

GoKWh

USER MANUAL

51.2V LiFePO4 LCD Stack-mounted
Battery Storage Series



Dongguan GoKWh Technology Co., Ltd.
Version - 2025



Important Safety Instructions

Please save these instructions.

DISCLAIMER

The user manual provides important operation and maintenance instructions for the GoKWh 51.2V LiFePO4 LCD Stack-mounted LiFePO4 Battery Storage Series (hereinafter referred to as the battery or battery pack).

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.
- Please carefully check all the configurations and batteries in the package. If any accessories are missing or for any technical support, please contact GoKWh Customer Service Center in time.

1. APPEARANCE AND DIMENSIONS

Unpack and check the accessory package to confirm whether the number of accessories is consistent with the list. If there is any missing, please contact GoKWh Customer Service Center in time.



(48V 200Ah)



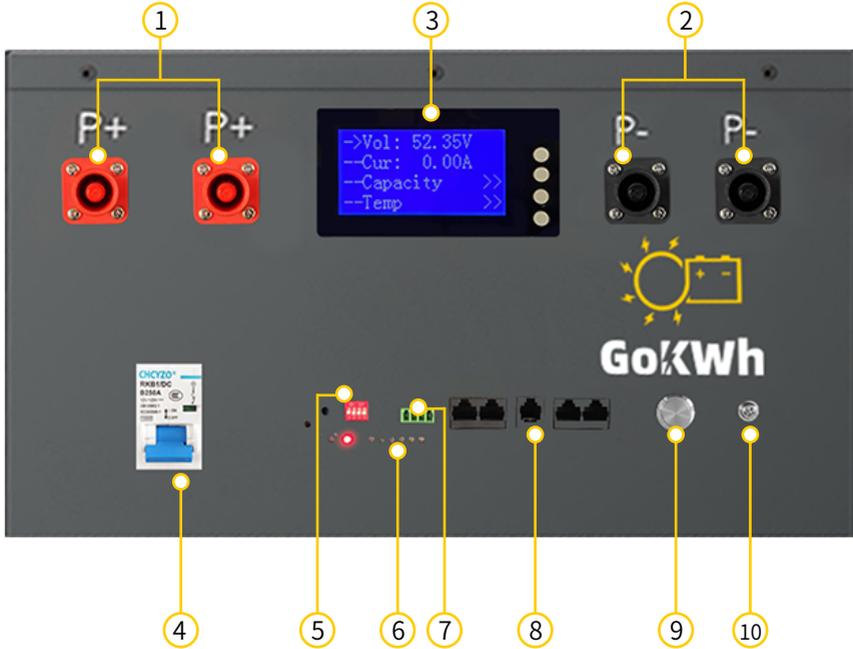
(48V 280Ah)



(48V 320Ah)

2.INTERFACE DESCRIPTION

Battery Front Panel



① M8 P+ Terminals	⑥ Capacity Light
② M8 P- Terminals	⑦ Digital Output Port
③ LCD Screen	⑧ Communication Port
④ Circuit Breaker	⑨ ON/OFF Switch
⑤ ADS Switch	⑩ Grounding Port

3.TECHNIAL SPECIFICATION



GW48200PSD



GW48280PSD



GW48320PSD

Model

BATTERY

Cell Type	Prismatic Lithium Iron Phosphate (LiFePO4)		
Nominal Voltage	51.2V		
Rated Capacity	200Ah	280Ah	320Ah
Nominal Energy	10.2kWh	14.3kWh	16.4kWh
Internal Resistance	≤80 mΩ		
Cycle Life	≥8000 at 80% DOD		
Max. Expansion	15P (In Parallel)		
Dimensions (L*W*H)	22.6*17.3*9.1 in (575*440*232mm)	28.7*17.3*9.5 in (730*440*242mm)	
Weight	200lb (91kg)	249lb (113kg)	255lb (115.8kg)
Display	LCD Screen		
Protection Class	IP20		
Warranty	5-Year		

BMS

BMS	200A
Communication	RS485/ CAN
Max. Cont. Charge Current	200A
Max. Cont. Discharge Current	200A
Max. Instantaneous Current	200A
Max. Charge Current	200A
Max. Discharge Current	200A
Discharge Cut-off Voltage	40V

CHARGE

Charge Method	CV/CC
Charge Voltage	58.4V
Recommend Charge Current	≤200A

TEMPERATURE

Charge	0°C~45°C/ 32°F~113°F
Discharge	-20°C~60°C/ -4°F~140°F
Storage	-20°C~25°C/ -4°F~77°F

4. BMS (Battery Management System)

4.1. LED Status Indicators

Model	Normal/Warning/ Protection	ON/ OFF	RUN	ALM	SOC Indicators LED				
		●	●	●	●	●	●	●	●
Power Off	Normal	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Balancing	Normal	ON	Flicker	OFF	Battery based display				
	Alarm	ON	Flicker	Flicker					
Charging	Normal	ON	ON	OFF	Battery based display				
	Alarm	ON	ON	Flicker					
	OV Protect	ON	ON	OFF	ON	ON	ON	ON	ON
	Overcurrent	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
	Over Temp	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
	Fail-safe	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
Discharging	Normal	ON	Flicker	OFF	Battery based display				
	Alarm	ON	Flicker	Flicker					
	UV Protect	OFF	Flicker	OFF	OFF	OFF	OFF	OFF	OFF
	Overcurrent	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
	Over Temp	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
	Short Circuit	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
	Fail-safe	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF

Note.

Buzzer action description

- When a occurs, 0.25S is emitted every 1S;
- When protecting, chirp 0.25S every 2S (except over and under voltage protection);
- When an alarm is generated, the alarm is generated every 3S for 0.25S (except for an over-voltage or under-voltage alarm);

Reset key switch description

- When the BMS is in hibernation state, press the key (1S) and release it, the protection board is activated, and the LED indicator lights up successively from "LED1" for 0.5 seconds.
- When the BMS is active, press the button (3 to 6S), and the LED indicator will turn on for 0.5 seconds from the lowest power indicator. When released, the system will go to sleep.
- When the BMS is in the active state, press the button (6-10s) and release it, the protection board is reset, and the LED indicator is displayed according

Note.

Description of the self-locking switch

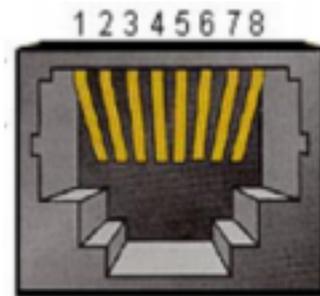
- When the BMS is in hibernation state, after closing the self-lock, the protection board is powered on, and the LED indicator lights up successively from "LED1" for 0.5 seconds.
- When the BMS is active, turn off the self-locking switch and wait for 1S~3S before

4.2.SOC Indicators

Status		Charging						Discharging					
Soc LED		L6	L5	L4	L3	L2	L1	L6	L5	L4	L3	L2	L1
SOC (%)	0~16.6%	OFF	OFF	OFF	OFF	OFF	Flash	OFF	OFF	OFF	OFF	OFF	ON
	16.6~33.2%	OFF	OFF	OFF	OFF	Flash	ON	OFF	OFF	OFF	OFF	ON	ON
	32.2~49.8%	OFF	OFF	OFF	Flash	ON	ON	OFF	OFF	OFF	ON	ON	ON
	49.8~66.4%	OFF	OFF	Flash	ON	ON	ON	OFF	OFF	ON	ON	ON	ON
	66.4~83.0%	ON	Flash	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON
	83.0~100%	Flash	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

4.3.RS4851 & RS4852 Interfaces

Communication with host computer:



RS485-Adopts 8P8C Vertical RJ45 Socket	
RJ45 Pin	Description
1/8	RS485-B
2/7	RS485-A
3/4/5/6	GND

4.4.Communication

4.4.1.CAN Communication

There is a CAN1 interface on the front panel, and default CAN communication baud rate is 250k.

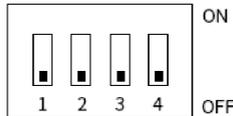
4.4.2.RS485 Communication

The front panel has two RS485 communication interfaces for detecting battery pack information. Default baud rate is 115200. The communication address can be set via DIP switch with address range 0~15 to poll data from all battery packs.

4.5.Dip Switch Setting

When multiple battery packs are used in parallel, the address of each battery pack needs to be set through the DIP switch to distinguish different battery packs, and the hardware address of each battery pack is unique.

The hardware address can be set in turn through the dial switch on the board, with 1, 2, 3, 4, dials. Refer to the following table for the definition of switches.



0	DIP Switch Positions			
	1	2	3	4
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

4.6. Set the RS485 and CANBUS protocols of the BMS to the inverter through the UPLCD display screen

Step 1. Select PackSet

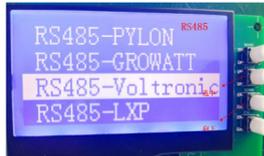


Step 2. Select the protocol type that needs to be set, namely RS485 or CANBUS.



Step 3. Set the corresponding protocol type

a. Select the corresponding protocol using the DOWN button



b. Click the ENTER button to select



5. 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.

6. BATTERY STORAGE

- When storing the battery, keep the battery charge above 70%.
- The battery is to be stored in a condition that the temperature of $23 \pm 2^{\circ}\text{C}$ and the humidity of 45%- 75%.
- 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.

7. 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.

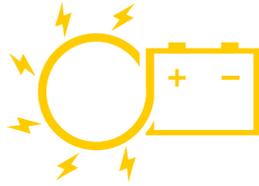
Note.

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.

10. WARRANTY & AFTER-SALES SERVICE

- All GoKWh 51.2V LiFePO₄ LCD Battery Storage Series come with a 5-year manufacturer's warranty from the date of purchase.
- This warranty covers the following GoKWh 51.2V LiFePO₄ LCD Stack-mounted Battery Storage Series models:
 - a. GoKWh 51.2V 200Ah LiFePO₄ LCD Stack-mounted Battery Storage
 - b. GoKWh 51.2V 280Ah LiFePO₄ LCD Stack-mounted Battery Storage
 - c. GoKWh 51.2V 320Ah LiFePO₄ LCD Stack-mounted Battery Storage

- 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.
- a.** If GoKWh provides technical support and battery repair services for non-manufacturer defects, the customer will be responsible for the corresponding shipping costs.
- b.** 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:
 - a.** Improper battery maintenance, incorrect charging, reverse polarity, improper use, improper installation
 - b.** 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)
 - c.** Failure to maintain proper battery charge or use beyond the rated charge/discharge cycle
 - d.** Battery damage caused by unauthorized tampering or repair
 - e.** Force majeure or external causes, misuse, accident, negligence
 - f.** The buyer intentionally conceals or fails to cooperate in providing purchase or use information



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