



X1/X3-EVC Series User Manual

7.2 kW - 22 kW (Commercial Edition)



EN

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* Warranty Registration Form

1 Notes on this Manual

1.1 Scope of Validity

This manual is an integral part of the X1/X3-EVC Series EV-Charger. It describes the assembly, installation, commissioning, maintenance and failure of the product. Please read it carefully before operating.

X1-EVC-7.2K(SXC)	X3-EVC-11K(SXC)	X3-EVC-22K(SXC)
X1-EVC-7.2K(PXC)	X3-EVC-11K(PXC)	X3-EVC-22K(PXC)
X1-EVC-7.2K(PLC)	X3-EVC-11K(PLC)	X3-EVC-22K(PLC)

Note:

“X1” means single-phase, “X3” means three-phase.

“EVC” means “EV-Charger”.

“7.2K” means 7.2 kW, “11K” means 11 kW, “22K” means 22 kW.

“S”: Socket Type, only socket outlet, “P”: Plug Type (also called Connector Type), with charging cable and connector.

“X”: without LCD screen, “L”: with LCD screen.

“C”: commercial edition.

Keep this manual at where it is accessible all the time.

1.2 Target Group

This manual is for qualified electricians. The tasks described in this manual can only be performed by qualified electricians.

1.3 Symbols Used

The following types of safety instructions and general information appear in this document as described below:



DANGER!

“Danger” indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING!

“Warning” indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION!

“Caution” indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTE!

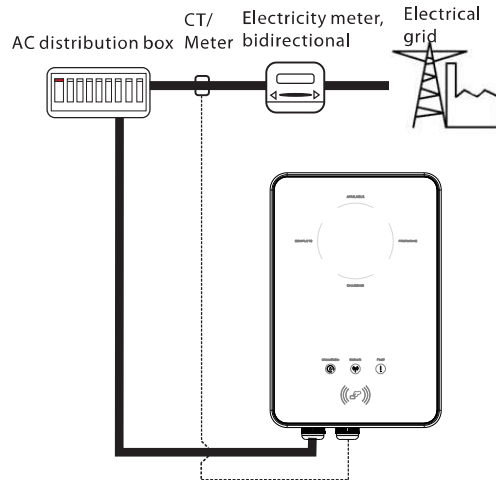
“Note” provides tips that are valuable for the optimal operation of your product.

2 Safety

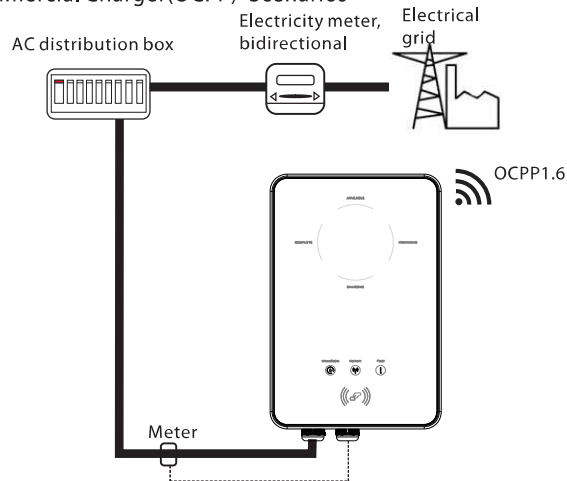
2.1 Appropriate Usage

The series are AC EV charger, intended to be installed in a fixed location and connected to the AC supply.

- For “Private Charger” Scenarios



- For “Commercial Charger(OCPP)” Scenarios



NOTE!

Please decide the application scenarios before installation.

2.2 Important Safety Instructions



DANGER!

- Danger to life due to output and input high voltages in this device!
- All work must be carried out by qualified electrician who has knowledge of and experience in dealing with electrical installations.
- The device is not to be used by children or persons with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children should be supervised to ensure that they do not play with the device.



CAUTION!

- Danger of burn injuries due to hot enclosure parts!
- During operation, the EV-Charger may become hot.



CAUTION!

- Incorrect operation or misuse may result in:
- Injury or death to the operator or third parties.
 - Damage to the device and other property of the operator.
 - Inefficient operation of the device.



WARNING!







Risk of electric shock!

- Prior to the application, please read this section carefully to ensure correct and safe application. Please keep the user manual properly.
- Use only accessories recommended. Otherwise may result in a risk of fire, electric shock, or injury to person.
- Make sure that existing wiring is in good condition and that wire is not undersized.
- Do not disassemble any parts of the EV-Charger which are not mentioned in installation guide. It contains no user-serviceable parts. See Warranty for instructions on obtaining service. Attempting to maintain the EV-Charger by yourself may result in a risk of electric shock or fire and will void your warranty.
- Keep away from flammable, explosive materials to avoid fire disaster.
- The installation place should be away from humid or corrosive substance.

- Authorized service personnel must use insulated tools when installing or working with this equipment.
- Do not use the EV-Charger in case the device has defects, cracks, abrasion, bare leakage and so on. Please contact the working staff in case of above conditions.
- In case any emergency condition happens, please press the EMERGENCY STOP button immediately, cut off all input and output power supply.
- During charging, the electric vehicle is not allowed to drive. Charging only when the electric vehicle stays still. For hybrid car, charging only when switching the engine off.

2.3 Explanation of Symbols

This section gives an explanation of all the symbols shown on the EV-Charger type label.

Symbol	Explanation
	CE mark. The EV-Charger complies with the requirements of the applicable CE guidelines.
	TUV certification.
	Danger of high voltages. Danger to life due to high voltages in the EV-Charger!
	Danger. Risk of electric shock!
	The EV-Charger can not be disposed together with household waste. Used electrical devices must be collected separately and recycled in an environmentally responsible manner. Ensure that you return your used device to your dealer or obtain information regarding a local, authorised collection and disposal system.
	The EV-Charger can be recycled.

3 Introduction

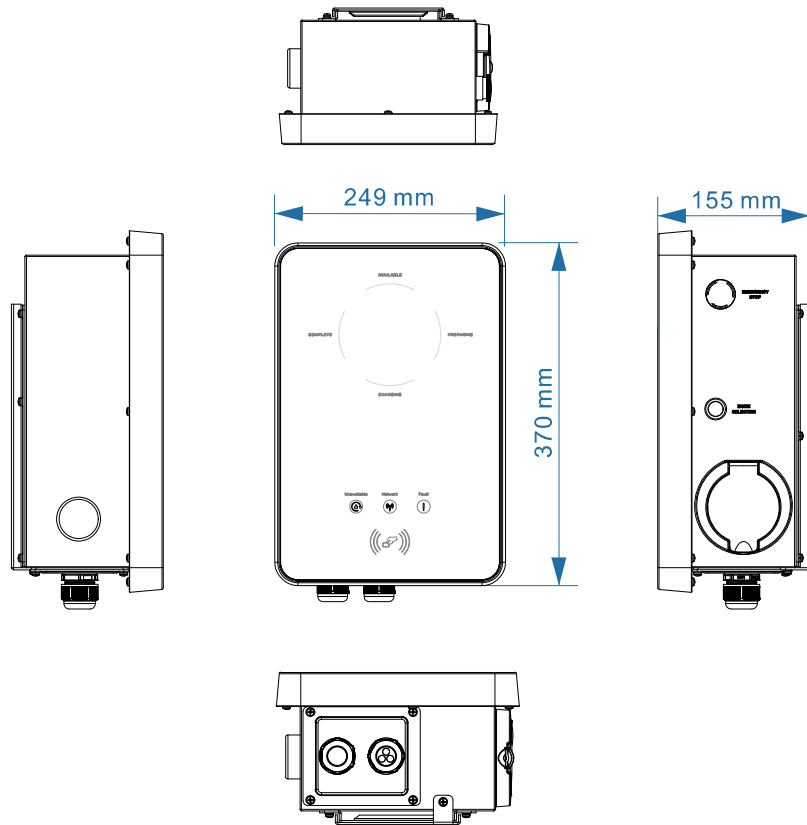
3.1 Basic Features

Thanks for purchasing with the series EV-Charger. The EV-Charger can be used for charging electric vehicle. Also you can choose single or three phase with plug or socket type, you can consult our salesmen for specific details. The features of the series are listed as below .

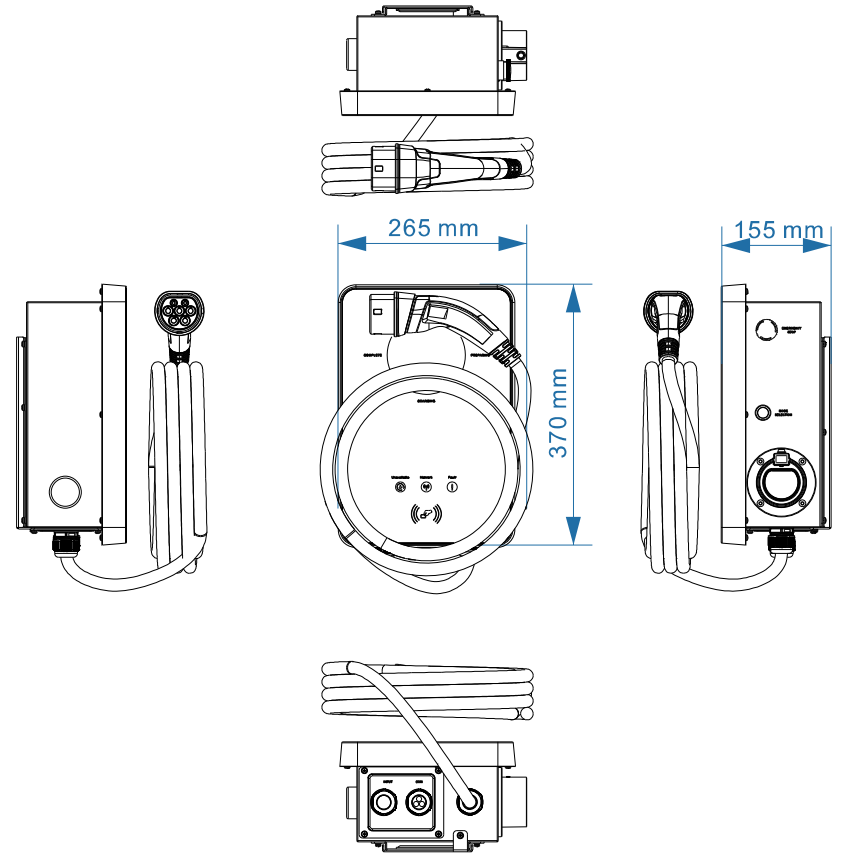
- Plug or socket outlet selectable
- Integrated current failure monitoring (30mA AC & 6mA DC)
- Integrated with PEN protection and no earth rod
- Encrypted communication based on TLS
- Indoor and outdoor easy installation
- Integrated RFID function
- Remote setting and monitoring with APP and website
- Smart dynamic load balance control
- Set timers to reduce your cost during peak and valley price
- Integrated with OCPP 1.6(JSON) protocol
- Delayed startup configurable

3.2 Dimension

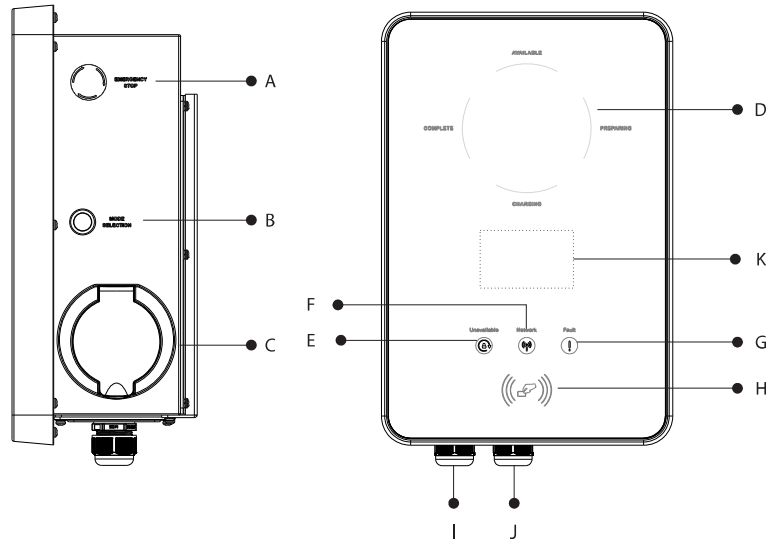
➤ Socket Type



➤ Plug Type (Connector Type)



3.3 Product Description



Object	Name	Description
A	Button	EMERGENCY STOP: Press in emergency, the EV-Charger will stop operating.
B		MODE SELECTION: Reserved.
C	Charging connector base	Socket outlet (for Socket Type)/Connector holder(for Plug Type)
D	LED indicator	Operating status: The corresponding status light will be on when operating.
E		Unavailable: When the light is on the EV-Charger is not available for charging.
F		Network: When the light is on, the EV-Charger is connected with the OCPP server.
G		Fault: The red light will be on when error occurs.
H	Card swiping position	Swipe card here.
I	Connector	INPUT: For AC input connection.
J		COM: For communication connection.
K	LCD screen (Optional)	Display the EV-Charger information.

4 Technical Data

4.1 General Data

Model	X1-EVC-7.2K(SXC) X1-EVC-7.2K(PXC) X1-EVC-7.2K(PLC)	X3-EVC-11K(SXC) X3-EVC-11K(PXC) X3-EVC-11K(PLC)	X3-EVC-22K(SXC) X3-EVC-22K(PXC) X3-EVC-22K(PLC)
AC Nominal Input			
Phases/Lines	L+N+PE	3P+N+PE	3P+N+PE
Voltage [V]	230	400	400
Frequency [Hz]	50/60;±5	50/60;±5	50/60;±5
AC Nominal Output			
Voltage [V]	230	400	400
Current [A]	32	16	32
Power [W]	7200	11000	22000
Interface			
RS485	YES		
RFID Frequency	13.56 M		
LCD Screen	Optional		
Housing Material	Plastic/Metal		
Installation Method	Wall-mounted(Optional: pedestal-mounted)		
Wall-mount Bracket	YES		
Charging Outlet	Socket Type (Socket-outlet)/Plug Type (Charging cable with connector)		
Cable Length [m]	6.5(for Plug Type)		
Operating Temperature [°C]	-30~ +50		
Working Humidity	5%~95% without condensation		
Working Altitude [m]	<2000		
Degree of Protection	IP65		
Protection Class	Class I		
Application Site	Indoor/Outdoor		
Cooling Method	Natural cooling		
Dimension (W*H*D)[mm]	249*370*155(for Socket Type)/265*370*155(for Plug Type)		
Net Weight [kg]	7(for Socket Type)/10.5(for Plug Type)		
Communication Info			
Communication Mode	WiFi		
EIRP Power	17.41 dBm(Measured Max. Average)		
Frequency	2412~2484 MHz		
Antenna Gain	4 dBi		
Antenna Type	IPEX		
Wireless Mode	802.11 b/g/n		

4.2 Security Protection

Model	X1-EVC-7.2K(SXC)	X3-EVC-11K(SXC)	X3-EVC-22K(SXC)
	X1-EVC-7.2K(PXC)	X3-EVC-11K(PXC)	X3-EVC-22K(PXC)
	X1-EVC-7.2K(PLC)	X3-EVC-11K(PLC)	X3-EVC-22K(PLC)
Multiple Protection			
Over/Under voltage protection	YES		
Overload protection	YES		
Current leakage monitoring	YES		
Grounding protection	YES		
Surge protection	YES		
Over temperature protection	YES		
Integral earth leakage monitoring	Integrated current failure monitoring (30 mA AC & 6 mA DC) *		
Safety Standard	IEC61851-1; IEC62196-2		
Built-in PEN fault technology	YES		
Warranty	3 years		

*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.

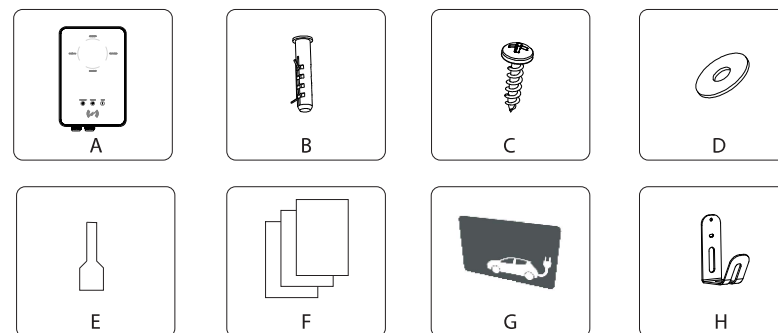
5 Installation

5.1 Check for Transport Damage

Make sure the EV-Charger is intact during transportation. If there are some visible damages, such as cracks, please contact your dealer immediately.

5.2 Packing List

Open the package and fetch out the product, check the accessories at first. The packing list is shown as below.



Object	Quantity	Description
A	1	EV-Charger
B	3/5	Expansion bolt (3 for Socket Type, 5 for Plug Type)
C	3/5	Self tapping screw (3 for Socket Type, 5 for Plug Type)
D	3/5	Gasket (3 for Socket Type, 5 for Plug Type)
E	3/5	European terminal (3 for single-phase; 5 for three-phase)
F	/	Documents
G	2	Private RFID card
H	1	Cable hook (only for Plug Type)

5.3 Installation Precaution

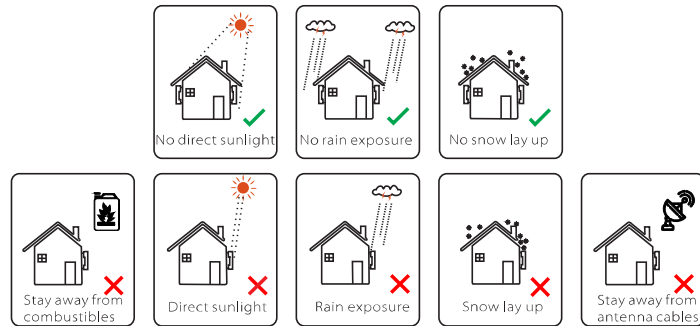
The EV-Charger is designed for wall-mounted installation (IP 65).

Make sure the installation site meets the following conditions:

- Not exposed to sunlight directly.
- Not in areas where highly flammable materials are stored.
- Not in potential explosive areas.
- Not near the television antenna or antenna cable.
- Not higher than altitude of about 2000 m above sea level.
- Not in environment of precipitation or humidity (5%~95%) .
- Make sure that the ventilation is good enough.
- The ambient temperature in the range of -30°C~ +50°C.
- The slope of the wall should be within ±5°.

The wall on which the EV-Charger will be installed should meet the conditions below:

- 1) Solid brick/concrete, or strength equivalent mounting surface;
- 2) The EV-Charger must be supported or strengthened if the wall's strength isn't enough (such as wooden wall, the wall covered by thick layer of decoration).



➤ Available Space Size

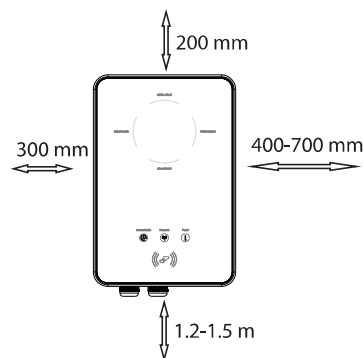


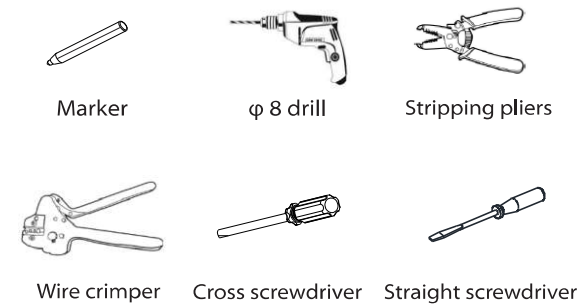
Table: Available Space Size

Position	Min. size
Left	300 mm
Right	400-700 mm
Top	200 mm
Bottom	1.2-1.5 m
Front	300 mm

5.4 Installation Steps

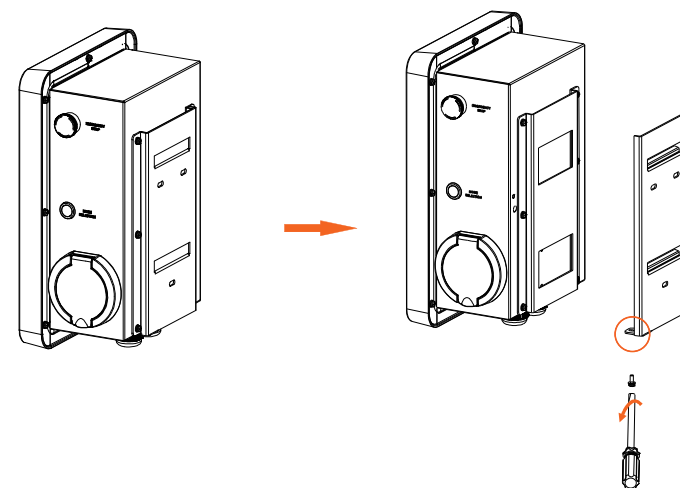
Preparation

- Below tools are needed before installation.



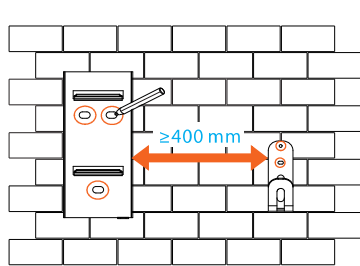
- Prepare cables:
Communication cable with RJ45 if the required length exceeds 10 m;
Input cable with outer diameter of 12.5-18 mm (three-core for single-phase, five-core for three-phase)

STEP 1: Remove the screw from the EV-Charger with the cross screwdriver. Then remove the back bracket away carefully.

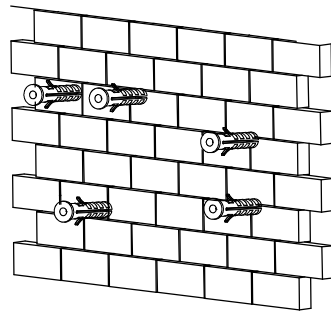


STEP 2: Fix the back bracket and the cable hook (only for Plug Type) to the wall.

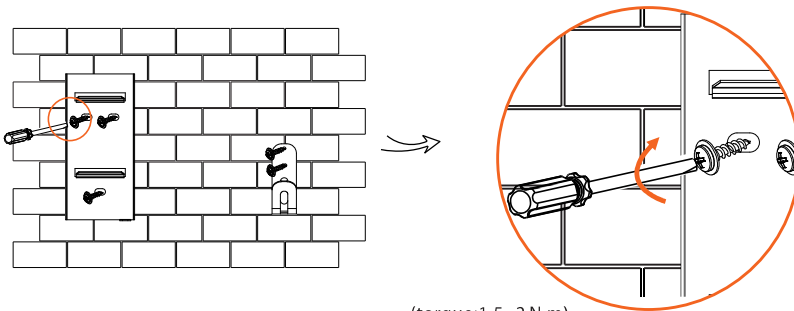
- Mark the position of the holes.
- Drill holes with ϕ 8 drill.
- Depth: at least 45 mm.



- Insert the expansion bolts.



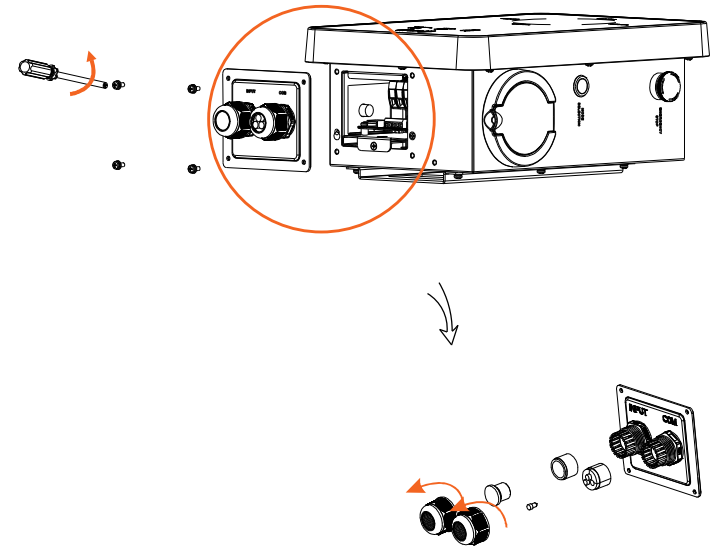
- Align the bracket and the cable hook (only for Plug Type) with the holes, and screw the self tapping screws with the cross screwdriver.



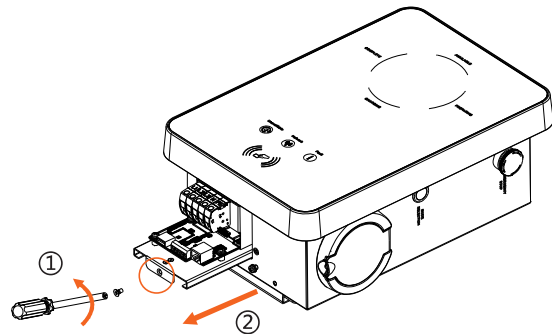
(torque:1.5~2 N·m)

STEP 3: Hang the EV-Charger on the wall for trial, then estimate the required length of input cable and communication cable. After that, take the EV-Charger down.

STEP 4: Unscrew the EV-Charger's rear cover with the cross screwdriver and take it down. Then undo the fastening heads and take the waterproof materials away as shown below.

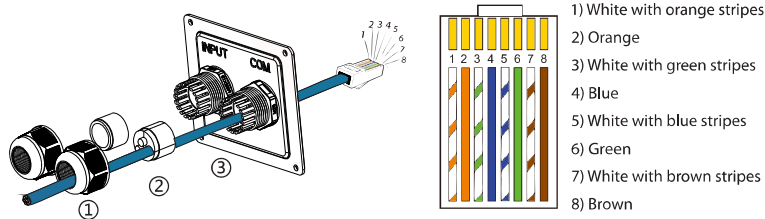


STEP 5: Unscrew the countersunk screw of the base plate of communication board with the cross screwdriver. Then pull the base plate of communication board out.



STEP 6: Insert the (extended) communication cable of the meter or CT or other devices applied through the waterproof connector in sequence as shown below. (For communication connection of different devices, please refer to the "Communication Connection" section of this manual.)

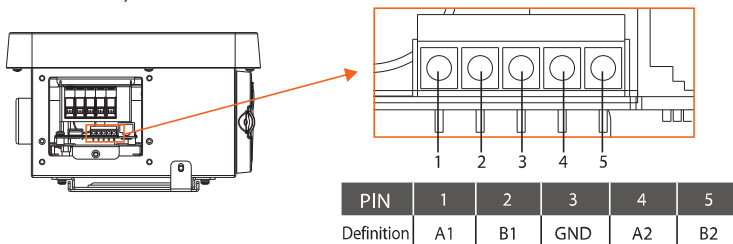
- PIN definitions for RJ45 terminal (Recommended):



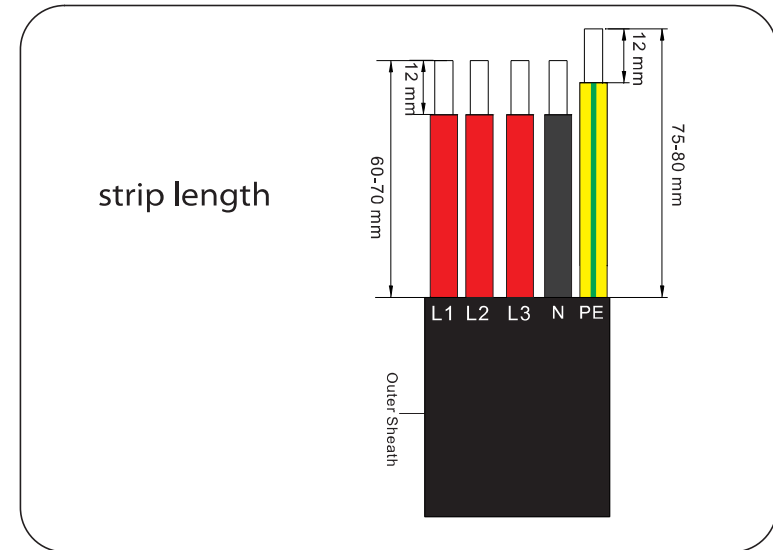
PIN	1	2	3	4	5	6	7	8
Definition	L1_CT+	L1_CT-	L2_CT+	A1	B1	L2_CT-	L3_CT+	L3_CT-

* PIN 3, 6, 7, 8 is null for single-phase.

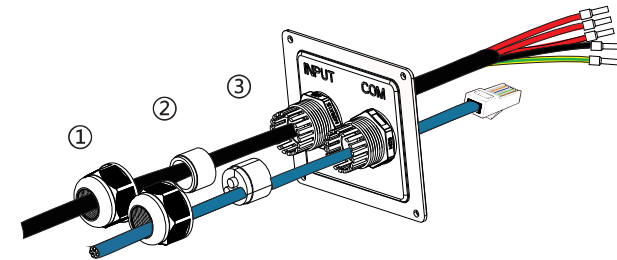
- PIN definitions for RS485 terminal (Alternative connection terminal for meter and other devices):



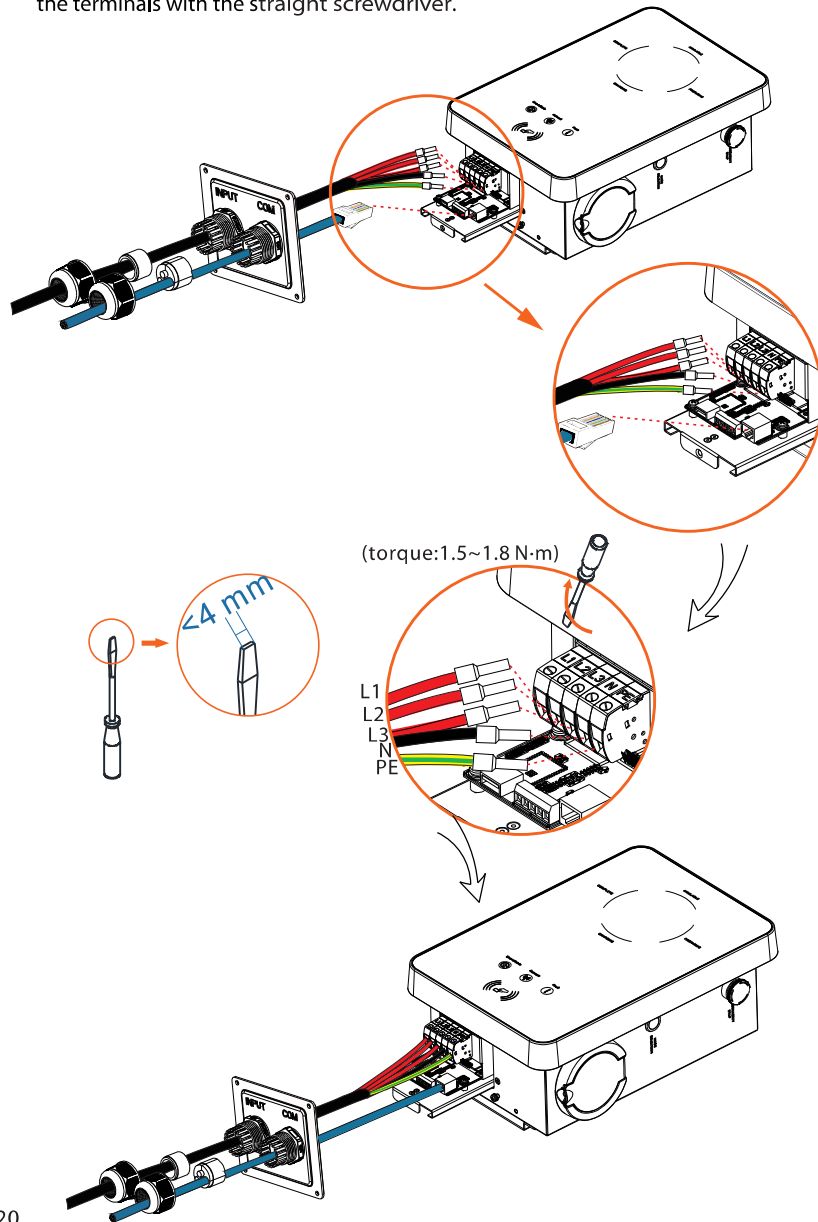
STEP 7: Strip the outer sheath of the input cable as below, ensuring all the wires can reach the terminal blocks with a little excessive length. Use the stripping pliers to strip approx. 12 mm of insulation from the end of all the coloured wires as below. Then crimp the European terminal with the wire crimper.



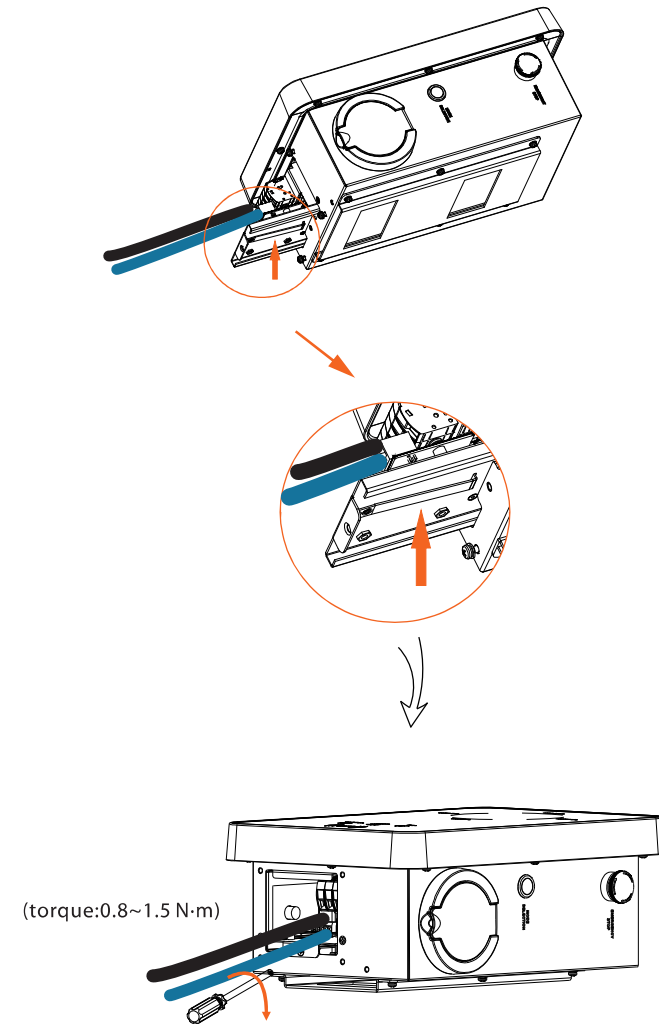
STEP 8: Insert the input cable through the waterproof connector in sequence as shown below.



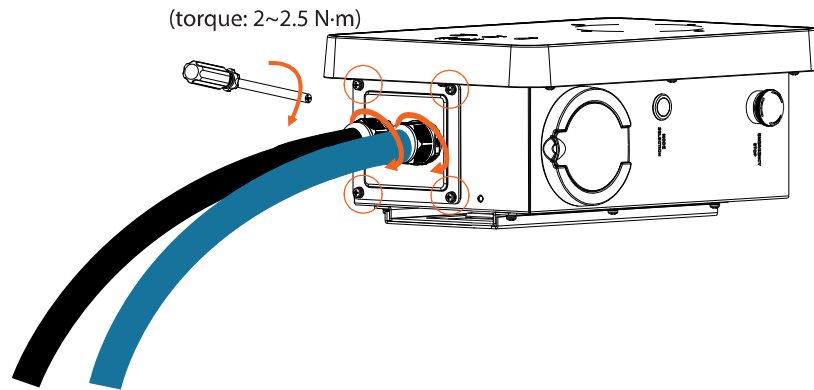
STEP 9: Insert the wires into the appropriate holes of the terminal blocks, then block the terminals with the straight screwdriver.



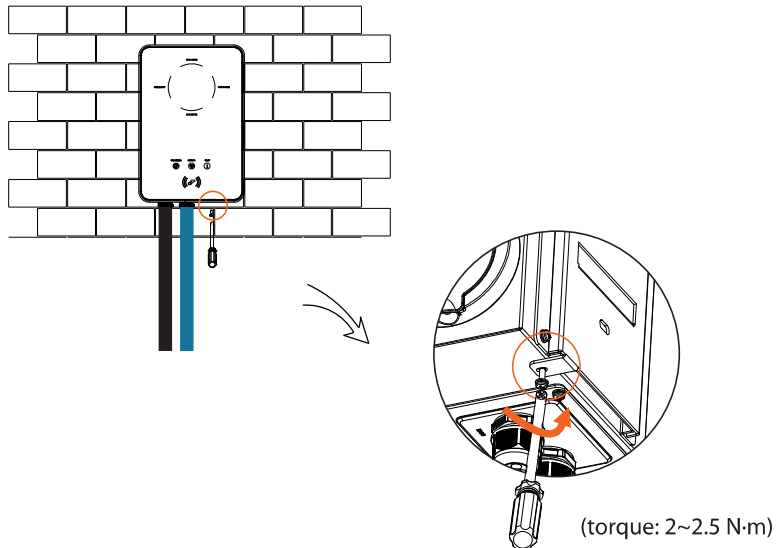
STEP 10: Press the spring upward and push the base plate of communication board in. Then screw the countersunk screw.



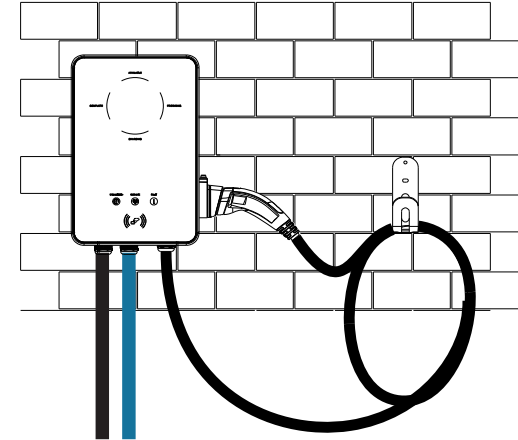
STEP 11: Push the rear cover to appropriate position of the cables and screw the self tapping screws with the cross screwdriver. Then tighten the waterproof fastening heads.



STEP 12: Hang the EV-Charger up carefully and steady the EV-Charger with the self tapping screw and the cross screwdriver.



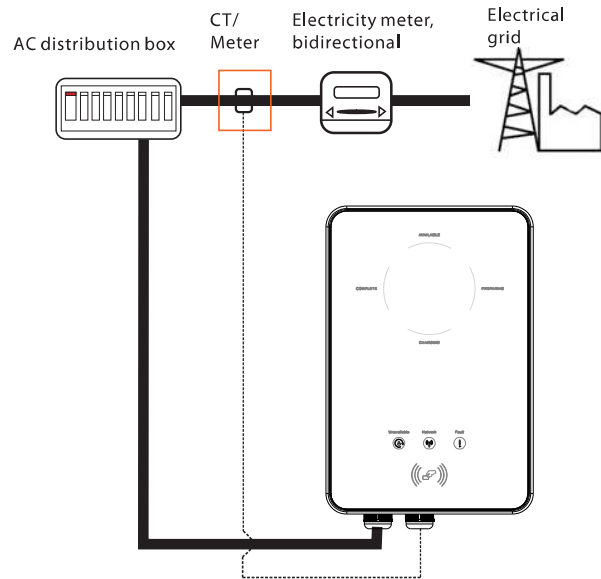
For Plug Type, connect the charging connector with the EV-Charger and hang the connecting cable on the hook.



5.5 Communication Connection

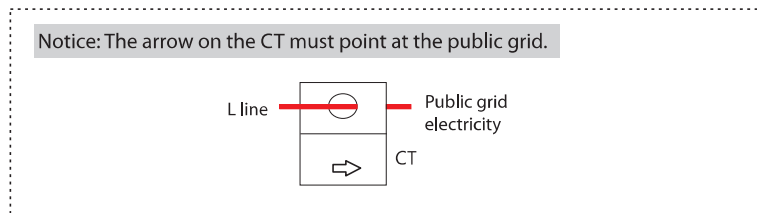
- For "Private Charger" Scenarios

If the user want to use the "Main Breaker Limit" function in "Private Charger" scenarios, a CT or meter must be involved in the system as shown below.

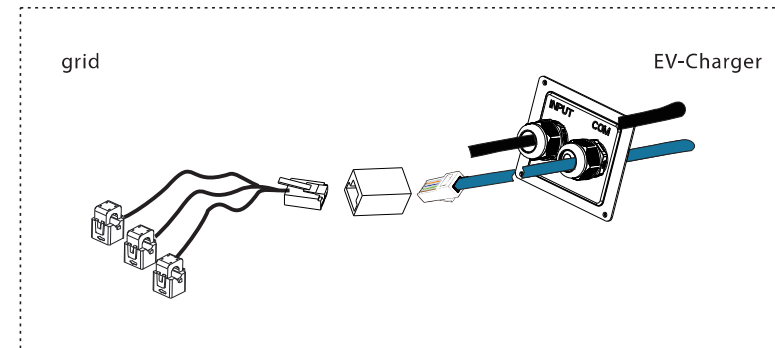


1) CT connection:

-Steady the CT on the public grid.



-Connect the communicable cable of the CT with the EV-Charger or insert the other end of the communication cable and the terminal of CT into each side of the RJ45 terminal adapter if extended cable is needed.



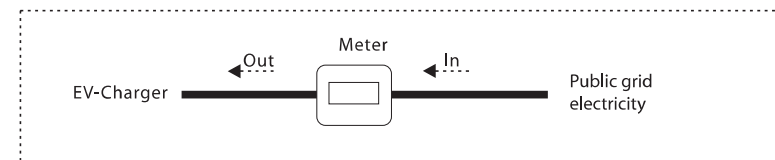
NOTE!



- 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.
- When using the three-phase CT, please clip the CT clamps on the corresponding phases.

CT and the RJ45 terminal adapter can be purchased from us if users need them in their system.

2) Meter connection:



The communication cable of the meter can be connected with RJ45 terminal into the port or connected to PIN A1 & B1 of the RS485 terminal.

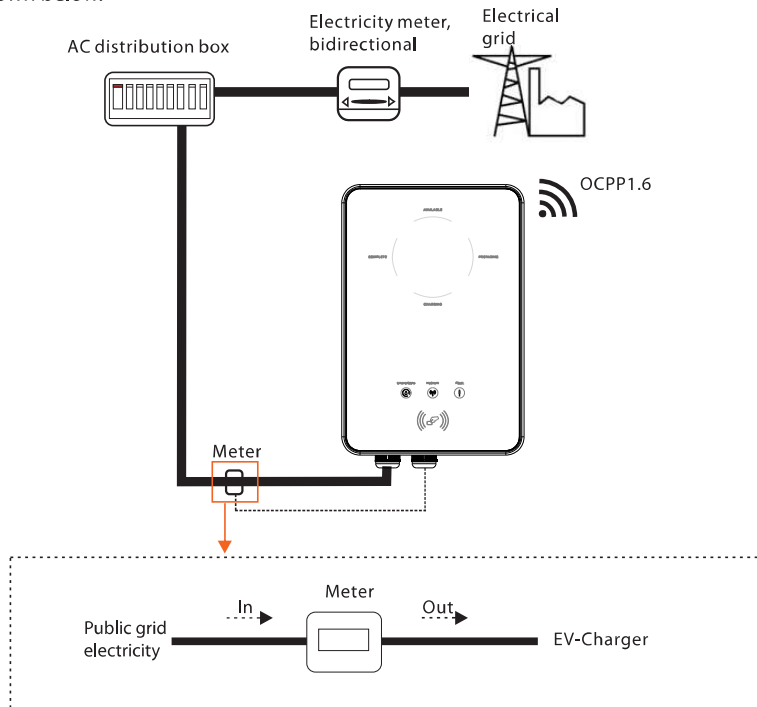


NOTE!

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

- For “Commercial Charger(OCPP)” Scenarios

In “Commercial Charger(OCPP)” scenarios, a meter must be involved in the system as shown below.



The communication cable of the meter can be connected with RJ45 terminal into the port or connected to PIN A1 & B1 of the RS485 terminal.



NOTE!

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

- If the EV-Charger needs to operate together with other devices, please connect the communication cable of the certain device to PIN A1 & B1 of the RJ45 terminal or RS485 terminal through COM as described in STEP 6 of the “Installation Steps” section.

5.6 Run the EV-Charger

- Power on the EV-Charger after checking all below steps:

- a) Check that the device is fixed well on the wall.
- b) AC cable is connected to grid correctly.

- Power on the EV-Charger

- Check the status of LED indicators: When the device is powered on, all the LED indicators will be on and the system will start self-checking automatically. After the checking process, the AVAILABLE light will be on when the connector is not plugged and the PREPARING light will be on when plugged.
- If the Fault light is on, please check if it is correctly installed and connected to the grid.



WARNING!

Power to the unit must be turned on only after installation work has been completed. All electrical connections must be carried out by qualified personnel in accordance with legislation in force in the country concerned.



NOTE!

Equipment only to be used for the purpose outlined by us.

6 Operation Method

6.1 States

The states of the series EV-Charger (commercial edition) are described as below:

States	Indicator Light & Description
Idle	The AVAILABLE light is on. The connector is not inserted.
Connected	The PREPARING light is on. The EV-Charger is connected with EV but not charging.
Charge	The CHARGING light is on. The EV-Charger is charging.
Complete	The FINISH light is on. The EV-Charger has completed charging.
Unavailable	The Unavailable light is on. The EV-Charger cannot charge even if the connector is plugged in.
Online	The Network light is on. The EV-Charger has been connected to the OCPP server.
Fault	The Fault light is on. The EV-Charger is in fault state.

6.2 Start-up Pattern

The start-up pattern for the series EV-Charger (commercial edition) is card-swiping pattern.

For Socket Type, the electronic lock will be locked when the EV-Charger starts charging after swiping the card, and unlocked after swiping the card when the charging stops.

For Plug Type, there is no electronic lock.

Note:

The charging process can be stopped by the vehicle or by APP setting or swiping card). The electronic lock will not unlock automatically when the charging stops, and users need to swipe the card again to unlock it.



NOTE!

In emergency cases, please stop the EV-Charger by pressing the EMERGENCY STOP button.

* Card Activation

In the "Private Charger" scenarios, the RFID cards need to be activated at the EV-Charger. Please follow the instructions below:

1. Enable the "Card Activation Mode" of "Advanced Settings" in the APP. Once enabled, the four operating LED indicator lights on the EV-Charger will light up in sequence and cycle.

NOTE!
The default RFID PIN is 111111, the user can modify the RFID PIN before activation, and the password of the RFID card will be updated to the RFID PIN after activation. The password of the RFID card must be consistent with the one set in the APP. The RFID PIN is 6 digits.

2. Swipe the RFID card at the EV-Charger.
3. If successfully activated, the EV-Charger will beep.
4. Disable the "Card Activation Mode" in the APP or wait for 1 minute after activation, the EV-Charger will turn to standby state.
5. The card is successfully activated.

RFID Function

Card Activation Mode	Enable
RFID PIN	<input style="width: 100px;" type="text" value="111111"/> <input type="button" value="Save"/>

Restore factory settings

EV Charger Reset

6.3 Application Scenarios

The series EV-Charger (commercial edition) has two application scenarios, i.e. the "Private Charger" and the "Commercial Charger(OCPP)".


For the "Private Charger" scenarios, users can start or stop the EV-Charger by swiping card or APP setting, and charge the vehicle at preset time period.

For the "Commercial Charger(OCPP)" scenarios, users can connect their EV-Charger with the OCPP server.

Before choosing this scenario, please ensure that the EV-Charger has met the following prerequisites:

- 1) The EV-Charger has joined the network that can access the Internet through Wi-Fi connection.
- 2) A valid "URL" address has been obtained from the OCPP server.
A valid "URL" address usually starts with "ws://" or "wss://". For example, *ws://xxxxxx.com:8080/ChargeCentralSystem/CPXXXXXX* or *wss://xxxxxx.com/ChargeCentralSystem/CPXXXXXX*.
For more details, please consult with the seller or the OCPP server.
- 3) A valid charger ID has been obtained from the OCPP server.
- 4) The network is normal and the OCPP server can be connected. When the EV-Charger has been connected to the OCPP server successfully, the Network light will be on.

NOTE!



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

For the detailed settings, please refer to section 7 "APP Setting".

7 App Setting

The screen shots here are for reference only and the actual interfaces may differ. Users can update their APP as needed.

➤ APP account login

- If you don't have the app or monitoring cloud's account yet, you can operate as below:

➤ Monitoring Cloud Registration

Step 1: Use your smart phone to scan below QR code or search for the keyword "SolaXCloud" in browser to download the Monitoring App.



iOS

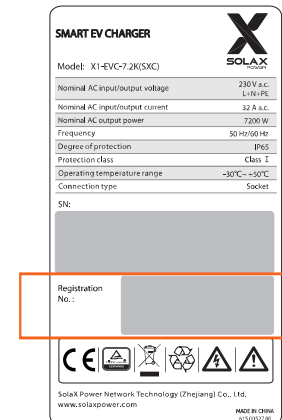


Google

Step 2: Touch the Setting button at upper left corner of the Monitoring App to choose language.

Step 3: Touch "Create a new account" at the bottom of Monitoring App and fill in the information to create the account.

Step 4: For the first login, click "+" to create site. Fill in site information and type in or scan the Registration No. and follow the instructions to complete the site creation and WiFi connection.



(Example for Registration No.)

- If you already have the account, you can operate as below:

> Add Device

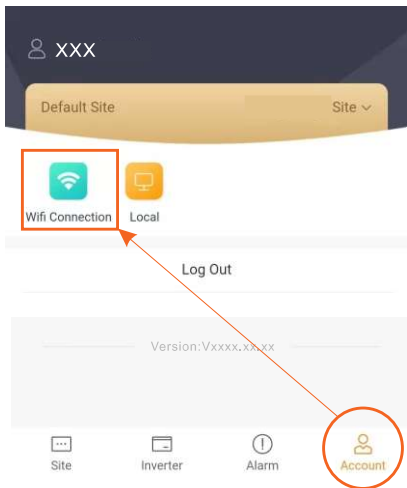
Step 1: Login your account and turn to Device page in the app.
 Step 2: Touch the “+” icon on the upper right corner and fill in the information to add the EV-Charger.

Site*
 Default Site v
 Registration No.*


OK

> Wi-Fi Connection

Step 1: Login your account and turn to Account page in the app.
 Step 2: Click “Wifi Connection”.




Step 3: Type in or scan the Registration No. of the EV-Charger. Then touch Next and agree to join the network of the EV-Charger.


Registration No. 

Next

Step 4: Type in or choose your home Wi-Fi SSID and password, then touch “Next”.

*5GHz Wi-Fi is unavailable for now.

WIFI Network* 

Password* 

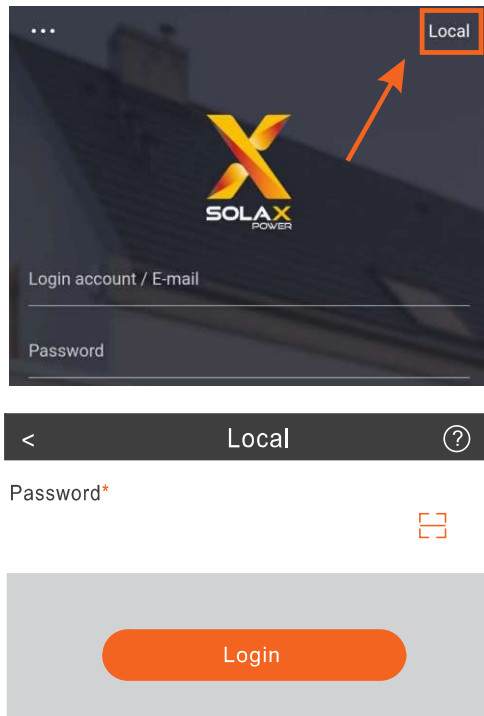
Back Next

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

*Check more Wi-Fi setting information on www.solaxcloud.com/wifiSetting/

➤ Local Mode

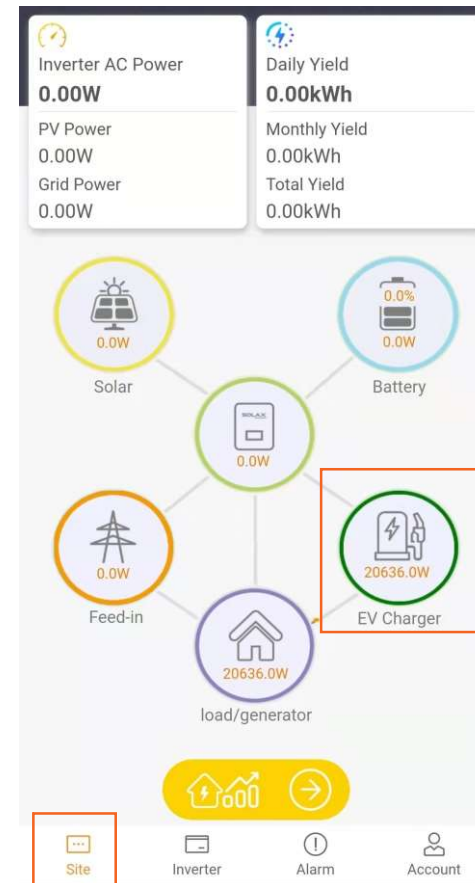
Use your smart phone to connect the SolaX Wi-Fi signal (Wifi_Sxxxxxxx). Then touch Local and type in password (initially same as the Registration No.) to access the Local Mode in the Monitoring App.
 *Visit the local password setting instruction on www.solaxcloud.com/wifiSetting/



*If manual WiFi configuration is required, the IP address is <http://192.168.10.10/>.

➤ Settings for the EV-Charger

1. Follow the instructions below to enter the setting page:
 1) a. Login and select "Site" at the bottom and then touch the "EV Charger" icon and select your EV-Charger on the list.

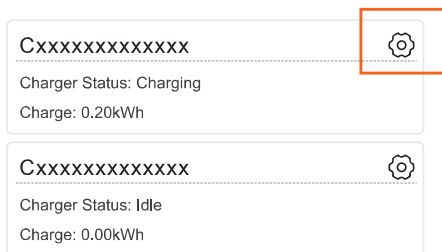


b. For the EV-Charger applied "Private Charger" Scenarios, touch the "EV Charger" icon on the page appeared after selecting and then touch the setting icon to enter the setting page.
 For the EV-Charger applied "Commercial Charger(OCPP)" Scenarios, touch the setting icon on the top right corner of the selected EV-Charger on the list.

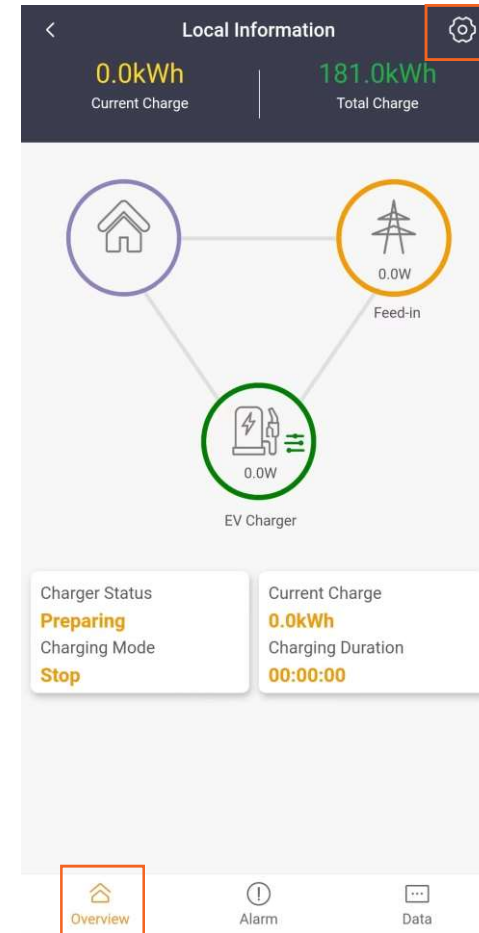
- For "Private Charger" Scenarios



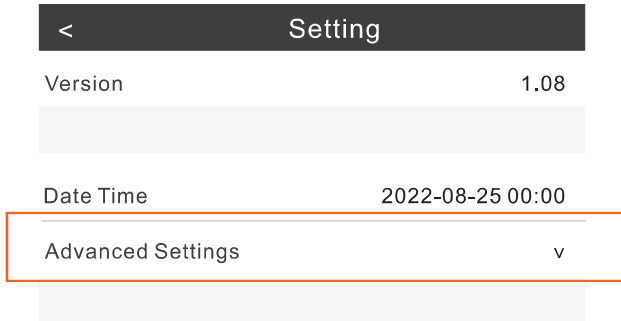
- For "Commercial Charger(OCPP)" Scenarios



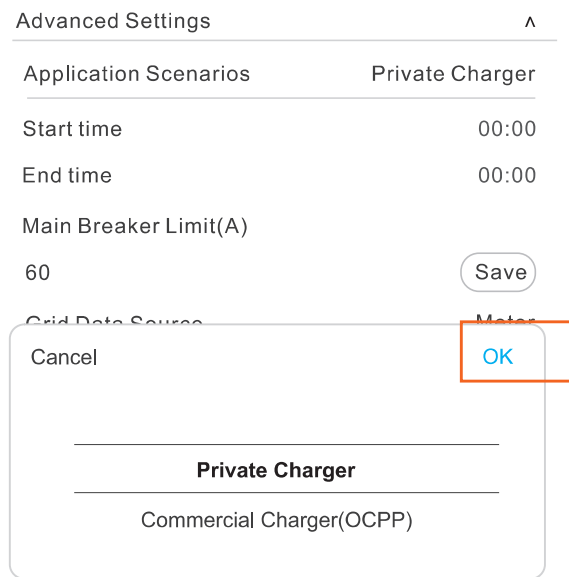
2) If logged in via Local mode, please select "Overview" at the bottom and then touch the setting icon as shown in the picture.



2. After entering the setting page, select "Advanced Settings" and a drop-down list will appear.



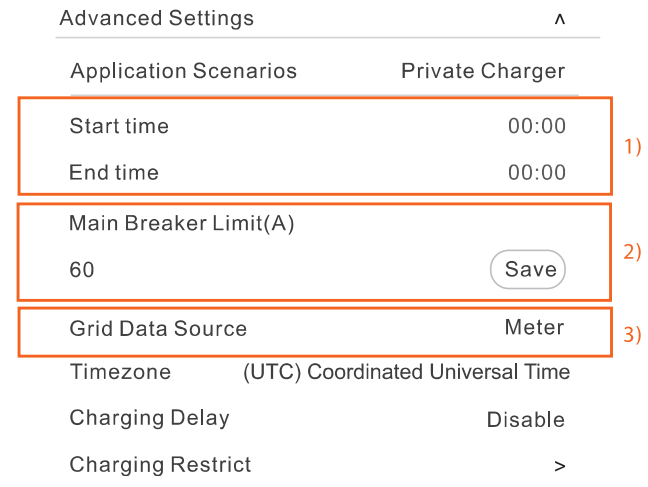
3. Select "Application Scenarios" and touch "OK" to confirm.



4. Complete the corresponding settings for different scenarios according to the following instructions.

- Private Charger

1) Set the "Start time" and "End time" if you want to charge your vehicle at a certain time period.
 2) Set and save the value for "Main Breaker Limit". With dynamic load balance function, when the power consumption approaches the preset max value, the EV-Charger will reduce charge power so that the main breaker current will reduce to the preset value minus 5 A, thus avoid the situation of main breaker trip due to overload.




3) Select the item for "Grid Data Source" according to the actual application. If the EV-Charger was to be connected with devices except CT or meter, please select "MODBUS". When "MODBUS" is selected, the "Slave Address" will appear and needs to be checked and set if needed. The addresses of different EV-Chargers in the same one system should be different. The default value is 70.

Grid Data Source MODBUS

Slave Address

70 Save

Timezone (UTC) Coordinated Universal Time

NOTE!
 The "Slave Address" only needs to be modified according to the actual application when multiple EV-Chargers are used in parallel and the default value can be kept when one single EV-Charger is used.

4) In this scenario, you can touch the "EV Charger" icon and start or stop charging by touching corresponding image on the new pop-up page. Also, you can set the "Start time" and "End time" on this new page.



- Commercial Charger(OCPP)

1) Type in the address and charger ID obtained from the OCPP server and touch "Save". A "Setting success" notice will appear when saved successfully.

Advanced Settings ^

Application Scenarios Commercial Charger(OCPP)

Timezone (UTC) Coordinated Universal Time


Charging Delay Disable

Charging Restrict >

OCPP server

Charger ID

Save

NOTE!
 OCPP server and Charger ID can only be set by logging in via Local mode.

5. Confirm the "Timezone" according to the application location. After logging in to the APP through LOCAL mode, the Timezone will be automatically located. If it is not correct, please adjust it to the correct one.

Advanced Settings ^

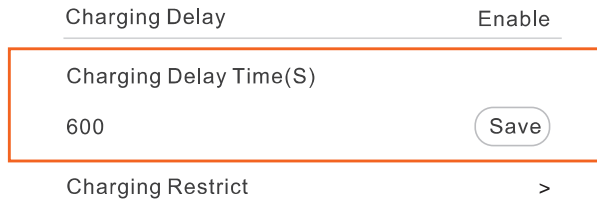
Application Scenarios Commercial Charger(OCPP)

Timezone (UTC) Coordinated Universal Time

Charging Delay Disable

Charging Restrict >

6. You can delay the start charging time for the vehicle by enabling the "Charging Delay". Once enabled, you can input the "Charging Delay Time(S)" within a range of 600 s ~ 1800 s. If not needed, you can disable it.



7. Settings for "Charging Restrict".

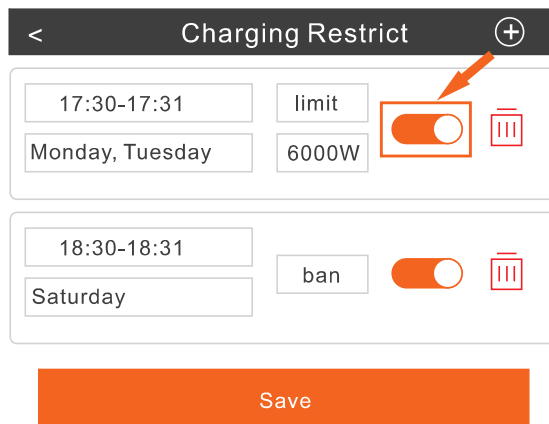
You can set at most six time periods here, and for each period you can set repeat times. At these preset time periods, the EV-Charger will charge at a restricted power limit or will not be available for charging.

1) Select "Charging Restrict" and touch the extended icon.



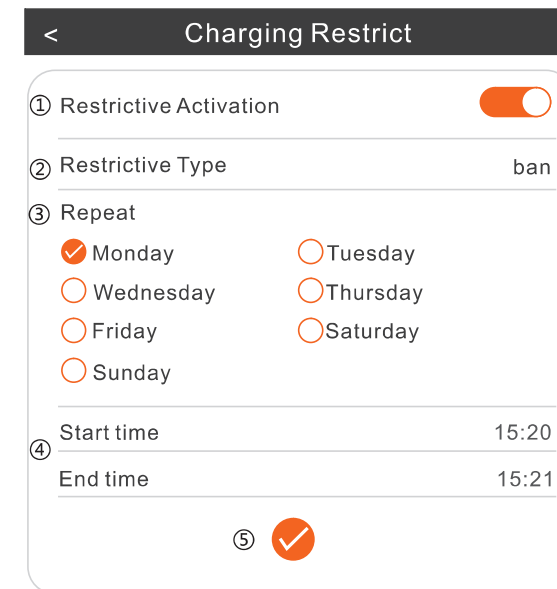
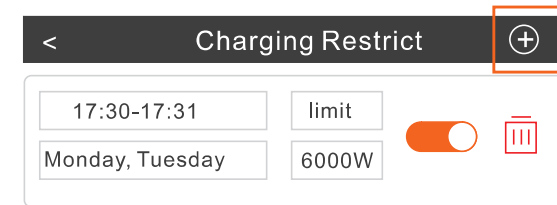
2) After entering the "Charging Restrict", the existed list will appear.

You can choose certain time period(s) and turn on or off the switch as shown, and then touch "Save" to confirm the settings.

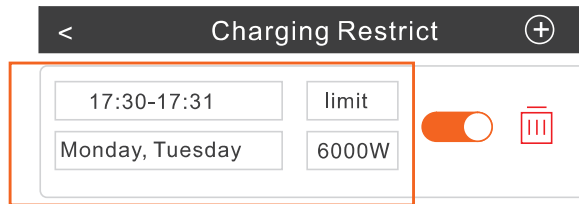


3) If you want to add a new period, please touch the add icon and complete relative settings.

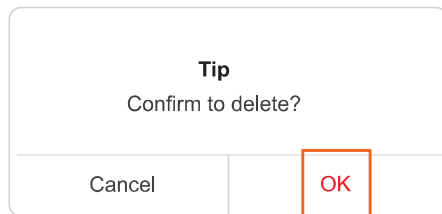
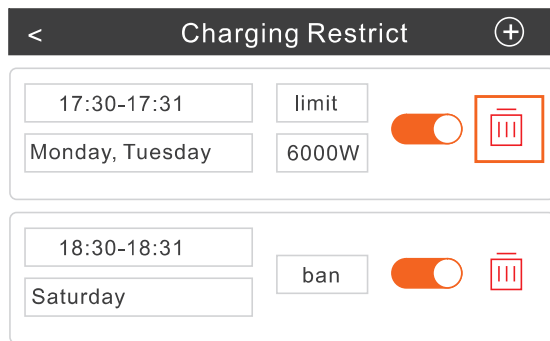
- ① Enable or disable the "Restrictive Activation" for a certain period.
- ② Select the "Restrictive Type". "ban" means charging is not allowed at this period; "limit" means the charging power in this preset time will limit to the preset value.
- ③ Set the repeat frequency by tick the days (Multiple choices are possible).
- ④ Set the "Start time" and "End time" of the period.
- ⑤ Touch the tick icon to confirm.



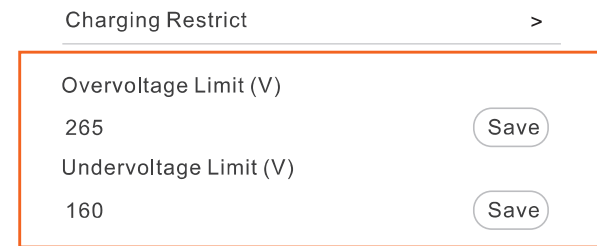
4) If you want to revise the settings for a certain period, please touch the content box of the period and then update the setting items.



5) If you want to delete a certain period, please touch the delete icon and select "OK" in the pop-up window to confirm.

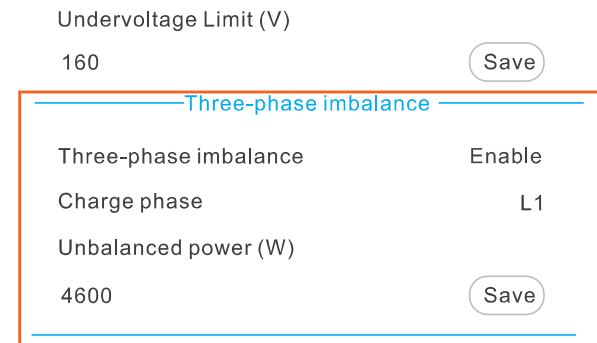


8. Set and save the value of "Overvoltage Limit" and "Undervoltage Limit".



9. Settings for "Three-phase imbalance" (Only for "Private Charger" scenarios). In some countries, there are some special regulations that the power differences between the phases must not be bigger than 4.6 kW or 3.7 kW. Therefore, when using single-phase EV-Charger, the charging power must be limited. (This setting item is not available for three-phase EV-Chargers.) If required by local regulations, please enable this function and complete the relative settings:

- 1) Select the correct "Charge phase" after consulting with the technical electrician.
- 2) Set the value for "Unbalanced power (W)" according to local regulations. The default value is 4600.



10. Touch “Card Activation Mode” for the activation of the RFID card as described in section “Operation Method”. (Only required in the “Private Charger” scenarios. In the “Commercial Charger(OCPP)” scenarios, please consult the OCPP server.)

RFID Function

Card Activation Mode	Enable
RFID PIN	
111111	<input type="button" value="Save"/>

Restore factory settings	<input type="button" value="Save"/>
--------------------------	-------------------------------------

EV Charger Reset	<input type="button" value="Save"/>
------------------	-------------------------------------

11. The default setting can be restored and the EV-Charger can be reset by touching correspondent option.

RFID Function

Card Activation Mode	Enable
RFID PIN	
111111	<input type="button" value="Save"/>

Restore factory settings	<input type="button" value="Save"/>
--------------------------	-------------------------------------

EV Charger Reset	<input type="button" value="Save"/>
------------------	-------------------------------------

8 Troubleshooting

8.1 Troubleshooting

This section contains information and procedures for solving possible problems with the series EV-Charger, and provides you with troubleshooting tips to identify and solve most problems that could occur with the EV-Charger.

This section will help you narrow down the source of any problems you may encounter. Please read the following troubleshooting steps.

Check warnings or fault messages on System Control Panel or Fault codes on the EV-Charger information panel. If a message is displayed, record it before doing anything further.

Attempt the solution indicated in troubleshooting lists.

No.	Faults	Solution
0	PowerSelect_Fault	Contact installers for help
1	EmStop_Fault	1.Release the Emergency button; 2.Contact installers for help
2	OverVoltL1_Fault	1.Confirm that the Grid Voltage is within the working range; 2.If the "Fault" indicator is off, try charging EV again; 3.If not, set the value of "Overvoltage Limit" to a proper range, the buzzer will beep after the value is saved; 4.repeat step 2; 5.Contact installers for help
3	UnderVoltL1_Fault	1.Confirm that the Grid Voltage is within the working range; 2.If the "Fault" indicator is off, try charging EV again; 3.If not, set the value of "Undervoltage Limit" to a proper range, the buzzer will beep after the value is saved; 4.repeat step 2; 5.Contact installers for help
4	OverVoltL2_Fault	Same as ErrorCode 2
5	UnderVoltL2_Fault	Same as ErrorCode 3
6	OverVoltL3_Fault	Same as ErrorCode 2
7	UnderVoltL3_Fault	Same as ErrorCode 3
8	ElecLock_Fault	Contact installers for help
9	OverLoad_Fault	1.Unplug the connector from the EV; 2.If the "Fault" indicator is off, re-plug in and try charging EV again; 3.If the "Fault" indicator persists, try another EV; 4.Contact installers for help

No.	Faults	Solution
10	OverCurr_Fault	1.Unplug the connector from the EV; 2.If the "Fault" indicator is off, re-plug in and try charging EV again; 3.Contact installers for help
11	OverTemp_Fault	1.Unplug the connector from the EV; 2.If the "Fault" indicator is off, re-plug in and try charging EV again; 3.If not, confirm that the conditions for installation are proper and waiting for cooling down, then re-plug in and try charging EV again when the indicator turns off; 4.Contact installers for help
12	PEGround_Fault	1.Unplug the connector from the EV; 2.If the "Fault" indicator is off, check the EV whether it is normal; 3.If not, confirm that all the cables and wires are intact; 4.Contact installers for help
13	PELeakCurr_Fault	1.Unplug the connector from the EV; 2.If the "Fault" indicator is off, check the EV whether it is normal; 3.If not, confirm that all the cables and wires are intact; 4.If the "Fault" indicator is off, re-plug in and try charging EV again; 5.Contact installers for help
14	OverLeakCurr_Fault	Same as ErrorCode 12
15	MeterCom_Fault	Contact installers for help
16	485Com_Fault	1.If the "Fault" indicator is off, try charging EV again; 2.If not, confirm that all the communication wires are intact; 3.Restart; 4.Contact installers for help
17	CPVolt_Fault	Same as ErrorCode 12
18	MeterType_Fault	Contact installers for help
19	MainBreaker_Fault	1.Unplug the connector from the EV; 2.Increase the value of the "Main Breaker Limit" or reduce the power of the home load; 3.If the "Fault" indicator is off, re-plug in and try charging EV again; 4.Contact installers for help

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

- If your EV-Charger's information panel is not displaying a Fault light, check the following list to make sure that the present state of the installation allows proper operation of the unit.
 - Is the EV-Charger located in a clean, dry, adequately ventilated place?
 - Are the specification and length of the cables suitable?
 - Are the input connections and wiring in good condition?
 - Are the configuration settings correct for your particular installation?
 - Are the display panel and the communication cable properly connected and undamaged?

Contact our Customer Service for further assistance. Please be prepared to describe details of your system installation and provide model and serial number of the unit.

8.2 Routine Maintenance

The EV-Charger do not need any maintenance or correction in most condition. To ensure that the EV-Charger can operate properly for a long term, you are advised to perform routine maintenance on it.

Only trained and authorized professional personnel who are familiar with the requirements of safety was allowed to perform servicing and maintenance work.

► *Safety checks*

Safety checks should be performed at least every 12 months by manufacturer's qualified person who has adequate training, knowledge, and practical experience to perform these tests. The data should be recorded in an equipment log. If the device is not functioning properly or fails any of the tests, the device has to be repaired. For safety check details, refer to section 2 Safety instruction in this manual.

► *Maintain periodically*

Only qualified personnel may perform the following works.

During the process of using the EV-Charger, the manage person shall examine and maintain the machine regularly. The concrete operations are as follows.

- 1) Check that if the indicators of the EV-Charger are in normal state, check if the buttons of the EV-Charger are in normal state, check if the display of the EV-Charger is normal. This check should be performed at least every 6 months.
- 2) Check that if the input cable and the connector are damaged or aged. This check should be performed at least every 6 months.
- 3) Check whether the ground terminal and ground cable are securely connected every 12 months.
- 4) Clean the outer shell of the EV-Charger and check its security at least every 6 months.

9 Decommissioning

9.1 Dismantling the EV-Charger

- Disconnect the EV-Charger from the grid.
- Wait for 5 minutes for de-energizing.
- Remove the EV-Charger from the bracket.
- Remove the bracket if necessary.

9.2 Packaging

If possible, please pack the EV-Charger with the original packaging.

If it is no longer available, you can also use an equivalent carton that meets the following requirements.

- Suitable for loads more than 10 kg.
- With handle.
- Can be fully closed.

9.3 Storage and Transportation

Store the EV-Charger in dry place where ambient temperatures are always between -30 °C ~ +50 °C. Take care of the EV-Charger during the storage and transportation, keep less than 4 cartons in one stack.

9.4 Disposing of the EV-Charger

When the EV-Charger or other related components need to be disposed, have it carried out according to local waste handling regulations. Please be sure to deliver the wasted EV-Charger and packing materials to certain site where can assist relevant department to dispose and recycle.

10 Disclaimer

The EV-Chargers shall be transported, used and operated under restricted conditions. We will not provide any service, technical support or compensation in case of the following conditions, including but not limited to:

- The EV-Charger is damaged by force majeure (such as earthquake, flooding, thunderstorm, lighting, fire hazard, volcanic eruption etc.);
 - The EV-Charger's warranty is expired, but not extended;
 - The EV-Charger's SN, warranty card or invoice cannot be provided;
 - The EV-Charger is damaged by man-made cause;
 - The EV-Charger is used or operated against any items in local policy;
 - The EV-Charger's installation, configuration, commissioning doesn't meet the requirements mentioned in this manual;
 - The EV-Charger is installed, refitted or operated in improper ways;
 - The EV-Charger is installed, operated under improper environment or electrical condition;
 - The EV-Charger is changed, updated or disassembled on hardware or software without authority from us;
 - The communication protocol from other illegal channels is used; and
 - The monitoring or control system is used without authority from us.
- SolaX reserves the right for the final explanation.

Warranty Registration Form



For Customer (Compulsory)

Name Country

Phone Number Email

Address

State Zip Code

Product Serial Number

Date of Commissioning

Installation Company Name

Installer Name Electrician License No.

For Installer

Module (If Any)

Module Brand

Module Size(W)

Number of String Number of Panel Per String

Battery (If Any)

Battery Type

Brand

Number of Battery Attached

Date of Delivery Signature

Please visit our warranty website: <https://www.solaxcloud.com/#/warranty> to complete the online warranty registration or use your mobile phone to scan the QR code to register.

For more detailed warranty terms, please visit SolaX official website: www.solaxpower.com to check it.





PLEASE REGISTER THE WARRANTY IMMEDIATELY AFTER INSTALLATION!
GET YOUR WARRANTY CERTIFICATE FROM SOLAX!
KEEP YOUR INVERTER ONLINE & WIN SOLAX POINTS!

1

Open your camera app and point your device at the QR code



2

Wait for the camera to recognize the QR code



3

Click banner or notification when it appears on the screen



4

Warranty registration page will be loaded automatically

