



# Residential AC Charger

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## USER MANUAL

## IMPORTANT SAFETY INSTRUCTIONS RELATED TO RISK OF FIRE OR ELECTRIC SHOCK

**WARNING:** When working with electrical products, basic precautions should always be followed. This manual contains important instructions for ECA-NH1606S, ECA-NH3206S, ECA-NH4006S, ECA-NH4806S models, needs to be observed during installing, operating and maintaining.

1. Please read all instructions before using this product.
2. Use of this device around children should be done under supervision.
3. Do not stick your fingers into the EV connector.
4. Do not use this product if the flexible power cord or scooter cable is frayed, has torn insulation, or has any other damage.
5. Do not use this product if the housing or EV connector is broken, cracked, open, or otherwise damaged.
6. Indicate the ambient temperature grade:  $-30^{\circ}\text{C}$  to  $50^{\circ}\text{C}$ .
7. Note the following or something similar: "To reduce the risk of fire, connect to a circuit providing the following function". @ampere's maximum branch circuit overcurrent protection shall be in accordance with the National Electrical Code ANSI/NFPA 70, and Canadian Electrical Code Part 1 C22.1.

**SAVE THESE INSTRUCTIONS**

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## ABBREVIATIONS

S/N	Abbreviations	Description
1	EV/PHEV	Electric vehicles, either BEV (battery electric vehicles) or PHEV (plug-in hybrid electric vehicles)
2	EVSE	Electric Vehicle Supply Equipment
3	KW	Kilowatt
4	A	Ampere (unit of current)
5	V	Volts (unit of voltage)
6	Hz	Hertz (unit of frequency)
7	RFID	Radio Frequency Identification

## SAFETY INSTRUCTIONS

In this manual, the following warning labels and precautions are used on AC EV Chargers:

### WARNING

For use with Electric Vehicles.

Ventilation Not Required.

To avoid a risk of fire or electric shock, do not use this device with an extension cord.

This device is intended only for charging vehicles not requiring ventilation during charging.

THE SUITABILITY OF THE USE OF FLEXIBLE CORD IN

ACCORDANCE WITH CE CODE, PART I, RULE 4-012, IS

TO BE DETERMINED BY THE LOCAL INSPECTION AUTHORITY HAVING JURISDICTION

## STANDARD

### Safety Standard

Complies with UL 2594 UL 2231 UL 1998 UL991

### Radio Frequency Standard

47CFR Part 15 (2020)

ANSI C63.4 (2014)

ICES-003 Issue 7: October 2020+

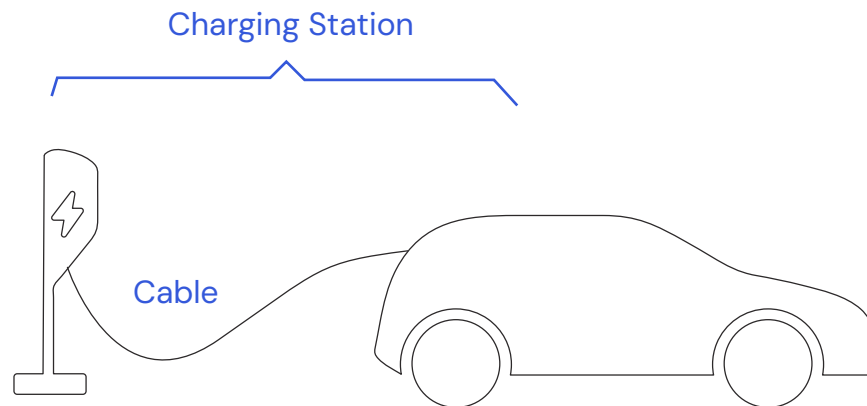
### Energy Star Standard.

ENERGY STAR® Program Requirements for Electric Vehicle Supply Equipment (EVSE)

Version 1.2

### Charging Connection

The connections for charging are shown below



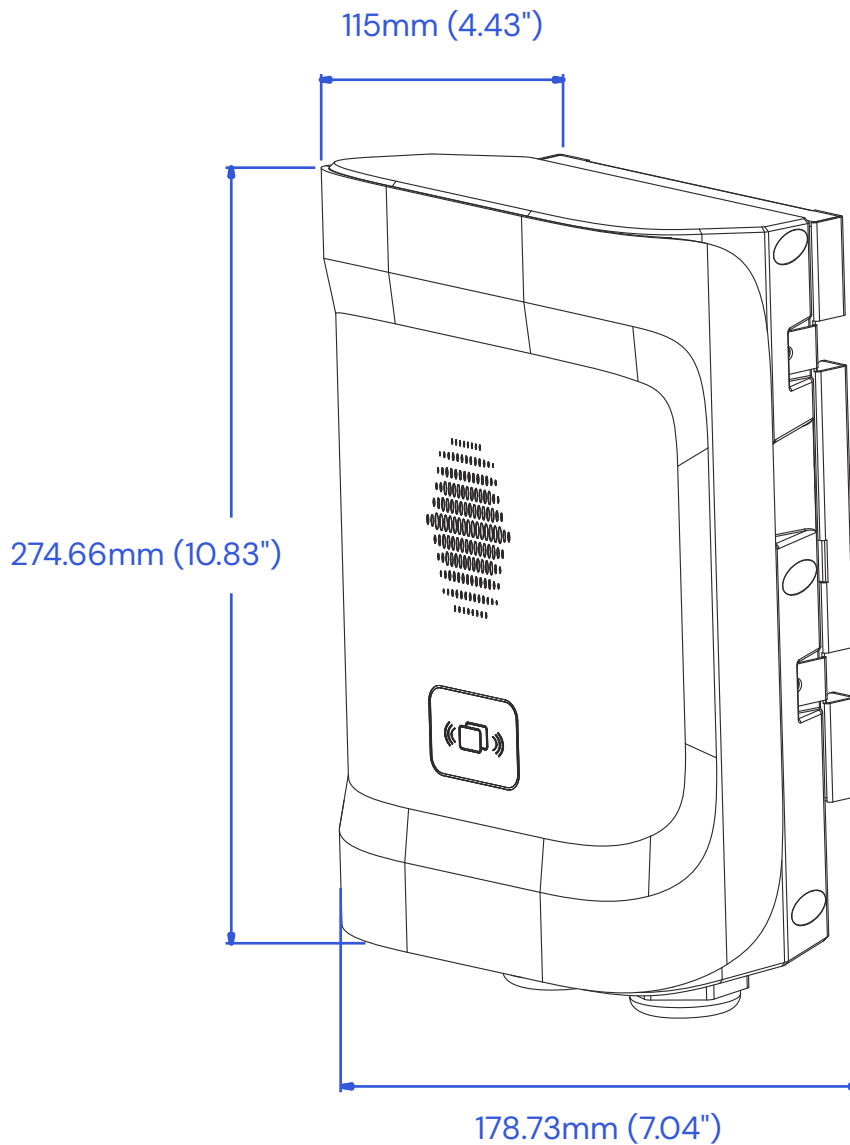
## 1 PRODUCT INFORMATION

### 1.1 Type

Welcome to our AC EVSE

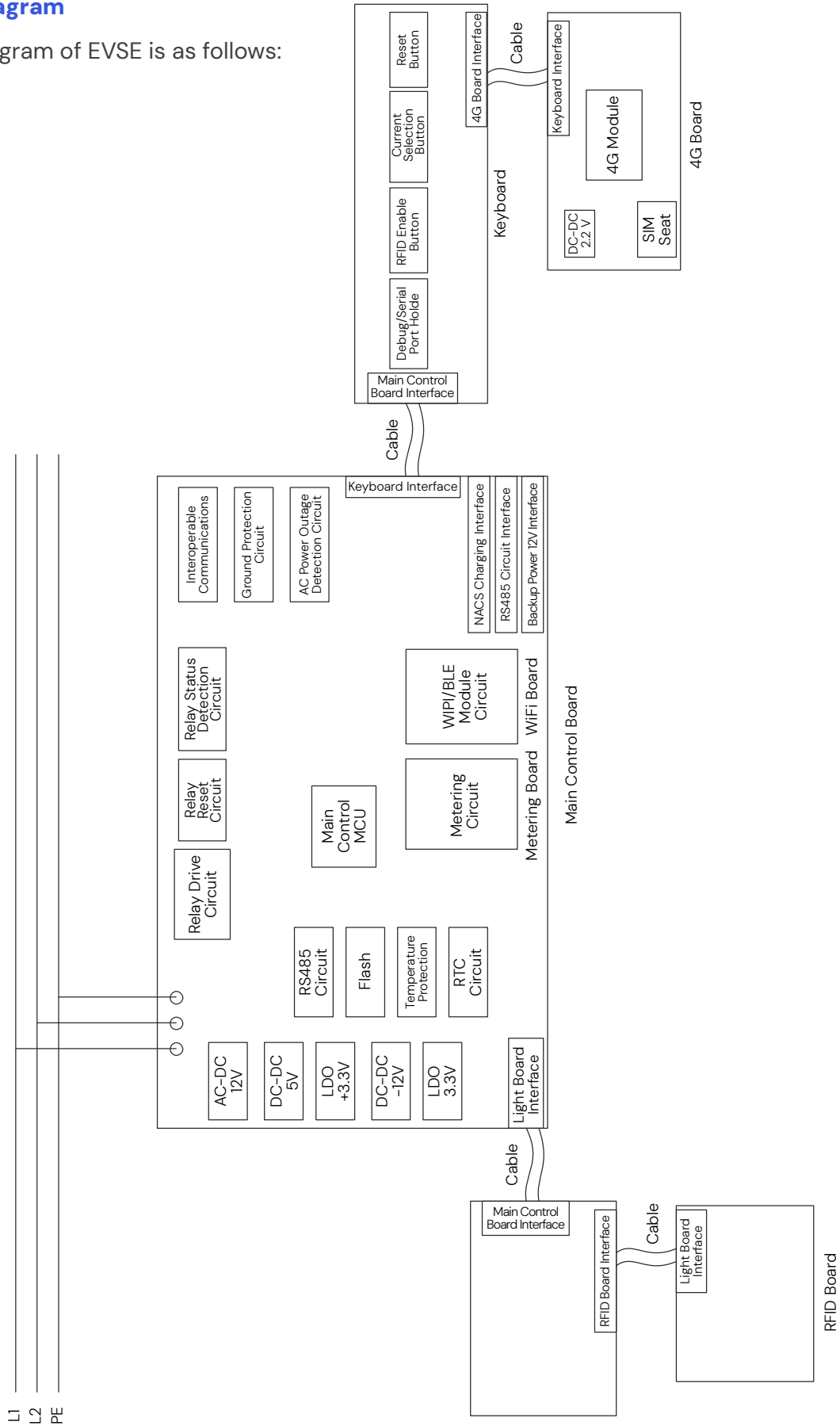
#### 1.1.1 Shape and Size

The shape and size of the AC EVSE is shown in the figure below:



### 1.1.2 Block Diagram

The block diagram of EVSE is as follows:



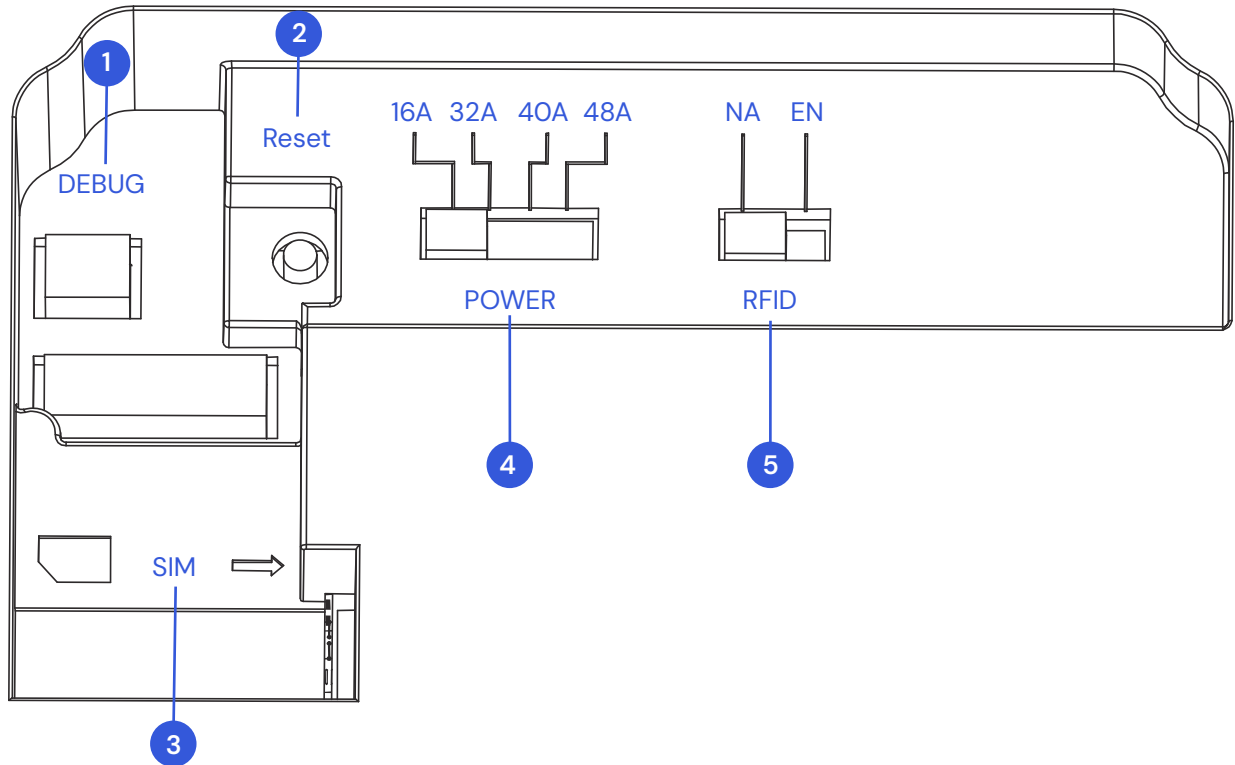
## 1.2 Specifications

RD10 American Standard AC EV Charging Specifications								
Category	Specifications & Parameters							Option
	Model Number	Part Number	Rated Input/ Output (v)	Rated Input (A)	Rated Output (A)	Max Power	Charge Coupler	
Power Specification	CTX-RAC48	CTX-R16- 240-1	120/208/ 240VAC 60Hz	32A	32A	7.68kW	SAEJ1772 TYPE1/32A	Optional
		CTX-R32- 240-1	120/208/ 240VAC 60Hz	40A	40A	9.6kW	SAE J1772 TYPE1/40A	Optional
		CTX-R40- 240-1	120/208/ 240VAC 60Hz	48A	48A	11.52kW	SAEJ1772 TYPE1 /48A	Optional
		CTX-R48- 240-1	120/208/ 240VAC 60Hz	48A	48A	11.52kW	SAEJ1772 TYPE1 /48A	Optional
Power Wiring	Hardwired via pigtail: L1/L2/PE   L/N/PE							Optional
	NEMA 14-50P (selection of rated current not exceeding 40A)							Optional
	NEMA 6-50P (selection of rated current not exceeding 40A)							Optional
Communication	4G CAT.4							Optional
	Dual mode: wifi 2.4g/ble 5.0 【customer order module compatible】							Optional
	RS485							
OCPP Version	OCPP 1.6J							Optional
User Interface & Control	RGB LED light							
	Power option switch							
	Reset switch							
	RFID enable switch							
	Emergency button							Optional
Firmware Upgrade	Over the air(OTA) 【Network communication module selected】							
	Local update possible							
User Authentication	RFID 【supports ISO14443-compliant type A, mifare one (MFI) cards】							Optional
	APP							Optional
Power Meter	Measurement error accuracy less than 1%							Optional
Memory	Flash rom (128M bit)							
Real Time Clock	Supercapacitor							



Protection Function	CCID20	
	Over voltage protection	
	Under voltage protection	
	Over-current protection	
	Over load protection	
	Short circuit protection	
	Ground protection	
	Over-temp protection	
	Surge protection 6 kV @ 3,000A	
	Fault self-test	
Environmental	Enclosure protection: type 4,IK08	
	Operating temperature: -30 ~ 50°C (-22 to 122°F)	
	Storage temperature: -40 ~ 75°C (-40 to 167°F)	
	Humidity: up to 95%, non-condensing	
	Altitude: ≤2000m	
	Cooling method: natural cooling	
Mechanica Parameter	Net weight: 5.7 kg(hardwired via pigtail) /6.3kg( NEMA 14-50P )	
	Product outline size: h*w*d (274.66 mm *178.73 mm *115 mm)	
	Cable length: 18ft or customization	
Regulation	Safety regulations: ETL (UL2231 UL2594 UL1998 UL991)	
	Energy efficiency: energy star(energy star® program requirements for electric vehicle supply equipment (evse) version 1.2)	
	Wireless certificate: FCC / IC	
Warranty	2 Years	

## 2 ABOUT



	Name Label	Function	Parameters/Specifications
1	DEBUG	Debug Port	Debug Port
2	Reset	Configure Reset Switch	Configure Reset Switch
3	SIM	4G Card Slot	4G Card Slot
4	POWER	Power Configuration Switch	6A, 32A, 40A, 48A
5	RFID	RFID Enable Switch	NA/EN

## 3 FUNCTION INTRODUCTION

### 3.1 Configure the Network

#### CONFIGURE WIFI NETWORK

##### Step 1:

Turn on the power to the charging pile, open the mobile APP or computer, find the hotspot named "CHARGE TRONIX", and connect to it without a password. (If you do not find a hotspot named "CHARGE TRONIX", please restart the power supply of the charging pile). Network distribution can be carried out in the following way.

##### Step 2:

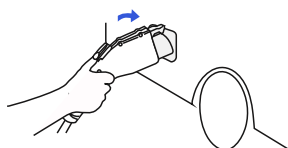
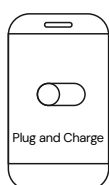
In the settings, enter the corresponding WIFI SSID, secret, and OCPP Server in the WIFI setting items, and wait for feedback from the APP; make corresponding confirmations and modifications.

#### CONFIGURE 4G NETWORK

If the product uses 4G for networking, you need to put the traffic card into serial number 3 of [5. Interface], and note that the direction of the card needs to be the same as the direction of the model, otherwise it may not be connected to the Internet.

### 3.2 Operation Guide

#### 1. Charging Preparation



##### Option 1: Plug and charge

1. When the charging post is normally connected with APP, set the product to "Plug and Charge" mode through the "Settings" item;
2. The next time you use the charging post, you don't need APP or swipe card to start charging, just plug the charging gun into the car charging socket, the charging post can start charging by itself.

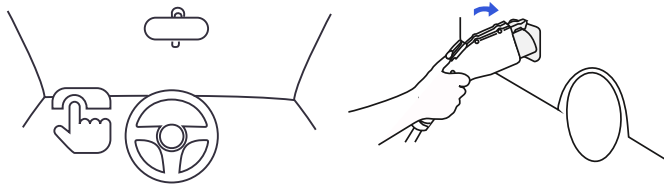
##### Option 2: APP start and stop

You can download the APP according to the prompts, register an account according to the prompts, and add WIFI distribution network according to the prompts;

##### Option 3: Tap RFID card to start

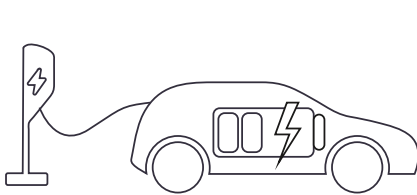
Use the RFID card provided in the packaging box, and Pull the RFID switch of the charging pile to ENABLE to use the RFID card for charging; if the pull-out switch is at the DISABLE position, you cannot use RFID for charging.

## 2. Connecting Charging Connector



Open the cover of the car charging socket, and connect the charging cable to the car socket stably. Make sure the connection is successful.

## 3. Start Charging



### Option 1: Plug and charge

The charging mode is configured as plug and charge, when step 2 is completed, the car is ready to start charging.

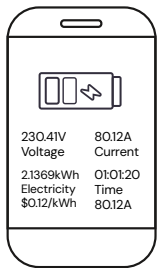
### Option 2: APP start and stop

When using it for the first time, turn on the APP and configure the charging mode to scheduled charging, or when there is no WIFI signal, you can connect to the electric pile through the Bluetooth of the mobile phone to start charging.

### Option 3: Tap RFID card to start

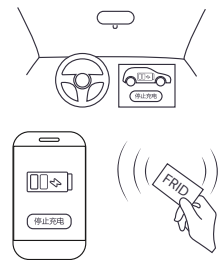
Put the RFID card close to the card-tapping area to start charging by tapping the card, and tap the card again during the charging process to end the charging.

## 4. Charging



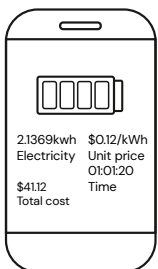
During the charging process, you can check the current vehicle charging voltage, charging current, charging time, charging power, and charging capacity through the mobile APP.

## 5. End Charging



End charging via center console, app, tap FRID card and direct pull of gun.

## 6. Billing Information



Billing information can only be viewed when the app is activated in charging mode: order data information such as current charging power, charging time, etc. can be displayed on the mobile APP.

### 3.3 Troubleshooting

When an abnormal state occurs during charging, you can check the relevant fault information through the mobile APP, and when the light bar makes corresponding prompts, please remove the charger gun from the vehicle socket.

Fault Code	Handling Method
Leakage	Disconnect charging vehicle, check power supply, power off and restart. Observe whether the fault recurs. If the fault recurs, repair is required. If it doesn't recur, change another car to conduct a comparison test. If it does not recur after changing the car, it means the car is leaking electricity.
Grounding Abnormality	Check the grounding condition of the charging pile and eliminate the problem of poor installation and wiring, If the fault still occurs after confirming that the grounding is good, repair is required.
Relay Abnormality	It is recommended to restart after a power outage, It is recommended to restart after a power outage.
Overcurrent	Check the power configuration and disconnect the charging vehicle. If the fault is restored, it is a power compatibility issue. If it cannot be restored, repair is required.
Overload	Check the power configuration and disconnect the charging vehicle. If the fault is restored, it is a power compatibility issue. If it cannot be restored, repair is required.
Overtemperature	<ol style="list-style-type: none"> <li>1. Check whether the charging pile is covered or installed in a high-temperature environment that exceeds the specifications.</li> <li>2. After cooling down, recheck whether it will occur. If the fault recurs, repair is required.</li> </ol>
Overvoltage	<ol style="list-style-type: none"> <li>1. Check whether the grid voltage is abnormal.</li> <li>2. Check whether the input cable is connected correctly.</li> </ol>
Undervoltage	<ol style="list-style-type: none"> <li>1. Check whether the grid voltage is abnormal.</li> <li>2. Check whether the input cable is connected correctly.</li> </ol>
CP Communication Abnormality	Cut off the power and restart, replace the vehicle and charge it. If the fault recurs, it needs to be returned to the factory.
Meter Abnormality	Power off and restart. If the fault recurs, repair is required.
Card Reader Abnormality	Power off and restart. If the fault recurs, repair is required.
WIFI Cannot be Networked	<ol style="list-style-type: none"> <li>1. Use other devices to confirm whether the WIFI hotspot can access the Internet normally.</li> <li>2. Power off and restart. If the fault recurs, repair is required.</li> </ol>
BLE Cannot Connect	<ol style="list-style-type: none"> <li>1. Confirm whether the Bluetooth settings of the mobile phone are correct and whether the pairing is successful.</li> <li>2. Power off and restart. If the fault recurs, repair is required.</li> </ol>
4G Module Communication Failure	It is recommended to restart after a power outage. If the fault recurs, repair is required.
4G Cannot be Connected	<ol style="list-style-type: none"> <li>1. Confirm whether the SIM traffic card is normal and whether the card is in good contact.</li> <li>2. Power off and restart. If the fault recurs, repair is required.</li> </ol>

## 4 PRODUCT INSTALATION

### 4.1 Labels

#### WARNING

For use with Electric Vehicles.  
Ventilation Not Required.  
To avoid a risk of fire or electric shock, do not use this device with an extension cord.  
This device is intended only for charging vehicles not requiring ventilation during charging.

THE SUITABILITY OF THE USE OF FLEXIBLE CORD IN ACCORDANCE WITH CE CODE, PART I, RULE 4-012, IS TO BE DETERMINED BY THE LOCAL INSPECTION AUTHORITY HAVING JURISDICTION.

#### CAUTION

To reduce the risk of electric shock, connect only to properly grounded outlets.  
Do not use this product if there is any damage to the unit.  
Risk of electric shock, Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel.



#### CHARGE TRONIX

Model: ECA-NH4006S  
Input/Output: 208/240VAC  
60Hz  
Max 40A  
Max 9.6kW

MMQ: 0.1kWh  
Enclosure type: TYPE 4  
Operating Temp: -30 50°C  
-22 122°F

Storage Temp: -40 75°C  
-40 167°F



4912888535269720090  
Date Code  
ECA2315RDO30001

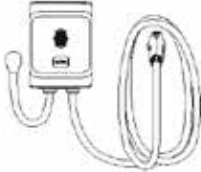
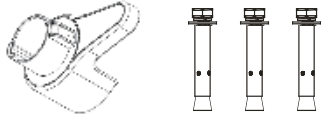
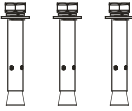

CHARGE TRONIX  
FOR USE WITH ELECTRIC VEHICLES.  
FOR INDOOR OR OUTDOOR USE.



Intertek  
5014466

Conforms to UL Std.2594  
Certified to CSA Std.C22.2#280  
CAN ICES-3(B)/NMB-3(B)  
Contains IC: 23236-BW16  
Contains FCC ID: 2AHMR-BW16  
Contains IC: ES0001-ISED-6489  
Contains FCC ID: 2AFOS-WT32C3-SX  
Contains IC: 23243-CBU  
Contains FCC ID:2ANDL-CBU

## 4.2 Packing List

Material Name	Quantities (PCS)	Illustration
AC Charger	1	
Socket	1	
M6 Expansion Screws	3	
M4 Anti-theft Screws	2	

## 4.3 Check and Confirm

When unpacking, please carefully confirm the following points:

- According to the packaging list, whether the accessories are missing.
- Whether there is any damage during transportation.
- Whether the model and specification on the nameplate of the machine are consistent with the order requirements.
- If any damaged or missing parts are found, do not start the machine and contact the supplier as soon as possible.
- Please keep the box and packaging materials for 1 month for future disposal. Paper packaging is recyclable.

## 4.4 Preparation

In order to ensure long-term stable operation of the product, it is recommended to avoid the following installation problems:

- This product is an electrical device. Handle with care and avoid severe vibration and shock.
- EVSE cannot be transported by dragging the charging connector and charging cable.
- EVSE cannot be used in extreme weather, especially when the ambient temperature is too low or too high, which will affect the use of EVSE.

It is recommended to install EVSE in a ventilated and cool place away from direct sunlight and rain. To ensure good ventilation, you should install the EVSE vertically with enough space. Installation tools before installing AC EVSE, you should prepare at least the following tools:



Multimeter

Electric Impact Drill  
(D8mm+D6mm)Wrench  
(10mm)AWG23-7  
Tube Terminal  
Crimping PliersPhillips Screwdriver  
(D5mm)Electric Batch  
(With plum blossom  
hole T20.T25 bit)

Utility Knife



Anti-static bracelet



Heat Coupler



Wire Strippers



Marker Pen

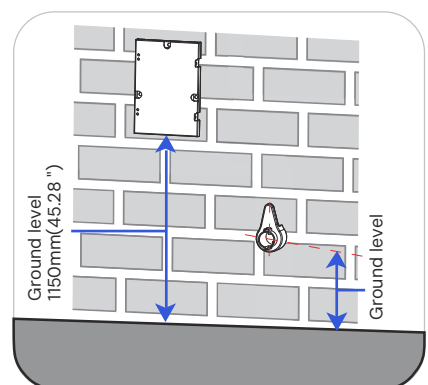
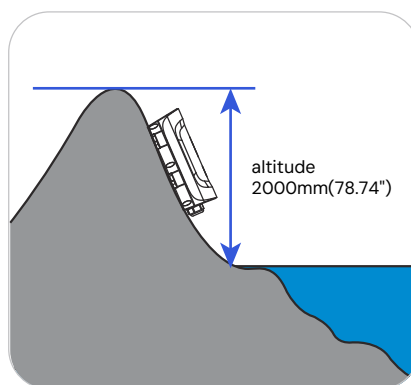
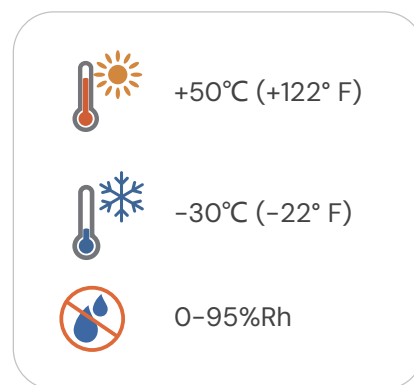
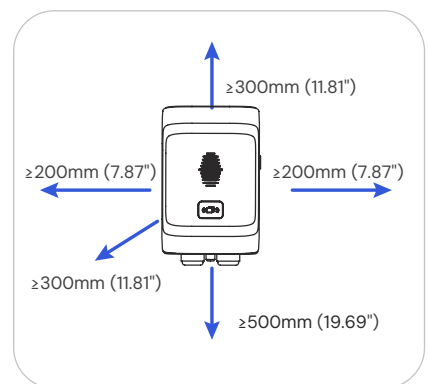
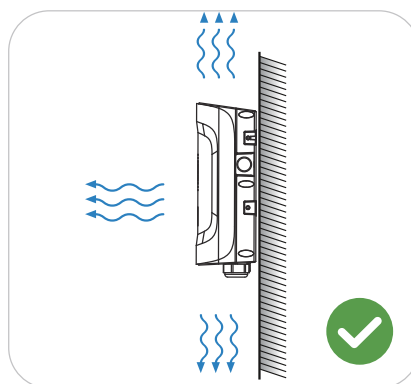
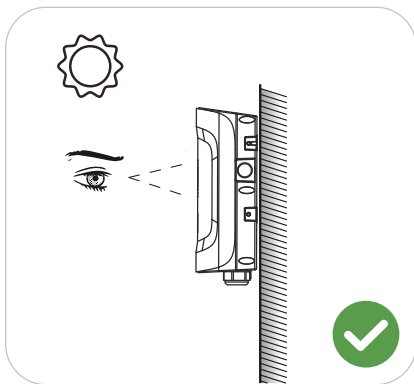
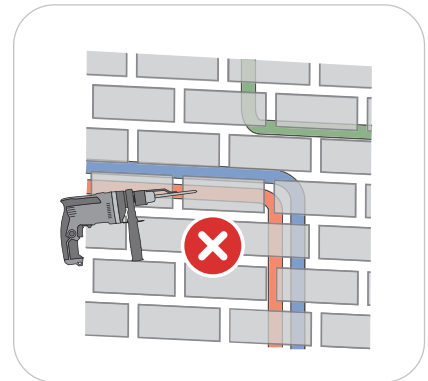


Rubber Hammer

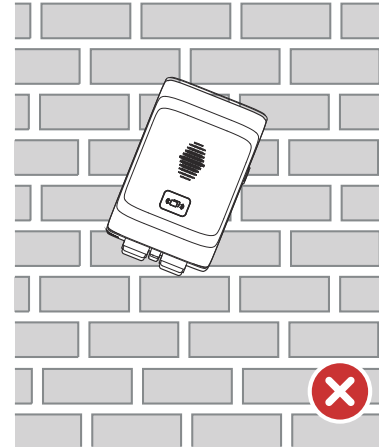
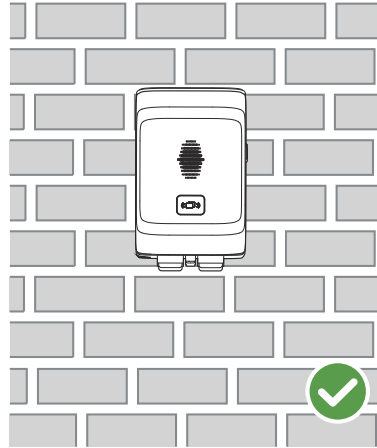
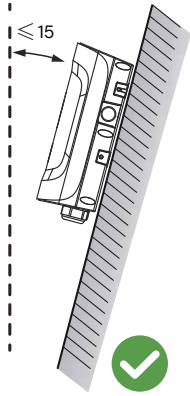


## 4.5 Installation Step

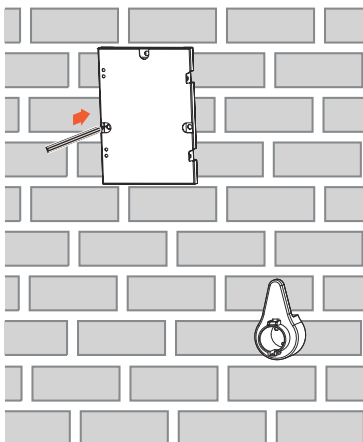
### Location Requirements



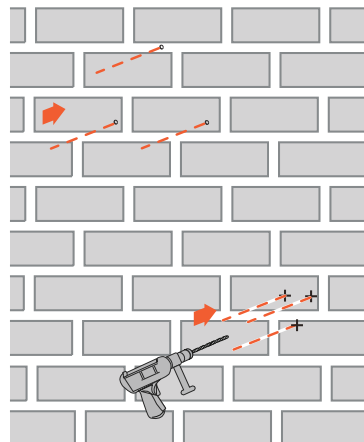
## Angle Requirements



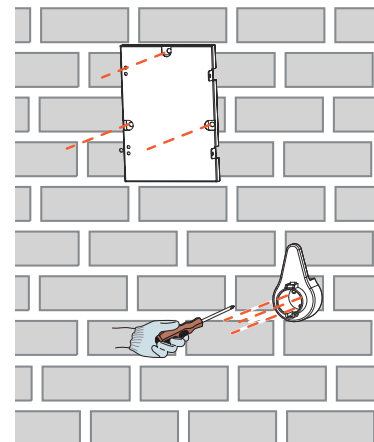
## Wall-mounted Installation Steps



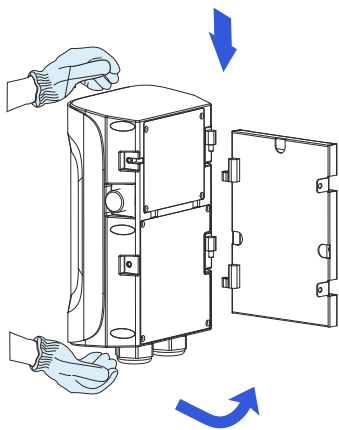
- 1 Install the wall-mounted version and trace holes on the wall



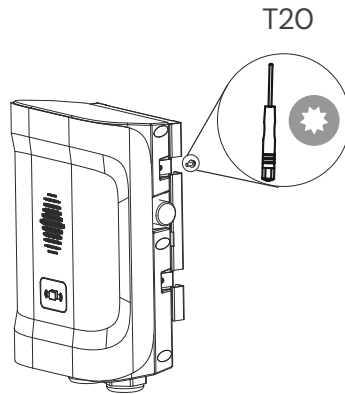
- 2 Punch holes in the wall



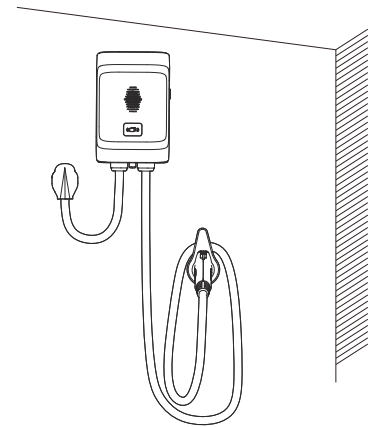
- 3 Install wall mounts, hanging plates and empty blocks.



4 Install the pile body on the mounting plate



5 Set screw



6 Installation pile completion diagram

## 4.6 Maintenance

To ensure the long-term stable operation of the equipment, please perform regular (usually monthly) maintenance on the device according to the operating environment.

- a) Equipment is maintained by professionals.
- b) Check whether the equipment is well grounded and safe.
- c) Check whether there are safety hazards around the charging pile, such as whether there are high temperatures, corrosion or flammable and explosive items near the charger.
- d) Check whether the connection points of the input terminals are in good contact and whether there is any abnormality. Check other wiring points for looseness.

## WARRANTY AGREEMENT

1. The scope of the warranty refers to the product itself.
2. The warranty period is 24 months. During the warranty period, if the product fails or is damaged under normal use (determined by the company's technicians), the company will repair it free of charge.
3. The starting time of the warranty period is the production date of the product.
4. Even within the warranty period, if the following conditions occur, a certain maintenance fee will be charged.
  - Equipment failure caused by failure to operate according to the user manual.
  - Equipment damage caused by fire, flood, abnormal voltage, etc.
  - Equipment damage caused by the entry of foreign objects.
  - Equipment damage caused by other human-made external factors.
5. Service fees shall be calculated based on actual costs. If there is any other contract, this contract shall prevail.
6. During the warranty period, be sure to keep this card and show it to the maintenance personnel.
7. If you have any questions, please contact the agent or our after-sales service center directly.



## For Both FCC & IC application:

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## MPE Requirements

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.