECHNICAL SUPPORT
info@amped.ae

AMPED GENERAL TRADING FZ-LLC
www.amped.ae