24 V 100 Ah LiFePO4

Deep-Cycle Battery

High-capacity deep-cycle energy storage with integrated battery management

TECHNICAL SPECIFICATION



DOCUMENT NUMBER	REVISION	ISSUE DATE	STATUS
AMP-SPEC-BAT-003	A	18 July 2026	Released

1 Product Overview

The Amped 24 V 100 Ah LiFePO4 Battery is designed for high-capacity deep-cycle energy storage applications requiring long service life, low maintenance and high charge and discharge capability. The battery combines a 25.6 V nominal 8S1P prismatic-cell pack with an internal battery management system.

25.6 V NOMINAL VOLTAGE NOMINAL VOLTAGE	**100 Ah NOMINAL CAPACITY** NOMINAL CAPACITY	**2,560 Wh STORED ENERGY** STORED ENERGY
150 A CONTINUOUS DISCHARGE CONTINUOUS DISCHARGE	**21 kg PACK WEIGHT** PACK WEIGHT	**> 6,000 SPECIFIED CYCLES** SPECIFIED CYCLES

KEY FEATURES

- **Integrated internal battery management system**
- **LiFePO4 prismatic cells in an 8S1P configuration**
- **150 A maximum charge current**
- **150 A continuous discharge capability**
- **IP67 ABS enclosure with M8 terminals**
- **Maintenance-free sealed battery pack**

TYPICAL APPLICATIONS

- **Solar and off-grid energy storage**
- **Caravan, RV and recreational systems**
- **Marine auxiliary power systems**
- **Backup power and UPS systems**
- **Telecommunications and remote equipment**
- **Commercial deep-cycle applications**

APPLICATION NOTE

System compatibility, cable sizing, protection devices and charger settings must be confirmed by a competent installer. Engine-cranking use, series connection and parallel connection are not approved by this document unless confirmed separately in writing.

Product identification

Product model: Amped 25.6/100Lfp. This specification applies to the product configuration and document revision identified herein.

2 Electrical Specification

Parameter	Specification
Cell chemistry	Lithium iron phosphate (LiFePO4), prismatic cells; 8S1P
Nominal voltage	25.6 V
Nominal capacity	100 Ah at stated 0.5 C discharge condition
Nominal energy	2,560 Wh
Charge method	CC-CV
Recommended / standard charge current	20 A
Maximum charge current	150 A
Charge voltage	29.2 V maximum
Continuous discharge current	150 A
Operating voltage range	20 V to 29.2 V

2.1 Battery Management and Protection

Parameter	Specification
Internal BMS	Included
Communications interface	Optional UART / RS485 / CAN bus, when specified at time of order
Over-voltage protection	Included
Under-voltage protection	Included
Over-current protection	Included
Short-circuit protection	Included
High / low temperature protection	Included
Cell balancing	Included

CHARGING REQUIREMENT
Use only a charger with a LiFePO4-compatible CC-CV profile and a maximum charge voltage of 29.2 V. The charger, cabling, connectors and protective devices must be rated for the intended current and operating environment.

3 Mechanical and Environmental Specification



REFERENCE IMAGE - NOT TO SCALE

Mechanical parameter	Specification
Overall dimensions	345 x 190 x 245 mm
Pack weight	21 kg (±1 kg production tolerance)
Terminal type / thread	M8 threaded terminals
Terminal polarity layout	Positive and negative terminals identifie on enclosure
Enclosure material	ABS case
Ingress protection rating	IP67
Permitted mounting orientation	Upright or on either side
Product finish	Black enclosure with Amped identificatio label

3.1 Environmental Limits

Parameter	Specification
Charging temperature	-10 °C to 55 °C
Discharge temperature	-10 °C to 60 °C
Recommended storage temperature	0 °C to 35 °C
Recommended storage state of charge	Approximately 50% SOC
Storage maintenance	Fully charge every three months; for extended storage, cycle and return to approximately 50% SOC
Humidity range	0% to 75% RH (storage)

INSPECTION REQUIREMENT

Before installation, confirm that the enclosure, terminals and identification label are free from visible damage, contamination, swelling, deformation or corrosion.

4 Safety, Installation and Storage

WARNING

Lithium batteries 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.

ESSENTIAL SAFETY PRECAUTIONS

- Never connect the positive and negative terminals together.
- Do not immerse the battery in water or expose it to uncontrolled moisture.
- Do not pierce, puncture, crush, distort or modify the battery pack.
- Do not expose the battery to open flame, excessive heat or temperatures outside the stated limits.
- Immediately isolate the battery if it emits an unusual smell, excessive heat, smoke, swelling, deformation or discolouration.
- Do not use a visibly damaged battery.

INSTALLATION AND USE

- **Installation must be completed by a competent person using correctly rated cables, terminals, fuses and isolation devices.**
- **Confirm polarity before connection. Reverse-polarity protection is not stated in this specification.**
- **Use only compatible LiFePO4 charging equipment with a 29.2 V maximum charge setting.**
- **Do not use this model for engine cranking unless Amped confirms suitability in writing.**
- **Do not connect batteries in series or parallel until the permitted configuration and balancing requirements are confirmed.**
- **Provide adequate ventilation and protect the battery from impact and abrasion.**

4.1 Storage and Handling

Topic	Requirement
State of charge	Store at approximately 50% SOC.
Temperature	Store between 0 °C and 35 °C where practical.
Maintenance	Fully charge every three months; for extended storage, cycle the battery and return it to approximately 50% SOC.
Terminals	Protect terminals from short circuit and contamination during handling and transport.
Location	Store upright or on either side in a dry, secure and well-ventilated area away from heat sources and combustible materials.
Abnormal condition	Quarantine damaged, swollen, overheated or leaking batteries and contact Amped for guidance.

COMMUNICATIONS CONFIGURATION

Optional communication interfaces are supplied only when specified on the product order. External system protection, isolation and cabling requirements remain the responsibility of the system designer and installer.

5 Warranty, Compliance and Document Control

WARRANTY

Warranty period: Five years from the date of purchase, subject to the applicable Amped warranty terms and proof of purchase.

- Damage caused by misuse, incorrect charging, short circuit, physical damage or operation outside the specified limits may invalidate warranty coverage.
- The current specification may be revised 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 24 V 100 Ah LiFePO4 Battery
Product / model code	Amped 25.6/100Lfp
Document number	AMP-SPEC-BAT-003
Document revision	A
Included accessories	Refer to the supplied packing list or sales order
Recommended charger	LiFePO4-compatible CC-CV charger, 29.2 V output

5.2 Revision History

Rev	Date	Description	Approved by
A	18 Jul 2026	Initial release. Product data, BMS functions, mounting orientation and product photograph confirmed.	Amped Engineering

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