

Bosch Level 2 Charging Station

en Installation and Operating Instructions



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, selon la partie 15 de la réglementation FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radioélectrique. Si l'installation et l'utilisation ne sont pas conformes aux instructions, il peut causer des interférences nuisibles aux communications radio. Toutefois, il n'existe aucune garantie qu'aucune interférence ne se produira dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou télévisuelle, ce qu'il est possible de vérifier en éteignant et rallumant l'équipement, l'utilisateur doit tenter de corriger les interférences à l'aide d'une ou plusieurs des mesures suivantes :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur une prise d'un circuit différent de celui auquel le récepteur est branché.
- Consulter le concessionnaire ou un technicien radio/TV compétent pour obtenir de l'assistance.

Este equipo ha sido probado y se apega a los límites para los dispositivos digitales de Clase B, en virtud de la sección 15 de las Reglas de la Comisión Federal de Comunicaciones (FCC). Estos límites han sido diseñados para proporcionar una protección razonable contra interferencia perjudicial en una instalación residencial. Este equipo genera, usa y puede radiar energía de radiofrecuencia y si no se instala y utiliza conforme a las instrucciones, puede causar interferencias perjudiciales con las comunicaciones radiofónicas. No obstante, no existe ninguna garantía de que no se produzcan interferencias en una instalación específica. Si este equipo causa interferencias perjudiciales para la recepción de radio o televisión, lo cual se puede determinar encendiendo y apagando el equipo, recomendamos al usuario que intente corregir dichas interferencias con una o varias de las siguientes medidas:

- Reorientar o reubicar la antena receptora.
- Aumentar la separación entre el equipo y el receptor.
- Conectar el equipo a un enchufe o circuito diferentes de aquellos a los que el receptor estaba conectado.
- Consultar al distribuidor o a un técnico de radio/televisión con experiencia para obtener ayuda.

Contents English.4

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1 Introduction

The Bosch Level 2 Charging Station is designed for the North American market to charge plug-in electric vehicles (PHEV) and battery electric vehicles (BEV). It provides AC Level 2 Charging that effectively shortens charging time for typical electric vehicles (EVs) when compared to the Level 1 Cordset.

1.1 Applications

- ▶ Residential
- ▶ Private and public parking facilities
- ▶ Fleet
- ▶ Shopping malls and retailers
- ▶ Workplace

Please read and follow these safety warnings and operating instructions carefully before operating the Bosch Level 2 Charging Station. Failure to follow these instructions may result in serious injury or property damage.

2 Important Safety Warnings and Instructions

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.



WARNING

Disconnect electrical power to the Bosch Level 2 Charging Station before installation. Failure to do so may cause physical injury or damage to the electrical system and charging unit.



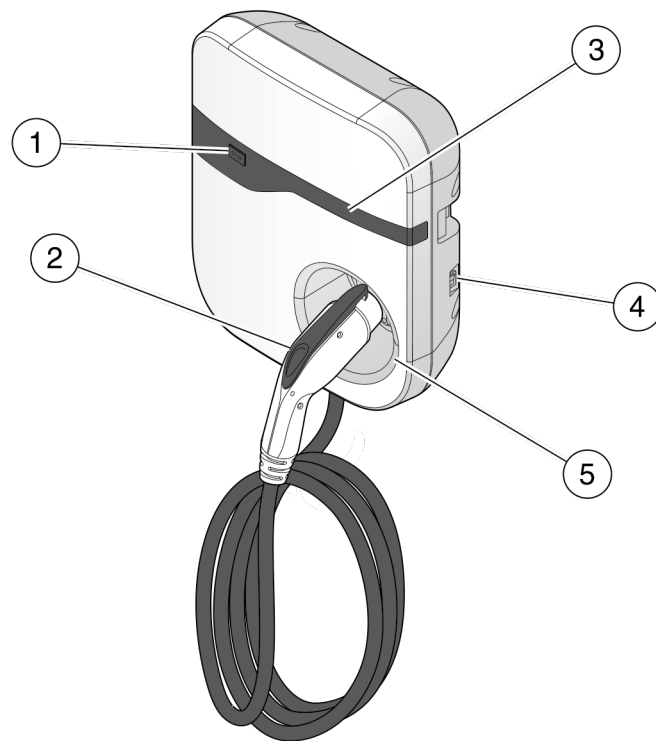
CAUTION

To reduce the risk of fire, connect only to a circuit provided with 20 amperes (EL-51245-XXXXX) or 40 amperes (EL-51253-XXXXX, EL-51254-XXXXX) maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70.

- ▶ Read all the instructions before using this product.
- ▶ Children should be supervised when this product is used around children.
- ▶ Do not put fingers into the EV connector.
- ▶ Do not use this product if the EV cable is frayed, has broken insulation, or displays any other indication of damage.
- ▶ Do not use this product if the enclosure or the EV connector is broken, cracked, open, or show any other indication of damage.
- ▶ This product should be installed only by a qualified approved technician.
- ▶ Make sure that the materials used and the installation procedures follow local building codes and safety standards.
- ▶ The information provided in this manual in no way exempts the user of responsibility to follow all applicable codes or safety standards.
- ▶ Bosch and its partners are not responsible for physical injury, damage to property or equipment caused by the installation of this product.
- ▶ This document provides instructions for the wall-mounted Bosch Level 2 Charging Station and should not be used for any other product. Before installation or use of this product, you should review this manual carefully and consult with a licensed contractor, licensed electrician, or trained installation expert to make sure of compliance with local building codes and safety standards.

3 Features and Specifications

3.1 Front View



1. **STOP button**
2. **Charging plug and cable**
 - ▶ SAE J1772 compliant
3. **Status indicator**
 - ▶ Ready (green LED on)
 - ▶ Charging (green LED flashing)
 - ▶ Fault (red LED on)
 - ▶ Warning (red LED flashing)
4. **ON/OFF switch**
5. **Plug dock**

3.2 Package Contents

- ▶ Bosch Level 2 Charging Station
- ▶ Installation and Operating Instructions
- ▶ Mounting bracket
- ▶ Three (3) Torx T30 screws

3.3 Specifications

Model		EL-51245-XXXXX	EL-51253-XXXXX	EL-51254-XXXXX
Power Input	Input Rating	208-240 Vac, 16 A	208-240 Vac, 30 A	208-240 Vac, 30 A, 60 Hz
	Connections & Wiring	L1, L2, and Ground, hardwired w/ terminal block		
	Standby Power	< 5 W		
Power Output	Output Rating	208-240 Vac, 16 A	208-240 Vac, 30 A	208-240 Vac, 30 A
	Cold-Load Pickup	Randomized delay before charge resume after power failure		
Protection	Internal Residual Current Detection	20 mA CCID per UL 2231		
	Upstream Breaker	2-pole 20 A breaker on dedi-cated circuit, non-GFCI type	2-pole 40 A breaker on dedicated circuit, non-GFCI type	
	Output Protection	Power output is terminated upon detection of charging connector plug-out		
	Electrical Protection	Over current, short circuit, over voltage, under voltage, ground fault, surge protection, over temperature		
User Interface & Control	Status Indicators	Standby (solid green), charging (flashing green), fault (solid red), warning (flashing red)		
	Buttons/Switches	ON/OFF switch, stop button		
Environmental	Operating Temperature	-22°F to +122°F (-30°C to +50°C)		
	Humidity	95% relative humidity, non-condensing		
Mechanical	Charging Cable Length	12/18/25-ft cable	18-ft cable	25-ft cable
	Ingress Protection	Type 3R		
	Mounting Type	Wall-Mount		
	Dimension (W x H x D)	13.8 x 15.7 x 5.0 inch (350 x 400 x 126 mm), excluding charging cable and support bracket		
	Net Weight	15.4 lb (7 kg)		
Regulation	Certificate	UL, cUL		
	Charging Interface	SAE J1772 compliant charging plug		

4 Installation

4.1 Important SAFETY WARNINGS and Instructions

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.



WARNING

Danger of electrical shock or injury. Turn OFF power at the panelboard or load center before working inside the equipment or removing any component. Do not remove circuit protective devices or any other component until the power is turned OFF.

The Bosch Level 2 Charging Station should be installed only by a licensed contractor, and/or a licensed electrician or trained installation expert in accordance with all applicable state, local and national electrical codes and standards.

Before installing the Bosch Level 2 Charging Station, review this manual carefully and consult with a licensed contractor, licensed electrician, or trained installation expert to ensure compliance with local building practices, climate conditions, safety standards, and state and local codes.

The Bosch Level 2 Charging Station is to be hardwired only. The installation of a plug is not allowed.

4.2 Grounding Instructions

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.

4.3 Recommended Tools

The following tools are recommended for the Bosch Level 2 Charging Station installation:

- ▶ Supplied accessories and components:
 - Level 2 Charging Station mounting bracket
 - Three (3) Torx T30 screws for securing the Level 2 Charging Station to the mounting bracket
- ▶ Installer-supplied components:
 - Conduit of appropriate trade size for power wire
 - Two (2) screws for securing the main body mounting bracket to the wall
- ▶ Recommended tools:
 - Torx T30 screwdriver

4.4 Installing the Bosch Level 2 Charging Station

1. See Figure 4-1. Secure the Level 2 Charging Station mounting bracket to the wall using appropriate screws and bracket holes, as shown in Figure 4-1. Thread 1/4-in. expansion bolts through bracket offset holes into masonry walls as shown and torque to 78 lb-in (8.8 N·m). Thread 2-in., or longer, No. 8 wood screws through bracket inline holes into finished walls supported by wood studs and torque to 26 lb-in (3 N·m).

Note:

The Level 2 Charging Station must be mounted at a sufficient height from grade such that the height of the plug dock is located between 24–48 in. (0.6–1.2 m) from grade per NEC Article 625.

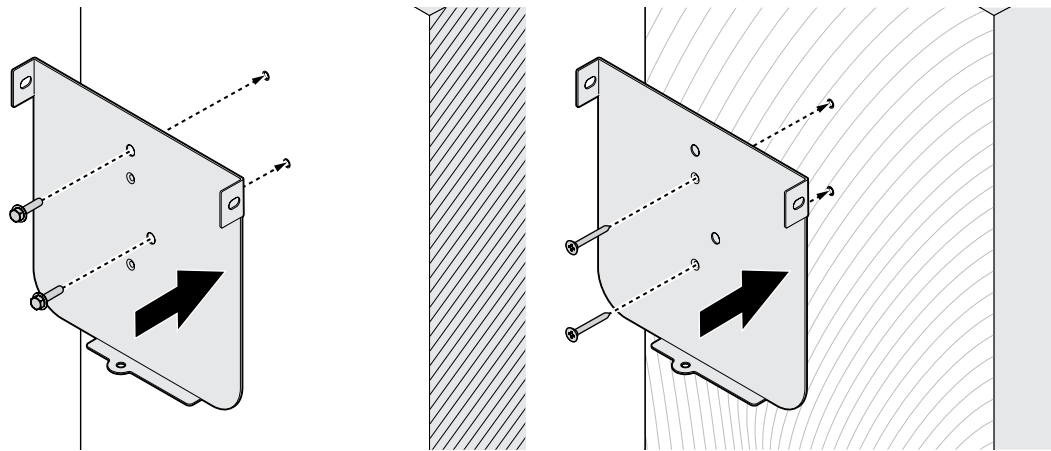
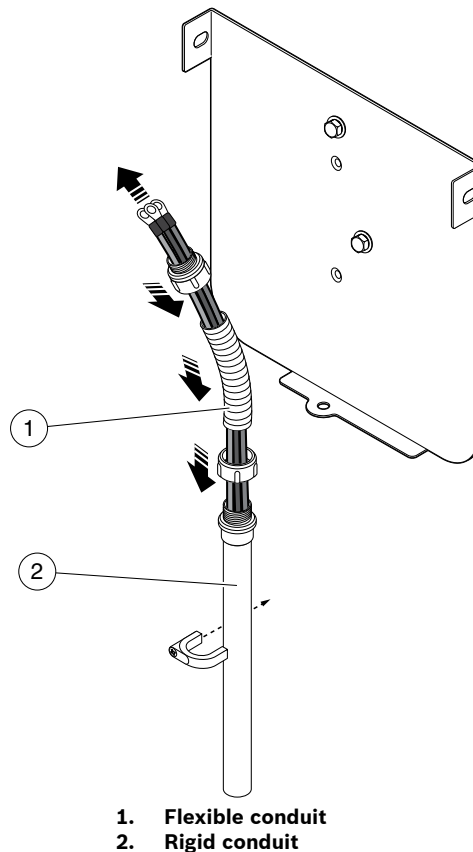


Figure 4-1. Mounting bracket use on masonry wall (left) and finished wall (right)

2. See Figure 4-2. Choose appropriate conduit in accordance with all applicable state, local, and national electrical codes and standards. Use flexible conduit when connecting to the rear of the Level 2 Charging station to facilitate rotation and installation on mounting bracket (Figure 4-4).



1. Flexible conduit
2. Rigid conduit

Figure 4-2. Conduit use

- See Figure 4-3. Drill a hole of an appropriate size to accommodate the conduit system fitting in the bottom of the plastic housing as shown.



CAUTION

Drill the hole carefully to avoid punching through the housing and damaging internal components
Place the Level 2 Charging Station on a soft surface during drilling to avoid damage.

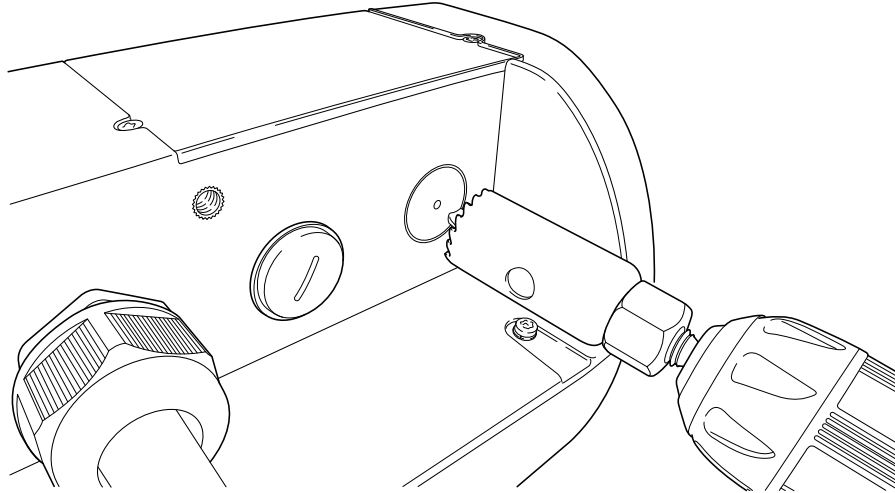


Figure 4-3. Drilling hole for conduit

- See Figure 4-4. Install ring terminal eyelets on each wire end and connect each to the correct terminal input block connector. Use copper wire of the appropriate size to operate the EVSE at its rated amperage output. Replace the compartment cover and torque to 4.6 lb·in (0.5 N·m).

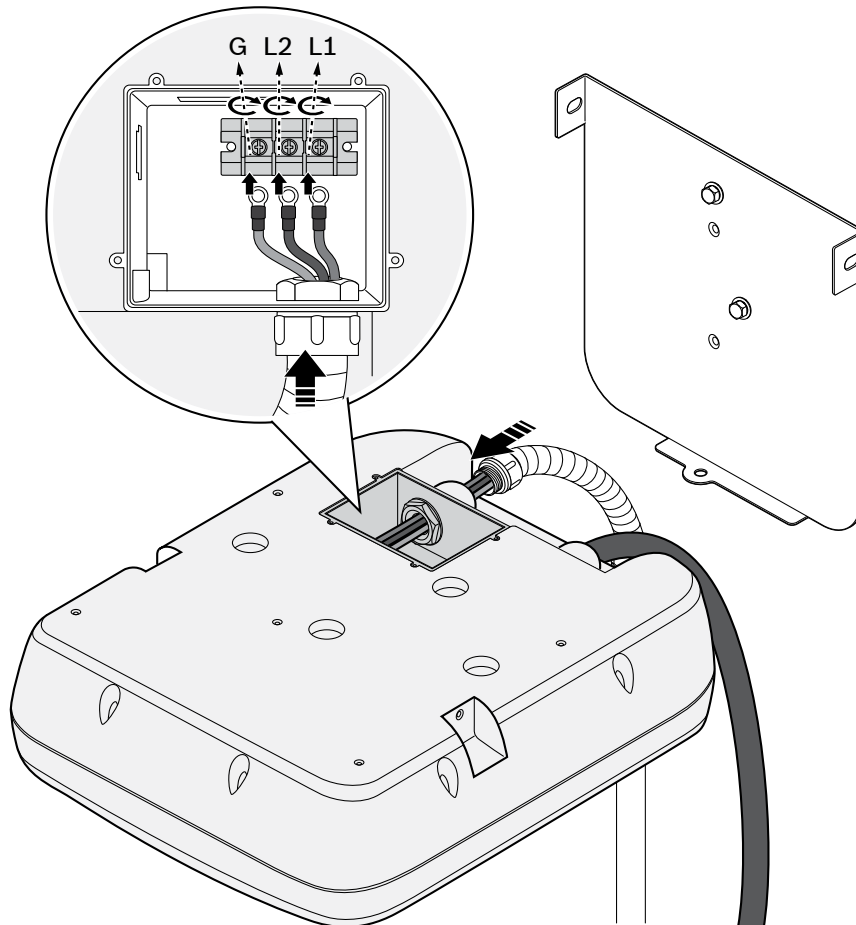


Figure 4-4. Electrical wiring with detail of input terminal block

5. See Figure 4-5. Align the screw holes of the mounting bracket with the Level 2 Charging Station.

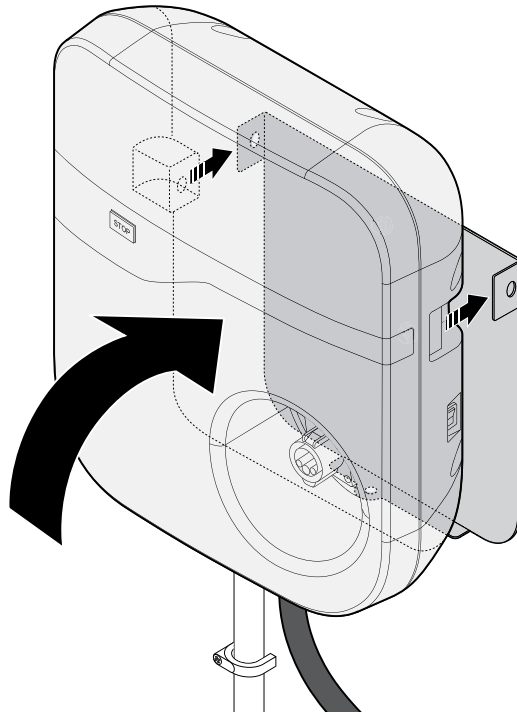


Figure 4-5. Alignment of charging station on mounting bracket

6. See Figure 4-6. Install and secure the charging station to the mounting bracket with the three (3) screws supplied.

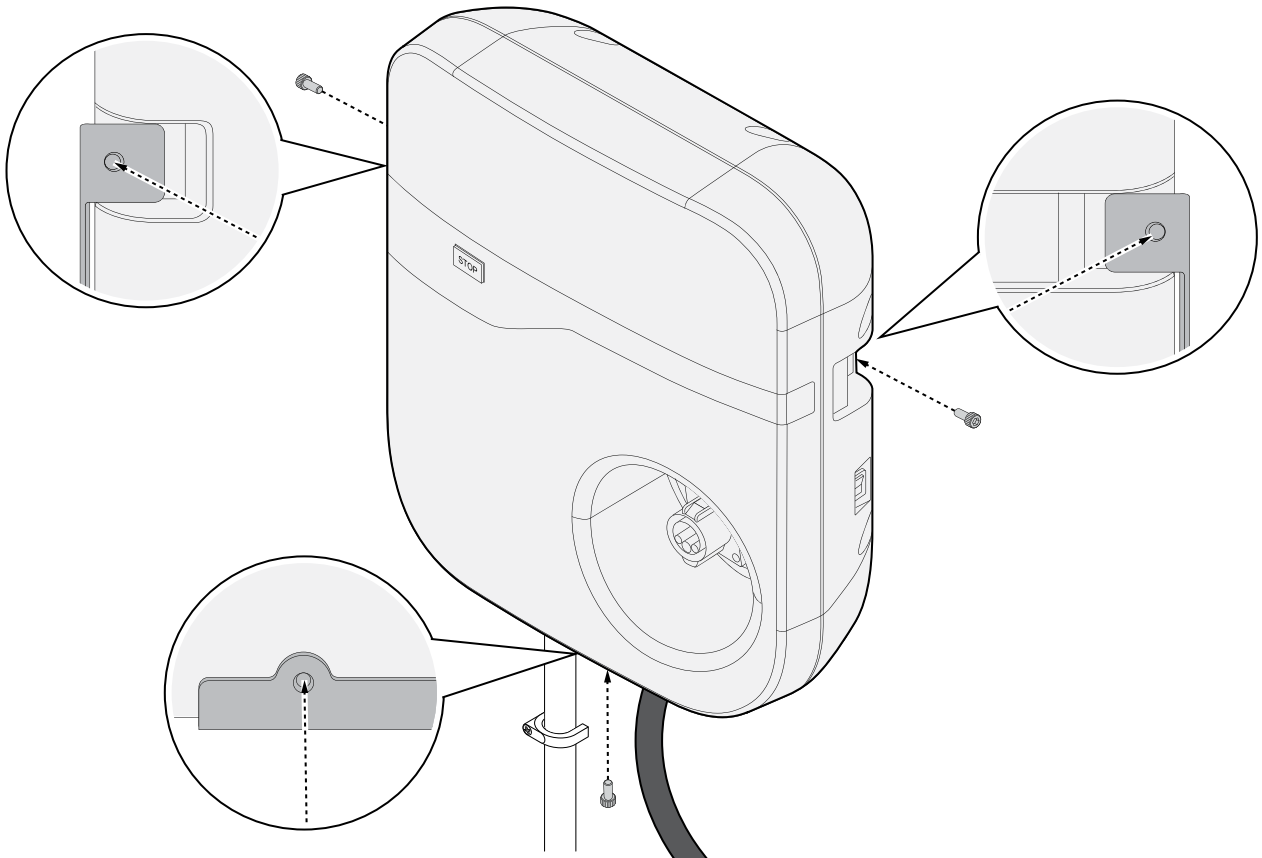


Figure 4-6. Installation screw locations

7. See Figure 4-7. Secure the charging plug to the Level 2 Charging Station.

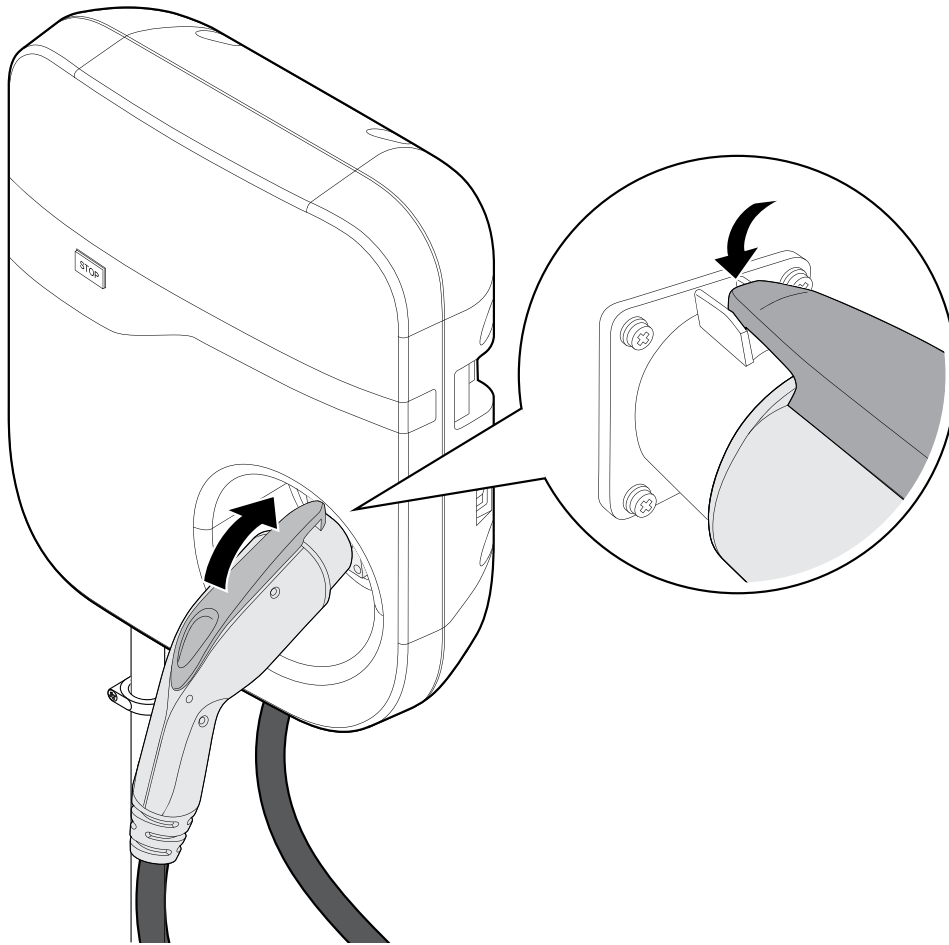


Figure 4-7. Plug attachment with detail of plug dock

5 Maintenance

The exterior of the Bosch Level 2 Charging Station is designed to be waterproof and dust proof with an ingress protection rating of Type 3R.

To ensure proper maintenance of the Level 2 Charging Station, follow these guidelines:

- ▶ Keep the exterior clean at all times.
- ▶ Do not spray water directly at the Level 2 Charging Station.
- ▶ Replace the charging plug in the plug dock after charging to avoid damage.
- ▶ Store the power cable on the Level 2 Charging Station after use to avoid damage.
- ▶ If the power cable or the charging plug is damaged, contact the charging station provider.

6 Operations and Troubleshooting

6.1 Charging

1. See Figure 6-1. Turn the Bosch Level 2 Charging Station power switch to ON. Wait 3 seconds for the green indicator light.

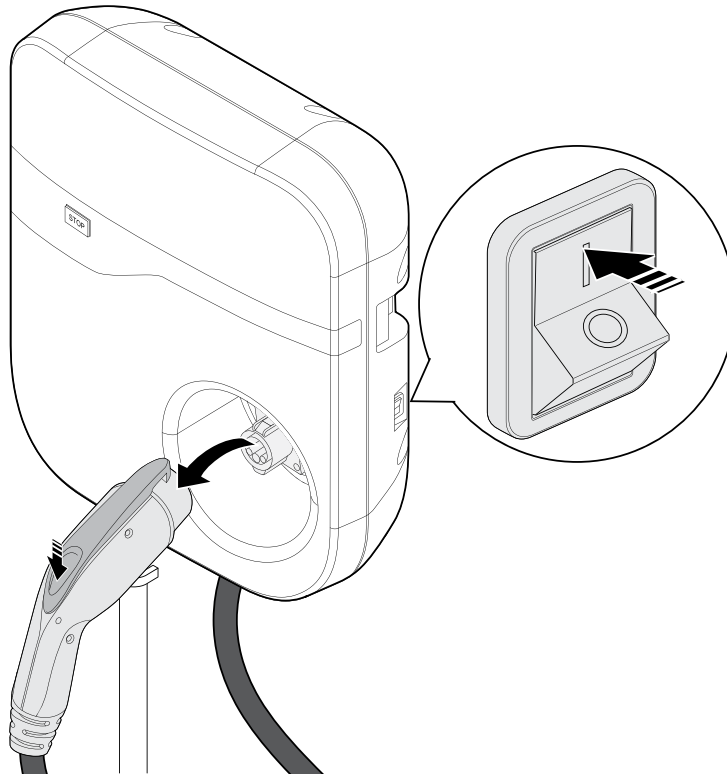


Figure 6-1. Powering on the Bosch Level 2 Charging Station and removing the charging plug

2. See Figure 6-2. Release the charging plug from the plug dock and connect it to the EV to start the charging process.

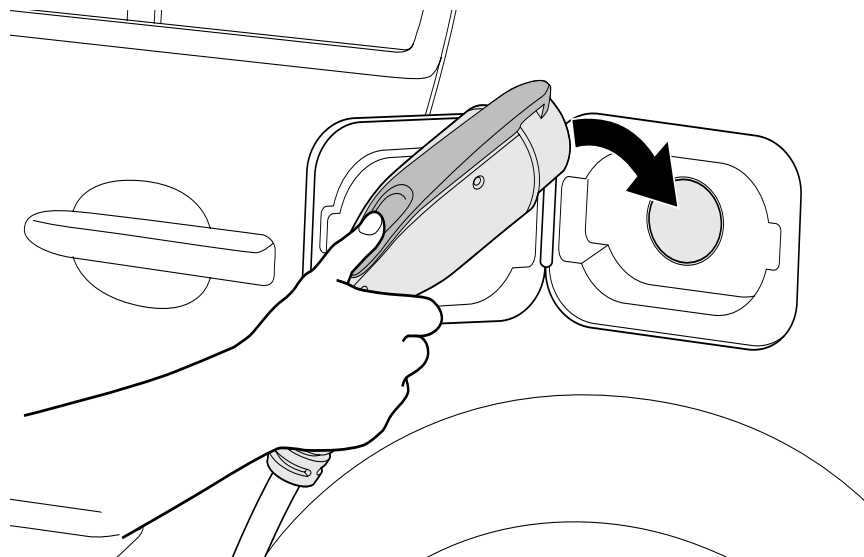


Figure 6-2. Connecting the charging plug to the EV

3. See Figure 6-3. To stop charging before charging is complete, disconnect the charging plug from the EV or press the “Stop” button. Remove and reconnect the charging plug with the EV to start charging again.

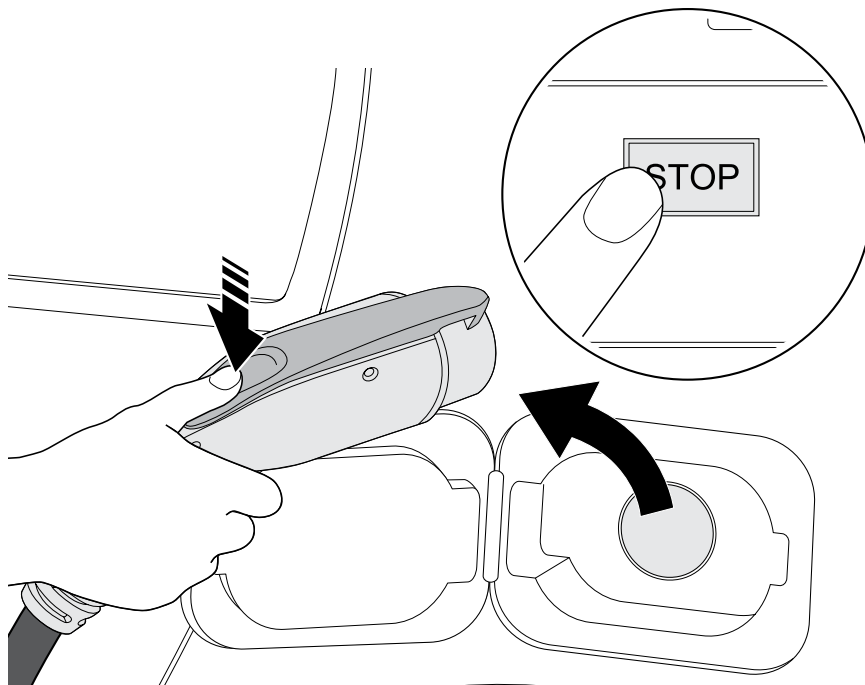


Figure 6-3. Stop charging

4. See Figure 6-4. When charging is complete, disconnect charging plug from the EV and place it in the plug dock to store the charging cable properly.

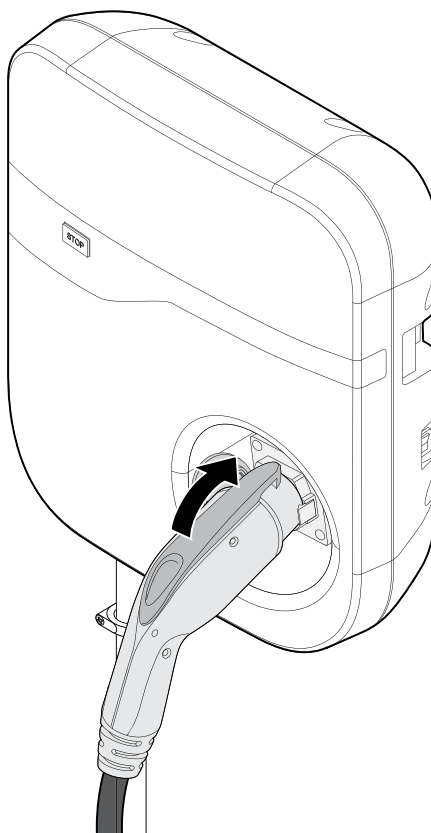


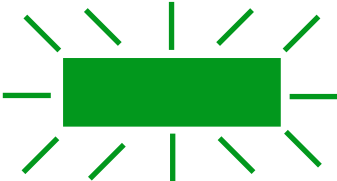




Figure 6-4. Place the charging plug in the plug dock

6.2 Charging Status Indicators

LED Status	Description	Definition
	Off	Power is off. Use the ON/OFF switch on the side of the Level 2 Charging Station to turn on the power.
	Solid green	Level 2 Charging Station is ON; charging not in process. Connect the charging cable to begin charging.
	Flashing green	Charging in process. LED status returns to solid green (above) when charging is complete.
	Solid red	Level 2 Charging Station fault. Stop using the Level 2 Charging Station and contact the Level 2 Charging Station provider.
	Flashing red	Level 2 Charging Station is recovering from a minor fault. Stop using the Level 2 Charging Station until the LED turns solid green.

Note:

Minor clicking noises are normal during startup (powering on the Bosch Level 2 Charging Station and connecting to EV).

6.3 Troubleshooting

Situation	Action
Status indicator is not green after the Level 2 Charging Station is powered on	<ol style="list-style-type: none"> 1. Make sure the AC power input is connected correctly. 2. Turn OFF the Level 2 Charging Station and then back ON using the ON/OFF switch. 3. If the problem persists, contact Technical Support.
Status indicator does not flash green when the Level 2 Charging Station is connected to the EV	<ol style="list-style-type: none"> 1. Unplug the charging plug and reconnect it fully to the receptacle on the EV. 2. Inspect the cable and plug for damage. 3. Inspect the EV and its receptacle for damage 4. Try to charge with the portable cord set that came with the vehicle; contact Technical Support.
Status indicator flashes red while charging	<ol style="list-style-type: none"> 1. There is a temporary error. 2. Wait until the temporary error is resolved and the Level 2 Charging Station returns to normal condition. It usually takes less than 10 seconds. 3. If the status indicator doesn't return to green, turn OFF the Level 2 Charging Station and then back ON using the ON/OFF switch. 4. If the situation persists, contact Technical Support.
Status indicator is solid red	<ol style="list-style-type: none"> 1. There is a critical error. 2. Unplug the charging plug from the EV immediately. 3. Turn OFF the Level 2 Charging Station and then back ON using the ON/OFF switch. 4. If the situation persists, contact Technical Support.

7 Important Notices

7.1 Limited Warranty

THIS LIMITED WARRANTY IS EXPRESSLY LIMITED TO THE ORIGINAL PURCHASER ("PURCHASER") OF THE BOSCH LEVEL 2 CHARGING STATION ("CHARGING STATION").

IMPORTANT: It is the Purchaser's obligation to register the Charging Station with Bosch and failure to do so may delay warranty support. To register a Charging Station online, go to [BoschEVSolutions.com](https://www.boschevsolutions.com) or call 1-877-805-3873 for assistance.

Bosch Automotive Service Solutions Inc. ("Bosch") warrants to the Purchaser that the Charging Station will be free from defects in materials and workmanship for a period of three years from the date of purchase ("Warranty Period"). This warranty is valid for purchasers located in the U.S.A. and Canada only.

ALL WARRANTY CLAIMS MUST BE MADE WITHIN THE WARRANTY PERIOD AND PROOF OF PURCHASE ACCEPTABLE TO BOSCH MUST BE SUPPLIED.

The sole and exclusive remedy for any Charging Station found to be defective is repair or replacement, at the option of Bosch. The warranty covers both parts and factory labor necessary to repair the Charging Station, but does not include any on-site labor costs related to un-installing or reinstalling the repaired or replacement Charging Station. This warranty does not cover cosmetic damage such as scratches and dents, or normal aging. Repair parts and replacement Charging Stations may be either new or reconditioned at Bosch's discretion. Any replacement Charging Stations so furnished will be warranted for the remainder of the original Warranty Period. Should Bosch be unable to repair or replace the Charging Station with a comparable Bosch product of Bosch's choice, Bosch will refund the purchase price of the Charging Station to you.

This warranty does not cover the cost of freight to return the Charging Station to Bosch. This warranty does include freight to ship repair parts and or a replacement Charging Station to the Purchaser, using a shipping carrier of Bosch's choice.

This warranty covers only those defects that arise as a result of normal use of the Charging Station and does not cover Charging Stations subject to improper installation, improper connections with peripherals, external electrical faults, accident, disaster, misuse, abuse, neglect, improper maintenance and care, modification, disassembly, operation outside of the Charging Station specifications or in a manner inconsistent with instructions regarding use. This warranty does not apply if the Charging Station's original identification markings (for example, serial numbers and trademarks) have been defaced, altered or removed. The Charging Station is not certified for plugin applications and any modification to create a plugin application will void this warranty.

The existence of a defect shall be determined by Bosch in accordance with procedures established by Bosch. No one is authorized to make any statement or representation altering the terms of this warranty.

This warranty gives the Purchaser specific legal rights. The Purchaser may also have other rights which vary from state to state. To the extent that this warranty is inconsistent with applicable law, this warranty will be deemed modified to be consistent with such local law.

7.2 Disclaimer

TO THE EXTENT PERMITTED BY APPLICABLE LAW AND EXCEPT AS EXPRESSLY PROVIDED IN THE LIMITED WARRANTY, BOSCH MAKES NO WARRANTY WITH RESPECT TO THE CHARGING STATION, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE. BOSCH EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT OF THIRD PARTY RIGHTS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. BOSCH DOES NOT WARRANT UNINTERRUPTED OR ERROR FREE OPERATION OF THE CHARGING STATION.

7.3 Limitation of Liability

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL BOSCH, ITS AFFILIATES OR ITS

SUPPLIERS BE LIABLE FOR ANY, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY EVEN IF BOSCH AND ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages for some products, so the limitations or exclusions contained herein may not apply.

7.4 To Obtain Warranty Service

To obtain warranty service during the Warranty Period, the Purchaser may contact Bosch Technical Support Services (TSS) at 1-877-805-3873 or email to oetech@service-solutions.com for assistance. A Bosch TSS agent will troubleshoot the Charging Station and determine if it has a defect, and if it is covered under this warranty.

In connection with a warranty inquiry, you will be asked for each of the following:

1. Your name and address;
2. A detailed description of the problem you are experiencing with the Charging Station;
3. The model number and serial number of the Charging Station;
4. Proof of purchase; and
5. Return Shipping information.

If Bosch confirms a defect covered under this warranty, you will:

- Obtain a Return Goods Authorization Number (RGA#) number from Bosch;
- Directed to ship the Charging Station, at your expense, in accordance with the instructions provided by Bosch, ► in either its original package or packaging providing the Charging Station with a degree of protection equivalent to that of the original packaging, to Bosch at the address so instructed at that time.
- You agree to obtain adequate insurance to cover loss or damage to the Charging Station during shipment and you understand prior to receipt by Bosch, you assume risk of any loss or damage to the Charging Station.
- If the Charging Station is covered under this warranty, Bosch will either repair or replace the defective Charging Station at no charge to you and ship the repaired or replaced Charging Station back to you at Bosch's expense, using a carrier of Bosch's choice.
- Any Charging Station that is found by Bosch to be out-of-warranty or otherwise ineligible for warranty service will be repaired or replaced upon your approval and payment of Bosch's standard charges.
- Bosch is not responsible for any unauthorized shipments to Bosch, and under no obligation to return the Charging Station, at its expense. If you do not contact Bosch within five (5) business days of its delivery, Bosch will dispose of the shipment in a manner of its choice without any liability to you. Any damage incurred returning an unauthorized shipment back to you is not Bosch's responsibility.

This warranty is not transferable to subsequent owners of the Charging Station. No attempt to alter, modify, or amend this warranty shall be effective unless authorized in writing by an officer of Bosch. This warranty shall be governed by and construed in accordance with the laws of the State of Michigan U.S.A., exclusive of its conflict of laws principles. The U.N. Convention on Contracts for the International Sale of Goods shall not apply. Bosch reserves the right to amend this warranty policy as required.

7.5 Technical Support

If technical support is required, contact Bosch at:

1-877-805-EVSE (3873)

