



Quick Installation Manual

Please scan the following QR code for SolisStorage FlexHome-(5-40)kWh-H Series User Manual



Before installing the FlexHome-(15-40)kWh-H Series, please read through the user manual in order to learn the product information and safety precautions. The Company does not provide warranty services for any damage caused by the failure in storing, handling, installing and using the equipment according to this document and user manual. We may update this document irregularly due to product version upgrading or other reasons. This document is used for use guidance, and all statements, information and suggestions contained herein do not constitute any guarantee, either expressly or in an implied manner, unless otherwise specified.

STATEMENT
Follow local laws and regulations when installing, operating, or maintaining the equipment. The safety instructions in this manual are only supplements to local laws and regulations. SolisStorage will not be liable for any consequence caused by the violation of general safety requirements or design, production, and usage safety standards.

- PERSONNEL REQUIREMENTS**
- Personnel who plan to install or maintain SolisStorage equipment must receive thorough training, understand all necessary safety precautions, and be able to correctly perform all operations.
 - Only qualified professionals are allowed to install, operate, and maintain the equipment.
 - Personnel who will operate the equipment, including operators, trained personnel, and professionals, should possess the local national required qualifications in special operations such as high-voltage operations, working at heights, and operations of special equipment.

Professionals: personnel who are trained or experienced in equipment operations and are clear of the sources and degree of various potential hazards in equipment installation, operation, and maintenance.

- The following types of safety instructions and general information appear in this document as described below:
- Danger!** Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
 - Warning!** Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
 - Caution** Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
 - Notice** Indicates actions of which, if not avoided, could result in material damage.

01 Important Safety Instructions

Danger! High voltage in the battery poses a risk to life! All work must be performed by a qualified electrician. This equipment must not be used by children or individuals with physical, sensory, or mental disabilities, or those lacking experience and knowledge, unless they are under supervision or instruction.

Warning! Electric shock hazard! Authorized service personnel must disconnect the AC and DC power before attempting any maintenance, cleaning, or working on any circuit connected to the system. Do not operate the system while the equipment is running. The battery system can only be used in the DVC-A circuit and can only be used in conjunction with an isolated PCS.

Notice Battery grounding. Comply with local battery grounding requirements. It is recommended to connect the generator frame and other conductive surfaces in a way that ensures continuous electrical conductivity and ground them to provide optimal system and personnel protection. Recommend adding a circuit breaker to the negative pole (the circuit breaker needs to be self equipped)

Setting of Safety Warning Signs
Follow the instructions below during guidance, maintenance, and repair to prevent misuse or accidents caused by non-professionals:

- Place safety signs at both ends of switches to avoid accidents caused by incorrect operation.
- Set up warning signs or isolation barriers near the operating area.
- After maintenance or operation, the system must be reinstalled.

Measuring Equipment
To ensure electrical parameters meet the requirements, relevant measuring equipment is required when connecting or testing the system. Ensure that the equipment used is of matching specifications to prevent arcing or electric shock.

Moisture Protection
Moisture can damage the battery. During maintenance or servicing, avoid operating in damp weather.

Post-Power-Off Operations
The battery system is part of an energy storage system, and even if the DC power is turned off, it may still store life-threatening high voltage. Do not touch the battery socket. Even if the DC or AC power is cut off, the battery pack may still maintain life-threatening voltage. For safety, use a calibrated voltmeter to check the voltage before any installation personnel operate the equipment.

Proper Disposal and Recycling
Dispose of and recycle batteries correctly according to the waste battery management regulations of different countries.

External aural-visual alarm
When venting of gaseous electrolyte, burning of the cell, spark formation and ignition of vented gas mixtures, explosion of the cell, the energy storage system will activate audible and visual alarms via RS485 or CAN communication commands. Simultaneously, the red "SYS" indicator on the PCS front panel will illuminate. The alarm device shall meet the requirement that the sound pressure level at 3 meters is greater than 85 dB but not exceeding 110 dB.

Battery Safety Regulations
Hazard Information
This product uses lithium iron phosphate batteries and complies with the United Nations recommendations for the transport of dangerous goods, having passed testing and obtained UN38.3 certification. The battery contains chemicals stored in sealed metal casings designed to withstand the temperatures and pressures encountered during normal use. Therefore, there are no physical hazards of fire or explosion, nor chemical hazards of dangerous goods leakage under normal usage conditions. However, if the product is misused, subjected to fire, mechanical shock, electrical stress, or decomposition, gas release vents will be activated. The outer casing of the battery will be destroyed to the limit, potentially releasing harmful substances.

Safety Data Sheet
For more information, please refer to the battery Safety Data Sheet.

General Precautions
Warning! There is a risk of chemical burns from electrolyte or toxic gases. Under normal operation, there will be no electrolyte leakage or toxic gas emissions from the battery pack. However, if the battery pack is damaged or malfunctioning, electrolyte leakage or toxic gas emissions may occur.

- Do not touch the battery with wet hands.
- Do not install or operate the battery in potentially explosive environments or high humidity areas.
- If moisture penetrates the battery (e.g., due to casing rupture), do not install or operate the battery.
- Do not move equipment connected to the battery module. Secure the equipment to prevent tipping.
- The battery system must be transported by the manufacturer or designated personnel. Precautions should be documented and archived.
- During transportation, a fire extinguisher with a minimum capacity of 2 kg and ABC certification must be carried.
- Do not smoke inside or near the vehicle during loading or unloading.
- If necessary, when replacing the battery module, request new hazardous material packaging from the supplier, then repack it and return it to the supplier for recycling.
- If electrolyte comes into contact with skin, immediately rinse with clean water and seek medical attention.
- There is a risk of injury when handling or dropping the equipment. The battery pack is heavy. If the battery is improperly lifted or dropped during transportation, installation or removal from the wall, there is a risk of injury.
- If the user chooses to install an external sound and light alarm, please contact the manufacturer to confirm the appropriate alarm and detailed wiring method

- Do not smoke inside or near the vehicle during loading or unloading.
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Limitation of Liability
SolisStorage shall not be liable for any direct or indirect damage to products or property caused by the following situations:

- Unauthorized modifications, design changes, or part replacements of the product;
- Alteration, modification, or erasure of serial numbers or seals by non-technical personnel;
- Failure to comply with local safety regulations (e.g., DE: VDE; AU: SAA);
- Damage during transportation (including paint scratches due to friction within the packaging), claims should be filed immediately with the transportation or insurance company after unloading the container/ packaging and confirming the damage;
- Failure to follow any/all user manuals, installation guides, and maintenance rules;
- Improper or misuse of the equipment;
- Inadequate ventilation for the equipment;
- Failure to maintain according to standard maintenance procedures;
- Force majeure (e.g., storms, lightning, fire, etc.);
- Any damage caused by external factors.

Symbols On The Type Label

Symbol	Explanation
	CE marking The battery complies with applicable CE requirements.

TUV marking

The battery should be recycled in appropriate facilities in an environmentally safe manner.

High voltage in the battery poses a risk to life!

Danger
Risk of electric shock!

Read instructions.

The system should not be disposed of with household waste. Disposal information can be found in the accompanying documentation.

Do not dispose of the system together with household waste. Instead, it should be disposed of in accordance with the regulations on electronic waste disposal applicable to the installation site.

Warning:
Explosive Hazard!

Keep the battery module away from open flames or ignition sources.

Installation Precautions
The FlexHome-(15-40)kWh-H Series is specifically designed for outdoor installation (IP66). Ensure the installation location meets the following conditions:

- Not exposed to direct sunlight.
- Not in areas with combustible materials stored at high levels.
- Not in potentially explosive areas.
- Not in direct cold air.
- Not near television antennas or antenna cables.
- Altitude not exceeding approximately 4000 meters above sea level.
- Not in environments with precipitation or humidity outside the range of 5%–95%.
- Installed in an area with good ventilation.
- Environmental temperature between -25°C and +45°C.

Wall requirements for battery installation:
1. The surface should be solid and flat.
2. Sturdy brick/concrete or an installation surface of equivalent strength.
3. If the wall is not strong enough, the battery must be supported or reinforced (e.g., wooden walls or walls covered with thick layers of decoration).
4. Do not install the device in areas with vibration.
5.If wall mounted installation is chosen, please ensure that the wall can withstand three times the weight of the product.

Please avoid direct sunlight exposure, rain exposure, or snow accumulation during installation and operation.

Installation Location And Environment
Restricted Locations
Do not install the Battery system series batteries in the following locations:
(a) Locations restricted by AS/NZS 3000 panel regulations;
(b) Within 600mm of any heat sources (such as water heater units, gas heaters, air conditioning units, or any other equipment);
(c) Within 600mm of any exit;
(d) Within 600mm of any window or ventilation opening;
(e) Within 900mm of any point connected to 240V AC power supply;
(f) Within 600mm of the sides of any other equipment.

Ensure that when the battery is installed in any corridor, hallway, or similar location leading to an emergency exit, there is a sufficient distance of at least 1 meter from the safety exit.

Residential Partition
To prevent fire from spreading within the space where the energy storage system is installed, install a non-combustible partition on the side of the wall or structural surface opposite the energy storage system. If the installation surface is not made of non-combustible material, a non-combustible partition can be installed between the energy storage system and the wall or structural surface.
If the energy storage system is installed on the wall separating the energy storage system from the living space or within 300mm of the wall, the distance from other structures or objects must be increased. Please ensure the following distances are maintained:

- (i) At least 500mm distance on both sides of the battery;
- (ii) At least 500mm distance above the battery;
- (iii) The gap between multiple units must be at least 500mm.

If the energy storage system has less than 50mm clearance between the ceiling or any object above, the ceiling or the surface of the upper structure must be made of non-combustible material, and the radius should be within 600mm.

The maximum distance between the highest point of the installed energy storage system and the floor or platform should not exceed 2.2 meters.

Notice When carrying heavy objects, you should be prepared to bear the weight to avoid being crushed or sprained by heavy objects.

Caution When multiple people carry heavy objects at the same time, it is necessary to consider the height and other conditions, and do a reasonable job of personnel matching and division of labor to ensure a balanced weight distribution

02 Installation Accessory Checklist

Check the following parts list to ensure all accessories are complete. (Example for installing one battery packs)

Connection BOX & Base List			

Battery Packing List		

*The above are standard configurations; Please choose the configuration based on the actual shipment!

03-A Floor Standing Installation

01 Select Drilling Location:

Unit: mm

Attention: Refer to mounting hole location drawing for installation, the red coordinates indicate the drilling position Select the corresponding punching size for different battery pack quantities

02 Position And Drill Holes, And Install The Base:

Installation examples of two battery pack solutions: Unit: mm

Tools: Impact Drill, Spirit level, Drilling Location Drawing, Marker, Drilling Location mark

03 Install The First Battery System:

Tools: Screw M5*16, Plum Blossom

04 Install The Second Battery System:

Tools: Screw M5*16, Plum Blossom

05 Install The Bracket:

Tools: Expansion Bolt Combination, Socket Wrench 13mm, Screw M6*12, Plum Blossom

06 Install The Wiring Harness:

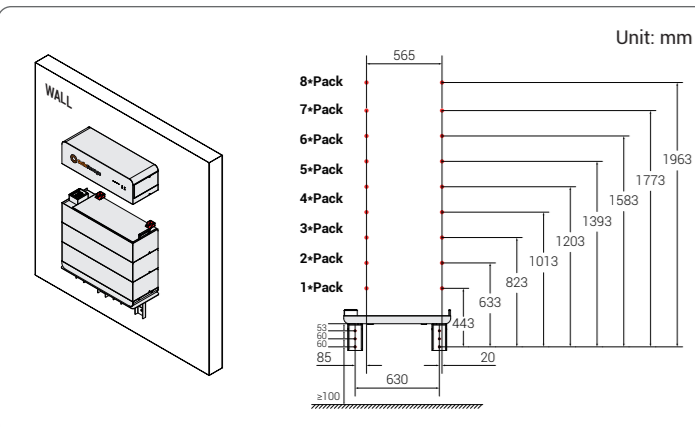
Tools: Screw M5*16, Plum Blossom

07 Install The Connection BOX:

Tools: Screw M5*16, Plum Blossom

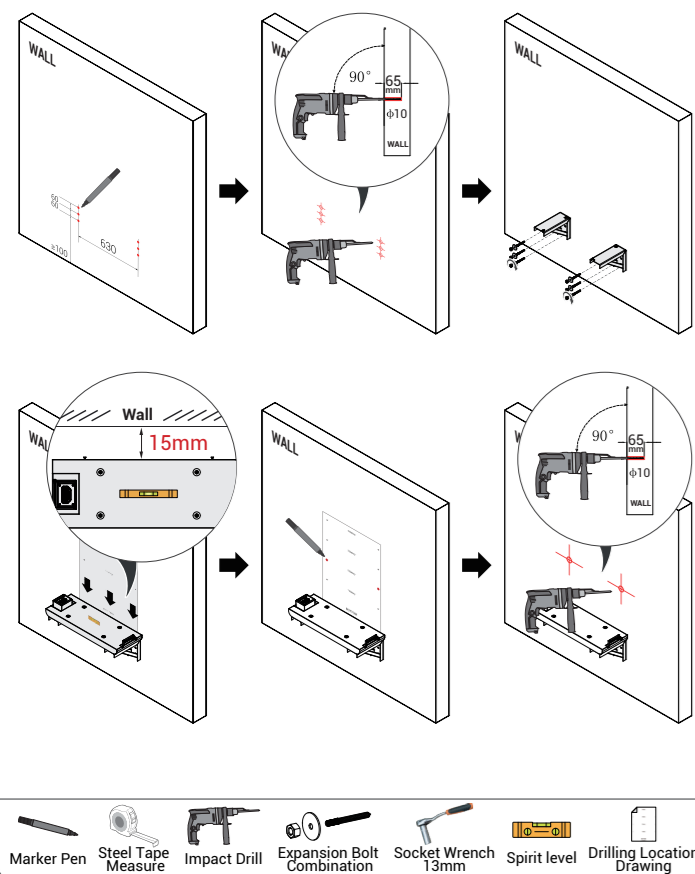
03-B Wall Mounted Installation

01 Select Drilling Location:

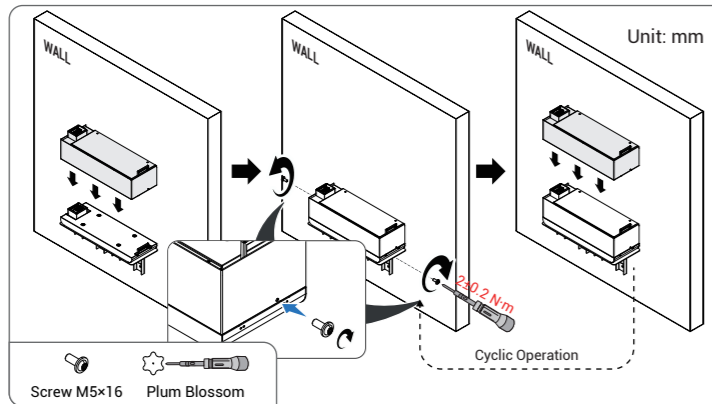


02 Position And Drill Holes, And Install The Base:

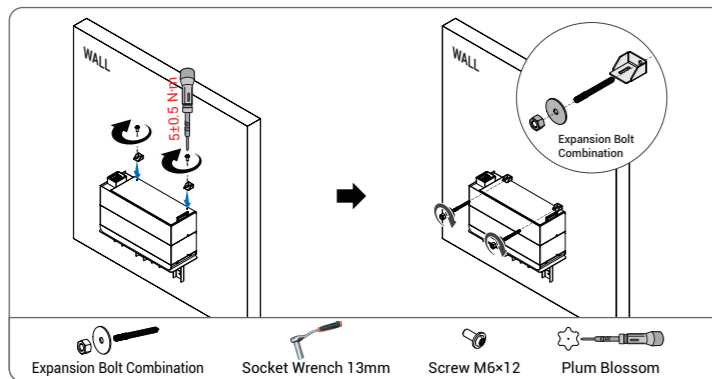
Installation examples of two battery pack solutions:



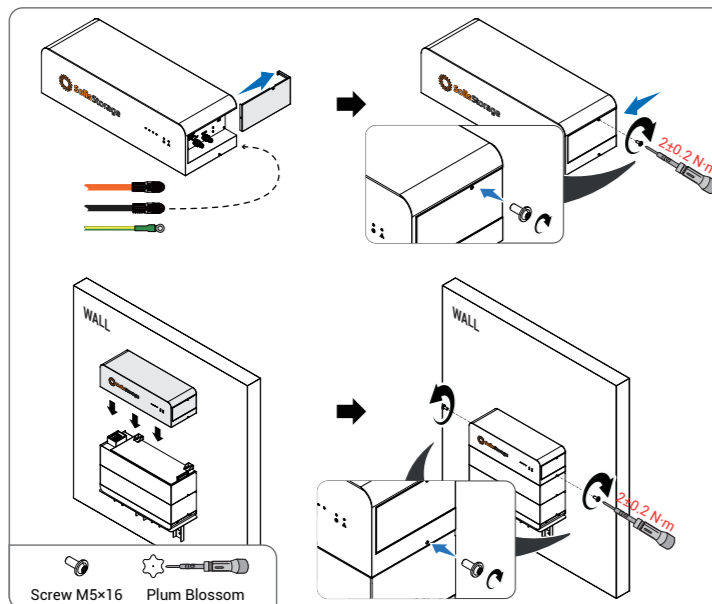
03 Install The Battery System:



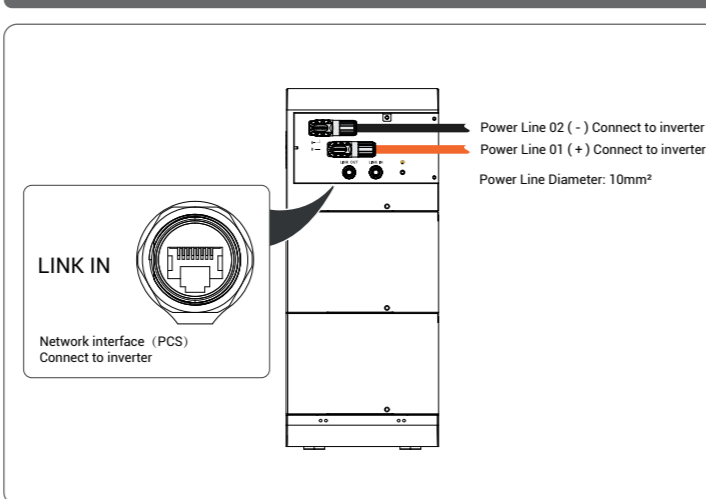
04 Install The Bracket:



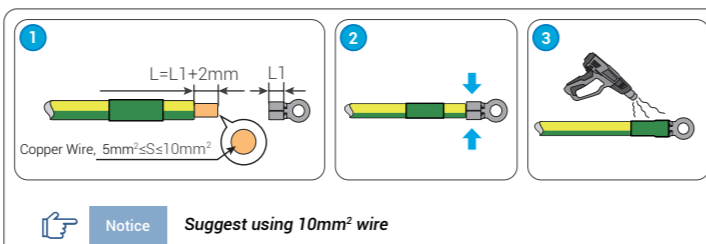
05 Install The Connection BOX:



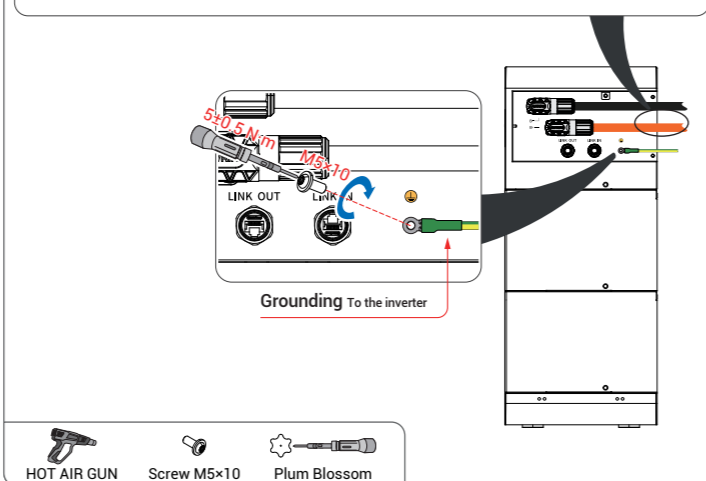
04 Electrical Interface Guidelines



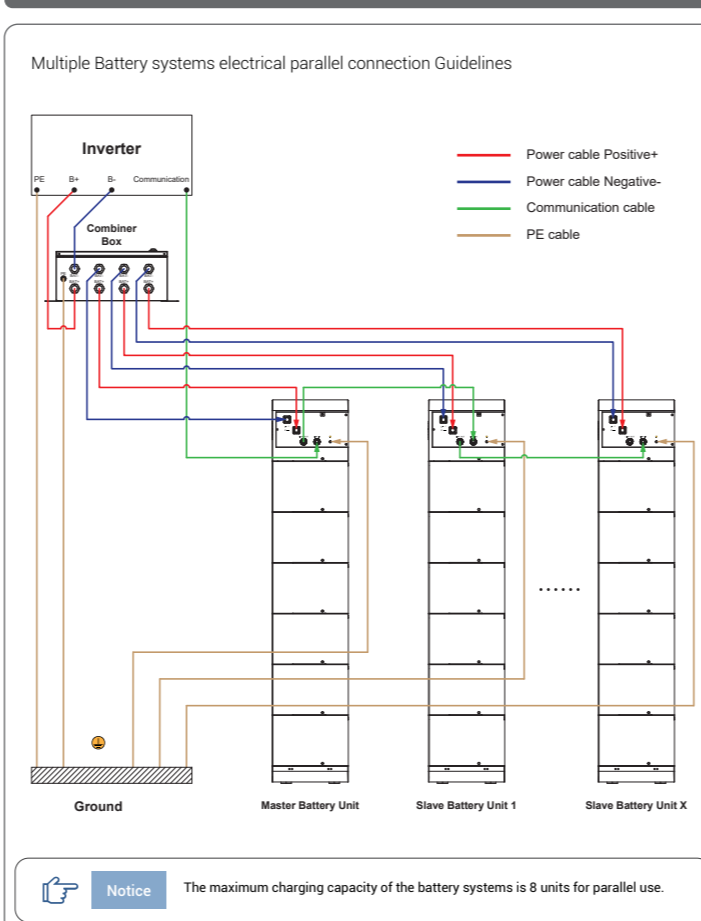
05 Installation of Grounding Wire



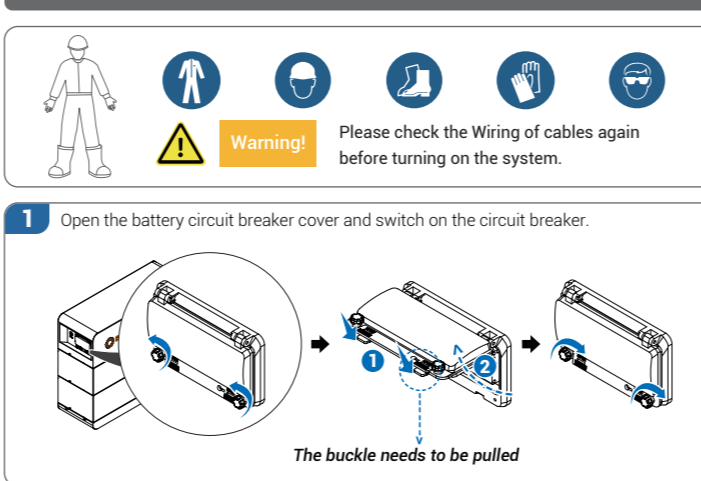
We recommend installing a circuit breaker at the negative terminal between the PCS and battery system. For the specifications of the circuit breaker, we recommend using a molded case circuit breaker with a rated operating voltage greater than 80Vdc and a rated operating current greater than 160A. When cleaning or maintaining the product, it is necessary to disconnect both this circuit breaker and the one installed on the junction box simultaneously.



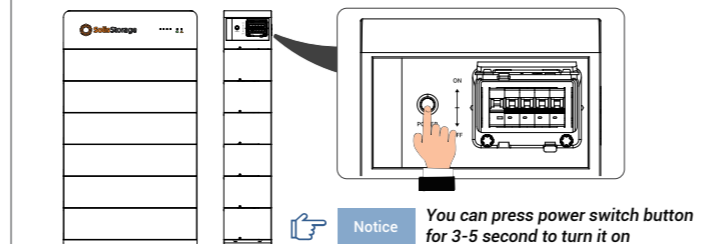
06 Battery systems electrical parallel connection Guidelines



07 Power On/Off Operation



2 Press the START switch; The LED light is on



Definition Of Led Indicator Lights:



State	Normal /Alarm /Protection	SOC Indicator				RUN	ALM	Instructions
		L1	L2	L3	L4			
Power-On Self-Test		●	●	●	●	○	●	The LED colors light up sequentially, then turn off completely and switch to the next state color, with the direction from left to right
Shutdown	Dormancy	OFF	OFF	OFF	OFF	OFF	OFF	All off
	Normal Warning	OFF	OFF	OFF	OFF	Blink1	OFF	Standby Mode
Standby	Normal	OFF	OFF	OFF	OFF	Blink1	Blink3	Low Voltage Module
	Warning	ON	OFF	OFF	OFF	Blink3	OFF	LED Mode 2 at maximum soc, during an overcharge alarm, the ALM indicator does not flash.
Charge	Overcharge protection	ON	ON	ON	ON	ON	OFF	If there is no mains power, the indicator light is in standby mode.
	Temperature, Overcurrent, and Failure protection	OFF	OFF	OFF	OFF	OFF	ON	Stop charging
Discharge	Normal	OFF	OFF	OFF	OFF	Blink3	OFF	--
	Warning	OFF	OFF	OFF	OFF	Blink3	Blink3	--
Undervoltage protection	Normal	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharging
	Temperature, overcurrent, Short circuit, Reverse connection, Failure protection	OFF	OFF	OFF	OFF	OFF	ON	Stop discharging
Failure		OFF	OFF	OFF	OFF	OFF	ON	Stop charge/discharge

State	SOC Indicator	Charge				Discharge			
		L1	L2	L3	L4	L1	L2	L3	L4
0-25%	Blink2	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
25-50%	ON	Blink2	OFF	OFF	OFF	ON	OFF	OFF	OFF
50-75%	ON	ON	Blink2	OFF	OFF	OFF	OFF	ON	OFF
75-100%	ON	ON	ON	Blink2	OFF	OFF	OFF	ON	ON

LED Blinking Mode	Light on		Light off	
	0.25s	3.75s	0.50s	1.50s
Blink1	0.25s	3.75s	0.50s	1.50s
Blink2	0.25s	3.75s	0.50s	1.50s
Blink3	0.25s	3.75s	0.50s	1.50s

External aural-visual alarm
When venting of gaseous electrolyte, burning of the cell, spark formation and ignition of vented gas mixtures, explosion of the cell, the energy storage system will activate audible and visual alarms via RS485 or CAN communication commands. Simultaneously, the red "SYS" indicator on the PCS front panel will illuminate. The alarm device shall meet the requirement that the sound pressure level at 3 meters is greater than 85 dB but not exceeding 110 dB.



08 Product Parameter

Pack	FlexHome-BAT5kWh-H
Nominal Energy	5.0kWh
Usable Energy	5.0kWh
Nominal Capacity	100Ah
Max. Charge Power	2.5kW
Max. Discharge Power	2.5kW
Series And Parallel Connections	1P16S
Sizes (W+D+H)	= 800mm(W)×285mm(D)×236.7mm(H)
Weight	= 48.15kg
Battery Cell System	LFP
Max. Continuous Charge Current (@25°C)	50A
Max. Continuous Discharge Current (@25°C)	50A
Peak Charge Current (@25°C,10s)	75A, 10s
Peak Discharge Current (@25°C,10s)	75A, 10s
DOD	90%
Rated Voltage	DC 51.2V
Voltage Range	DC 44.8V...58.4V
Temperature Range for Charging	-20°C ~ +55°C (Below 0°C, the heating function is activated)
Temperature Range for Discharging	-20 ~ +55°C
Battery Designation	IFP51/161/120[16S]M/20+60/90
Optimal Operating Temperature	25 ~ 35°C
Operating Ambient Humidity	5~95%RH
Warranty	10 Years
Cooling	Natural Heat Dissipation
Altitude	≤4000m, >2000m load shedding
Communication Port (Between Parallel Battery Systems)	CAN
Communication Between PCS And Battery System	CAN
UN Transportation Test Standard	UN38.3
Environment Protection Standard	ROHS, REACH
Mounting	Stacking on the ground against the wall / wall-mounted

System	FlexHome-(15-40)kWh-H					
Number of battery modules	3	4	5	6	7	8
Performance parameters						
Battery type	LiFePO ₄					
Nominal energy	15kWh	20kWh	25kWh	30kWh	35kWh	40kWh
Operating Voltage	DC 134.4_175.2V	DC 179.2_233.6V	DC 224_292V	DC 268.8_350.4V	DC 313.6_408.8V	DC 358.4_467.2V
Rated cell capacity	100Ah					
Recommended charge & discharge rate	0.5C					
Recommended charge & discharge current	50A					
Maximum sustainable charging current	50A					
Maximum sustainable discharge current	50A					
Depth of discharge (DOD)	100%					
Charging temperature range	-20~55°C(with heating function)≤ 45°C, derating)					
Discharging temperature range	-20~55°C(≤ 45°C, derating)					
Communication interface	CAN/RS485					
Cycle life (E)	≥6000 Cycles/10Years					
Round trip efficiency	≥95%					
Short circuit current	450A,3ms					
Expansion capability	Up to 4 units in parallel					
Standard parameters						
Cooling method/Heating method	Natural cooling/Smart heating system					
Certifications & safety standards	IEC 62619- IEC 63056- ISO13849- VDE 2510-50- UN 38.3- EN/IEC61000-6-1/2/3/4- IEC 60730-1- IEC/EN 62477-1:2022- IEC 60529 (IP) - IEC62040- CEC list					
Compatible inverters	S6-EH3P(3-12)K-H/S6-EH3P(12-20)K-H/S6-EH3P(12-20)K-ND-H/S6-EH3P(8-12)K-LV-ND-H					
Dimensions [W+H+D]/mm	=800 ×857 ×285	=800 ×1046 ×285	=800 ×1235 ×285	=800 ×1424 ×285	=800 ×1613 ×285	=800 ×1802 ×285
Weight (kg)	=172.95kg	=221.1kg	=269.25kg	=317.4kg	=365.55kg	=413.7kg
Ingress protection	IP66					
Pollution level	IEC60664-1 Level III					
Anti-corrosion grade	CSM					
Installation method	Floor-mounted (default) / Wall-mounted					
Environmental protection standards	ROHS, Reach					
Transportation	Shipping, Land transportation					
Discharge rate of module	≥3%/months@25°C					
Storage temperature range	0~35°C (6~12 months)					
Maximum operating altitude	≤4000m					
Operating ambient humidity	5~95%RH					
Noise level	≤30db					
Control box parameters						
Operating voltage	DC 80...600V					
Recommended charge & discharge current	DC 50A					
Dimensions [W+H+D]/mm	800×230×285					
Weight/kg	19.5					
Compatible inverters	Solis					
Communication interface	CAN/RS485					
Remark: ①Test conditions: @25°C,0.2C/0.2C,70%EOL@100%DOD						

09 Packaging, Transportation, Storage

The system cabinet is packed in cardboard packaging and the internal PE packaging bag is moisture-proof and waterproof.

Use EPE pearl cotton foam pad in the middle to prevent damage to the system during handling and transportation.

Transportation must comply with UN3480's dangerous goods transportation and local laws and regulations.

The system is heavy and must use the mechanical handling.

Storage temperature requirements for single cells:
The cell shall be kept at approximately 30~40% SOC.

For short-term storage (within 1 month), store in a clean and ventilated indoor environment at -20 °C to 45 °C.

For long-term storage (within 1 year), it is recommended to store in an environment with a temperature of 0 °C to 35 °C and a relative humidity of 65% ± 20%.

Single cells shall be kept away from contact with corrosive chemicals or gases to prevent corrosion of cell bodies and connectors, which may affect appearance and service life.

Keep away from fire and heat sources, and take effective moisture-proof measures. Ensure proper insulation, waterproofing and dustproofing during storage.

The State of Charge (SOC) of single cells shall be maintained at 30~40% during storage. For long-term storage (more than 3 months), recharge periodically to avoid over-discharge. Storage time after receipt is recommended not to exceed half a year.

10 SolisCloud Quick Commission Guide

Please refer to the SolisCloud Quick Commission Guide document for quick startup instructions.

Scan the left side QR-Code below to download the digital version of SolisCloud Quick Commission Guide document.

Scan the right side QR-Code below to download the "SolisCloud" app on your mobile phone.



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