

# INTEG **E** STORAGE SYSTEM

E2BA-B10K3



## User Manual

E2BA-B10K3-UMEN-00



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## 1. About This Manual

### 1.1. Purpose

This manual is an integral part of Solinteg E2BA-B10K3 series energy storage batteries (hereinafter referred to as the battery). It mainly introduces the safety instructions, mechanical installation, electrical connection, debugging, operation, maintenance, and troubleshooting of the products. Please read this instruction carefully before installation.

The products, services, or features you purchase are subject to the commercial contracts and terms of Solinteg. All or part of the products, services, or features described in this document may not be within the scope of your purchase. This document serves only as a guide to use, and all statements, information, and recommendations in this document do not constitute any express or implied guarantee.

### 1.2. How to Use This Manual

Before installing and using battery, please read this manual carefully, understand the safety information and be familiar with the functions and characteristics of battery. The manual content of subsequent versions of the battery may be subject to change. The latest manual can be found at [www.solinteg.com](http://www.solinteg.com).

### 1.3. Target Groups

This manual is applicable to electrical installers with professional qualifications and endusers, who should have the following skills:

- ✧ Training for installation and commissioning of the electrical system, as well as dealing with hazards.
- ✧ Knowledge of photovoltaic power generation and energy storage systems and their working principles.
- ✧ Knowledge of the manual and other related documents.
- ✧ Knowledge of the local regulations and directives.

Only personnel who meet the above requirements are authorized to perform installation, maintenance, and troubleshooting. Unauthorized personnel do not operate the equipment.

### 1.4. Symbols

This manual contains important safety and operation instructions that must be accurately understood and followed during the installation and maintenance of the equipment. To ensure accurate use of this manual, please note the following symbol explanations.



**DANGER**

Indicates a hazard with a high level of risk that, if not avoided, will result in death or serious injury.



**WARNING**

Indicates a hazard with a medium level of risk that, if not avoided, could result in moderate injury or property damage.

**CAUTION**

Indicates a hazard with a low level of risk that, if not avoided, could result in minor injury or property damage.

**NOTE**

Provides extra info to help users use the equipment better. "NOTE" is not a safety warning and does not involve personal, equipment, or environmental hazard information.

## 2. Safety Instructions

### 2.1. General Statement

Before transporting, storing, installing, operating, using, and maintaining the equipment, please read this manual carefully, strictly follow the manual's instructions, and comply with all safety precautions on the equipment and in the manual.

Solinteg has the right not to undertake quality assurance in any of the following circumstances:

- ✧ Damages caused by improper transportation.
- ✧ Damages caused by incorrect storage, installation or use.
- ✧ Damages caused by installation and use of equipment by non-professionals or untrained personnel.
- ✧ Damages caused by failure to comply with the instructions and safety warnings in this document.
- ✧ Damages of running in an environment that does not meet the requirements stated in this document.
- ✧ Damages caused by operation beyond the parameters specified in applicable technical specifications.
- ✧ Damages caused by unauthorized disassembly, alteration of products or modification of software codes.
- ✧ Damages caused by unauthorized opening of the equipment's cover and disassembling or replacing internal components.
- ✧ Damages caused by abnormal natural environment (force majeure, such as lightning, earthquake, fire, storm, etc.).
- ✧ Any damages caused by the process of installation and operation which don't follow the local standards and regulations.
- ✧ Products beyond the warranty period.

### 2.2. Personnel Safety

- ✧ Installers must undergo professional training or obtain electrical-related professional qualification certificates.
- ✧ Do not wear watches, bracelets, rings, necklaces, and other conductive objects during installation and operation, to avoid electric shock and burns.
- ✧ Do not operate with electricity during the installation. When removing or installing cables, sparks and arcs generated by live-line operation can cause fire or personal injury.

- ✧ Installers must wear professional protective devices during installation and operation of the equipment.
- ✧ The equipment should be installed out of reach of children and small animals.

### **2.3. General Safety Statements**

- ✧ Please strictly follow the content of the manual for proper operation.
- ✧ Please strictly comply with local regulations for electrical connections.
- ✧ Please disconnect the electricity while installing the equipment. Live-line operation is prohibited.
- ✧ Please ground the equipment prior to installation. When removing the equipment, detach the grounding protective wire as the final step.
- ✧ Please select proper cable size according to the local regulation and requirements from this manual.
- ✧ During the installation of the device, ensure that the cables are firmly connected and the screws are tightened properly.
- ✧ Any cable damages must be replaced by a professional to avoid risks.
- ✧ Please disconnect the power source before connection of power or communication cables. Live-line operation is strictly prohibited.
- ✧ Do not open the front cover of the equipment during installation. Unauthorized opening of the cover and replacement of internal components may result in personal injury, damage to the inverter, and voiding of the warranty.
- ✧ Do not connect lithium battery terminals without advance turning off the circuit breaker or main power switch to avoid personal injury due to high voltage.
- ✧ The battery may pose risks of electric shock, fire, or explosion due to gas leakage. Please observe appropriate precautions.
- ✧ During normal energization of any part of the system, installation, disassembly, or operation of any component of the entire system is prohibited.
- ✧ Drilling, cutting, chopping, piercing, deforming, burning, or any other destructive actions are prohibited, as they may damage seals or insulation.

### **2.4. Preventive Statements**

#### **2.4.1. Battery Leakage**

Due to the corrosive nature of the electrolyte, use protective gloves/clothing, eye protection, and face shields to avoid direct contact. If battery leakage occurs, evacuate personnel immediately. If exposed to the leaked substance, seek medical attention immediately and take the following measures:

- ✧ If inhaled: Do not remove contaminated work clothes from the workplace; they must be thoroughly cleaned before reuse.
- ✧ If skin contact: Flush with plenty of water and seek medical advice immediately.
- ✧ If eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing and seek medical advice.
- ✧ If swallowed: Induce vomiting immediately and seek medical advice.

#### **2.4.2. Fire**

- ✧ Have carbon dioxide, Novec 1230, or FM-200 fire extinguishers available near the equipment.

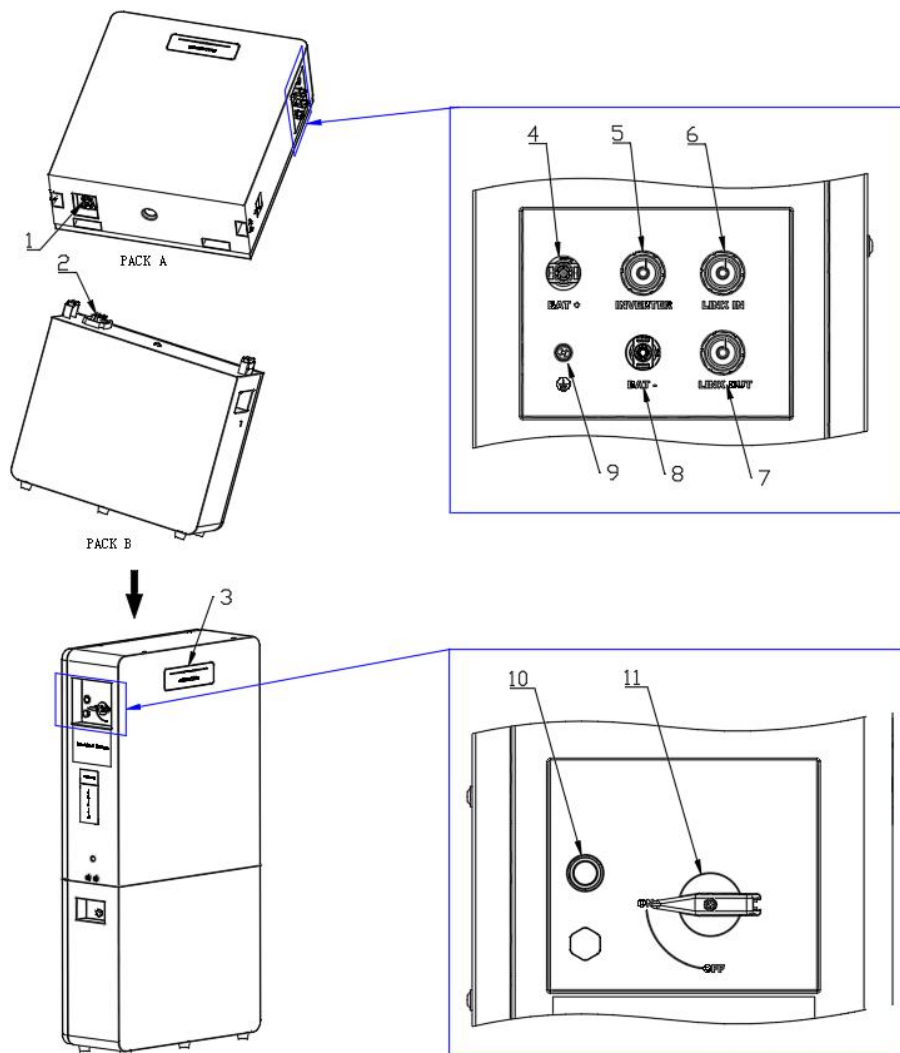
- ✧ Extinguish fires before they reach the battery.
- ✧ If a battery fire occurs, evacuate personnel immediately and without hesitation.



### 3. Product Description

The E2BA-B10K3 is a high-voltage lithium battery system that includes an integrated BMS (Battery Management System) module and battery modules. There is one model in this series: E2BA-B10K3.

#### 3.1. Appearance



| Item | Name                                    | Description                                                                          |
|------|-----------------------------------------|--------------------------------------------------------------------------------------|
| 1    | PACK A/B Quick-Connect Female Terminals | Quick-connect female terminals for PACK A and PACK B                                 |
| 2    | PACK A/B Quick-Connect Male Terminals   | Quick-connect male terminals for PACK A and PACK B                                   |
| 3    | Status Indicator                        | Indicates the operating status of the battery system                                 |
| 4    | BAT +                                   | Battery positive terminal; connects to the battery positive terminal on the inverter |
| 5    | INVERTER                                | Communication interface between the battery and the inverter                         |
| 6    | LINK IN                                 | Battery parallel input interface                                                     |
| 7    | LINK OUT                                | Battery parallel output interface                                                    |
| 8    | BAT -                                   | Battery negative terminal; connects to the battery negative terminal on the inverter |
| 9    | Ground                                  | Battery ground connection point                                                      |
| 10   | Power Switch and Power Indicator        | Battery power switch; indicates the battery system 's power status                   |
| 11   | DC Switch Knob                          | Master switch controlling the battery system 's charge and discharge circuits        |

### 3.2. Symbols on the Battery

| Symbols                                                                             | Description                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | CE mark, the battery complies with the requirements of the applicable CE guidelines.                                                                                                                                                                                                                                                                                              |
|  | To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately. |
|  | Please read the instructions carefully before installation.                                                                                                                                                                                                                                                                                                                       |

| Symbols                                                                           | Description             |
|-----------------------------------------------------------------------------------|-------------------------|
|  | Risk of electric shock! |
|  | Grounding mark.         |

### 3.3. Current Limiting Declaration

Based on the characteristics of lithium batteries, to ensure long-term and reliable operation of this battery, it is necessary to limit the charge and discharge currents. This is one of the core protection mechanisms of the battery.

Typical conditions that trigger this mechanism include, but are not limited to, the following:

- ✧ Excessively High Ambient Temperature: Ambient temperature  $> 40^{\circ}\text{C}$  during charging,  $> 45^{\circ}\text{C}$  during discharging, or overheating of critical internal components within the equipment.
- ✧ Excessively Low Ambient Temperature: Ambient temperature  $< 20^{\circ}\text{C}$  during charging,  $< 0^{\circ}\text{C}$  during discharging, or overheating of critical internal components within the equipment.
- ✧ Battery During Final Charging Stages: SOC  $> 80\%$ .
- ✧ Battery During Final Discharging Stages: SOC  $< 20\%$ .
- ✧ External Battery Limitations: Such as when photovoltaic energy exceeds both load consumption and battery charging power, and the inverter has enabled export limit, etc.

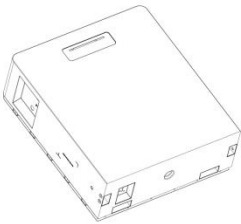
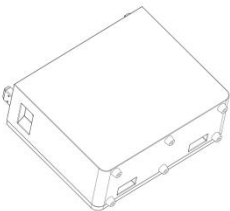
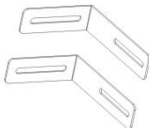
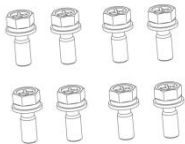
## 4. Unpacking and Storage

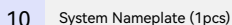
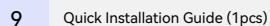
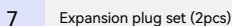
### 4.1. Packing List

The device is thoroughly tested and strictly inspected before delivery. Nonetheless, damage may still occur during shipping. For this reason, please conduct a thorough inspection after receiving the device. Please contact Solinteg or the transport company in case of any damage or incompleteness, and provide photos to facilitate services. The package of the inverter includes the following accessories.

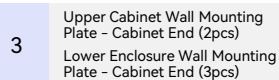
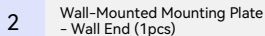
Please check whether the accessories in the packing box are complete when receiving the goods.

#### Standard Packing Box

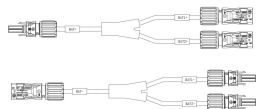
|                                                                                                                                 |                                                                                                                     |                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>1</b>    PACK A (1pcs)</p>               |  <p><b>2</b>    PACK B (1pcs)</p>  |  <p><b>3</b>    2-meter power cable - positive (1 pcs)<br/>2-meter power cable - negative (1 pcs)<br/>Unlocking tool (1 pcs)</p> |
|  <p><b>4</b>    Ground OT terminal (1pcs)</p> |  <p><b>5</b>    Hanger (2pcs)</p> |  <p><b>6</b>    M5 fixed bolt (A box) (4pcs)<br/>M5 fixed bolt (B box) (4pcs)</p>                                               |



1 Expansion plug set (6pcs)  
M5 fixed bolt (12pcs)



9



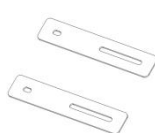
1

Y-Type Power Cable - Positive  
(1pcs)  
Y-Type Power Cable - Negative  
(1pcs)



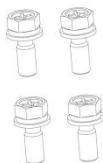
2

3-meter Ethernet cable (1pcs)



3

mounting brackets (2pcs)



4

M5 fixed bolt (4pcs)



NOTE

- ✧ Handle with care when removing packaging to prevent scratching the equipment. Ensure the device remains stable during packaging removal.
- ✧ When placing the battery on the ground, use foam or cardboard padding underneath to prevent casing damage.

## 4.2. Storage Considerations

- ✧ Environmental conditions and storage methods can affect the product's lifespan.
- ✧ Please store the battery in the original packages.
- ✧ Batteries must be stored in a clean, dry location free from corrosive gases, and protected against dust and moisture ingress.
- ✧ Do not put heavy objects on the battery.
- ✧ When batteries are stored in stacks, the number of stacked layers must not exceed the "maximum stacking layers" indicated on the outer packaging.
- ✧ Store the battery in a no-fire zone with clear "No Smoking or Open Flames" warnings, and keep it separate from flammable or explosive materials.
- ✧ Before storage, charge the battery to a state of charge between 30% and 60%.
- ✧ After the battery is fully discharged, it must be recharged within 12 hours.



**WARNING**

To ensure battery performance and service life, it is recommended to avoid long-term idle storage. Extended storage may lead to deep discharge of the battery, resulting in irreversible chemical damage, capacity fade, or even complete failure. Therefore, timely usage is advised. If long-term storage of the battery is necessary, periodic charge and discharge maintenance should be performed according to the intervals specified in Section [10.3](#)

#### **4.3. Safe Transport Instruction**

- ✧ Observe the caution signs on the battery's packaging before transportation.
- ✧ Pay attention to the weight of the battery. Be cautious to avoid injury when carrying it.  
Transport according to the personnel quantity required by local regulations.
- ✧ Use the battery's original packaging during transportation.

## 5. Installation



### DANGER

- ✧ Do not mix batteries from different manufacturers, of different types and models, or new and old batteries.
- ✧ Do not expose to fire, mix with other battery types, charge at rates exceeding specifications, connect incorrectly, or short-circuit, as this may cause overheating, explosion, or leakage of battery contents.

### 5.1. Location

The battery is designed with IP65 protection for indoor and outdoor installations.

- ✧ Floor mounting is recommended. If wall-mounted, the battery must be installed on a solid wall or bracket capable of supporting its weight.
- ✧ Install the battery in a location that is convenient for wiring, operation, and maintenance.
- ✧ The installation location must ensure that the battery is out of reach of children and pets.
- ✧ The battery should be installed in a well-ventilated environment for good heat dissipation.
- ✧ The ambient temperature, humidity, and altitude of the installation site must comply with the requirements stated in the specification sheet.
- ✧ Do not install the battery in direct sunlight or environments exposed to rain and snow.
- ✧ Keep the battery away from heat sources, sparks, open flames, and high-temperature surfaces. Maintain a distance of more than 2 meters from any heat source.
- ✧ A fire extinguishing system must be installed.



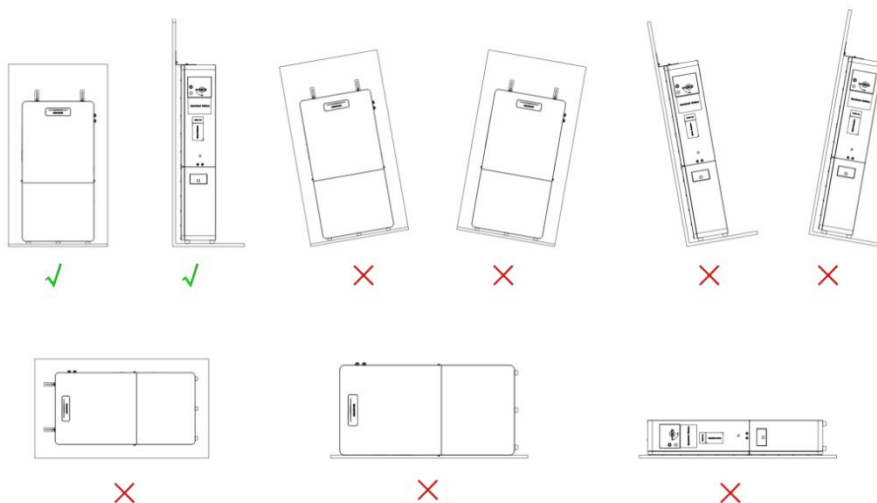
### WARNING

- ✧ Prohibit placing flammable or explosive materials near the battery.
- ✧ Do not install the machine on hollow masonry, drywall, or similar wall structures.
- ✧ Due to the machine's weight, ensure the mounting surface is sturdy. The mounting base must support at least four times the battery's weight and match the battery dimensions.
- ✧ Installation and operating environments impact product service life. Therefore, adhere to operational environment guidelines to ensure the device operates under suitable conditions.



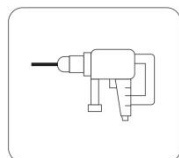
## 5.2. Installation Angle

Install the battery vertically. Never install the battery at forward/backward tilted, or upside down.

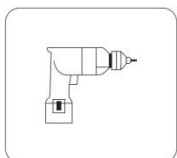


## 5.3. Installation Tools & Materials

When installing the inverter, please wear professional protective equipment.



Electric Drill



Electric Screw  
Driver



Hammer



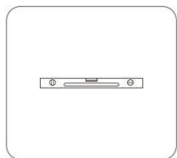
Cross Screw  
Driver



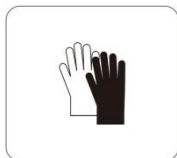
Tape Measure



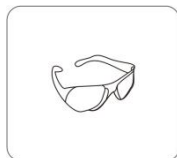
Mark Pencil



Spirit Level



Insulation  
Gloves



Goggle



Safety boots



Multimeter  
(VDC > 500V)



Cable ties

## 5.4. Moving the inverter

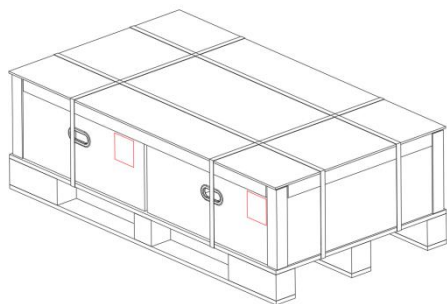


Improper handling operations may cause personal injury!

- ✧ Ensure a sufficient number of qualified personnel are involved in handling the battery based on its weight. All operators must wear appropriate PPE (e.g., impact-resistant footwear, protective gloves).
- ✧ Maintain constant awareness of the battery's center of gravity during transportation to prevent tilting or imbalance.
- ✧ Place cushioning materials (e.g., foam pads or rubber mats) under the battery when setting it on rigid surfaces to avoid damage to the metal housing.
- ✧ Always use the designated handles on the product for lifting/movement. Never use the terminals or non-designated components as handholds.

Please carefully inspect the product after unpacking. If any abnormal damage or deformation is found, especially puncture, impact, stepping, or striking, immediately contact the installer or dealer.

1. Verify that the matching codes on the labels of the two outer boxes in each pallet are identical. Within a single battery system, PACK A and PACK B must be used in a one-to-one pairing, and their matching codes must match. If the matching codes do not match, please contact the installer or dealer immediately to have them replaced.



CARTON LABEL-PACK A:

| SOLINTEG                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Lithium Battery             |
| Type:                                                                                                                                                                                                                                                                                                                                                                                                                                                          | E2BA-B10K3(A)               |
| PN:                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SOL-P0300-10K1-300-001-B-00 |
| Total Storage Energy:                                                                                                                                                                                                                                                                                                                                                                                                                                          | 115kWh                      |
| Rated Capacity:                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30Ah                        |
| Net Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 56KG                        |
| Gross Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 62.4KG                      |
| Pack Dimensions:                                                                                                                                                                                                                                                                                                                                                                                                                                               | 775*680*305mm               |
| <b>B10K3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |
| <b>A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |
| <div style="display: flex; justify-content: space-between;"> <div>  <p>E2BA-B10K3(A)<br/>SN:1234567812345678</p> </div> <div> <p>Matching Code:<br/><b>26 5 0001</b></p> </div> <div>   </div> </div> |                             |

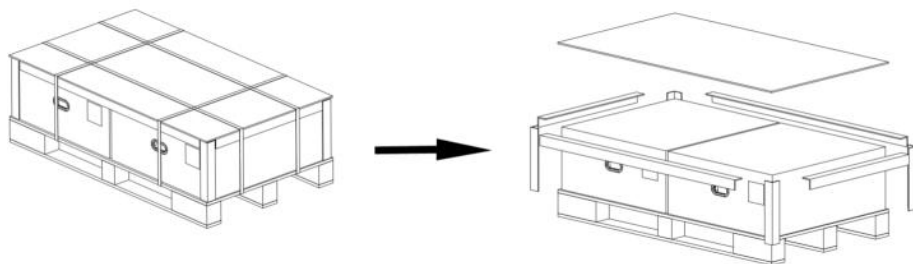
CARTON LABEL-PACK B:

| SOLINTEG                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Lithium Battery             |
| Type:                                                                                                                                                                                                                                                                                                                                                                                                                                                          | E2BA-B10K3(B)               |
| PN:                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SOL-P0300-10K3-300-001-B-00 |
| Total Storage Energy:                                                                                                                                                                                                                                                                                                                                                                                                                                          | 115kWh                      |
| Rated Capacity:                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30Ah                        |
| Net Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 55.5KG                      |
| Gross Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 55.5KG                      |
| Pack Dimensions:                                                                                                                                                                                                                                                                                                                                                                                                                                               | 775*680*305mm               |
| <b>B10K3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |
| <b>B</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |
| <div style="display: flex; justify-content: space-between;"> <div>  <p>E2BA-B10K3(B)<br/>SN:1234567812345678</p> </div> <div> <p>Matching Code:<br/><b>26 5 0001</b></p> </div> <div>   </div> </div> |                             |

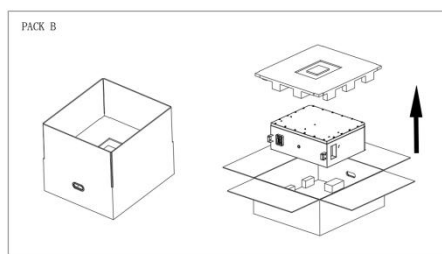
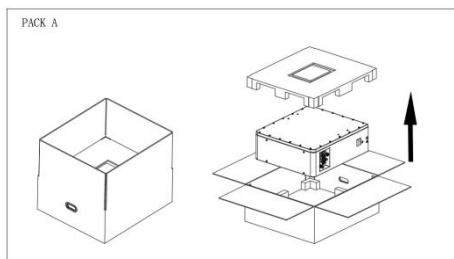
The matching code needs to be consistent.

Note: The matching code numbers in the figure are only for illustration purposes, and consistency is sufficient.

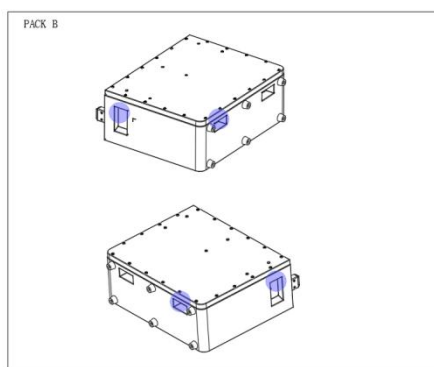
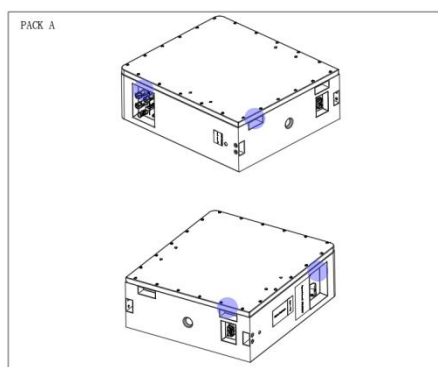
## 2. Unpack



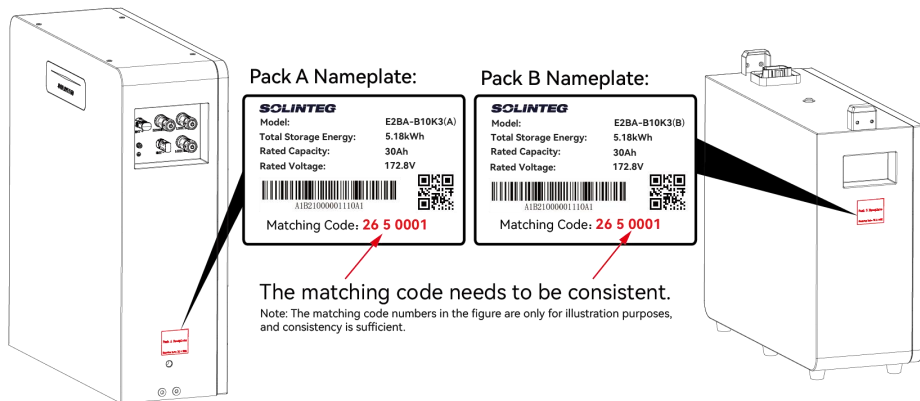
3. Remove the battery from the box.



4. When removing the battery from the case or moving it, grip the handle (as indicated by the highlighted area in the figure).



5. Verify that the matching codes on the nameplates of PACK A and PACK B are identical. Within a single battery system, PACK A and PACK B must be paired on a one-to-one basis, and their matching codes must match. If the matching codes do not match, please contact the installer or dealer immediately.



## 5.5. Floor installation



### DANGER

- ✧ When installing battery packs, particularly in areas prone to collisions or in earthquake-prone regions, the battery packs must be securely fastened. Failure to do so may result in the battery packs tipping over, causing personal injury or death, as well as explosions or leakage of battery contents.
- ✧ The installation site must meet load-bearing requirements; otherwise, it may lead to collapses or subsidence, resulting in personal injury or death. During installation, constant attention must be paid to structural stability, and necessary stabilization measures must be taken to prevent the battery packs from tipping over, which could cause personal injury or death, as well as explosions or leakage of battery contents.



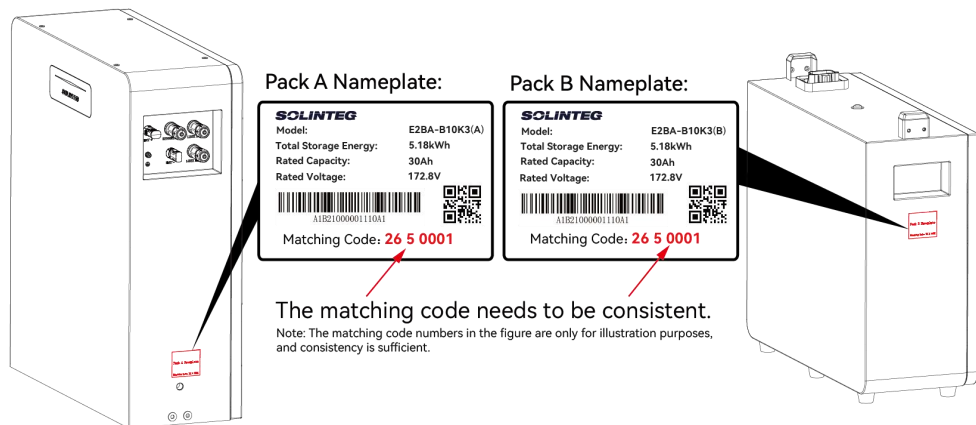
### CAUTION

Improper handling may result in personal injury!

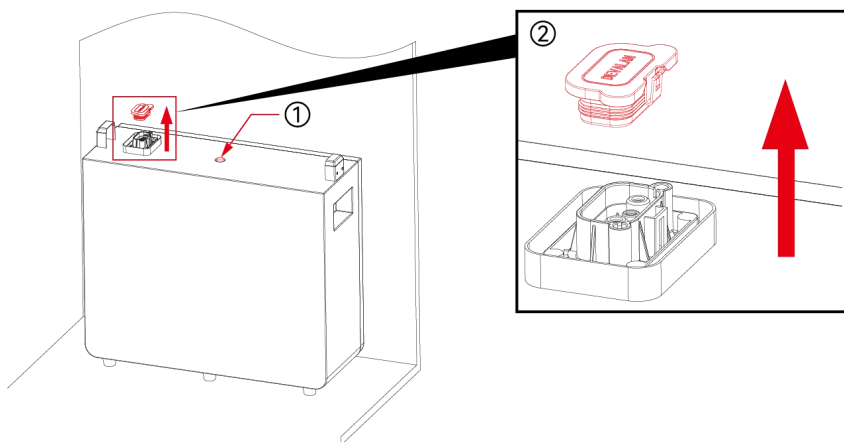
- ✧ During installation, pay attention to the orientation of the connectors; ensure that the connectors on Pack A and Pack B are aligned in the same direction to prevent damage to the connectors and tilting of the battery.
- ✧ The battery installation process must comply with local regulations, and dedicated handling and lifting equipment must be used.
- ✧ When installing the battery at a significant height, installation must be performed in accordance with local regulations.

**Step 1:** Before installation, be sure to verify that the matching codes on the nameplates of PACK A and PACK B are identical. Using PACK A and PACK B together when their matching codes do not match will reduce the performance and lifespan of the battery system.

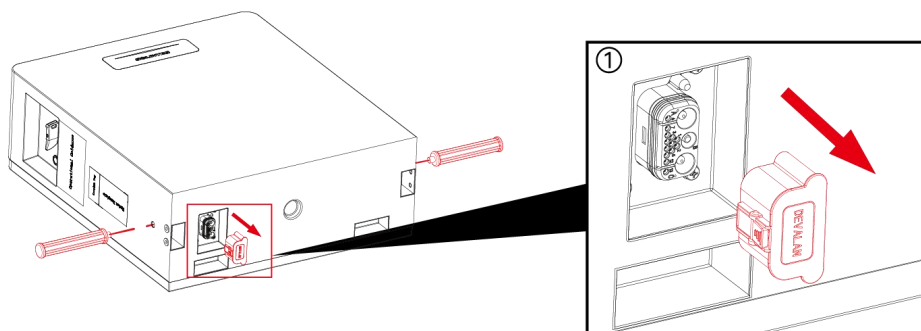
Before installation, be sure to verify that the wall is strong enough to support the battery system.



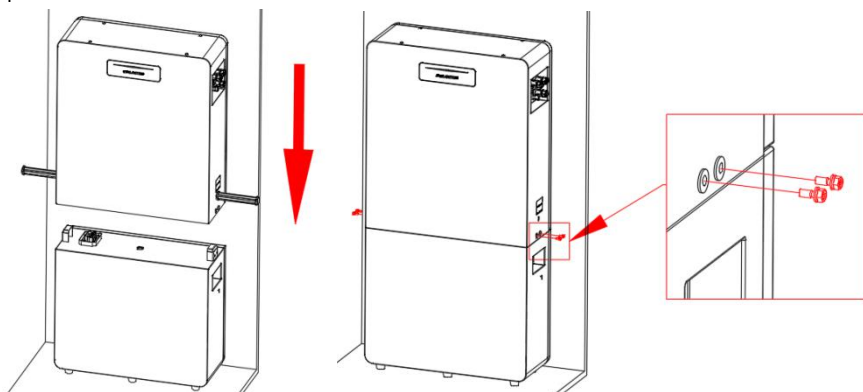
**Step 2:** Place Pack B vertically at the installation location with the cover facing the wall, maintaining a distance of 30–85 mm from the wall; ensure that the spirit level ① is level. Remove the dust cover ② from the quick-connect terminals on Pack B.



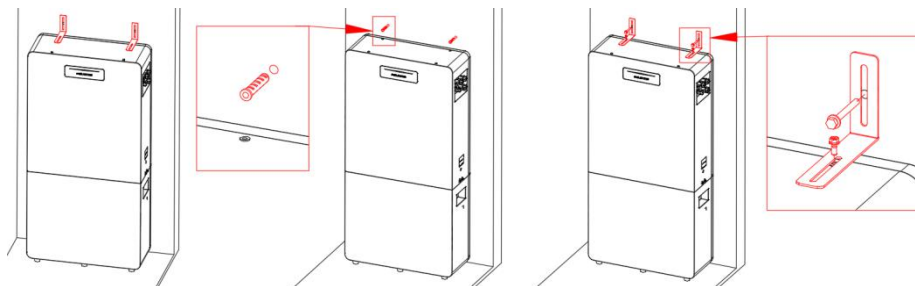
**Step 3:** Attach the lifting bar to Pack A, and remove the dust cap ① from the Pack A quick-connect terminal.



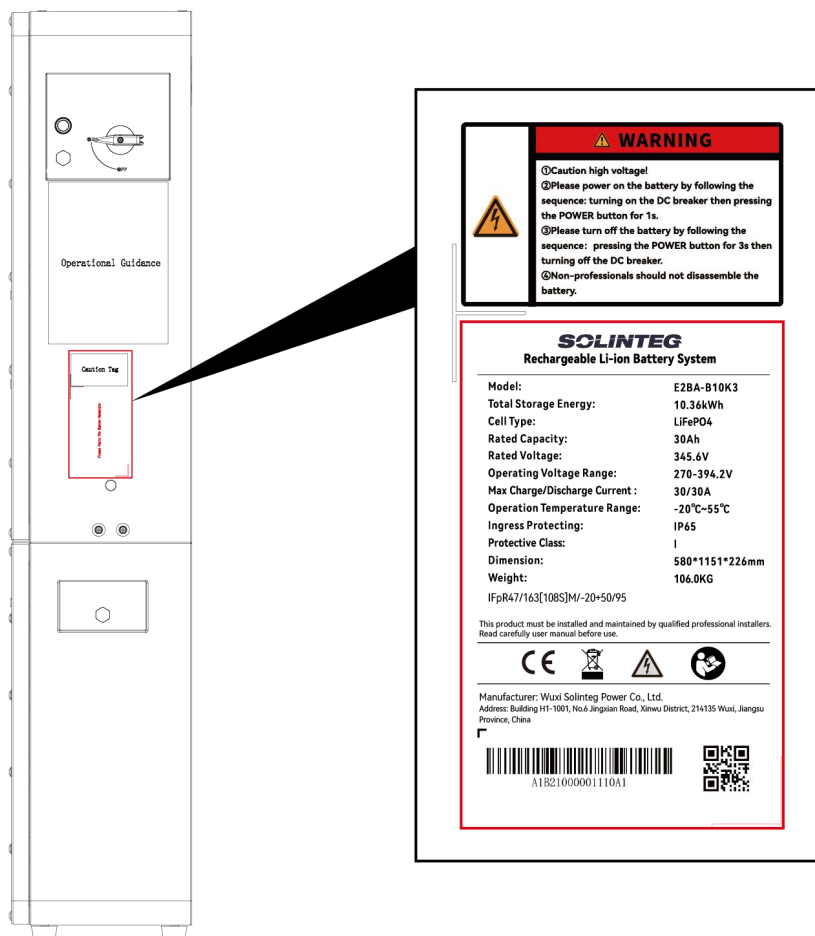
**Step 4:** Adjust the orientation of Pack A so that the quick-connect plug aligns with the socket on Pack B, then mount it onto Pack B from top to bottom. Remove the lifting handle and secure the upper and lower boxes together using four M5 x 14 mm mounting screws (recommended torque: 2 N·m).



**Step 5:** Place the mounting bracket in the desired location, mark the drilling positions with a marker, and drill the holes using an electric drill. First, insert the expansion plugs, then thread the screws through the holes. Use an electric screwdriver to tighten the two 60x8mm expansion screws (ST6, recommended torque: 5.5 N·m) securing the bracket to the wall and the two M5x14mm bolts (recommended torque: 2 N·m) securing it to the top of the enclosure, thereby securing the battery pack to the wall.



**Step 6:** Paste the system nameplate in the area marked "Please Paste The System Nameplate".



## 5.6. Wall-Mounted Installation



### DANGER

- ✧ When installing battery packs, particularly in areas prone to collisions or in earthquake-prone regions, the battery packs must be securely fastened. Failure to do so may result in the battery packs tipping over, causing personal injury or death, as well as explosions or leakage of battery contents.
- ✧ The installation site must meet load-bearing requirements; otherwise, it may lead to collapse or subsidence, resulting in personal injury or death. During installation, constant attention must be paid to structural stability, and necessary stabilization measures must be taken to prevent the battery packs from tipping over, which could cause personal injury or death, as well as explosions or leakage of battery contents.



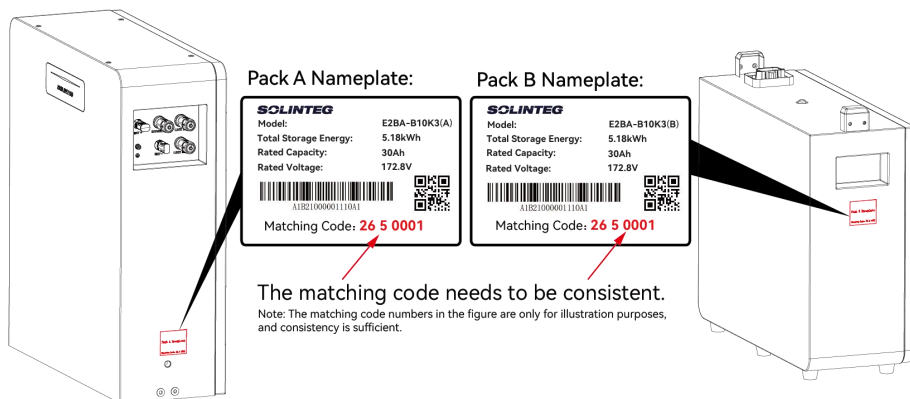
### CAUTION

Improper handling may result in personal injury!

- ✧ During installation, pay attention to the orientation of the connectors; ensure that the connectors on Pack A and Pack B are aligned in the same direction to prevent damage to the connectors and tilting of the battery.
- ✧ The battery installation process must comply with local regulations, and dedicated handling and lifting equipment must be used.
- ✧ When installing the battery at a significant height, installation must be performed in accordance with local regulations.

**Step 1:** Before installation, be sure to verify that the matching codes on the nameplates of PACK A and PACK B are identical. Installing PACK A and PACK B together when their matching codes do not match will reduce the performance and lifespan of the battery system.

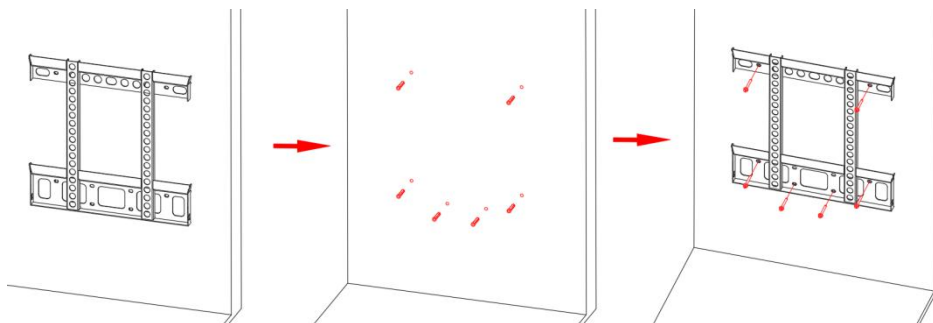
Before installation, be sure to confirm that the wall has sufficient strength to support the battery system.



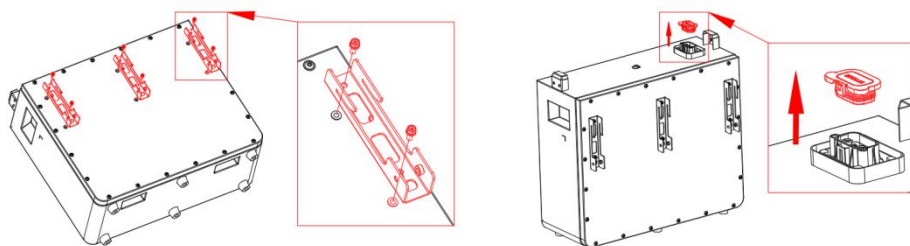
**Step 2:** Use a level to position the mounting plate horizontally on the wall. Place the mounting bracket as shown in the figure below, with the wider end facing down, and use a marker to mark the drilling locations. Use an electric drill to drill the holes. First, insert the expansion plugs, then thread the screws through the holes. Use an electric screwdriver to tighten the screws and secure the mounting bracket (Expansion bolt, ST6, recommended torque 5.5 N · m). The



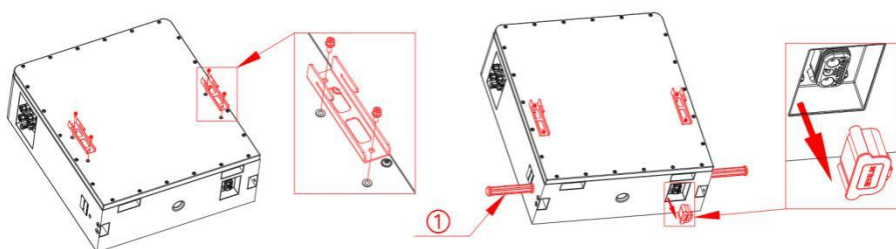
recommended distance from the bottom of the mounting plate to the floor should be  $\geq 340$  mm.



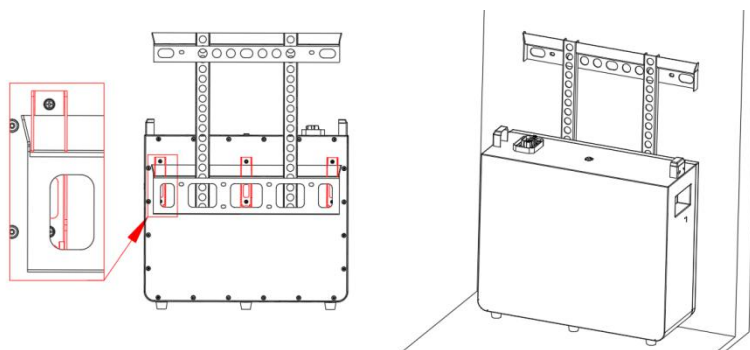
**Step 3:** Using six M5x14mm mounting screws (recommended torque 2 N·m), attach the three PACK B wall-mount brackets (box end) to PACK B as shown in the figure below, with the hook-side facing upward; remove the dust cap from the PACK B quick-connect terminal.



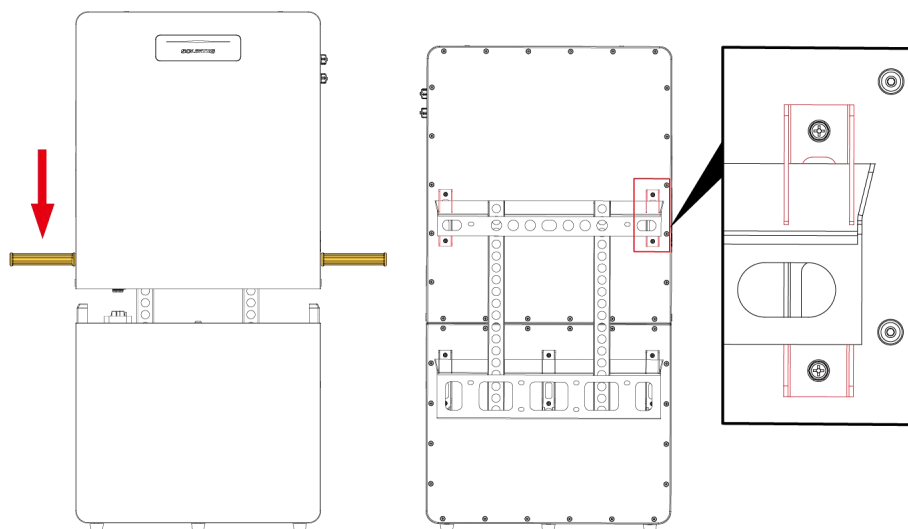
**Step 4:** Using four M5x14mm mounting screws (recommended torque 2 N·m), attach the two PACK A wall-mount brackets (box end) to PACK A as shown in the figure below, with the hook-side facing upward; install the carrying handle ① (optional); remove the dust cap from the PACK A quick-connect terminal.

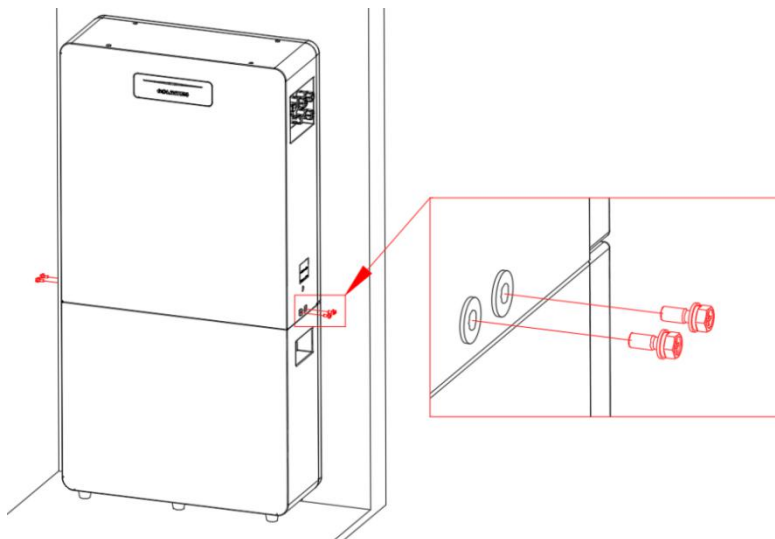


**Step 5:** Hang the hooks on the wall-mounting plate from Pack B vertically on the lower section of the back-mounting bracket, ensuring that the hooks on the left and right outer sides of the wall-mounting plate are both inside the back-mounting bracket.

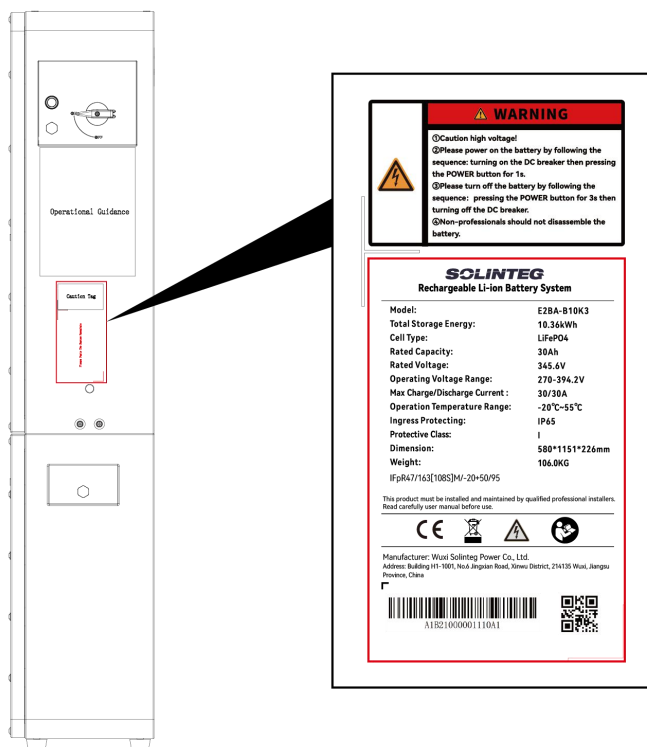


**Step 6:** Adjust the orientation of Pack A so that the quick-connect plug aligns with the socket on Pack B. Place it on top of Pack B (the lower unit) from top to bottom. Remove the lifting bar and secure the upper and lower units together using M5 x 14 mm mounting screws (recommended torque 2 N·m).





**Step 7:** Paste the system nameplate in the area marked "Please Paste The System Nameplate".

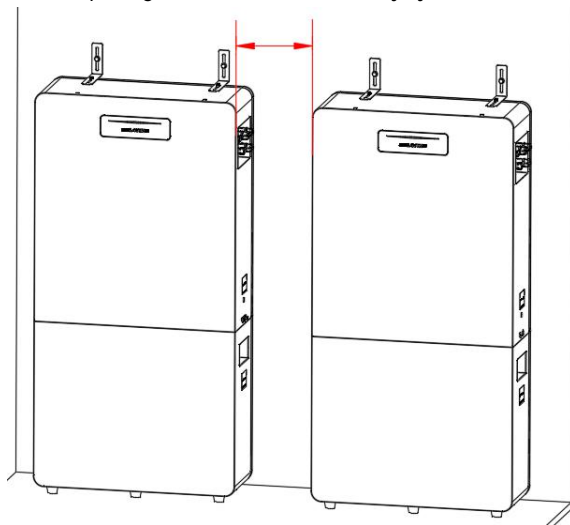


## 5.7. Side-by-side installation

This battery system supports two-unit parallel installation, which can be configured either left-to-right or front-to-back.

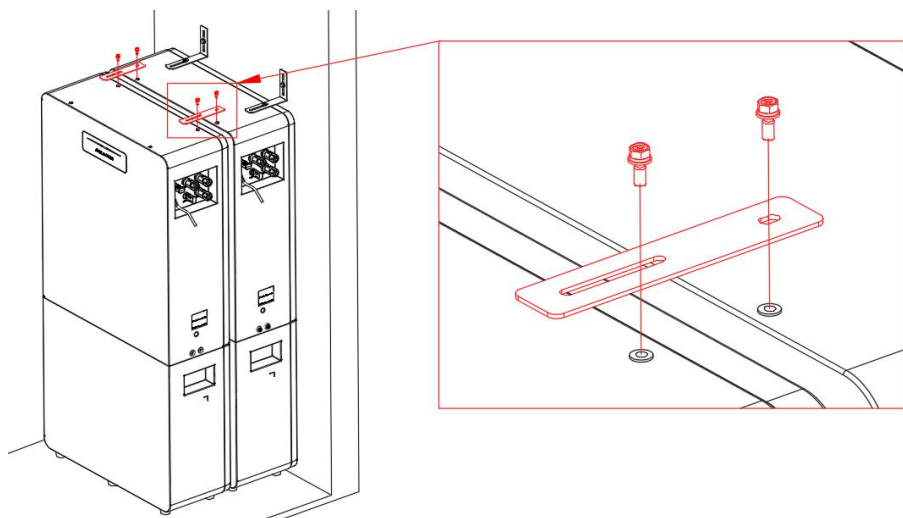
### 5.7.1. Left-to-Right Installation

Install two battery systems left-to-right on the floor or wall in accordance with Sections 5.5 and 5.6 of this document. The spacing between the two battery systems must be at least 300 mm.



### 5.7.2. Front-to-Back Installation

First, install the first battery system as described in Section 5.5 of this document for floor installation. Then, assemble the second battery system in front of it. The two battery systems must be placed parallel to each other, with a gap of 20–60 mm between them. Use four M5 × 14 mm mounting screws (recommended torque: 2 N · m) and two side-by-side mounting brackets to secure the two battery systems in place.



## 6. Electrical Connection

### 6.1. Safety Instructions



#### DANGER

- ✧ When installing the battery, ensure both the battery and the inverter are completely de-energized to prevent high voltage at conductive parts that could cause harm to personnel or equipment.
- ✧ Always use well-insulated tools to prevent short circuits at the battery terminals.



#### WARNING

- ✧ Do not ground the positive or negative pole of the battery, as this may cause serious damage to the system.
- ✧ Electrostatic discharge (ESD) can damage the battery's electronic components. Always implement ESD protective measures during installation and maintenance.
- ✧ Do not connect PV modules or DC power sources directly to the battery.



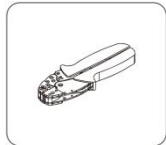
#### CAUTION

- ✧ Use of terminal lugs (including other brands or models) outside the designated accessory kit is prohibited. Solinteg reserves the right to refuse compensation for damages caused by terminal incompatibility.
- ✧ Moisture and dust may damage the battery. Ensure cable connectors are firmly tightened during installation. Warranty claims will be void if the battery is damaged due to poor connector mating.
- ✧ All electrical connections must adhere to local electrical codes.
- ✧ A stable and reliable grounding system should be installed for safety and proper operation.
- ✧ Never connect the same battery bank to multiple inverters simultaneously, as this may damage the inverters.
- ✧ Do not connect loads between the inverter and the battery.

### 6.2. Wiring Tools and Materials

Before performing electrical connections, prepare the following materials:

- ✧ Battery accessory kit.
- ✧ Cables: DC cables, communication cables, grounding cables. (Please prepare suitable cables according to actual conditions)
- ✧ Wiring tools:



Wire strippers



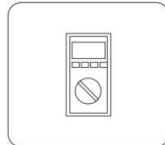
Wire cutters



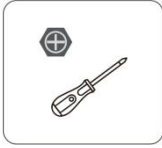
Crimping pliers



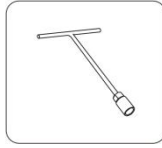
RJ45 connector  
crimping pliers



Multimeter (DC  
range >1100V)



Screwdriver



Allen socket  
wrench

### 6.3. External Grounding Connection

Connect the inverter and ground bar through PE wire to achieve the purpose of grounding protection. Please always remember wiring the PE wire before wiring other wires.



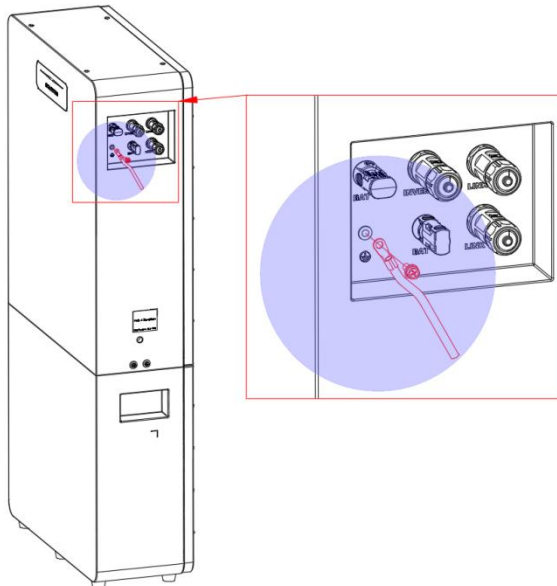
#### CAUTION

- ✧ In a single-battery system: Ground the PE conductor only.
- ✧ In a multi-battery system: All batteries' PE conductors must be connected to the same grounding copper busbar to ensure equipotential bonding.
- ✧ Reliable grounding is good for resisting surge voltage shock and improving EMI performance.

Ground terminal connection steps:

**Step1:** The external grounding terminal is located at the top right corner of the battery.

**Step2:** Use a crimping plier to crimp the PE conductor into the OT terminal. Then, use a screwdriver to secure the OT terminal onto the battery's external grounding bolt (recommended torque:  $1.5 \pm 0.15 \cdot \text{m}$ ). Connect the other end of the PE conductor to the grounding copper bus bar.



## 6.4. Power Cable Connection



### WARNING

- ✧ Before connecting the battery, disconnect the AC-side circuit breaker of the inverter and the battery-side circuit breaker. Set the DC switch on the battery to the OFF position to prevent electric shock.
- ✧ Ensure correct polarity when connecting the battery.



### CAUTION

- ✧ The battery voltage range must match the inverter's battery voltage range.
- ✧ Install fuses or circuit breakers on both the positive and negative lines of the power circuit between the battery and inverter, as required by local regulations.

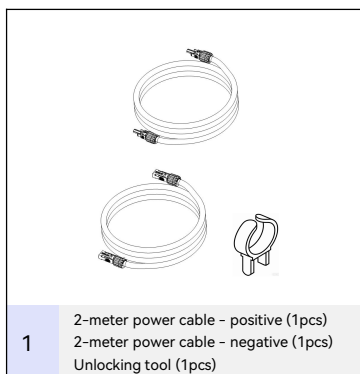


### NOTE

Solinteg batteries are compatible only with Solinteg inverters. Using them with other inverters will automatically void the battery warranty.

### 6.4.1. Cable Connections for Single-Unit Power Supplies

The accessory includes one positive and one negative power cable for the client, as follows:

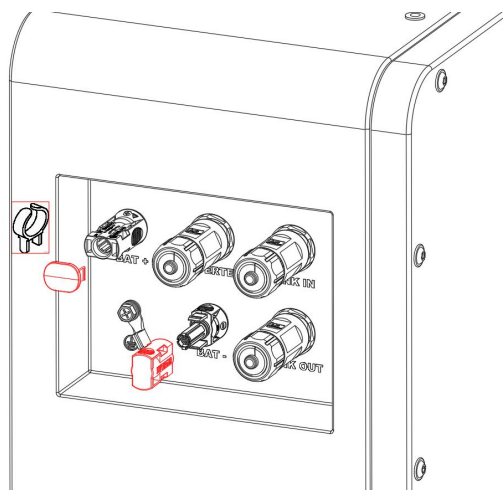


### WARNING

Before assembling the Battery connector, make sure that the cable polarity is correct.

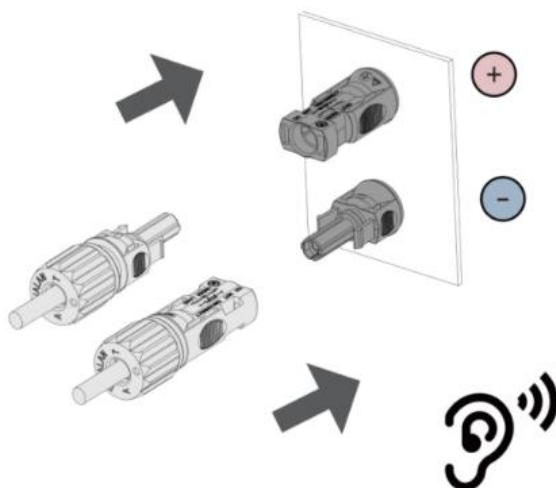
**Step 1:** Use an unlocking tool to remove the dust caps from the BAT+ and BAT- terminals.

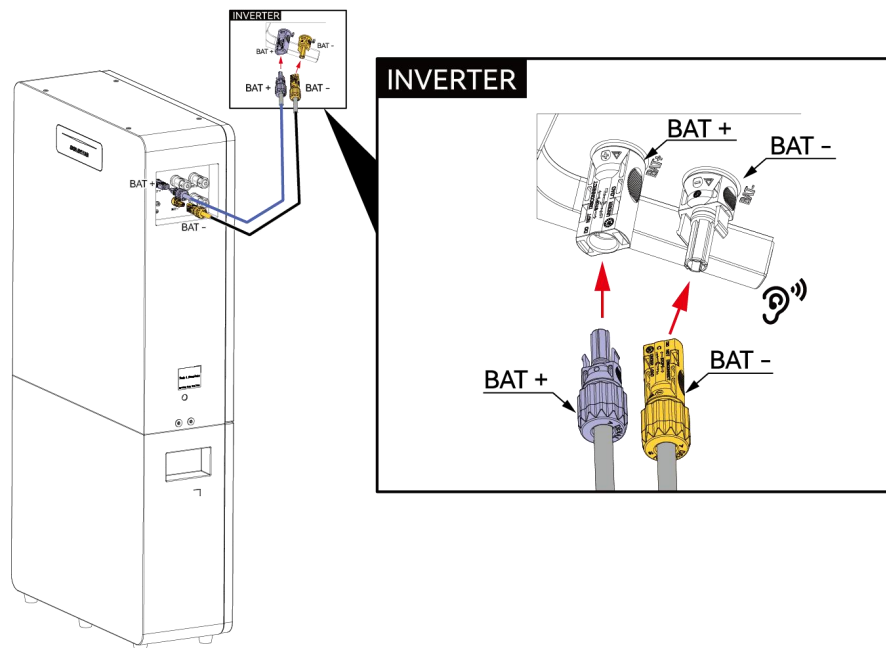




**Step 2:** Check that the battery cable polarity is correct. Check that the cables are intact and undamaged.

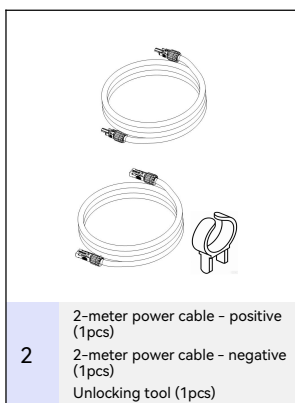
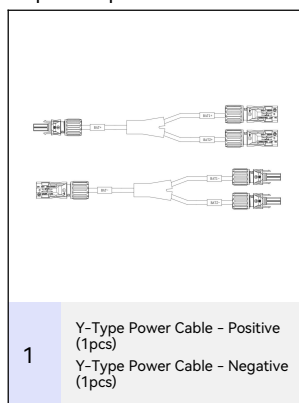
**Step 3:** Insert the positive and negative connectors at both ends of the power cable into the battery input terminals and the inverter battery terminals, respectively. A "click" indicates a secure connection.



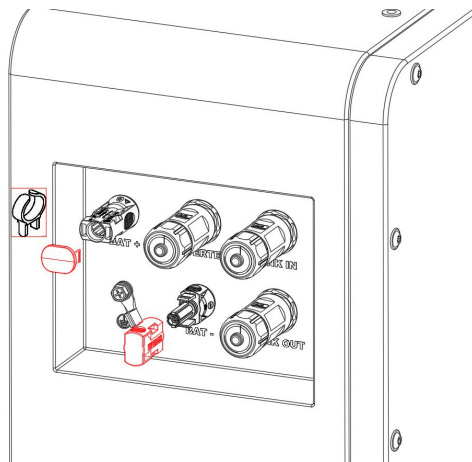


#### 6.4.2. Power Cable Connections for Parallel Operation

When installing two units in parallel, the power cable connection requires two 2-meter power cables from the standard battery system accessories and one Y-shaped power cable from the optional parallel connection kit:

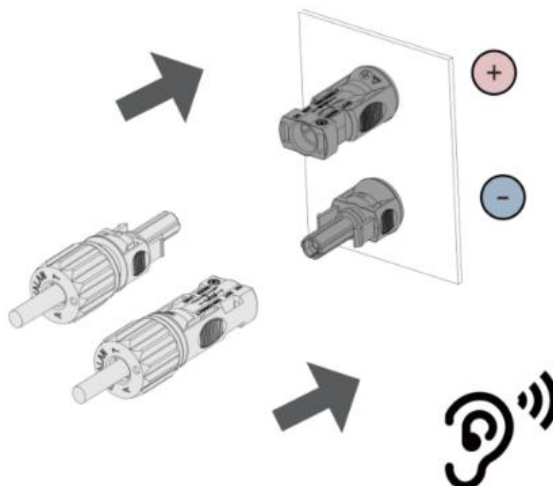


**Step 1:** Use an unlocking tool to remove the dust covers from the BAT+ and BAT- connectors.

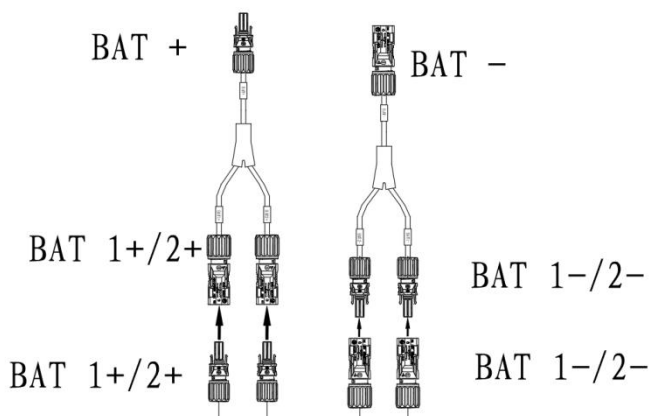


**Step 2:** Check that the battery cable polarity is correct. Check that the cable is intact and free of damage.

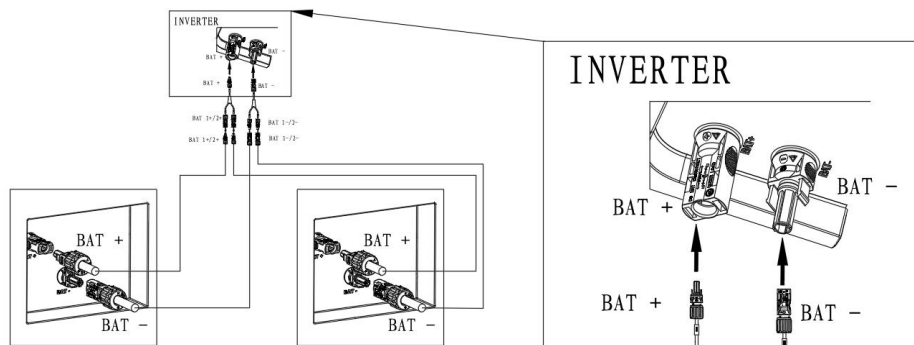
**Step 3:** Insert the positive and negative connectors at one end of the power cable into the battery's input terminals. A "click" indicates a secure connection.



**Step 4:** Connect the positive and negative terminals at the other end of the power cable to the BAT 1- and BAT 2- connectors on the Y-shaped power cable, respectively. A "click" indicates that the connection is secure.



**Step 5:** Connect the BAT+ and BAT- terminals of the Y-type power cable to the BAT+ and BAT- terminals of the inverter, respectively.

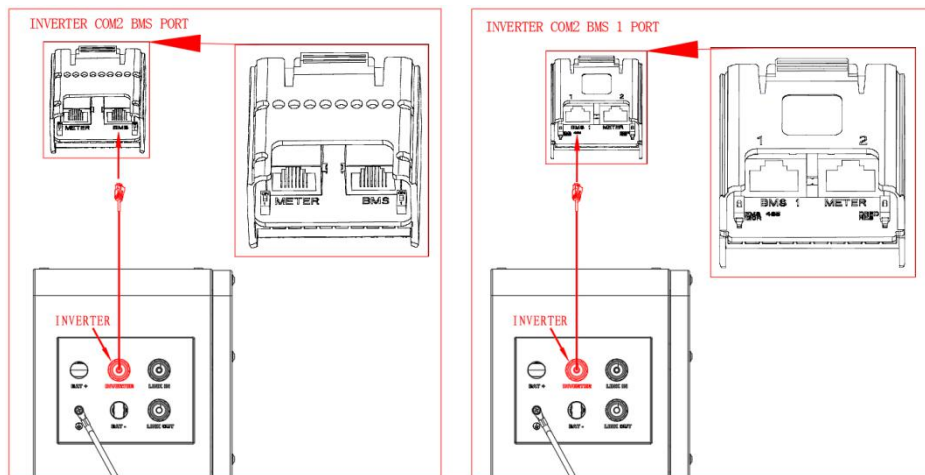


## 6.5. Communication Cable Wiring

The battery BMS communicates with the inverter or other battery BMS via a CAN communication line.

### 6.5.1. Wiring the Standalone Communication Cable

Connect the "INVERTER" port on the battery system to the BMS/BMS 1 port on the inverter's COM2 port using an Ethernet cable.



### 6.5.2. Wiring the Parallel Communication Cable

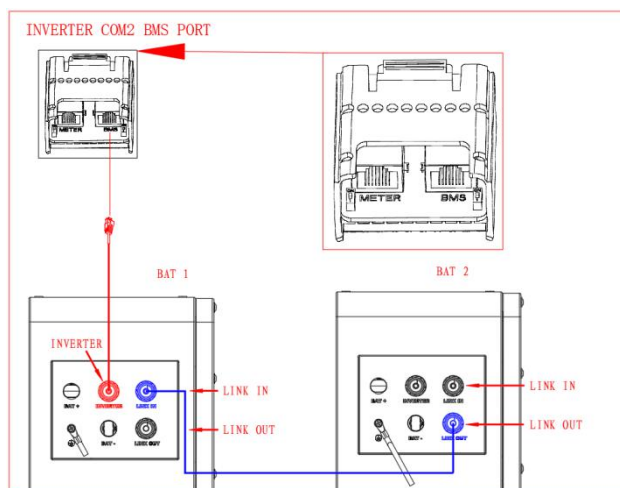
**Step 1:** Connect the "LINK IN" port on BAT 1 to the "LINK OUT" port on BAT 2 using an Ethernet cable.

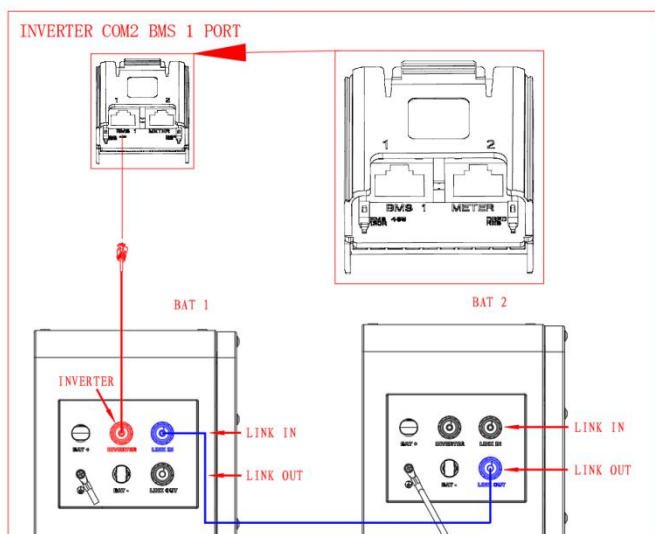
**Step 2:** Connect the "INVERTER" port on BAT 1 to the BMS/BMS 1 port on the inverter's COM2 port using an Ethernet cable.



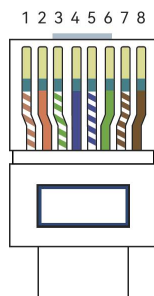
**CAUTION**

If no external network cable is connected, do not remove the RJ45 connectors from the INVERTER, LINK IN, and LINK OUT ports, or the jumper connectors installed in the LINK IN and LINK OUT ports. If they have been removed, please reinstall them. If the jumper connectors are missing and no external network cable is connected, the PACK SYSTEM will not function.





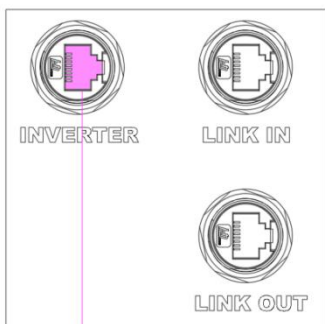
## RJ45 Wiring Scheme Definition



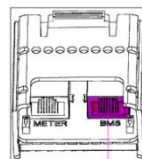
| No | Color          | BMS-Inverter | Link IN      | Link OUT     |
|----|----------------|--------------|--------------|--------------|
| 1  | Orange & White | /            | MASTER_SL    | LAST_SL      |
| 2  | Orange         | /            | ENCODE_IN    | ENCODE_OUT   |
| 3  | Green & White  | /            | GND          | GND          |
| 4  | Blue           | CAN1_H       | CAN1_H       | CAN1_H       |
| 5  | Blue & White   | CAN1_L       | CAN1_L       | CAN1_L       |
| 6  | Green          | /            | Recharge EN+ | Recharge EN- |
| 7  | Brown & White  | CAN2_L       | CAN2_L       | CAN2_L       |
| 8  | Brown          | CAN2_H       | CAN2_H       | CAN2_H       |

## Battery and inverter communication

### BATTERY COM INVERTER PORT

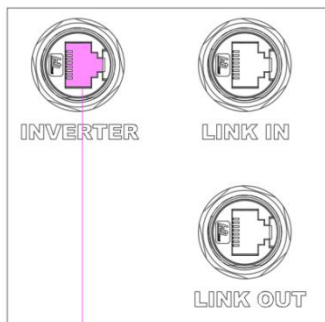


### INVERTER COM2 BMS PORT

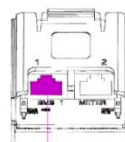


PIN4: CAN1\_H  
PIN5: CAN1\_L  
PIN7: CAN2\_L  
PIN8: CAN2\_H

### BATTERY COM INVERTER PORT



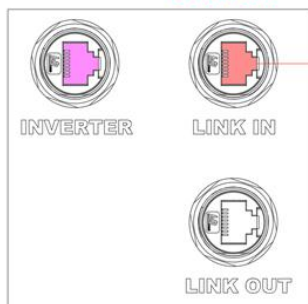
### INVERTER COM2 BMS1 PORT



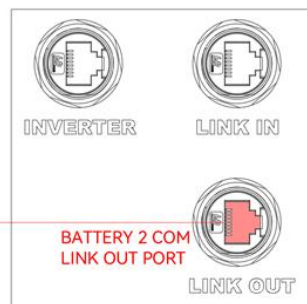
PIN4: CAN1\_H  
PIN5: CAN1\_L  
PIN7: CAN2\_L  
PIN8: CAN2\_H

## Battery parallel communication

### BATTERY 1 COM LINK IN PORT



PIN1: MASTER\_SL/  
LAST\_SL  
PIN2: ENCODE\_IN/  
ENCODE\_OUT  
PIN3: GND  
PIN4: CAN1\_H  
PIN5: CAN1\_L  
PIN6: Recharge EN+/  
Recharge EN-  
PIN7: CAN2\_L  
PIN8: CAN2\_H



### BATTERY 2 COM LINK OUT PORT

**BAT 1**

**BAT 2**

### Battery Parallel System

A parallel system must meet the following conditions:

- ✧ All batteries in the parallel system must be of the same model.
- ✧ To connect batteries in parallel, the parallel wiring harness must be installed and connected correctly.
- ✧ The power cables on the output side of each battery must be independently routed, and the communication ports must be connected as required.
- ✧ The parallel system operates in a master-slave configuration, requiring that one of the batteries be designated as the master by retaining the LINK IN port connector and cable.
- ✧ The current configuration supports parallel operation of up to 2 battery units.



#### NOTE

Failure to meet the above conditions may result in system malfunction or suboptimal operation.



### 6.5.3. Wiring Procedure

The installation procedure is the same for all three communication interfaces. Install the single-unit and parallel communication cables as described below according to your needs. Be sure to verify that the correct port is selected before installation.

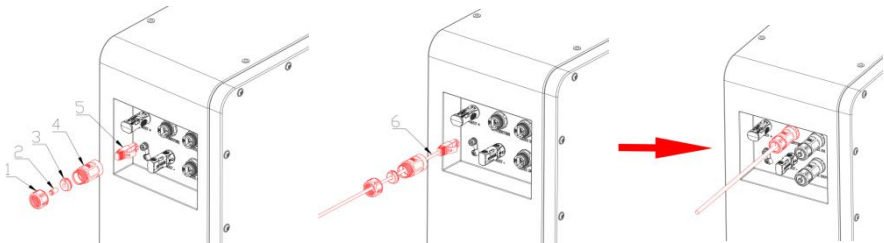
**Step 1:** Disassemble the terminal connectors (1, 2, 3, 4) on the electrical control port where the network cable is to be connected, and remove the plug (2) and the jumper connector (5).

**Step 2:** Thread the network cable (6) to be installed sequentially through the cable connector's locking nut (1), sealing plug (3), and main body (4). Insert the RJ45 connector of the network cable (6) into the RJ45 port, then secure the cable connector (1, 2, 3, 4).



#### CAUTION

- ✧ If no external network cable is connected, do not remove the three RJ45 connectors (INVERTER, LINK IN, and LINK OUT) or the two existing jumper connectors. If they have been removed, please reinstall them. If the jumper connectors are missing and no external network cable is connected, the PACK SYSTEM will not function.
- ✧ **The communication cable between the battery and the inverter is located inside the inverter's packaging box.**



| No. | Description                       |
|-----|-----------------------------------|
| 1   | Wire End Connector - Locking Nut  |
| 2   | Wire End Connector - Plug         |
| 3   | Wire End Connector - Sealing Plug |
| 4   | Wire End Connector - Body         |
| 5   | Patch Cord                        |
| 6   | Network Cable                     |



#### CAUTION

Unused pin terminals and cables in the battery communication line must not be grounded or connected to other devices.

## 7. Commissioning



### WARNING

During normal operation in non-emergency situations, the battery must be turned off via the button before switching the battery's switch. Directly turning off the switch on the battery is prohibited.

### 7.1. Pre-Commissioning Inspection

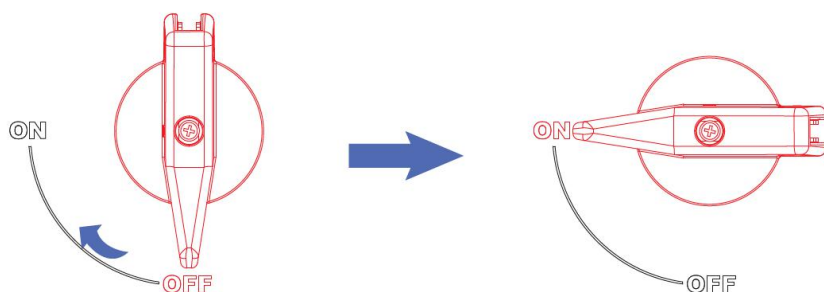
Before energizing the battery, confirm the following:

- ✧ All equipment has been securely installed.
- ✧ All DC switch is in the "OFF" position.
- ✧ Grounding cables are correctly and securely connected.
- ✧ Power cables and communication cables are correctly and securely connected.
- ✧ Unused terminals are sealed.
- ✧ No foreign objects (e.g., tools) remain on top of the equipment or inside junction boxes (if applicable).
- ✧ Fuses and circuit breakers comply with this manual and local standards.
- ✧ All warning labels and markings are intact and legible.

### 7.2. Commissioning

If all above items are satisfied, follow these steps to start the battery for the first time:

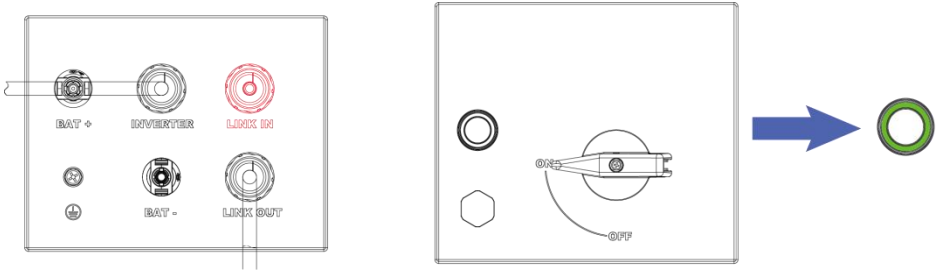
**Step1:** Turn the DC switch for all battery systems from the OFF position to the ON position.



**Step 2:** Check to make sure that the status indicator on all batteries are flashing red and green.



**Step 3:** Confirm the master battery position, master battery LINK IN port is installed with end plug and without network cable (as shown in the lower left figure), press the master battery power switch for 1s, and all battery indicator lights will turn green (as shown in the lower right figure).

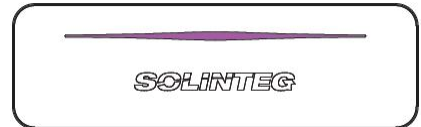


**Step 4:** Wait 20 minutes and check the color of all the battery status indicator lights. If any of the following conditions apply, the power-up process is completely.

Scenario 1: Master battery status indicator shows a steady green light (as shown in the lower left figure), while slave battery show a steady cyan light (parallel connection successful, as shown in the lower right figure).



Scenario 2: Master battery status indicator shows a steady green light (as shown in the lower left figure), while slave battery show a steady purple light (waiting for parallel connection, as shown in the lower right figure).



If the status indicator shows a color other than those listed above, please turn off the power, check and verify the cable connections, and then turn the power ON again; or refer to the user manual.



**CAUTION**

- ✦ After initial installation, enable the SOC RESET function. The battery will automatically charge to calibrate the SOC and disable this function once fully charged (manually disable if insufficient energy is available).
- ✦ The battery initiates an equalization charge every 10 days to calibrate SOC.



**NOTE**

- ✦ These steps apply only to battery startup. For system startup, refer to the inverter user manual.
- ✦ Ensure no obstacles (e.g., cables or personnel) block the DC switch handle rotation during operation.

### 7.3. Parallel System Commissioning

For battery parallel systems:

- ✦ Rotate all batteries' DC switches to "ON".
- ✦ Press and hold the power button of one battery for 1 second until its indicator lights up.



### CAUTION

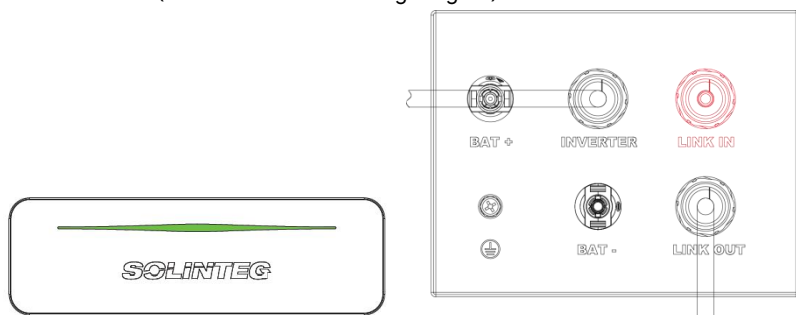
When replacing or adding/removing parallel-connected batteries, all original parallel-connected batteries must be powered down, and their respective DC switches must be disconnected. After the new parallel-connected batteries are correctly installed, proceed according to the parallel system commissioning process.

## 7.4. Shutting Down the Battery

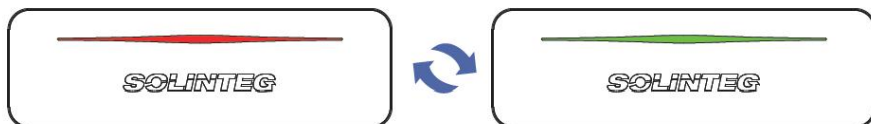
When shutting down the battery, follow these steps:

**Step1:** Turn off the inverter (For detailed instructions, please refer to the inverter user manual).

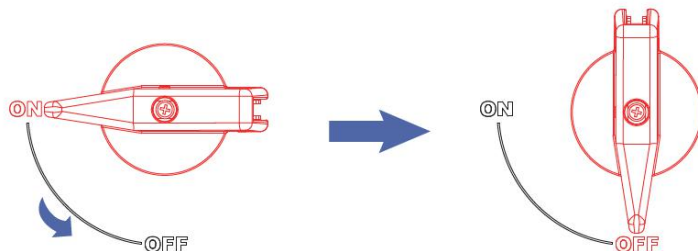
**Step2:** Confirm the master battery's location, master battery status indicator light is green (as shown in the lower left figure), master battery LINK IN port is installed with end plug (as shown in the lower right figure).



**Step3:** Press and hold the master battery power switch for 3 seconds. All battery power indicator lights will turn off, and the battery status indicator will flash red and green.



**Step4:** Turn the DC switches on all batteries from the ON to the OFF position. If you need to power up again, please wait at least 5 seconds after step 4.



If the battery will be taken out of service for an extended period or permanently, disconnect the cables. Please note that the cables must be disconnected by a licensed electrician or a certified professional.

## 8. Operation

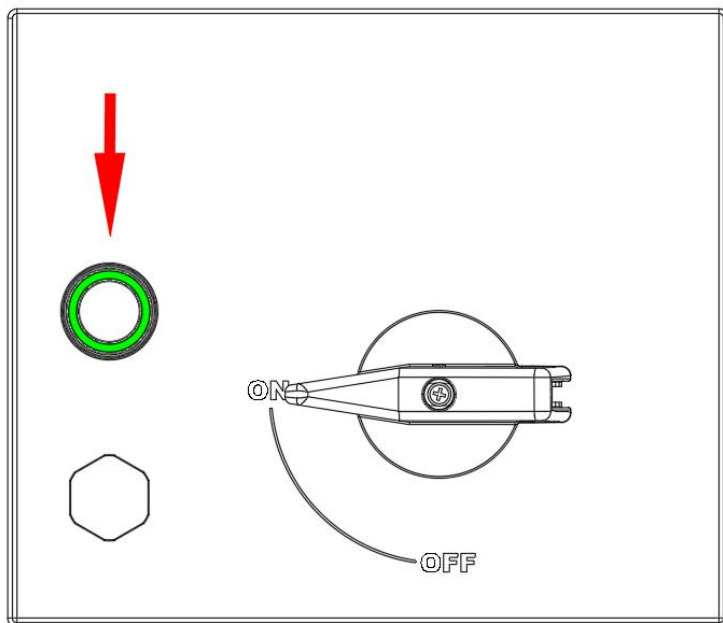
### 8.1. Indicator



The indicator lights are located on the front of the battery and are defined as follows:

| Battery Status | Color and State           | Description                                                                     |
|----------------|---------------------------|---------------------------------------------------------------------------------|
| Normal         | Green steady on           | Standalone Normal Operation / Master Unit Normal Operation (in Parallel System) |
|                | Cyan steady on            | Slave Unit(s) Normal Operation (in Parallel System)                             |
| Abnormal       | Red and green alternating | Battery Abnormal Startup                                                        |
|                | Green blinking            | Battery Self-testing                                                            |
|                | Blue blinking             | Battery in Sleep Mode                                                           |
|                | Purple steady on          | Slave Unit(s) Offline (in Parallel System)                                      |
| Fault          | Red light slow blink      | Battery Fault                                                                   |
| Upgrade        | Red light fast blink      | Battery Updating Firmware                                                       |

## 8.2. Power Switch and Power Indicator



The power switch and power indicator are located on the side of the battery. The operating instructions are as follows:

| Description           | Operation                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Power On the Battery  | Set the battery DC switch to ON, then press and hold power switch for 1 second. The power indicator will show a steady green light. |
| Power Off the Battery | Press and hold the power switch for 3 seconds until the power indicator light turns off. Then, set the battery DC switch to OFF.    |

## 9. Troubleshooting

The battery has undergone a series of rigorous tests to ensure its sustained and reliable operation. If any battery fault occurs, please record the fault information, shut down the battery following the procedure in the "Pre-Commissioning Inspection" section, and then contact your distributor or Solinteg. Do not attempt to resolve the fault yourself.

| No. | Fault Phenomenon                                                                 | Corrective Actions                                                                                                                                                                                              |
|-----|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | The battery cannot be powered on following the startup procedure.                | The individual cell voltage is too low, triggering system protection, or other faults are preventing startup. Please contact the Solinteg service team.                                                         |
| 2   | The battery can be powered on, but the indicator light shows an abnormal status. | Battery fault. Please check the fault information on the monitoring platform and refer to the corrective actions in the table below. If the issue cannot be resolved, please contact the Solinteg service team. |

When a battery fault occurs, detailed fault information can be obtained through the monitoring platform. The fault information and corresponding corrective actions are as follows (Version 2026.02.07):

| ID   | Information              | Solution                                                                                                                                                                                                                                                                                                                                                                             |
|------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E400 | BMS Comm Fault           | Inverter-battery BMS communication error detected.<br>1. Check whether the selected battery model is correct.<br>2. Verify that communication between the BMS master and the inverter is properly established.<br>3. Check whether the battery is in normal status.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance. |
| E404 | BAT Voltage Sensor Fault | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                              |
| E405 | BAT Temp. Sensor Fault   | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                              |
| E406 | BAT Internal Comm Fault  | There might be something wrong with battery internal comm. circuit.<br>1. Check comm. cable between battery module and controller.<br>2. Reboot the battery.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                        |
| E407 | Input OV Fault           | Input voltage on battery is too high.<br>1. Check if power cables are incorrectly connected to other source.<br>2. Check if there is malfunction of inverter.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                       |
| E408 | Input Reversed Fault     | Input polarity is reversed.<br>1. Check if power cables are reversely connected.<br>2. Check if there is malfunction of inverter.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                   |
| E409 | BAT Relay Checking Fault | There might be something wrong with battery relay.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                        |
| E410 | Cell Damaged Fault       | Cell is severely over-discharged.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                         |

| ID   | Information            | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                        | further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| E411 | Shutdown Circuit Fault | Can not switch off the system.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| E412 | BMIC Fault             | Sensor chip is abnormal.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| E413 | BAT Internal Bus Fault | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| E414 | Self-checking Fault    | Self-checking failed.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| E415 | Safety Function Fault  | Chip self-checking failed.<br>1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| E416 | ISO Fault              | Isolation is too low.<br>1. Turn off the whole system.<br>2. Check if any damage or breakage in devices, cables, terminals, etc.<br>3. Check if any circuit shorted by foreign matters.<br>4. Reboot battery after removing anomalies.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                       |
| E417 | Cell UV                | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.<br>3. Check if there is obvious cell voltage deviation.If there is obvious cell voltage deviation,fully charge and discharge the battery for several times.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance. |
| E418 | Cell OV                | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                 |
| E419 | Cluster UV             | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.<br>3. Check if load power is oversized.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                     |
| E420 | Cluster OV             | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                 |
| E421 | Charge UT              | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Increase the enviroment temp. to warm up battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                |



| ID   | Information               | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E422 | Charge OT                 | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the environment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                |
| E423 | Discharge UT              | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Increase the environment temp. to warm up battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                |
| E424 | Discharge OT              | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the environment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                |
| E425 | Charge OC                 | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not charge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                             |
| E426 | Discharge OC              | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not discharge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                          |
| E427 | Battery Module UV         | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>3. Reboot and then charge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                |
| E428 | Battery Module OV         | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                   |
| E429 | Terminal OT               | <ol style="list-style-type: none"> <li>1. Check if terminal temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the environment temp. to cool down terminal and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                              |
| E430 | Abnormal Leakage          | <ol style="list-style-type: none"> <li>1. Turn off the whole system.</li> <li>2. Check if any damage or breakage in devices, cables, terminals, etc.</li> <li>3. Check if any circuit shorted by foreign matters.</li> <li>4. Reboot battery after removing anomalies.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                           |
| E431 | Abnormal Battery Voltage  | <p>A large difference between the battery voltage measured by the inverter and that reported by the BMS indicates a possible communication or sampling issue.</p> <ol style="list-style-type: none"> <li>1. Check whether the battery power cables are properly and securely connected.</li> <li>2. Check whether the battery circuit breaker, switch, or fuse is in normal condition.</li> <li>3. Check whether the battery has an alarm or protection status preventing output. Clear any faults and restart the battery after reinstallation.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol> |
| E432 | Abnormal BAT Parallel No. | <p>Contains offline battery clusters.</p> <ol style="list-style-type: none"> <li>1. Check if each cluster is powered on. If any cluster without power, turn on the DC breaker of each battery/cluster and re-execute the parallel process.</li> <li>2. Check if there is any alarm or protection in any cluster. If any alarm or protection, resolve it and re-execute the parallel process.</li> <li>3. Check if the voltage deviation between batteries/clusters is <math>\leq 2.5V</math>. If anything abnormal charge or discharge the batteries/cluster to ensure the voltage deviation <math>\leq 2.5V</math> and then re-execute the parallel process.</li> </ol>           |

| ID   | Information                        | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E433 | Fire Alarm                         | <p>Presence of fire, smoke, or other fire-related emergencies are detected. Immediately ensure all on-site systems enter E-stop and check the alarm validity. If alarm is TRUE:</p> <ol style="list-style-type: none"> <li>1. Evacuate all non-essential personnel at once.</li> <li>2. Contact qualified technicians or fire-rescue immediately.</li> <li>3. Establish an isolation perimeter without delay.</li> </ol>                                                                                      |
| E434 | Flooding Alarm                     | <p>There is too much water accumulated in the system, which triggers the flood alarm. Immediately ensure all on-site systems enter E-stop and check the alarm validity. If alarm is TRUE:</p> <ol style="list-style-type: none"> <li>1. Evacuate all non-essential personnel at once.</li> <li>2. Contact qualified technicians or fire-rescue immediately.</li> <li>3. Establish an isolation perimeter without delay.</li> </ol>                                                                            |
| E435 | Access Alarm                       | <p>Access control detect the disclosure of cabinet door.</p> <ol style="list-style-type: none"> <li>1. Check if the cabinet door is opened without authorization. if it is an unauthorized opening, close the door with confirmation of the safety of on-site personnel and system.</li> <li>2. Check if the access control is functioning normally. if there is faulty, replace it immediately.</li> </ol>                                                                                                   |
| E436 | Emergency Stop                     | <p>System emergency stop is triggered manually or automatically due to the present or potential hazard to system or personnel.</p> <ol style="list-style-type: none"> <li>1. Check if there is present and/or potential hazard to personnel or system. If it is true, execute those solutions of corresponding alarm.</li> <li>2. Check if emergency-stop was activated accidentally. If it was a false trigger, reset the E-stop with confirmation of the safety of on-site personnel and system.</li> </ol> |
| E437 | UPS Battery Damaged                | <p>UPS battery has been damaged due to misuse or other causes.</p> <ol style="list-style-type: none"> <li>1. Reboot the UPS.</li> <li>2. If problem remains, contact manufacturer after-sales for solution.</li> </ol>                                                                                                                                                                                                                                                                                        |
| E438 | UPS OT                             | <p>UPS is over temperature due to operating environment, overcurrent, etc.</p> <ol style="list-style-type: none"> <li>1. Check if UPS temperature is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the charging current or decrease the load power.</li> <li>4. Reduce the environment temp. to cool down UPS.</li> </ol>                                                                                                                                             |
| E439 | Abnormal Comm. Extinguisher        | <ol style="list-style-type: none"> <li>1. Check if any damage in comm. cables or ports.</li> <li>2. Check on-site wiring and comm. settings are correct.</li> <li>3. Check if any magnetic interference is present.</li> <li>4. Reboot the system.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                          |
| E440 | Abnormal Air Conditioner Alarm     | <ol style="list-style-type: none"> <li>1. Check if any damage in the air conditioner.</li> <li>2. Check the error code on the panel of air conditioner.</li> <li>3. Check if any malfunction of temp. sensors.</li> <li>4. Check if any magnetic interference is present.</li> <li>5. Reboot the system.</li> <li>6. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                    |
| E441 | Abnormal EMS-BMS Comm.             | <ol style="list-style-type: none"> <li>1. Check if correct selection of battery ID.</li> <li>2. Check the working status of battery.</li> <li>3. Check if any damage in comm. cables or ports.</li> <li>4. Check on-site wiring and comm. settings are correct.</li> <li>5. Check if any magnetic interference is present.</li> <li>6. Reboot the system.</li> <li>7. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                   |
| E442 | Abnormal Comm. EMS-Fire-SYS        | <ol style="list-style-type: none"> <li>1. Check if any damage in comm. cables or ports.</li> <li>2. Check on-site wiring and comm. settings are correct.</li> <li>3. Check if any magnetic interference is present.</li> <li>4. Reboot the system.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                          |
| E443 | Abnormal Conditioner Comm. EMS-Air | <ol style="list-style-type: none"> <li>1. Check if any damage in comm. cables or ports.</li> <li>2. Check on-site wiring and comm. settings are correct.</li> <li>3. Check if any magnetic interference is present.</li> <li>4. Reboot the system.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                          |
| E444 | Cell UV-L3                         | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.</li> </ol>                                                                                                                                                                                                                                                                                                        |

| ID   | Information          | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                      | <ol style="list-style-type: none"> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.</li> <li>3. Check if there is obvious cell voltage deviation.If there is obvious cell voltage deviation,fully charge and discharge the battery for several times.</li> <li>4. Reboot and then charge the battery immediately.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                          |
| E445 | Cell OV-L3           | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol> |
| E446 | Cluster UV-L3        | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.</li> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.</li> <li>3. Check if load power is oversized.</li> <li>4. Reboot and then charge the battery immediately.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>               |
| E447 | Cluster OV-L3        | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol> |
| E448 | Charge UT-L3         | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Increase the enviroment temp. to warm up battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                |
| E449 | Charge OT-L3         | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the enviroment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                |
| E450 | Discharge UT-L3      | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Increase the enviroment temp. to warm up battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                |
| E451 | Discharge OT-L3      | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the enviroment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                |
| E452 | Charge OC-L3         | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not charge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                            |
| E453 | Discharge OC-L3      | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not discharge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                         |
| E454 | Battery Module UV-L3 | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.</li> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.</li> <li>3. Reboot and then charge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                             |

| ID   | Information              | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                          | further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| E455 | Battery Module OV-L3     | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol> |
| E456 | BAT Voltage Sensor Fault | <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| E457 | BAT Temp. Sensor Fault   | <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| E458 | BAT Internal Comm Fault  | <p>There might be something wrong with battery internal comm. circuit.</p> <ol style="list-style-type: none"> <li>1. Check comm. cable between battery module and controller.</li> <li>2. Reboot the battery.</li> <li>3. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                   |
| E459 | Input OV Fault           | <p>Input voltage on battery is too high.</p> <ol style="list-style-type: none"> <li>1. Check if power cables are incorrectly connected to other source.</li> <li>2. Check if there is malfunction of inverter.</li> <li>3. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                  |
| E460 | Input Reversed Fault     | <p>Input polarity is reversed.</p> <ol style="list-style-type: none"> <li>1. Check if power cables are reversely connected.</li> <li>2. Check if there is malfunction of inverter.</li> <li>3. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                              |
| E461 | P+ Relay Checking Fault  | <p>There might be something wrong with battery relay.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                         |
| E462 | P- Relay Checking Fault  | <p>There might be something wrong with battery relay.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                         |
| E463 | Cell Damaged Fault       | <p>Cell is severely over-discharged.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                          |
| E464 | Shutdown Circuit Fault   | <p>Can not switch off the system.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                             |
| E465 | BMIC Fault               | <p>Sensor chip is abnormal.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                   |
| E466 | BAT Internal Bus Fault   | <p>Battery internal bus is abnormal.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                          |
| E467 | Self-checking Fault      | <p>Self-checking failed.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                      |
| E468 | Safety Function Fault    | <p>Chip self-checking failed.</p> <ol style="list-style-type: none"> <li>1. Reboot the battery.</li> <li>2. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                 |

| ID   | Information          | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| E469 | ISO Fault            | Isolation is too low.<br>1. Turn off the whole system.<br>2. Check if any damage or breakage in devices, cables, terminals, etc.<br>3. Check if any circuit shorted by foreign matters.<br>4. Reboot battery after removing anomalies.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                         |
| E470 | Terminal OT          | 1. Check if terminal temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down terminal and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                               |
| E471 | CAN2 Comm. Fault     | Inverter-battery BMS communication error detected.<br>1. Check if the selected battery model is correct.<br>2. Verify that communication between the BMS master and the inverter is properly established.<br>3. Check if the battery is in normal status.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                      |
| E472 | CAN1 Comm. Lost      | Inverter-battery BMS communication error detected.<br>1. Check if the selected battery model is correct.<br>2. Verify that communication between the BMS master and the inverter is properly established.<br>3. Check if the battery is in normal status.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                      |
| E473 | Abnormal DCDC Switch | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| E474 | Duplicate CAN addr.  | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| E475 | Cell UV-L2           | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.<br>3. Check if there is obvious cell voltage deviation. If there is obvious cell voltage deviation, fully charge and discharge the battery for several times.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance. |
| E476 | Cell OV-L2           | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                    |
| E477 | Cluster UV-L2        | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstoppped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstoppped discharging.<br>3. Check if load power is oversized.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                       |
| E478 | Cluster OV-L2        | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                    |
| E479 | Charge UT-L2         | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| ID   | Information          | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|      |                      | 3. Increase the environment temp. to warm up battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| E480 | Charge OT-L2         | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                               |
| E481 | Discharge UT-L2      | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Increase the environment temp. to warm up battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                               |
| E482 | Discharge OT-L2      | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                               |
| E483 | Charge OC-L2         | 1. Check if current limitation of battery decreases cause of temp, SOC, etc.<br>2. Check if inverter does not charge according to current limitation.<br>3. Reboot battery after checking or adjusting configuration of inverter.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                            |
| E484 | Discharge OC-L2      | 1. Check if current limitation of battery decreases cause of temp, SOC, etc.<br>2. Check if inverter does not discharge according to current limitation.<br>3. Reboot battery after checking or adjusting configuration of inverter.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                         |
| E485 | Battery Module UV-L2 | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.<br>3. Reboot and then charge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                               |
| E486 | Battery Module OV-L2 | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                  |
| E487 | Fatal Error          | Fatal error in battery system.<br>Please contact your installer or battery manufacturer for further assistance immediately.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| E488 | Severe Error         | Fatal error in battery system.<br>Please contact your installer or battery manufacturer for further assistance immediately.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| W400 | Cell UV              | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.<br>3. Check if there is obvious cell voltage deviation. If there is obvious cell voltage deviation, fully charge and discharge the battery for several times.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance. |
| W401 | Cell OV              | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                  |
| W402 | Cluster UV           | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| ID   | Information       | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                   | inexecution of forced-charging or unstopped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.<br>3. Check if load power is oversized.<br>4. Reboot and then charge the battery immediately.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                  |
| W403 | Cluster OV        | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance. |
| W404 | Charge UT         | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Increase the environment temp. to warm up battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                              |
| W405 | Charge OT         | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                              |
| W406 | Discharge UT      | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Increase the environment temp. to warm up battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                              |
| W407 | Discharge OT      | 1. Check if battery temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down battery and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                              |
| W408 | Charge OC         | 1. Check if current limitation of battery decreases cause of temp, SOC, etc.<br>2. Check if inverter does not charge according to current limitation.<br>3. Reboot battery after checking or adjusting configuration of inverter.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                           |
| W409 | Discharge OC      | 1. Check if current limitation of battery decreases cause of temp, SOC, etc.<br>2. Check if inverter does not discharge according to current limitation.<br>3. Reboot battery after checking or adjusting configuration of inverter.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                        |
| W410 | Battery Module UV | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.<br>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.<br>3. Reboot and then charge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                              |
| W411 | Battery Module OV | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance. |
| W412 | BMU Offline       | BMU in battery module is offline.<br>1. Turn off the battery system.<br>2. Please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                               |
| W413 | BMCU Offline      | BMCU in controller is offline.<br>1. Turn off the battery system.<br>2. Please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                                                                                                  |

| ID   | Information                              | Solution                                                                                                                                                                                                                                                                                                                               |
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| W414 | SN Change of Module                      | Battery module(s) changed.<br>1. Check if any battery module is removed or added.<br>2. Check if SOC and voltage of all the battery modules are the same when added.<br>3. Please contact your installer or our technical support team for further assistance.                                                                         |
| W415 | Abnormal Change of Cluster Voltage       | 1. Check if power cable is connected correctly.<br>2. Check if abnormal change of voltage and SOC.<br>3. Reboot battery after removing anomalies.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                     |
| W416 | Abnormal Cluster $\Delta V$              | 1. Check if power cable is connected correctly.<br>2. Check if abnormal change of voltage and SOC.<br>3. Check if battery mode and number in each cluster is the same.<br>4. Reboot battery after removing anomalies.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance. |
| W417 | Abnormal Module $\Delta V$               | 1. Check if power cable is connected correctly.<br>2. Check if abnormal change of voltage and SOC.<br>3. Reboot battery after removing anomalies.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                     |
| W418 | Abnormal Cluster $\Delta V$              | 1. Check if power cable is connected correctly.<br>2. Check if abnormal change of voltage and SOC.<br>3. Check if battery mode and number in each cluster is the same.<br>4. Reboot battery after removing anomalies.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance. |
| W419 | Inconsistent Cell qty.                   | 1. Check if different battery pack used.<br>2. Check if there is internal comm. Malfunction in any battery pack.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                             |
| W420 | Cluster(s) under Forced-charging         | 1. Check if any battery under forced-charging<br>2. Reboot after forced-charging finished.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                            |
| W421 | Cluster(s) under Upgrading               | 1. Check if any battery under upgrading.<br>2. Reboot after upgrading finished.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                       |
| W422 | Master Polling                           | 1. Check if any battery under information-poll.<br>2. Check if it back to normal after minutes.<br>3. Reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                             |
| W423 | Cluster(s) turned off Manually           | 1. Check if any battery is turned-off manually.<br>2. Reboot the battery.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                             |
| W424 | Emergency Stop Triggered of Cluster(s)   | 1. Check if any battery is turned-off manually.<br>2. Reboot the battery.<br>3. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                             |
| W425 | Heating Circuit Temperature Sensor Error | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                |
| W426 | Heating Circuit Checking Error           | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                |
| W427 | Abnormal Voltage of Heating Circuit      | 1. Reboot the battery.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                |
| W428 | General Warning                          | General Warning for battery system, which might lead to performance limitation.                                                                                                                                                                                                                                                        |



| ID   | Information       | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                   | Please contact your installer or battery manufacturer for further assistance immediately.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| I400 | Cell UV           | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>3. Check if there is obvious cell voltage deviation.If there is obvious cell voltage deviation,fully charge and discharge the battery for several times.</li> <li>4. Reboot and then charge the battery immediately.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol> |
| I401 | Cell OV           | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                     |
| I402 | Cluster UV        | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.</li> <li>3. Check if load power is oversized.</li> <li>4. Reboot and then charge the battery immediately.</li> <li>5. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                     |
| I403 | Cluster OV        | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>2. Check if any unsuitable setting and/or configuration , which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.</li> <li>3. Reboot and then discharge the battery immediately.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                     |
| I404 | Charge UT         | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Increase the environment temp. to warm up battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                   |
| I405 | Charge OT         | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the environment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                   |
| I406 | Discharge UT      | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Increase the environment temp. to warm up battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                   |
| I407 | Discharge OT      | <ol style="list-style-type: none"> <li>1. Check if battery temp. is reasonable.</li> <li>2. Check if any malfunction of temp. sensors.</li> <li>3. Reduce the environment temp. to cool down battery and then reboot the battery.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                   |
| I408 | Charge OC         | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not charge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                                |
| I409 | Discharge OC      | <ol style="list-style-type: none"> <li>1. Check if current limitation of battery decreases cause of temp, SOC, etc.</li> <li>2. Check if inverter does not discharge according to current limitation.</li> <li>3. Reboot battery after checking or adjusting configuration of inverter.</li> <li>4. If the issue persists, please contact your installer or our technical support team for further assistance.</li> </ol>                                                                                                                                                                                                                                                                                                             |
| I410 | Battery Module UV | <ol style="list-style-type: none"> <li>1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-charging or unstopped discharging.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| ID   | Information       | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                   | 2. Check if the external source (PV, utility grid, diesel generator, etc.) stop working, which leads to inexecution of forced-charging or unstopped discharging.<br>3. Reboot and then charge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                      |
| I411 | Battery Module OV | 1. Check if there is any malfunction or incorrect configuration of inverter, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>2. Check if any unsuitable setting and/or configuration, which leads to inexecution of forced-discharging or inexecution protection according to charging voltage limitation.<br>3. Reboot and then discharge the battery immediately.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance. |
| I412 | Terminal OT       | 1. Check if terminal temp. is reasonable.<br>2. Check if any malfunction of temp. sensors.<br>3. Reduce the environment temp. to cool down terminal and then reboot the battery.<br>4. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                            |
| I413 | Abnormal Fan      | Fan of battery module is abnormal.<br>1. Turn off the battery and check if power cable of fan is connected correctly.<br>2. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                                                                                                                       |
| I414 | Abnormal Leakage  | 1. Turn off the whole system.<br>2. Check if any damage or breakage in devices, cables, terminals, etc.<br>3. Check if any circuit shorted by foreign matters.<br>4. Reboot battery after removing anomalies.<br>5. If the issue persists, please contact your installer or our technical support team for further assistance.                                                                                                                                                                                                                               |
| I415 | General Info.     | Tips of battery system status. Nothing needs to processed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## 10. Operation and Maintenance



### ⚠ DANGER

Improper operation may cause battery damage or personal injury. When performing battery maintenance, strictly adhere to electrical safety regulations.



### ⚠ WARNING

- ✧ Keep unauthorized personnel away from the equipment!
- ✧ Temporary warning signs or barriers must be posted during electrical connection and maintenance to prevent access by unauthorized personnel.
- ✧ The battery may only be restarted after troubleshooting is completed, provided that any issues affecting safety performance have been resolved.



### ⚠ CAUTION

- ✧ Unauthorized replacement of internal battery components is prohibited. The battery cells inside are not replaceable. Please seek repair support from the Solinteg service team. Otherwise, Solinteg will not assume any liability.
- ✧ Maintenance or repair of the battery is not recommended if you lack the proper tools, test equipment, or a clear and thorough understanding of the latest version of this manual.

### 10.1. Routine Inspection

It is recommended to regularly confirm the battery is operating normally through system monitoring or on-site inspection.

| Item                 | Method                                                                                                                                                                                                                                                      | Frequency      |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Monitoring System    | <ol style="list-style-type: none"> <li>1. Check if the battery is online and displaying information such as SOC.</li> <li>2. Check if the battery's communication status is normal.</li> <li>3. Check for any battery alarms or prompt messages.</li> </ol> | Once per day   |
| On-site Visual Check | Check if the battery is operating normally via the color and status of the battery indicator light.                                                                                                                                                         | Once per week  |
|                      | Check via the inverter indicator light or screen whether the communication and power circuits between the battery and inverter are properly connected.                                                                                                      | Once per week  |
|                      | Check for heat sources or direct sunlight near the battery.                                                                                                                                                                                                 | Once per week  |
|                      | Check the battery for damage, leakage, or deformation.                                                                                                                                                                                                      | Once per month |
|                      | Visually inspect connectors and cables for obvious signs of burning, pitting, corrosion, deformation, aging, cracking, or detachment.                                                                                                                       | Once per month |

## 10.2. Periodic Maintenance

When performing battery maintenance, strictly adhere to the following steps:

- ✧ Select the "Stop" option on the inverter screen or monitoring application to turn off the inverter.
- ✧ Turn off the battery using the battery power switch.
- ✧ Disconnect the battery-side DC circuit breaker or switch.
- ✧ Rotate the battery's DC switch to the OFF position.
- ✧ Confirm that all indicator lights are off.

| Item                    | Method                                                                                                                                                                                                                                                                   | Frequency         |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| System Cleaning         | Clean the exterior casing with a dry, soft cloth.<br>Exercise caution during operation.                                                                                                                                                                                  | Every 6–12 months |
| Electrical Connections  | 1. Carefully check connectors, terminals, and cables for any looseness.<br>2. Carefully inspect the casing, gaskets, and seals for aging and cracking.<br>3. Check conductive copper cores and pins for signs of burning, pitting, corrosion, oxidation, or deformation. | Every 6–12 months |
| Sealing Integrity Check | Check that all terminals and ports are properly sealed.<br>Re-seal any cable entry points if the gland is aged or unsealed.                                                                                                                                              | Annually          |

## 10.3. Battery Charge/Discharge Maintenance

### Charge/Discharge Maintenance During Normal Operation

During normal system operation, the battery automatically initiates an equalization charge every 10 days to calibrate its State of Charge (SOC).

### Charge/Discharge Maintenance During Storage

To ensure battery performance and service life, prolonged idle storage should be avoided. Long-term storage may lead to deep discharge of the battery, causing irreversible chemical degradation, capacity reduction, or even complete failure. Therefore, timely usage is recommended. If long-term storage is necessary, maintenance must be performed according to the following requirements.

| Initial Storage State of Charge (SOC) Range | Recommended Storage Temperature | Maintenance Charging/Discharging Interval        | Battery Maintenance Method                                       |
|---------------------------------------------|---------------------------------|--------------------------------------------------|------------------------------------------------------------------|
| 30%~60%                                     | 0°C~35°C                        | 0°C ~ 35°C: ≤ 3 months<br>35°C ~ 45°C: ≤ 1 month | Contact the Solinteg Service Team for the maintenance procedure. |

## 11. End-of-Life Battery Disposal

For detailed information regarding end-of-life battery disposal, please contact the Solinteg Service Team.

Comply with local regulations concerning waste battery disposal. Cease using damaged batteries. Before disposing of a battery, contact your installer or sales partner and ensure the battery is not exposed to damp environments or direct sunlight.



### CAUTION

- ✧ Do not dispose of batteries and rechargeable batteries as household waste!
- ✧ Waste batteries may contain pollutants. Improper storage or disposal may harm the environment or your health.
- ✧ Batteries contain lithium, copper, aluminum, iron, and other critical raw materials that can be recycled.

## Appendix

### Technical Parameters

| Parameter                              | E2BA-B10K3          |
|----------------------------------------|---------------------|
| Total Storage Energy (kWh)             | 10.36               |
| Usable Energy (kWh)                    | 9.32                |
| Rated Voltage (V)                      | 345.6               |
| Operating voltage range (V)            | 270-394.2           |
| Rated Capacity (Ah)                    | 30                  |
| Recommend Charge/Discharge Current (A) | 15                  |
| Max. Charge/Discharge Current (A)      | 30                  |
| Cell type                              | LiFePO <sub>4</sub> |
| Dimensions[W*D*H] (mm)                 | 580x1151x226        |
| Weight (KG)                            | 106.5               |
| Ingress protection                     | IP65                |
| Operating temperature range (°C)       | -20~55              |
| Relative humidity (%)                  | 5-90                |
| Operating altitude (m)                 | 2000                |
| Cooling                                | Natural Convection  |
| Noise level (dB)                       | < 30                |
| Communication                          | CAN                 |



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