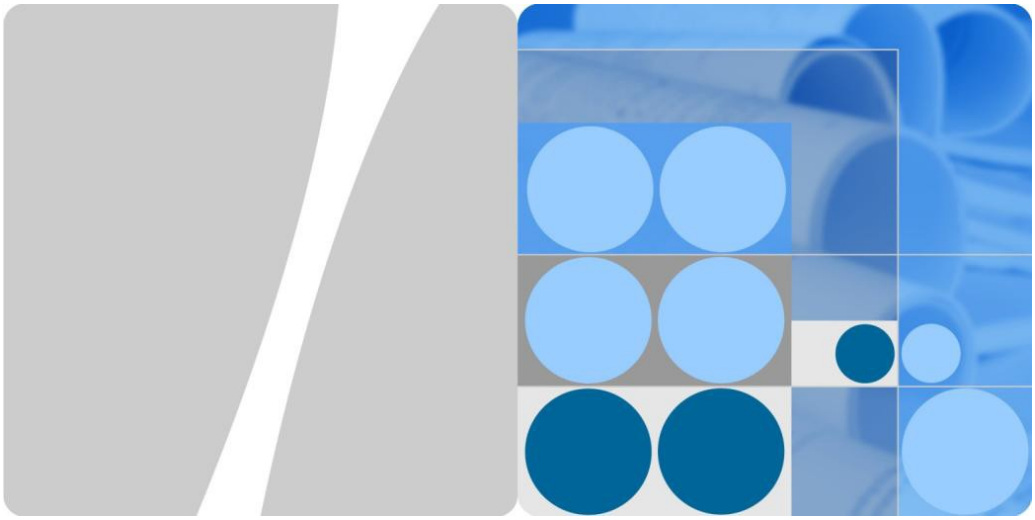


Distributed Energy Storage System

Quick Installation Guide

Jiangsu Koyoe Energy Technology Co.,Ltd
Add: Building 3, Industrial Zone C, No.588 Wutaishan Road,
New District, Suzhou, Jiangsu P.R. China
Business Cooperation: info@koyoe.com
After Sales Service：service@koyoe.com
Web：www.koyoe.com
Global Support Hotline: +86 400-900-9536

CATALOGUE

1 Overview

1.1 Applicable Products

This manual is applicable to the following types of energy storage integrated systems：

- KYT15kW-30kWh-A
- KYT15kW-46kWh-A
- KYT15kW-60kWh-A
- KYT20kW-46kWh-A
- KYT20kW-60kWh-A
- KYT25kW-53kWh-A
- KYT25kW-60kWh-A

Model Definition：

KYT：energy storage systems

15 kW /20 kW /25kW：power of the inverter（The specific equipment power is subject to the physical object）

30 kWh /46 kWh /53kWh/100kWh：battery capacity（The specific equipment capacity is subject to the physical object）

A：Outdoor energy storage machine with temperature control

* The model matching listed is the recommended optimal matching, and the actual model is subject to the received product.

2 Product Information

2.1 Basic Dimensions

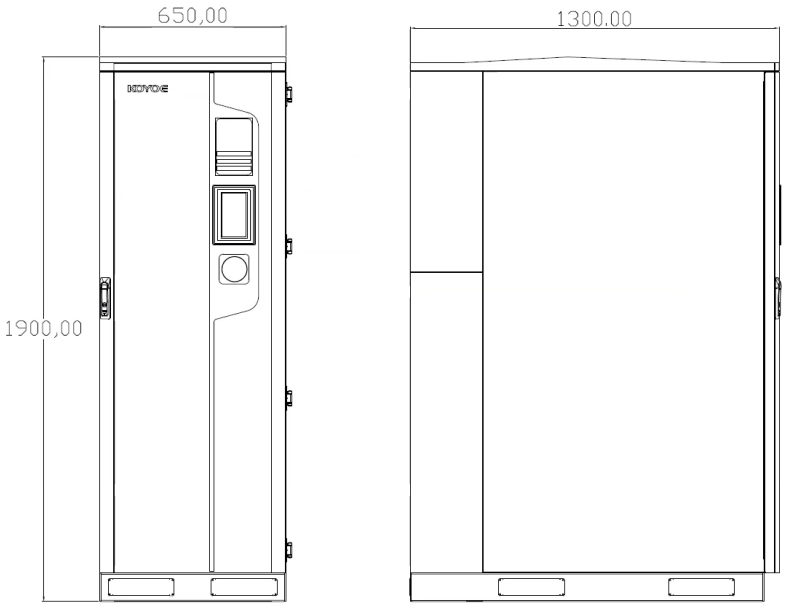
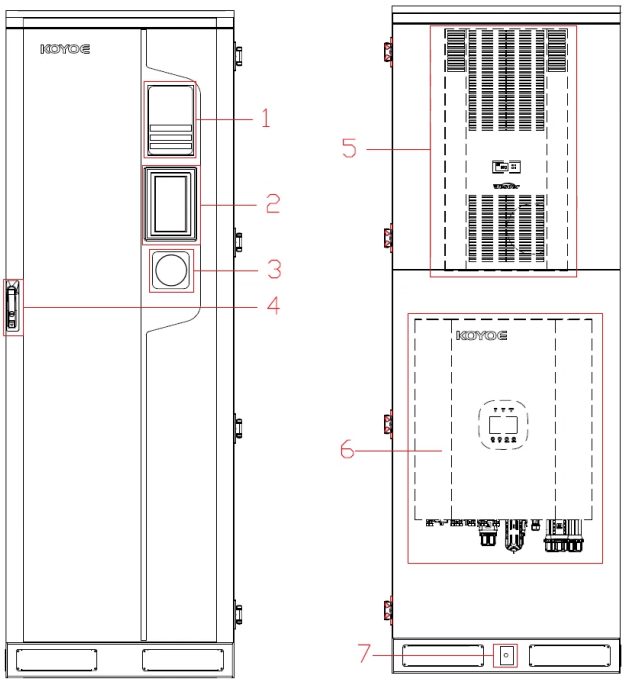


Fig. 2-1 Cabinet size unit: mm（KYT25kW-60kWh-A for example）

2.2 Part Description



1: audible and visual alarm 2: touch screen 3: scram button 4: door lock
5: air conditioner 6: inverter 7: ground copper bar

Fig. 2-2 Energy storage cabinet component name（KYT25kW-60kWh-A for example）

3 Preparation for Installation

3.1 Equipment Base Cement Base

Fig. 3-1 Cabinet equipment cement foundation form 1 （KYT25kW-60kWh-A for example）

Fig. 3-2 Cabinet equipment cement foundation form 2 （KYT25kW-60kWh-A for example）

3.2 Recommended Size for Device Base

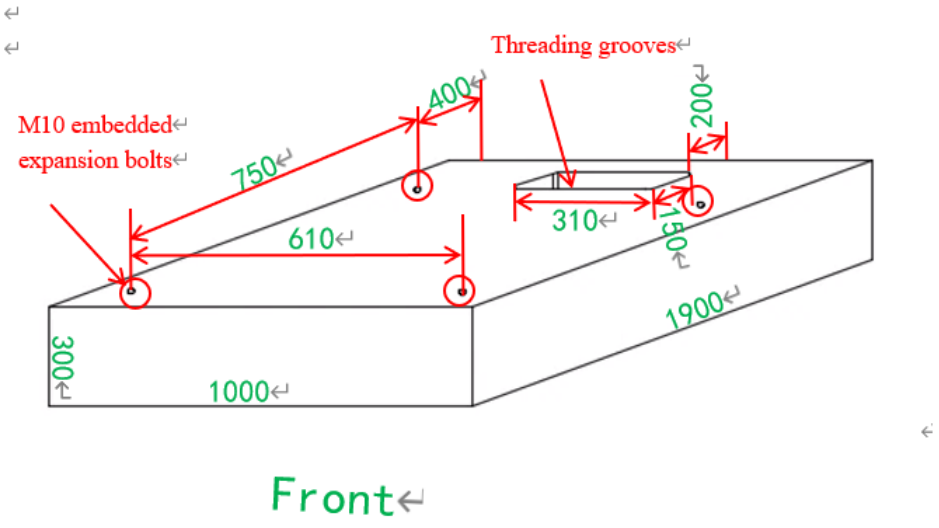


Fig. 5-5 Cabinet equipment cement foundation form 1 (unit: mm)

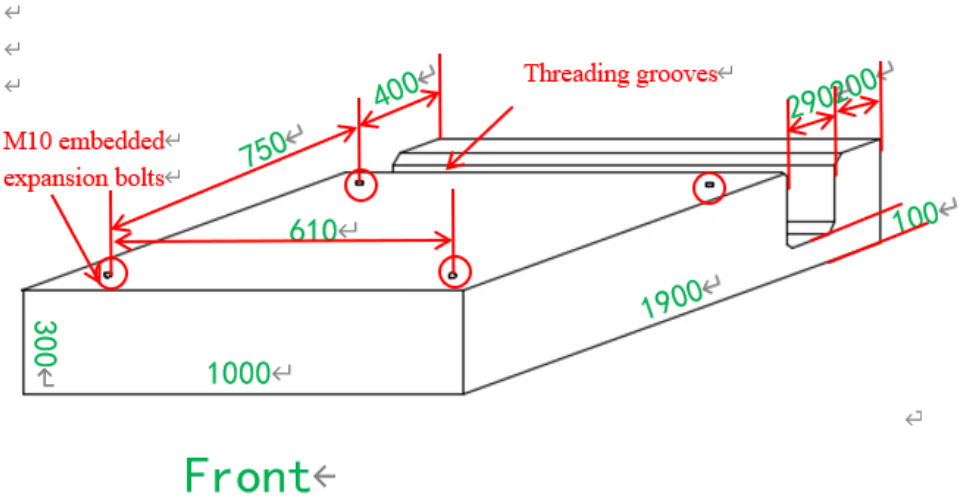


Fig. 5-6 Cabinet equipment cement foundation form 2 (unit: mm)

4 Equipment Transportation

4.1 Forklift Truck Transportation

The forklift should be equipped with sufficient carrying capacity (at least 3 tons), and if the installation site is level, the forklift can be used to move the storage cabinet. The bottom of the energy storage cabinet is equipped with fork holes specially for forklift transportation. Move the energy storage cabinet through the fork hole. If the forklift transportation method is used, the following requirements should be met：

- Pin length should be at least 700mm;
- The pins should be inserted into the square jack at the bottom of the cabinet and fully inserted into place so that the pins are completely through the cabinet;
- Storage cabinets should be transported, moved and lowered slowly and steadily.

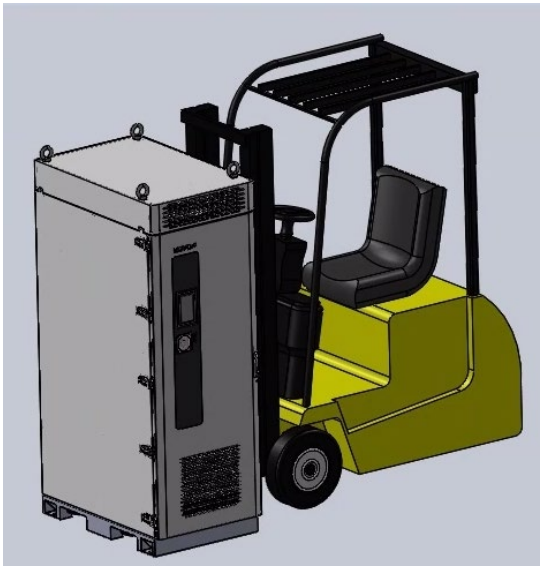


Fig. 4-1 Forklift truck transportation （KYT25kW-60kWh-A for example）

4.2 Transport by Lifting

When lifting the energy storage cabinet, the following requirements should be met at least:

- The strength of the sling used should be sufficient to withstand the weight of the storage cabinet;
- Ensure that all sling connections are safe and reliable, ensuring that each sling connected to the corner piece is of equal length;
- The length of the sling can be adjusted appropriately according to the actual requirements of the site;
- During the whole lifting process, the energy storage cabinet must be stable and not skewed;
- Please use the four rings of the energy storage cabinet to lift it;
- Take all necessary auxiliary measures to ensure the safety and smooth lifting of the storage cabinet.

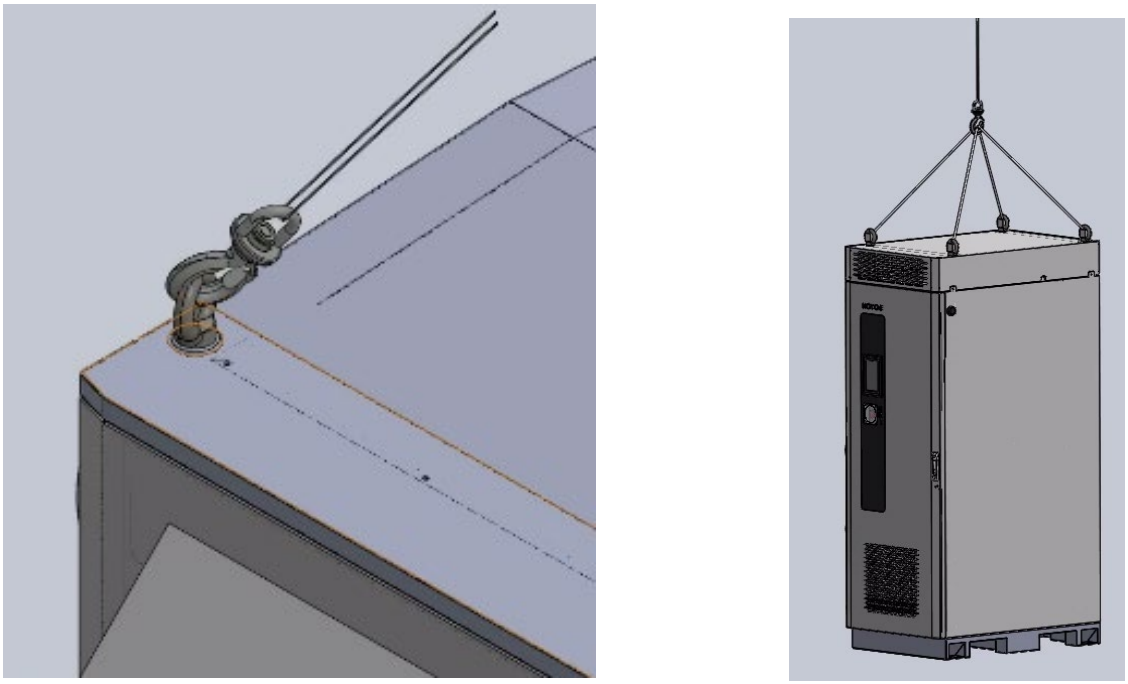


Fig. 4-2 Transport by lifting （KYT25kW-60kWh-A for example）

5 Fixed Installation

5.1 Fixed with Bolts

After confirming that the foundation construction meets the requirements and is dry, strong and smooth enough, the energy storage cabinet is transported to the predetermined location. Fastening bolts are used to fix the energy storage cabinet to the foundation. The fixed position of the fastening bolt is shown in the figure.

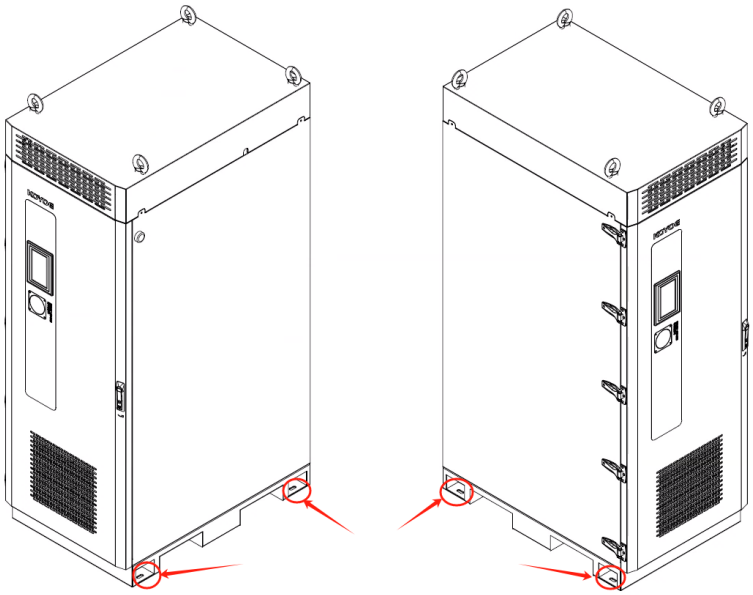


Fig. 5-1 Fixed position of the cabinet（KYT25kW-60kWh-A for example）

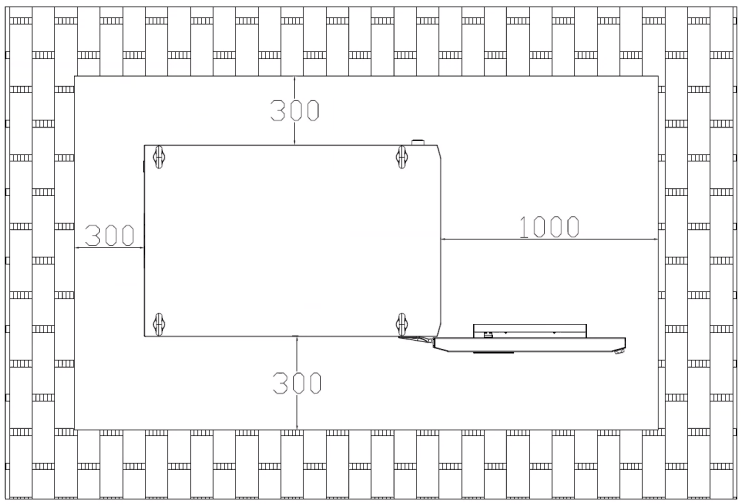
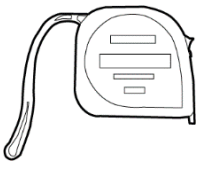
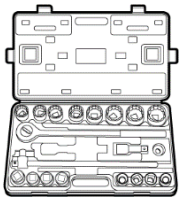
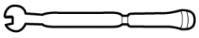
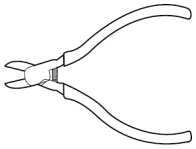
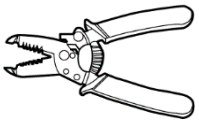
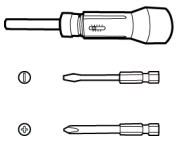
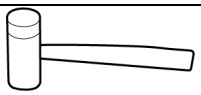
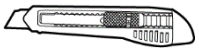
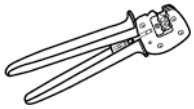
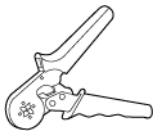
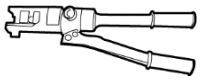
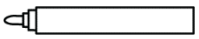
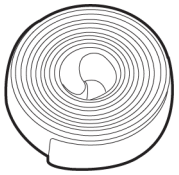
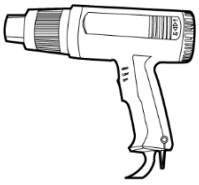
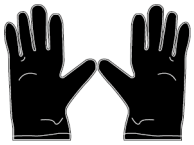
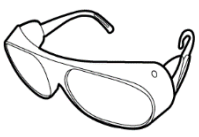


Fig. 5-2 The size of the range without occlusion around the cabinet (unit: mm)（KYT25kW-60kWh-A for example）

6 Electrical Connection

6.1 Tool Preparation

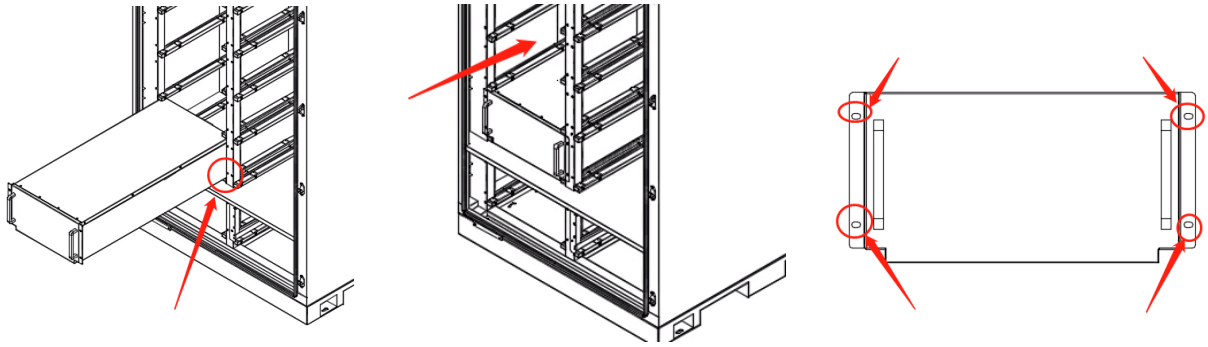
 Steel tape	 Torque socket wrench	 Torque wrench

 Diagonal pliers	 Wire stripper	 Torque screwdriver
 Rubber hammer	 Utility knife	 Wire cutters
 Crimping tool	 Cold-press terminal crimping pliers	 Hydraulic pliers
 Cable tie	 Vacuum cleaner	 Multimeter
 Marker pen	 Level	 Thermal casing
 Hot air blower	 Safety shoes	 Dust mask
 Safety gloves	 Safety goggles	

6.2 Remove Electrical Cabinet Wiring Panel

Step 1 : Press the cabinet lock arrow direction to open the cabinet door;

Step 2 : The back of the battery pack is attached to the front end of the slide rail, and the battery pack is pushed into the slide rail and fasten with the M5 screw lock;



Step 3 : Remove the screws and open the wiring sealing plate at the back of the cabinet to expose the wiring panel position;

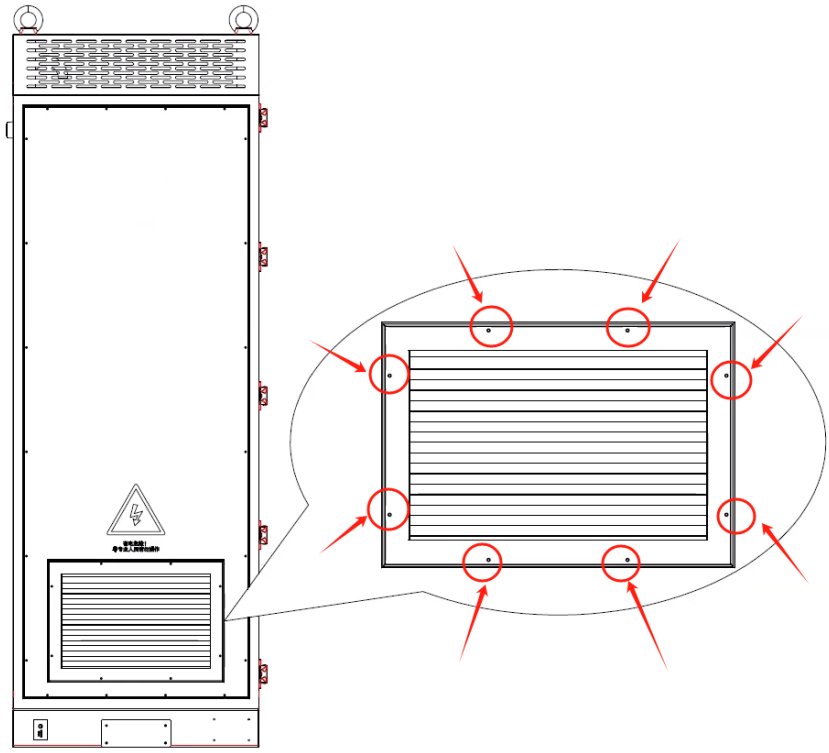


Fig. 6-1 Position of cabinet sealing board （KYT25kW-60kWh-A for example）

6.3 AC Connection

10mm² 5-core multi-strand oxygen-free copper cable is recommended. The color is yellow-green red + blue + yellow-green.

For L1, L2, L3 and N terminals, it is recommended to use sheet bare end cold press terminals

PE terminals are recommended to use circular bare end cold press terminals

Follow these steps to make the harness：

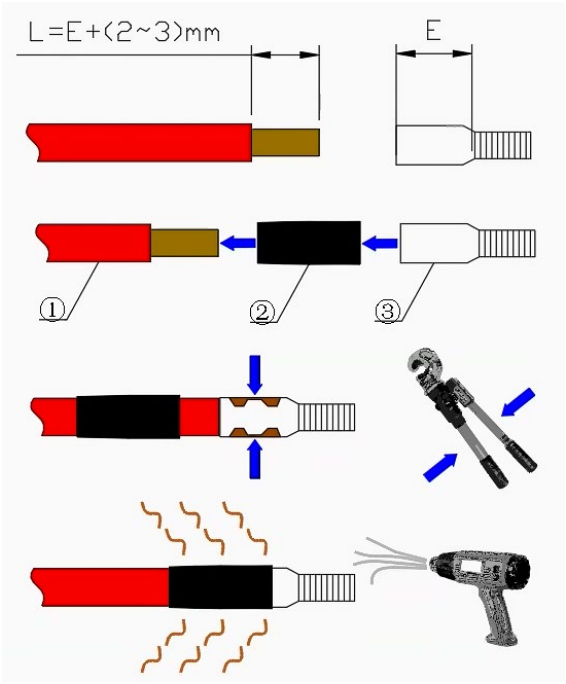
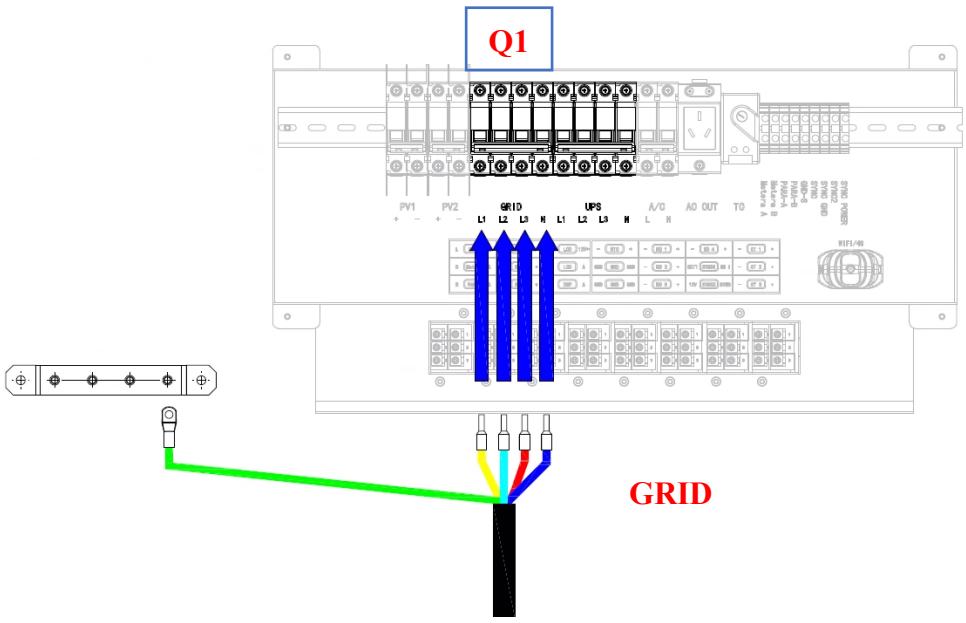


Fig. 6-2 Cabinet AC line crimping ①: wiring harness ②: heat shrink tubing ③: terminal（KYT25kW-60kWh-A for example）



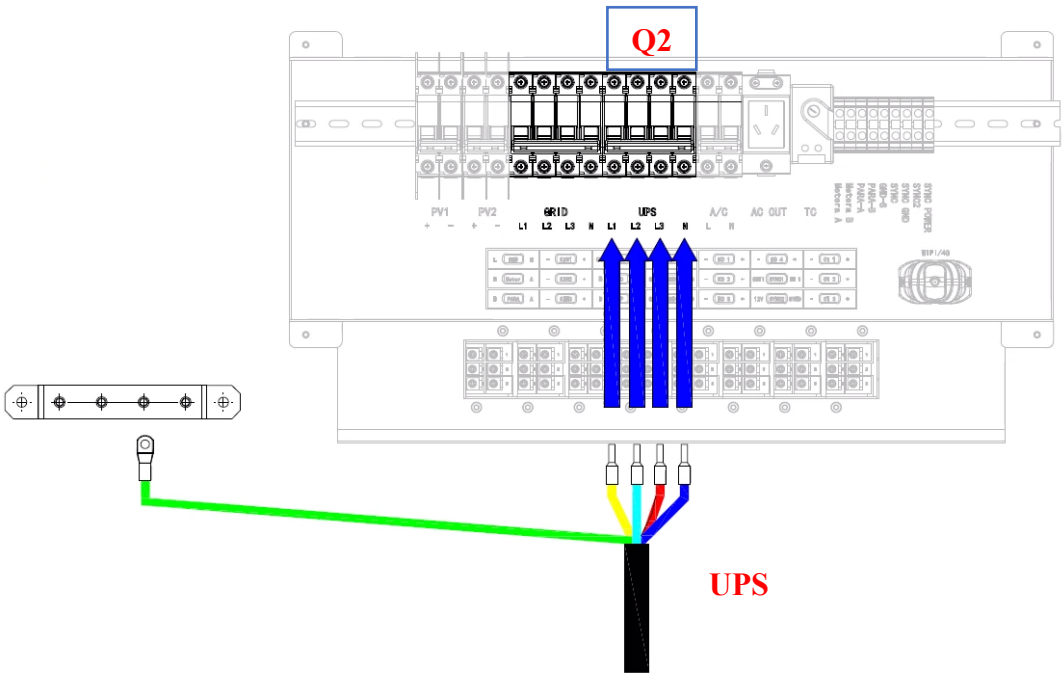


Fig. 6-3 AC connection position of cabinet （KYT25kW-60kWh-A for example）

6.4 PV Connection

4mm² PV cable is recommended, red (PV +)/black (PV -).

The terminal is recommended to use the sheet type bare end cold press terminal.

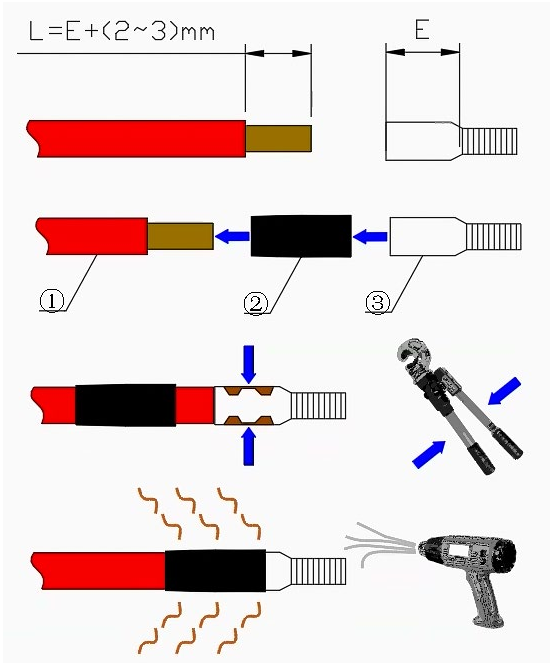


Fig. 6-4 Cabinet PV line crimping ①：wiring harness ②：heat shrink tubing ③：terminal (KYT25kW-60kWh-A for example)

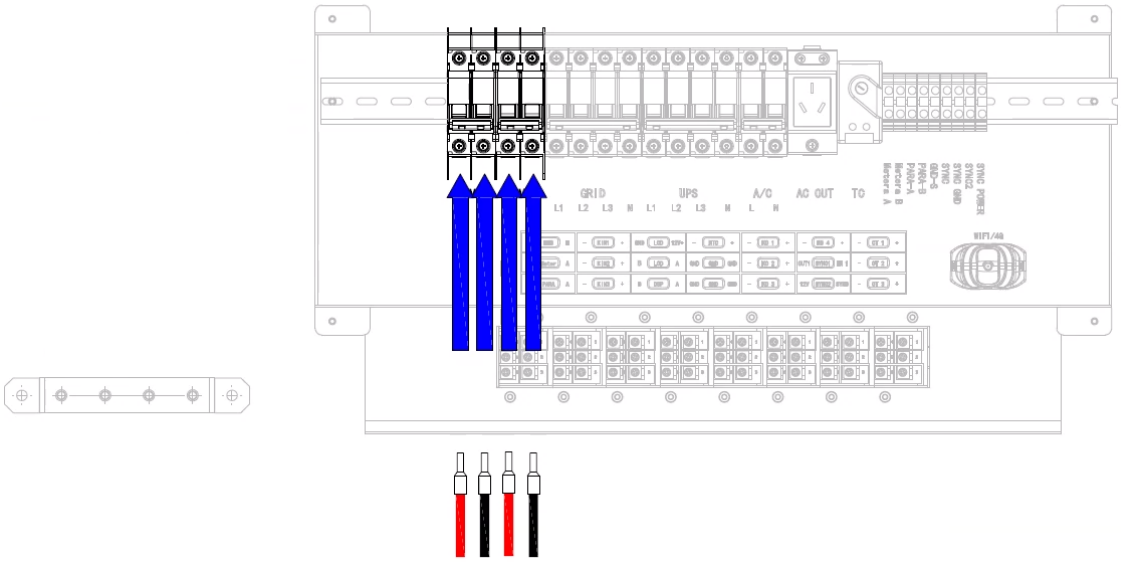


Fig. 6-5 PV connection position of cabinet （KYT25kW-60kWh-A for example）

6.5 COM Connection

0.5mm2 cable is recommended.

Sheet type bare head cold press terminal is recommended for terminal.

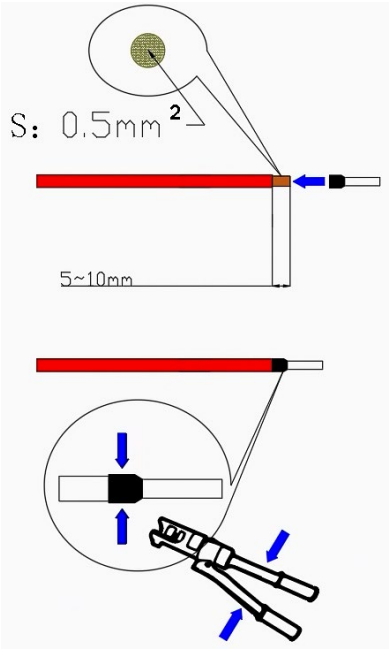


Fig. 6-6 Cabinet COM line crimping（KYT25kW-60kWh-A for example）

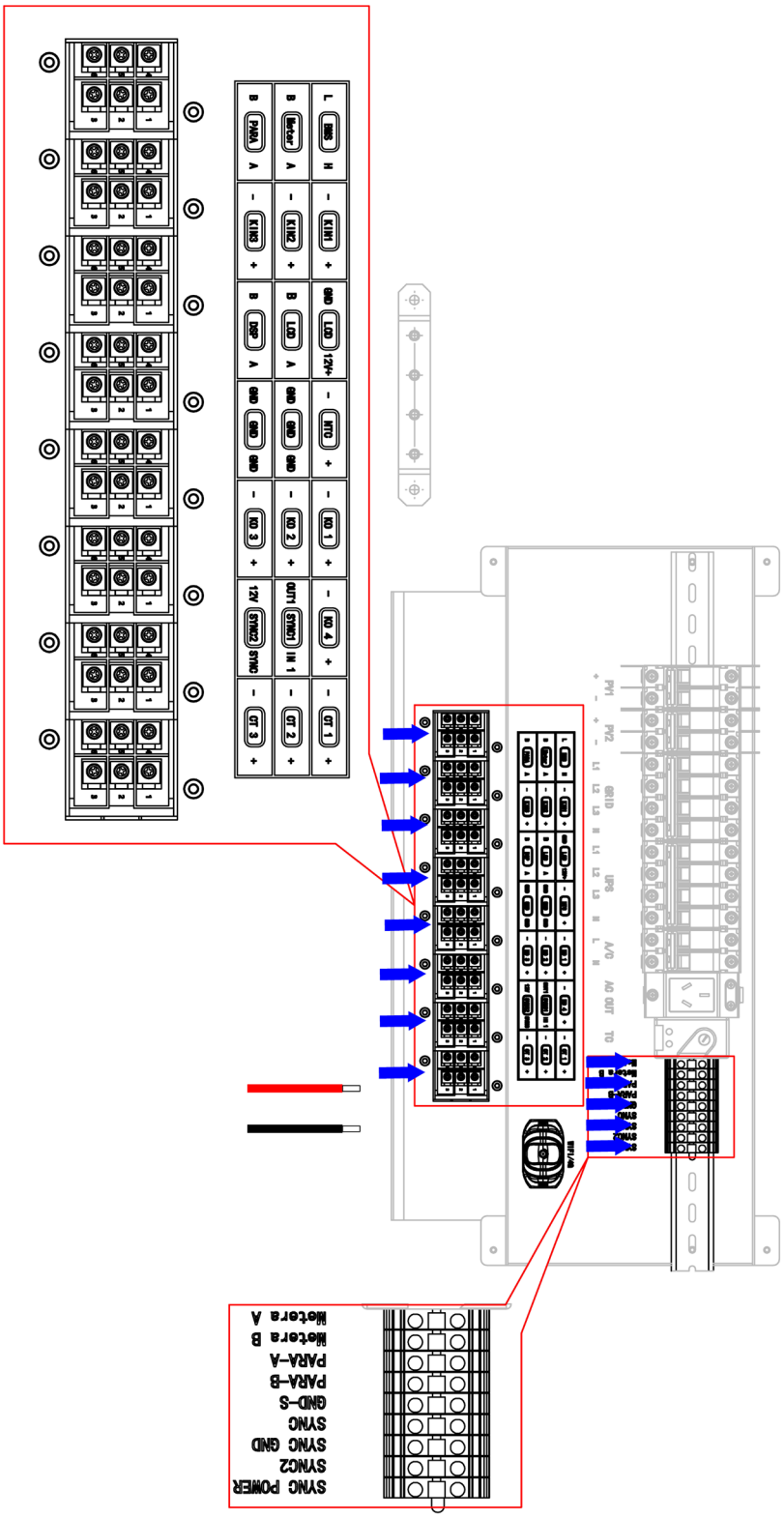


Fig. 6-7 COM connection position of cabinet（KYT25kW-60kWh-A for example）

6.6 End of Connection

According to the inlet and outlet line hole design of the storage cabinet base, the cable must be laid in advance at the inlet and outlet line position of the equipment base, and introduced into the equipment through the inlet and outlet line hole at the bottom of the cabinet. At the same time, the appropriate cable should be selected according to the requirements of the equipment inside the energy storage cabinet.

When wiring, ensure electrical insulation and comply with EMC specifications. Power cables, power supply and communication cables should be laid in layers. And if necessary, provide protection and support for the cable to reduce the stress of the cable.

Make sure all wiring is correct and firm. The gap of the cable inlet and outlet hole on the side of the energy storage cabinet shall be blocked with fire mud. At the same time, the installation foundation of the energy storage cabinet should be waterproof.

After the above work is completed, install the wiring sealing plate back.

7 Power On

7.1 Power On- Battery

A. The MSD module of each battery pack is sequentially inserted into the corresponding interface

B. Open the G/S load switch of the main control module (left 3P switch), open the control switch on/off key (right 1P switch)

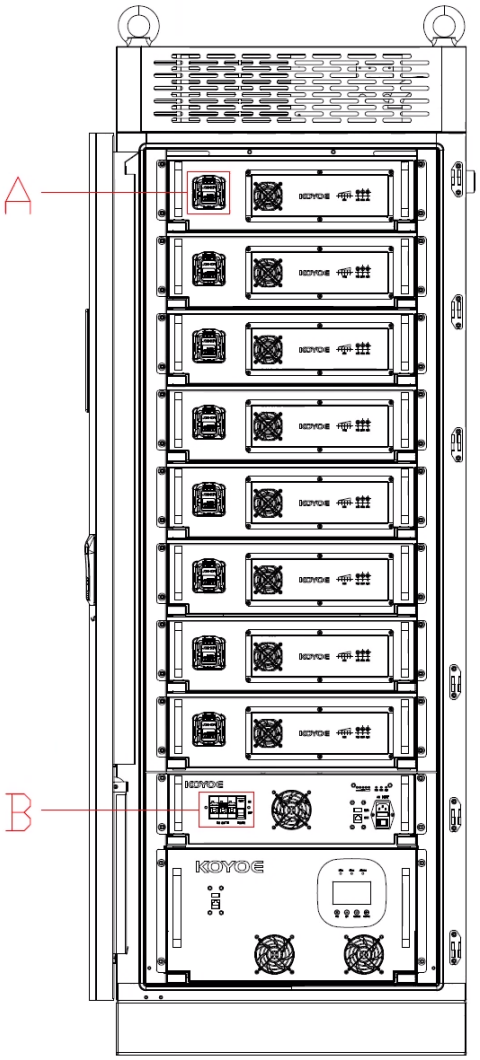


Fig. 7-1 Overview of operation switch position （KYT25kW-60kWh-A for example）

8 Power On/Off Operation

Power On

For the location of each circuit breaker, please refer to the '**Fig. 7-1**'

Step 1: Complete the auxiliary power supply and main loop wiring, measure the voltage and frequency to meet the system requirements, and then proceed to the next step；

Step 2: Closed energy storage cabinet power supply: Operate S/G load switch closed；

Step 3: Close the BCMU control box in the energy storage cabinet: close the control switch, and the battery switch box is powered up. At this time, the touch screen and PCS are charged.；

Step 4: Close the three-phase power supply in the AC outdoor cabinet: Operate Q1 to close, and the air conditioner is charged at this time；

Step 5: Close the PV power supply in the AC outdoor cabinet: operate the PV switch to close, and the solar photovoltaic panel can work normally.

Step 6: Open the EPS load of AC outdoor cabinet; Operate Q2 to close, at this time, the AC outdoor cabinet can be outputted

- - Since then, the system power on is completed, you can check the operation touch screen, check whether the system is normal.

Power Off

Step 1: Firstly, stop the system by controlling the Web interface or touch screen interface, and wait for the power of each end to drop to 0 before operating the following steps.；

Step 2: Disconnect the EPS load inside the AC outdoor cabinet: Operation Q2 is disconnected, and the AC outdoor cabinet is disconnected from the external output；

Step 3: Disconnect the PV power in the AC outdoor cabinet: Operate the PV switch to turn off, and the AC outdoor cabinet will be disconnected from the solar photovoltaic panel；

Step 4: Disconnect the three-phase power supply inside the AC outdoor cabinet: disconnect operation Q1, disconnect the air conditioning power supply；

Step 5: Disconnect the BCMU control box in the battery outdoor cabinet: Disconnect the control switch；

Step 6: Disconnect battery outdoor cabinet power: Operate S/G load switch to disconnect，

- - This end, the system power down completed.

For detailed instructions, please read the manual carefully. The latest manual can be obtained at http://download.koyoe.com/, or scan the QR code below.

Note：The manual is only for quick understanding of the product installation method, specific matters need to comply with the requirements of the manual.

DANGER

There is a danger of electric shock when touching the contacts, terminals, etc, connected to the power grid or equipment！

• Do not touch terminals or conductors connected to the grid loop.

•Pay attention to any instructions or safety instructions for connecting to the grid.

DANGER

Fatal high voltage exists inside the product!

- Pay attention to and follow the warning label on the product.
- Observe the safety precautions listed in this manual and other related document of this equipment.
- Comply with the relevant safety precautions and protection precautions for lithium batteries.

DANGER

Damaged equipment or system failure can cause electric shock or fire!

- Preliminary visual inspection of equipment for damage or other hazards before operation.
- Check that other external devices or circuit connections are secure.
- Ensure that the device is in a safe state before operation.

WARNING

The installation and operation of the integrated energy storage system must comply with the relevant standards and regulations of the country/region where the project is located.