



SmartTWO™

Installation Guide



IMPORTANT

Split Phase 120/240 VAC Supply or 3 phase 120/208 VAC C (must be protected by a 40 A fuse or circuit breaker)
 Both lines must have 120V between ground.
 Voltage supply must be grounded.
 Require 2 lines and 1 ground connection. Neutral is not used. (Refer to Figure 1 and Figure 2).
 Maximum output power: 7.2 kW @ 240 VAC or 6.3 KW @ 208 VAC
 Built-in protection against overvoltage conditions and leakage current to ground
 Connect the power supply of the EVSE with caliber 2 to 8 copper or aluminium conductors
 Any EVSE part alteration will automatically void the warranty.

Install the Communication Gateway prior to the Commissioning of the Station

The Communication Gateway is the property of AddEnergie. Fees will be charged if the Gateway is damaged or lost.

IMPORTANT ELEMENTS TO CONSIDER WHEN INSTALLING THE COMMUNICATION GATEWAY:

- An Outdoor installation is recommended. The Customer must provide a waterproof PVC box and install it less than 50 meters (164 ft.) from the stations.
- Never use a GFCI outlet to power the Communication Gateway.

Contact us when the Communication Gateway is installed to validate the signal levels and activate Commissioning or for any other questions: **1-877- 505-2674 #203**

Fig. 1

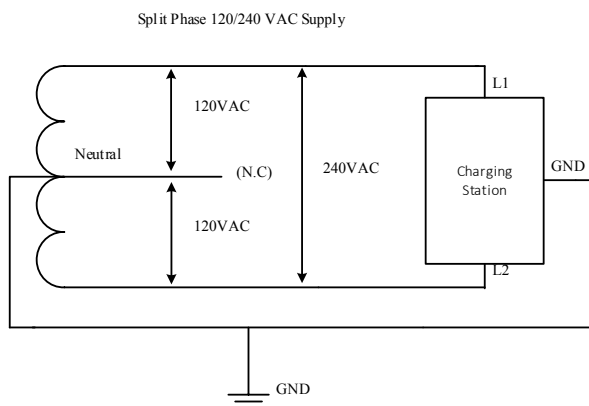


Fig. 2

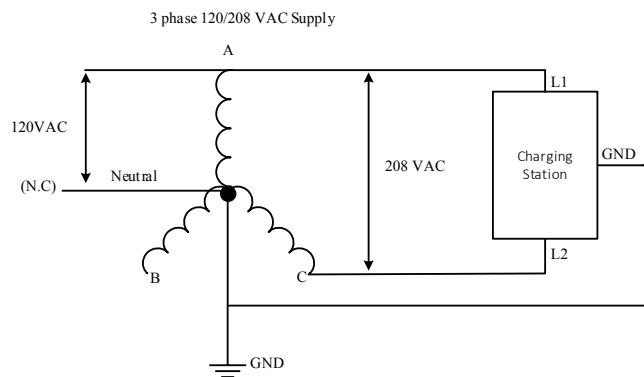
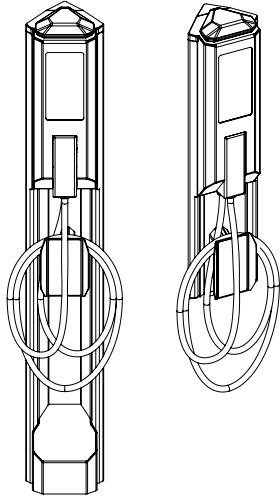


Table of Contents

Specifications	4
Maintenance and Safety	5
Configurations	6
Pedestal	7
Wall Mount	12
Connection	13
Front Panel and Base Cover Installation	15
Station Heads Installation on the Bases	17
Installation of the Panel on the Charging Head	18
Preliminary Tests and Commissioning	19

Specifications



Model: **SmartTWO™**

Revision: V4

Company Info: AddEnergie Technologies Inc.

Document revision number: V17-2016-03-03

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EVSE type: Level 2

Output connector: SAE J1172 compliant

Split Phase 120/240 VAC Supply or 3 phase 120/208 VAC (must be protected by a 40 A fuse or circuit breaker)

Maximum output power: 7.2 kW @ 240 VAC or 6.3 KW @ 208 VAC

Built-in protection against overvoltage conditions and leakage current to ground

Ingress Protection rating: Certified NEMA3R enclosure, suitable for outdoor use

Shipping weight: Approximately 30 kg for the single pedestal configuration

Patent : US 9,421,878B2

Security standard compliance:

- CSA C22.2 No. 0-10 General Requirements – Canadian Electrical code, part II
- CSA 281.1-12/UL2231-1 Standard for safety for personnel protection systems for electrical vehicle (EV) supply circuits: General requirements
- CSA 281.2-12/UL2231-2 Standard for safety for personnel protection systems for electric vehicle (EV) supply circuits: Particular requirements for protection devices for use in charging systems
- CSA C22.2 No. 280-13/UL2594 (1st edition) Electric vehicle supply equipment (EVSE)



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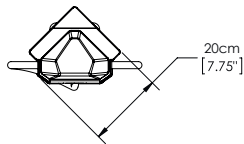
Maintenance and Safety

IMPORTANT SAFETY INSTRUCTIONS - PLEASE DO NOT DISCARD THESE INSTRUCTIONS

Carefully read this guide before installing the EVSE

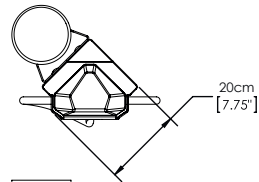
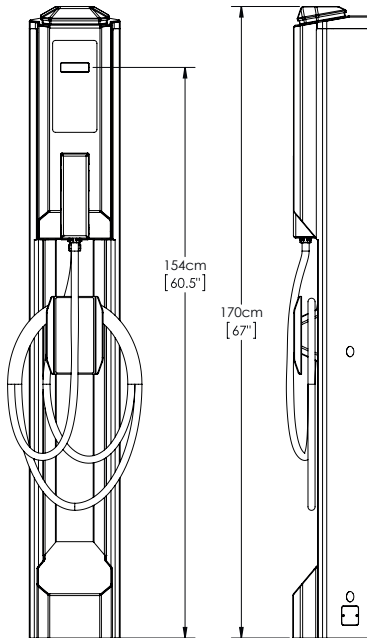
1. This EVSE was designed to be ground-based, wall-mounted or pole-mounted.
 - 1.1. For the pedestal version, it must be mounted on a non-combustible surface.
 - 1.2. For the wall-mounted version, you must make sure the wall on which it will be mounted is strong enough, and that you use the appropriate type of anchors.
 - 1.3. For the pole mounted version, you must make sure the pole on which it will be mounted is strong enough, and that you use the appropriate type of tether straps.
2. Make sure with local authorities that the location where the EVSE is to be installed is free from underground pipelines or electrical equipment, otherwise you might inflict yourself serious injuries.
3. Connect the power supply of the EVSE with caliber 2 to 8 copper or aluminum conductors rated for usage at a temperature of at least 75°C.
4. Grounding: to ensure the safe operation of the AddÉnergie's EVSE, it must be connected to a grounding circuit compliant with local regulations and installed by a certified electrician.
5. Communicate with a certified contractor, certified electrician or trained installer to ensure compliance with local building code, regulation, security standards and weather conditions.
6. Any EVSE part alteration will automatically void the warranty.
7. Handle parts with care, since they can be sharp-edged. Always use safety glasses and gloves when unpacking and installing.
8. Some parts are heavy and could cause injuries. Use proper lifting techniques and wear safety boots at all times during installation.
9. Never insert your finger into the electric vehicle connection.
10. Never use the EVSE if the flexible power cord seems damaged or if insulation is damaged.
11. Never use the EVSE if the main case is broken, cracked, open or damaged.
12. This EVSE was designed to be used with electric vehicles equipped with a SAE-J1772 connector.
13. This EVSE is to be used to charge vehicles that do not require a ventilated environment during charging.
14. Replacement of the EVSE's head, gun module, gun cable, or gun must be performed by qualified service personnel.
15. When the case of the EVSE's head is open, all gaskets must be replaced.
16. Do not install on or over a combustible surface.

Configurations Dimensions



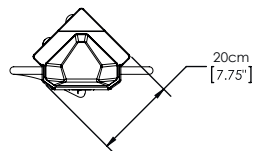
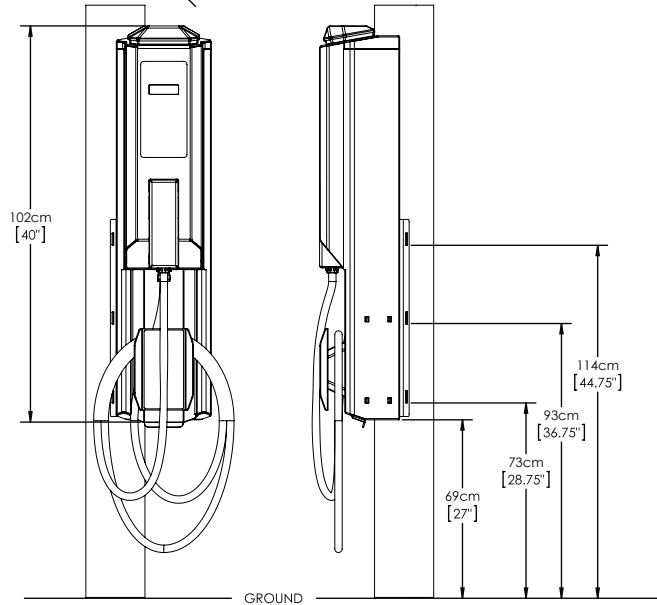
Pedestal EVSE

Leave a minimum of 7,6 cm (3") on top of the main structure to insert the EVSE's head.



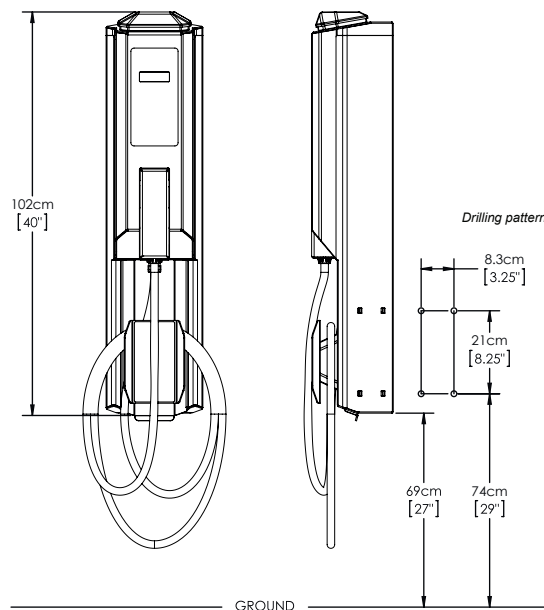
Pole-mounted EVSE

Leave a minimum of 7,6 cm (3") on top of the main structure to insert the EVSE's head.



Wall-mounted EVSE

Leave a minimum of 7,6 cm (3") on top of the main structure to insert the EVSE's head.



Pedestal

Site preparation

ANCHOR

The installer can use a prefabricated anchor offered by AddÉnergie (part number: S2-V2-ACCSP-01-03) or make his own using 12" long ½" threaded rods spaced according to the pattern shown on left.

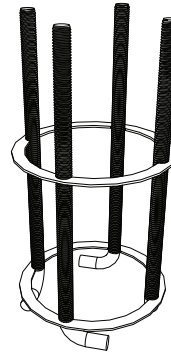


Fig. 1: Prefabricated anchor

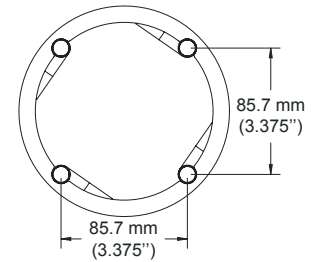


Fig. 2: Threaded rod spacing

CONCRETE BASE

The base can be prefabricated or made on site using concrete formwork.

Determine the base's height (H), depth in the ground (D) and the surface area (A) of its sole according to the soil type and the freeze thaw specifications of the installation area.

Use an electrical conduit of the appropriate size with a diameter of 2" or less to bring the electrical cables to the center of the anchor.

The dimension of the top of the base, and the position of the anchor shall be determined according to the specific charging station configuration, as detailed on the next page.

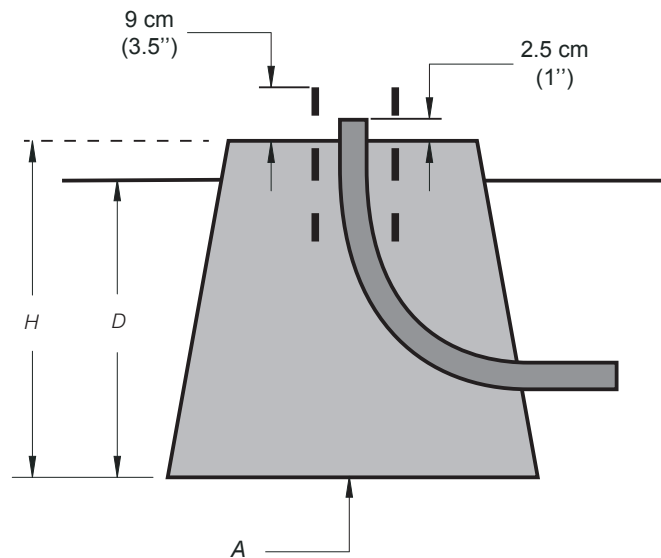
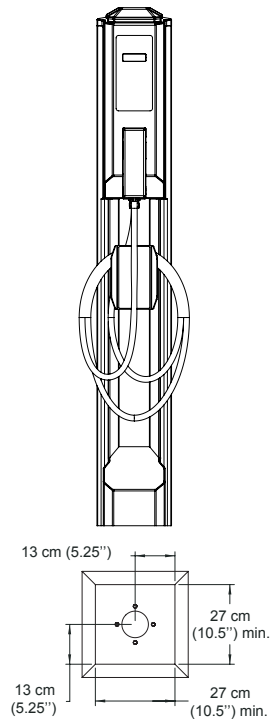


Fig. 3: Concrete base

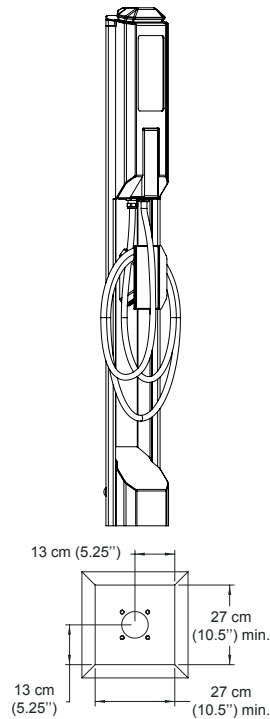
Pedestal

Anchor positioning

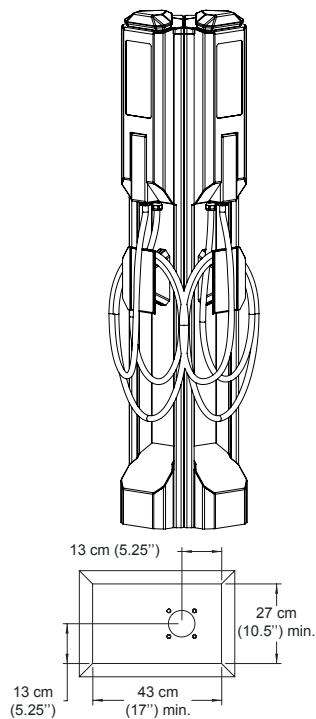
Single pedestal, straight facing



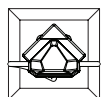
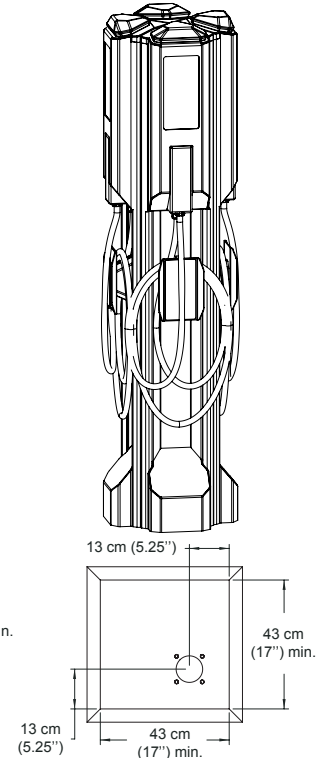
Single pedestal, angle facing



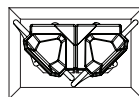
Double pedestal



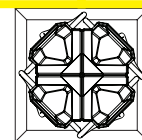
Quad pedestal



The pedestal can be installed in the center of the parking stall. In such case, the anchor shall be layed out on the base as shown above, to make sure that the station is straight facing.



For an initial installation of a single pedestal that will evolve to a dual in the future, it is recommended to install the base at the intersection of 2 parking stalls, with the anchor positioned to have the charging station face at 45°.



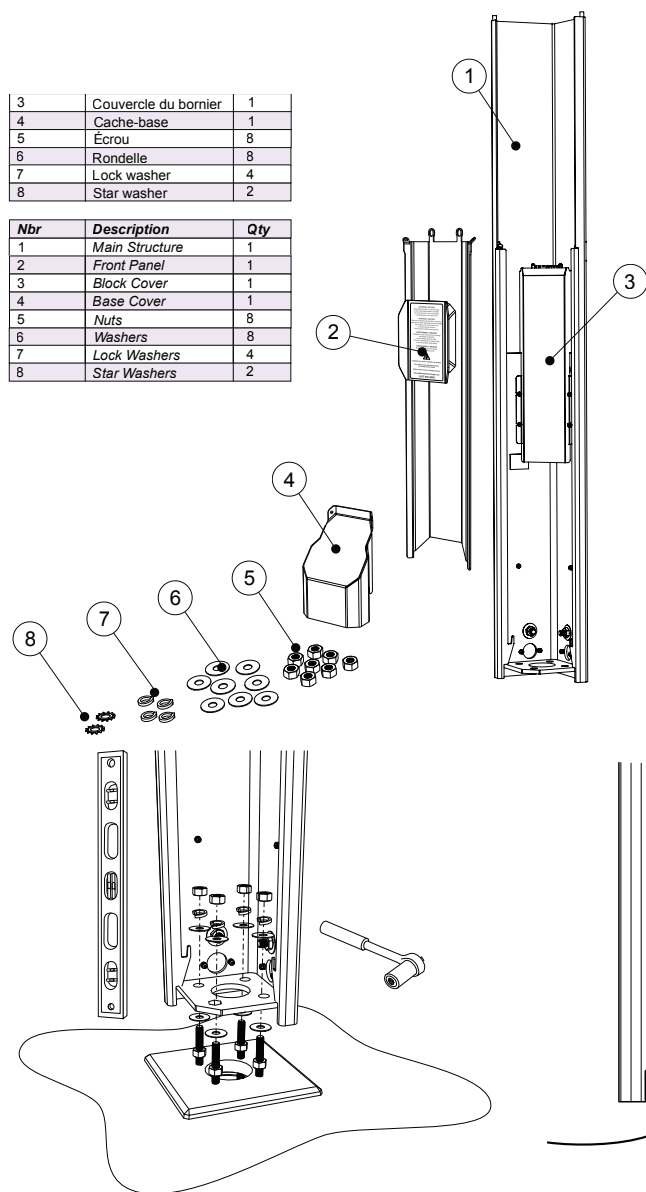
A quad pedestal shall be installed at the intersection of four parking stalls.

Pedestal

Single base installation

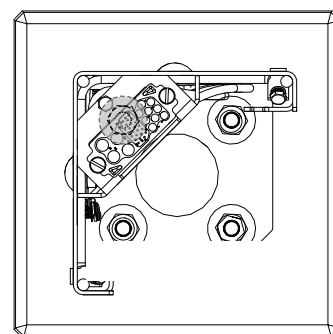
3	Couvercle du bornier	1
4	Cache-base	1
5	Écrou	8
6	Rondelle	8
7	Lock washer	4
8	Star washer	2

Nbr	Description	Qty
1	Main Structure	1
2	Front Panel	1
3	Block Cover	1
4	Base Cover	1
5	Nuts	8
6	Washers	8
7	Lock Washers	4
8	Star Washers	2



INSTRUCTIONS:

- Install the main structure over the concrete base. Make sure to maintain a minimum of 3 cm (1.125") between the bottom of the structure and the top of the base.
- Adjust the level of the structure through the nuts attaching it to the base.



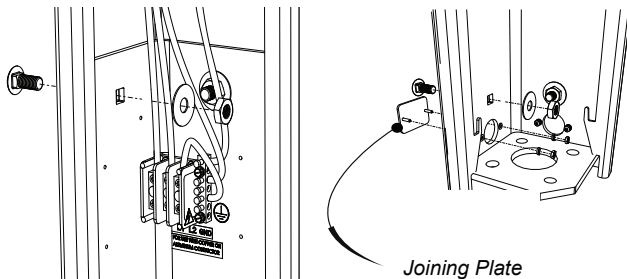
Vue de dessus
Top view

Pedestal

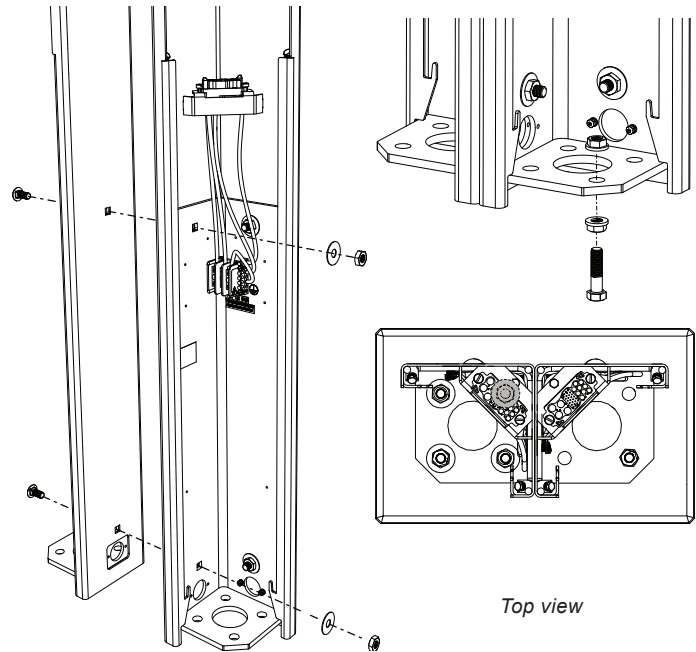
Double & quadruple base installation

INSTRUCTIONS:

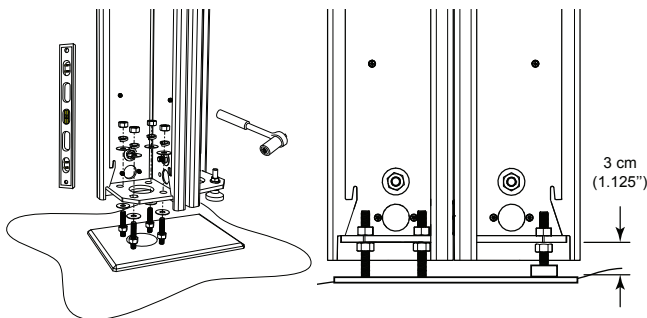
- Identify which sides of the main structures must be assembled side to side and remove their corresponding bolts and joining plates.
- Place the main structures one against the other and join them together with the 2 bolts you just removed.
- Assemble a stabilizer into the hole of the main structure that is not fastened to the threaded shaft anchor.



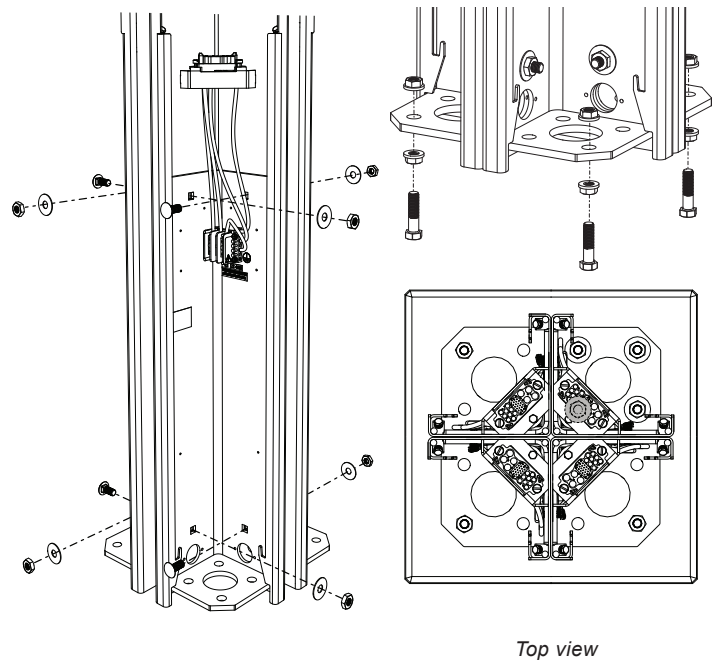
Double pedestal



- Install the main structure over the concrete base. Maintain a minimum of 3 cm (1.125") between the bottom of the structure and the top of the base.
- Adjust the level of the structure through the nuts attaching it to the base.



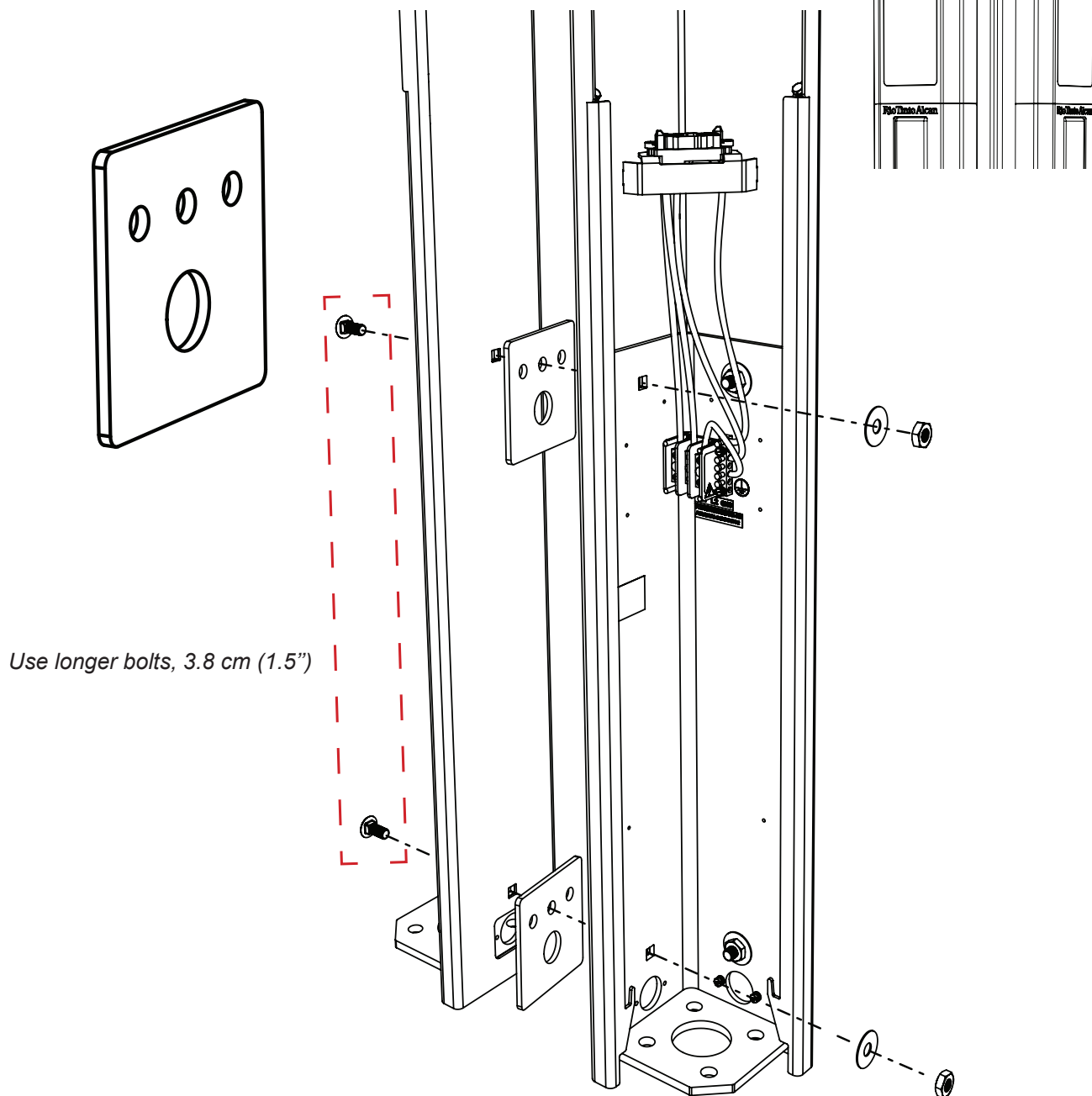
Quad pedestal



Pedestal

Double & quadruple base installation

For double or quadruple mounting with panel holder (part number: S2-V2-ACCSPSM-01-02), add spacers (part number: S2-V2-ACCSPSM-01-05) between the main structures.



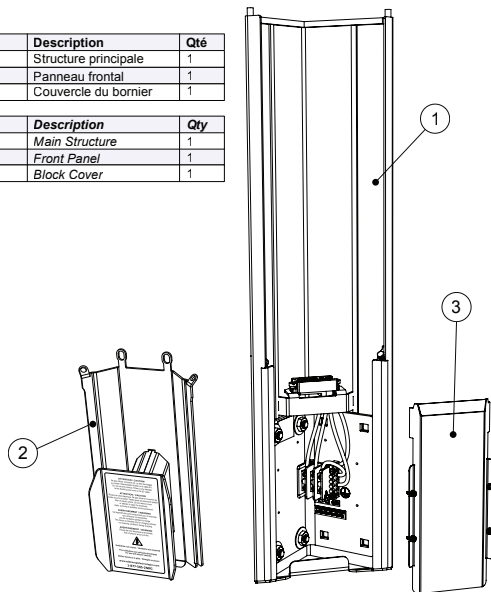
Use longer bolts, 3.8 cm (1.5")

Wall Mount

Single unit installation

No	Description	Qté
1	Structure principale	1
2	Panneau frontal	1
3	Couvercle du bornier	1

Nbr	Description	Qty
1	Main Structure	1
2	Front Panel	1
3	Block Cover	1

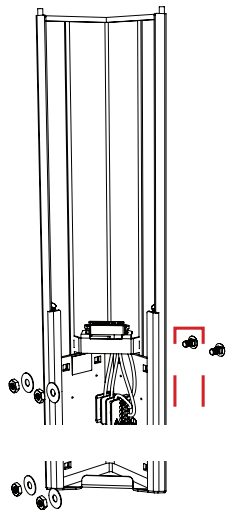
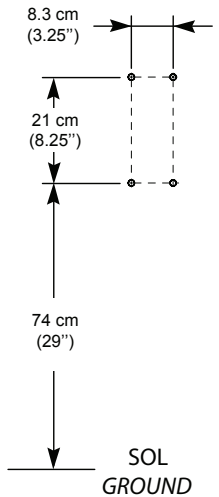


INSTRUCTIONS:

- Make sure that the available height is a minimum of 216 cm (85")
- If the wall requires that anchors to be pre-installed, follow the drilling pattern provided on right
- Install the base on the wall using the proper type of anchors, which means ½-13 inserts and bolts for a concrete wall, or ½ lag bolts for a wooden wall.
- Before drilling and during the installation of the base on the wall, make sure that everything is leveled

Patron de perçage:

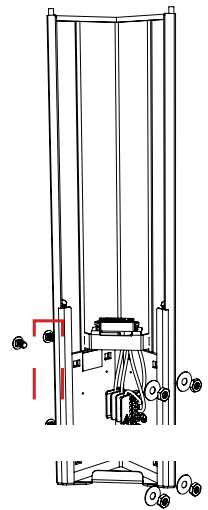
Drilling pattern:



Montage du côté gauche
Left side mounting

SPECIAL NOTES:

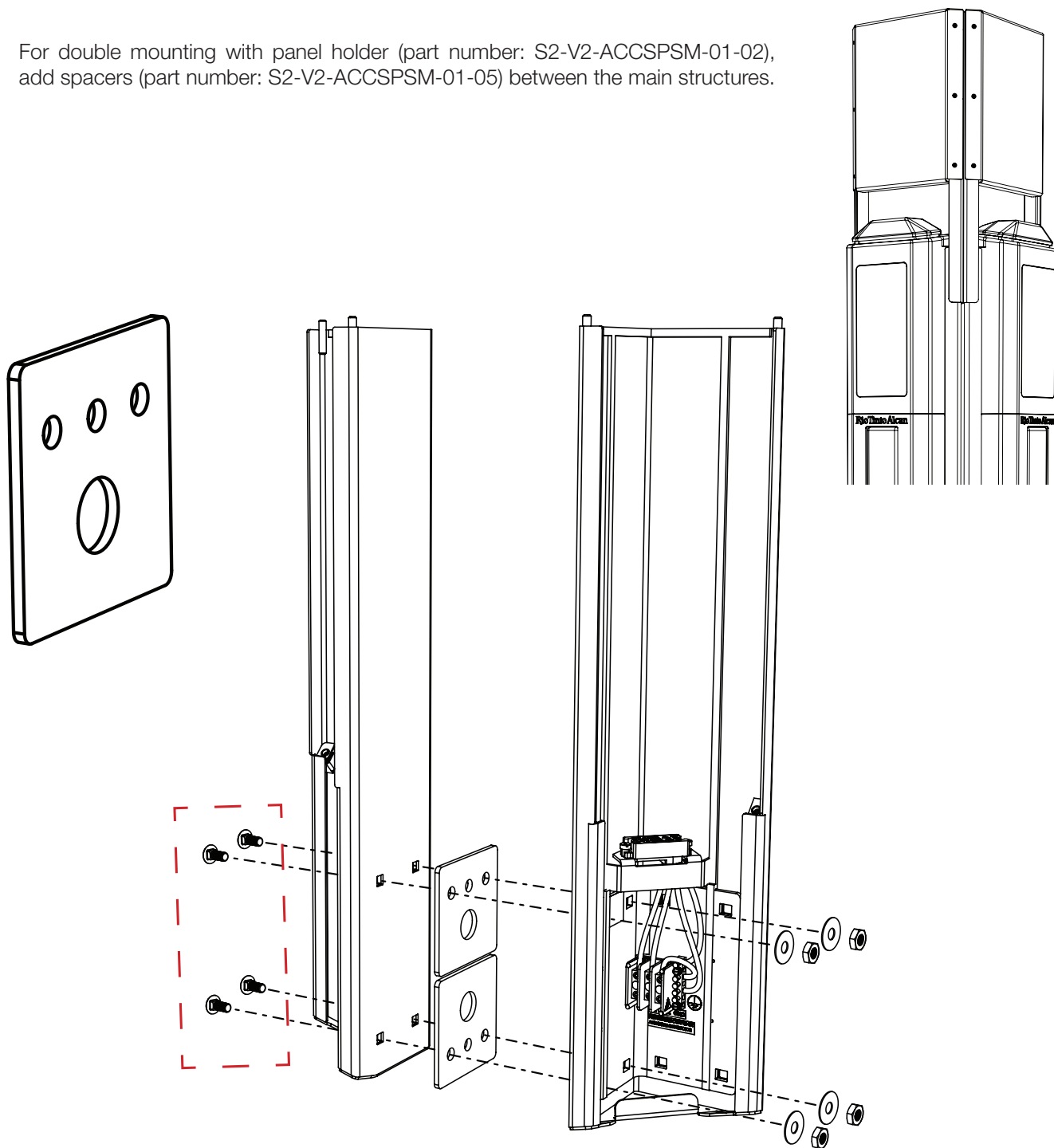
- The EVSE has been assembled at the factory to point toward the right side, assuming that it will be installed on the left corner of the parking stall.
- To install on the right corner of the parking stall, the nuts and bolts attaching the back of the base to its inner frame shall be transferred from one side to the other as shown on the pictures.
- Make sure you put both longer bolts at the position closest to the terminal block.



Montage du côté droit
Right side mounting

Wall Mount Double unit installation

For double mounting with panel holder (part number: S2-V2-ACCSPSM-01-02), add spacers (part number: S2-V2-ACCSPSM-01-05) between the main structures.



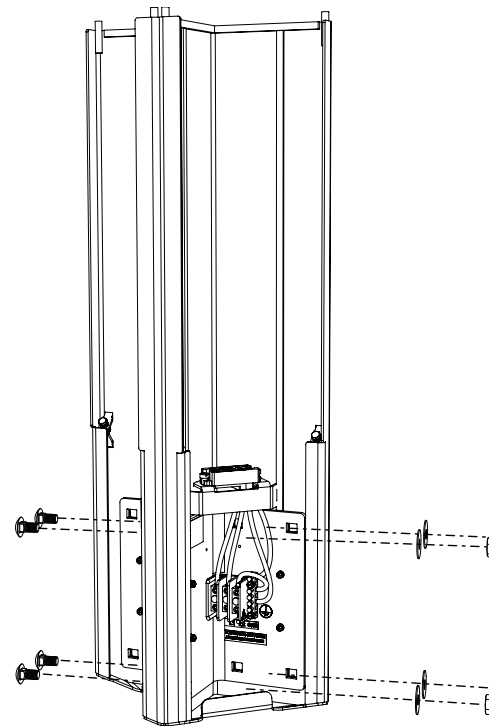
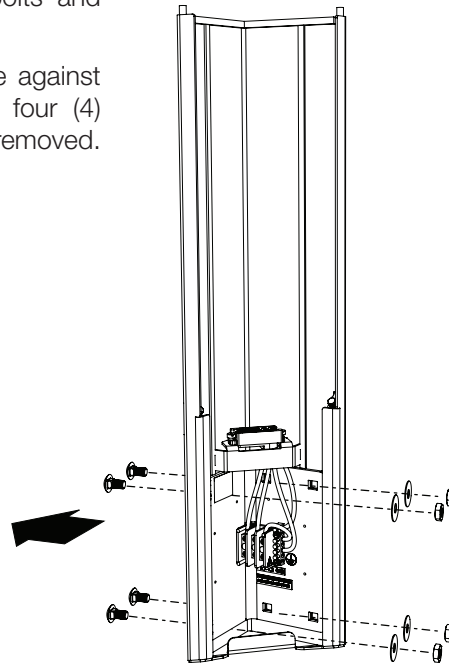
Use longer bolts, 3.8 cm (1.5")

Wall Mount

Double unit installation

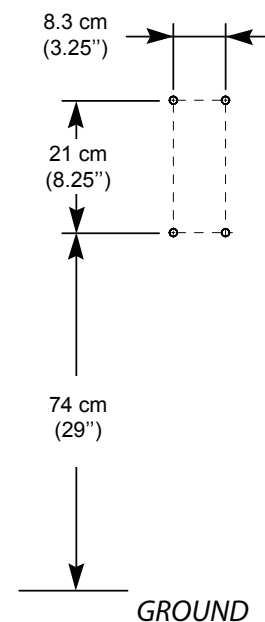
INSTRUCTIONS:

- Identify which sides of the main structure must be assembled face to face and remove their corresponding bolts and screwed plates.
- Place the main structures one against the other and join using the four (4) longest carriage bolts you just removed.



- Make sure that the available height is a minimum of 216 cm (85")
- If the wall requires that anchors to be pre-installed, follow the drilling pattern provided on right
- Install the base on the wall using the proper type of anchors, which means 1/2-13 inserts and bolts for a concrete wall, or 1/2 lag bolts for a wooden wall.
- Before drilling and during the installation of the base on the wall, make sure that everything is leveled

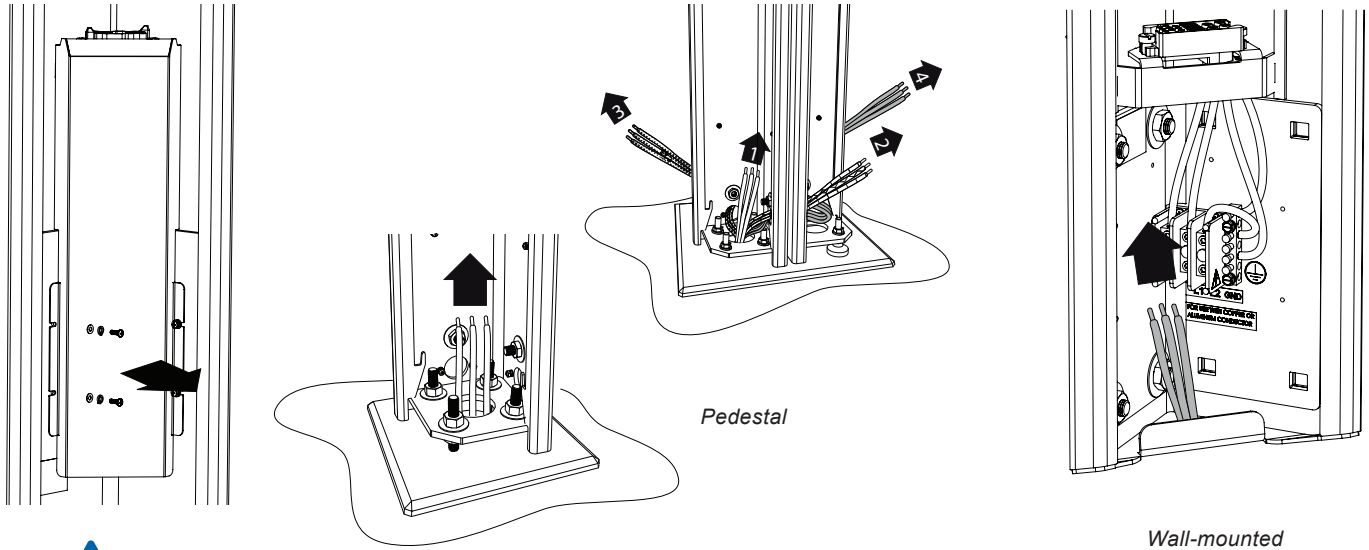
Drilling pattern:



Electrical Connections

Remove the block cover.

Insert the wires from the bottom of the base and proceed with the connection as shown on the figure below for each EVSE.



IMPORTANT

Installation and maintenance of this EVSE must only be performed by a certified electrician to ensure compliance with local and national codes.

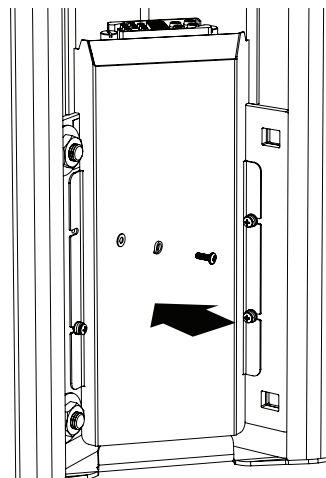
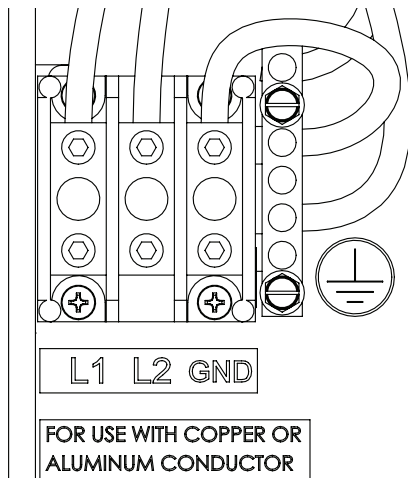
Requires a dedicated 40A dual protection device (breaker or fuse).

Do not add CCID protection to the service panel. This kind of protection is already built into AddÉnergie's EVSE.

Input: 208/240VAC nominal, 60Hz, 30A

Recommended tightening torque for the block bolts: 18 Nm.

Wire size of AWG 2 - 8, copper or aluminum



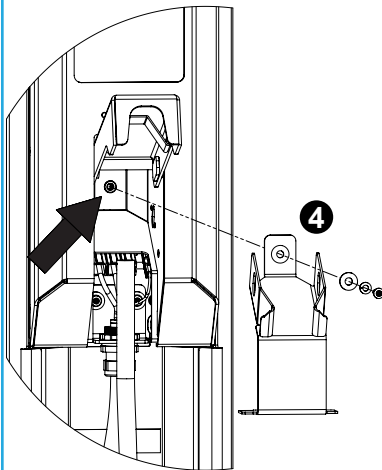
Reinstall the block cover once all connections are made.

1. For a pedestal installation, insert base covers into each of the main structure down to the ground and fasten them with the provided hardware.
2. Slide the front panels into each of the main structures.
3. Fasten each front panel's two mounting brackets with bolts and star washers.

[illegible]

Station Head and Connector Installation

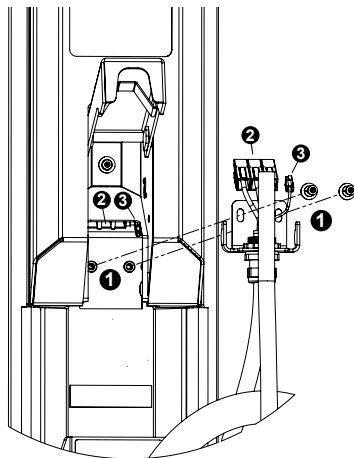
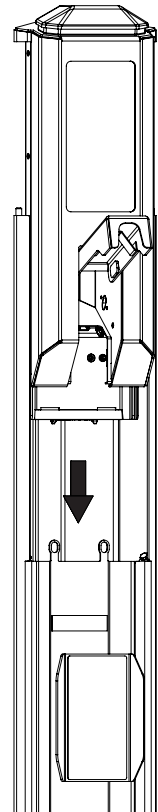
Installation of the charging station head on its base



1. Unscrew the charging port holder **4**.
2. Remove the charging port and cable assembly
 - 2.1 Disconnect the three positions connector **2** and the small black connector **3**.
 - 2.2 Unscrew the two brackets **1**.
3. Slide the head into the base

Important :

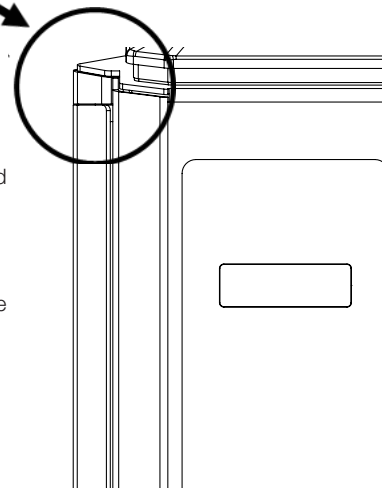
- Do not slide the head down with excessive force. If the head doesn't slide down into position easily, gentle shake the base of the charger head while guiding it into the base.
- Be careful not to damage the black plastic connectors on the bottom of the charger head on the top of the base.
- Once fully inserted, the spacing between the head and the base should be from 0 à 3mm



Installation of the charging coupling connector

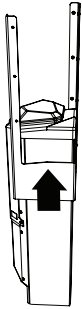
1. Screw the bracket back into place **1**.
2. Connect the three positions connector **2** (green connection should be on the right) and the small black connector **3**.
3. Screw the charging port holder back into place **4**.

Make sure the bottom of the charging port holder does not interfere with the base.

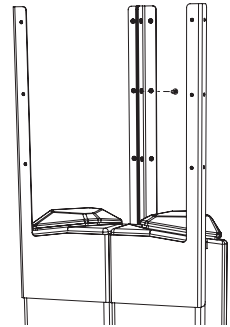


* **WARNING:** Never use a power tool to install the security screws, and never apply a torque of more than 18 Nm (160 pound-inches) when tightening them.

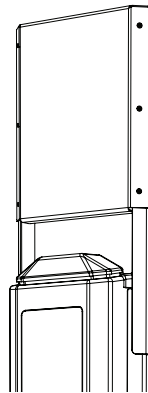
Installation of the Panel on the Charging Head



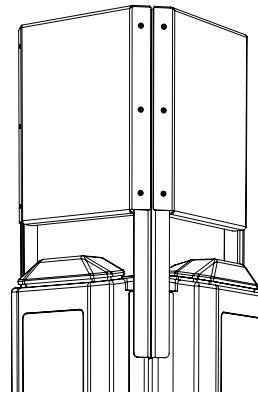
- Slide the panel holder onto the charging station head as shown in the image on the left (at this stage, the panel holder is not attached to the head but simply clipped to it).
- Attach the panel(s) to the panel holder. Only one is required for a wall mount installation and two are required for a pedestal installation.
- For a double or quadruple installation screw the adjacent panel holders together, as shown on the image to the right.



WALL MOUNT

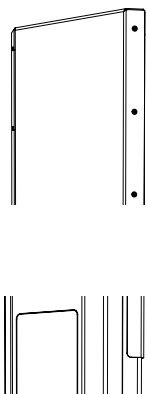


*Single
(1 panel)*

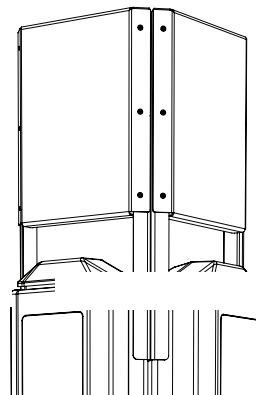
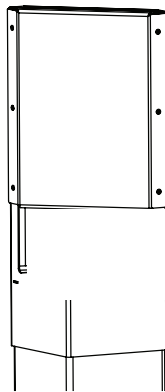


*Double
(2 panels)*

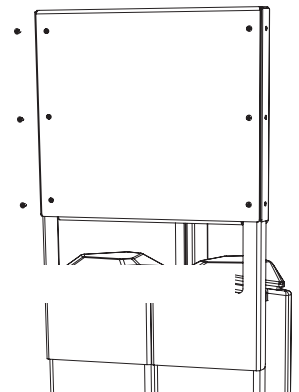
PEDESTAL



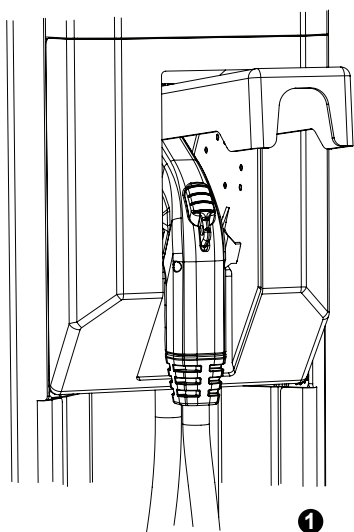
*Single
(2 panels)*



*Double
(2 singles panels + 1 double panel)*



Preliminary Tests & Commissioning



Instructions:

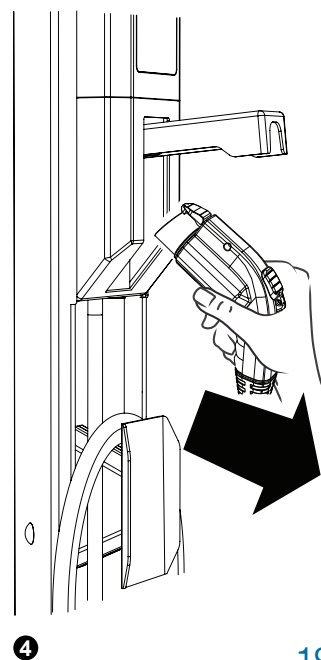
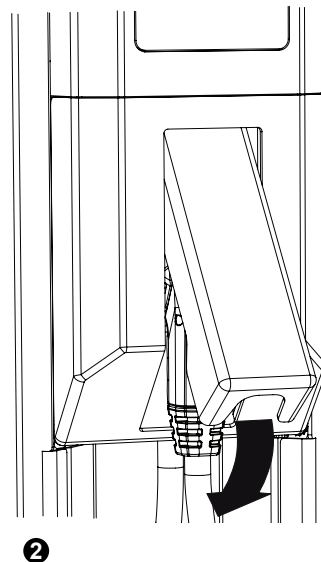
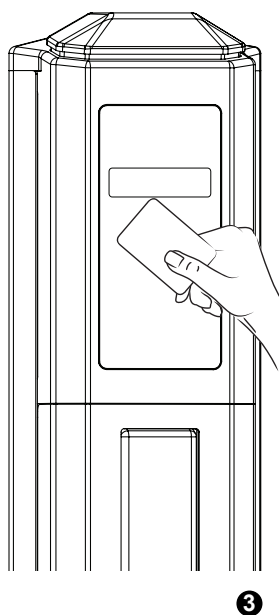
1. Place the charging port in the holder and close the door. **1 2**
2. Once the charging station is powered up, check the following:
 - 2.1. The door is locked.
 - 2.2. The charger head status lights turn to GREEN.
 - 2.3. The display shows the greeting messages.
3. Swipe the card provided with the charger in front of the display. **3**

The charger will react as follows:

- 3.1. Once the reader detects the card, it will emit an audible beep.
- 3.2. The access card is authenticated by the charging station.
- 3.3. If the test is successful, the charger head status WHITE lights will start flashing and the charging port will be unlocked. **4**
- 3.4. If the charging port is inserted into an Electrical Vehicle, it will begin charging. If not, 1 minute later, the charging session will be cancelled.

4. If the preliminary test is successful :
 - 4.1. Make sure you have installed the Communication Gateway according to the instructions described in the «Important» section, on page 2 of this guide.
 - 4.2. Call AddEnergie for charger commissioning :

877-505-2674 #203



Installation or commissioning questions:

(877) 505-2674 ext. 203

AddÉnergie Technologies Inc.

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