



BlueArk X5

C & I PV+ESS All-in-One System

Quick Installation Manual

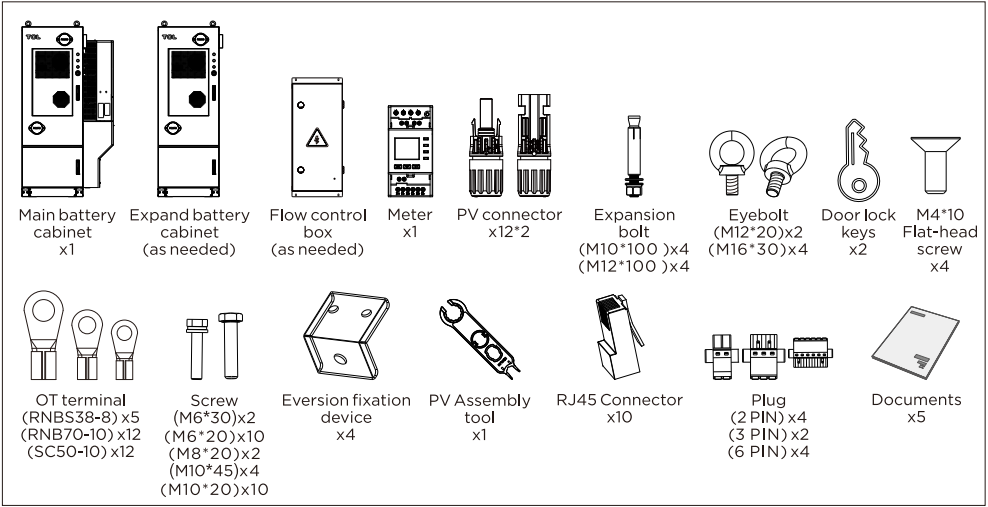


Safety Declaration

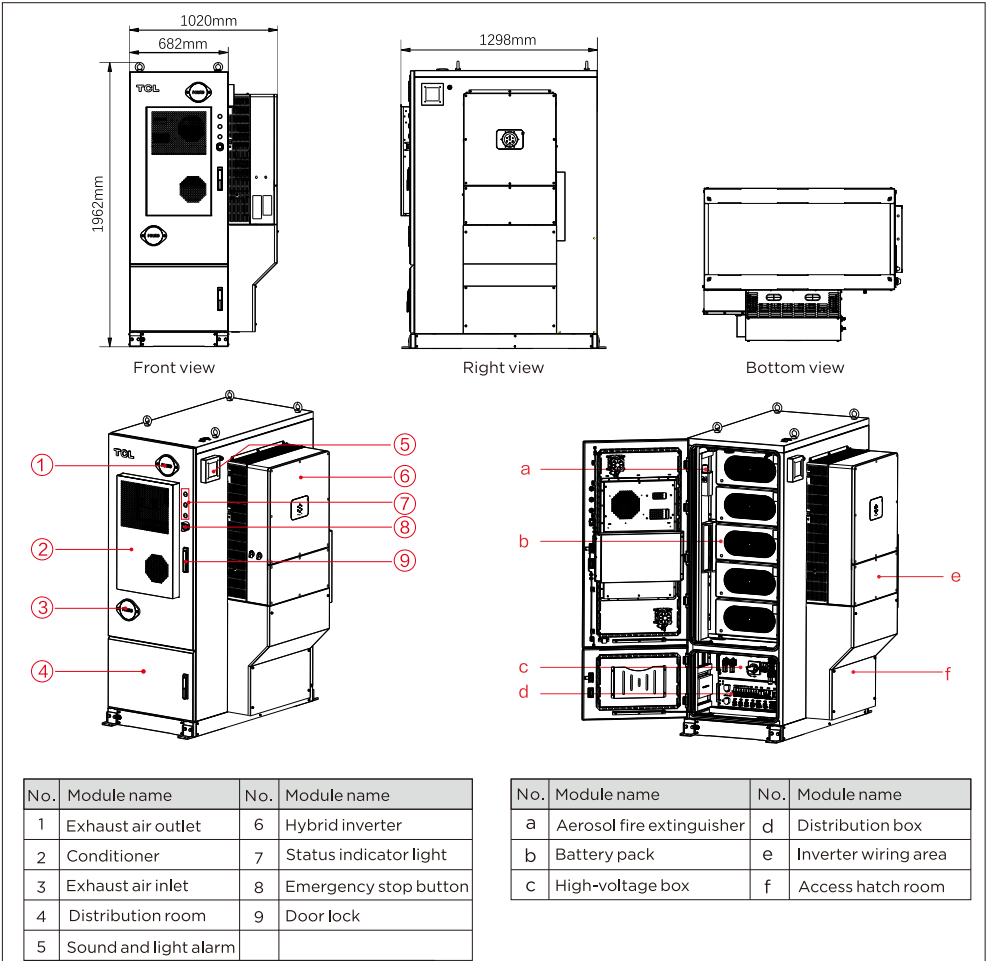
- All operations of the equipment must be carried out by professional technicians. Professional technicians must undergo specialized training, thoroughly read the manual and master the relevant safety matters of the operation, be familiar with local standards and the relevant safety regulations of the electrical system.
- If you fail to follow the requirements of this document and the user manual when operating the equipment, resulting in casualties or equipment damage, the equipment manufacturer shall not bear any responsibility.

1. Product Description

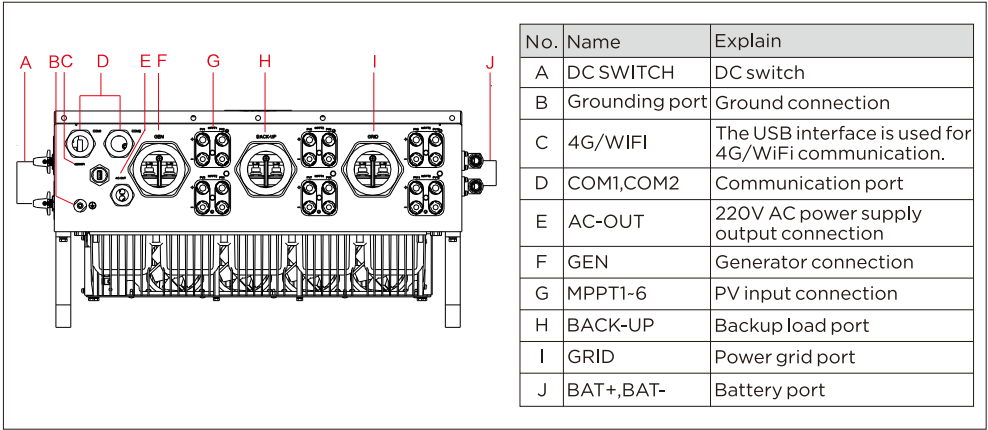
1.1 List of Deliverables



1.2 Product Component Description

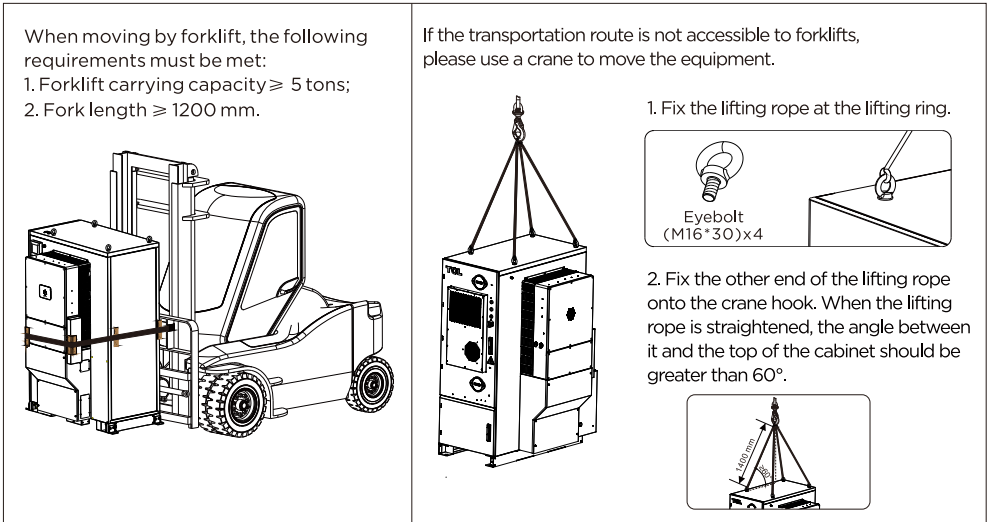


1.3 Hybrid Inverter Port Description

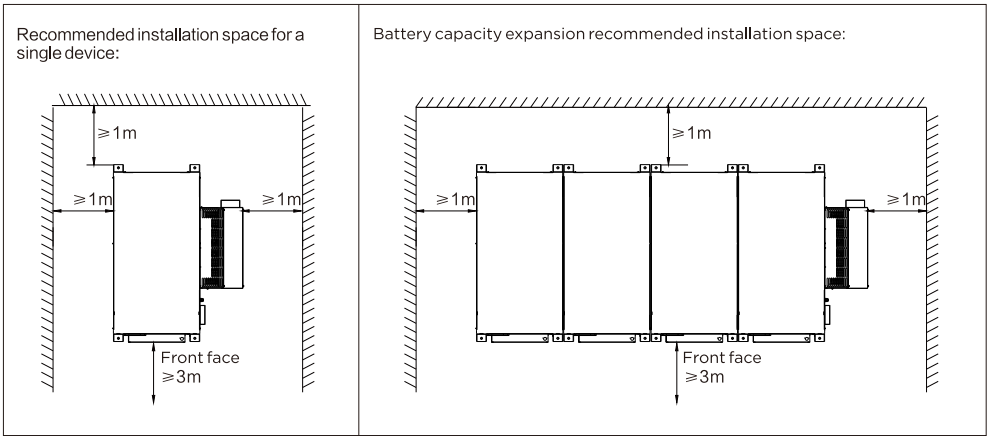


2. Transportation and Installation Requirements

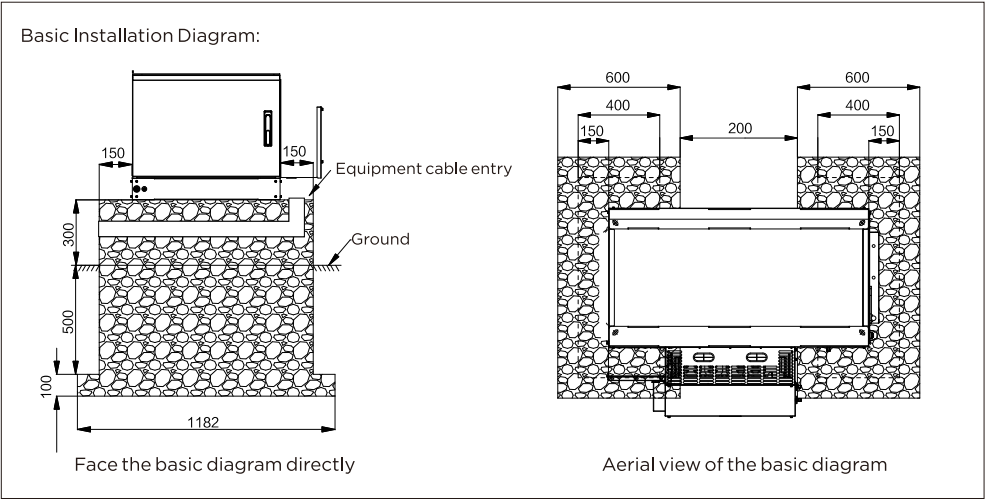
2.1 Portage



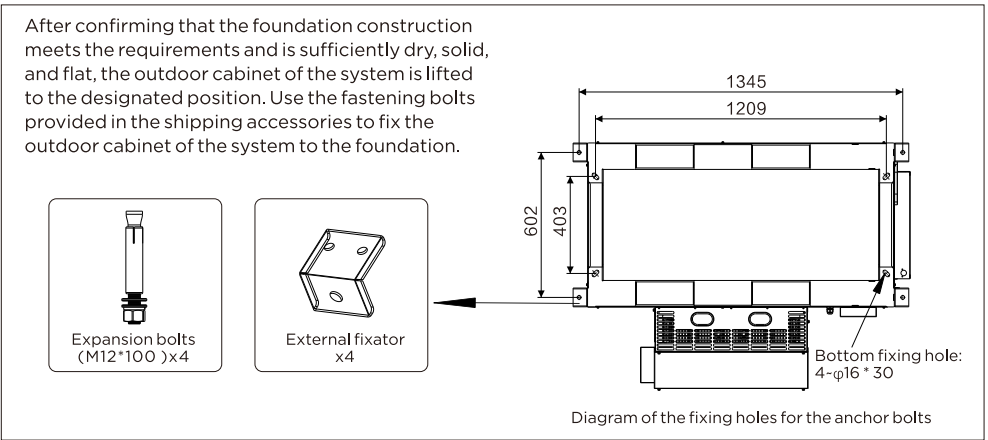
2.2 Safety Distance Requirements



2.3 Foundation Requirements and Installation



2.4 Fixed Installation

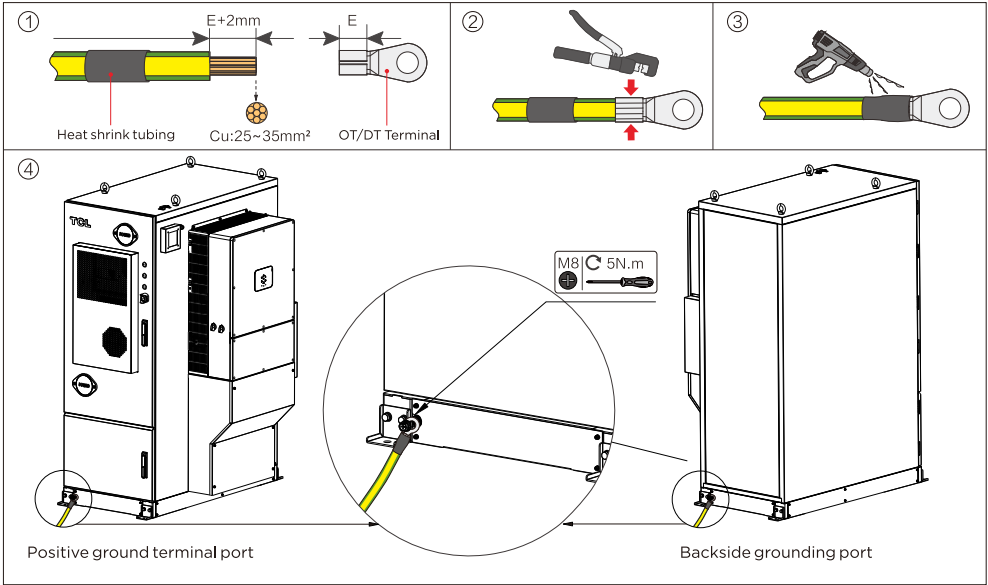


3. Cable connection

3.1 Cable Preparation

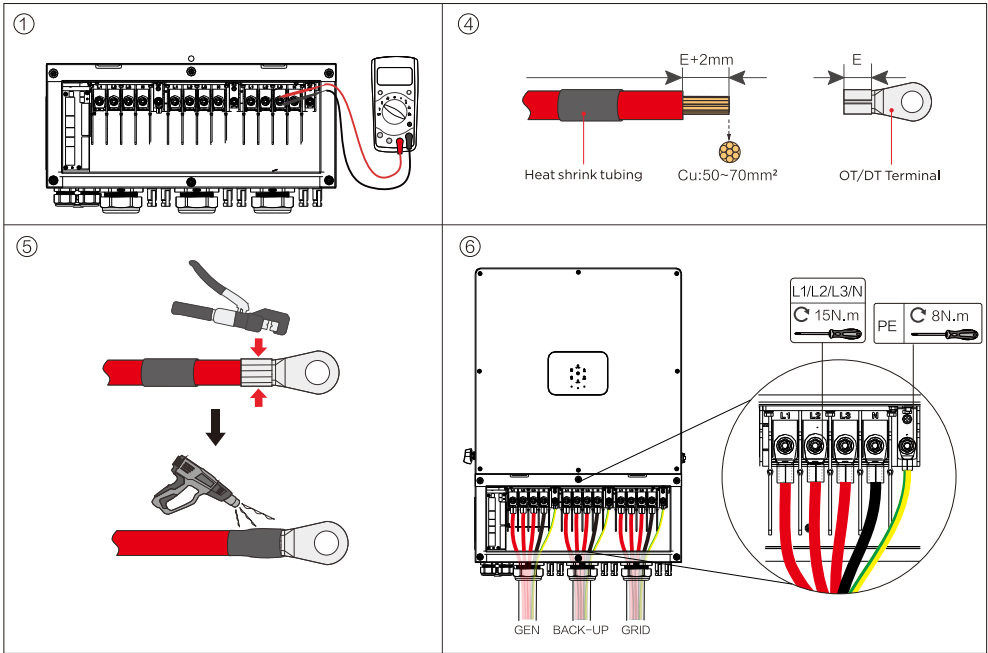
Name	Recommended specifications for copper wire conductors		Recommended terminal connector	Recommended circuit breaker specifications (provided by the user)
	Single-player mode	Parallel operation		
City wire cable	50mm ² /400V	70mm ² /400V	RNB70-10/SC50-10 OT/DT	200A
Load cable	25mm ² /400V	50mm ² /400V	RNB70-10/SC50-10 OT/DT	100A
Generator cable	50mm ² /400V	70mm ² /400V	RNB70-10/SC50-10 OT/DT	200A
Communication side grounding cable	25mm ²	35mm ²	RNBS38-8 OT/DT	/
Grounding of the cabinet	25-35mm ²	25-35mm ²	RNBS38-8 OT/DT	/
Photovoltaic cable	4-6mm ² /1000V	4-6mm ² /1000V	MC4	/
Electricity supply control signal cable	0.5mm ²	0.5mm ²	/	/
Communication shielding twisted pair wire	0.5mm ²	0.5mm ²	/	/
Network cable	CAT 5E outdoor shielded network cable	/	Shield the RJ45 connector	/

3.2 Ground Wire Connection



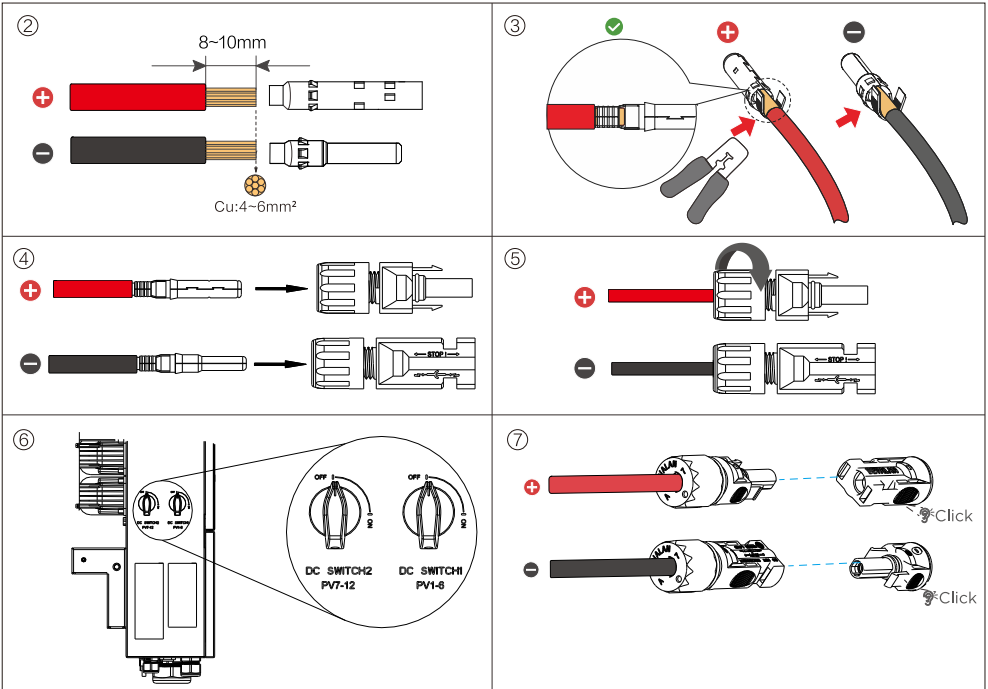
3.3 AC Cable Connection

The wiring steps are as follows:
Step 1: Disconnect the upstream AC circuit breaker and use a multimeter to measure to ensure that there is no voltage at the terminals.
Step 2: Insert the cable into the incoming line hole and bring it into the AC wiring area of the cabinet.
Step 3: Ensure that the connection sequence of the communication cables is correct.
Step 4: Use wire strippers to remove the protective layer of the cable, exposing the copper core.
Step 5: Use the OT terminal for crimping.
Step 6: Use RNB70-10/SC50-10OT/DT to fix the power grid, generator and Back-up cables on the machine. Mark the L1/L2/L3 and N terminals. Use RNBS38-8OT/DT to connect the PE terminal. The tightening torque for L1/L2/L3/N: 15 N.m and PE: 8 N.m.
Step 7: After the wiring is completed, gently pull the cables to ensure there is sufficient slack.



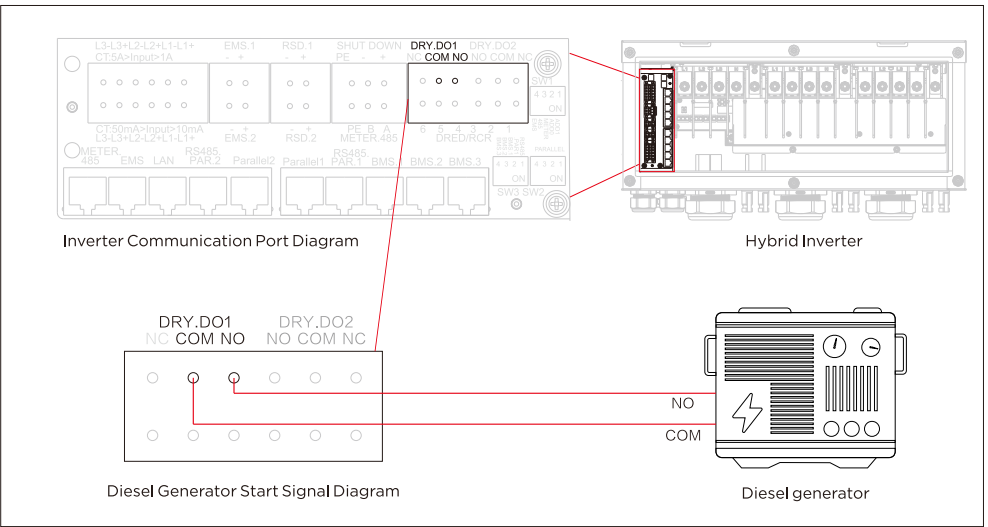
3.4 Photovoltaic Input Connection

Step 1: Loosen the locking screws on the positive and negative terminals.
Step 2: Use a 3-millimeter wide blade screwdriver to remove approximately 8 to 10 millimeters of the insulation from each end of the cable.
Step 3: Insert the cable end into the sleeve and assemble the cable end using a crimping tool.
Step 4: Insert the assembled cable ends into the positive and negative connector, and gently pull the clips backward to ensure a secure connection.
Step 5: Tighten the locking screws on the positive and negative cable connectors. I'm sorry.
Step 6: Make sure that the DC switch on the inverter is in the "off" (OFF) position.
Step 7: Insert the positive and negative cable connectors into the positive and negative photovoltaic ports on the inverter until you hear a "click" sound, to ensure a secure connection.

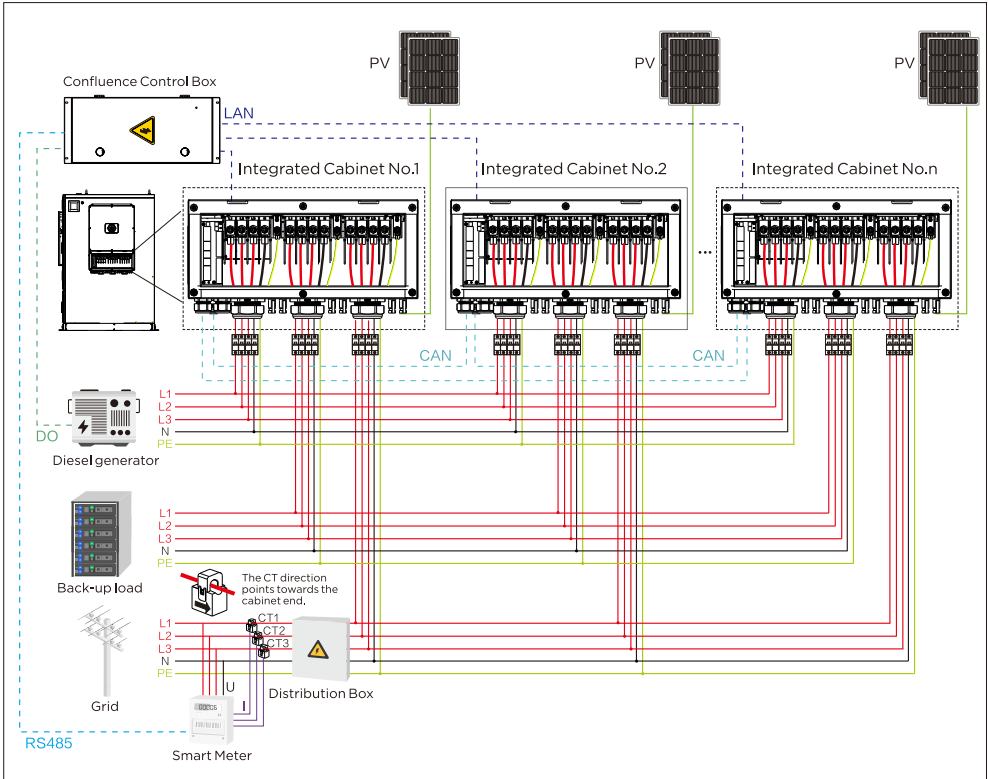


3.5 Connection of Diesel Generator

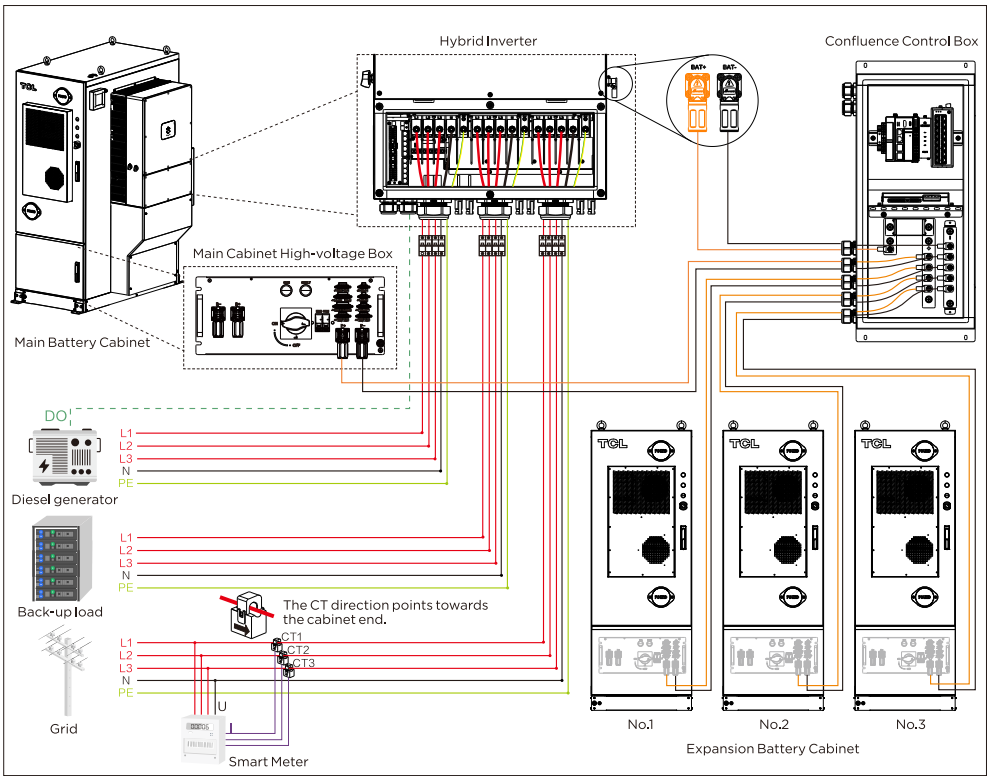
When running independently, the dry contact port DO1 of the hybrid inverter can be used to start and stop the diesel generator.



3.6 Parallel Connection



3.7 Expansion of Battery Cabinet Wiring



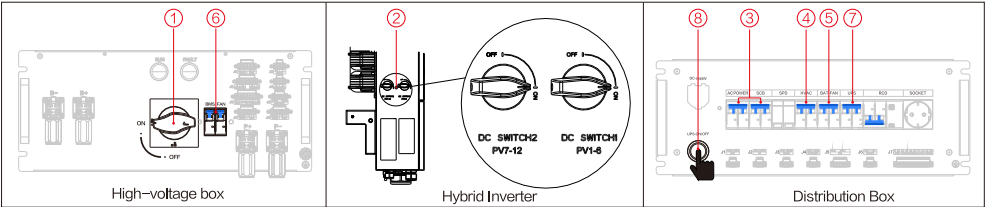
4. System Power On and Power Off

4.1 Pre-power-on Inspection

No.	Check items	Acceptance criteria
1	Appearance of the equipment	- The appearance of the equipment is in good condition, without any damage, rust or peeling paint. If there is any peeling paint, please carry out the painting repair operation - The equipment labels are clearly visible. Damaged labels should be replaced promptly.
2	Appearance of the cable	The flexible conduit cable is in good condition, and the protective layer of the cables is intact with no obvious damage.
3	Cable connection	The terminal components are made in accordance with the specifications and are securely connected; the positions of the cable connections are the same as designed.
4	Cable wiring	- The wiring is straight and orderly, with no crossover within the cabinet, meeting the principle of separating power and signal lines. - The cables should be left with sufficient slack as per the requirements and must not be pulled tight. - The wire connection joints should be cut neatly without any exposed sharp edges.
5	Switch	The PCS DC switch and circuit breaker are in the OFF position.

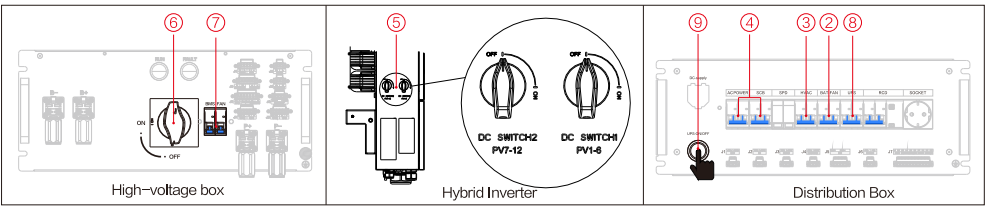
4.2 System Power On

- Rotate the handle of the DC circuit breaker in the rotating high-voltage box to "ON".
- Rotate the DC switch handle of the rotary mixer to "ON".
- Close the auxiliary power switch AC POWER (main power switch) and the lightning protection switch SCB (power distribution switch with lightning protection).
- Close the HVAC power switch, and the air conditioner will be powered on.
- Close the BAT-FAN power switch, and the fan of the battery pack will be powered on.
- Close the switches of the high-pressure box BMS and FAN;
- Close the UPS power supply switch;
- Press and hold the UPS-ON/OFF switch for at least - seconds. When you see the high-voltage box indicator light and the water immersion indicator light turn on, it indicates that the BMS, fire protection system, and control power supply have completed the power-on process.
- Start up the control system of the operation control platform.



4.3 System Power Off

- Shut down the operation control platform control system and disconnect the battery contactor (in case of emergency shutdown, you can press the emergency stop button on the cabinet).
- Disconnect the power switch for the BAT-FAN. The fan of the battery PACK will be powered off.
- Disconnect the power switch for the HVAC system. The air conditioner will power off.
- Disconnect the auxiliary power switch AC POWER (main power switch) and the lightning protection switch SCB (power distribution switch with lightning protection).
- Rotate the DC switch handle of the rotary mixer to "OFF".
- Rotate the handle of the DC circuit breaker in the rotating high-pressure box to "OFF".
- Disconnect the switches of the high-voltage box BMS and FAN;
- Disconnect the UPS power supply switch;
- Press and hold the UPS-ON/OFF switch. When you see the UPS indicator light go out, the BMS, fire protection, and control power supplies have completed the power-down process.



5. Services and Contact



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