

# Sigen EV AC Charger Installation Guide

Sigen EVAC (7, 11, 22) 4G T2 WH  
Sigen EVAC (7, 11, 22) 4G T2SH WH  
Sigen EVAC (7, 11, 22) 4G T2 UK WH  
Sigen EVAC (7, 11, 22) 4G T2SH UK WH

Version: 05  
Release date: 2025-07-17

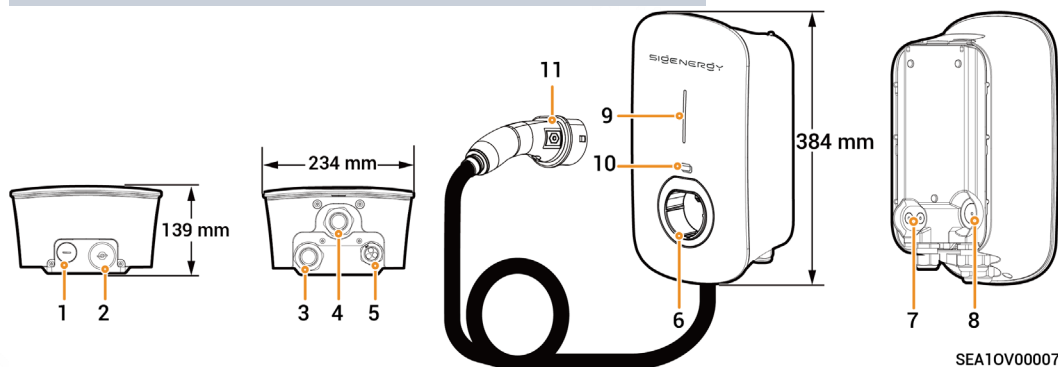


## ⚠ Caution

- 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

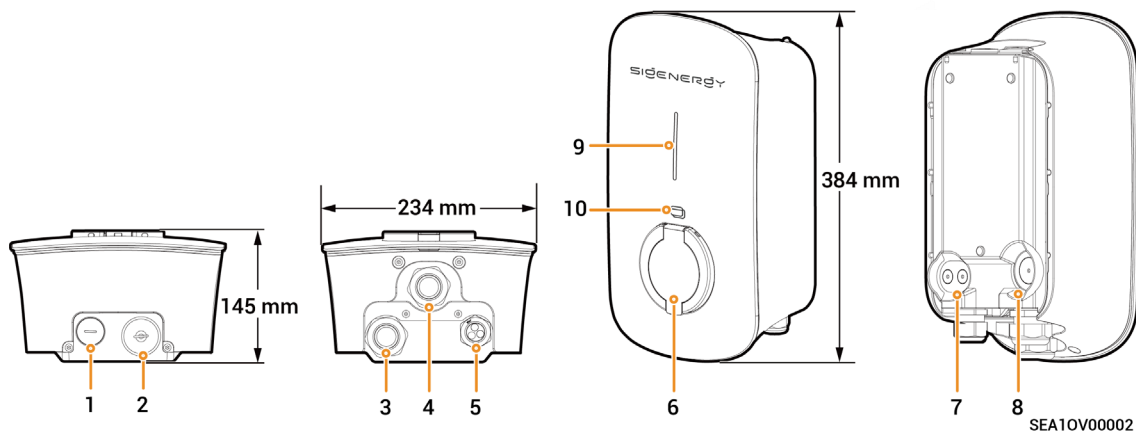
Sigen EVAC 7/11/22 4G T2 WH, Sigen EVAC 7/11/22 4G T2 UK WH



## ⚠ Caution

- You are advised to connect cables through bottom routing holes (holes 3 and 5).
- If cables are connected through top routing holes (holes 1 and 2) or the rear routing (number 7, 8), please install the equipment in a sheltered location to prevent water ingress after prolonged water accumulation on the top.

No.	Description	No.	Description
1	Top routing hole for communication cable	2	Top routing hole for AC input cable
3	Bottom routing hole for AC input cable	4	Bottom routing hole for charging cable
5	Bottom routing hole for communication cable	6	Type 2 charging connector holder
7	Rear routing hole for communication cable	8	Rear routing hole for AC cable
9	Indicator	10	Sigen RFID card reading area
11	Charging connector		



### ⚠ Caution

- You are advised to connect cables through bottom routing holes (holes 3 and 5).
- If cables are connected through top routing holes (holes 1 and 2) or the rear routing (number 7, 8), please install the equipment in a sheltered location to prevent water ingress after prolonged water accumulation on the top.

No.	Description	No.	Description
1	Top routing hole for communication cable	2	Top routing hole for AC input cable
3	Bottom routing hole for AC input cable	4	(Reserved) Bottom routing hole
5	Bottom routing hole for communication cable	6	Type 2 charger socket with protective door
7	Rear routing hole for communication cable	8	Rear routing hole for AC cable
9	Indicator	10	Sigen RFID card reading area

## 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.
- 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



Safety glasses



Dust mask



Protective gloves



Insulating gloves



Insulating shoes

### Installation tool



Power drill



Vacuum cleaner



Wire cutter



Crimp tool



Crimping pliers



Wire stripper



Scissors



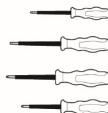
Cable tie



Heat shrinkable sleeve



Heat gun



Insulation screwdriver set



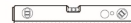
Digital torque open-end wrench



Marker



Rubber mallet



Level



Tape measure



Hole saw drill

### Self-supplied pre-AC switch

Users should prepare type B MCB compliant with IEC/EN 60898 with recommended specifications shown below. Users can omit this requirement if they have installed compliant AC switches.

Model	Number of Poles, MCB	Rated Current, MCB
Sigen EVAC 7 4G T2 WH, Sigen EVAC 7 4G T2SH WH	1P+N	40 A
Sigen EVAC 11 4G T2 WH, Sigen EVAC 11 4G T2SH WH	3P+N	20 A
Sigen EVAC 22 4G T2 WH, Sigen EVAC 22 4G T2SH WH	3P+N	40 A



## Self-supplied Cables

The grid power options include TT, TN-S, TN-C-S, and IT. Users can prepare cables according to their local grid power mode.

No.	Cable Name		Recommended Specification		
			Sigen EVAC 7 4G (T2, T2 UK) WH Sigen EVAC 7 4G (T2SH, T2SH UK) WH	Sigen EVAC 11 4G (T2, T2 UK) WH Sigen EVAC 11 4G (T2SH, T2SH UK) WH	Sigen EVAC 22 4G (T2, T2 UK) WH Sigen EVAC 22 4G (T2SH, T2SH UK) WH
1	AC input cable	Three-phase five-wire system (L1/L2/L3/N/PE)	-	Five-core/four-core copper core cables for outdoor use <ul style="list-style-type: none"><li>• Cable temperature resistance: ≥ 90°C</li><li>• Outer diameter: 13 mm to 20 mm</li><li>• Current: 16 A</li><li>• Cross-sectional area of conductor: 2.5 mm<sup>2</sup> to 4 mm<sup>2</sup></li></ul>	Five-core/four-core copper core cables for outdoor use <ul style="list-style-type: none"><li>• Cable temperature resistance: ≥ 90°C</li><li>• Outer diameter: 13 mm to 20 mm</li><li>• Current: 32 A</li><li>• Cross-sectional area of conductor: 6 mm<sup>2</sup></li></ul>
		Three-phase four-wire system (L1/L2/L3/PE)			
		Two phases (L1/L2/PE)	Three-core copper core cables for outdoor use <ul style="list-style-type: none"><li>• Cable temperature resistance: ≥ 90°C</li><li>• Outer diameter: 13 mm to 20 mm</li><li>• Current: 32 A</li><li>• Cross-sectional area of conductor: 6 mm<sup>2</sup></li></ul>	-	-
		Single phase (L/N/PE)			
2	RS485 signal cable/DO signal cable		Cables or two-core shielded twisted pair for outdoor use <ul style="list-style-type: none"><li>• Conductor cross-sectional area: 0.2 mm<sup>2</sup> to 1.5 mm<sup>2</sup></li><li>• Outer diameter: 5 mm to 7 mm</li></ul>		
3	RJ45 network cable		Shielded twisted pair for outdoor use <ul style="list-style-type: none"><li>• Conductor cross-sectional area: 0.129 mm<sup>2</sup> to 0.205 mm<sup>2</sup></li><li>• Outer diameter: 5 mm to 7 mm</li></ul>		
4	(Optional) PEN control line (only applicable to products with MCB terminals)		Two-core copper core cables for outdoor use <ul style="list-style-type: none"><li>• Cable temperature resistance: ≥ 90°C</li><li>• Voltage requirement: ≥ 300 V/500 V</li><li>• Cross-sectional area of conductor: 0.75 mm<sup>2</sup> to 1.5 mm<sup>2</sup></li><li>• Outer diameter: 5 mm to 7 mm</li></ul>		

### 3 Site Selection Requirements

#### Tips

- Before installing the equipment, please be sure to carefully read the following installation requirements. The company will not be liable for any functional abnormalities or damages arising from the operation of the equipment if the installation requirements are not followed, even in cases leading to personal safety incidents.
- 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, explosive, or corrosive environments.
- Avoid exposing the equipment to direct sunlight, rain, standing water, snow, or dust. 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.
- Ensure that the temperature and humidity of the installation environment comply with the equipment's 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).
- In areas with good marine environments (such as Norway, where the nearshore salinity is  $\leq 28$  psu), the mounting distance of the device from the coastline can be appropriately relaxed to  $\geq 200$  m.
- If the outer surface of the device is damaged, please repaint the device in time.

#### Installation position

- Do not tilt or overturn the equipment to ensure that it is installed horizontally.
- Do not install the equipment in a place easily touched by children.
- Do not install the equipment in mobile scenarios such as RVS, cruise ships, and trains.
- You are advised to install the equipment in a position that is easy to operate, maintain, and view indicator status.
- When installing the equipment in the garage, do not install the equipment in the position where the vehicle passes through to avoid collision.

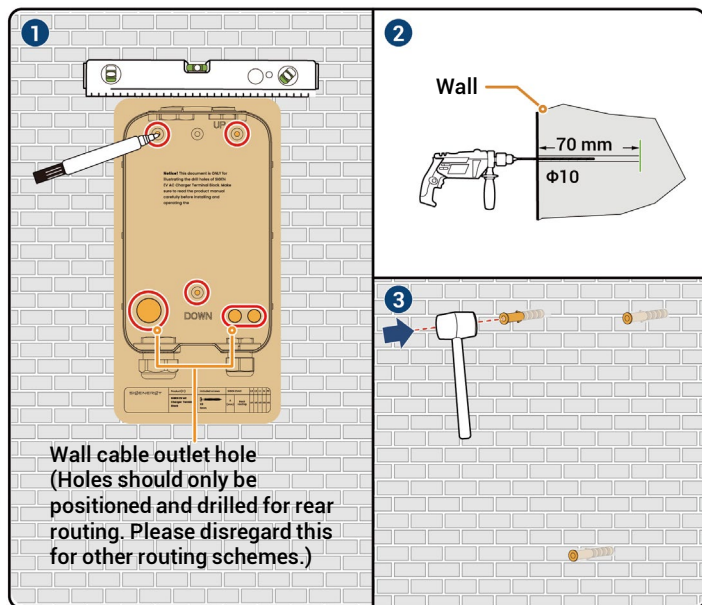
## Mounting surface

- Do not install the equipment on a flammable carrier.
- The installation carrier must meet load-bearing requirements. Solid brick-concrete structure, concrete walls are recommended.
- The surface of the installation carrier must be smooth and the installation area must meet the installation space requirements.
- No water or electricity is routed inside the carrier to prevent drilling hazards during equipment installation.



## 4 Installation

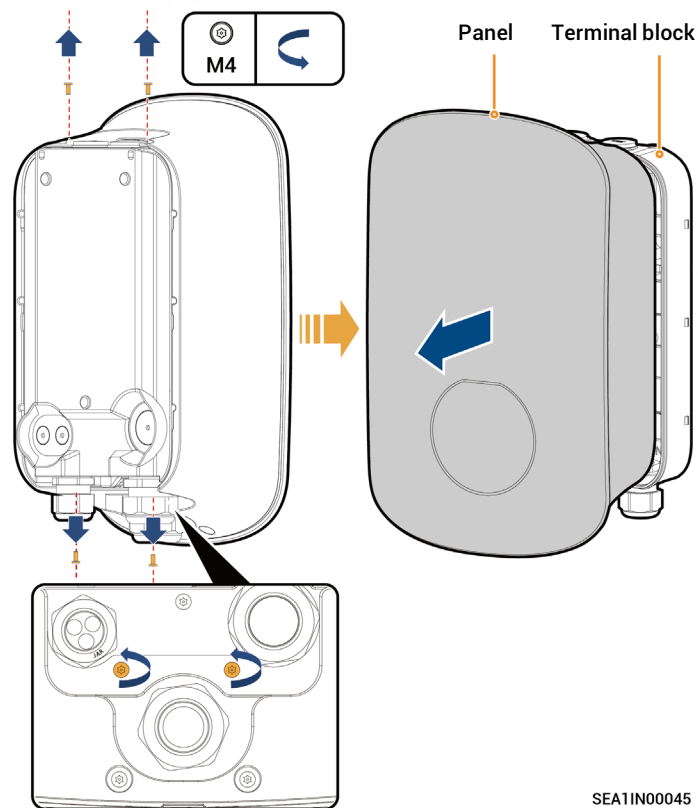
1



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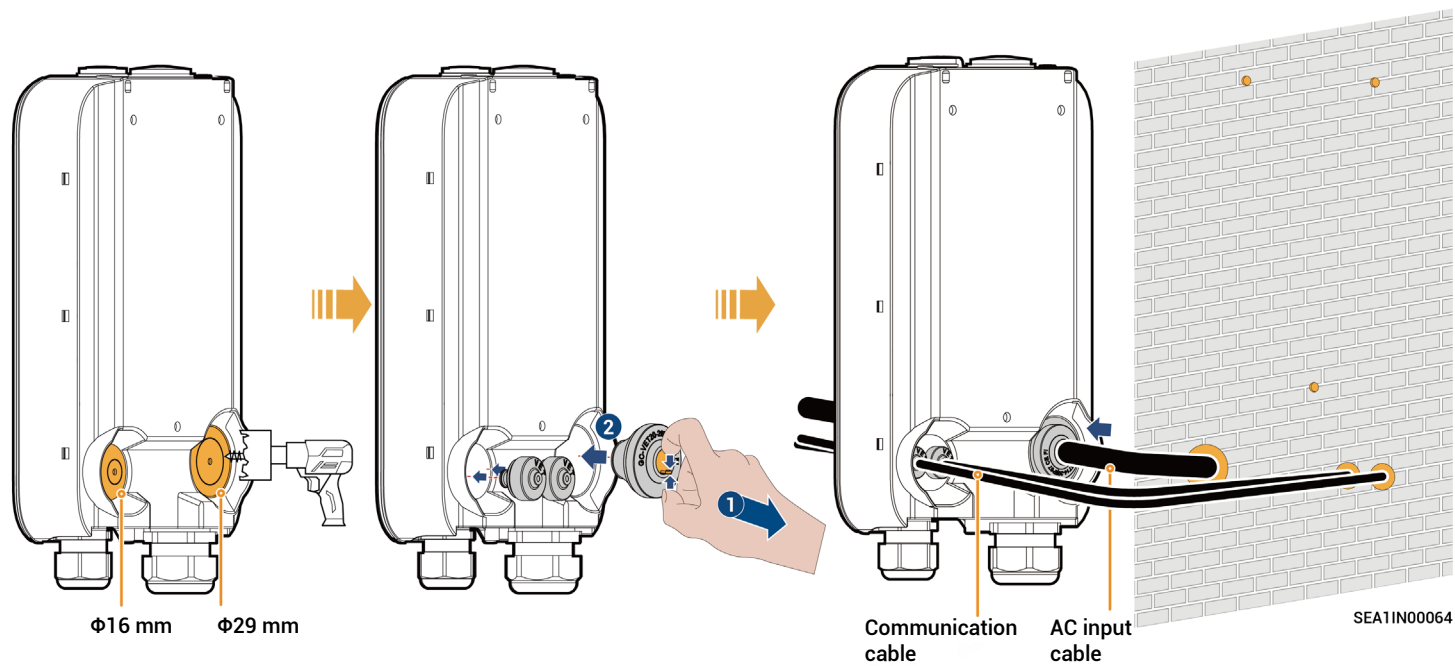
2

Take the equipment from its package and disassemble it.

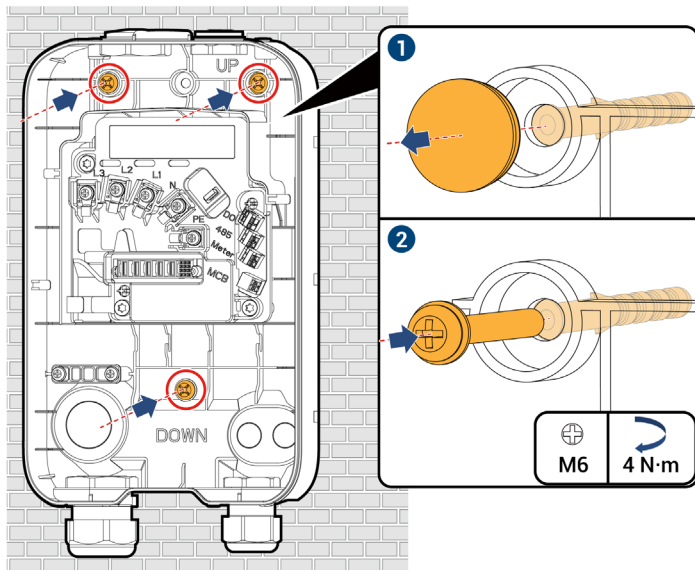


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**3** If using rear routing, please proceed accordingly. Please disregard this for other routing schemes.



**4** Secure the equipment.



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## 5 Cable Connection

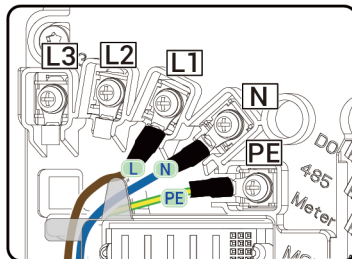
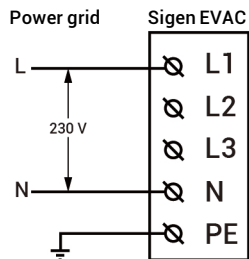
### 5.1 Description of Grid Power Supply Modes



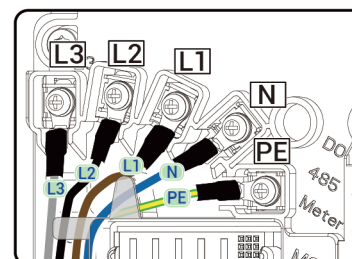
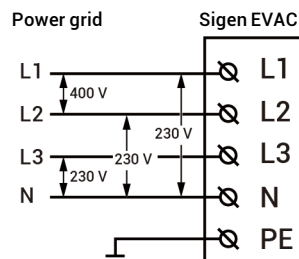
**Danger**

Sigen EVAC supports the grid power supply methods shown in the diagram, please strictly refer to the diagram to connect the AC cable. The device can not operate if the connection is wrong; safety hazard can be caused if the PE wire is wrongly connected.

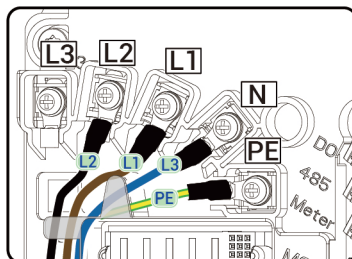
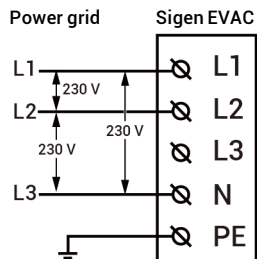
Single-phase three-wire system (L/N/PE)  
Phase-to-neutral voltage (L-N): 230 V



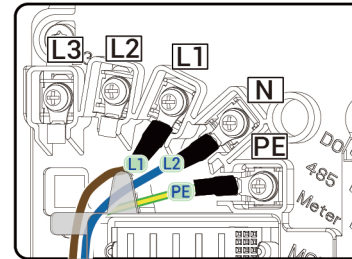
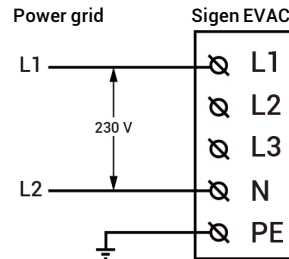
Three-phase five-wire system (L1/L2/L3/N/PE)  
Phase-to-phase voltage (L-L): 400 V  
Phase-to-neutral voltage (L-N): 230 V



Three-phase four-wire system (L1/L2/L3/PE)  
Phase-to-phase voltage (L-L): 230 V



Two phases (L1/L2/PE)  
Phase-to-phase voltage (L-L): 230 V



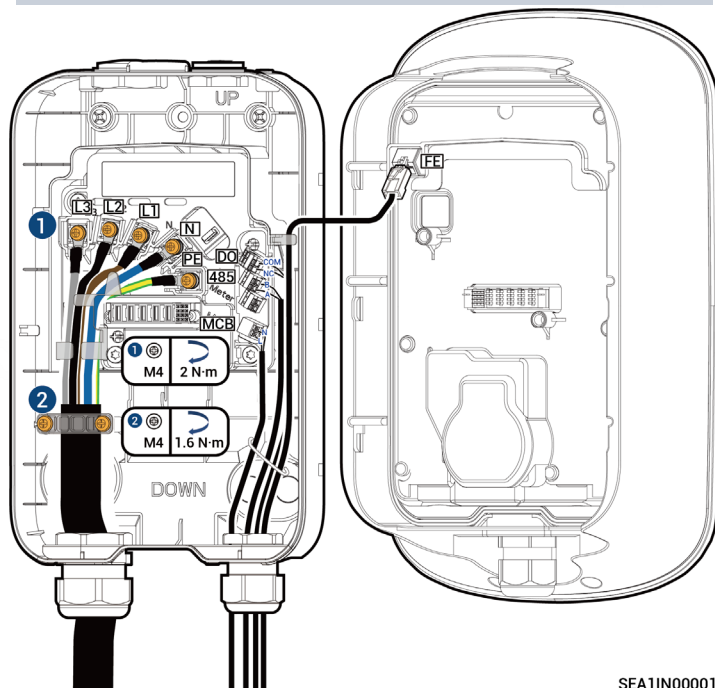
SEA11N00011

## 5.2 Routing

### Tips

- This section describes the routing method using the three-phase five-wire system.
- You are recommended to place the PE core at the lowest layer during routing.
- Meter is a reserved port.
- Sigen EVAC (7, 11, 22) 4G T2 WH and Sigen EVAC (7, 11, 22) 4G T2SH WH with MCB terminals can be optionally connected to MCB terminal cables. Please ignore this for other models.

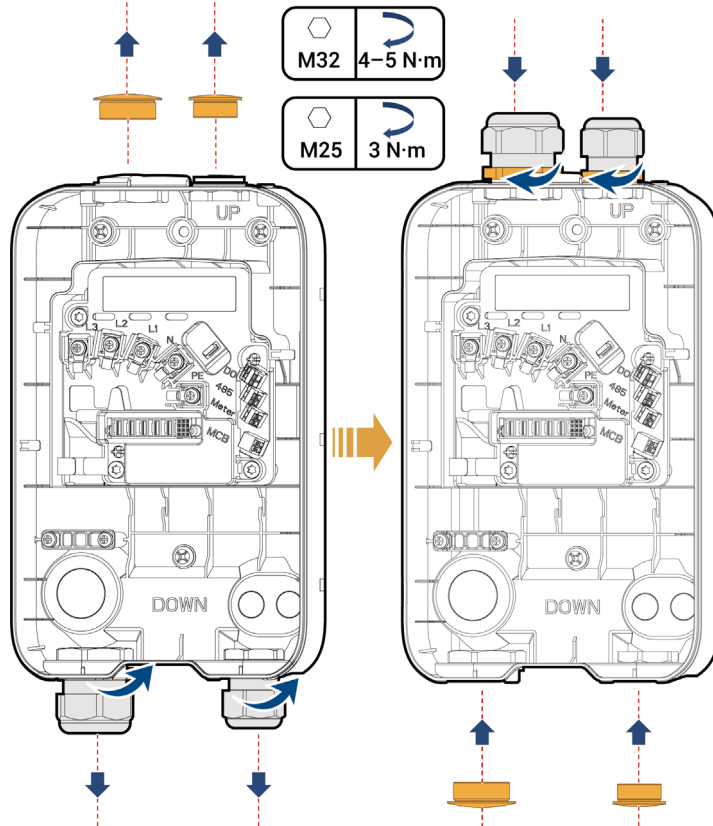
### Bottom Routing (recommended)



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### Top Routing

Install the water-proof connector at the bottom to the top before connecting cables.



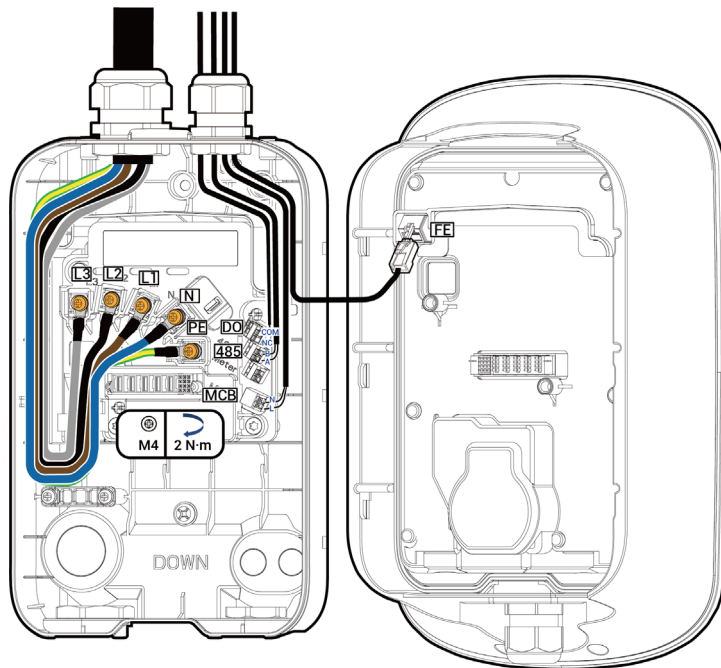
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## Top Routing

### Tips

When top routing is used, the equipment top should be adequately protected to prevent water ingress caused by prolonged water accumulation.

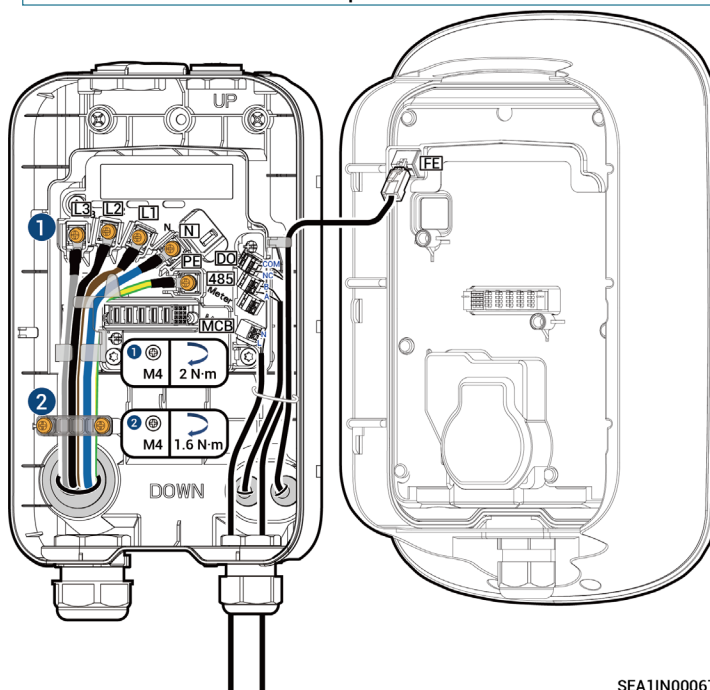


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## Rear Routing

### Tips

- When rear routing is used, the top of the device should be properly protected to avoid water ingress caused by prolonged water accumulation on the back.
- To ensure sealing, it is recommended that one communication cable passes through one rear routing hole. If more than two communication cables are connected, the extra cables can be routed from the bottom or top.



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### 5.3 AC Cable Connection

- This section will take three-phase five-wire system as an example to introduce the connection procedure.
- Rear routing does not require the use of water-proof connectors.

1

2

Sigen EVAC		L3	L2	L1	N	PE
A (mm)	Top routing	330	340	350	355	360
	Bottom routing	105	110	115	125	130
	Rear routing	140	145	145	155	165

The stripping length (A) of cable insulation is determined by the Sigen EVAC port to which cables are connected.

3

SEA1IN00007

13

# 5.4 RS485/DO Signal Cable Connection

## Definitions of RS485 Ports and Connection Relationship with Power Sensor

Connect one end of the RS485 signal cable to Sigen EVAC and the other end to Power Sensor.

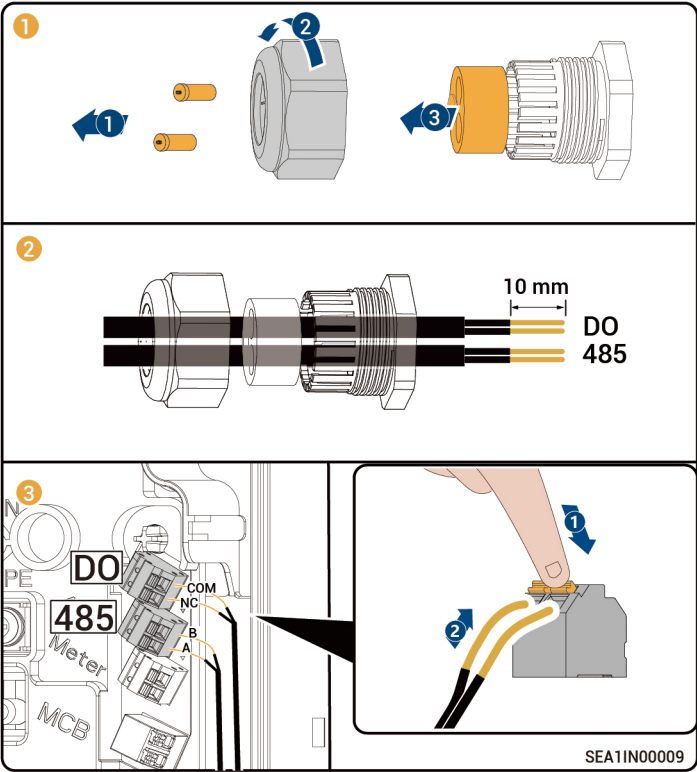
PIN	Definitions	Sigen Sensor TP-CT120-DH (SDM630 MCT 40mA)
RS485_A	RS485 signal_A+	14
RS485_B	RS485 signal_B-	13

## Tips

For appearance and connection details of the Power Sensor, refer to the User Manual supplied with the product.

## Definitions of DO Port (1 A, 30 Vd.c.)

PIN	Definitions
COM	Output signal COM
NC	Output signal NC



## 5.5 (Optional) Connection of PEN control lines

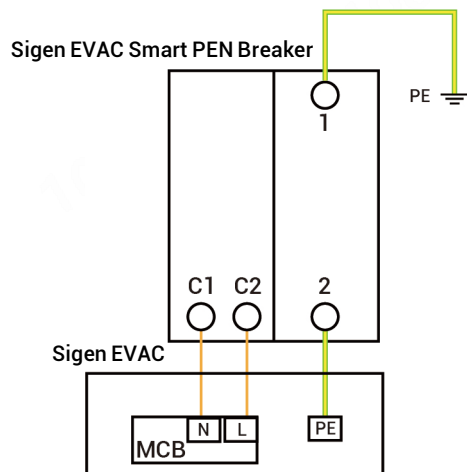
### Tips

Sigen EVAC (7, 11, 22) 4G T2 WH and Sigen EVAC (7, 11, 22) 4G T2SH WH with MCB terminals can be optionally connected to the PEN control line. Please ignore this for other models.

#### Definitions of MCB Ports and Connection Relationship with Sigen EVAC Smart PEN Breaker

PIN	Definitions	Sigen EVAC Smart PEN Breaker <sup>[1]</sup>
N	Output N level	Terminal C1
L	Output L level	Terminal C2

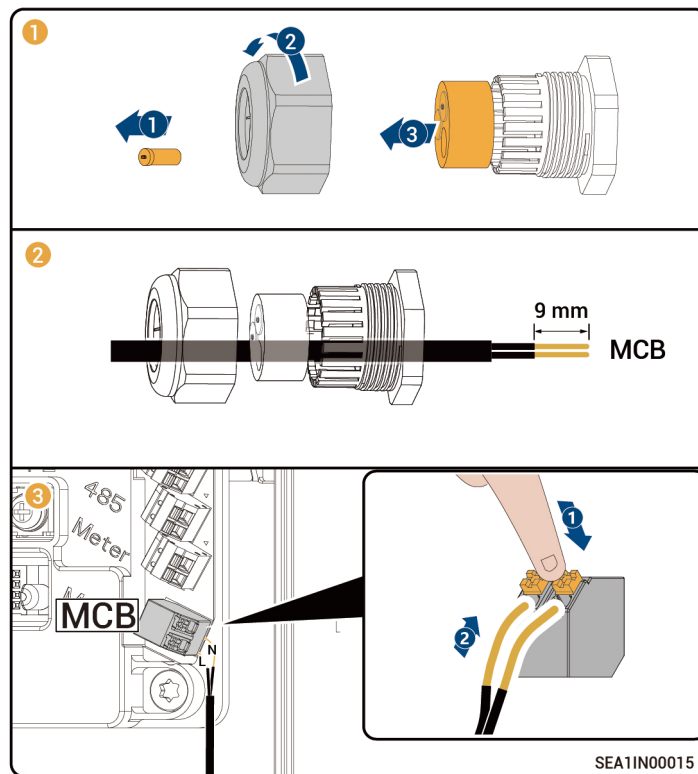
Note [1]: The corresponding wiring terminal of the Sigen EVAC Smart PEN Breaker



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### Tips

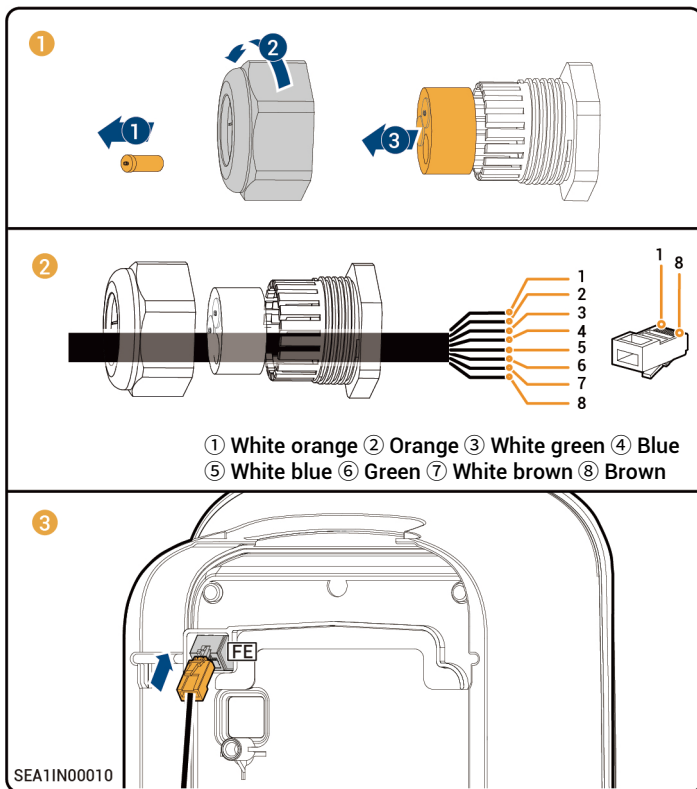
For the information of appearance, installation, and wiring of Sigen EVAC Smart PEN Breaker, refer to the marking on the equipment.



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## 5.6 FE Signal Cable Connection

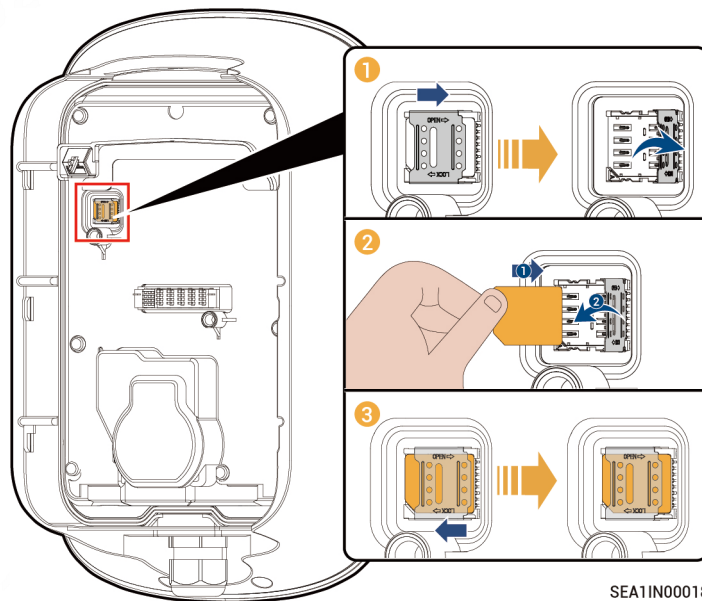
Connect one end of the FE signal cable to Sigen EVAC and the other end to a router.



## 5.7 Installation of SIM Card

### Tips

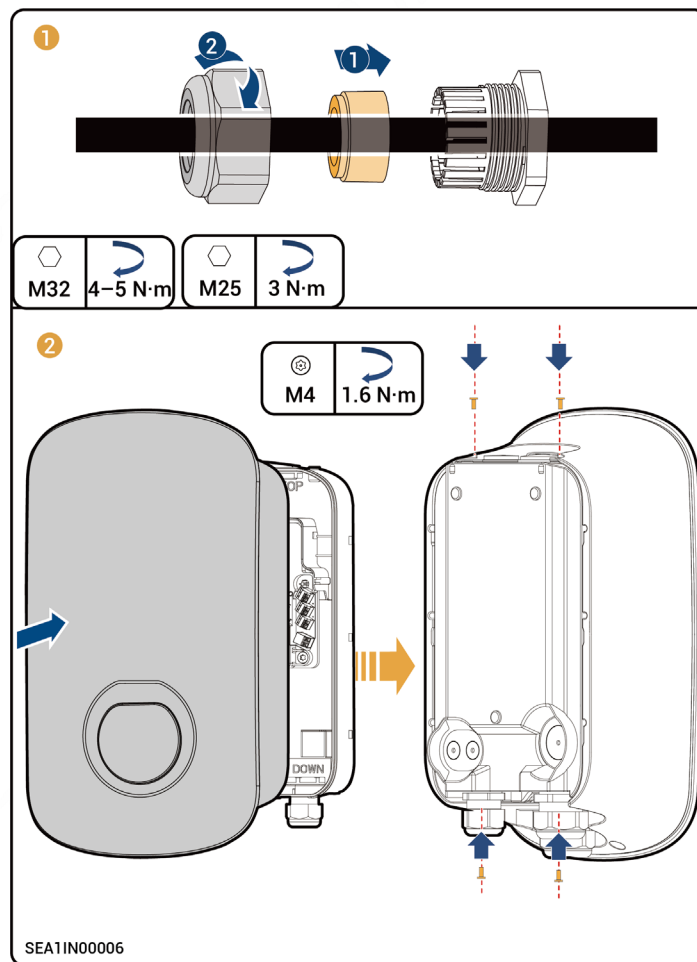
- Install the SIM card when 4G communication is enabled.
- SIM cards are supplied by users and standard SIM cards are recommended (size: 25 mm × 15 mm, capacity ≥ 64 KB, traffic ≥ 128 MB/month).



## 5.8 Installing Panel

Check the following items against the provided table, tighten routing holes, and install the panel.

No.	Check Item
1	The equipment is securely installed.
2	AC cables and signal cables are properly connected without omission.
3	Lock screws or terminals are installed in place without any looseness.
4	Cutouts of cable ties are free of burr or sharp edges.
5	Unused ports are protected with water-proof covers or plugs.
6	No construction residue inside and outside the equipment.

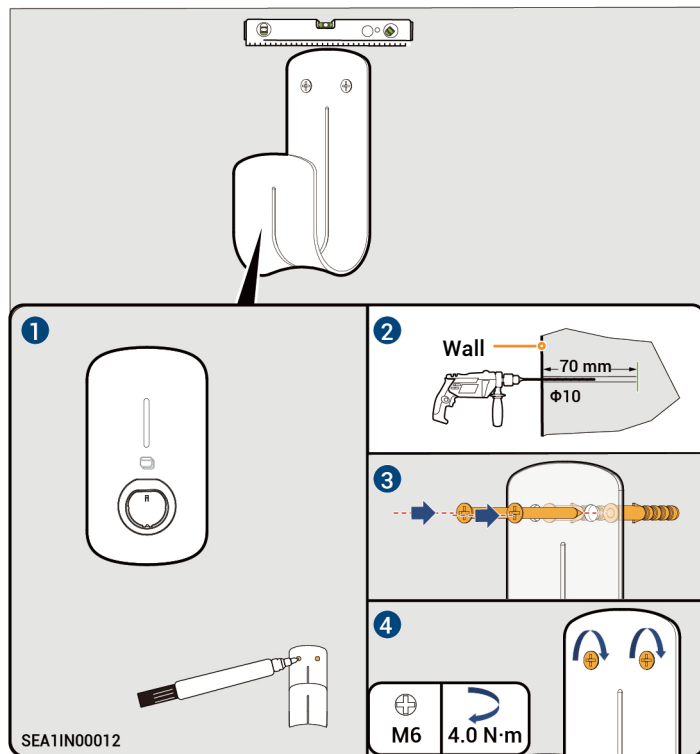


## 5.9 Installing Cable Holder and Placing Charging Connector

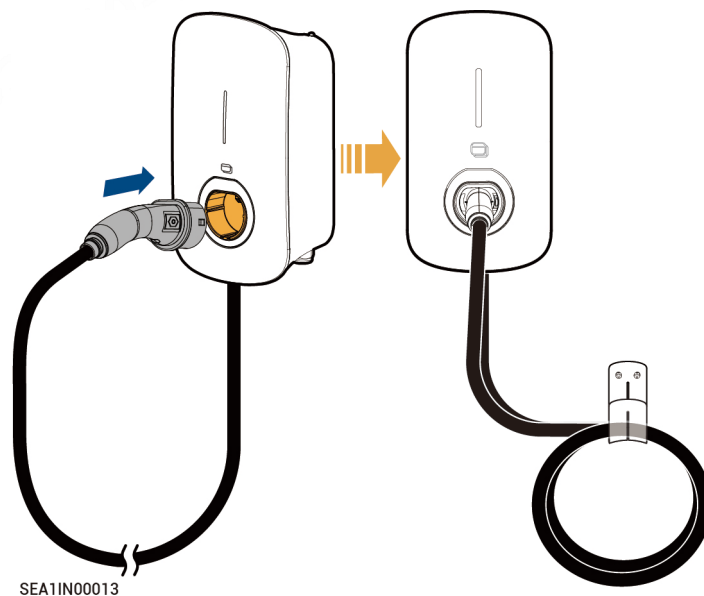
### Tips

This section applies only to Sigen EVAC 7/11/22 4G T2 WH, Sigen EVAC 7/11/22 4G T2 UK WH.

- 1 Install the cable holder.

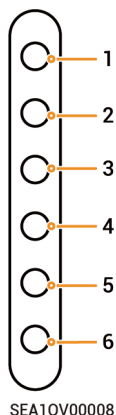














- 2 Place the charging connector.



## 6 Power-on

1. Turn on the pre-AC switch.
2. Observe the indicator status on the front panel of Sigen EVAC to understand the operating conditions.
3. When the indicator turns green and is steady on or breathing blinking, create a new system in the mySigen app.

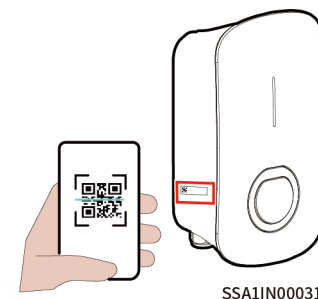
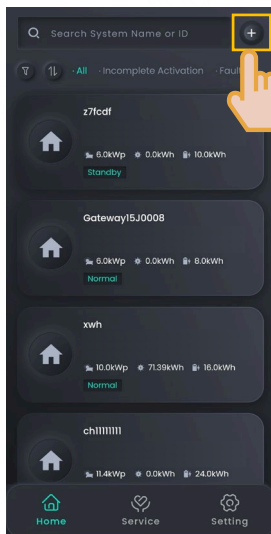
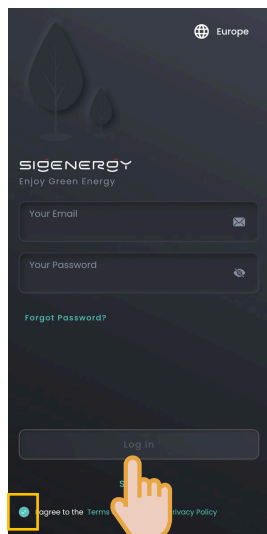
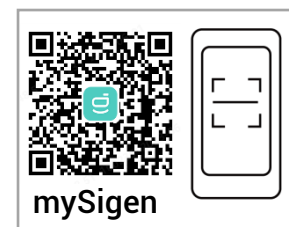


Illuminated Indicator	Color	Status	Meaning
All	Multicolored	Steady on	Starting, initializing configuration.
1		Steady on	In standby mode. Not connected to the internet, charging connector not inserted into the vehicle.
1		Breathing blink	In standby mode. Connected to the internet, charging connector not inserted into the vehicle.
All		Steady on	<ul style="list-style-type: none"> <li>• RFID card not read. The charging connector is connected to the vehicle.</li> <li>• Charging completed.</li> </ul>
All		Breathing blink	You have registered the charging time, and the charging connector has already been connected to your vehicle.
All		Blink	RFID card read. Get ready to charge vehicles.
All		Flowing blink	Charging.
None	-	-	Not powered on or low voltage.
1		Blink	Equipment electrical leakage.
1		Steady on	Relays within the equipment getting stuck.
1, 2		Blink	Overvoltage or undervoltage protection.
1-3		Blink	Overcurrent protection.
1-4		Blink	Overtemperature protection.
1-5		Blink	Grounding fault.
All		Blink	Communication failure between the equipment and the vehicle.
1, 2		Steady on	Other malfunctions.



## 7 New System Creation

- 1 Please visit <https://www.sigenenergy.com> and go to "Partner" → "Register Now" and sign up for your account.
- 2 Download the mySigen app to initiate the creation of a new system for your equipment.



In different scenarios, the subsequent steps for creating new systems will vary. For details, please refer to "mySigen App Creating New Systems Guide".



Sigenergy Technology Co., Ltd.



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