

Timeusb 12V 100Pro NEW

Timeusb 12V 100Ah LiFePO4 Battery Instruction Manual

Model: 12V 100Pro NEW

1. PRODUCT OVERVIEW

The Timeusb 12V 100Ah LiFePO4 Battery is an advanced deep-cycle lithium battery designed for various applications including RVs, marine, solar systems, and off-grid power. It features automotive-grade battery cells, a robust 100A Battery Management System (BMS), and a lightweight, compact Group 31 design.

- **Automotive Grade Battery Cells:** Ensures 4000-15000 deep cycles for extended lifespan.
- **Lightweight & Compact:** Weighs only 23 lbs (2.6X lighter than lead-acid) with a Group 31 BCI size for easy handling and installation.
- **1280Wh Usable Energy Output:** Provides 100% usable capacity, double that of lead-acid batteries.
- **Built-in 100A BMS:** Offers 5 intelligent protections against overcharge, over-discharge, over-current, short circuit, and high temperature.
- **Fast Charging:** Achieves full charge in approximately 5 hours with a 14.6V 20A LiFePO4 charger.
- **Expandable Capacity:** Supports up to 4S4P connections for a maximum of 400Ah capacity or 48V (51.2V) voltage.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before installation and use of the battery. Failure to follow these instructions may result in electric shock, fire, or other serious injury.

- Always wear insulating gloves and eye protection during installation and wiring.
- Do not disassemble, modify, or attempt to repair the battery.
- Avoid short-circuiting the battery terminals.
- Do not expose the battery to fire, extreme heat, or direct sunlight for prolonged periods.
- Ensure proper ventilation when charging or discharging in enclosed spaces.
- Use only LiFePO4 compatible chargers with appropriate voltage and current settings.
- This battery is not suitable for starter batteries or golf cart applications.
- Keep terminals covered when not in use to prevent accidental short circuits.

Why Choose Timeusb LiFePO4 Battery

Perfect Replacement of Lead-Acid Batteries

Group 31 	Size	 Group 31
100A BMS	BMS	No
23lbs	Weight	66lbs
100% True 1280Wh	Energy	50% of 1200Wh Available
4000-15000	Cycles Time	300-500
10 years	Lifespan	3 years
5hrs(0.2C)	Charging Time	10hrs(0.1C)



Image: Timeusb 12V 100Ah LiFePO4 Battery highlighting safety, durability, portability, IP65 waterproof rating, and eco-friendliness.

3. WHAT'S IN THE BOX

- Timeusb 12V 100Ah Pro LiFePO4 Battery
- 2 x M8 (16MM) Terminal Bolts
- 2 x Insulating Caps for Bolts
- User manual

4. SETUP AND INSTALLATION

4.1 Initial Battery Preparation

1. Upon receiving the battery, inspect it for any visible damage.

2. Ensure the battery is charged to at least 50% capacity before initial use. A full charge is recommended for optimal performance.
3. Install the provided M8 terminal bolts and insulating caps.

4.2 Connecting the Battery

When connecting the battery to your system (e.g., inverter, trolling motor, solar charge controller), ensure correct polarity (positive to positive, negative to negative) to avoid damage.

- Connect the positive (+) terminal of the battery to the positive terminal of your device/system using appropriate gauge cables.
- Connect the negative (-) terminal of the battery to the negative terminal of your device/system.
- Secure all connections tightly to prevent loose contacts and arcing.

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Video: Demonstrates the discharge operation of the Timeusb 12V 100Ah LiFePO4 battery, connecting it to an inverter and powering electronic devices.

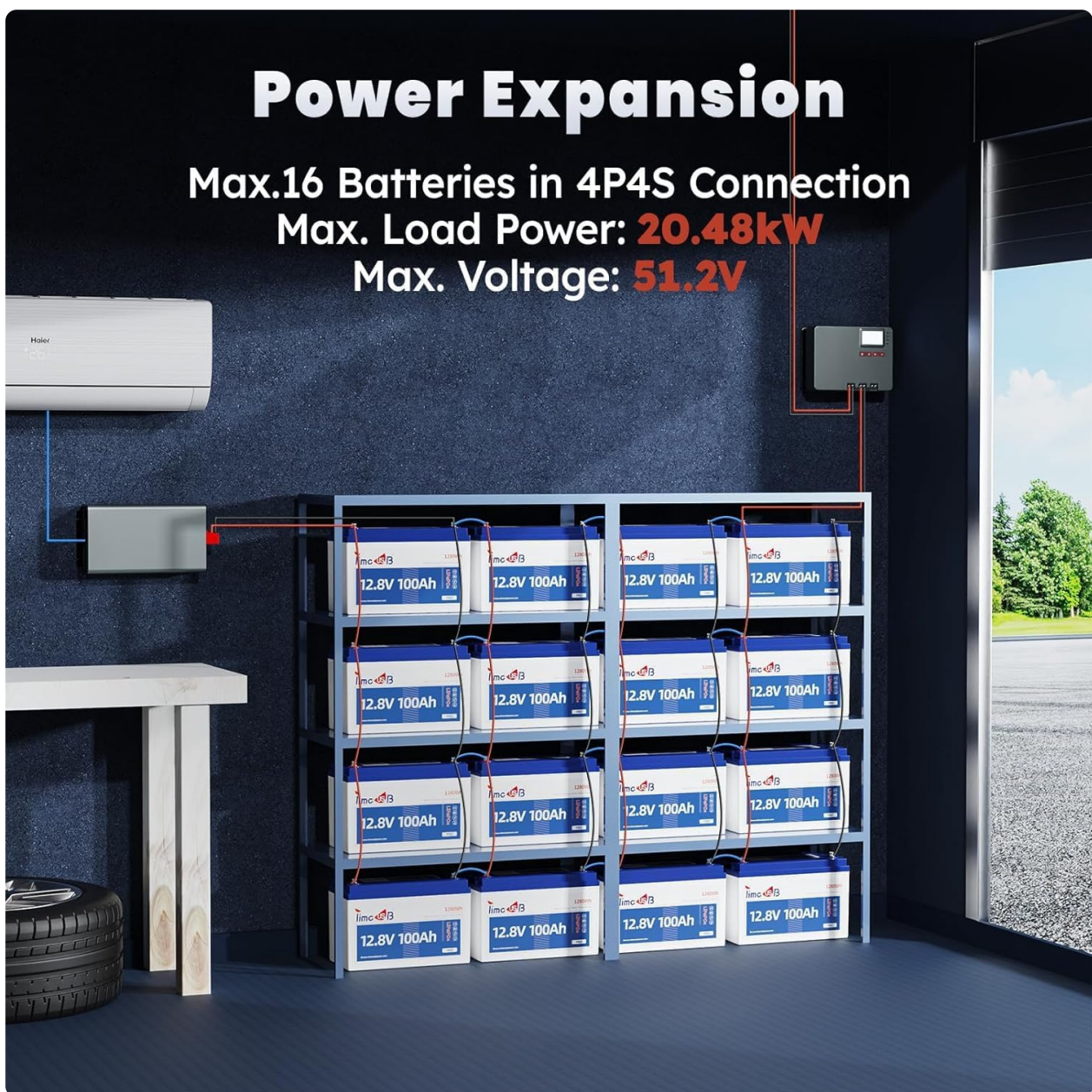


Image: Diagram showing multiple Timeusb 12V 100Ah LiFePO4 batteries connected in a 4P4S configuration for power expansion, supporting up to 16 batteries for a maximum load of 20.48kW and 51.2V.

5. OPERATING INSTRUCTIONS

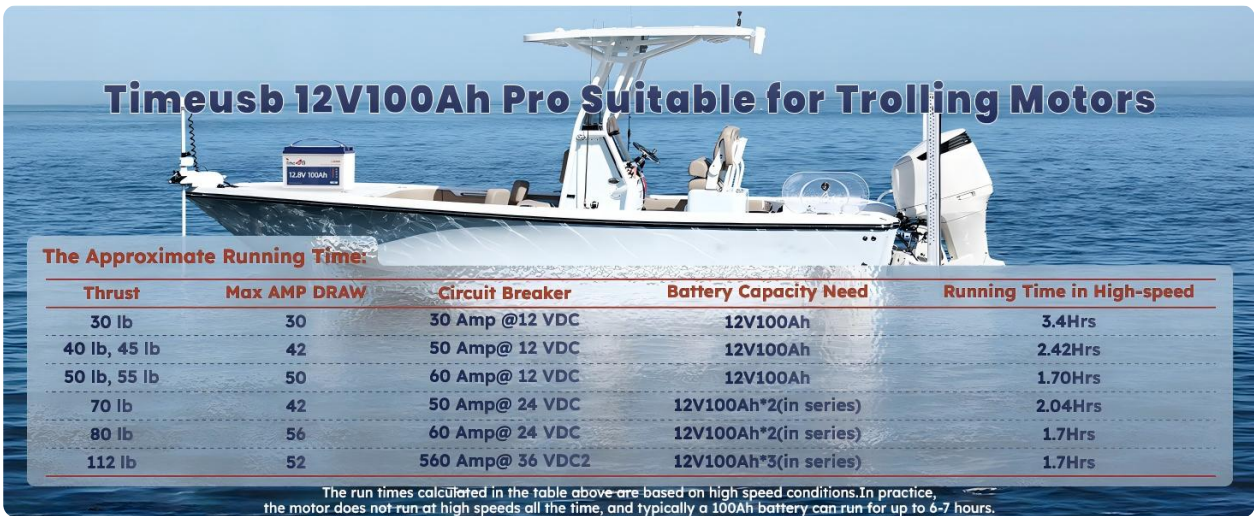
5.1 Charging the Battery

The Timeusb 12V 100Ah LiFePO4 battery can be charged using a compatible LiFePO4 battery charger, solar panels with a charge controller, or a generator with a DC-DC charger.

- Recommended Charge Current: 20A
- Maximum Charge Current: 100A
- Recommended Charge Voltage: 14.6V
- A 14.6V 20A LiFePO4 battery charger can fully charge the battery in approximately 5 hours.

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Video: Demonstrates the charging operation of the Timeusb 12V 100Ah LiFePO4 battery, connecting it to a compatible charger.



Timeusb 12V100Ah Pro Suitable for Trolling Motors

The Approximate Running Time:

Thrust	Max AMP DRAW	Circuit Breaker	Battery Capacity Need	Running Time in High-speed
30 lb	30	30 Amp @12 VDC	12V100Ah	3.4Hrs
40 lb, 45 lb	42	50 Amp@ 12 VDC	12V100Ah	2.42Hrs
50 lb, 55 lb	50	60 Amp@ 12 VDC	12V100Ah	1.70Hrs
70 lb	42	50 Amp@ 24 VDC	12V100Ah*2(in series)	2.04Hrs
80 lb	56	60 Amp@ 24 VDC	12V100Ah*2(in series)	1.7Hrs
112 lb	52	560 Amp@ 36 VDC2	12V100Ah*3(in series)	1.7Hrs

The run times calculated in the table above are based on high speed conditions. In practice, the motor does not run at high speeds all the time, and typically a 100Ah battery can run for up to 6-7 hours.

Image: Illustrates various charging methods for the Timeusb 12V 100Ah LiFePO4 battery, including a dedicated charger, solar panel, generator, and alternator.

5.2 Discharging the Battery

The battery can be discharged to power various 12V compatible devices. The built-in BMS protects against over-discharge.

- Maximum Continuous Discharge Current: 100A
- Peak Discharge Current: 200A (3s)
- BMS Discharge Cut-Off Voltage: 10.0V (2.5V/Cell)

Wide Applications



Image: Various usage scenarios for the Timeusb 12V 100Ah LiFePO4 battery, including RV power, trolling motors, camper power, home backup power, off-grid systems, and solar panel systems.

5.3 Parallel and Series Connection

The Timeusb 12V 100Ah LiFePO4 battery supports both parallel and series connections to increase capacity or voltage.

- Up to 4 batteries can be connected in series (4S) for a maximum voltage of 51.2V.
- Up to 4 batteries can be connected in parallel (4P) for a maximum capacity of 400Ah.
- A maximum of 16 batteries can be connected in a 4S4P configuration.

Usage Scenarios

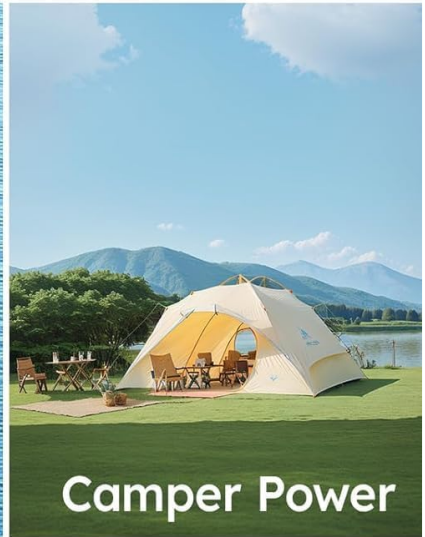


Image: Diagram showing two Timeusb 12V 100Ah LiFePO4 batteries connected in parallel, indicating proper connection for increased capacity.

6. MAINTENANCE

- Regularly inspect battery terminals for corrosion or loose connections. Clean as needed.
- Store the battery in a cool, dry place away from direct sunlight and extreme temperatures.
- For long-term storage, charge the battery to 50% capacity and disconnect it from any loads. Recharge every 3-6 months to maintain battery health.
- Avoid fully discharging the battery below the BMS cut-off voltage to prolong its lifespan.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Battery not charging	Charger not connected, faulty charger, or BMS protection activated.	Check charger connection and functionality. Ensure charger is LiFePO4 compatible. If BMS is in protection mode, disconnect load and allow battery to rest.
Battery not discharging	Loose connections, BMS protection activated (over-discharge, over-current, short circuit).	Check all cable connections. Disconnect load, allow battery to rest, then reconnect. Reduce load if over-current protection is triggered.
Reduced capacity/runtime	Aging battery, improper charging/discharging habits, extreme temperatures.	Ensure proper charging voltage and current. Avoid deep discharges. Operate within recommended temperature range.

8. SPECIFICATIONS

Feature	Specification
Brand	Timeusb
Model	12V 100Pro NEW
Voltage	12 Volts (12.8V Nominal)
Battery Capacity	100 Amp Hours
Energy Output	1280Wh
Battery Cell Composition	Lithium Iron Phosphate (LiFePO4)
Cycle Life	4000-15000 cycles
Maximum Continuous Discharge Current	100A
Peak Discharge Current	200A (3s)
Recommended Charge Current	20A
Recommended Charge Voltage	14.6V
Terminal Type	M8
Product Dimensions (L x W x H)	13"D x 6.77"W x 8.5"H
Item Weight	22.1 pounds
BCI Battery Size	Group 31

9. WARRANTY & SUPPORT

Timeusb provides a 5-year warranty for this 12V 100Ah LiFePO4 battery, covering defects in materials and workmanship under normal use. Additionally, lifetime technical support is offered through their responsive customer service team.

For any questions, technical assistance, or warranty claims, please contact Timeusb customer service.

- **Warranty Period:** 5 Years
- **Support:** Lifetime customer service and technical support.