



USER MANUAL

12V Sodium-ion Start Battery





Important Safety Instructions

Please save these instructions.

DISCLAIMER

The user manual provides important operation and maintenance instructions for GoKWh 12V Sodium-ion Start Battery (hereinafter referred to as battery or Na⁺ battery).

Before use, please read all specifications, usage, storage conditions and warnings on this document and save for future reference. Always follow our instructions for the handling and use of this battery pack. Abuse of battery can cause battery failure, performance degradation or shortened life, overheating, explosion or fire.

Note

- Users should install and use the battery in accordance with the requirements of the user manual. If the user uses the battery under conditions or equipment beyond the conditions specified in this user manual, GoKWh does not assume any responsibility or liability for direct or indirect personal and property losses.
- The illustrations in the user manual are for demonstration purposes only. Details may vary slightly based on product version and market region
- GoKWh reserves the right to make changes to the user manual without prior notice.

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TECHNICAL SPECIFICATION



GWN124S



GWN125S

Model

BATTERY

Cell Type	Sodium-ion (Na-ion) 18650	
Nominal Voltage	12.0V	
Working Voltage Range	6.0~16.0V	
Rated Capacity	3.9Ah	5.2Ah
Nominal Energy	46.8Wh	62.4Ah
Peak Current	150 CCA	200 CCA
Waterproof Rating	IP66	
Internal Resistance	≤55 mΩ	≤50 mΩ
Cycle Life	≥3,000 Cycles @80%DOD 25°C	
Warranty	5 Years	

CHARGE & DISCHARGE

Charge Voltage	≤16.0V	
Standard Charging Current	1.95A	2.6A
Max. Charging Current	11.7A	15.6A
Standard Discharge Current	1.95A	2.6A
Max. Discharging Current	39A	52A
Discharging Cut-off Voltage	7.2V	

MECHANICAL

Terminal	12*10/φ6	
Dimensions (L*W*H)	4.5*2.7*4.1 in/113*68*104 mm	5.9*3.4*4.1 in/149*85*104 mm
Weight	1.49 lbs./ 0.68 kg	2 lbs./ 0.91 kg
Case Material	ABS(Flame Retardant Plastic)	

TEMPERATURE

Charge	0°C~45°C / - 32°F~113°F	
Discharge	-30°C~60°C / -22°F~140°F	
Storage	0°C~45°C / 32°F~113°F	

INSTALLATION AND USE

A safe and reliable installation requires trained and certified technicians. Therefore, this section is intended as a guide only as it cannot cover all scenarios.

Required Tools & Accessories

		
Wrench	Screw Driver	Battery Cable
		
Insulating Gloves	Goggles	Multimeter

Inspection

Please check for visible damage including cracks, dents, deformation, and other visible abnormalities. The top of the battery and terminal connections should be clean, free of dirt and corrosion, and dry. If any problems are detected with the battery, please contact us for assistance. Refer to the last page of the manual for contact information.

Before installation, use a voltmeter to check the voltage status of the Na+ battery. If the voltage is lower than 12.8V, please charge it before installation.

Battery Installation

Step 1. Check The Vehicle's Circuit System

Please follow the vehicle manufacturer's instructions for installation, and use a dedicated charging voltage detector to check the vehicle circuit system.

Step 2. Dismantling Old Battery

Remove the original battery from the vehicle according to the manufacturer's instructions. Be sure to remove the negative bolt and wire first, then the positive bolt and wire to avoid short circuits.

Step 3. Check If Na+ Battery Is Compatible With The Vehicle

① Size, cold cranking amps, terminal location and battery type are key factors in getting the right device. Please measure your old battery and compare size with this battery, If the measurements are the same, the positive and negative poles are consistent, there is not much difference in CCA, it will fit your vehicle.

- ② Check the battery polarity, the Na+ battery must be the same as the original one.
- ③ Check whether the size, length, width and height of the Na+ battery are consistent with the original battery. This is to avoid the situation where the Na+ battery is too large to be properly installed in the vehicle.

Note

- Typically, Na+ battery are the same size as the original battery, or smaller. The same size or Na+ battery is smaller in size than the original battery and can be directly installed in the vehicle.
- If you need to change the battery size, you can stick foam strips on the bottom and sides of the Na+ battery to make it closer to the original battery size. **IMAGE ①**

Step 4. Connect Na+ Battery Torque

Select the cable and locking screw of the appropriate size and use them to tighten the connection torque of the battery.

Step 5. Connect Na+ Battery To The Vehicle

Securely connect the positive and negative wires from the motorcycle or vehicle to the battery terminals. The red wire is connected to the positive pole, and the black wire is connected to the negative pole

It is strictly prohibited to start the ignition with the positive and negative poles reversed. **IMAGE ②**

Step 6. Check Battery Voltage After Connecting

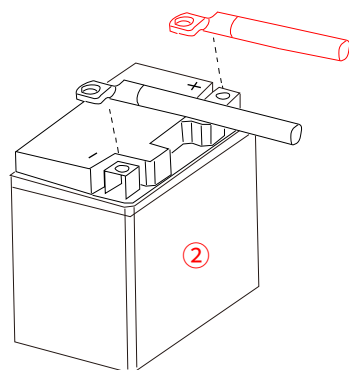
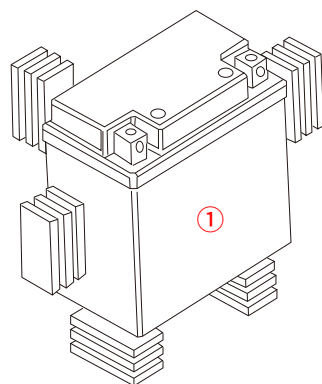
Connect the charging voltage detector firmly to the two wires of the vehicle or motorcycle, paying attention to the correct connection of the positive and negative poles. At this time, the detector will display the terminal voltage of the battery.

Step 7. Motorcycle Charging System voltage Detection

Disconnect the negative terminal of the battery from the negative terminal of the motorcycle. The detector will display the charging voltage of the motorcycle charging system. Control the motorcycle speed at 2000-5000 rpm and read the voltage of the detector respectively:

- ① When the voltage is 14.0V-16.0V, the charging voltage is normal.
- ② When the voltage is lower than 14.0V, the battery is undercharged
- ③ When the voltage is higher than 16.0V, the battery is overcharged.

When the battery is undercharged or overcharged, it will cause abnormality and damage to the battery, and the motorcycle charging system needs to be maintained.



Step 8. Connect A Multimeter To Detect Parking Current

Turn off the motorcycle switch, connect a multimeter that can measure milliampere current in series between the negative pole of the battery and the negative pole of the motorcycle, and use the milliampere current range to measure the static power consumption of the motorcycle to ensure that the parking current of the motorcycle is less than 1mA.

BATTERY CHARGING

- When using a vehicle or external charger to charge the battery, the charging voltage should be limited to 14V-16V.
- When using an external charger to charge the battery, please remove the battery from the vehicle and do not charge it in the vehicle.
- After external charging, please leave the battery for one to two hours and check its voltage. If the voltage is less than 12.8V, continue charging.

BATTERY TRANSPORTATION

- When transporting the battery, please ensure that the battery power is around 50%.
- During transportation, please use insulating and shockproof materials to pack the battery to avoid collision and extrusion during transportation, which may cause damage to the battery.
- Please handle with care during transportation and loading to avoid dropping or bumping the battery.
- Do not transport together with flammable, explosive or sharp metal objects.

BATTERY STORAGE

- When storing the battery, keep the battery charge above 70%.
- The battery should be stored in a ventilated and dry environment to avoid contact with corrosive substances.
- Keep away from high temperature and open flame environment.
- During storage, it is recommended to charge the battery every 180 days and fully charge the battery.

BATTERY MAINTENANCE

- When the vehicle is not used for a long time, the battery should be removed or disconnected to prevent leakage or over-discharge of the battery, which may cause damage to the battery.

- The vehicle and battery should be checked regularly to keep the positive and negative poles of the battery clean and firmly connected.
- If the battery voltage is found to be lower than 12.8V during storage, the battery should be charged in time
- Do not use a maintenance charger for long-term maintenance of the battery.

WARNING

- DO NOT immerse the battery in water or allow it to get wet.
- DO NOT use or store the battery near sources of heat such as a fire or heater.
- DO NOT reverse the positive (+) and negative (-) terminals.
- DO NOT connect the battery directly to wall outlets or car cigarette-lighter sockets without proper charging equipment.
- DO NOT allow exposed ends of cables connected to opposite terminals to touch.
- DO NOT put the battery into a fire or apply direct heat.
- DO NOT use the battery if the battery casing has been pierced, broken, cracked, or otherwise visibly damaged.
- DO NOT throw the battery or heavily strike the battery in any way.
- Never solder anything directly to the battery terminals.
- DO NOT attempt to open or modify the battery in any way.
- DO NOT mix batteries of different capacities, types, and brands.
- Stop using the battery if it has an odor, is abnormally hot, deformed, has its cover discolored, or has any other abnormalities.
- When the battery is in use or charging, the above conditions may occur. Please remove the battery from the vehicle immediately or disconnect the charger and stop using it.
- The battery charging voltage should be controlled below 16V, otherwise the battery will be damaged.
- Before discarding the battery, please fully discharge the battery.

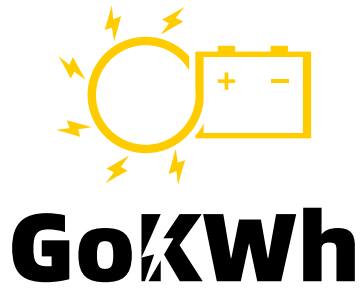
Note

- The electrolyte in the battery is harmful to human skin and eyes. If the electrolyte leaking from the battery contacts your eyes, please do not rub it, rinse it with clean water immediately, and go to the hospital for treatment. If not handled properly, the electrolyte may damage your eyes.

WARRANTY & AFTER-SALES SERVICE

GoKWh guarantees that all batteries are brand new and are fully tested before shipment. If you encounter any problems when using the product, please feel free to contact us through the official email for after-sales service. If you need to use the warranty service, please refer to the warranty terms in this booklet:

- All GoKWh 12V Sodium Ion Batteries come with a 5-year manufacturer's warranty from the date of purchase.
- This warranty covers the following 12V series of Sodium Ion start battery models:
 - ① 12V 3.9Ah Sodium-ion Start Battery
 - ② 12V 5.2Ah Sodium-ion Start Battery
- Warranty applies only to the original owner and is not transferable.
- We will require proof of purchase and usage before processing any warranty claim or return.
 - ① If GoKWh provides technical support and battery repair services for non-manufacturer defects, the customer will be responsible for the corresponding shipping costs.
 - ② If the product is confirmed to have a manufacturer defect, GoKWh will bear the shipping costs of replacing the battery.
- Warranty service will not be provided if the battery fails due to the following conditions or reasons:
 - ① Improper battery maintenance, incorrect charging, reverse polarity, improper use, improper installation
 - ② Damage to the battery caused by use in an overheated environment, fire, freezing, accidental entry into any body of water (lakes, streams, ponds or oceans)
 - ③ Failure to maintain proper battery charge or use beyond the rated charge/discharge cycle
 - ④ Battery damage caused by unauthorized tampering or repair
 - ⑤ Force majeure or external causes, misuse, accident, negligence
 - ⑥ The buyer intentionally conceals or fails to cooperate in providing purchase or use information



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