

Sigen Hybrid (5.0, 6.0) SP

Installation Guide (Australia)

Version: 01
Part Number: 3101000017
Release date: 2024-10-14

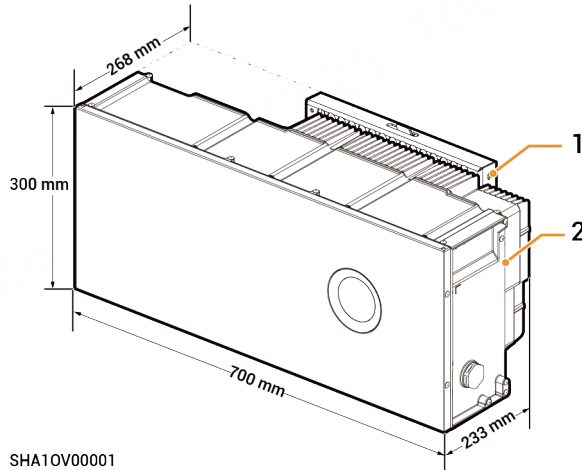


⚠ Caution

- Trained or experienced electrical personnel are required to operate the equipment.
- Operators should be familiar with national/regional laws, regulations and standards, the structure and working principle 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 Introduction to Product Appearance

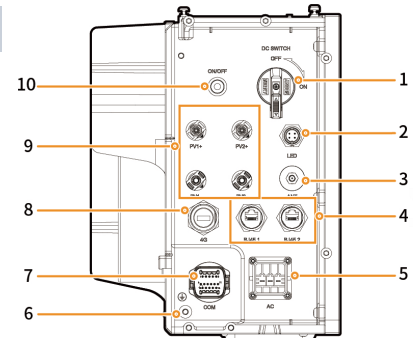
1.1 Appearance and Dimensions



S/N	Equipment/component	Model
1	Wall mounting hardware	-
2	Sigen Hybrid	Sigen Hybrid 5.0/6.0 SP

1.2 Port Descriptions

Left side view



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

2 Pre-installation Check

- According to the packing list, check whether the components are complete and in good appearance. If any abnormality occurs, contact your sales agent in time.
- 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 the customer-provided cable to ensure that the quantity and specifications are correct; if not, prepare again.

Protective equipment



Safety hat



Goggles



Dust mask



Protective gloves

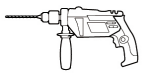


Insulating gloves

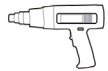


Insulating shoes

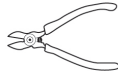
Installation tool



Power drill



Heat gun



Wire cutter



Hydraulic pliers



Crimping pliers



Wire stripper



Scissors



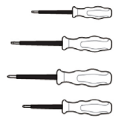
Cable tie



Heat shrinkable sleeve



Vacuum cleaner



Insulation screwdriver set sleeve



Insulation sleeve set



Torque socket wrench



Crimping pliers
(model: H4TC0003
Manufacturer:
Amphenol)



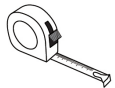
Open-end wrench
(model: H4TW0001
Manufacturer:
Amphenol)



hexagonal L-type wrench (4 mm on opposite side)



Rubber mallet



Tape measure



Marker



Level

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.

Customer-provided cable

S/N	Cable name	Recommended specifications
1	Protective ground cable	Outdoor single core copper cable Cross-sectional area of core conductor: 4–6 mm ² ;
2	AC cable	Outdoor three-core copper cable (L, N, PE) Cross-sectional area of core conductor: 4–6 mm ² ; Outer diameter: 13–21 mm
3	Signal cable	Outdoor shielded twisted pair Cross-sectional area of core conductor: 0.5–0.75 mm ² (multi-core flexible conductor, Tubular terminal needed); 0.5–1 mm ² (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 ² ; Outer diameter: 4–7.5 mm Single cable length: ≤ 100 m ^[1]
5	DC input cable	Outdoor photovoltaic cable Cross-sectional area of core conductor: 4–6 mm ² ; 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 Requirements

Tips

- 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 the installation location should comply with local regulations, firefighting 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

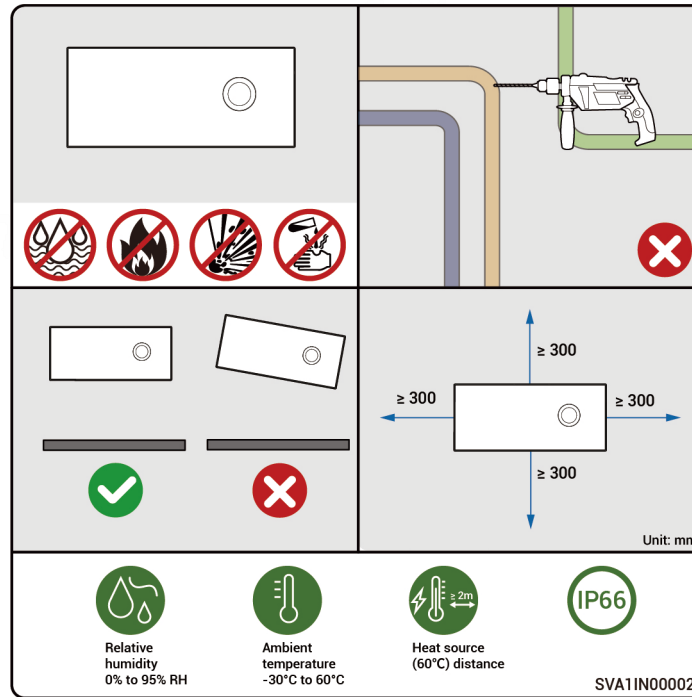
- Do not install the equipment in a smoky, flammable, or explosive environment.
- Avoid exposing the equipment to direct sunlight, rain, standing water, snow, or dust. It is suggested to install the equipment in a sheltered place. Take preventive measures in operating areas prone to natural disasters 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 Location

- Do not tilt the equipment or place it upside down. Ensure that the equipment is horizontally installed.
- Do not install the equipment in areas easily accessible to 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.

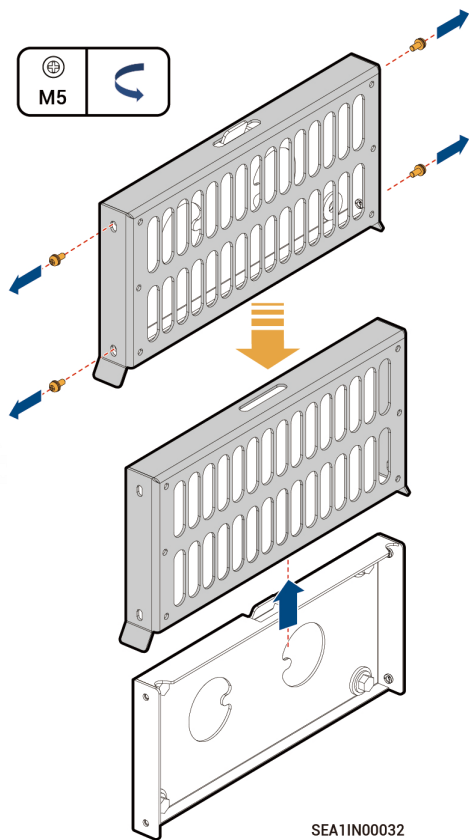
Installation Base

- Do not install the equipment on a flammable base.
- The installation base should meet the load-bearing requirement. Solid brick-concrete structures, concrete walls 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.

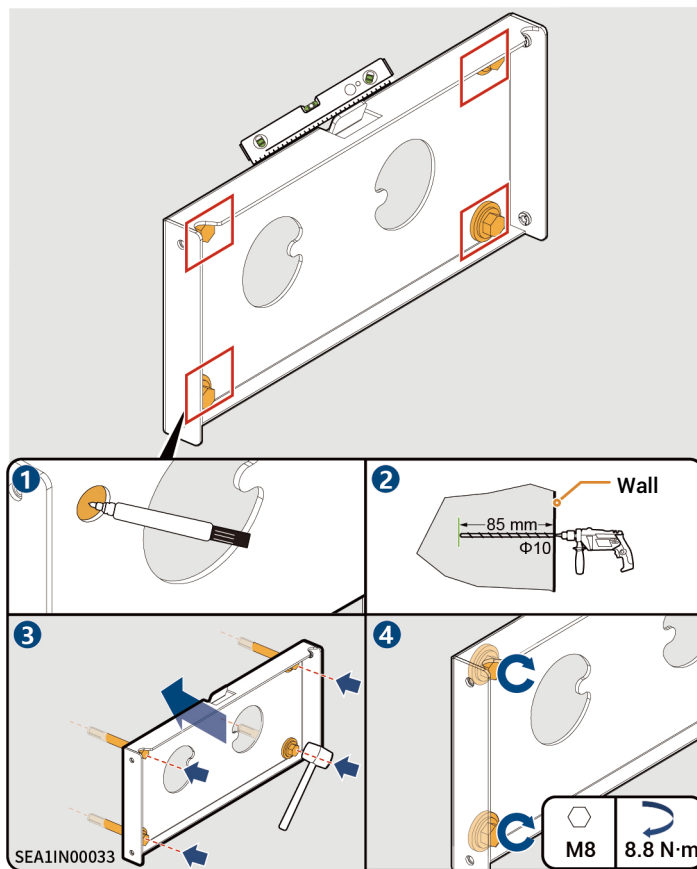


4 Equipment Installation

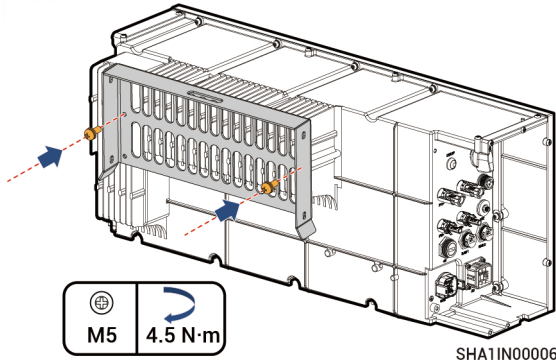
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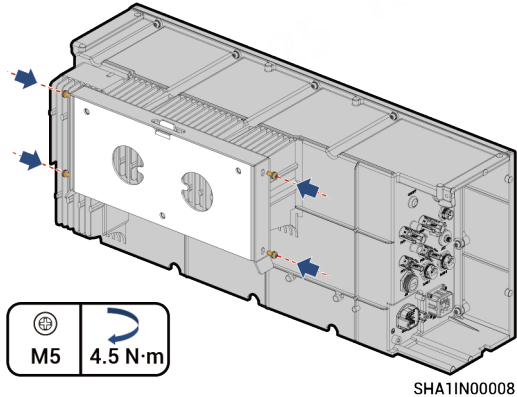
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3



4

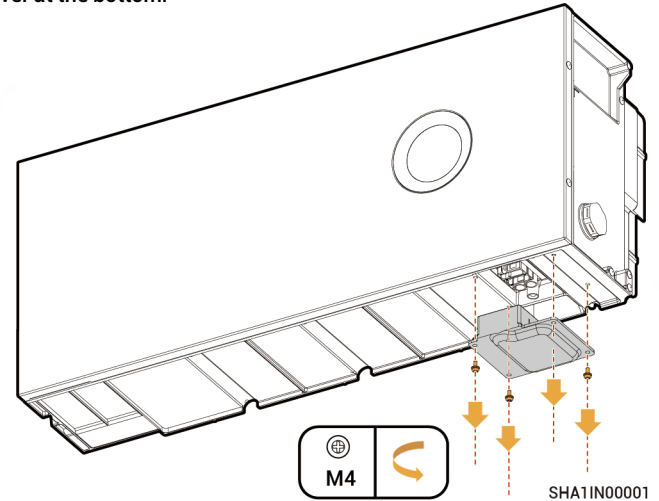


⚠ Caution

- After purchasing and activating the specified license, the Sigen Hybrid can be adjusted to the PV storage application. Please follow the reverse operation in this section to remove Sigen Hybrid from the wall and install it on SigenStor BAT.
- Before making any adjustments to the installation scenarios of Sigen Hybrid, ensure that Sigen Hybrid is powered off.

Operation when adjusting Sigen Hybrid to the PV storage application

Before installing on SigenStor BAT, remove the IP protection cover at the bottom.



⚠ Danger

After the device is powered on, there is high voltage, and this step is prohibited in pure PV application.

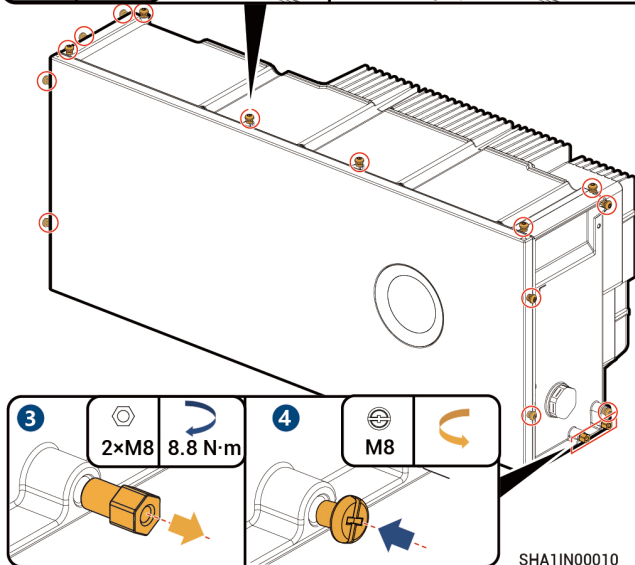
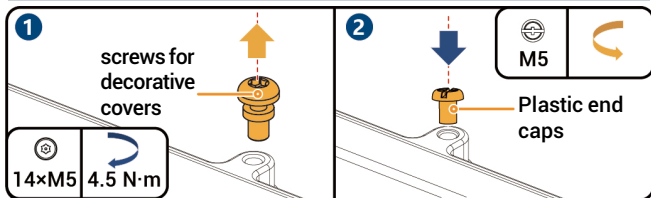
⚠ Caution

Please refer to the "SigenStor-5S - (5-16), SigenStor-6S - (8-24) Installation Guide" for specific instructions on installing the inverter on SigenStor BAT.

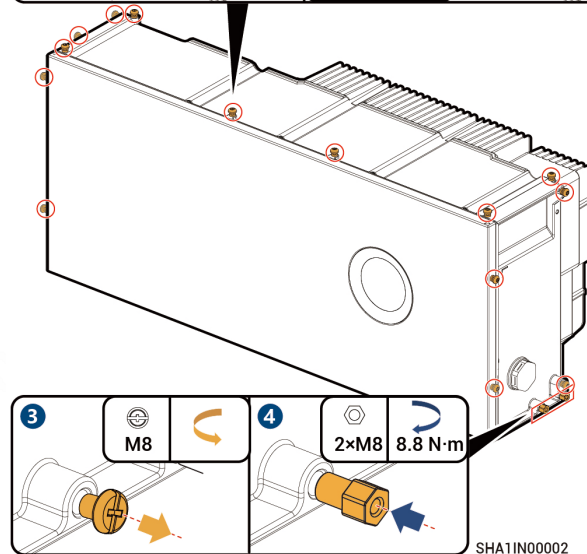
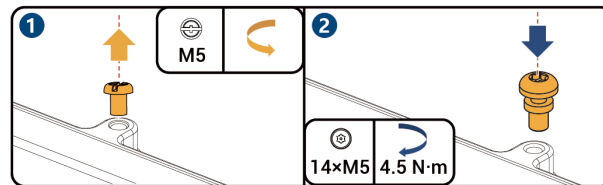
5 Tips

- The equipment has been installed with screws for decorative covers at the factory.
- When applied to pure PV, Sigen Hybrid can selectively replace the screws for decorative covers with plastic end caps according to the needs of the homeowner.
- When adjusting Sigen Hybrid to the PV storage application, if the device has already installed a plastic end caps, it is necessary to replace the plastic end caps with the screws for decorative covers ; If the device is installed with the screws for decorative covers, this step can be ignored.

Replace the screws for decorative covers with plastic end caps



Replace the plastic end caps with screws for decorative covers



5 Cable Connection and Component Installation

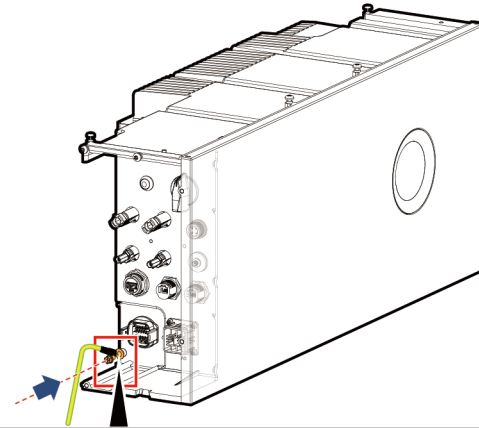
Danger

- 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.

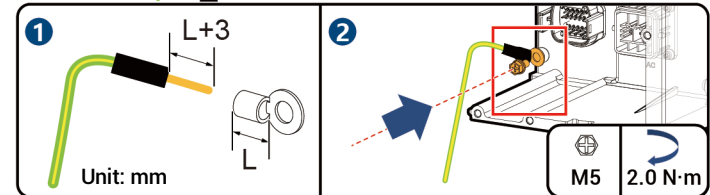
Tips

- Bind the power cable separately from the signal cable.
- 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.

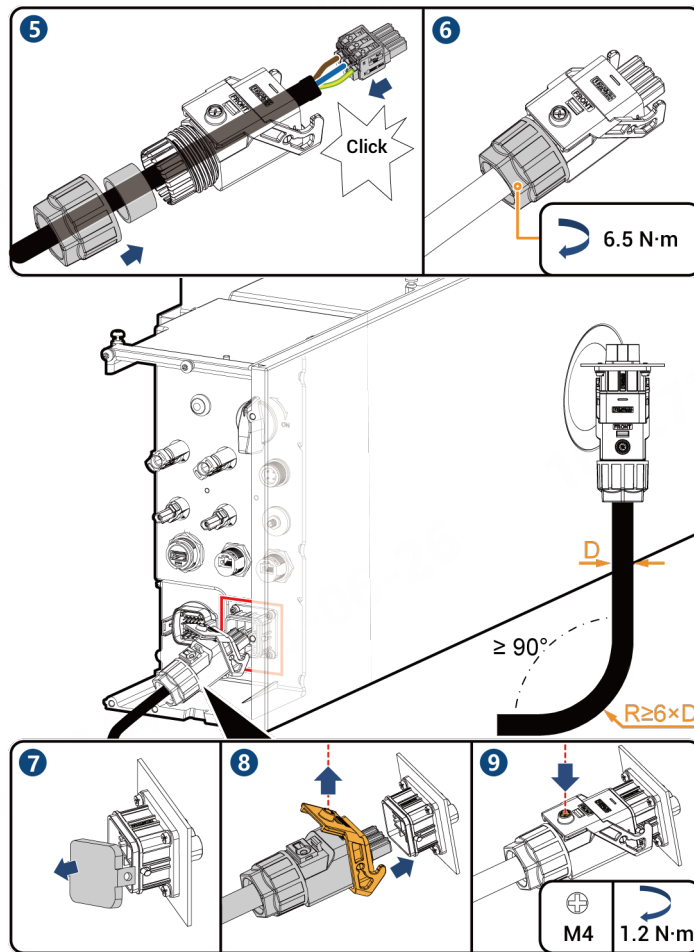
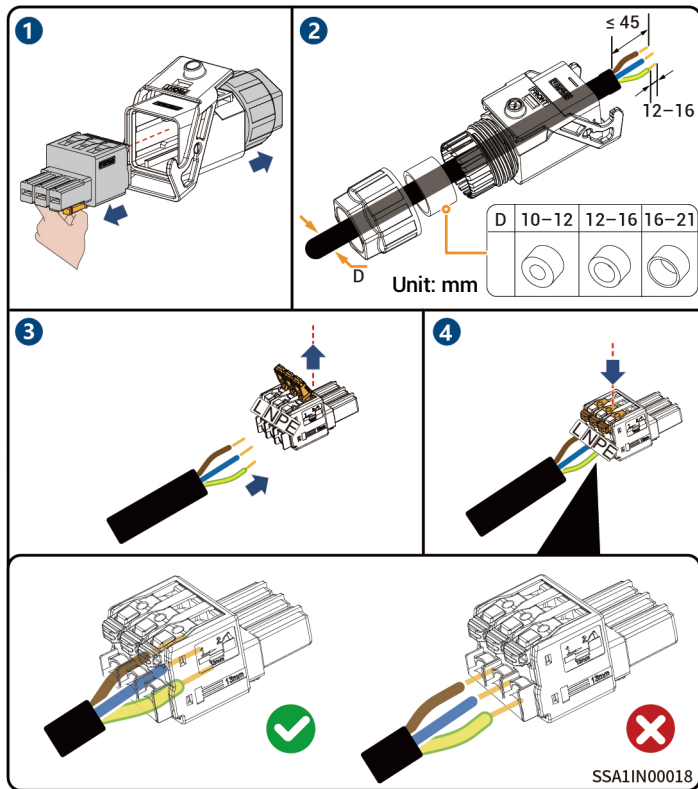
5.1 Protective Ground Cable of Inverter



SSA1IN00017



5.2 AC Output Cable

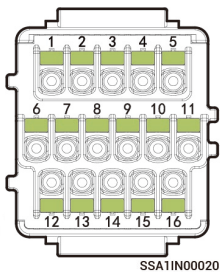


5.3 Signal cable Connection

Tips

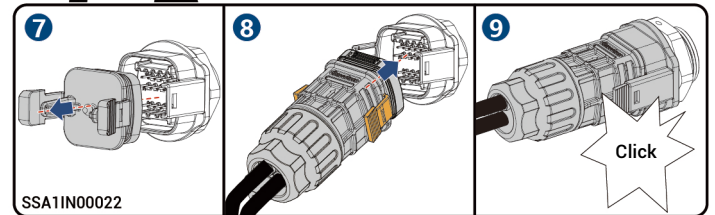
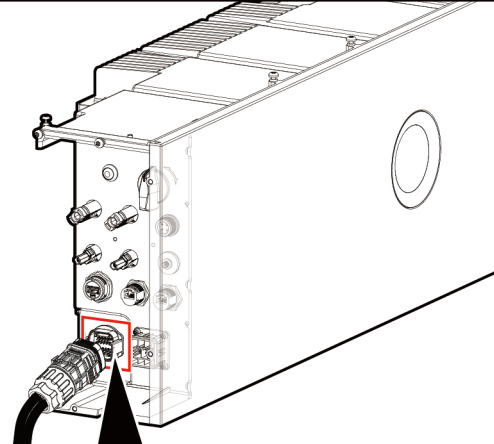
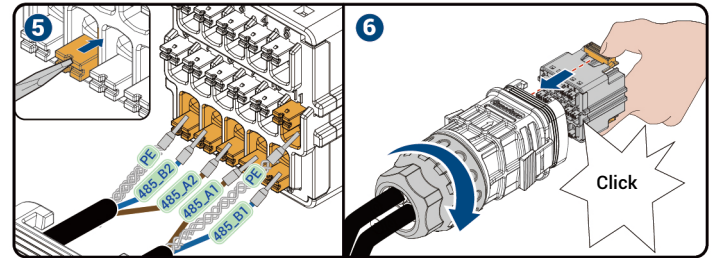
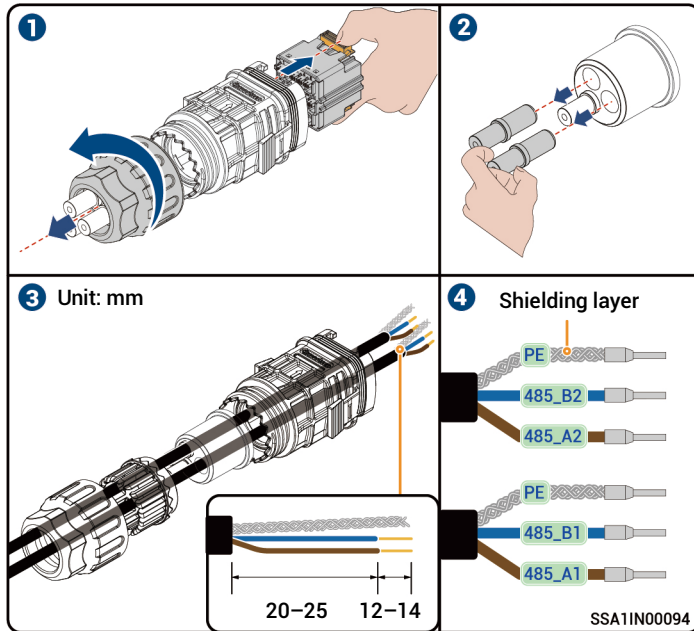
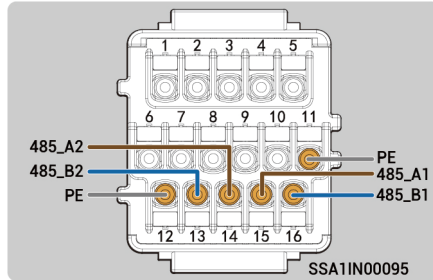
- Power sensors need to be purchased from our official channel.
- The appearance and specific wiring of the power sensor can be found in the instruction manual delivered with the case.
- According to AS/NZS 4777.2:2020+A1:2021, connecting SigensStor to the power grid must meet the Demand Response Mode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

5.3.1 COM terminal introduction

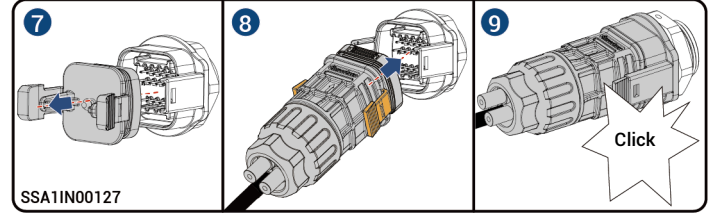
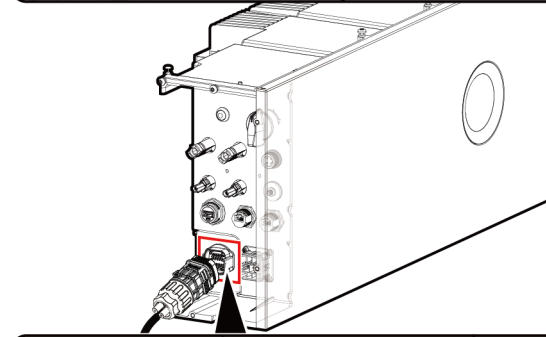
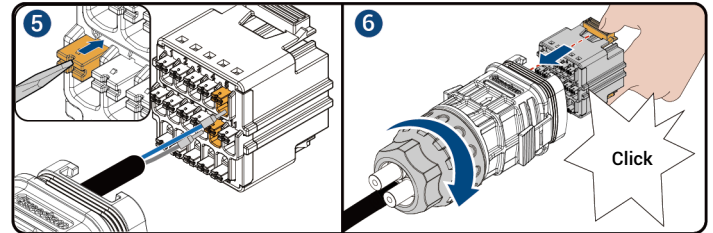
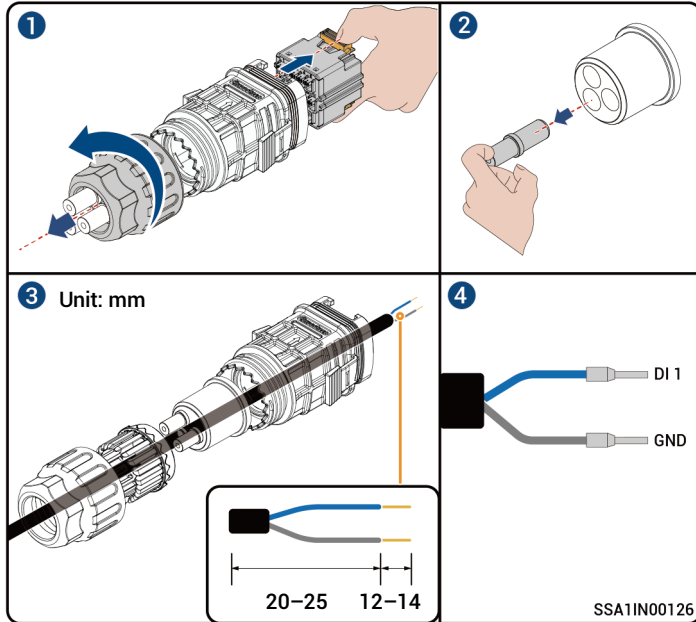
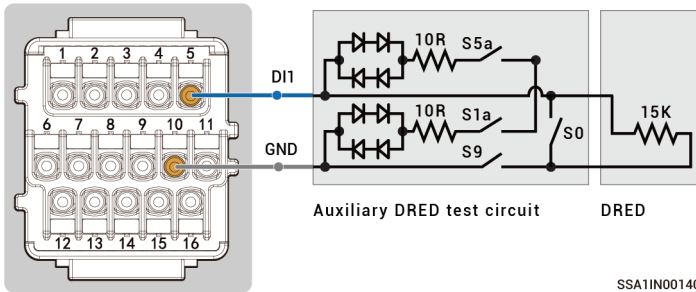


Description	Interface definition	Pin Number	Sigen Sensor SP-DH (SDM230Modbus)	Sigen Sensor SP-CT120-DH (SDM120CT 40mA)
(Reserved) DO1, connected to third party intelligent electric equipment, such as switch control and heat pump	Dry contact 1 – Common	1	–	–
	Dry contact 1 – NO	2	–	–
(Reserved) DO2, connected to third party intelligent electric equipment, such as switch control and heat pump	Dry contact 2 – Common	3	–	–
	Dry contact 2 – NO	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	–	–
	DI1, digital input 1	5	–	–
For DRM0	Signal GND	10	–	–
RS485-2, COM port used to access the power sensor	PE signal shielding ground	12	–	–
	RS485 signal 2_B-	13	6	9
	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 signal shielding ground	11	–	–
	RS485 signal 1_A+	15	–	–
	RS485 signal 1_B-	16	–	–

5.3.2 RS485 Signal Cable Connection



5.3.3 Demand Response Enabling Device (DRED) Connection

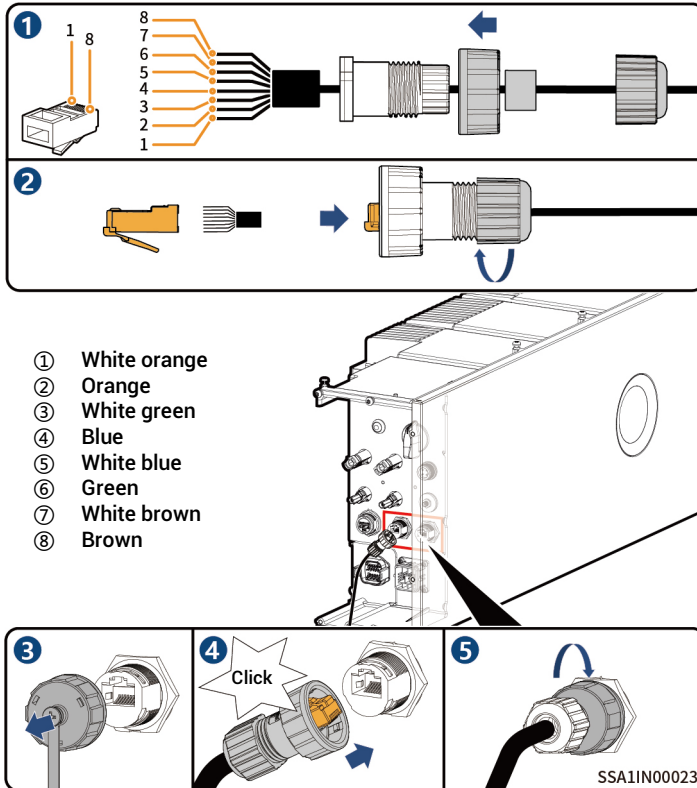


- Tips**
- Switches S5a, S1 a, and S9 of DRED are normally closed and S0 is used to control the power on and off of SigenStor. When S0 closes, SigenStor is powered off, and when S0 opens, SigenStor is powered on.
 - After creating new systems, you can use mySigen App to set DRM0 parameters. Please refer to mySigen App Installer Manual for detailed instructions.

5.4 RJ45 Cable Connection

Tips

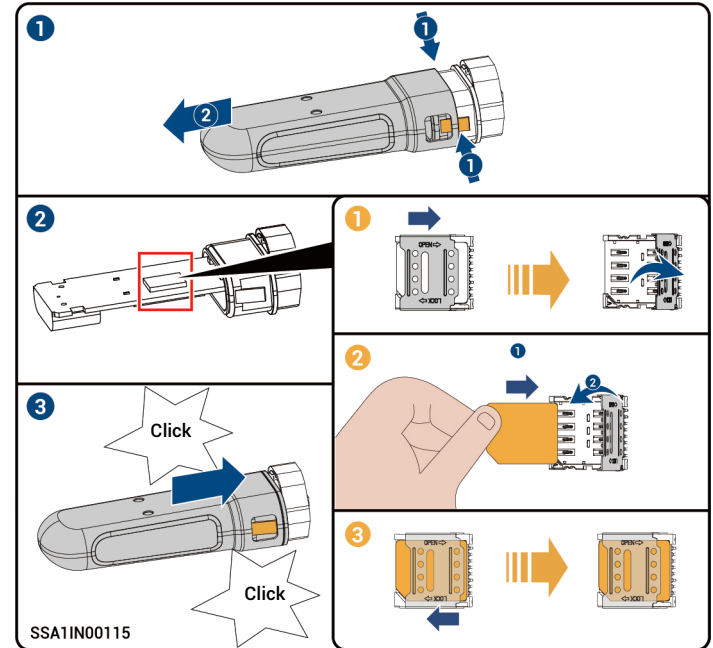
- RJ45 cables are EIA/TIA 568B standard cables.
- Two RJ45 Ethernet ports, one of which is connected to the router, and the other is connected to other devices (e.g., inverters, gateways, etc.).



5.5 (Optional) Replacing SIM card of Sigen CommMod

Tips

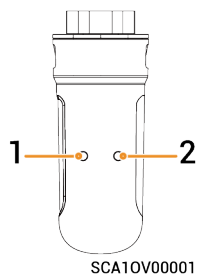
- When free 4G traffic of Sigen CommMod runs out, users must replace a SIM card.
 Please replace the SIM card in Sigen CommMod with a SIM card of your country or region. Recommended data plan: $\geq 50 \text{ MB/month} \times N$. (Wherein, N is the number of inverters)
- If you hear only one click sound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



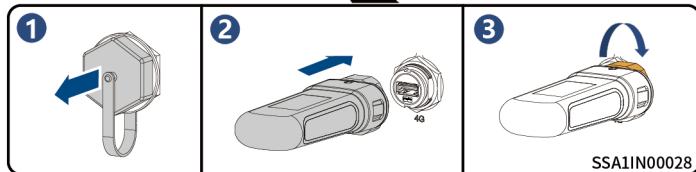
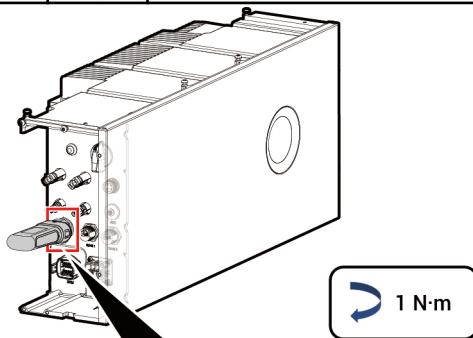
5.6 Sigen CommMod Installation

Tips

Sigen CommMod is required for 4G communication.



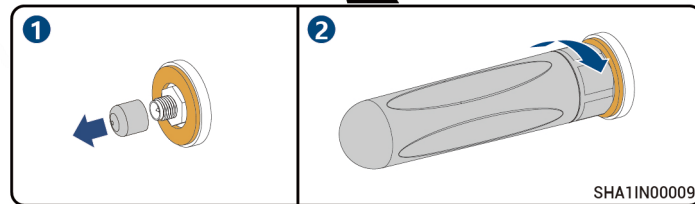
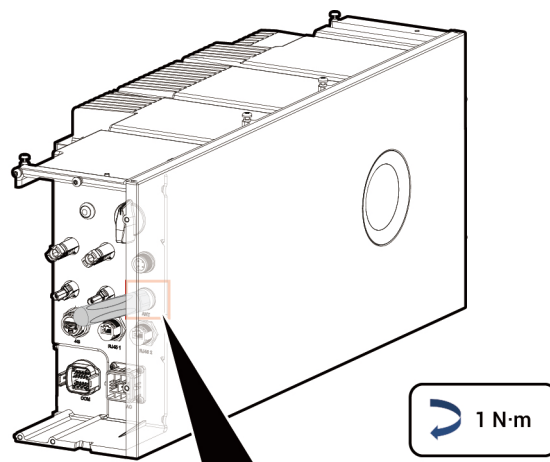
S/N	Indicator	Description
1	Power indicator	-
2	Network state indicator	<ul style="list-style-type: none"> • Slow flashing (200ms on/1800ms off): The network is being connected • Slow flashing (1800ms on/200ms off): Standby • Quick flashing (125ms on/125ms off): Data is being transferred



5.7 WLAN antenna stick Installation

Tips

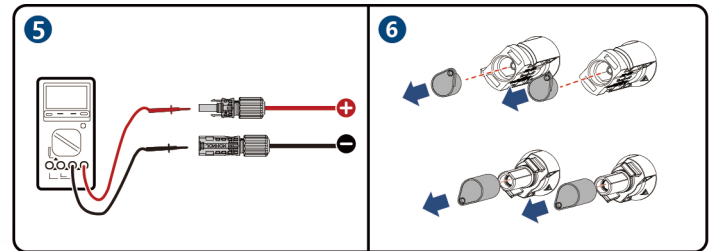
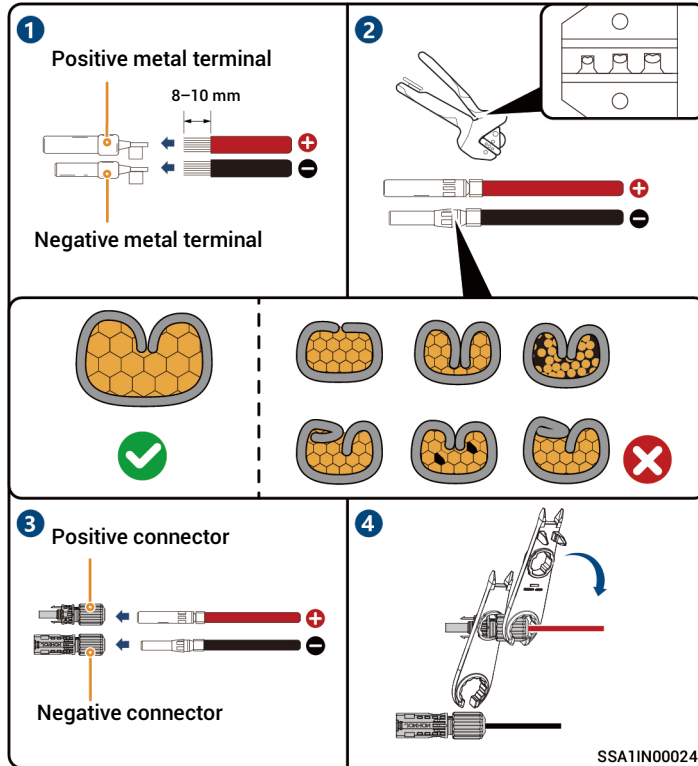
- WLAN communication requires the installation of WLAN antenna stick.
- To ensure good communication, tighten the antenna rod up clockwise. The antenna rod is tightened up when it cannot be easily turned counterclockwise.



5.8 DC input cable Connection

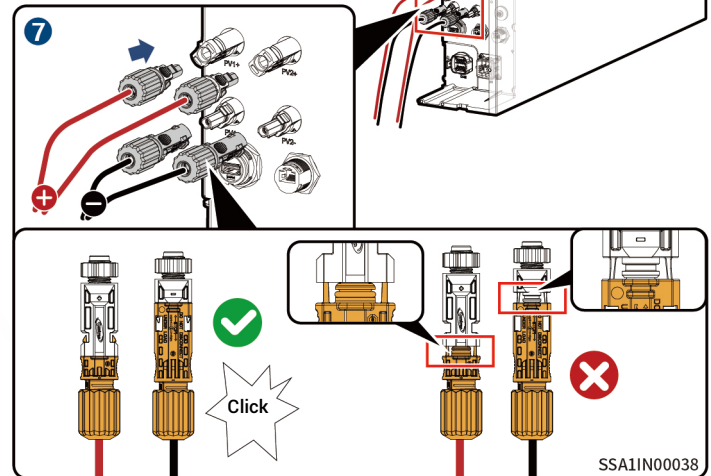
Tips

- 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.
- If you have only one DC input, connect it to PV1.

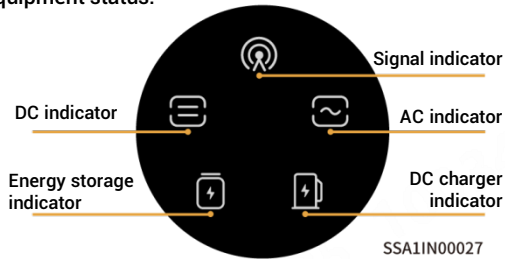


6 Post-installation Check

Serial number	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 SWICH is in the OFF position.
6	Ports that are not in use have waterproof covers or plugs installed.
7	There is no construction left inside or outside the equipment.

7 Equipment Power-On

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

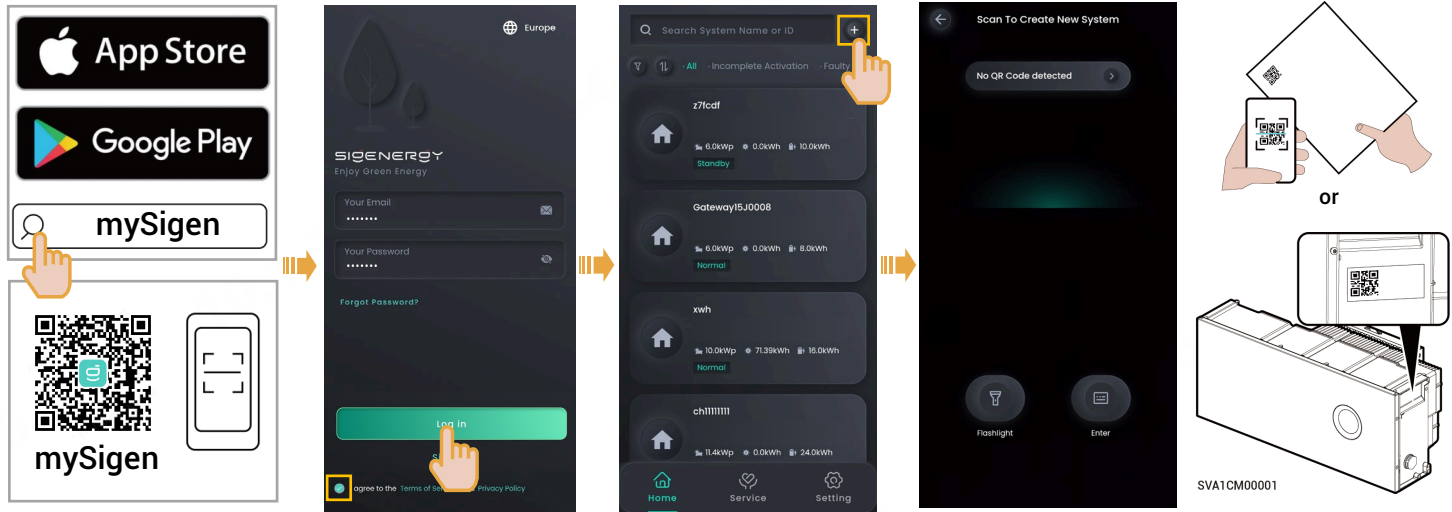


Indicator	Color	State	Meaning
		-	The management system is not connected.
		Flash	Connected to local App.
		Always on	Connected to the management system using an FE or WLAN.
		Always on	Connected to the management system over 4G.
		Flash	Insufficient traffic for Sigen CommMod.

Indicator	Color	State	Meaning
		Always on	The DC side is connected but not running.
		Always on	The DC side is running.
		-	The DC side is not connected.
		Flash	The DC side is faulty.
		Always on	The inverter is faulty.
		Always on	The AC side is connected but not running.
		Always on	Grid-connected operation.
		Always on	Off-grid operation.
		-	The AC side is not connected.
		Flash	Off-grid overload operation.
		Flash	The AC side is faulty.
		Always on	The inverter is faulty.

8 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.

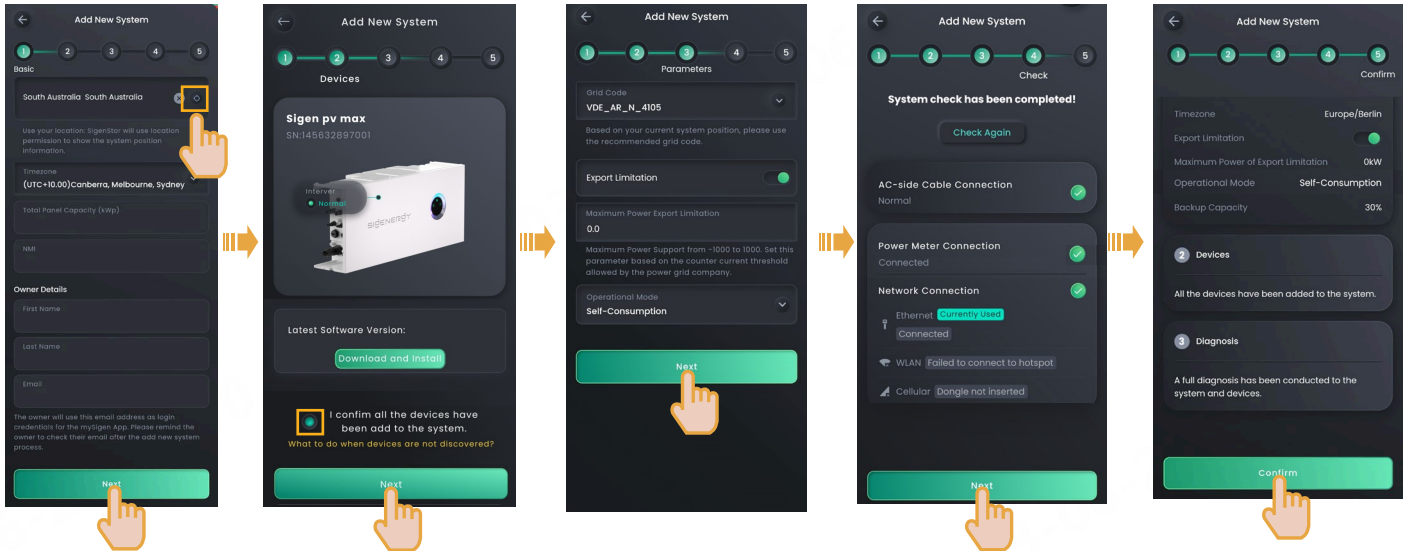


Scan the SN code label on the accompanying box material. If the SN is lost, scan the SN on the side of the inverter.

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:



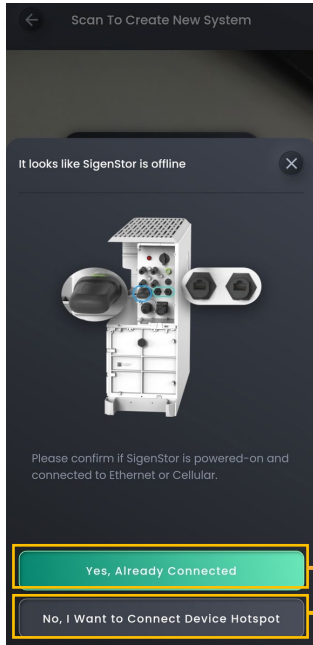
Manually locate the address, set the Time zone, EMI, and enter Owner Details.

Perform upgrades where necessary.

You can manually set and modify some function parameters of the power station.

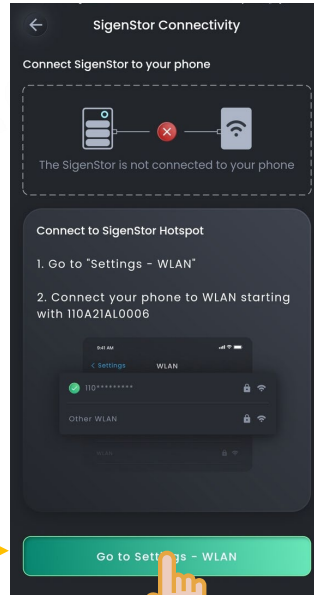
3 Upon completion of the new system creation, the installer shall inform the owner to check its "sigencloud" e-mail within 24 hours and proceed with activating its account.

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



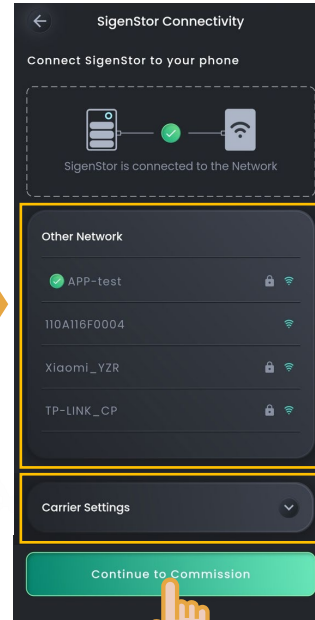
Click this button if the equipment is still not connected to the internet

Caution
The equipment hotspot is available for 2 hours. Please connect to the hotspot as soon as possible.



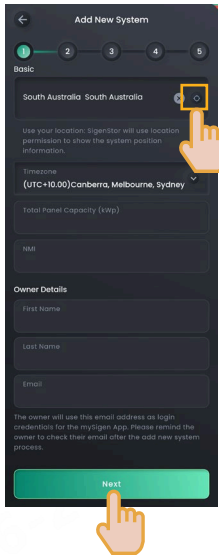
Connect the WLAN hotspot of the equipment. The hotspot is named equipment SN code.

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.

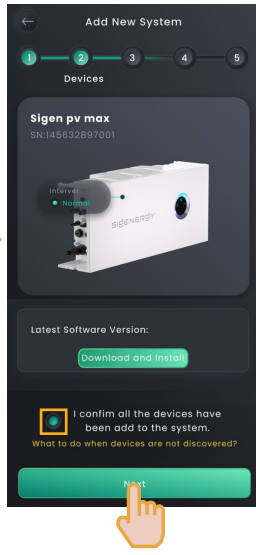


If connected to the WLAN hotspot at the owner's premises or if the SIM card APN is set (the device has a SIM card installed), click "Continue to Commission" to go to the page for creating new systems. You can refer to the description in the "already connected to the internet" section.

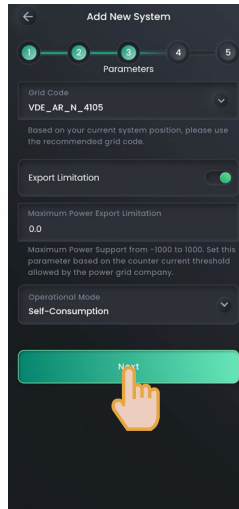
If there is no available WLAN hotspot at the owner's premises, or if the device has no SIM card installed, click "Continue to Commission" and follow the on-screen instructions to proceed.



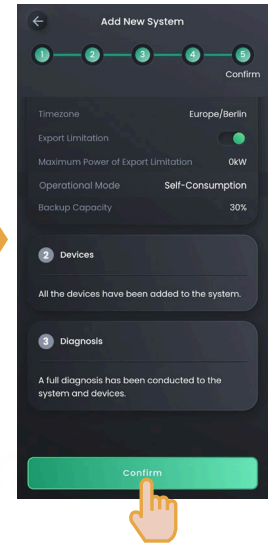
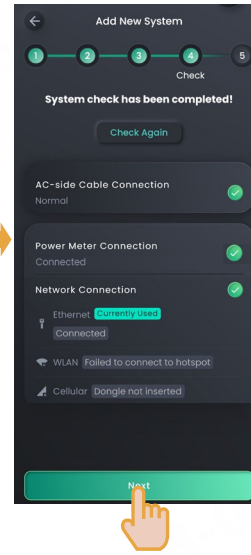
Manually locate the address, set the Time zone, EMI, and enter Owner Details.



Perform upgrades where necessary.



You can manually set and modify some function parameters of the power station.



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.

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