

# INSTALLATION GUIDE

## Pedestal-Mounted Installation

AeroVironment EV Solutions™ TurboDock™ Charging Station

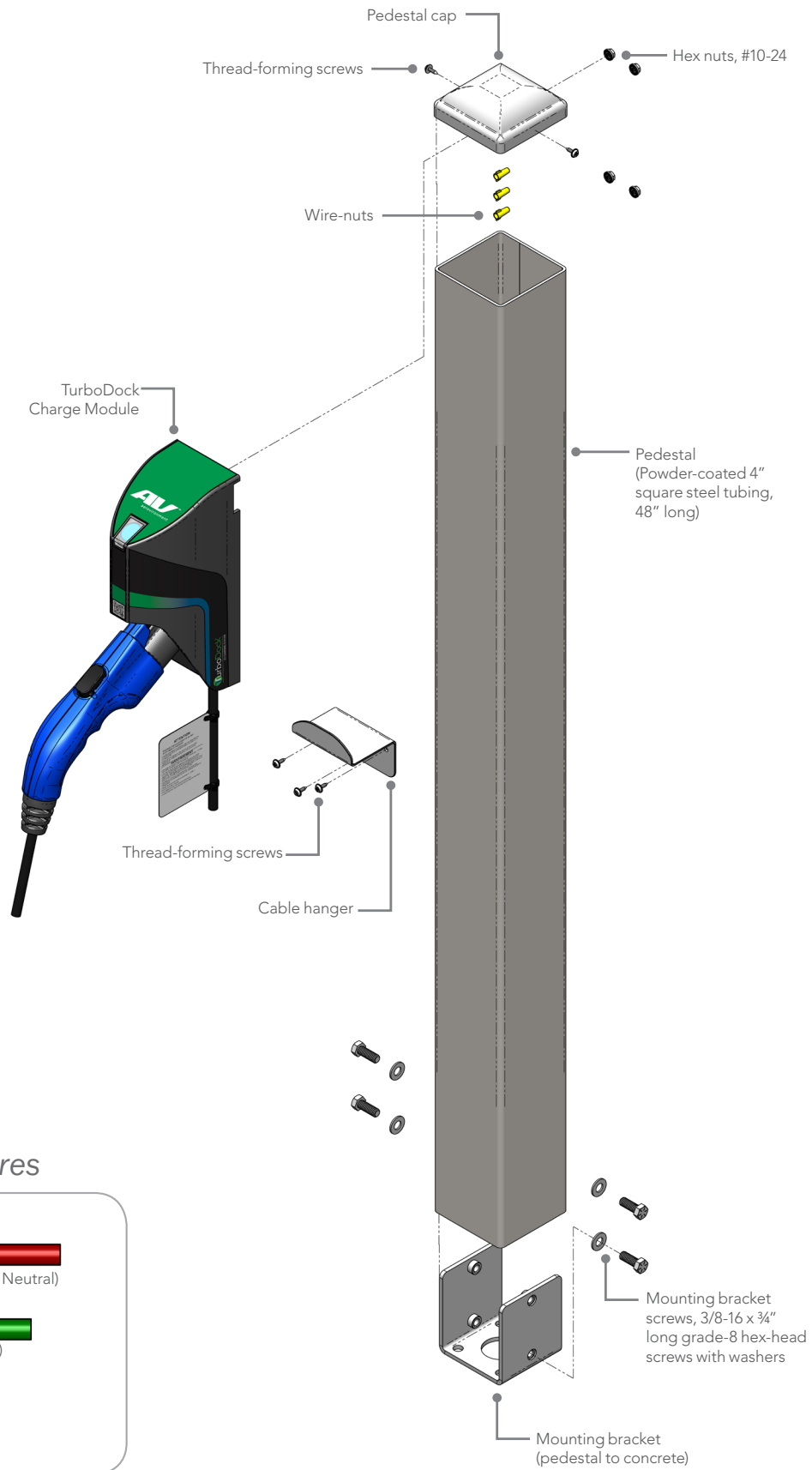


**Important:** Installation should be completed by a licensed, qualified electrician. Installation must comply with the provisions of the National Electric Code (NEC) and all local codes. In cases of conflict between local codes and the NEC, local codes shall take precedence. Verify with authority having jurisdiction.

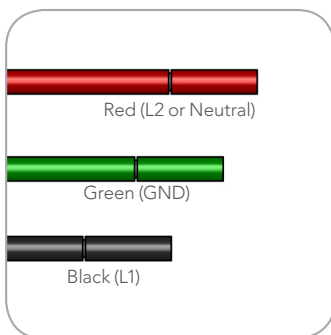
*Model TurboDock*

**NOTICE TO ELECTRICIAN:** Leave this Installation Guide with the TurboDock customer for future reference.

# PEDESTAL-MOUNTED INSTALLATION



## Detail of Wires



# TOOLS AND HARDWARE

## HARDWARE PROVIDED IN PEDESTAL-MOUNT KIT

- 1 Qty - Pedestal (powder-coated 4" square steel tubing, 48" long)
- 1 Qty - Mounting bracket (pedestal to concrete)
- 4 Qty - Mounting bracket screws, 3/8-16 x 3/4" long grade - 8 hex-head screws with washers
- 2 Qty - Thread-forming screws
- 1 Qty - Pedestal cap

## HARDWARE PROVIDED IN TURBODOCK KIT

- 4 Qty - Hex nuts, #10-24
- 1 Qty - Cable hanger
- 3 Qty - Thread-forming screws
- 3 Qty - Wire-nuts

## SPECIAL TOOLS REQUIRED

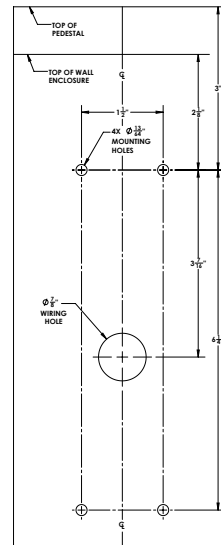
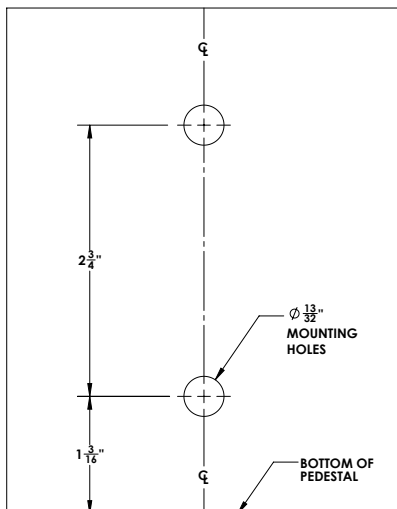
- 1/8" drill bit for #6 screw pilot holes
- 13/64" drill bit for #10 screw clearance holes
- 13/32" drill bit for 3/8" screw clearance holes
- 7/8" drill bit or hole saw for wire entry hole
- Torque wrench capable of at least 50 pound-feet
- 9/16" hex socket to fit torque wrench
- Magnetic torpedo level

## REQUIRED HARDWARE

**\*\*NOT SUPPLIED\*\***

- Conduit, maximum 1" trade size, minimum finished length 12" above concrete
- Wire, per local code, #12 AWG minimum, to extend to at least 6" above pedestal finished height
- 20A circuit breaker, double-pole or single-pole
- 3/8" anchors or threaded rod, Qty. 4
- 3/8" hex nuts, Qty. 8
- Concrete anchoring adhesive (not required if anchor bolts are set into wet concrete)

## Detail of template



# INSTALLATION STEPS

## Before you start:

- Determine the location and orientation of the wall mounted TurboDock(s), as directed by Account Manager (AM). Decide how high the mount must be.\*\*

- If no electrical service is present to the concrete pad:

Run the appropriate wiring from the service panel to the pedestal location per local code, #12 AWG minimum. Use a 20 Amp double-pole circuit breaker for 240V service (Level II charging) or a 20 Amp single-pole circuit breaker for 120V service (Level I charging).

Pour concrete and insert J-bolts (or equivalent) into wet concrete to cure.

- If service is already present to concrete pad:

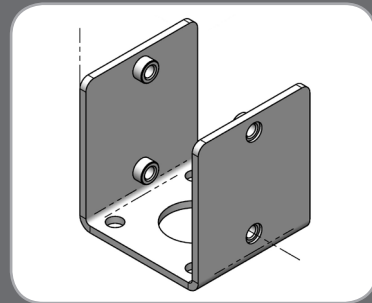
Verify that existing service meets local code for 20A 240V or 20A 120V, #12 AWG minimum.

- \*\*Installation must comply with the Americans with Disabilities Act (ADA). The top of each TurboDock charger must be between 39" and 49" above the access surface. Access space between and around the wall-mounts must also comply with the ADA.

## 1

### Attach the anchor to the base

- Use the mounting bracket to locate the concrete anchors.
- Install anchors per Adhesive Manufacturer Instructions, leaving minimum 1-1/2" exposed thread above the concrete.
- Place a nut on each anchor bolt down to the surface of the concrete.
- Insert the mounting bracket around the conduit and onto the anchors.
- Level the bracket. The bottom of the bracket should be about 1/2" from the concrete surface.
- Install nuts on the anchors above the bracket and torque to 20 pound-feet (concrete must be dry).



## 2

### Pedestal preparation

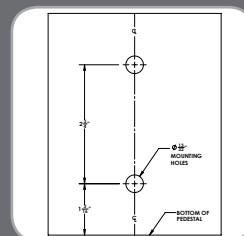
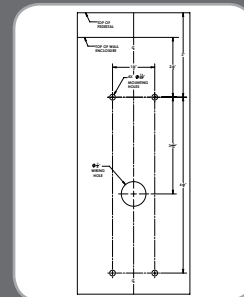
Cut the pedestal to the desired length. Be sure that bottom is cut square so that mounting holes on opposite sides will line up with each other.

Use the provided Mounting Bracket Template to mark holes near the cut end, on opposite sides of the pedestal. If possible, do not drill mounting holes on the surface of the pedestal with the internal weld seam.

- Drill the 13/32" diameter holes.
- Touch up the holes with rust inhibitive paint to protect them from the elements.

Drill upper holes using the template included with TurboDock to mark the 5 holes for each TurboDock at top of pedestal, on each face of the pedestal where a TurboDock will be installed.

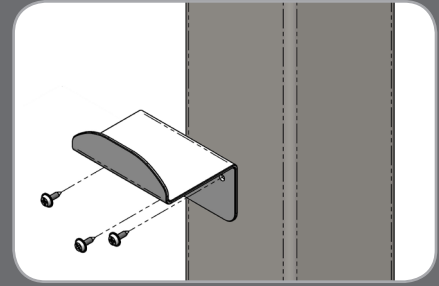
- Remember, the mounting holes at the bottom of the pedestal determine the orientation of the pedestal.
- The 1/8" "Cap Hole" is for the screw that will fasten the cap to the pedestal. Mark and drill this hole on the same two sides of the pedestal as the mounting bracket holes. The cap holes will be drilled through the flange of the cap and pedestal.



### 3

#### Attach the hanger

- Using the cable hanger as a template, mark and drill the 1/8" holes for the cable hangers.
- Holes must be at least 6" below the lowest TurboDock.
- For hangers on adjacent sides of the pedestal, stagger the height of every other hanger so that wound cables will have enough room. You can locate one pair of hangers about 6" lower than the other.



### 4

#### Attach the TurboDock to the pedestal

Attach TurboDock chargers to pedestal. For each TurboDock:

- Insert the 3 wires through the large hole in the side of the pedestal, and pull them through the top.
- Insert the studs on the charger into the 13/64" holes on the pedestal.
- Install and securely tighten the four #10-24 nuts provided.

Repeat for all chargers.

(NOTE: Bond pedestal post per NEC code. Use lug and drill, and tap a hole near top of post to bond.)



### 5

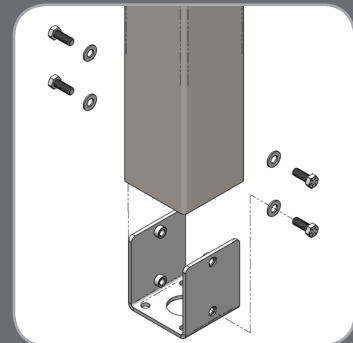
#### Attach the pedestal to the mounting anchor

Carefully lift the pedestal (with the installed TurboDocks) over the conduit and onto the mounting bracket.

Use the provided 3/8" x 3/4" long hex-head screws and washers to secure pedestal to the mounting bracket.

- Install screws finger-tight.
- Plumb pedestal with level.
- Torque screws to 50 pound-feet.

Secure TurboDock wires to the electrical service wires using yellow wire-nuts provided, as per electrical code. The Red wire is to be connected to the Neutral supply wire for 120 applications.



### 6

#### Complete install

Test each charger:

- Turn on power (to one unit at a time, if possible).
- Verify that top light is steady blue, otherwise refer to the Troubleshooting Guide.
- Verify that lower-front lights show steady blue, otherwise refer to the Troubleshooting Guide.
- On the nameplate label on the front of each TurboDock, mark the correct box: 240V or 120V.
- Fasten the cap to the pedestal with 2 of the 5 thread-forming screws provided.
- Attach the cable hangers to the pedestal with 3 of the 5 thread-forming screws provided.
- Inform the Account Manager (AM) that the TurboDock is ready with "open access". If the AM desires, you can now test the TurboDock by charging a vehicle.



**CORPORATE HEADQUARTERS**

**AeroVironment, Inc.**

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**1-888-833-2148**

