



Residential Battery Pack



Emergency Power Back-up



Flexible Installation



Cost-effective



Expandable



Peak Load Shifting

Residential Battery Pack

System Total Energy: 5.12kWh

 Tel: +(0086) 400-101-8585

 E-mail: service@sylbattery.com

 Web: www.sylbattery.com

 No.23 Xingke Middle Road, Meilin Street,
Ninghai County, Ningbo City,
Zhejiang Province,
China



TECHNICAL PARAMETERS

Parameters	SH-5.12KWH(LFP)
Cell	LFP
Total energy (kWh)	5.12
Usable energy (kWh)	4.6
Nominal voltage (V)	51.2
Nominal capacity (Ah)	100
Operation voltage range (V)	46.4 ~ 57.6
Nominal charge current (A)	50
Nominal discharge current (A)	50
Short circuit current (A)	306
Scalability range / mode	Max.5 modules parallel
Installation mode	Sit on the ground / Wall mounted
Communication	CAN / RS485
Charge temperature (°C)	0 ~ 55
Discharge temperature (°C)	-20 ~ 55
Operation humidity	5% ~ 95%
Enclosure protection rate	IP65
Dimensions (W*H*D) (mm)	371*645*206
Weight (kg)	53.5
Cycle life (90% DOD, 25°C)	≥ 5000 cycles
Cooling	Natural cooling
Certificates	IEC62619, IEC62040, CE-EMC, UN38.3, MSDS

Manufacturer:

SYL (Ningbo) Battery Co., Ltd.

E-mail: service@sylbattery.com

Website: www.sylbattery.com

Address: No.23 Xingke Middle Road, Meilin Street, Ninghai County, Ningbo City, Zhejiang Province, China

Importer:

Risen Energy (Australia) Pty Ltd.

Contact number: +61-039-021-7788

Website: <https://www.risenenergy.com.au>

Address: Unit 35, 15 Ricketts Road, Mount Waverley, Victoria, 3149, Australia



Installation Manual

SBL5.1K2 battery pack system



The information included in this manual is accurate at the time of publication. However, this manual is subject to change without prior notice. In addition, the illustrations in this manual are meant only to help explain system configuration concepts and installation instructions.

Please note the image shown is for illustration purposes only.

 WARNING

After installation, the installer must explain the User Guide to the end-user.

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1. Improper installation or commissioning,
2. Unauthorized modifications, alterations or repair attempts,
3. Inappropriate use or operation
4. Insufficient ventilation of the device; Non-compliance with relevant safety standards or regulations
5. Flood, lightning, overvoltage, storm and fire (acts of nature). We reserve the right to make alterations that will improve device function.

Preface

Published by **SYL (Ningbo) Battery Co., Ltd.**

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Legal Disclaimer

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Read this installation manual entirely prior to installation work

Thank you for purchasing our highly reliable and efficient battery system. This lithium ion battery pack can be installed indoor or outdoor and carry a rating of IP65.

If you are reading the electronic version of the manual, please note that you can click the content to find information you want quickly. All underlined characters are clickable.

Before operating this device, please read this manual entirely. If you have any difficulty during installation or operation, please refer to this manual, contact your installer or send service request by email [to service@sylbattery.com](mailto:service@sylbattery.com)

How to use this manual?

Please read the safety instructions in this manual first.

Installation and maintenance work is assumed to be carry out by personal which is familiar with AC and DC voltage system. It is also assumed that personal is familiar with related NEC code requirements for PV and energy storages system. Please also pay attention to NEC code in regards to electrical wiring, grounding, as well as interconnecting it to the utility grid. Please pay specific attention and observe general safety rules while working with electrical equipment.

This installation manual is intended for qualified electricians only.

1. Safety

1.1 Important Safety Information

For safety reasons, installers are responsible for familiarizing themselves with the contents of this document and all warnings before performing installation.

Before Installation Check for damage on the device and package. If you are in doubt, please contact distributor before installing the device.

Before connecting battery modules to the designated terminal of the inverter, please ensure voltages are within the allowable range as stated on the specifications sheet. Failure to observe these specifications could void your warranty.

1.1.1 General safety precautions

Over-voltages or wrong wiring can damage the battery pack and cause deflagration, which can be extremely dangerous.

All types of breakdown of the product may lead to a leakage of electrolyte or flammable gas.

Avoid installing the battery pack where flammable materials are stored. Do not install in places where explosive gas or chemicals are present.

During installation of the battery, the utility grid, solar input must be disconnected from the Battery Pack wiring. Wiring must be carried out by a qualified personnel.

Battery Pack is not user serviceable. High voltage is present in the device.

The electronics inside the Battery Pack are vulnerable to electrostatic discharge. Be sure to be grounded before handling the battery pack.

Read the label with Warning Symbols and Precautions, which is visibly under to the Battery Cover (see Section 1.1.6)

1.1.2 Battery handling guide

- Do not expose battery to open flame.
- Do not place the product nearby highly flammable materials. It may lead to fire or explosion in case of accident.
- Do not expose or place near water sources like downspouts or sprinklers.
- Do not store this product in a place exposed to direct sunlight.
- A ventilated area is strongly recommended for handling the product.
- Store at cool and dry place. (Do not store in greenhouses and storage areas for hay, straw, chaff, animal feed, fertilizers, vegetables or fruit products.)
- Store the product on a flat surface.
- Store the product out of reach of children and animals.
- Store the product where it should be minimal dust and dirt in the area.
- Do not commission the device until the whole system complies with the application-specific NEC code and local utility rules and safety regulations.
- The device manufacturer or installer is responsible for compliance with the limit values as prescribed in the national regulations.
- Only persons who are trained and qualified to install and operation this device are allowed to work on the device.
- Do not disconnect, disassemble or repair by unqualified personnel. Services must be made by qualified personnel only.

- Do not damage the unit in such ways as dropping, deforming, impacting, cutting or penetrating with a sharp object. It may cause a leakage of electrolyte or fire.
- Do not touch if liquid is spilled on the product. There is a risk of electric shock. Handle the battery wearing the insulated gloves.
- Do not step on the product or the product package. The product may be damaged.
- Do not place any foreign objects on the top of the Battery Pack and on the cooling fin.
- Do not put the battery pack upside down on the ground.
- Do not connect the power cables at terminal block opposite direction.
- Do not charge or discharge damaged battery.
- If the battery pack is installed in the garage then ensure the product is above the height of the vehicle bumper and/or door.
- Only use the product with SYL-authorized inverter.

1.1.3 Maintenance and Modification

Only qualified personnel are allowed to repair to the battery. To ensure safety for installers and end user, only the original spare parts available from your supplier should be used.

1.1.4 Functional Safety Parameters

Unauthorised changes of functional safety parameters may cause injury or accidents to user and damage the inverter. The warranty and product related certifications shall be voided.

1.1.5 Response to emergency situations

The battery pack comprises multiple batteries that are designed to prevent hazards resulting from failures. However, we cannot guarantee their absolute safety.

1. Leaking Batteries

If the battery pack leaks electrolyte, avoid contact with the leaking liquid or gas.

If one is exposed to the leaked substance, immediately perform the actions described below.

Inhalation: Evacuate the contaminated area, and seek medical attention.

Contact with eyes: Rinse eyes with flowing water for 15 minutes, and seek medical attention.

Contact with skin: Wash the affected area thoroughly with soap and water, and seek medical attention.

Ingestion: Induce vomiting, and seek medical attention.

2. Fire



In case of fires, it is recommended to have an ABC or carbon dioxide extinguisher.

WARNING

The battery pack may catch fire when heated above 150°C.

If a fire breaks out in the place where the battery pack is installed, perform the following countermeasures:

1. Extinguish the fire before the battery pack catches fire.
2. If it is nearly impossible to extinguish the fire but you have time, move the battery pack to a safe area before it catches fire.
3. If the battery pack has caught fire, do not try to extinguish the fire on the battery pack, but evacuate people immediately.

WARNING

When the battery pack is burning, it produces poisonous gases.

4. Wet battery

If the battery pack is wet or submerged in water, do not let people access it.

Contact SYL or your distributor for technical assistance.

1.2 Safety Symbols

The following symbols are adopted in this documentation:

 DANGER	<p>Death or severe personal injury will occur. Electric shock! Do not open the device! Residual High voltage may still be circulating inside the device even after it has been switched off</p>
 WARNING	<p>Death or severe personal injury may occur. High leakage current! Make absolutely sure you have established grounding system before connecting the device to the supply circuit! Health risk! Health risk for persons with cardiac pacemakers, metallic implants and hearing aids in the immediate vicinity of electrical equipment!</p>

 CAUTION	<p>Personal injury or material damage may occur. Risk from improper handling! Personal injury mechanically by crushing, shearing, cutting or striking.</p>
 HOT SURFACE	<p>Surfaces of the housing can be hot! Risk of injury! Risk of burns. Equipment housing surface and heat sink surface may exceed 70°C.</p>
	<p>Do not place nor install near flammable or explosive materials.</p>
	<p>Install the product out of reach of children.</p>
	<p>Read the instruction manual entirely before starting installation and operation.</p>
	<p>Heavy weight may cause serious injury to the back.</p>
	<p>Observe a resting time of fifteen (15) minute.</p>
	<p>Do not dispose of the product with household wastes.</p>
	<p>Recyclable.</p>
	<p>Disconnect the equipment before carrying out maintenance or repair.</p>
	<p>Observe precautions for handling electrostatic discharge sensitive devices.</p>
	<p>CE MARK</p>
	<p>TUV MARK</p>



Two adult male operations.

1.3 Qualified personnel

This guide and the tasks and procedures described herein are intended for use by skilled workers only. A skilled worker is defined as a trained and qualified electrician or installer who has all of the following skills and experience:

- Knowledge of the functional principles and operation of on-grid and off-grid (backup) systems.
- Knowledge of the dangers and risks associated with installing and using electrical devices and acceptable mitigation methods.
- Knowledge of the installation of electrical devices
- Knowledge of and adherence to this guide and all safety precautions and best practices.

1.4 Exclusion of Liability

SYL (Ningbo) Battery Co., Ltd. will not be liable for any direct, indirect or consequential damages, losses or costs including without restriction any economic losses of any kind, any loss or damage to property, any personal injury, any damage or injury arising from or as a result of misuse or abuse, or the incorrect installation, integration or operation of the product. We disclaim any liability for direct or indirect damages due to:

1. Improper installation or commissioning,
2. Unauthorized modifications, alterations or repair attempts,
3. Inappropriate use or operation,
4. Insufficient ventilation of the device,
5. Non-compliance with relevant safety standards or regulations,
6. Flood, lightning, overvoltage, storm and fire (acts of nature).

We do not assume any liability for an incorrect country code setting.

We reserve the right to make alterations that will improve device function.

2. Product Introduction

2.1 Features

The SBL5.1K2 battery pack has the following features:

Photovoltaic system: This battery pack is designed for photovoltaic system compatibility.

Battery management system (BMS): The battery pack's built-in BMS monitors its operation and prevents the battery from operating outside design limitations. See Troubleshooting on page 9.

Expandability: The battery capacity can be increased by adding expansion battery packs. Up to two expansion battery packs can be added. An expansion battery pack can be purchased either with the main battery pack or as a separate unit.



Figure 2.1 Battery System parts

2.2 Technical Specification

2.2.1 Component Dimension

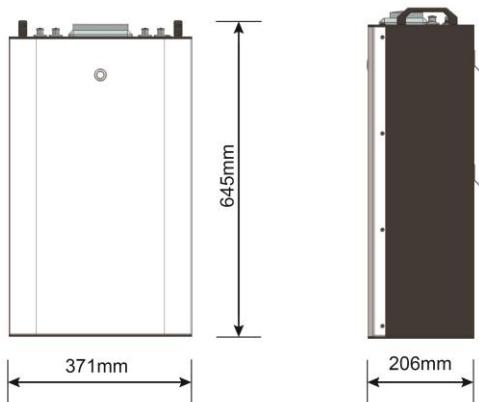


Figure 2.1 battery bank (SBL5.1K2) dimension

2.2.2 Battery Bank Specification

Lithium iron phosphate energy storage battery module	
Product name	Rechargeable Li-ion Battery Pack
Type/model	SBL5.1K2
Nominal voltage	51.2V
Rated capacity	100Ah
Charging voltage declared by manufacturer	57.6V
Upper limit charging voltage	57.6V
Charging current declared by manufacturer	50A
Maximum charging current	50A
Discharging current declared by manufacturer	50A
Maximum discharging current	50A
End of discharge voltage	46.4V
Standard temperature range for charging	0°C~55°C

Standard temperature range for discharging	-20°C~55°C
Standard charging method by manufacturer	Charge at constant current 50A until voltage reaches 57.6V, then charge at constant voltage 57.6V till current is 5A
Dimension	371mm(L)*645mm(D) *206mm (H)
Weight	≈52Kg
Configuration	1P16S
Storage temperature range	-30~60°C (Storage ambient humidity<85%ROH,no condensation)
IP class	IP65

Table 2.2 Battery bank specification

3. Installation

3.1 Unboxing the package

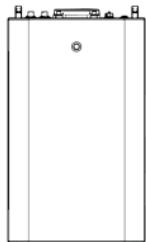
1. Cut the packing tape and open the carton.
2. Pull out other items. Take them out and check if any item is missing.
See Package items on section 3.1.2.
3. Remove the wall bracket guide pad & cushioning pad.
 1. Remove the side pad.
 2. Remove the side pad.
3. Pull out the battery pack using handles and stand it up (Lift handles are sold separately for this product.)

 **WARNING**

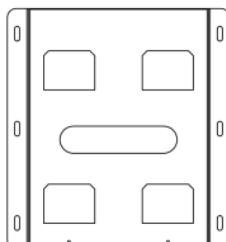
According to regional regulations, several people may be required for moving equipment.

3.2 Battery Module Packing List

This product has one packages: battery package .Following items inside of package :



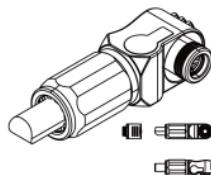
Batteryx1



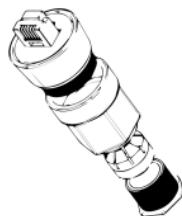
Hanging Platex1



Expansion Tubex1



Pan Head screwx2(+ -)



Connectorx1

Figure 3.1 Battery Module Packing List

- Prior to installation, please inspect packages for transport damage.
- If damage discovered, document the findings and report damage immediately to your distributor or goods forwarder.
- If it becomes necessary to turn the unit, please use the original packages in which they were delivered.

3.3 Selecting Installation Location

Required:

- There must be no highly flammable or explosive materials nearby.
- The ambient temperature should be within the range of 14 ~ 113°F (-10 ~ 45°C).
- Battery pack must be installed on walls that are upright and can support battery weight.
- Product shall be installed in the order of: indoor (ex. basement or garage); or, outdoor but under the roof shades facing north; or, other sides of the house that minimizes direct sunlight.

Recommended:

- The building should be designed to withstand earthquakes.
- The waterproof and properly ventilated area is recommended. (IP55)
- Install the product on a flat wall.
- Install this product out of reach of children and animals.

WARNING

If the ambient temperature is outside the operating range, the battery pack stops operating to protect itself. The optimal temperature range for the battery pack to operate is from 59 to 86°F (15 to 30°C). Frequent exposure to harsh temperatures may deteriorate the performance and life of the battery pack.

3.4 Mounting clearance

- Observe the minimum clearance distance between in battery and nearby object to ensure proper heat dissipation.
- Install battery modules on wall or wood framing that can support the weight of the units.
- Do not install battery modules in direct sunlight. Battery pack power output derate occurs above 113°F (45 °C).
- Do not install battery modules on flammable construction materials or in area close to flammable or explosive materials.

Infront: 300mm

Two sides: 200mm

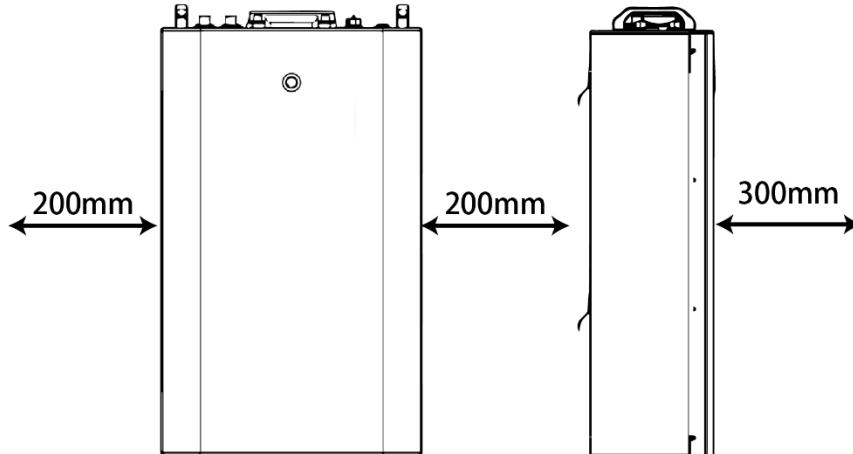


Figure 3.2 System clearnace reference

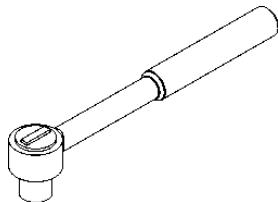
3.5 Tools & safety gears required

Tools

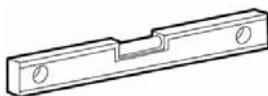
The following tools are required to install the battery pack:



Precision screwdriver



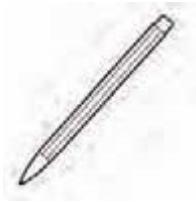
M6 torque wrench



Inclinometer



Drill



Pencil or Marker

Safety gears for personal protection

It is recommended to wear the following safety gears when handling the battery pack.



Insulated gloves



Safety goggles



Safety shoes

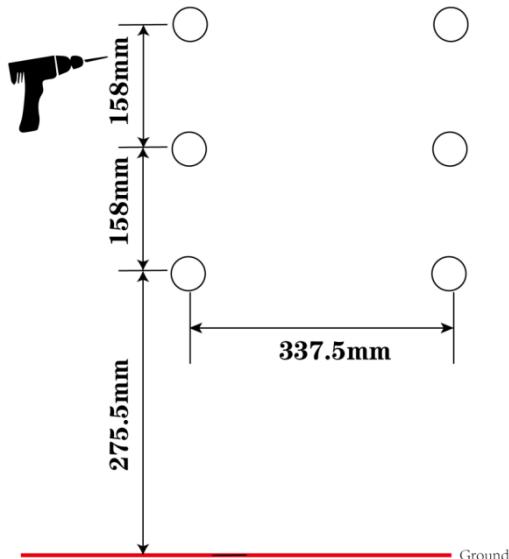
NOTE

SBL5.1K2 battery is heavy and challenging to lift. Lift handles are recommended.

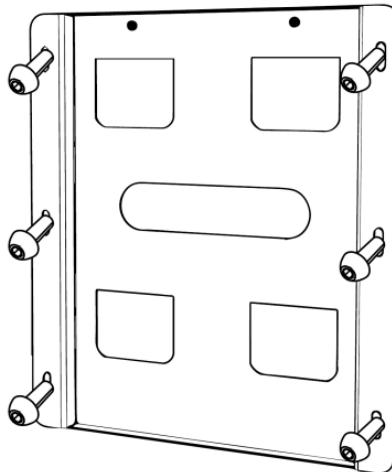
3.6 Mounting Battery bank

When installing the battery pack on a wall, make sure that the wall is capable of supporting the weight of the battery pack.

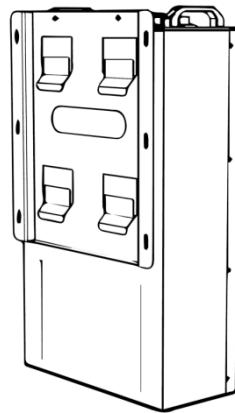
To mount the battery pack on a wall, take the following steps :



1. Place the mounting bracket against the wall and mark the hole.



2. Use $\Phi 10$ drill template to drill holes on marketed position.
3. Fix wall bracket onto the wall.
4. Ensure bracket is attached firmly.
5. Align with wall bracket, install battery vertically with a maximum incline of $+\text{-} 5$ degree.



6. Slowly lower battery, ensure the battery hang on the hook of wall bracket.

4. Cable Connection



- Only electricians with proper license can carry out electrical work.

WARNING

4.1 The Overview of Electrical Connection

SBL5.1K2 battery pack system Connection Diagram:

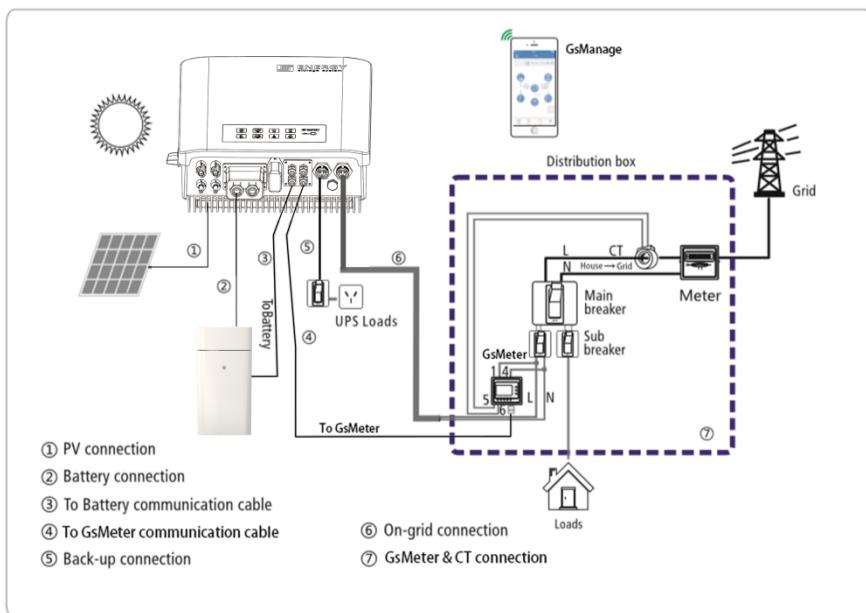
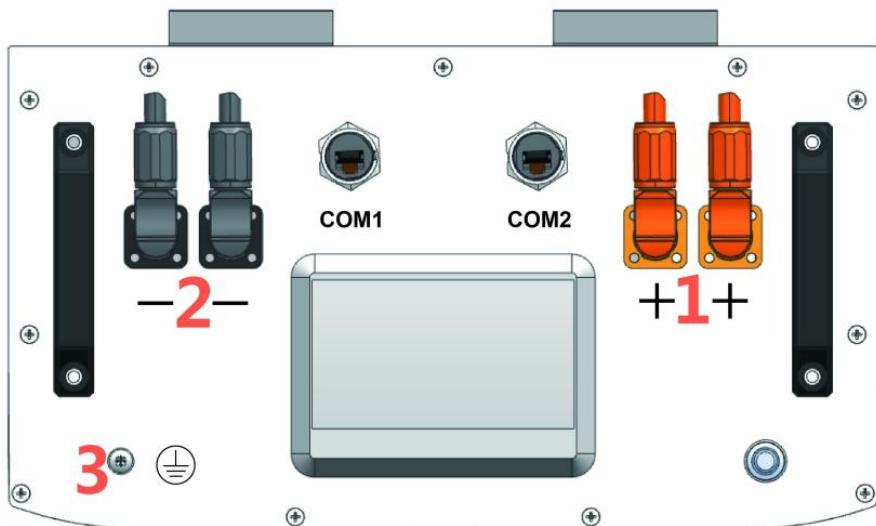


Figure 4.1 the Overview of Electrical Connection

4.2 Battery Connection

	NOTE <ul style="list-style-type: none">● Suggestion: if the battery is to be installed indoor, for details please refer to battery manufacture's user manual.● Suggestion: Batteries must be installed with a distance to each other, details please refer to battery manufacture's user manual.● As for the number of cells used, it will be decided by customer's choice, the choice must comply with the followed requirement: the rated voltage is 48V.
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Please follow below steps to implement battery connection:



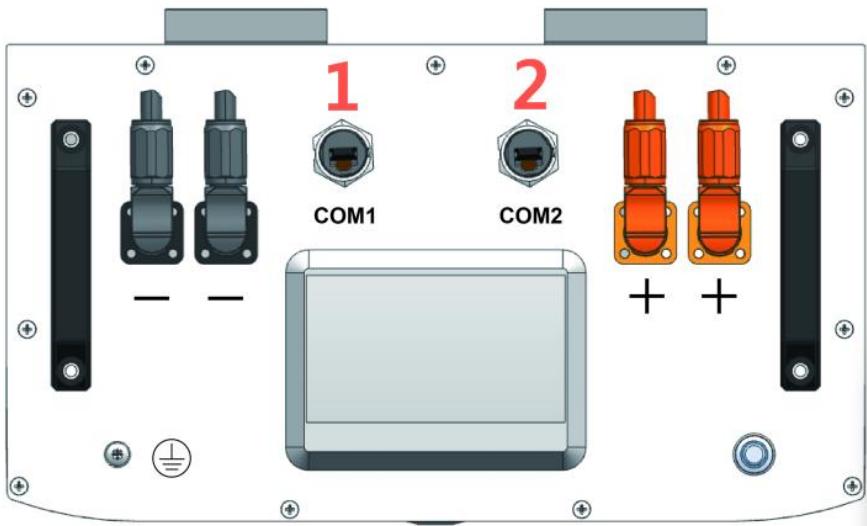
1. For Power Cable specifications

a) Connect the ground wire to terminal 3. If the voltage does not exceed

the human safety voltage, there will be no need for grounding wire

b) Connect the negative line of the power cable to terminal 2.

C) Connect the positive line of the power cable to terminal 1.

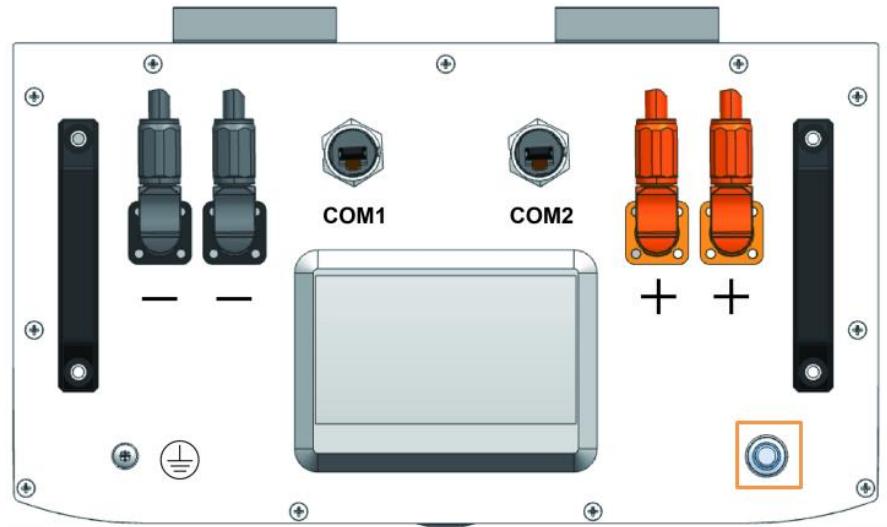


2. For Communication Cable specifications

a) Connect the PCS to terminal1.

b) Connect the pack to the terminal 2.

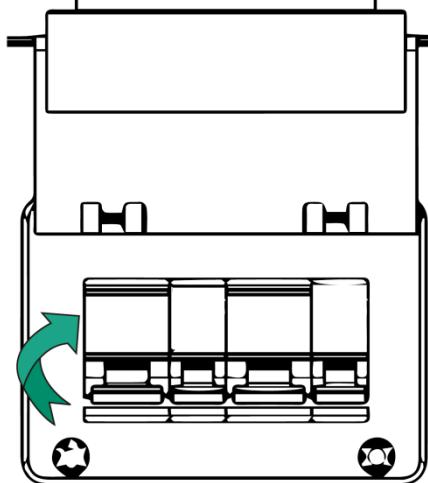
•Before connection, please turn on the cover first what you need.



3. Auxiliary power ON/OFF switch (for shipping and storage)

Turn on the auxiliary power switch.

- Must turn off to reduce self-discharge of battery during shipping and storage.



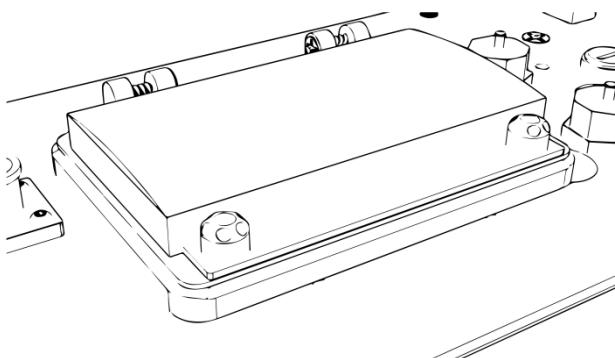
4. Connecting the battery pack to the inverter.

Refer to the installation instructions for the inverter to connect the power cable and communication cable to the inverter.

Then, push the circuit breaker switch up so that it is in the ON position.

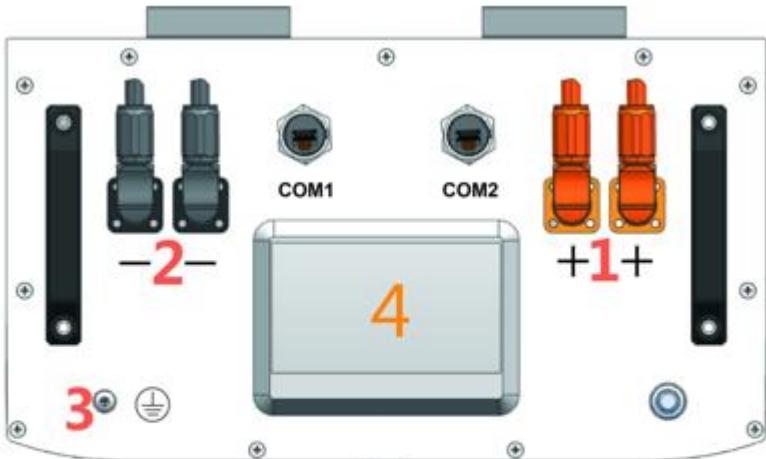
⚠ CAUTION

Please must do the switch on & off operation at the middle side of SHT31 and Ex9BP combined. It's forbidden to do the operation at the left or right edge side of combined body. Any wrong operation cause the products break off.



5. Close the wiring box cover.

4.2.1 Auxiliary power switch and spring terminal blocks



1. Power terminal block
2. Communication terminal block
3. Power switch
4. Circuit breaker

5. Operation Test

5.1 Starting the System

After the battery energy storage system is normally connected with the wiring harness of hybrid inverter, close the main isolation circuit breaker; Then, press the "on/off" button, the system enters the startup state; The power indicator lights up and the system starts up normally.

5.2 Turning off the System

When the system is in the starting state, press the "on/off" button, and the system enters the shutdown process. After the power indicator light

is off, disconnect the isolation circuit breaker and the power off operation is completed.

6. Troubleshooting

6.1 Troubleshooting

Check the indicators on the front to determine the state of the battery pack. A warning state is triggered when a condition, such as with voltage or temperature, is beyond design limitations. The battery pack's BMS periodically reports its operating state to the inverter.

When the battery pack falls outside prescribed limits, it enters a warning state. When a warning is reported, the inverter immediately stops operation.

Use the monitoring software on the inverter to identify what caused the warning. The possible warning messages are as follows:

- Battery Over Voltage
- Battery Under Voltage
- Battery Over Temperature
- Battery Under Temperature
- Battery Discharge Over Current
- Battery Charge Over Current \rightarrow BMS Internal Communication \rightarrow Battery Cell Voltage Imbalance

The abnormal state is cleared when the battery pack recovers normal operation. If battery pack is not working correctly and the issue persists, contact a Qualified personnel, Installer or SYL regional contact point.

NOTE
For a serious warning, if no proper corrective actions are taken by the

inverter, the battery pack's circuit breaker automatically trips to protect itself.

WARNING

If the battery pack or the inverter indicates FAULT or fails to operate, contact SYL regional contact point (page 34) or your distributor immediately.

6.1.1 Post-Installation Check List

	YES	NO
1. Visual check if the wiring matches with the installation manual.	<input type="radio"/>	<input type="radio"/>
2. Both the Auxilliary Power Switch and Circuit Breaker are ON.	<input type="radio"/>	<input type="radio"/>
3. The battery "ON" LED is ON.	<input type="radio"/>	<input type="radio"/>
4. The inverter power is ON.	<input type="radio"/>	<input type="radio"/>
5. The inverter has the latest firmware.	<input type="radio"/>	<input type="radio"/>
6. The inverter recognizes the battery.	<input type="radio"/>	<input type="radio"/>
7. The battery can operate after installation is correctly done. 7-1.The AC grid is connected. 7-2.The Meter is installed. 7-3.The government approval is complete.	<input type="radio"/>	<input type="radio"/>
8. If any of #7 is checked as "NO" or the inverter needs to be turned off, turn off the circuit breaker first, then turn off the aux power switch.	<input type="radio"/>	<input type="radio"/>

6.1.2 Troubleshooting Guideline

If the battery LED is OFF

1. Turn off the Circuit Breaker first, then turn off the Aux Power Switch.
2. Turn off the inverter. Verify there is no power at the battery connection.
3. Unplug all the wires and reconnect. Re-check the wiring on the battery is done correctly.
4. Turn on the Aux Power Switch first. Then, turn on the Circuit Breaker.
5. Turn on the inverter.

6. If the LED is still off, turn off the Circuit Breaker first, then turn off the Aux Power Switch.
7. Contact SYL regional contact point.

If the battery LED is ON, but the battery is not charging or discharging

1. Update both the inverter and battery firmware version. Refer to the inverter's troubleshooting guide for instruction.
2. Check the inverter's setting for battery.

 1. Refer to the inverter's troubleshooting guide for the battery set-up instruction.
 2. If the battery is recognized, inverter set up is correct.
 3. If the issue persists,
 4. 4-1. Turn off the Circuit Breaker first, then turn off the Aux Power Switch.
 5. 4-2. Turn off the inverter. Verify there is no power at the battery connection. 4-3. Unplug all the wires and reconnect. Re-check the wiring on the battery is done correctly. Refer to the installation manual (3.2 Cable connection). 4-4-4.Turn on the Aux Power Switch first. Then, turn on the Circuit Breaker. 4-4-5. Turn on the inverter.
 6. If the battery set up is correctly done, but the battery still does not operate, turn off the Circuit Breaker first, then turn off the Aux Power Switch.

7. Contact SYL regional contact point.

If the battery FAULT LED is ON

1. Check if the inverter recognizes the battery. Refer to the inverter's troubleshooting guide on the battery set-up instruction.
2. If the inverter is connected to the internet, collect the log file from the inverter company.
 - 2-1. Send the log file to SYL regional contact point.
 - 2-2. Turn off the Circuit Breaker first, then turn off the Aux Power Switch.

2-3. Wait further instruction from SYL

3. If the inverter is not connected to the internet, check the inverter SYL to read battery's fault ID. Refer to the inverter's troubleshooting guide for instruction.

3-1. Send the fault ID to SYL regional contact point.

3-2. Turn off the Circuit Breaker first, then turn off the Aux Power Switch.

3-3. Wait further instruction from SYL

6.3 Battery Pack

Check the indicators on the front to determine in what state the main battery pack is.

Status	Charge/Discharge	
Orange → Green	Off	Successfully initialized
Orange → Orange	Off	Initialization failed
Green	Green	Discharging in normal state
Green	Red	Charging in normal state
Green	Off	Waiting in normal state
Flashing Green/Orange	Green	Discharging in warning state
Flashing Green/Orange	Red	Charging in warning state
Flashing Green/Orange	Off	Waiting in warning state
Off	Off	Circuit breaker tripped

1) This should occur in 7 seconds.

2) Contact SYL or your distributor in this case.

A warning state is triggered when a condition, such as voltage or temperature, is beyond its design limitations.

The main pack's BMS periodically reports its operational state to the inverter.

There are two abnormal states:

Warning: When the main pack is likely to become faulty, it goes into a warning state. When a warning is reported, the inverter shows the warning message on its display but takes no action about it.

Fault: When the main pack falls outside prescribed limits, it goes into a fault state. When a fault is reported, the inverter immediately stops its operation and shows the fault message on the display.

The possible warning or fault messages are as follows:

- Battery Over Voltage
- Battery Under Voltage
- Battery Over Temperature
- Battery Under Temperature
- Battery Discharge Over Current
- Battery Charge Over Current
- BMS Internal Communication
- Battery Cell Voltage Imbalance

An abnormal state is cleared when the main pack recovers its normal condition.

NOTE

For a serious fault, if no proper corrective actions are taken by the inverter, the main pack's circuit breaker automatically trips to protect itself. For example, if the Status indicator stays orange for more than 5 minutes, the circuit breaker trips. Use the monitoring software on the inverter to identify what caused the fault.

7. Uninstallation & Return

7.1 Return/replacement instructions

1. Switch OFF the Inverter before starting the uninstallation of the battery pack.
2. Press the two buttons and pull the two latches (marked position) on the rear.
3. Open the wiring box cover (about 2~10 degrees), and pull to remove it.
4. Switch off the circuit breaker.

If you have Auxiliary Power ON/OFF switch, turn off Auxiliary Power switch.

WARNING

Do not turn off the Auxiliary Switch while the battery is in operation.

5. Loosen the screw (marked position), and remove the transparent protection cover.
6. Check for voltage at power cable terminal.
7. Disconnect the communication cable from the communication port.
8. Disconnect the power cable from the terminal block. Disconnect the positive terminal (+) ① first, and next the negative terminal (-) ②, and finally ground terminal ③.
9. Assemble transparent protection cover. Close the wiring box cover, and lock the ratchet.
10. Loosen the two hex-socket screws using a socket wrench to detach the battery pack from the wall using lift handles

WARNING

According to regional regulations, several people may be required for moving equipment.

11. Repack in Box

Keep this manual for later use

SYL (Ningbo) Battery Co., Ltd.

Add: No.23 Xingke Middle Road,Meilin Street, Ninghai County,Ningbo City,Zhejiang Province,315609,China

E-mail: service@sylbattery.com
website: www.sylbattery.com

Battery compatibility statement

The battery SBL5.1K2 manufactured by SYL (Ningbo) Battery Co., Ltd. matches the hybrid inverter as follows:

Model: GS-hybrid-3K,3K6,4K6,5K

Manufacturer: Gsmart (Ningbo) Energy Storage Technology Co., Ltd.

Company: SYL (Ningbo) Battery Co., Ltd.

Signature: 易清

Job title: Product Manager

Date: 2020.8.6



Warranty Terms and Conditions

For SBL5.1K2 battery pack system

Warranty Period

The standard warranty period for SBL5.1K2 battery pack is 84 months (7 years) and the performance warranty period for SBL5.1K2 battery pack is 120 months (10 years) and the cycle life is over 5000 times from the date of purchase. Our end user needs to provide the valid purchasing invoice to verify the date of purchase.

If our end user fails to provide the valid purchasing invoice, the standard warranty period for SBL5.1K2 battery pack is 87 months (7.25 years) from the date of production (it's on the SN).

Upon the granting of the Power plus Warranty, SYL BATTERY guarantees as follows: As the manufacturer of battery, SYL BATTERY ensures that 120 months after installation and commissioning, the battery is still 90% of its original capacity. The usable capacity at the time of installation is 90%.

Our end user can also purchase an extension of this standard warranty within 12 months from the date of manufacturing.

General Terms

We warrant that we will repair or replace (at our option) the Product or any part thereof, if such Product is faulty or defective in manufacture or materials for a period of 5 years from the date of purchase

We will endeavor to replace Products with identical products. However, due to technological advancements, that Product may not be available. In these cases, we will supply another type of product of at least the same value and standard, although the replacement product may be a different size, shape, colour and/ or capacity. Due to technical advances it is

possible that replacement parts or components may not be compatible with the other components already installed. Any costs relating to the incompatibility of systems is not covered by this Warranty.

If the products are replaced within the warranty period, the remaining warranty period will be automatically transferred to the replacement products. In this event, you will not receive a new warranty.

In the events of defects in the material or workmanship of the product within the warranty period, the system can be monitored via internet and the end user informed.

If the system is non-internet enabled and thus cannot be monitored by SYL. The end user should inform SYL ASAP if a product is found to be defect in order to qualify for repair or replacement under the warranty.

This Warranty only covers repair or replacement of the defective product. It does not cover:

- any costs incurred by the end-user in normal or scheduled maintenance of the Product; or
- any other costs such as transportation, travelling and accommodation cost of personnel etc;
- subject to any law to the contrary, any damage to property, personal injury, direct or indirect loss,

Consequential losses or other expenses arising from breach of this Warranty.

Warranty Conditions

In the case of a faulty product during the agreed warranty period, please report defective products with a brief error description to our service hotline for registering and send your warranty card to our service department by email to process the warranty claim. You may also contact your dealer (SYL Battery authorized dealer or distributor) or installer if your unit is defective or faulty.

To make a claim under the warranty periods, you need to provide us the following information and documentation of the faulty product:

- Product Model and product serial number.
- A copy of the valid purchasing invoice and warranty card of the product.
- Error messages and additional information about the fault/error.
- Detailed information about the entire system (pcs, battery etc.).
- Documentation of previous claims/exchanges (if applicable).

If a product is faulty while it is under warranty period, it will be:

- Repaired by SYL (Ningbo) Battery Co., Ltd, or
- Repaired on-site, or
- Exchanged with a refurbished inverter that includes all firmware updates

If the product needs to be exchanged, the remainder of the warranty period will be transferred to the replacement unit, i.e. the warranty period of the original device will continue. In this event, you will not receive a new warranty card, and this replacement will be registered by SYL (Ningbo) Battery Co., Ltd. If the remaining warranty period is less than 6 months, you will automatically receive a 6-month warranty period for the replacement unit.

The warranty includes the cost of work and material necessary to regain faultless functioning products. All other costs, particularly transports, travel- and accommodation cost of SYL (Ningbo) Battery Co., Ltd. personnel as well as costs of your own staff are not included in the warranty. Furthermore, claims for compensation for direct or indirect damages arising from the defective battery pack are not covered by the warranty.

SYL (Ningbo) Battery Co., Ltd. keeps the right to arrange the warranty service for end users and to use third parties for performing warranty services.

All warranty services are free of charge only if the action is agreed with in advance.

Scope of Manufacturer Warranty

To provide excellent Service to end users, all SYL (Ningbo) Battery Co., Ltd. authorized Dealers or Distributors are requested to respond to your warranty claim. SYL (Ningbo) Battery Co., Ltd. will replace any products or parts of the product during the Warranty Period proved to be defective in design or manufacture. Any defect caused by the following situations will not be covered by this warranty (the Dealers or Distributors are responsible and authorized by SYL (Ningbo) Battery Co., Ltd. for the following investigation):

- 1) "Warranty Card" not being sent back to Distributor/Dealer or SYL (Ningbo) Battery Co., Ltd.
- 2) The Product has been modified, its design has been changed or parts have been replaced by parts not approved by SYL (Ningbo) Battery Co., Ltd.;
- 3) Changes have been made, or repairs been attempted by NON-SYL (Ningbo) Battery Co., Ltd, or series number or seals have been erased;
- 4) The product has been installed or commissioned incorrectly;

- 5) You or another user have failed to comply with the safety regulations.
- 6) The product has been improperly stored and damaged while being stored by the dealer or the end user;
- 7) The defect is damage during transportation (including painting scratch caused by movement inside packaging during shipping). A claim for such transport damage should be made directly to shipping company/insurance company as soon as the container/packaging is unloaded and such damage is identified;
- 8) You or another user have failed to follow any/all of the user manual, the installation guide, and the maintenance regulations;
- 9) The device has been used improperly or misused;
- 10) Insufficient ventilation of the device;
- 11) The maintenance procedures relating to the product have not been followed to an acceptable standard;
- 12) The defect has been caused by force majeure (violent or stormy weather, lightning, overvoltage, fire etc.).
- 13) The damage is only cosmetic and has no impact on the functioning of the device.

This warranty is without prejudice to your rights including but not limited to warranty rights in relation to the seller, i.e. if applicable rectification, reduction of the price, rescission of the sale and damages.

All demands from or in connection with this warranty are subject to Chinese law.

Extension of Warranty Period

You may apply for a warranty extension within 12 months from the date of production from SYL (Ningbo) Battery Co., Ltd. by providing the serial number and copy of the warranty card of the unit. SYL (Ningbo) Battery Co., Ltd. may reject any application received which does not meet the date requirement. Extended warranty period can be purchased to 10, 15, 20 or 25 years. Refer to the Warranty Extension Order Form for more information.

Once the purchase of the warranty extension has been processed, SYL (Ningbo) Battery Co., Ltd. will send the warranty extension certificate to the user confirming the extended warranty period.

How to Make a Warranty Claim

If a Product fails within the Warranty period, the end-user must stop using the Product or the system in which the Product is installed as the case may be by isolating the Product from any energy source, make a claim as soon as possible and follow all directions provided by us, or our representative or agents.

When repairing the product, please send the warranty card together with the purchased product to the distributor for maintenance.

When contacting us, please have the following information to hand:

- In order to better serve you, after purchasing this product, please read it carefully, fill out and keep the warranty card.
- Your name, address, postcode and a telephone number where you can be contacted
- The model designation and serial number of the Product (you can find both on the Product)
- Proof of purchase with date and address of the vendor
- Installation date and installation address

Costs of Submitting a Warranty Claim

- For invalid claims under this Warranty, we will not be liable for the end-user's costs in making the warranty claim, including transport or return freight.
- In respect of valid claims under this Warranty, the end-user will not be charged for reasonable costs associated with the making of a warranty claim, including warranty processing costs, the cost of replacement parts or freight. Reimbursement for necessary and reasonably incurred costs or expenses in making valid warranty claims under this Warranty may be claimed from us. Documentary evidence in support of such claim will be required.

Deadlines for Submitting Warranty Claims

We aim to rectify genuine quality problems as a priority. This is generally achieved by investigating why defective products have failed and by introducing immediate corrective action measures to prevent re-occurring warranty failures. It is therefore critical that all claims under this Warranty are promptly submitted to us as soon as the Product fails, and in any event, within three months of knowledge of the matter or event giving rise to the claim. No consideration will be given to claims under this Warranty which are made after this period.

Product Liability and Product Safety

We should be informed immediately about any potential product safety concerns within and outside the warranty period.

We are well aware of our product liability and product safety obligations and responsibilities. It is our aim to ensure appropriate product safety standards are met in order to avoid injury, loss and damage caused by defects in any Product.

Miscellaneous

This Warranty shall form part of the purchase contract in respect of the Product between us and the end-user and shall be complied with by both parties.

Contact Details

If any questions, please contact:

1) Product holder: SYL (Ningbo) Battery Co., Ltd.

Contact number: +86-400-101-8585

Email: service@sylbattery.com

Address: No.23 Xingke Middle Road, Meilin Street, Ningbo City, Zhejiang, 315609, China

Website: <https://www.sylbattery.com/>

2) Importer :Risen Energy (Australia) Pty Ltd.

Contact number: +61-039-021-7788

Email: info@risenenergy.com.au

Address: Unit 35, 15 Ricketts Road, Mount Waverley, Victoria, 3149, Australia

Website: <https://www.risenenergy.com.au/>

- *Our goods come with guarantees that cannot be excluded under the **Australian Consumer Law**. You are entitled to a replacement or refund for a major failure and compensation for any other direct loss or damage.*

You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.



SYL (Ningbo) Battery Co., Ltd.

The Warranty Card of All-in-one Energy Storage System

Respected User:

Thank you for purchasing the SYL Home Series Energy Storage System of GS ENERGY brand of SYL (Ningbo) Battery Co., Ltd., In order to serve you better, after purchasing this product, please read it carefully, fill out and keep this warranty card.

User Name		Contact Person	
The Address of User		Contact Number	
Product Name		Product Model	
Buying Date			
Buying Channel			
Product Series Number			
Maintenance Record	Date	Failure cause and treatment situation	

When repairing the product, please send this warranty card together with the purchased product to the distributor for maintenance.

No.23, Middle Xingke Road, Meilin Streets, Ninghai County, Ningbo City, Zhejiang Province, China.

材料安全数据表

Material Safety Data Sheet

样 品 名 称: 可充电锂离子电池系统

Name of Sample: Rechargeable Li-ion Battery System

委 托 单 位: 双一力(宁波)电池有限公司

Commissioner: SYL (NINGBO) BATTERY CO., LTD.



材料安全数据表

Material Safety Data Sheet

1. 化学品及企业标识 Chemical product and company identification	
样品名称 Name of Sample	可充电锂离子电池系统 Rechargeable Li-ion Battery System
样品型号 Type/Mode	SBL5.1K2 51.2V 100Ah 5120Wh
委托单位 Commissioned by	双一力（宁波）电池有限公司 SYL (NINGBO) BATTERY CO., LTD.
委托单位地址 Commissioner address	中国浙江省宁波市宁海县梅林街道兴科中路 23 号 No.23 Xingke Zhong Road, Meilin Street, Ninghai, 315609 Ningbo City, Zhejiang Province, People's Republic Of China
制造商 Manufacturer	双一力（宁波）电池有限公司 SYL (NINGBO) BATTERY CO., LTD.
制造商地址 Manufacturer address	中国浙江省宁波市宁海县梅林街道兴科中路 23 号 No.23 Xingke Zhong Road, Meilin Street, Ninghai, 315609 Ningbo City, Zhejiang Province, People's Republic Of China
鉴定依据 Inspection according to	联合国《关于危险品货物运输的建议书》 UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
应急电话 Emergency telephone call	+86-574-59988908
	接样日期: 2020-06-08 Receiving date: 

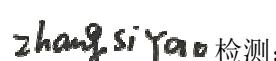
Approved by:

批准:



Reviewed by:

审核:

 检测:

Tested by:



2. 成分/组成信息 Composition information			
化学名称 Common Chemical Name	化学式 Chemical Formula	CAS 号 CAS No.	重量含量 Wt %
石墨 Graphite	C	7782-42-5	7-25
磷酸铁锂 Lithium iron Phosphate	LiFePO ₄	15365-14-7	15-40
偏氟乙烯, 六氟丙烯共聚物 Hexafluoropropylene-vinylidene fluoride Copolymer	- (C ₂ H ₂ F ₂) x(C ₃ F ₆)y-	9011-17-0	3-15
六氟磷酸锂 Lithium Hexafluorophosphate	LiPF ₆	21324-40-3	0-5
乙炔炭黑 Acetylene Black	C	1333-86-4	0-2
碳酸二乙酯 Diethyl Carbonate	C ₅ H ₁₀ O ₃	105-58-8	0-15
碳酸二甲酯 Dimethyl Carbonate	C ₃ H ₆ O ₃	616-38-6	0-15
碳酸甲乙酯 Ethyl Methyl Carbonate	C ₄ H ₈ O ₃	623-53-0	0-15
碳酸丙烯酯 Propylene Carbonate	C ₄ H ₆ O ₃	108-32-7	0-15
碳酸亚乙酯 Ethylene Carbonate	C ₃ H ₄ O ₃	96-49-1	0-15
铅 Lead	Pb	7439-92-1	Not Detected
镉 Cadmium	Cd	7440-43-9	Not Detected
汞 Mercury	Hg	7439-97-6	Not Detected

3. 危险性概述 Hazards identification	
爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods

毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性 other risk	该电池瓦时率为 5120Wh, 属于第九类危险品。 The watt-hour rate of the battery is 5120Wh, which belong to the Class 9 dangerous goods.

4. 急救措施

First aid measures

电池外壳破裂, 内容物接触人体会产生危害, 一旦发生接触, 应采取以下应急措施:

Once battery shell rupture, content contact with the human body will produce harm, once contact, should take the following emergency measures:

眼睛: 万一接触, 立即用大量的清水冲洗至少 15 分钟, 翻起上下眼睑, 直到化学的残留物消失为止, 迅速就医。

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

皮肤: 万一接触, 用大量水冲洗至少 15 分钟, 同时除去污染的衣物和鞋子, 迅速就医。

Skin: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

吸入: 立即从暴露处移至空气清新处, 如果呼吸困难给予输氧, 立即就医。

Inhalation: Remove from exposure and move to fresh air immediately. Use oxygen if available.

食入: 饮用两杯牛奶或水。如果当事人仍然清晰可以采取催吐的方法, 并且立即就医。

Ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician

5. 消防措施

Fire-fighting measures

燃点: 不适用

Flash Point: N/A.

自燃温度: 不适用

Auto-Ignition Temperature: N/A.

灭火介质: 大量水 (降温), 二氧化碳

Extinguishing Media: Water, CO₂.

特殊灭火程序: 自给式呼吸器

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

异常火灾或爆炸: 当电芯暴露于过热的环境中时, 安全阀可能会打开。

Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

燃烧产生的危险物品：一氧化碳，二氧化碳，锂氧化物烟气

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

6. 泄露应急处理 **Accidental release measures**

为防止电池材料泄露或释放采取的措施

如果电池内部材料泄露，操作人员应立刻撤离事故区直到烟气消散。将通风设备打开吹散危险性气体。用抹布擦净试验区，清除溢出的液体，将泄露电池放进塑料袋中，然后放进钢制容器。避免皮肤和眼睛接触或吸入有害气体。

Steps to be taken in case Material is Released or Spilled

If the battery material is released, remove operators from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

废弃物处置方法

建议将电池完全放电，锂金属电池消耗完电池内部的金属锂，并且交付给专业机构处理。

Waste Disposal Method

It is recommended to discharge the battery to the end. Use up the metal lithium inside the lithium metal battery, and delivered to professional institutions for further treatment.

7. 操作处置和储存 **Handling and storage**

禁止打开、毁坏或焚烧电池，因为电池有可能在这些处理过程中发生爆炸、破裂或泄露等事故。

禁止将电池短路、过充、强制放电或扔入火中。禁止挤压刺穿电池或将电池浸入溶液中。

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

操作处置和储存中的防范措施

禁止物理或电滥用，禁止高温储存，最好将电池储存在阴凉、干燥、通风及温度变化较小的环境中。禁止将电池接触加热设备或将电池直接暴露于阳光中。

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

其他要注意的防范措施

拆解、挤压、直接放入火中或高温条件下，电池可能发生爆炸和燃烧。禁止短接或将电池正负极错误的安装在设备中。

Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. 接触控制/个人防护 Exposure controls/personal protection

呼吸防护:

当电池排气阀打开时, 应尽量使通风设备开至最大, 避免将打开排气阀的电芯局限在某一狭窄空间内。正常操作条件下, 呼吸保护是不必要的。

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

通风条件

正常使用条件下不必考虑。

Ventilation

Not necessary under conditions of normal use.

防护手套

正常使用条件下不必考虑。

Protective Gloves

Not necessary under conditions of normal use.

其他防护服装或设备

正常使用条件下不必考虑。

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

电池开阀试验时应做好个人防护

呼吸防护, 防护手套, 防护服装和有护边的安全玻璃罩都是要准备的。

Personal Protection is recommended for venting battery

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9. 物理和化学特性 Physical and chemical properties

外形: 棱柱形

Appearance: Prismatic

认证编号: RZUN2020-2120

Ref. No.: RZUN2020-2120

气味: 泄漏时, 有醚的气味。

Odour: If leaking, smells of medical ether.

酸碱度: 不适用

pH: Not applicable as supplied.

闪点: 针对单个组分暴露情况, 其他不适用。

Flash Point: Not applicable unless individual components exposed.

易燃度: 针对单个组分暴露情况, 其他不适用。

Flammability: Not applicable unless individual components exposed.

相对密度: 针对单个组分暴露情况, 其他不适用。

Relative density: Not applicable unless individual components exposed.

溶解性 (水溶性): 针对单个组分暴露情况, 其他不适用。

Solubility (water): Not applicable unless individual components exposed.

溶解性 (其他): 针对单个组分暴露情况, 其他不适用。

Solubility (other): Not applicable unless individual components exposed.

10. 稳定性和反应活性

Stability and reactivity

稳定性: 产品在第 7 节所述的条件下稳定。

Stability: Product is stable under conditions described in Section 7.

应避免的条件: 加热 70°C 以上或焚烧、变形、毁坏、粉碎、拆卸、过充电、短路, 长时间暴露在潮湿的条件下。

Conditions to Avoid : Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

应避免的材料: 氧化剂, 碱, 水。

Materials to avoid: Oxidising agents, alkalis, water.

危险分解物: 有毒烟雾, 并可能形成过氧化物。

Hazardous Decomposition Products : Toxic Fumes, and may form peroxides.

聚合危害: 不适用

Hazardous Polymerization : N/A.

如果发生泄露, 避免与强氧化剂, 无机酸, 强碱, 卤代烃接触。

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

11. 毒理学资料

Toxicological information

标志及症状: 无, 除非电池破裂。

Signs & symptoms: None, unless battery ruptures.

内部物质暴露的情况下, 蒸汽烟雾可能对眼睛和皮肤的刺激性。

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

吸入: 对肺有刺激性。

Inhalation: Lung irritant.

皮肤接触: 对皮肤刺激性。

Skin contact: Skin irritant.

眼睛接触: 对眼睛有刺激性。

Eye contact: Eye irritant

食入: 吞下中毒。

Ingestion: Poisoning if swallowed.

下列情况下会危及人员身体健康: 如果与电池内部材料直接接触, 皮肤可能会出现干燥、灼烧等轻微或严重的刺激, 并且损坏靶器官的神经, 肝脏和肾脏。

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to sever irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

12. 生态学资料

Ecological information

对哺乳动物的影响: 目前未知。

Mammalian effects: None known at present.

生态毒性: 目前未知。

Eco-toxicity: None known at present.

生物体内积累: 慢慢地生物降解。

Bioaccumulation potential: Slowly Bio-degradable.

环境危害: 目前没有已知的环境危害。

Environmental fate: None known environmental hazards at present.

13. 废弃处置 Disposal consideration

禁止焚烧, 或使电池温度超过 70°C, 这种滥用可导致泄漏和/或电池爆炸。应按照相应的地方性法规处理。

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

14. 运输信息 Transport information

运输标签: 第 9 类锂电池危险品标签

Label for conveyance: class 9 lithium battery hazard label

UN 编号: UN3480

UN Number: UN3480

包装等级: II

Packaging Group: II

EmS 编号: F-A ,S-I

EmS No: F-A ,S-I

海洋污染物: 无

Marine pollutant: No

正确的装运名称: 锂离子电池 (包括锂离子聚合物电池)

Proper Shipping name: Lithium-ion batteries (Including lithium-ion polymer batteries)

危害分类: 货物应符合《国际海运危险货物规则》包装导则 P903 (Amdt. 39-18) (2018 年版),

《欧洲道路危险货物国际运输协议》包装导则 P903 (2019 年版), JT/T 617.3-2018 危险货物道

路运输规则 第 4 部分: 品名及运输要求索引包装导则 P903 (2018 年版), 包括通过 UN38.3 测试手册要求。

Hazard Classification: The goods shall be complied with Packing Instruction P903 of IMDG CODE (Amdt. 39-18) (2018 Edition),Packing Instruction P903 of ADR 2019, Packing Instruction P903 of JT/T 617.3-2018 Regulations concerning road transportation of dangerous goods — Part 4: Index of dangerous goods name and transportation requirement ,including the passing of the UN38.3 test.

15. 法规信息 Regulation information

法律信息

Law information

《危险品规则》
《Dangerous Goods Regulations》
《对危险货物运输的有关规定的建议》
《Recommendations on the Transport of Dangerous Goods Model Regulations》
《国际海运危险货物规则》
《International Maritime Dangerous Goods》
《危险货物品名表》
《List of dangerous goods》
《欧洲道路危险货物国际运输协议》
《European Agreement concerning the International Carriage of Dangerous Goods by Road》
《危险品安全运输技术指令》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《危险货物分类和品名编号》
《Classification and code of dangerous goods》
《职业安全卫生法》
《Occupational Safety and Health Act》 (OSHA)
《有毒物质控制法》
《Toxic Substance Control Act》 (TSCA)
《消费产品安全法》
《Consumer Product Safety Act》 (CPSA)
《联邦环境污染控制法》
《Federal Environmental Pollution Control Act》 (FEPCA)
《石油污染法案》
《The Oil Pollution Act》 (OPA)
《超级基金修正案和再授权法案III(302/311/312/313)》
《Superfund Amendments and Reauthorization Act TitleIII (302/311/312/313)》 (SARA)
《资源保护及恢复法案》
《Resource Conservation and Recovery Act》 (RCRA)
《安全饮用水法》
《Safety Drinking Water Act》 (CWA)
《加州 65 提案》
《California Proposition 65》
《美国联邦法规》
《Code of Federal Regulations》 (CFR)
根据所有联邦、州和地方法律。
In accordance with all Federal, State and local laws.

16. 其他信息

Other information

本文件仅对由委托方双一力（宁波）电池有限公司提供的，并由双一力（宁波）电池有限公司生产的电池（SBL5.1K2）有效。该电池的成分信息由委托方提供并承诺其完整性和准确性。用户应仔细阅读此文件，并按照正确的方法使用电池，如因电池使用不当造成的损害或损失，威凯检测技术有限公司（CVC）不承担任何责任。

This file is only effective to the batteries (SBL5.1K2) provided by commissioner SYL (NINGBO) BATTERY CO., LTD., which manufactured by SYL (NINGBO) BATTERY CO., LTD.. The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method. Vkan Certification & Testing Co., Ltd. (CVC) doesn't assume responsibility for any damage or loss

because of misuse of batteries.

注 意 事 项

Important

1. 本报告无检测单位印章无效。

The test report is invalid without the official stamp of CVC.

2. 未经本试验室书面同意，不得部分地复制本报告。

Nobody is allowed to photocopy or partly photocopy this test report without written permission of CVC.

3. 本报告无批准人、审核人及检测人签名无效。

The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.

4. 本报告涂改无效。

The test report is invalid if altered.

5. 对检测报告若有异议，应于收到报告之日起十五天内向检测单位提出。

Objections to the test report must be submitted to CVC within 15 days.

6. 本报告仅对送检样品负责。

The test report is valid for the tested samples only.

报告中未加 CMA 标志时，检测数据和结果仅供科研、教学或内部质量控制之用。

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