



Series 5 and 6 EV Charging Station

1 — Last update: 07/20/2022

Installation Manuals

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1. Series 5 / Series 6 EV Charging Station Install Manual



1.1. 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.

In no event shall SemaConnect, Inc. Or its authorized distributors be liable for any indirect, incidental, special, punitive, or consequential damages, including without limitation, lost profits, lost data, loss of use, cost of cover, or loss or damage to the SemaConnect charging station arising out of or relating to the use or inability to use this guide, even if SemaConnect, Inc. Or its authorized distributors have been advised of the possibility of such damages.

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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.

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1.2. Key Requirements / Wiring Diagram

Key Requirements

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

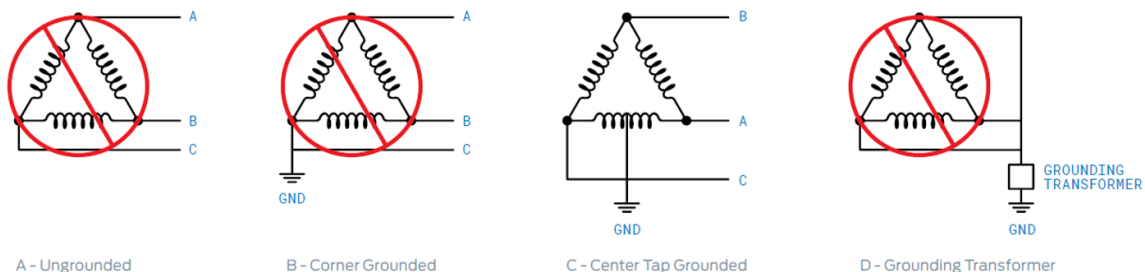
Color Code	Left Side		Right Side		Green
	Red	Black	Red w/Stripe	Black w/Stripe	
Service	Phase A (L1)	Phase B (L2)	Phase A (L1)	Phase B (L2)	Ground

Wiring Diagram

Connect SemaConnect stations to any one of the power sources as shown:

1. 208 VAC three phase , Delta system, Center tap grounded (use only two phases)
2. 208 VAC three phase, Wye system (use only two phases)
3. 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.



1.3. Parts List

Tools Required

- Electrical Tools: wire stripper, wire nut, insulation tape
- Mechanical Tools: spirit level, anchor plate J bolt, driver set

For Pedestal leveling

- 3/8" inch wrench
- key size 3 (metric)
- key size 10 (metric)
- Key size 3 (metric)
- Key size 2 (metric)

SemaConnect Parts List:

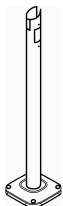
1) Station Head Unit with J1772 Cable (20ft)

Single pedestal: Qty 1 / Dual pedestal: Qty 2



2) Single Pedestal

Single pedestal: Qty 1 / Dual pedestal: Qty 0



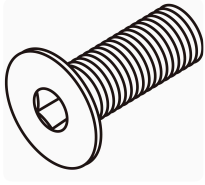
3) Dual Pedestal

Single pedestal: Qty 0 / Dual pedestal: Qty 1

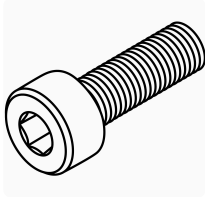


4) Head Unit Mounting Screws (M5×10)

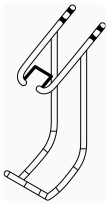
Single pedestal: Qty 4 / Dual pedestal: Qty 8

**5) Pedestal Mounting Screw (M12×25)**

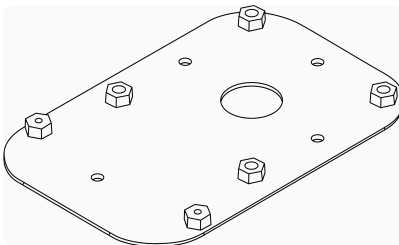
Single pedestal: Qty 4 / Dual pedestal: Qty 4

**6) Cable Hanger**

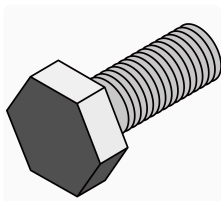
Single pedestal: Qty 1 / Dual pedestal: Qty 1

**7) Anchor Plate**

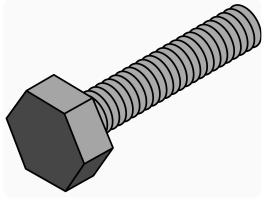
Single pedestal: Qty 1 / Dual pedestal: Qty 1

**8) Sacrificial Bolt (M12×25)**

Single pedestal: Qty 4 / Dual pedestal: Qty 4

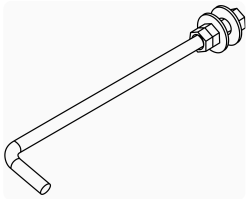
**9) Sacrificial Bolt (M6×30)**

Single pedestal: Qty 2 / Dual pedestal: Qty 2



10) Anchor J-bolt set-3/8" (three nuts, one flat washer, two spring washer, 1 J bolt)

Single pedestal: Qty 4 / Dual pedestal: Qty 4



1.4. Key Requirements

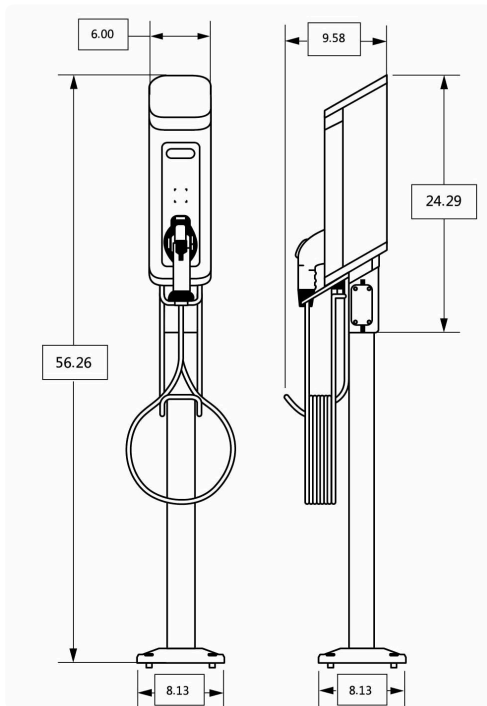
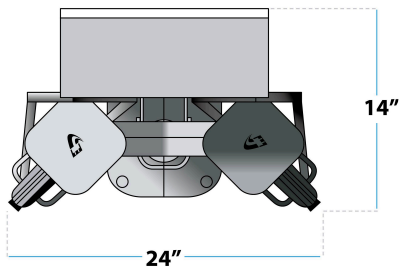
[Dimensions](#)

[Dedicated Power](#)

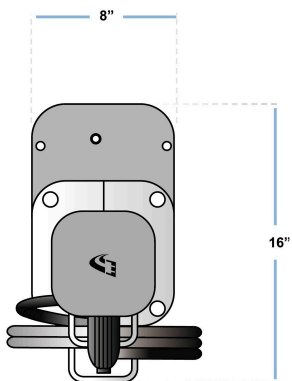
[Shared Power](#)

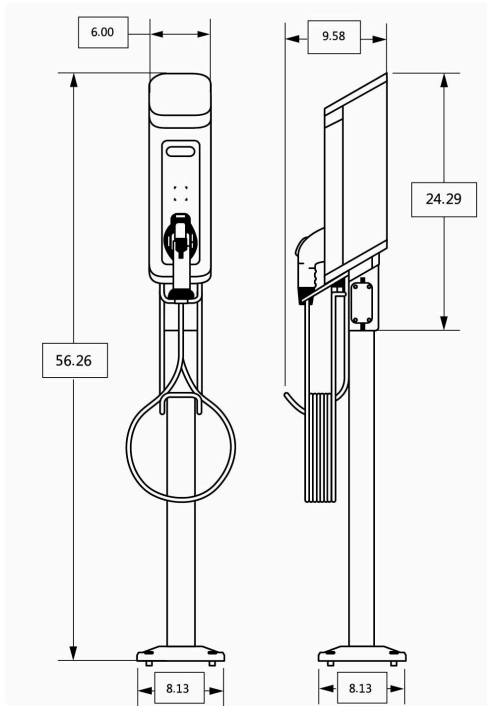
1.4.1. Dimensions

Series 6 Dual Pedestal Mount

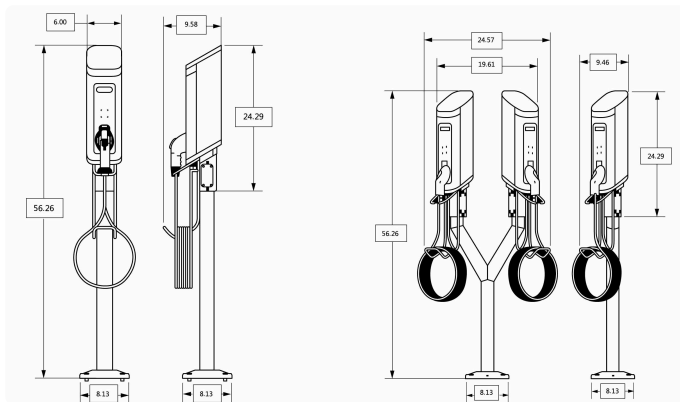


Series 6 Single Pedestal Mount





Single and Dual Pedestal

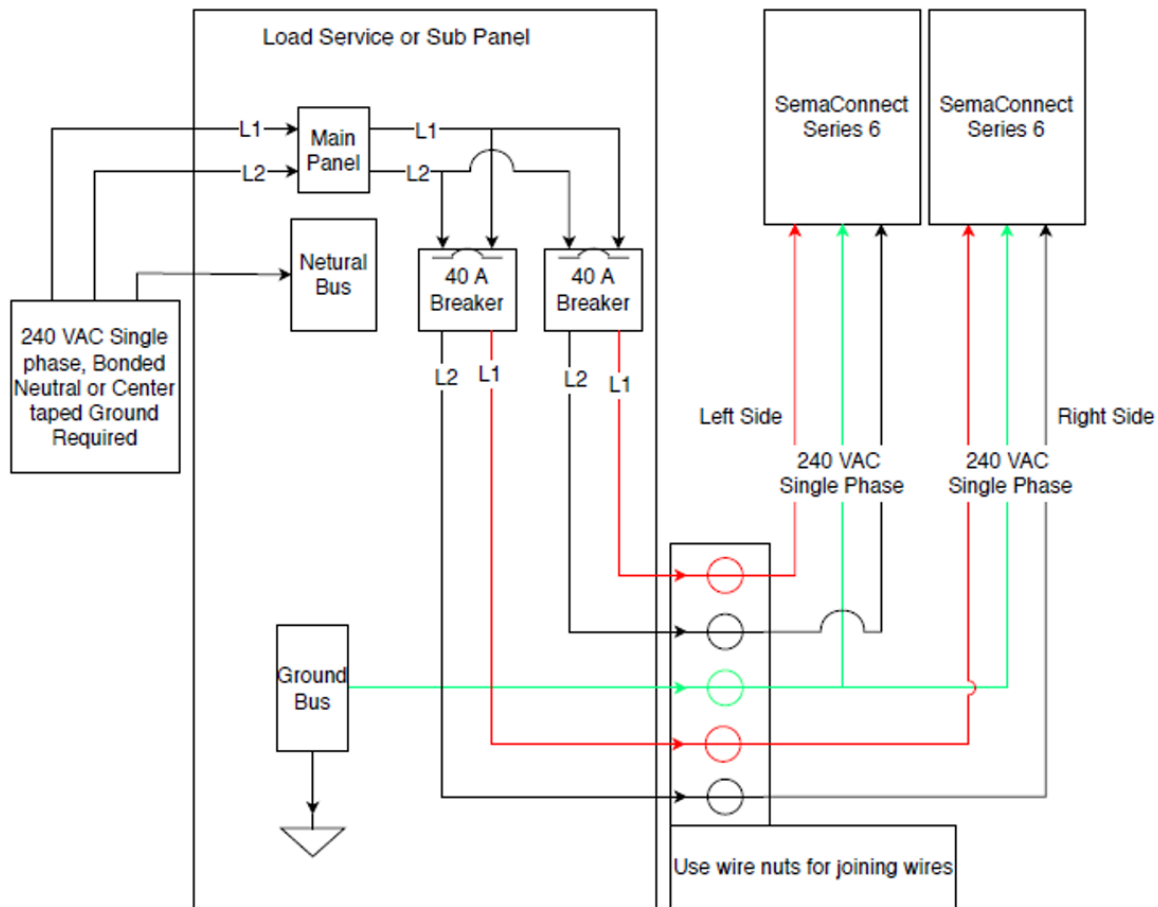


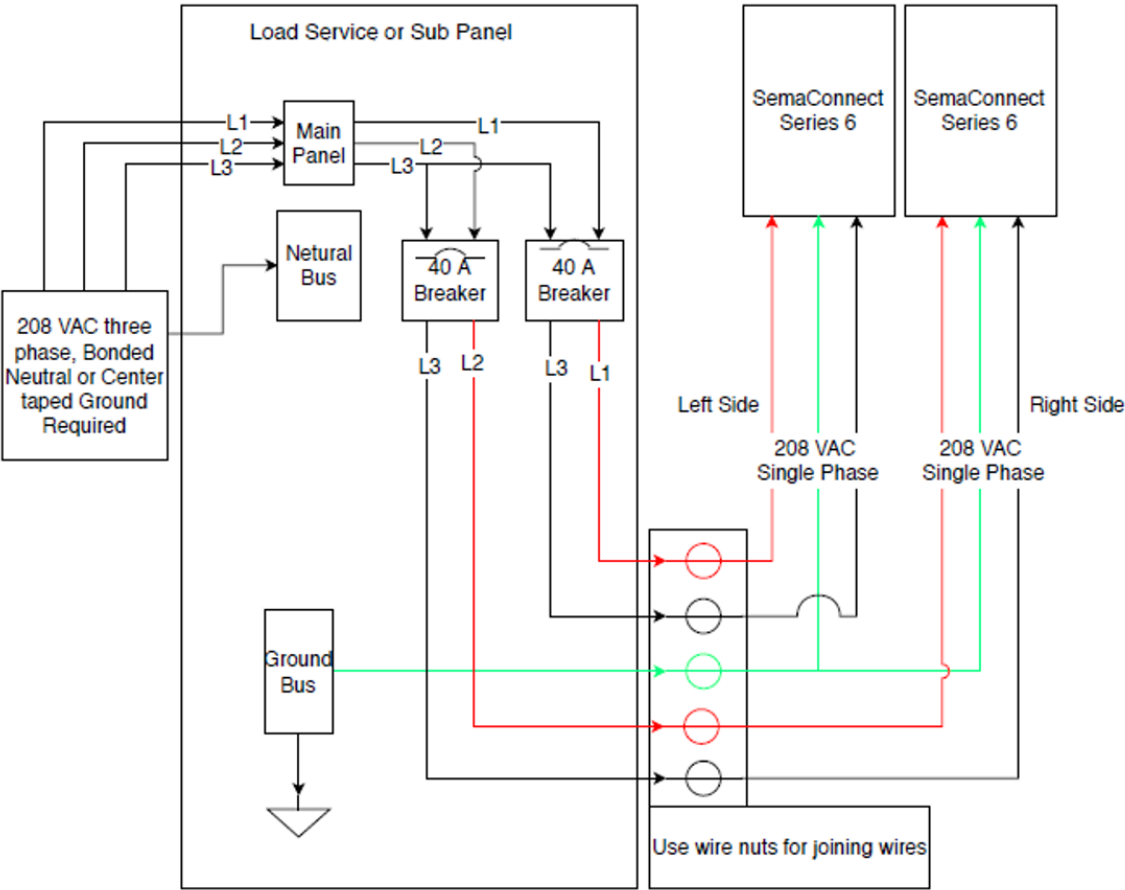
1.4.2. Dedicated Power

All wiring used in the installation must meet NEC guidelines for supplying 30A continuously.

1. Each EV charging station shall be on a dedicated electrical circuit.
2. Each station shall be protected with a 40 Amp 2-pole common trip circuit breaker (non-GFCI type).
3. Each station is designed to draw a maximum of 30Amps.
4. Each station can operate on either a 240V or 208V circuit. Wire size should meet NEC guidelines for 40A circuit breaker supplying 30A current.
5. Each station requires three electrical supply wires (two hot, one ground, no neutral).
6. All data communication is wireless, so no data cabling needed, but cellular communication is required.

Station Wiring Diagram – Dedicated Power



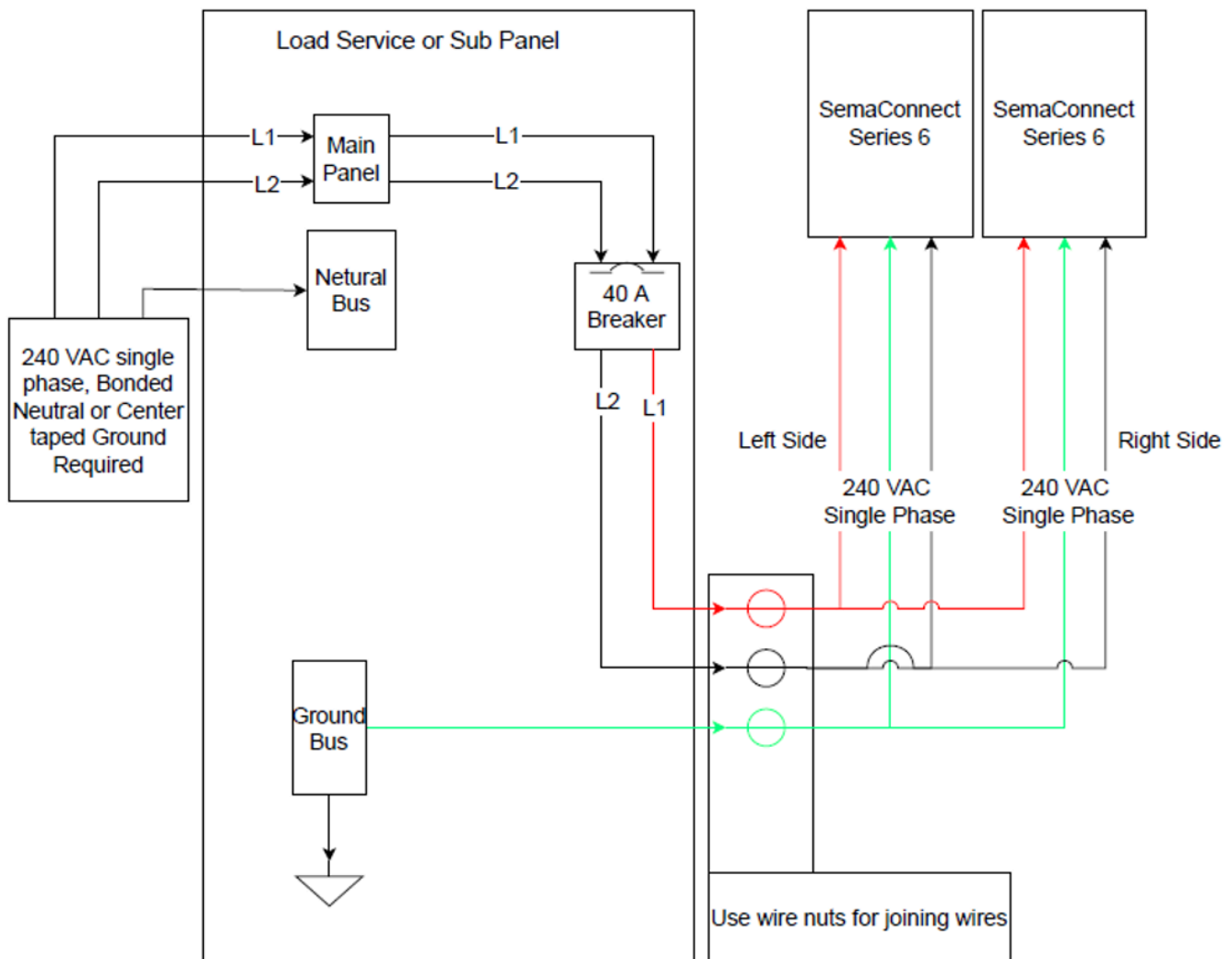


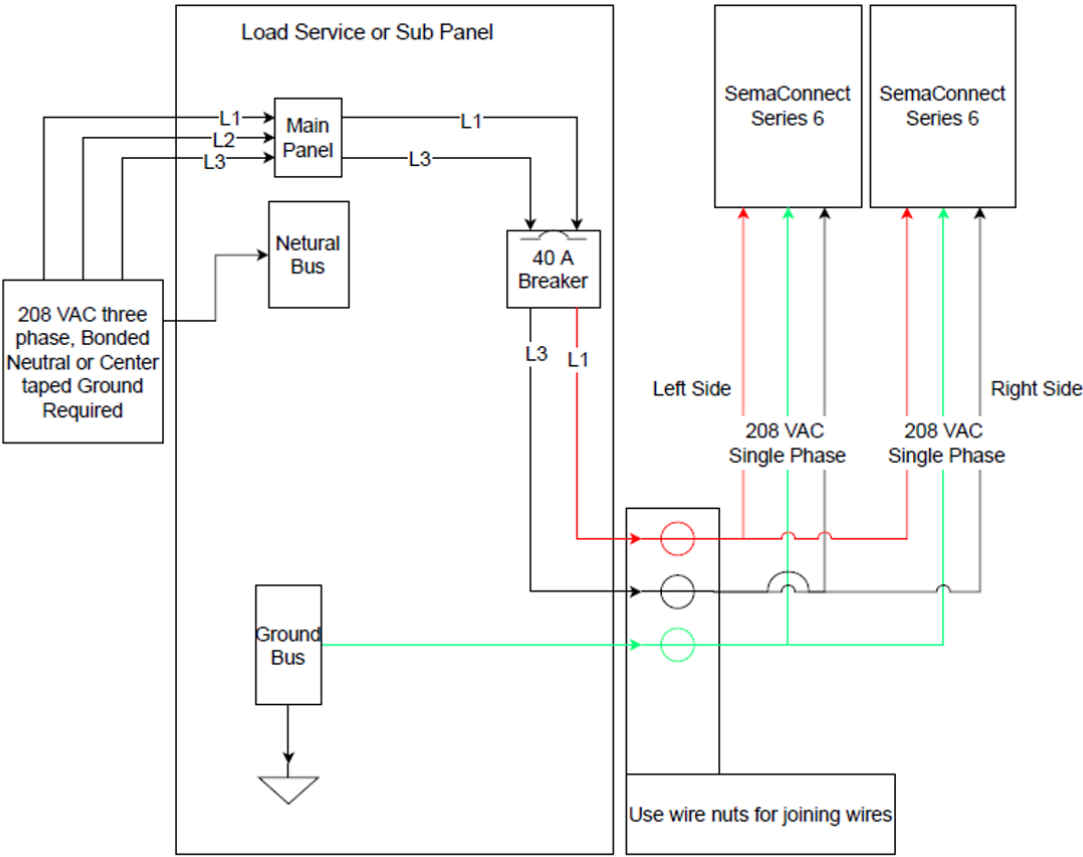
1.4.3. Shared Power

All wiring used in the installation must meet NEC guidelines for supplying 30A continuously.

1. Each EV charging station shall be on a dedicated electrical circuit.
2. Each station shall be protected with a 40 Amp 2-pole common trip circuit breaker (non-GFCI type).
3. Each station is designed to draw a maximum of 30Amps.
4. Each station can operate on either a 240V or 208V circuit. Wire size should meet NEC guidelines for 40A circuit breaker supplying 30A current.
5. Each station requires three electrical supply wires (two hot, one ground, no neutral).
6. All data communication is wireless, so no data cabling needed, but cellular communication is required.

Station wiring Diagram – Shared Power

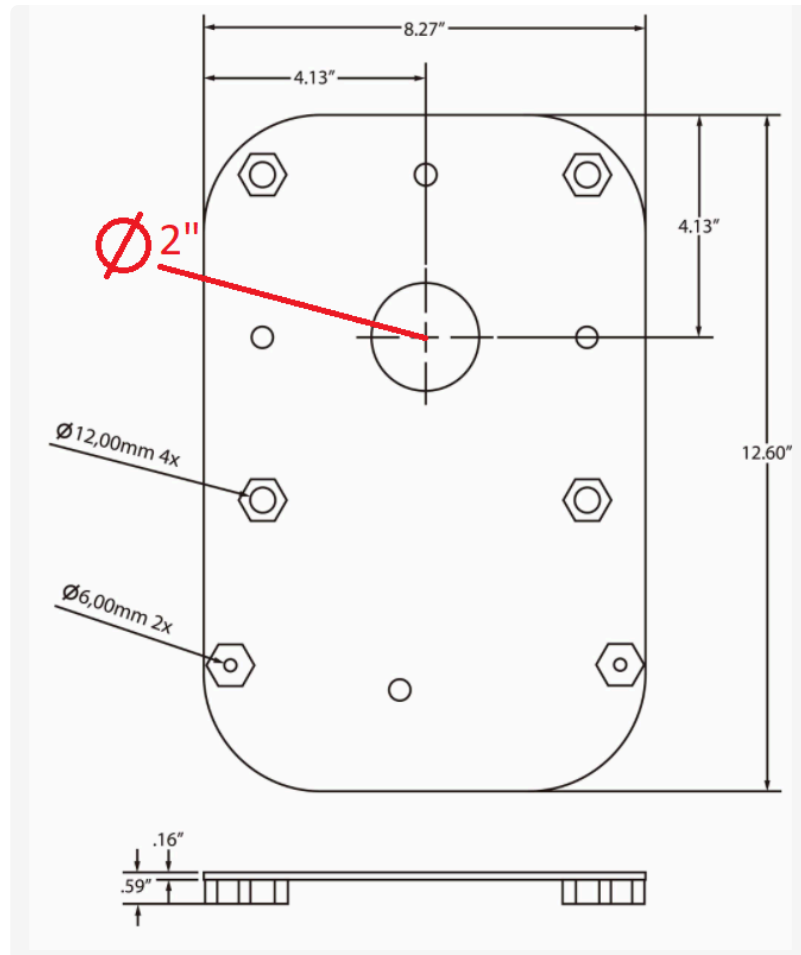




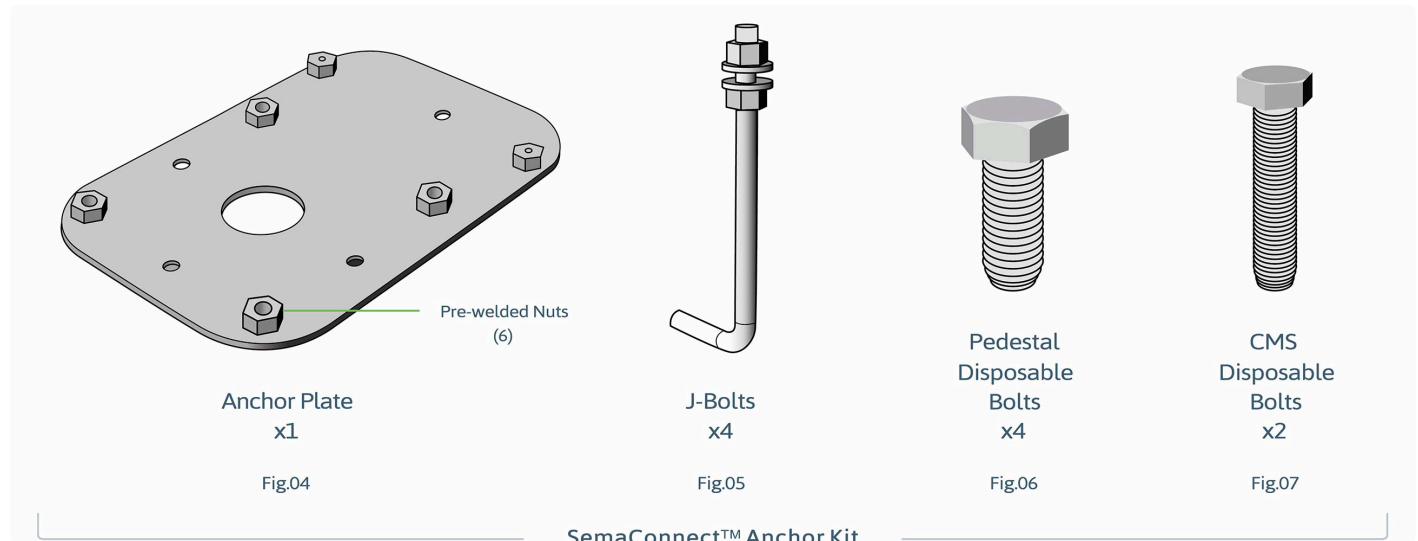
1.5. Anchor Plate Installation

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

- Anchor Plate Key Dimensions

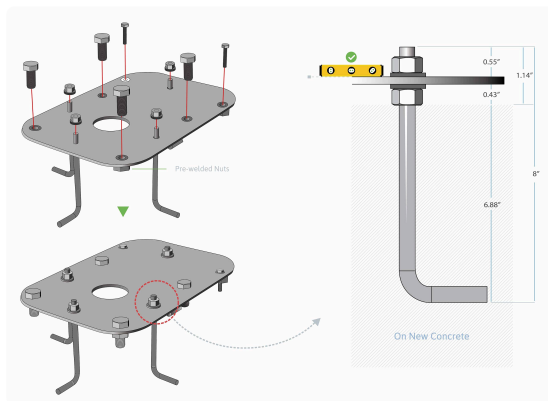


When pouring new concrete, request a SemaConnect Anchor Kit which contains:



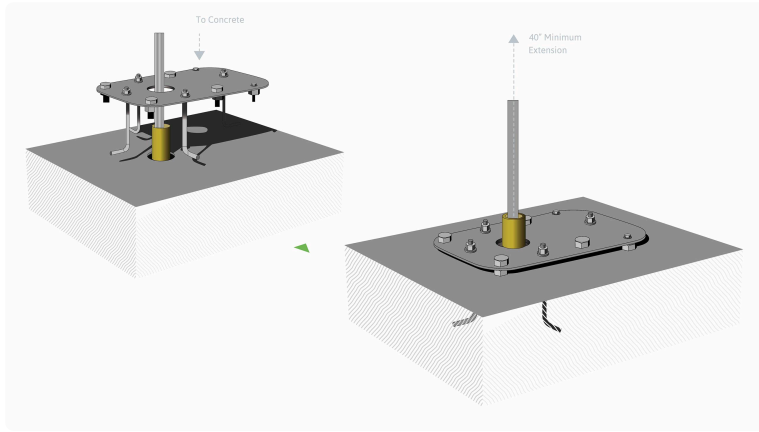
Fit all J-Bolts (4), Pedestal (4) and CMS (2) Disposable Bolts to the anchor plate.

- The flat side on which 6 nuts are welded on the Anchor Plate face downwards.
- Do not remove Disposable Bolts (6) from the anchor plate until the pedestal is ready to be installed.
- Make sure that only one thread of the top nut is visible after the J-Bolts are fitted to the anchor plate.



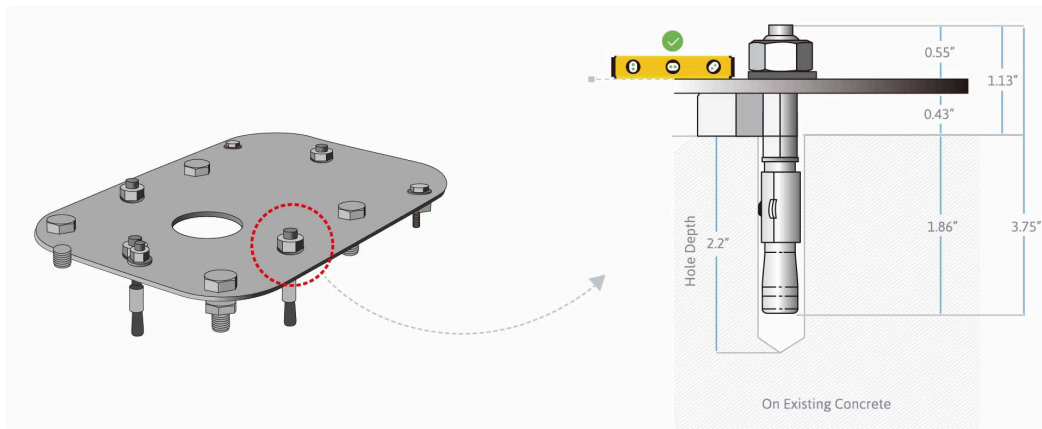
On New Concrete

- Ensure that at least 40" of wire extends out of the conduit.
- Insert the anchor plate into the concrete immediately after pouring the concrete.
- It is recommended to vibrate the concrete to eliminate any air bubbles.
- Anchor plate surface should be in level with the ground.



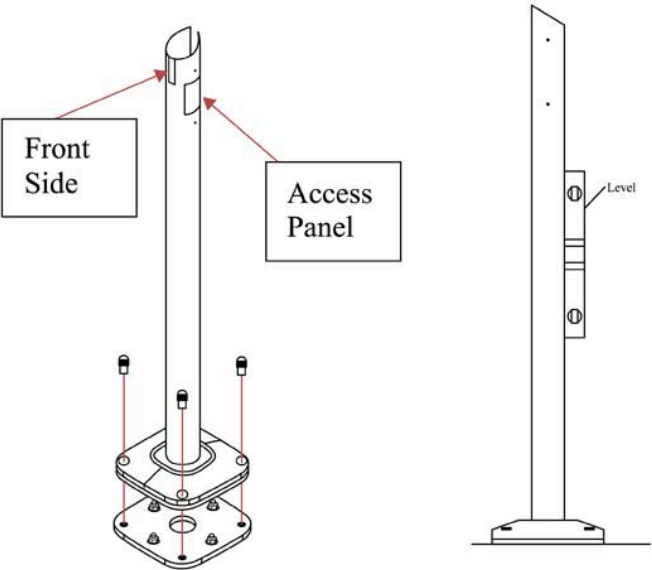
On Existing Concrete

- Ensure that at least 40" of wire extends out of the conduit.
- Mark anchoring points with the help of anchor plate template.
- Drill 4 holes into the concrete, each minimum 2.2" deep.
- Put anchor bolts provided by SemaConnect, ensuring that bolts extend out.
- Place anchor plate on top of stud anchors.



SemaConnect Single/Dual Pedestal Installation Procedure

- Once the concrete has set, remove the Sacrificial bolts from the anchor plate.
- Then place the pedestal on top of anchor plate and screw in four pedestal mounting screw. Do not tighten it fully.
- Make sure the electrical wire is passed through the pedestal.
- Ensure that access panel is to your right, when seen from the front end.
- Align Pedestal for plumb with the help of Set screw on the pedestal. Once the Pedestal is plumb, fully tighten the pedestal mounting screw.



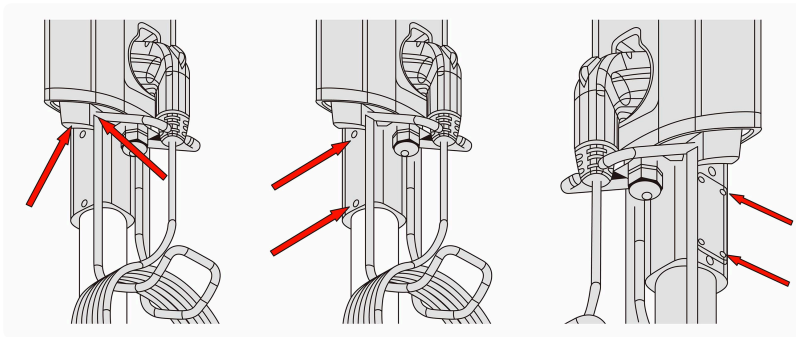
1.6. Pedestal Mount

Preparing the SemaConnect Series 6 Head Unit

- Loosen the Set screws (4 nos) in the head unit(s) and attach Cable rack to charging Station.
- Remove the access panel from the head unit.
- Place the J1172 in the holder and hang the cable in the cable rack.

Assembly of SemaConnect Series 6 onto Pedestal

- Now Slide the head unit onto pedestal and attach it with four mounting screw.
- Make sure that the wires are not pinched between pedestal and charging station



- Connect three electrical supply wires.
- Strictly adhere to the wire color codes to ensure proper installation (Green-Green). And use wire nut and Insulation tape for safety.
- Carefully push the wire in and attach the access plate.



The device, may be cleaned by following the instructions below:

- Use clean, soft cloth along with mild detergent to wash the dirt off.
- Do not use high pressure water. Pour water gently from the top and use a wet/dry cloth to clean all the sides.
- Never use strong detergents or any other chemicals (Acids, petrol, thinner or any other solvent.)
- Do not exert too much of pressure on the device while cleaning.
- Do not open the device.
- Do not use a vacuum cleaner.

Power Up!

- To power up, flip the breakers.
- Call (800)-663-5633 to complete installation.
- Please have the station serial number ready with you. If you do not have it, you can find it on left-hand side of the station.



1.7. Wall/Pole Mount Parts

Tools Required

Electrical Tools: – Wire stripper, Wire nut, Insulation tape

Mechanical Tools: – Power drill, leveler

Allen key set – Head unit mounting screw - Key size 3

cabl rack - Key size 2

access panel - Key size 2.5

SemaConnect Parts List:

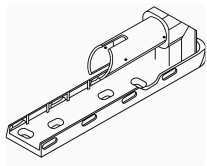
1) Station Head Unit with J1772 Cable (20ft)

Qty: 1

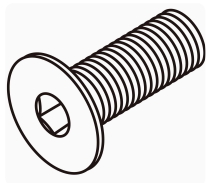


2) Wall/Pole Mount

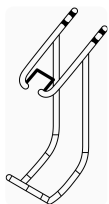
Qty: 1



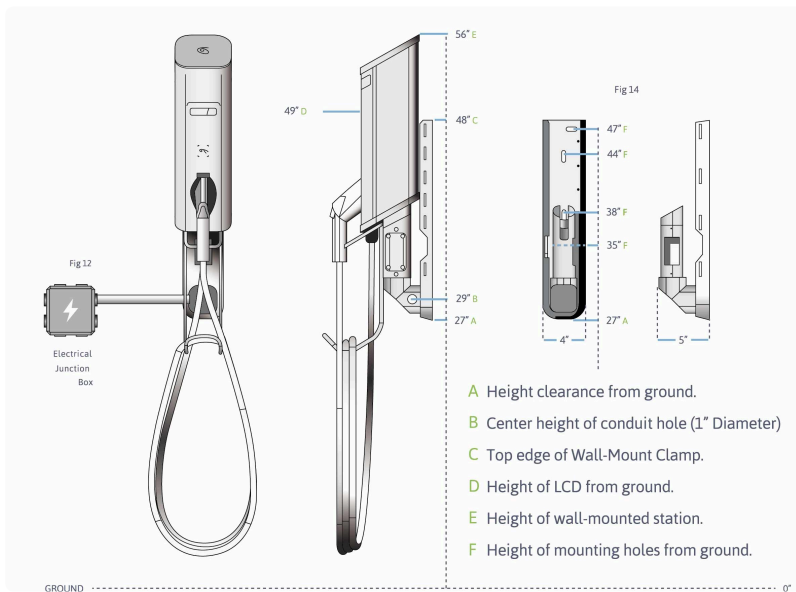
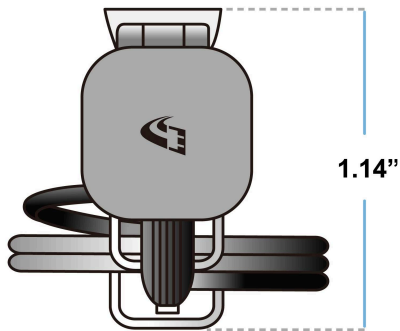
3) Head Unit Mounting Screws (M5×10)

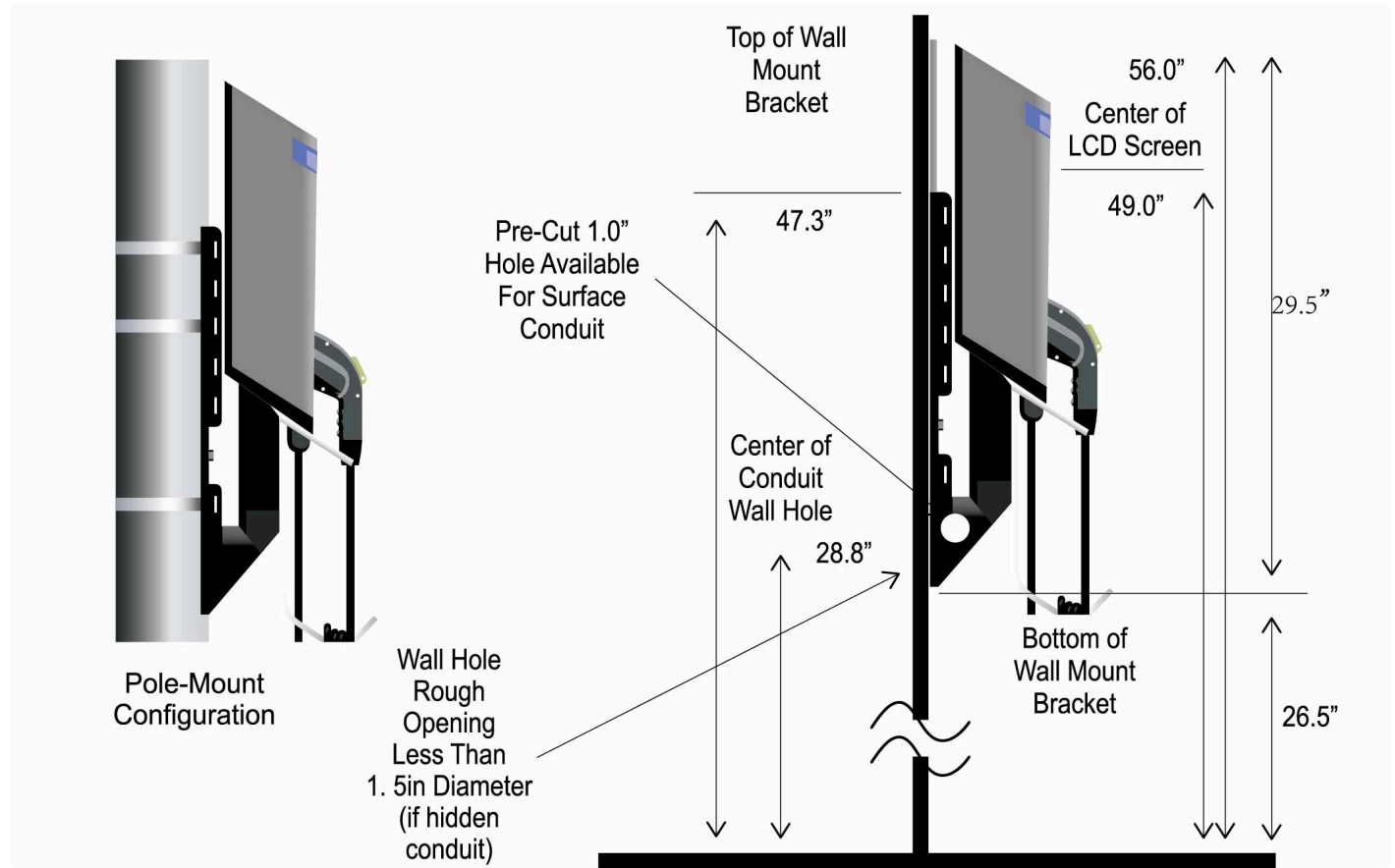


4) Cable hanger



1.8. Wall Mount Dimensions





1.9. Wall/Pole Mount Installation

Wall/Pole Mount Installation Procedure

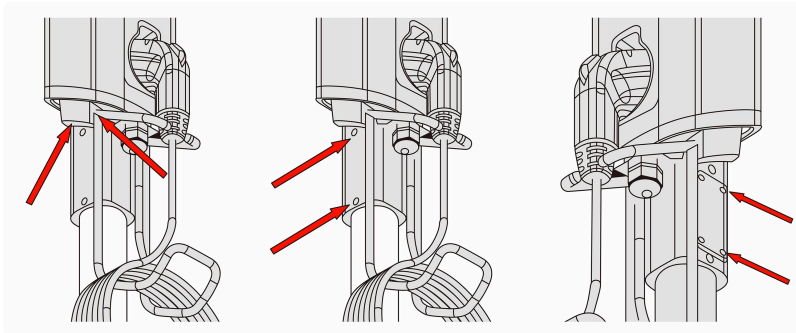
- Install the circuit Breaker, run the electrical conduit
- After circuit breaker is installed, make sure it is turned off.
- Attach Wall/Pole Mount Bracket
- * If Wall-Mount: – Attach Wall Mount Bracket to wall with 4 bolts.
- * If Pole-Mount: – Attach Pole Mount Bracket with three straps.
- In both cases electrical conduit can run from the back or the side.
- Make sure that the wall mount is level.

Preparing the Head Unit

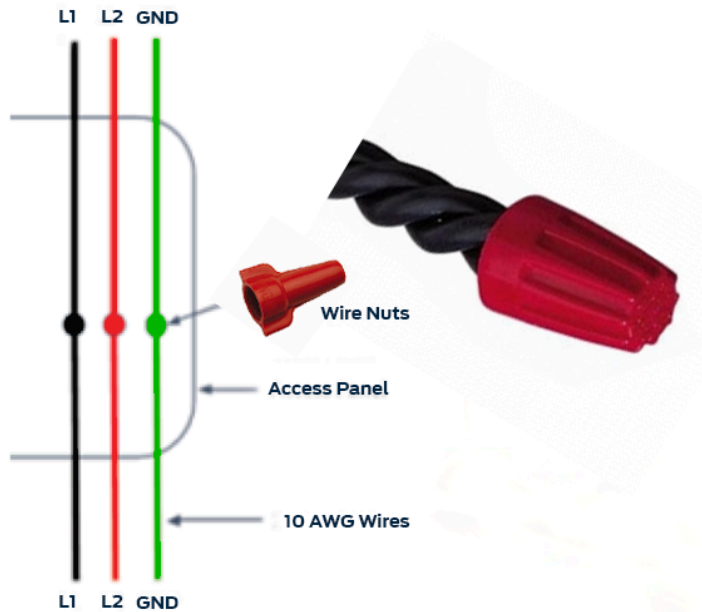
- Loosen the Set screws (4 nos) in the head unit(s) and attach Cable rack to charging Station.
- Remove the access panel from the head unit.
- Place the J1172 in the holder and hang the cable in the cable rack.

Assembly onto Bracket

- Now Slide the head unit onto the bracket and attach it with four mounting screw.
- Make sure that the wires are not pinched between the bracket and charging station



- Connect three electrical supply wires.
- Strictly adhere to the wire color codes to ensure proper installation (Green-Green). And use wire nut and Insulation tape for safety
- Carefully push the wire in and attach the access plate



Cleaning the charging station

- Use clean, soft cloth along with mild detergent to wash the dirt off.
- Do not use high pressure water. Pour water gently from the top and use a wet/dry cloth to clean all the sides.
- Never use strong detergents or any other chemicals (Acids, petrol, thinner or any other solvent.)
- Do not exert too much of pressure on the device while cleaning.
- Do not open the device.
- Do not use a vacuum cleaner.

Power Up!

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

