LTCP

Li Time

LiFePO4

36V 50Ah

Smart BLUETOOTH 5.0 x Trolling Motor and More

PRODUCT (50A BMS) MANUAL

Lithium Iron Phosphate Battery(LiFePO4)

PRODUCT OVERVIEW

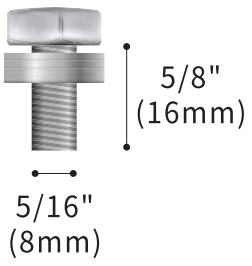
36V 50AH BATTERY

- Operating Voltage: 38.4V
- Charging Voltage: 43.2±0.6V
- Recommend Charge Current: 10A (0.2C)
- Max Continuous Discharge Current: 50A
- Max. Continuous Output Power: 1920W
- Max. Thrust Power: 120lbs

ADDITIONAL COMPONENTS

M8- 5/8" (16mm) Terminal Bolts

The terminal bolts are used to secure multiple cable lugs to a single battery terminal. The bolts can be replaced with M8 bolts of other lengths based on actual needs.



Insulating Caps for Bolts

24/7 MONITORING VIA LITIME APP

The LiTime 36V 50Ah Smart TM LiFePO4 battery, integrated with Bluetooth 5.0, enables accurate and effortless real-time tracking and management of the battery status.

Step **1**

Download the LiTime APP and register your account.

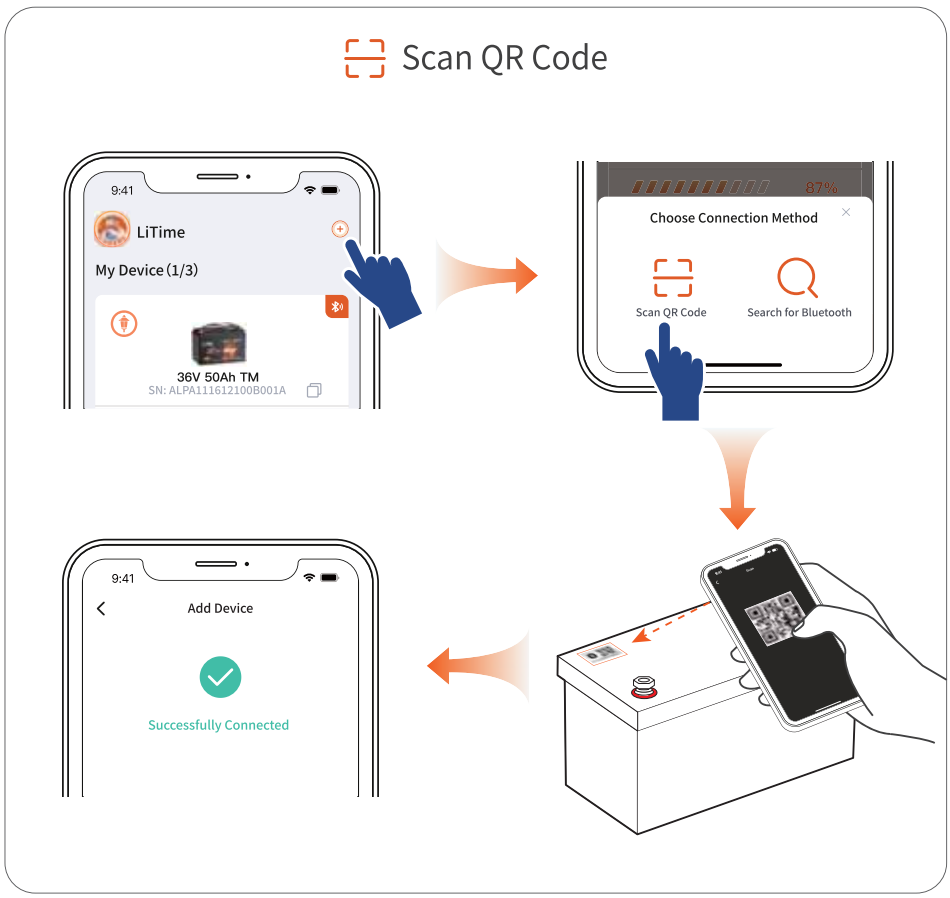
Li Time

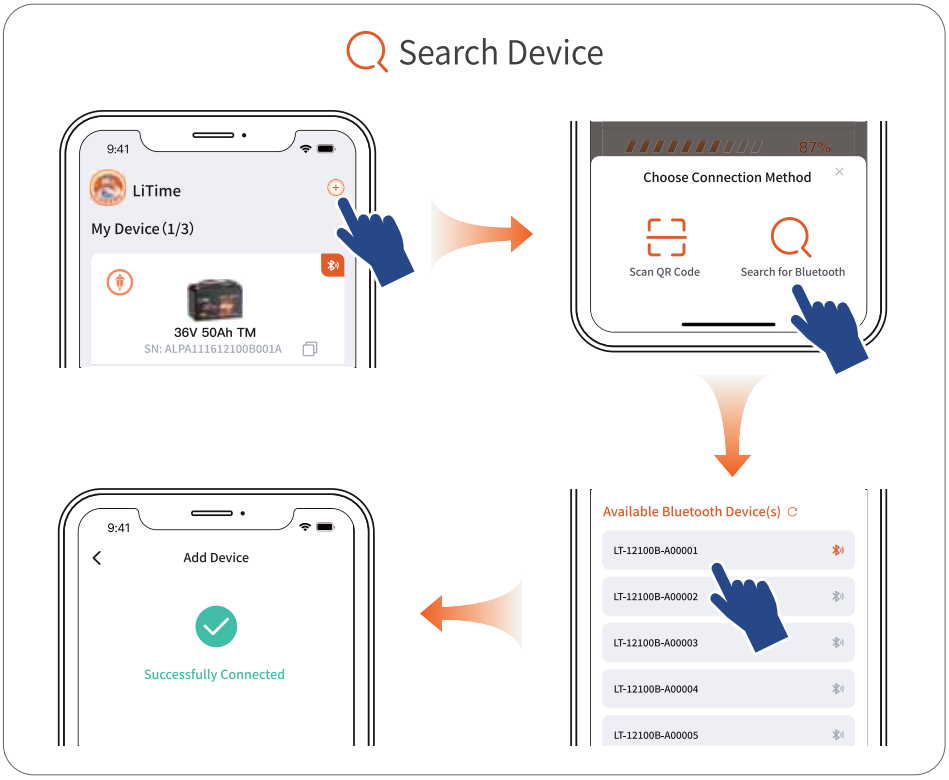
Download on the App Store

GET IT ON Google Play

Step **2**

Pair the battery with the LiTime APP and effortlessly keep track of the battery's real-time status.





FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Information:This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

IMPORTANT
SAFETY INSTRUCTION

Please keep the battery away from heat sources, sparks, flames, and hazardous chemicals.

Maintain Adequate Ventilation and Heat Dissipation

Place the battery in a well-ventilated area with sufficient heat dissipation to prevent overheating and damage.

Size the Battery Cables and Connectors Appropriately

Use high-stranded copper connectors and heavy gauge cables to handle possible battery loads. Make sure to keep identical cable lengths.
Avoid accidents caused by unsuitable connectors or cables that make the connection a heat source during battery operation.

Please tighten all cable connections, as loose cable connections can cause terminal meltdown or fire.

DO NOT puncture, drop, crush, burn, penetrate, shake, or strike the battery.

The battery should be securely fastened during handling to prevent impact or dropping.
It should be safely secured to a solid plane and the cables safely tied to a suitable location to avoid arcing and sparking due to friction.
DO NOT press it by placing heavy stuff on top of it for long periods, which may damage it due to an internal short circuit.

DO NOT immerse the battery in water whether the battery is in use or on standby.

DO NOT open, dismantle, or modify the battery.

DO NOT touch the exposed electrolyte or powder if the battery casing is damaged.

Uncovered electrolyte or powder that has contacted the skin or eyes MUST be flushed out with plenty of clean water immediately. Seek medical attention afterward.

Avoid Short Circuit

Please use circuit breakers, fuses, or disconnects that have been properly sized by certified electricians, licensed installers, or regional code authorities to protect all the electrical equipment in your system. The battery has a built-in battery management system (BMS) that protects the battery cells from over-charge, over-discharge, and over-current, however this alone will not protect your system from severe electrical conditions.

Trained and certified technicians are required for safe and reliable installation. This product manual can only serve as a guideline as it cannot cover all possible scenarios.

Verify Correct Polarity

Please verify the polarity before connecting the wiring. Reverse polarity can and will destroy the battery and other electrical equipment. Use a multimeter to determine proper polarity.

Avoid Exposed Metal Terminals or Connectors

The terminals of this battery are always live. Avoid exposed metal terminals or connectors; DO NOT place tools on the terminals or touch them with bare hands; DO NOT short circuit or use outside of specified electrical ratings.

DO NOT dispose of the battery as household waste. Please use recycling channels in accordance with local, state, and federal regulations.

WARNING

Batteries are potentially dangerous and proper precautions must be taken during operation and maintenance.

Improper use of the battery can lead to battery failure or other potential damage.

Improper configuration, installation, or use of related equipment in the battery system may damage the battery and other related equipment.

Please wear proper personal protective equipment when working on the battery.

Battery installation and maintenance must be performed by trained and certified technicians.

Failure to follow the warnings above can result in potential damage.

If you have any questions or need any help, please feel free to contact us (and leave your contact phone number) at service@litime.com, we will offer phone or email support in 12hrs.

BATTERY PARAMETERS

Item	Parameter
Cell Type	LiFePO4
Nominal Voltage	38.4V
Rated Capacity	50Ah
Energy	1920Wh
Internal Resistance	⩽40mΩ
Cycle Life	⩾4000 times
Battery Management System (BMS) Board	50A
Charge Method	CC/CV
Charge Voltage	43.2±0.6V
Recommended Charge Current	10A (0.2C)
Max. Continuous Charge Current	50A
Max. Continuous Discharge Current	50A
	60A@30mins
Surge Discharge Current	250A@1 second

Max. Continuous Output Power	1920W
Max. Thrust Power	120lbs①
Dimension	L13*W6.77*H8.43 inch
	L329*W172*H214 mm
Housing Material	ABS (Flame Retardant Plastic)
Recommended Terminal Torque	106.2 to 123.9 inch · lbs/12 to 14 N.m
Protection Class	IP65
Temperature Range	Charge: 0°C to 50°C / 32°F to 122°F
	Discharge: -20°C to 60°C / -4°F to 140°F
	Storage: -10°C to 50°C / 14°F to 122°F
Low Temperature Charging Protection (LTCP) Functions②	Yes
Resume Charging Temperature Under LTCP	5°C/41°F (Battery Temperature)
FCC ID	2BDSV-3650

① The 38.4V 50Ah Smart TM battery with Bluetooth is suitable for 36V trolling motors up to 120 lbs thrust.

② The 38.4V 50Ah Smart TM battery with Bluetooth supports Low Temperature Charge Protection (LTCP), where the BMS stops battery charging when the battery temperature falls below 0°C/32°F and resumes charging when the temperature rises above 5°C/41°F.

CHARGING METHODS

SOLAR PANEL(S) & CONTROLLER

Solar Panel

☆ Recommended Power: ⩾600W

- The battery can be fully charged in one day (with effective sunshine 4.5hrs/day) by 600W solar panels.
- It may take more than one day to fully charge the battery by ⩾600W solar panels since the duration and intensity of light would be a great factor for their charging efficiency.

Controller

☆ Recommended Charging Current:

10A (0.2C)	The battery will be fully charged in around 5hrs to 100% capacity.
25A (0.5C)	The battery will be fully charged in around 2hrs to around 97% capacity.

☆ Recommended Charging Mode: **36V (38.4V) LI (LiFePO4)**

Controller Settings

Refer to the below parameters if you need to manually set up your controller. As different types of batteries have different charging modes , it is recommended to set only the following parameters for LiFePO4 batteries. The settings for other types of batteries do not apply to LiFePO4 batteries except for the following settings.

CHARGING	Charge /Bulk /Boost Voltage	43.2±0.6V
	Absorption Voltage	43.2±0.6V
	Over Voltage Disconnect	45V
	Over Voltage Reconnect	42.6V
	Tail Current	1A (0.02C)
DIS-CHARGING	Under Voltage Warning	34.8V
	Under Voltage Recover	36V
	Low Voltage Disconnect	32.4V
	Low Voltage Reconnect	37.2V

BATTERY CHARGER

Use 43.8V lithium iron phosphate (LiFePO4) battery charger to maximize the capacity.

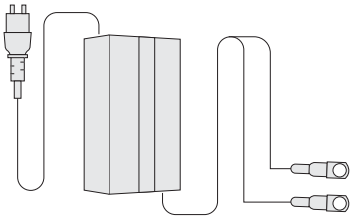
☆ Recommended Charging Voltage: Between 42.6V to 43.8V

☆ Recommended Charging Current:

10A (0.2C)	The battery will be fully charged in around 5hrs to 100% capacity.
25A (0.5C)	The battery will be fully charged in around 2hrs to around 97% capacity.

Tips

①It' s recommended to disconnect the charger from the battery after fully charging.



ALTERNATOR / GENERATOR

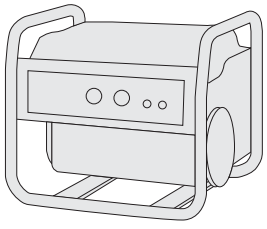
LiTime battery can be charged by an alternator or generator.

If the alternator/generator **supports AC output**, please refer to the recommendations in "Battery Charger" above to add **a suitable battery charger** between the battery and the generator.

☆ Recommended Charging Voltage: Between 42.6V to 43.8V

☆ Recommended Charging Current:

10A (0.2C)	The battery will be fully charged in around 5hrs to 100% capacity.
25A (0.5C)	The battery will be fully charged in around 2hrs to around 97% capacity.



Step
3

Leave them together for 12~24hrs until the battery voltages have been balanced, the paralleled battery system can be connected to the load.

Copper Bar: Flat metal made of copper. It can help ensure the input &output currents of each battery are balanced. Copper is recommended as it has better conductivity, and the conversion efficiency of the input & output currents for the battery will be higher.

Step 3 Complete the System Connection

Connect the ⊕ and ⊖ of the load to the copper bars. The cable gauge used in this step should be able to support the total input & output current of the entire battery system.