Manual Type:
Installation Guide

ICE-30 Light Bar Pedestal Installation Guide	Topics Covered	Date Revised	Revision Number
	▪ Pedestal Assembly ▪ Pedestal Wiring ▪ Charger Mounting	04/24/2023	1

Equipment and Tools Needed:

- Electric Drill (Phillips Head Bit)
- Flat Head Screwdriver (Precision)
- Allen Wrench
- Socket Wrench
- Conduit (The size of the AC input hole is 1.25 inches)

Safety Precautions:

Whenever working on an EVSE or other electrical equipment safety is the number one priority, make sure that the charger is de-energized and safe to begin work on. If the work site requires it, ensure a second person is available as a safety observer until the work is complete.

Required Safety Equipment:

- Safety Boots
- Safety Gloves
- Safety Glasses

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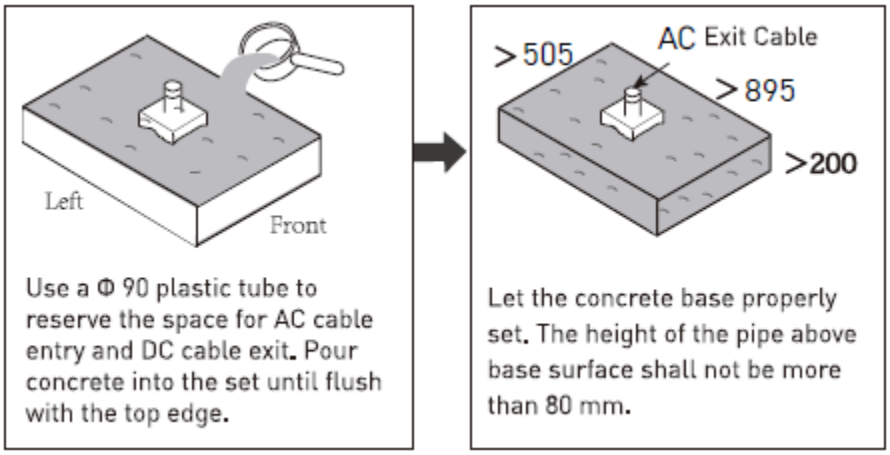
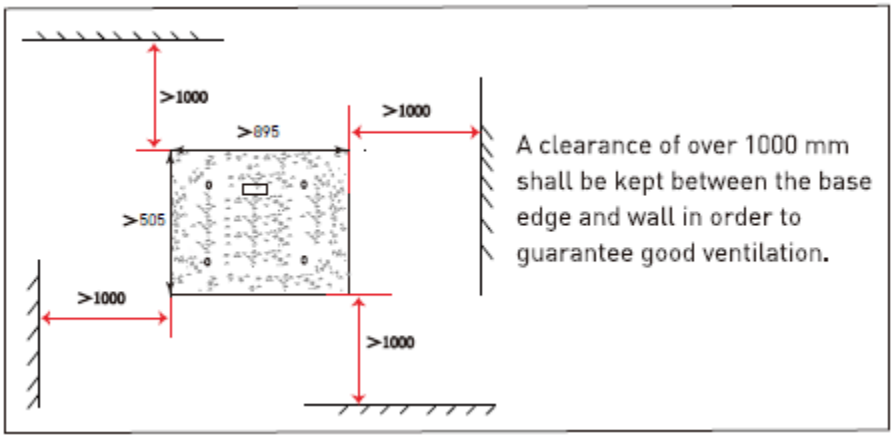
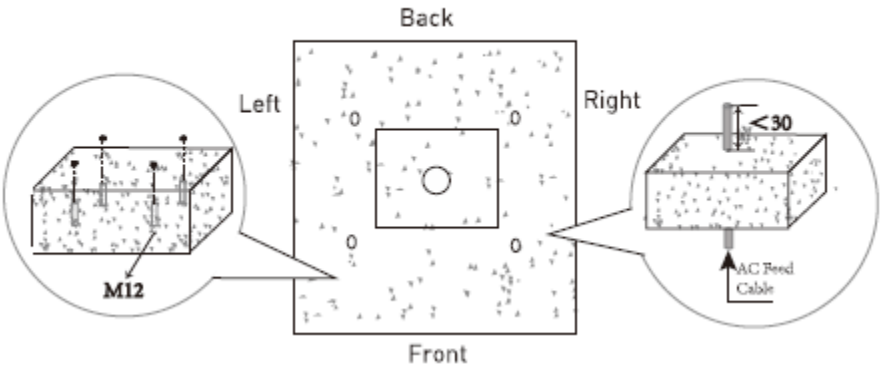
1.) Foundation Creation/Mounting



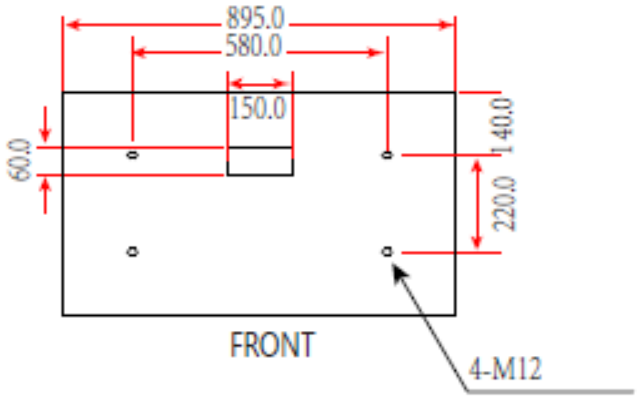
- The recommended Foundation should be made according to the image above. However, **please follow local codes when designing**. >19.88in x >35.24in x >7.87in (>505mm x >895mm x >200mm).

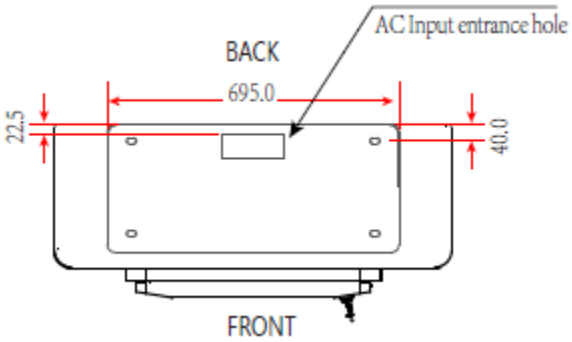


- The recommended spacing of the foundation can be seen above. However, please follow local codes when designing.

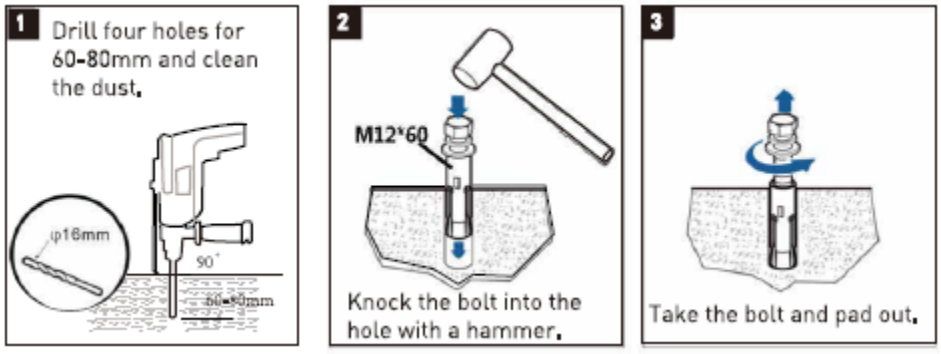


- M12 Bolts are to be used during the Pedestal Base Mounting Process. Furthermore, the AC input tube should stick out >1.18 inches (>30mm).

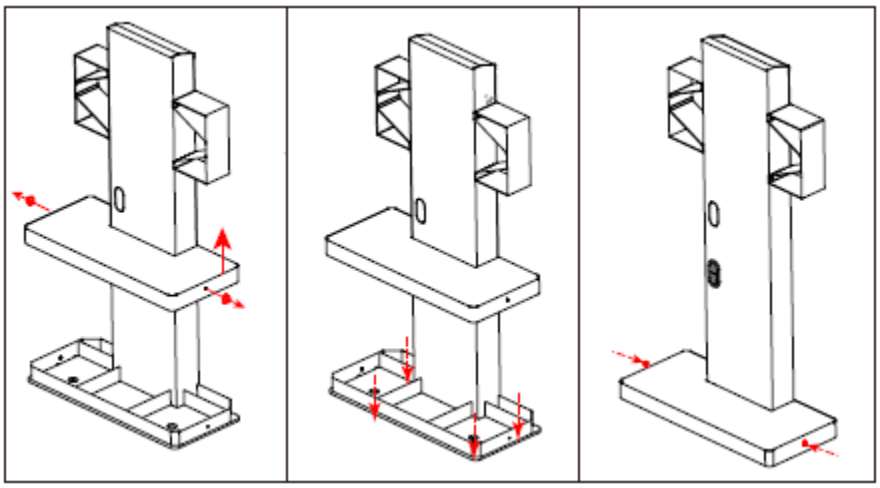




- Overhead front view of the pedestal base with dimensions (all measurements are in mm).

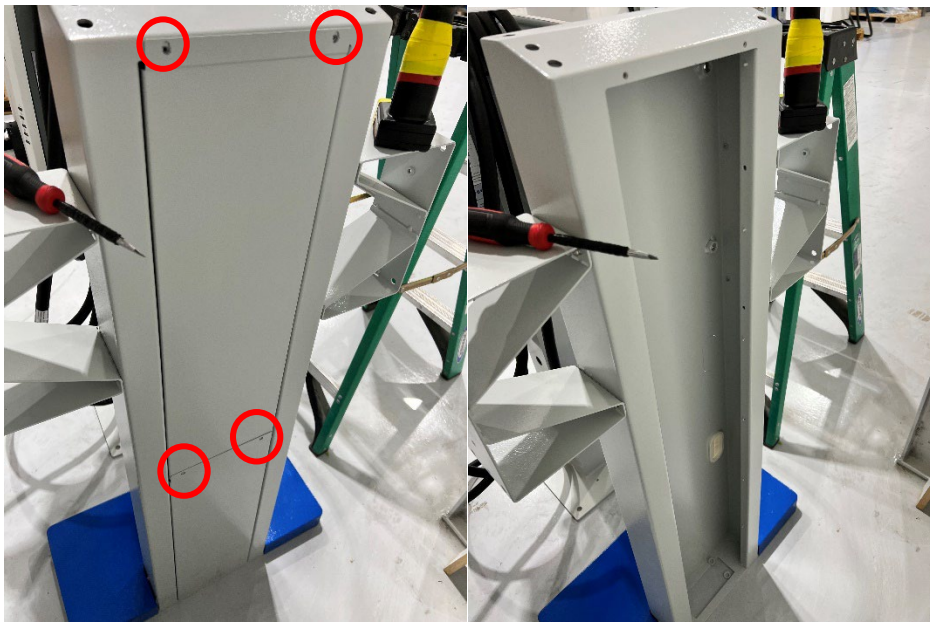


- Drilling instructions: Drill out 4 holes 60mm-80mm (2.36in – 3.15in) and clear out debris. Knock the bolt with anchor into place with a hammer. Then, take the bolt and pad out.



- Remove the bottom blue cover of the base. Line the holes of the foundation with the holes in the base of the pedestal. Secure the base down to the foundation using the M12 bolts. Resecure the blue cover onto the base.

2.) Pedestal Base Preparation

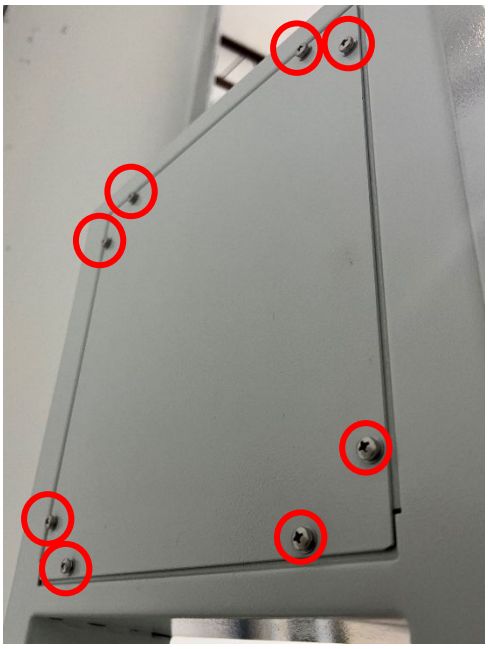


After the base of the pedestal has been properly installed into the ground or foundation.

- Unscrew the four Phillips screws on the back side that hold the two back panel covers in place and remove from the base.

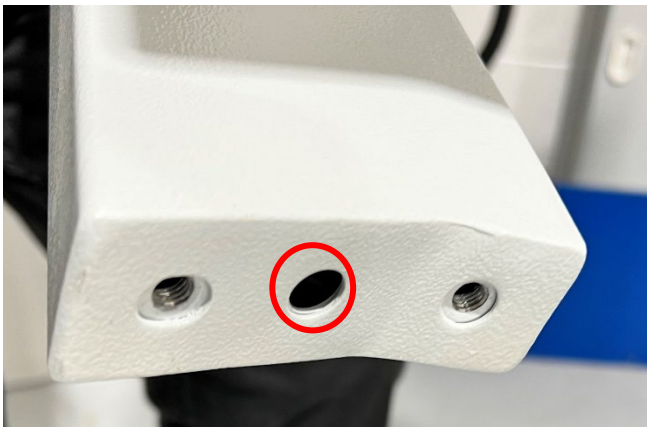
- Carefully remove the 5-screw hole covers from the top portion of the pedestal base.

3.) Pedestal Top Preparation

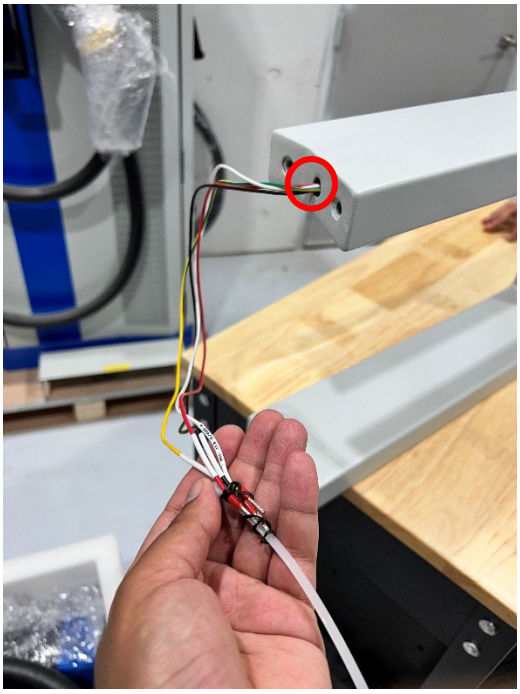


- Remove the 8 Phillips screws from the back side of the top portion of the pedestal.
- Remove the cover.

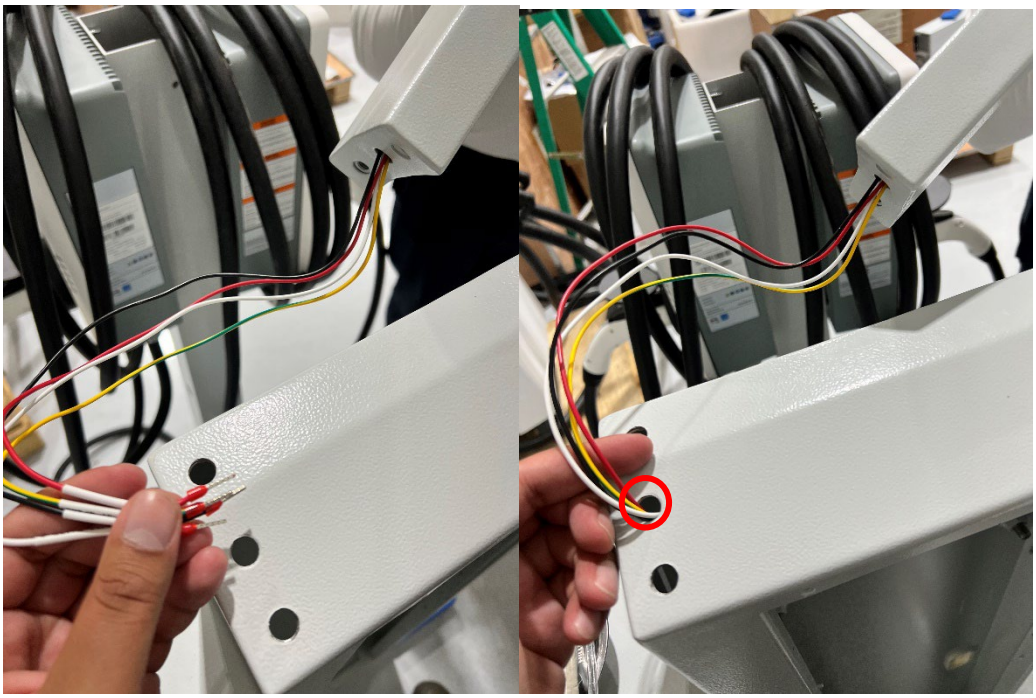
- Taking the supplied cable that comes with the light bar, feed the cable through the top hole of the top portion of the pedestal.



- Feed the Light bar cable through the left support leg and have the cable exit the middle hole on this specific support leg.



4.) Connecting the Base and Top Portion



- Feed the light bar cables from the top portion (left leg middle hole) and feed it through the bottom portion (left side middle hole).

- With the wire successfully ran through the pedestal. Insert the four M8*20 bolts to connect the two pieces together.

5.) Light Bar Installation

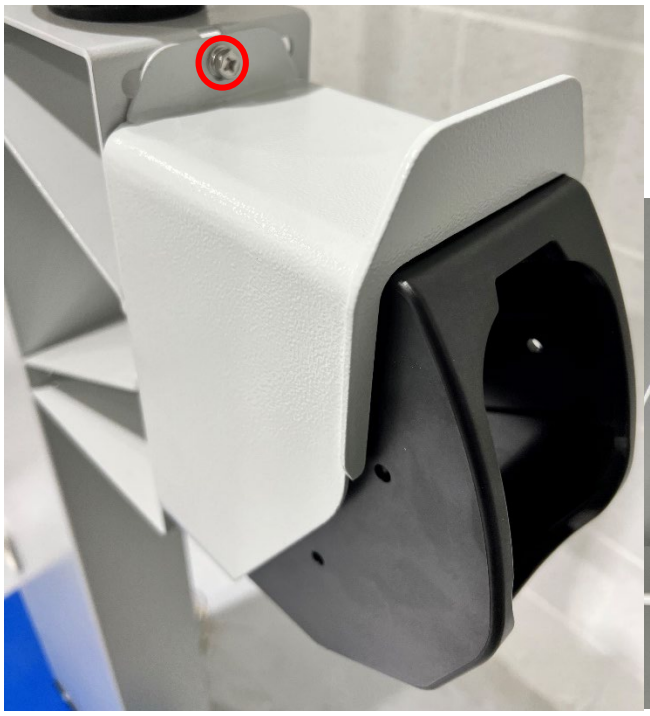
- Once the Bottom and the top portions of the pedestal have been secured together, unpackage the light bar.

- Lift the light bar into place on the top portion of the pedestal, and align the four bolt holes with the light bars respective holes. Furthermore, make sure the cable that is attached to the light bar is placed in the larger center hole.

- Secure the light bar to the top portion of the pedestal using four of the M8*20 Bolts.
- Connect the Molex connectors for the light bar cables together.
- Place the top square cover back on using the 8 phillips head screws.

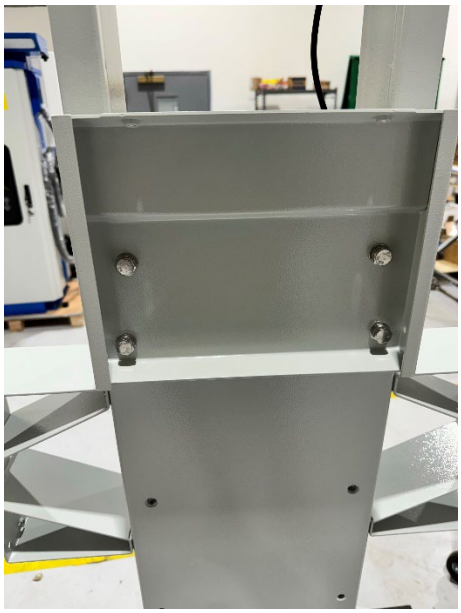
- Run the light bar wire harness through this piece located at the bottom part of the pedestal. Keep in mind that enough room is needed for the AC input cable.

6.) Holster Mounting

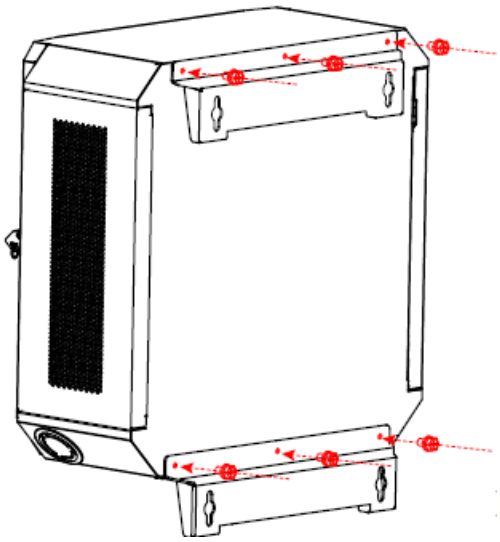


- Attach the two holsters using four of the M6*12 bolts provided (two per each side), one on top and one on the bottom.

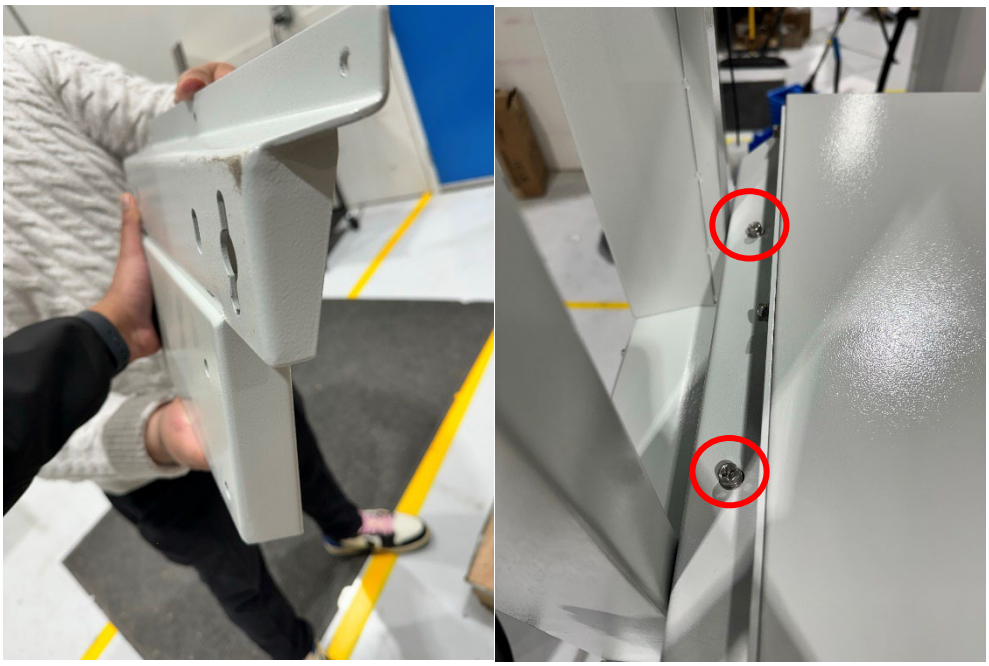
7.) ICE-30 Mounting



- Take the supplied bracket and mount it in the position as shown above using the four M10*30 bolts.



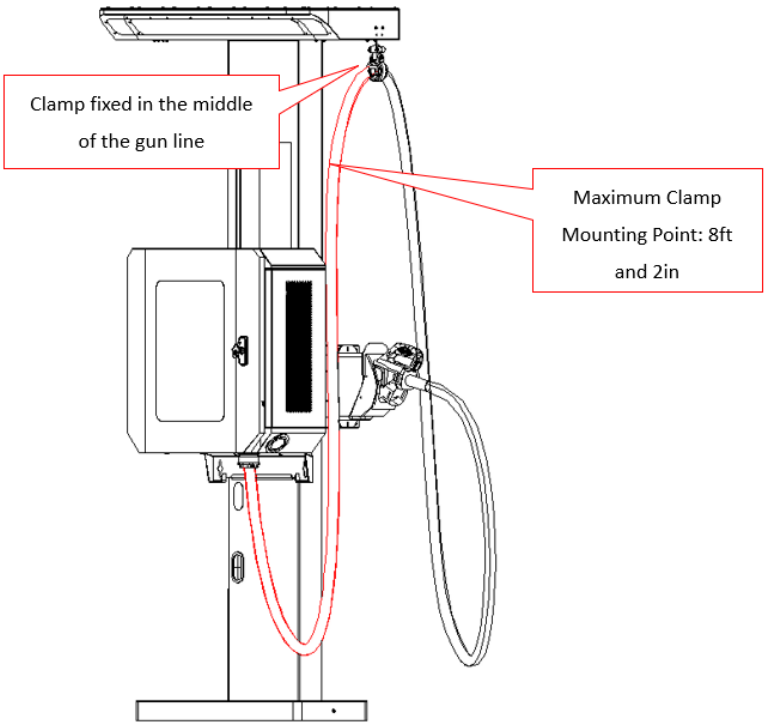
- On the ICE EVSE, attach the two brackets in the orientation shown above using the six M6*12 bolts.



- Once the brackets have been installed on the back end of the EVSE, place it on the pedestal mounting bracket (for visual purposes, the left image shows how the pedestal bracket will connect with the charger's bracket). Secure two M6*16 bolts in place (shown by the red circles) on the top end of the bracket.

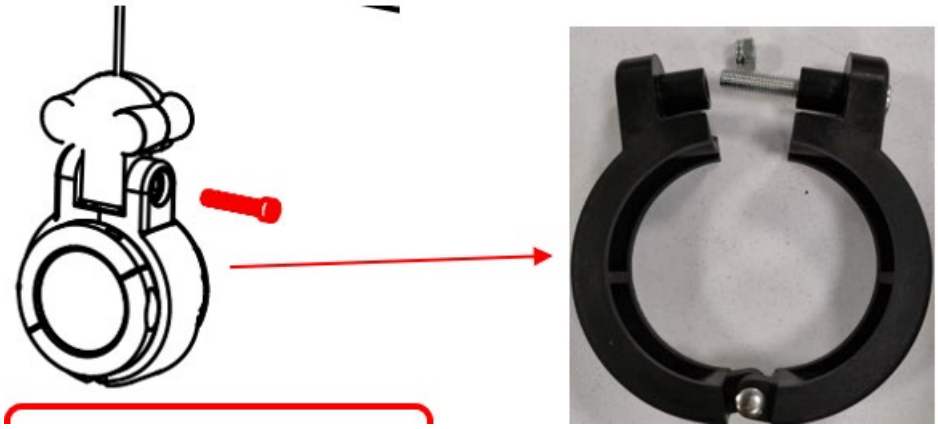
- On the bottom bracket, locate the last two mounting holes and use the two M10*30 bolts to secure the EVSE bracket in place.

8.) Cable Clamp Installation



- Looking at the EVSE charging cable, from the point of which the cable exits the EVSE, measure 8 feet and 2 inches, and place the inner part of the cable clamp at the measurement.

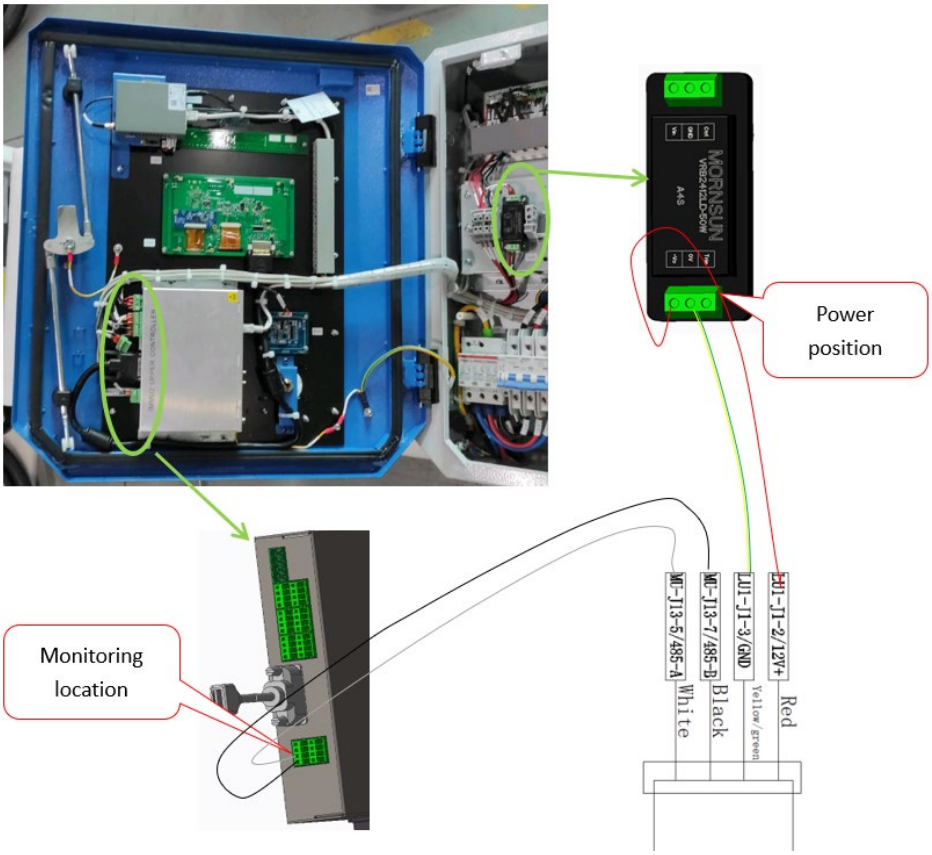
- Then secure the inner part of the cable clamp in place by using the 4 screws provided in the small bag.



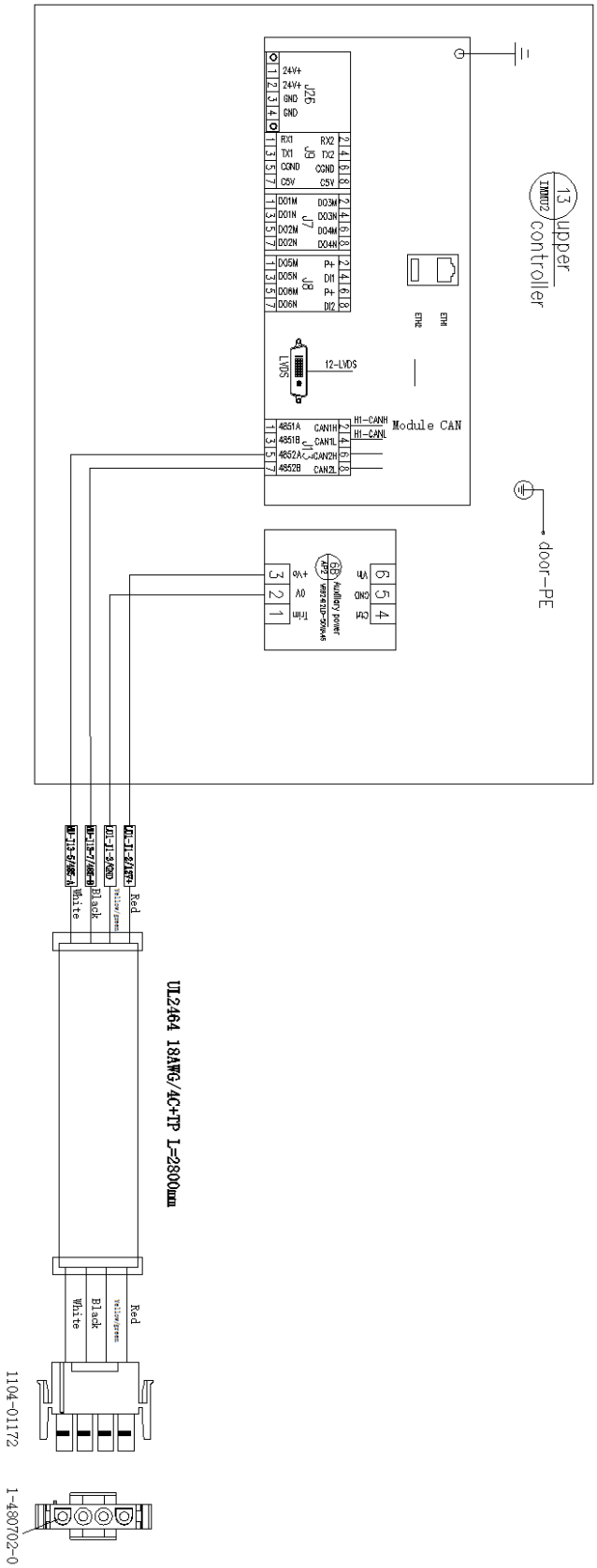
- Secure the outer part of the clam onto the cable where the inner part of the clamp was secured. Attach using the one screw shown above.

9.) Light Bar and ICE-30 (Old Style) Wiring Connection

- Please note that if the ICE-30 comes with these older brackets, then the following wiring method needs to be followed.



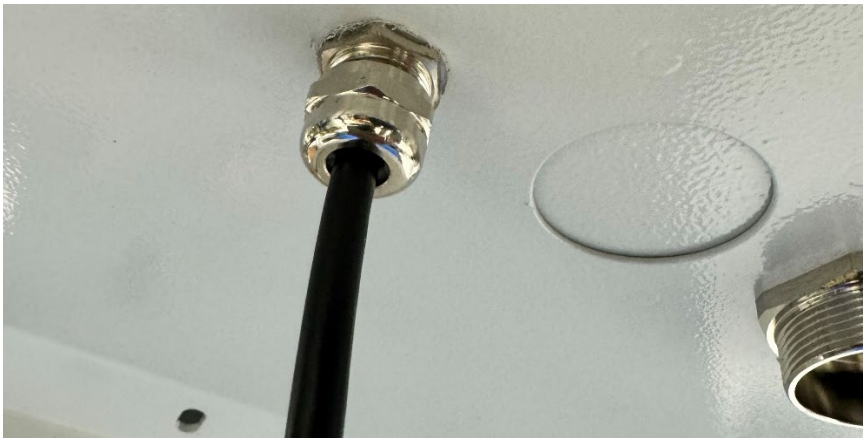
- Component Location for wiring



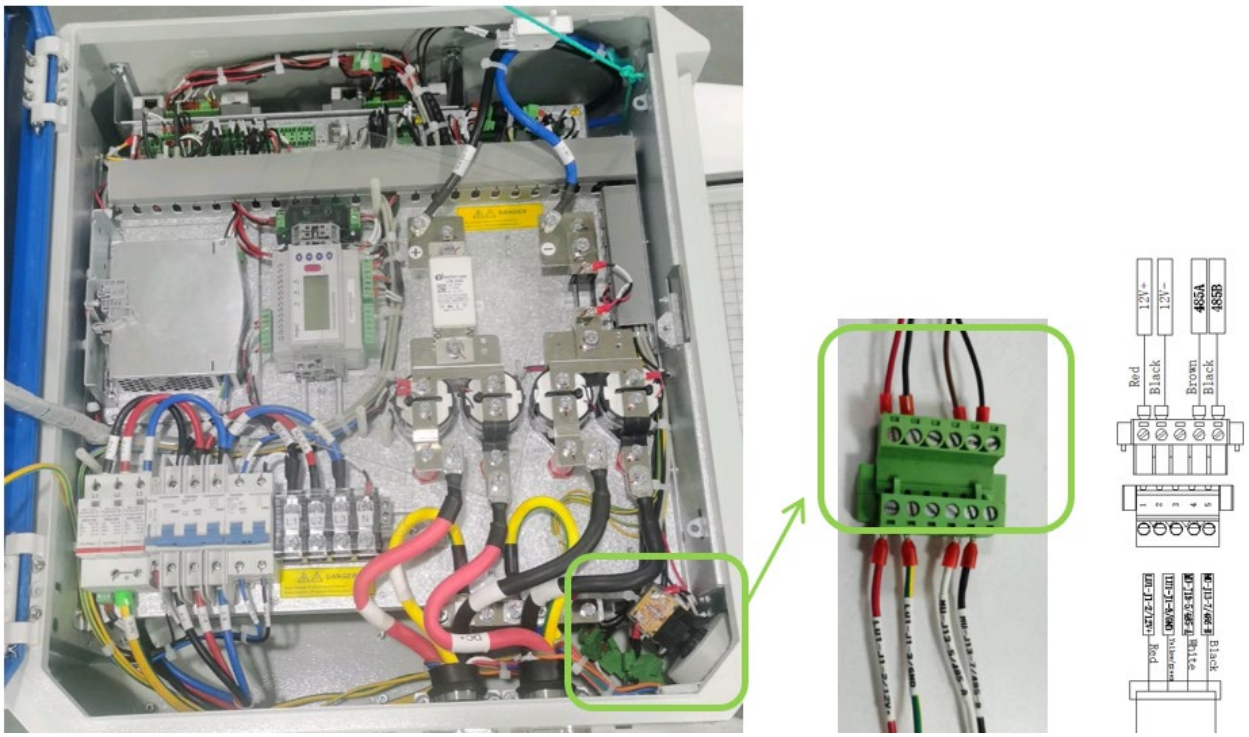
- Connect the white wire (485-A) to the monitoring IMMU2-J13-5 pin, and the black wire (485-B) to the monitoring IMMU2-J13-7 pin, as shown in the figure.
- Connect the red line (12V+) to AP2_12V+, yellow wire (GND) connected to AP2-12V-, as shown in the figure. **Please note that AP2 is the 12V Power Supply (As seen on page 16 in the image).**

10.) Light Bar and ICE-30 (New Style) Wiring Connection

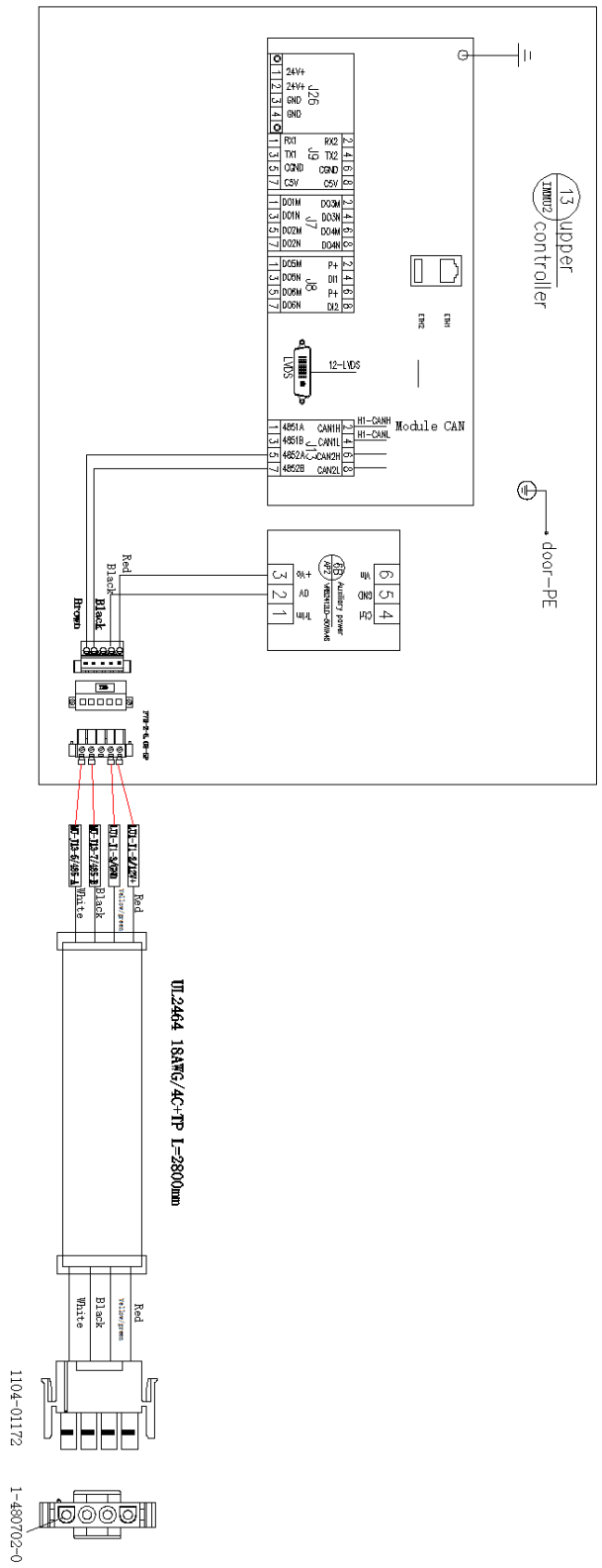
- Please note that if the ICE-30 comes with these newer style brackets, then the following wiring method needs to be followed.



- Run the light bar wire harness into the bottom of the ICE-30.



- Wiring Harness Connector Location

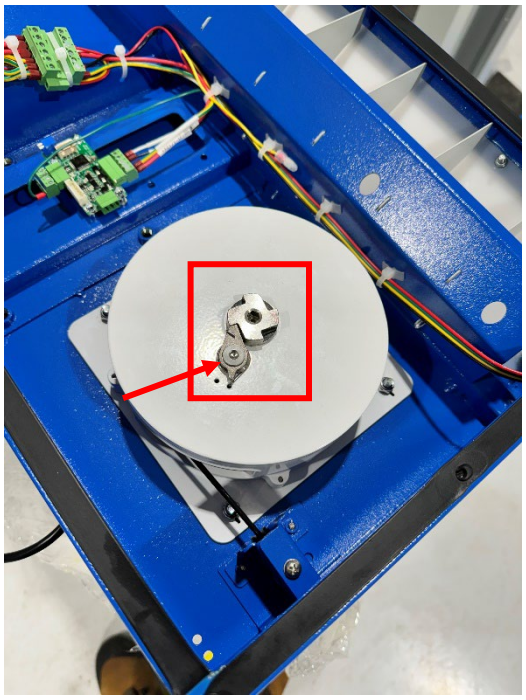


- Light Bar Wiring Schematic (New Style)

- Connect the red line (12V+) to the first port on the left side of the connector. Followed by yellow/green wire (GND) connected into port 2. Next, connect the white wire (485-A) into port 4, and lastly connect the black wire (485-B) into port 5.

11.) Retractor Adjustment

- Remove all the screws from the top cover of the light bar retractor.



- To adjust the cable retractor for different cables, use a 6mm Hex wrench and use your thumb to release the buckle on the left side of the adjustment nut **(Please use caution when adjusting and wear appropriate PPE. Once the tension starts building up, the risk of an accident increases)**. Adjust the tension by turning clockwise to increase tension and counterclockwise for decreasing tension. For every ¼ turn (90 degrees), the setting number will change by one.

- To access the other retractor adjustment point. Remove the 4 screws that hold the blue mounting plate in place. Flip over and adjust tension as needed.
- The table below shows the comparison of rotations and torque, as well as recommended settings. However, please increase or decrease the tension as desired.
- Checking the cable's tension involves two indicators: If the cable descends on its own, it lacks sufficient tension. However, if excessive force is needed to extend it, there's too much tension. The optimal adjustment involves effortlessly extending the cable by pulling on the retractor, ensuring smooth retraction without excessive resistance.

Setting #	Rotation angle (Degrees)	Number of rotations	Torque（N·M）
1	-900	-10	3
2	-810	-9	3.5
3	-720	-8	3.9
4	-630	-7	4.2
5	-540	-6	4.4
6	-450	-5	4.5
7	-360	-4	4.7
8	-270	-3	4.9
9	-180	-2	5.2

10	-90	-1	5.4
11	0	0	5.5
12	90	1	5.8
13	180	2	6.1
14	270	3	6.3
15	360	4	6.6
16	450	5	6.8
17	540	6	7
18	630	7	7.2
19	720	8	7.5
20	810	9	7.8

- When securing the cover back onto the light bar, be sure to secure the cover properly. Under tightening will lead to water and other debris entering the light bar and damaging the electrical components. Over tightening will lead to a damaged seal that may result in electrical component damage.
- After adjustments, test the cable retraction. Pull down the charging cable to reel out the retractor. When you reach a desired distance, stop and the retractor will latch in place and keep the cable at the current distance. To reel the cable back towards the retractor, pull the charging cable slightly and it will release the hold and allow it to retract.
- Please note that the user cannot let go of the charging cable and allow the retractor to snap back. This will lead to damage to the retractor cable.