

# SiGenStor-5S-(5-16), SiGenStor-6S-(8-24) Installation Guide

Version: 03  
Part Number: 3101000012  
Release date: 2024-11-30



## ⚠ Caution

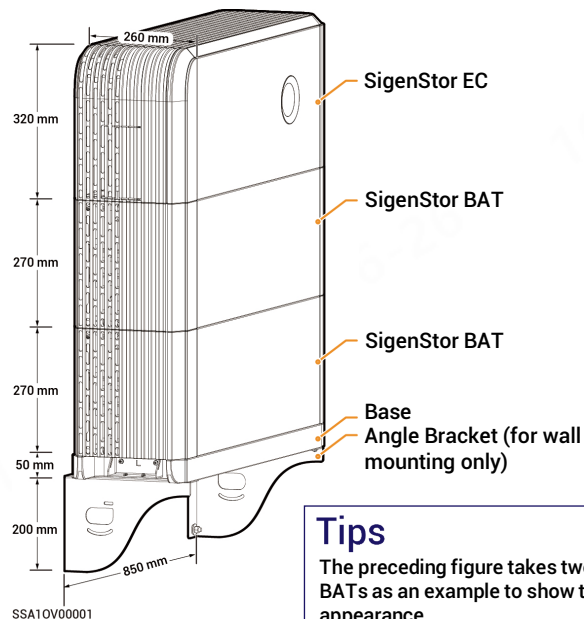
- Trained or experienced electrical personnel are required to operate the equipment.
- Operators should be familiar with national and local laws, regulations, and standards, and the compositions and operating principles of relevant systems.
- Please read carefully the operating requirements and precautions in this document and "Important Notice" before operating. Failure to do so may result in damage to the equipment that is not covered by the warranty.

## 1 Product Description

### 1.1 Model Designation

Model	Inverter model	Number of SigenStor BATs 5.0	Number of SigenStor BATs 8.0
SigenStor-5S-5	SigenStor EC 5.0 SP	1	0
SigenStor-5S-8		0	1
SigenStor-5S-10		2	0
SigenStor-5S-13		1	1
SigenStor-5S-16		0	2
SigenStor-6S-8	SigenStor EC 6.0 SP	0	1
SigenStor-6S-10		0	2
SigenStor-6S-13		1	1
SigenStor-6S-16		0	2
SigenStor-6S-24		0	3

### 1.2 Appearance and Dimensions

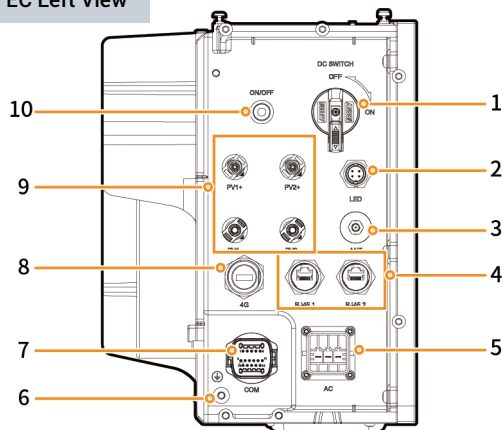


### Tips

The preceding figure takes two SigenStor BATs as an example to show the appearance.

## 1.3 Port Descriptions

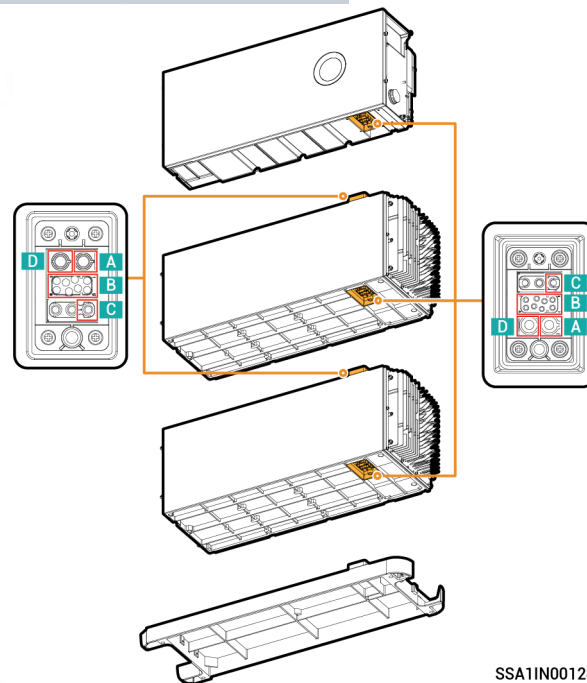
SigenStor EC Left View



SSA10V00030

S/N	Name	Marking
1	DC switch	DC SWITCH
2	Decorative cover light strip connector	LED
3	Antenna interface	ANT
4	Cable interface	RJ45 1/ RJ45 2
5	AC output interface	AC
6	Ground screw	—
7	Communication interface	COM
8	Sigen CommMod interface	4G
9	DC input interface	PV1+/PV2+/ PV1–/PV2–
10	Switch button	ON/OFF

Modular Floating Stacked Connector



SSA11N00128

No.	Meaning
A	BAT-
B	Communication interface
C	PE
D	BAT+

## 2 Pre-installation Check

- Check whether the components are entirely supplied against the packing list and whether the appearance is in good condition. For any problem, contact your sales representative.
- Parts and accessories supplied with the packing box are personal assets of the owner and must not be taken away from the installation site.
- Check personal protective equipment and installation tools to ensure that they are complete; If not, please make them up.
- Check and ensure the completeness of personal protective equipment and installation tools; replenish if necessary.

### Protective equipment



Safety hat



Goggles



Dust mask



Protective gloves

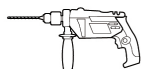


Insulating gloves



Insulating shoes

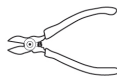
### Installation tool



Power drill



Heat gun



Wire cutter



Crimp tool



Crimping pliers



Wire stripper



Scissors



Cable tie



Heat shrinkable sleeve



Insulation sleeve set



Torque socket wrench



Marker



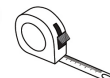
Rubber mallet



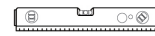
Adjustable wrench



hexagonal L-type wrench (4 mm oppositly)



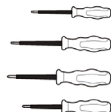
Tape measure



Level



Vacuum cleaner



Insulation screwdriver set



Open-end wrench  
(model: H4TW0001  
Manufacturer:  
Amphenol)



Crimping pliers  
(model: H4TC0003  
Manufacturer:  
Amphenol)



(Optional) Stainless steel  
covered plastic steel  
rope (bearing:  $\geq 250$  kg  
Diameter: 3 mm)



(Optional) Lift  
(used when SigenStor  
BAT  $\geq 3$  units)



(Optional) Lock  
(Lock bar  
diameter  $\leq 5$  mm)



**Caution**

- The specifications of the Installer-provided cable must comply with the cable regulations and standards of the country or region standards.
- L, N and PE should be connected to other equipment in sequence without mixing.

S/N	Cable name	Recommended specifications
1	Protective ground cable of inverter housing	Outdoor single core copper cable Cross-sectional area of core conductor: 4–6 mm <sup>2</sup> ;
2	AC cable	Outdoor three-core copper cable (L, N, PE) Cross-sectional area of core conductor: 4–6 mm <sup>2</sup> ; Outer diameter: 13–21 mm
3	RS485/Connect DRED (Demand Response Enabling Device) signal line cable	Outdoor shielded twisted pair Cross-sectional area of core conductor: 0.5–0.75 mm <sup>2</sup> (multi-core flexible conductor, Tubular terminal needed); 0.5–1 mm <sup>2</sup> (single-strand hard conductor, no tubular terminal needed) Outer diameter: 4.5–6.5 mm Cable length: ≤ 1000 m Baud rate: ≤ 9600 bps
4	RJ45 network cable	Outdoor eight-conductor shielded twin-twisted pair cable Cross-sectional area of core conductor: 0.13–0.2 mm <sup>2</sup> ; Outer diameter: 4–7.5 mm Single cable length: ≤ 100 m <sup>[1]</sup>
5	DC input cable of inverter (Ignore this cable in case of SigenStor AC inverters)	Outdoor photovoltaic cable Cross-sectional area of core conductor: 4–6 mm <sup>2</sup> ; Outer diameter: 4.5–7.8 mm

Note [1]: The cable length should be limited for good communication. Too long cable degrades the communication effect. FE communication distance: ≤ 100 m.

**Tips**

Recommended specifications for cables connecting power sensors to Distribution panel and to the grid, as well as step-by-step instructions for wiring, can be found in the accompanying documentation for each respective model.

### 3 Site Selection Requirements

#### Tips

- The equipment can be installed indoors and outdoors. Install the equipment in strict accordance with installation instructions given in this section and local laws and regulations.
- The warranty applies when the equipment has been installed properly for its intended use and in accordance with the operating instructions.
- During actual installation, the selection of installation location should comply with local firefighting, environmental protection regulations, and other relevant laws. The specific installation location planning should be subject to the installer or engineering, procurement, and construction (EPC) contracts.

#### Installation environment

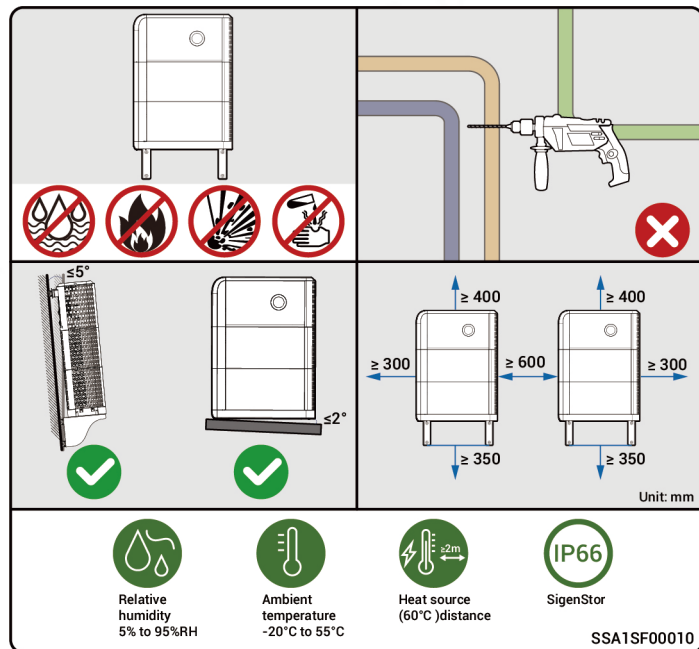
- Do not install the equipment in smoky, flammable, or explosive environment.
- Avoid exposing the equipment to direct sunlight, rain, standing water, snow, or dust. It is suggested to install the equipment in a sheltered place. Take preventive measures in operating areas prone to natural disasters such as floods, mudslides, earthquakes, and typhoons.
- Do not install the equipment in an environment with strong electromagnetic interference.
- The temperature and humidity of the installation environment should meet equipment requirements.
- The equipment should be installed in an area that is at least 500 m away from corrosion sources that may result in salt damage or acid damage. Corrosion sources include but are not limited to seaside, thermal power plants, chemical plants, smelters, coal plants, rubber plants, and electroplating plants.

#### Installation position

- Do not tilt the equipment or place it upside down. Ensure that the equipment is horizontally installed.
- Do not install the equipment in places easily touched by children.
- Do not install the equipment in a place with fire hazards or is prone to moisturizing.
- The equipment produces sound when it is operating. Please install the equipment in a place with appropriate distance at which there is no impact to daily work and life.
- Do not install the equipment in a sealed, poorly ventilated location without fire protection measures and inaccessible for firefighters.
- The equipment is hot when it is operating. If the equipment is installed indoors, please ensure good indoor ventilation and avoid significant indoor temperature rise by more than 3°C while the equipment is operating. Otherwise, the equipment will be derated.
- Do not install the equipment in mobile scenarios such as recreational vehicles, cruise ships, and trains.
- It is recommended to install the equipment in a location where you can easily access, install, operate, and maintain it, and view the indicator status.
- Do not place the equipment in the vehicle passage when installed in a garage to avoid collisions.

## Mounting surface

- Do not install the equipment on a flammable base. If this cannot be avoided, add a fire barrier between the equipment and the base.
- The installation base should meet the load-bearing requirement. Solid brick-concrete structures, concrete walls, and floors are recommended.
- The installation base should be flat, and the installation area should meet the installation space requirements.
- No plumbing or electrical alignments are allowed inside the installation base to avoid potential drilling hazards during equipment installation.



## 4 Installation of inverter and battery pack

### Tips

- For floor installation of SigenStor-6S-24, please use a crane to install the 3rd SigenStor BAT.
- If the floor is prone to stagnant water, please set up a waterproofing platform or install it on the wall.
- The equipment is heavy, do not slip off when handling the equipment to avoid the equipment falling and injuring the operator.
- SigenStor BAT is forbidden to be used after falling, please buy a new one.
- Do not drag the equipment during installation.

### 4.1 Floor Installation

### Tips

- If the ground is uneven, leveling plates or adjustable feet can be used for leveling, depending on the product received.
- If the installation package the owner receives contains no adjustable feet, only leveling plates can be used for leveling. If both are available, either leveling tool can be used. Please install the equipment according to the actual needs of the owner.
- Please avoid using adjustable feet for leveling in earthquake-prone areas.



Leveling plate



Adjustable feet

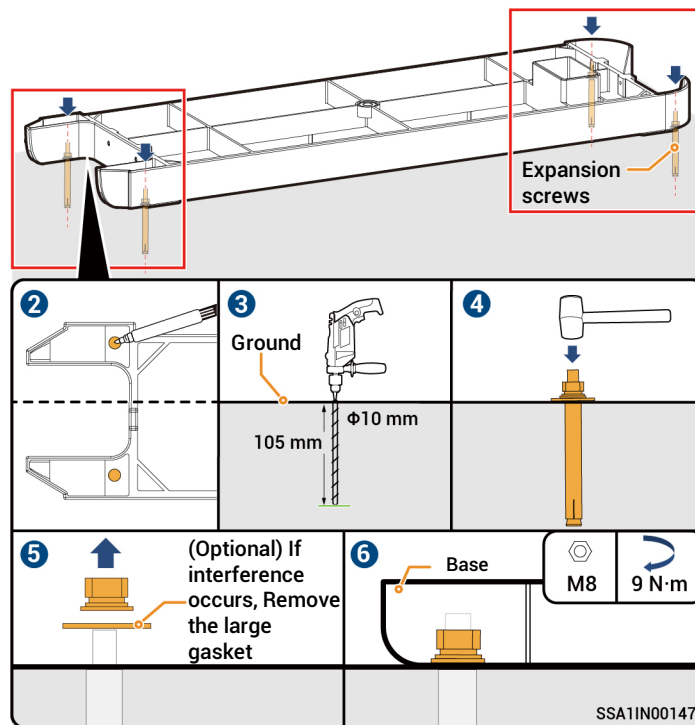
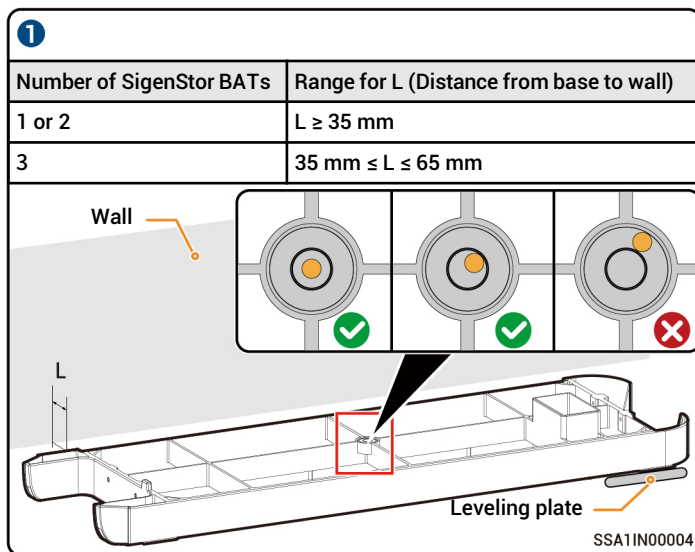
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1

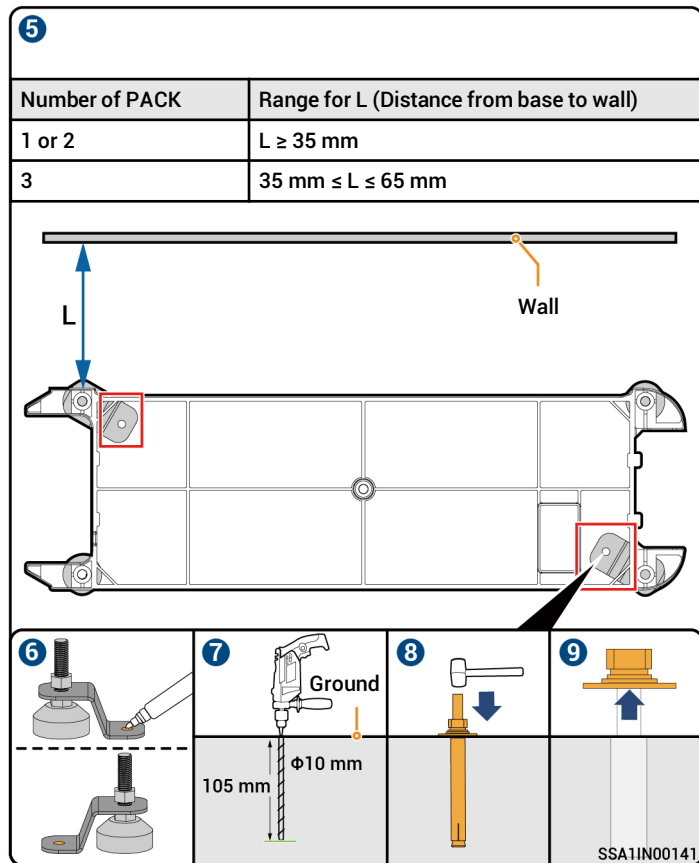
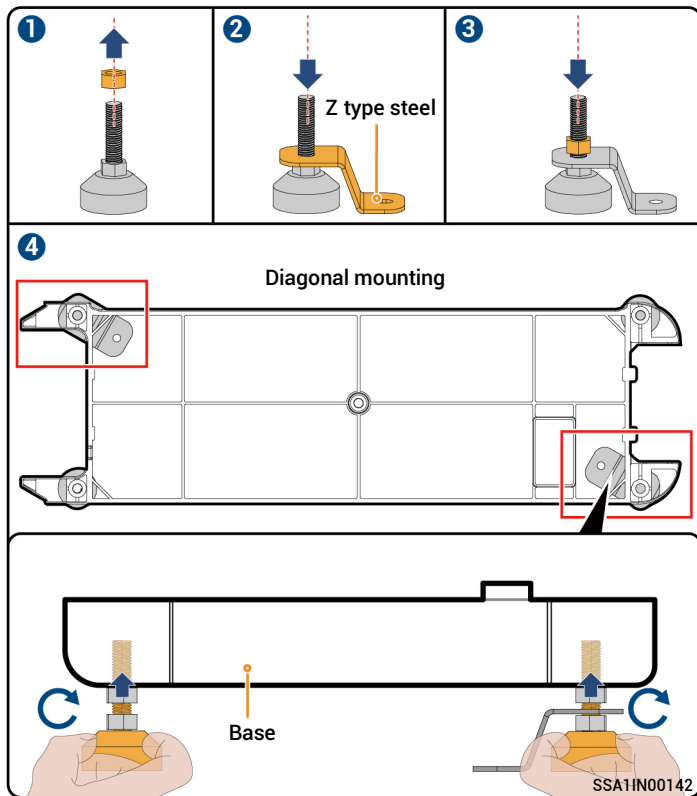
## Leveling with leveling plates

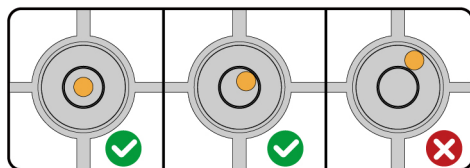
### Tips

If the bubble level is not centered, use a Leveling plate to adjust.



## Leveling with adjustable feet





**2** This step applies only to SigenStor-6S-24. Skip this step for other models.

INV1 is the mounting hole on the left side of the inverter for wall installation, while INV2 is the mounting hole on the right side for wall installation.

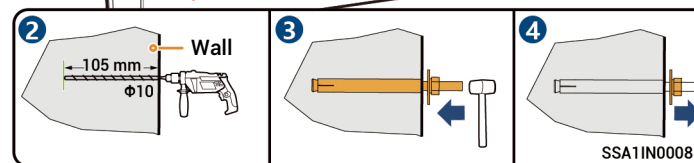
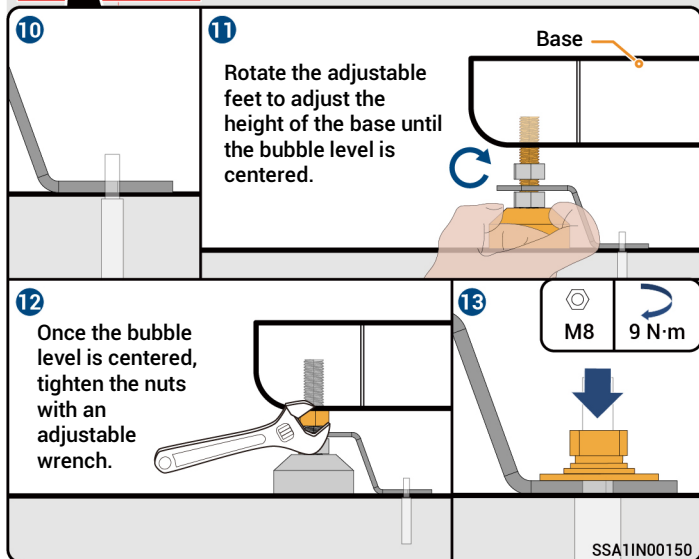
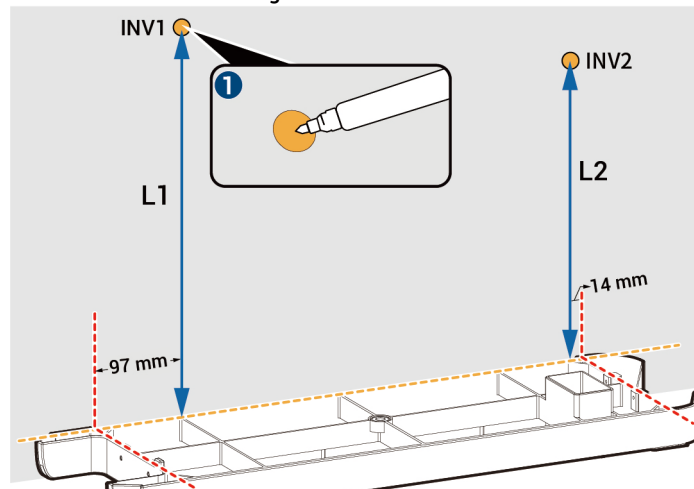
Calculation formula for punch height:

L1 and L2 should be measured from the upper surface of the base:

$$L1 = N \times 270 \text{ mm} + 261 \text{ mm} \pm 3 \text{ mm}$$

$$L2 = N \times 270 \text{ mm} + 254 \text{ mm} \pm 3 \text{ mm}$$

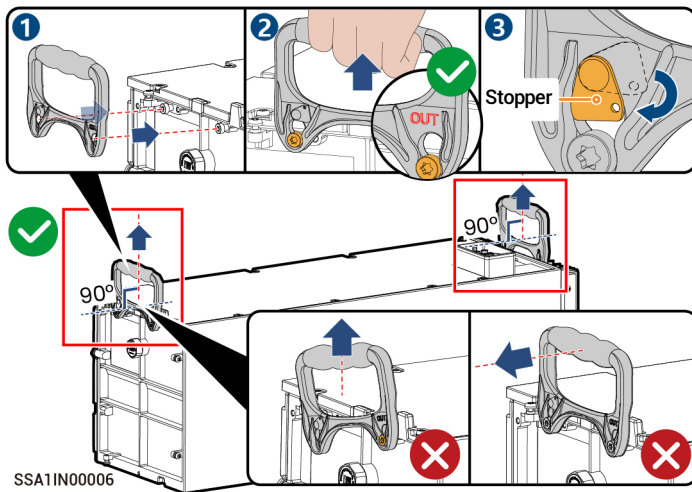
Note: N is the number of SigenStor BATs and N is 3.



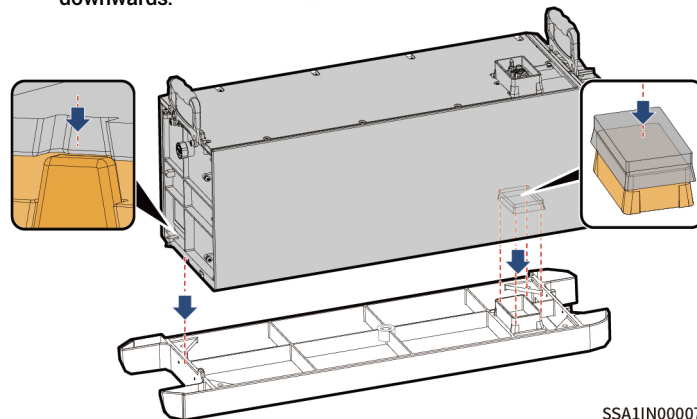
- 3** Before installing the handle, please use a Torque socket wrench to measure the screws and confirm that the screws on Sigen BAT are securely tightened with a torque of 4.5 N·m ( $\pm 0.45$  N·m).

### ⚠ Caution

- Use the new handle supplied with the inverter for your installation operation.
- The "OUT" lettering on the handle must face outwards.
- Do not use a handle with stoppers that fell off or damaged for your installation operation. (Including but not limited to rust, paint peeling, deformation, and fracture)
- The handle is a personal asset of the owner. After use, it must be handed over to the owner for future use and must not be taken away from the installation site.
- The handle shall not be used more than 100 times. The handle that exceeds the use limits shall be scrapped.



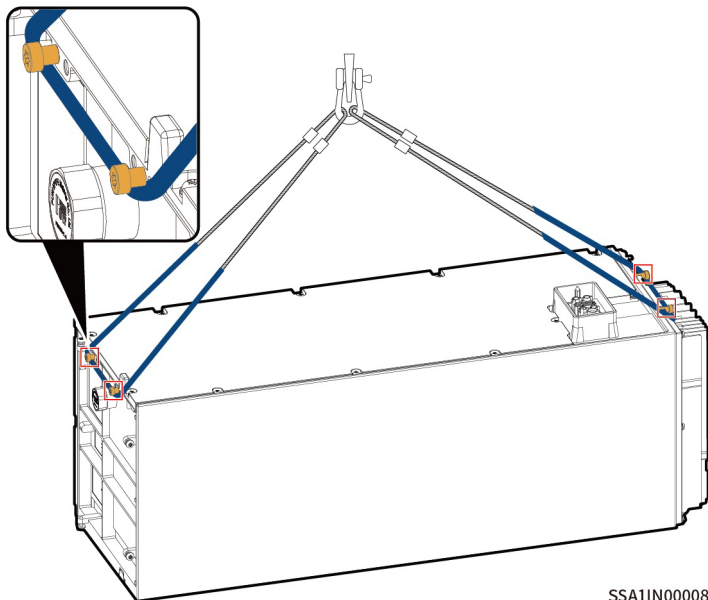
- 4** SigenStor BAT is kept horizontally and mounted vertically downwards.



- 5** For details about how to place the second SigenStor BATs, see Steps 3 4 .



- 6** This step applies only to SigenStor-6S-24. Skip this step for other models.  
To install the 3rd SigenStor BAT, please use a crane.

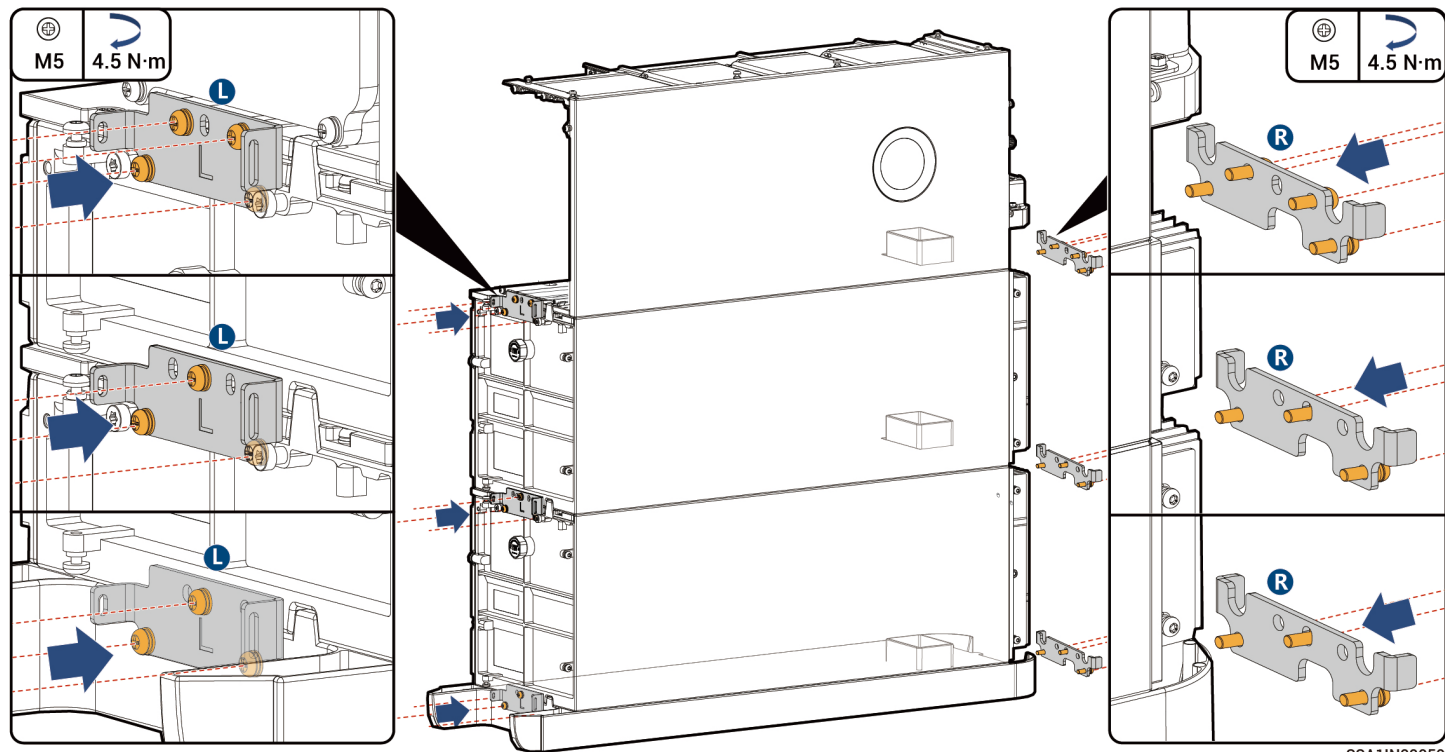


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## Tips

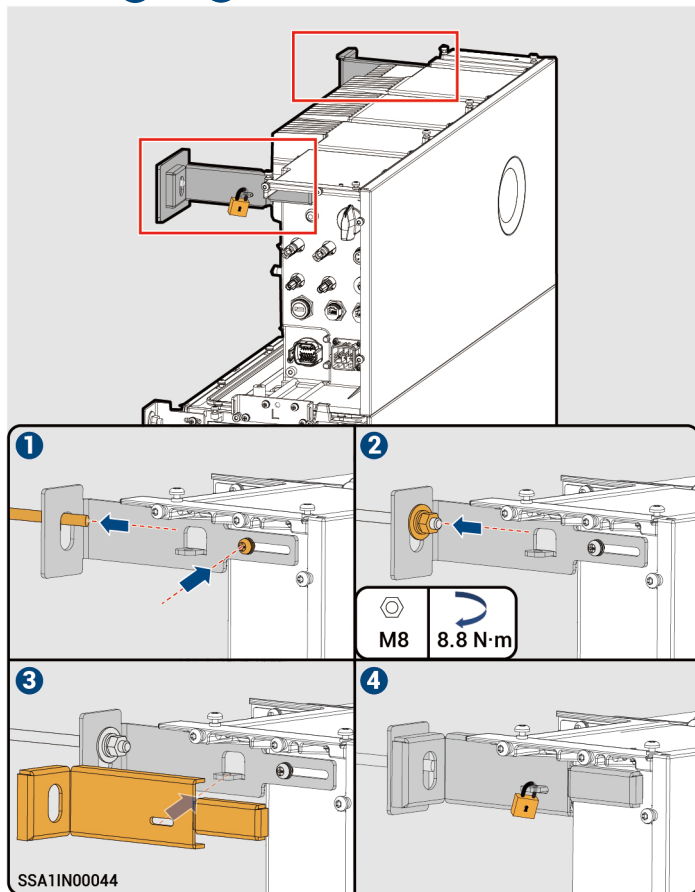
During lifting operations, the area where the sling comes in contact with the equipment should be wrapped with a protective layer to avoid damage to the equipment.

- 7** For information on how to place SigenStor EC, please refer to step **4**.



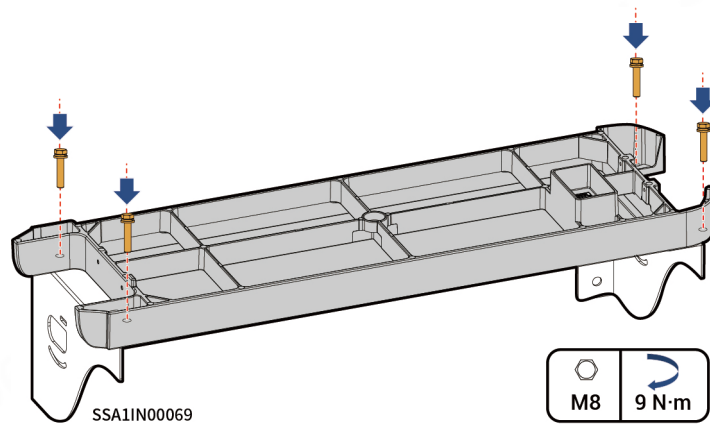
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- 9** This step applies only to SigenStor-6S-24. Skip this step for other models.  
Steps **3** and **4** are optional and can effectively prevent theft.

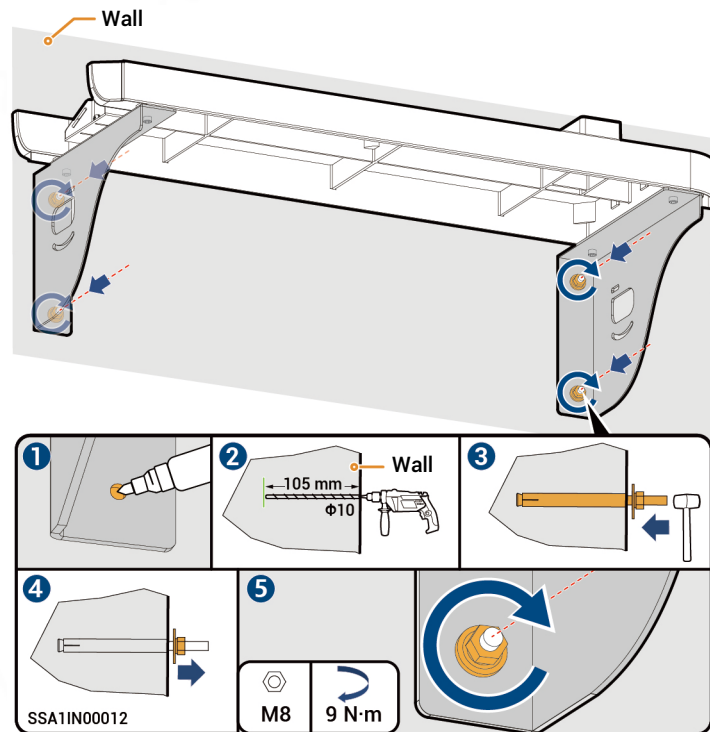


## 4.2 Wall Installation

1



2



3

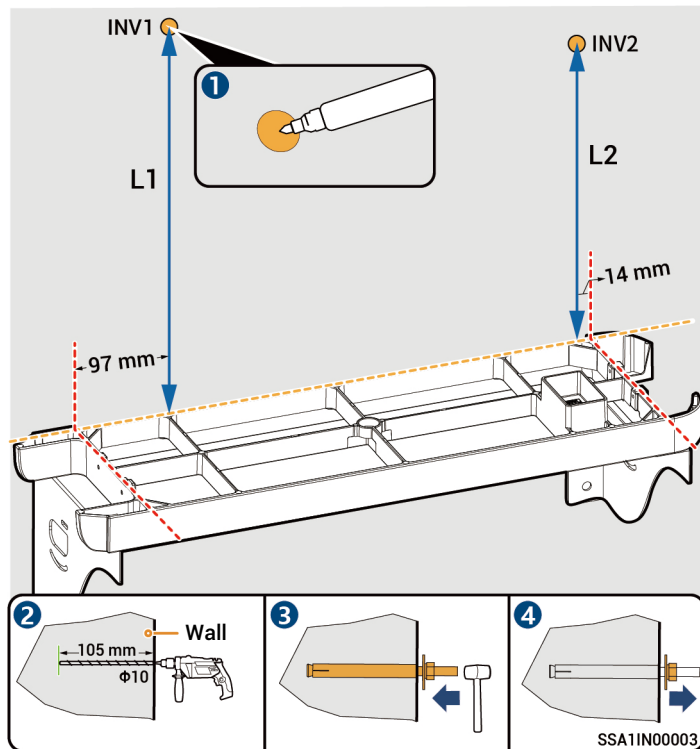
Calculation formula for punch height:

L1 and L2 should be measured from the upper surface of the base:

$$L1 = N \times 270 \text{ mm} + 261 \text{ mm} \pm 3 \text{ mm}$$

$$L2 = N \times 270 \text{ mm} + 254 \text{ mm} \pm 3 \text{ mm}$$

Note: N is the number of SigenStor BATs and N is 1 or 2.



4

For details about how to place the SigenStor BAT, see Steps 3 4 in Section 4.1 Floor installation.

5

For details about how to place the inverter, see Steps 7 in Section 4.1 Floor installation.

6

For the installation of the Base bracket, please refer to Step 8 in Section 4.1 Floor Installation.

7

For the installation of the fasteners for a wall-mounted inverter, please refer to Step 9 in Section 4.1 Floor installation.

## 5 Cable Connection and Component Installation

### Danger






- Before connecting cables, ensure that DC SWITCH is in the OFF state, and the front switch of the AC line is off.
- Do not perform operations on the equipment with power on. Before operation, please make sure all power supplies to the equipment have been disconnected, including but not limited to the grid side, inverter and diesel generator power switches.
- Do not leave construction residues, for example, cut cores of cables, in or around the equipment, such as, in terminals and in or around fans.

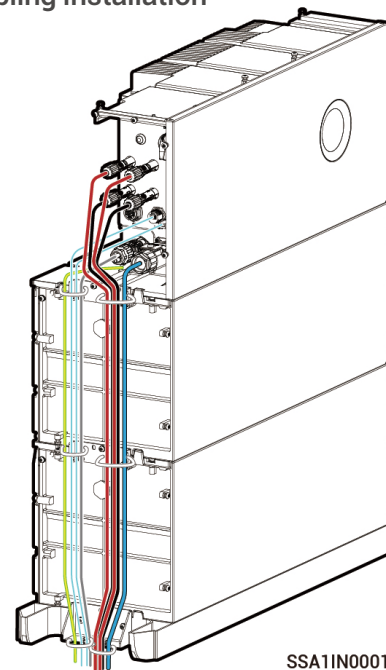
### Tips

- The cable colors in the figure are used only to distinguish different lines. The cable colors are based on actual conditions.
- Bind the power cable separately from the signal cable.
- There are three routing schemes, Select them based on the actual situation.
- PVC wiring ducts or PVC conduits are recommended to wrap cables outside decorative parts. 60 × 50 mm PVC wiring ducts are recommended and PVC conduits with diameter not less than  $\Phi 80$  are recommended.

### 5.1 Recommended Cabling installation

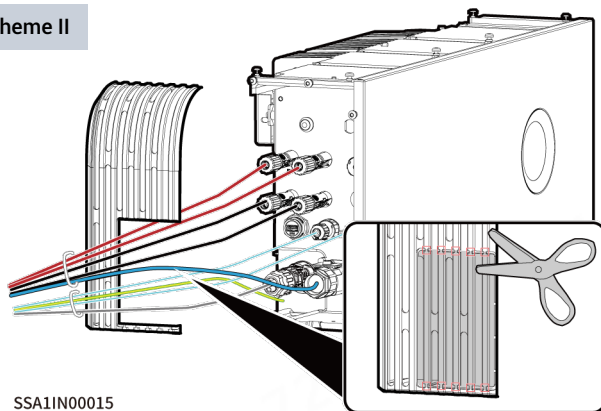
#### Scheme I

-  AC output cable
-  RS485 signal cable
-  Protective ground cable
-  RJ45 cable
-  DC input cable



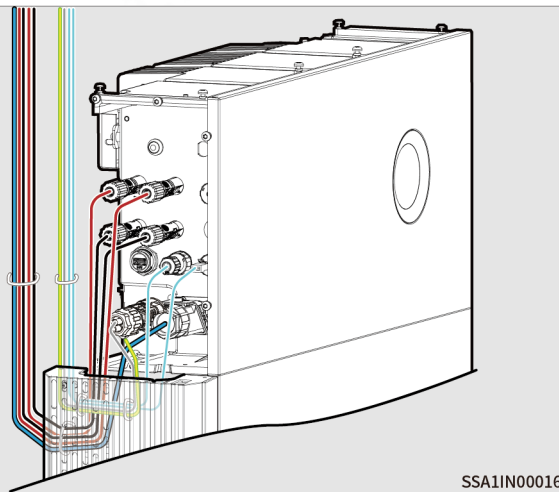
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Scheme II



SSA1IN00015

Scheme III

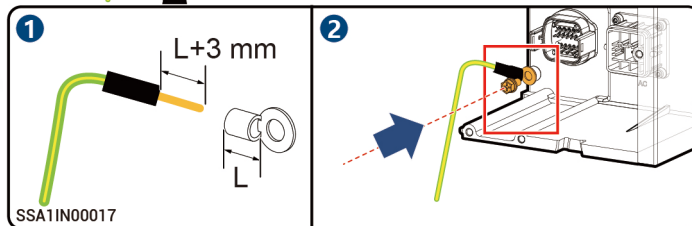
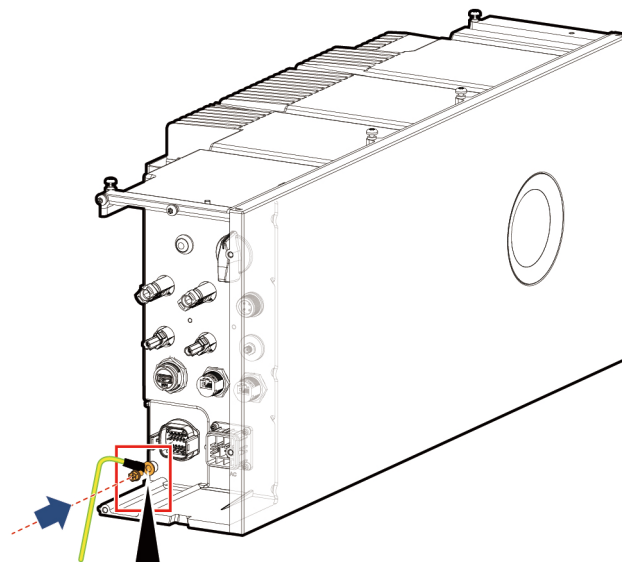


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## 5.2 Protective Ground Cable Connection

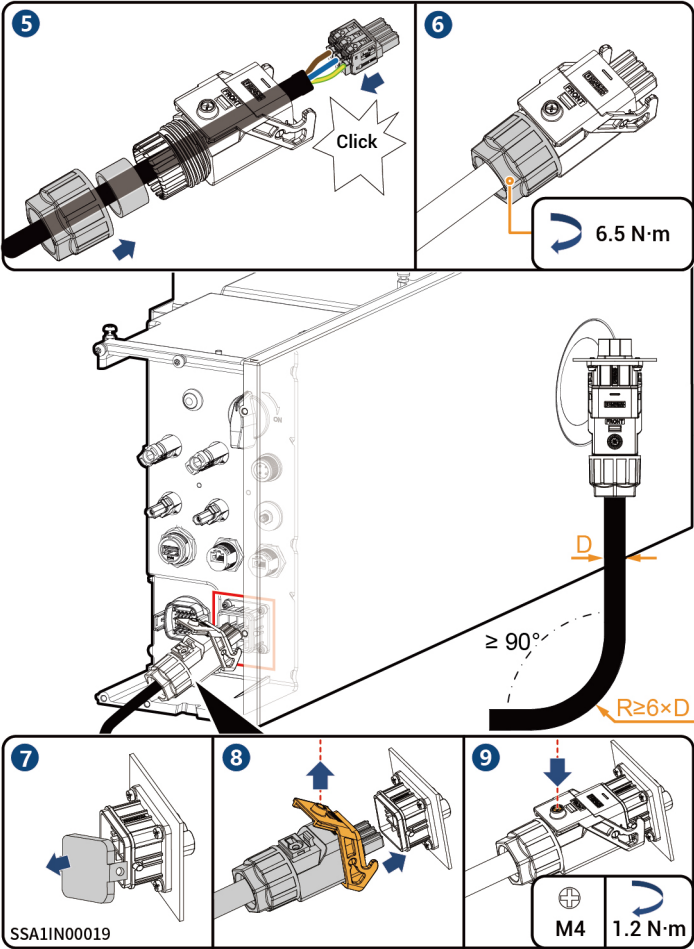
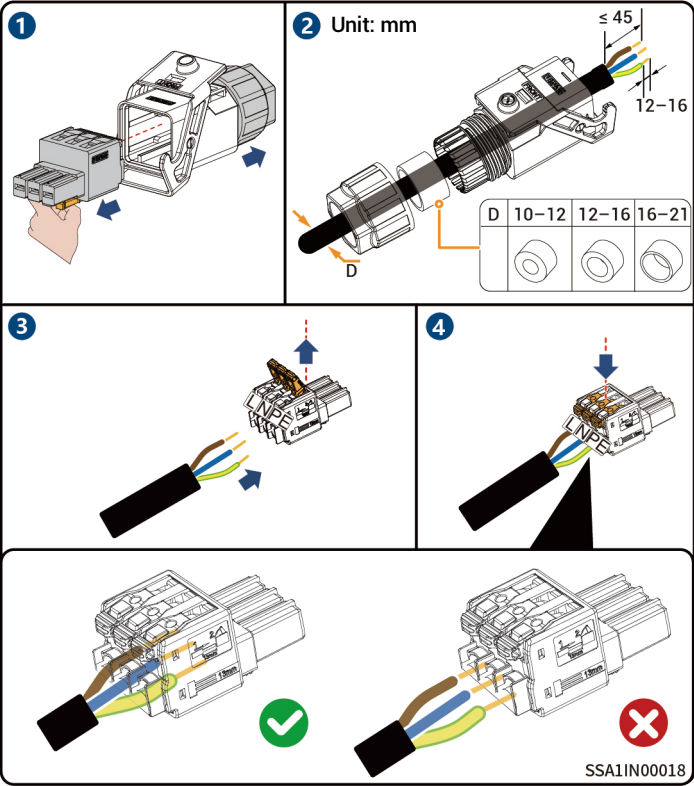
### Tips

The protective ground wire should be grounded in close proximity.



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5.3 AC Output Cable Connection

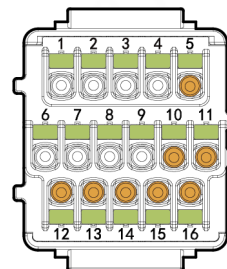




## 5.4 COM terminal of the inverter Introduction

### Tips

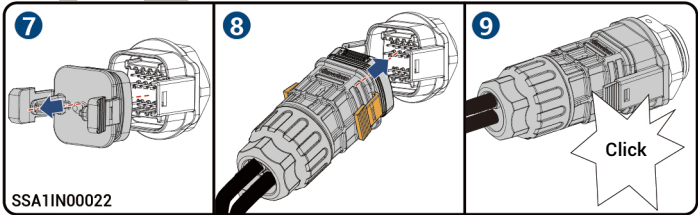
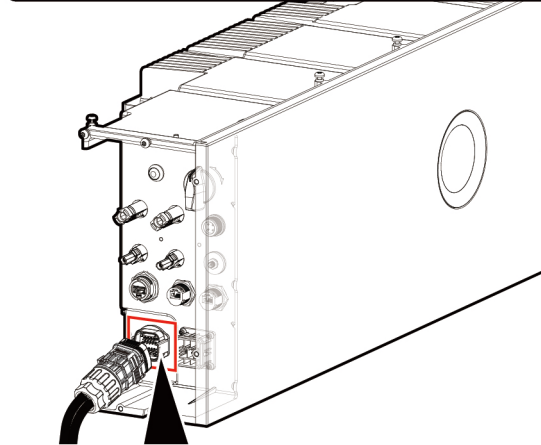
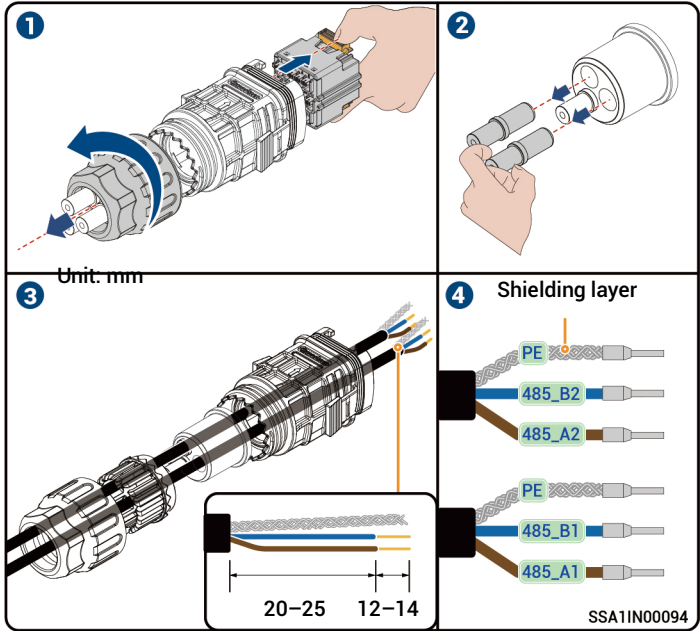
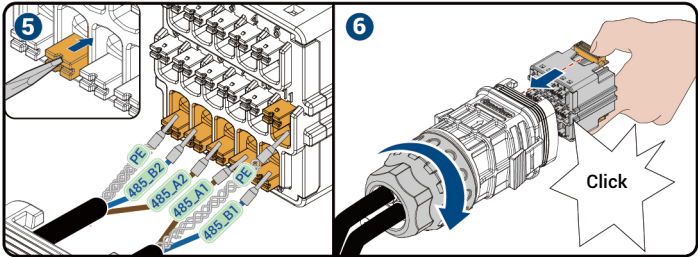
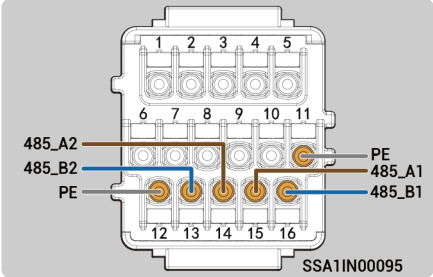
- Power sensors need to be purchased from our official channel.
- The appearance and specific wiring of the power sensor can be found in the instruction manual delivered with the case.
- According to AS/NZS 4777.2:2020+A1:2021, connecting SigenStor to the power grid must meet the Demand Response Mode (DRM) function, of which DRM0 is mandatory.



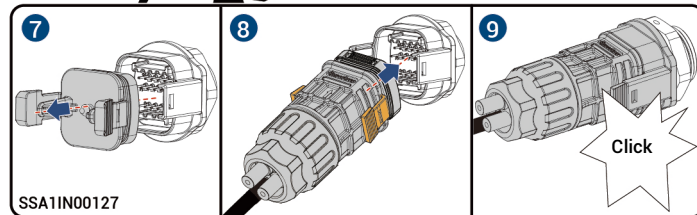
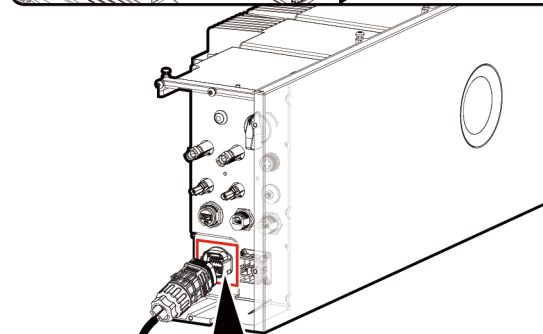
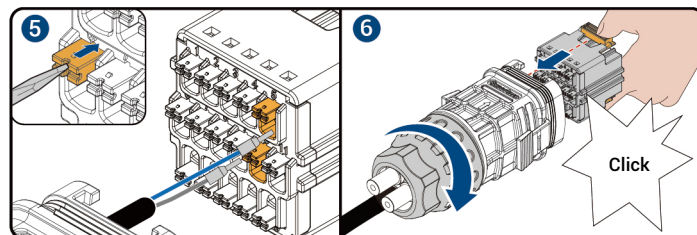
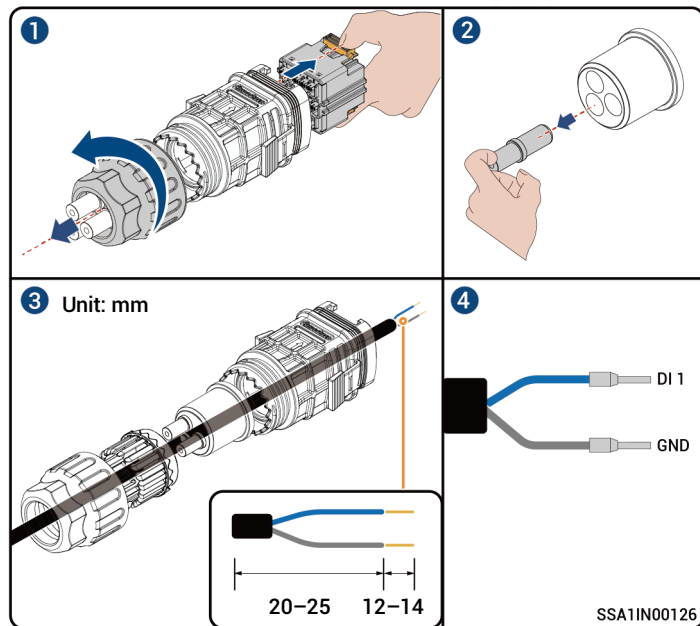
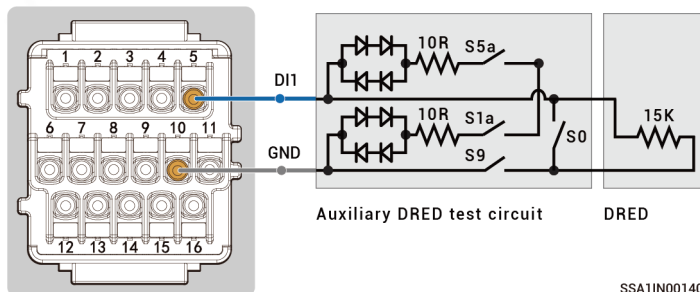
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Description	Pin Definition		Pin Number	Sigen Sensor SP-DH (SDM230Modbus)	Sigen Sensor SP-CT120-DH (SDM120CT 40mA)
(Reserved) DO1, connected to third party intelligent electric equipment, such as switch control and heat pump	DO1-COM	Dry contact 1-Common	1	—	—
	DO1-NO	Dry contact 1-Normal Open	2	—	—
(Reserved) DO2, connected to third party intelligent electric equipment, such as switch control and heat pump	DO2-COM	Dry contact 2-Common	3	—	—
	DO2-NO	Dry contact 2-Normal Open	4	—	—
(Reserved) For power scheduling, such as DRMs and Ripple control	DI2	Digital input 2	6	—	—
	DI3	Digital input 3	7	—	—
	DI4	Digital input 4	8	—	—
	DI5	Digital input 5	9	—	—
For DRM0	DI1	Digital input 1	5	—	—
	GND	Signal GND	10	—	—
RS485-2, COM port used to access the power sensor	PE	PE signal shielding ground	12	—	—
	485-B2	RS485 signal 2_B-	13	6	9
	485-A2	RS485 signal 2_A+	14	5	10
RS485-1, custom port. It can be used to connect to third-party EMS controllers, electricity meters or heat pump equipment, etc.	PE	PE signal shielding ground	11	—	—
	485-A1	RS485 signal 1_A+	15	—	—
	485-B1	RS485 signal 1_B-	16	—	—

5.4.1 RS485 Signal Cable Connection



## 5.4.2 Demand Response Enabling Device (DRED) Connection



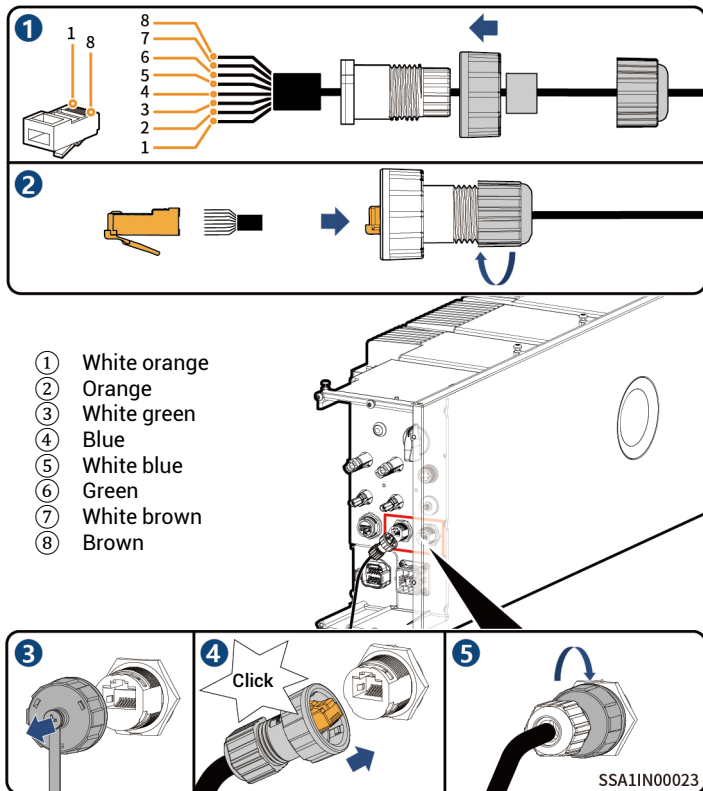
### Tips

- Switches S5a, S1a, and S9 of DRED are normally closed and S0 is used to control the power on and off of SigenStor. When S0 closes, SigenStor is powered off, and when S0 opens, SigenStor is powered on.
- After creating new systems, you can use mySigen App to set DRMO parameters. Please refer to mySigen App Installer Manual for detailed instructions.

## 5.5 RJ45 Cable Connection

### Tips

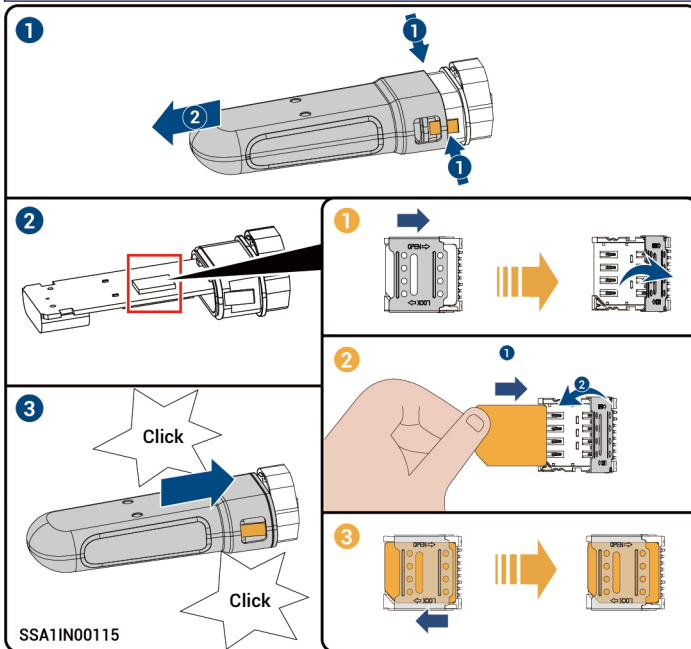
- RJ45 cables are EIA/TIA 568B standard cables.
- Two RJ45 Ethernet ports, one of which is connected to the router, and the other is connected to other devices (e.g., inverters, gateways, etc.).



## 5.6 (Optional) Replacing SIM card of Sigen CommMod

### Tips

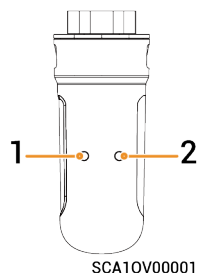
- If 4G communication is required, Sigen CommMod must be separately purchased.
- When free 4G traffic of Sigen CommMod runs out, users must replace an SIM card.  
Please replace the SIM card in Sigen CommMod with a SIM card of your country or region. Recommended data plan:  $\geq 50 \text{ MB/month} \times N$ . (Wherein, N is the number of inverters)
- If you hear only one click sound when assembling Sigen CommMod in Step ③, complete the assembly on the other side.



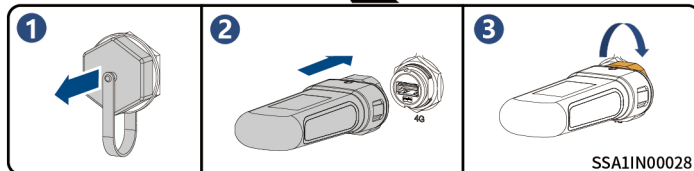
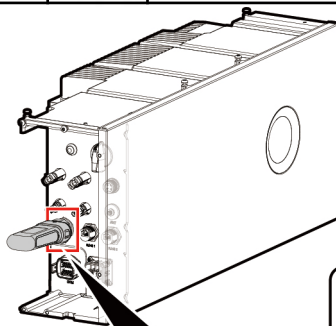
## 5.7 Sigen CommMod Installation

### Tips

Sigen CommMod is required for 4G communication. Sigen CommMod must be separately purchased.



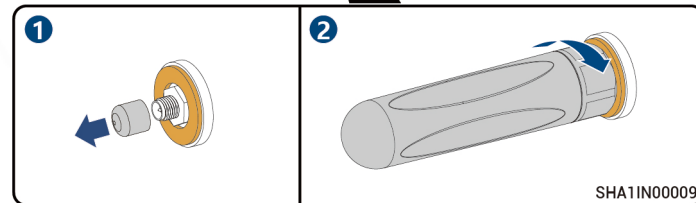
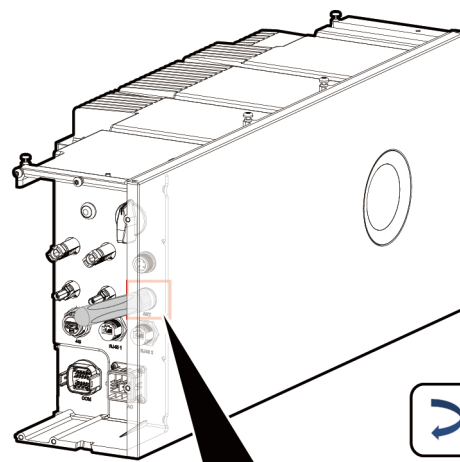
S/N	Indicator	Description
1	Power indicator	—
2	Network state indicator	<ul style="list-style-type: none"> <li>Slow flashing (200ms on/1800ms off): The network is being connected</li> <li>Slow flashing (1800ms on/200ms off): Standby</li> <li>Quick flashing (125ms on/125ms off): Data is being transferred</li> </ul>



## 5.8 WLAN antenna stick Installation

### Tips

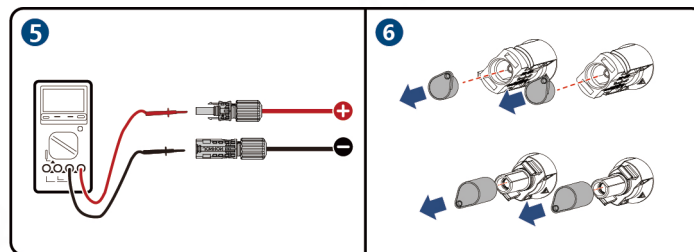
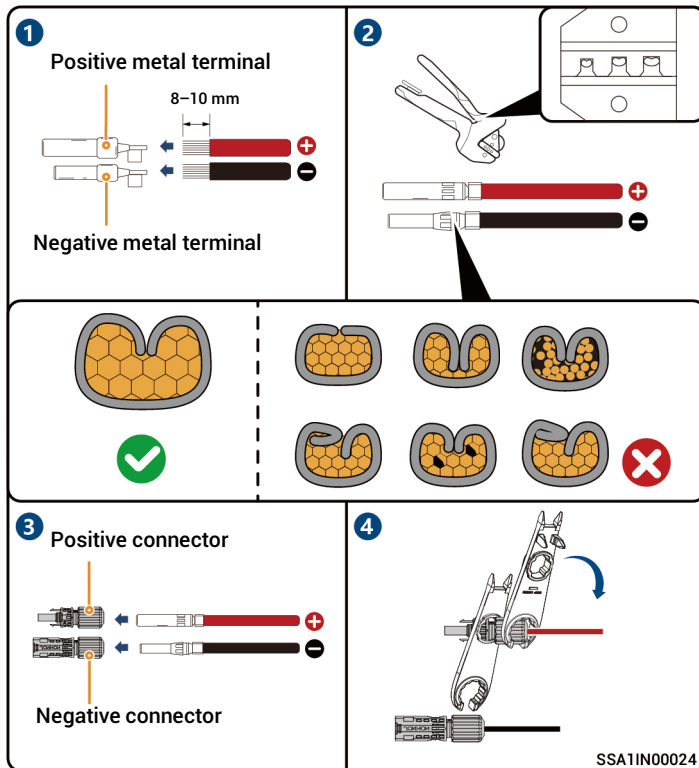
- WLAN communication requires the installation of WLAN antenna stick.
- To ensure good communication, tighten the antenna rod up clockwise. The antenna rod is tightened up when it cannot be easily turned counterclockwise.



## 5.9 DC input cable Connection

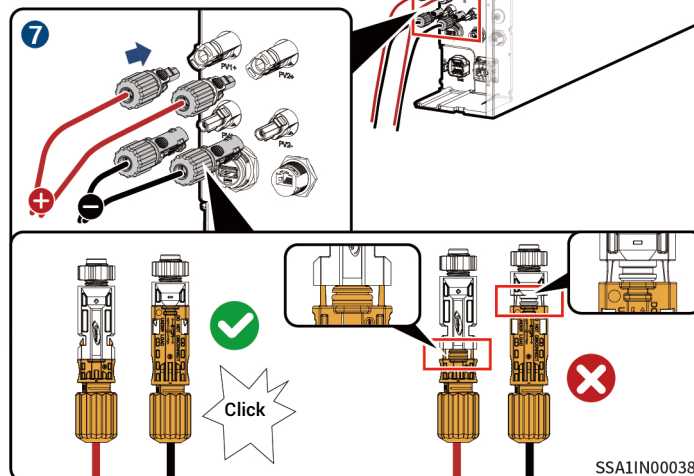
### Tips

- Please make sure that the circuit breaker on the PV side is electrically neutral before connection.
- The DC cable is connected to the inverter from the PV string.



### Caution

If the voltage is negative, the polarity is incorrect. Rectify the fault in time.



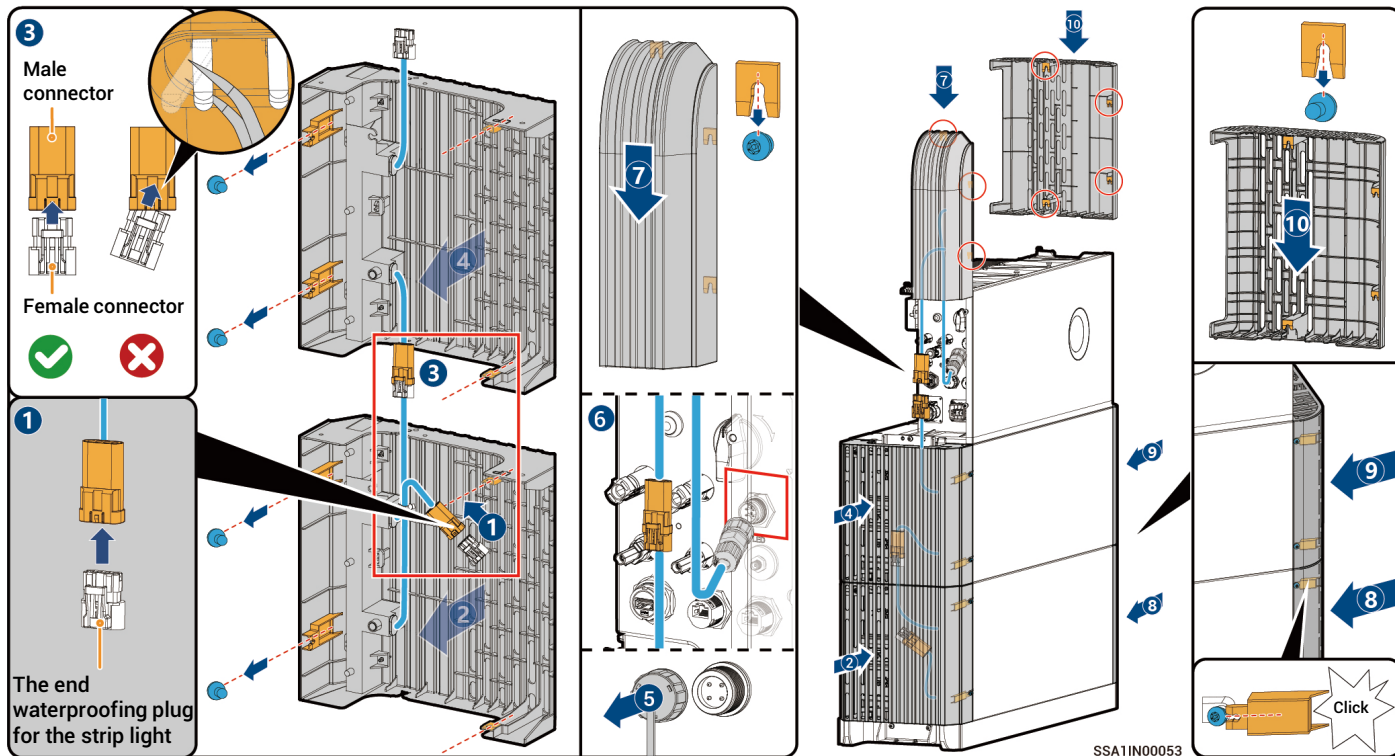
## 6 Post–installation Check

S/N	Check Item
1	The equipment has been securely installed.
2	Ground cables, DC cables, signal cables, etc. are installed accurately without leftovers.
3	The cable fastening screws or terminals are properly installed.
4	There are no sharp spikes or acute angles at the cut point of the cable tie.
5	DC SWITCH is in the OFF state.
6	Ports that are not in use have waterproof covers or plugs installed.
7	There is no construction left inside or outside the equipment.

After confirmation, install the SigenStor BAT and SigenStor EC decorative covers.



## 7 Installation of the Decorative Cover



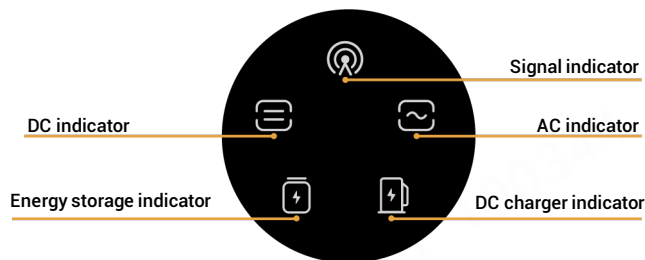
### ⚠ Caution

- The end waterproofing plug for the strip light in step **1** is at the lower end of the decoration on the left side of the inverter, please remove it for spare.
- If the strip light shows abnormal status when the device is powered on, check if the pins in the male connector are tilted. If tilted, straighten them out, reconnect the corresponding male and female connectors, or reconnect the terminal in Step **6** to resume normal operation.



## 8 Equipment Power-On

1. Turn on the upstream switch of equipment.
2. Rotate DC SWITCH to ON.
3. Observe the indicators on the front side of the inverter to learn about the equipment status.

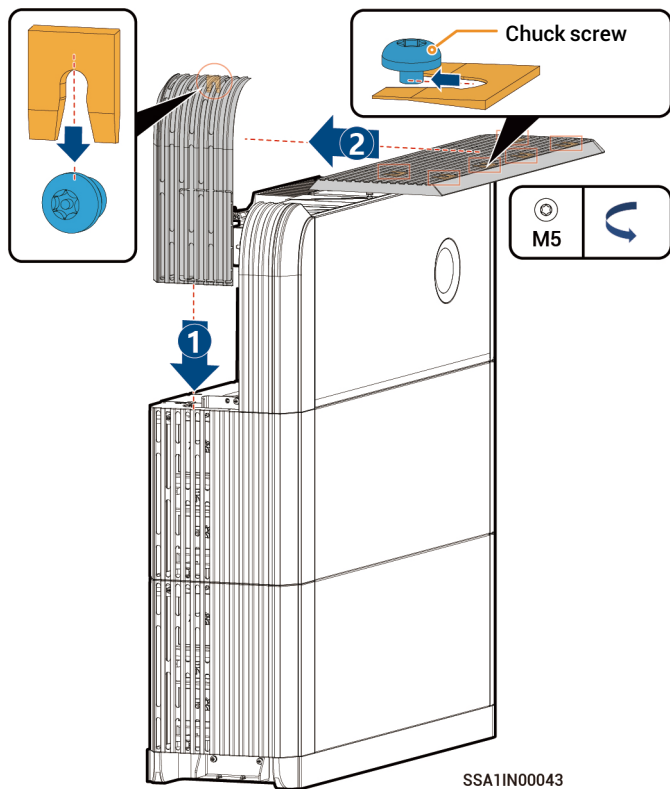


SSA1IN00027

Indicator	Color	State	Description
	White	Always on	The DC side is connected but not running.
	Green	Always on	The DC side is running.
	Grey	–	The DC side is not connected.
	Flash (Orange)	Flash	The DC side is faulty.
	Red	Always on	The inverter is faulty.
	White	Always on	The AC side is connected but not running.
	Green	Always on	Grid-connected operation.
	Blue	Always on	Off-grid operation.
	Grey	–	The AC side is not connected.
	Flash (Blue)	Flash	Off-grid overload operation.
	Flash (Orange)	Flash	The AC side is faulty.
	Red	Always on	The inverter is faulty.

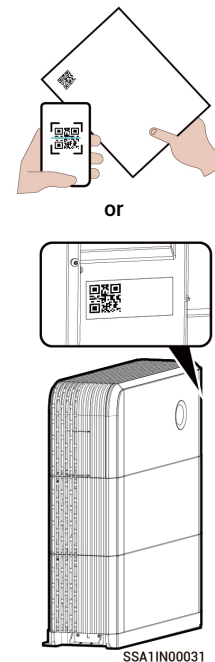
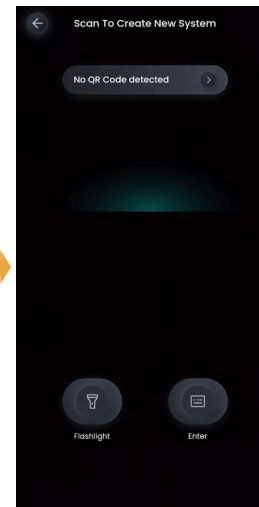
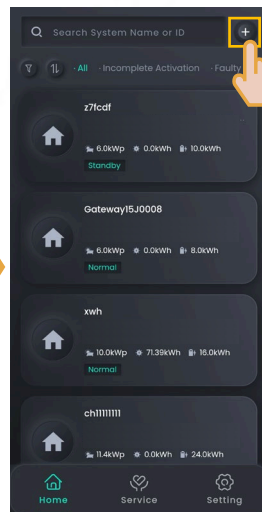
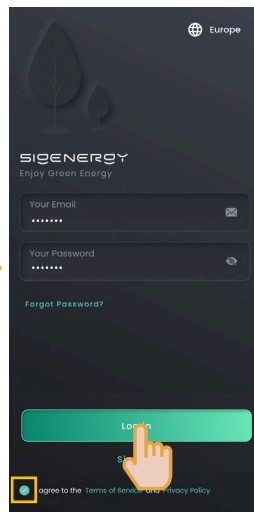
Indicator	Color	State	Description
	White	Always on	All SigenStor BATs are connected but not running.
	Flash (Green)	Flash	SigenStor BAT is charging.
	Flash (Blue)	Flash	SigenStor BAT is discharging.
	Grey	–	All SigenStor BATs lie dormant.
	Flash (Red)	Flash	Some SigenStor BATs are faulty.
	Red	Always on	All SigenStor BATs are faulty.
	Grey	–	The management system is not connected.
	Flash (Green)	Flash	Connected to local App.
	Always on (Green)	Always on	Connected to the management system using an FE or WLAN.
	Always on (Blue)	Always on	Connected to the management system over 4G.
	Flash (Blue)	Flash	Insufficient traffic for Sigen CommMod.

After powering on the equipment, install the remaining decorative covers.



## 9 Download and create new system for mySigen APP

- 1 Please enter the "Partner" → "Register Now" at the Company's official website (<https://www.sigenergy.com>), and complete the account registration based on facts.
- 2 Download the mySigen App and create new system for the device.

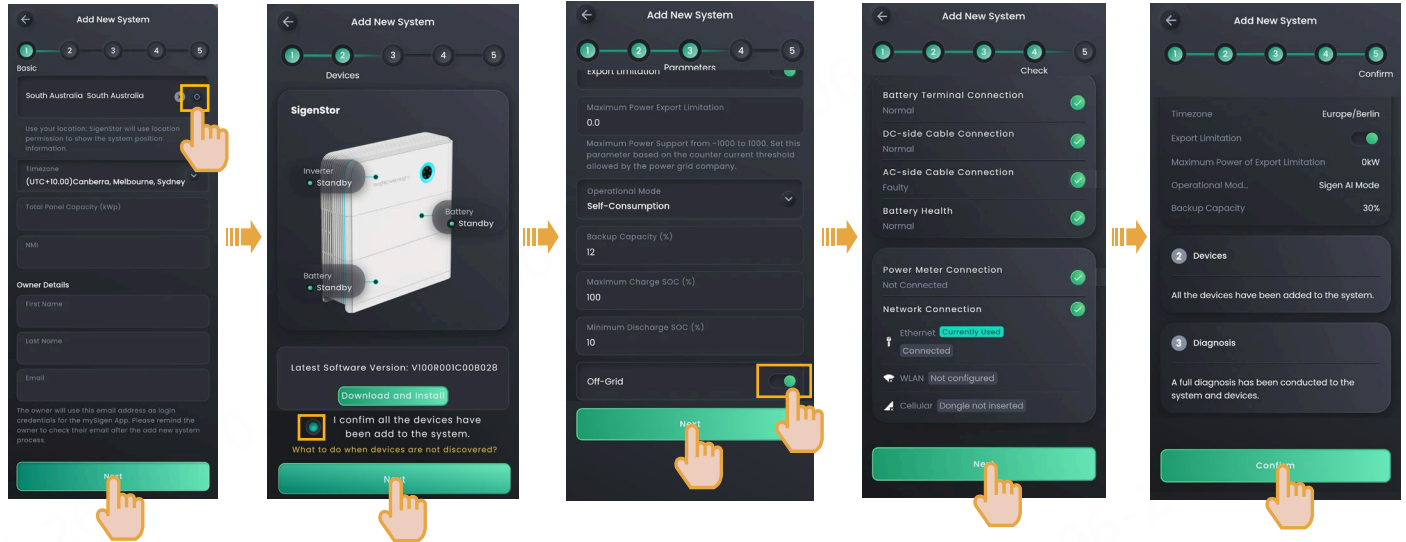


Scan the SN code label on the accompanying box material. If the SN is lost, scan the SN on the side of the inverter.

### Tips

The following steps are different when the equipment has already been connected or not connected to the internet (that is, FE and 4G communication fault), as described below.

## Already connected to the internet:



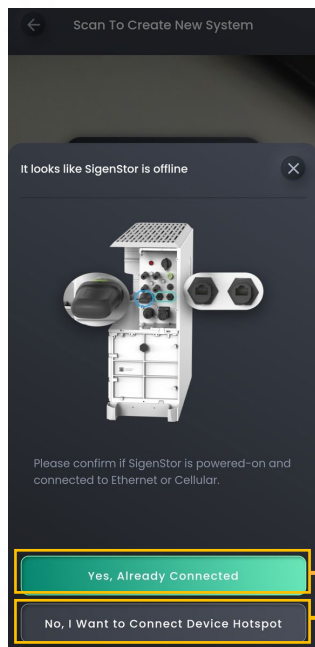
Manually obtain the location and fill out Total Panel Capacity, EMI, and Owner Details.

Perform upgrades where necessary.

- If Gateway is configured in the system, the screen displays the Off-Grid button.
- In off-grid state, the Off-Grid button is turned off by default. In this case, the inverter can only operate in on-grid mode. If the Off-Grid button is manually turned on, the inverter can switch between off-grid and on-grid modes.

**3** Upon completion of the new system creation, the installer shall inform the owner to check its "sigencloud" e-mail within 24 hours and proceed with activating its account.

## Not connected to the internet (that is, FE and 4G communication fault):

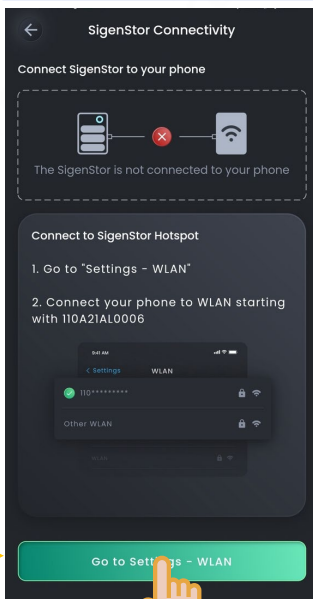


Click this button if the equipment is still not connected to the internet

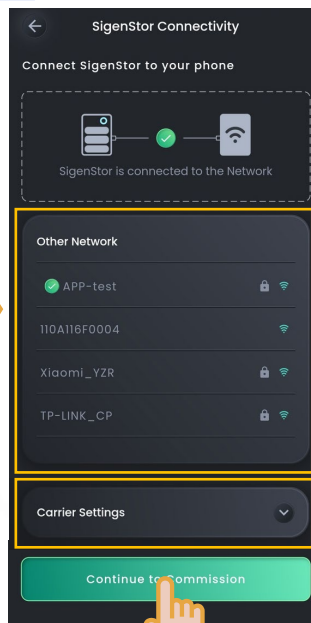
### Caution

After create new system, the equipment hotspot is available for 2 hours. Please connect to the hotspot as soon as possible.

If the equipment has already been connected to the internet, click this button and go to the Create New System page and perform operations by referring to the description in the "already connected to the internet" section.

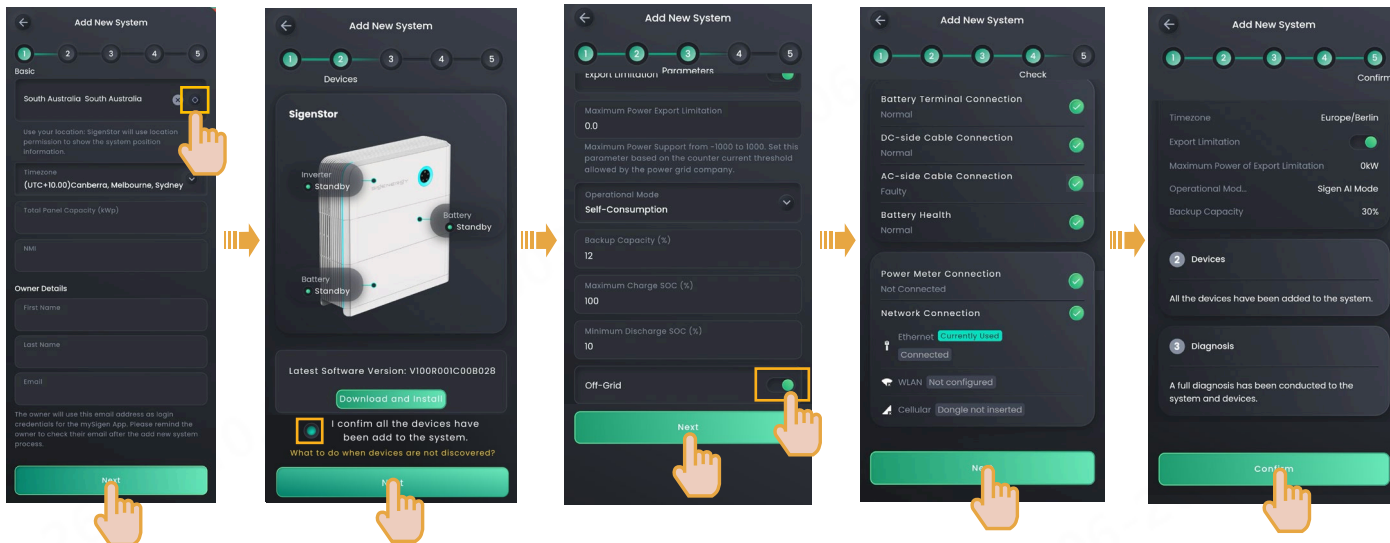


Connect the WLAN hotspot of the equipment. The hotspot is named equipment SN code.



If connected to the WLAN hotspot at the owner's premises or if the SIM card APN is set (the device has a SIM card installed), click "Continue to Commission" to go to the page for creating new systems. You can refer to the description in the "already connected to the internet" section.

If there is no available WLAN hotspot at the owner's premises, or if the device has no SIM card installed, click "Continue to Commission" and follow the on-screen instructions to proceed.



Manually obtain the location and fill out Total Panel Capacity, EMI, and Owner Details.

Perform upgrades where necessary.

- If Gateway is configured in the system, the screen displays the Off-Grid button.
- In off-grid state, the Off-Grid button is turned off by default. In this case, the inverter can only operate in on-grid mode. If the Off-Grid button is manually turned on, the inverter can switch between off-grid and on-grid modes.

**3** Upon completion of the new system creation, the installer shall inform the owner to check its "sigencloud" e-mail within 24 hours and proceed with activating its account.

Sigenergy Technology Co., Ltd.



Website	LinkedIn	YouTube
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[www.sigenergy.com](http://www.sigenergy.com)



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