AC Charger
User Manual
AC011E-01

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About This Manual

The manual mainly contains product information, as well as guidelines for installation, operation, and maintenance.

Target Group

This manual is intended for qualified technicians who are responsible for the installation, operation, and maintenance of the charger, and end users who need to check charger parameters.

A qualified technician is required to meet the following requirements:

- Knowledge of electronics, electricity, and machinery, and be familiar with electrical and mechanical schematic diagrams.

- Training in the installation and commissioning of electrical equipment.

- Be able to quickly respond to hazards or emergencies that occur during installation and commissioning.

- Be familiar with local standards and relevant safety regulations of electrical systems.

- Read this manual thoroughly and understand the safety instructions related to operations.

EMC

In some cases, even if the equipment is in accordance with the standard emission limits, it can have an impact in certain application areas (some sensitive equipment is placed in the same location; the equipment is installed close to a radio or TV receiver), and the operator is obliged to take appropriate action to correct this situation.

How to Use This Manual

Please read this manual carefully before using the product and keep it properly in a place for easy access.

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Contents of this manual may be periodically updated or revised, and the actual product purchased shall prevail. Users can obtain the latest manual from **support.sungrowpower.com** or sales channels.

Symbols

This manual contains important safety instructions, which are highlighted with the following symbols, to ensure personal and property safety during usage, or to help optimize the product performance efficiently.

> **⚠ DANGER**
>
> **Indicates high-risk potential hazards that, if not avoided, may lead to death or serious injury.**

⚠ WARNING

Indicates moderate-risk potential hazards that, if not avoided, may lead to death or serious injury.

⚠ CAUTION

Indicates low-risk potential hazards that, if not avoided, may lead to minor or moderate injury.

NOTICE

Indicates potential risks that, if not avoided, may lead to device malfunctions or financial losses.

🛈 "NOTE" indicates additional information, emphasized contents, or tips that may be helpful, e.g., to help you solve problems or save time.

Contents

1 Introduction

1.1 Introduction

The AC011E-01 charger (hereinafter "charger") is used for AC charging of electric vehicles (EVs) and can be either wall-mounted or pole-mounted, with the following advantages:

Ease of Use

EV drivers can start and stop charging via RFID charge card or App. When the vehicle is fully charged, the charging will stop. The charger also supports plug&play, which means the charging starts automatically as soon as the charging connector is plugged into the vehicle.

Smart and Easy Management

In addition to the LED lights on the charger that indicate charging status, EV drivers can visualize and control the charging session remotely via iEnergyCharge.

Sustainability

With an IP65 rating, the charger is water and dust proof, allowing for outdoor use and maintenance.

1.2 Model and Nameplate

Model	Nameplate

AC 011 E - 0 1
- Card configuration: with card
- Screen configuration: no screen
- Application standard: European standard
- Output power: 11 kW
- AC Charger

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Product	11kW EV Charger
Model	AC011E-01
S/N	xxxxxx
Rated Voltage	3P+N+PE 400Vac
Rated Current	16A
Frequency	50/60Hz
Rated Power	11kW
Working Temp	-30℃~+50℃
Date	xxxxxx
IP Degree	IP65

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1.3   Appearance and Dimensions
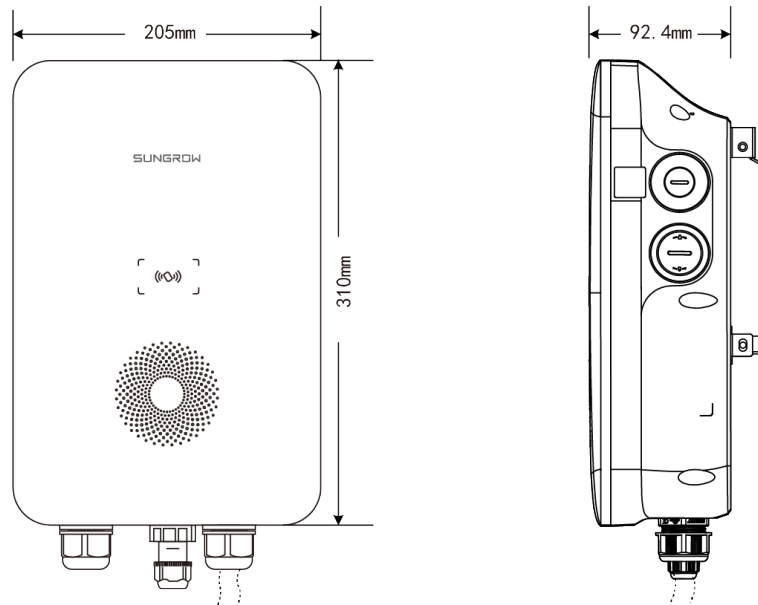
figure 1-1 Appearance and dimensions

1.4   LED Signals

table 1-1 LED Signals

LED Signal	Description
The blue LED blinks slowly (on for 1 s and off for 4 s)	Standby mode
The blue LED blinks (on for 1 s and off for 1 s)	Vehicle charging
The blue LED is glowing	Charging ended
The blue LED blinks quickly (on for 0.5 s and off for 0.5 s)	Vehicle plugged in
The blue LED blinks quickly for five times (on for 0.2 s and off for 0.2 s)	RFID charge card used
The blue LED is on for 1 s and the red LED is on for 1 s	Power-on self-test
The blue indicator blinks quickly	Firmware upgrading

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1.5   Electrical Connection Ports
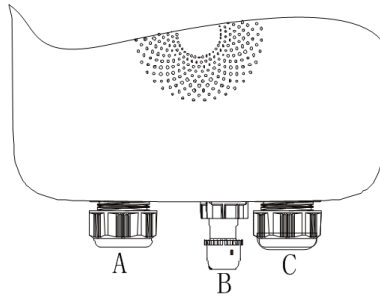
figure 1-2 Port Diagram

table 1-2 Label Explanation

Label	Explanation
A	Charging cable output (Charging cable connection)
B	RS485 external communication
C	AC input (AC connection)

1.6   System Topology

Stand-alone EV Charger
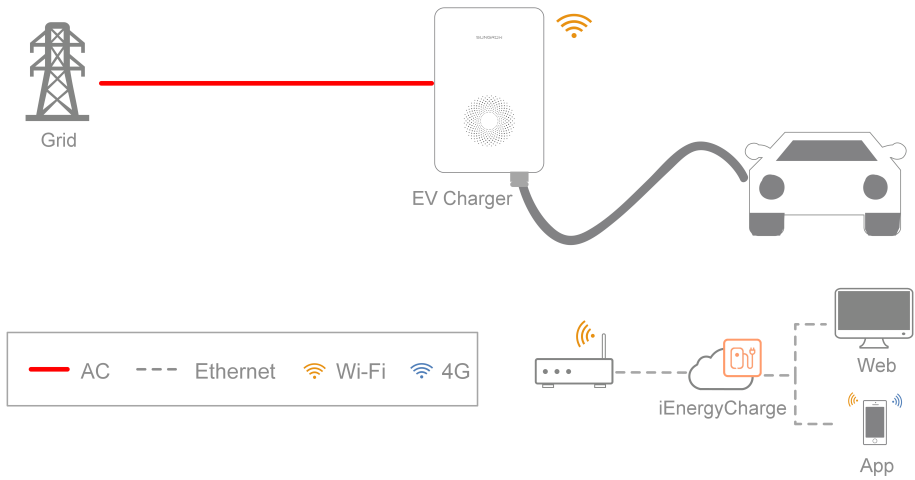
figure 1-3 System topology diagram of EV charger

Solar-Storage-Charging Solution
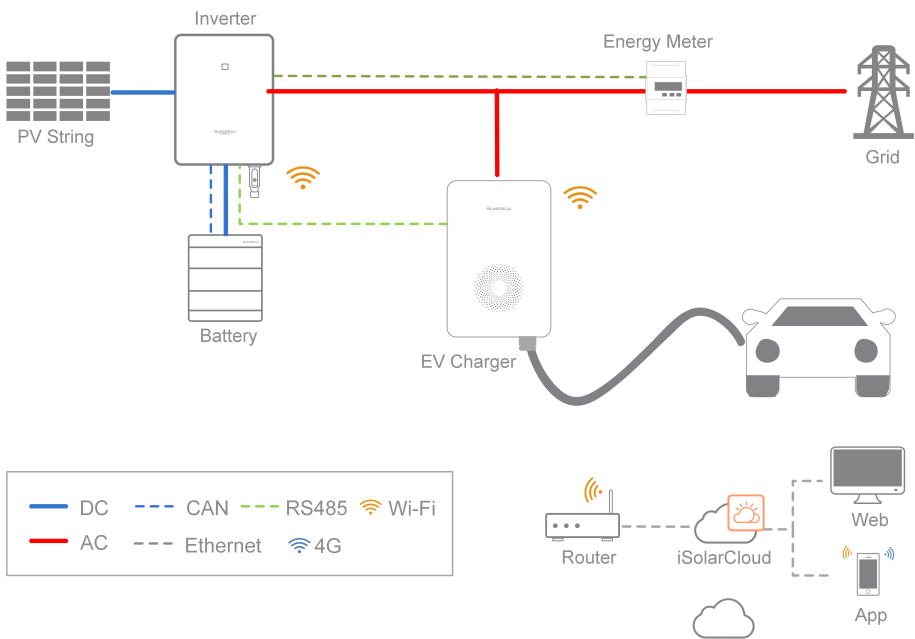
figure 1-4 System topology diagram of the solar-storage-charging solution

ℹ️ For Sungrow's solar-storage-EV charging solution, please refer to user manuals of related inverters.

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2 Installation

> ⚠ **WARNING**
>
> **Respect all local standards and requirements during mechanical installation.**

> ⚠ **CAUTION**
>
> **Any damage or malfunction with the charger caused by negligence or improper use will not be eligible for service and replacement under the warranty.**

2.1 Installation Requirements

Location Requirements

Select an optimal mounting location for safe operation, long service life and expected performance.

- The charger with protection rating IP65 can be installed both indoors and outdoors.

- The charger should be installed at a place where the LED signals can be easily seen, and is convenient for electrical connection, operation, and maintenance.
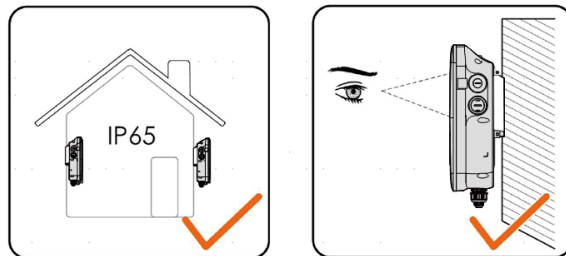
Environment Requirements

- There must be no flammable hazards or ignition risks.

- The mounting location must be inaccessible to children.

- The ambient temperature and relative humidity must meet the following requirements.
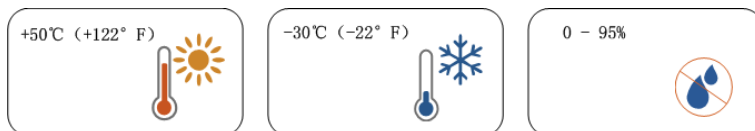
- Avoid exposure to direct sunlight, rainwater and snow.

- The charger should be well-ventilated for good air circulation.

- The mounting location must be away from living area. The charger will emit noises during operation that might be perceived as disturbing.

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Carrier Requirements

The mounting structure where the charger is installed must comply with local/national standards and guidelines.

Ensure that the installation surface is solid enough to bear 4.5 times the weight of the charger and is suitable for the dimensions of the inverter.
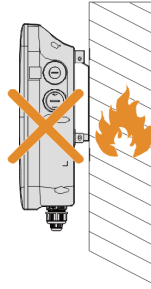
Angle Requirements

- Install the charger vertically.

- Do not install the charger horizontally, tilted or upside down.

- Do not install the charger on a tilted surface.
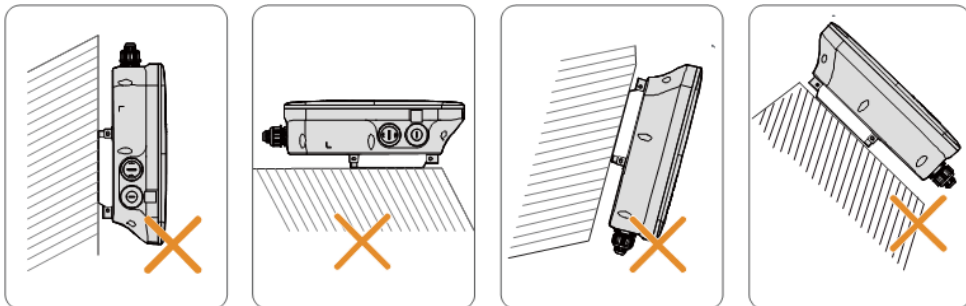
2.2   Unpacking and Inspection

> ℹ️ After receiving the product, check whether the appearance and structural parts of the device are damaged, and check whether the packing list is consistent with the actual ordered product. If there are problems, do not install the device and contact your distributor first. If the problem persists, contact SUNGROW in time.

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A   B   C   D

E   F   G   H

I   J
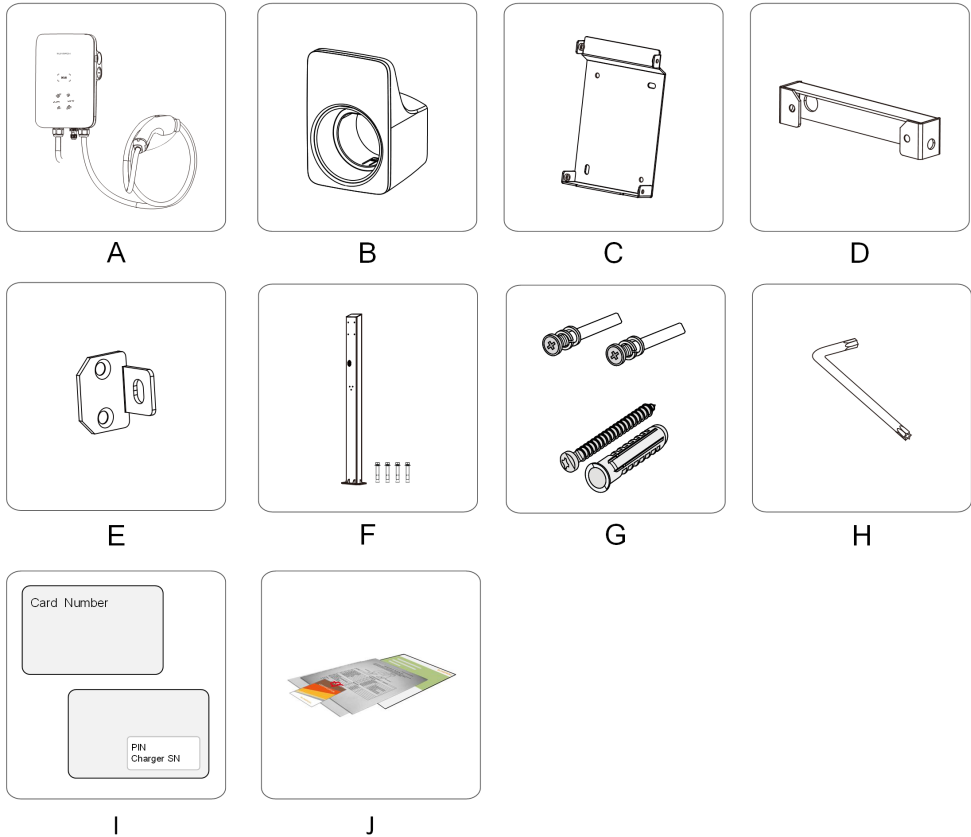
table 2-1 Label Descriptions

Item	Name	Quantity
A	AC-Charger	1
B	Charging cable bracket	1
C	Backplate	1
D	Upper mounting plate	1
E	Lower mounting plate	2
F	Mounting pole (optional)	1
G	Combination screw and expansion screw	4, 7 (wall-mounted); 11, 0 (pole-mounted)
H	L-shaped spanner	1
I	RFID charge card	2
J	Quick Installation Guide, Warranty Card, and Certificate of Conformity	1, 1, 1

> ℹ️ The scope of delivery does not include the optional mounting pole (F), this item must be ordered separately.

2.3 Installation Tools

| A | B | C | D |
| E | F | G | H |
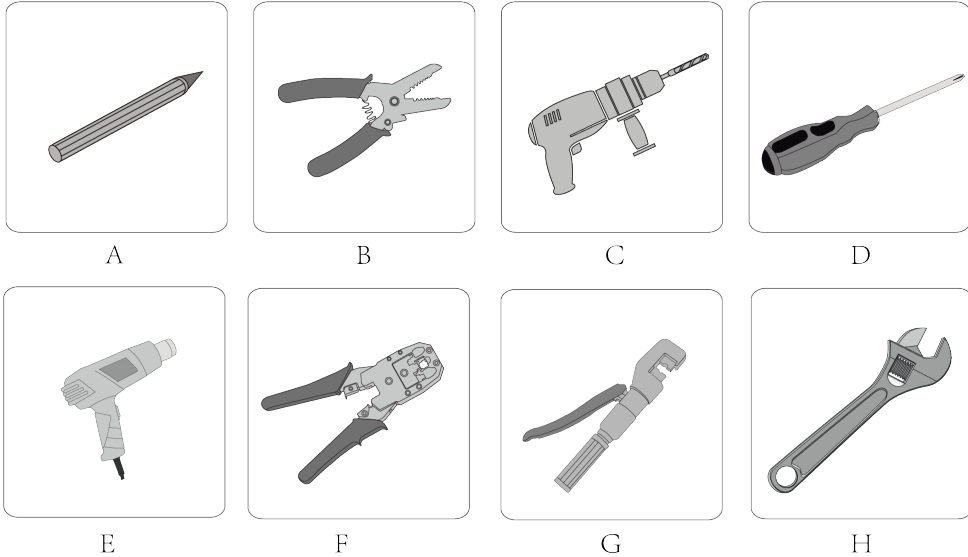
table 2-2 Label Descriptions

Item	Name	Specification
A	Marker	-
B	Wire stripper	-
C	Hammer drill	Ø6, Ø12
D	Philips screwdriver	M3, M4
E	Heat gun	-
F	RJ45 crimping tool	-
G	Hydraulic plier	2.5-6 mm²
H	Adjustable spanner	-

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2.4   Electrical Connection

2.4.1   Circuit Diagram
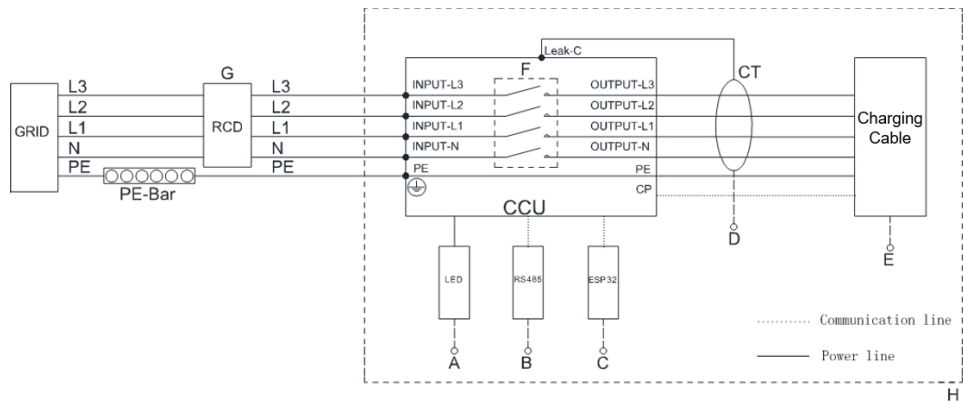
figure 2-1 Circuit diagram

table 2-3 Label Descriptions

Label	Description
A	The LED lights that indicates the status of the charger
B	RS485, reserved for external communication
C	ESP32 module for Wi-Fi communication
D	CT for leakage current detection
E	Charging cable output (connected to the vehicle)
F	CCU internal relay
G	Type A residual-current device (Parameter: 25 A/400 V with a rated residual current of 30 mA; input cable cross-section: 2.5 mm^2)
H	The charger

NOTICE

The charger already integrates a DC residual-current device (RCD) with a rated residual current of 6 mA. However, the charger also requires a type A RCD of 30 mA to operate. Each charger in the system must be individually connected to the utility grid through an RCD and a miniature circuit breaker.

2.4.2   AC Cable Connection

AC Cable Requirement

Cable cross-section: 5 × 2.5 mm^2

step 1   Place the charger face-down on a clean and flat surface.

step 2   Loosen the screws that secure the back cover plate. (M3 screws, torque: 0.5 ± 0.1 N·m)
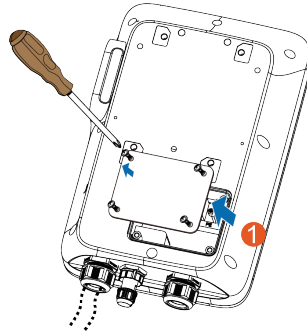
step 3   Plug the cable into the port of the power supply which is at the leftmost.
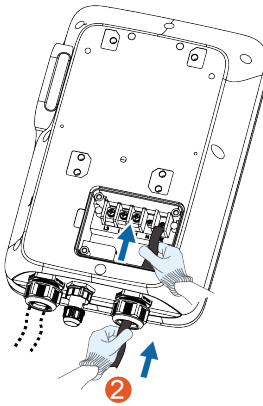
step 4   Adjust the cable to a suitable length, and strip off the insulation of the cable to prepare for cable connection terminals.

1   Strip off the insulation from the end of each wire.

2   Insert the copper core of the stripped end of the wire into the copper lug.

3   Tighten the copper lug using a hydraulic plier.

4   Select a heat-shrink tubing that matches the diameter of the wire.

The length of the tubing should be about 2 cm longer than the length of the copper lug's wire tube.

5   Place the heat-shrink tubing on the copper lug until it completely covers the copper lug's wire hole.

6   Activate heat-shrink tubing using a heat gun.

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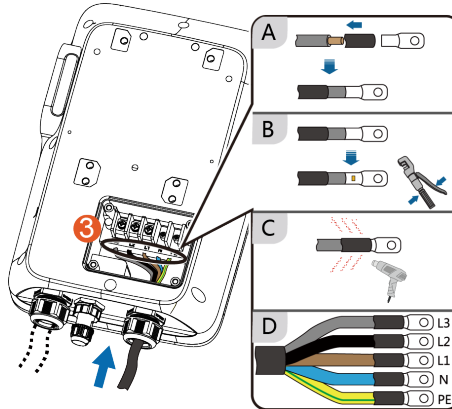
Color	Terminal
Brown	L1
Black	L2
Gray	L3
Blue	N
Yellow-green	PE

step 5   Connect each crimped terminal (OT2.5-5) and tighten them using a screwdriver. (Torque: 3 ± 0.2 N·m)
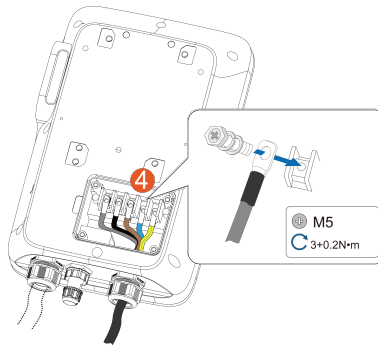
step 6   Put the back cover plate back in place and tighten the screws to secure it.
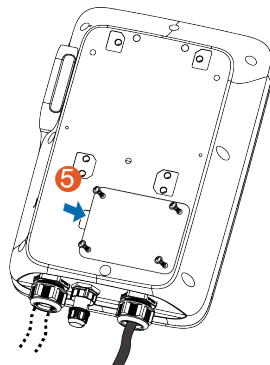
- - End

2.4.3 Communication Connection

ℹ️ The communication connection is only needed to connect the charger to an inverter, battery or Wi-Fi connection that is possible for stand-alone usage with iEnergyCharge.
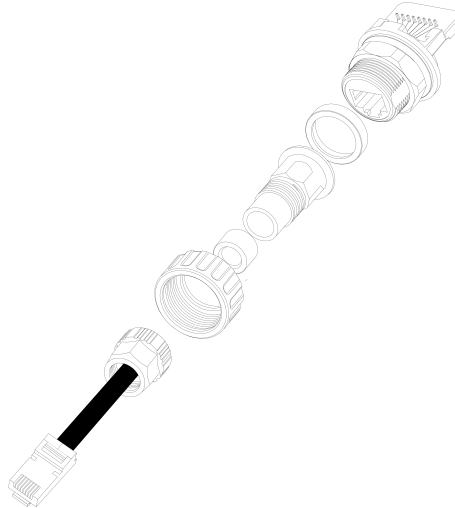
figure 2-2 RJ45 components

step 1 Crimp both ends of the Ethernet cable using a crimping tool.

ℹ️ Ensure that the blue wire and the blue-white wire is correctly crimped.

The blue wire (PIN 4) connects to 485B, and the blue-white wire (PIN 5) connects to 485A.
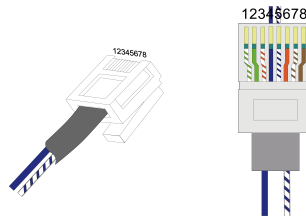
step 2 Insert the RJ45 connector to the RJ45 jack.

step 3 Install seals for the Ethernet cable in sequence.

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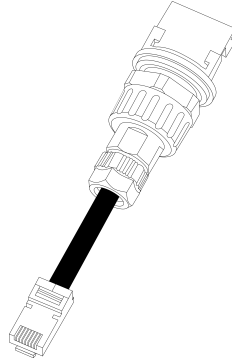
step 4   Ensure that the cable is secured.

- - End

2.5   Wall-Mounted Installation

Install the charger on the wall using the provided wall-mounting bracket and expansion screw sets.

> ℹ   The load-bearing capacity of the installation carrier must be at least 4.5 times the weight of the charger.

step 1   Install the backplate.

   1   Hold the backplate in the desired position on the wall and mark the positions of the drill holes.

> **NOTICE**
>
> **Before drilling the hole for the backplate, locate and avoid water pipes and electrical wires in the wall.**

   2   Drill holes at the marked positions using a hammer drill. (Diameter: 6 mm; depth: 45 mm)

   3   Insert the dowel into the holes.

   4   Place the backplate on the wall and tighten the screws using a screwdriver to secure the backplate.
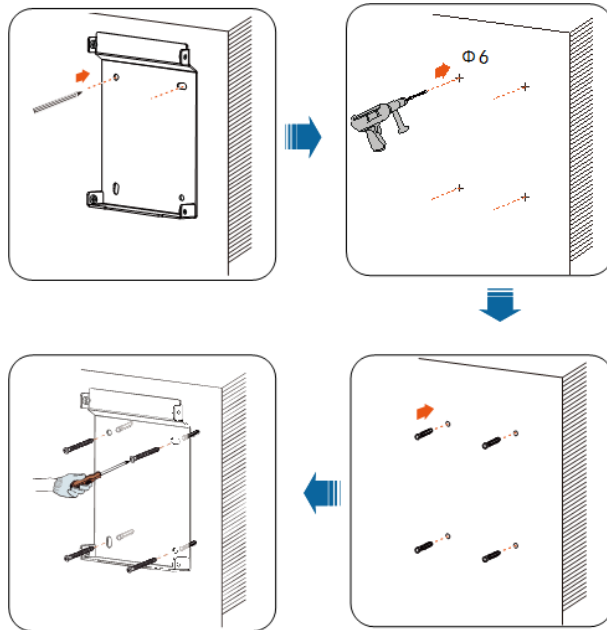
step 2   Install the charging cable bracket.

1   Hold the charging cable bracket in the desired position on the wall and mark the positions of the drill holes.

2   Drill holes at the marked positions using a hammer drill.

3   Insert the dowel into the hole.

4   Place the charging cable bracket on the wall, and tighten the screws to secure the charging cable bracket using a screwdriver.

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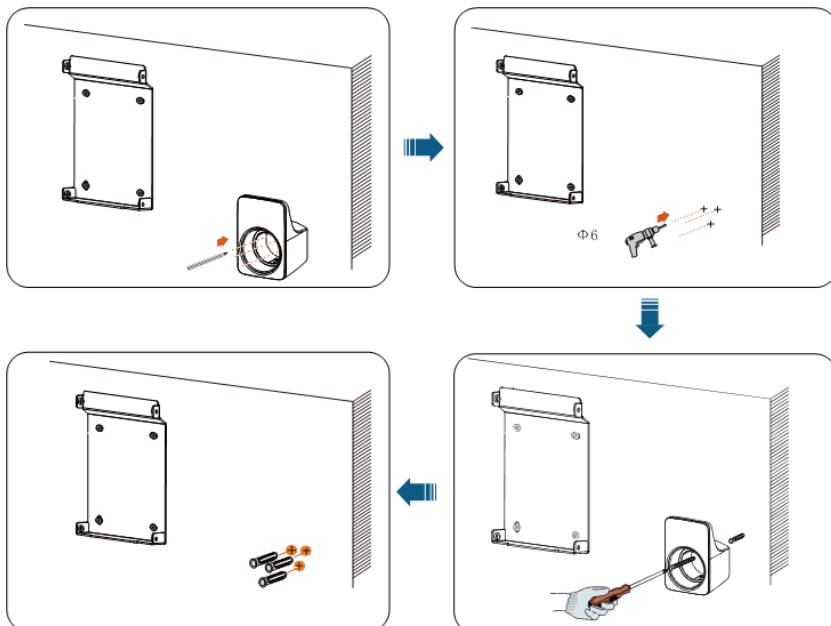
> ℹ️ It is recommended that the charging cable bracket be positioned at the lower right side of the charger, about 20 cm away from the charger. The distance shall be adjusted according to the actual situation.

step 3   Mount the charger.

1   Secure the upper mounting plate and the lower mounting plate on the back of the charger using a screwdriver. (Torque: 1.2 ± 0.1 N·m)
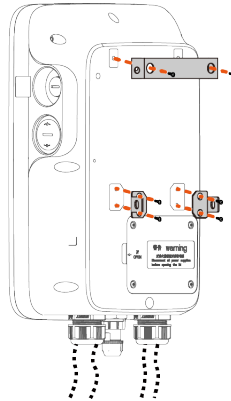
2   Hang the charger onto the backplate.
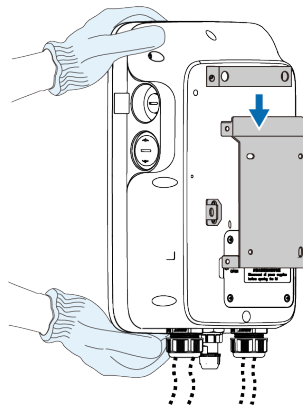
3   Secure the upper and lower mounting plates to the backplate with screws. (Torque: 1.2 ± 0.1 N·m).
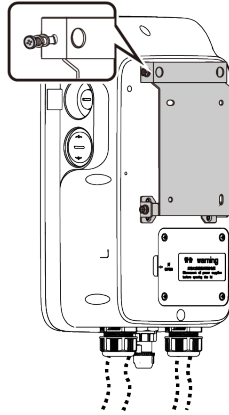
- - End
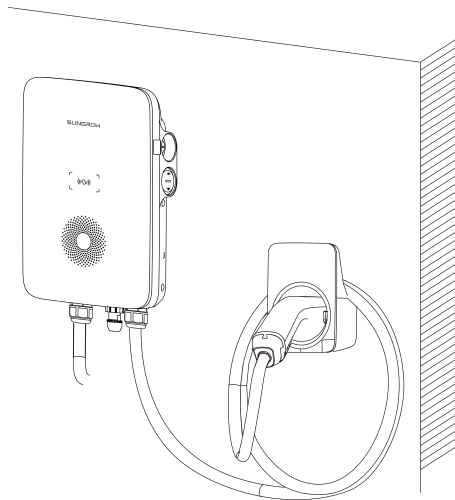
figure 2-3 Wall-mounted charger

2.6   Pole-Mounted Installation

> ℹ️ It is recommended to install the pole on a solid support surface (such as concrete or tarmac). If conditions do not permit, please install the foundation first, and then install the mounting pole.

2.6.1 Foundation Installation

The base should be 100 mm above the ground, and the exterior dimensions of the front, back, left, and right side columns should be greater than 100 mm. Ensure that there are openings for cables.

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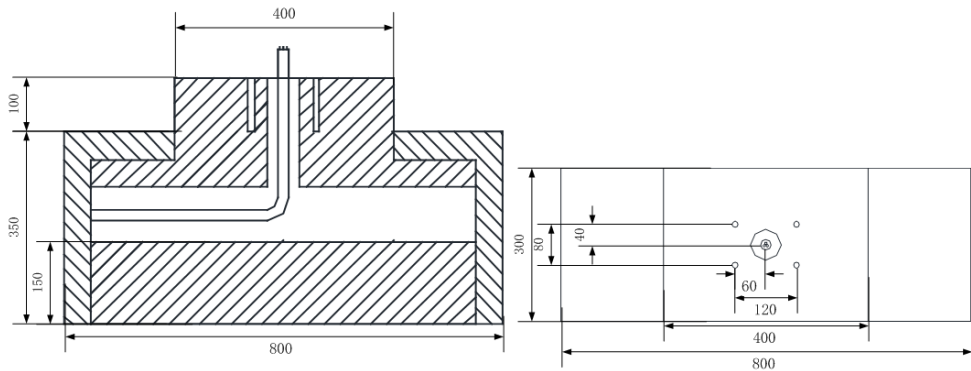
figure 2-4 Front view and top view (unit: mm)

2.6.2 Pole Installation

step 1 Connect the AC cable.

    1   Remove the cover plate on the back of the pole using a cross screwdriver.

    2   Lead the AC cable through the bottom into the pole.

    3   Grab the AC cable when it reaches the cover plate and take out the end of the cable from the AC cable outlet.

    4   Pull the cable out to an appropriate length and close the cover plate.
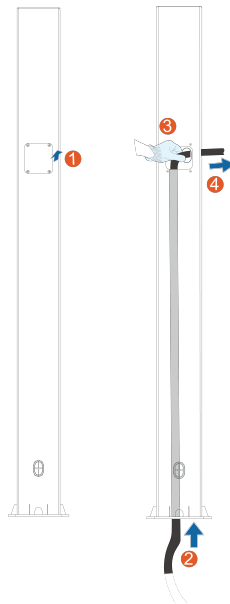
step 2 Mount the charger.

    1   Place the pole on a solid and flat surface, and mark the positions of the drill holes.

    2   Drill holes at the marked positions using a hammer drill. (Diameter: 12 mm; depth: 85 mm)

3   Insert the dowel into the holes.

4   Tighten the expansion screw using a screwdriver.
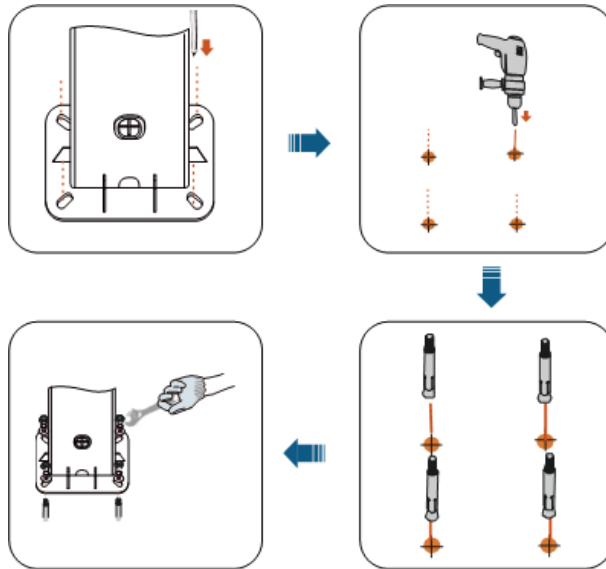
5   Check whether the pole is firmly installed.

step 3   Install the backplate and the charging cable bracket.

1   Align the holes in the backplate with the holes drilled in the pole, and secure the back-plate to the pole with screws.

2   Align the holes in the bracket with the holes drilled in the pole, and secure the bracket to the pole with screws.

3   Check whether the backplate and the charging cable bracket are firmly installed.

step 4   Install the upper mounting plate and lower mounting plate.

1   Place the charger face-down on a clean and flat surface, and secure the upper and low-er mounting plates to the pole using a screwdriver.

2   Ensure that the upper mounting plate and the lower mounting plate are firmly installed.

3   Hang the charger onto the backplate.

4   Secure the upper and lower mounting plates to the backplate.

5   Check whether the charger is correctly installed on the pole.

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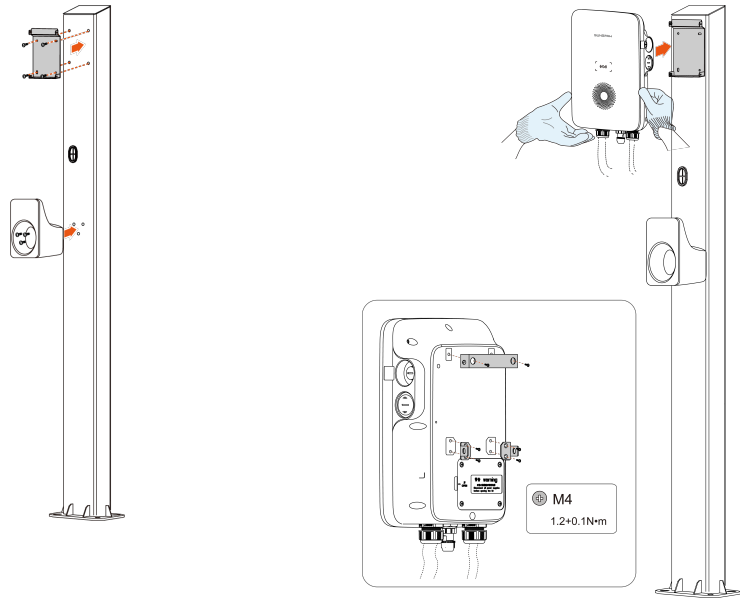
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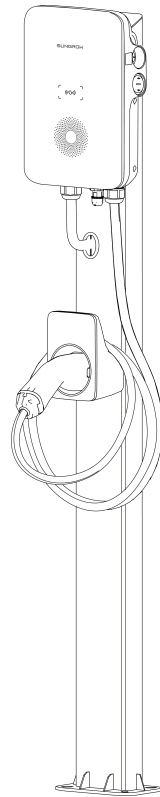
figure 2-5 Pole-mounted charger

3 Inspection before Commissioning

table 3-1 Requirements before commissioning

Item	Description
Location	The charger is correctly mounted at a place that is convenient for operation and maintenance.
Charger	The charger is firmly and securely installed.
Cable	Cables are correctly and firmly connected, and are adequately protected from damage.
Current leakage protection	The AC input's current leakage protection switch is reasonable.
Clearance	The charger has sufficient cooling space and there is no other stuff or components are left on the top of the charger.

step 1 Ensure that all requirements are met before commissioning.

step 2 Turn on the current leakage protection switch of the AC input.

step 3 Power on the charger.

The blue LED blinks slowly which indicates the charger is in standby mode.

- - End

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4 Troubleshooting

table 4-1 Fault Resolution

Problem	Possible Cause	Solution
Overvoltage	1 The grid voltage at the input end of the charger exceeds 276 V. 2 The grid voltage is still above 265 V after overvoltage.	Usually, the charger will be reconnected to the grid once the grid returns to normal. If the problem occurs repeatedly: 1 Measure the actual grid voltage, and contact local power company for solutions if the grid voltage is above 265 V. 2 Contact Sungrow Customer Service if the problem persists.
Undervoltage	1 The grid voltage at the input end of the charger is below 184 V. 2 The grid voltage is still below 196 V after undervoltage.	Usually, the charger will be reconnected to the grid once the grid returns to normal. If the problem occurs repeatedly: 1 Measure the actual grid voltage, and contact the local power company for solutions if the grid voltage is below 196 V. 2 Check if the AC cables are firmly connected. 3 Contact Sungrow Customer Service if the problem persists.

Problem		Possible Cause	Solution
Overfrequency		1 The mains AC frequency exceeds 64 Hz. 2 The grid frequency is still above 61 Hz after overfrequency.	Usually, the charger will be re-connected to the grid once the grid returns to normal. If the problem occurs repeatedly: 1 Measure the actual grid frequency, and contact the local power company for solutions if the grid frequency is above 61 Hz. 2 Contact Sungrow Customer Service if the problem persists.
Underfrequency		1 The mains AC frequency is below 47 Hz. 2 The grid frequency is still below 49 Hz after underfrequency.	Usually, the charger will be re-connected to the grid once the grid returns to normal. If the problem occurs repeatedly: 1 Measure the actual grid frequency, and contact the local power company for solutions if the grid frequency is below 49 Hz. 2 Contact Sungrow Customer Service if the problem persists.
EV	Leakage current	The DC leakage current is above 6 mA	1 Stop charging and pull out the charging connector. When the charger returns to normal, try charge again. If the problem occurs repeatedly, contact the EV manufacturer's customer service. 2 Stop charging and pull out the charging connector. Contact Sungrow Customer Service if the problem persists.
	Overcurrent	Output current is above 17.6 A	
Charger	Stuck relay	The relay is stuck and cannot be disconnected.	Restart the charger and try again. If the problem occurs repeatedly, contact Sungrow Customer Service.

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Problem		Possible Cause	Solution
	Leakage current detection circuit failure	1 The CT terminal has bad connection or the CT is malfunctioning. 2 The RCD circuit is abnormal.	
	Relay overtemperature	The temperature of the main relay is too high. It might be a hardware problem.	
	CP failure	Abnormal CP loop circuit on the main board	
Wiring	Input terminal overtemperature	1 The input terminal is loosely connected which causes bad connection. 2 The cable's current-carrying capacity does not meet the requirements.	1 Ensure that the AC cable is tightly connected, that the cable used meets requirements, and L and N wires are correctly connected. 2 Contact Sungrow Customer Service if the problem persists.
	Reverse polarity	L and N wires are connected reversely.	

table 4-2 LED Signals that indicates abnormal conditions

Charger Status	LED Signals
Reverse polarity	The red LED is glowing
Leakage current	The red LED blinks for 4 times (on for 0.5 s, off for 0.5 s)
CP failure	The red LED blinks for 5 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Overcurrent	The red LED blinks for 6 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Stuck replay	The red LED blinks for 7 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Abnormal leakage current loop	The red LED blinks for 8 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Input terminal overtemperature	The red LED blinks for 9 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Relay overtemperature	The red LED blinks for 10 times (on for 0.5 s, off for 0.5 s) and then off for 3 s

Charger Status	LED Signals
Undervoltage	The red LED blinks for 11 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Overvoltage	The red LED blinks for 12 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Overfrequency	The red LED blinks for 13 times (on for 0.5 s, off for 0.5 s) and then off for 3 s
Underfrequency	The red LED blinks for 14 times (on for 0.5 s, off for 0.5 s) and then off for 3 s

> ⓘ   If the above faults cannot be removed, please contact Sungrow.

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5 Commissioning via Web UI

The charger has a built-in access point for commissioning and connection to other devices.
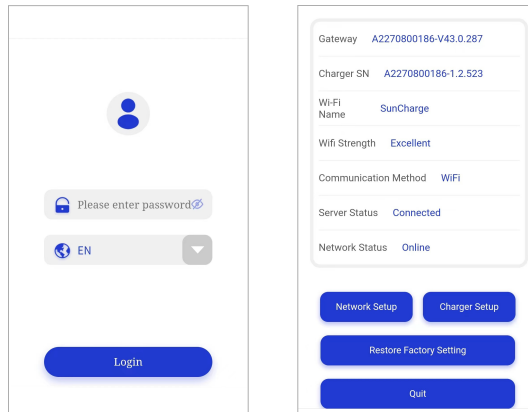
figure 5-1 Web UI

> ℹ️ The charger's Wi-Fi network will only broadcast for 15 minutes. Once you have connected your mobile device or laptop to the charger, be sure to perform the task within 15 minutes. Otherwise, you need to restart the charger and join the network again.

5.1 Establish a Wireless Connection

Once the charger is powered on, you need to establish a wireless connection between the charger and your mobile device or laptop.
Before you start, be sure that the charger is powered on.

step 1 On your mobile device or laptop, turn on the WLAN option.

> ℹ️ It's recommended to turn on airplane mode to suspend cellular communication until the connection is established.

step 2 In the WLAN settings, select the network with the name that matches the serial number of the charger.

step 3 Enter the standard password `admin123` to connect to the charger.

step 4 Open your browser and enter the IP address `192.168.4.1` to navigate to the Login page.

step 5 Enter the device-specific password and click **Login**.

> ℹ️ You can find the 4-character password on the sticker on the RFID charge card.

The Home page opens.

step 6   On the Home page, select **Network Settings**.

step 7   Click 📶**Wi-Fi Name** to select your router Wi-Fi network from the list, and enter the password of the router network below.

step 8   Click **Confirm** to apply the changes.

The web UI will navigate to the Login page.

step 9   Enter the password and click **Login**.

The server status changes to "Connected" to confirm the connection.

- - End

5.2   Configure Network

Before you start, be sure that your mobile device or laptop has been connected to the charger.

step 1   Log in to the web UI.

step 2   On the Home page, select **Network Settings**.

step 3   Modify network settings as needed.

Option	Description
📶Wi-Fi Name	Select a Wi-Fi network from the list.
Server Address	Enter the server address provided by the operator. The serial number will be captured automatically.

step 4   Click **Confirm** to apply the changes.

The web UI will navigate to the Login page.

- - End

5.3   Manage the Charger

5.3.1   Switch Charging Modes

Before you start, be sure that your mobile device or laptop has connected to the charger.

step 1   Log in to the web UI.

step 2   On the Home page, select **Charger Settings**.

step 3   On the Charger Settings page, select **Switch Charging Modes**.

step 4   In the pop-up dialog box, select **Network**. You can also select other charging modes as needed.

Mode	Description
Network	Start the charging session on iEnergyCharge.
EMS	Start the charging session on iSolarCloud.
Plug&Play	Start the charging session once the charging connector is plugged into the vehicle.

- - End

5.3.2 Upgrade the Firmware

Before you start, be sure that your mobile device or laptop has connected to the charger.

> ℹ️ Please use Safari or Chrome browsers only because other browsers might cause an unexpected error when upgrading.

> ℹ️ Please contact customer support for available firmware packages if needed.

step 1   Log in to the web UI.

step 2   On the Home page, select **Charger Settings**.

step 3   On the Charger Settings page, select **Upgrade Firmware**.

step 4   Click **Browse...** and select the firmware package.

> ℹ️ Currently, only .enfs format is supported.

step 5   Click **Upgrade** to upgrade the charger.

The process might take 3 to 5 minutes.

- - End

5.4   Restore the Charger to Factory Settings

Before you start, be sure that your mobile device or laptop has connected to the charger.

step 1   Log in to the web UI.

step 2   On the Home page, select **Restore Factory Settings**.

step 3   Follow the on-screen instructions to restore the charger to factory settings.

- - End

6 Commissioning via App

iEnergyCharge connects charge point operators and EV drivers and aims to provide a seamless and integrated charging experience.
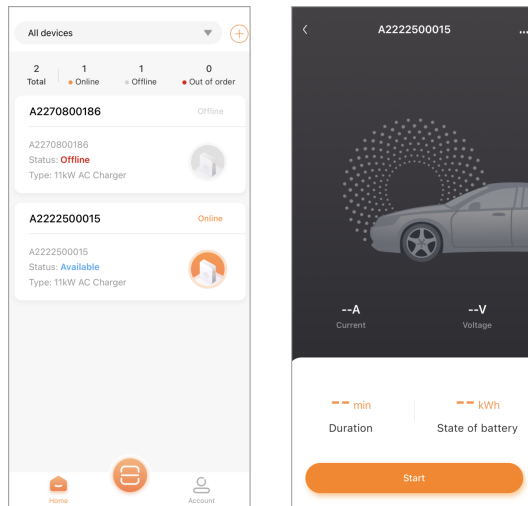
figure 6-1 iEnergyCharge

> ℹ️ Depending on the version of iEnergyCharge you're using, the user interface might be slightly different.

6.1 Access iEnergyCharge

iEnergyCharge connects charge point operators and EV drivers and aims to provide a seamless and integrated charging experience.

6.1.1 Download and Install

Before you start, be sure that the operating system of your phone has met the requirement:

• Android 6.0 and above

• iOS 11 and above

Method 1

Search for "iEnergyCharge" in the following application stores, and follow the on-screen instructions to install.

• App Store

• Google Play Store

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Method 2

Scan the QR code to download and install iEnergyCharge.

Android   iOS

6.1.2 Sign up and Log in

Sign up to use iEnergyCharge.

Sign up

step 1   Open iEnergyCharge and click **Sign Up** on the Login page.

step 2   Enter your email, and follow the on-screen instructions to sign up for an account.

Log in

step 3   Open iEnergyCharge, and enter your email and password.

step 4   Click **Login**.

> ℹ When you logged in, you can update your email and password on the **Account**→-**Settings** page.

- - End

6.2 Common Tasks

6.2.1 Establish a Wireless Connection

Refer to "5 Commissioning via Web UI".

6.2.2 Connect the Charger to Your Account

You can scan the QR code or manually enter Charger SN to connect the charger to your iEnergyCharge account.

Before you start, be sure that:

• Your phone has connected to the Internet.

• You have configured the charger.

• The charger is online.

step 1   Open iEnergyCharge and click ⊜ to navigate to the **Scan** page.

step 2   Scan the QR code on the charger.

step 3   If scanning does not work, click **Enter SN** to manually add the charger.

step 4   In the pop-up dialog box, click **Confirm** to navigate to the **Add a Charger** page.

step 5   Click **Confirm**.

step 6   **Optional:** If you need to delete the charger, select ▪▪▪→**Delete Device**.

   - - End

6.2.3   Scan the QR Code to Charge

Before you start, be sure that:

- Your phone has connected to the Internet.

- The charger has been connected to your account.

- You have plugged in the charging connector.

step 1   Open iEnergyCharge, click ⊜ or select the charger on the Home page to check details.

   You can see the rated current and rated voltage of this charger.

step 2   Click **Start** to start charging.

   You can see the real-time current and voltage of this charger.

step 3   When the charging finishes, you can **Confirm** the time and energy used.

> ℹ During charging, you can track charging progress or remotely stop charging on iEnergyCharge.

step 4   **Optional:** Click ▪▪▪→**Device Name** to rename this charger for easier recognition.

   - - End

6.2.4   Add RFID Charge Cards

Once you add an RFID charge card, you can directly start charging by holding the RFID charge card against the card reader on the charger.
Before you start, be sure that:

- Your phone has connected to the Internet.

- You know the ID number of the RFID charge card.

> ℹ You can add multiple RFID charge cards.

step 1   Open iEnergyCharge and navigate to the **Account** page.

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step 2   Select **Charge Cards→Add Card**.

step 3   Enter Card Name and Card Number.

step 4   Click **Save**.

      - - End

6.2.5 Enable Offline Charging

When offline charging is enabled, you can start charging via RFID charge card even if the
charger is offline.
Before you start, be sure that:

- Your phone is connected to the Internet.

- You have added RFID charge cards.

step 1   Open iEnergyCharge and select the charger to be used for offline charging.

step 2   Click ▪▪▪→**Offline Charging** to navigate to the Offline Charging page.

step 3   Click ⬤ on the top left and click **Confirm** in the pop-up dialog box.

step 4   Select one or multiple RFID charge cards.

> ℹ️ If you have not added an RFID charge card, or you need to add a new RFID
> charge card, click **Add Card** on the top right and follow the on-screen instructions
> to complete the process.

> ℹ️ If you switch off offline charging, the respective RFID charge cards must be asso-
> ciated with the charger once again for recognition.

      - - End

6.2.6 Upgrade the Firmware of the Charger

You can manually upgrade the firmware of the charger.
Before you start, be sure that:

- Your phone and the charger have connected to the Internet.

- The charger to be upgraded is available.

- There is a new version of the firmware.

step 1   Open iEnergyCharge and select the charger to be upgraded.

step 2   Select ▪▪▪→**Firmware Upgrade** to navigate to the Firmware Upgrade page.

step 3   Click **Upgrade** to download the firmware.

The charger restarts when the firmware is upgraded.

      - - End

6.2.7 Update App

iEnergyCharge might force an upgrade to improve user experience. Other than that, you can manually update it when there is a new version.

Before you start, be sure that:

- Your phone is connected to the Internet.

- iEnergyCharge has a new version.

step 1   Open iEnergyCharge and navigate to the **Account** page.

step 2   Select **Settings→Version Info** to check the available version.

step 3   Click **Update Now** and follow the on-screen instructions to complete the process.

    - - End

6.3   Common Questions

6.3.1 Provide Feedback

If you run into any problems, feel free to provide your feedback to operators.

step 1   Open iEnergyCharge and navigate to the **Account** page.

step 2   Select **Settings→Help Center** to navigate to the Help Center page.

step 3   Describe the problem in the text box and click **Submit**.

> ℹ️ It is recommended to describe the problem you ran into in detail so operators can quickly troubleshoot and follow up.

    - - End

6.3.2 Forgotten Password

If you have forgotten the password, you can reset it on the login page.

step 1   Open iEnergyCharge and click **Forgot Password**.

step 2   Enter your registered email and follow the on-screen instructions to reset the password.

    - - End

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7 Appendix

7.1 Technical Data

table 7-1 Technical Data

Specification	AC011E-01
AC Input and Output	
Max. charge power	11 kW
Nominal Voltage	400 V
Nominal grid frequency	50/60 Hz
Max. current	16 A three-phase
Charge connector	Plug Type 2
Cable cross-section	5*2.5 mm^2
Cable Length	7 m
Protection Devices	6mA DC
Integrated DC fault detection	
Over/Under voltage protection	Yes
Over load protection	Yes
Over temperature protection	Yes
Surge protection	II
Overvoltage category	III (grid)/II (car)
General Data	
Dimensions (W*H*D)	205*310*92 mm
Weight	3.8 kg
Mounting method	Wall-Mounting/Pole-Mounting (optional)
Degree of protection	IP65
Operating ambient temperature range	-30 to 50 °C
Allowable relative humidity range (non-condensing)	5 % to 95 %
Cooling method	Natural convection
Max. operating altitude	2000 m

Specification	AC011E-01
Grid type	TN/TT
Display	LED indicator
Monitoring	iSolarCloud App (with Sungrow inverter), iEnergy-Charge App
Communication	RS485 / WLAN
Charging protocol	OCPP 1.6
Power consumption for standby	< 5 W
Start Mode	RFID card/APP/EMS/Plug&Play
Standard compliance	EN/IEC 61851-1:2019; IEC 61851-21-2:2018
Warranty	2.5 years (standard), 5 years (optional)

7.2 Quality Assurance

In the event of a defect during the warranty period, SUNGROW will provide free of charge service or replace the product with a new one.

Evidence

During the warranty period, the customer shall provide the product purchase invoice and date. In addition, the trademark on the product shall be undamaged and legible. Otherwise, SUNGROW has the right to refuse to honor the quality guarantee.

Conditions

- After replacement, unqualified products shall be processed by SUNGROW.

- The customer shall give SUNGROW a reasonable period to repair the faulty device.

Exclusion of Liability

In the following circumstances, SUNGROW has the right to refuse to honor the quality guarantee:

- The free warranty period for the whole machine/components has expired.

- The device is damaged during transport.

- The device is incorrectly installed, refitted, or used.

- The device operates in harsh conditions beyond those described in this manual.

- The fault or damage is caused by installation, repairs, modification, or disassembly performed by a service provider or personnel, not from SUNGROW.

- The fault or damage is caused by the use of non-standard or non-SUNGROW components or software.

- The installation and use range are beyond the stipulations of relevant international standards.

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- The damage is caused by unexpected natural factors.

For faulty products in any of the above cases, if the customer requests maintenance, paid maintenance service may be provided based on the judgment of SUNGROW.

7.3   EU Declaration of Conformity

within the scope of the EU directives:
Radio Equipment Directive (RED) 2014/53/EU

7.4   Contact Information

In case of questions about this product, please contact us.
We need the following information to provide you with the best assistance:

- Model of the device

- Serial number of the device

- Fault code/name

- Brief description of the problem

For detailed contact information, please visit **https://en.sungrowpower.com/contactUS**.

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Specifications are subject to changes without advance notice.