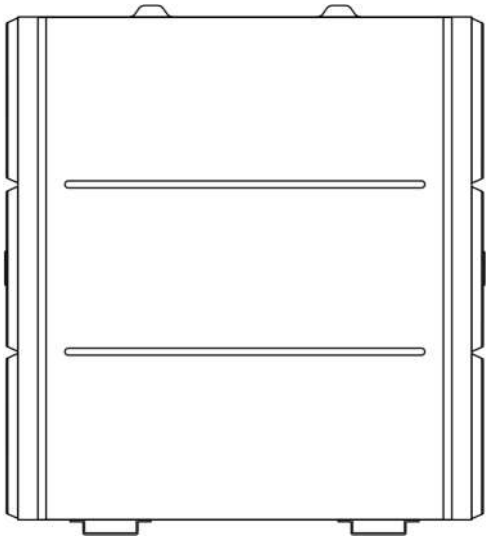
User Manual

Lithium-ion Rechargeable Battery System

AI-W16-6



Issue: 02
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Preface

This manual provides information on safety, installation, electrical connection, operation, maintenance, and other relevant aspects of the product.

In this manual, the terms “equipment”, “device”, and “product” refer to the product or its components; the terms “manufacturer”, “producer”, and “the Company” refer to NINGBO DEYE ESS TECHNOLOGY CO., LTD. (hereinafter referred to as the “Company”) or its authorized agents.

The illustrations in this manual are for reference only and may differ from the actual product. The Company reserves the right to modify the content without prior notice. For the latest version, please visit our official website or contact our after-sales service.

The Company assumes no liability for any losses arising outside the scope of the warranty policy.

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Contents

1 Safety

1.1 Symbols

Symbols	Description
	Connect an earth terminal to the ground.
	Warning; Electricity.
	Warning; Hot surface.
	Warning; Explosive material.
	Do not step on the product.
	Do not touch with your hands. This is usually due to being electrified, hot, or being delicate and prone to damage.
	Do not place the equipment near open flames or burn it. Do not use this equipment near heaters or high-temperature sources.
	No chasing.
	The product / packaging is not resistant to compression. Handle with care to prevent internal damage.
	5 min remaining before operation.
	ESD protection area.
	To indicate that the marked item or its material is part of a recovery or recycling process.
	Symbol for separate collection of batteries.
	Refer to instruction manual/booklet.
	Operator's manual.

	The package shall be kept upright during transportation and storage.
	The package contains fragile objects and shall be handled with care.
	The package shall be protected against rain, and rainproof measures shall be taken during transportation and storage.
	The package shall not be rolled during transportation.
	Stacking limit by number
	Lithium-ion battery transport falls under UN3480, Class 9 Miscellaneous Dangerous Goods. For sea, land and air transportation, the battery is classified into Packaging Group PI965 Section I. Class 9 Miscellaneous Dangerous Goods labels and UN identification labels must be affixed during transportation, and all operations shall be carried out in accordance with relevant transport documents.

1.2 Safety Precautions

This manual uses the following signal words to indicate imminently or potentially hazardous situations. Observe all safety instructions to avoid personal injury, property damage, or equipment malfunction.

Symbols	Description
DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTE	Supplements the important information in the main text. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Personal safety

DANGER

- Operators must carefully read and comply with all safety information in this manual and relevant document. Improper operation may cause casualties.
- Keep the product out of reach of children and animals.
- No one except DEYE staff or authorized personnel is allowed to open, repair or disassemble the battery.
- Only qualified professionals or trained personnel are permitted to install and operate the equipment.

- Only qualified professionals are permitted to remove safety facilities and inspect the equipment.

WARNING

- Personnel performing wiring operations on the equipment shall possess knowledge of electronics, electrical wiring and mechanical expertise, and be familiar with the electrical and mechanical schematics of this equipment.
- In case of electrolyte contact with eyes or skin, flush thoroughly with clean water for at least 10 minutes and seek immediate medical attention.
- Only qualified personnel are permitted to service the battery. Unauthorized operations void all liability.

CAUTION

- Personnel operating this equipment shall understand and comply with the requirements of this manual and other applicable documents.
- Components may become extremely hot in case of malfunction; touching is prohibited to prevent scalding.
- Personnel planning to install and operate the equipment must master all necessary safety precautions and local relevant standards.
- This manual does not cover all conceivable scenarios; applicable standards and relevant occupational health and safety regulations shall take precedence during operation.

NOTE

- Qualified professionals: Personnel who are familiar with the working principles and structure of the equipment, have received training or have experience in equipment operation, and are clear about the sources and degrees of various potential hazards in equipment installation.
- Trained personnel: Personnel who have received technical and safety training, have the required experience, are aware of potential hazards to themselves during certain operations, and can take protective measures to minimize hazards to themselves and others.

Electrical Safety

DANGER

- Lethal voltages exist inside the product. Touching the power grid and contact points/terminals of equipment may cause electric shock.
- Direct connection to AC power or PV solar wiring is strictly prohibited.
- Connecting batteries of different models is strictly prohibited.

WARNING

- Prior to installation, disconnect grid power and ensure the equipment is fully powered off.
- The battery may still be charged after power disconnection. Wait for 10 minutes and use a standard voltmeter to confirm no voltage before operation.
- The battery system must be well grounded with a grounding resistance of less than

1Ω.

- Use insulated tools and gloves during operation, and remove metal accessories such as watches and rings.
- Prevent terminals from contacting exposed wires or metal objects.
- Do not place any tools or metal parts on the battery module.
- Adjacent live parts shall be covered or shielded.

CAUTION

- Ensure correct wiring. Distinguish positive and negative poles strictly to prevent short circuits with external devices.
- Do not use faulty or incompatible power conversion unit.
- Verify that battery system parameters are fully compatible with connected equipment.

Mechanical Safety

DANGER

- Installation or operation of the battery system in explosive or high-humidity areas is strictly prohibited.

WARNING

- Do not insert foreign objects into any part of the battery.
- Place necessary warning signs or barriers near the product to prevent accidents caused by misuse or unrelated persons.

CAUTION

- Do not expose cables outside the designated routing.

NOTE

- Unpack and inspect immediately. Contact your vendor if damaged or parts are missing.
- Maintain a State of Charge (SOC) above 5% during use. Recharge within 48 hours after full discharge to avoid over-discharging.
- Contact the supplier within 24 hours if any abnormality occurs to the battery.

Maintenance Safety

DANGER

- Disassembling, modifying, or opening the battery is strictly prohibited.

WARNING

- Power off the battery completely before moving or performing any maintenance.
- All battery terminals and circuit connectors must be disconnected during maintenance.
- Maintenance shall follow the principles: power off, prevent restart, verify no voltage, grounding and short-circuit protection, shield adjacent live parts.
- Residual safety risks may arise from failure to observe warnings, improper installation, or construction by untrained personnel.

NOTE

- Do not paint any internal or external components of the battery.
- Do not clean batteries with cleaning solvents.
- Commissioning of the battery energy storage system shall be completed no later than six months after delivery.

Environmental Safety

DANGER

- Do not expose the battery to fire, heaters, high-temperature sources, or open flames.
- In case of fire, use only dry chemical fire extinguishers. Liquid extinguishers are forbidden.
- Damaged or failed batteries may leak electrolyte, producing hydrofluoric acid and other substances, causing chemical burns.

WARNING

- Do not expose the battery to flammable substances, harsh chemicals, or their vapors.
- Do not submerge the battery in water or expose it to moisture when incomplete. (The product's protection rating is valid exclusively when the product is in its complete, fully assembled configuration.)

Disposal Safety

WARNING

- Immediately cease use of damaged, swollen, or leaking batteries.
- Do not attempt to repair or disassemble damaged batteries. Contact your installer, sales partner, or a qualified recycling service provider for safe handling and disposal.
- Ensure damaged batteries are stored in a dry, cool environment, protected from moisture and direct sunlight.

CAUTION

- Waste batteries may contain hazardous pollutants and heavy metals. Improper storage, handling, or disposal can:
  Pose risks to human health.
  Cause environmental pollution (soil, water, and air contamination)
  In severe cases (e.g., damaged lithium-ion batteries), lead to leakage, fire, or explosion.

NOTE

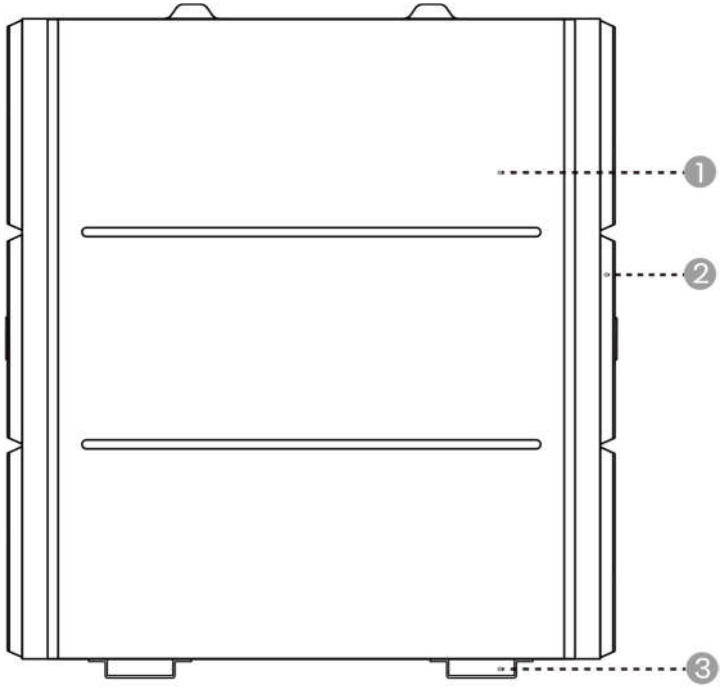
- Used batteries must not be disposed of as household or domestic waste. You are legally obligated to:
  Remove any privacy-related information from the product before disposal.
  Return used batteries and rechargeable batteries to designated or authorized collection/recovery points in compliance with local regulations and standards for waste battery management.
  Batteries contain valuable raw materials (e.g., lithium, iron, cobalt, nickel) that can

be recycled and reused. Proper disposal supports resource conservation and circular economy goals.

2 Product Introduction

The AI-W16-6 is Deye modular stacked residential energy storage battery. It features a 16 kWh capacity and a maximum output power of 11 kW. When paired with a stacked hybrid inverter, it forms an integrated energy storage system.
The first three digits of the battery pack SN code: 429.

2.1 Product Overview



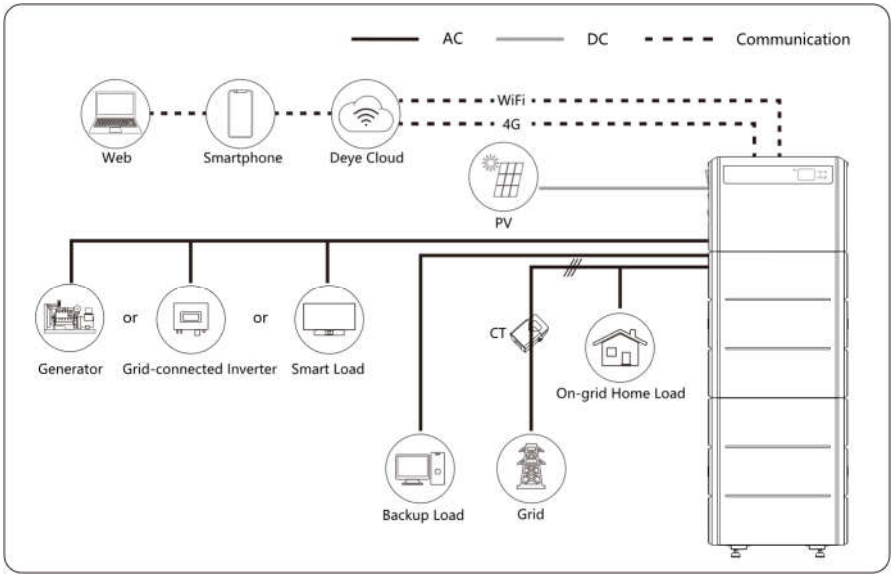
No.	Item
1	Battery Pack (Optional: 1~6 pcs)
2	Side Cover
3	Base

2.2 Application Scenarios

The following illustration shows basic application of this battery system. It also includes following devices to have a complete running system:

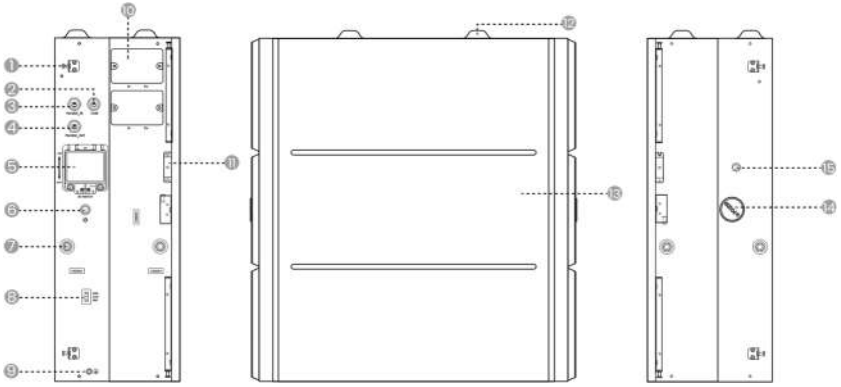
- Generator or Utility;
- PV modules;
- Inverter (Charge & Discharge).

Consult with your system integrator for other possible system architectures depending on your requirements.



The picture is only a reference picture, please refer to the actual product, the final interpretation right belongs to DEYE.

2.3 Product Appearance



Left View Front View Right View

No.	Icon	Item	Remarks
1	/	Decorative Cover Buckle	/
2	COM	COM	Real-time data exchange between the Inverter and the BMS.
3	Parallel_IN	Communication Port-IN	Connection position with previous battery's Parallel_OUT

4	Parallel_OUT	Communication Port-OUT	Connection position with next battery's Parallel_IN
5	ON/OFF, DC SWITCH	Circuit Breaker (in the protective cover)	Built-in overcurrent protection device. It automatically cuts off the circuit when the current abnormally exceeds the safe value, protecting the battery and equipment. A protective cover is fitted externally over the circuit breaker to shield it from external impacts and contamination.
6		ON/OFF Button (Power Button)	Manually activates or deactivates the Battery Management System (BMS) control circuit.
7	/	Handle Mounting Bolt	/
8	RUN / ALM / ERR	LED Indicator	/
9		Protective Grounding	Safety grounding terminal, ensuring reliable grounding of the metal enclosure to prevent electric shock risks.
10	P+ / P-	Battery Terminals (in the protective cover)	Positive connection terminal and negative connection terminal for Inverter.
11	/	Fixed Support Bracket	/
12	/	Positioning Boss	/
13	/	Front Cover	/
14	/	Explosion Relief Valve	Openings for rapidly venting high-pressure gas to prevent overpressure and explosion.
15	/	Air Vent Valve	Balances internal and external pressure of the device while preventing the ingress of contaminants such as water, dust, and oil.

LED Indicator:

	**RUN LED** Green, flashes when battery is running. **ALM LED** Yellow, flashes when alarm occurs. **ERR LED** Red, flashes when fault occurs. **All LED** Running light pattern: Firmware upgrading

3 Transportation

3.1 Transportation Precautions

DANGER

- Transportation of end-of-life, damaged or recalled batteries may be prohibited in some regions. Confirm local regulations before transportation; illegal transportation is strictly prohibited.
- It is strictly prohibited to mix dangerous goods with food, medicine, animal feed and their additives in the same vehicle or container, and to transport with sharp objects in the same vehicle or container.

WARNING

- Lithium-ion batteries are classified as UN3480, Class 9 Miscellaneous Dangerous Goods. For sea, land and air transportation, they fall under PI965 Section I. Class 9 dangerous goods labels and UN identification labels must be affixed during transportation.
- Transportation and storage service providers must hold the dangerous goods operation certification required by local laws and standards; no relevant business shall be undertaken without corresponding qualifications.
- Sea transportation shall comply with the requirements of the International Maritime Dangerous Goods Code (IMDG Code), and land transportation shall meet ADR or JT/T 617 transport standards; illegal selection of transport modes is strictly prohibited.
- If the battery has peculiar smell, leakage, smoke, fire or any other abnormalities before transportation, transportation is strictly prohibited.
- Obtain MSDS certification before sea transportation, seal the external gaps of containers and affix marks certified by the classification society; equip the outer packaging with rainproof canvas covers to avoid paint film scratches.
- Remove obstacles along the transport route, confirm that transport vehicles/containers meet dangerous goods transport standards, and ensure dangerous goods transport vehicles are equipped with two tested CO_2 fire extinguishers.
- Before removing the transport protector, check whether the packaging is damaged and whether the impact indicator on the outer packaging of the battery converter is triggered; if triggered, the risk of transport damage cannot be ruled out.
- When transporting faulty batteries, avoid flammable and explosive material storage areas, residential areas, mass transit facilities, elevators and other densely populated places.
- Only the top lifting lugs of the product are allowed for lifting, and the included angle of slings shall be at least 60°; illegal lifting is strictly prohibited.

CAUTION

- During the whole transportation process, strictly prevent severe vibration, impact and extrusion, avoid direct sunlight, rain and moisture, and take rainproof, moisture-proof and sun-protection measures.
- Smoking is strictly prohibited in transportation, loading and unloading areas. Freight

personnel are not allowed to open the outer packaging of battery packs without permission; handle with care during moving to prevent bumping.

- Transport operators must wear protective gloves and toe-cap safety shoes for personal protection, and pay special attention to avoiding scratches by sharp metal panels and crushing injuries by heavy objects.

NOTE

- All operations must be completed by professionally trained personnel, and unauthorized operation by non-professionals is strictly prohibited.
- Complete compliant and accurate declaration before transportation, and carefully check whether the battery packaging, labels and markings are intact.
- Transport vehicles/containers must meet dangerous goods transport standards to ensure the product is firmly fixed throughout the transportation process.
- Do not remove the product transport packaging before arrival at the installation site; remove it after arrival.

3.2 Transportation Methods

3.2.1 Handling

DANGER

- A single battery pack is heavy; forcible single-person handling is strictly prohibited.
- Battery packs/racks are top-heavy; side placement, upside-down placement and unfixed transportation are strictly prohibited; measures must be taken to prevent tipping during vertical transportation.

Before handling:

- Confirm that all personnel are in good physical condition before handling, wear anti-slip gloves, anti-slip shoes and necessary waist protection equipment to avoid injuries.
- Clean the handling path in advance to ensure a safe ground; slow down on slopes with special personnel assistance, and reserve sufficient operating space in narrow areas.
- When assigning carriers, the number of personnel shall be reasonably determined in accordance with the "Recommended Limits for Single Lifts by Healthy Adult Workers" specified in ISO 11228-1:2003 (25kg for males, 15kg for females), combined with the requirements for handling stability, load distribution and safety redundancy.

Example (for a 100kg product):

Short-distance handling on flat ground: at least 4 personnel working in coordination;

Long-distance handling, moving up/down slopes, operating in narrow spaces or lifting/lowering: no less than 5 personnel are recommended.

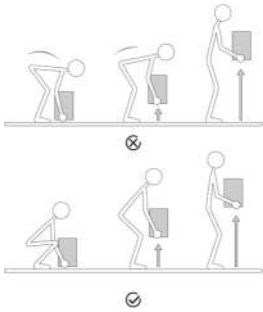
Wear personal protective equipment such as protective gloves and safety shoes when manually moving the equipment.

When handling:

- When manually lifting an object, move close to it, squat down, and lift smoothly and steadily using leg strength instead of back strength. Do not jerk or twist your body during lifting.
- Move or lift the equipment only by its designated handles or lower edges. Do not hold the handles of modules installed inside the equipment.
- Do not rapidly lift heavy objects above waist height. Place the object on a waist-height

workbench or other suitable surface, reposition your hands, and then continue lifting.

- Move heavy objects smoothly, with balanced force and at a slow, constant speed. Lower the object gently and steadily to avoid collisions, drops, scratches, or damage to components and cables.
- When moving heavy objects, pay attention to workbenches, slopes, stairs, and slippery areas. When moving through a doorway, ensure the opening is sufficiently wide to prevent impact or injury.
- When carrying heavy objects, turn by moving your feet instead of twisting your waist. When lifting and carrying, keep your feet pointing toward the intended direction of movement.



After handling:

- After handling, confirm that the load is placed stably to avoid injury caused by tipping.

3.2.2 Forklift

DANGER

- During forklift operation, unrelated personnel must keep at least a 2m safe distance; standing or riding on the forklift or cargo is strictly prohibited.
- Overloading and lifting loads too high are strictly prohibited to avoid forklift instability and rollover risks.
- Only certified professional forklift operators may perform operations; unauthorized operation by non-professionals is forbidden. Strictly follow all clauses; violators bear full responsibility for equipment damage and personal accidents.

Equipment Parameter Requirements:

Item	Requirements
Rated load capacity	more than 2 times of product weight
Fork length	no less than product width
Fork width	80mm~160mm
Fork thickness	25mm~70mm
Forklift lifting height	Subject to actual on-site installation

Driving & Steering:

- Driving speed shall be strictly controlled below 3 miles per hour (3mph). Sharp turns are strictly prohibited to avoid cargo shaking and imbalance.
- Before reversing, the forklift operator must carefully check the rear area and confirm safety before reversing. When reversing in confined spaces, a special commander must be arranged to guide the operator throughout the process.
- Operating forklifts on slopes with a gradient ≥5° is strictly prohibited. Slow down and operate carefully when lifting loads on uneven roads.
- Tilting or inverting the product is strictly prohibited during the whole transfer process. If tilting or inversion is necessary under special circumstances, restore the product to upright position as soon as possible, and leave it standing for 2 hours before power-on.

4 Installation

DANGER

- There is a risk of static overload during the entire installation process, which may cause damage to building structures. Be sure to verify the site bearing capacity and anti-static measures in advance.

CAUTION

- Only qualified professionals or trained personnel are permitted to install the equipment.
- Personnel planning to install the equipment must master all necessary safety precautions and local relevant standards.
- Only qualified professionals are permitted to remove safety facilities and inspect the equipment.
- Personnel installing this equipment shall understand and comply with the requirements of this manual and other applicable documents.

WARNING

- Product assembly must be carried out in strict accordance with the design scheme, process requirements, relevant regulations and national standards; unauthorized changes to assembly procedures and technical parameters are strictly prohibited.

4.1 Pre-Installation Preparation

4.1.1 Site Requirements

DANGER

- Do not expose the equipment to flammable or explosive gases, smoke, or heat/fire sources, and do not operate the equipment in such environments. Do not store any flammable or explosive materials around the equipment, and do not cover or wrap the battery. Otherwise, it may cause serious safety accidents such as fire, explosion, or equipment damage.
- The product should in principle be installed at least 15 ft (4.57 m) away from heat sources. This distance may be reduced by 100 cm if a fire barrier or other equivalent protective measure is provided.

WARNING

- Install the equipment in an area far away from liquids. Do not install it in areas prone to condensation, such as under water pipes and air exhaust vents, or areas prone to water leakage, such as air conditioner vents, ventilation vents, or feeder windows of the equipment room. Ensure that no liquid enters the equipment to prevent faults or short circuits.
- To prevent damage or fire due to high temperature, ensure that the ventilation vents or heat dissipation systems are not obstructed or covered by other objects while the equipment is running, so as to ensure unobstructed heat dissipation.
- The product poses a risk of burns. Do not touch hot surfaces to avoid personal injury.
- Keep away from the air outlet of the product to prevent personal injury caused by

high-temperature air flow.

NOTE

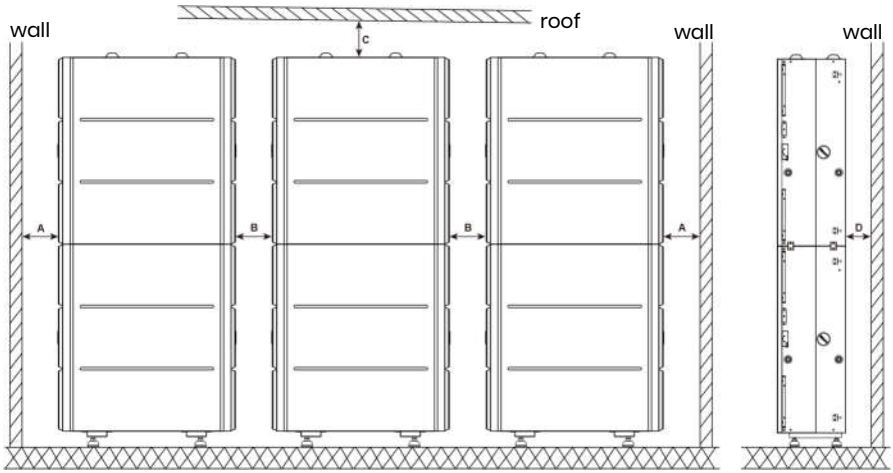
- The installation and usage environment must meet the requirements of relevant international standards and local laws and regulations. The user is obliged to take measures to protect the equipment against fire or other hazards.
- Confirm that the installation site has sufficient bearing capacity in advance according to the total weight of the battery storage system; installation in areas with unqualified bearing capacity is strictly prohibited.
- When selecting the installation site, plan a reasonable equipment transportation route in advance, remove obstacles, debris and dust on the site to ensure a spacious and unobstructed working space.
- Keep the equipment out of the reach of children and away from daily working or living areas, including but not limited to the following areas: studio, bedroom, lounge, living room, music room, kitchen, game room, home theater, sunroom, toilet, bathroom, laundry room, and attic.
- Do not install the equipment in enclosed, poorly ventilated areas without proper fire-fighting facilities, or in areas difficult for firefighters to access, to prevent failure to dispose of fires in a timely manner.
- Do not install the equipment on a moving object, such as a ship, train, or car, to avoid damage or potential safety hazards caused by jolting and shaking of the equipment.
- Ensure that the equipment is installed in a clean, dry and well-ventilated area with proper temperature, humidity and altitude range. For more data, please check the "Technical Specifications" section. It is recommended that the installation site have an altitude no higher than 3000 meters (an increase in altitude will reduce the battery output power)
- Do not install the equipment in an environment with magnetic dust, volatile or corrosive gases, infrared and other radiations, organic solvents, conductive metals, or salty air, so as to avoid damaging equipment components. (This product, with Anti-Corrosion Level C4m, is only suitable for installation beyond **2 km** from the coastline.)
- Do not install the equipment in an area conducive to the growth of microorganisms such as fungi or mildew, to prevent microorganisms from eroding the equipment and affecting its normal operation and service life.
- Do not install the equipment in an area with strong vibration, noise, or electromagnetic interference, to avoid affecting the operational stability and safety of the equipment.
- Do not install the equipment in a position that may be submerged in water, to prevent short circuits, damage or safety accidents caused by water entering the equipment.
- The floor and wall at the installation location shall be fully waterproof with a flat and level surface, to avoid affecting the installation and operation of the equipment due to uneven ground or water leakage.
- The equipment should be placed on a surface with sufficient load-bearing capacity.
- The installation site shall adopt solid brick-concrete structures, concrete walls and floors. If other types of walls or floors are used, they must be constructed of flame-

retardant materials and meet the load-bearing requirements of the equipment.

- Before installing and powering up the system, dust and iron filings must be removed to keep the environment clean. The system cannot be installed in desert areas without a shell to protect against sand.
- The product shall be installed at a location where the impact of its noise is minimized.
- This product may be installed indoors and outdoors. To prolong the battery's lifespan, please try to avoid direct sunlight exposure, direct rainwater impact, snow cover, and being close to fire sources, etc.

Recommended Clearance

During product installation, the following clearance requirements shall be met between the product and surrounding buildings and objects:

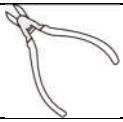


Item	Distance (mm)
A	≥220
B	470
C	≥950
D	0-35

4.1.2 Tool Requirements

These tools are required to install the device.

		
Hammer	Drill	Tape measure

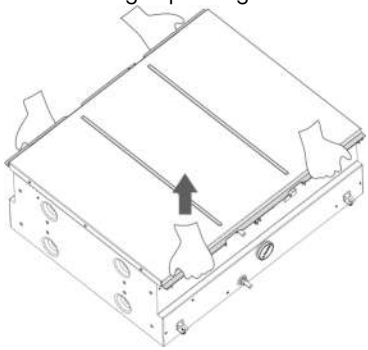
		
Hexagon socket wrench	Phillips screwdriver	Hex screwdriver
		
Marker	Precision Level	Ring Spanner
		
Diagonal pliers		

It is recommended to wear the following safety gear when installing the device.

		
Insulated gloves	Safety shoes	Safety goggles

4.2 Unpacking and Inspection

- If possible, do not remove the transport packaging until the equipment arrives at the installation site.
- After preparing the equipment for installation, unpack it carefully to avoid scratching the equipment.
- This product is mostly packaged with shock-resistant and easy-to-disassemble EPE foam, which can be unpacked with tools such as cutters or knives.
- Keep the equipment stable during unpacking.

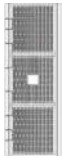
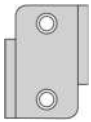
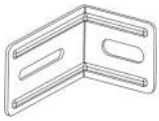


- If the installation environment is not conducive to equipment protection, take measures to prevent internal battery failure caused by condensation or dust corrosion (e.g., cover with woven cloth or dust cover).
- After unpacking the equipment, check that the deliverable contents are intact and complete, and free from any damage. If any items listed in the Packing List is missing or damaged, contact your dealer or our after-sales service team.
- All components shall be thoroughly cleaned prior to assembly to ensure surfaces are free of dirt and impurities.
- During component handling and storage, collision and scratch are strictly prohibited. Take moisture-proof and rust-proof measures to avoid appearance damage and performance failure of components.
- This product is heavy. Handle it with care when taking it out of the packaging box; rough handling is strictly prohibited to avoid personnel injuries and equipment falling damage.
- When connecting to Inverters or operating in parallel mode, only standard cables included in the unpacking list must be used. If other cables are required under special circumstances, ensure they meet relevant standards.

Packing List

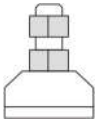
Standard Accessory Kit

Battery

		
Battery pack *1	Documents *1	Base *2
		
Side cover *2	Label sticker *1	Grounding wire *1
		
BAT-BAT connecting plate *4	Fixed support *2	Bolt (M6×16) *8
		
Expansion bolt (M6×100) *2	Bolt (M4*12) *7	

Optional Accessory Kit

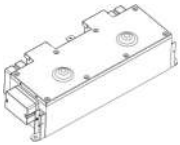
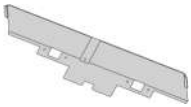
Leveling Foot (M12*H60*D40)

		
Leveling foot *4		

BCable

		
Connector assembly *1	Communication cable A *1	Bolt (M4*12) *8 For fixing the connector assembly
		
Nut (M10) *2	Nut (M12) *2	

Parallel Base

		
Parallel base (with brackets) *1	Left cover *1	Right cover *1
		
Rear cover *1	Telescopic slide rail *1	Connector assembly *1
		
Communication cable B *1	BAT-Base connecting plate *2	Bolt (M4*12) *8

		
Screw (M4*8) *8	Expansion bolt (M10×100) *4	Bolt (M4*12) *9 For fixing the connector assembly
		
Nut (M10) *2	Nut (M12) *2	

Recommended Torque

Nominal thread diameter (mm)	T	0.5T	1.8T	2.4T
	N·m	N·m	N·m	N·m
M1	0.0195	0.0098	0.035	0.047
(M1.1)	0.027	0.0135	0.049	0.065
M1.2	0.037	0.0185	0.066	0.088
(M1.4)	0.058	0.029	0.104	0.14
M1.6	0.086	0.043	0.156	0.205
(M1.8)	0.128	0.064	0.23	0.305
M2	0.176	0.088	0.315	0.42
(M2.2)	0.23	0.116	0.41	0.55
M2.5	0.36	0.18	0.65	0.86
M3	0.63	0.315	1.14	1.5
(M3.5)	1.0	0.5	1.8	2.4
M4	1.5	0.76	2.7	3.6
(M4.5)	2.15	1.08	3.9	5.2
M5	3.0	1.5	5.4	7.2

M6	5.2	2.6	9.2	12.2
(M7)	8.4	4.2	15.0	20.0
M8	12.5	6.2	22.0	29.5
M10	24.5	12.5	44	59
M12	42	21.0	76	100
M14	68	34	122	166
M16	106	53	190	255
(M18)	146	73	270	350
M20	204	102	370	490
(M22)	282	140	500	670
M24	360	180	650	860
(M27)	520	260	940	1240

NOTE

- Strictly adhere to the specified torque values to prevent over-tightening or under-tightening.
- The torque value is for reference only for standard bolts during normal assembly; adjust appropriately for special working conditions (high vibration/harsh environment).
- Use a calibrated torque wrench for installation to ensure torque accuracy.

4.3 Installation Procedures

NOTE

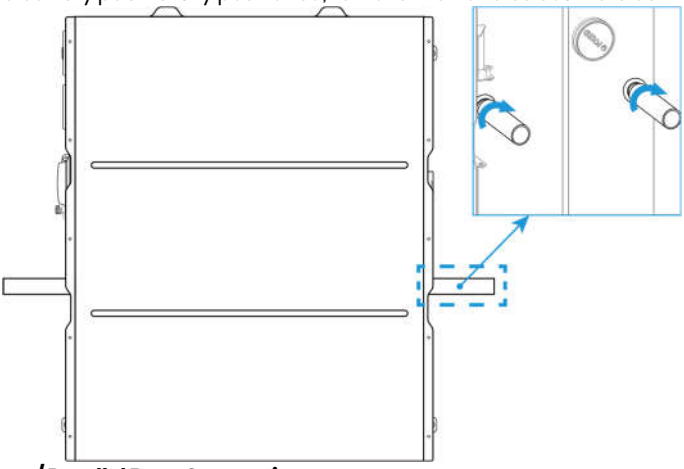
- Before installation, be sure to turn the manual switch of the components of the product to the OFF position; live operation is strictly prohibited.
- This product is heavy. If a forklift is used for handling and installation, ensure cooperative operation by multiple personnel to prevent tipping or falling.
- A single stack allows a **maximum** stack of **2** battery packs.
- All screws and expansion bolts must be tightened to ensure firm connection.
- When drilling holes, pay attention to prevent dust from entering the battery, which may affect the battery performance and function. Installer shall avoid the wires and pipes behind the wall when they drill the hole on the wall.
- After drilling, never forget to clean up the floor.

4.3.1 Common Installation Procedures

(Applicable to all installation modes)

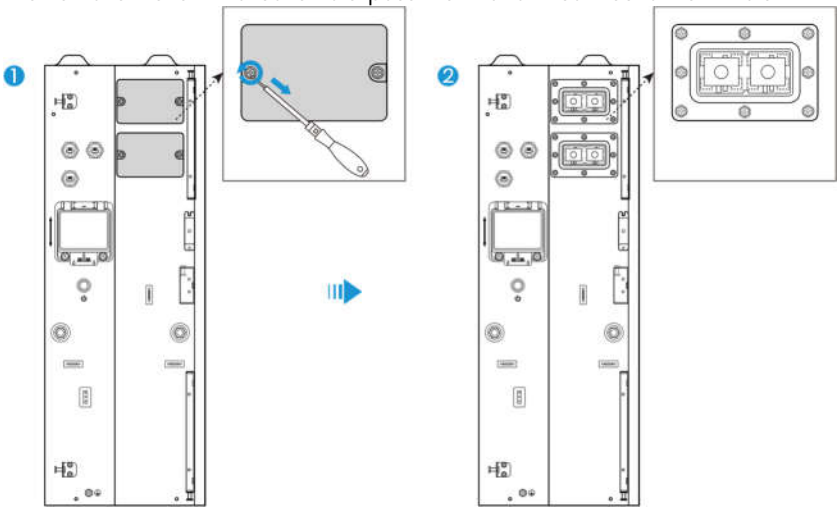
✧ **Battery Pack Handling**

1. Take 4 handles from the inverter accessory kit.
2. Screw them clockwise onto the reserved handle mounting bolts on both sides of the battery pack.
3. After the battery pack is fully positioned, remove the handles counterclockwise.



✧ **Battery / Parallel Base Connection**

First remove the terminal cover to expose the P+ and P- connection terminals.

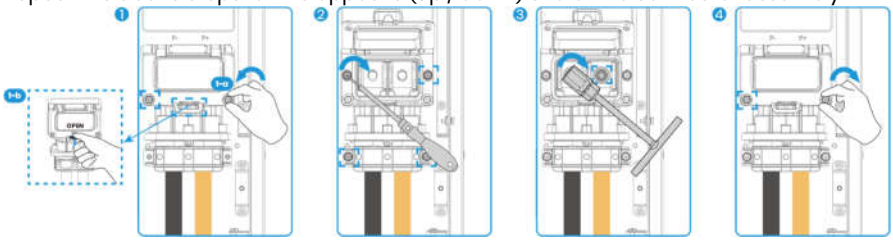


1. Counter-clockwise loosen the 2 screws on the connector-assembly protective cover, press the latch and flip the cover open.
2. Align connector-assembly crimp terminals with P+ / P- points on battery pack (or base); fix the connector assembly to battery pack (or base) with screwdriver and M4×12 screws. Recommended torque: 1.5 N·m for M4×12 bolt.
3. Secure with M12 / M10 nuts using the T-type socket wrench from the inverter accessory kit. **M12** nut applies to "**P+**"; **M10** nut applies to "**P-**". Orange cable is positive wire, black cable

is negative wire. Ensure correct mating to P+ and P- connection terminals. Recommended torque: 24.5 N·m for M10; 42 N·m for M12.

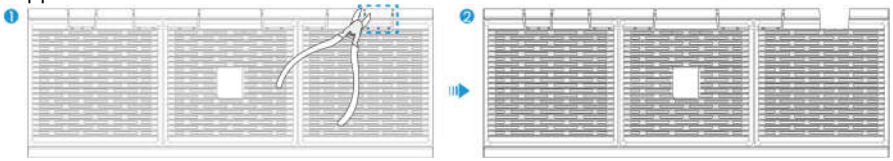
4. Close the cover and tighten its 2 screws clockwise.

Repeat the above steps for the opposite (up / down) end of the connector assembly.



✧ **Side Cover Trimming**

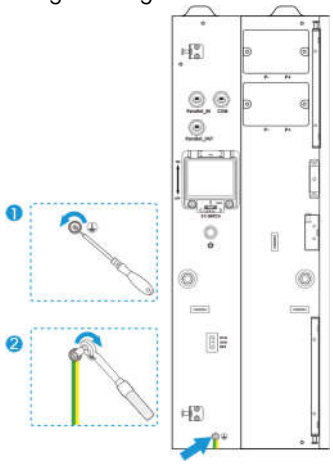
Trim the side cover according to the figure below for clearance against the side fixed supports.



✧ **System Grounding**

The bottom battery pack of each stack must be reliably grounded.

1. Use a torque wrench to remove the M4×12 grounding screw at the base grounding point.
2. Attach the yellow-green grounding cable, then re-tighten the M4×12 grounding screw at the grounding point. Recommended torque for M4×12 screw: 1.5 N·m
3. Connect the other end of the grounding cable to a reliable earth ground.

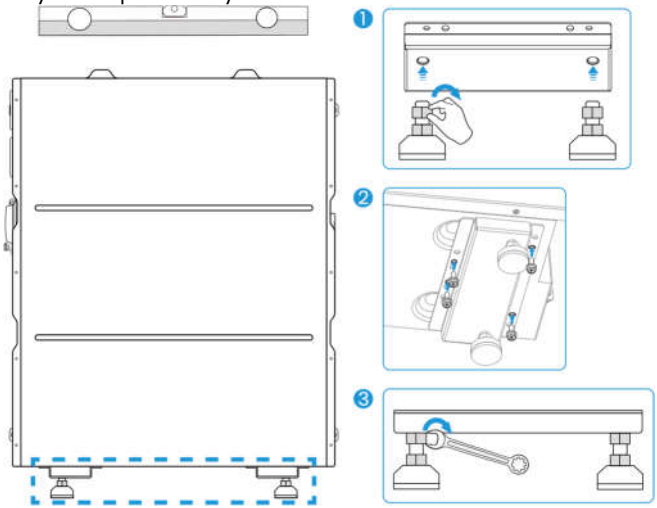


4.3.2 Configuration-Specific Installation Procedures

✧ **Single-Stack Installation (for 1–2 battery packs)**

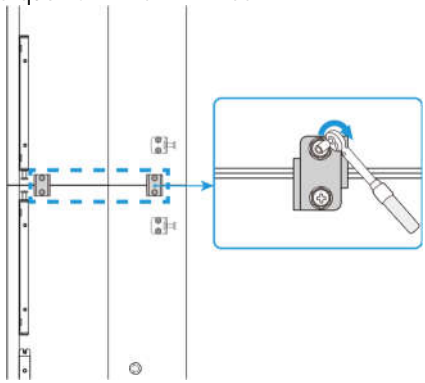
Step 1:

1. Attach leveling feet to the base to form the base assembly. (**Optional. Without leveling feet, the unit shall be installed on flat concrete floor or concrete-brick surface.**)
2. Install the base (or base assembly) to the bottom of Battery 1 with 4 pcs M6×16 bolts, refer to ② in the figure. Recommended torque: 5.2 N·m for M6×16 bolt.
3. Place Battery 1 against the wall with a clearance of 0–35 mm.
4. Level the battery pack by adjusting the leveling feet.
5. Stack Battery 2 on top of Battery 1.



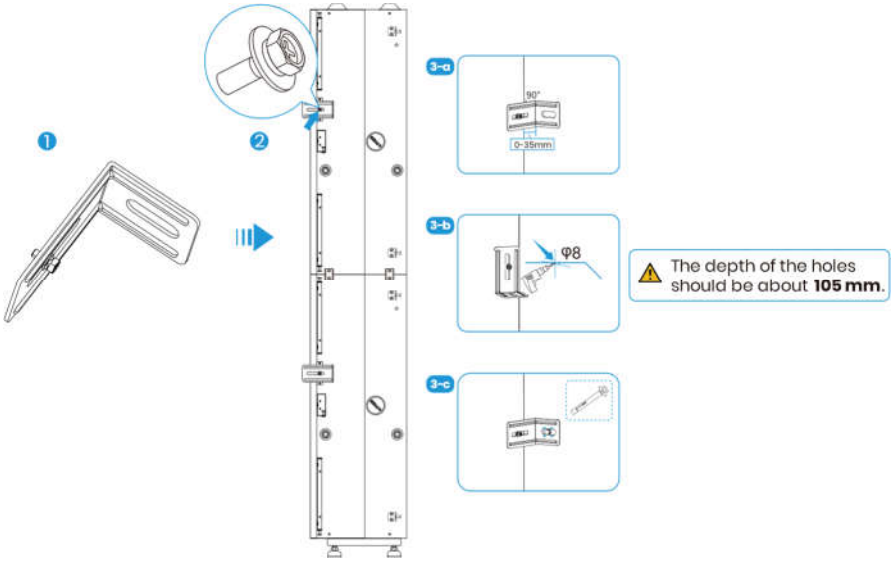
Step 2:

Secure upper and lower packs with 2 connecting plates per side (4 pcs total) and 4 M4×12 bolts. Recommended torque: 1.5 N·m for M4×12 bolt.



Step 3:

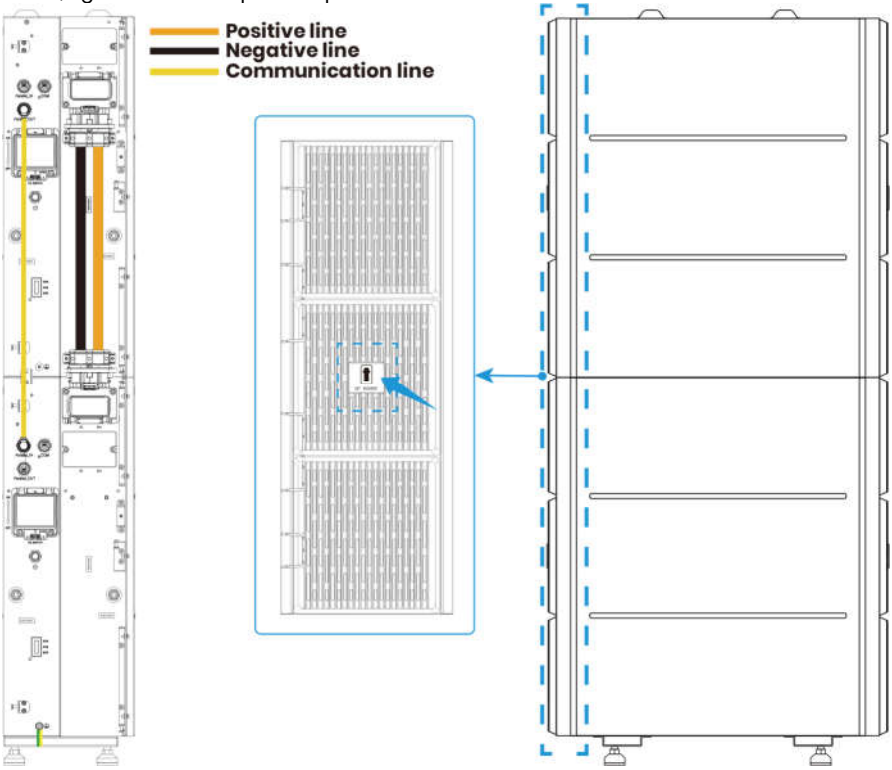
Fasten the fixed supports to the left and right sides of the battery stack using M4×12 bolts and M6×100 expansion bolts. Recommended torque: 1.5 N·m for M4×12 bolt; 5.2 N·m for M6×100.



Step 4:

Install the connector assembly onto the battery packs, connect the communication cable A between packs, mount the trimmed side covers, and affix the label to mark the circuit breaker position.

Communication cable A connection method: Parallel_OUT of the upper battery pack connects to Parallel_IN of the lower battery pack. After connecting the communication cable, tighten the waterproof cap of the communication cable.



✧ **Multi-Stack / Parallel Installation (for 3–6 battery packs, 6 units as example)**

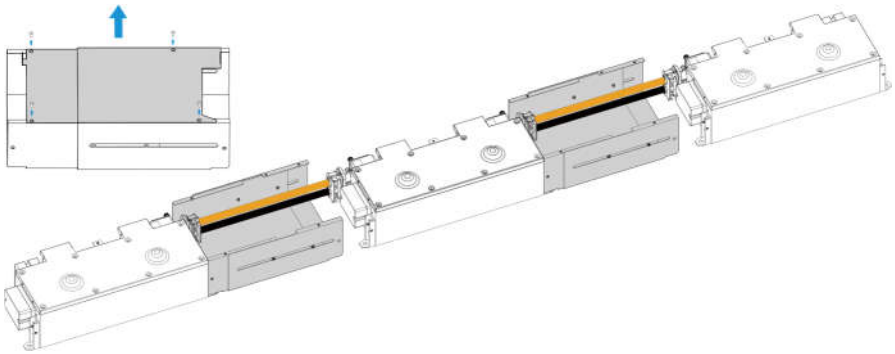
The Parallel Base Kit is mandatory for this configuration.

Units fitted with Parallel bases shall be installed on a flat concrete floor or concrete -brick surface.

Mode 1: Side-by-Side Arrangement (left – middle – right)

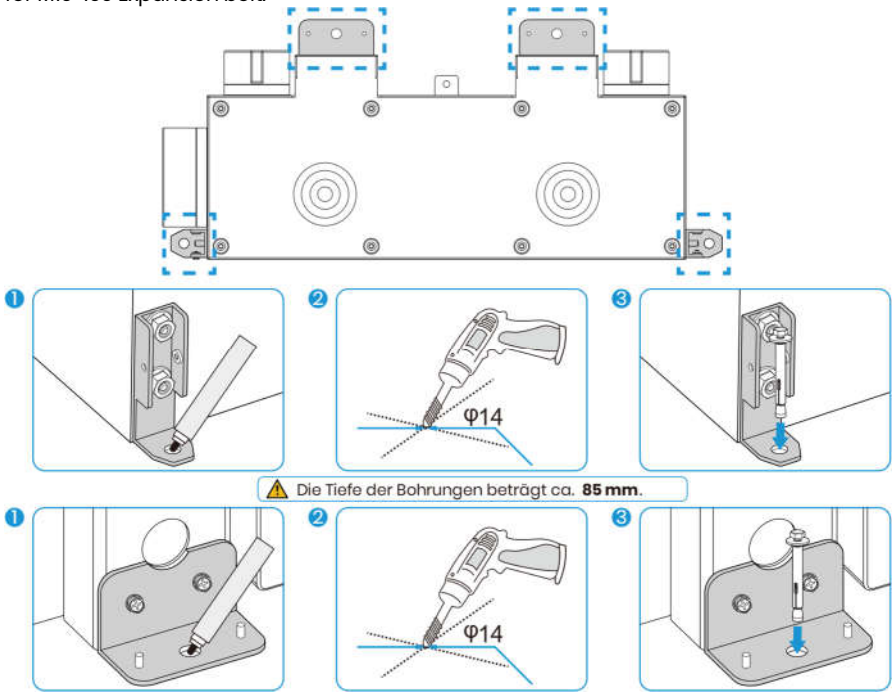
Step 1:

Place the Parallel bases and the retracted telescopic slide rail (with covers removed) in an open area first. Keep the removed covers and M4×12 screws for later use. Connect the 3 Parallel bases with 2 connector assemblies. Then move them against the wall with a clearance of 0–35 mm.



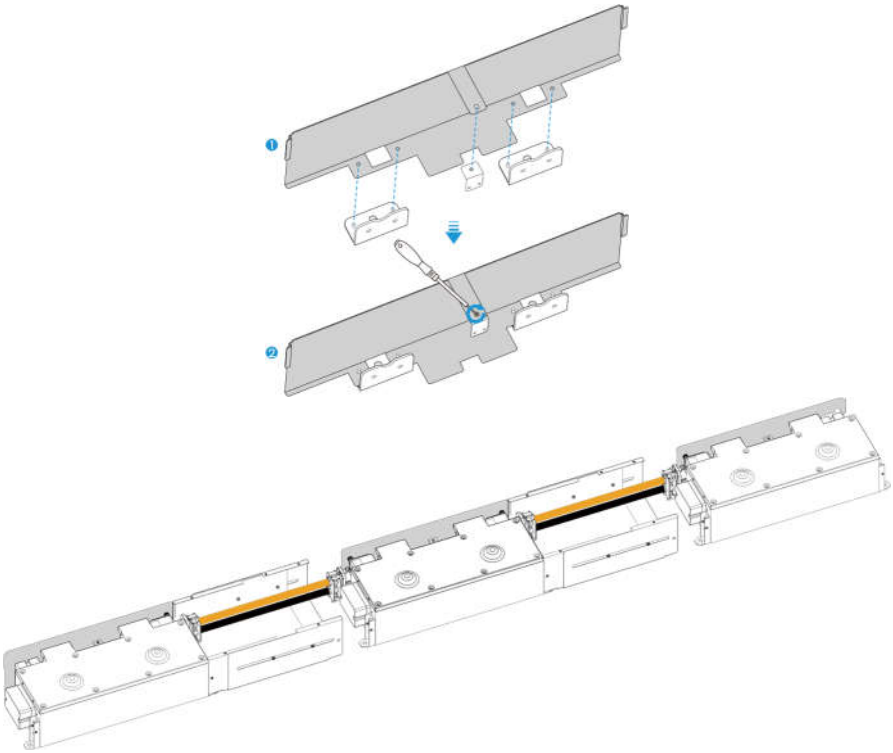
Step 2:

Mark the fixing positions of the Parallel base mounting feet on the floor with a marker. Remove the Parallel bases, drill the mounting holes, then reposition the bases. Secure the Parallel bases to the floor with M10×100 expansion bolts. Recommended torque: 24.5 N·m for M10×100 Expansion bolt.



Step 3:

Place the rear covers between the Parallel bases and the wall. Align with the positioning posts on the Parallel base mounting feet, and secure each rear cover to the base with 1 M4×8 screw.



Step 4：

Stack battery packs onto the Parallel bases:

- Connect two battery packs on the same base with 4 BAT-BAT connecting plates.
- Connect each battery stack to its base with 2 BAT-Base connecting plates.
- All 16 bolts for fixing the connecting plates are M4×12. Recommended torque: 1.5 N·m for M4×12 bolt.

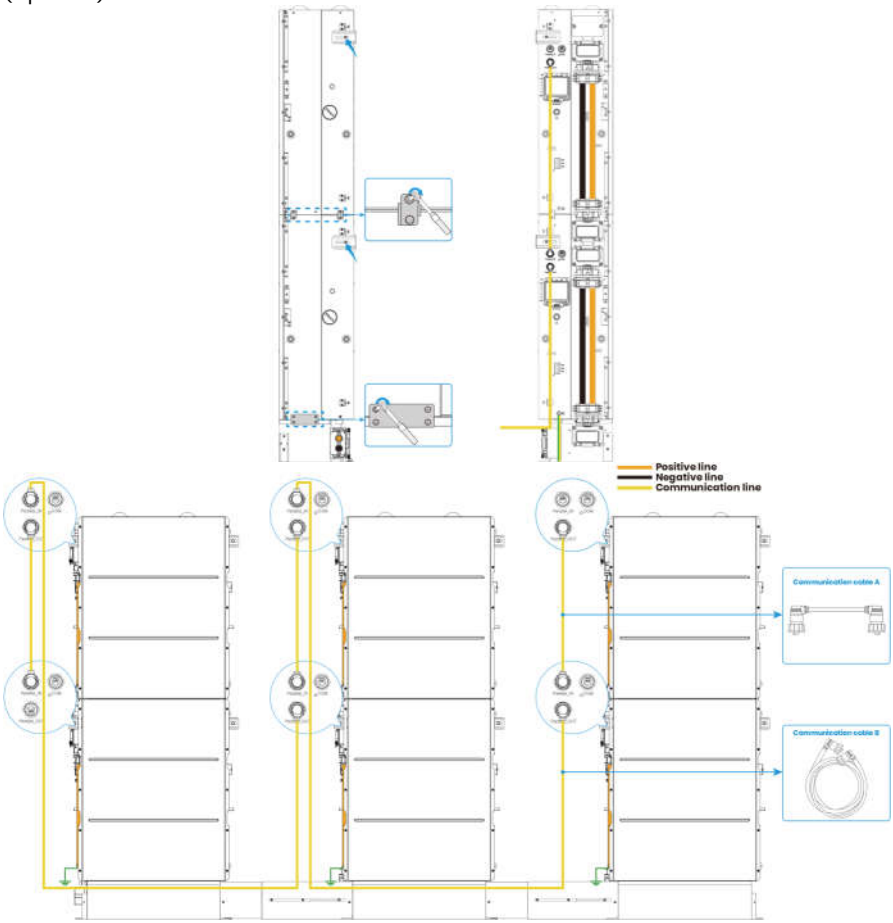
Fasten fixed supports to the left and right sides of all battery packs using M4×12 bolts and M6×100 expansion bolts. Recommended torque: 1.5 N·m for M4×12 bolt; 5.2 N·m for M6×100.

Install the connector assemblies onto the battery packs and connect the communication cables between packs.

- Connect two battery packs on the same base: connector assembly and communication cable A are from the BCable Accessory Kit. (Optional). Communication cable A connection method: Parallel_OUT of the upper battery pack connects to Parallel_IN of the lower battery pack. After connecting the communication cable, tighten the waterproof cap of the communication cable.
- Connect two battery stacks: communication cable B is from the Parallel Base Accessory Kit (Optional). Communication cable B connection method: Parallel_OUT of the lower battery pack in the right battery stack connects to Parallel_IN of the upper battery pack in the middle battery stack; Parallel_OUT of the lower battery pack in the middle battery stack connects to Parallel_IN of the upper battery pack in the left battery stack. After connecting the communication cable, tighten the waterproof cap of the

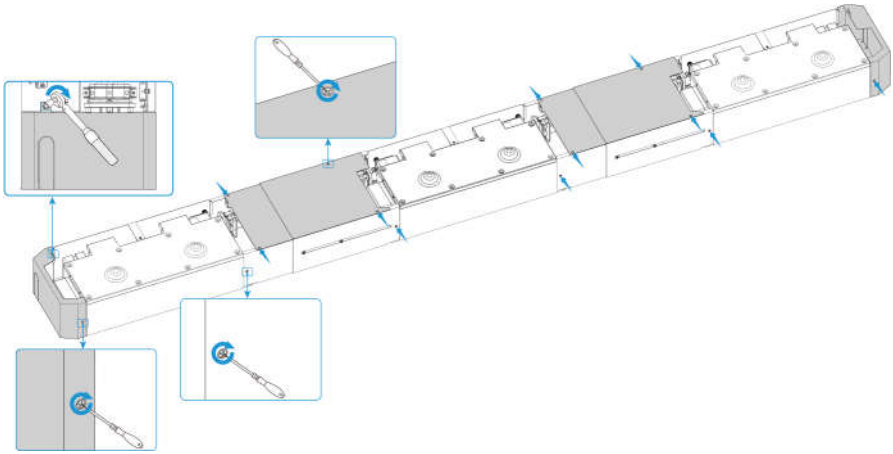
communication cable.

- Connect two Parallel Bases: connector assembly is from the Parallel Base Accessory Kit (Optional).



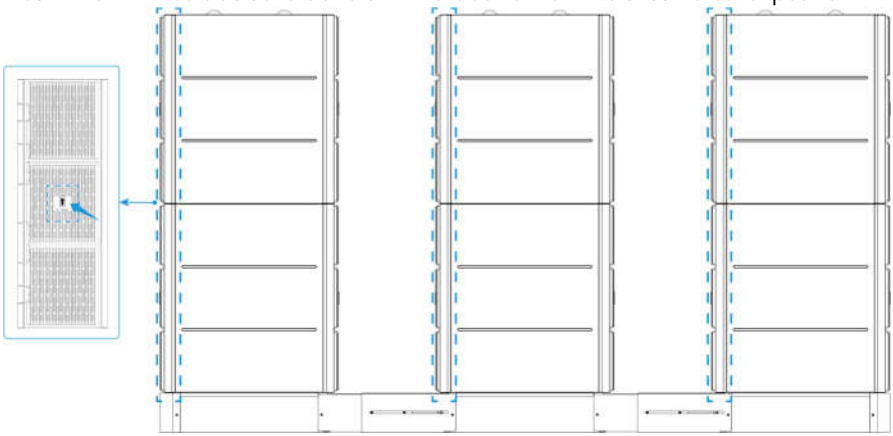
Step 5:

Extend the telescopic slide rail between the bases, and fasten both sides of the rail to the Parallel bases with 2 M4×8 screws each. Recommended torque: 1.5 N·m for M4×8 screw.
Reinstall the covers on the telescopic slide rail and tighten with the original M4×12 screws. Recommended torque: 1.5 N·m.
Install the left and right covers onto both sides of each Parallel base assembly, and fasten the covers to the battery packs and bases with M4×12 bolts. Recommended torque: 1.5 N·m for M4×12 screw / bolts.
(For illustration, the figure below only shows the Parallel base assembly.)



Step 6:

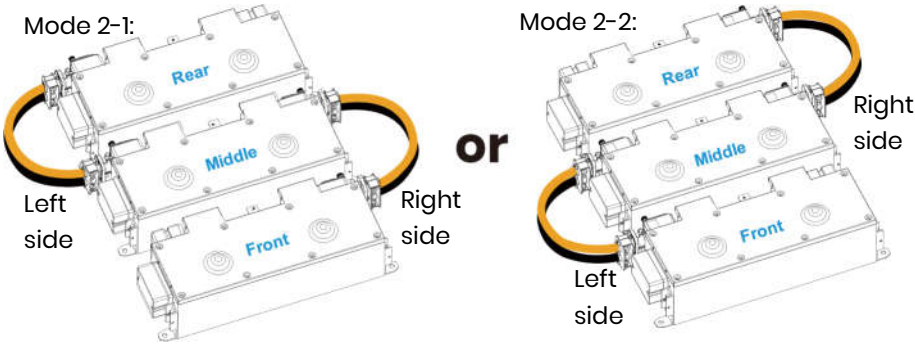
Mount the trimmed side covers and affix the label to mark the circuit breaker position.



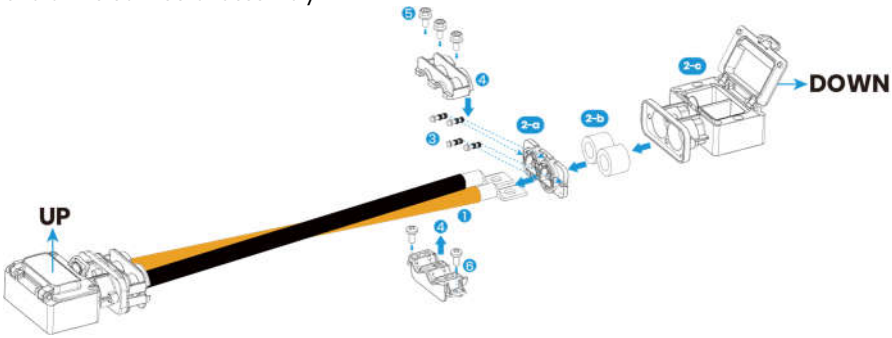
Mode 2: Front-to-Rear Arrangement (front – middle – rear)

Step 1:

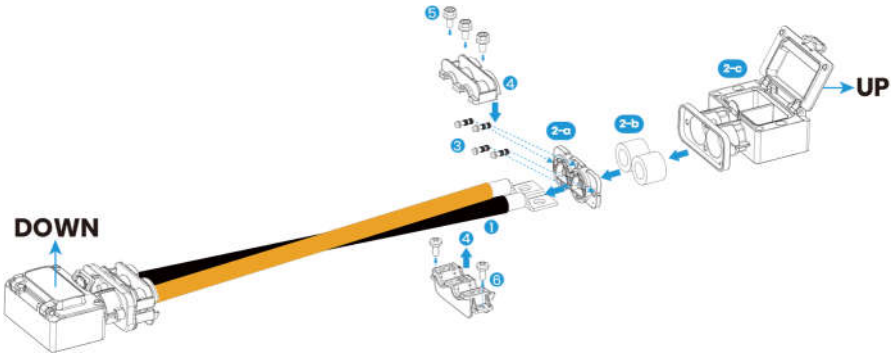
Arrange the Parallel bases front-to-rear in an open area first, and connect them sequentially with connector assemblies. To match the polarity, one end of each connector assembly must be disassembled, the cables crossed, then reassembled, finally the connector assembly should be bent to complete the connection. Move them against the wall with a clearance of 0–35 mm. Final status shall be as shown in the figure below:



- **Left side** (Middle-Rear @Mode 2-1 & Front-Middle @Mode 2-2)**:** Disassemble the **DOWN** end of the connector assembly

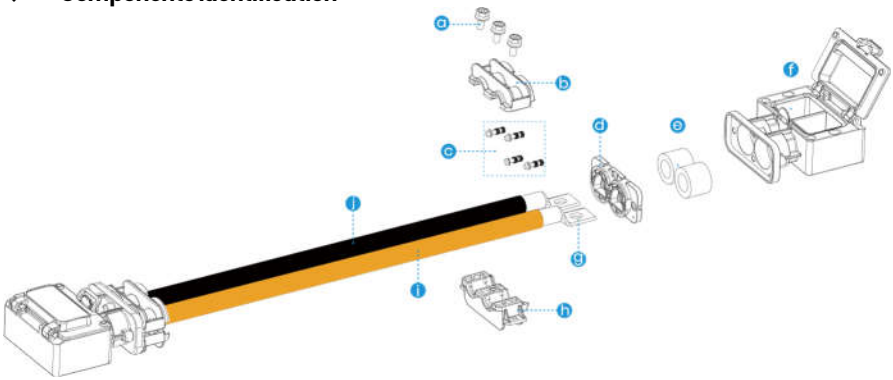


- **Right side** (Front-Middle @Mode 2-1 & Middle-Rear @Mode 2-2)**:** Disassemble the **UP** end of the connector assembly.



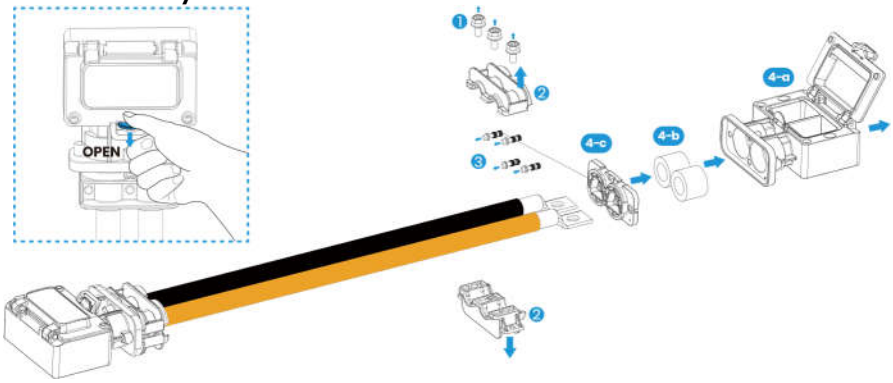
- **Connector Assembly Disassembly & Reassembly Procedures**

◆ **Components Identification**



No.	Name	No.	Name
a	M4×12 Screw	f	Protective Housing
b	Upper Pressure Plate	g	Crimp Terminal
c	M4×12 Screw	h	Lower Pressure Plate
d	Pressure Plate	i	Positive Cable
e	Cable Gland	j	Negative Cable

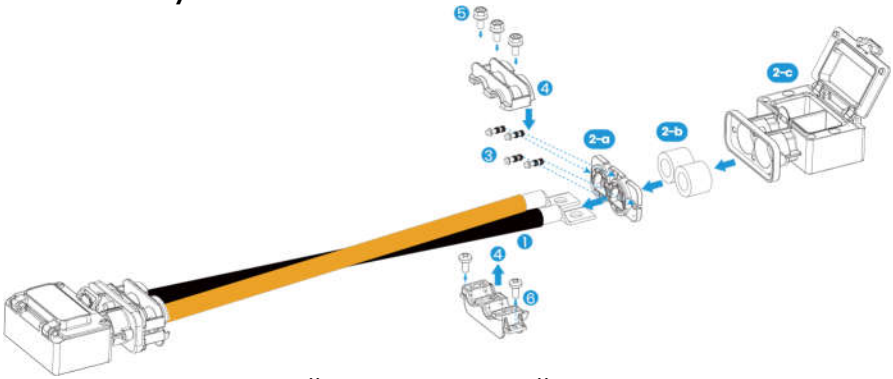
➢ **Disassembly**



Before disassembly, press the latch and flip the cover open.

1. Loosen the M4×12 Screw (a).
2. Separate Upper Pressure Plate (b) and Lower Pressure Plate (h).
3. Loosen the M4×12 Screw (c).
4. Remove Protective Housing (f), Cable Gland (e) and Pressure Plate (d) sequentially from the cables.

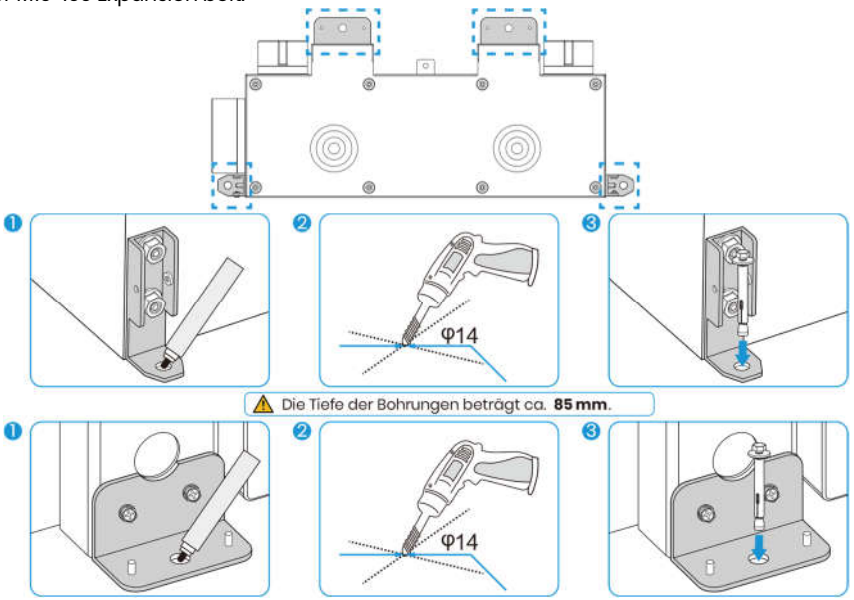
➢ **Reassembly**



1. Cross the Positive Cable (i) and Negative Cable (j).
2. Mount Pressure Plate (d), Cable Gland (e) and Protective Housing (f) back onto the cable harness in sequence.
3. Fasten M4×12 Screw to secure Pressure Plate (d). Recommended torque for M4×12 Screw: 1.5 N.m
4. Close Upper Pressure Plate (b) and Lower Pressure Plate (h).
5. Fix the combined pressure plates with M4×12 Screw (a). Recommended torque for M4×12 Screw: 1.5 N.m

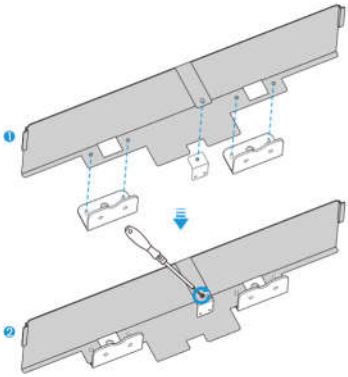
Step 2:

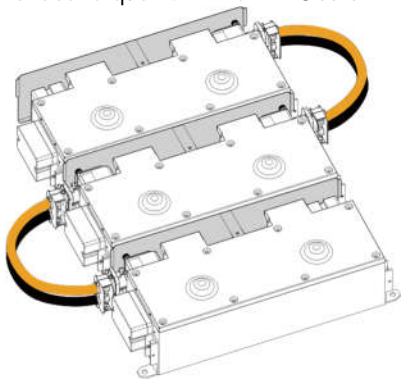
Mark the fixing positions of the Parallel base mounting feet on the floor with a marker. Remove the Parallel bases, drill the mounting holes, then reposition the bases. Secure the Parallel bases to the floor with M10×100 expansion bolts. Recommended torque: 24.5 N·m for M10×100 Expansion bolt.



Step 3:

Place rear covers between the Parallel bases and the wall, and between adjacent Parallel bases. Align with the positioning posts on the Parallel base mounting feet, and secure each rear cover to the base with 1 M4×8 screw. Recommended torque: 1.5 N·m for M4×8 screw.





Step 4:

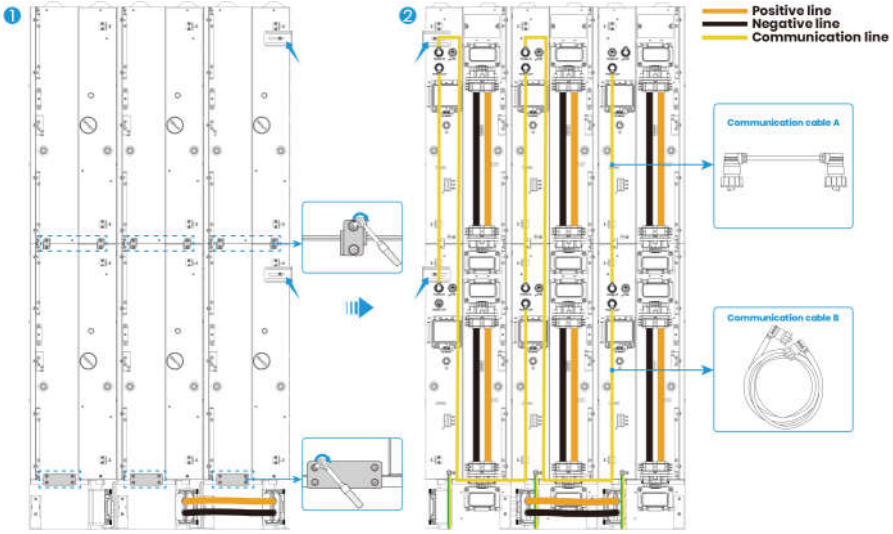
Stack battery packs onto the Parallel bases:

- Connect two battery packs on the same base with 4 BAT-BAT connecting plates.
- Connect each battery stack to its base with 2 BAT-Base connecting plates.
- All 16 bolts for fixing the connecting plates are M4×12. Recommended torque: 1.5 N·m for M4×12 bolt.

Fasten fixed supports to the left and right sides of the two wall-side battery packs using M4×12 bolts and M6×100 expansion bolts. Recommended torque: 1.5 N·m for M4×12 bolt; 5.2 N·m for M6×100.

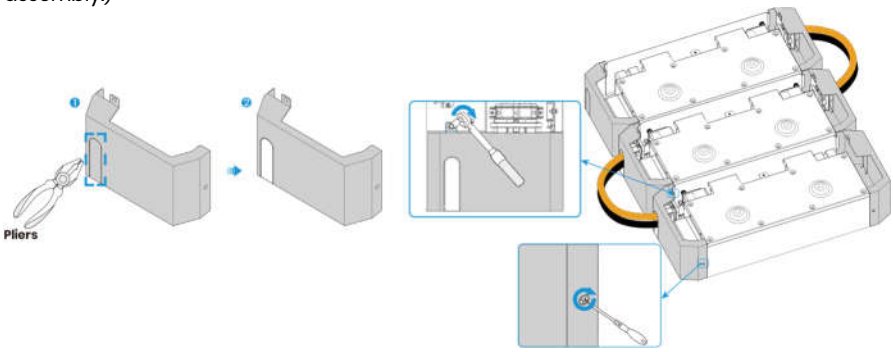
Install the connector assemblies onto the battery packs and connect the communication cables between packs.

- Connect two battery packs on the same base: connector assembly and communication cable A are from the BCable Accessory Kit. (Optional). Communication cable A connection method: Parallel_OUT of the upper battery pack connects to Parallel_IN of the lower battery pack. After connecting the communication cable, tighten the waterproof cap of the communication cable.
- Connect two battery stacks: communication cable B is from the Parallel Base Accessory Kit (Optional). Communication cable B connection method: Parallel_OUT of the lower battery pack in the front battery stack connects to Parallel_IN of the upper battery pack in the middle battery stack; Parallel_OUT of the lower battery pack in the middle battery stack connects to Parallel_IN of the upper battery pack in the rear battery stack. After connecting the communication cable, tighten the waterproof cap of the communication cable.
- Connect two Parallel Bases: connector assembly is from the Parallel Base Accessory Kit (Optional).



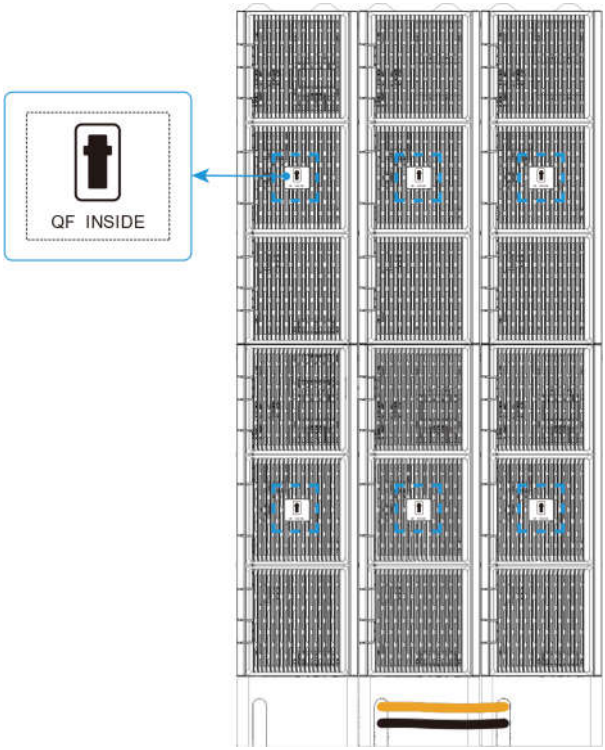
Step 5:

Install the left and right covers onto both sides of each Parallel base, and fasten the covers to the battery packs and bases with M4×12 bolts. Recommended torque: 1.5 N·m for M4×12 bolts. Drill corresponding through holes on the left and right covers at the cable outlet positions as needed. (For illustration, the figure below only shows the Parallel base assembly.)



Step 6:

Mount the trimmed side covers and affix the label to mark the circuit breaker position.



4.4 Post-Installation Inspection

Item	Inspection Criteria
The system/battery pack	Intact without deformation, collision or scratch.
Protective cover	Intact and effective.
Bracket, base and bolts	Tightened and firmly installed.
Power wiring and bolts (nuts)	Polarity correct, and bolts (nuts) tightened to the specified torque.
Grounding marking	Clear
Air outlet	Not be blocked.
Fire-fighting equipment	Be in place and meet on-site requirements.
Equipment warning signs and parameter nameplates	Complete and clear.
Passage in installation area	Unobstructed without flammable and explosive materials.

5 Electrical Connection

5.1 Safety Precautions

WARNING

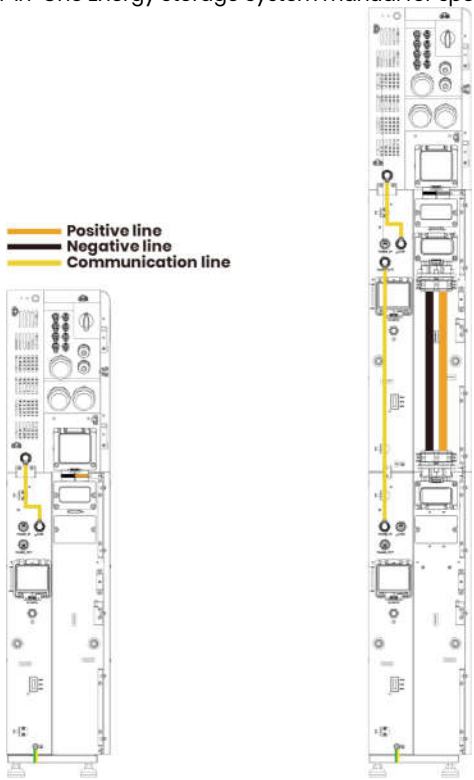
- Only qualified electrical professionals may install and operate the product.
- The product can only be used in situations equipped with overvoltage protection devices.
- Do not place the equipment on a flammable surface.
- Do not perform electrical connections during sandstorms or when the relative humidity of the surrounding environment is greater than 95%.
- Do not contact live parts directly without protection
- Before installation, ensure that there is no voltage on the AC side and DC side.
- Only allow connection of "+" to "+" and "−" to "−".
- This system must be used in conjunction with compatible hybrid inverter models. It needs to establish communication with the inverter to activate the lithium battery mode, ensuring optimal battery performance.
- When connecting to inverters or operating in parallel mode, please use the cables provided in the unpacking list. If other cables must be used under special circumstances, ensure they comply with relevant standards.
- Before connecting cables, check that the polarity of all input cables is correct. Do not pull wires and cables forcibly during electrical installation; otherwise, the insulation performance may be affected. Ensure all cables have sufficient bending space and take necessary auxiliary measures to reduce cable stress.
- After each connection is complete, carefully check whether the connection is correct and secure.

5.2 Wiring

5.2.1 Single-stack wiring

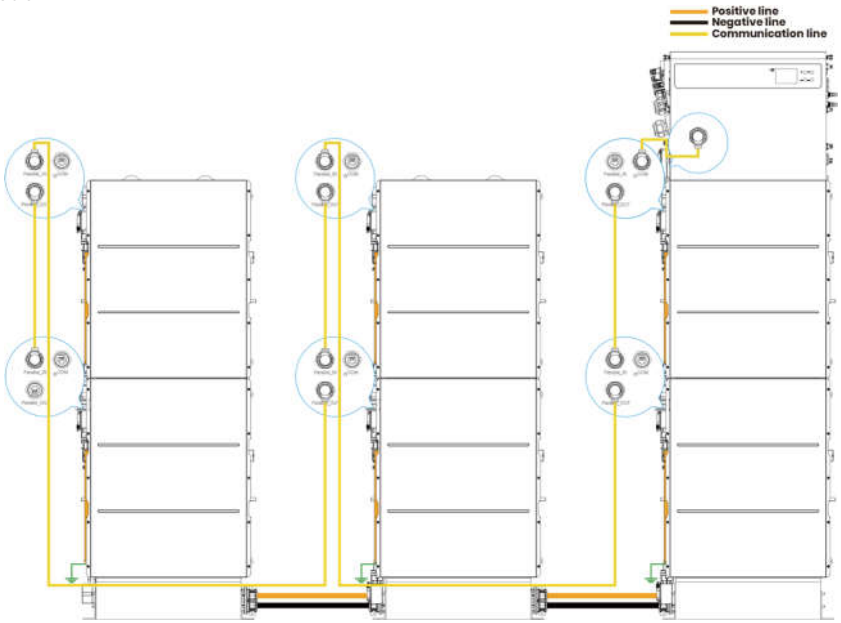
CAUTION:

Please refer to the All-in-One Energy Storage System manual for specific wiring steps.

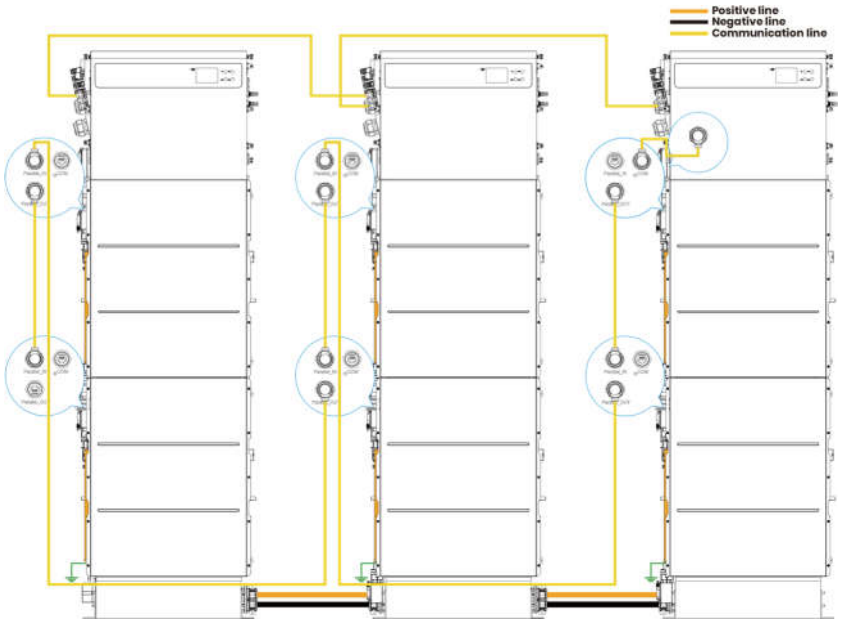


5.2.2 Multi- stack wiring

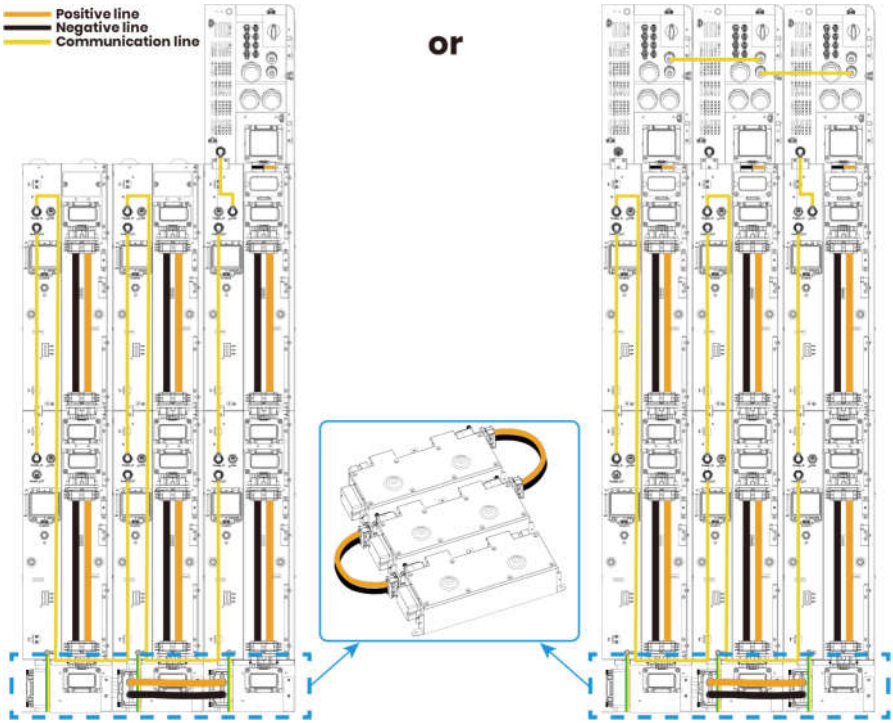
Mode 1:



or



Mode 2:



5.3 Post-Connection Inspection

After connecting the battery, verify the following items:

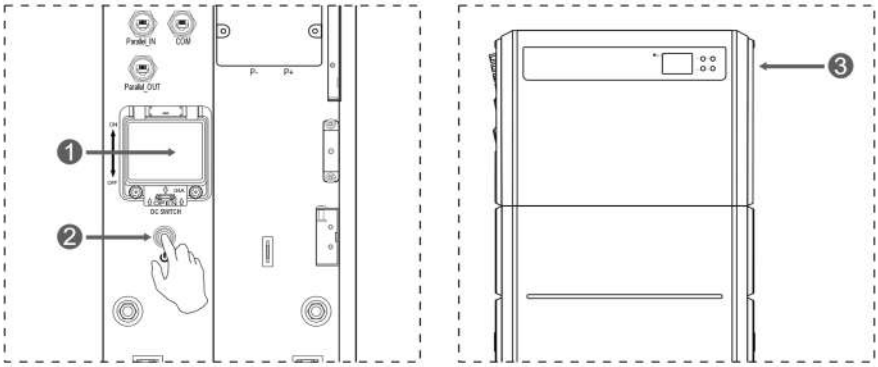
- Correct polarity of positive and negative cable connections;
- Secure and reliable connection of positive and negative terminals;
- All bolts are tightened to the specified torque values (refer to the installation torque table);
- Proper cable fastening and intact cable appearance;
- Correct and secure installation of the side covers.

6 Operation

6.1 Check Before Power-On

- All cables are wired correctly and firmly connected, with no looseness or poor contact.
- All fasteners including bolts and screws are fully tightened, with no looseness or loss.
- Clear the equipment working area, and strictly prohibit unrelated personnel and animals from entering the operation range.
- Keep foreign objects, especially metal debris, away from the battery area to avoid short circuit risks.

6.2 Power-On

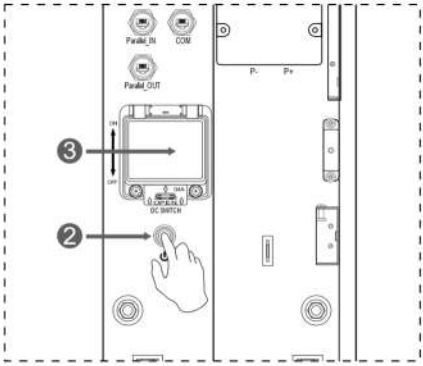


Left view Front view

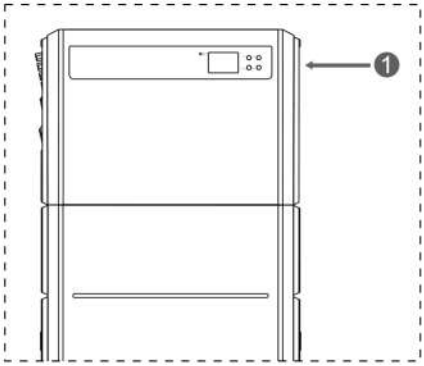
① Turn on the circuit breaker on the batter pack(s).
② Turn on the ON/OFF Button (Power Button) on the battery pack(s).
③ Turn on the inverter module.

NOTE: PLEASE REFER TO THE ALL-IN-ONE ENERGY STORAGE SYSTEM MANUAL FOR SPECIFIC OPERATION STEPS.

6.3 Power-Off



Left view



Front view

① Turn off the inverter module.

NOTE: PLEASE REFER TO THE ALL-IN-ONE ENERGY STORAGE SYSTEM MANUAL FOR SPECIFIC OPERATION STEPS.

② Turn off the ON/OFF Button (Power Button) on the battery pack(s).

③ Turn off the circuit breaker on the battery pack(s).

7 Product Monitoring

NOTE

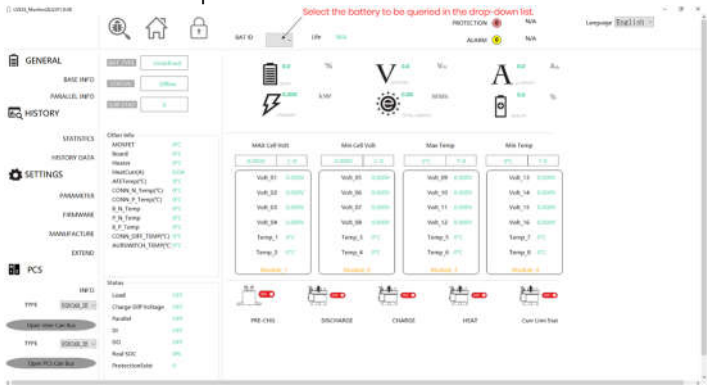
- The TM series inverter module matched with AI-W16 battery has a built-in data logger. Refer to the All-in-One system manual to perform network configuration for the WiFi data logger, download the APP, create a plant and add devices. Then you can remotely monitor the system operating status via the Deye webpage or APP; when the battery isn't used with an inverter, users can monitor the battery via the upper computer.

7.1 DEYE Cloud Website

1. Log in to the Deye Cloud with your account and password.
2. After logging in to the Deye Cloud, enter the SN code of the inverter collector in the search bar (marked by the red box). The detailed information corresponding to the device will be displayed in the table below. Click the device's SN code in the table (marked by the green box) to access the **Device Details Page**.
3. On the **Device Details Page**, click **Architecture** to navigate to the **Inverter Architecture Page**.
4. Then, click **Battery Module** to view the corresponding battery data.

7.2 Upper Computer

Contact the after-sales team to obtain the monitoring software installation package and install it on the upper computer. Connect the IN/OUT ports of the battery system to the upper computer via a CAN adapter. Launch the monitoring software to view the operating status of the battery system. The software interface is shown below; minor differences may occur due to software updates.



8 Maintenance and Storage

8.1 Safety Precautions

DANGER

- Maintenance shall be performed or supervised by qualified professional personnel.
- Wear personal protective equipment (PPE) and use dedicated insulated tools to avoid electric shocks or short circuits.
- Do not smoke or have open flames in the vicinity of batteries.
- Do not wear jewelry, watches or other metallic accessories during servicing.
- Disconnect the Li-ion battery from all loads and chargers before cleaning and maintenance, and fit protective caps over the terminals.
- All battery terminals must be disconnected for maintenance.
- It is forbidden for users to dismantle, dissect or open the battery.
- Electrolyte released from a damaged battery is harmful to skin and eyes and may be toxic; do not touch it.

WARNING

- **Never maintain energized batteries.** Disconnect mains power and batteries before moving or reconnecting the equipment, and wait 5 minutes until the equipment powers off. Verify no hazardous voltage remains with a multimeter before maintenance.
- Improper decommissioning may cause damage to equipment and/or inverters. Ensure the product is decommissioned in accordance with relevant provisions before maintenance.

CAUTION

- Place a warning sign indicating "DO NOT SWITCH ON" at the switch location.
- Use an electroscope of the proper voltage level to verify the equipment is completely de-energized.
- Before maintenance or repair, securely connect the loop to be repaired to the main ground loop; remove the grounding connection upon completion.
- Insert and remove cables in accordance with regulations; violent or forced operations are prohibited.
- Clean tools and materials promptly after maintenance, and check for any metallic objects left inside or on top of the product.
- When replacing batteries, use spare parts of the same type and specification.
- Contact the supplier within 24 hours if any abnormality occurs.
- Contact the customer service center for any operation and maintenance queries; unauthorized operation is prohibited.

8.2 Maintenance Schedule

Maintenance Item	Frequency	Description
Environment & Safety	6 months	Ensure no flammable or explosive materials around the product.
		Ambient temperature and humidity within operating ranges.
	12 months	Check heat dissipation modules and vents; clean with a vacuum cleaner if necessary.
	24 months	Ensure air inlets and outlets are not blocked.
Appearance & Structure	1 day	Check that status indicators are in normal condition.
		Ensure no foreign objects wrap or cover the product exterior.
	3 months	Visual inspection of the product: no obvious paint peeling or rust, no dust at vents, no vermin, fasteners secured, parameter settings normal
	12 months	Check screws for no loss or rust
		Warning labels and marks legible and intact; replace if stained or damaged
	24 months	No oxidation or rust
		No damage or deformation
Electrical & Connections	6 months	Cables: securely connected, undamaged, no water ingress, intact insulation tape at terminals, proper routing
	12 months	Check and retighten electrical connections to specified torque
		Check grounding and equipotential bonding; grounding resistance ≤ 0.4 Ω
	24 months	Verify correct wiring
Battery Pack	3 months	good appearance, proper ambient temperature/humidity, normal operating voltage and current
	6 months	no rust or foreign objects, fan operates properly, BMS free of alarms
Protection & Safety Devices	3 months	Verify normal function of equipment switches
System Operation	1 day	Log in to the management platform (WEB/EMS/APP, etc.) to check system alarms.
	12 months	Check battery module SoC, SoH, voltage, and temperature via monitoring software.
		Perform one system shutdown and restart.
	24 months	Check for abnormal noise during equipment operation.

CAUTION: THE FOLLOWING REPLACEMENT SUGGESTIONS ARE PROVIDED BY OUR PROFESSIONAL AFTER-SALES PERSONNEL.

- Battery replacement is recommended if any of the following is met:
  - Battery runtime drops below 70% of the original runtime
  - Battery charging time changes significantly

NOTE:

- SOC is an estimated value from the BMS. **Minor SOC differences between battery modules are normal** due to cell consistency, sampling and operating conditions. They do not require battery replacement and will not affect charge - discharge performance or safety. The BMS applies automatic balancing to reduce such gaps.

8.3 Post-Maintenance Requirements

After completing maintenance operations, follows the steps below to retore the site and archive the maintenance records:

Step	Operation
1. Cleaning & Restoration	Remove all temporary measures (e.g., grounding and warning signs) and wiring is restored to original condition. Prevent foreign objects from being left behind or personnel from inadvertently entering.
2. Power-up & Verification	Restore system power step by step per the power-up procedure. Verify that the system has no alarms and operating parameters are normal.
3. Recording & Archiving	Create traceable maintenance records, including the time, personnel and equipment status, and archive the records.

8.4 Storage Precautions

DANGER

- Keep the product far away from high-temperature heat sources, open flames, flammable and explosive areas, and all ignition sources.
- Do not expose the product to direct sunlight or rain.
- During storage, ensure the product is completely disconnected from external equipment, with all operation indicators off.
- Batteries shall be stored in a separate area away from heat sources, stacked in accordance with the marks on the packing case, and over-limit stacking is strictly prohibited.

WARNING

- Store the product in a dry, clean, well-ventilated indoor area, away from strong infrared radiation, radiation sources, organic solvents, corrosive gases, and conductive metal dust.
- Handle with care. Dropping, collision, overturning, side placement, or tilting are strictly prohibited.

- Do not stack or roll the product improperly. Follow all outer packaging markings.
- The storage ground must be flat and solid.
- The storage area must be equipped with qualified fire-fighting facilities, including fire sand and special fire extinguishers.
- Only trained and qualified personnel may operate the product. Wear insulated gloves and use dedicated insulated tools during operation.

Battery Storage

- The optimal storage temperature is 0℃~35℃, and the maximum storage period at normal room temperature is 6 months.
- For long-term battery storage, keep the SOC no less than 50%, complete at least one charge-discharge cycle every 6 months, charge timely and calibrate the SOC to 50%. Low SOC storage is strictly prohibited to avoid battery damage caused by over-discharge.
- Check the battery voltage monthly if stored for more than 6 months. Storage can be continued if the voltage is higher than 51.2V; charge immediately in accordance with the specified charging strategy if the voltage is lower than 51.2V.
- Long-term storage of lithium batteries will cause capacity attenuation, so overdue storage shall be avoided as much as possible.
- Batteries shall be stored in separate zones, not mixed with other equipment, and ultra-high stacking is prohibited. If any abnormality such as bulging or smoking occurs during storage, stop operation immediately, isolate the battery and dispose of it as per specifications.
- Long-term idle storage is strictly prohibited. Regular maintenance and inspection shall be carried out. Report to the person in charge immediately if the allowable storage period is exceeded, and do not start use without inspection.

9 Product Specifications

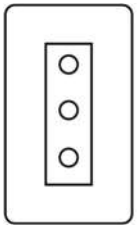
Model		**AI-W16-6**
Main Parameter		
Battery Chemistry		$LiFePO_4$
Built-in Circuit Breaker		250A, 80Vdc
Rated Capacity (Ah) [1]		314
Nominal Voltage (V)		51.2
Operating Voltage(V)		41.6 ~ 58.4
Nominal Energy (kWh) [1]		16
Usable Energy (kWh)[1]		16
Charge Current (A) [2]	Max. Continuous	160
	Peak	192
Discharge Current (A) [2]	Max. Continuous	220
	Peak	264
Short-Circuit Current (A) / Time (ms)		1000 A / 1 ms
Other Parameter		
Recommend Depth of Discharge		100% DoD
Dimension (mm, W/H/D)		662 x 715 x 255 (Without base)
Weight Approx. (kg)		120
Display		LED (working, protecting, alarming)
IP Rating of Enclosure		IP66
Operating Temperature (℃)		Charge: -20 - +55 (Heating On), Discharge: -20 - +55
Storage Temperature (℃)		0~35
Relative Humidity		95% (non-condensing)
Altitude (m)		≤3000

Cycle Life	≥8000(25℃±2℃, 70%EOL)
Max. Energy RTE (DC) [1]	95%
Installation	Floor-Mounted，Stack-Mounted
Communication	CAN2.0
Certification	UN38.3, CE, CB, CEC
Energy Throughput [3]	50 MWh

[1] Test conditions : 25℃±2℃, at beginning of life, 0.2C charge & 0.2C discharge,100% DOD.
[2] The current is affected by temperature and SOC.
[3] Conditions apply, refer to Deye Warranty Letter.

Appendix I Troubleshooting

➢ **Pack LED Fault Indication**

	**RUN LED** Green, flashes when battery is running. **ALM LED** Yellow, flashes when alarm occurs. **ERR LED** Red, flashes when fault occurs. **All LED** Running light pattern: Firmware upgrading

➢ **Upper Computer Fault Display**

To determine the status of the battery system, users can use additional battery status monitoring software to examine the protection mode. Refer to the installation manual about using the monitoring software. Once the user knows the protection mode, refer to the following sections for solutions.

Fault Type	Phenomenon	Possible Causes	Solutions
Information collection fails	The cell voltage sampling circuit is faulty. The cell temperature sampling circuit is faulty	The welding point for cell voltage sampling is loose or disconnected. The voltage sampling terminal is disconnected. The cell temperature sensor has failed.	Replace the collection line.
Electrochemical cell error	The voltage of the cell is low or unbalanced.	Due to large self-discharge, the cell over discharges to below 2.0V after long term storage. The cell is damaged by external factors, and short circuits, pinpricks, or crushing occur.	Replace the battery.
Over-voltage protection fails	The cell voltage is greater than 3.65 V in charging state. The battery voltage is greater than 58.4 V.	The busbar input voltage exceeds the normal value. Cells are not consistent. The capacity of some cells deteriorates too fast or the internal	If the battery cannot be recovered due to protection against abnormality contact local engineers to rectify the fault.

		resistance of some cells is too high.	
Under voltage protection fails	The battery voltage is less than 44.8V. The minimum cell voltage is less than 2.8V	The mains power failure has lasted for a long time. Cells are not consistent. The capacity of some cells deteriorates too fast or the internal resistance of some cells is too high.	Same as above.
Charge or dis-charge high temperature protection fails	The maximum cell temperature is greater than 60℃	The battery ambient temperature is too high. There are abnormal heat sources around	Same as above.
Charge low temperature protection fails	The minimum cell temperature is less than 0℃	The battery ambient temperature is too low.	Same as above.
Discharge low temperature protection fails	The minimum cell temperature is less than -20℃	The battery ambient temperature is too low.	Same as above.

Appendix II Emergency Handling

DANGER

- In the event of natural disasters (earthquake, typhoon, flood, wildfire, etc.): Prioritize personnel safety, cut off power and stop the ESS immediately.
- Do NOT operate damaged equipment without professional inspection and qualified testing after the disaster.
- Keep away from waterlogged or fire-damaged units and contact our service engineers for professional handling.

WARNING

- When the air intake/exhaust system is operating, do NOT face the exhaust vents under any circumstance.
- Refer to the user manual/product manual for product information. Do NOT ACCESS the product if safety cannot be guaranteed.

➢ **Fire/Explosion Hazards**

- Evacuate immediately to at least 50 meters away from the site and call the fire department.
- Wear respiratory protection. Disconnect the upstream power supply only when safe.
- Isolate the accident area only when safe to keep unauthorized personnel away.
- Post-incident maintenance must be performed by professionals or our after-sales engineers.

➢ **Electric Shock**

- Ensure personal safety, then disconnect the power supply immediately to avoid secondary electric shock.
- Use an insulated object to separate the victim from the power source and perform first aid such as cardiopulmonary resuscitation (CPR).
- Call the emergency medical number immediately to obtain professional medical treatment.
- Protect the accident scene for investigation and evidence preservation.
- Contact professionals to conduct a comprehensive inspection of the ESS. The system may only be put back into use after repair or replacement and passing qualified testing.

➢ **Chemical Hazards**

- In case of electrolyte leakage, evacuate personnel from the affected area and notify the relevant personnel immediately. Professionals shall conduct safe collection and proper disposal of leaked substances.
- Toxic gases may be released during battery combustion or damage; evacuate personnel to a safe area immediately. If personnel are exposed or injured, call the emergency medical number for professional treatment. Respiratory protection, protective clothing and other safety equipment must be worn during hazard

handling.

- **Mechanical Injury**
  - In the event of equipment tipping, battery pack dropping or component detachment, disconnect power and stop ESS operation immediately.
  - In case of personnel injury, administer first aid (hemostasis, bandaging, etc.) and call the emergency medical number immediately.
  - If obvious odor, damage, smoke or fire is detected, evacuate personnel immediately, call the fire department, and allow professionals to handle firefighting and subsequent treatment.
  - If any abnormalities are observed, professionals shall use move the battery pack to an open, safe area, let it stand for 1 hour while monitoring temperature, and contact the engineers.
  - Contact professionals to repair or replace damaged components. The system may only be returned to service after passing inspection and testing.

- **Natural Disasters**
  - In the event of natural disasters including earthquake, typhoon, flood, wildfire, etc., disconnect the power supply and stop ESS operation immediately.
  - If the ESS is submerged or flooded, do not touch the equipment and keep clear of the waterlogged area.
  - Do not use water-soaked batteries under any circumstances. Contact a qualified battery recycling service for proper disposal and scrapping.
  - Before a wildfire approaches, establish a firebreak around the ESS and prepare adequate fire-fighting equipment such as fire extinguishers, fire sand, fire hoses, etc.
  - After the disaster, contact professionals to fully inspect the support structure, electrical connections, etc. The system may only be reused after repair/replacement and qualified testing.