

HUMSIENK

USER MANUAL HOME ENERGY STORAGE SERIES

LiFePO₄ BATTERY



 48V 100Ah Smart Home Storage

 48V 314Ah Smart Home Storage



Register Warranty 

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NOTES

All or part of the products and services described in this document may not be available for purchase or use by you.

Unless otherwise agreed in the contract, **HUMSIENK** makes no express or implied representation or warranty with respect to the contents of this document.

This document is subject to periodic updates due to product version updates or upgrades. This document is intended as a guide to use only and will not be notified of updates unless otherwise agreed.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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Preface

This document mainly introduces the product information, installation method, configuration and debugging, troubleshooting and maintenance of energy storage battery packs. Please read this document carefully before installation to understand the safety information and functions and features of energy storage battery pack. Incorrect use may cause danger to your property safety and life safety.

■ Applicable Products

This document applies to the following models:

- 48V 100Ah Smart Home Storage
- 48V 314Ah Smart Home Storage

■ Applicable Personnel

This document is intended for the following personnel:

- Equipment installation engineers.
- Maintenance engineers.
- Be familiar with local laws and regulations, understand the products after professional training and be authorized technicians.

■ Symbol Definition

In order to make the best use of this manual, the following symbols are used to highlight important information. Please read the symbol instructions carefully.

 Danger
Indicates a high potential risk that, if not avoided, may result in serious injury.
 Warning
Indicates a moderate potential risk that, if not avoided, may result in moderate injury.



Caution

Indicates a moderate potential risk that, if not avoided, may result in moderate or minor injury to personnel.

Attention

Emphasis and supplementation of content may also provide techniques for the use of the product, which can help solve a problem or reduce operation time.

Safety Precautions

■ Declaration

When installing, operating and maintaining the equipment, please read this manual and understand the relevant information and safety precautions. When unpacking a new product, please check the product against the packing list. If the product is deformed, leaking, damaged or missing accessories, contact your local distributor immediately.

The safety precautions in this document must be followed when operating the equipment.

Attention

The equipment is designed and manufactured in strict accordance with relevant safety regulations. However, as an electrical equipment, the relevant safety regulations and instructions must be observed before any operation on the equipment.

When installing, operating, and maintaining equipment, please follow local laws and regulations. The safety matters in this manual are only supplementary to local laws and regulations.

The Company shall not be liable under any of the following circumstances.

- Do not use or operate under the instructions and conditions of use in the manual.
- Force majeure causes equipment damage, such as earthquake, storm, flood and other natural disasters.

- The equipment is damaged due to unauthorized disassembly and modification of parameters.
- Damage caused by customer's own handling.
- Equipment damage caused by failure to store as required.
- Damage beyond the service life of the equipment.

■ General Requirements



Danger

1. Before installation, please check and verify the parameters of each component (such as photovoltaic, inverter) to see if they meet the requirements of the overall system. Incorrect parameter configuration during installation or use may cause equipment damage or fire.
2. Check whether the battery pack shell is deformed, corroded, or leaked before installation. If any of the above phenomena are found, stop using it immediately and put it in a safe and ventilated environment for treatment.
3. During installation, insulation protection should be done and live operation is prohibited. Installation or removal of cables may cause electric arc or spark, which may lead to fire or personal injury.
4. Do not store flammable or explosive objects or gases in the installation environment.
5. The battery pack is prohibited from being hit, trampled or dropped during transportation.
6. Unauthorized modification of battery parameters is prohibited.
7. Do not place the battery pack in a high temperature environment or burn it in a fire.
8. Do not use the battery pack as a portable battery pack.
9. Do not short circuit the positive and negative electrodes of the battery pack. Although the BMS is equipped with short circuit protection, it may be damaged.
10. Corresponding fire protection measures should be configured in the installation environment.
11. Installation location is prohibited for children or people who do not have the ability to think independently.

 Caution

1. During transportation, it should be handled by professional personnel and equipment, and the process should be recorded.
2. Ensure that the battery is placed firmly and not tilted.
3. The equipment should be kept away from direct sunlight or rain and snow cover.
4. The service life of the cable will be shortened in high temperature environment. It is recommended to lay the cable 30mm away from the heat source.
5. The wiring is neat and reasonable.

■ Special Cases**Fire handling measures** **Danger**

Under high temperature, the battery pack may have thermal runaway, resulting in battery deformation and electrolyte leakage. In serious cases, internal short circuit may lead to a secondary fire. Do not approach.

- In case of fire, please power off the system while ensuring your own safety.
- Use carbon dioxide, FM-200 or ABC dry powder fire extinguishers to put out the fire.
- Wear a gas mask when escaping or putting out a fire.
- Fire water pollution of underground water or drinking water sources is prohibited.

Leakage treatment **Danger**

Excessive inhalation of, or contact with, leaked chemical gases or liquids may cause injury.

When the battery leaks, take the following measures according to the actual situation:

- Immediately stop using the equipment.
- Ensure good ventilation.
- Use personal protective equipment (gas masks, protective clothing, etc.) to avoid contact with chemical liquids or inhalation of chemical gases.
- Load equipment and contaminants into sealed containers and dispose of waste in accordance with local regulations.

In case of accidental contact or inhalation of leaked chemical liquids or gases, the following measures should be taken immediately:

- Inhalation: Transfer to fresh air immediately and keep breathing clear. If breathing difficulties are felt, oxygen should be given immediately. If syncope occurs, cardiopulmonary resuscitation should be performed immediately and medical help should be sought immediately.
- Skin contact: Wash with plenty of water and soap and seek medical help immediately.
- Eye contact: Wash with plenty of water immediately for at least 15 minutes, do not rub, and seek medical help immediately.
- Accidental ingestion: If the person is conscious, induce vomiting and seek medical help immediately.

■ Product Information

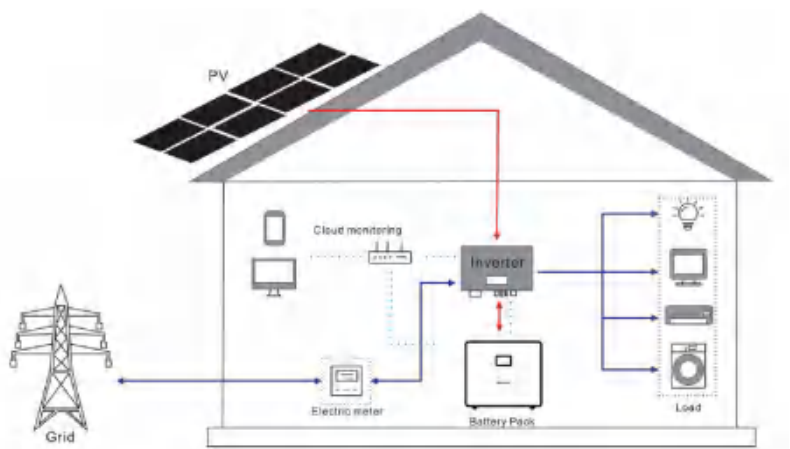
■ Function Introduction

The 48V 100Ah Smart Home Storage/48V 314Ah Smart Home Storage is an energy storage system combining lithium iron phosphate batteries with a Battery Management System (BMS). This system integrates photovoltaic panels, inverters, generators, and grid power to store and release electrical energy, enabling green power generation, energy conservation, and an uninterrupted home electricity supply.

Characteristics:

- Lithium iron phosphate cells are used, which have longer service life and higher safety.
- Special shell design with IP54 protection to avoid the impact of external environment on the inside of the equipment.
- Intelligent BMS is adopted to achieve high precision collection and monitoring, ensuring the safety of battery operation.
- Add Bluetooth function, which can be monitored and operated through the mobile phone.

■ System Applications



Attention

The figure above is only a general schematic diagram of the framework of the system. Circuit breakers or distribution boxes may need to be added between components. The actual application scenario should be set up according to your own requirements and local laws and regulations.

List of matching inverter brands

The following brands are verified to be successfully paired. The same brand may vary due to different models and versions. If the inverter brand selected is not shown in the table below or cannot be matched successfully, please contact the after-sales personnel.

Brand	Type	Test	Baud rate
PYLON TECH	RS485/CAN	Support	9600/250k
GROWATT	RS485	Support	9600
VoltronicPower	RS485	Support	9600
SRNE	RS485	Support	9600
VICTRON	CAN	Support	500K

Brand	Type	Test	Baud rate
Sacolar	RS485	Support	500K
Deye	CAN	Support	500K
MUST	CAN	Support	100K
Sumry	RS485	Support	9600
SOROTEC	CAN	Support	500K
SAKO	RS485	Support	9600
MEGAREVO	CAN	Support	500K
LUXPOWER	CAN	Support	500K
GT	RS485	Support	9600
SOFAR	CAN	Support	500K
GOODWE	CAN	Support	500K
SOLAX	RS485/CAN	Support	9600/500K
Afore	CAN	Support	500K
SUYEEGO	RS485	Support	500K
INVT	CAN	Support	500K
NEXT	RS232	Support	9600
PACE	RS485	Support	9600
Solis	CAN	Support	500K
SMA	CAN	Support	500K

■ Product Parameters

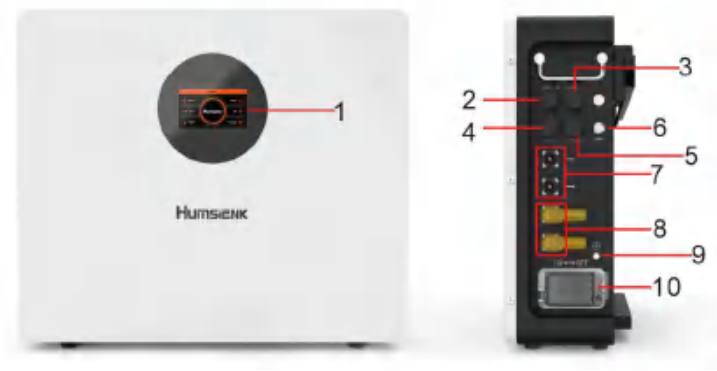
1. Specifications

Model	48V 100Ah Smart Home Storage	48V 314Ah Smart Home Storage
Battery Type	LiFePO ₄ /LFP	
Configuration	16S1P	16S1P
Rated Energy	5.12kWh	16kWh
Nominal Voltage	51.2V	
Working Voltage	40~58.4V	
Capacity	100Ah	314Ah
Recommended Charge Current	≤20A	≤60A
Max. Charge	100A	200A
Max. Discharge	100A	200A
Cycle Life (@25°C)	>6000@DOD80%	
Extensibility	Up to 15 Batteries in Parallel	
Working Temperature (Charge)	2~50°C/35.6~122°F	
Working Temperature (Discharge)	-20~65°C/-4~149°F	
Storage Temperature	-20~45°C/-4~113°F	
Max. Altitude	≤3000m	
Humidity	5%~95%	
Communication	CAN/RS485/Bluetooth	
Dimensions (L×W×H)	550×485×185.5mm/ 21.65×19.09×7.30inch	890×620×254mm/ 35.04×24.41×10.00inch
Weight	50kg/110.23lbs	133.5kg/294.32lbs
Mounting	Wall-Mounted Installation	
Ingress Protection	IP54	

2. Appearance Size



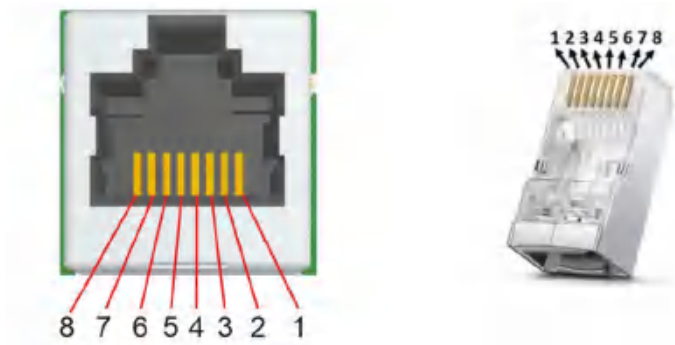
■ Interface Specifications



No.	Name	Purpose
1	Display screen	View Real-Time Battery Information and Set Communication Protocols
2	RS485/CAN	Communication Interface Between BMS and Inverter
3	RS232	The Communication Interface of the Computer to the BMS
4	LINK-IN	Communication Interface for Parallel Battery Packs
5	LINK-OUT	
6	Switch	Control BMS on and Off
7	-	Battery Negative Terminal Interface

No.	Name	Purpose
8	+	Battery Pack Positive Interface
9	GND	Grounding Wire Connection Point
10	ON-OFF	Circuit Breaker, Controls the Connection Between the Positive Electrode Inside the Battery Pack and the External Connection to Be Open or Closed

Communication interface description



CAN/RS485		RS232		LINK-IN		LINK-OUT	
1	RS485B	1	GND	1	NC	1	NC
2	RS485A	2	TX	2	RS485A	2	RS485A
3	NC	3	RX	3	RS485B	3	RS485B
4	CAN-H	4	NC	4	IN+	4	OUT+
5	CAN-L	5	NC	5	IN-	5	OUT-
6	GND	6	RX	6	RS485B	6	RS485B
7	RS485A	7	TX	7	RS485A	7	RS485A
8	RS485B	8	GND	8	GND	8	GND