2026-10-20 V1.0

## AC Charger

· GW7K-HCA-G30
· GW11K-HCA-G30
· GW22K-HCA-G30
· GW7K-HCA-UK-G30
· GW11K-HCA-UK-G30
· GW22K-HCA-UK-G30

# User Manual

GOODWE

# Copyright Notice

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**NOTICE**

This document may be updated periodically due to product version upgrades or other reasons. Unless otherwise specified, the content of this document does not replace the safety precautions on the product labels. All descriptions in this document are for guidance only.

# Preface

This document primarily describes the inverter's product information, installation and wiring, configuration and commissioning, troubleshooting, and maintenance. Before installing or using this product, read this manual carefully to understand the product safety information and familiarize yourself with its functions and features. This document may be updated periodically. Visit the official website for the latest documentation and more product information.

## Applicable Products

This document applies to the following EV charger models (hereinafter referred to as HCA).

- GW7K-HCA-G30
- GW11K-HCA-G30
- GW22K-HCA-G30
- GW7K-HCA-UK-G30
- GW11K-HCA-UK-G30
- GW22K-HCA-UK-G30

## Applicable Personnel

This product is intended only for qualified personnel who are familiar with local regulations and electrical systems, have received professional training, and are knowledgeable about this product.

## Symbol Definitions

To help you use this manual effectively, the following symbols are used to highlight important information. Please read the symbols and their descriptions carefully.

| DANGER |
| --- |
| Indicates a situation with a high potential risk that, if not avoided, will result in death or serious injury. |
| WARNING |
| Indicates a moderate potential hazard that, if not avoided, could result in death or serious injury. |
| CAUTION |
| Indicates a low potential hazard that, if not avoided, may result in moderate or minor injury. |
| NOTICE |
| Emphasizes or supplements information, and may also provide tips or tricks for optimizing product use to help you solve a problem or save time. |

Table of Contents

1 Safety Precautions 7
1.1 General Safety 7
1.2 Charging Station Safety 7
1.3 Personnel Requirements 9
2 Declaration 10
2.1 Declaration of Conformity 10
2.2 Statement on the Minimum Security Update Period 10
3 Product Overview 12
3.1 Introduction 12
3.2 Application Scenarios 12
3.3 Charging Modes 16
3.4 Charging Station Operating Status 17
3.5 Features 17
3.6 Appearance 20
3.6.1 Appearance Overview 20
3.6.2 Dimensions 24
3.6.3 Indicator Description 27
4 Equipment Inspection and Storage 29
4.1 Pre-Delivery Inspection 29
4.2 Items Supplied 29
4.3 Equipment Storage 33

5 Installation 34
5.1 Installation Requirements 34
5.2 Install the EV Charger 35
5.2.1 Handling the Charging Station 36
5.2.2 Wall-Mounting the Charging Station 36
5.2.3 Pedestal-Mounting the Charging Station 38
5.2.4 Installing the MID Meter (Optional) 39
5.3 Installing the SIM Card 39
6 Electrical Connections 41
6.1 Safety Precautions 41
6.2 Prepare the Cables 42
6.3 Connect the RCBO 43
6.4 Connect the AC Cable to the EV Charger 44
6.5 Connect the EV Charger Communication Cable 45
6.5.1 Connect the RS485 Communication Cable 46
6.5.2 Connect the Ethernet Cable 47
6.6 Connect the MID Meter (Optional) 48
7 Equipment Commissioning 49
7.1 Pre-Energization Inspection 49
7.2 Energizing the Equipment 49
7.3 Charge the Electric Vehicle 50
7.3.1 Start Charging in the SEMS+ App 51

7.3.2 Schedule Charging in the SEMS+ App 51
7.3.3 Charge in Plug and Play Mode 52
7.3.4 Charge Using an RFID Card 52
8 Set up and View EV Charger Information Using the SEMS+ App (End User) 54
8.1 Download and Install the App 54
8.2 Register an Account (End User) 54
8.3 Log in to the App 55
8.4 Create a Power Plant 56
8.5 Charging Modes 57
8.6 Settings 59
9 System Maintenance 65
9.1 Power off the EV Charger 65
9.2 Remove the EV Charger 65
9.3 Decommission the EV Charger 65
9.4 Periodic Maintenance 65
9.5 Troubleshooting 66
10 Technical Data 70
11 Contact Details 77

# 1 Safety Precautions

Always observe the safety precautions in this document when operating the equipment.

**NOTICE**

The EV charger has been designed and tested in strict accordance with safety regulations. However, as an electrical device, it must be handled in accordance with the relevant safety instructions. Improper operation may result in serious injury or property damage.

## 1.1 General Safety

**NOTICE**

- This document may be updated periodically due to product version upgrades or other reasons. Unless otherwise specified, the content of this document does not replace the safety precautions on the product labels. All descriptions in this document are for guidance only.
- Before installing the equipment, read this document carefully to understand the product and its precautions.
- All work on the equipment must be performed by qualified electrical professionals who are familiar with the applicable standards and safety codes in the project location.
- Use insulated tools and wear personal protective equipment when working on the EV charger to ensure personal safety. Wear antistatic gloves, an antistatic wrist strap, and antistatic clothing when handling electronic components to protect the EV charger from electrostatic damage.
- The equipment manufacturer shall not be liable for equipment damage or personal injury caused by installing, using, or configuring the EV charger contrary to the requirements of this document or the corresponding user manual. For more information about the product warranty, visit the official website: https://en.goodwe.com/warranty.

## 1.2 Charging Station Safety

**DANGER**

- Do not disassemble any EV charger components. Do not extend the charging cable, as this may reduce the EV charger's Ingress Protection Rating or cause an electric shock hazard.
- The EV charger is intended solely for charging electric vehicles. Do not connect any other devices.
- Avoid excessively bending, squeezing, or rolling over the charging connector and cable, as this may damage the equipment.
- Before installing or maintaining the EV charger, de-energize it and disconnect the upstream switch.
- Never touch the charging connector contacts while the EV charger is energized.

**WARNING**

Regularly inspect the EV charger enclosure and charging connector for any visible abnormalities.

**DANGER**

After installation, labels and warning signs on the EV charger enclosure must remain clearly visible. Do not cover, alter, or damage them.

The warning labels on the EV charger enclosure are as follows:

| | | | |
|---|---|---|---|
|  | High voltage hazard. High voltage is present while the EV charger is operating. Ensure that the EV charger is de-energized before installation or maintenance. |  | Delayed discharge. After de-energizing the equipment, wait 5 minutes for it to fully discharge. |

| | | | |
|---|---|---|---|
|  | Read the product manual carefully before operating the equipment. |  | Potential hazards may be present when the equipment is operating. Wear appropriate protective equipment when performing operations. |
|  | The surface of the EV charger may become hot. Do not touch it while the equipment is operating, as this may cause burns. |  | RCM mark. |
|  | CE mark. |  | Do not dispose of this equipment as household waste. Dispose of it in accordance with local laws and regulations, or return it to the equipment manufacturer. |

## 1.3 Personnel Requirements

**NOTICE**

- Personnel responsible for installing and maintaining the equipment must first undergo rigorous training, understand all relevant safety precautions, and master the correct operating procedures.
- Only qualified professionals or trained personnel may install, operate, maintain, or replace the equipment or its components.

# 2 Declaration

## 2.1 Declaration of Conformity

**Europe**

Equipment with wireless communication capabilities that can be sold on the European market complies with the following directives:

- Radio Equipment Directive 2014/53/EU (RED)
- Restrictions of Hazardous Substances Directive 2011/65/EU and (EU) 2015/863 (RoHS)

**United Kingdom**

Wireless communication equipment intended for sale in the UK complies with the requirements of the following directives:

- Radio Equipment Regulations 2017
- The Restrictions of the use of Certain Hazardous Substaances in Electrical and Electronic
  Equipment Regulations 2012 (S.I. 2012/3032)

**Brazil**

Wireless communication equipment intended for sale in Brazil complies with the requirements of the following directives:

- Incorpora produto homologado pela Anatel sob número HHHHH-AA-FFFFF.
- Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL www.gov.br/anatel/pt-br.

## 2.2 Minimum Security Update Support Period

The minimum security update support period for this product (model list below) is five years from its market launch date, covering October 2026 to October 2031. Security updates will be provided free of charge throughout the support period. If

the support period changes, it may only be extended; any such change will be announced in advance on our official website and users will be notified.

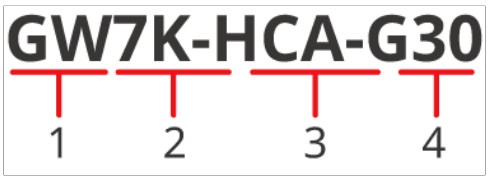
| Model | Communication module version | Description |
|---|---|---|
| GW7K-HCA-G30 | 18.0.13 | EV Charger |
| GW11K-HCA-G30 | | |
| GW22K-HCA-G30 | | |
| GW7K-HCA--UK-G30 | | |
| GW11K-HCA-UK-G30 | | |
| GW22K-HCA-UK-G30 | | |

# 3 Product Overview

## 3.1 Introduction

The HCA G3 Series AC EV Charger is available in two versions: tethered and socketed. It covers Power Specification options of 7 kW, 11 kW, and 22 kW, and is primarily intended for residential and commercial applications (such as homes and office parks), providing safe and efficient AC charging for electric vehicles.
This product can communicate directly with an inverter and use PV energy for charging. Dynamic Load Management can be enabled through an inverter paired with a smart meter or by using a GoodWe smart meter directly. It can communicate directly with a MID meter to provide reimbursable billing.
It supports RFID and app-based activation, and automatic charging upon connector insertion can be configured in the app. It also features charging Protection and network monitoring.

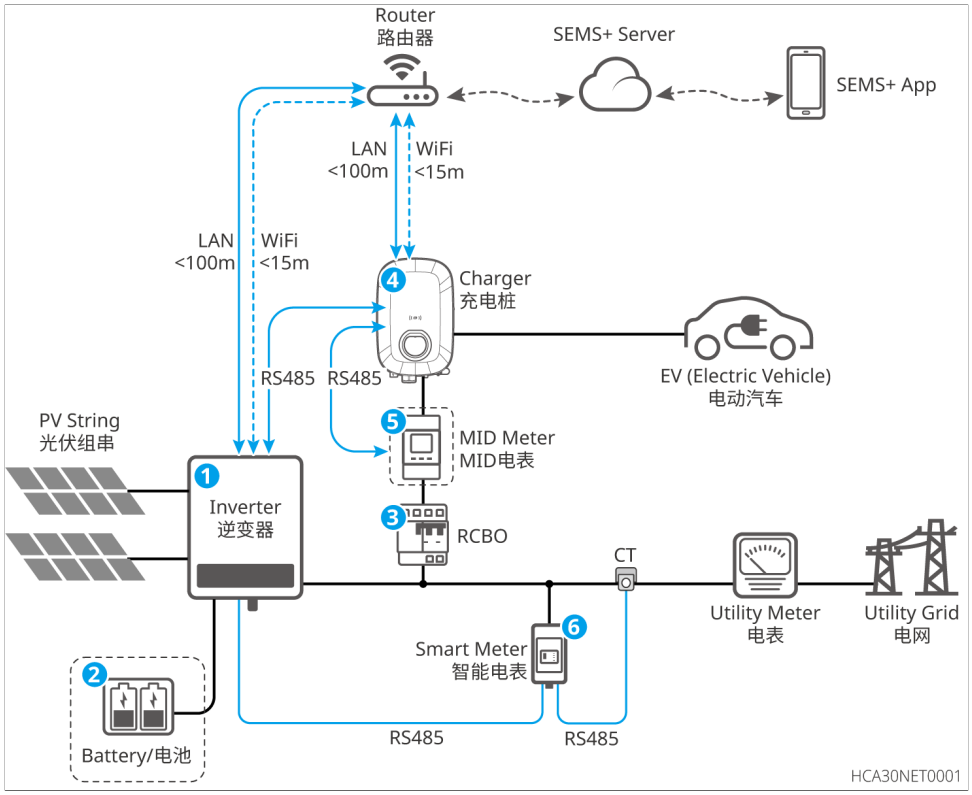
**Model Description**



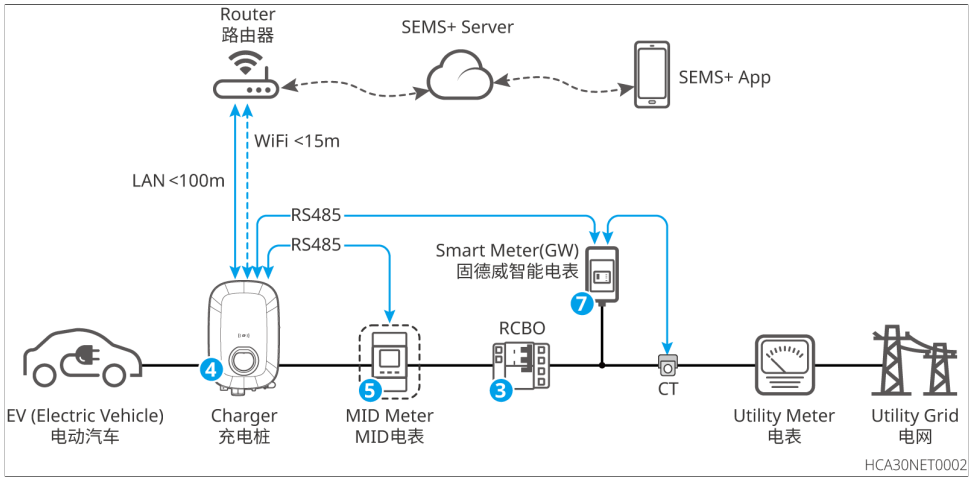

| No. | Description | Description |
|---|---|---|
| 1 | Brand Code | GW: GoodWe |
| 2 | Rated Power | • 7K: 7 kW output power<br>• 11K: 11 kW output power<br>• 22K: 22 kW output power |
| 3 | Series Name | HCA: HCA Series |
| 4 | Version Code | G30: Third Generation |

# 3.2 Application Scenarios

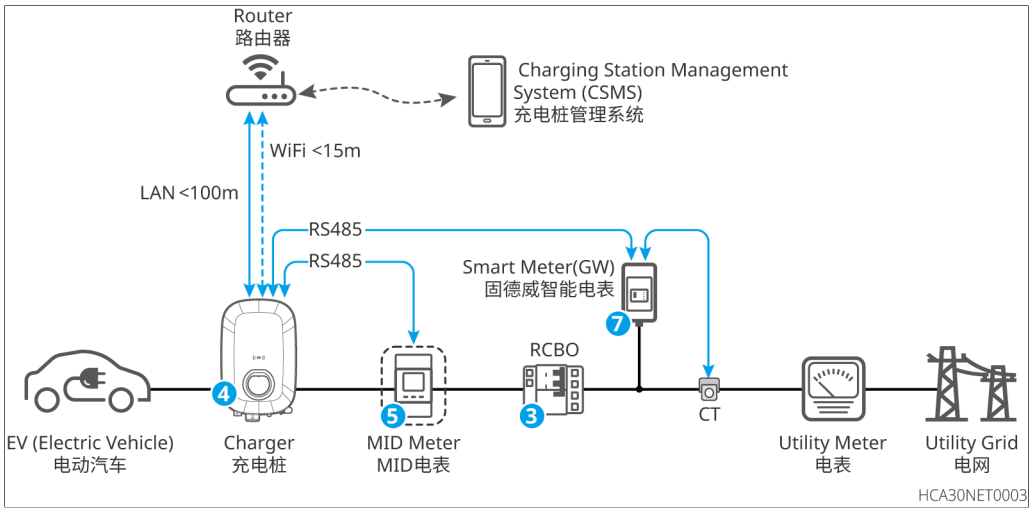
## PV, Storage, and EV Charging System




## Grid Connection Only



## Commercial Applications

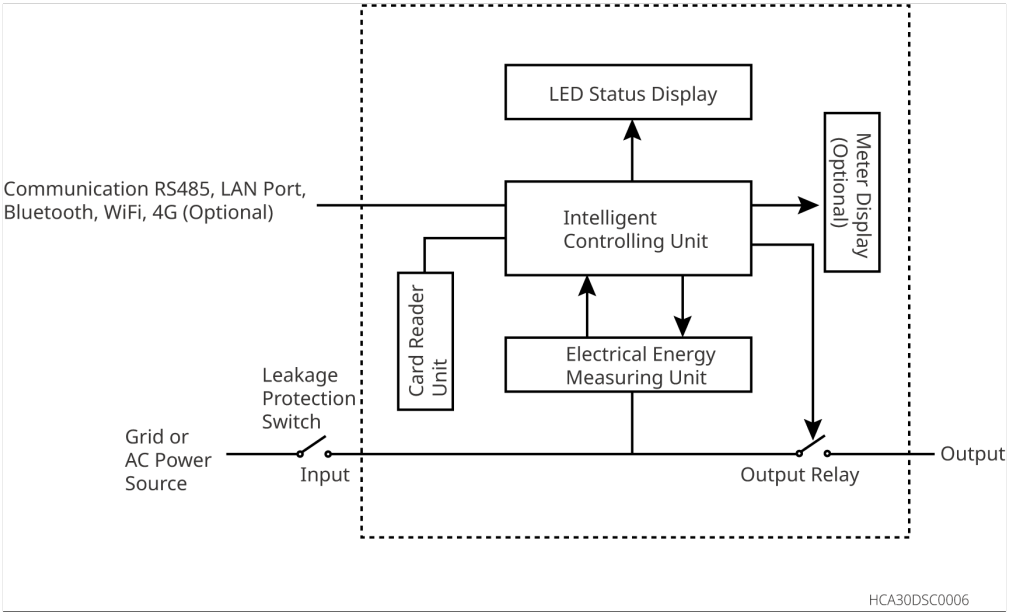



| No. | Component | Description |
|---|---|---|
| 1 | Inverter | GoodWe inverter. |
| 2 | Battery | Batteries compatible with GoodWe inverters; for use with energy storage inverters only. |
| 3 | RCBO | Provides residual (leakage) current Protection and Overcurrent Protection. Contact GoodWe to purchase. |
| 4 | EV Charger | GoodWe HCA Series EV Charger. |
| 5 | MID Meter | Collects electricity consumption data from the EV charger, which can be used for reimbursement of charging expenses.<br>**NOTICE**<br>The MID meter cannot be used as a household revenue meter. |
| 6 | Smart Meter | Supplied with the inverter or purchased from the inverter manufacturer. |

| No. | Component | Description |
| --- | --- | --- |
| 7 | Meter | GoodWe smart meter for dynamic load balancing. Supported models include GM3000, GM330, GMK110, GMK330, and GM1000. |

### Circuit Diagram

The EV charger circuit block diagram is shown below.

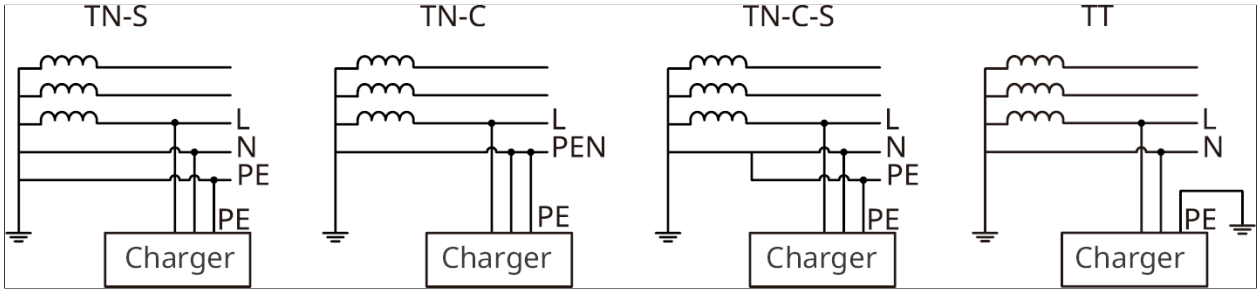



- Two RS485 communication interfaces for communicating with devices such as PV inverters with energy storage or smart meters. Communication ports for connecting multiple EV chargers in parallel.
- The LAN communication interface or Wi-Fi can communicate with a router.
- 4G is an optional feature. To use 4G, users can choose whether to insert a SIM card as needed. The 4G function is unavailable if no SIM card is inserted.
- The input for a single-phase AC EV charger is a single-phase, three-wire power cable; the input for a three-phase AC EV charger is a three-phase, five-wire power cable.
- The output connects to an AC charging connector (integrated cable-and-connector version) or a charging socket (separate cable-and-socket version).

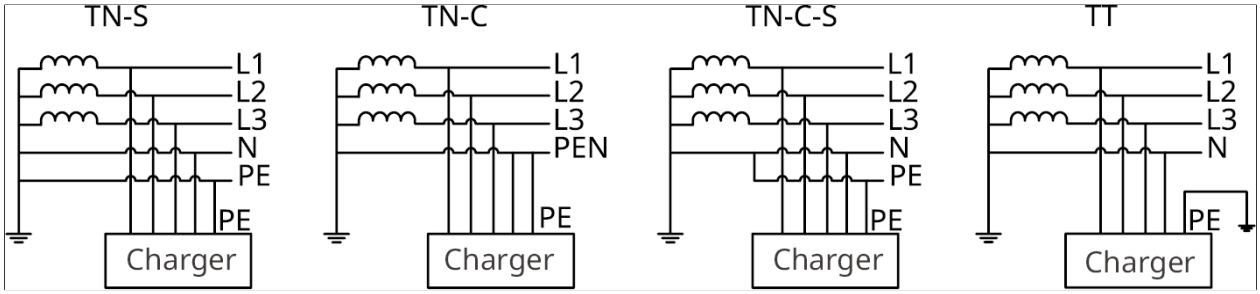
### Power Grid System

| NOTICE |
| --- |
| The EV charger does not support connection to an IT power grid. |

- Single-Phase Configuration




- Three-Phase Configuration




## 3.3 Charging Modes

| NOTICE |
| --- |
| In PV charging and PV + battery charging modes, EV Charger Power is limited by the inverter's maximum output power. |

### Fast Charging

The EV charger charges the electric vehicle using power from the grid, PV, or battery. The EV charger's output power defaults to the Rated Power. Users can customize the output power according to actual needs, up to the Rated Power.

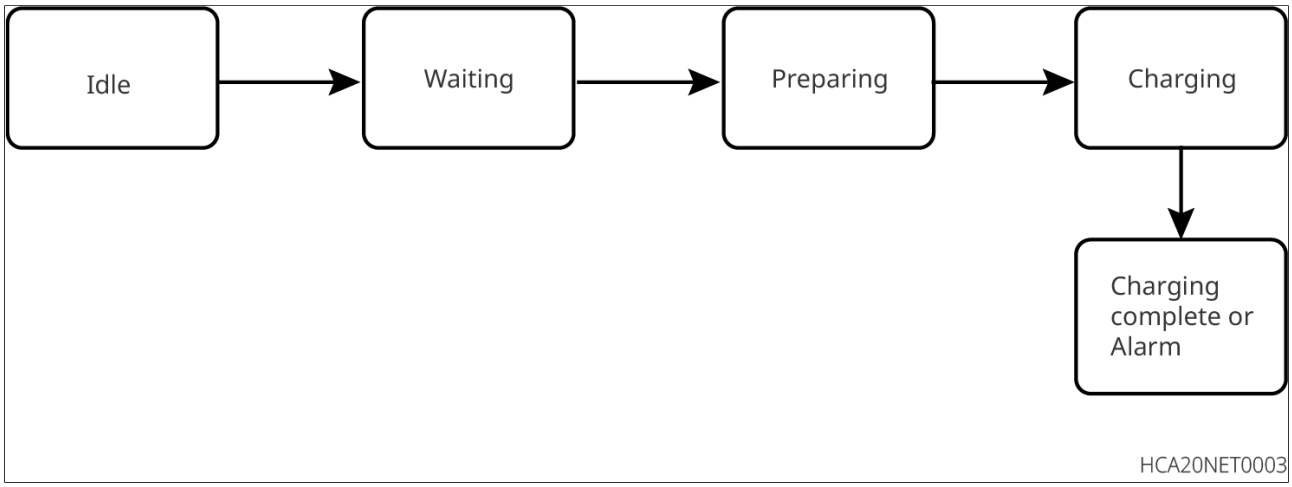
**PV Charging**

Charges the electric vehicle using PV power only. Power is prioritized for household loads, and any surplus power is used to charge the electric vehicle.

**PV + Battery Charging**

Charges the electric vehicle using power converted from PV and battery power. Power is prioritized for household loads, and any surplus power is used to charge the electric vehicle.

## 3.4 Charging Station Operating Status




## 3.5 Features

**NOTICE**

- The actual charging speed depends on the grid power available at the site where the EV charger is installed or the power rating of the vehicle's onboard charger.
- The EV charger has minimum charging current and power requirements. The minimum start-up Charging Current is 6 A per phase. Therefore, the minimum charging power is 1.4 kW for single-phase charging and 4.2 kW for three-phase charging.
- A three-phase EV charger supports single-phase, two-phase, and three-phase charging, but the actual charging power depends on the vehicle's onboard charging system. When a three-phase EV charger charges a vehicle that supports single-phase charging only, its Max. Charging Power is one-third of the EV charger's Rated Power. When it charges a vehicle that supports two-phase charging only, its Max. Charging Power is two-thirds of the EV charger's Rated Power.

**Dynamic Load Management**

This function monitors household loads and power at the grid connection point in real time, and dynamically adjusts the EV charger's charging output. It prevents the main incoming circuit breaker from tripping due to Overload and maximizes the use of available charging capacity while ensuring household electrical safety.

- Importing Power (Drawing Power from the Grid)

  When Dynamic Load Management is enabled, the system dynamically adjusts charging power based on real-time household load, subject to the maximum current set for the main incoming circuit breaker and the import power limit. When household load increases, the EV charger automatically reduces its charging power. If charging power falls below the minimum charging power, the EV charger automatically pauses charging. When household load decreases and the remaining available power meets charging requirements, the EV charger automatically resumes charging. Start/stop control includes a built-in delay to prevent frequent cycling of the EV charger.

- Exporting Power (Feeding Excess Power to the Grid)

  The EV charger's charging power is not subject to the import power limit and can

charge at Maximum Power.

### Ensure Minimum Charging Power

In PV charging and PV + battery charging modes, after the EV charger starts charging, if PV or battery energy is insufficient, enabling Ensure Minimum Charging Power allows the grid or battery to provide support to maintain the required power output. Users can enable this feature via SEMS+.

| Feature Status | Description |
|---|---|
| On | With support from the grid or battery, the EV charger continues charging to ensure the minimum power required for charging (1.4 kW for the 7 kW module; 4.2 kW for the 11/22 kW module). |
| Off | If the available power is below the minimum charging power, the EV charger stops charging. |

### Enwg 14a Support

| NOTICE |
|---|
| This feature is available in Germany only. |

All controllable load devices must support emergency load derating initiated by the grid operator. The grid operator may temporarily limit this device's maximum grid import power to 4.2 kW by issuing a dispatch command.

### Single-/Three-Phase Switching

| NOTICE |
|---|
| • Only three-phase EV chargers support single-/three-phase switching.<br>• This feature is available only in PV or PV + battery charging mode. |

- Switching from Three-Phase to Single-Phase

When the input power falls below 4.2 kW, the EV charger automatically switches to single-phase charging to avoid importing power from the grid or stopping charging.

- Switching from Single-Phase to Three-Phase

  When the power at the point of grid connection (the sum of feed-in power and EV charger charging power) exceeds 5.4 kW, the EV charger immediately switches to three-phase charging. When the inverter's Power Limit function is enabled and feed-in power is detected at the point of grid connection, the EV charger attempts to switch to three-phase charging every 5 minutes. If the PV power available to the EV charger is above 5.4 kW, it remains in three-phase charging mode; if below 5.4 kW, it switches to single-phase charging mode.

**Safe and Reliable**

- The EV charger offers effective dust and water resistance, allowing it to operate and be maintained outdoors.
- The EV charger features overvoltage and undervoltage Protection, Overload Protection, short-circuit Protection, residual-current Protection, grounding Protection, Overtemperature Protection, and surge Protection to ensure safe and reliable operation.

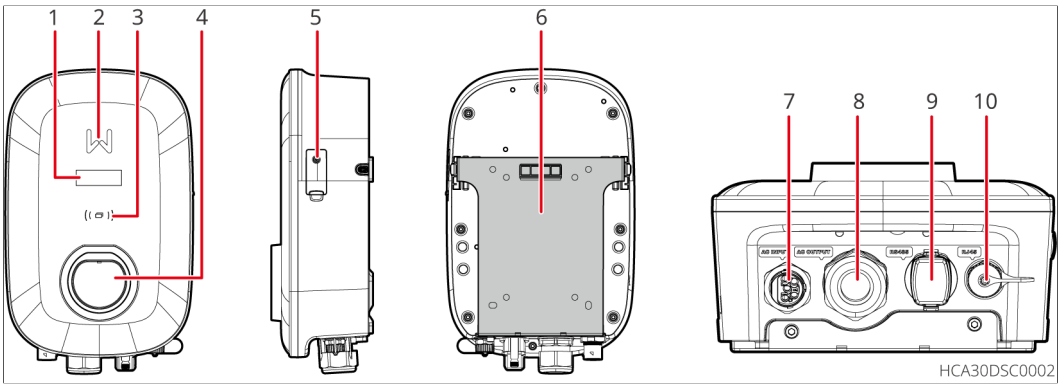
| NOTICE |
| --- |
| • 2.4G WiFi, Operating frequency :2412-2472MHz, max e.i.r.p :20dBm<br>• BLE 1M&2M, Operating frequency :2402-2480MHz, max e.i.r.p:2.99dBm<br>• RFID 13.56MHz, max e.r.p: -47.50dBm |

# 3.6 Appearance

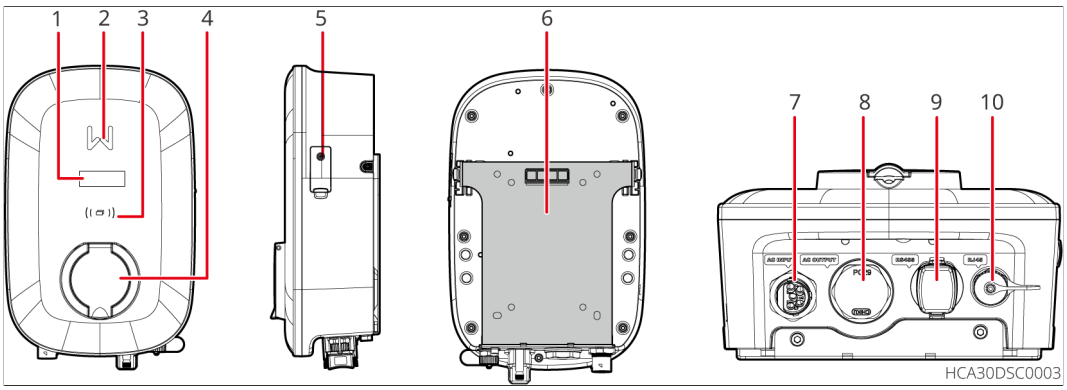
## 3.6.1 Appearance Overview

**EV Charger**

- Type 1: Integrated Charging Cable




- Type 2: Detachable Charging Cable

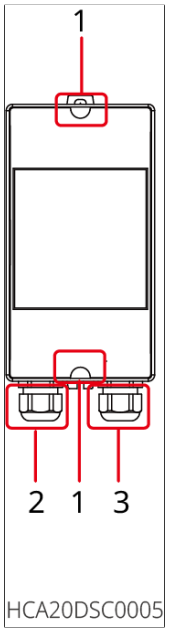



| No. | Component | Description |
|---|---|---|
| 1 | Display (Optional) | Displays information such as charging energy and software version. |
| 2 | Indicator | Indicates the operating status of the EV charger. |
| 3 | RFID Card Reader Area | Tap a card to start charging. |
| 4 | Charging Connector Holder | Used to hold the charging connector. |
| 5 | SIM Card Slot | - |
| 6 | Mounting Bracket | Secures the EV charger to the mounting surface. |

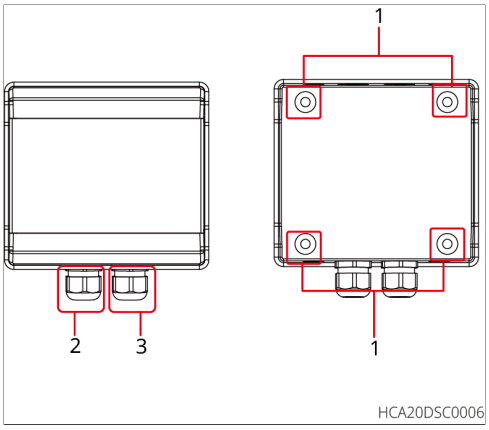
| No. | Component | Description |
| --- | --- | --- |
| 7 | AC Input Cable Entry | Connects the single-phase or three-phase AC input cable. |
| 8 | Charging Cable | - |
| 9 | RS485 Communication Port | Connects the RS485 cable for communication with the inverter or energy meter. |
| 10 | LAN Communication Port | Connects the cable for communication with the router. |

**(Optional) RCBO Distribution Box**

- **GW7K-HCA-G30**、GW7K-HCA-UK-G30



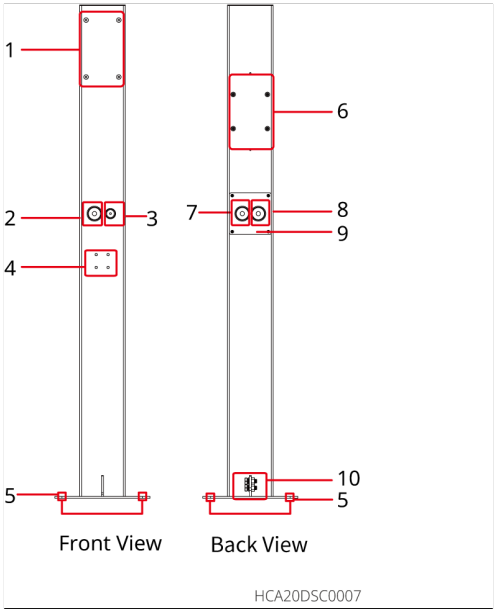

- **GW11K-HCA-G30**、GW11K-HCA-UK-G30、GW22K-HCA-G30、GW22K-HCA-UK-G30



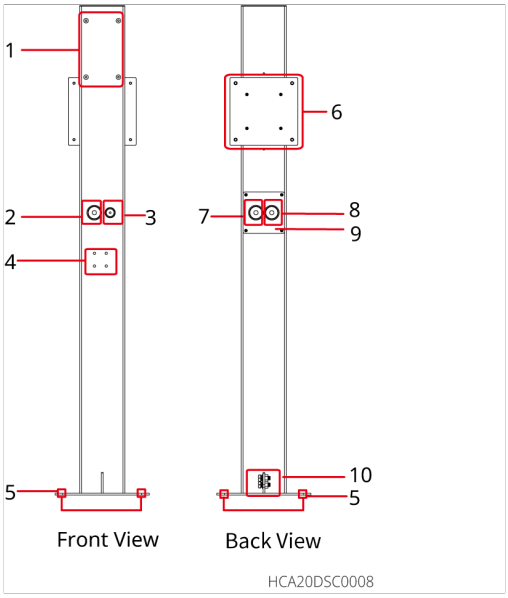

1 Mounting Holes 2 AC Cable Entry 3 AC Cable Outlet

**(Optional) Pedestal**

- **GW7K-HCA-G30**、GW7K-HCA-UK-G30




- **GW11K-HCA-G30**、GW11K-HCA-UK-G30、GW22K-HCA-G30、GW22K-HCA-UK-G30




| | | | |
|---|---|---|---|
| 1. EV Charger Mounting Position | 2. EV Charger AC Cable Connection Port | 3. Communication Cable Connection Port | 4. Charging Connector Holder Mounting Holes |
| 5. Base Mounting Holes | 6. RCBO Installation Position | 7. RCBO AC Input Cable Entry | 8. RCBO AC Output Cable Outlet |
| 9. Operation Window Cover | 10. Protection Grounding Terminal | | |

## 3.6.2 Dimensions

### EV Charger

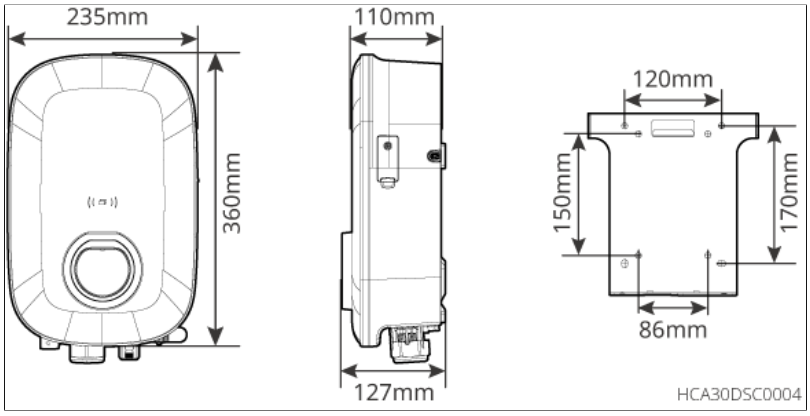



Figure1 Integrated Charging Cable Version

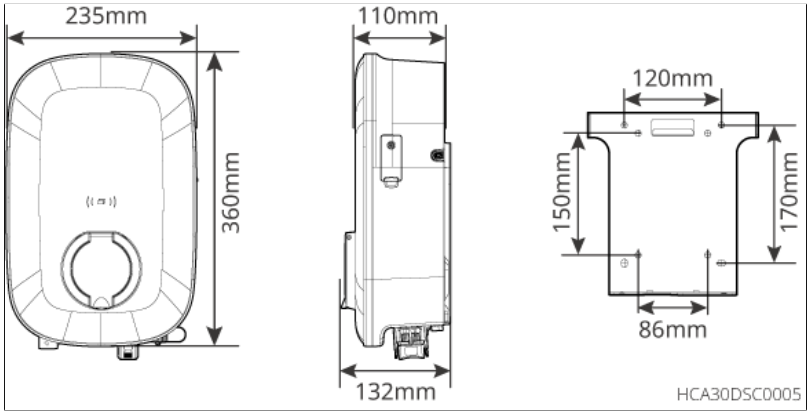
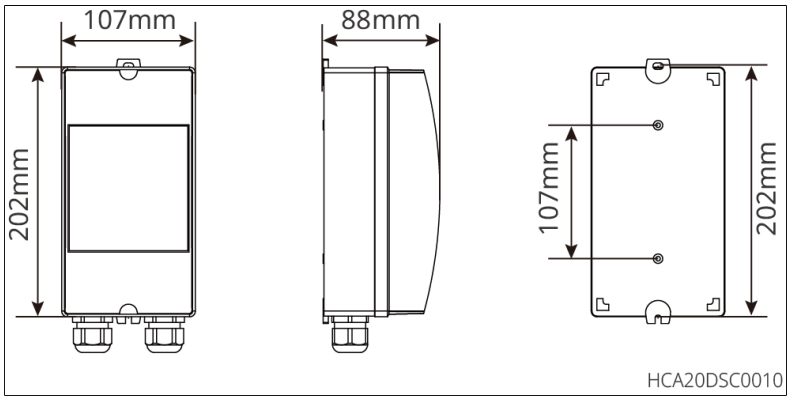


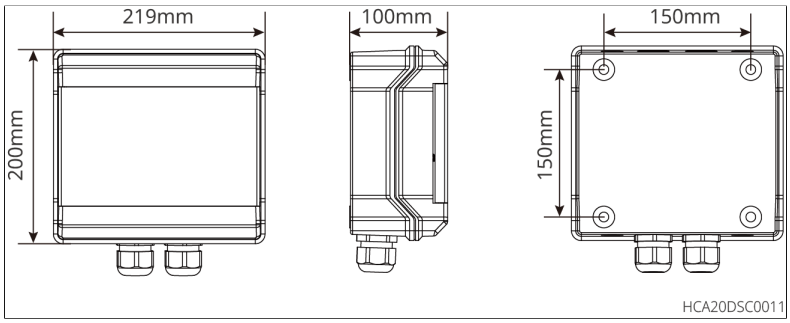

Figure2 Detachable Charging Cable Version

## (Optional) RCBO Distribution Box

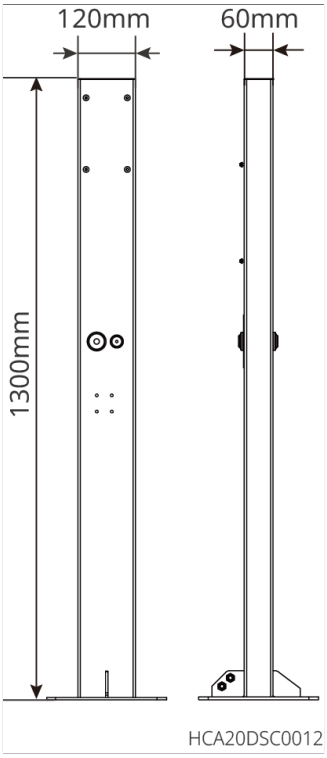
- GW7K-HCA-G30、GW7K-HCA-UK-G30




- GW11K-HCA-G30、GW11K-HCA-UK-G30、GW22K-HCA-G30、GW22K-HCA-UK-G30




## (Optional) Pedestal



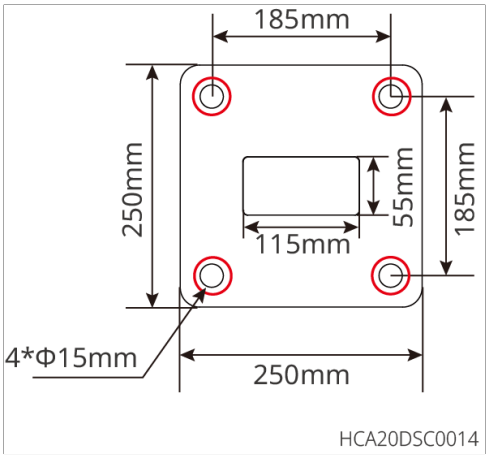



Figure3 Pedestal base

## (Optional) MID Meter

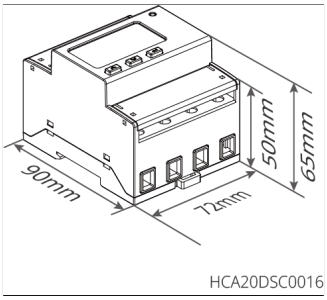



Figure4 Three-phase meter

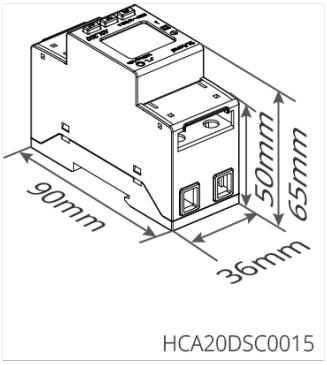



Figure5 Single-phase meter

## 3.6.3 Indicator Description

| Indicator | Color | Description |
| --- | --- | --- |
|  | Steady green | The EV charger is in standby mode. |
| | Flashing green rapidly, 3 times per second | The EV charger system is being upgraded. |
| | Flashing green slowly, once per second | Charging handshake phase (the interval from the charging start trigger until the EV charger officially enters the charging state). |
| | Steady blue | Charging an electric vehicle. |
| | Steady red | EV charger fault. |
| | Flashes blue twice | EV charger card authentication successful. |
| | Indicator status when card scanning fails | |
| | Red light on for 2 s | Card scanned while the connector is unplugged. |
| | Flashes red twice | The EV charger and card do not match. |

# 4 Equipment Inspection and Storage

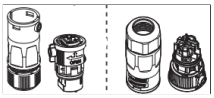
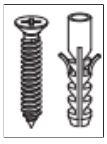
## 4.1 Pre-Delivery Inspection

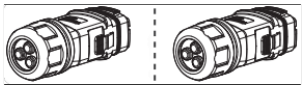
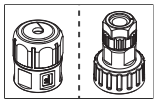
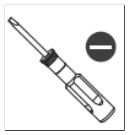
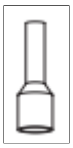
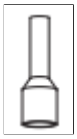
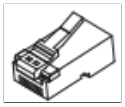
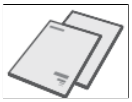
Before accepting the product, carefully check the following:

1. Check the outer packaging for damage, such as deformation, holes, cracks, or any other signs that may indicate damage to the equipment inside. If damaged, do not open the package and contact your dealer.
2. Check that the EV charger model is correct. If it does not match, do not open the package and contact your dealer.
3. Check that the type and quantity of the delivered items are correct and that they are undamaged. If anything is damaged, contact your distributor.

## 4.2 Items Supplied

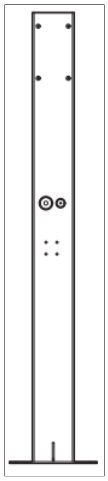
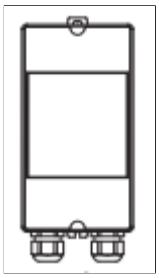
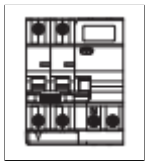
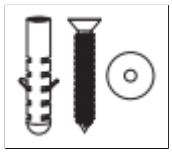
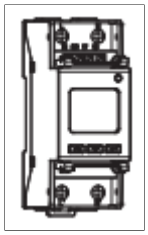
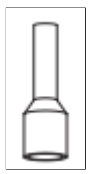
| WARNING |
| --- |
| For electrical connections, use the wiring terminals supplied with the unit. Damage to the equipment caused by using incompatible connectors is not covered by the warranty. |

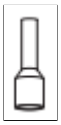
| Component | Description | Component | Description |
| --- | --- | --- | --- |
|  | EV charger ×1 |  | AC Connector (cable end) ×1 |
|  | ×1 |  | Blanking socket fixing screws ×4 |

| Component | Description | Component | Description |
|---|---|---|---|
|  | RS485 communication connector (cable end) ×1 |  | LAN communication connector (cable end) ×1 |
|  | Phillips screwdriver ×1 |  | Flathead screwdriver ×1 |
|  | AC wire ferrules ×5 |  | RS485 wire ferrules ×6 |
|  | RJ45 connector ×1 |  | Decorative plugs for wall-mounting screws ×2 |
|  | RFID cards ×2 |  | Documents ×1 |

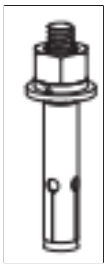
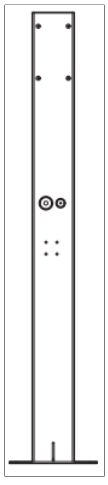
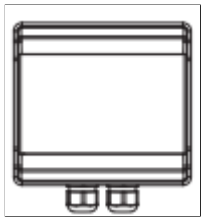
**Optional for GW7K-HCA-G30 and GW7K-HCA-UK-G30**

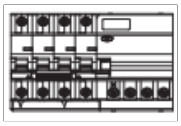
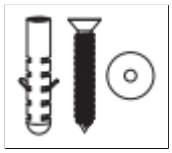
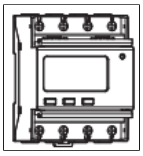
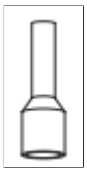
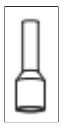
| Component | Description | Component | Description |
|---|---|---|---|
|  | M5*12 screws ×8 |  | M4*10 screws ×2 |

| Component | Description | Component | Description |
|---|---|---|---|
|  | M4*10 countersunk screws ×4 |  | M12*100 expansion anchors ×4 |
|  | Pedestal ×1 |  | RCBO box ×1 |
|  | RCBO×1 |  | Expansion screws ×4 |
|  | MID meter ×1 |  | AC wire ferrules ×4 |

| Component | Description | Component | Description |
|---|---|---|---|
|  | RS485 wire ferrules ×2 | - | - |

**Optional for GW11K-HCA-G30, GW11K-HCA-UK-G30, GW22K-HCA-G30, and GW22K-HCA-UK-G30**

| Component | Description | Component | Description |
|---|---|---|---|
|  | M5*12 screws ×12 |  | M4*10 screws ×2 |
|  | M4*10 countersunk screws ×4 |  | M12*100 expansion anchors ×4 |
|  | Pedestal ×1 |  | RCBO box ×1 |

| Component | Description | Component | Description |
|---|---|---|---|
|  | RCBO×1 |  | Expansion screws ×4 |
|  | MID meter ×1 |  | AC wire ferrules ×8 |
|  | RS485 wire ferrules ×2 | - | - |

## 4.3 Equipment Storage

If the EV charger will not be put into service immediately, store it as follows:

1. Ensure that the outer packaging is not opened and that the desiccant inside the package is intact.
2. Ensure that the storage environment is clean, with suitable temperature and humidity and no condensation.
3. Stack the EV chargers at the height and in the orientation indicated on the packaging labels.
4. Ensure the stacked EV chargers are stable and cannot tip over.
5. After long-term storage, the EV charger must be inspected and approved by qualified personnel before it is put back into service.

# 5 Installation

## 5.1 Installation Requirements




### Installation Environment Requirements

- Do not install the equipment in environments that are flammable, explosive, or corrosive.
- Install the EV charger out of reach of children. The surface of the equipment may become hot during operation, posing a burn hazard.
- Avoid installing the EV charger where there are water pipes, cables, or other services inside the wall to prevent hazards when drilling.
- Install the EV charger in a sheltered location whenever possible.
- The installation space must meet the equipment's ventilation, heat dissipation, and operating clearance requirements.
- The equipment's Ingress Protection Rating is suitable for both indoor and outdoor installation. Ensure that the ambient temperature and humidity are within the specified range.
- Install the equipment at a height that allows easy operation and maintenance. Ensure that the indicator lights and all labels are easy to see, and that the terminals are easy to access.

- Install the EV charger at an altitude below the Max. Operating Altitude of 2,000 m.
- Keep the EV charger away from strong magnetic fields to prevent electromagnetic interference.

**Mounting Structure Requirements**

- The mounting structure must not be made of flammable materials and must be fire-resistant.
- Ensure that the mounting surface is solid and reliable and can support the Weight of the EV charger.

### Installation Angle

- Recommended Installation Angle for the EV charger: vertical.
- Do not install the EV charger upside down, tilted forward or backward beyond the permitted angle, or horizontally.

### Installation Tool Requirements

The following installation tools are recommended. Other auxiliary tools may be used on site as needed.



# 5.2 Install the EV Charger

## 5.2.1 Handling the Charging Station

**CAUTION**

Before installation, move the EV charger to the installation location. To prevent personal injury or equipment damage during handling, observe the following precautions:

- Select an appropriate number of personnel based on the equipment Weight to prevent the equipment from exceeding the load that can be safely carried by a person and injuring someone if dropped.
- Wear safety gloves to prevent injury.
- Keep the equipment balanced during transport to prevent it from falling.

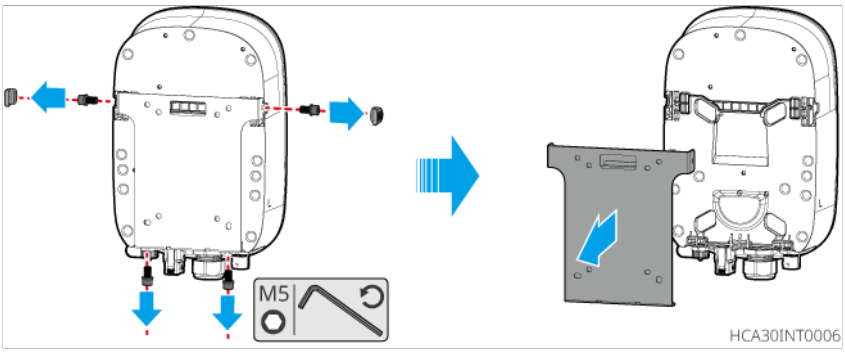
**NOTICE**

- When drilling, make sure the drilling locations avoid water pipes, cables, and other objects inside the wall to prevent hazards.
- When drilling, wear safety goggles and a dust mask to prevent dust from entering your respiratory tract or eyes.
- Ensure that the charging station is securely installed to prevent it from falling and injuring personnel.

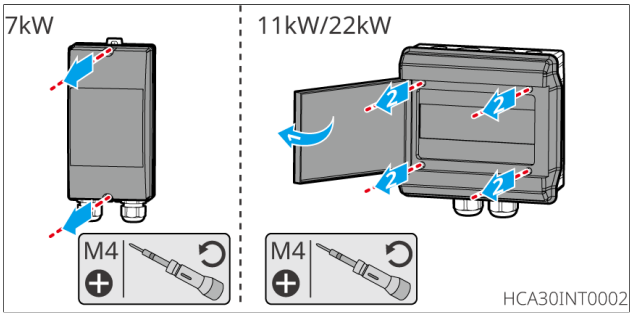
## 5.2.2 Wall-Mounting the Charging Station

### Install the EV Charger

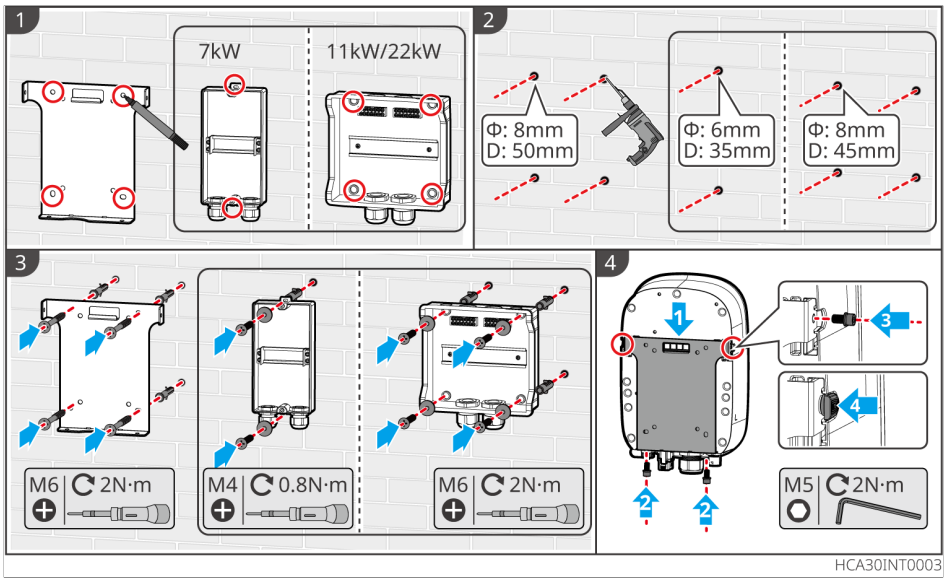
1. Remove the mounting plate from the charging station.




2. Remove the front cover of the RCBO distribution box.




3. Position the mounting plate and RCBO box against the wall, and mark the drilling locations with a marker.
4. Drill the holes using a hammer drill.
5. Use expansion screws to secure the RCBO box and mounting plate to the wall.
6. Hang the charging station on the mounting plate, then secure the plate to the charging station.

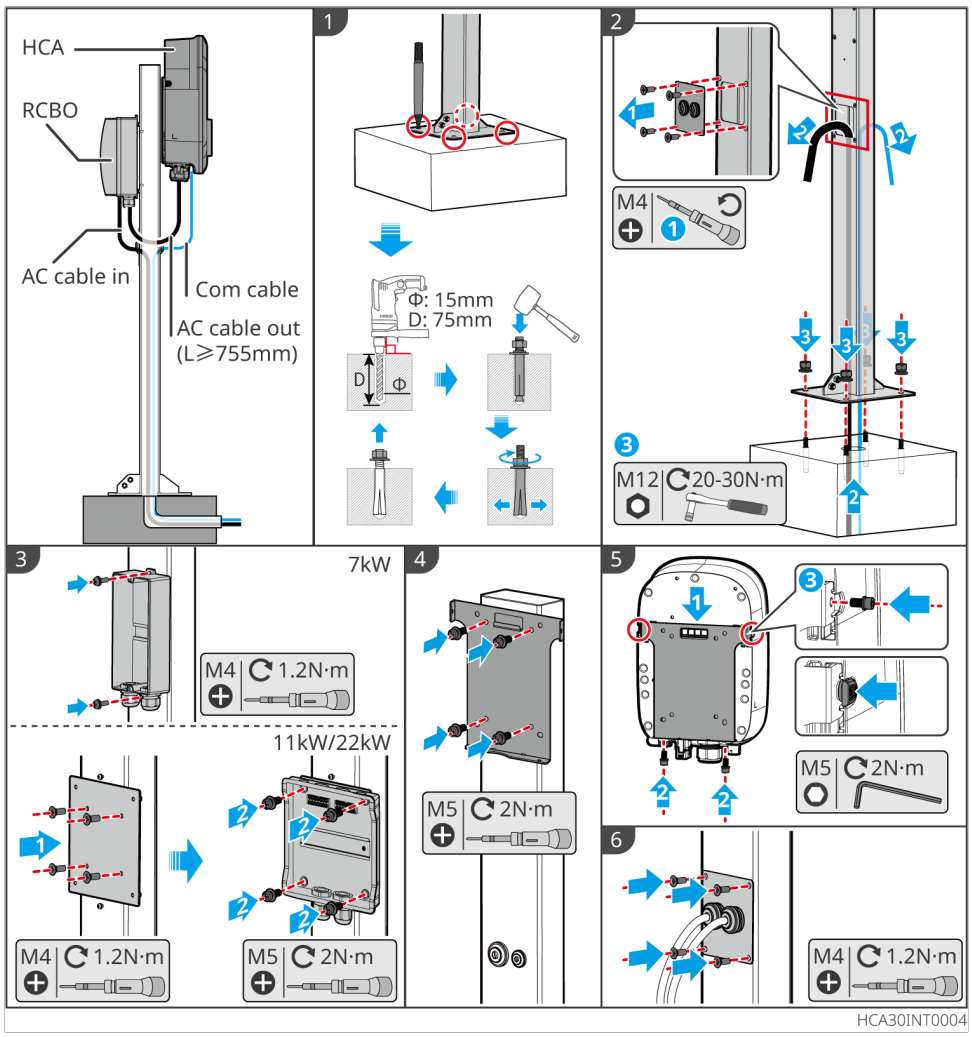



### 5.2.3 Pedestal-Mounting the Charging Station

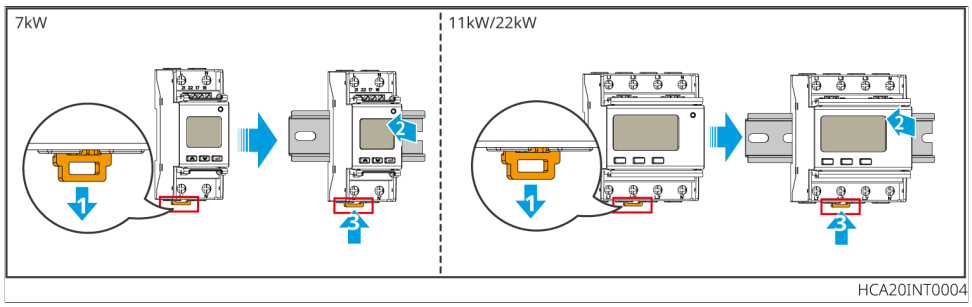
**NOTICE**

Conduit for the cables must be embedded in the concrete foundation. The conduit diameter should be approximately 60 mm.

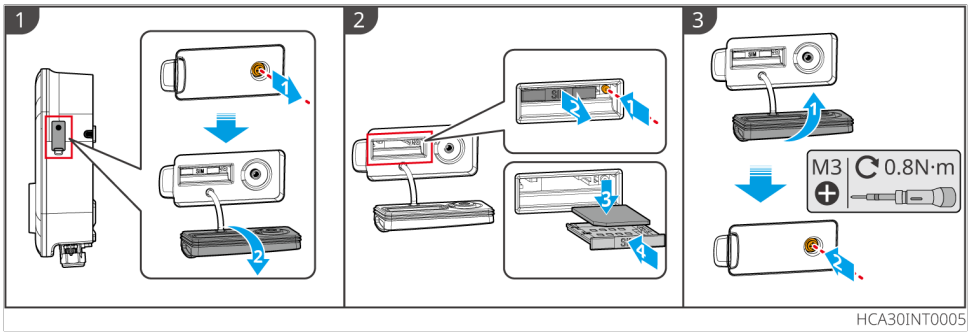
1. Stand the post upright on the concrete surface and mark the drilling locations with a marker. After marking, use a hammer drill with a 15 mm drill bit to drill holes approximately 75 mm deep.
2. Secure the pedestal.
   a. Remove the cable cover plate from the post.
   b. Feed the pre-embedded cables into the post and route them out through the cable outlet.
   c. Secure the post to the concrete surface using expansion bolts, and plug any unused mounting holes with screws.
3. Install the RCBO box on the pedestal.
   - For a 7 kW charging station, secure it in place with screws.
   - For 11 kW and 22 kW charging stations, first secure the adapter plate, then mount the RCBO box on the adapter plate.
4. Remove the mounting plate from the charging station and install it on the post.
5. Hang the charging station on the mounting plate.
6. Reinstall the cable cover plate on the post and tighten the screws.




### 5.2.4 Installing the MID Meter (Optional)




## 5.3 Installing the SIM Card


1
2
3
M3
0.8N·m
HCA30INT0005

# 6 Electrical Connections

## 6.1 Safety Precautions

**DANGER**

- All operations performed and the specifications of cables and components used during electrical connection must comply with local laws and regulations.
- Before making electrical connections, disconnect the upstream switch. Live work is strictly prohibited; otherwise, there is a risk of electric shock or other hazards.
- Bundle cables of the same type together and route them separately from other cable types. Do not allow cables to become tangled or cross one another.
- Excessive tension on a cable may result in a poor connection. When wiring, leave sufficient cable slack before connecting the cable to the charging station terminals.
- When crimping the wire terminals, ensure that the cable conductors are in full contact with the terminals. Do not crimp the cable insulation together with the terminals; this may prevent the equipment from operating or, due to an unreliable connection, cause overheating during operation and damage to the charging station terminal block.
- Connect the AC cable to the charging station through an RCBO. The RCBO provides overcurrent Protection for the charging station circuit.

**WARNING**

- When wiring, ensure that the AC input wires are correctly matched to the AC terminal ports marked "L1," "L2," "L3," "N," and "PE." Incorrect wiring may damage the charging station.
- Ensure that the conductor cores are fully inserted into the wiring holes of the AC terminal block, with no exposed conductor.
- Ensure that the cables are securely connected; otherwise, the terminals may overheat while the equipment is operating, causing damage to the charging station.

**NOTICE**

- When making electrical connections, wear the required personal protective equipment, such as safety shoes, protective gloves, and insulating gloves.
- Only qualified personnel may perform electrical connection work.
- The cable colors shown in the illustrations in this manual are for reference only. The actual cable specifications must comply with local regulations.

## 6.2 Prepare the Cables

### Cable Specification Requirements

| Model | Cable | Cable Specifications |
|---|---|---|
| GW7K-HCA-G30、GW7K-HCA-UK-G30 | AC cable (stranded, 3-core outdoor cable) | • Copper conductor, 105°C, 1000 V<br>• Cable outer diameter: 13–14 mm<br>• Cable conductor cross-sectional area: 6 $mm^2$ |
| GW11K-HCA-G30、GW11K-HCA-UK-G30 | AC cable (stranded, 5-core outdoor cable) | • Copper conductor, 105°C, 1000 V<br>• Cable outer diameter: 12.6–17.3 mm<br>• Cable conductor cross-sectional area: 4–6 $mm^2$ |

| Model | Cable | Cable Specifications |
| --- | --- | --- |
| GW22K-HCA-G30、GW22K-HCA-UK-G30 | | • Copper conductor, 105°C, 1000 V<br>• Cable outer diameter: 16.3–17.3 mm<br>• Cable conductor cross-sectional area: 6 $mm^{2}$[1] |
| [1]: The recommended distance between the distribution box and the EV charger is no more than 15 m. | | |

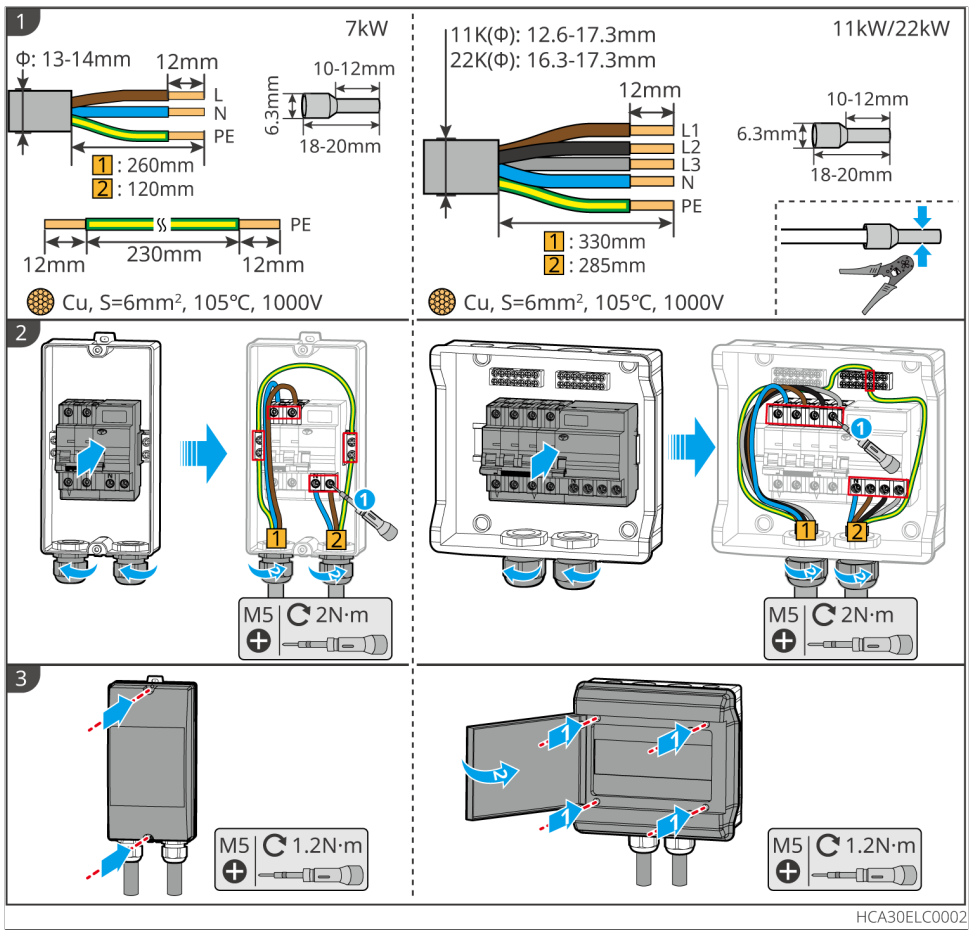
**RCBO Specifications**

| NOTICE |
| --- |
| RCBO specifications may vary depending on applicable international laws, regulations, and standards. |

## 6.3 Connect the RCBO

| NOTICE |
| --- |
| • The following instructions for connecting RCBO cables apply only to RCBO models purchased from the charging station manufacturer. For connections to other RCBO types, refer to the relevant instruction manual.<br>• Connect AC wire 1 to the utility grid or the inverter AC output, and connect wire 2 to the charging station AC input. |

1. Prepare and crimp the AC cable.
2. Feed the prepared AC cable through the RCBO distribution box and secure it to the RCBO terminals in the correct wiring sequence.
3. Install the RCBO distribution box cover to prevent water and other foreign matter from entering.

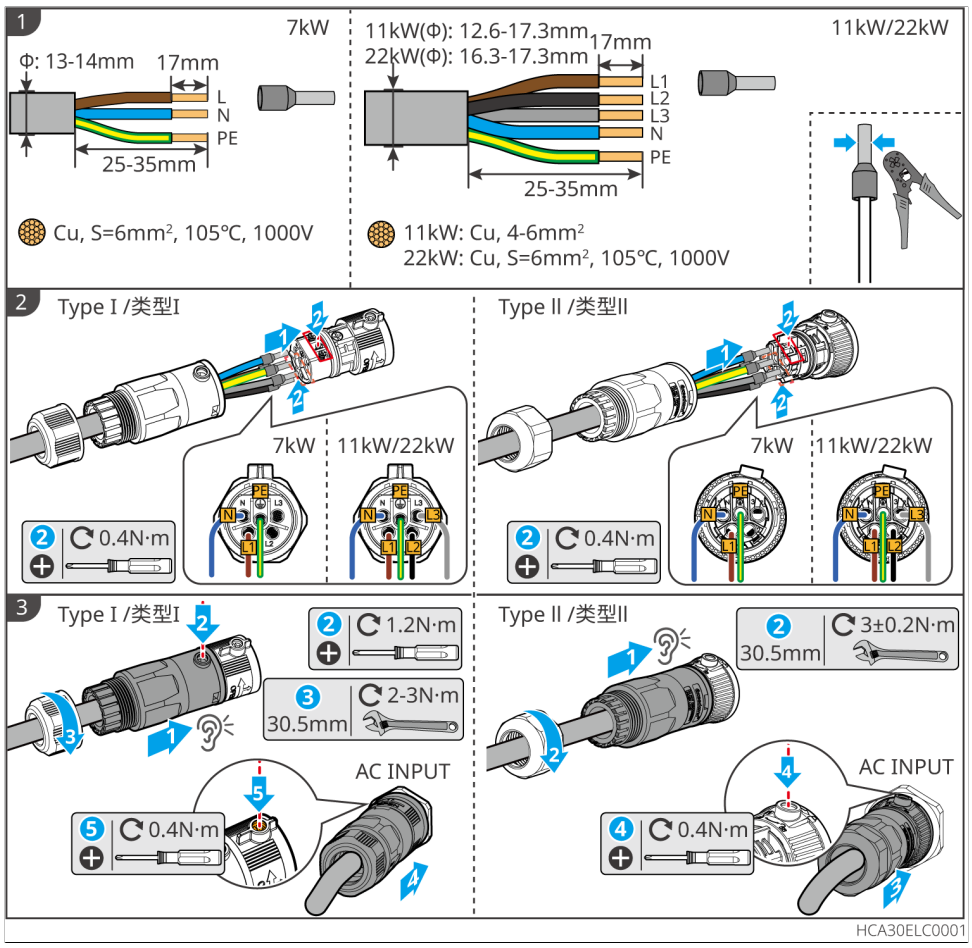



## 6.4 Connect the AC Cable to the EV Charger

| NOTICE |
| --- |
| Connect a single-phase AC input cable to the GW7K-HCA-G30 and GW7K-HCA-UK-G30. Connect a three-phase AC input cable to the GW11K-HCA-G30, GW11K-HCA-UK-G30, GW22K-HCA-G30, and GW22K-HCA-UK-G30. |

The three-phase AC input cable consists of L1, L2, L3, N, and PE; the single-phase AC input cable consists of L, N, and PE.

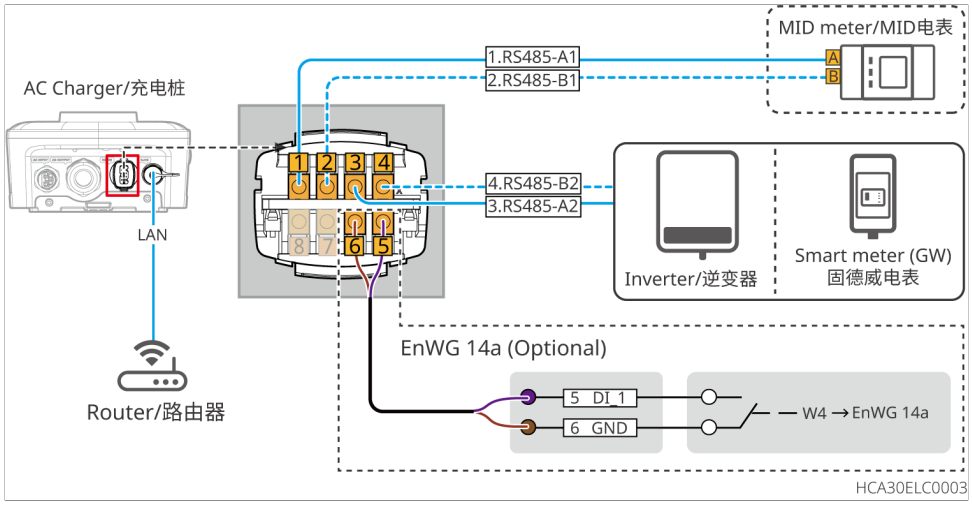
1. Prepare the AC cable.
2. Secure the AC input cable to the AC terminals and tighten the terminals.
3. Secure the AC input terminal to the charging station.




## 6.5 Connect the EV Charger Communication Cable

**NOTICE**

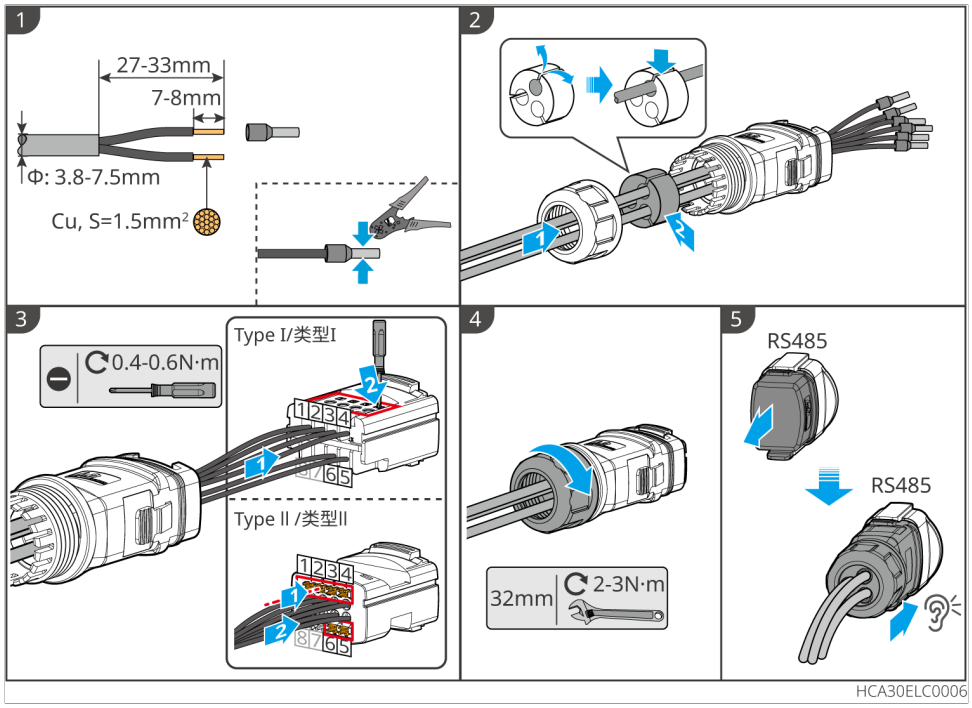
- When connecting communication cables, ensure that the terminal definitions exactly match those of the device. Route cables away from sources of interference, such as power cables, to avoid affecting signal reception.
- Connect RS485_A2/B2 on the EV charger to the inverter communication port. Refer to the corresponding inverter manual for the specific RS485 port.
- Use either an inverter or a GoodWe meter; if an inverter is installed, there is no need to connect a GoodWe meter as well.




### 6.5.1 Connect the RS485 Communication Cable

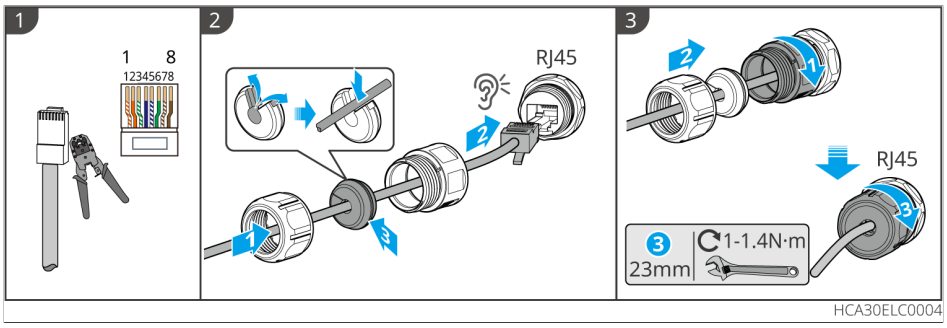
| NOTICE |
| --- |
| Provide your own outdoor-rated twisted-pair cable that meets local standards. |

1. Prepare the communication cable.
2. Feed the cable through the connector assembly.
3. Insert the cables with crimped terminals into the terminal openings according to the wiring sequence, then tighten them.
4. Tighten the seal at the rear of the connector.
5. Secure the connector to the charging station.

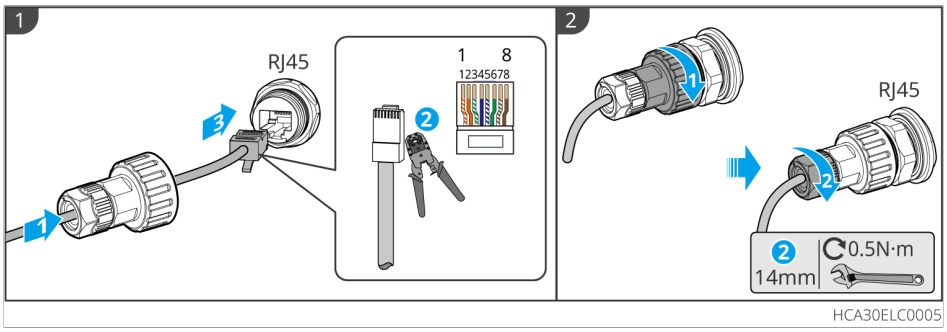



## 6.5.2 Connect the Ethernet Cable

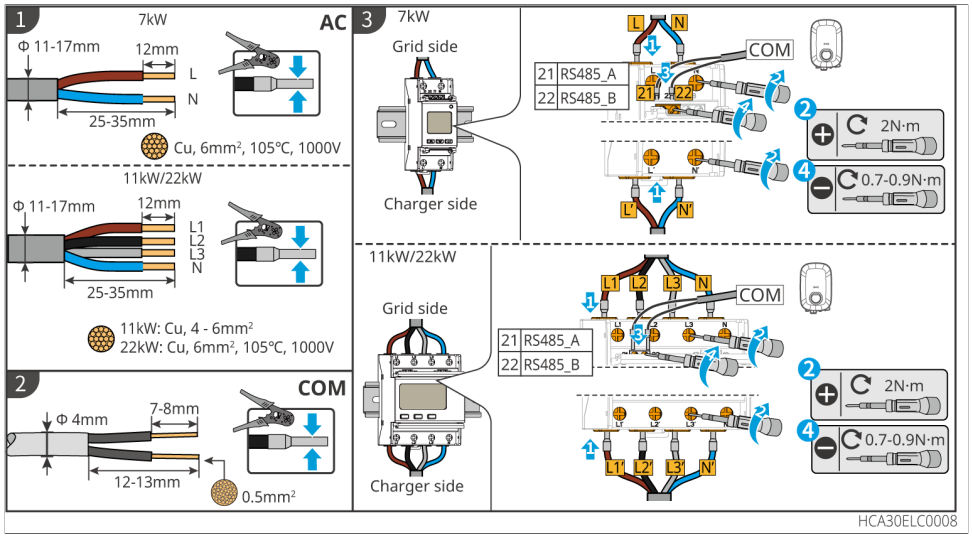
- **Type 1**




- **Type 2**




## 6.6 Connect the MID Meter (Optional)



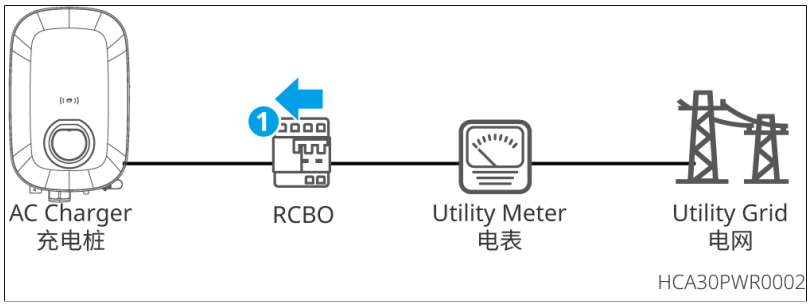
# 7 Equipment Commissioning

## 7.1 Pre-Energization Inspection

| No. | Inspection Item |
| --- | --- |
| 1 | Ensure the EV charger is securely installed in a location that is easy to access for operation and maintenance, with sufficient space for ventilation and heat dissipation. Keep the installation area clean and tidy. |
| 2 | Ensure the AC input cables and communication cables are connected correctly and securely. |
| 3 | Cables are secured and routed as required, are arranged properly, and are undamaged. |
| 4 | Unused ports are sealed. |
| 5 | Ensure that the grid voltage, frequency, and other parameters meet the EV charger's operating requirements. |

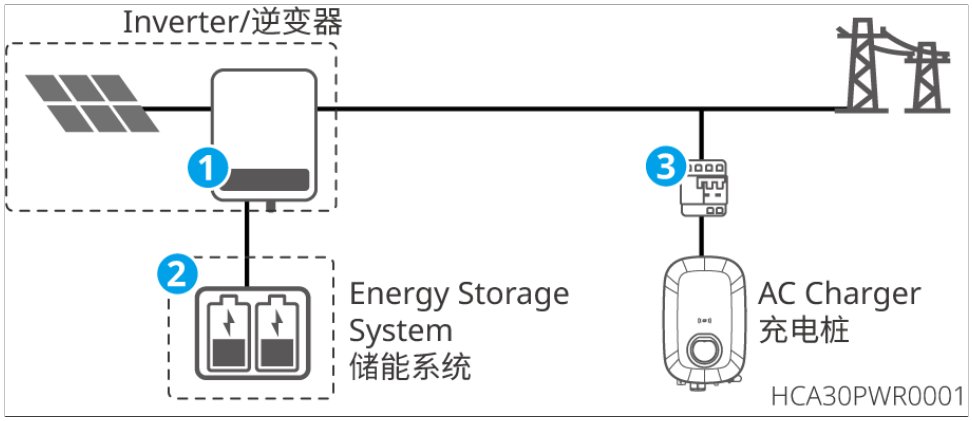
## 7.2 Energizing the Equipment

### Grid-Connected Scenario




Close the RCBO switch between the EV charger and the grid.

### PV-Storage-Charging Scenario




1. Close the inverter-side AC Switch and DC Switch.
2. (Optional) Close the Battery Side switch.
3. Close the RCBO switch.

## 7.3 Charge the Electric Vehicle

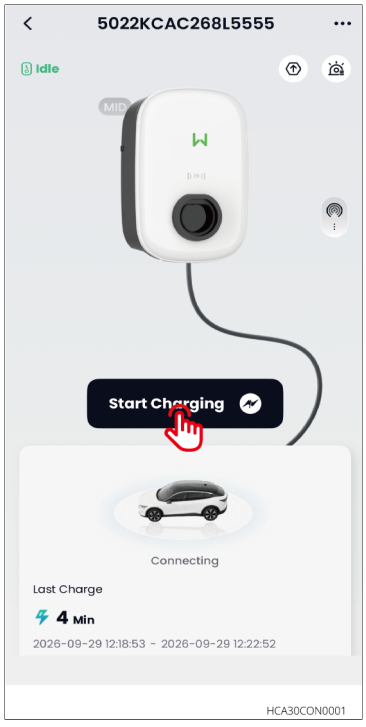
**DANGER**

- Do not move the electric vehicle while it is being charged by the EV charger.
- If an abnormal situation occurs during charging, use the EPO button to cut off the power supply.
- Avoid charging electric vehicles during thunderstorms. If charging is necessary, ensure that the EV charger's connector and the vehicle's charging inlet are dry.
- Keep children away from the EV charger and do not allow them to use it.
- Do not charge an electric vehicle if the EV charger has malfunctioned or if any abnormal condition exists, such as damaged cables.

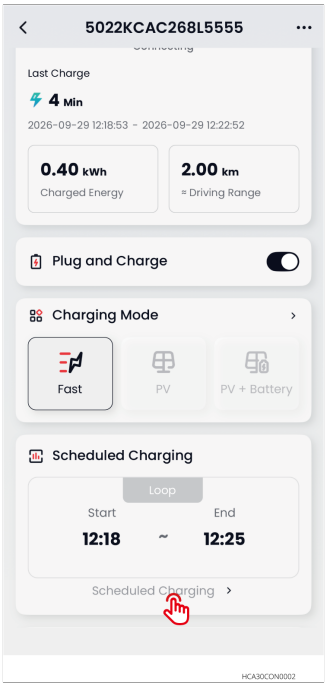
**NOTICE**

- Before charging, insert the charging connector into the electric vehicle's charging inlet.
- After charging, for EV chargers with an integrated charging cable, unplug the connector, coil the cable around the cable holder on the charger, and insert the connector into the charger's holster.
- If the electric vehicle does not support Automatic Charging, after the EV charger resumes from a charging interruption, unplug and reconnect the charging connector to start charging again:
  - In Plug and Charge mode, charging starts automatically;
  - In modes other than Plug and Charge, charging can be started by scanning an RFID card or using the app.

### 7.3.1 Start Charging in the SEMS+ App

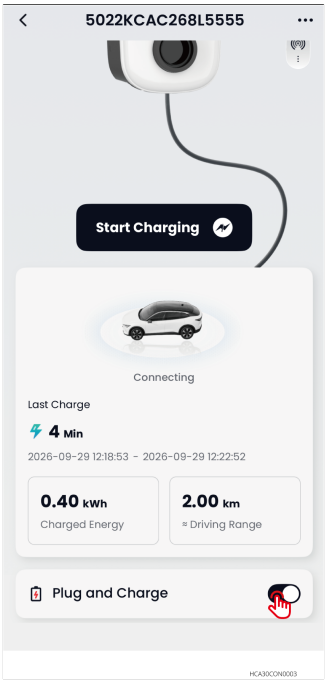



### 7.3.2 Schedule Charging in the SEMS+ App




### 7.3.3 Charge in Plug and Play Mode

After selecting Plug and Play in the app, if no scheduled charging is set, you can start charging the electric vehicle simply by plugging in the charging connector without scanning an RFID card.



### 7.3.4 Charge Using an RFID Card

| NOTICE |
| --- |
| Bind the RFID card in advance. For binding instructions, see8.6.Settings(Page 59)。 |

If Plug and Charge has not been activated, the EV charger will start charging the electric vehicle after the card is scanned.

# 8 Set up and View EV Charger Information Using the SEMS+ App (End User)

SEMS+ is a cloud platform for unified remote management and monitoring of EV chargers and inverters.

## 8.1 Download and Install the App

### Phone Requirements

- Mobile operating system requirements: Android 7.0 or later, iOS 15.1 or later.
- The phone must support a web browser and be connected to the Internet.
- The phone must support WLAN/Bluetooth.

### Download

- Option 1: Search for SEMS+ in Google Play (Android) or the App Store (iOS), then download and install it.

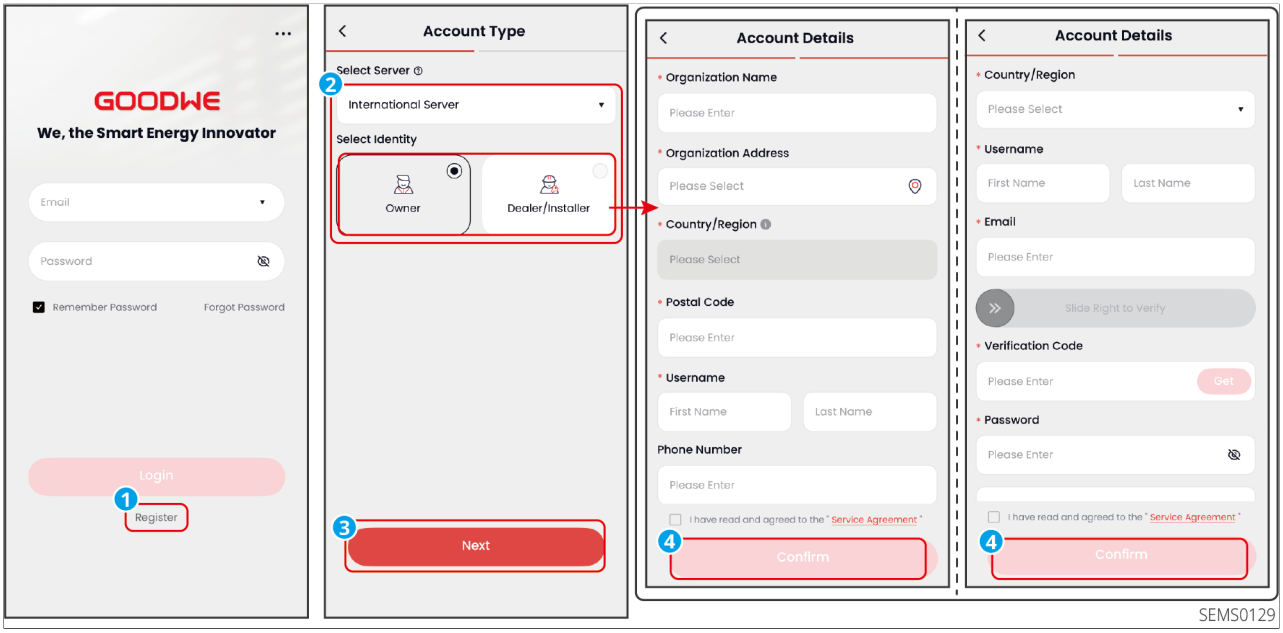



- Option 2: Scan the QR code below to download and install the app.



## 8.2 Register an Account (End User)

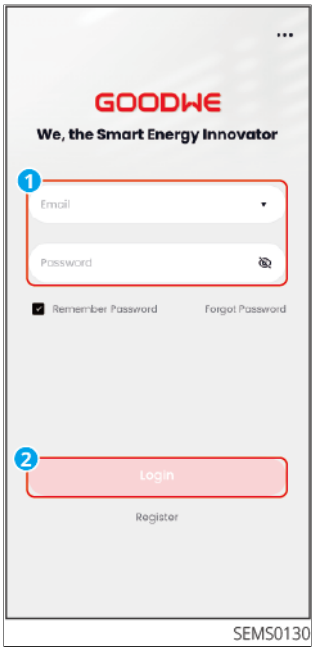
Read the Data Protection Statement carefully, then enter your registration details based on your actual circumstances to complete registration.




## 8.3 Log in to the App

| NOTICE |
| --- |
| You have obtained your username and password. |

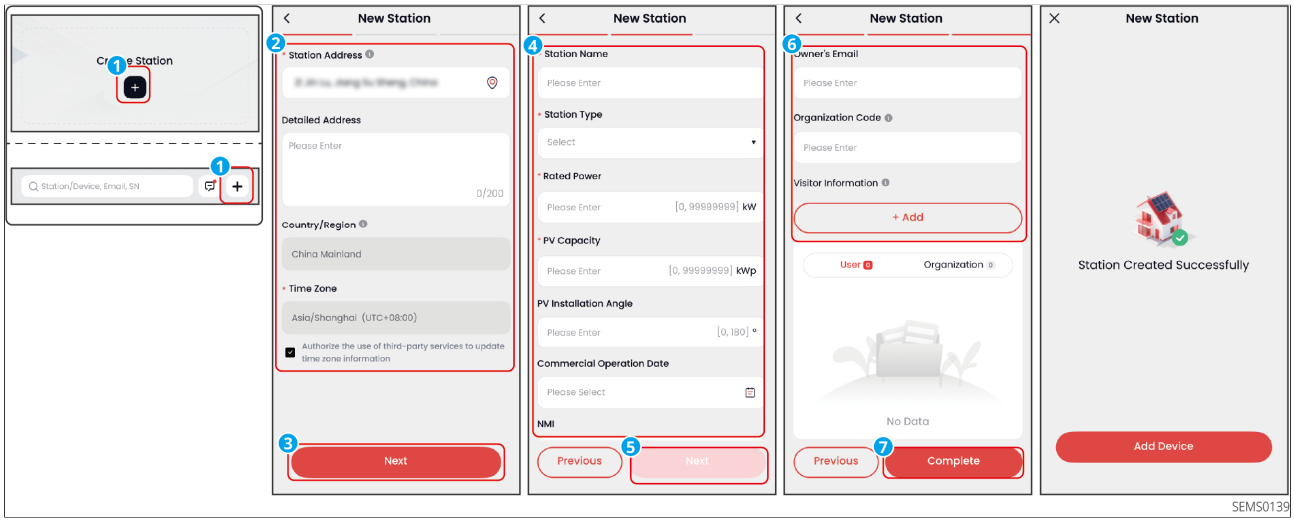
Enter your username and password to log in to the SEMS+ App.




# 8.4 Create a Power Plant

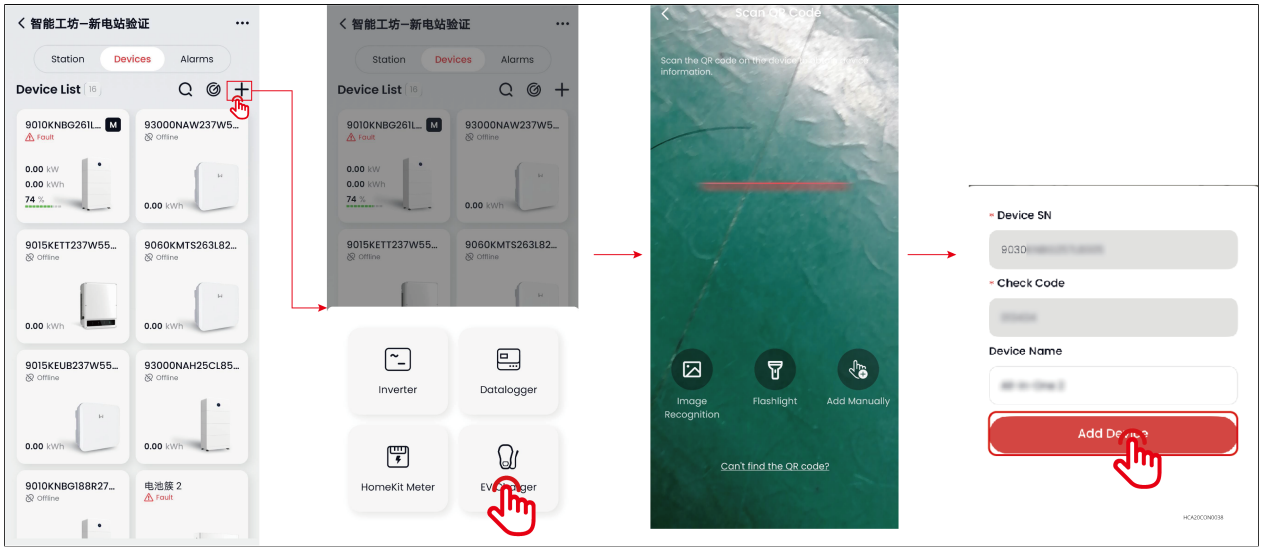
### Enter Power Plant Information

1. After logging in to the App, tap "Create Power Plant" if there is no power plant associated with your account. If your account already has a power plant, tap "+" on the power plant list page to open the new power plant information form.
2. Follow the on-screen instructions and enter the power plant information based on your actual circumstances. (* indicates a required field.)



### Add a Device

1. On the device list page, tap +.
2. Select the device type, then scan the device SN or enter it manually.
3. After scanning, verify that the device serial number and verification code are correct. Tap "Add Device" to complete the process.



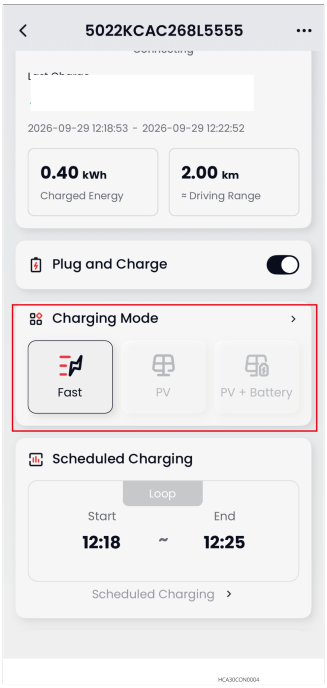

## 8.5 Charging Modes

**NOTICE**

If the electric vehicle does not support Automatic Charging, after the charger resumes from an interrupted charging state, unplug and reconnect the charging connector, then manually start charging in the App.

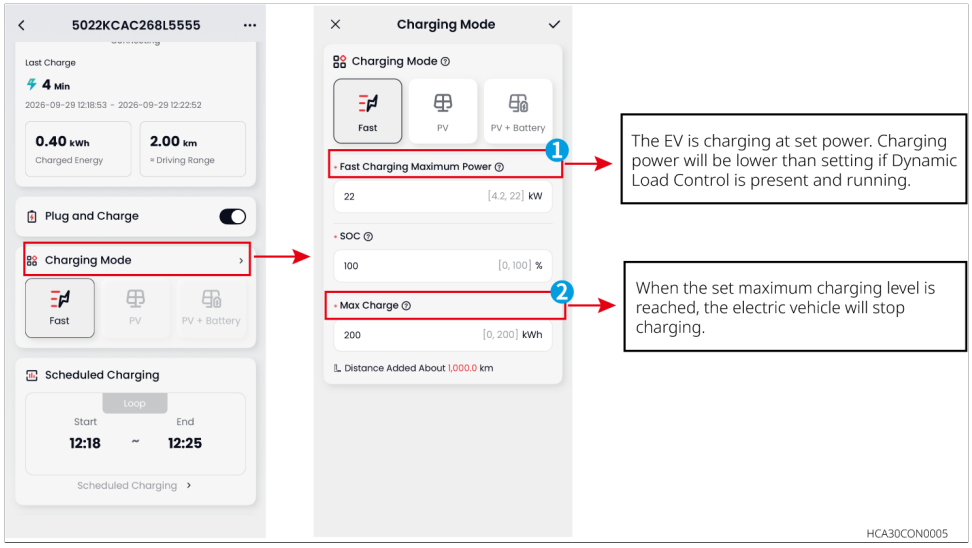
### Charging Modes

The charger has three advanced charging modes: Fast Charging, PV Charging, and PV + Battery Charging.



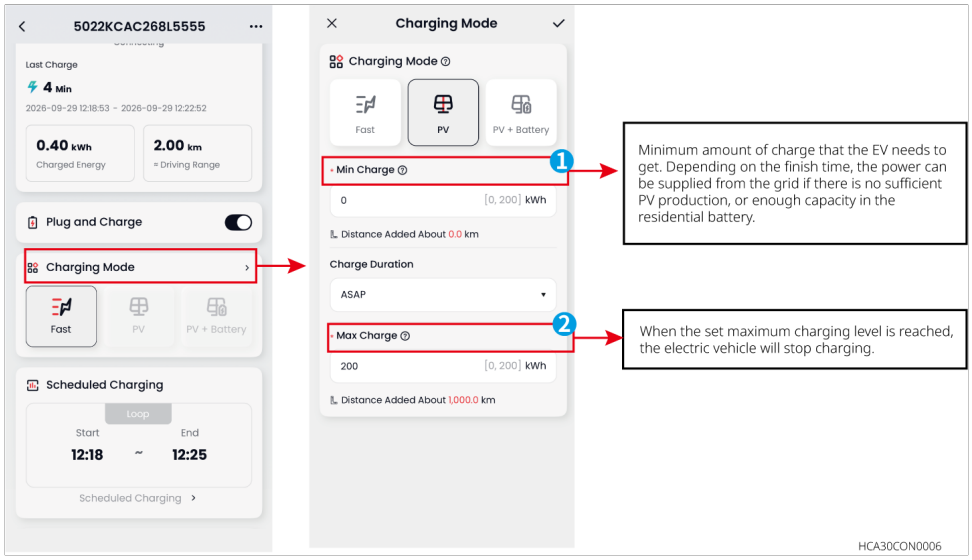

## Fast Charging

The charger can use power from the grid, PV, or the battery to charge the electric vehicle. The charger's output power is set to the Rated Power by default. Users can customize the output power according to their actual needs, up to the Rated Power.



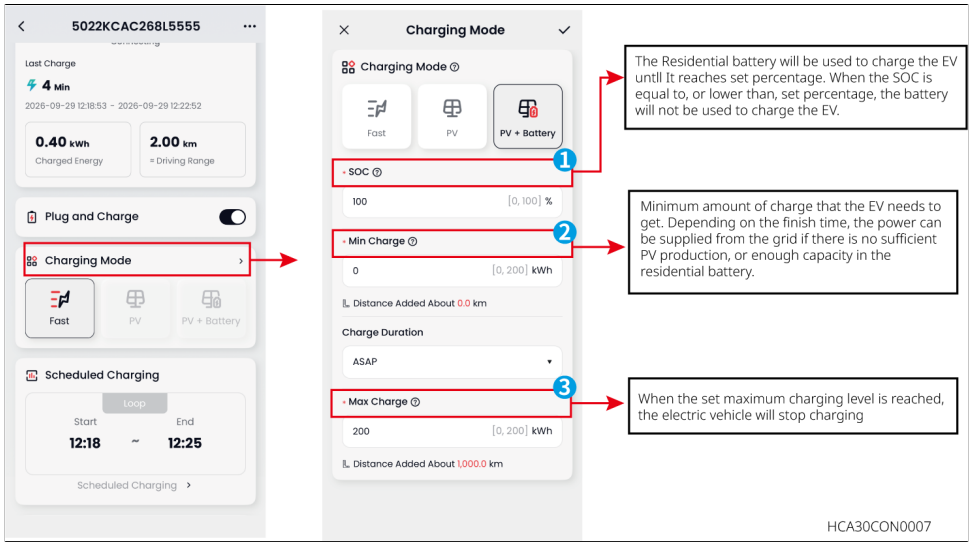

## PV Charging

Uses PV power only to charge the electric vehicle. PV power is prioritized for loads, and any remaining power is used to charge the electric vehicle.

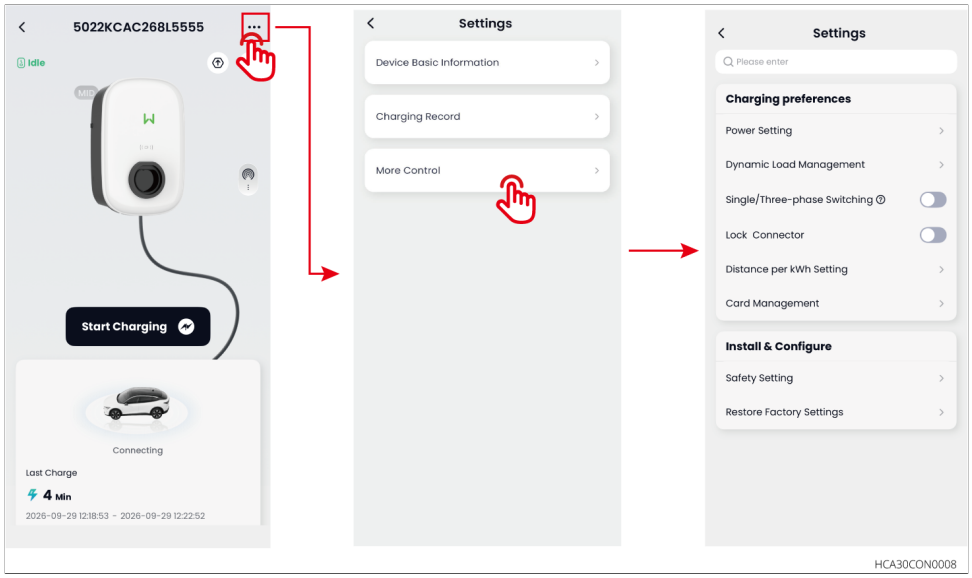



### PV + Battery Charging

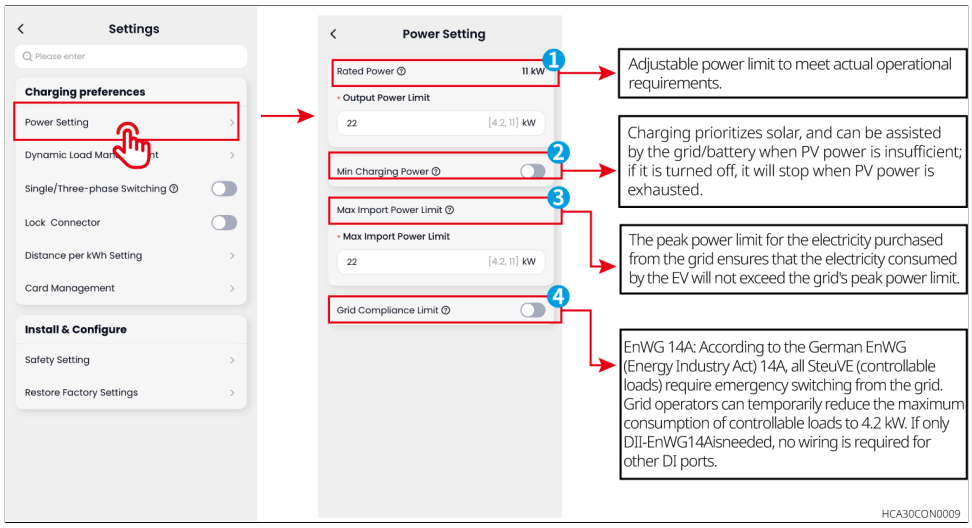
Uses PV and battery power to charge the electric vehicle. PV or battery power is prioritized for loads, and any remaining power is used to charge the electric vehicle.




# 8.6 Settings



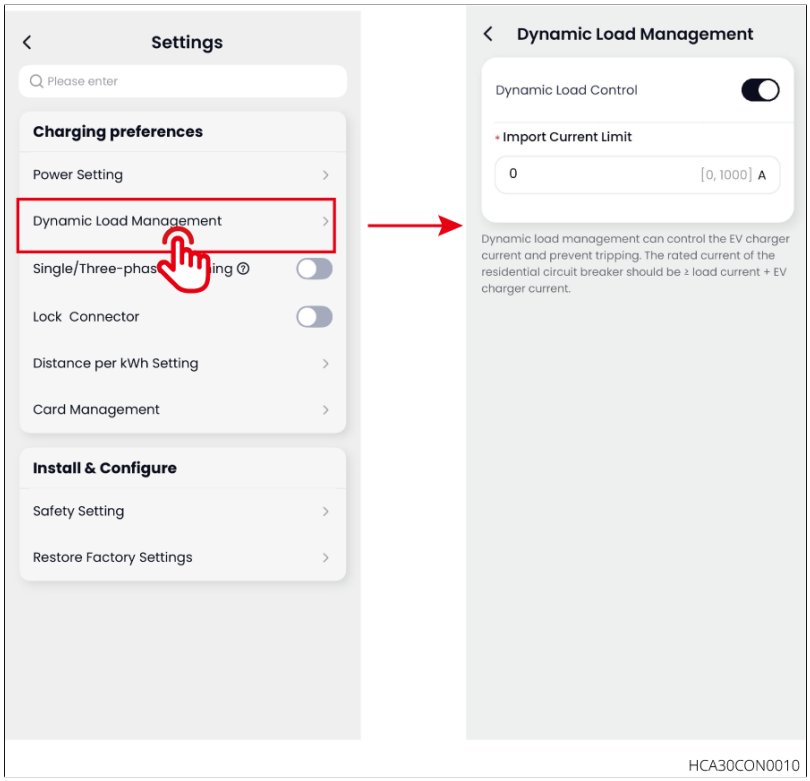

## Power Setting




## Dynamic Load Management

**NOTICE**

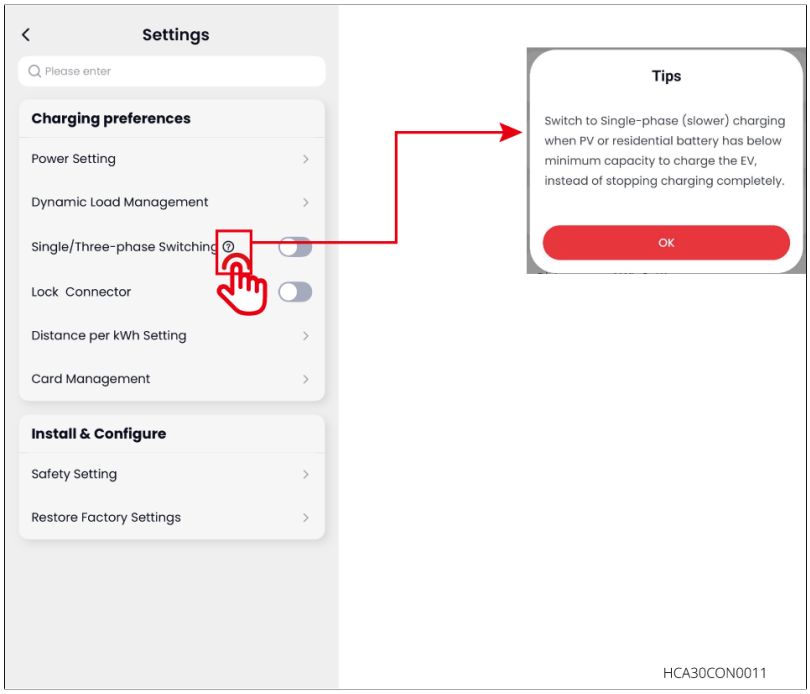
This function requires a compatible inverter or GoodWe smart meter connected to the network. The setting will not take effect if neither device is connected.




### Single-/Three-Phase Switching

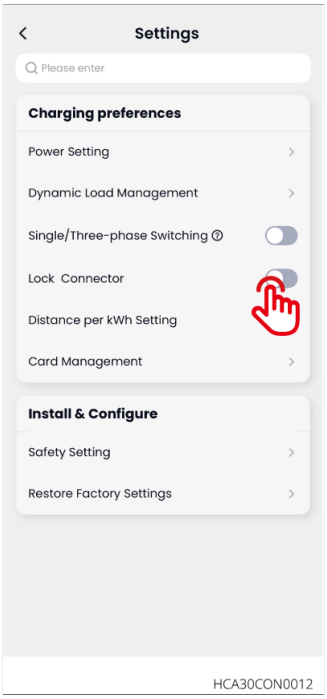
| NOTICE |
| --- |
| Only three-phase EV chargers support single-/three-phase switching. |

- On: Enables single-/three-phase switching.
- Off: The EV charger is in three-phase charging mode.



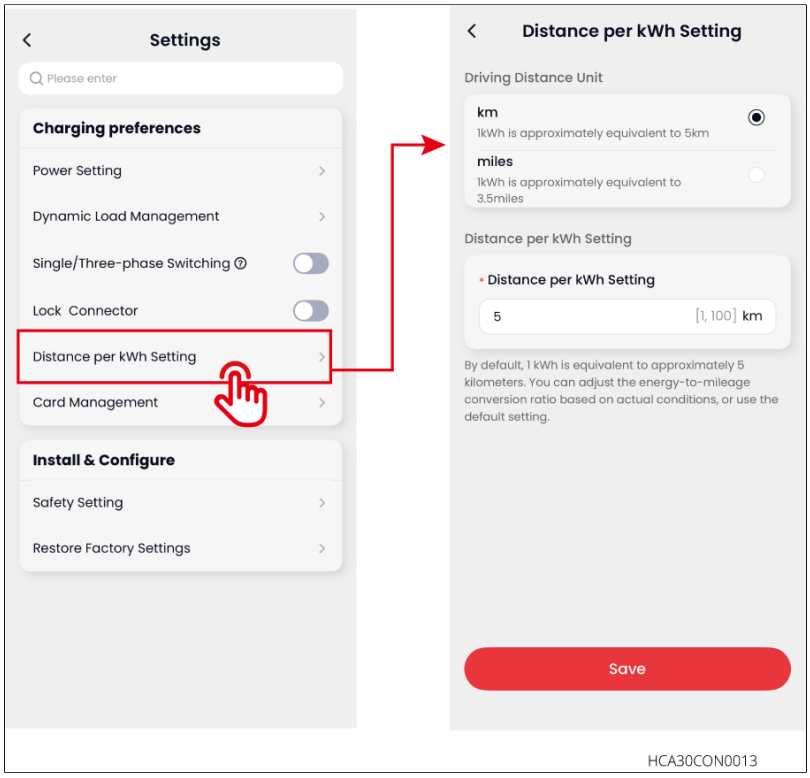

### Lock Charging Connector

When this function is enabled, the electronic lock on the corresponding connector is activated, preventing the cable connector inserted into the charging station holster from being removed. This secures the cable to the charging station and prevents it from falling off or being stolen. This function applies to charging stations with separate cable and connector assemblies.



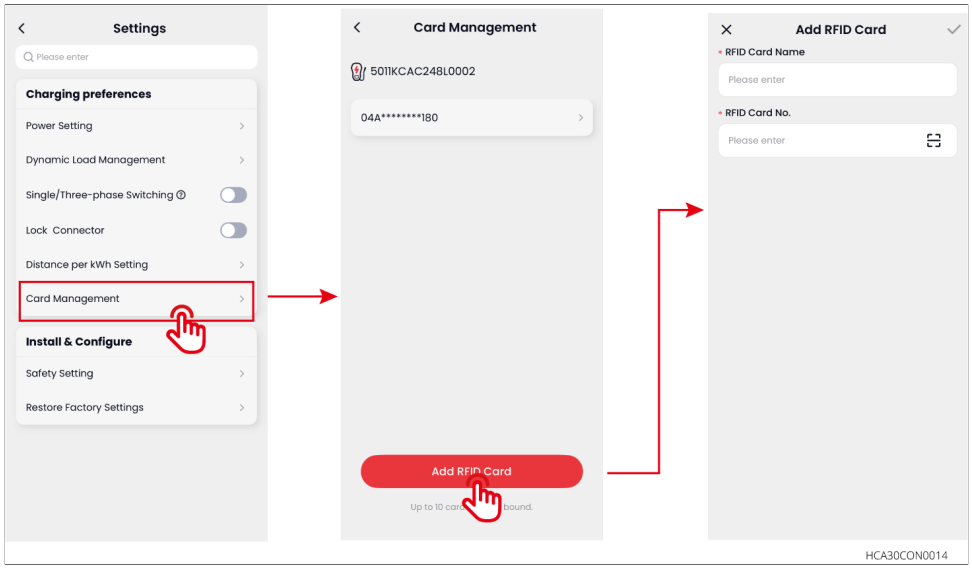

## Energy-to-Driving-Distance Conversion

Set the energy-to-distance conversion ratio according to actual conditions.



## RFID Card Management

Refer to the following instructions to add an RFID card.



# 9 System Maintenance

## 9.1 Power off the EV Charger

| DANGER |
| --- |
| Before performing maintenance on the charging station, power it off. Working on energized equipment may damage the charging station or cause electric shock. |

Open the RCBO between the charging station and the grid or inverter.

## 9.2 Remove the EV Charger

| WARNING |
| --- |
| • Make sure the charging station is de-energized.<br>• Wear personal protective equipment when working on the charging station. |

1. Disconnect all electrical connections to the charging station, including the AC cable and communication cable.
2. Remove the charging station from the mounting plate.
3. Remove the mounting plate.
4. Store the charging station properly. If it will be used again, ensure that the storage conditions meet the requirements.

## 9.3 Decommission the EV Charger

When the charging station can no longer be used and must be scrapped, dispose of it in accordance with the electrical waste disposal requirements in the country/region where it is located. Do not dispose of the charging station as household waste. charging station.

## 9.4 Periodic Maintenance

| Maintenance Item | Maintenance Procedure | Maintenance Interval |
| --- | --- | --- |
| Electrical Connections | Check electrical connections for looseness and cables for visible damage or exposed copper. | Once every 6 months to once a year |
| Sealing | Check that the seals around the equipment cable entry holes meet the requirements. If gaps are too large or the holes are unsealed, reseal them. | Once every 6 months to once a year |
| RCBO residual current protection switch | Press the residual current Protection switch   to ensure that the RCBO trips correctly. | Once per month |

## 9.5 Troubleshooting

When the EV charger malfunctions, its indicator light turns red. Log in to the SEMS+ App to view detailed fault information.
Troubleshoot the fault using the methods below. If these methods do not resolve the issue, contact the after-sales service center.
When contacting the after-sales service center, collect the following information to help resolve the issue quickly.

1. EV charger information, such as the serial number, software version, device installation date, time of fault occurrence, and fault frequency.
2. Device installation environment, such as weather conditions. Photos, videos, or other files showing the installation environment are recommended to help analyze the issue.
3. Grid conditions.

| No. | Fault Information | Fault Cause | Corrective Action |
|---|---|---|---|
| 1 | Charging Gun Connection Failure | The charging gun disconnects during charging | Reconnect the charging gun |
| 2 | Grounding Abnormal | AC input ground wire Not Connected | Check and reconnect the ground wire |
| 3 | Environment Overtemperature | The temperature inside the EV charger exceeds 98°C | The fault clears after the temperature drops, and the charger enters standby mode |
| 4 | Overvoltage | AC input voltage is too high | The fault clears when the voltage returns to normal, and the charger enters standby mode |
| 5 | Low Voltage | AC input voltage is too low | |
| 6 | Overcurrent | Output short circuit or overcurrent | The fault clears when the output returns to normal, and the charger enters standby mode |
| 7 | Charging paused for too long | • The vehicle battery is fully charged<br>• The ambient temperature is too low for the battery to charge<br>• Abnormal charging gun connection | 1. Use the software to check whether the battery has finished charging<br>2. If the ambient temperature is too low, start the vehicle five minutes in advance to preheat it before charging<br>3. Check the connector, unplug it for about 15 seconds, then reconnect it |

| No. | Fault Information | Fault Cause | Corrective Action |
|---|---|---|---|
| 8 | Handshake timeout | CP signal communication failed | 1. Check whether the vehicle battery is fully charged.<br>2. Unplug the connector for about 15 seconds, then reconnect it. If the fault persists, restart the vehicle. If the fault cannot be cleared, contact your dealer or after-sales service center. |
| 9 | AC Output Relay Sticking Failure | Internal component fault | Restart the EV charger. If the fault persists, contact your dealer or after-sales service center. |
| 10 | Meter Comm Failure | | |
| 11 | GFCI Failure | | |
| 12 | Meter Reading Abnormal | | |
| 13 | EE Read/Write Abnormal | | |
| 14 | Off-chip Flash Read/Write Abnormal | | |
| 15 | Leakage detection device fault | | |

| No. | Fault Information | Fault Cause | Corrective Action |
|---|---|---|---|
| 16 | Failed to start charging remotely via the app | Wi-Fi signal abnormal | Check the Wi-Fi signal. If the signal is normal, contact your dealer or after-sales service center. |
| 17 | Communication failure between the EV charger and inverter | Inverter communication baud rate mismatch | Set the inverter baud rate to 9600. |

# 10 技术数据

| Technical Data | GW7K-HCA-G30 | GW11K-HCA-G30 | GW22K-HCA-G30 |
|---|---|---|---|
| **Input / Output** | | | |
| Rated Power (kW) | 7 | 11 | 22 |
| Nominal Voltage (V) | 230, L/N/PE | 400, 3L/N/PE | 400, 3L/N/PE |
| Voltage Range (V) | / | / | / |
| Nominal Frequency (Hz) | 50/60 | 50/60 | 50/60 |
| Rated Current (A) | 32 | 16 | 32 |
| Max.Output current(A) | / | / | / |
| **Protection** | | | |
| Residual Current Protection | AC 30mA+ DC 6mA | AC 30mA+ DC 6mA | AC 30mA+ DC 6mA |
| Overcurrent Protection | Integrated | Integrated | Integrated |
| Overvoltage Protection | Integrated | Integrated | Integrated |
| Over Temperature Protection | Integrated | Integrated | Integrated |
| Insulation Resistance Monitoring | Integrated | Integrated | Integrated |
| Ground Fault Protection | Integrated | Integrated | Integrated |

| Technical Data | GW7K-HCA-G30 | GW11K-HCA-G30 | GW22K-HCA-G30 |
|---|---|---|---|
| AC Surge Protection | Type III | Type III | Type III |
| Open PEN Detection (BS 7671) | / | / | / |
| Protection Class | Class I | Class I | Class I |
| Emergency Power Off | / | / | / |
| **Function/Communication** | | | |
| User Interface | WLAN+APP,LED | WLAN+APP,LED | WLAN+APP,LED |
| Start Method | AUTO Start/APP/RFID（ISO/IEC 14443A） | AUTO Start/APP/RFID（ISO/IEC 14443A） | AUTO Start/APP/RFID（ISO/IEC 14443A） |
| Communication | Bluetooth, WiFi, RS485（*2）, LAN | Bluetooth, WiFi, RS485（*2）, LAN | Bluetooth, WiFi, RS485（*2）, LAN |
| Communication with Vihicle | PLC (ISO 15118) | PLC (ISO 15118) | PLC (ISO 15118) |
| Communication with Back-end | OCPP 1.6J<br>OCPP 2.0.1 | OCPP 1.6J<br>OCPP 2.0.1 | OCPP 1.6J<br>OCPP 2.0.1 |
| Communication Protocol | Modbus TCP | Modbus TCP | Modbus TCP |
| Working Mode | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] |

| Technical Data | GW7K-HCA-G30 | GW11K-HCA-G30 | GW22K-HCA-G30 |
|---|---|---|---|
| Dynamic Load Management*[2] | Integrated | Integrated | Integrated |
| Phase Switching | Integrated | Integrated | Integrated |
| Energy Metering | Integrated | Integrated | Integrated |
| **General Data** | | | |
| Operating Temperature Range (℃) | -30~+50*[3] | -30~+50*[3] | -30~+50*[3] |
| Operating Environment | Indoors or Outdoors | Indoors or Outdoors | Indoors or Outdoors |
| Relative Humidity | 5% ~ 95% | 5% ~ 95% | 5% ~ 95% |
| Max. Operating Altitude (m) | 2000 | 2000 | 2000 |
| Cooling Method | Natural Convection | Natural Convection | Natural Convection |
| Weight (kg) | 6.2/5.2（Soket） | 6.3/5.3（Soket） | 6.9/5.9（Soket） |
| Dimension (W×H×D mm) | 235*360*110 | 235*360*110 | 235*360*110 |
| Noise Emission（dB） | < 20 | < 20 | < 20 |
| Ingress Protection Rating | IP65*[4] | IP65*[4] | IP65*[4] |
| Impact resistance | IK09 | IK09 | IK09 |
| Anti-corrosion Class | C5 | C5 | C5 |

| Technical Data | GW7K-HCA-G30 | GW11K-HCA-G30 | GW22K-HCA-G30 |
|---|---|---|---|
| Connector | Type 2, Plug with 7.5m Cable / Socket with shutter | Type 2, Plug with 7.5m Cable / Socket with shutter | Type 2, Plug with 7.5m Cable / Socket with shutter |
| Accessories | RFID Card×2 | RFID Card×2 | RFID Card×2 |
| MTBF（h） | 100000 | 100,000 | 100,000 |
| Mounting Method | Wall / Floor（Optional Stand） | Wall / Floor（Optional Stand） | Wall / Floor（Optional Stand） |

| Technical Data | GW7K-HCA-UK-G30 | GW11K-HCA-UK-G30 | GW22K-HCA-UK-G30 |
|---|---|---|---|
| **Input / Output** | | | |
| Rated Power (kW) | 7 | 11 | 22 |
| Nominal Voltage (V) | 230, L/N/PE | 400, 3L/N/PE | 400, 3L/N/PE |
| Voltage Range (V) | / | / | / |
| Nominal Frequency (Hz) | 50/60 | 50/60 | 50/60 |
| Rated Current (A) | 32 | 16 | 32 |
| Max.Output current(A) | / | / | / |
| **Protection** | | | |
| Residual Current Protection | AC 30mA+ DC 6mA | AC 30mA+ DC 6mA | AC 30mA+ DC 6mA |
| Overcurrent Protection | Integrated | Integrated | Integrated |

| Technical Data | GW7K-HCA-UK-G30 | GW11K-HCA-UK-G30 | GW22K-HCA-UK-G30 |
|---|---|---|---|
| Overvoltage Protection | Integrated | Integrated | Integrated |
| Over Temperature Protection | Integrated | Integrated | Integrated |
| Insulation Resistance Monitoring | Integrated | Integrated | Integrated |
| Ground Fault Protection | Integrated | Integrated | Integrated |
| AC Surge Protection | Type III | Type III | Type III |
| Open PEN Detection (BS 7671) | Integrated | Integrated | Integrated |
| Protection Class | Class I | Class I | Class I |
| Emergency Power Off | / | / | / |
| **Function/Communication** | | | |
| User Interface | WLAN+APP,LED | WLAN+APP,LED | WLAN+APP,LED |
| Start Method | AUTO Start/APP/RFID（ISO/IEC 14443A） | AUTO Start/APP/RFID（ISO/IEC 14443A） | AUTO Start/APP/RFID（ISO/IEC 14443A） |
| Communication | Bluetooth, WiFi, 4G, RS485（*2）, LAN | Bluetooth, WiFi, 4G, RS485（*2）, LAN | Bluetooth, WiFi, 4G, RS485（*2）, LAN |
| Communication with Vihicle | PLC (ISO 15118) | PLC (ISO 15118) | PLC (ISO 15118) |

| Technical Data | GW7K-HCA-UK-G30 | GW11K-HCA-UK-G30 | GW22K-HCA-UK-G30 |
|---|---|---|---|
| Communication with Back-end | OCPP 1.6J<br>OCPP 2.0.1 | OCPP 1.6J<br>OCPP 2.0.1 | OCPP 1.6J<br>OCPP 2.0.1 |
| Communication Protocol | Modbus TCP | Modbus TCP | Modbus TCP |
| Working Mode | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] | Fast Charging<br>PV Priority<br>PV+BAT<br>Scheduled Charging<br>AI Smart Charging*[1] |
| Dynamic Load Management*[2] | Integrated | Integrated | Integrated |
| Phase Switching | Integrated | Integrated | Integrated |
| Energy Metering | Integrated | Integrated | Integrated |
| **General Data** | | | |
| Operating Temperature Range (℃) | -30~+50*[3] | -30~+50*[3] | -30~+50*[3] |
| Operating Environment | Indoors or Outdoors | Indoors or Outdoors | Indoors or Outdoors |
| Relative Humidity | 5% ~ 95% | 5% ~ 95% | 5% ~ 95% |
| Max. Operating Altitude (m) | 2000 | 2000 | 2000 |
| Cooling Method | Natural Convection | Natural Convection | Natural Convection |
| Weight (kg) | 6.2/5.2（Soket） | 6.3/5.3（Soket） | 6.9/5.9（Soket） |

| Technical Data | GW7K-HCA-UK-G30 | GW11K-HCA-UK-G30 | GW22K-HCA-UK-G30 |
|---|---|---|---|
| Dimension (W×H×D mm) | 235*360*110 | 235*360*110 | 235*360*110 |
| Noise Emission（dB） | < 20 | < 20 | < 20 |
| Ingress Protection Rating | IP65*4 | IP65*4 | IP65*4 |
| Impact resistance | IK09 | IK09 | IK09 |
| Anti-corrosion Class | C5 | C5 | C5 |
| Connector | Type 2, Plug with 7.5m Cable / Socket with shutter | Type 2, Plug with 7.5m Cable / Socket with shutter | Type 2, Plug with 7.5m Cable / Socket with shutter |
| Accessories | RFID Card×2 | RFID Card×2 | RFID Card×2 |
| MTBF（h） | 100000 | 100,000 | 100,000 |
| Mounting Method | Wall / Floor（Optional Stand） | Wall / Floor（Optional Stand） | Wall / Floor（Optional Stand） |

*1: For AI fuction needs to be used with Home Energy Management System.
*2: For DLB function needs to be used with inverter or meter.
*3: Operating Temperature Range (℃): Charger is -30~+55℃, and Charging Plug is 50℃.
*4: For Soket version is IP54.

# 11 Contact Details

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