

6.1 Decide Application Scenario

The EV-Charger offers different application scenarios and the communication connection is different under different application scenario. Please decide the application scenarios before installation.

If the user wants to use more than one EV-Charger in one system, please refer to "[14.2 Parallel Function](#)".

NOTICE!

- When powered on after completing the installation, the system will automatically identify the grid data source of the grid side (Priority: Inverter > Meter > CT).

Solar Scene

In Solar scene, the EV-Charger can work with the inverter system to make more efficient use of the photovoltaic energy.

- Communication with Inverter

The EV-Charger can work with the inverter system which supports communication with it to form an intelligent photovoltaic, storage and EV charging energy system. Through communicating with the inverter, the EV-Charger can obtain the current information of the grid and PV and realize the smart control of different charging modes.

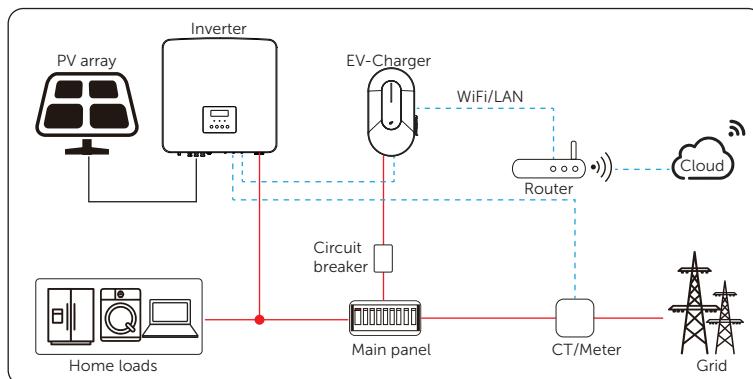


Figure 6-3 Solar scene and communication with inverter

NOTICE!

- If the system has zero injection requirement, the EV-Charger must communicate with the inverter.

- Communication with CT/Meter

The EV-Charger can work with the inverter system which does not support communication with it to form an intelligent photovoltaic, storage and EV charging energy system. Through communicating with CT or meter, the EV-Charger can obtain the current information and realize the smart control of different charging modes. However, if the inverter has zero injection requirement, Green or Eco charging mode of the EV-Charger may not work normally.

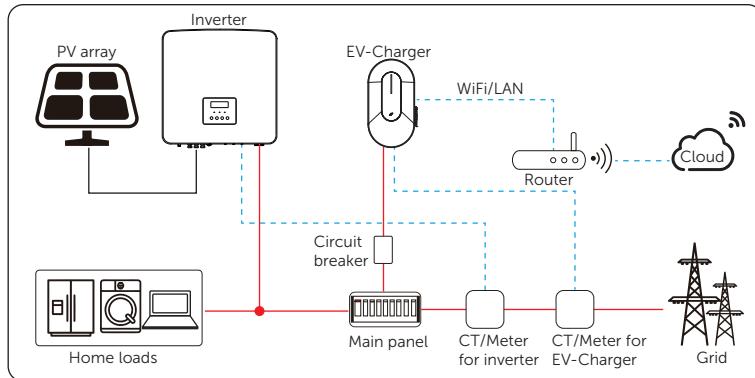


Figure 6-4 Solar scene and communication with CT/meter

Standard Scene

The EV-Charger is to be operated only as a standard charger stand alone in this scene. Through communicating with CT or meter, the EV-Charger can realize the smart control of the charging process.

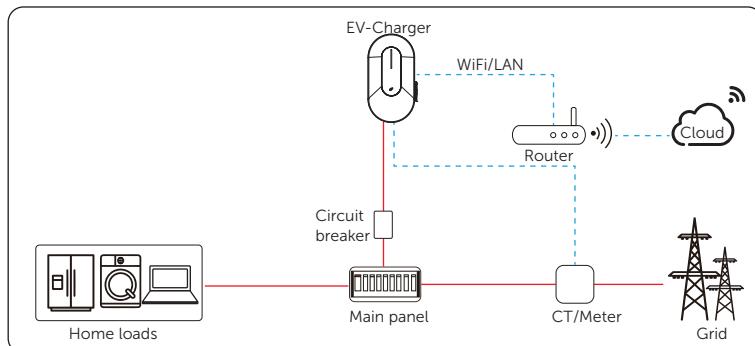


Figure 6-5 Standard scene

OCPP Scene

The EV-Charger can be connected with the OCPP server and controlled by the OCPP server.

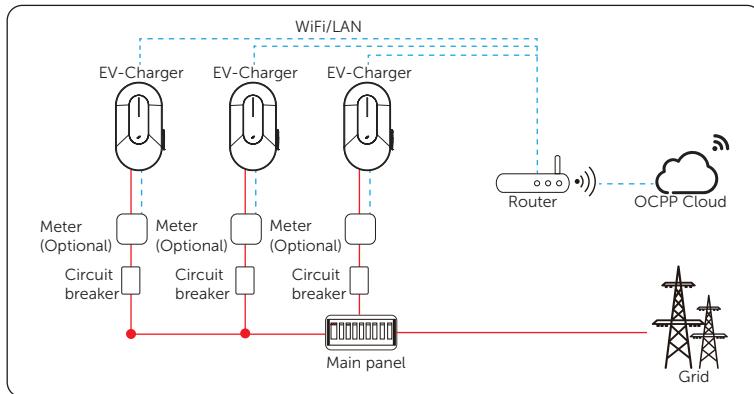


Figure 6-6 OCPP scene

6.2 Installation and Wiring Steps

⚠️ WARNING!

- Disconnect the AC power supply before electrical connection. Do not work with the power on, or electric shock may occur.
- Only qualified personnel are allowed to perform the electrical connection following local laws and regulations.
- Strictly follow the instructions of this manual or other related documentation for electrical connection. Damages caused by incorrect wiring are not covered by the warranty.
- Use insulated tools and wear personal protective equipment throughout the electrical connection process.

NOTICE!

- The installation and wiring steps for the series EV-Charger may vary according to different models. 11.5 kW models are hard-wired installation version. 7.6 kW and 9.6 kW models are NEMA installation version, but are allowed to do hard-wired installation with corresponding accessories purchased from SolaX.
- The descriptions and figures in the section will mainly take hard-wired installation version as examples but supplements about the NEMA installation version will be provided when necessary.

Step 1: Use the base plate and the cable hook as a template to mark the position of the holes on the wall.

- **Hard-wired installation version**

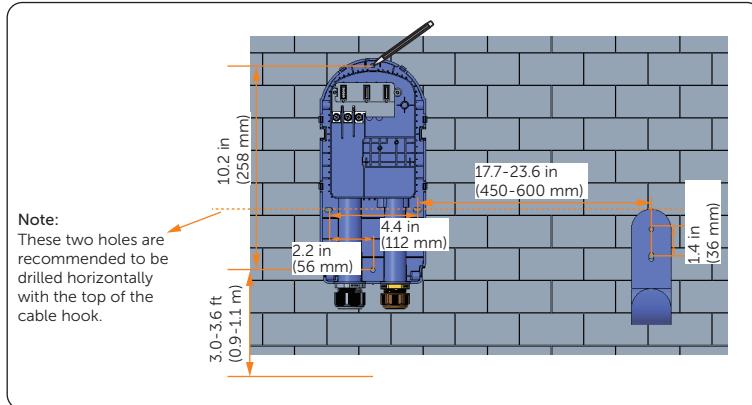


Figure 6-7 Mark the holes - hardwired version

- **NEMA installation version**

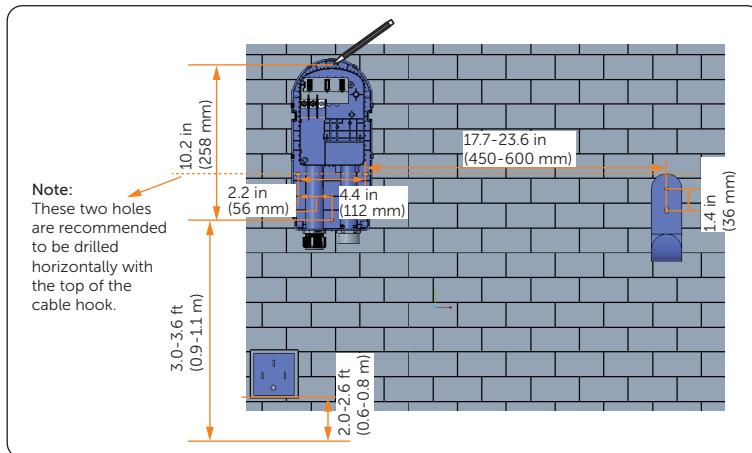


Figure 6-8 Mark the holes - NEMA version

For the NEMA installation version, please consider the location of the NEMA outlet, please refer to "[4.4 NEMA Outlet](#)" for details.

Step 2: Set the base plate and the cable hook aside and drill holes with Ø8 mm drill bit, make sure the holes are deep enough for the installation [Depth: at least 1.8 in (45 mm)].

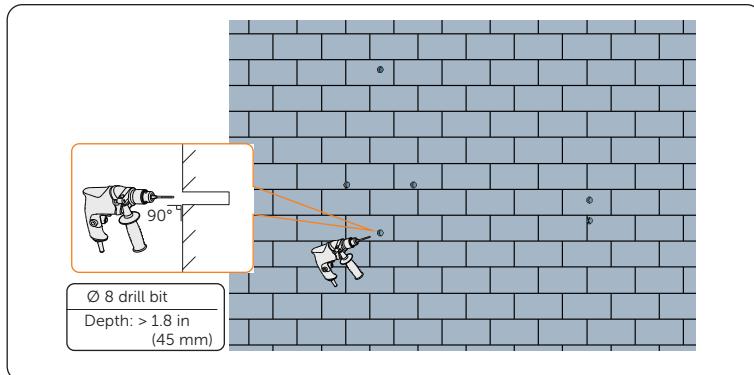


Figure 6-9 Drill the holes

Step 3: Insert the expansion tubes (part A) in the holes.

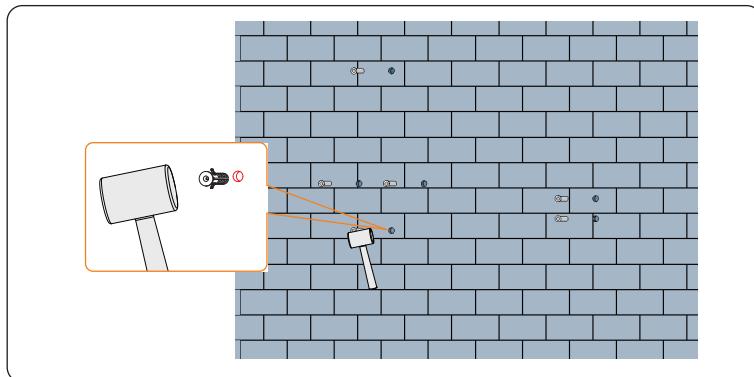


Figure 6-10 Insert the expansion tubes

Step 4: Install the terminal adapter(s).

- **Hard-wired installation version**

Loosen the swivel nuts from the AC input terminal and the communication terminal, then install the M27 to 1 inch adapter (part O) and M25 to 3/4 inch adapter (part D) respectively.

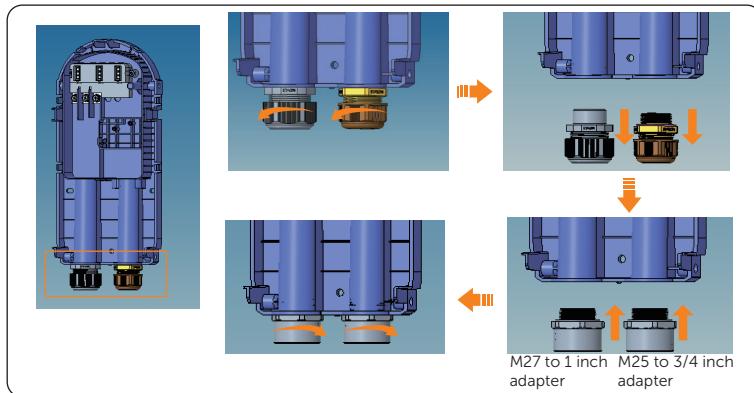


Figure 6-11 Install the terminal adapters - hardwired version

- **NEMA installation version**

Loosen the swivel nut from the communication terminal, then install the M25 to 3/4 inch adapter (part D).

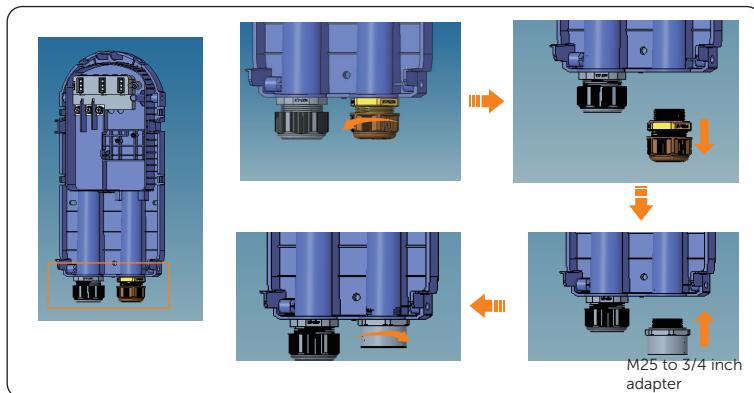


Figure 6-12 Install the terminal adapter - NEMA version

Step 5: Align the base plate and the cable hook with the holes, and screw the self-tapping screws (part B) with a Phillips-head torque screwdriver.

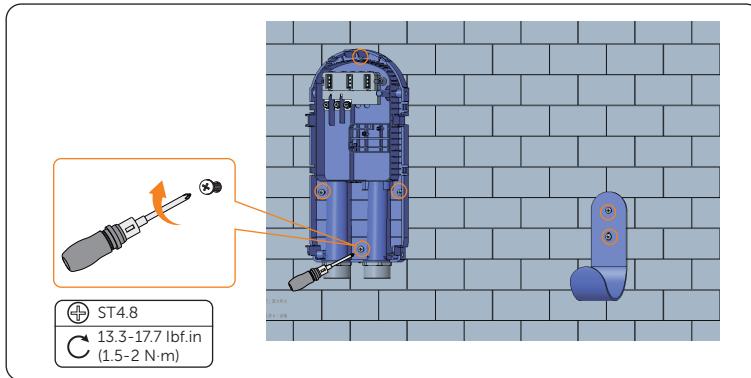


Figure 6-13 Secure the base plate and the cable hook

* (Optional) If the user wants to install the padlock for safety reasons, install the anti-theft accessory (a) (part I) before tighten the screw at the bottom part of the base plate.

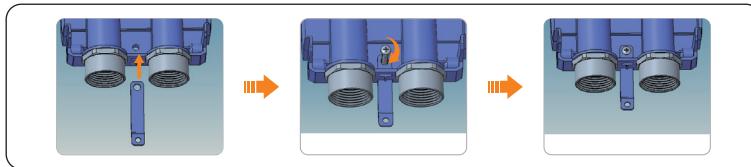


Figure 6-14 Install anti-theft accessory (a)

Step 6: Connect the AC input cable.

 **WARNING!**

- **GROUNDING INSTRUCTIONS** - This product must be connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.

• **Hard-wired installation version**

- a. Thread the prepared AC input cable in sequence as shown below. When threading the cable, reserve more cable length outside the channel to facilitate the stripping and crimping of the cable.

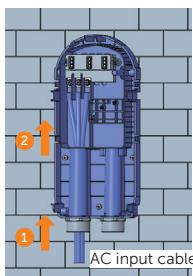


Figure 6-15 Thread the AC input cable

- b. Strip the insulation jacket of the AC input cable to an appropriate length.

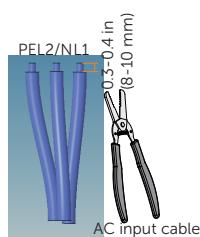


Figure 6-16 Strip the AC input cable

c. Pull the heat shrink tubing over the AC input cable and insert the stripped section of the wires into the R-type terminals (part P).

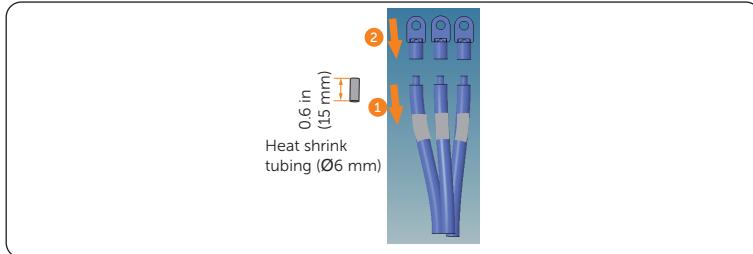


Figure 6-17 Install the tubing and R-type terminal

d. Crimp them with crimping tool, then pull the heat shrink tubing over the crimped section of the R-type terminals and use a heat gun to shrink them so that they can be firmly contacted with the terminals.

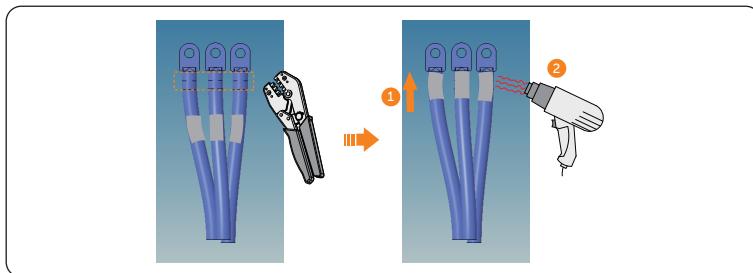


Figure 6-18 Crimp the cable and shrink the tubing

e. Remove the screws from the upper part of the base plate. Then make sure the wires are connected correspondingly and secure them with a Phillips-head torque screwdriver.

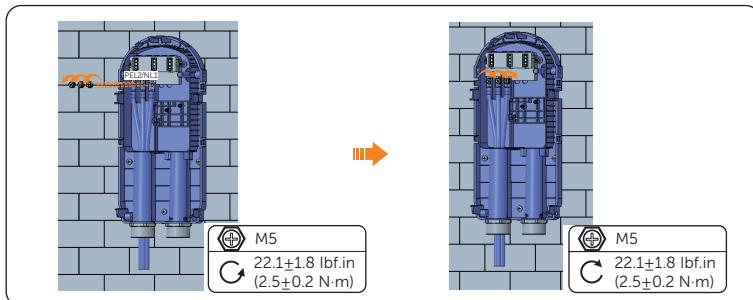


Figure 6-19 Secure the wires of AC input cable

f. Complete the conduit connection according to local regulations.

- **NEMA installation version**

- Loosen the swivel nut from the AC input terminal, then thread the input power cable (part N) through the swivel nut and the channel as shown below.

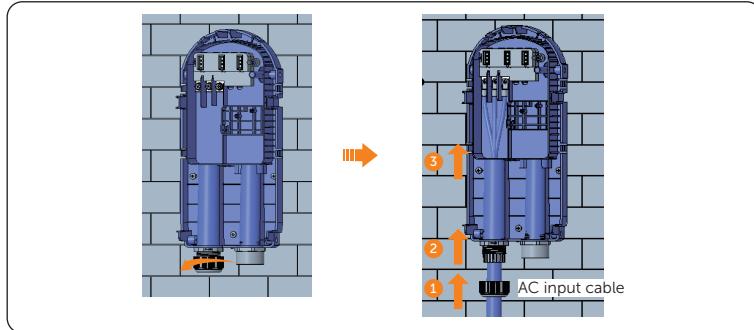


Figure 6-20 Thread the input power cable

- Remove the screws from the upper part of the base plate. Then make sure the wires are connected correspondingly and secure them with a Phillips-head torque screwdriver.

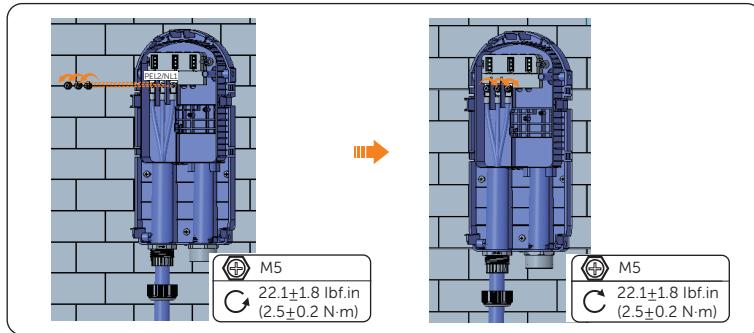


Figure 6-21 Secure the wires of input power cable

c. Push up the swivel nut to an appropriate position, and tighten the swivel nut of the AC input terminal.

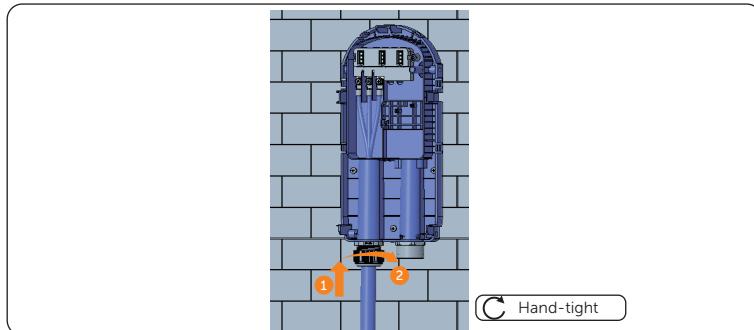


Figure 6-22 Tighten the swivel nut of the AC input terminal

Step 7: Align and clamp the two holes on the RJ45 terminal adapter (part E) with the two cylinders on the panel.

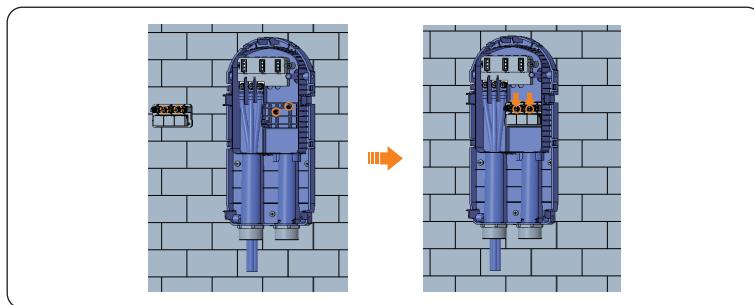


Figure 6-23 Install the RJ45 terminal adapter

Pin definition of communication ports

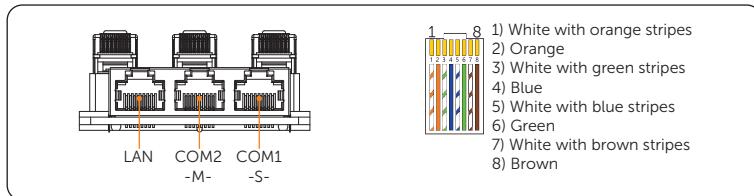


Figure 6-24 Communication ports

Table 6-1 Pin definition of COM1-S-

Pin	1	2	3	4	5	6	7	8
Pin Definition	X	X	X	A1	B1	X	X	X

Table 6-2 Pin definition of COM2-M-

Pin	1	2	3	4	5	6	7	8
Pin Definition	L1_CT+	L1_CT-	X	A2	B2	X	L2_CT+	L2_CT-

Note: For A1 & B1 and A2 & B2, please refer to below table.

Table 6-3 Explanation for A1 & B1 and A2 & B2

Port	Pin	Single EV-Charger	In parallel connection
COM1 -S-	A1	Connecting inverter, Datahub or other master devices	As secondary EV-Charger
	B1		
COM2 -M-	A2	Connecting meter or other slave devices	As primary EV-Charger
	B2		

NOTICE!

- When powered on after completing the installation, the system will automatically identify the grid data source of the grid side (Priority: Inverter > Meter > CT).

Step 8: Connect the communication cable(s) as the actual application scenario required.

- a. Thread the communication cable(s) through the right channel on the base plate according to the actual application scenario. When threading the cable, reserve more cable length outside the channel to facilitate the stripping and crimping of the cable. (Take all ports connected as an example from hereupon unless otherwise specified.)

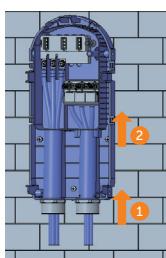


Figure 6-25 Thread communication cable(s)

- b. Strip and insert the communication cable(s) to the of RJ45 terminal (part F) following the pin definitions, make sure the wires are firmly crimped with the RJ45 terminal.

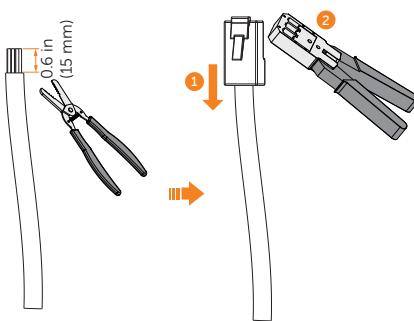


Figure 6-26 Strip and crimp communication cable(s)

- c. Connect to the corresponding port(s) according to the actual application scenario.

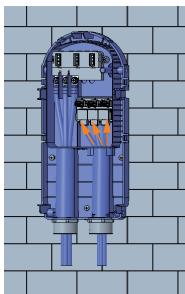


Figure 6-27 Connect to corresponding port(s)

- d. Complete the conduit connection according to local regulations.

Special notice about communication connection

- Communication with inverter

For inverter side, connect the other end of the communication cable to the corresponding terminal of the inverter according to the definitions of the communication ports of the specific inverter.

- Communication with CT

For CT side, steady the CT (part H) on the public grid.

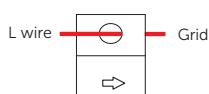


Figure 6-28 CT side connection

NOTICE!

- The arrow on the CT must point at the public grid.
- Do not place the CT on the N Wire or the PE wire.
- Do not place the CT on the N and L wire simultaneously.
- Do not place the CT on the non-insulated wires.
- It is recommended to wrap the CT clip around in circles with insulating tape.
- When using the split-phase CT, please clip the CT clamps on the corresponding phases (CT-U must be connected to grid L1, CT-W connected to grid L2).

* If extended communication cable is needed when connecting with CT, use the RJ45 connector (part G) to connect the communication cable connected with the EV-Charger and the other one connected with CT.

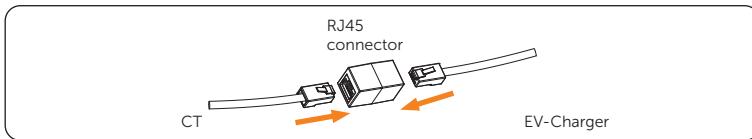


Figure 6-29 Using RJ45 connector

- Communication with meter

For the installation of meter, please refer to the relative quick installation guide or user manual for details.

- Communication with Ethernet (LAN)

Ethernet (LAN) connection is optional for areas where remote WiFi connection is not available or has a weak signal. Users can choose to finish the Ethernet (LAN) connection as needed.

WARNING!

- The Ethernet cable used to connect the EV-Charger for communication must be protected from lightning strikes.

NOTICE!

- Please ensure that the communication cable is intact and correctly connected. Otherwise, some functions may not work properly. For example, in Solar scene if the communication with the inverter is lost, the EV-Charger cannot obtain information about surplus PV power, which will reduce the charging current in Green mode and can only charge at the set charging level in Eco mode.

Step 9: Align the body of the EV-Charger with the base plate, pay special attention to align a with a' and b with b' as shown below.

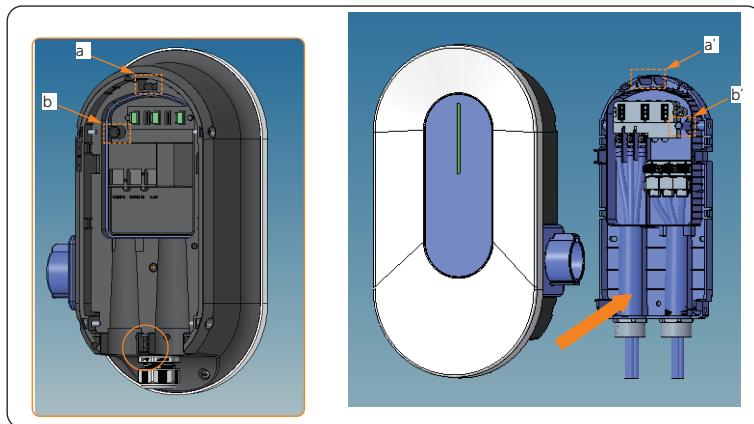


Figure 6-30 Align the body with the base plate

* (Optional) If the user wants to install the padlock for safety reasons, install the anti-theft accessory (b) (part L) and secure it with the ST3.5 screws (part M) before aligning the body with the base plate.

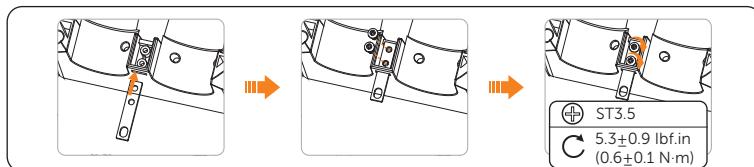


Figure 6-31 Install anti-theft accessory (b)

Step 10: Secure the four M5 screws (part D) on both sides of the body of the EV-Charger with a hexagonal head electric screwdriver.

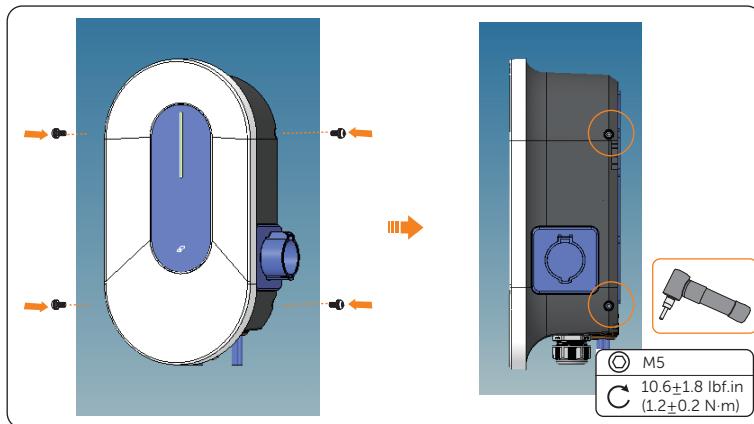


Figure 6-32 Secure the M5 screws

* (Optional) If the user wants to install the padlock for safety reasons, hang the padlock on the anti-theft accessories after fixing the screws. The padlock is not in the scope of delivery. If necessary, prepare a lock with a diameter less than 5.5 mm by yourself, and keep the key to the padlock in a safe place.

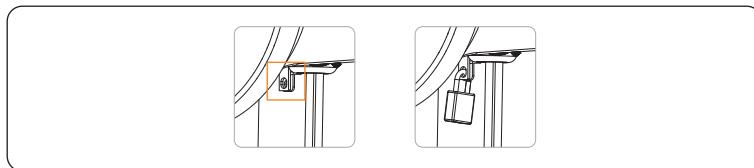


Figure 6-33 Hang the padlock

Step 11: Connect the charging connector with the EV-Charger and hang the connecting cable on the cable hook.

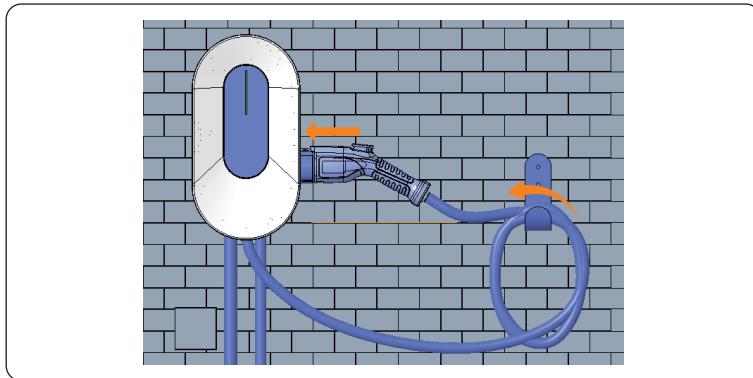


Figure 6-34 Connect the charging connector and hang the cable

For NEMA installation version, please plug the power cable into the NEMA outlet after the completion of installation.

7 Power on

7.1 Checking before Powering on

Check all below steps before powering on the EV-Charger:

- a. Check that the device is installed correctly and securely;
- b. The AC input cable is connected correctly and securely;
- c. The communication cables are connected correctly and securely;
- d. The voltage, frequency and other factors of the grid are in consistent with the working requirement of the EV-Charger.

7.2 Powering on

Step 1: Turn on the circuit breaker.

Step 2: Check the status of the LED indicator:

1. When the device is powered on, the buzzer will give a short sound, and the indicator light will be solid or breathing green ("Available" state) after three seconds by default. The EV-Charger has been successfully connected with network server if the indicator light is solid green and it is off-line if the light is breathing green.
2. Then the system will start self-checking automatically. After the checking process, if there is any fault, the indicator light will be solid red ("Faulted" state), please check if it is correctly installed and connected.
3. If it works normally:
 - 1) When the charging connector is not plugged, the indicator light will be solid or breathing green ("Available" state);
 - 2) When the charging connector is plugged in but the device is not charging, the indicator light will be solid blue ("Preparing" state);
 - 3) When the charging connector is plugged in and the device is in charging process, the indicator light will show as the "Charging" state (the colour will be displayed according to the application scene and charging mode and the flowing speed will be determined by the charging power).

WARNING!

- Power to the device must be turned on only after installation work has been completed.
- The device is intended only for charging electric vehicles. Do not charge other devices.

8 App Setting

8.1 Download, Registration and Login

SolaXCloud is an intelligent management platform for home energy, which integrates energy efficiency monitoring, device management, data security communication and other integrated capabilities. While managing your home energy device, it helps you optimize the efficiency of electricity consumption and improve the revenue of power generation.

8.1.1 Downloading and Installing App

Method 1: Scan the QR code below to download the App.

QR code can also be available on the login page of our official website (www.solaxcloud.com).



Figure 8-1 QR code

Method 2: Search for **SolaXCloud** in Apple Store APP or Google Play Store, and then download the App.

NOTICE!

- The screenshots hereupon are for reference only (mainly based on V6.2.3), and the actual interfaces may differ. You can update your App as needed.

8.1.2 App Registration and Login

Step 1: Run the App and then touch **Don't have an account? Sign up** to create a new account on the App.

Step 2: Follow the instructions and fill in your registration Email, input the verification code, and enter your password to create the account. Log in the App after registration finished.

Step 3: For the first login, complete the plant creation and Wi-Fi configuration as below.

- a. Turn to the **Home** page and touch the  icon to add plant.

b. Allow SolaXCloud to access your system location, fill in plant name (self-defined), system size (For the system size, please check the information with the installer), choose the other settings according to actual situations, then add device by scanning or typing in the Registration No. on the type label.

NOTICE!

- Select **Use&Set DST** if your country has summer time and winter time.

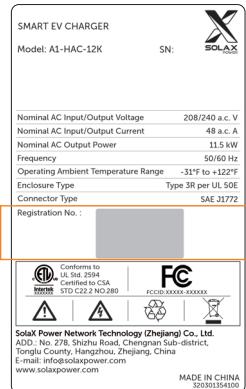


Figure 8-2 One example for Registration No.

c. Enter your WiFi account and password. Start to configure the device network. DHCP is enabled by default to distribute IP address automatically. 5GHz network is not supported.

8.2 Configuration

NOTICE!

- If you already have the App account, you can proceed to the configuration after login.

8.2.1 Add Device

Step 1: Login your account, turn to the **Home** page or the **Device** page of the App and select the exact plant from the plant list on the upper left corner.

Step 2: Touch the **+** icon on the upper right corner of the **Home** page or the **Device** page, then touch **Add device**.

Step 3: Follow the instructions to add the EV-Charger and complete the device network configuration.

8.2.2 Wi-Fi Connection

The network configuration will be completed automatically by following the instructions when add device. If you need to reconnect the network when the device is off-line, please operate as below.

Step 1: Login your account, turn to the **Device** page of the App and select the exact plant from the plant list on the upper left corner.

Step 2: Choose the exact EV-Charger card (off-line with  icon) from the **Device** list according to the device type and SN, and touch any part of the card.

Step 3: Touch **Reconfigure** on the pop-up window.

Step 4: Type in or choose your home Wi-Fi SSID and password, then touch **Next**.
* 5GHz Wi-Fi is unavailable for now.

Step 5: Follow the instructions to complete Wi-Fi setting, there will be a note when the setting successes.

NOTICE!

- If the Wi-Fi connection fails, users can connect to the WiFi signal named after the device registration number and visit the IP address <http://192.168.10.10> in a browser to configure Wi-Fi. (Account: "admin"; default password: the Registration No.)
- If users connect to the network server through LAN, there is no need to set the WiFi configuration, as it will be automatically configured.

8.2.3 Local Mode

When there is no network, users can access local mode to complete the settings.

Step 1: Use your smart phone to connect the SolaX Wi-Fi signal (Wifi_XCXXXXXXX).

Step 2: On the login page, you can touch **More** on the upper right corner and then choose **Local**.

If you've already logged into your account, access following the path: **Service > Application > Local Access**.

Step 3: Type in or scan the Registration No. (as the initial password) to access the Local Mode in the App.

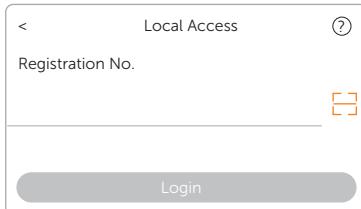


Figure 8-3 Password for local mode

9 Settings for EV-Charger

The function settings for EV-Charger can be done on the setting page and control page of the App according to different functions.

9.1 Operation to Enter the Setting Page

There are two methods to enter the setting page of the EV-Charger, but charging level setting, boost setting and schedule charging setting can only be done on the control page.

Method 1 (Recommended)

- Step 1:** Login your account, turn to the **Device** page of the App and select the exact plant from the plant list on the upper left corner.
- Step 2:** Choose the exact EV-Charger card from the **Device** list according to the device type and SN, and touch  icon on the lower right corner of the card.
- Step 3:** The control page of the EV-Charger will be displayed. Touch the setting button on the upper right corner to enter the setting page. For the introduction of the control page, please refer to "9.2 Introduction of Control Page".

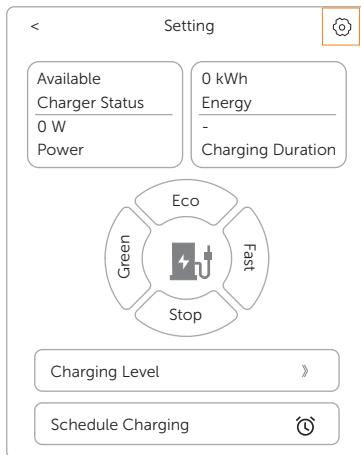


Figure 9-1 Touch to enter the setting page

Method 2

Step 1: Login your account, turn to the **Device** page of the App and select the exact plant from the plant list on the upper left corner.

Step 2: Choose the exact EV-Charger card from the **Device** list according to the device type and SN, and touch any part of the card except the  icon.

Step 3: The **Device Details** page will be displayed. On this page, you can review the basic information about the device, which contains the SN number, Registration No. etc. and charging records, which contains information of start time, duration, energy and RFID card number. Touch **Remote Settings** in the middle part of this page to enter the setting page.

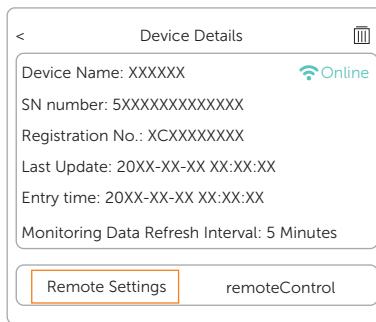


Figure 9-2 Touch to enter the setting page

9.2 Introduction of Control Page

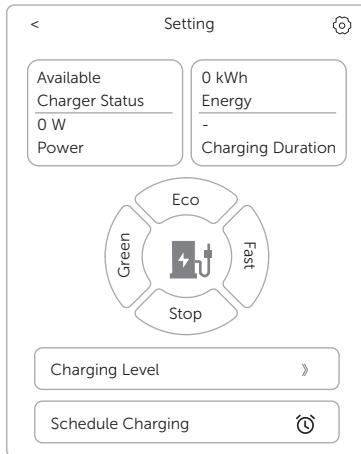


Figure 9-3 Control page

On the control page, the charging information can be seen, including the **Charger Status**, **Energy**, **Power** and **Charging Duration**.

Users can switch between Green, Eco and Fast charging modes and stop charging in Solar scene and start or stop charging in Standard scene on the control page by touching the corresponding area as well as complete the charging level setting, boosting settings, and schedule charging setting here. For details, please refer to "[10.3 Detailed Function Operation](#)".

Users can touch the setting button on the upper right corner to enter the setting page for the EV-Charger.

9.3 Overview of the Setting Page

The setting page contains three parts: **Basic information**, **Charger setting**, **Advanced setting**. Touch on each item can enter to the next level.



Figure 9-4 Setting page

Basic Information

Enter the **Basic information** page, there are four items displayed: **Charger ID**, **Date Time**, **Timezone** and **Version**.

Basic information		X
Charger ID	5XXXXXXXXXXXXX	
Date Time	2024-10-30 10:55	
Timezone	(UTC) Coordinated Universal Time	
Version	Vxxxx.xx	

Figure 9-5 Basic information page

Date Time will be automatically synchronized. If it is not correct, please adjust it by yourself.

Confirm the **Timezone** according to the application location. After logging in to the App, the **Timezone** will be automatically located. If it is not correct, please adjust it to the correct one.

Charger Setting

Enter the **Charger setting** page, there are the following items: **Activation mode**, **Dynamic load balance**, and **Modbus Setting**.

Charger setting		X
Activation mode	Plug&Charge	
Dynamic load balance	Disable	
Modbus Setting	70/9600	

Figure 9-6 Charger setting page

For **Activation Mode**, please refer to "[10.1 Activation Mode Setting](#)".

The other settings on this page by default will be shown and take effect in Solar scene and Standard scene. For details, refer to "[10.3 Detailed Function Operation](#)".

Advanced setting

There are the following items: **Application scene**, **Parallel Setting**, **Random charging delay**, **Alarm setting**, **Restore factory settings**, **EV Charger Reset**.

<	Advanced setting	X
Application scene	Solar	
Parallel Setting	Disable	
Random charging delay	Disable	
Alarm setting	275/160 v	
Restore factory settings	Save	
EV Charger Reset	Save	

Figure 9-7 Advanced setting page

The default **Application scene** is **Solar**, if the user wants to use OCPP scene or Standard scene, please refer to "[10.2 Application Scene Setting](#)".

The default for **Parallel Setting** is **Disable**, if the user wants to use the parallel function, please refer to "[14.2 Parallel Function](#)".

The default for **Random charging delay** is **Disable**, for details, please refer to "[10.3 Random Charging Delay](#)".

The **Alarm setting** contains **OverVoltage** and **LowVoltage**. Set and save these two limit values according to local regulations.

Alarm setting	275/160 ^
OverVoltage(V)	
275	Save
LowVoltage(V)	
160	Save

Figure 9-8 Alarm setting

The default settings can be restored by touch **Save** for **Restore factory settings**.

The EV-Charger can be reset and the LED status indicator light will be green when touch **Save** for **EV Charger Reset**.

10 Operation Method

10.1 Activation Mode Setting

The EV-Charger has three activation modes in total, namely plug & charge, card-swiping, and APP activation.

Solar scene / Standard scene

In Solar scene and Standard scene, all the three activation modes are available and the default mode is plug & charge. If the user wants to switch to the card-swiping mode or APP activation mode from the default mode, the user needs to select **RFID** or **APP** for **Activation mode** on the App following the path: **Charger setting > Activation mode > RFID / APP**.

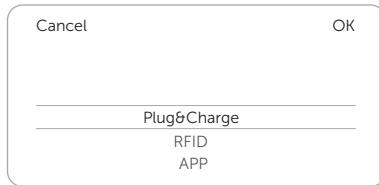


Figure 10-1 Select activation mode

OCPP scene

In OCPP scene, please refer to the operation guide of the OCPP server.

NOTICE!

- The RFID card (part L) from the accessory bag will be invalid in OCPP scene.

NOTICE!

- Before charging, please check whether the EV-Charger and the charging connector are in normal state.
- During the charging process, do not unplug the charging connector directly, STOP charging first.
- After charging stopped, disconnect the charging connector from the electric vehicle first.

10.2 Application Scene Setting

The default **Application scene** is **Solar**. If the user wants to use the Standard scene or OCPP scene, select on the setting page following the path: **Advanced setting** > **Application scene** > **Standard / OCPP**.



Figure 10-2 Select Application scene

Standard scene

In Standard scene, the EV-Charger will operate as a standard charger which just operate the start and stop charging. No Green or Eco mode in this scene. The control page in Standard scene will be shown as below. You can start and stop charging by touching the corresponding button.

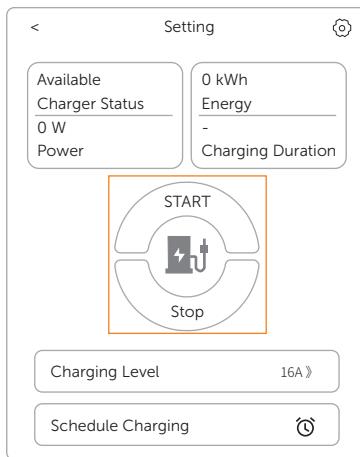


Figure 10-3 Control page for Standard scene

OCPP scene

In OCPP scene, the EV-Charger can be connected with the OCPP server and be managed and controlled through the App or web of the corresponding OCPP server. Before choosing this scene, please ensure that the EV-Charger has met the following prerequisites:

- The EV-Charger has joined the network that can access the Internet through network connection.

- A valid "URL" address has been obtained from the OCPP server.

A valid "URL" address usually starts with "ws://" or "wss://". For example, ws://xxxxx.com:8080/ChargeCentralSystem/CPXXXXXX or wss://xxxxx.com/ChargeCentralSystem/CPXXXXXX.

For more details, please consult with the seller or the OCPP server.

- A valid charger ID has been obtained from the OCPP server.
- The network is normal and the OCPP server can be connected.

NOTICE!

- Only with a valid address and a valid charger ID obtained from the OCPP server, can the EV-Charger be connected to the OCPP server through the Internet and access the various functions provided by the server.

After **OCPP** scene is selected, enter the **Charger setting** page. Then type in the **OCPP Server** address and **Charger ID** obtained from the OCPP server and touch **Save**. A **Setting success** notice will appear when saved successfully.

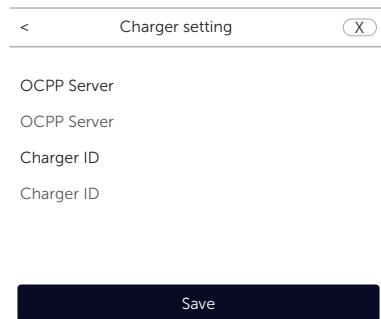


Figure 10-4 OCPP scene setting

10.3 Detailed Function Operation

10.3.1 Charging modes in Solar Scene

When **Solar** scene is selected, there are three charging modes (Green, Eco & Fast) and two kinds of boost settings available (Smart Boost & Timer Boost). The default charging mode is Fast mode, and the users can switch among the charging modes on the control page of the App. The boost settings will only take effect in Green and Eco modes.

Green mode

In Green mode, the EV-Charger will maximize the use of surplus power generated from the inverter. The EV-Charger should be connected with the inverter or CT/meter to obtain the power information, so as to control the charging power in real time. According to the minimum start-up charging power, the charging current can be divided into two levels as 3 A and 6 A. The default level is 3 A.

In the 6 A level, the EV-Charger won't use the power generated from grid at all.

In the 3 A level, the EV-Charger would start charging only when surplus photovoltaic power supply is more than 3 A. Meanwhile, if the surplus photovoltaic power supply is less than 6 A, the EV-Charger needs to buy extra electricity from grid for minimum start-up charging power (1.5 kW for 240 V grid, 1.3 kW for 208 V grid).

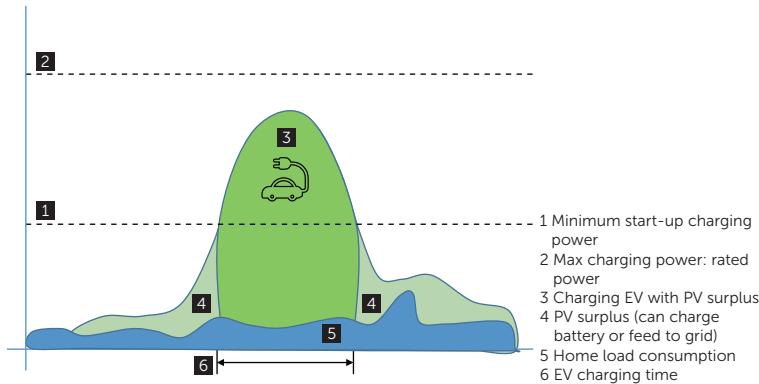


Figure 10-5 Green mode

The user can set the charging current level for Green mode on the control page of the App following the path: **Charging Level > Green**.

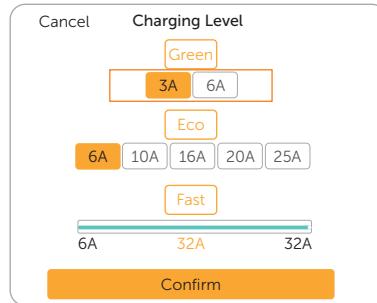


Figure 10-6 Charging current level for Green mode

Eco mode

In Eco mode, the charging power is continuously adjusted according to changes in generation or power consumption elsewhere in the house, thereby minimizing the use of the grid power. In this mode, users can set charging current at seven different levels at most, i.e., 6 A, 10 A, 16 A, 20 A, 25 A, 32 A, and 40 A (40 A is only available for 11.5 kW models, 32 A is only available for 9.6 kW and 11.5 kW models). When the available surplus photovoltaic power is not less than the charging power required by the set level, the EV-Charger will charge with the actual available surplus photovoltaic power. If at any time the available surplus power falls below the charging power required by the set level, the shortfall will be drawn from the grid.

For example, an EV-Charger working in 240 V grid is set at 10 A level (2.4 kW), if the available surplus photovoltaic power is only 8 A (1.92 kW), then the insufficient 2 A (0.48 kW) will be taken from the grid.

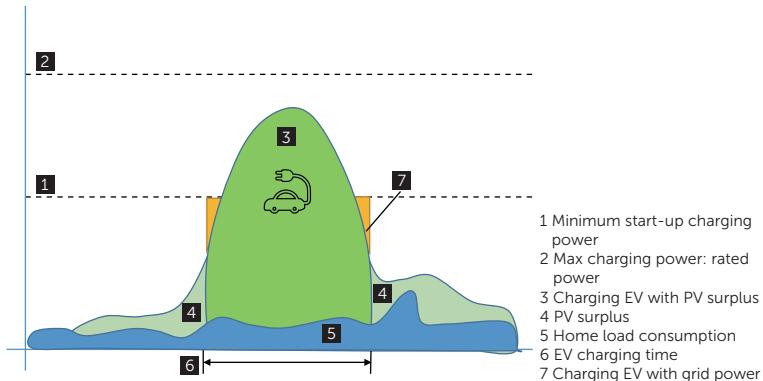


Figure 10-7 Eco mode

The user can set the charging current level for Eco mode on the control page of the App following the path: **Charging Level > Eco**.

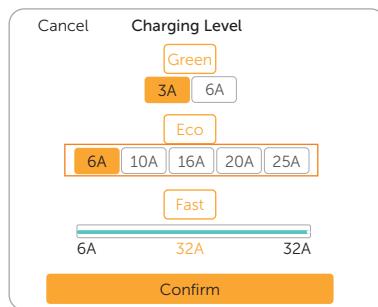


Figure 10-8 Charging current level for Eco mode

NOTICE!

When the EV-Charger is charging in Green or Eco mode:

- The charging electric vehicle must comply with the SAE J1772 standard, otherwise the EV-Charger won't work.
- If there is a zero injection requirement for the system, the EV-Charger must communicate with the inverter in order to charge normally.

Fast mode

In Fast mode, the EV-Charger will charge the EV at the rated output power regardless of whether the surplus photovoltaic power is sufficient. The actual charging power depends on the SOC of the battery pack of the EV.

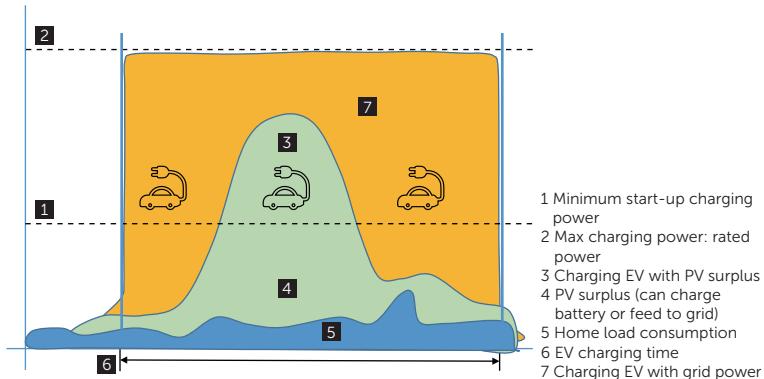


Figure 10-9 Fast mode

10.3.2 Boost Settings in Solar Scene

NOTICE!

- The boost settings will only take effect under Green and Eco modes.
- The boost settings can only be set during the charging process.
- Smart Boost and Timer Boost cannot take effect at the same time.

Smart Boost

Before using the Smart Boost function, complete the settings as below:

- Touch **Smart Boost** item in the middle part on the control page.
- Set the desired **Energy** and **End time** for the vehicle charging, and touch **OK** to confirm.

Operation Method

c. Enable the Smart Boost function by touch the switch.

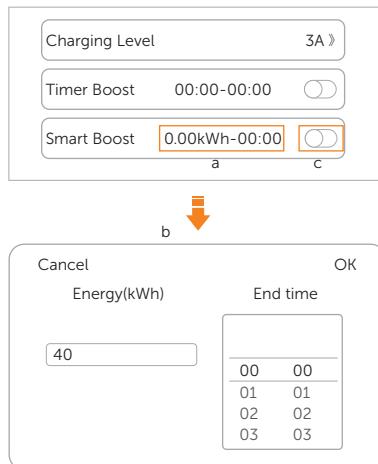


Figure 10-10 Smart Boost setting

The EV-Charger will complete the charging of the EV with desired energy before the preset end time at maximum charging power and will use the photovoltaic power supply as much as possible and minimize the use of the grid power. (E.g.: The user needs to charge the EV to 40 kWh before 10:00 a.m. and completes the settings, the EV-Charger will charge the EV to 40 kWh before 10:00 a.m., after this desired energy and / or the time has reached, the charging power will be depended on the surplus power generated by the inverter if the charging process has not been completed.)

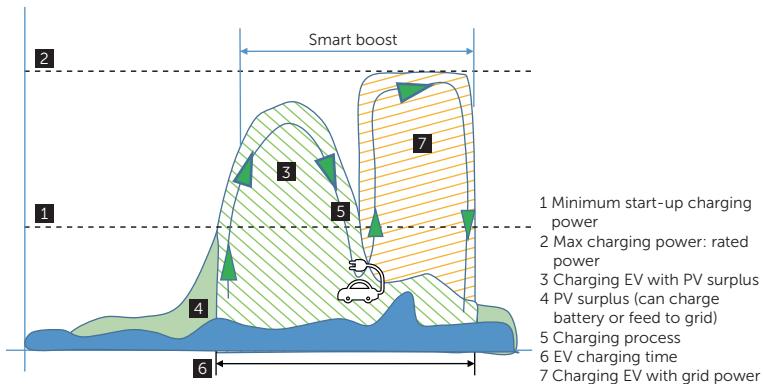


Figure 10-11 Smart Boost

Timer Boost

Before using the Timer Boost function, complete the settings as below:

- Touch **Timer Boost** item in the middle part on the control page.
- Set the desired **Start time** and **End time** for the vehicle charging, and touch **OK** to confirm.
- Enable the Timer Boost function by touch the switch.

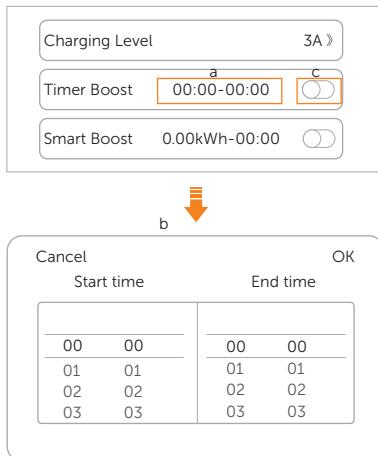


Figure 10-12 Timer Boost setting

When using Eco or Green modes, the EV-Charger can be programmed to "boost" the current charge in a certain period. During the set boost period, the charging rate will adjust to maximum (just like Fast mode), regardless of the amount of available surplus photovoltaic power. This means that the power may be drawn from the mains grid supply during boost times. If the EV is fully charged, the EV-Charger will stop charging.

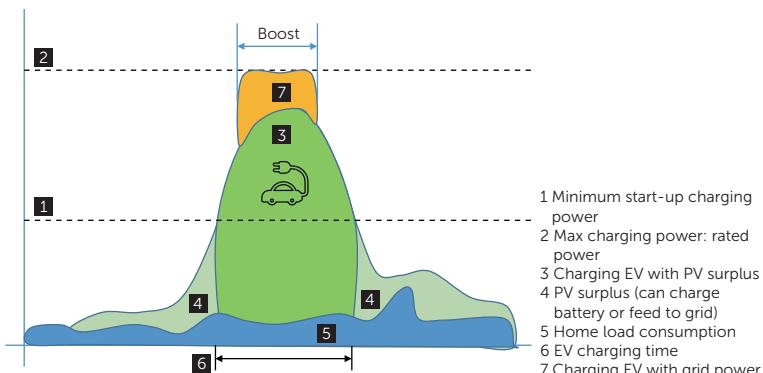


Figure 10-13 Timer Boost

10.3.3 Dynamic Load Balance

The EV-Charger has dynamic load balancing function. During the charging period, no matter in which charging mode, the total power of the house will not exceed the main grid capacity. To ensure that the total power of the house doesn't exceed the grid capacity, the charging power will be adjusted in real time according to the total load power.

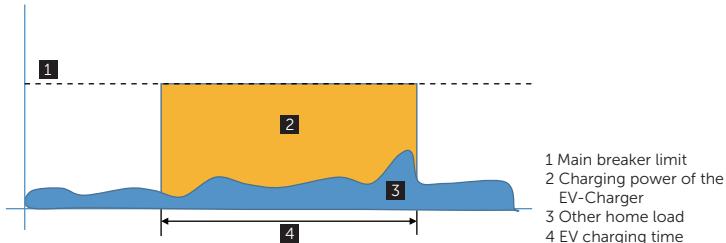


Figure 10-14 Dynamic load balance

If the user wants to use this function, touch **Dynamic load balance** on the setting page following the path: **Charger setting > Dynamic load balance**, enable and set the value for it, then confirm the settings.

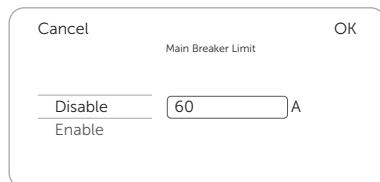


Figure 10-15 Dynamic load balance setting

With the dynamic load balance function, when the power consumption approaches the preset maximum value, the EV-Charger will reduce the charging power so that the main breaker current will reduce to the preset value minus 5 A, thus avoiding the situation of main breaker trip due to overload.

NOTICE!

- The EV-Charger should be connected with a matched inverter, CT or meter to obtain the grid data for the dynamic load balance function to work normally. Otherwise, the function won't take effect.

10.3.4 Modbus Setting

If the EV-Charger was to communicate with other devices except CT or meter and the user needed to do Modbus setting according to the actual application, it could be done on the setting page following the path: **Charger setting > Modbus Setting**.

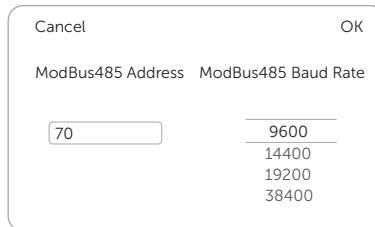


Figure 10-16 Modbus setting

The addresses of different EV-Chargers in the same one system should be different (The default value is 70). The baud rate should be set according to the devices with which the EV-Charger is working (The default value is 9600).

10.3.5 Random Charging Delay

The start charging time for the vehicle can be delayed randomly with the random charging delay function. If choose to enable it, input the charging delay time (s) within a range of 600 s ~ 1800 s. This function is disabled by default. If needed, the user can enable it following the path on the setting page: **Advanced setting > Random charging delay**.

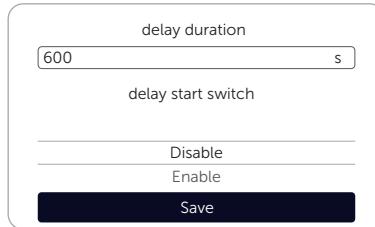


Figure 10-17 Random charging delay setting

10.3.6 Max Charging Current

The user can set the max charging current for the EV-Charger based on actual need on the control page by touching **Charging Level** and adjust the value for max charging current by adjusting the bar as shown. The setting range is shown in below table.

Table 10-1 Setting range for max charging current

Models	7.6 kW	9.6 kW	11.5 kW
Setting range	6 A to 32 A	6 A to 40 A	6 A to 48 A

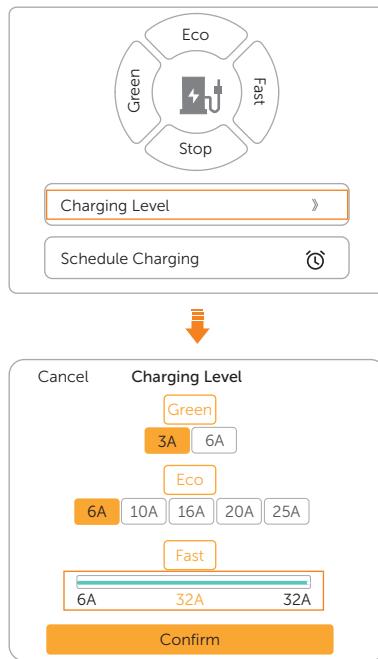


Figure 10-18 Setting max charging current

10.3.7 Schedule Charging Setting

NOTICE!

- When the schedule charging setting function is enabled, the plug & charge activation mode will be invalid immediately. If the user wants to charge the EV immediately on the spot, the **Activation mode** must be selected as APP / RFID to start charging following the path: **Charger setting** > **Activation mode** > APP / RFID.

In Solar scene and Standard scene, users can set **Schedule Charging** at some specific time period as scheduled according to the electricity price of different periods or their household load to save the electricity cost. At most four periods can be set here.

- Touch **Schedule Charging** on the control page.

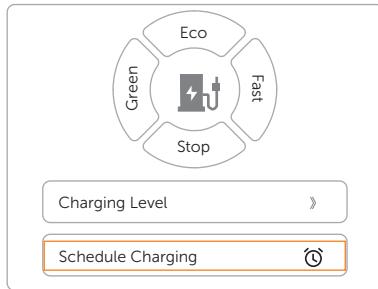


Figure 10-19 Touch Schedule Charging

- Touch **Add Schedule** at the bottom.

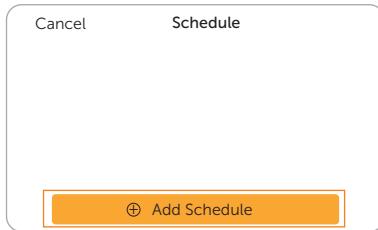


Figure 10-20 Touch Add Schedule

c. Four items (**Start time**, **End time**, **Repetition** and **Current**) can be set here. Touch each item to set the desired value and confirm.

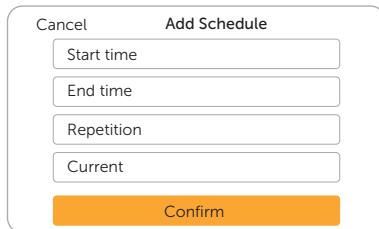


Figure 10-21 Set the items and confirm

- » **Start time:** Time to start charging
- » **End time:** Time to end charging, can be set to a time of the next day
- » **Repetition:** Effective frequency, can be set as only once or repeated several times during Monday to Sunday (multiple choices are allowed)



Figure 10-22 Repetition page

- » **Current:** The maximum charging current of the scheduled charging period. The range is 6 A to 32 A for 7.6 kW model, 6 A to 40 A for 9.6 kW models, 6 A to 48 A for 11.5 kW models.
- d. After the addition is completed, it will be displayed on the list. Touch the switch as shown to enable the setting. Once enabled, the clock icon on the control page will turn to yellow like "⌚".

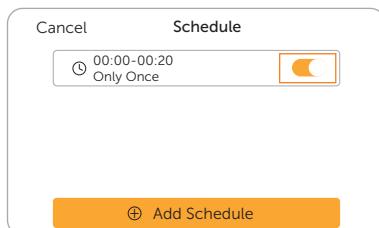


Figure 10-23 Enable the schedule charging period

- e. If the user wants to revise the settings for a certain period, touch the content box of the period and then edit the setting items.
- f. If the user wants to delete a certain period, select and slide it from right to left, the delete button will appear. Then touch **Delete** and select **OK** in the pop-up window to confirm.

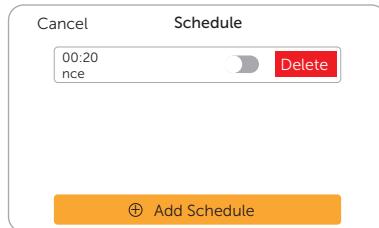


Figure 10-24 Delete the schedule charging period

NOTICE!

- For the charging current, the value set for dynamic load balance has a higher priority.
- During the schedule charging period, the charging process can be stopped by the App.

11 Troubleshooting and Maintenance

11.1 Power off

Turn off the circuit breaker.

WARNING!

- After the EV-Charger is powered off, there may still be the residual electricity and heat which may cause electric shocks and body burns. Please wear personal protective equipment (PPE) and start maintaining the EV-Charger at least five minutes after power off.

11.2 Troubleshooting

This section lists the possible problems with the EV-Charger, and provides information and procedures for identifying and resolving them. In case of any errors, check for the warnings or error messages on App, and then refer to the suggestions below. For further assistance, contact SolaX Customer Service. Please provide the model and SN of the EV-Charger, and be prepared to describe the system installation details.

Table 11-1 Troubleshooting list

Error Code	Fault	Diagnosis and Solutions
IE:0x00000002	OverCurr_Fault	<p>Overcurrent fault.</p> <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.Contact SolaX for help.
IE:0x00000004	OverTemp_Fault	<p>Temperature beyond limit.</p> <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.If not, confirm that the conditions for installation are proper and waiting for cooling down, then re-plug in and try charging the EV again.Contact SolaX for help.
IE:0x00000008	PEGround_Fault	<p>PE grounding fault.</p> <ul style="list-style-type: none">Unplug the charging connector from the EV and confirm that the EV-Charger is reliably grounded.Contact SolaX for help.

Error Code	Fault	Diagnosis and Solutions
IE:0x00000010	OverLeakCurr_Fault	20 mA leakage current fault. <ul style="list-style-type: none">Unplug the charging connector from the EV and check whether the EV is leaking.Contact SolaX for help.
IE:0x00000040	OverLoad_Fault	Over power fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.Contact SolaX for help.
IE:0x00000100	OverVoltL1_Fault	L1 phase overvoltage fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.If not, check whether the grid voltage is too high, then try charging the EV again.Contact SolaX for help.
IE:0x00000200	UnderVoltL1_Fault	L1 phase undervoltage fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.If not, check whether the grid voltage is too low, then try charging the EV again.Contact SolaX for help.
IE:0x00004000	MeterCom_Fault	Metering chip communication fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App.Contact SolaX for help.
IE:0x00008000	485Com_Fault	RS485 communication fault. <ul style="list-style-type: none">Check and confirm that the communication cable for RS485 is intact and correctly connected.Contact SolaX for help.
IE:0x00010000	PowerSelect_Fault	Power selection fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.Contact SolaX for help.
IE:0x00020000	CPVolt_Fault	CP voltage fault. <ul style="list-style-type: none">Unplug the charging connector from the EV, if it is back to normal, re-plug in and try charging the EV again.Contact SolaX for help.

Error Code	Fault	Diagnosis and Solutions
IE:0x00080000	MeterType_Fault	<p>Meter type fault.</p> <ul style="list-style-type: none"> Change and install a meter as recommended. Contact SolaX for help.
IE:0x00400000	ParallelCom_Fault	<p>Parallel communication fault.</p> <ul style="list-style-type: none"> Check whether the connections between the primary and secondary EV-Chargers are in good condition. Contact SolaX for help.
IE:0x00800000	Relay1Adhesion_Fault	<p>First relay welding detection fault.</p> <ul style="list-style-type: none"> Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App, then re-plug in and try charging if it is back to normal. Contact SolaX for help.
IE:0x01000000	Relay1Refused_Fault	<p>First relay malfunction fault.</p> <ul style="list-style-type: none"> Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App, then re-plug in and try charging if it is back to normal. Contact SolaX for help.
IE:0x02000000	Relay2Adhesion_Fault	<p>Second relay welding detection fault.</p> <ul style="list-style-type: none"> Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App, then re-plug in and try charging if it is back to normal. Contact SolaX for help.
IE:0x04000000	Relay2Refused_Fault	<p>Second relay malfunction fault.</p> <ul style="list-style-type: none"> Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App, then re-plug in and try charging if it is back to normal. Contact SolaX for help.
IE:0x20000000	ClassB_Fault	<p>Class B fault.</p> <ul style="list-style-type: none"> Unplug the charging connector from the EV, power off and re-power the EV-Charger or save EV Charger Reset in the App, then re-plug in and try charging if it is back to normal. Contact SolaX for help.

11.3 Maintenance

Regular maintenance is required for the device. Please check and maintain the following items based on the instructions below to ensure the optimal performance of the device. For devices working in inferior conditions, more frequent maintenance is required. Please keep maintenance records.

 **WARNING!**

- Only qualified person can perform the maintenance for the EV-Charger.
- Only spare parts and accessories authorized by SolaX can be used for maintenance.

Table 11-2 Proposal of Maintenance

Item	Check Notes	Maintenance Interval
Safety check	<ul style="list-style-type: none"> • Check if the device is functioning properly. • The safety checks shall be performed by manufacturer's qualified person who has adequate training, knowledge, and practical experience. 	Every 12 months
LED indicator	<ul style="list-style-type: none"> • Check if the indicator is in normal state. 	Every 6 months
Wiring connections	<ul style="list-style-type: none"> • Check if the cables are securely connected. • Check if the cables are damaged or aged. • Check if the terminals and ports are intact. • Check if the charging connector is in good condition. 	Every 6 months
Grounding reliability	Check if the ground terminal and ground wire are securely connected.	Every 12 months
Housing	Clean and check its security.	Every 6 months

NOTICE!

- When your EV-Charger needs to be upgraded by the service personnel, please make sure to unplug the charging connector from the EV.

12 Decommissioning

12.1 Disassembling the EV-Charger

WARNING!

- When disassembling the EV-Charger, strictly follow the steps as below.
- Use insulated tools and wear individual protective tools when disassembling the EV-Charger.

Step 1: Turn off the circuit breaker to disconnect the EV-Charger from the grid and/or inverter.

Step 2: Wait for at least 5 minutes to fully discharge the capacitors inside the EV-Charger.

Step 3: Remove the padlock if there is one hanged.

Step 4: Remove the four M5 screws on both sides of the EV-Charger.

Step 5: Take down the body part of the EV-Charger, and remove the charging cable and connector as well.

Step 6: Remove the RJ45 terminal from the RJ45 terminal adapter, and pull out the communication cable(s) from the base plate.

Step 7: Remove the screws on the AC input wires, and pull out the AC input cable from the base plate.

Step 8: Remove the base plate and the cable hook.

12.2 Packing the EV-Charger

- Use the original packaging materials if available.
- If the original packing material is not available, use the packing material which meets the following requirements:
 - » Suitable for the weight and dimension of product
 - » Convenient for transportation
 - » Can be sealed with adhesive tape

12.3 Disposing of the EV-Charger

Properly dispose of the EV-Charger and accessories in accordance with local regulations on the disposal of electronic waste.

13 Technical Data

- General Data

Model	A1-HAC-8K A1-HAC-8K-B	A1-HAC-10K A1-HAC-10K-B	A1-HAC-12K A1-HAC-12K-B
AC Nominal Input			
Voltage [V]	208/240	208/240	208/240
Frequency [Hz]	50/60	50/60	50/60
Input connection	NEMA6-50 / NEMA14-50	NEMA6-50 / NEMA14-50	Hardwire
AC Nominal Output			
Voltage [V]	208/240	208/240	208/240
Current [A]	32	40	48
Power [kW]	7.6	9.6	11.5
Interface & Communication			
Communication interface	WiFi / Ethernet / Bluetooth / RS485x2		
Protocol	OCPP 1.6j, Modbus TCP, Modbus RTU, Cloud API		
Authentication	Plug & Charge / RFID (ISO-14443-A) / APP		
Measurement meter	External (Optional)		
HMI	RGB LED / APP		
Remote control	APP & Web		
Application	Residential / Destination place / Public		
RFID	13.56MHz/1.1dB μ A/m@3m		
General Data			
Housing Material	PC		
Installation Method	Wall-mounted (Optional: pedestal-mounted)		
Charging Outlet	SAE J1772 / NACS		
Cable Length	23 ft (7 m)		
Operating Ambient Temperature Range	-31°F to +122°F (-35°C to +50°C)		
Storage Temperature	-40°F to +140°F (-40°C to +60°C)		
Working Humidity	5%~95% without condensation		
Working Altitude [m]	<2000		
Enclosure Type	Type 3R per UL 50E		
Cooling Method	Natural cooling		
Application Site	Indoor/Outdoor		
Dimension (WxHxD)	15.4 in x 8.1 in x 5.5 in (390 mm x 206 mm x 139 mm)		
Net Weight [kg]	(SAE J1772)	16.5 lb (7.5 kg)	16.5 lb (7.5 kg)
	(NACS)	13.7 lb (6.2 kg)	13.7 lb (6.2 kg)
			17.6 lb (8 kg)
			14.3 lb (6.5 kg)

Technical Data

- Security & Protection

Model	A1-HAC-8K A1-HAC-8K-B	A1-HAC-10K A1-HAC-10K-B	A1-HAC-12K A1-HAC-12K-B
Multiple Protection			
Over/Under voltage protection		Yes	
Overload protection		Yes	
Short circuit protection		Yes	
Current leakage monitoring		Integrated current failure monitoring (CCID 20 mA) *	
Grounding protection		Yes	
Surge protection		Yes	
Over temperature protection		Yes	
Relay protection		Relay weld detection	
Standard Compliance	UL/ULC, CSA, NEC Article 625, RoHS, FCC Part 15B		

* This document does not replace any regional, state, provincial or national laws, regulations or standards that apply to the installation, electrical safety and use of the product. Always observe the local regulations as well.

14 Appendix

14.1 RFID Management Function

14.1.1 Introduction of RFID Management Function

For most destination charging scenario, RFID is the mostly used activation method because of its convenience and safety. The RFID card management function is developed to help the charging station operator to manage the RFID card easily. This function can help the operator to do below things:

- Add new RFID card into the charging station system. This function is used for the operator to assign a new RFID card to a new user or an old user who has lost the original card.
- Delete RFID card. This function is used while some users lose their original card, the operator can delete the lost card from the system.
- Check charging history for each RFID card. This function can help the operator to know the total charging energy for each user and to bill the user.
- Support third party RFID card. This function can allow the operator to add third party RFID card into the system, the third party RFID must meet ISO 14443-A standard.
- Support NFC activation. This function can support the NFC function of smart phones to copy the RFID card number.

Only RFID cards listed on the management function can activate the EV-Charger. The users can edit a note for each card on the App.

For the number of RFID cards: There is no limit when the EV-Charger is online (connected to the network server) and a maximum of ten can be stored on the EV-Charger when off-line.

14.1.2 Operation of RFID Management Function

NOTICE!

- The operations should be done via the App, the App version must be V6.2.0 and above.
- In order to allow this function working normally, the **Activation mode** must be selected as **RFID** following the path: **Charger setting > Activation mode > RFID**.

This function can be accessed following the path: **Service > Application > EV Charger > Charger Card Admin.**

Operations

- a. Choose **Plant**: The function is based on each plant, you need to choose one plant from the upper part of the function main page, then the RFID cards in the plant will be shown on the page. The RFID number is displayed in hex format, now the APP can display a maximum of 10 cards on each page, slide left and right to see more cards.
- b. Add card: Touch **Add** button at the bottom of the function main page, there are three methods to add the cards.
 - » **Scan the barcode**: This method is for the RFID cards with barcode from SolaX.
 - » **Enter the card number**: This method is for the cards with card number from SolaX.
 - » **Bind through EV charger**: This method is for the SolaX cards without barcode and card number and other third party cards. It will require the operator to swipe the card on the card swiping position of the chosen EV-Charger.
- c. Delete card: Select and long press the card on the list, the delete button will appear. Then touch **Delete** to confirm the operation.
- d. Rate setting: Touch the  icon on the upper right corner of the function main page, you can set the rate for charging.

14.2 Parallel Function

14.2.1 Introduction of Parallel Function

For the users who like to install more than one EV-Charger under same circuit, they can use the parallel function.

In Solar scene, two EV-Chargers can be paralleled in one system. One EV-Charger can be operated as primary EV-Charger and the other secondary. The primary EV-Charger takes the responsibility to collect PV feed in information and grid energy consumption information together and to allocate the PV energy and remaining load capacity for the system according to allocation ratio.

In Standard scene, a maximum of 20 EV-Chargers can be paralleled in one system. One EV-Charger can be operated as primary EV-Charger and the rest secondary. The charging power will be allocated averagely among the EV-Chargers.

When using the parallel function, the secondary EV-Charger's work mode setting will be copied from the primary EV-Charger.

NOTICE!

- The EV-Chargers used in parallel function should be the same model.
- The firmware version of the EV-Chargers should be the same.

14.2.2 Connection Method

Parallel system in Solar scene

- Communication with Inverter

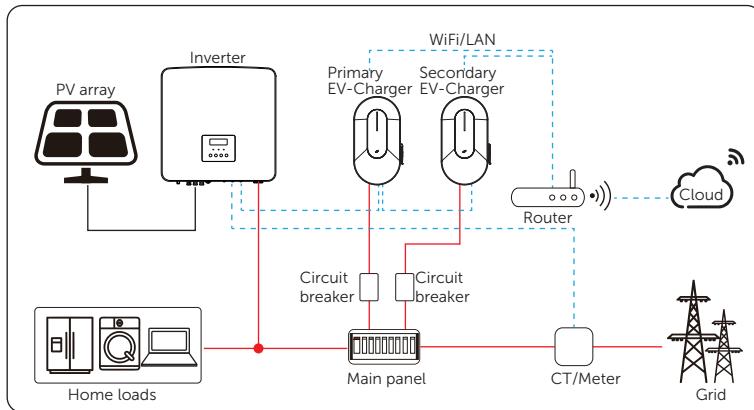


Figure 14-1 Parallel function - communication with inverter in Solar scene

- 1) Connect the primary EV-Charger's A1 & B1 of COM1-S- port to the inverter's COM or RS485 port according to the definitions of the communication ports of the specific inverter. (Please refer to the user manual of the specific inverter for details.)
- 2) Connect the primary EV-Charger's A2 & B2 of COM2-M- port to the secondary EV-Charger's A1 & B1 of COM1-S- port.

- Communication with CT/meter

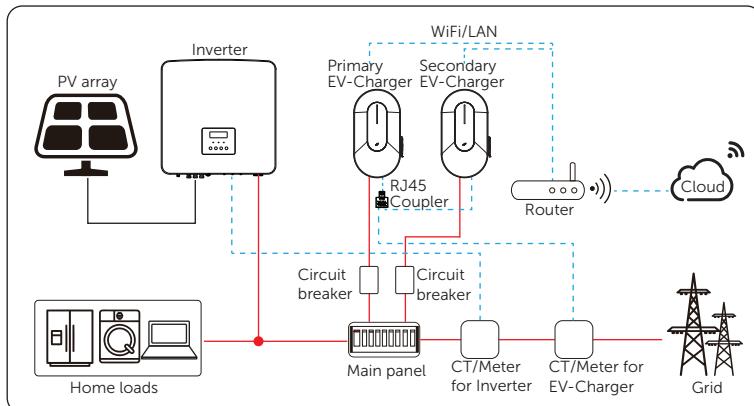


Figure 14-2 Parallel function - communication with CT/meter in Solar scene

- 1) Connect CT or meter to the primary EV-Charger's COM2-M- port.
- 2) Connect the primary EV-Charger's A2 & B2 of COM2-M- port to the secondary EV-Charger's A1 & B1 of COM1-S- port. (An RJ45 coupler is needed for COM2-M- port.)

Parallel system in Standard scene

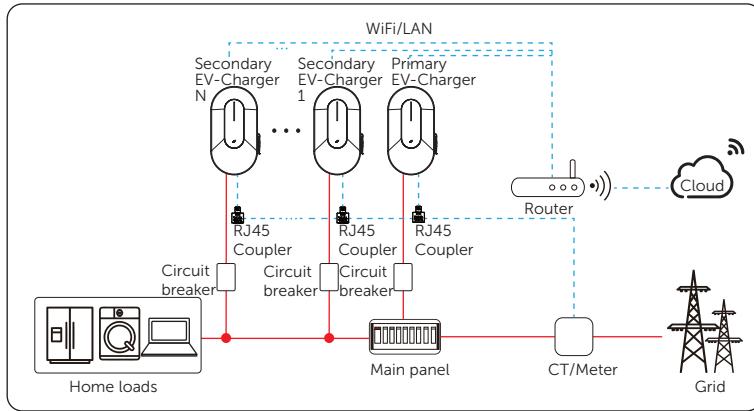


Figure 14-3 Parallel function in Standard scene

- 1) Connect CT or meter to the primary EV-Charger's COM2-M- port.
- 2) Connect the primary EV-Charger's A2 & B2 of COM2-M- port to the secondary EV-Chargers' A1 & B1 of COM1-S- port via RJ45 couplers.

NOTICE!

- RJ45 couplers need to be prepared by the user.
- For the specific wiring procedures, please refer to section "6.2 Installation and Wiring Steps".

14.2.3 Settings for Parallel Function

Do the App settings on the primary EV-Charger, the settings relating to work mode will be synchronized to the secondary EV-Charger. The parallel function setting can be done on the setting page following the path: **Advanced setting > Parallel Setting**.

- 1) Select **Primary** for the primary EV-Charger, the secondary EV-Charger(s) will automatically switch to **Secondary**.

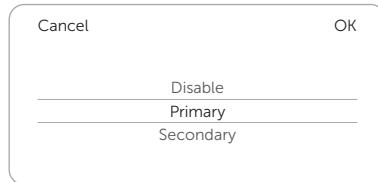


Figure 14-4 Set the primary EV-Charger

- 2) Set the items according to different scenarios.

- For Solar scene, set the **PowerAllocationRatio** for **primary** and **secondary**. The default is 1:1, and supported ratio is 1:1, 1:2, 2:1. This feature is to allocate the PV energy and remaining load capacity for the two EV-Chargers if user needs.

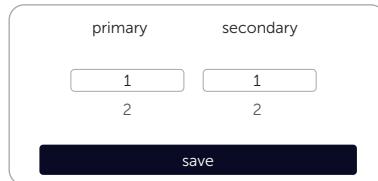


Figure 14-5 Set the power allocation ratio

- For Standard scene, set and save the **Secondary number** according to the actual situation. The charging power will be allocated averagely among the EV-Chargers.

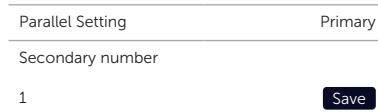


Figure 14-6 Set Secondary number

- 3) Enable and set the value for **Dynamic load balance** as needed on the primary EV-Charger following the path: **Charger setting > Dynamic load balance**.

For the settings on the inverter side when connected with inverter, please refer to the user manual of the specific inverter for details.

NOTICE!

- When parallel function is enabled, any work mode setting of the secondary EV-Charger should be done via the primary EV-Charger, no matter whether the primary EV-Charger is working or not; the settings done on the secondary EV-Charger are invalid.

NOTICE!

- When the EV-Chargers work in parallel, the primary EV-Charger will allocate the PV energy and remaining load capacity for EV-Chargers.
- When the primary EV-Charger or the secondary EV-Charger works alone, each can use full PV energy and remaining load capacity in Solar scene.

14.3 Voice Control Function

14.3.1 Introduction of Voice Control Function

The EV-Charger supports voice control with Alexa Echo to realise the smart control of the charging modes and get the information of it.

Please connect the Alexa Echo with power supply and download or update the Alexa App in you mobile device's App store in advance.

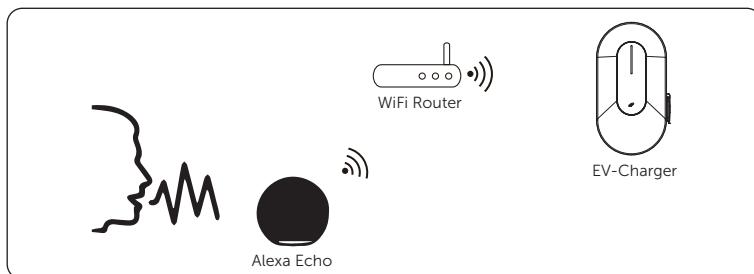


Figure 14-7 Voice control function

14.3.2 Operation of Voice Control Function

Step 1: Set up Alexa Echo.

- Sign up and log into the Alexa App.
- Select **Devices** at the bottom menu, and touch **+** on the upper right corner. Then select **Add Device**.
- Select **Amazon Echo** and then **Echo, Echo Dot, Echo Pop and more**.

- d. Follow the instructions to set up your Alexa Echo.

Step 2: Link with the EV-Charger.

- a. Select **More** at the bottom menu, and select **Skills & Games**.
- b. Search and select "**Solax Power**" (Note the case and space; it should be input as this exactly), then **LAUNCH** the skills to your Echo.
- c. Click **SETTINGS**, then **Link Account**, and input your SolaXCloud account information.
- d. Check the status, **Linked** indicates the skills are successfully linked.

Step 3: Say "Alexa, open smart energy" to Alexa Echo to launch the voice control skills. The following voice control skills are supported.

- my charger current status
- my charger current mode
- my charger about the amount of electricity charged this time
- my charger the charging power this time
- my charger set to Green mode
- my charger set to economy mode
- my charger set to Stop mode
- my charger set to Fast mode



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