

# STS 375-750kW User Manual

GW375K-ST5-A-G10

GW750K-ST5-A-G10

# Copyright Statement

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## **NOTICE**

Due to product version upgrades or other reasons, the content of this document is updated periodically. Unless otherwise agreed, the content of this document cannot replace the safety precautions on product labels. All descriptions in this document are for guidance only.

# About This Manual

## Overview

This document primarily introduces the product information, installation and wiring, configuration and commissioning, troubleshooting, and maintenance of the Grid-connected/Off-grid Switching Cabinet (hereinafter referred to as STS). Please read this manual carefully before installing and using this product to understand the product safety information and familiarize yourself with the product's functions and features. The document may be updated periodically. Please obtain the latest version of materials and more product information from the official website:

<https://www.goodwe.com>.

## Applicable Model

This document applies to devices of the following models:

| model            | Rated Power                                                                           | Nominal Voltage                             |
|------------------|---------------------------------------------------------------------------------------|---------------------------------------------|
| GW375K-ST5-A-G10 | Rated power for grid side, BACK-UP port, and SMART-PORT port is 375kW@400V/200kW@220V | 127/220, 220/380, 230/400, 240/415, 3L/N/PE |
| GW750K-ST5-A-G10 | Rated power for grid side, BACK-UP port, and SMART-PORT port is 750kW@400V/400kW@220V |                                             |

## Symbol Definition



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**

Indicates a moderate potential danger, which if not avoided, may result in death or serious injury.

 **CAUTION**

Indicates a low-level potential hazard, which if not avoided, could result in moderate or minor injury to personnel.

**NOTICE**

Emphasizes and supplements content, may also provide tips or tricks for optimal product use, helping you solve a problem or save time.

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# 1 Safety Precautions

The safety precaution information contained in this document must always be followed when operating the device.

## WARNING

The inverter has been strictly designed and tested in accordance with safety regulations. However, as an electrical device, relevant safety instructions must be followed before performing any operations on the equipment. Improper operation may lead to serious injury or property damage.

## 1.1 General Safety

### NOTICE

- Document content is updated periodically due to product version upgrades or other reasons. Unless otherwise agreed, the document content cannot replace the safety precautions on the product label. All descriptions in the document are for guidance only.
- Please read this document carefully before installation to understand the product and its precautions.
- All operations on the device must be performed by professional, qualified electrical technicians who are familiar with the relevant standards and safety regulations in the project location.
- When operating the device, use insulated tools and wear personal protective equipment to ensure personal safety. Wear anti-static gloves, anti-static wrist straps, anti-static clothing, etc., when handling electronic components to protect the device from electrostatic damage.
- Unauthorized disassembly or modification may cause device damage, and such damage is not covered by the warranty.
- Device damage or personal injury caused by failure to install, use, or configure the device in accordance with the requirements of this document or the corresponding user manual is beyond the manufacturer's liability. For more product warranty information, please visit the official website:  
<https://en.goodwe.com/warrantyrelated.html>.

## 1.2 personnel requirements

### NOTICE

To ensure safety, compliance, and efficiency throughout the entire process of equipment transportation, installation, wiring, operation, and maintenance, all tasks must be performed by professionals or qualified personnel.

1. Professionals or qualified personnel include:

- Personnel who have mastered knowledge of equipment working principles, system structure, risks and hazards, and have received professional operational training or possess extensive practical experience.
- Personnel who have received relevant technical and safety training, possess certain operational experience, are aware of the potential dangers specific tasks may pose to themselves, and can take protective measures to minimize risks to themselves and others.
- Qualified electrical technicians who meet the regulatory requirements of the country/region where they are located.
- Personnel holding an electrical engineering degree/advanced diploma in electrical subjects or equivalent/professional qualifications in the electrical field, and possessing at least 2/3/4 years of experience in testing and regulatory work using electrical equipment safety standards.

2. Personnel involved in special tasks such as electrical work, work at height, and special equipment operation must hold valid qualification certificates as required by the location of the equipment.

3. Operation of medium-voltage equipment must be performed by certified high-voltage electricians.

4. Replacement of equipment and components is only permitted to be performed by authorized personnel.

## 1.3 System Safety

### DANGER

- Before making electrical connections, disconnect all upstream switches of the equipment to ensure it is powered off. Live operation is strictly prohibited,

 **DANGER**

otherwise electric shock or other hazards may occur.

- For equipment supporting PV string connection, the PV input terminals have weak surge current resistance. It is strictly prohibited to power on the equipment directly from a DC voltage source via the PV ports. If powering on from the PV ports is required, please follow the steps below. Damage caused by non-compliance will be considered human-induced damage and is not covered under the product warranty.
  1. First, limit the output current of the DC voltage source to within the maximum allowable input current range of the PV ports.
  2. Then, close the DC switch of the inverter.
  3. Finally, slowly increase the output voltage of the DC source from 0 to the target value at a rate  $\leq 50\text{V/s}$ .
- To prevent personal injury or equipment damage caused by live operation, a circuit breaker must be added to the voltage input side of the equipment.
- All operations including transportation, storage, Installation, operation, use, and maintenance must comply with applicable laws, regulations, standards, and specifications.
- The specifications of cables and components used for electrical connections must comply with local laws, regulations, standards, and specifications.
- Please use the cable connectors provided in the box to connect the equipment cables. If other models of connectors are used, any resulting equipment damage is not the responsibility of the equipment manufacturer.
- Ensure all equipment cable connections are correct, secure, and not loose. Improper wiring may lead to poor contact or equipment damage.
- The equipment's protective ground wire must be securely connected.
- To protect the equipment and its components from damage during transportation, ensure transport personnel are professionally trained. Record the operational steps during transportation and keep the equipment balanced to avoid dropping it.
- The equipment is heavy. Please assign personnel according to the equipment's weight to prevent it from exceeding the safe lifting capacity and causing injury to personnel.
- Ensure the equipment is placed stably and not tilted. Equipment tipping over may cause equipment damage and personal injury.

 **WARNING**

- During device installation, avoid having the terminal blocks bear weight, as this may cause damage to the terminals.
- If the cable is subjected to excessive tension, it may lead to poor connections. When wiring, leave a certain length of cable slack before connecting it to the device's terminal ports.
- Cables of the same type should be bundled together. Cables of different types should be laid out with at least 30mm separation, and they must not be intertwined or crossed.
- Using cables in high-temperature environments may cause aging or damage to the insulation layer. Maintain a distance of at least 30mm between the cables and heat-generating components or the periphery of heat source areas.

## 2 Safety Symbols and Certification Marks

### DANGER

- After the equipment is installed, the labels and warning signs on the enclosure must remain clearly visible. It is prohibited to cover, alter, or damage them.
- The following enclosure warning label descriptions are for reference only. Please refer to the actual labels used on the equipment.

| No. | Symbol                                                                              | Description                                                                                                                                                 |
|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   |   | There is potential danger when the device is operating. When operating the device, please take protective measures.                                         |
| 2   |  | High voltage hazard. High voltage is present when the device is operating. When performing operations on the device, ensure that the device is powered off. |
| 3   |  | The device surface is at high temperature. Do not touch the device while it is operating, as it may cause burns.                                            |
| 4   |  | Use the device properly. Using it under extreme conditions may pose an explosion risk.                                                                      |
| 5   |  | The battery contains flammable materials. Beware of fire.                                                                                                   |
| 6   |  | The device contains corrosive electrolyte. Avoid contact with leaked electrolyte or vaporized gases.                                                        |
| 7   |  | Delayed discharge. After powering off the device, wait for 5 minutes until the device is completely discharged.                                             |
| 8   |  | The device should be kept away from open flames or ignition sources.                                                                                        |

| No. | Symbol                                                                              | Description                                                                                                                                                      |
|-----|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9   |    | The device should be kept out of the reach of children.                                                                                                          |
| 10  |    | Use the device properly. Using it under extreme conditions may pose an explosion risk.                                                                           |
| 11  |    | The battery contains flammable materials. Beware of fire.                                                                                                        |
| 12  |    | After the battery system is wired or while the battery system is operating, do not lift the device.                                                              |
| 13  |    | Do not extinguish with water.                                                                                                                                    |
| 14  |  | Before operating the device, please read the product manual in detail.                                                                                           |
|     |  |                                                                                                                                                                  |
| 15  |  | Personal protective equipment must be worn during installation, operation, and maintenance.                                                                      |
| 16  |  | The device should not be disposed of as household waste. Dispose of the device according to local laws and regulations, or return it to the device manufacturer. |
| 17  |  | Grounding point.                                                                                                                                                 |
| 18  |  | Recycling symbol. The device should be placed in the correct location and recycled according to local environmental regulations.                                 |
| 19  |  | CE certification mark.                                                                                                                                           |

| No. | Symbol                                                                            | Description             |
|-----|-----------------------------------------------------------------------------------|-------------------------|
| 20  |  | RCM certification mark. |

# 3 Product Introduction

## 3.1 Product Overview

STS supports the connection of photovoltaic inverters, hybrid inverters, Diesel Generator, loads, and the grid, assisting the entire system in achieving seamless grid-connected and off-grid switching, meeting the power backup needs of areas with unstable power supply.

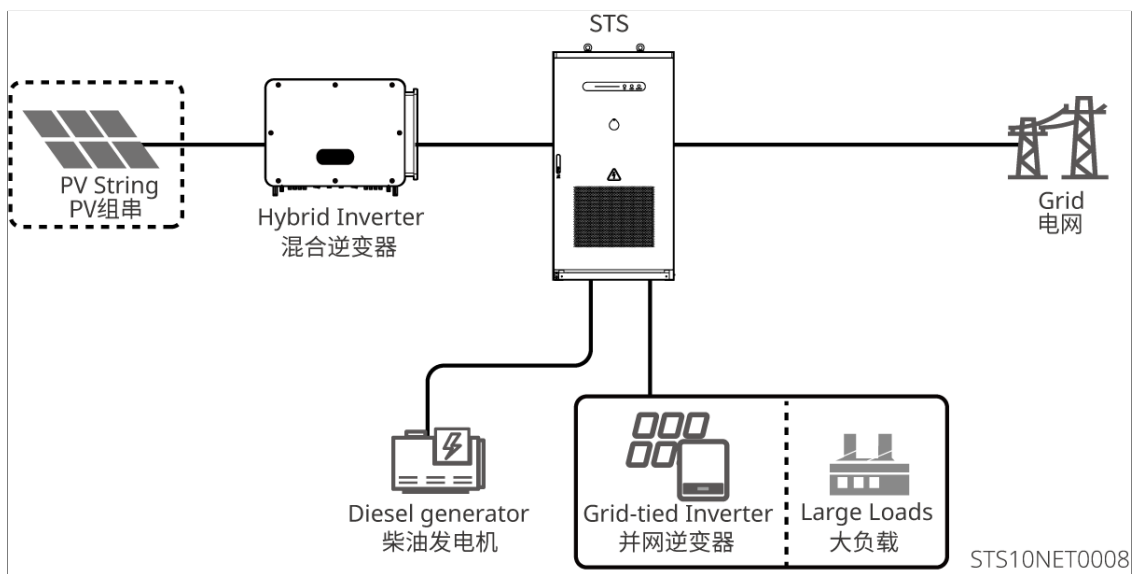


Figure1 Network Application

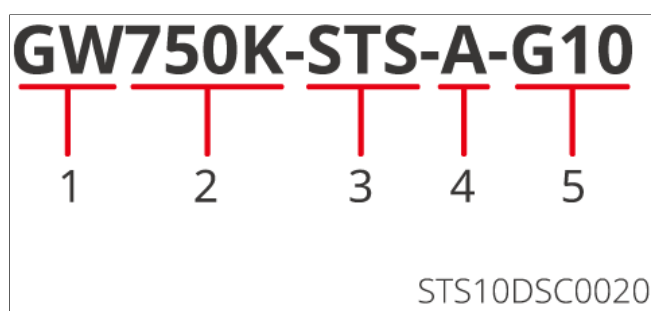
| port       | Description                                                                                                                                                                                                 |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INVERTER   | Supports connection of hybrid inverters, AC-coupled inverters <ul style="list-style-type: none"><li>• 375K: Supports connection of 3 inverters</li><li>• 375K: Supports connection of 6 inverters</li></ul> |
| SMART-PORT | Supports connection of diesel generators or high-power loads, but not simultaneously                                                                                                                        |

| port    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BACK-UP | <ul style="list-style-type: none"> <li>Used to connect grid-tied inverters, loads, UPS, and other devices</li> <li>When connecting a UPS device, the UPS serves as the backup power source. The UPS backup power is activated when the system has no other power supply.</li> <li>UPS specification requirements: <ul style="list-style-type: none"> <li>Rated Power &gt; 200VA, Input voltage range: 100-240VAC</li> <li>Backup duration &gt; 48h (Recommended calculation based on SEC3000C power 30W and UPS battery using a standard 12V)</li> </ul> </li> </ul> |
| GRID    | Connect to the grid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

#### NOTICE

- 375K: Grid side, BACK-UP port, SMART-PORT port rated power is 375kW@400V/200kW@220V
- 750K: Grid side, BACK-UP port, SMART-PORT port rated power is 750kW@400V/400kW@220V

### Model Description

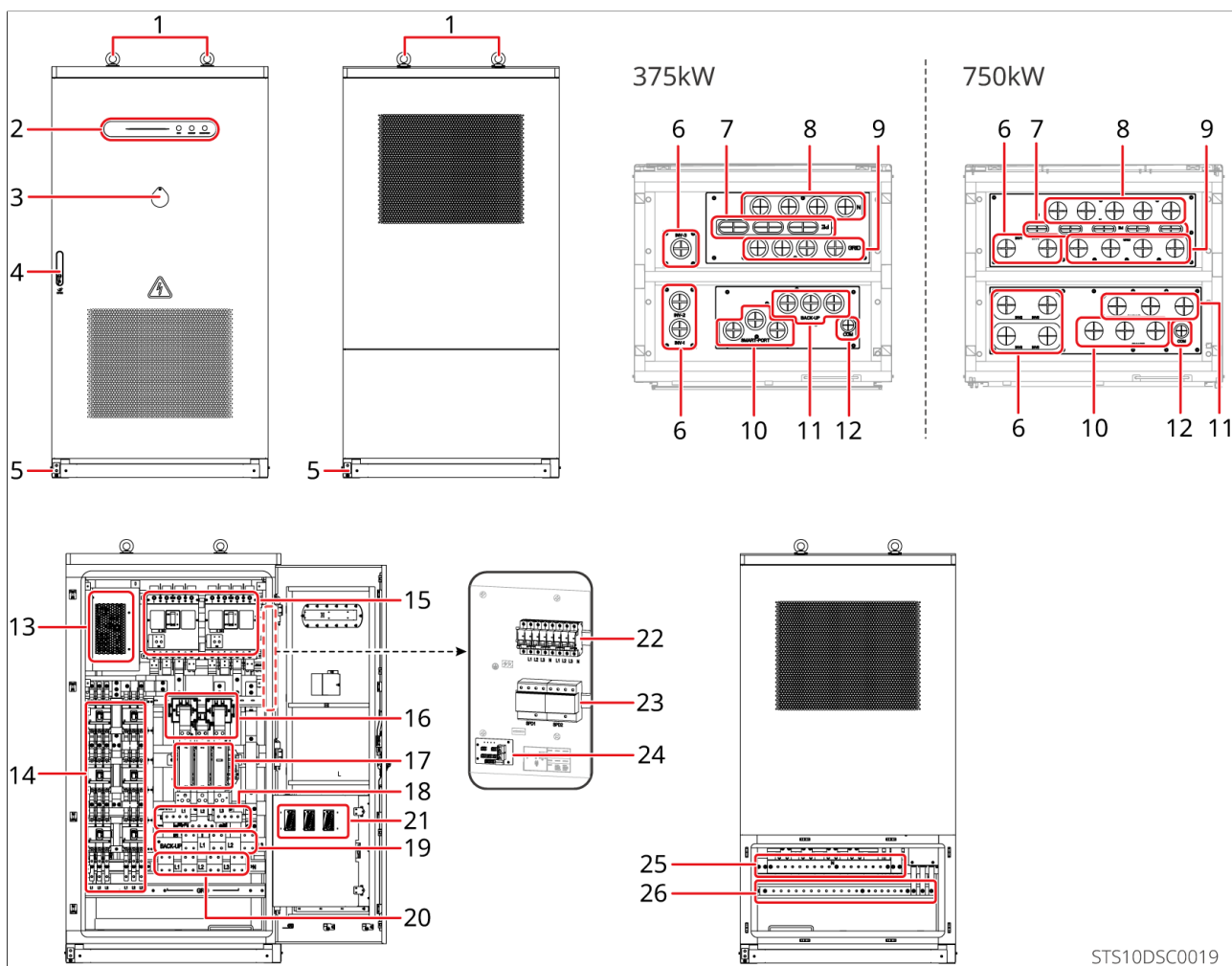


| No. | Meaning    | Description |
|-----|------------|-------------|
| 1   | Brand code | GW: GoodWe  |

| No. | Meaning      | Description                                              |
|-----|--------------|----------------------------------------------------------|
| 2   | Rated Power  | 375K: Rated power is 375kW<br>750K: Rated power is 750kW |
| 3   | Series code  | STS: STS Series                                          |
| 4   | Feature code | A: Feature code                                          |
| 5   | Version code | G10: First-generation product                            |

## 3.2 Appearance & Dimensions

### 3.2.1 Component Introduction



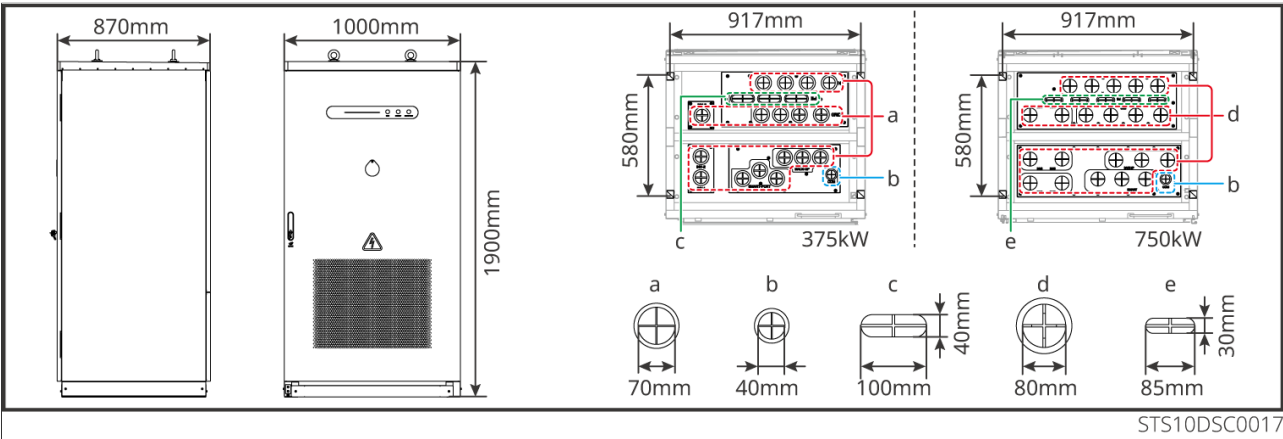
| No. | Component              | Description                                                                                                              |
|-----|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1   | Lifting Eye            | Used for hoisting and handling                                                                                           |
| 2   | indicator              | Indicates the operating status of the STS                                                                                |
| 3   | Emergency Stop Button  | In case of an emergency, use this button to stop the system operation                                                    |
| 4   | Door Lock              | Use a key to open the cabinet door lock. Close and lock the cabinet door when internal device operation is not required. |
| 5   | Protective Earth Point | Used for connecting the protective earth wire                                                                            |

| No. | Component                                             | Description                                                                                                                                                                       |
|-----|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6   | Inverter Power Line Entry Port (INV)                  | Entry hole for inverter power line                                                                                                                                                |
| 7   | PE Line Entry Port (PE)                               | Entry hole for PE line                                                                                                                                                            |
| 8   | N Line Entry Port (N)                                 | Entry hole for N line                                                                                                                                                             |
| 9   | AC Line Entry Port (GRID)                             | Entry hole for GRID terminal connection cable                                                                                                                                     |
| 10  | AC Line Entry Port (SMART)                            | Entry hole for SMART terminal connection cable                                                                                                                                    |
| 11  | AC Line Entry Port (BACK-UP)                          | Entry hole for BACK-UP terminal connection cable                                                                                                                                  |
| 12  | Communication Line Entry Port (COM)                   | Entry hole for COM terminal connection cable                                                                                                                                      |
| 13  | Auxiliary Power Board                                 | Used to supply power to the control circuit and communication circuit                                                                                                             |
| 14  | Inverter breaker<br>AC Line Terminal Block (INVERTER) | <ul style="list-style-type: none"> <li>Used for connecting AC power lines for hybrid inverters and AC-coupled inverters</li> <li>breaker specification: 400VAC 250A 3P</li> </ul> |
| 15  | Grid Port Contactor                                   | Controls system grid connection/disconnection<br>Specifications:<br>375K: 690V 630A 4P (KM1)<br>750K: 690V 630A*2 4P (KM1, KM2)                                                   |
| 16  | CT                                                    | -                                                                                                                                                                                 |

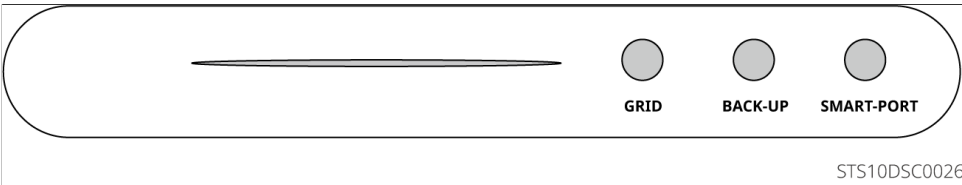
| No. | Component                        | Description                                                                                                                                                                                                                                                                                                      |
|-----|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17  | Smart Port Contactor             | <ul style="list-style-type: none"> <li>Controls diesel generator start/stop</li> <li>375K: AC/DC 220~240V 760A 3P (KM2)</li> <li>750K: AC 220~230V(F) 1250A 3P (KM4)</li> </ul>                                                                                                                                  |
| 18  | AC Line Terminal Block (SMART)   | Used for connecting power lines for diesel generators or high-power loads                                                                                                                                                                                                                                        |
| 19  | AC Line Terminal Block (BACK-UP) | <ul style="list-style-type: none"> <li>Used for connecting power lines for grid-tied inverters, loads, UPS, and other equipment</li> <li>When connecting a UPS device, the UPS serves as the backup power source. The UPS backup power is activated when the system has no other power supply method.</li> </ul> |
| 20  | AC Line Terminal Block (GRID)    | Used for connecting AC lines to the grid                                                                                                                                                                                                                                                                         |
| 21  | Fan                              | Temperature regulation                                                                                                                                                                                                                                                                                           |
| 22  | breaker                          | Disconnect power when replacing the surge protective device module<br>400VAC 32A 4P                                                                                                                                                                                                                              |
| 23  | Surge Protective Device          | <ul style="list-style-type: none"> <li>203-10014-00 230/400VAC 385V (L-N) / 255V (N-PE) 20kA 40kA 1.8kV (L-N) / 1.0kV (N-PE)</li> <li>203-10010-00 230/400VAC 385V (MOV) / 255V (GDT) 20kA 40kA 1.8kV (L-N) / 1.6kV (N-PE)</li> </ul>                                                                            |

| No. | Component               | Description                                                                                                                                                                                        |
|-----|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24  | Communication Line Port | Used for connecting diesel generator control communication lines, high-load control communication lines, communication lines between STS and inverter, and communication lines between STS and SEC |
| 25  | N Terminal Block        | Used for connecting N lines                                                                                                                                                                        |
| 26  | PE Terminal Block       | Used for connecting PE lines                                                                                                                                                                       |

### 3.2.2 Product Dimensions



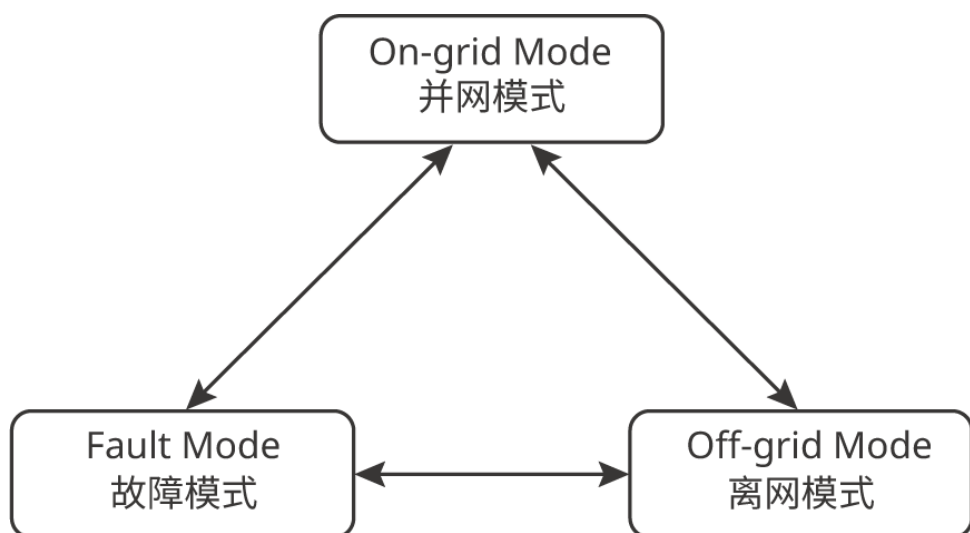
### 3.2.3 Indicator Light Description



| Indicator | Status | Description              |
|-----------|--------|--------------------------|
|           |        | Grid port voltage normal |

| Indicator                                                                                       | Status                                                                              | Description                    |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------|
| <br>GRID       |    | Grid port has no voltage       |
| <br>BACK-UP    |    | Backup port voltage normal     |
|                                                                                                 |    | Backup port has no voltage     |
| <br>SMART-PORT |    | SMART-PORT port voltage normal |
|                                                                                                 |    | SMART-PORT port voltage normal |
|                |    | Device fault                   |
|                                                                                                 |  | Device normal                  |

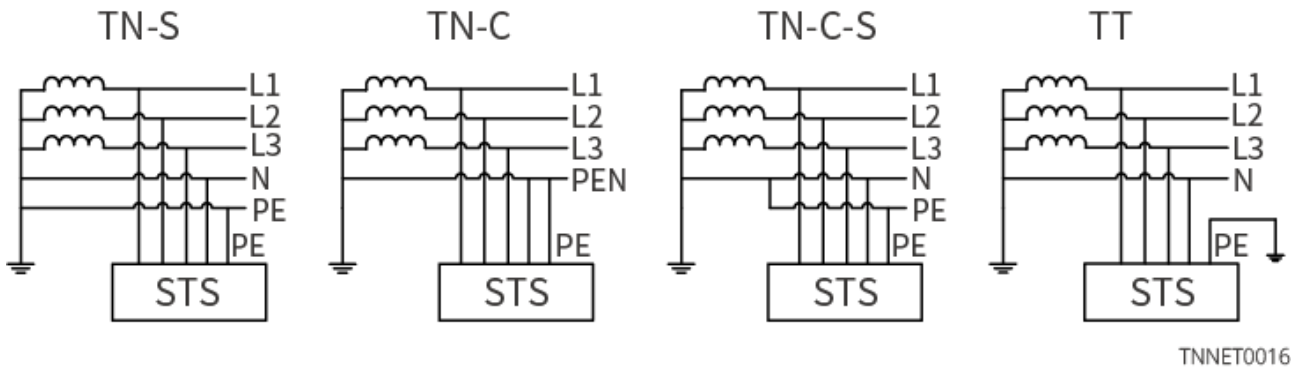
### 3.4 Operating Mode



STS10DSC0012

| No. | Mode     | Description                                                                                             |
|-----|----------|---------------------------------------------------------------------------------------------------------|
| 1   | on-grid  | When the grid is normal, the STS transfer switch is closed, and the system is in the on-grid state.     |
| 2   | Off-grid | When the grid is powered off, the STS transfer switch is open, and the system is in the off-grid state. |
| 3   | fault    | The fault indicator light is red, please handle it promptly.                                            |

### 3.5 Supported Grid Types



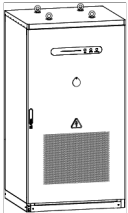
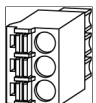
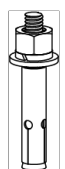
## 4 Check and Storage

### 4.1 Check Before Receiving

Before signing for the product, please carefully check the following:

1. Check the outer packaging for any damage, such as deformation, holes, cracks, or any other signs that could indicate damage to the equipment inside the box. If damaged, do not open the packaging and contact your distributor.
2. Check if the inverter model is correct. If it does not match, do not open the packaging and contact your distributor.
3. Check if the type and quantity of delivered items are correct and if there is any visible damage. If damaged, please contact your distributor.

### 4.2 deliverables

| Component                                                                           | Description       | Component                                                                            | Description                                |
|-------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|--------------------------------------------|
|  | STS Cabinet ×1    |  | fireproofing mud<br>750K: ×45<br>375K: ×30 |
|  | Connector ×2      |   | Connector ×1                               |
|  | Expansion bolt ×4 |   | Fastening bolt ×80                         |

| Component                                                                         | Description      | Component | Description |
|-----------------------------------------------------------------------------------|------------------|-----------|-------------|
|  | Documentation ×1 | -         | -           |

Table19

## 4.3 Storage

If the device is not put into use immediately, please store it according to the following requirements:

1. Ensure that the outer packaging box is not removed, and the desiccant inside the box is not lost.
2. Ensure that the storage environment is clean, with appropriate temperature and humidity ranges, and no condensation.
3. Ensure that the stacking height and direction of the devices are arranged according to the instructions on the packaging box labels.
4. Ensure that there is no risk of tipping after the devices are stacked.
5. If the storage time of the device exceeds two years or the time after installation without operation exceeds 6 months, it is recommended to have it inspected and tested by professionals before putting it into use.
6. To ensure the good electrical performance of the electronic components inside the device, it is recommended to power it on every 6 months during storage. If it has not been powered on for more than 6 months, it is recommended to have it inspected and tested by professionals before putting it into use.

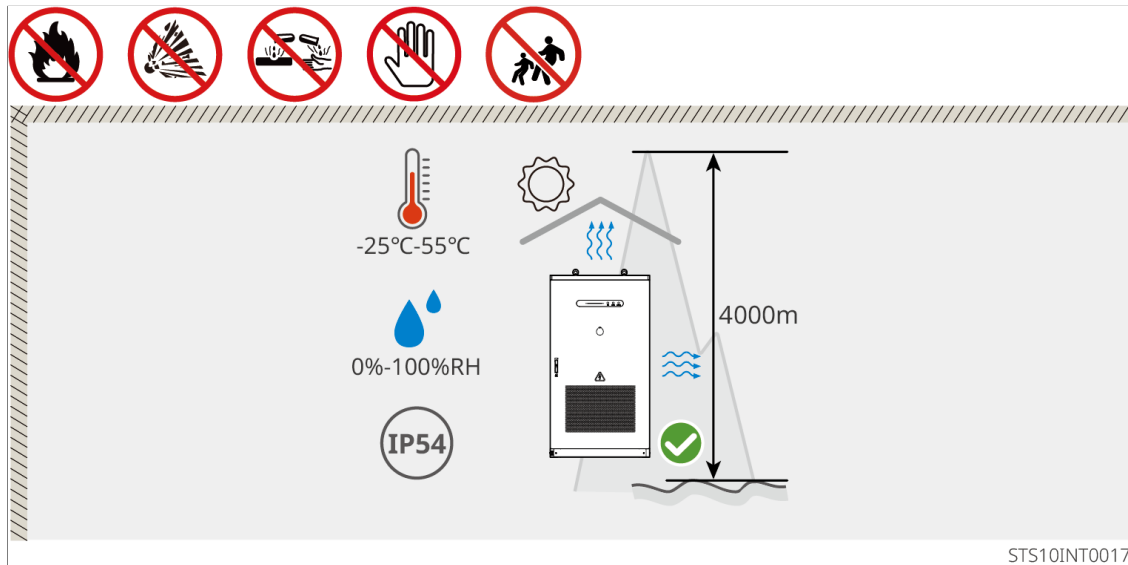
# 5 Installation

## 5.1 Installation Requirements

### Installation Environment Requirements

1. The equipment must not be installed in flammable, explosive, corrosive, or similar environments.
2. The installation space must meet the equipment's ventilation, heat dissipation, and operational space requirements.
3. The equipment's protection rating is suitable for outdoor installation; ambient temperature and humidity must be within the appropriate range.
4. Avoid installation environments with direct sunlight, rain, snow accumulation, etc. It is recommended to install in a sheltered location; a sunshade canopy can be built if necessary.
5. The installation location must be out of reach of children and avoid easily accessible positions.
6. The installation height should facilitate operation and maintenance, ensuring indicator lights, all labels are easily visible, and wiring terminals are easy to operate.
7. The installation altitude must be below 4000m.
8. The equipment will be subject to corrosion if installed in salt-damage areas. Salt-damage areas refer to regions within 500m of the coast or areas affected by sea breezes. Areas affected by sea breezes vary depending on weather conditions (e.g., typhoons, seasonal winds) or terrain (presence of embankments, hills).
9. If the equipment is installed in public areas other than work and living spaces (e.g., parking lots, stations, factory buildings, etc.), install a protective mesh around the equipment and erect safety warning signs for isolation. Unauthorized personnel must be kept away to prevent personal injury or property damage caused by accidental contact or other reasons by non-professionals during equipment operation.
10. Keep away from strong magnetic field environments to avoid electromagnetic interference. If there are radio stations or wireless communication devices below 30MHz near the installation location, install the equipment according to the following requirements:
  - Add a ferrite core with multiple windings on the equipment's AC line, or add a low-pass EMI filter.

- Maintain a distance of over 30m between the equipment and the wireless electromagnetic interference source.



### Installation Angle Requirements

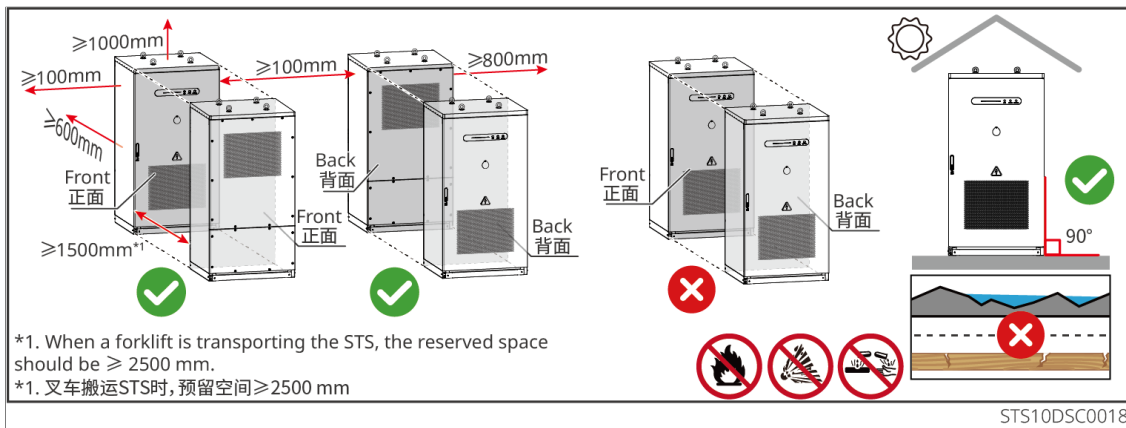
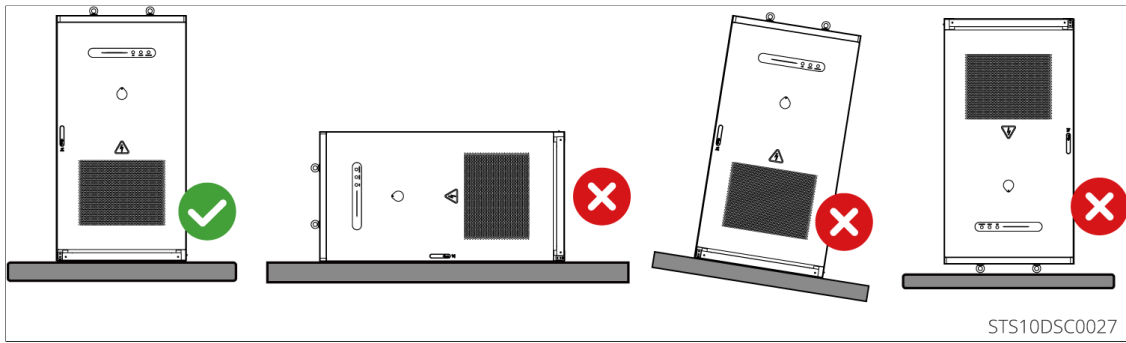
The equipment must be installed vertically and stably on the foundation to ensure stability and proper heat dissipation.

Do not tilt, place on its side, or invert the equipment, as these may cause equipment damage, unstable operation, or safety hazards.

### Installation Space Requirements

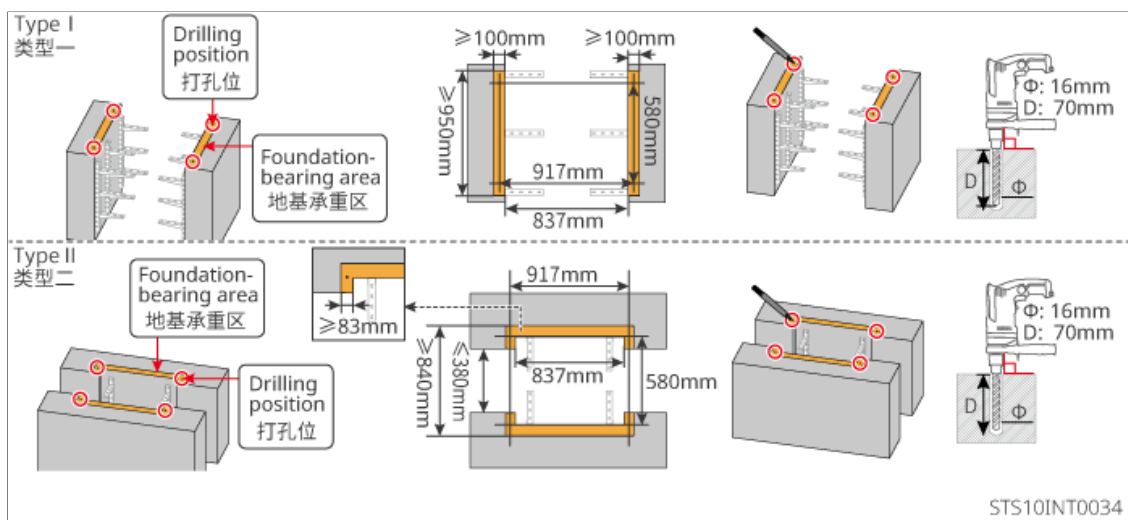
#### NOTICE

When using a forklift, the spacing between equipment must be greater than or equal to 2.5m.



## Installation Foundation Requirements

- The equipment installation foundation must be constructed using C35 concrete or other concrete with equivalent performance.
- Before installation, ensure the base is level, solid, flat, dry, has sufficient load-bearing capacity, and is free from depressions or tilting.
- The base must have pre-embedded conduits or reserved cable outlet holes to facilitate equipment cabling.
- The equipment uses bottom cable entry; the foundation must have dust and rodent protection design to prevent foreign objects from entering.
- The foundation must have water drainage and moisture protection design to prevent cable aging, short circuits, and ensure normal equipment operation.
- Due to the thick equipment cables, sufficient space for cables must be fully considered when designing the pre-embedded conduits/reserved cable outlets to ensure smooth, non-abrasive cable connections.

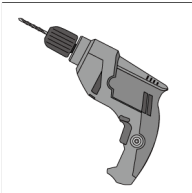
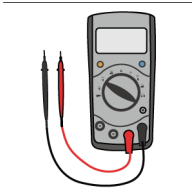
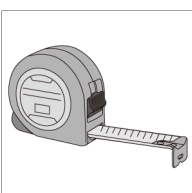


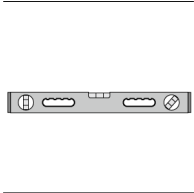
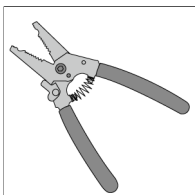
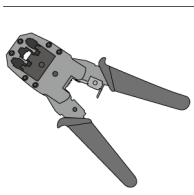
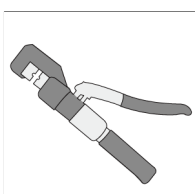
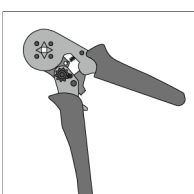
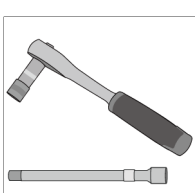
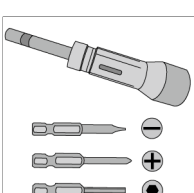
## 5.2 Tool Requirements

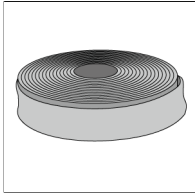
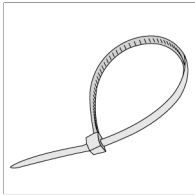
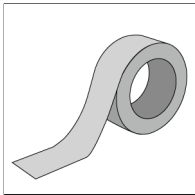
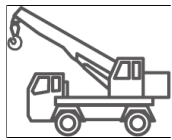
### NOTICE

During installation, it is recommended to use the following installation tools. If necessary, other auxiliary tools may be used on-site.

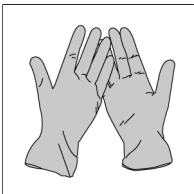
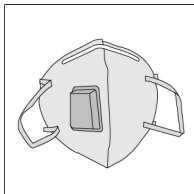
### Installation Tools

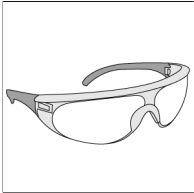
| Tool Type                                                                           | Description                   | Tool Type                                                                            | Description   |
|-------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------|---------------|
|  | hammer drill (16mm drill bit) |  | multimeter    |
|  | tape measure                  |  | utility knife |

| Tool Type                                                                           | Description      | Tool Type                                                                            | Description                    |
|-------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|--------------------------------|
|    | rubber hammer    |    | level                          |
|    | marker pen       |    | diagonal plier                 |
|   | wire stripper    |   | RJ45 crimping tool             |
|  | hydraulic pliers |  | tubular terminal crimping tool |
|  | socket wrench    |  | torque screwdriver             |

| Tool Type                                                                           | Description     | Tool Type                                                                            | Description        |
|-------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|--------------------|
|    | heat gun        |    | heat shrink tubing |
|    | vacuum cleaner  |    | cable tie          |
|   | open-end wrench |   | insulating tape    |
|  | forklift        |  | crane              |

## Personal Protective Equipment

| Tool Type                                                                           | Description                            | Tool Type                                                                            | Description |
|-------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------|-------------|
|  | Insulated gloves,<br>protective gloves |  | Dust mask   |

| Tool Type                                                                         | Description         | Tool Type                                                                          | Description   |
|-----------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------|---------------|
|  | goggle              |  | Safety shoes  |
|  | Protective clothing |  | Safety helmet |

## 5.3 Check Before Receiving

Before receiving the product, please carefully check the following items:

1. Check if the outer packaging is damaged, such as deformation, holes, cracks, or any other signs that could cause damage to the equipment inside the box. If damaged, do not open the packaging and contact your dealer.
2. Check if the STS model is correct. If it does not match, do not open the packaging and contact your dealer.
3. Check if the type and quantity of the delivered items are correct, and if there is any visible damage to their appearance. If damaged, please contact your dealer.

## 5.4 Handling Requirements

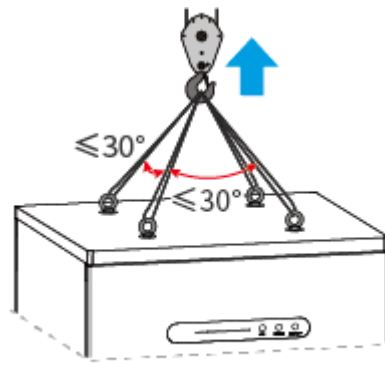
### CAUTION

1. When the equipment is being transported, turned over, installed, or during other operations, it must comply with the laws, regulations, and relevant standard requirements of the country or region where it is located.
2. To protect the equipment from damage during transportation, ensure that the transport personnel are professionally trained. Record the operation steps during transportation and keep the equipment balanced to avoid falling.
3. Before installation, the energy storage system needs to be moved to the installation site. To avoid personal injury or equipment damage during the moving process, please note the following:
  - Please allocate corresponding personnel and tools according to the weight of the equipment to prevent the equipment from exceeding the weight range that can be manually carried, causing injury to personnel.
  - Please ensure that the equipment remains balanced during the moving process to avoid falling.
  - During the equipment moving process, please ensure that the cabinet doors are locked.

### NOTICE

- The equipment can be transported to the installation site using either hoisting or a forklift.
- When using hoisting to move the equipment, please use flexible lifting slings or straps, with a single strap load-bearing capacity of  $\geq 5t$ .
- When using a forklift to move the equipment, the forklift's load-bearing capacity must be  $\geq 5t$ .
- The door panel sticker is a vulnerable area during installation and transportation; please handle with care.

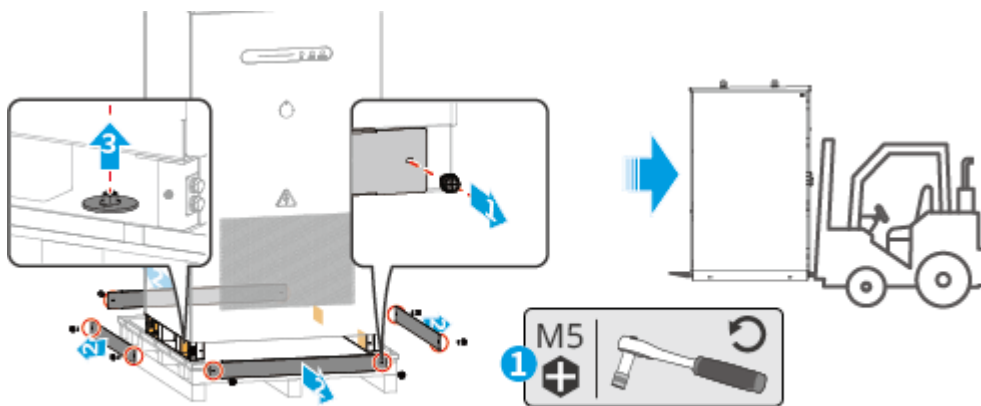
### • Lifting and Handling



STS10INT0022

1. Use slings with hooks or U-shaped hooks to lift the equipment.
2. Use lifting devices to hoist and move the equipment.

#### • Forklift Handling



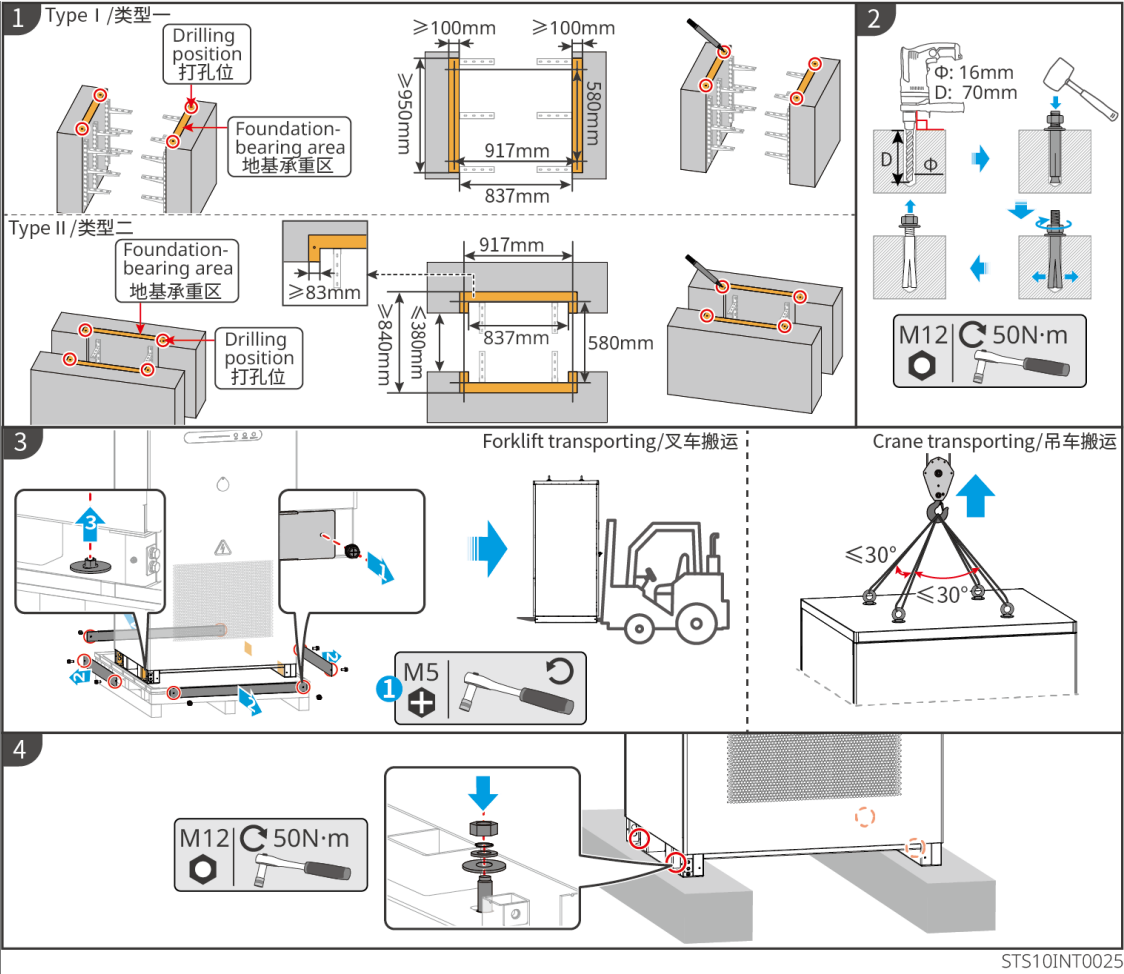
STS10INT0021

1. Remove the front and rear panels of the equipment.
2. Use a forklift to move the equipment, ensuring the equipment's center of gravity is centered on the forklift tines.

## 5.5 Install Equipment

1. Use a marker pen to mark the drilling positions on the foundation.
2. Use an impact drill to drill holes in the ground and install expansion bolts.
3. Move the cabinet onto the foundation and remove the surrounding panels.

4. Secure the cabinet to the foundation.



## 6 Electrical Connections

### DANGER

- All operations during electrical connection, as well as the specifications of cables and components used, must comply with local laws and regulations.
- Before performing electrical cable connections, ensure that all upstream switches of the equipment are disconnected.
- Before performing electrical connections, disconnect all switches of the equipment to ensure it is powered off. Live operation is strictly prohibited, as it may cause DANGERS such as electric shock.
- Cables of the same type should be bundled together and separated from cables of different types. Intertwining or crossing arrangements are prohibited.
- If the cable is subjected to excessive tension, it may lead to poor connections. When wiring, leave a certain length of cable slack before connecting it to the equipment's terminal ports.
- When crimping terminal connectors, ensure that the conductor part of the cable is in full contact with the terminal. Do not crimp the cable insulation together with the terminal, as this may cause the equipment to fail to operate, or after operation, lead to conditions such as heating due to unreliable connections, resulting in damage to the equipment's terminal block.
- Using cables in high-temperature environments may cause insulation aging and damage. The distance between cables and heat-generating components or the periphery of heat source areas should be at least 30mm.

### NOTICE

- Before performing electrical connections, wear the required personal protective equipment (PPE) such as safety shoes, protective gloves, and insulating gloves.
- Only trained professionals are permitted to perform related operations such as electrical connections.
- Please keep the cabinet door key in a safe place.
- The cable colors shown in the graphics of this document are for reference only. Specific cable specifications must comply with local regulatory requirements.

## 6.1 Pre-wiring Preparation

### Preparing Cables

| No. | Cable                                                                           | Type                                                           | Recommended Specification                                                                                                                                                                                                                                                                                                                                                               | Note          |
|-----|---------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 1   | GRID Port AC Cable<br>BACK-UP Port AC Cable<br>SMART Port AC Cable              | Single-core outdoor copper wire (user-provided)                | <ul style="list-style-type: none"> <li>375K requires 2 cables per port, 750K requires 4 cables per port</li> <li>Specifications for a single cable: <ul style="list-style-type: none"> <li>L1/L2/L3/N Conductor cross-sectional area (S): 95mm<sup>2</sup></li> <li>PE Conductor cross-sectional area (<math>S_{PE}</math>): <math>\geq S/2</math>mm<sup>2</sup></li> </ul> </li> </ul> | User-provided |
| 2   | INVERTER Port AC Cable                                                          | Single-core outdoor copper wire (user-provided)                | <ul style="list-style-type: none"> <li>L1/L2/L3/N Conductor cross-sectional area (S): 70mm<sup>2</sup></li> <li>PE Conductor cross-sectional area (<math>S_{PE}</math>): <math>\geq S/2</math>mm<sup>2</sup></li> </ul>                                                                                                                                                                 | User-provided |
| 3   | Equipment Enclosure Protective Grounding Cable                                  | Single-core outdoor copper cable                               | Conductor cross-sectional area ( $S_{PE}$ ): 35mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                          | User-provided |
| 4   | Generator Control Signal Cable<br>Load Control Signal Cable<br>EMS Signal Cable | Copper-core outdoor twisted-pair cable meeting local standards | Conductor cross-sectional area: 0.32~0.5mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                 | User-provided |

| No. | Cable                   | Type                                                                  | Recommended Specification | Note          |
|-----|-------------------------|-----------------------------------------------------------------------|---------------------------|---------------|
| 5   | LAN Communication Cable | Standard shielded network cable with RJ45 connector, CAT 5E or higher | -                         | User-provided |

Note:

The cable specifications recommended in this table are for reference only. When selecting actual cables, users must comprehensively consider the effects of installation ambient temperature, laying method, number of parallel cables, voltage deviation, thermal stability, and other factors, and correct the current-carrying capacity using corresponding correction coefficients. The selected cable must meet the following requirement: Cable current-carrying capacity  $\geq$  Rated current of the overcurrent protection device  $\geq$  Maximum rated current.

## Preparing Breakers

- To ensure safe disconnection from the grid under abnormal conditions, please select appropriate overcurrent protection devices in accordance with local electrical distribution regulations.
- Please select the breaker specifications based on the actual connected equipment. The following are the recommended specification requirements:

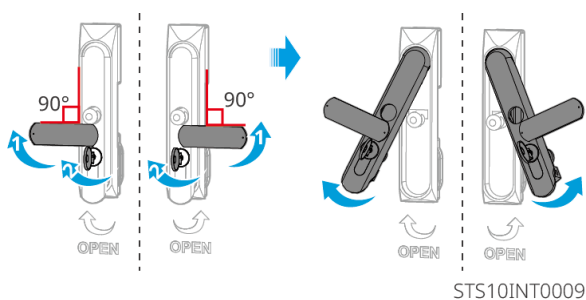
| Port     | Recommended Specifications                                                                                                                                                                                                                                             | Acquisition Method |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| INVERTER | <ul style="list-style-type: none"> <li>• Built-in switch; refer to component introduction for specific switch specifications.</li> <li>• If additional preparation is required, select the switch specification based on the actual device to be connected.</li> </ul> | Self-provided      |

| Port                         | Recommended Specifications                                                                                                                                        | Acquisition Method |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| SMART-PORT,<br>BACK-UP, GRID | No built-in switch<br><ul style="list-style-type: none"> <li>• 375K: Rated current of 630A and above</li> <li>• 750K: Rated current of 1250A and above</li> </ul> | Self-provided      |

## Cabinet Door and Cover Plate Operations

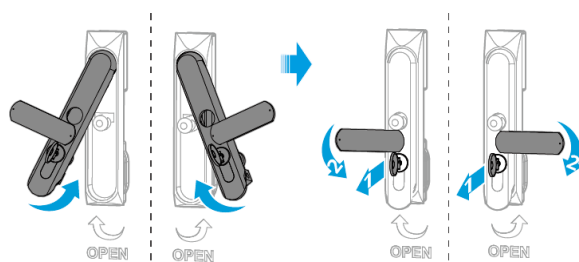
### • Cabinet Door

Open cabinet door



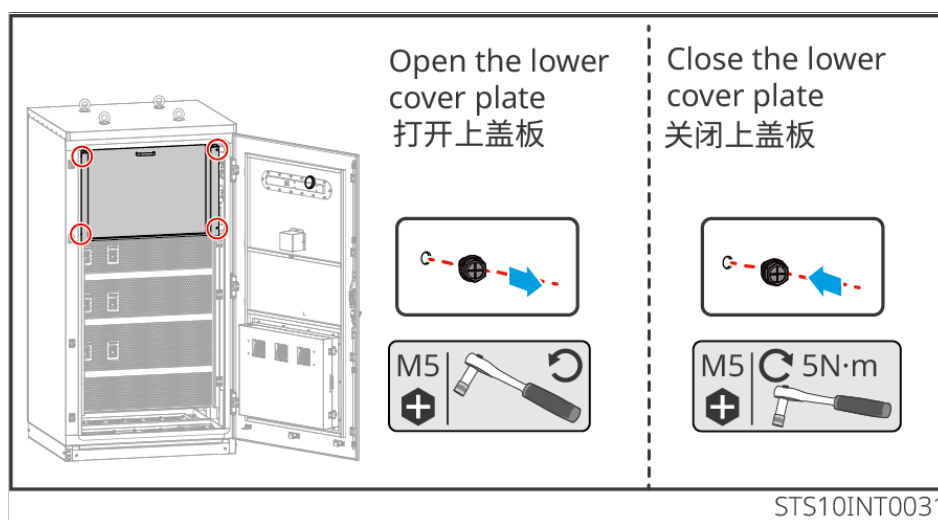
STS10INT0009

Close cabinet door



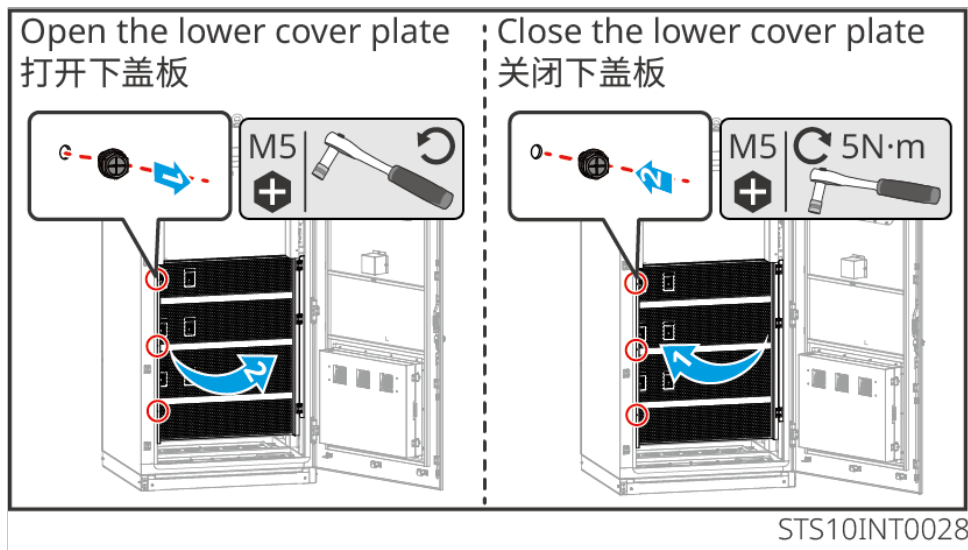
STS10INT0010

### • Top Cover Plate

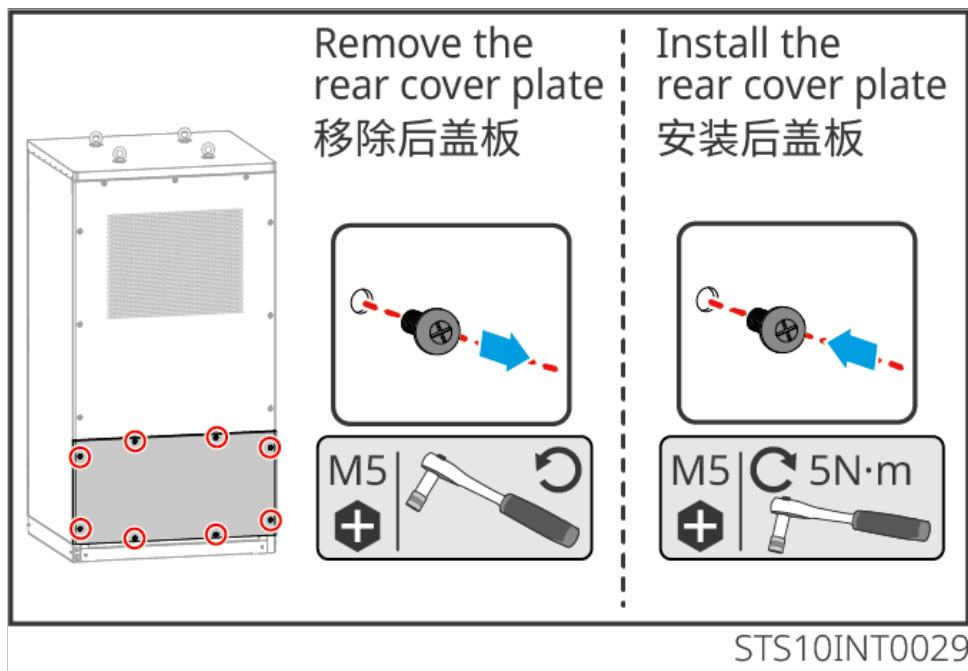


STS10INT0031

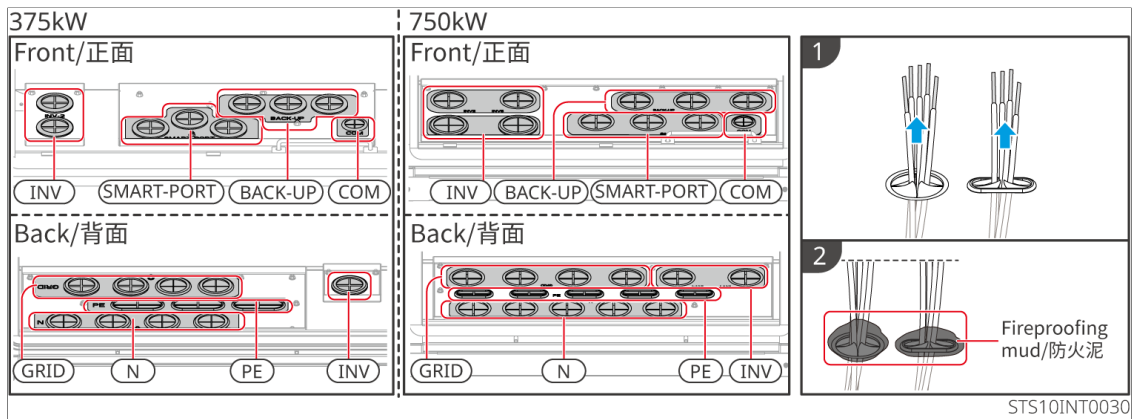
### Bottom Cover Plate



## Rear Cover Plate



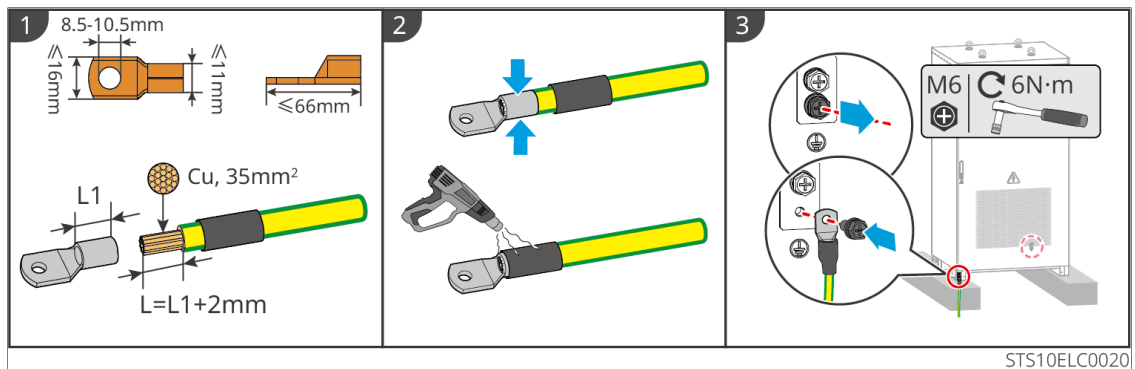
## Terminal and Cable Gland Plate Operations



## 6.2 Connecting the PE cable

### WARNING

- Before operating the device, ensure the system is reliably grounded and appropriate protective measures are taken, otherwise there is a risk of electric shock.
- To improve the corrosion resistance of the terminal, it is recommended to apply silicone or paint to the exterior of the grounding terminal for protection after the ground wire connection is completed.



## 6.3 Connecting AC Cables

### Connecting INVERTER & BACK-UP & GRID & SMART-PORT AC Cables

1. Prepare the cables and terminals, and perform crimping.
2. Unscrew the screws on the copper busbar, and secure the crimped cables to the busbar using the screws.

| 端口<br>Port               | 线缆材质<br>Cable Material | 线缆类型<br>Cable Type | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm)  | S<br>(mm <sup>2</sup> ) |
|--------------------------|------------------------|--------------------|-----------|-----------|-----------|-----------|------------|-------------------------|
| GRID<br>BACK-UP<br>SMART | Cu                     | L1/L2/L3/N         | 8.5-10.5  | ≤25       | ≤18       | ≤87       | Φ: 16.9-19 | 95                      |
|                          |                        | PE                 |           | ≤19       | ≤14       | ≤72       | Φ: 13-18   | 50                      |
| Inverter                 | Cu                     | L1/L2/L3/N         | 8.5-10.5  | ≤22       | ≤15       | ≤80       | Φ: 15-16   | 70                      |
|                          |                        | PE                 |           | ≤16       | ≤11       | ≤66       | Φ: 12-16   | 35                      |

STS10ELC0021

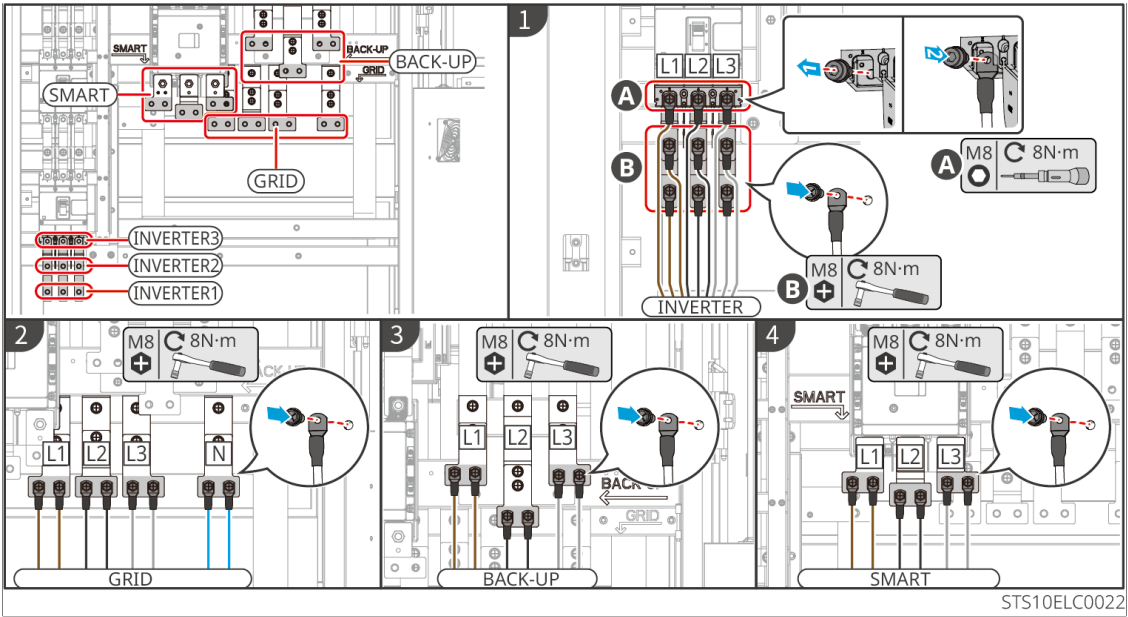


Figure2 375K

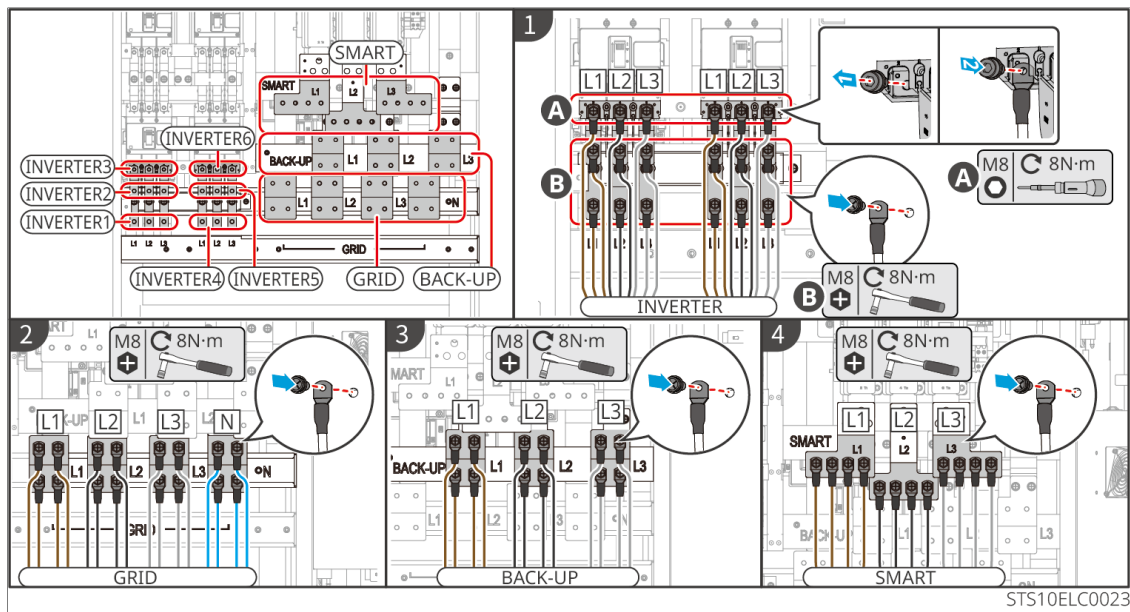


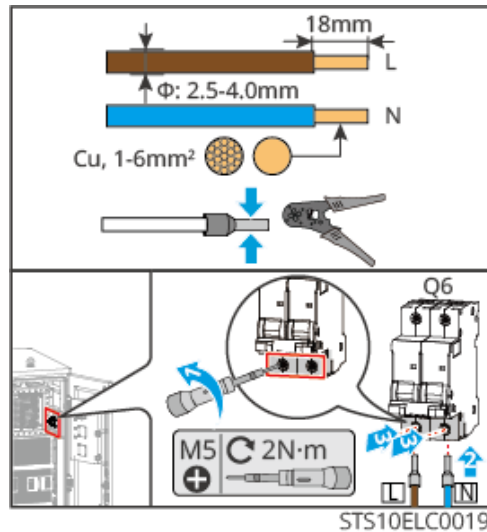
Figure3 750K

## Connecting SEC3000C Power Cable

### NOTICE

It is recommended to equip a UPS between the power supply port and the SEC3000C to ensure its stable operation.

1. Prepare single-phase AC cables and terminals. For specific requirements, please refer to the [SEC3000C User Manual](#).
2. Crimp the terminals.
3. Loosen the screws at the bottom of the circuit breaker, insert the terminals, and then tighten the screws.



## 6.4 Connecting Communication Cables

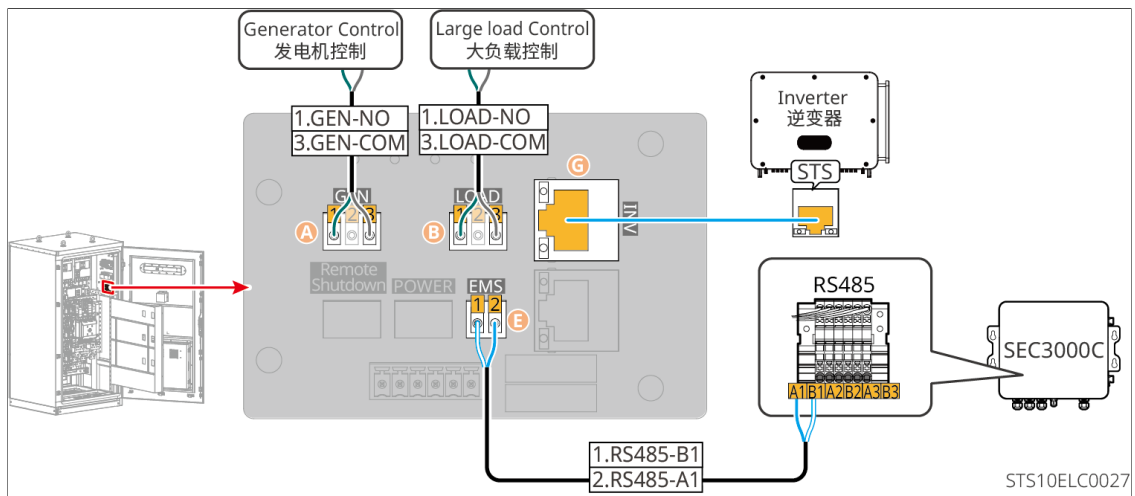
### NOTICE

- The length of the communication cable between the STS and its nearest energy storage system should not exceed 45m.
- It is recommended to install a UPS between the STS and the SEC3000C.

### Wiring Overview

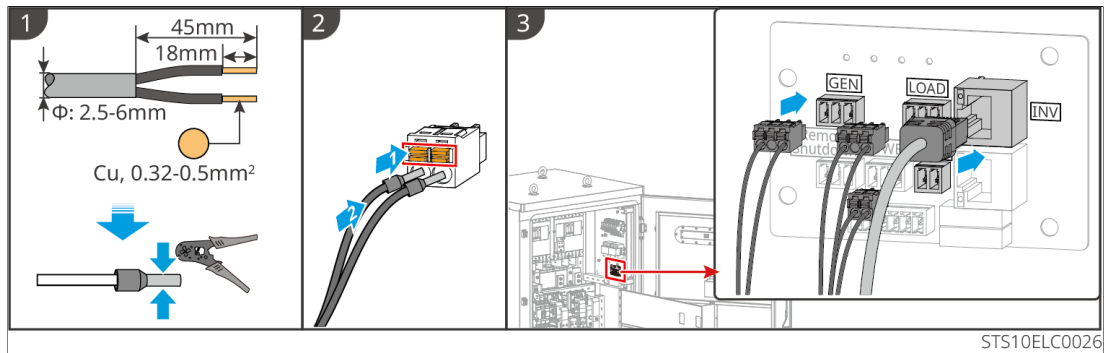
| Port |      | Function                          | Description                                                                                                                                        |
|------|------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| A    | GEN  | Diesel Generator Dry Node Contact | Supports connecting to generator control signals to control generator start/stop.<br>DO contact rating is 24V DC@1A, NO/COM normally open contact. |
| B    | LOAD | Large Load Dry Node Contact       | Connects to dry node signals to achieve load control function.<br>DO contact rating is 24V DC@1A, NO/COM normally open contact.                    |

| Port |     | Function                    | Description                                         |
|------|-----|-----------------------------|-----------------------------------------------------|
| E    | EMS | SEC Communication Port      | Connects to SEC using RS485 communication.          |
| F    | INV | Inverter Communication Port | Connects to the inverter using RS485 communication. |



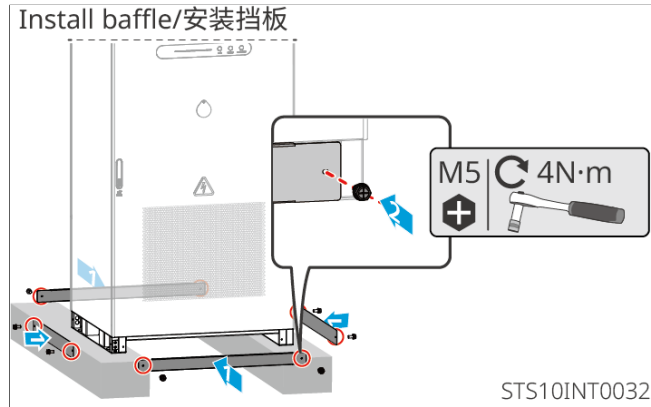
## Operation Steps

1. Prepare the communication cable and crimp the terminals.
2. Route the communication cable through the bottom COM port and insert it into the corresponding communication port.

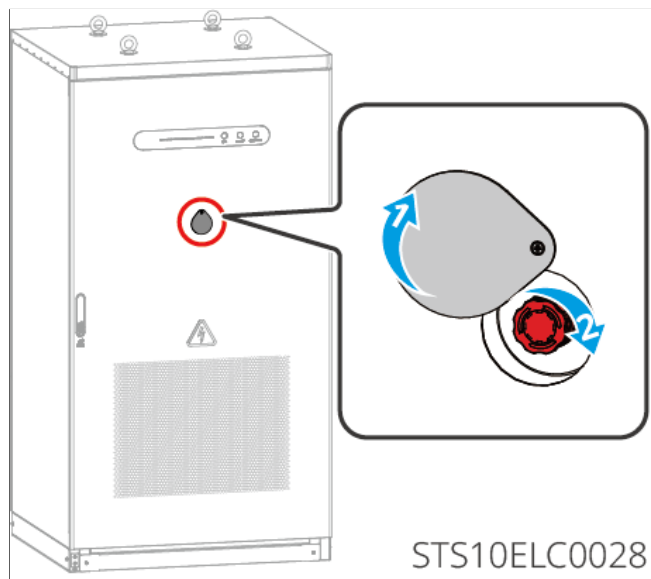


## 6.5 Post-Wiring Operations

**Step 1:** Install the baffle.



**Step 2:** Release the emergency stop switch.

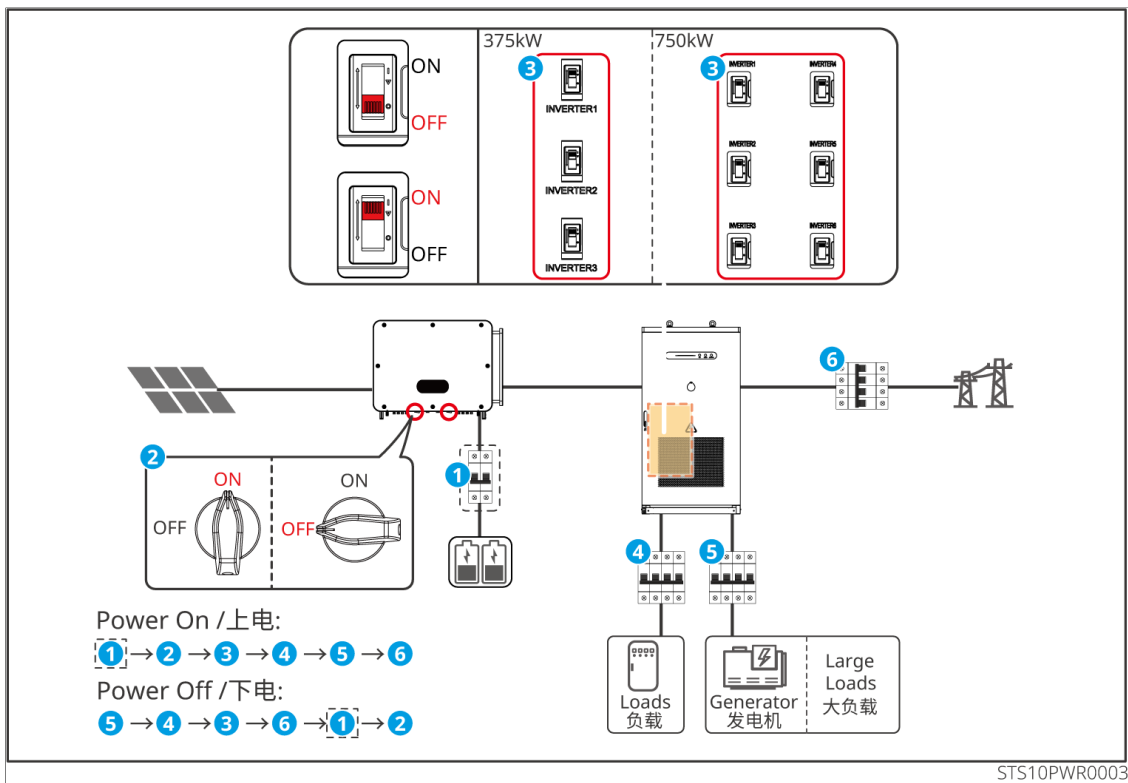


## 7 Equipment Trial Run

### 7.1 Pre-power-up Inspection

| No. | Inspection Item                                                                                                                                                                                                               |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | The equipment is securely installed, the installation location facilitates operation and maintenance, the installation space allows for ventilation and heat dissipation, and the installation environment is clean and tidy. |
| 2   | The PE cable, power cable, and communication cable are correctly and securely connected.                                                                                                                                      |
| 3   | Cable bundling meets routing requirements, is reasonably distributed, and shows no damage.                                                                                                                                    |
| 4   | For unused cable entry holes and ports, ensure they are reliably connected using the terminals provided with the accessories and have been sealed.                                                                            |
| 5   | Ensure that used cable entry holes have been sealed.                                                                                                                                                                          |
| 6   | The voltage and frequency at the equipment's grid connection point meet the grid connection requirements.                                                                                                                     |

### 7.2 Powering On the Device

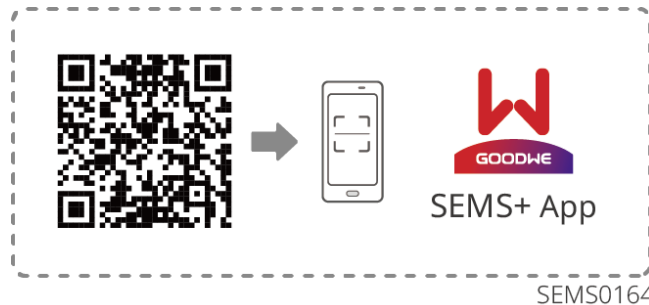


## 8 Power Plant Monitoring via SEMS+

SEMS+ is a monitoring platform that can communicate with devices via WiFi, LAN, or 4G. The following are common functions of SEMS+:

1. Manage organization or user information, etc.
2. Add and monitor power plant information, etc.
3. Maintain equipment.

Scan the QR code below to download and install.



SEMS0164

For detailed functions, please refer to the "SEMS+ User Manual". The user manual can be obtained from the official website or by scanning the QR code below.

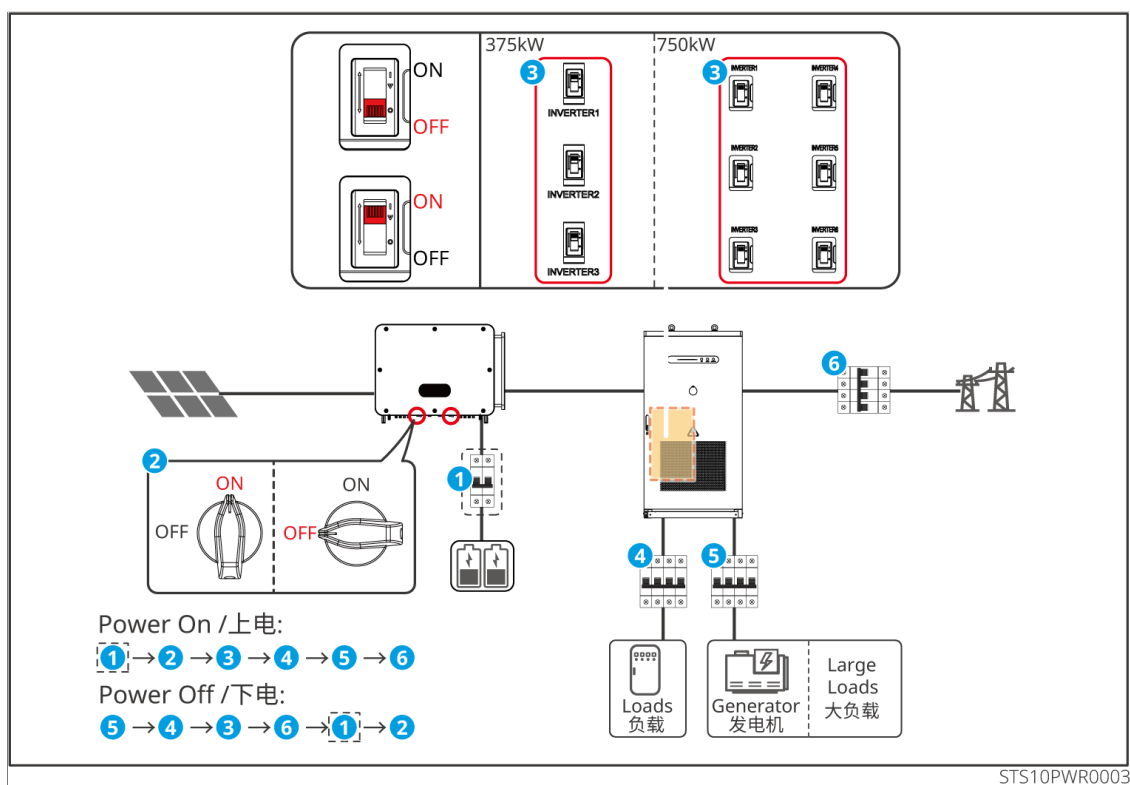


## 9 Debugging via SEC3000C

For SEC3000C debugging content, please refer to the corresponding user manual "[SEC3000C User Manual](#)".

# 10 Maintenance

## 10.1 Device Power-off



## 10.2 Troubleshooting

Please perform troubleshooting according to the following methods. If the troubleshooting methods cannot help you, please contact the after-sales service center.

When contacting the after-sales service center, please collect the following information to facilitate a quick resolution.

1. Device information, such as: serial number, software version, device installation time, fault occurrence time, fault frequency, etc.
2. Device installation environment, such as: weather conditions, installation location,

etc. Providing photos, videos, and other files of the recommended installation environment can assist in problem analysis.

### 3. Grid conditions.

| <b>Fault Type</b>      | <b>Fault Prompt</b>                | <b>Troubleshooting</b>                                                                                                                                                                                                                                                                                                                        |
|------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MC Control Board Fault | NTC Abnormal (Ambient Temperature) | Please contact the distributor/GoodWe After-sales Service Center                                                                                                                                                                                                                                                                              |
|                        | Internal Fan Abnormal              | Please contact the distributor/GoodWe After-sales Service Center                                                                                                                                                                                                                                                                              |
|                        | DSP Communication Failure          | 1. After powering down, check if the PCS communication RJ45 port on the MC control board and the COM port RJ45 of the 261 integrated cabinet LC are connected or have any abnormalities.<br>2. If the fault persists after eliminating abnormalities and powering up again, please contact the distributor/GoodWe After-sales Service Center. |
|                        | Contactor Communication Failure    | 1. After powering down, check if the CN20 control port on the MC control board and the Phoenix terminal of the Jinggui switch are connected or have any abnormalities.<br>2. If the fault persists after eliminating abnormalities and powering up again, please contact the distributor/GoodWe After-sales Service Center.                   |

| Fault Type          | Fault Prompt                           | Troubleshooting                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | DG Communication Failure               | <p>1. After powering down, check if the RS485 port of the diesel generator terminal block inside the cabinet and the communication terminal on the diesel generator side are connected or have any abnormalities.</p> <p>2. If the fault persists after eliminating abnormalities and powering up again, please contact the distributor/GoodWe After-sales Service Center.</p> |
| EPO                 | Internal Cabinet Fault                 | <p>1. If the EPO button was pressed due to human error, after confirming the STS is completely powered down and safe, rotate the EPO button to reset.</p> <p>2. If the EPO was pressed due to an emergency danger, please contact the distributor/GoodWe After-sales Service Center.</p>                                                                                       |
| Contactor Failure 1 | Latching Contactor False Trip Warning  | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center.                                                                                                                                                                                                                    |
|                     | Latching Contactor False Close Warning | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center.                                                                                                                                                                                                                    |
|                     | Main Latching Contactor Close Failure  | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center.                                                                                                                                                                                                                    |

| <b>Fault Type</b> | <b>Fault Prompt</b>                   | <b>Troubleshooting</b>                                                                                                                                      |
|-------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | Main Latching Contactor Trip Failure  | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Relay Abnormal Open in Closed State   | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Relay Abnormal Close in Open State    | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Relay Close Failure                   | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Relay Trip Failure                    | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Phase A Current Trip Shutdown Timeout | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Phase B Current Trip Shutdown Timeout | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |

| <b>Fault Type</b>   | <b>Fault Prompt</b>                   | <b>Troubleshooting</b>                                                                                                                                      |
|---------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | Phase C Current Trip Shutdown Timeout | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                     | Input Three-Phase Power Loss          | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                     | 24V Power Supply Undervoltage         | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                     | Latching Drive Undervoltage           | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                     | Dual-Machine Mode Setting Error       | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                     | Internal 485 Communication Loss       | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
| Contactor Failure 2 | Parallel Slave Action Failure         | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |

| <b>Fault Type</b> | <b>Fault Prompt</b>                       | <b>Troubleshooting</b>                                                                                                                                      |
|-------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | N Phase Wiring Error                      | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | ABC Phase Sequence Error                  | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Phase Loss Error                          | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | MCU Overtemperature Error                 | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | One Open One Close in Parallel Mode       | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Both Machines Closed in Interlock Mode    | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |
|                   | Control Contacts Triggered Simultaneously | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center. |

| Fault Type               | Fault Prompt                     | Troubleshooting                                                                                                                                                                                                                      |
|--------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | Excessive Trip/Close Frequency   | Power down the entire system, wait 5 minutes, then power up again. If the fault persists, please contact the distributor/GoodWe After-sales Service Center.                                                                          |
| Overload Protection 1    | Overload Protection (GRID)       | 1. Power down the entire system, wait 5 minutes, then power up again. If the fault disappears, it's acceptable.<br>2. If it occurs twice or more within one month, please contact the distributor/GoodWe After-sales Service Center. |
| Overload Protection 2    | Overload Protection (Smart-port) | 1. Power down the entire system, wait 5 minutes, then power up again. If the fault disappears, it's acceptable.<br>2. If it occurs twice or more within one month, please contact the distributor/GoodWe After-sales Service Center. |
| Surge Protection Fault 1 | Grid Side SPD1 Activated         | Check if the surge protector SPD1 has activated. Please contact the distributor/GoodWe After-sales Service Center and report the activation status.                                                                                  |
| Surge Protection Fault 2 | Off-grid Side SPD2 Activated     | Check if the surge protector SPD1 has activated. Please contact the distributor/GoodWe After-sales Service Center and report the activation status.                                                                                  |

## 10.3 Routine Maintenance

### DANGER

Before maintenance, ensure the STS is completely powered off. Operating with power on may cause equipment damage or risk of electric shock.

| Maintenance Item       | Maintenance Method                                                                                                                                                                                                                   | Maintenance Cycle                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| System Cleaning        | <ul style="list-style-type: none"> <li>• Check if there are any foreign objects or dust on the heat sink and air inlet/outlet vents.</li> <li>• Check if the fan and dust filter are clean and free of dust accumulation.</li> </ul> | Once every six months                |
| Fan                    | Check if the fan is operating normally, if there is any abnormal noise, and if its appearance is normal.                                                                                                                             | Once a year                          |
| Electrical Connections | Check if electrical connections are loose, if cable sheaths are damaged, and if there is exposed copper.                                                                                                                             | Once every six months to once a year |
| Sealing                | Check if the sealing of the equipment cable entry holes meets requirements. If gaps are too large or unsealed, reseal them.                                                                                                          | Once a year                          |

## 10.4 Removing the Equipment

### CAUTION

- Before removing the STS, ensure the device is completely powered off.
- During operation, wear personal protective equipment.

1. Open the cabinet door.
2. Disconnect all electrical connections of the STS, including: power cable, Communication cable, protective grounding cable.
3. Unscrew the fixing screws on the STS base.
4. Use hoisting or forklift to move and remove the STS from the base.
5. Properly store the equipment. If it will be put into use later, ensure that the storage conditions meet the requirements.

## **10.5 Disposing of the Equipment**

When the equipment can no longer be used and needs to be disposed of, please handle it according to the electrical waste disposal requirements of the regulations in the country/region where the equipment is located. The equipment must not be disposed of as general household waste.

# 11 Technical Data

| Technical Data                               | GW375K-ST5-A-G10                            | GW750K-ST5-A-G10                            |
|----------------------------------------------|---------------------------------------------|---------------------------------------------|
| Grid side                                    |                                             |                                             |
| Nominal Voltage (V)* <sup>1</sup>            | 127/220, 220/380, 230/400, 240/415, 3L/N/PE | 127/220, 220/380, 230/400, 240/415, 3L/N/PE |
| Voltage Range (V)* <sup>2</sup>              | 114~280<br>(according to local standard)    | 114~280<br>(according to local standard)    |
| Nominal Frequency (Hz)                       | 50/60                                       | 50/60                                       |
| Frequency Range (Hz)                         | 45~55 / 55~65                               | 45~55 / 55~65                               |
| Rated. Current (A)                           | 543.5                                       | 1087                                        |
| Max. Current (A)                             | 543.5                                       | 1087                                        |
| Rated Power (kW)* <sup>3</sup>               | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Max. Apparent Power (kVA)* <sup>4</sup>      | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Rated conditional short-circuit current (kA) | 10                                          | 20                                          |
| Back-up side                                 |                                             |                                             |
| Nominal Voltage (V)* <sup>1</sup>            | 127/220, 220/380, 230/400, 240/415, 3L/N/PE | 127/220, 220/380, 230/400, 240/415, 3L/N/PE |
| Voltage Range (V)* <sup>2</sup>              | 114~280<br>(according to local standard)    | 114~280<br>(according to local standard)    |
| Nominal Frequency (Hz)                       | 50/60                                       | 50/60                                       |

| Technical Data                               | GW375K-STS-A-G10                            | GW750K-STS-A-G10                            |
|----------------------------------------------|---------------------------------------------|---------------------------------------------|
| Frequency Range (Hz)                         | 45~55 / 55~65                               | 45~55 / 55~65                               |
| Rated. Current (A)                           | 543.5                                       | 1087                                        |
| Max. Current (A)                             | 543.5                                       | 1087                                        |
| Rated Power (kW) <sup>*3</sup>               | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Max. Apparent Power (kVA) <sup>*4</sup>      | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Rated conditional short-circuit current (kA) | 10                                          | 20                                          |
| <b>Smart Port side</b>                       |                                             |                                             |
| Nominal Voltage (V) <sup>*1</sup>            | 127/220, 220/380, 230/400, 240/415, 3L/N/PE | 127/220, 220/380, 230/400, 240/415, 3L/N/PE |
| Voltage Range (V) <sup>*2</sup>              | 114~280<br>(according to local standard)    | 114~280<br>(according to local standard)    |
| Nominal Frequency (Hz)                       | 50/60                                       | 50/60                                       |
| Frequency Range (Hz)                         | 45~55 / 55~65                               | 45~55 / 55~65                               |
| Rated. Current (A)                           | 543.5                                       | 1087                                        |
| Max. Current (A)                             | 543.5                                       | 1087                                        |
| Rated Power (kW) <sup>*3</sup>               | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Max. Apparent Power (kVA) <sup>*4</sup>      | 375@400V (200@220V)                         | 750@400V (400@220V)                         |
| Rated conditional short-circuit current (kA) | 10                                          | 20                                          |
| <b>Inverter side</b>                         |                                             |                                             |

| Technical Data                               | GW375K-STS-A-G10                            | GW750K-STS-A-G10                            |
|----------------------------------------------|---------------------------------------------|---------------------------------------------|
| Nominal Voltage (V) <sup>*1</sup>            | 127/220, 220/380, 230/400, 240/415, 3L/N/PE | 127/220, 220/380, 230/400, 240/415, 3L/N/PE |
| Voltage Range (V) <sup>*2</sup>              | 114~280<br>(according to local standard)    | 114~280<br>(according to local standard)    |
| Nominal Frequency (Hz)                       | 50/60                                       | 50/60                                       |
| Frequency Range (Hz)                         | 45~55 / 55~65                               | 45~55 / 55~65                               |
| Rated. Current (A)                           | 210 x 3                                     | 210 x 6                                     |
| Max. Current (A)                             | 210 x 3                                     | 210 x 6                                     |
| Rated Power (kW)                             | 125(75@220V) x 3                            | 125(75@220V) x 6                            |
| Max. Apparent Power (kVA)                    | 125(75@220V) x 3                            | 125(75@220V) x 6                            |
| Rated conditional short-circuit current (kA) | 10                                          | 20                                          |
| General Data                                 |                                             |                                             |
| On/Off Grid Transfer Time (ms)               | <20                                         | <20                                         |
| Operating Temperature Range (°C)             | -35~+60                                     | -35~+60                                     |
| Installation Type                            | Indoor/Outdoor                              | Indoor/Outdoor                              |
| Storage Temperature (°C)                     | -40~+70                                     | -40~+70                                     |
| Relative Humidity                            | 0 ~ 100%                                    | 0 ~ 100%                                    |
| Pollution Degree                             | III                                         | III                                         |

| Technical Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | GW375K-STS-A-G10        | GW750K-STS-A-G10        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|
| Type of Electrical Supply System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TN-S, TN-C, TN-C-S, TT  | TN-S, TN-C, TN-C-S, TT  |
| Stationary or Movable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Stationary              | Stationary              |
| Type Of Short-circuit Protective Device                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Icc                     | Icc                     |
| Max. Operating Altitude (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4000                    | 4000                    |
| Cooling Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Intelligent air cooling | Intelligent air cooling |
| Communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RS485                   |                         |
| Weight (kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 395                     | 500                     |
| Dimension (W×H×D mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1000 x 1900 x 870       | 1000 x 1900 x 870       |
| Mounting Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Floor Mounted           | Floor Mounted           |
| Noise Emission (dB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | < 60                    | < 60                    |
| Ingress Protection Rating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IP54                    | IP54                    |
| Overvoltage Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | III                     | III                     |
| Protective Class                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I                       | I                       |
| <ul style="list-style-type: none"> <li>• *1: For Colombia, the Nominal Voltage(V) is :127/220, 220/380, 230/400, 240/415, 3φ</li> <li>• *2: For Colombia, the Voltage Range(V) is: 220, 380, 400, 415, 3φ(+5%/-10%)</li> <li>• <b>GW375K-STS-A-G10:</b> <ul style="list-style-type: none"> <li>*3: When the phase voltage is 220V, the Rated Power is 358 kW.</li> <li>*4: When the phase voltage is 220V, the Max. Apparent Power is 358 kVA.</li> </ul> </li> <li>• <b>GW750K-STS-A-G10:</b> <ul style="list-style-type: none"> <li>*3: When the phase voltage is 220V, the Rated Power is 717 kW.</li> <li>*4: When the phase voltage is 220V, the Max. Apparent Power is 717 kVA.</li> </ul> </li> </ul> |                         |                         |

## 12 Contact Details

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