

12V 100AH LiFePO4 Battery

User Manual



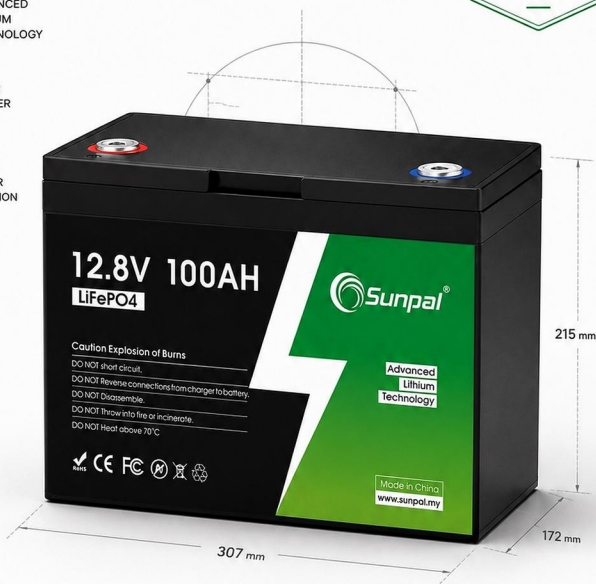
ADVANCED
LITHIUM
TECHNOLOGY



SAFER
LONGER
LIFE



CLEAN
POWER
SOLUTION



Key Specifications



High-performance LiFePO4 battery engineered for reliability, safety, and long service life.



NOMINAL VOLTAGE
12.8V



CAPACITY
100AH



ENERGY
1280Wh



CYCLE LIFE
6000+ cycles
for long-term durability



MAX CHARGE CURRENT
100A



MAX DISCHARGE CURRENT
100A



WEIGHT
10.5kg
lighter design for
easier handling



DIMENSIONS
307 × 172 × 215 mm
(L × W × H)



OPERATING TEMPERATURE
Charge 0–55°C / Discharge -20–60°C



IP65
sealed protection
for demanding environments

Safety Instructions

Please read and follow these safety instructions carefully to ensure safe use and maximum performance of your LiFePO4 battery.



Do not short circuit

Avoid short circuiting the battery terminals. Short circuit can cause overheating, fire, or explosion.



Do not reverse polarity

Ensure correct polarity when connecting the battery. Reverse connection may cause damage or safety hazards.



Do not disassemble

Do not disassemble or modify the battery. Disassembly may lead to damage, leakage, or fire.



Keep away from fire

Keep the battery away from fire, heat sources, and high temperatures. Do not incinerate.



Use LiFePO4 charger only

Use only a charger specifically designed for LiFePO4 batteries. Using an incompatible charger may cause damage or fire.



Keep dry

Do not expose the battery to water or moisture. Keep it in a dry and well-ventilated area.



WARNING

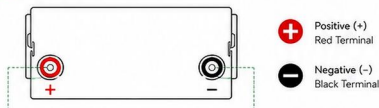
Failure to follow these safety instructions may result in battery damage, reduced performance, fire, explosion, or serious injury. Please use the battery responsibly and in accordance with this manual.

Installation Guide

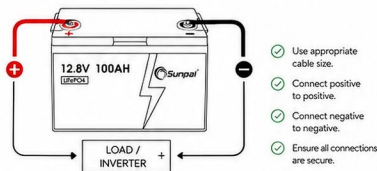


Please read this guide carefully before installation.
Follow all safety precautions and use appropriate tools and protection.

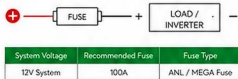
1 Terminal Identification



2 Cable Connection Example



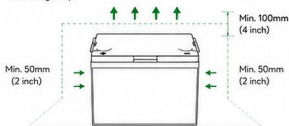
3 Fuse Recommendation



Note:
Install fuse as close as possible to the positive terminal.

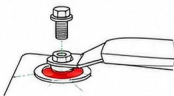
4 Ventilation Notes

Keep the battery in a well-ventilated area to ensure optimal performance and longevity.



- ✔ Maintain at least 100mm (4 inch) clearance above the battery.
- ✔ Maintain at least 50mm (2 inch) clearance on both sides.
- ✔ Do not install in enclosed or non-ventilated spaces.
- ✔ Avoid direct sunlight and heat sources.

5 Tightening Instructions



- ✔ Use M8 bolts and appropriate tools.
- ✔ Tighten terminal bolts to the recommended torque.
- ✔ Ensure terminals are clean and free of debris before connection.

Recommended Torque



8-10 N·m
(70-90 in·lb)



Charging Guide

Follow the recommended charging parameters and safety precautions to ensure optimal performance and long battery life.



CHARGING VOLTAGE
14.4V ± 0.2V

- ✓ Recommended absorption voltage for full capacity.
- ✓ Do not exceed the specified voltage.



FLOAT VOLTAGE
13.6V ± 0.2V

- ✓ Recommended float voltage for standby or long-term storage.
- ✓ Helps maintain battery health.



CHARGING TEMPERATURE
0°C to 55°C

- ✓ Charge within the specified temperature range.
- ✓ Avoid charging in extreme temperatures.



CHARGER COMPATIBILITY
LiFePO4 charger only

- ✓ Use a LiFePO4 compatible charger.
- ✓ Do not use lead-acid or other chemistry chargers.



CHARGING PRECAUTIONS

- ✓ Do not exceed the rated charging current.
- ✓ Ensure correct polarity before charging.
- ✓ Stop charging immediately if the battery becomes damaged, overheated, or swollen.

Series & Parallel Connections

Connect batteries in series and/or parallel to achieve the desired voltage and capacity.

2S Connection



2S = 25.6V nominal

4S Connection



4S = 51.2V nominal

2P Connection



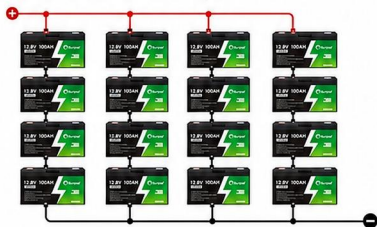
2P = 200AH

4P Connection



4P = 400AH

4S4P Connection (Example)



4S4P = 51.2V, 400AH

Voltage: 51.2V nominal
Capacity: 400AH



WARNING

- Use same model batteries only
- Use batteries from the same **production batch** when possible
- Do not mix batteries of **different ages** or **cycle counts**
- Do not mix Sunpal batteries with **other brands**
- Charge batteries to the same voltage before connection
- Use equal cable lengths
- Ensure all batteries are in good condition before installation

Applications & Storage

Versatile power for a wide range of applications and reliable storage when not in use.



Storage Guidance



Store at 40–60%

Store the battery with 40–60% state of charge for optimal health.



Recharge every 3–6 months

Recharge the battery every 3–6 months to maintain performance.



Keep dry

Store in a cool, dry place. Avoid moisture, humidity, and water exposure.



Avoid direct sunlight

Keep away from direct sunlight and high temperatures.

Warranty & Contact

Thank you for choosing Sunpal LiFePO4 Battery. We are committed to providing reliable products and world-class support.



5-Year Warranty

Sunpal warrants this product to be free from defects in materials and workmanship for a period of 5 years from the date of purchase.

WARRANTY EXCLUSIONS

- ⊗ Damage caused by improper installation, misuse, or unauthorized modification.
- ⊗ Use in applications other than for which the product is designed.
- ⊗ Damage due to natural disasters, fire, flood, or abnormal environmental conditions.
- ⊗ Normal wear and tear or cosmetic damage that does not affect performance.



SERIAL NUMBER

SN: _____



Scan to Register Warranty

Scan the QR code to register your product and activate your 5-year warranty.

We're Here to Help

Website: www.sunpal.my

Email: hello@sunpal.my

Phone: 016-800-8400



Premium Support. Always with You.

Our dedicated support team is ready to assist you with any questions or concerns. Your satisfaction and peace of mind are our top priorities.

