

Electric Vehicle Charging Station Installation Guide



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Safety and Compliance

This document provides instructions to install the SemaConnect™ Charging Station and should not be used for any other product. This product must be installed in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC) whichever is applicable. Consult a licensed contractor and/or electrician before installation to ensure compliance with local building practices, climate conditions, safety standards, and state and local codes. Under no circumstances will compliance with the information in this guide relieve the installer of responsibility to comply with all applicable codes and safety standards.

This document describes the most common installation and mounting methods. Contact SemaConnect where it is not possible to perform an installation using the procedures provided in this document. SemaConnect is not responsible for damages that may occur during or as a result of installation.

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This guide assumes that the appropriate wiring, conduit and circuit protection is in place at the installation site. Review this entire document to understand the installation process before installing the SemaConnect™ Charging Station.

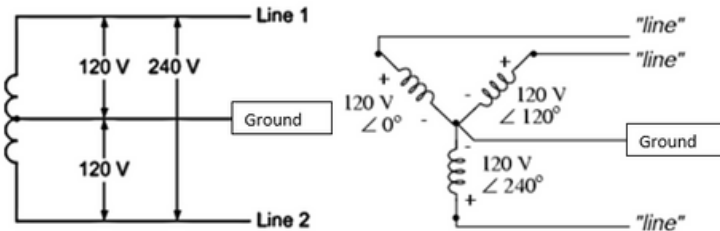
Key Requirements

- Each EV charging station shall be on a dedicated electrical circuit.
- Each station shall be protected with a **40 Amp 2-pole common trip circuit breaker (non- GFCI type)**.
- Each station is designed to draw a maximum of 30Amps.
- Each station can operate on either a 240V or 208V circuit.
- Each station requires three electrical supply wires (two hot, one ground, no neutral).
- All data communication is wireless, so there is no data cabling to install, but cellular communication is required.

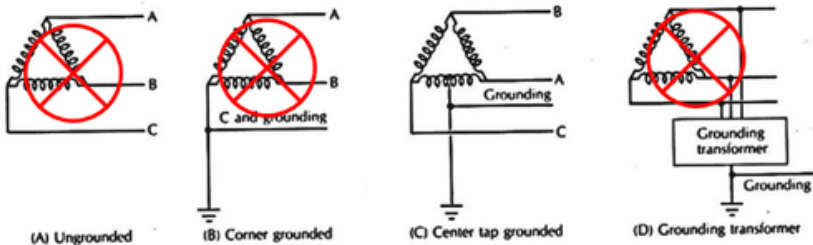
Wiring Diagram

Connect SemaConnect™ stations to any one of the power source as shown

- 208 VAC three phase , Delta system, Center tap grounded (use only two phases)
- 208 VAC three phase, Wye system (use only two phases)
- 240 VAC single phase



In a delta system, connect the SemaConnect™ station only to a center-tapped grounded transformer only as shown below. Connect the station to the side where ground is bonded (in figure C line A and



C). This allows voltages to remain constant regardless of other loads that may be using the lines. Please do not connect to other type of power sources shown below.

SemaConnect Pedestal Mount Parts

Tools Required

Electrical Tools:- nut, Insulation tape

Plumbing Tools:-

Anchor plate J bolt - 3/8" inch wrench

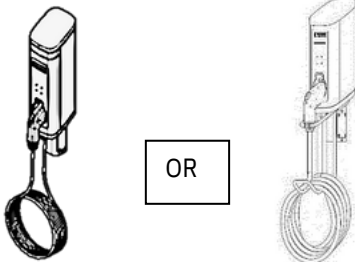


Driver Set - For Pedestal levelling - key size 3 (metric)




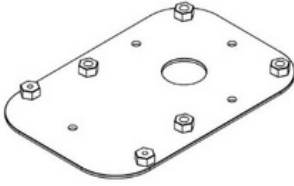
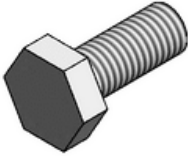
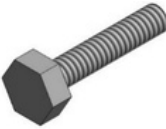
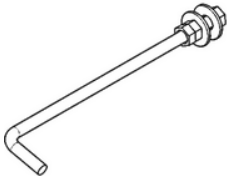
(Allen) Pedestal Mounting - key size 10 (metric)

head unit mounting screw - Key size 3 (metric)

cable rack - Key size 2 (metric)

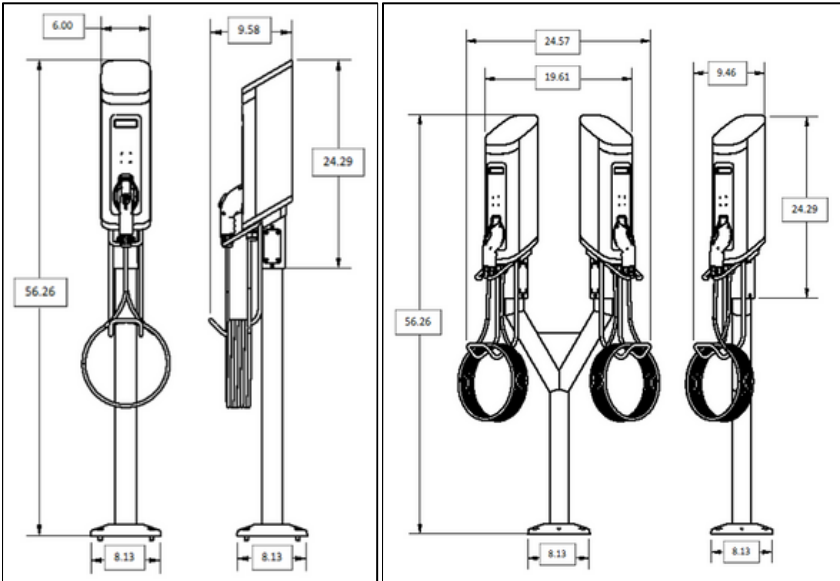
access panel - Key size 2.5 (metric)

Sl no	Description	Image	Quantity	
			Single Pedestal	Dual Pedestal
1	Head Unit with J1772 Cable (20ft)		1	2
2	Single Pedestal		1	0
3	Dual Pedestal		0	1

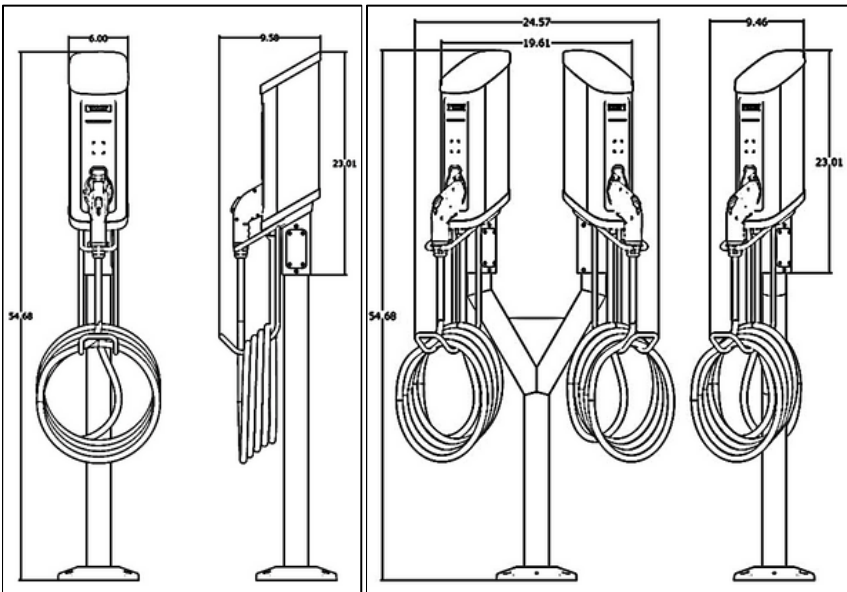
4	Head Unit Mounting Screws (M5x10 Socket Flat head)		4	8
5	Pedestal Mounting Screw (M12x25 Socket head)		4	4
6	Cable hanger		1	2
7	Anchor plate		1	1
8	Sacrificial Bolt (M12x25)		4	4
9	Sacrificial Bolt (M6x30)		2	2
10	Anchor J-bolt set-3/8" (three nuts, one flat washer, two spring washer, 1 J bolt)		4	4

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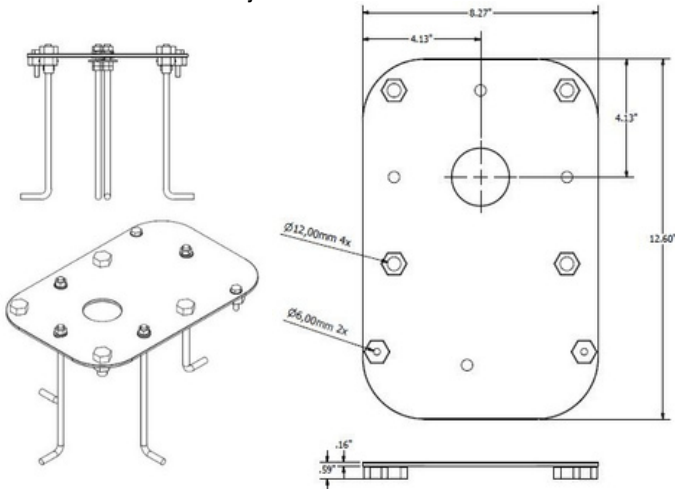
SemaConnect 620 Single and Dual Pedestal mount Installation Key Dimensions



SemaConnect 520 Single and Dual Pedestal mount Installation Key Dimensions



SemaConnect Anchor Plate Key Dimensions



SemaConnect Single and Dual Pedestal Mount Installation (cont)

Follow the same procedure for both Single and dual pedestal mount installation.

Anchor Plate Installation Procedure

Step-1:- Install the circuit Breaker.

Caution-1:- After circuit breaker is installed, make sure it's turned off.

Step-2:- Prepare the site and construct a concrete form (typical footprint: 24"x24"). Run the electrical conduit through the form. Please make sure that the electrical conduit does not come in the way of J-bolts, while installing anchor plate.

Step-3:- Place concrete into the form and smooth it out.

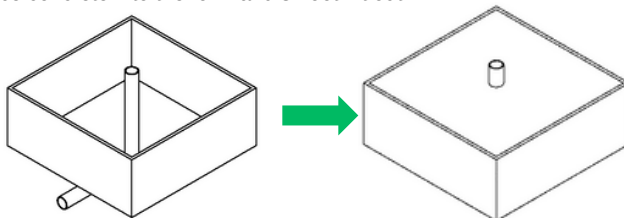


Figure-1

Step-4:- Attach all four anchor bolts (J bolts) and four sacrificial Bolt to the anchor plate (Figure-2).

Note-1:- Nut in the anchor plate should face downwards.

Note-2:- Do not remove the sacrificial bolt(supplied by the manufacturer) from the anchor plate.

Note-3:- Make sure that only one thread is coming out of the top nut when J bolt is assembled to anchor plate. If more thread is coming out of top nut then installer will face problems while mounting pedestal and CMS.

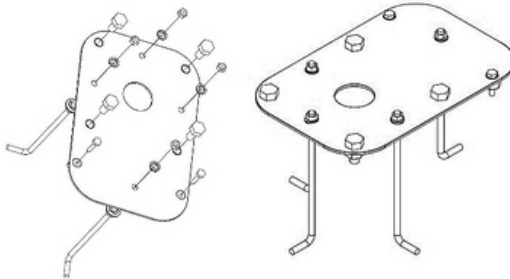


Figure-2

Step-5:- Insert the anchor plate into the concrete. Recommend vibrating the concrete to eliminate any air bubbles.

Note:- Anchor plate surface should be in level with the ground.

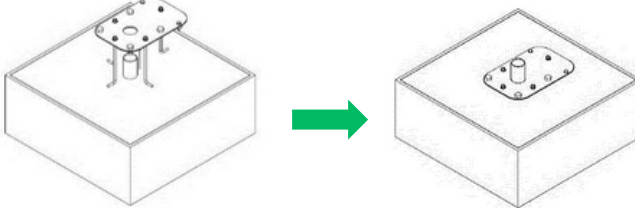


Figure-3

Step-6:- Smooth out the concrete around the anchor plate.

Note:- Continuously check for the anchor plate until concrete sets to make sure that anchor plate does not sink into the concrete (Figure-3).

SemaConnect Single/Dual Pedestal Installation Procedure

Step-7:- Once the concrete has set, remove the Sacrificial bolts (Figure-4) from the anchor plate. Then place the pedestal on top of anchor plate and screw in four pedestal mounting screw(Figure-5). Do not tighten it fully.

Note-1:- Make sure the electrical wire is passed through the pedestal.

Note-2:- Ensure that access panel is to your right, when seen from the front end.

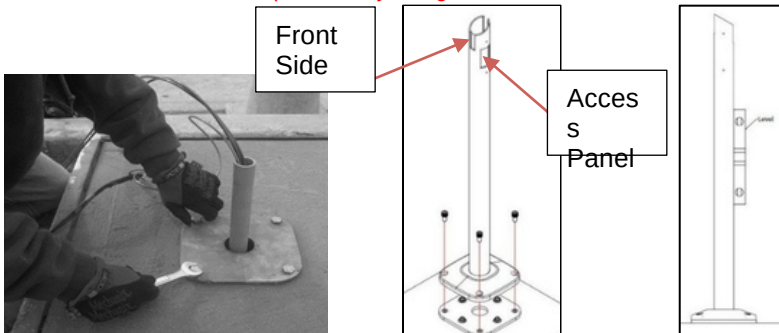


Figure-4 Figure-5 Figure-6

Step-8:- Align Pedestal for plumb with the help of Set screw on the pedestal(Figure-5). Once the Pedestal is plumb, fully tighten the pedestal mounting screw.

Preparing the SemaConnect™ 620/520 head Unit

Step-9:- Loosen the Set screws(4 nos) in the head unit(s) and attach Cable rack to charging Station(Figure-7).

Step-10:- Remove the access panel from the head unit.

Step-11:- Place the J1172 in the holder and hang the cable in the cable rack.

Assembly of SemaConnect™ 620/520 onto Pedestal

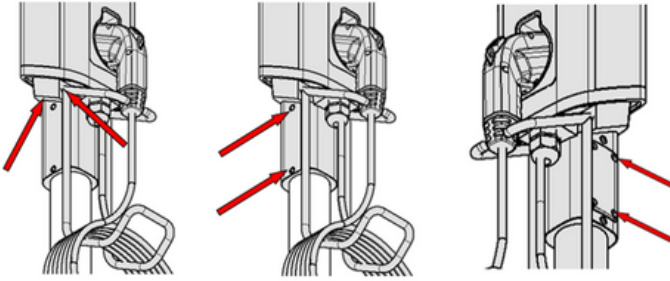


Figure-7 Figure-8 Figure-9

Step-12:- Now Slide the head unit onto pedestal and attach it with four mounting screw(Figure-8).

Note:- Make sure that the wires are not pinched between pedestal and charging station

Step-13:- Connect three electrical supply wires.

Note:- Strictly adhere to the wire color codes to ensure proper installation(Green-Green). And use wirenut and Insulation tape for safety

Step-14:- Carefully push the wire in and attach the access plate(Figure-9)

Step-15:- Power up Charging Station by turning on circuit breaker(s). Station will automatically communicate with network and initialize itself (using cellular signal). Successful power-up is indicated by a steady blue LED light and welcome message on LCD.



Step-16:- Call 800-663-5633 to complete Installation.
Please have station serial number ready with you. If you do not have it, you can find it on left hand side of the station

SemaConnect Wall/Pole Mount Installation

Tools Required

Wet strap, Torx nut, Insulation tape

Mechanical Tools:-

Power drill, leveller

Allen key set - head unit mounting screw

- Key size 3

- Key size 2

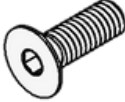

- Key size 2.5

cable rack

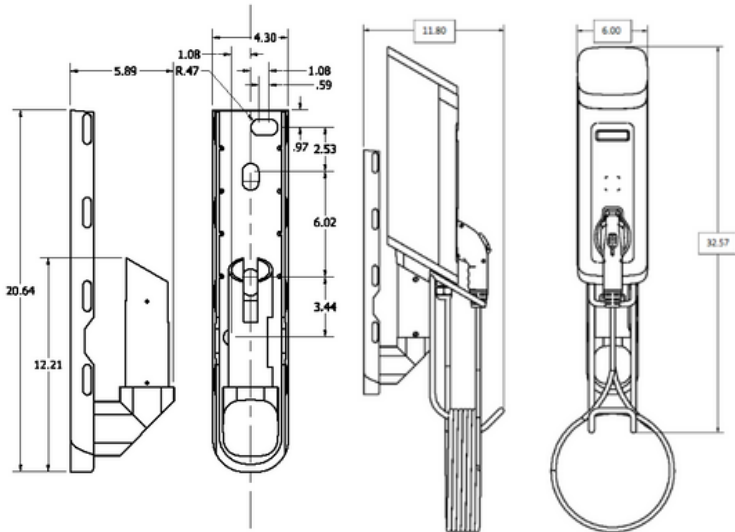
access panel

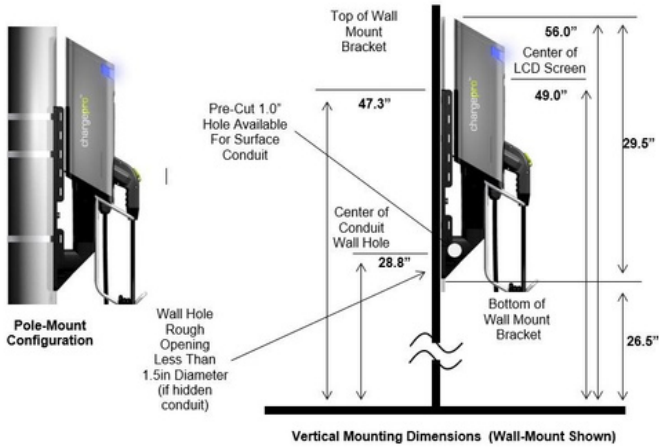
Wall mount bolt and Pole mount Strap not supplied

Sl no	Description	Image	Quantity	
			Wall mount	Pole Mount
1	Head Unit		1	1
2	Wall/Pole Mount		1	1

4	Head Unit Mounting Screws (M5x10 Socket Flat head)		4	4
6	Cable hanger		1	1

SemaConnect 620/520 Wall Mount Installation Key Dimensions





SemaConnect Wall/Pole Mount Installation

Follow the same procedure for Wall and Pole mount installation.

Wall/Pole Mount Installation Procedure

Step-1:- Install the circuit Breaker, run the electrical conduit

Caution-1:- After circuit breaker is installed, make sure it's turned off.

Step-2:- Attach Wall/Pole Mount Bracket

a. If Wall-Mount:- Attach Wall Mount Bracket to wall with 4 bolts.

b. If Pole-Mount:- Attach Pole Mount Bracket with three straps.

In both cases electrical conduit can run from the back or the side. Also make sure that the wall mount is level.

Preparing the SemaConnect™ 620/520 head Unit

Step- 1:- Loosen the Set screws in the head unit and attach Cable rack to charging Station (Figure-1).

3:- Remove the access panel

Step- Place the J1172 in the holder and hang the cable in the cable rack(Figure-1).

4:-

Step- Assembly of SemaConnect™ 620/520 onto Wall/Pole mount

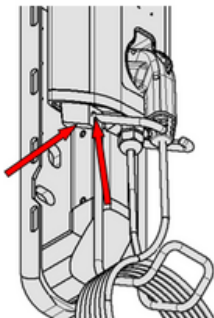


Figure-1

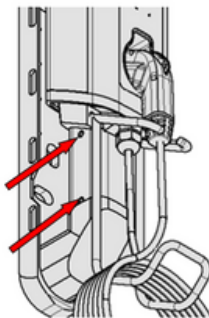


Figure-2

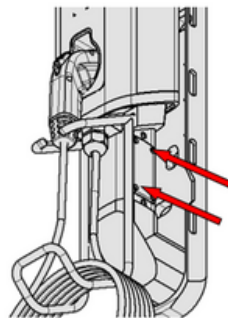


Figure-3

Step-6:- Now Slide the head unit(s) onto wall/pole mount and attach it with four mounting screw(Figure-2).

Caution:- Make sure that the wires are not pinched between pedestal and charging station

Step-7:- Connect three electrical supply wires.

Caution:- strictly adhere to the wire color codes to ensure proper installation(Green-Green). And use wirenut and Insulation tape for safety

Step-8:- Carefully push the wire in and attach the access plate(Figure-3).

Step-9:- Power up Charging Station by turning on circuit breaker(s). Station will automatically communicate with network and initialize itself (using cellular signal). Successful power-up is

Step-10:- Call 800-663-5633 to complete Installation.

Please have station serial number ready with you. If you do not have it, you can find it on left hand side of the station

