BUKNUWO®

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please log into the Buknuwo website or download the Buknuwo app to register for warranty service as soon as possible!

www.buknuwo.com

BUKNUWO®

GOLF CART BATTERY

USER EMANUAL

LIFEPO4 DEEP CYCLE BATTERY

38.4V100Ah

51.2V100Ah

⚠ CAUTION

- Flammable/explosive hazard
- Avoid mechanical impact
- Do not short circuit
- Do not crush
- Do not disassemble
- Do not incinerate
- Do not heat above 149 °F/65 °C
- Do not immerse the battery in water
- Do not reverse the polarity of the battery and charger
- Use the appropriate tools when handling the battery

When connecting batteries in parallel, refrain from using batteries of other brands or types, as the Battery Management System (BMS) may not be compatible.

Keep the battery away from fire, hazardous materials and other dangerous substances.

APP Introduction

This application is developed and designed by buknuwo®. It specializes in monitoring lithium batteries, providing real-time status readings such as the voltage, charging and discharging current, alarm prompts, protection status, etc. This allows users to clearly understand the status of lithium batteries and ensure safe use.

Download on the App Store

GET IT ON Google Play

You can search "buknuwo" in the App Store or Google Play Store to download and install.

*This app only supports for smart batteries.



Features

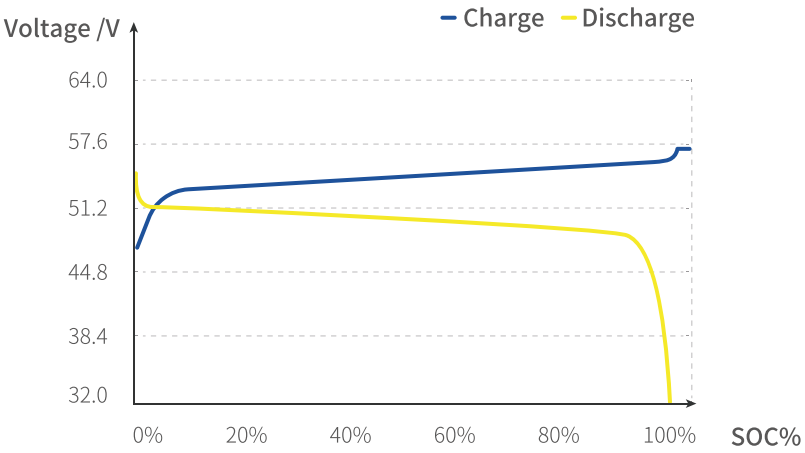
- Lithium Iron phosphate(LiFepo4) chemistry provides exceptional stability and consistent performance.
- Advanced Battery Management System(BMS) ensures product safety and long lifespan.
- With powerful output power, it can be perfectly compatible with the mainstream golf carts currently on the market.
- With standard industrial dimensions, it can be perfectly integrated into the battery compartments of most vehicle models.
- It comes with a built-in intelligent coulomb meter, allowing you to know the accurate power data in real time.
- Constant voltage and full usable capacity at any state of charge.
- Supports fast charging and discharging.
- Grade UL94 V- 0 (Fireproof).

External Featurves





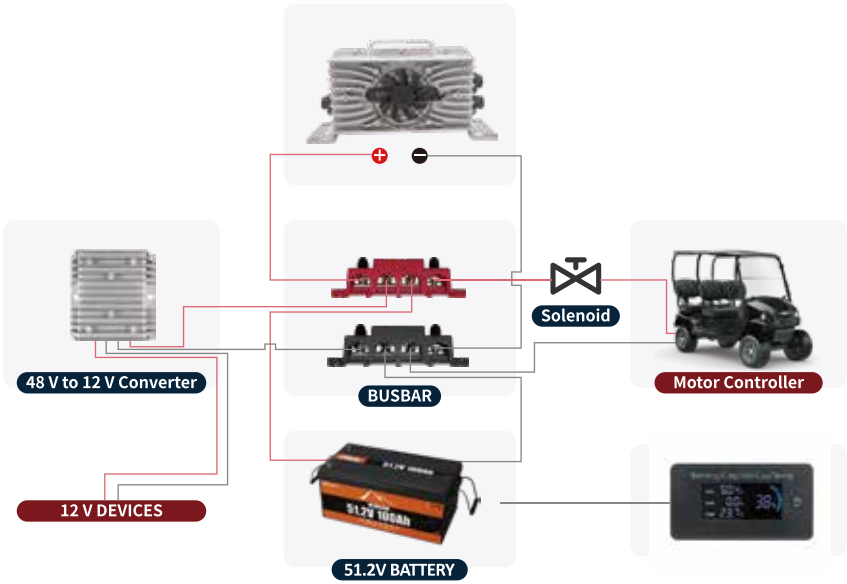
Charge-discharge Curve @ 77 °F/25 °C



Sample: 48 V 100 Ah battery

*Environmental conditions required for all tests: 77±9 °F/25±5 °C

Connection Diagram



Battery Parameters

Content	38.4V 100AH	51.2V 100AH
Battery Weight	68.78 lbs	77.38 lbs
Actual Size	L520*W268*H220	L520*W268*H220
Rated Voltage	38.4V	51.2V
Rated Capacity	100AH	100AH
Energy	3840W	5120W
Charge Limit Voltage	43.2V	57.6V
Over-chargeProtection Voltage	43.8V	58.4V
Over-chargeProtection Voltage	42.6V	56.8V
Recommended Charge Current	20-50A	20-50A
Continuous Maximum Charge Current	100A	100A
Recommended Discharge Current	100A	100A
Continuous Maximum Discharge Current	100A	100A
Maximum Power	3840W	5120W
Over - discharge Protection Voltage	27.6V	36.8V
Over - discharge Recovery Voltage	32.4V	43.2V
Discharge Over-current Protection	700A±100A	700A±100A
Short-circuitProtection Current	≈2800A	≈2800A
Recommendedcharging voltage	43.8V	58.4V

Battery Parameters

Content	38.4V 100AH 51.2V 100AH
Charge Low-temperature Protection	0±5°C
Charge Low-temperature Protection Recovery Value	10±5°C
Charge High-temperature Protection	65±5°C
Charge High temperature Protection Recovery Value	55±5°C
Discharge Low-temperature Protection	-20±5°C
Over-chargeProtection Voltage	-10±5°C
Over-chargeProtection Voltage	70±5°C
Recommended Charge Current	60±5°C
Continuous Maximum Charge Current	-10~45°
Ingress Protection Rating	IP65

Charging With AC-DC Battery Charger

Check whether the AC-DC battery charger you intend to use has a dedicated lithium charge setting that meets the below charging requirements. A lot of battery chargers are designed for charging lead-acid batteries only and may not have a suitable charge setting for LiFePO4 batteries

Charging Tips:

- Use a 58.4V/38.4V LiFePO4 battery charger
- Recommended Charging Voltage: 58.4±0.2V/38.4±0.2V
- Recommended Charging Current:

Battery Model / Charging Current	38.4V 100AH	51.2V 100AH
12A	8H	8H
18A	6H	6H

Installation Environment

The battery should be installed in a clean, cool, and dry place, away from water, oil, and dirt. The accumulation of these substances on the battery may cause leakage, resulting in self-discharge and possible short circuits. Adequate ventilation must be maintained to prevent the battery from overheating, and temperature fluctuations between the batteries should be minimized as much as possible.

Preparation

Before installing and handling the 36V 48V Lithium Iron Phosphate battery (plastic shell), please ensure you have prepared the following equipment or tools:

1. Appropriate insulation protection equipment and tools: For safety, it is recommended to wear insulated gloves, goggles, and use tools such as insulated screwdrivers. These can effectively prevent electric shock accidents.

2. Multimeter: Use for testing battery voltage, current, and other parameters to ensure the battery operates within normal ranges.

3. Battery cables: Choose suitable cables to connect the battery to the device, ensuring a secure connection that complies with electrical standards.

4. Battery charger/charge controller: Select an appropriate charger or charge controller based on the battery type and specifications to ensure the battery charges correctly and safely.

Additionally, read and follow all relevant safety guidelines and operation manuals to ensure correct steps and precautions are adhered to during installation and use.

Inspection

Check for visible damage, including cracks, dents, deformations, and other visible anomalies. The top of the battery and terminal connections should be clean , dry and free of dirt and corrosion. If you find any problem with the battery, please contact us for assistance.

1. Do not short the battery terminals, as doing so may cause a current burst leading to irreversible damage to the system and battery.

2. Please check the polarity before wiring. Polarity reversal will damage the battery.

3. Protect all electrical equipment with circuit breakers, fuses, or appropriately sized circuit breakers as specified by a qualified electrician , licensed installer or regional regulatory authority.

Best Practice Guidelines

To ensure the optimal operation, longevity, and safety of your Phosphate Iron Lithium (LiFePO4) 36V 48V battery, please adhere to the following best practices:

Compatibility with the Same Brand
Do Not Mix Brands:Only connect batteries from the same brand. Mixing different brands can result in incompatible Battery Management Systems (BMS), leading to potential performance issues or damage.

Use the Same Battery Type
LiFePO4 Only:Ensure all connected batteries are of the LiFePO4 type. Do not mix with other types such as lithium-ion (Li-ion) or Sealed Lead Acid (SLA) batteries, as this can cause imbalance and affect the overall system performance.

Matching Voltage
Fully Charged for Consistency:Use batteries that are fully charged before connecting them together. This practice helps maintain consistent voltage levels across all batteries, promoting balanced performance and longevity.

Uniform Capacity
Equal Capacity:Ensure all batteries connected in parallel have the same capacity rating. Using batteries with varying capacities can lead to uneven charging and discharging, reducing the efficiency and lifespan of the battery pack.

Age Matching
Similar Age:The age difference between any two batteries should not exceed three months. Batteries that are significantly different in age may have varied performance characteristics, affecting the overall balance and efficiency of the battery system.

Connection Steps

STEP1.
Fully charge the battery separately

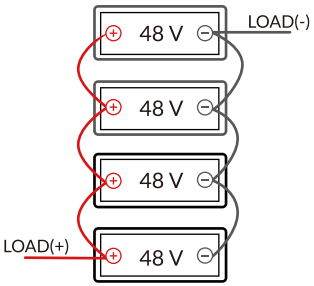
STEP2.
Wait 15mins then test the voltage, it should be more than 52 V

STEP3.
Connect your batteries in series or /and in parallel

(Taking a 48 V 100 Ah battery as an example)

Parallel Connection

48 V 100 Ah



Taking a 48 V 100 Ah battery as an example, first connect four 48 V 100 Ah batteriesin parallel, and then connect one 48 V 100 Ah battery in series to form a battery pack with a total voltage of 48 V and a capacity of 400 Ah.

Wide Application

Golf Cart

Solar Energy

Storage Industrial Battery

Used to Replace 48 V Lead-acid Batteries

Home Energy storage & power Wall

Nautical Applications

Fishing, Boating Electronics

Ice Fishing

Recreational vehicle

Off-grid Life

Deep circulation Application

Not suitable For starting Gasoline Engines



What should I do if the battery is 0 V?

Don't worry, if the battery is showing 0 V,this is potentially due to BMS protection, please disconnect the battery cable from the load and then test the battery voltage, if the voltage is more than 43.2V , reconnect the battery cable. If the voltage is lower than 43.2 V, please contact our technical team at gmail@buknuwo.com

Is it necessary to charge the battery out of the box?

Yes, you need to fully charge the battery. Note: please also fully charge the battery if you want to connect the batteries in series or parallel.

How can I check the battery voltage?

If you don't have a battery monitor ,you can use a multimeter to monitor the voltage.

Can I mount the battery in any position ?

You can mount our battery in any position. Please make sure to secure and protect the terminals when mounting.

FOR MORE FAQs, PLEASE VISIT OUR WEBSITE:

www.buknuwo.com

Warranty

Please visit our official website to register your warranty:
www.buknuwo.com

Not covered by warranty:

1. Damage caused by insufficient or improper fastening
2. Improper installation, use, maintenance, or service.
3. Loose battery terminal connections.
4. Reverse polarity connection.
5. Improper storage conditions defined in the battery user manual.
6. Any short circuit caused by accident,intention, or unintention in connecting the positive and negative.
7. Damage caused by impact, accidents, collisions, or drops.
8. Insufficient/overcharging of the battery as defined in the battery user manual.
9. Using the battery in conjunction with other third-party products.
10. High resistance caused by terminal corrosion, poor crimping, or undersized cables.
11. Battery failure caused by electrical system malfunctions.
12. Modification of the product without the explicit written consent of the manufacturer is prohibited.
13. Use of the battery for applications beyond its design and intended use,including repeated engine starting or consuming more amperes than the battery's rated continuous discharge to meet the irrespective specifications.
14. Batteries left uncharged for more than 1 year (batteries should be charged regularly).
15. Batteries that are used in commercial applications and cycle to a discharge depth of 80% or more within 24 hours.
16. Force majeure,including fires, typhoons, floods, or earthquakes.

After-sales Service

If you need any after-sales service for the product, please contact gmail@buknuwo.com .We will provide you with the necessary assistance.

How to store the battery?

We recommend bringing the batteries to a 50% state of charge.Then disconnect the battery from any loads by removing the negative cable from one battery.On average, the batteries lose< 3% capacity per month at 77 °F/250 °C.

This is subject to increase if stored in extreme environmental conditions.

Disposal and Recycling

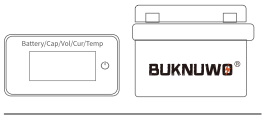
Ensure that the battery is properly disposed of in accordance with the laws and regulations in your area.

This product contains lithium-ion batteries and other recyclable materials.

We strongly encourage our customers to recycle used batteries.

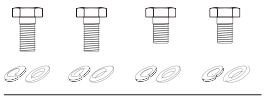
Packing List

Coulomb meter*1 Battery*1



Two M8×16 screws two M8×12 screws

Screw*4



Specification*1



Plastic insulation cap*2



Thank You

Dear Valued Customer,

We extend our deepest gratitude for the trust you have placed in Buknuwo Batteries. Your unwavering support serves as a constant inspiration, driving our team to pursue innovation and deliver state-of-the-art battery solutions, all while maintaining an uncompromising commitment to service excellence.

It is through your invaluable feedback and the relentless dedication of our team that we are able to provide superior products at competitive prices, ensuring your complete satisfaction. Your confidence in our brand fuels our passion to continually raise the standard in energy solutions.

We take immense pride in the engineering and craftsmanship of our products and sincerely hope they exceed your expectations. Should you require any assistance, our dedicated team remains readily available to support you.

With sincere appreciation,
The Buknuwo Team