Electric Vehicle Charger Installation Manual

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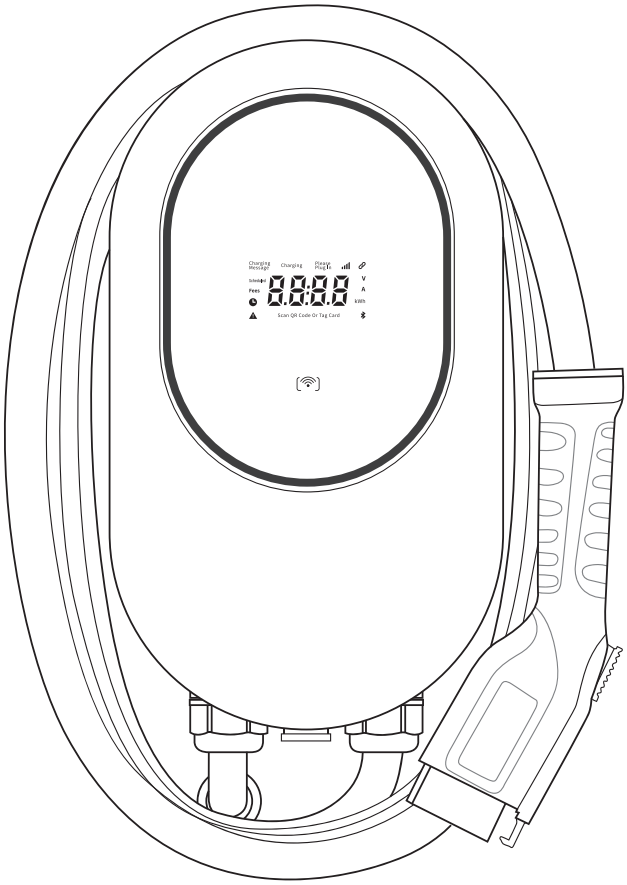


1. Safety Instructions

1.1. Warnings & Cautions

WARNING

⚠ To avoid fire, injury or death, read and follow the instructions carefully during installation, operation and maintenance.

DO NOT put fingers into the electric vehicle connector.

DO NOT use this product if the power cord or EV cable is frayed, insulation-broken, or any other signs of damage.

DO NOT use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

DO NOT remove cover or attempt to open the enclosure because of risk of electric shock.

⚠ This device should be supervised when used around children.

⚠ This device must be grounded.

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

⚠ 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.

⚠ To reduce the risk of fire, connect only to a circuit provided branch circuit over-current protection in accordance with the CSA C22. 1– 15 Canadian Electrical Code, Part 1 (Canada) or NOM-001-SEDE Electrical installations (utility) (Mexico) or ANSI / NFPA 70 National Electrical Code (USA).

Circuit Breaker Options				
Output Amperage (A)	16A	32A	40A	48A
Circuit Breaker Options (A)	20A	40A	50A	60A

1.2. Installation Requirements

WARNING

- Disconnect electrical power prior to installing the charging station.
- Be sure to preview the user manual and ensure local building and electrical codes are reviewed before installing the AC charger.
- The AC charger should be installed by a qualified technician according to the user manual and local safety regulations.

CAUTION

- Use appropriate protection when connecting to the main power distribution cable.
- Type B, C or D breaker with the rating current for table should be installed in the upstream AC distribution box.
- Disconnect switch for each ungrounded conductor of AC input shall be provided by others in accordance with the National Electric Code, ANSI/ NFPA70.
- The device shall be mounted at the height between 600 mm and 1200 mm from ground.
- Please keep the charger in a clean area with low humidity. Not recommended to be installed in coastal environments with high humidity or thick dust.

1.3. Daily Maintenance

CAUTION

- Avoid moisture or water in the charger. If there is water or moisture ingress in the charger, it is necessary to immediately power off to avoid immediate danger and notify the professionals to carry out maintenance before next use.
- Please use the charger properly. Do not hit or press hard on the enclosure. If it

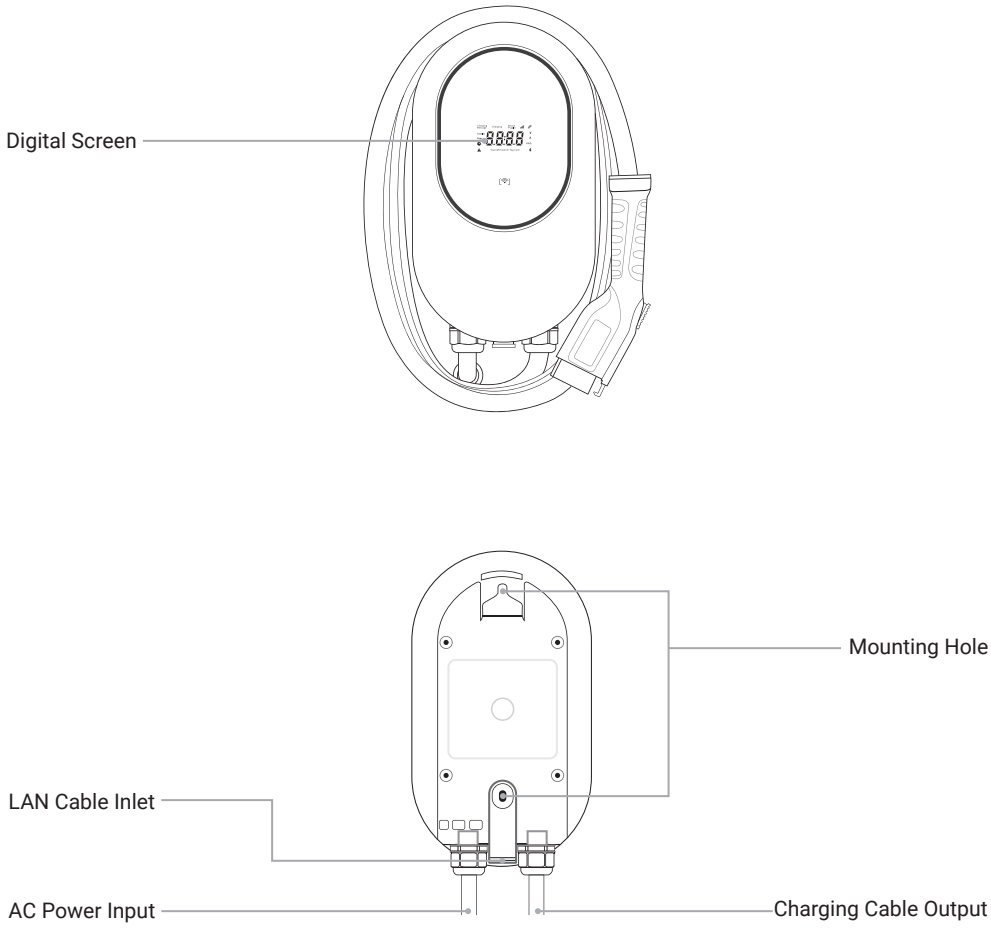
is damaged, please contact a professional technician.

- Avoid placing the charger near hot objects and at high temperature locations and away from dangerous substances such as flammable gases and corrosive materials.
- Do not put heavy objects on the charger to avoid danger.
- For 48 Amp installations, we recommend not using a NEMA cable. Instead, we advise a professional electrician hardwire it to the wall, given the high power requirement which could potentially cause electrical issues.
- For installations of 40 Amps and below, we recommend using a NEMA cable for simple plug-and-play usage.

2. Product Introduction

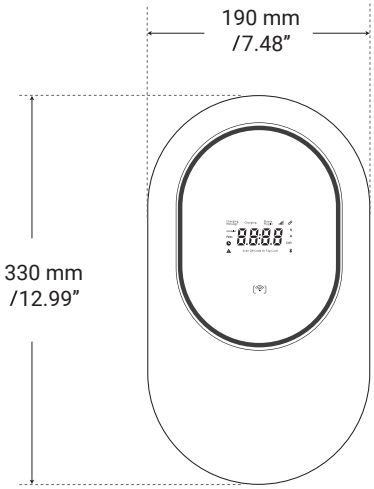
CAUTION: Avoid placing the charger near hot objects and at high temperature locations and away from dangerous substances such as flammable gases and corrosive materials.

2.1. Basic Interface

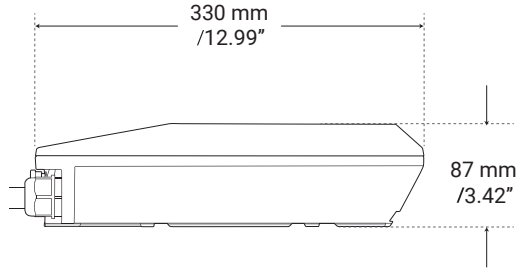


2.2. Basic Dimension

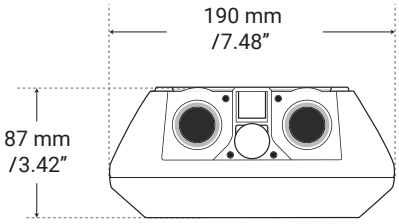
ENCLOSURE



Front View



Left View



Bottom View

2.4. Design Standards

UL 2594: Electric Vehicle Supply Equipment.

UL 2231-1: UL Prersonnel Protection System s for Electric Vehicle (EV) Supply Circuits:General Requirements.

UL 2231: Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: Particular Requirements for Protection Devices for Use in Charging Systems.

UL 2251: Plugs, Receptacles and Couplers for Electric Vehicles.

UL 62: Flexible Cords and Cables.

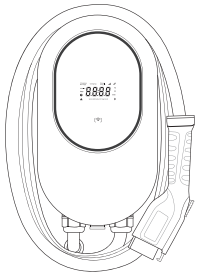
UL 991: Tests for Safety-Related Controls Employing Solid-State Devices.

UL 1998: Software in Programmable Components.

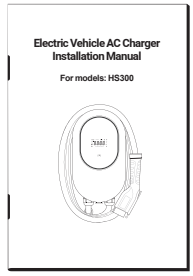
NFPA 70 Article 625: National Electrical Code, Electric Vehicle Charging System UL 840 (Clearance and Creepage).

3. Accessories

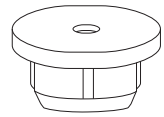
Check the box to ensure you have this installation guide and these parts:



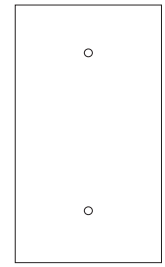
1 AC Charger



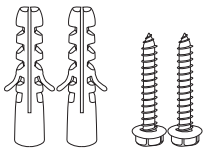
2 User Manual



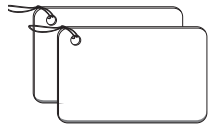
3 Screw Cover



4 Mounting Template



5 M6 Hexagonal Expansion Screws*2

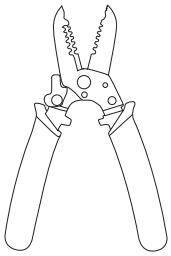


6 Standard RFID Cards*2

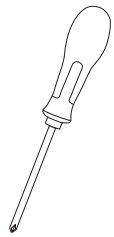
No.	Product Name	Quantity	Description
1	AC Charger	1	With attached input power cable and output charging cable.
2	User Manual	1	PDF version available online.
3	Screw Cover	1	For covering screw.
4	Mounting Template	1	For easy drilling of 2 screws holes for AC Charger.
5	M6 Hexagonal Expansion Screws	2	For installing the Mounting Bracket to the wall / structure.
6	Standard RFID Cards	2	To start/stop charger for the unit with RFID reader.

4. Tool for Mounting

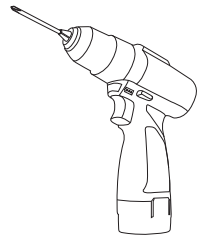
Tools required before installing the Wall-mounted charger, gather the following tools:



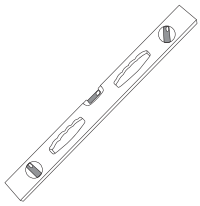
1 Wire stripper



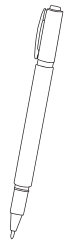
2 Phillips screwdriver



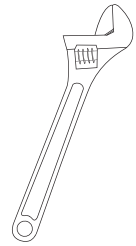
3 Drill



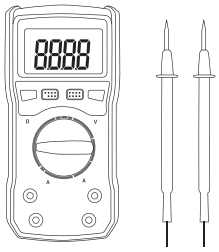
4 Level



5 Pencil or marker



6 Adjustable wrench



7 Voltmeter or digital multi-meter (for measuring AC voltage at the installation site)

NOTE: The above tools are very important, get them ready prior to installation.

5. Plan for Mounting

WARNING: In areas with frequent thunderstorms, add surge protection at the service panel for all circuits. Ensure all power and ground connections, especially those at the breaker and bus bar, are clean and tight.

CAUTION: Not recommended to be installed in coastal environments with high humidity or thick dust.

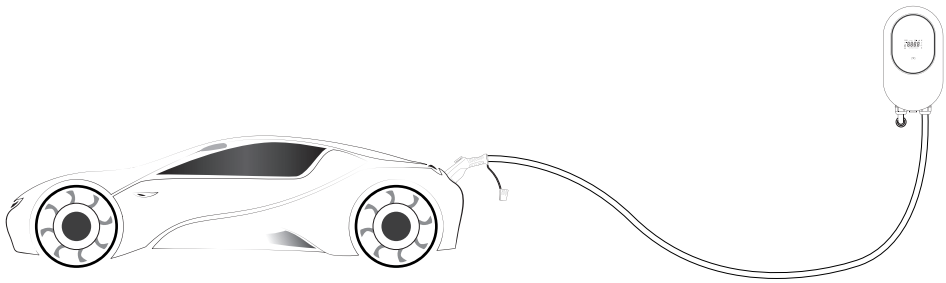
STEP 1

Select the appropriate mounting location with electrical capacity.

I. Ensure the owner has chosen a mounting location that allows the charging cable to reach the car's charging port while still providing slack.

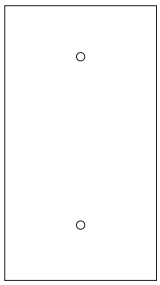
II. The device must be anchored on a solid wall or a stud with the dimensions: 80mm x 130mm.

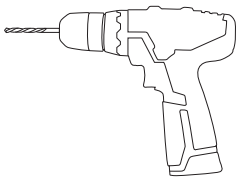
III. The device shall be mounted at height between 2 feet (600mm) and 4 feet (1200mm).



STEP 2

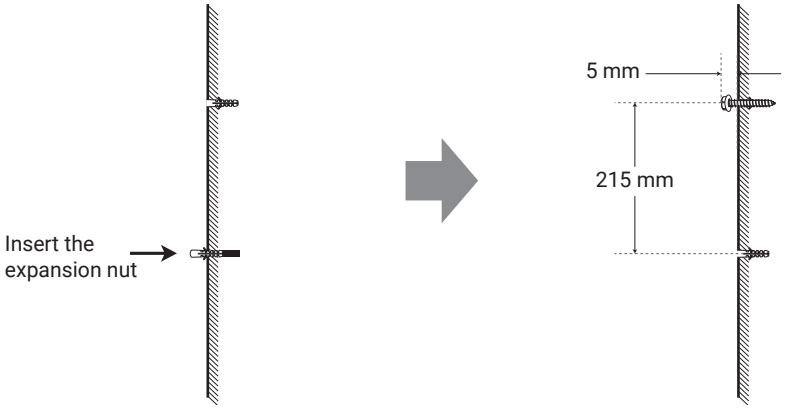
Drill 2 Screw Holes with a diameter of 12mm and a depth of 57mm by using #4 mounting template. Please drill screw holes in the direction of the template arrow.





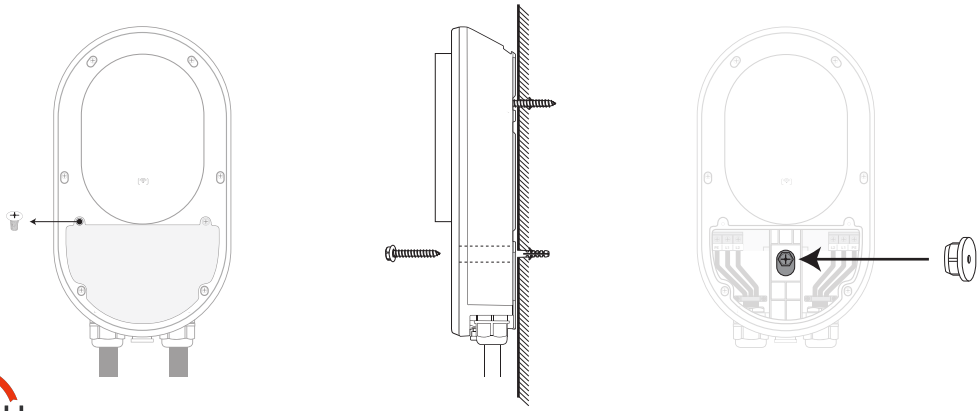
STEP 3

Nail #5 two expansion rubber sleeves into the holes and nail #5 one screw to the top expansion rubber sleeves. The distance between the cover of the screw and the wall is about 5mm.



STEP 4

Please unclick the shelf with slotted screwdriver, align the rear notch of charger with the holes and hang the top notch on the top screw, fit the #5 screw to the bottom hole. Cover the screw with #3 screw cover.



STEP 5

Wire the Circuit

WARNING

⚠ This device must be grounded. Disconnect electrical power prior to installing the charging station.

⚠ Improper connection of the equipment-grounding conductor would result in a risk of electric shock. Check with a qualified electrician or service man if you are not sure whether the product is properly grounded. Do not modify the plug provided with the product – if it doesn't fit the outlet, have a proper outlet installed by a qualified electrician.

CAUTION

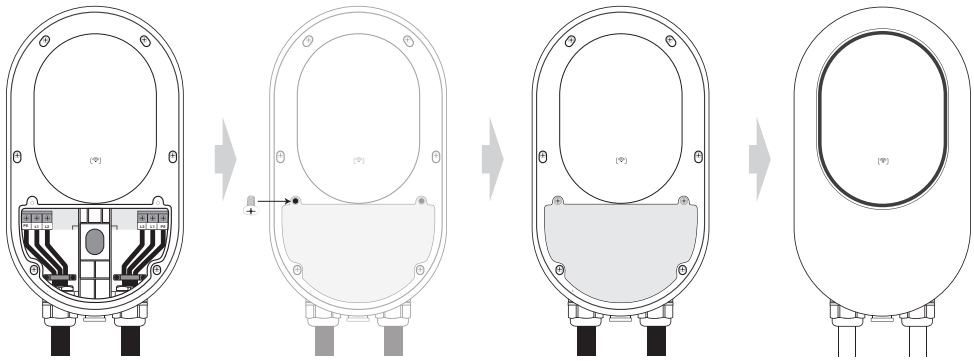
❗ Use appropriate protection when connecting to the main power distribution cable.

For the safety purpose, please set circuit breaker protection in the input part of EV Charger. Please follow the instructions below:

Circuit Breaker Options				
Output Amperage (A)	16A	32A	40A	48A
Circuit Breaker Options (A)	20A	40A	50A	60A

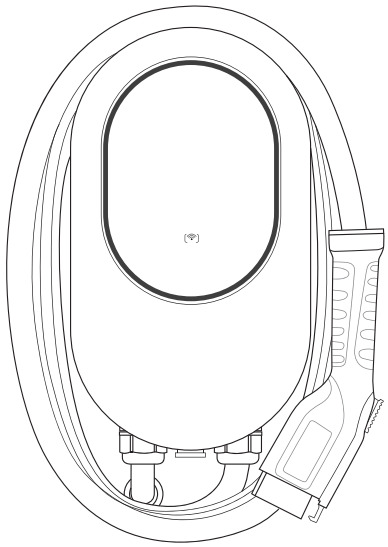
STEP 6

Connect L1 with grid L1, L2 with grid L2 and lead the PE to the grid PE. Click back the shelf, and fix the front cover back and tighten with screws at the buttom.



STEP 7

Overall outlook after installation



6. Operate Your Device

WARNING

⚠ This device should be supervised when used around children.

CAUTION

Please use the charger properly. Do not hit or press hard on the enclosure. If the case is damaged, please contact a professional technician.

Do not put heavy objects on the charger to avoid danger.

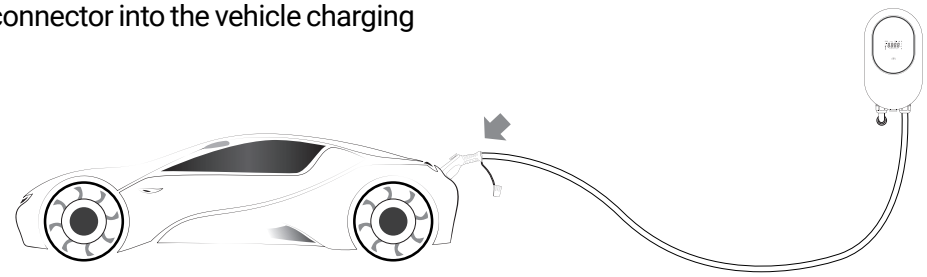
6.1. Operating Steps with Plug and Charge

STEP 1

Standby Mode: After the power has been turned on, you will see the sign ***"Please Plug In"*** on the LED screen.

STEP 2

Plug the Charging Connector: Please plug the charging connector into the vehicle charging inlet.



STEP 3

CHARGING: When the charging is going on, You can see ***"Charging, circularly voltage, currents and kWh."*** in the LED Screen.

If the sign "⚠" is on, try to plug the vehicle connector again.

If the sign "⚠" continues to be on, please refer to **"7.2 Error and warning message"**.

*Figures are for reference only

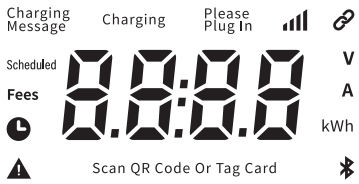
STEP 4

Charging finished: When the charging is completed, the number of total kWh will be shown. This indicates the total kWh your car has received. Please pull out the charging connector.

*Figures are for reference only

7. Light Codes

7.1. The Details of Screen



7.2. Error and Warning Message

Status	Screen Display	Remark
Off Ground	0001	Auto Recover
RCD Abnormal	0002	Auto Recover
Over Current Protection	0004	Auto Recover
Over Voltage Protection	0008	Auto Recover
Under Voltage Protection	0016	Auto Recover
Energy Meter Fault	0032	Contact Customer Service
Control Pilot Fault	0128	Auto Recover
Over Temperature Protection	0256	Auto Recover
Ground Fault	0512	Auto Recover
Ground Self-Test	1024	Auto Recover