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Timeusb 12V 140Ah Low-Temp

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Model: 12V 140Ah Low-Temp

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1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Timeusb 12V 140Ah LiFePO4 Lithium Battery. Please read all instructions carefully before installation and use.

1.1 Safety Instructions

- Always wear appropriate personal protective equipment (PPE) when handling batteries.
- Ensure proper ventilation during installation and operation.
- Avoid short-circuiting the battery terminals.
- Do not disassemble, puncture, or damage the battery.
- Keep the battery away from heat sources, open flames, and flammable materials.
- Use only compatible chargers designed for LiFePO4 batteries.
- Do not connect the battery in series beyond 4S or in parallel beyond 4P.
- This battery is not designed for starting vehicle engines.

2. WHAT'S IN THE BOX

- 12V140Ah LiFePO4 Battery
- M8 Terminal Bolts (2)
- Insulating Caps for Bolts (2)
- User Manual



Figure 1: Timeusb 12V 140Ah LiFePO4 Lithium Battery with included accessories.

This image displays the main battery unit along with the M8 terminal bolts, insulating caps, and the user manual, all packaged together.

3. SPECIFICATIONS

Feature	Value
Brand	Timeusb
Model	12V 140Ah Low-Temp
Product Dimensions	13"D x 6.77"W x 8.5"H
Item Weight	27.7 pounds
Battery Capacity	140 Amp Hours
Energy Output	Max. 1792Wh
Number Of Cells	4
Resistance	40 Milliohms
Terminal Type	M8
BMS	Built-in 100A BMS

Feature	Value
Low Temp Cut Off	Yes
Max. Charge/Discharge Current	100A
Max. Load Power	1280W
Cycle Life	Up to 15000 cycles

BCI Group31 Size

Terminal Specifications

M8 Bolts

Product Size

L13 x W6.77 x H8.5 inch

Weight

28 lbs



Figure 2: Physical dimensions and terminal specifications of the battery.

This image illustrates the battery's length (13 inches), width (6.77 inches), and height (8.5 inches), confirming its Group 31 size. It also highlights the M8 terminal bolts.

4. SETUP

4.1 Installation

The Timeusb 12V 140Ah LiFePO4 battery is designed to be a direct replacement for Group 31 lead-acid

batteries. Ensure the installation location is dry, well-ventilated, and free from direct sunlight or extreme temperatures.

4.2 Connection

1. Ensure all loads are disconnected from the battery system before making connections.
2. Connect the positive (+) terminal of the battery to the positive (+) terminal of your system using appropriate cables and the provided M8 terminal bolts.
3. Connect the negative (-) terminal of the battery to the negative (-) terminal of your system using appropriate cables and the provided M8 terminal bolts.
4. Tighten all connections securely to prevent loose contacts and potential arcing.
5. Place the insulating caps over the terminal bolts for added safety.

4.3 Series and Parallel Connection

This battery supports up to 4 batteries in series (Max.4S) and up to 4 batteries in parallel (Max.4P) to form a 51.2V 560Ah system, achieving Max.28.672kWh energy storage and Max.20.480kW load power. Always ensure all batteries are of the same model and state of charge before connecting in series or parallel.



Figure 3: Illustration of flexible capacity expansion with multiple batteries.

This image demonstrates how multiple Timeusb 12V 140Ah batteries can be connected to create a larger 48V (51.2V) 560Ah

system, suitable for significant energy storage needs.

5. OPERATING

5.1 Charging

The battery features a built-in 100A BMS that protects against over-charging. It also includes a Low Temperature Cut-Off function:

- Charging is automatically cut off when the cell temperature is lower than 32°F (0°C).
- Charging automatically resumes when the cell temperature is above 41°F (5°C).

Compatible charging methods include:

- Dedicated LiFePO4 Charger (e.g., 14.6V 20A for approx. 7h)
- Solar Panel + MPPT Charge Controller ($\geq 600W$ for 1 sunny day)
- Generator with 12V 20A AC-DC Charger
- Alternator with 12V 20A DC-DC Charger

Low-Temperature Cut-Off Protection



Below
32°F(0°C)
Charging Off

Above
41°F(5°C)
Charging Recovery

Below
-4°F(-20°C)
Discharging Off

Figure 4: Low Temperature Cut-Off Protection details.

This image visually explains the low-temperature protection features: charging stops below 32°F (0°C), charging recovers above 41°F (5°C), and discharging stops below -4°F (-20°C).

5.2 Discharging

The built-in 100A BMS supports a Max.100A continuous discharge current and Max.1280W load power. The battery can achieve 100% State of Charge (SOC) and 100% Depth of Discharge (DOD).

A Low Temperature Cut-Off function also applies to discharging:

- Discharging is automatically cut off when the cell temperature is lower than -4°F (-20°C).

5.3 Applications

The Timeusb 12V 140Ah LiFePO4 battery is designed for deep cycle energy storage applications. Suitable uses include:

- Home energy storage systems
- RVs and campers
- Trailers
- Trolling motors (up to 70 lbs)
- Electronic robots
- Off-grid systems

Note: This deep cycle battery cannot be used to start any vehicle engines such as golf carts and cars.

RV



Stay Charged, Stay Powerful

Back up Power System



Off-Grid



Trolling-Motor (30 - 70 lb)



Marine



Figure 5: Various applications for the Timeusb LiFePO4 battery.

This image displays common uses such as RVs, home backup power systems, off-grid cabins, and marine applications including trolling motors.

5.4 Monitoring with the Power Queen App

The battery can be monitored via a dedicated mobile application. This app provides real-time data on the battery's status, including:

- State of Charge (SOC) percentage and remaining capacity (Ah)
- Estimated discharging time
- Battery temperature (°F/°C)
- Real-time power (W), current (A), and voltage (V)
- Cell balance status
- BMS status and cycle times
- Firmware version

To connect, scan the QR code on the battery to download the app and pair your device via Bluetooth. This feature is particularly useful for monitoring battery performance in remote or mobile applications like kayaks or RVs.

Your browser does not support the video tag.

Video 1: Power Queen Bluetooth Trolling Motor Lithium Marine Battery - App Demonstration.

This video demonstrates the functionality of the Power Queen mobile app, showing how to connect to the battery via QR code and Bluetooth, and how to monitor various parameters like State of Charge (SOC), temperature, power, current, and voltage. It also shows how to rename the device and view cycle times, highlighting its utility for users in marine environments.

6. MAINTENANCE

- Keep battery terminals clean and free from corrosion.
- Regularly inspect cables and connections for wear or damage.
- Store the battery in a cool, dry place when not in use, ideally at a partial state of charge (e.g., 50%).
- Avoid prolonged exposure to extreme temperatures.
- Do not leave the battery fully discharged for extended periods.

7. TROUBLESHOOTING

- **Battery not charging:** Check charger connections, ensure the charger is compatible with LiFePO4 batteries, and verify battery temperature is above 32°F (0°C).
- **No power output:** Check all system connections, ensure the battery is sufficiently charged (monitor via app), and verify battery temperature is above -4°F (-20°C).
- **Unusual behavior:** Refer to the Power Queen app for detailed BMS status and error codes.
- For persistent issues, contact Timeusb customer support.

8. WARRANTY & SUPPORT

The Timeusb 12V 140Ah LiFePO4 battery comes with a 5-year warranty, ensuring reliable performance and peace of mind.

For technical assistance, warranty claims, or any questions regarding your battery, please contact Timeusb customer support through their official channels.

Your browser does not support the video tag.

Video 2: Timeusb 12.8V 140Ah LiFePO4 Battery Unboxing.

This video provides an unboxing experience for the Timeusb 12.8V 140Ah LiFePO4 battery, showcasing the packaging and initial presentation of the product.