

**GOODWE**



# **User Manual**

## **SECU-S Series (HV)**

Ver 1.2  
2023-02-20

# Declaration

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| Version | Date       | Change History |
|---------|------------|----------------|
| V1.0    | 2020-11-30 | First Release  |

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危険!  
DANGER!

- Please keep Power Off before any equipment operations to avoid high voltage risks. Strictly follow all safety precautions outlined in this manual or other related documents.
- All installation operations should be performed by trained and knowledgeable technical personnel who are familiar with local standards and electric systems.
- Do not use the battery module if it is defective, broken, or damaged.
- Do not attempt to disassemble, modify, or replace any part of the battery module without official authorization from GOODWE.
- Damage to the battery module may lead to explosive electrolyte leakage. Please contact Technical Support for help immediately.



警告!  
WARNING!

- If electrolytes leak from battery modules, please avoid contact with the leaking liquid or gas. Anyone exposed to the leaked substance has to do as following:
- Breath in the leaked substance: Evacuate from the polluted area, and seek immediate medical assistance.
- Eye contact: Rinse your eyes for at least 15 minutes with clean water and seek immediate medical assistance.
- Skin contact: Thoroughly wash the touch area with soap and clean water, and seek immediate medical assistance.
- Ingestion: Induce vomiting, and seek immediate medical assistance.
- Do not move the battery system upon it connected with external battery expansion modules. If you need to replace batteries or add batteries, please contact After-sales Service Center.



小心!  
CAUTION!

#### Transportation:

- Secure the battery modules and their components from damage during transportation and storage.
- Carefully lift the battery modules and consider the weight of them.
- Do not hit, pull, drag, or step on the battery modules or put unrelated items into any part of the battery modules.
- The transportation must be carried out by trained professionals, and operations during the process have to be recorded.
- Maintain the stability of the equipment to avoid dumping, which can result in equipment damage and personal injuries.
- In the event of fire disasters, please make sure that the carbon dioxide extinguisher or Novac1230 or FM-200 is nearby. The fire can not be put out by water(ABC is not useful for battery firefighting).
- Firefighters are required to wear full protective clothing and self-contained breathing apparatus when fighting fires.
- The battery may explode when the ambient temperature exceeds 150°C.
- Please use the appropriate tools and take protective measures when installing and maintaining heavy equipment. Improper operations will lead to personal injuries.
- Surge Protection
- Overvoltage can further influence the building or other connected devices in the same network via network cables or other cables if there is no surge protection.
- Integrate the system into the existing surge protection.

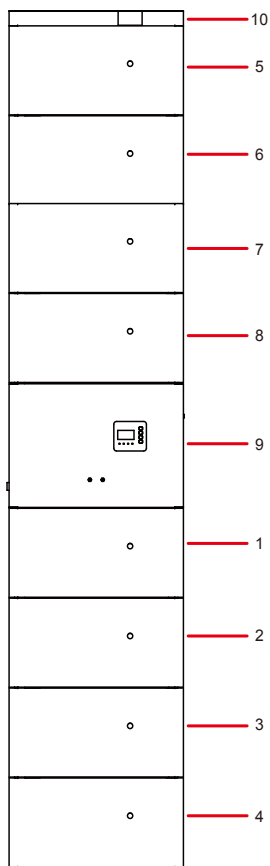
## 2.1 Product Description

The Energy Storage System consists of 5~8 SECU-S2.5 battery modules and 1 BCU-S0550 control box (hereinafter referred to as System). The System only works well together with GOODWE A-ES series in-verters.

## 2.2 Symbol Definition

| Symbol                                                                              | Definition                                                                                                              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|    | Danger zone<br>This indicates that the System must be grounded if extra grounding or equipotential bonding is required. |
|    | Electrical voltage danger                                                                                               |
|    | Explosion warning                                                                                                       |
|    | The battery contains corrosive electrolytes. Please avoid contact with leaked liquid or gas.                            |
|    | Refer to all documentation provided with the System.                                                                    |
|   | Pay attention to safety protection during installation, operation, and maintenance.                                     |
|  | Keep the battery away from open flame or ignition sources.                                                              |
|  | Keep the battery away from children.                                                                                    |
|  | Do not dispose of the battery with household waste at the end of its life.                                              |
|  | The battery should be put in the right place and recycled in compliance with local environmental regulations.           |

## 2.3 Introduction to System Components

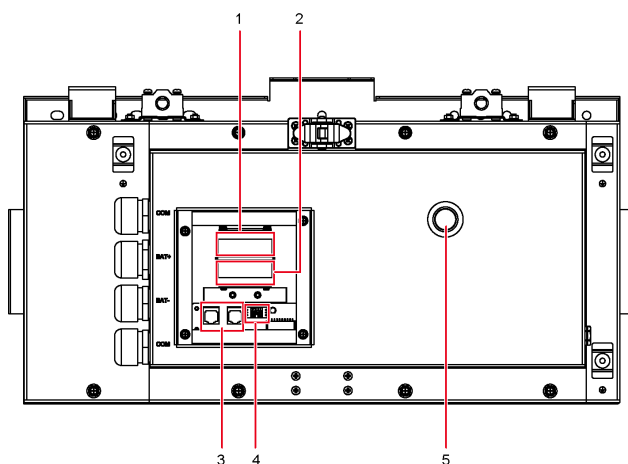


| NO. | DESCRIPTION           |
|-----|-----------------------|
| 1~8 | SECU-S2.5 Battery     |
| 9   | BCU-S0550 Control Box |
| 10  | Cover of the System   |



Install 4 SECU-S2.5 batteries under the control box and at most 4 SECU-S2.5 batteries over it, which means the system supports 8 SECU-S2.5 batteries maximum. This manual shows you the installation of 8 batteries.

### 2.3.1 Introduction to SECU-S2.5 Battery



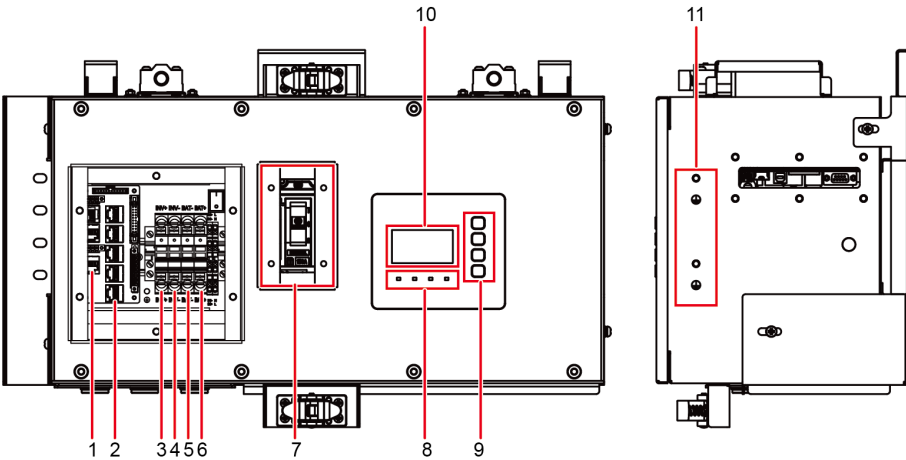
SECU-S2.5 Ports

| NO. | Description                          |
|-----|--------------------------------------|
| 1   | BAT+                                 |
| 2   | BAT-                                 |
| 3   | CAN COM Port(2 ports works the same) |
| 4   | Dial Switch                          |
| 5   | Indicator                            |

Indicator Status

| Indicator                                                      | Status     |
|----------------------------------------------------------------|------------|
| Green Light(on for 1s and then off for 1s)                     | Normal     |
| Red Light Blinking(on for 1s and then off for 1s)              | Protecting |
| Red and Green Light Blinking(red for 1s and then green for 1s) | Faulty     |

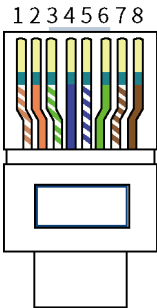
2.3.2 Introduction to BCU-S0550 Control Box



| NO. | Description             | NO. | Description    |
|-----|-------------------------|-----|----------------|
| 1   | CAN COM Port            | 2   | LMU COM Port   |
| 3   | INV+                    | 4   | INV-           |
| 5   | BAT -                   | 6   | BAT +          |
| 7   | Battery circuit breaker | 8   | Indicator      |
| 9   | Buttons                 | 10  | Display screen |
| 11  | Ground point            | N/A | N/A            |

| LMU COM Port |            | CAN COM Port |            |
|--------------|------------|--------------|------------|
| PIN          | Definition | PIN          | Definition |
| 1            | CANH       | 4            | CAN_H      |
| 2            | CANL       | 5            | CAN_L      |
| 3-4          | 24V        | 1,2,3,6,7,8  | N/A        |
| 5-6          | GND        | N/A          | N/A        |
| 7-8          | NC         | N/A          | N/A        |

### RJ45 Registered Jack



## 03 Storage and Package

### 3.1 Storage Environment

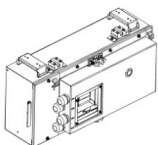
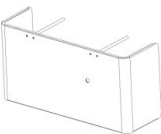
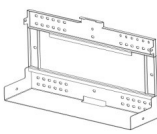
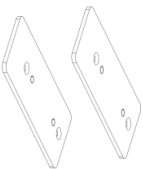
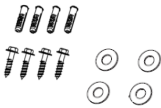
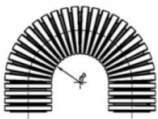
If the equipment will not be installed or used immediately, please ensure that the storage environment meets the following requirements:

- Pack the equipment with a packing box and put some desiccant in the box before sealing.
- Keep suitable ambient temperature and humidity to avoid equipment damage.
- Recommended storage temperature: 0°C~35°C (less than one year), -20°C~0°C or 35°C~45°C (less than one month).
- Recommended storage humidity: 0%~75%RH. DO NOT install or operate the System if moisture penetrates.
- Place the equipment in a cool place where away from direct sunlight.
- Keep the equipment away from inflammable, explosive, and corrosive things.

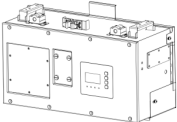
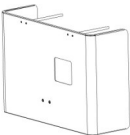
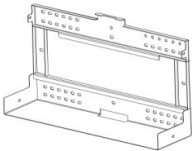
### 3.2 Packing Information

- The System consists of battery modules, a control box, and an accessory case.
- Please check outer packing for damage and model before unpacking it. If you find any damage or the model is not what you requested, do not unpack the product and contact the After-sales Service Center as soon as possible.
- Check whether the deliverables are intact and complete first after unpacking the System. If anything wrong, contact the After-sales Service Center as soon as possible.

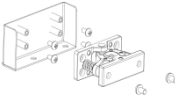
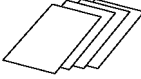
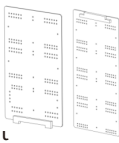
### SECU-S2.5 Battery Module

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|     |    |    |    |    |
| Packing Box x1                                                                      | Battery Module x1                                                                   | Case x1                                                                             | Wall hanging plate x1                                                               | Baseplate x2                                                                         |
|  |  |  |  |  |
| M6*12<br>Grounding screw<br>x2                                                      | M5*10 Fixing<br>screw x4                                                            | Expansion<br>bolts&flat<br>washer x4                                                | M4*8 Gasket<br>Screw x4                                                             | Power Cable x1                                                                       |
|   |  |  | N/A                                                                                 | N/A                                                                                  |
| Communication<br>Cable x1                                                           | Grounding Cable<br>x1                                                               | Nylon Tube                                                                          |                                                                                     |                                                                                      |

## BCU-S0550 Control Box

|                                                                                   |                                                                                   |                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |
| Box x1                                                                            | Control box x1                                                                    | Case x1                                                                           | Wall hanging plate x1                                                              |
|  |  | N/A                                                                               | N/A                                                                                |
| Top Cover x1                                                                      | M5*10 Screw x4                                                                    |                                                                                   |                                                                                    |

## Accessory Box

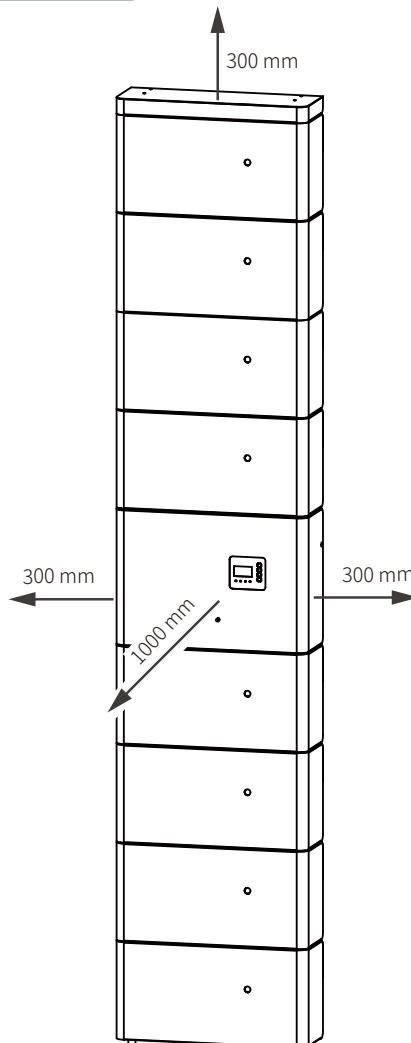
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|     |    |    |    |    |
| Box x1                                                                              | Wall hanging patch panel x1                                                         | Z-shape stand x2                                                                    | Buckle accessories(PE bag included)x2                                               | Power cable (BAT-HV) x2                                                              |
|    |    |    |    |    |
| Power cable (BAT-BAT) x1                                                            | Communication cable (BAT-HV) x1                                                     | Communication cable (BAT-BAT) x1                                                    | Grounding cable x2                                                                  | Terminal resistance x1                                                               |
|  |  |  |  |   |
| Waterproof connector x3                                                             | M6*12 Screw x2                                                                      | Expansion bolt X16<br>Flat washer x12                                               | M4 Flange nut x2                                                                    | M5*10 Screw x4                                                                       |
|  |  |  |  |  |
| M4*10 Screw x4                                                                      | M4*8 Screw x32                                                                      | User manual x1                                                                      | Nylon tube                                                                          | Front paperboardx1<br>Back paperboardx1 (optional)                                   |

|                                                                                                     |                                                                                                      |     |     |     |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----|-----|-----|
| <br>OT Terminal x4 | <br>Pin Terminal x5 | N/A | N/A | N/A |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----|-----|-----|

## 4.1 Installation Environment Requirement

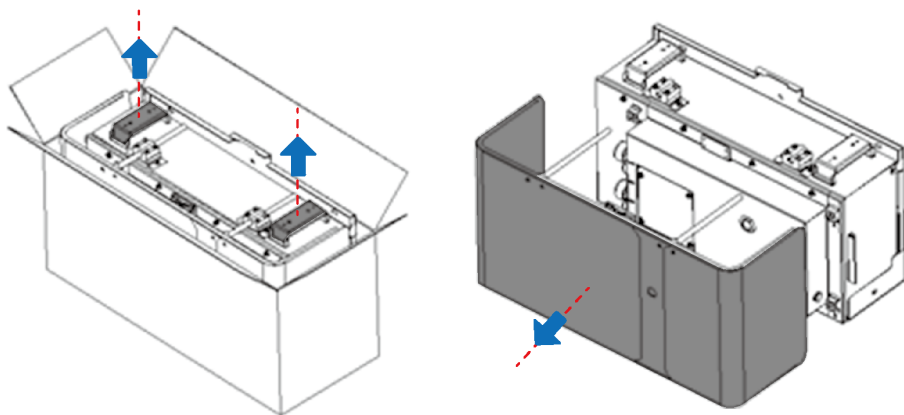
- Mount the System on a wall with sufficient load-bearing capacities such as a brick wall or concrete wall. If it is mounted on a wooden wall, evaluate its weight capability and the possibility of fall first. Meanwhile, the System must be grounding.
- The best temperature for the System is 20~45°C.
- Avoid exposing the equipment to direct sunlight or water.
- Install the equipment away from heat source or strong interferences to ensure its regular work.
- Keep children away from the equipment.

## 4.2 Installation Space Requirement

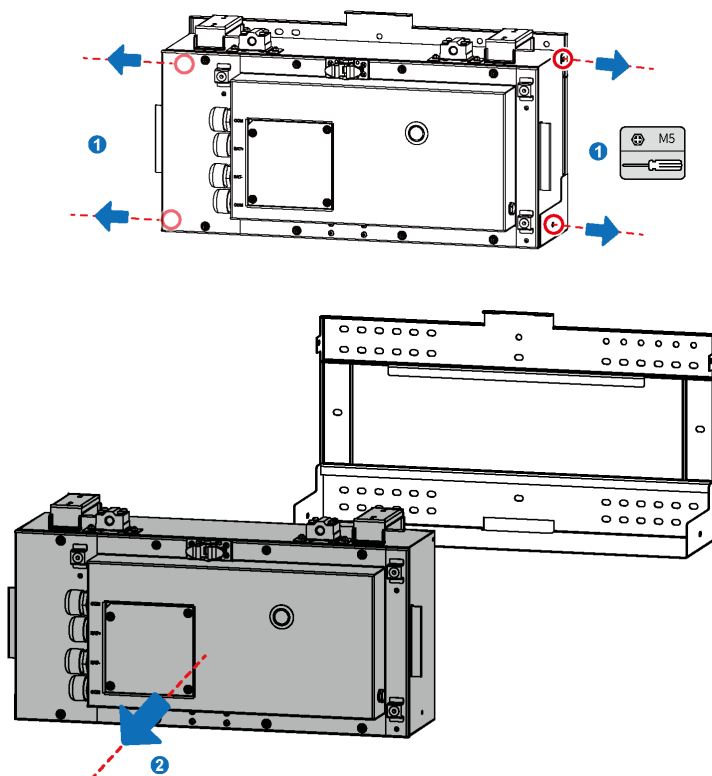


### 4.3 Installation of the System

1. Hold the battery handle to take it out from the packing box, and remove the protective case.



2. Hold the handle to separate the battery and the installation backboard. Keep the removed screws properly for future use.

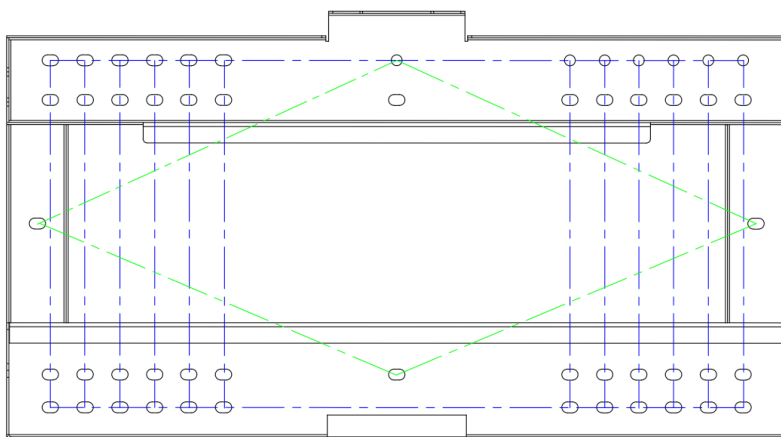


3.Perforate the mounting position with an impact drill (10mm diameter, 80mm depth) and clear the debris from the hole after drilling. Mounting hole distribution as follows.



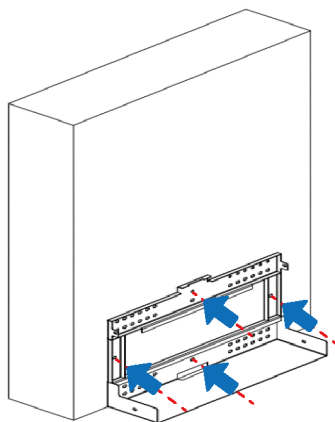
说明  
NOTE

Mounting holes can follow either rectangular distribution(blue border) or dia-mond distribution(green border).

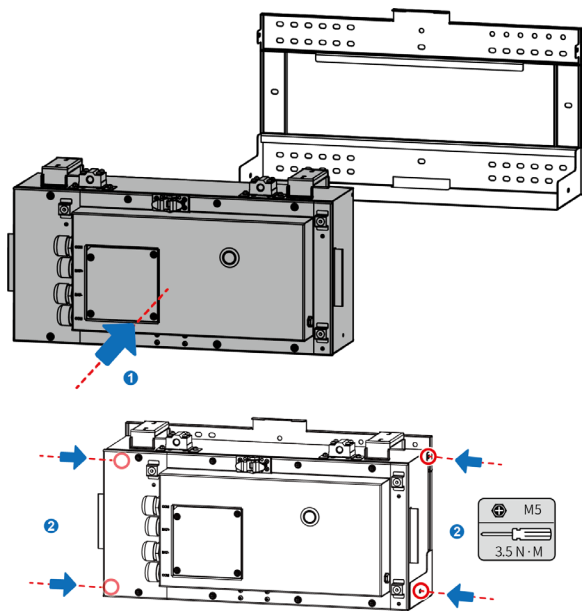


#### 4.Install wall hanging plate

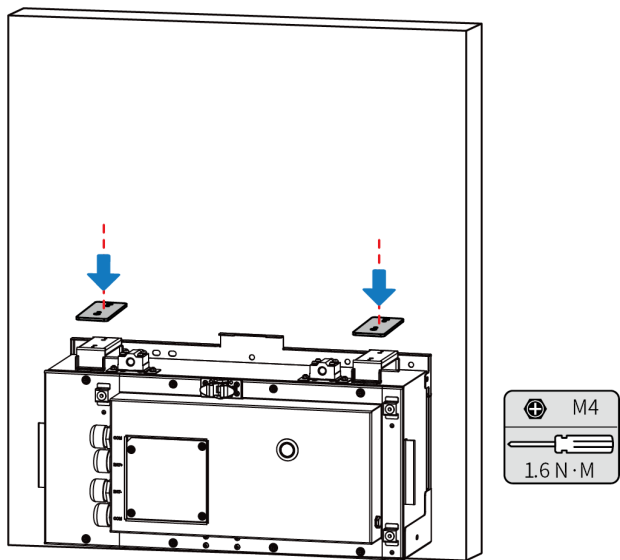
- Stacking the battery module: put the wall hanging plate flat with the support surface, which means the bottom of the plate will be placed against the wall while the support surface as the mounting reference, and use the SW10mm socket tool to fix the 4pcs expansion bolts to the mounting holes.
- Hanging the battery module: keep a distance of 10-30cm between the bottom of the wall hanging plate and the ground, and place the plate against the wall. Use the SW10mm socket to fix the 4pcs expansion bolts to the mounting holes.



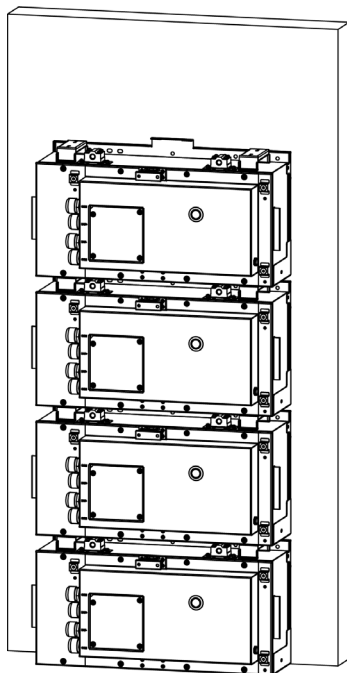
5.Put batteries inside the wall hanging plate and push them to the bottom to lock them together.



6.Attach the base plate to the battery.

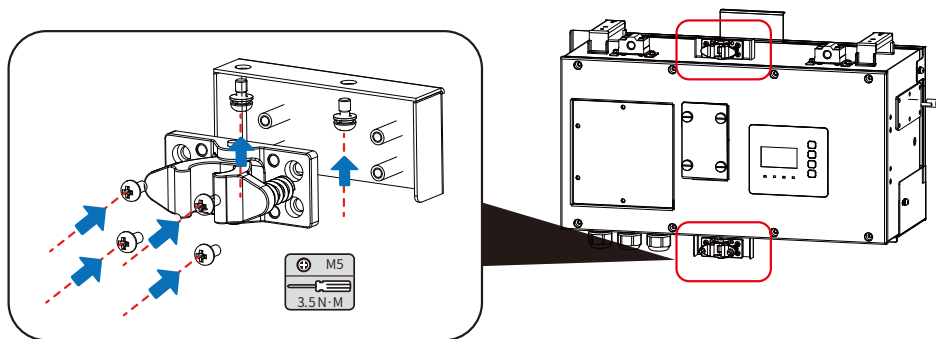


7.Repeat step1~step6 to finish the second, third, and fourth batteries from bottom to top.

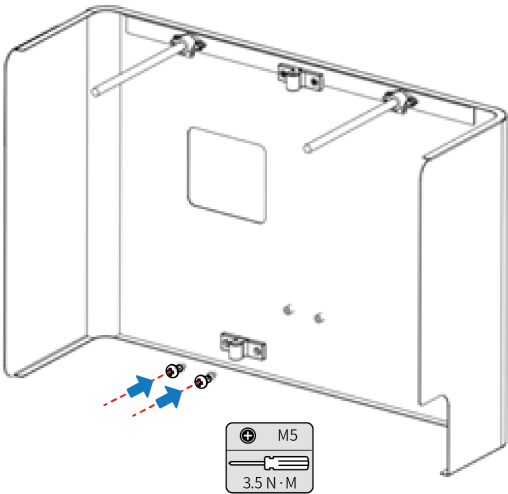


8.Take the control box out from the packing box as step 1 and step 2 showed. Keep the 4 re-moved M5\*10 screws properly for future use.

9.Fix the female snap-lock(in the accessory box) on the control box.



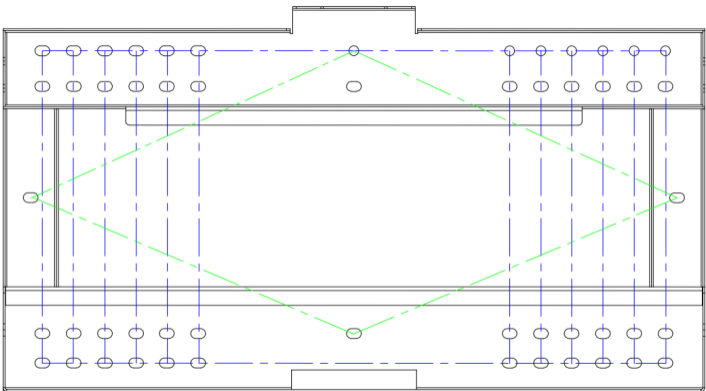
10. Directly fix the male snap lock on the decoration plate.



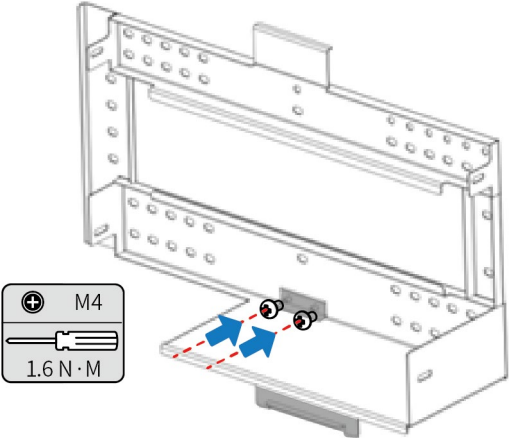
11. Perforate the mounting position with an impact drill (10mm diameter, 80mm depth) and clear the debris from the hole after drilling. Mounting hole distribution as follows.



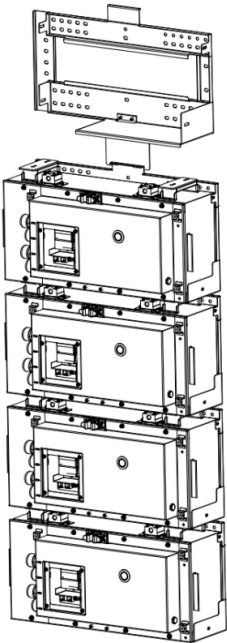
Mounting holes can follow either rectangular distribution(blue border) or dia-mond distribution(green border)



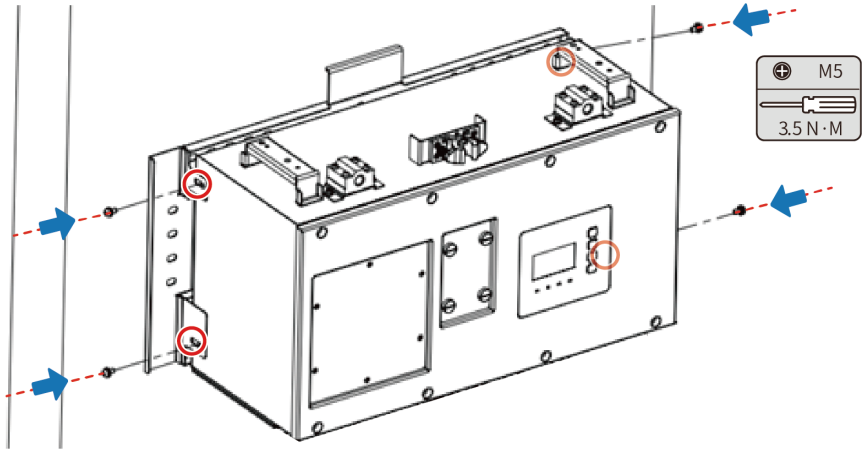
12.Install the wall hanging change-over stand on the wall hanging plate.



13.Fix the backboard of the control box.



14.Install the control box.



15.Repeat step1~step6 to finish the fifth, sixth, seventh, and eighth batteries from bottom to top.

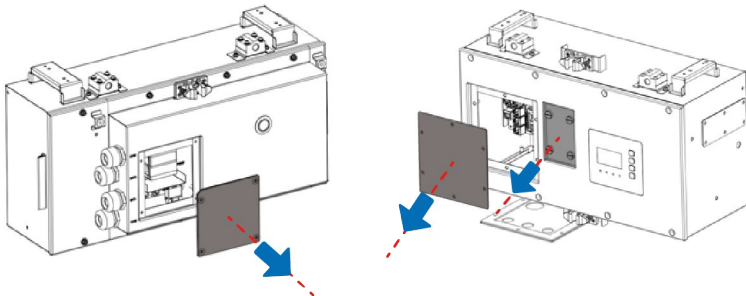


说明  
NOTE

- There is a risk of injury when the battery is raised or lowered, or when it is fixed to or removed from the wall stands since each battery weighs 37 KG (81.6 lbs). Raise the platform to ensure safety before installing the last 5-8 bat-tery modules.
- The upper part of the battery module can only be wall-mounted, so the base plate is used for position only. Remove the base plate after positioning to re-duce stress on the control box.

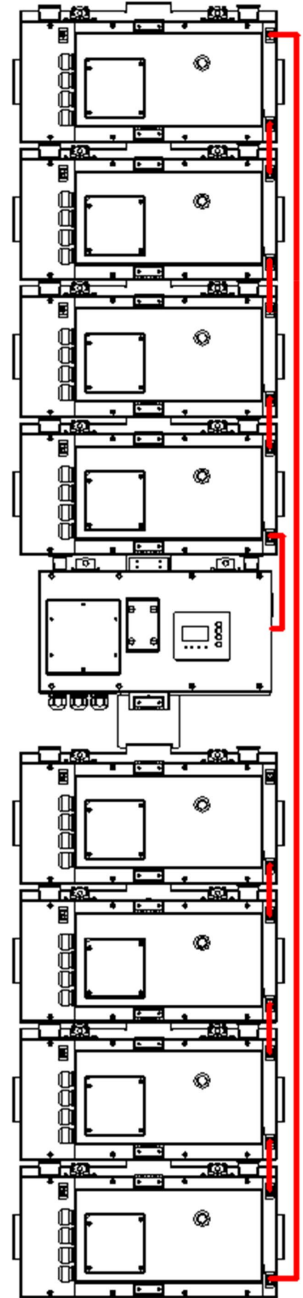
#### 4.4 Electrical Connection

##### 4.4.1 Remove covers of the control box and batteries modules



#### 4.4.2 Install PE cables

- The internal ground cables are delivered with the battery system and connected in series. The two neighboring batteries are connected by ground points.
- The external ground cables are not supplied. Cables with a sectional area bigger than 10AWG are recommended.
- Connect battery module PEC cables by M6 screws and an M6 OT terminal. Recommended tightening torque is 5N.m.
- Connect control box module ground cables by M5 screws and an M5 OT terminal. Recommended tightening torque is 3.5N.m.
- Connect PE cables of all batteries and the communication box in sequence, except the control box and the first battery under it. Then connect the first battery and the last battery.



#### 4.4.3 Connect power cables

- Connect battery power cables in series, which means connect the anode of the battery to the cathode of the next battery. Connect power lines of the control box and batteries in parallel, which means connect the negative line of the battery on the upside of the control box to its cathode while the positive line on the lower side to its anode.
- Customers have to prepare cables used to connect the main control box and inverter. 6AWG copper core is recommended.
- Confirm that the switch of the control box is off.

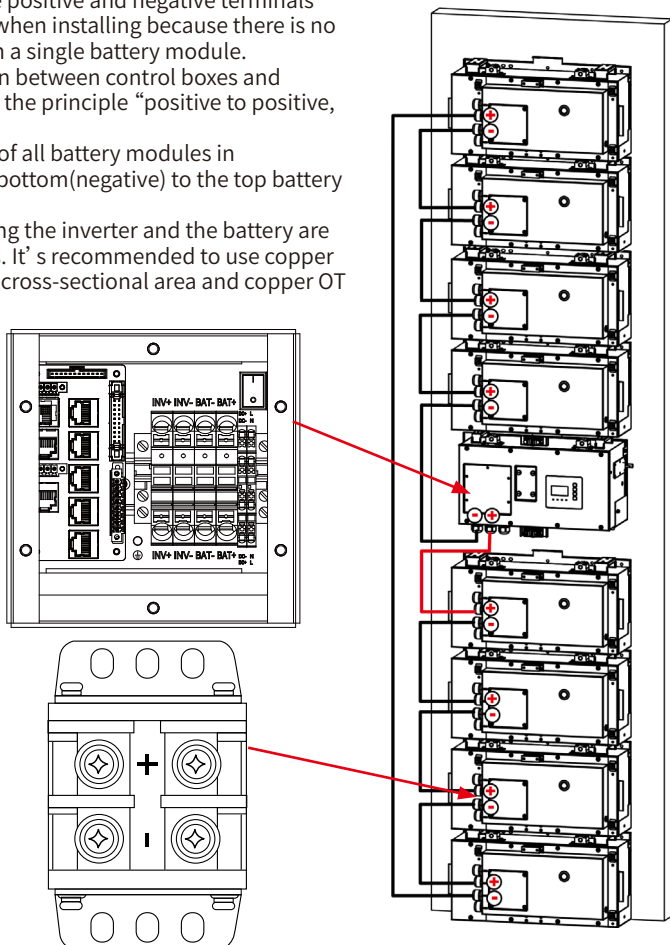
1.Route the cable through the nylon tube, seal ring and waterproof joint, then crimp on OT terminals.



说明  
NOTE

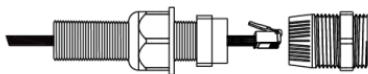
- Ensure that the seal ring of the waterproof joint is properly placed in the plastic ring.
- Do not short-circuit the positive and negative terminals of the battery module when installing because there is no disconnecting switch in a single battery module.
- Power cable connection between control boxes and batteries should follow the principle “positive to positive, negative to negative”.
- Connect power cables of all battery modules in sequence, connect the bottom(negative) to the top battery module(positive).
- Power cables connecting the inverter and the battery are prepared by customers. It's recommended to use copper core cables with 6AWG cross-sectional area and copper OT terminals.

2.Connection figure



#### 4.4.4 Connect Communication cables

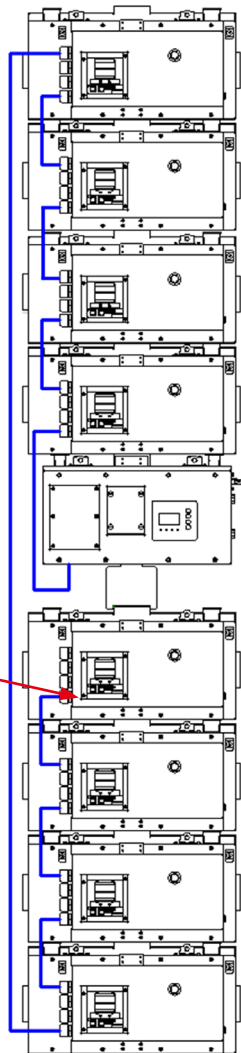
1.Route the cable through the nylon tube, seal ring and waterproof joint, then crimp on the RJ45 terminal.



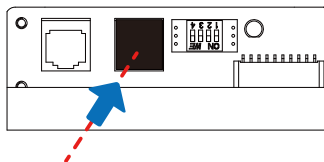
说明  
NOTE

- Remove the maintenance cover with a cross screwdriver before the connection.
- Unscrew and remove the compression fitting first and screw it after routing the nylon tube.
- Ensure that the seal ring of the waterproof joint is properly placed in the plastic ring.
- Do not short-circuit the positive and negative terminals of the battery module when installing because there is no disconnecting switch in a single battery module.
- Recommended torsion for tightening the compression fitting is 7N.m.
- Connect communication cables of all batteries and the communication box in sequence, except the control box and the first battery under it. Then connect the bottom and the top battery module.

2.Connection figure



3.Seal the unused communication ports under the main control box by terminal resistances after connecting communication cables.

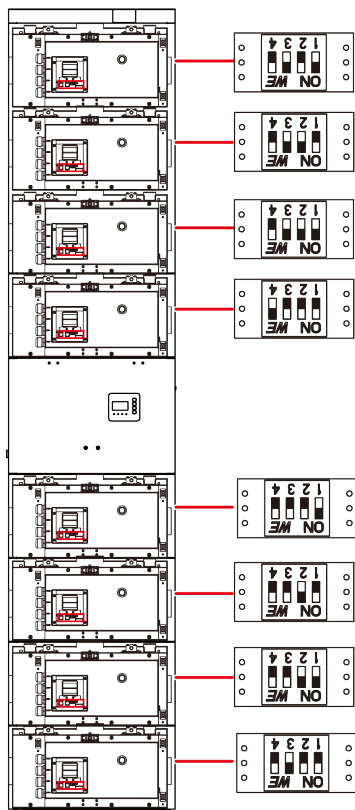


#### 4.4.5 Dial Switch Settings



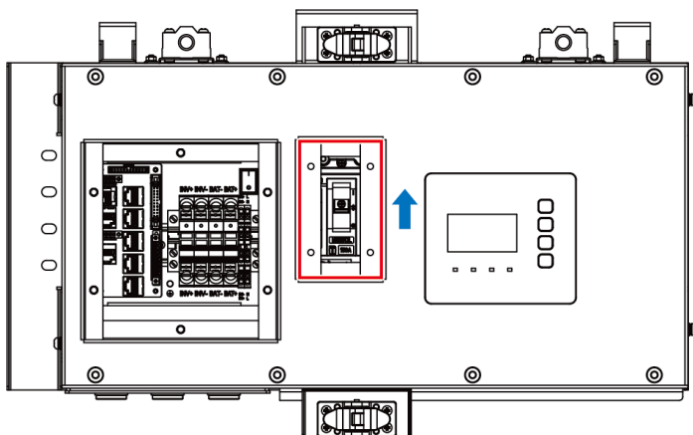
#### 说明 NOTE

- Different dial switch values apply to different battery modules.
- After installing the battery, the dial switch inside it is inverted. Please pay attention to the specific setting value of the dial switch when setting it.



#### 4.4.6 Cover of the System

1. Check the battery and the inverter, make sure that the power cable, communication cable, and PE cable inside the battery are connected correctly.
2. Set the dial switch properly.
3. Turn on the battery circuit breaker.

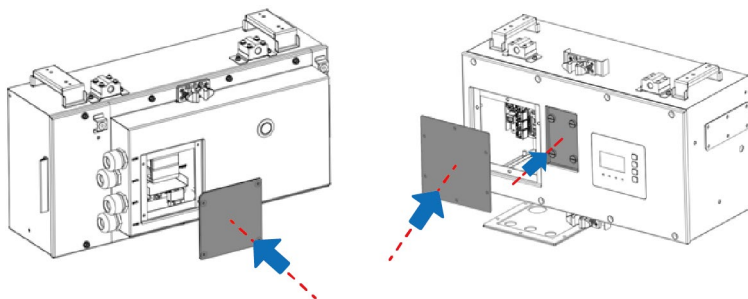


4. Install the connection closure plate between the control box and the battery.

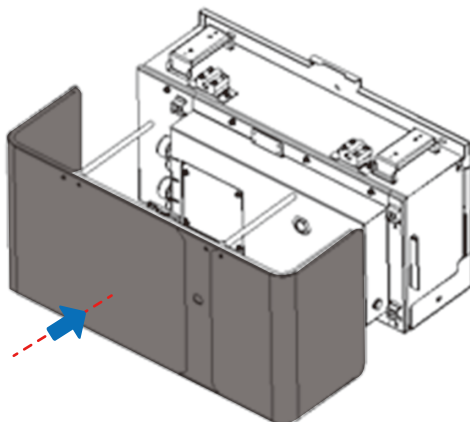


说明  
NOTE

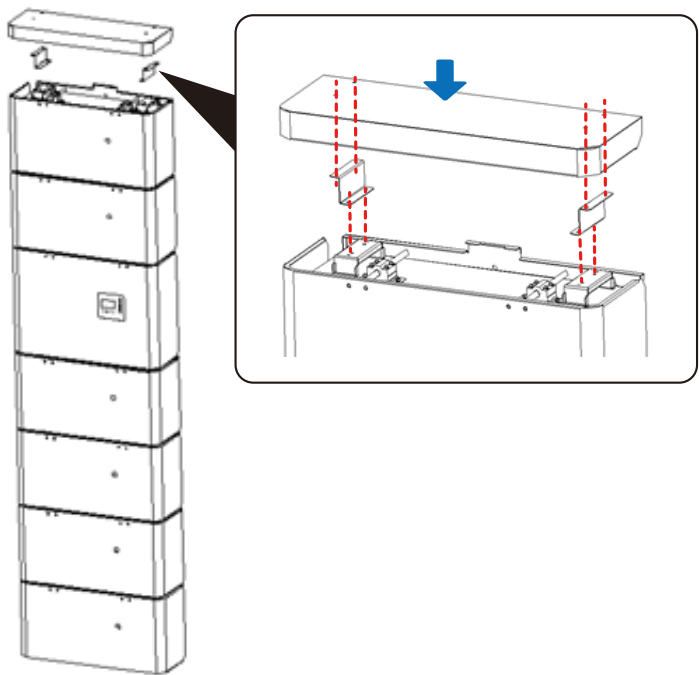
- Please check the following details before turning on the battery circuit break:
  - The ground cable, power cable, and communication cable are connected correctly and firmly.
  - The cable ties meet the cabling requirements and proper distribution. Also, the ties are tight and cut without sharp corners.
  - Place the battery in a reasonable space where is clean, tidy, and no construction debris.



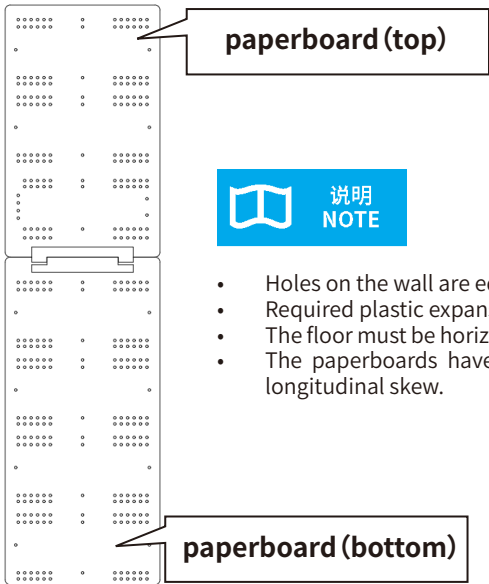
5. Install the cover of the battery system.



6.Install the top cover of the battery system.



Appendix: quick drill



- Holes on the wall are equispaced(rectangular distribution)
- Required plastic expansion screw torque:  $10 \pm 10\%N.m$ .
- The floor must be horizontal when drilling holes in stacking way.
- The paperboards have to be placed on the ground to avoid longitudinal skew.

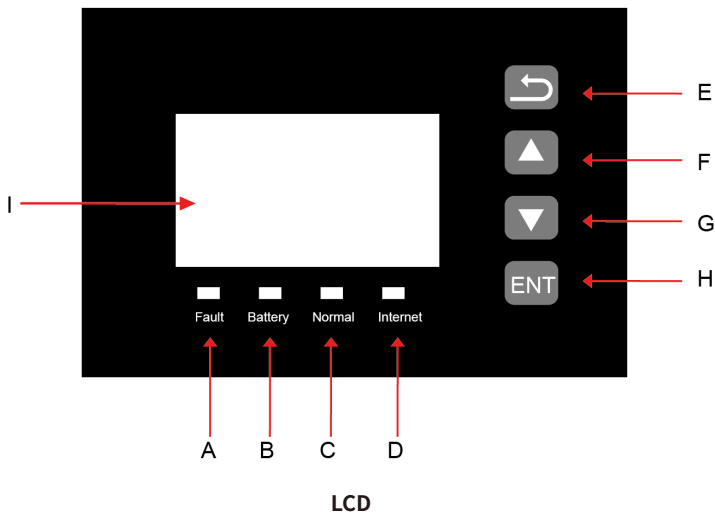
**5.1 Check before power on**

To prevent damages to the battery system, please strictly follow the steps below:

1. Take out the outer shell and the maintenance panel of the control box.
2. Ensure the battery circuit breaker is OFF.
3. Ensure all DC connections are ground and secured.
4. Ensure all Communications Connections are ground.

**5.2 Power on**

1. Push the handle to "ON" to turn on the battery circuit breaker.
2. Confirm that the battery system indicator is operating normally.

**5.3 Function Description**

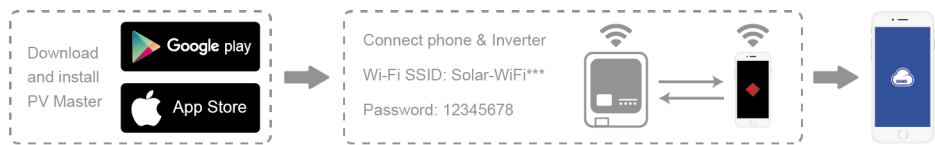
| Item | Name    | Status                                                                            | Description                 | Definition                               |
|------|---------|-----------------------------------------------------------------------------------|-----------------------------|------------------------------------------|
| A    | Fault   |  | On: fault                   | The battery in normal or abnormal status |
|      |         |  | Off: normal                 |                                          |
| B    | Battery |  | On: normal communication    | Communication status between LCD and BMS |
|      |         |  | Off: abnormal communication |                                          |
| C    | Normal  |  | On: normal operation        | Current BMS status                       |
|      |         |  | Off: abnormal operation     |                                          |

| Item | Object    |                     | Description                              |
|------|-----------|---------------------|------------------------------------------|
| E    | Backspace |                     | Exit from current interface or function. |
| F    | Up        |                     | Move cursor up or increase value.        |
| G    | Down      |                     | Move cursor down or decrease value.      |
| H    | ENT       |                     | Confirm selection.                       |
| I    | 1st row   | Power (no function) | PV power                                 |
|      | 2nd row   | Total (no function) | PV generated energy                      |
|      | 3rd row   | Battery             | SOC of the battery system                |
|      | 4th row   | Battery             | System status or error code              |

### 5.4 Setting the parameters of SECU-S On PV Master app

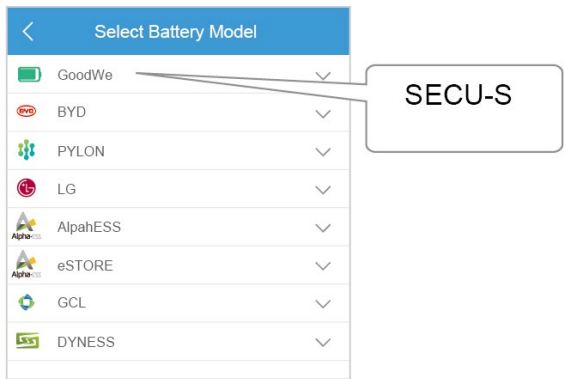
To make sure the battery communicates to the A-ES inverter unit successfully, users have to use PV Master to choose the right battery option on PV Master:

APP Installation And Connection:



Select Battery on PV master:

Select "SECU-S" on battery page in PV Master Application



Select wrong battery will lead to BMS communication failure.

5.5 Power off

To prevent damages to the battery system, please strictly follow the steps below:

- 1. Take out the outer shell and the maintenance panel of the control box.
- 2. Push the handle to "OFF" to turn off the Battery circuit breaker.
- 3. Confirm that all LED lights are off.

## 06 Troubleshooting

| LCD Fault Display | Fault                                | Solution                                                                                                                                                                                                                                                                                                           |
|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cell-Temp-Diff    | Cell temperature being different     | Turn off the system and wait for 2 hours. Then restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                       |
| Chrg-Ov-Curr      | Module charge overcurrent            | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |
| Disch-Ov-Curr     | Module discharge over-current        | Restart the system and switch off parts of the loads. If the fault persists, please contact the service center.                                                                                                                                                                                                    |
| Pole-Ov-Temp      | Pole over-temperature                | Turn off the system and wait for 2 hours. Then restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                       |
| Cell-Ov-Volt      | Cell overvoltage                     | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |
| Cell-Volt-Diff    | Cell voltage being different         | Restart the system and switch it to discharge. If the fault persists 10 minutes later, please contact the service center.                                                                                                                                                                                          |
| Disch-Low-Temp    | Cell discharge under low temperature | Keep the battery in a place where the temperature is higher than -10°C for more than 2 hours, then restart the system. If the fault persists, please contact the service center.                                                                                                                                   |
| Cell-Low-Volt     | Cell low voltage                     | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |
| IR_Fail           | Insulation resistance fail to work   | Disconnect the battery circuit break first. Then check whether impedance of the polarities to the ground is greater than 70kΩ and whether there are any insulation faults. Restart the system if the problems above are solved. If the fault persists, please disconnect the break and contact the service center. |
| Commu_fail_LMU    | LMU Communication fault              | Check the communication connections. If the fault persists, please contact the service center.                                                                                                                                                                                                                     |
| Cell-Ov-Temp      | Cell over-temperature                | Turn off the system and wait for 2 hours. Then restart the system to check it again. If the fault persists, please contact the service center.                                                                                                                                                                     |
| Chrg-Low-Temp     | Cell charge under low temperature    | Keep the battery in a place where the temperature is higher than 0°C for more than 2 hours, then restart the system. If the fault persists, please contact the service center.                                                                                                                                     |
| Wire-Harness-Err  | Wire harness fault                   | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |
| relay Err         | Relay fault                          | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |
| Temp-Sen-Err      | Temperature sensor fault             | Restart the system. If the fault persists, please contact the service center.                                                                                                                                                                                                                                      |

| Maintenance Item                                                                                                        | Maintenance Period    |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------|
| You need to fully charge the battery and discharge it to 30% if the battery is not in use.                              | Once Every 3~6 months |
| Check the wall hanging plate, fix it if it is not secured.                                                              | Once Every 6 months   |
| Check whether the outer shell is broken, repair the painting, or contact the Aftersales Service Center if it is broken. | Once Every 6 months   |
| Check the exposed cables, replace them, or contact the Aftersales Service Center if they are worn.                      | Once Every 6 months   |
| Check whether there is debris accumulation around the battery to avoid affecting the battery heat dissipation.          | Once Every 6 months   |
| Check for water and pest to avoid prolonged intrusion.                                                                  | Once Every 6 months   |



- Please contact after-sales for help if you find any problems that may influence the battery or the inverter. Disassemble without permission is strictly forbidden.
- Please contact after-sales for help if the conductive wire is exposed. Do not touch or disassemble privately without permission.
- In case of other emergencies, contact the after-sales as soon as possible. Please operate under the guidance of the after-sales personnel, or wait for them to operate.

## 08 Technical Parameters

|                                                                                                                                                                                                                                                                                                                                        |                                    |                 |                 |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------|-----------------|-----------------|
| Technical Data                                                                                                                                                                                                                                                                                                                         | SECU-S13                           | SECU-S15        | SECU-S18        | SECU-S20        |
| Rated Energy*                                                                                                                                                                                                                                                                                                                          | 12.80 kWh                          | 15.36 kWh       | 17.92 kWh       | 20.48 kWh       |
| Usable Energy*                                                                                                                                                                                                                                                                                                                         | 11.52 kWh                          | 13.83 kWh       | 16.13 kWh       | 18.43 kWh       |
| Battery Module                                                                                                                                                                                                                                                                                                                         | SECU-S2.5:51.2V 50Ah 2.56kWh 37kg  |                 |                 |                 |
| Number of Modules                                                                                                                                                                                                                                                                                                                      | 5                                  | 6               | 7               | 8               |
| Cell Type                                                                                                                                                                                                                                                                                                                              | LFP (LiFePO4)                      |                 |                 |                 |
| Cell Configuration                                                                                                                                                                                                                                                                                                                     | 80S1P                              | 96S1P           | 112S1P          | 128S1P          |
| Rated Voltage                                                                                                                                                                                                                                                                                                                          | 256 V                              | 307.2 V         | 358.4 V         | 409.6 V         |
| Operating Voltage                                                                                                                                                                                                                                                                                                                      | 240~280 V                          | 288~336 V       | 336~392 V       | 384~448 V       |
| Weight                                                                                                                                                                                                                                                                                                                                 | 200 kg                             | 237 kg          | 274 kg          | 311 kg          |
| Dimensions (W*D*H)                                                                                                                                                                                                                                                                                                                     | 610*236*1970 mm                    | 610*236*2270 mm | 610*236*2570 mm | 610*236*2870 mm |
| Depth of Discharge (DOD)                                                                                                                                                                                                                                                                                                               | 90%                                |                 |                 |                 |
| Max Charge/ Discharge Current*                                                                                                                                                                                                                                                                                                         | 50A (1C)                           |                 |                 |                 |
| Rated Power*                                                                                                                                                                                                                                                                                                                           | 12.80 kW                           | 15.36 kW        | 17.92 kW        | 20.48 kW        |
| Communication                                                                                                                                                                                                                                                                                                                          | CAN                                |                 |                 |                 |
| Operating Temperature                                                                                                                                                                                                                                                                                                                  | Charge:0~50°C / Discharge:-20~50°C |                 |                 |                 |
| Humidity                                                                                                                                                                                                                                                                                                                               | ≤90%                               |                 |                 |                 |
| Operating Altitude                                                                                                                                                                                                                                                                                                                     | ≤2000m                             |                 |                 |                 |
| Protection Degree                                                                                                                                                                                                                                                                                                                      | Type 4X* (Outdoor / Indoor)        |                 |                 |                 |
| Installation Location                                                                                                                                                                                                                                                                                                                  | Wall-Mounted / Ground-Mounted      |                 |                 |                 |
| Certification                                                                                                                                                                                                                                                                                                                          | UL1642, UL1973, FCC, UN38.3        |                 |                 |                 |
| Rated Energy*: Test conditions, 100% DoD, 0.5C charge & discharge at +25±3°C.<br>Usable Energy*: Test conditions, 90% DoD, 0.5C charge & discharge at +25±3°C.<br>Max Charge/Discharge Current*/Rated Power*: Max Charge/Discharge and power derating will occur related to Temperature and SoC.<br>Type 4X*: Same as NEMA 4X or IP65. |                                    |                 |                 |                 |

GOODWE will not be liable for any consequences like battery damage or property loss under the following circumstances:

- Unauthorized modification, alteration, or parts replacement.
- Change or erase the serial number privately.
- Non-observance to the User Manual.
- Improper use or misuse of the battery system.
- Inadequate ventilation.
- The maintenance routine does not follow accepted standards.
- Force Majeure like earthquakes, storms, thunders, overvoltage, or fire hazards, etc.
- Any external factors.



Offical Website

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