

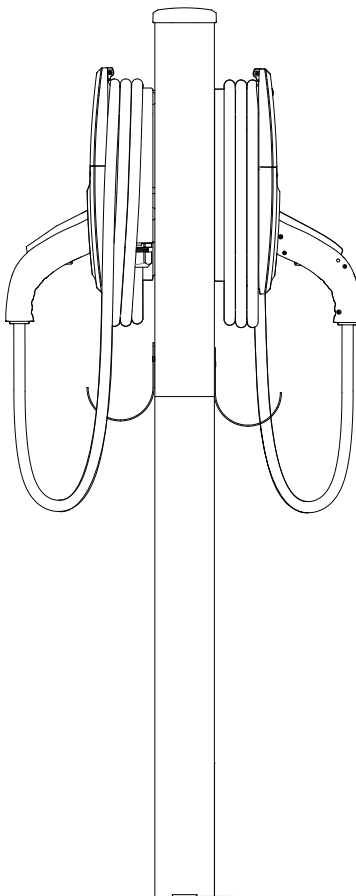
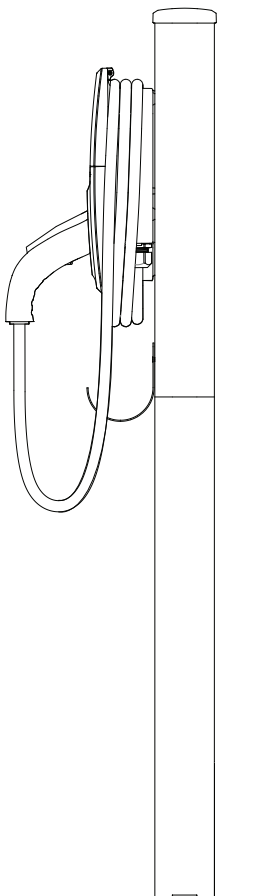
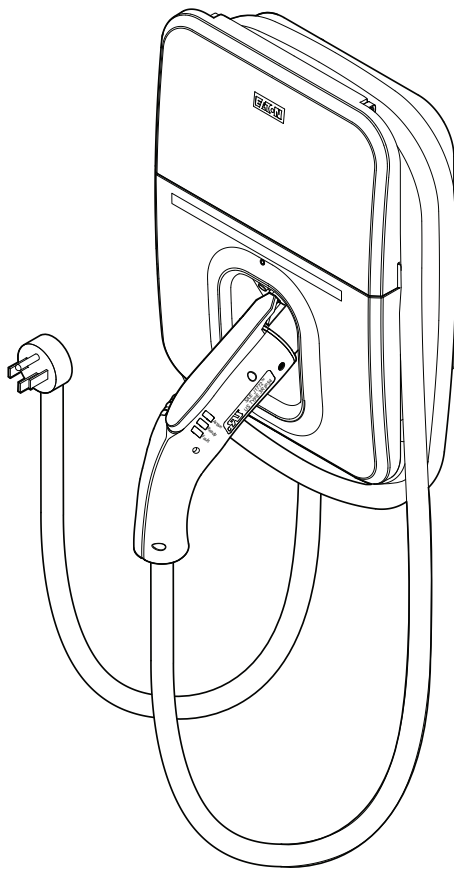
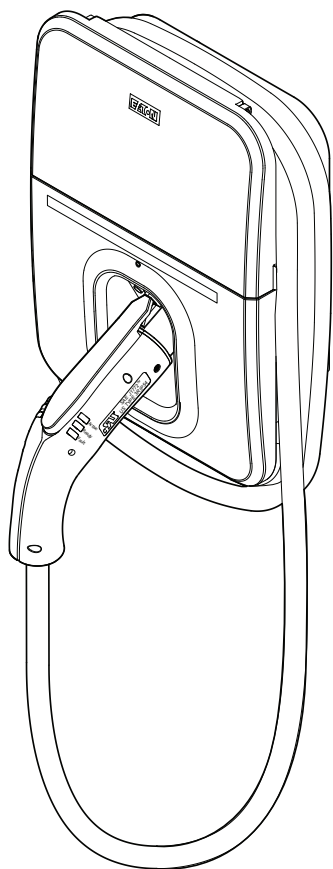
Installation guide:

EV wall charger and wall charger plug-in

Scan here for
Spanish translations



Powering Business Worldwide



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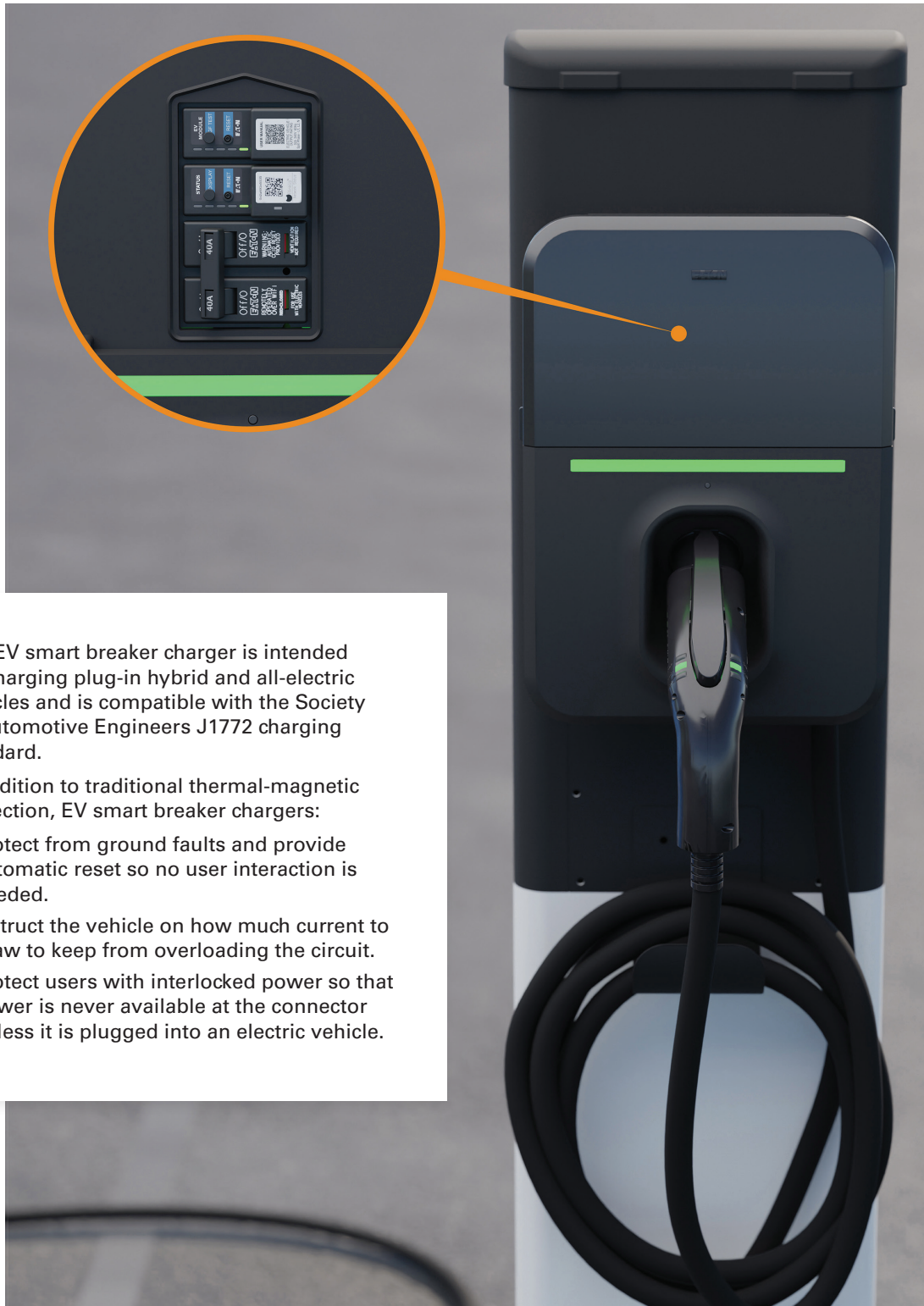
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EV wall charger (hardwire, plug-in, or pedestal options)



EV wall charger installs indoor/outdoor for additional versatility and a modern design.

EV smart breaker charger



The EV smart breaker charger is intended for charging plug-in hybrid and all-electric vehicles and is compatible with the Society of Automotive Engineers J1772 charging standard.

In addition to traditional thermal-magnetic protection, EV smart breaker chargers:

- Protect from ground faults and provide automatic reset so no user interaction is needed.
- Instruct the vehicle on how much current to draw to keep from overloading the circuit.
- Protect users with interlocked power so that power is never available at the connector unless it is plugged into an electric vehicle.

Package contents

EV wall charger (GMEV32BR-WC)

1. 7.7 kW EV smart breaker wall charger

2. J1772 EV connector and 25 ft cordset

3. Tamper-resistant screws

4. Mounting hardware kit (99-7544) - anchors/lag screws

EV wall charger plug-in (GMEV32BR-WCPL)

1. 7.7 kW EV smart breaker wall charger

2. J1772 EV connector and 25 ft cordset

3. Tamper-resistant screws

4. Mounting hardware kit (99-7544) - anchors/lag screws

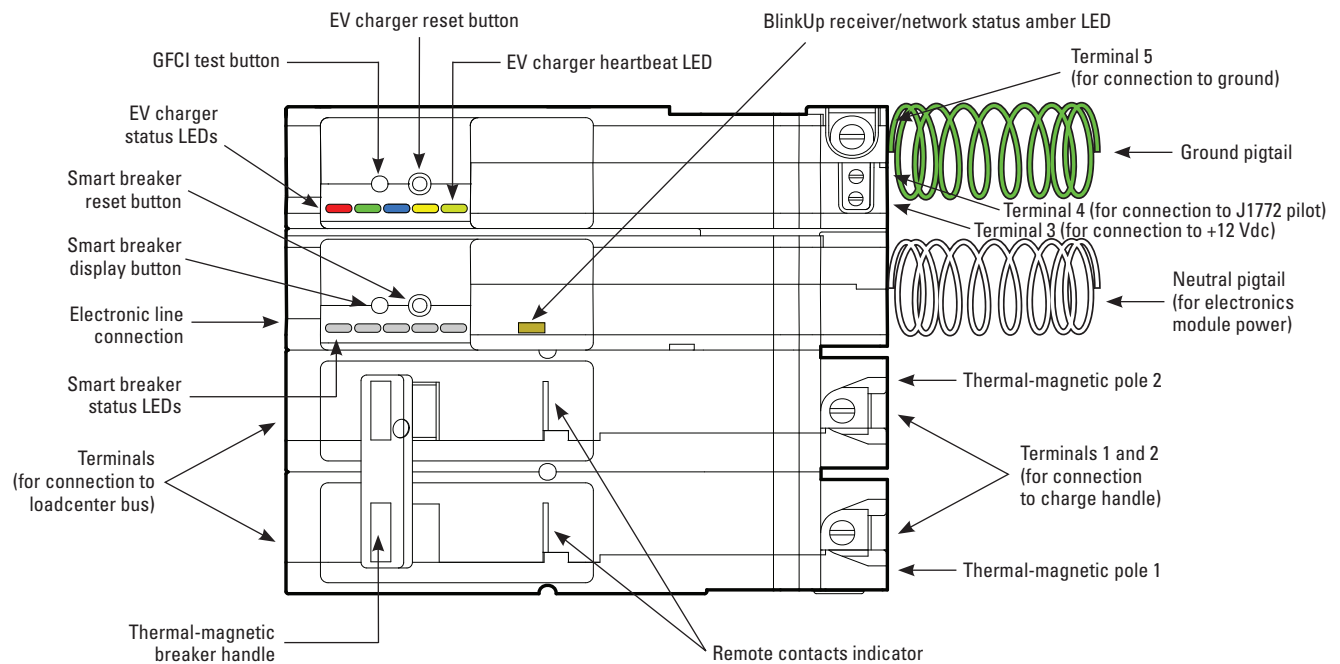
5. Pre-installed plug-in cable

EV smart breaker charger operation

QUICKLAG thermal-magnetic breaker

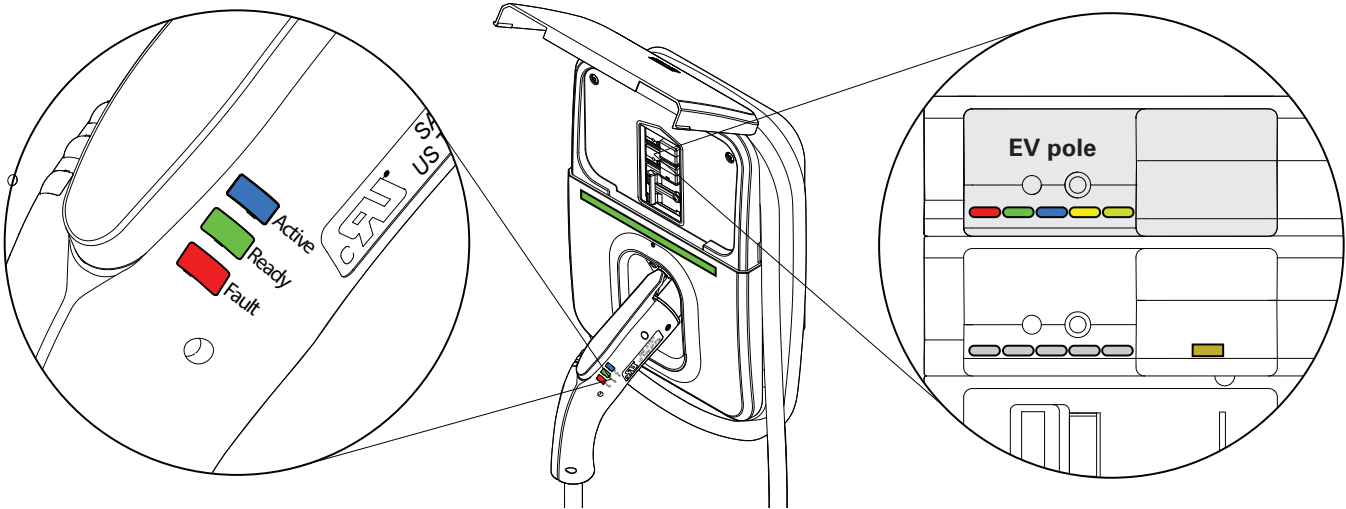
The EV smart breaker charger contains integral solenoid controlled contacts in series with QUICKLAG™ thermal-magnetic breaker. The instructions below describe how to operate the main handle of the EV smart breaker charger:

- Main handle must be in the ON position to supply power to the load
- When breaker trips, handle will move to the center-tripped position
- To reset breaker, push handle to OFF position, and then to ON position



Item	Description
GFCI test button	Initiates a ground fault self-test. Recommended to perform this test when J1772 connector is plugged into the EV.
EV charger reset button	Resets the EV charger.
EV charger status LEDs	Display status of the EV charger and various fault conditions, if present.
Smart breaker display button	1 press – Wi-Fi signal strength is displayed on the smart breaker status LEDs and enable BlinkUp™. 2 presses – For non-OCPP EV chargers, this will initiate a manual override of any schedules/advance option restrictions and will allow for a single charge session. The 3 middle LEDs will flash green to indicate the override was successful. 3 presses – If red EV charger status LED is flashing, this action will clear the fault *Smart Breaker Status LEDs will indicate how many button presses are recorded.
Smart breaker reset button	Reset the Wi-Fi antenna module and regain connectivity or clear any errors that may have occurred during the BlinkUp process.
Smart breaker status LEDs	LEDs show how loaded the circuit is compared to its capacity. The color of the LEDs will range from off indicating no load or too small of a load detected. Green indicates a low load, yellow indicates a medium load, and red indicates a high load. If the LEDs are flashing, this indicates that the current exceeds the rating of the smart breaker. When the smart breaker display button is pressed, these LEDs also show the Wi-Fi signal strength.
BlinkUp status LED	Indicates the status during the BlinkUp process.
Thermal-magnetic breaker handle	To manually trip or reset the thermal-magnetic breaker.
Remote contact indicator	Indicates status of secondary contacts (Open: Green / Close: Red).

LED indicator descriptions



State	Blink Type	Color							
Loss of line power	Medium	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		EV connector	
Fault (2)	Long	<div></div>		<div></div>		<div></div>			
Idle / Ready	No Blink	<div></div>							
Vehicle connected	Medium	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>			
Vehicle connected, EVSE ready	Long	<div></div>		<div></div>		<div></div>			
Vehicle charging state, EVSE not ready (1)	Short	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		
Charging	No Blink	<div></div>							
Vehicle connected	No Blink	<div></div>						EV pole only	
J1772 State D (2)	Medium	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>			
Cold Load Timeout Active (3)	Long	<div></div>		<div></div>		<div></div>			
EV charger heartbeat	Heartbeat	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		

1. Not a valid J1772 State, the EV smart breaker charger will commence charging when prompted to through the EV smart breaker charger application.

2. J1772 State D, the ventilation required state, is not supported and will cause the EV smart breaker charger to enter the fault state.

3. Cold Load Timeout: Following a complete loss of power during an active charging session, a phenomenon occurs called Cold Load Timeout. When power is restored, there may be a 2-5 minute delay to resume charging per SAE J2894.

Installation

Important safety instructions

INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK

DANGER

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DEATH, PERSONAL INJURY, OR PROPERTY DAMAGE. CIRCUIT BREAKERS MUST BE INSTALLED AND SERVICED BY A QUALIFIED ELECTRICIAN. REMOVE ALL POWER SOURCES TO THE PANEL BEFORE STARTING INSTALLATION OR MAINTENANCE.

WARNING

THIS EQUIPMENT SHOULD BE INSTALLED, ADJUSTED, AND SERVICED BY QUALIFIED ELECTRICAL PERSONNEL FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THIS TYPE OF EQUIPMENT AND THE HAZARDS INVOLVED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN DEATH OR SEVERE INJURY.

READ THIS MANUAL THOROUGHLY AND MAKE SURE YOU UNDERSTAND THE PROCEDURES BEFORE YOU ATTEMPT TO OPERATE THIS EQUIPMENT. THE PURPOSE OF THIS MANUAL IS TO PROVIDE YOU WITH INFORMATION NECESSARY TO SAFELY OPERATE, MAINTAIN, AND TROUBLESHOOT THIS EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE.

DO NOT USE THIS PRODUCT IF THE EV CONNECTOR CORD IS FRAYED, HAS DAMAGED INSULATION, OR HAS ANY OTHER INDICATION OF DAMAGE.

DO NOT USE THIS PRODUCT IF THE EV SMART BREAKER CHARGER, THE EV CONNECTOR, OR THE LOADCENTER IS BROKEN, CRACKED, OPEN, OR SHOWS ANY OTHER INDICATION OF DAMAGE.

INTENDED FOR USE WITH PLUG-IN ELECTRIC VEHICLES ONLY. PREMISE VENTILATION NOT REQUIRED.

THIS DEVICE SHOULD BE SUPERVISED WHEN USED AROUND CHILDREN.

DO NOT PUT FINGERS INTO THE ELECTRIC VEHICLE CONNECTOR.

WARNING

TURN OFF OR DISCONNECT THE POWER SUPPLYING THIS EQUIPMENT BEFORE BEGINNING WORK. THIS MAY REQUIRE THAT YOU CONTACT YOUR ELECTRIC UTILITY TO DISCONNECT POWER TO AN EXISTING LOADCENTER. THE LINE SIDE OF THE MAIN BREAKER IS ENERGIZED UNLESS POWER IS DISCONNECTED UPSTREAM. EATON WILL NOT ASSUME RESPONSIBILITY FOR PROPERTY DAMAGE OR PERSONAL INJURY RESULTING FROM MISUSE OF THE INFORMATION IN THIS PUBLICATION.

NOTICE

INSTALL EQUIPMENT IN CONFORMANCE WITH CODES.

Grounding instructions

WARNING

IMPROPER CONNECTION OF THE EQUIPMENT-GROUNDING CONDUCTOR IS ABLE TO RESULT IN A RISK OF ELECTRIC SHOCK. CHECK WITH A QUALIFIED ELECTRICIAN OR SERVICEMAN IF YOU ARE IN DOUBT AS TO WHETHER THE PRODUCT IS PROPERLY GROUNDED.

For a permanently connected product

This product must be connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.

REFERENCE THE QR CODE ON THE EV SMART BREAKER CHARGER FOR LATEST DOCUMENTATION AS THE INFORMATION CONTAINED IN THIS MANUAL IS SUBJECT TO CHANGE.

This product must be installed in accordance with the National Electrical Code® (NEC®) and any applicable local codes. Before installing equipment, check with your local electrical inspector for requirements and information. If you have questions or need assistance, contact a qualified electrical contractor.

For a grounded, cord connected product:

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING – Improper connection of the equipment-grounding conductor is able to result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

WARNING – When using electric products, basic precautions should always be followed, including the following. This manual contains important instructions for Models GMEV32BR-WC and GMEV32BR-WCPL that shall be followed during installation, operation and maintenance of the unit.

SAVE THESE INSTRUCTIONS.

Definitions

EVSE—Electric Vehicle Supply Equipment. EVSE is a general term used for all of the equipment used to supply electricity to the car.

J1772—SAE Recommended Practice for conductive charging of hybrid and electric vehicles. This standard spells out the physical dimensions of the J1772 connector and the pilot communication between the plug-in vehicle and the EVSE.

Pilot—The communication signal through the J1772 connector. This signal tells both the vehicle and the EVSE when both are ready to charge and how much current is permitted in the circuit. This signal is part of the SAE J1772 standard.

SAE—Society of Automotive Engineers. The group that organizes and leads committees of transportation experts to create standards, such as J1772, for the transportation industry.

ADA—Americans with Disabilities Act.

UL®—Underwriters Laboratories. UL is an accredited standards developer in the U.S. and Canada..

WARNING

ONLY QUALIFIED PERSONNEL FAMILIAR WITH THE OPERATION AND CONSTRUCTION OF THIS EQUIPMENT SHOULD INSTALL, ADJUST, MODIFY, AND SERVICE THIS EQUIPMENT. FAILURE TO FOLLOW THE INSTRUCTIONS COULD RESULT IN SEVERE BODILY INJURY OR DEATH.

NOTICE

THE USER IS RESPONSIBLE FOR CONFORMING TO ALL LOCAL AND NATIONAL ELECTRICAL CODES AND STANDARDS APPLICABLE IN THE JURISDICTION IN WHICH THIS EQUIPMENT IS INSTALLED.

NEC Article 625 requires that the coupling means of the electric vehicle supply equipment shall be stored or located at a height of not less than 18 inches (450 mm) and not more than 4 ft (1.2 m) above the floor level for indoor locations and 24 inches (600 mm) above the grade level for outdoor locations.

WARNING – Risk of Explosion. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be located at least 18 inches (460 mm) above the floor.

Americans with Disabilities Act requirements to consider for workplace charging installation

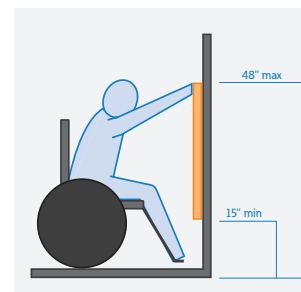
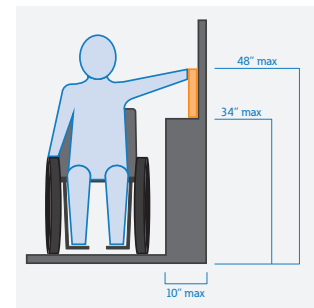
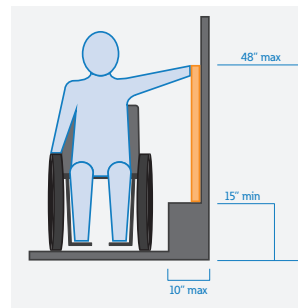
The ADA and workplace charging

The Americans with Disabilities Act (ADA) is a federal civil rights law that prohibits discrimination in public places against individuals with disabilities. As an employer installing plug-in electric vehicle (PEV) charging stations, also known as electric vehicle supply equipment (EVSE), you need to follow special design guidelines to accommodate people with disabilities, as required by the ADA. Although the ADA does not provide design standards for charging station-equipped parking spots, several industry studies and PEV planning guides do. In addition, several plans developed under the U.S. Department of Energy's (DOE) Clean Cities EV Community Readiness projects describe best practices for installing ADA-compliant charging stations.

Best practices for designing ADA-compliant PEV charging stations

When designing ADA-compliant PEV charging stations, consider accessibility, ease of use, and safety for disabled drivers, including those using wheelchairs or other assistive equipment. Key considerations include ensuring adequate space for exiting and entering the vehicle, unobstructed access to the EVSE, free movement around the EVSE and connection point on the vehicle, as well as clear paths and close proximity to any building entrances.

For information about the ADA, including the revised 2010 ADA regulations, please visit the Department's website: <http://www.ada.gov>; or, for answers to specific questions, call the toll-free ADA information line at 800-514-0301 (voice) or 800-514-0383 (TTY).



Safety instructions

Important safety instructions—read all instructions before using.

This product must be installed in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC) and any applicable local codes. Before installing equipment, check with your local electrical inspector for requirements and information. If you have questions or need assistance, contact a qualified electrical contractor.

This circuit breaker is designed to detect and trip when the following conditions occur:

- **Overcurrent/short-circuit**
This EV smart breaker charger will trip when overcurrent or short-circuit conditions exist in accordance with UL 489
- **Ground faults**
This EV smart breaker charger is designed for vehicle protection and will trip when leakage current conditions exist in accordance with UL 2231-2
- **Programmable components**
This EV smart breaker charger contains a programmable integrated circuit and complies with UL 1998 for safety in programmable components

A

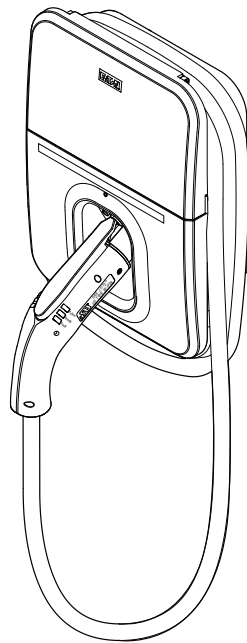
EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Prepare the EV wall charger

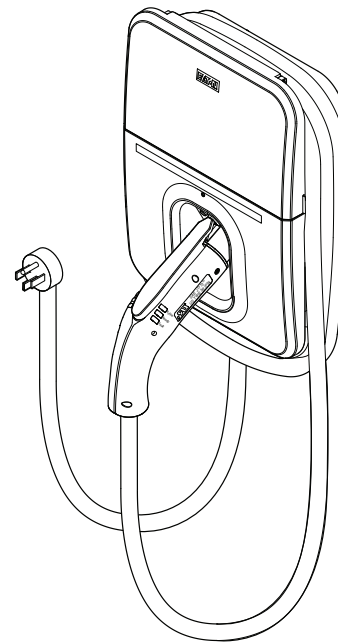


This section describes installation of an EV charger directly onto a wall.
If you will be installing your EV charger onto an EV pedestal, turn to page 16.

Hardwire



Plug-in



A

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Prepare the EV wall charger

STEP A-1

Hardwire

- Disconnect power to the loadcenter or panelboard where the EV wall charger will be powered from.
- Ensure the EV wall charger's dedicated 40 A upstream breaker handle is in the OFF position.

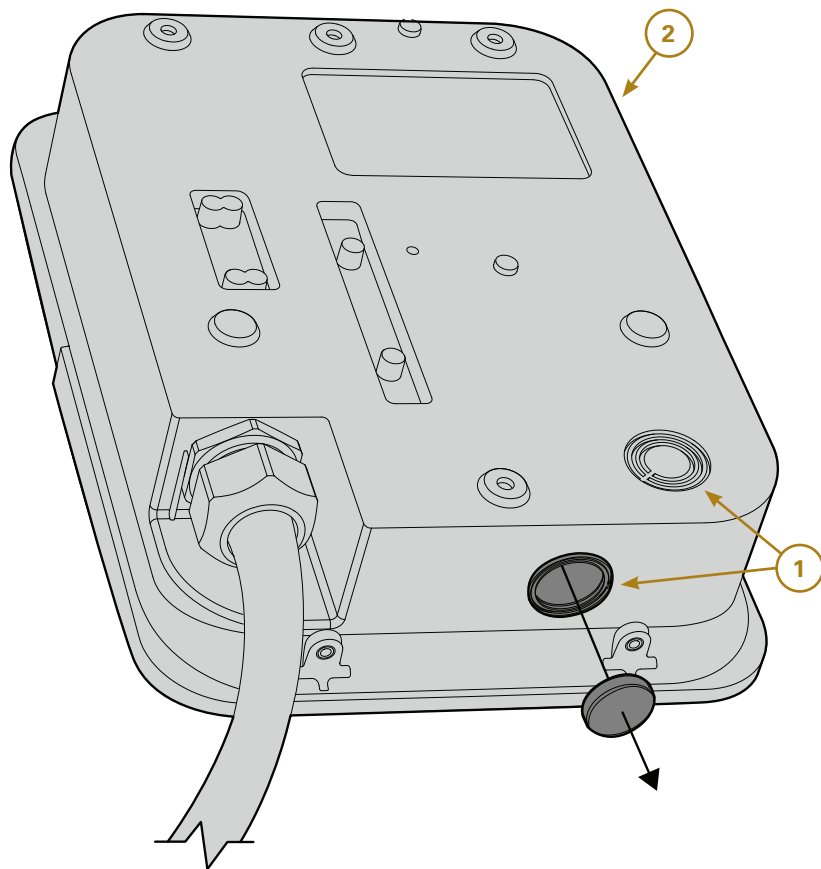
Note: Eaton recommends branch circuit protection using properly rated 2-pole 40 amp over-current protective devices per the applicable NEC (National Electrical Code) for the installation site location. Installations that require receptacles (for example NEMA 14-50) require 5ma GFCI protection.

- Set aside hardware kit and mounting template.
- Remove EV wall charger from the plastic bag.
- Remove the tape on the side(s) of the EV wall charger that is holding the cover to the base. Remove the cover and set aside cautiously to avoid damage to the circuit board.
- Depending on installation preferences, remove one of the two knockouts on (1) on the EV wall charger base (2), for conduit fitting.
- Remove center of knockout by driving it inward. Remove subsequent rings using pliers by pulling the ring out around the edge of the ring.
- To maintain UL 3R outdoor rating and prevent damage to insulation, use only approved clamps, conduit, and fittings per NEC.

Reference:

1. Knockouts
2. EV wall charger base

Figure 1



A

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Prepare the EV wall charger

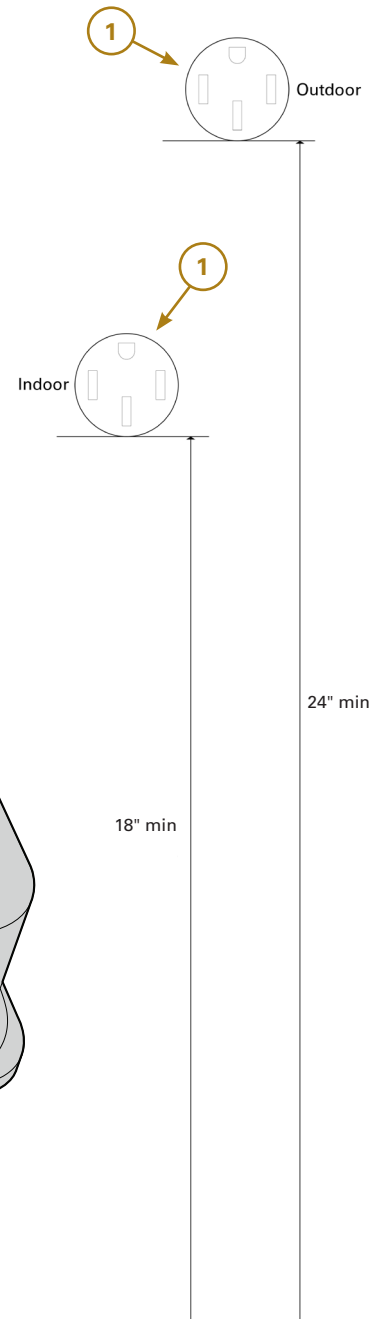
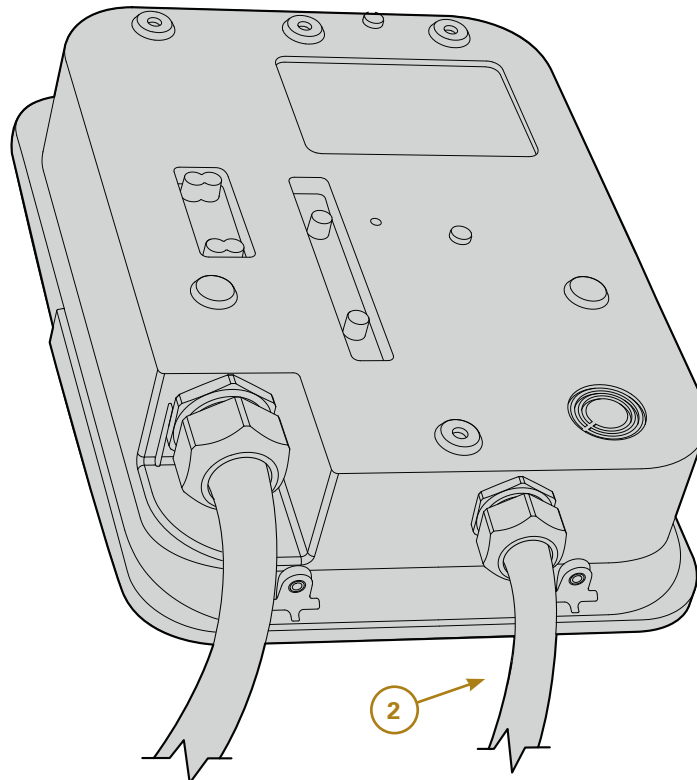
STEP A-1

Plug-in

- Ensure the EV wall charger's dedicated 40 A or 50 A upstream breaker handle is in the OFF position.

Note: Eaton recommends use of a BR240H/BR250H circuit breaker or equivalent 240 V rated two-pole device. Ensure to follow local code requirements.

- Set aside hardware kit and mounting template.
- Before you get started, ensure the available NEMA 14-50R receptacle **(1)** is 18 inches minimum from the ground for indoor applications and 24 inches minimum from the ground in outdoor applications.
- Remove EV wall charger from the plastic bag.
- Remove the tape on the side(s) of the EV wall charger that is holding the cover to the base. Remove the cover and set aside cautiously to avoid damage to the circuit board.



Reference:

1. NEMA 14-50R receptacle
2. NEMA 14-50 cord

Figure 2

B

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Mount the EV wall charger

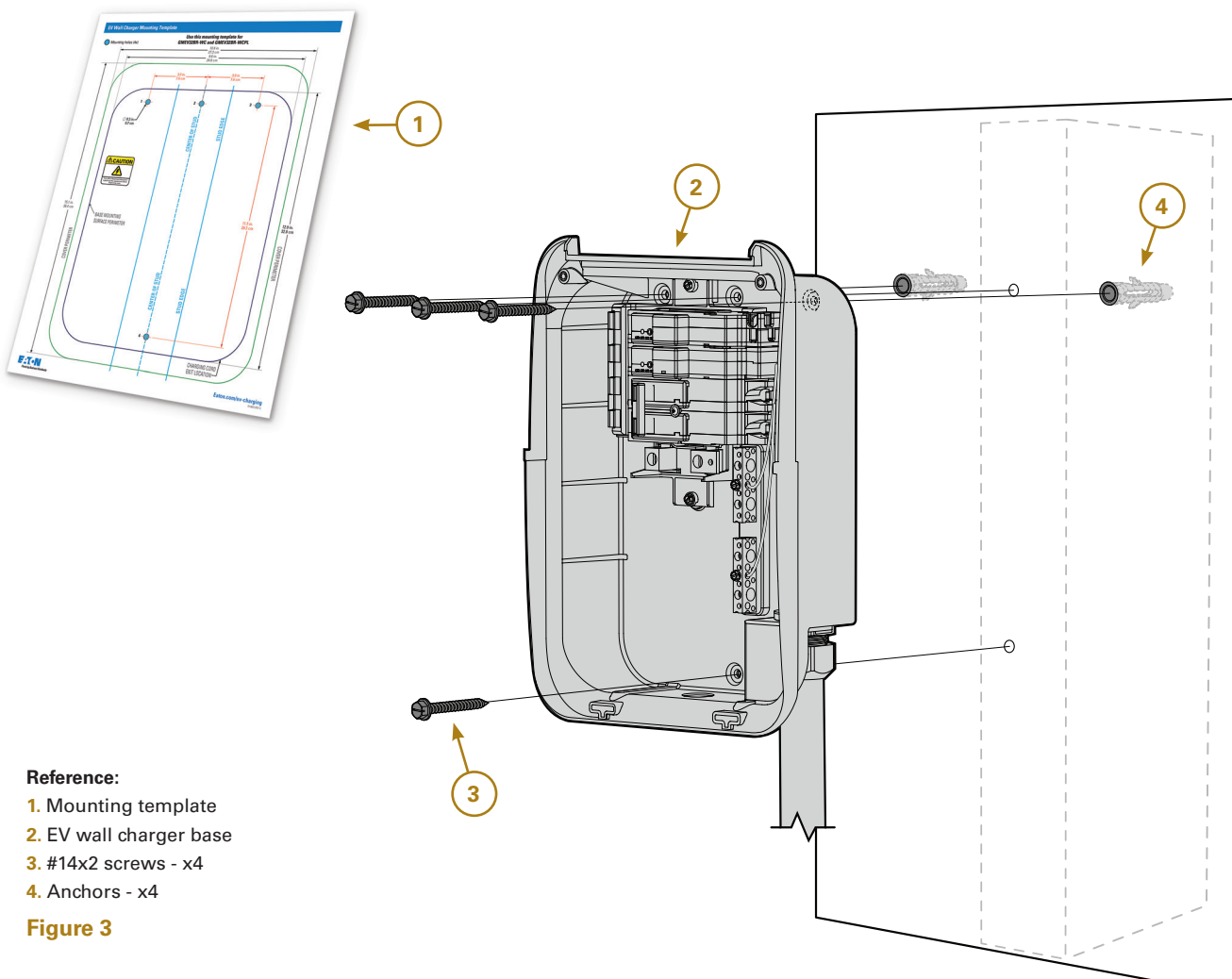
STEP B-1

Hardwire and plug-in



For EV wall charger plug-in:
DO NOT PLUG IN UNTIL STEP D-3

- Mark the location for the EV wall charger using the mounting template provided **(1)**.
 - » Eaton suggests following the appropriate ADA installation guidelines for commercial applications. (see page 8)
- Mount the EV wall charger base **(2)** to the wall using appropriate #14x2 screws **(3)** per NEC.
 - » Fasten EV wall charger base to wall, using surface mounting holes and appropriate fasteners.



C

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Connect conduit collet

STEP C-1

Hardwire

- Connect conduit collet

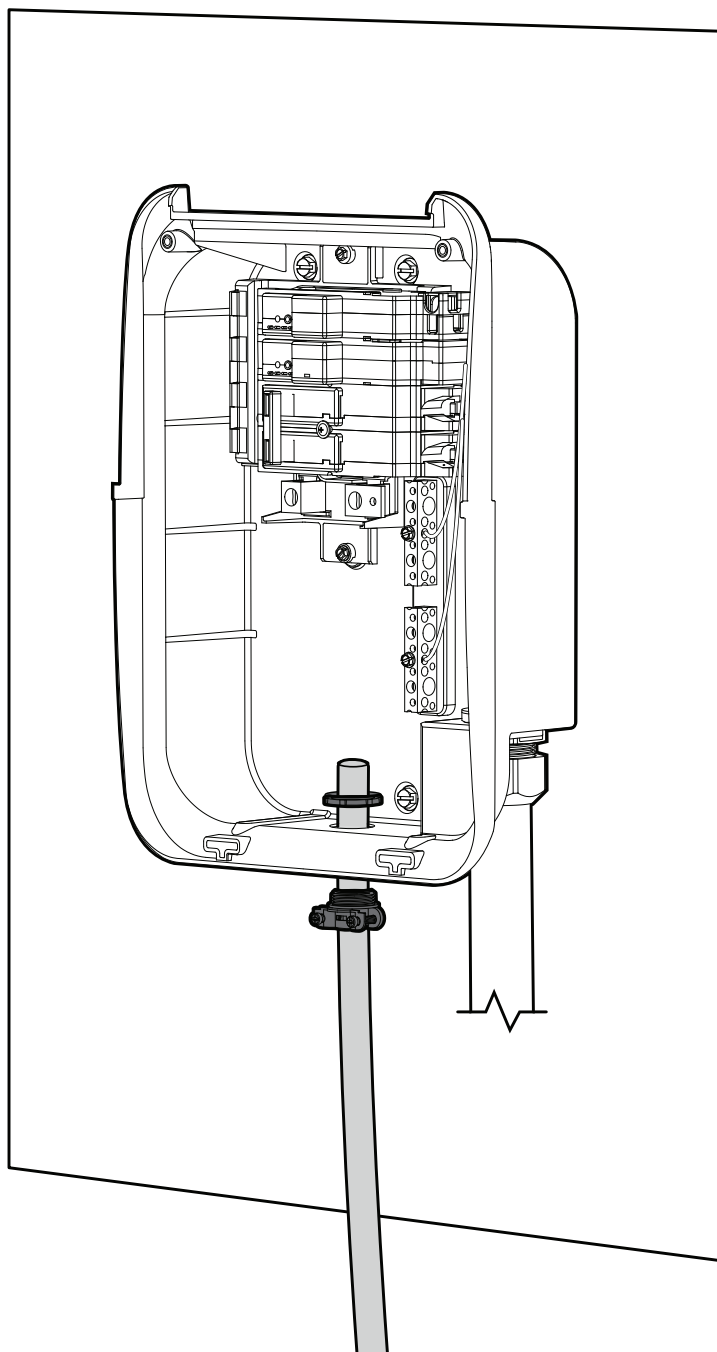


Figure 4

D

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Wire EV wall charger
and install EV wall charger front cover

STEP D-1

Hardwire

- Install two main, neutral, and ground wires.
Torque wire pressure screws to value shown on main label located inside of cover.

Note: Use 60°C wire, 8 AWG copper or 6 AWG aluminum; or 75°C wire, either 8 AWG copper or 8 AWG aluminum

Reference:

- 1. (BLACK) Line 2
- 2. (RED) Line 1
- 3. (WHITE) Neutral
- 4. (GREEN) Ground

Figure 5

NOTE: Electrical Systems supported: 240Vac Split-phase 3-wire (Neutral required); 208Vac Wye 4-wire (Neutral required)

WIRING DIAGRAM
DIAGRAMA DE CABLEADO
SCHEMA DE CABLAGE

(EN) TORQUE WIRE PRESSURE SCREW(S) AS FOLLOWS:
(ES) APRIETE LOS TORNILLOS DE SUELDON DE CABLE A LOS VALORES DE TORQUE SIGUIENTES: (FR) SERRER LES VIS DU COLLIER DE CABLE AUX VALEURS DE COUPLE SUIVANTES:

WIRE SIZE CALIBRE DE CABLE CÂBLE JAUGE	LB-IN (N·M) SMALL PEQUEÑO PETIT	LB-IN (N·M) LARGE GRANDE GRAND	LB-IN (N·M) LINE LUGS LINEAS LIGNE
60/75°C AL/CU AWG/KCMIL	#6 - #14	1/0 - #14	2/0 - #12
2/0	-	-	50
1/0 - #3	-	50	50
#4	-	45	50
#6	35	45	45
#8	25	40	40
#10 - #12	20	35	35
#14	20	35	-

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STEP D-2

Hardwire and plug-in

- Plug in two connectors located on the wire harness on the base to the circuit board on the cover.

Figure 6

D

EV WALL CHARGER AND EV WALL CHARGER PLUG-IN INSTALLATION

Wire EV wall charger
and install EV wall charger front cover

STEP D-3

Hardwire and plug-in

- Install cover.
 - » Align two bottom tabs with the slots in the base and fasten with tamper-resistant screws provided. Torque to 15 in-lb using T25 Torx bit provided.
 - » Fasten cover to base, using two mounting holes under the lid and tamper-resistant screws provided. Torque to 15 in-lb using T25 Torx bit provided.

! For EV wall charger plug-in:
Plug in NEMA 14-50P plug.

Note: Before energizing EV wall charger, re-check all electrical connections after all wiring has been completed.

- Reconnect power to the upstream circuit by switching circuit breaker to the ON position.
- Energize the loadcenter or the panelboard. The EV wall charger and EV smart breaker charger electronics should power immediately, and the BlinkUp status LED will begin blinking. The indicator LEDs on the EV connector will begin blinking.
- Finally, ensure the EV smart breaker charger handle is in the ON position. Turn the EV smart breaker charger on by moving the breaker handle from the OFF to the ON position.
- Follow all the safety guidelines suggested and complete the installation.

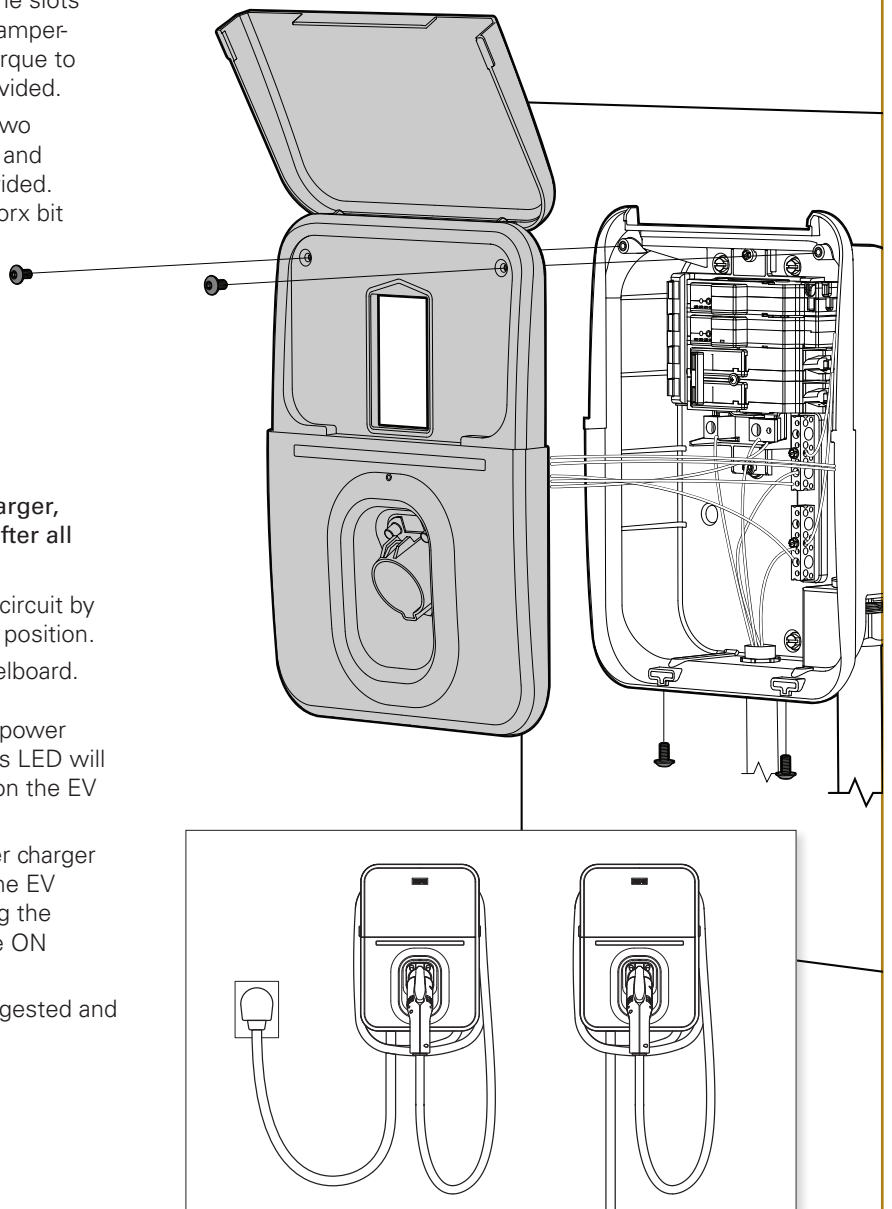


Figure 7

A

EV WALL CHARGER PEDESTAL INSTALLATION

Prepare EV pedestal



This section describes installation of an EV charger directly onto an EV pedestal.
If you will be installing your EV charger onto a wall, turn to page 9.

- Remove cover plates

PREPARATION

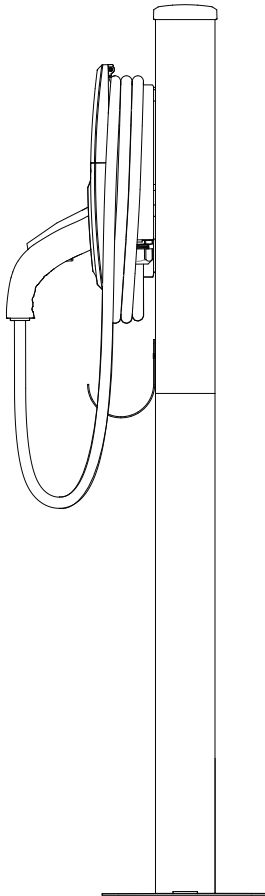
- Ensure the EV wall charger's dedicated 40A upstream breaker handle is in the OFF position.

Note: Eaton recommends use of a BR240H circuit breaker or equivalent 240V rated two-pole device.

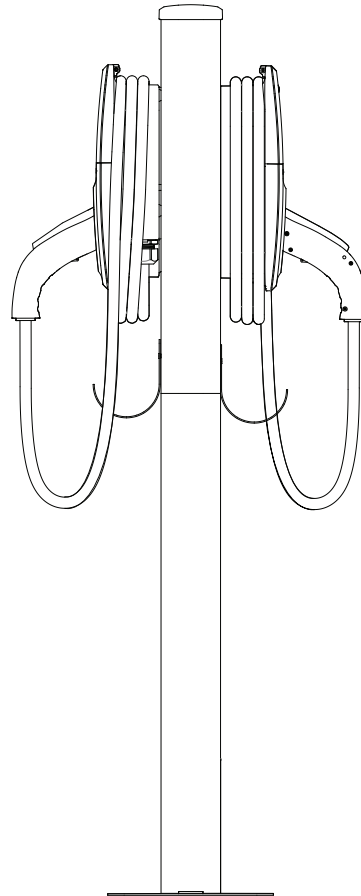
Make sure to follow local code and NEC requirements.

- Set aside hardware kit and mounting template included with the EV wall charger instructions. (mounting template won't be needed for installation.)

Single port



Dual port



A

EV WALL CHARGER PEDESTAL INSTALLATION

Prepare EV pedestal

STEP A-1

Single port

Dual port

- Remove the cover panels located on the rear of the unit, starting with the cover panel in the middle of the unit (1), then removing the cover panel at the top (2), and lastly the bottom panel (3).

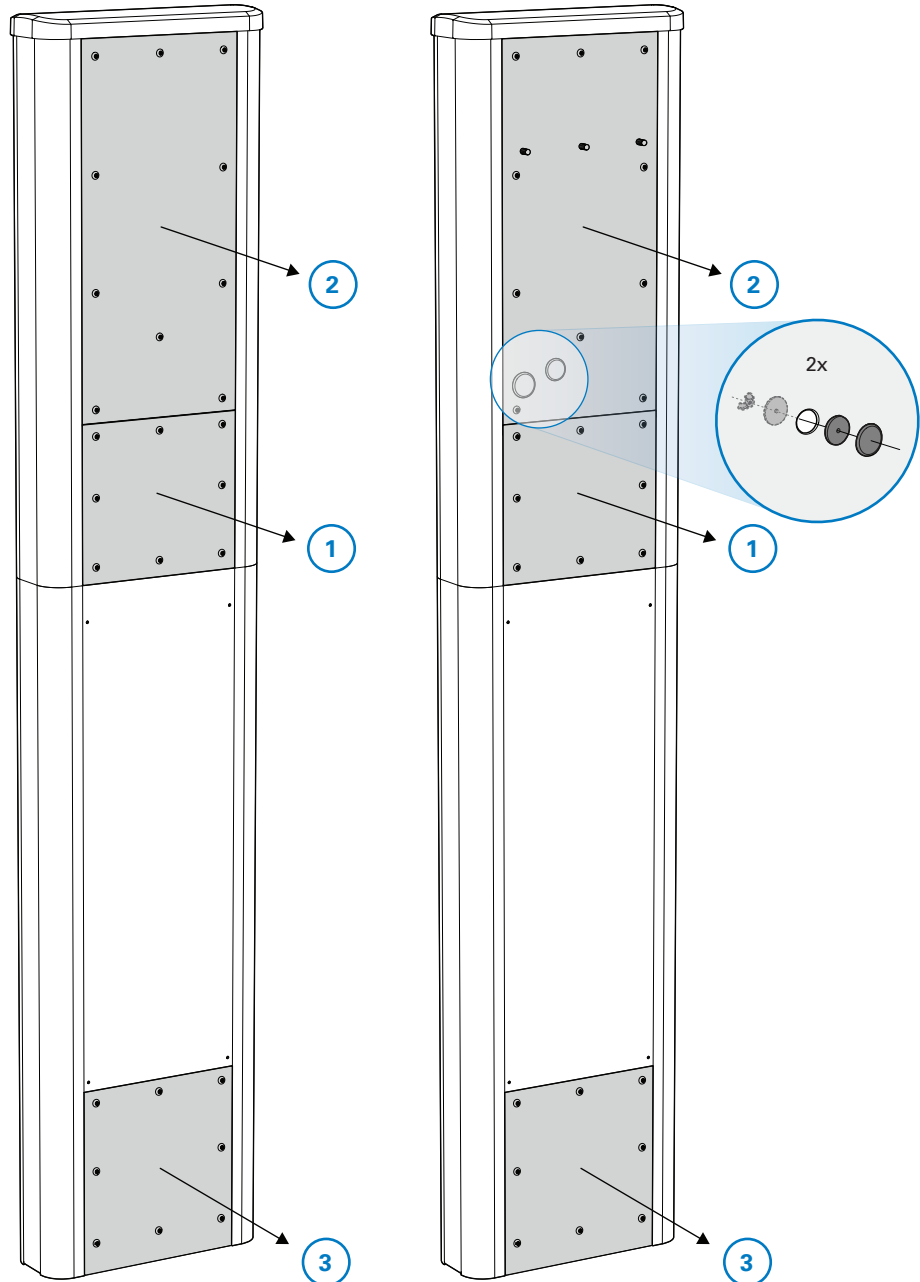


Figure 8

B

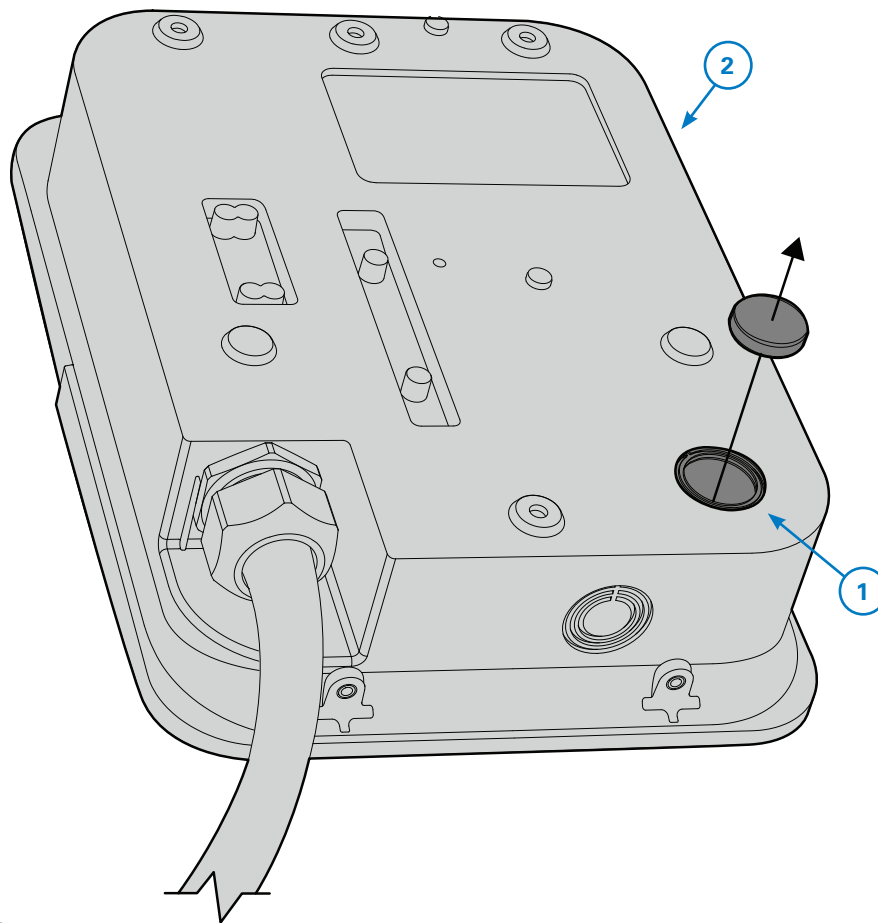
EV WALL CHARGER PEDESTAL INSTALLATION

Install EV wall charger base

STEP B-1

Single & dual port

- Remove EV wall charger from the plastic bag.
- Remove the tape on the side(s) of the EV wall charger that is holding the cover to the base. Remove the cover and set aside cautiously to avoid damage to the circuit board.
- Remove largest knockout **(1)** (diameter 1.375 inches) from the EV wall charger base **(2)**, for conduit fitting.
- Remove center of knockout by driving it inward. Remove subsequent rings using pliers by pulling the ring out around the edge of the ring.
- To prevent damage to insulation, use only approved clamps, conduit, and fittings per NEC.



Reference:

- 1.** Largest knockout
- 2.** EV wall charger base

Figure 9

B**EV WALL CHARGER PEDESTAL INSTALLATION****Install EV wall charger base****STEP B-2****Single & dual port**

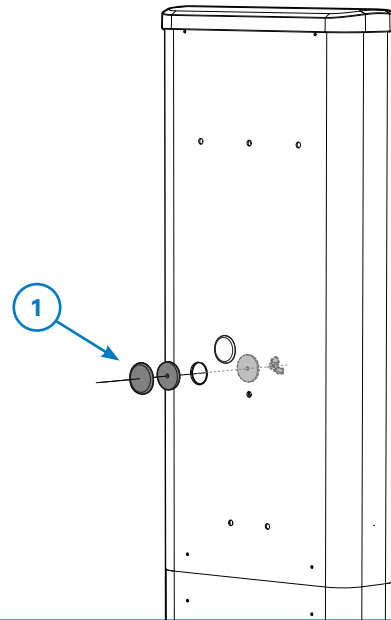
- Remove the mechanical closer (1) from the conductor entry point on the front of the pedestal.

Note: If you are not ready to install the EV charging station at this time, do not remove the mechanical closer.

Reference:

1. Mechanical closer

Figure 10

**STEP B-3****Single & dual port**

- Install the conduit fitting (2) through the EV pedestal upper (1) and EV wall charger base (3).

Note: The o-ring (4) must be placed between the EV pedestal and the EV wall charger during installation. Failure to do so will result in voiding any warranty.

Reference:

1. EV pedestal upper

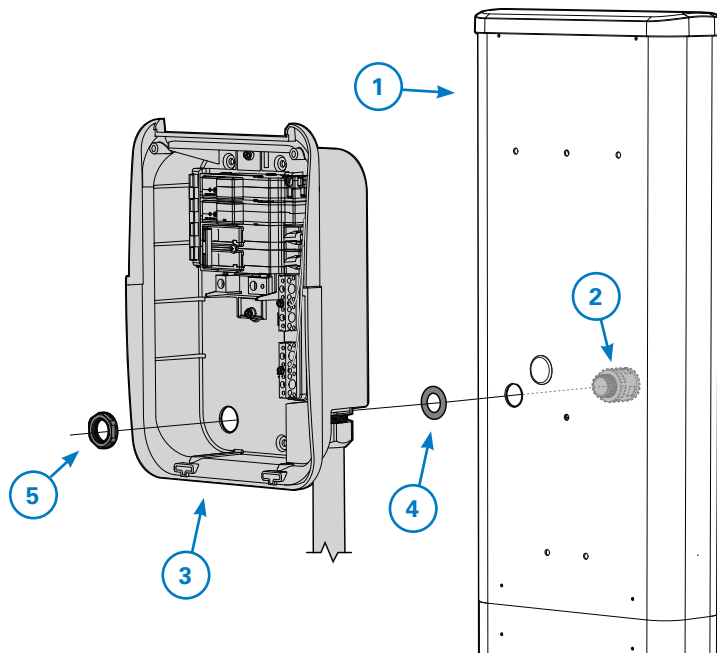
2. 1" trade size conduit fitting

3. EV wall charger base

4. 33 mm ID o-ring

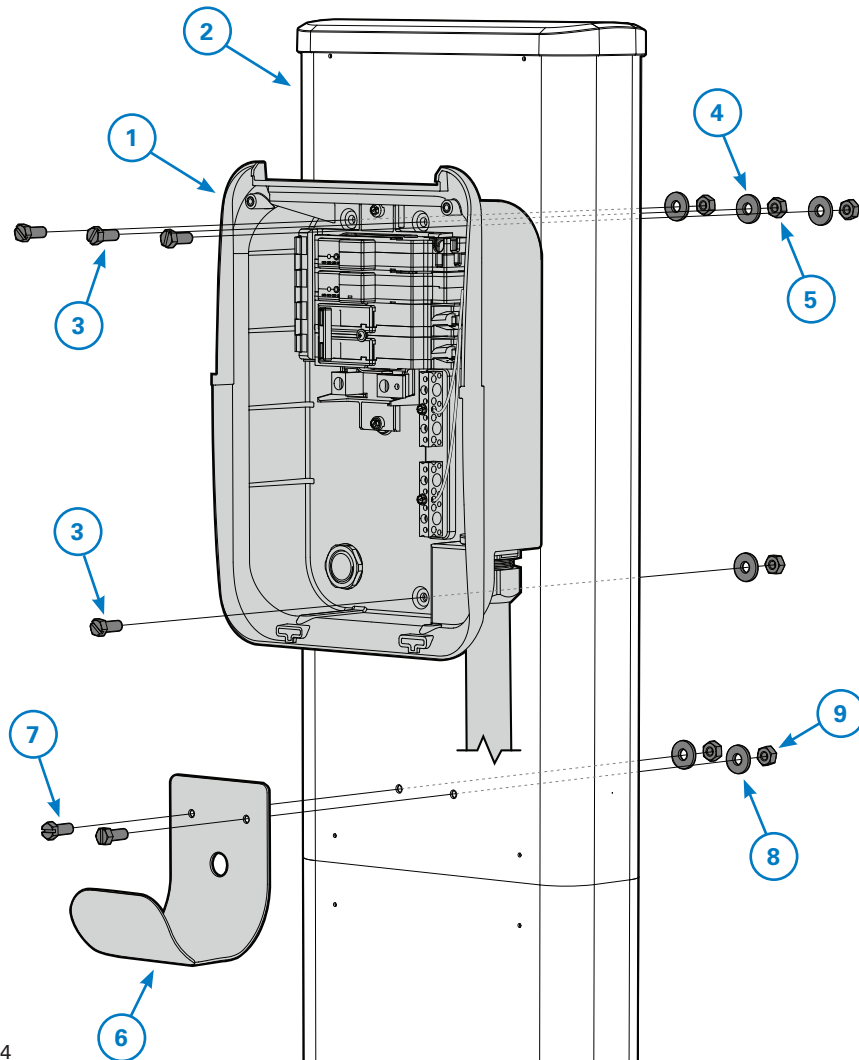
5. 1" conduit nut

Figure 11



B**EV WALL CHARGER PEDESTAL INSTALLATION****Install EV wall charger base****STEP B-4****Single & dual port**

- Be sure that the EV wall charger base **(1)** properly aligns with the four 1/4-20 clearance holes in the EV pedestal upper **(2)**.
- Install four 1/4-20 bolts **(3)** through the EV wall charger base **(1)** and into the EV pedestal upper **(2)**. Hold 1/4-20 bolts **(3)** while installing washers **(4)** and locknuts **(5)**.
- Secure cord hook **(6)** to EV pedestal upper using two 1/4-20 bolts **(7)**. Hold 1/4-20 bolts **(7)** while installing washers **(8)** and locknuts **(8 and 9)**.

**Reference:**

1. EV wall charger base
2. EV pedestal upper
3. 1/4-20 x 0.625-inch machine screw - x4
4. 1/4-20 washer - x4
5. 1/4-20 nylon locknut - x4
6. Cord hook
7. 1/4-20 x 0.625-inch machine screw - x2
8. 1/4-20 washer - x2
9. 1/4-20 nylon locknut - x2

Figure 12

C

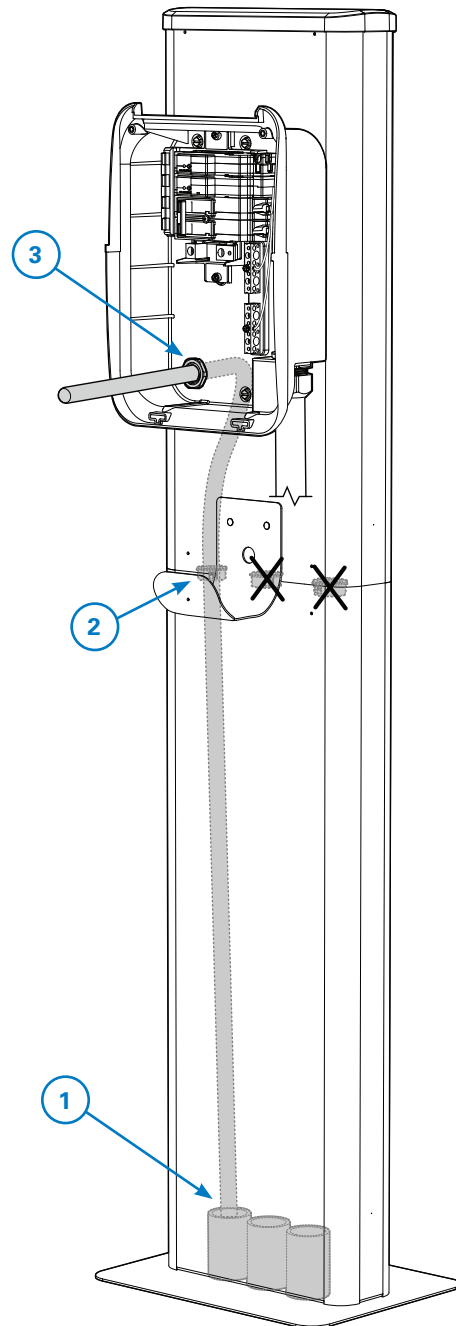
EV WALL CHARGER PEDESTAL INSTALLATION

Run wiring through EV pedestal

STEP C-1

Single & dual port

- As illustrated, route the conduit up through the base plate and center body of the EV pedestal (1).
- Pass the conduit through the cutout between the lower and upper EV pedestal sections (2).
- Route through the plastic conduit fitting (3) and into the EV wall charger.



1. EV pedestal base plate cutout
2. EV pedestal cutout
3. Plastic conduit fitting

Figure 13

D

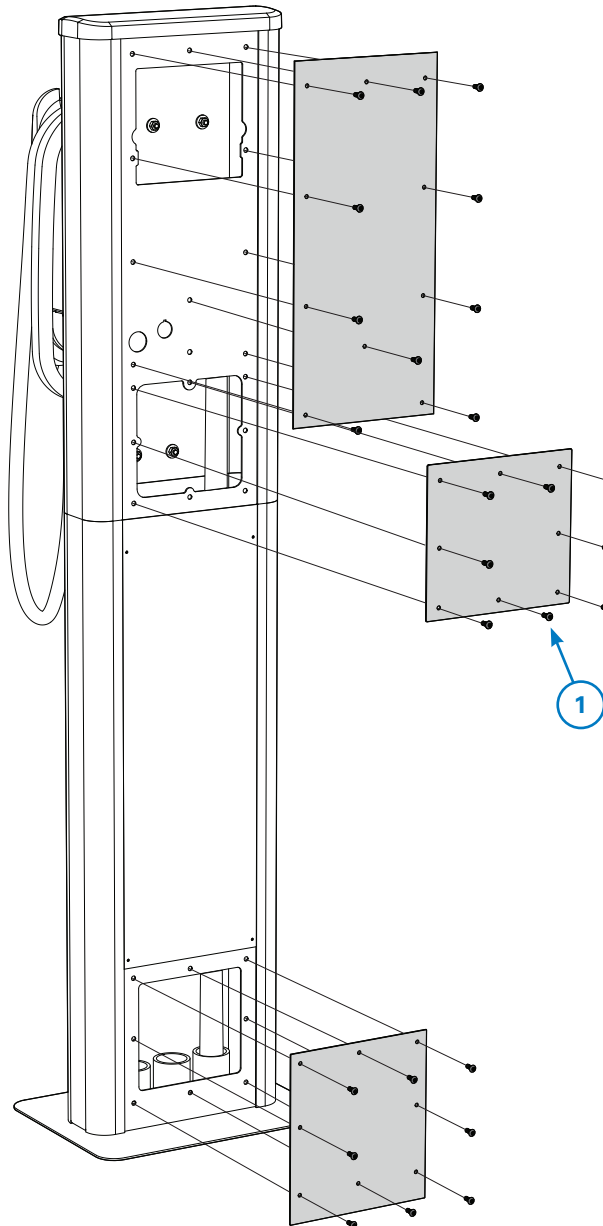
EV WALL CHARGER PEDESTAL INSTALLATION

Replace cover plate(s)

STEP D-1

Single port

- Replace cover plates to the EV pedestal using the tamper-resistant button head Torx screws (1).



Reference:

1. Stainless steel, tamper-resistant button head Torx screws, 10-32 thread size, 1/2-inch long - x10

Figure 14

For single port installation, skip to Step H on page 28

D

EV WALL CHARGER PEDESTAL INSTALLATION

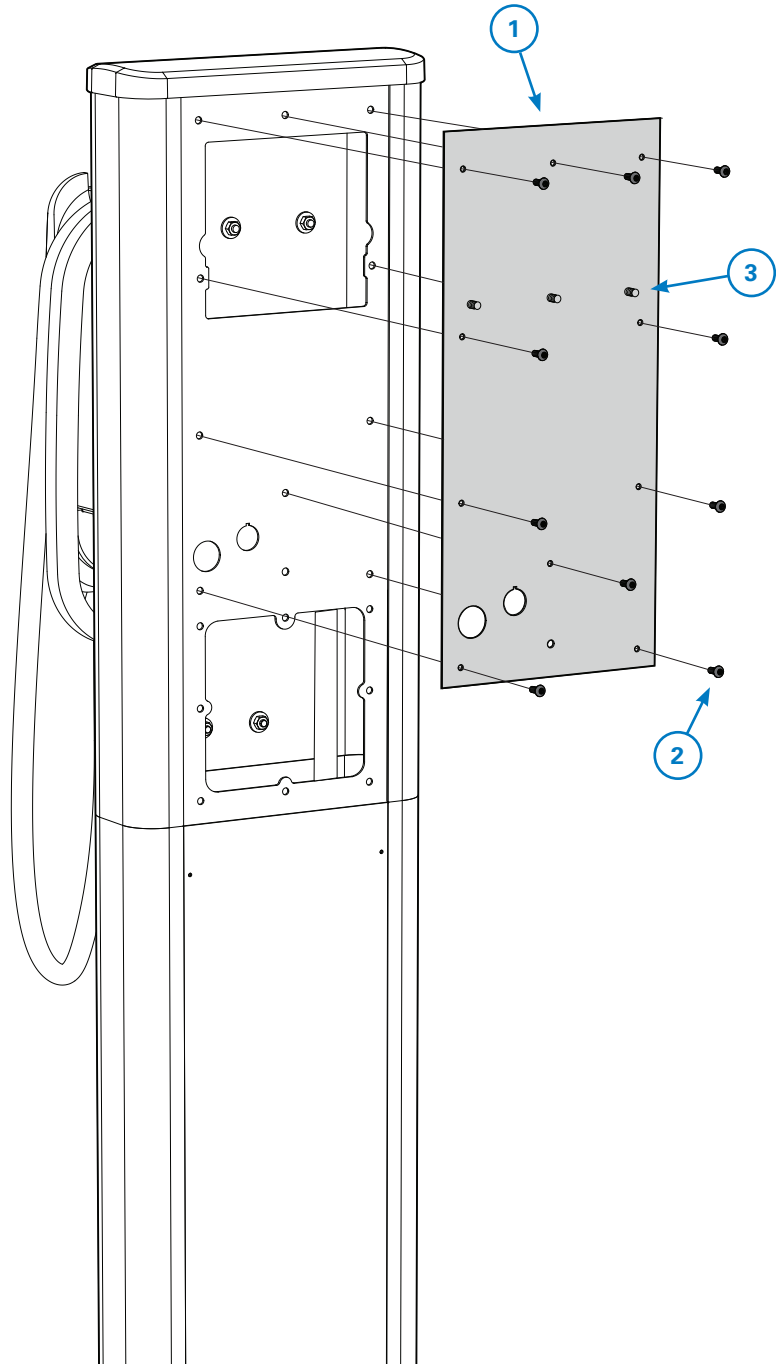
Replace cover plate

STEP D-1

Dual port

- Install the top cover plate (1) using the tamper-resistant button head Torx screws (2).

Note: Bracket studs (3) should be facing out.



Reference:

1. Top section cover
2. Stainless steel, tamper-resistant button head Torx screws, 10–32 thread size, 1/2-inch long - x10
3. 1/4-20 studs - x3

Figure 15

E

EV WALL CHARGER PEDESTAL INSTALLATION

Install second EV wall charger base

STEP E-1

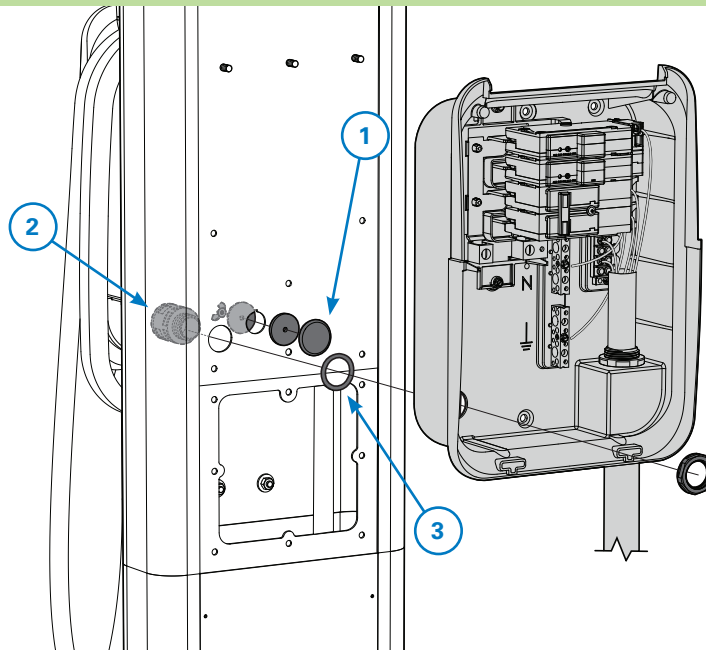
Dual port

- Replace the mechanical closer (1).
- Install the second EV wall charger base so that it properly aligns with the three 1/4-20 studs protruding through the top section cover.
- Install conduit fitting (2) and o-ring (3).

Reference:

1. Mechanical closer
2. 1" trade size conduit fitting
3. 33 mm ID o-ring

Figure 16



STEP E-2

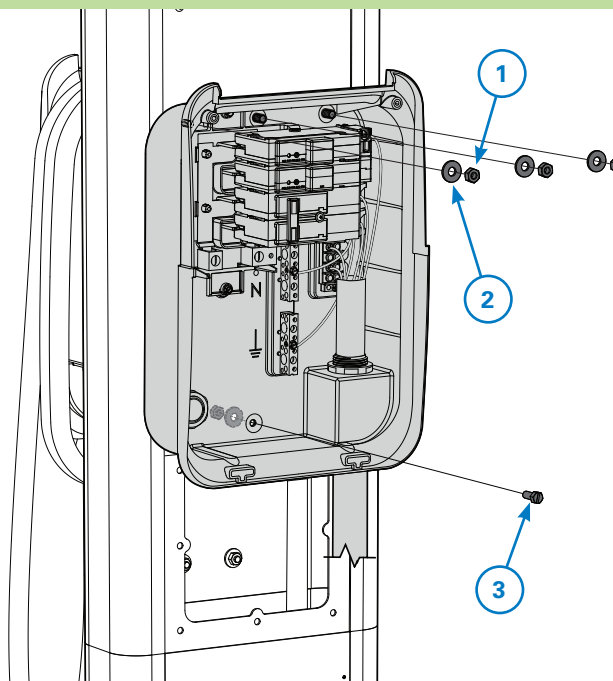
Dual port

- Use three 1/4-20 nuts and washers (1 and 2) to secure the EV wall charger base to the cover.
- Remove and reinstall one 1/4-20 bolt (3) through the EV wall charger base and into top section cover. Hold the bolt in place while installing a washer and locknut to the inside of the EV pedestal.

Reference:

1. 1/4-20 nylon locknut - x4
2. 1/4-20 washer - x4
3. 1/4-20 x 0.625-inch machine screw

Figure 17



F

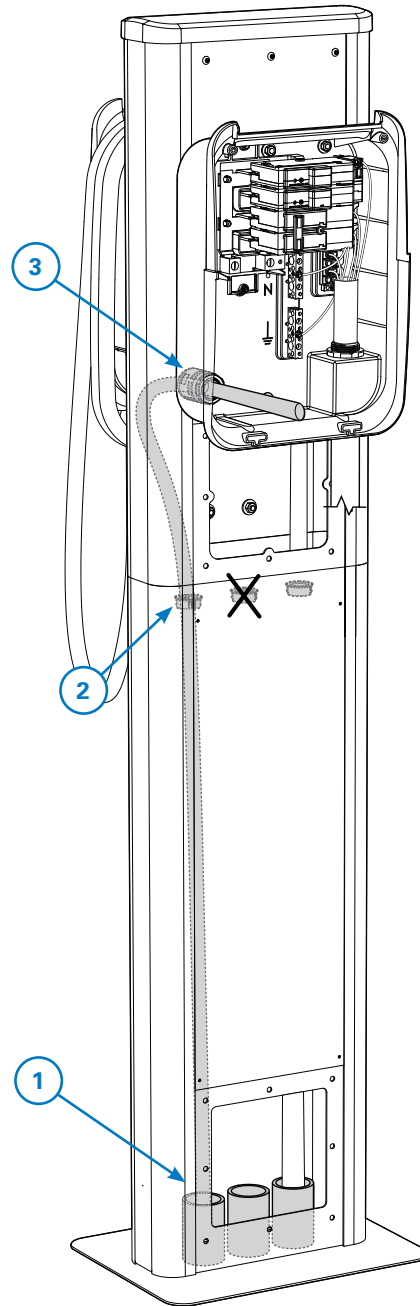
EV WALL CHARGER PEDESTAL INSTALLATION

Run wiring through EV pedestal

STEP F-1

Dual port

- As illustrated, route the conduit up through the base plate and center body of the EV pedestal (1).
- Pass the conduit through the cutout between the lower and upper EV pedestal sections (2).
- Route through the plastic conduit fitting (3) and into the EV wall charger.



1. EV pedestal base plate cutout
2. EV pedestal cutout
3. Plastic conduit fitting

Figure 18

G

EV WALL CHARGER PEDESTAL INSTALLATION

Install cord hook and lower access cover

STEP G-1

Dual port

- Install cord hook first

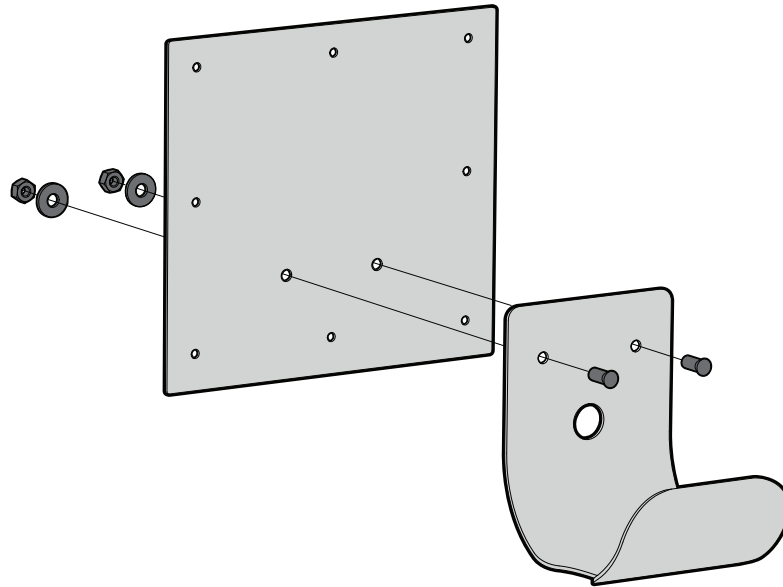


Figure 19

STEP G-2

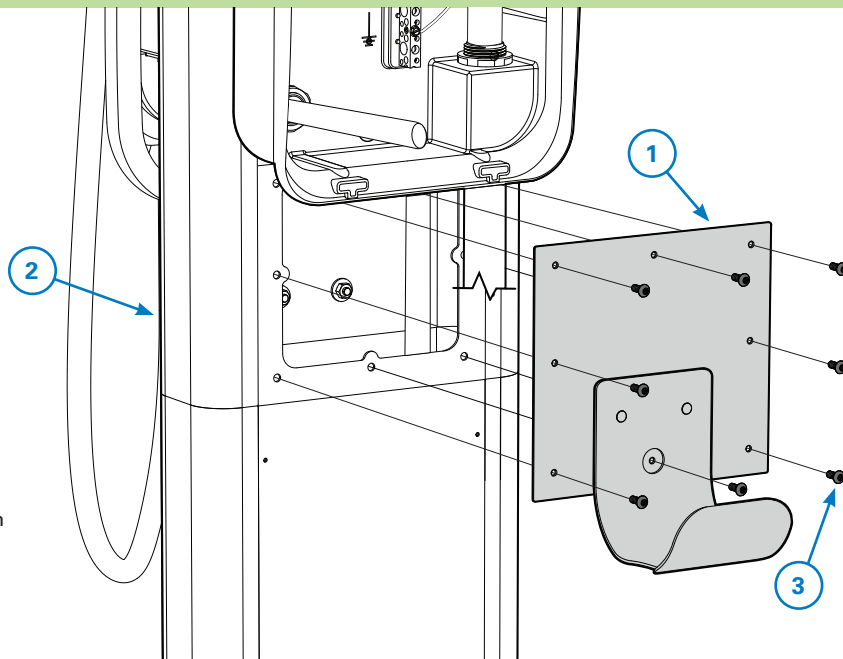
Dual port

- Install the access cover (1) to the EV pedestal upper section (2) using the tamper-resistant button head Torx screws (3).

Reference:

2. Access cover
3. EV pedestal upper
4. Stainless steel, tamper-resistant button head Torx screws, 10–32 thread size, 1/2-inch long - x8

Figure 20



G

EV WALL CHARGER PEDESTAL INSTALLATION

Install cord hook and lower access cover

STEP G-3

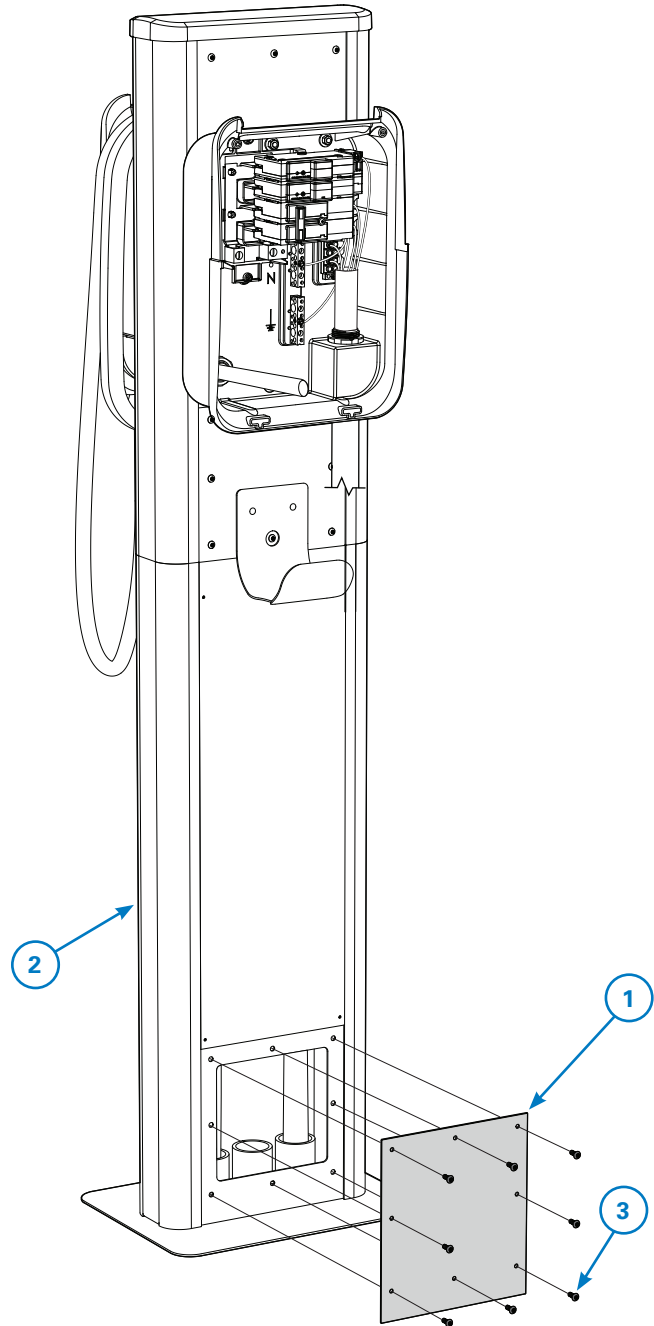
Dual port

- Install the lower access cover (1) to the EV pedestal lower section (2) using the tamper-resistant button head Torx screws (3).

Reference:

1. Access cover
2. EV pedestal lower
3. Stainless steel, tamper-resistant button head Torx screws, 10-32 thread size, 1/2-inch long - x8

Figure 21



H

EV WALL CHARGER PEDESTAL INSTALLATION

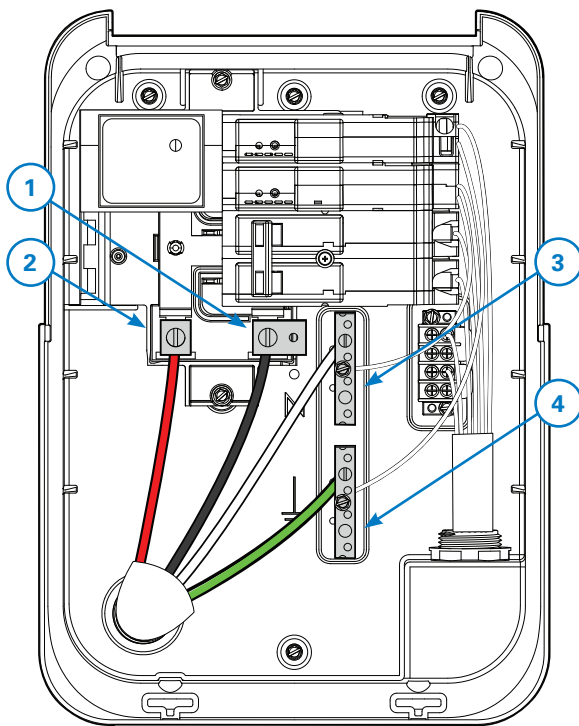
Wire EV wall charger and install EV wall charger front cover

STEP H-1

Single & dual port

- Install two main, neutral, and ground wires.
Torque wire pressure screws to value shown on main label located inside of cover.

Note: Use 60°C wire, 8 AWG copper or 6 AWG aluminum; or 75°C wire, either 8 AWG copper or 8 AWG aluminum



Reference:

1. (BLACK) Line 2
2. (RED) Line 1
3. (WHITE) Neutral
4. (GREEN) Ground

Figure 5

NOTE: Electrical Systems supported: 240Vac Split-phase 3-wire (Neutral required); 208Vac Wye 4-wire (Neutral required)

WIRING DIAGRAM
DIAGRAMA DE CABLEADO
SCHEMA DE CABLAGE

(EN) TORQUE WIRE PRESSURE SCREW(S) AS FOLLOWS:
(ES) APRIETE LOS TORNILLOS DE SUEGION DE CABLE
A LOS VALORES DE TORQUE SIGUIENTES: (FR) SERRER
LES VIS DU COLIER DE CABLE AUX VALEURS DE
COUPLE SUIVANTES:

WIRE SIZE CALIBRE DE CABLE CABLE JAUGE	LB-IN (N-M) SMALL PEQUEÑO PETIT	LB-IN (N-M) LARGE GRANDE GRAND	LB-IN (N-M) LINE LUGS LINEAS LIGNE
60/75°C AL/CU AWG KCMIL	#6 - #14	1/0 - #14	2/0 - #12
2/0	-	-	50
1/0 - #3	-	50	50
#4	-	45	45
#6	35	45	45
#8	25	40	40
#10 - #12	20	35	35
#14	20	35	-

UL FILE / ARCHIVO / FICHER : E33048 PUB3348 - REV 01

UL FILE / ARCHIVO / FICHER: E334048 PHS3948 - REV.01

STEP H-2

Single & dual port

- Plug in two connectors located on the wire harness on the base to the circuit board on the cover.

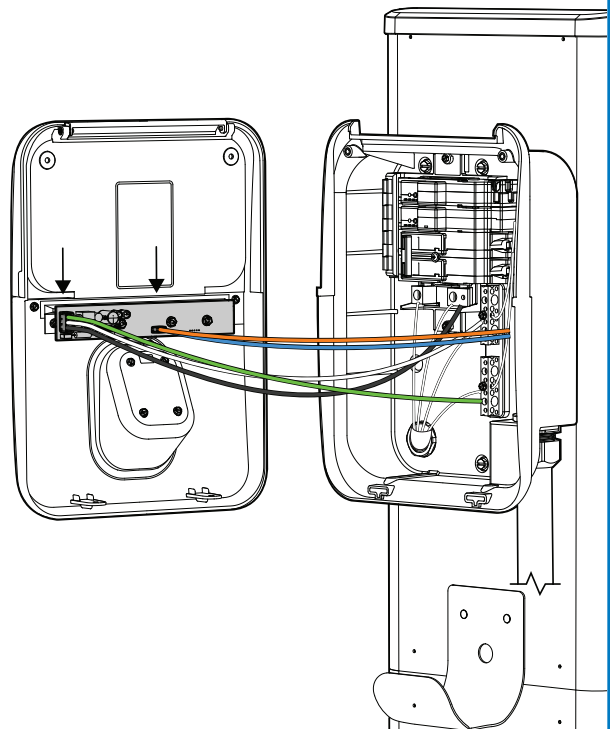


Figure 23

H

EV WALL CHARGER INSTALLATION

Wire EV wall charger and install EV wall charger front cover

STEP H-3

Single & dual port

- Install cover.
 - » Align two bottom tabs with the slots in the base and fasten with tamper-resistant screws provided. Torque to 15 in-lb using T25 Torx bit provided.
 - » Fasten cover to base, using two mounting holes under the lid and tamper-resistant screws provided. Torque to 15 in-lb using T25 Torx bit provided.

Note: Before energizing EV wall charger, re-check all electrical connections after all wiring has been completed.

- Reconnect power to the upstream circuit by switching circuit breaker to the ON position.
- Energize the loadcenter or the panelboard. The EV wall charger and EV smart breaker charger electronics should power immediately, and the BlinkUp status LED will begin blinking. The indicator LEDs on the EV connector will begin blinking.
- Finally, ensure the EV smart breaker charger handle is in the ON position. Turn the EV smart breaker charger on by moving the breaker handle from the OFF to the ON position.
- Follow all the safety guidelines suggested and complete the installation.

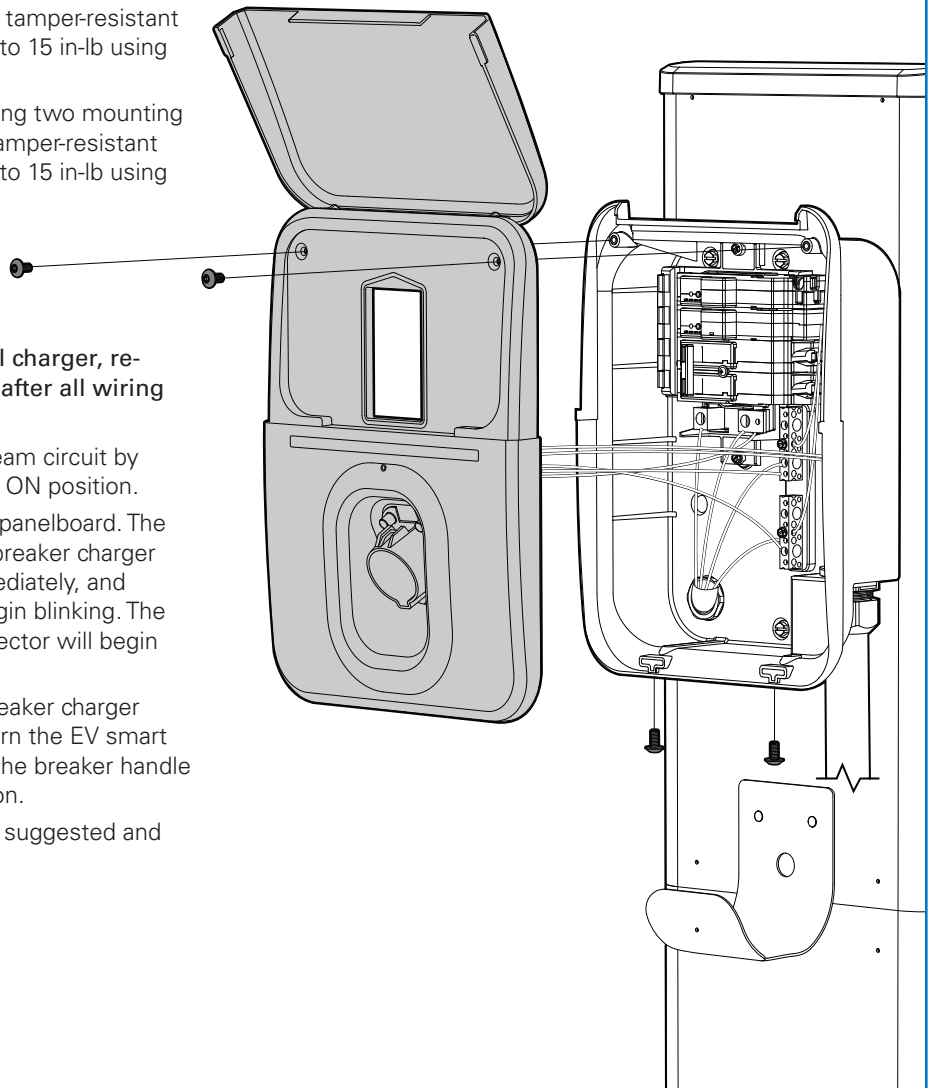


Figure 24

For dual port installation, repeat this step for the second EV wall charger.

User maintenance instructions

Your Green Motion EV smart breaker wall charger contains no user serviceable parts. Do not attempt to repair or service any other part of the unit yourself. If the unit requires servicing, please contact Eaton customer service.

The installation, maintenance, and servicing of your EV wall charger must only be performed by qualified personnel in accordance with applicable local regulations.

Protect your EV wall charger from any external impact.

Take appropriate precautions with electronic medical implants.

Disconnect the main service power to your charger before cleaning the unit. Do not use cleaning solvents to clean any part of your charger. Use a clean, dry cloth to remove accumulated dust and dirt. To maintain integrity of the UL 3R outdoor rated charger, ensure the drain hole on the bottom of your EV wall charger is free of debris that would prevent any moisture from escaping the enclosure.

Ensure that the EV charging cable is positioned in such a way so that it will not be stepped on, tripped over, or subjected to damage or stress. Do not close your garage door on the charging cord. Best practice for EV charging cable storage when not in use is to wrap the cord around the unit itself, or wrapped and hung on a hook, with the charging handle secured in the unit's holster.

Moving and storage instructions

Your EV wall charger should never be lifted or carried by the power supply cord or by the EV cable. Always lift or carry your charger by lifting up the charger's enclosure.

The charger is only to be used for fixed installations and cannot be used as a portable device.

Store your EV wall charger in a dry location, in its original packaging, and within the storage temperature of -40°F to 140°F (-40°C to 60°C) until it is ready to be installed.

FCC ID

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC ID: VPYLB1CBIMP003

RF radiation exposure statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Canada low-power license exempt radio communication devices (RSS-210)

Common information operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

IC: 772CVLB1CDIMP003

Connect to Wi-Fi

Wi-Fi commissioning and operation

After the EV smart breaker charger has been successfully installed and power has been restored to the loadcenter or panelboard, the EV smart breaker charger must be commissioned. Ensure that a Wi-Fi signal is available where the EV smart breaker charger has been installed.

Get started by downloading the Green Motion EV Charger Manager app. Available on IOS and Google Play stores.

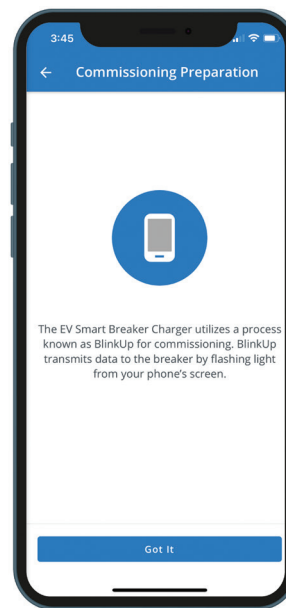
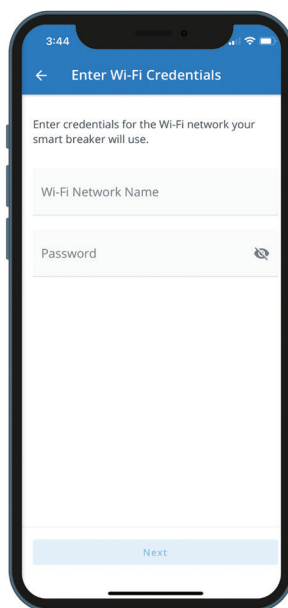
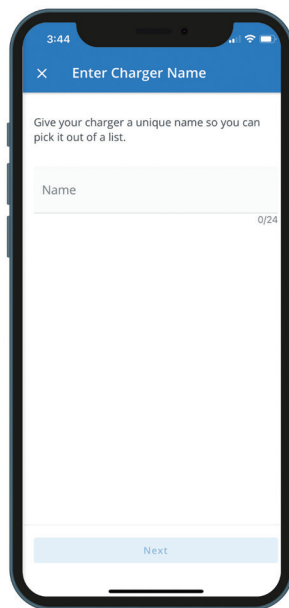


iOS install



Google Play
install

- Name your charger
- Enter your Wi-Fi credentials
- Connect your breaker following the steps in the app



To use the EV smart breaker charger with your preferred charge management system, please visit our developer portal (www.Eaton.com/developer) for complete API documentation. Once the integration is complete, download the EM Install app to commission the EV smart breaker charger.

Technical specifications

Description	Specification
Catalog number	GMEV32BR-WC, GMEV32BR-WCPL, GMEV-PED, GMEV-DPED
Outdoor rating	NEMA 3R
Electrical input	
Input power	7.7 kW
Input voltage	208-240 Vac
Input breaker rating	40 A
Electrical output	
Power output	7.7 kW
Output voltage	208-240 Vac
Output amperage	32 A
Connector	SAE J1772
Installation	GMEV32BR-WC hard wired through pedestal
Cable length (in feet)	25
Safety	UL
Interlocked power protection	Yes
Ground fault protection	20 mA
Overcurrent protection	Yes
Automatic reset after nuisance trip feature	Yes
Randomized restart on power failure (delay before charging resumes after a power failure)	Yes
Frequency rating	60 Hz
Storage temperature	–40 °C to +60 °C
Ambient operating temperature	–30 °C to +40 °C
Humidity	0% to 90%, noncondensing
kAIC rating	10 kA
Warranty	<p>Seller warrants that the Products manufactured by it will conform to Seller's applicable specifications and be free from failure due to defects in workmanship and material for three (3) years from the date of original purchase, installation of the Product, or from the date of shipment of the Product, whichever occurs first. In the event any Product fails to comply with the foregoing warranty, Seller will, at its option, either (a) repair or replace the defective Product, or defective part or component thereof, F.O.B. Seller's facility freight prepaid, or (b) credit Buyer for the purchase price of the Product. All warranty claims shall be made in writing. Seller requires all non-conforming Products be returned at Seller's expense for evaluation unless specifically stated otherwise in writing by Seller. This warranty does not cover failure or damage due to storage, installation, operation or maintenance not in conformance with Seller's recommendations, including as set forth in these Terms and Conditions of Sale, and industry standard practice or due to accident, misuse, abuse, or negligence. This warranty does not cover breach of data or system security, including that of information technology infrastructure, computers, software, hardware, databases, electronic systems (including database management systems), and networks. This warranty does not cover reimbursement for labor, gaining access, removal, installation, temporary power or any other expenses, which may be incurred in connection with repair or replacement. This warranty does not apply to equipment not manufactured by Seller. Seller limits itself to extending the same warranty it receives from the third-party supplier, to the extent such third party permits assignment of its warranty. For other general terms and conditions of sale, please refer to Eaton's selling policy 25-000.</p>
Certifications	<p>UL 489—Molded case circuit breakers, molded case switches, and circuit breaker enclosures</p> <p>UL 2231—These requirements cover devices and systems intended for use in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Article 625, to reduce the risk of electric shock to the user from accessible parts, in grounded or isolated circuits for charging electric vehicles. These circuits are external to or on-board the vehicle</p> <p>UL 1998—These requirements apply to non-networked embedded software residing in programmable components performing safety-related functions whose failure is capable of resulting in a risk of fire, electric shock, or injury to persons</p> <p>UL 2251—Plugs, receptacles, and couplers for electric vehicles</p> <p>UL 2594—Electric vehicle supply equipment</p> <p>CSA® C22.2 No. 5—Molded case circuit breakers, molded case switches and circuit breaker enclosures</p> <p>SAE J1772 2017 Ed.</p> <p>NFPA 70 Article 625</p> <p>FCC Compliant, Part 15</p> <p>Energy Star Level 2 Certified charger</p>

Troubleshooting

Condition	Troubleshooting Tip
Why is my EV smart breaker not charging my EV?	Check for any schedules set on the 'EV smart breaker charger' or the EV. If you are attempting to charge outside of these 'schedules', charging may not occur. You will have to manually over-ride the schedule to start a new charging session. See Green Motion EV Charger Manager app for instructions.
EV smart breaker charger has tripped. How do I reset the breaker?	Eaton's EV smart breaker chargers behave like a standard Eaton BR thermal mag breaker – once tripped, you have to push it to full-off position and then turn it back on.
I see a blinking RED LED on the EV connector. What does this mean and how can I resume normal operation?	<p>Red LED on the EV connector blinks at two different speeds. One of the blink patterns is half-a-second-ON and half-a-second-OFF. This is an indication of loss of line side power. Please turn the breaker OFF and recheck the line side wiring of the EV smart breaker.</p> <p>The second blink pattern is one-second-ON and one-second-OFF. This indicates a fault condition. Refer to the instruction sheet for various possible fault conditions.</p>
Why is the yellow LED flashing on the EV pole?	This means that the EV is requesting the charger to go into an unsupported state. The LED will stop flashing once a valid and supported request is received.
Why is my BlinkUp process not successful?	Refer to the EM Install app or the Green Motion EV Charger Manager app for additional information on BlinkUp errors and solutions. You can also refer to the installation video under the 'Resources' section of the product web page.
Why is the charger's RED LED flashing after GFCI Test button is pushed?	The charger entered a permanent fault mode since a GFCI self-test is initiated while the EV connector is not plugged into the EV. Press the 'smart breaker display button' three times to clear the fault.
Why is the LED bar on my wall charger unit OFF?	Please check the cable that is connected between the EV charger base unit and front face. If this cable is not installed properly, it can lead to abnormal LED behavior.
Why is my EV smart breaker showing as "NO INTERNET" in my Green Motion EV Charger Manager app.	Check to make sure both the mobile device and the EV smart breaker charger have an active internet connection.
I unplugged EV connector in the middle of a charge and now the EV charger is not working.	If you were charging outside of a pre-defined schedule and you unplugged the EV connector, the EV charger will stop charging since the schedule kicks in again. Check for any schedules set on the 'EV charger' or the EV. If you are attempting to charge outside of these 'schedules', charging may not occur. You will have to manually over-ride the schedule to start a new charging session. See Green Motion EV Charger Manager app for instructions.
Why does my mobile app say "waiting" while my EV smart breaker charger is already charging the EV?	Depending on the Wi-Fi traffic, the mobile app may take few seconds to update and show the correct status. If the mobile app continues to show an incorrect status, check the Wi-Fi connection on your mobile device and the EV smart breaker charger.

For more troubleshooting tips, please refer to the Eaton's knowledge center website.



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