



FLO Home® X3

Installation Guide

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1. INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

	WARNING – When using electric products, basic precautions should always be followed, including the following. This manual contains important instructions for all FLO Home™ X3 model that shall be followed during installation, operation, and maintenance of the unit.
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	CAUTION for the the FLO Home X3 - To reduce the risk of fire, connect only to a circuit provided with the circuit protection shown in Circuit Consideration on page 39 as a maximum branch circuit over current protection in accordance with the Canadian Electrical Code CSA C22.1 and National Electrical Code ANSI/NFPA 70.
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NOTE: The symbols in the table above apply to all the items in the list below.

1. Read all the instructions before using this product.
2. This device should be supervised when used around children.
3. Do not put fingers into the electric vehicle connector.
4. Do not use this product if the flexible power cord or Electric Vehicle (EV) cable is frayed, has broken insulation, or any other signs of damage.
5. Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open, or shows any other indication of damage.

6. Do not operate device outside of the operating temperature range: -40 °F to 122 °F (-40 °C to 50 °C).
7. Installation, removal, and handling activities must be conducted by qualified personnel in accordance with the applicable local rules. Alteration, dis-assembly or reparation must be conducted by an authorized service provider of FLO unless FLO has authorized in writing that specific alteration, dis-assembly or repair may be carried out by a licensed electrician instead of an authorized service provider.
8. Communicate with a licensed electrician to ensure compliance with the local building code, regulation, security standards and weather conditions.
9. Verify with local authorities that the location where the charging station is going to be installed is free from underground pipelines or electrical equipment, otherwise you might inflict serious injuries on yourself and others.
10. DO NOT INSTALL THE CHARGING STATION ON OR OVER COMBUSTIBLE SURFACES.
11. The installation shall not be made in a commercial garage (repair facility) or closer than 20 feet (6.1 m) of an outdoor motor fuel dispensing device.
12. Ensure compliance to specific bonding/grounding instructions for the FLO Home X3. Refer to the [INSTALLATION INSTRUCTIONS on page 34](#) which contain important grounding instructions.
13. Do not install the charging station in a hazardous location.
14. Use input wires rated at 90°C.

2. Important Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

Read all the instructions before using this product.

Please keep up to date instructions throughout the product life cycle, by consulting the FLO website and printing the latest version of the document, if necessary.

This document provides instructions to install the FLO Home™ X3 charging station and should not be used for any other product.

2.1. General Safety Instructions

	
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NOTE: The symbols in the table above apply to all the items in the list below.

1. Perform a hazard assessment prior to performing any activities and use adequate personal protective equipment.
2. Before installing the FLO Home charging station, review this guide carefully and consult with a licensed electrician to ensure compliance with local jurisdiction, safety standards and applicable codes.
3. Under no circumstances will compliance with the information in this manual relieve the user of their responsibility to comply with all applicable codes or safety standards.
4. Reasonable efforts have been made to ensure that the specifications and other information contained in this guide are accurate and complete at the time of publication. However, specifications and other information contained in this manual are subject to change at any time without notice.
5. FLO cannot be held responsible for any damage that may occur resulting from custom installations not described in this document.

6. If, for any reason, it is not possible to install the FLO Home according to the procedures provided in this guide, the installer should contact the FLO team.
7. The warranty will be voided if the charging station has been altered, disassembled or repaired by any person other than an authorized service provider from FLO, unless FLO has authorized in writing that such alteration, dis-assembly or repair may be carried out by a licensed electrician instead of an authorized service provider.
8. Handle parts with care. Always use safety glasses and protection gloves when unpacking and installing the FLO Home.
9. Avoid installing the charging station in bad weather conditions to prevent ingress of moisture or debris.
10. During maintenance or service, ensure that the upstream disconnect is in the open position and follows workplace electrical safety procedures, as required by the local jurisdiction.
11. This charging station has been designed to be mounted on a wall or on a pedestal.
12. Ensure that the wall or pedestal mounting surface is strong enough to support the weight of the charging station, and that the anchors and/or screws used are compatible with the surface.
13. The input cable strain relief, conduits or armed-cable bushings and adapter must be:
 - a. Certified for both Canada and USA.
 - b. Watertight (4X enclosure type).
 - c. Suitable for the outside diameter of the chosen cable.
 - d. Suitable for mounting into an opening size of 3/4" (19 mm) National Pipe Thread (NPT).
14. This charging station is not intended to be used with connector adapters other than those supported by the Original Equipment Manufacturer (OEM) of the vehicle being charged.

2.2. Safety Instructions for Hardwired Units

Follow the safety instructions below for the hardwired units below:

1. Connect the charging station with the proper caliber of conductors. Refer to [Connecting the Wiring on page 41](#) for more information.
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 and installed by a certified electrician.
3. The power supply cables of the charging station must be rated FT2 minimum.
4. The input cable strain relief, conduits, armed-cable bushings or adapter must be certified for both Canada and USA.

2.3. Safety Instructions for Units with NEMA Plugs



Improper connection of the power supply cable can result in a risk of electric shock.

The charging station used with a NEMA power outlet must comply to the following safety instructions:

1. Communicate with a licensed electrician to ensure compliance with local building codes, regulations, security standards and weather conditions.
2. Ensure compliance to specific bonding/grounding instructions for the FLO Home X3. Refer to the [INSTALLATION INSTRUCTIONS on page 34](#) which contain important grounding instructions.
3. Do not modify the NEMA plug supplied with the charger.
4. Do not unplug the charging station during charging.
5. Always disconnect the power supply of the charging before servicing.
6. Communicate with a licensed electrician to ensure that the power outlet to be used in conjunction with the charging station:
 - Complies with EV charging requirements.
 - Complies with local jurisdiction.
 - Has a dedicated circuit breaker and appropriately dimensioned electrical wiring.

2.4. Safety Symbols on your Product

The symbols in the table below may be present on your charging station and in this guide. Please refer to the table below for information on the symbols.

Symbol	Description
	Alternating current
	Phase
	CAUTION: This symbol is used to provide awareness of important safety information in these instructions
	WARNING: This symbol is used to provide warning of hazardous voltage and possibility of electric shock
	Earth "ground" terminal
	Protective (earth) ground Class 1
	Chassis

3. Introduction

3.1. About the FLO Home

The FLO Home is a robust and long lasting home charging station that allows a convenient and secure Electric Vehicle (EV) charging experience at home.

The FLO app makes it easy to schedule charging sessions or block off no-service time, benefit from the most attractive energy rates and monitor charging sessions.

3.2. About the Installation Guide

The *FLO Home™ Installation Guide* covers the FLO Home X3 and its components and should be used as instructions for the installation of the FLO Home.

This guide is subject to updates. FLO recommends consulting the *Products* section of FLO web site (www.flo.com) to get the most up to date version of the installation guide. Please refer to the most up to date version of the installation guide online for up to date instructions.

NOTE: A warranty policy is included in this guide. The warranty policy that applies on your purchase is the one in effect at the time of purchase.

4. Certifications and Conformities

The products covered by this guide follow industry standards and are compliant with the standards and certifications detailed in the sections below:



4.1. Safety Certifications

- CSA C22.2 No. 281.1/UL 2231-1 Standard for safety for personnel protection systems for electrical vehicle.
- CSA C22.2 No. 281.2/UL 2231-2 Standard for safety for personnel protection systems for electric vehicle (EV) supply circuits: Requirements for protection devices for use in charging systems.
- CSA C22.2 No. 280/UL 2594 Electric vehicle supply equipment (EVSE).
- UL 1998 Standard for software in programmable components.
- UL 991 Standard for Tests for Safety-Related Controls Employing Solid-State Devices.

4.2. Compliance

- NEC 2023 article 625.
- CSA C22.1 Canadian electric code.

4.3. Radio Frequency Regulations

- CAN ICES-003 (B)/NMB-003(B)
- FCC 47 CFR part 15

4.4. Energy Efficiency Certification

The products covered by this guide are ENERGY STAR® certified.

5. Getting Started

Use the information in the sections below to help you prepare for the FLO Home installation before getting started.

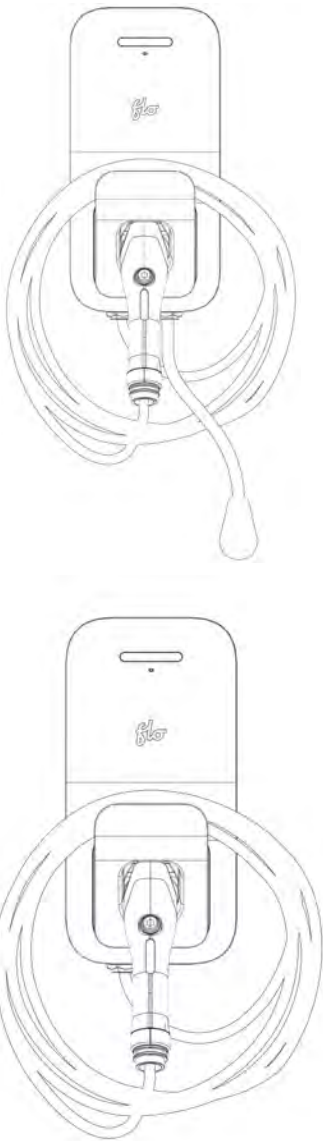
5.1. MOVING AND STORAGE INSTRUCTIONS

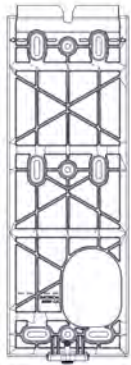
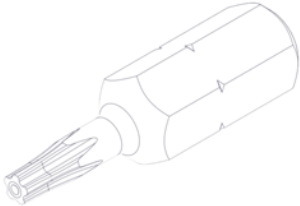
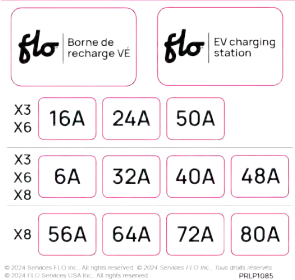
The charging station must be moved and stored according to the following instructions:

- The charging station is designed for permanent installation and not intended for portable utilization.
- Move the station carefully in order to ensure safety.
- During storage, the station should be kept in its shipping packaging at a temperature within the -40 °F to 140 °F (-40 °C to 60 °C) range, and humidity not exceeding 95% (non-condensing), until it is installed by qualified personnel.

5.2. Box Contents

The table below shows the box contents as they are delivered in the shipping box.

Item	Image
FLO Home Charging station with NEMA plug (plug-in option) or without a charging cable (hardwired option)	

Item	Image
Wall mounting plate	
Wall mounting plate lower security screw	
Screwdriver bit for safety screw	
Amperage identification labels	 flo Borne de recharge VE flo EV charging station X3 16A 24A 50A X6 6A 32A 40A 48A X8 56A 64A 72A 80A © 2024 Sonenno FLO Inc. All rights reserved. © 2024 Sonenno FLO Inc. Tous droits réservés. PH1008
FLO Home X3 Installation Guide	

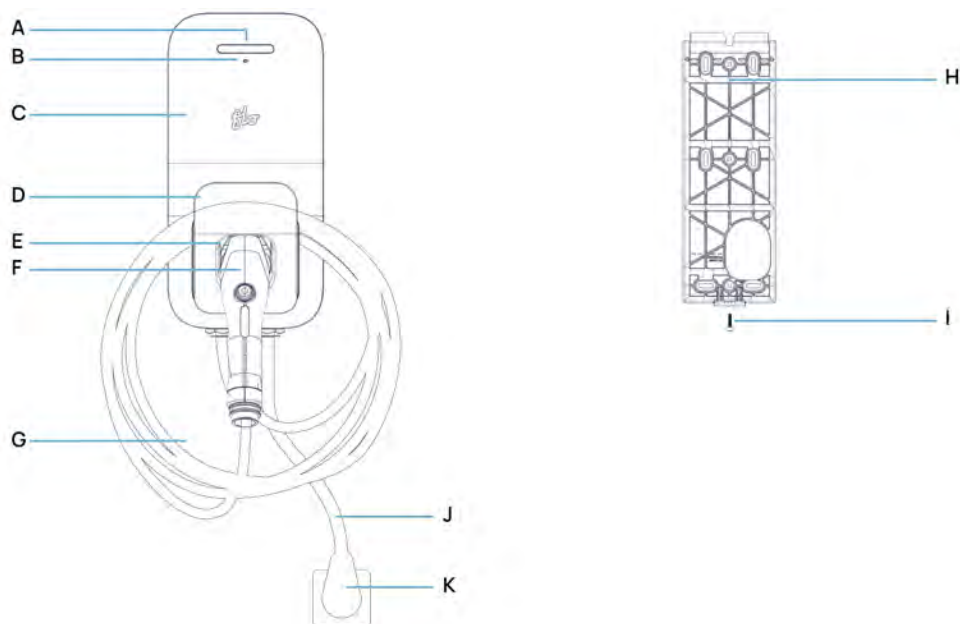
Item	Image
Important information document	

5.3. Main Components

The following sections show the main interior and exterior components for the FLO Home X3.

5.3.1. Exterior Components

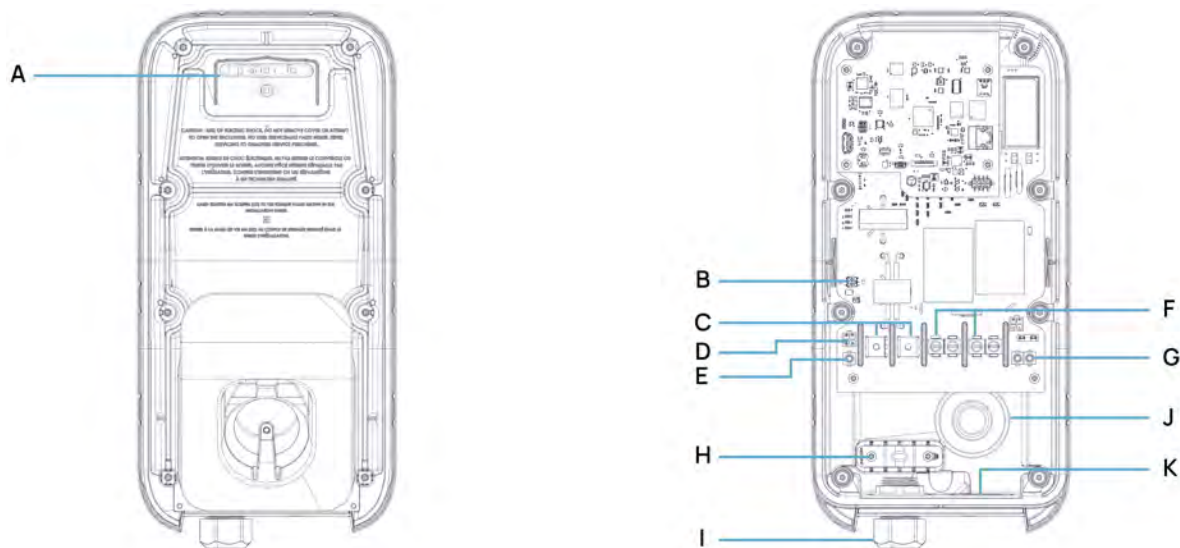
The FLO Home X3 includes the following exterior components:



Part	Description
A	Charging status light
B	Connectivity status light
C	Fascia cover plate
D	Cable holster
E	Connector holster
F	Charging connector (J1772 or NACS depending on the charging station configuration)
G	Charging cable
H	Wall mounting plate
I	Wall mounting plate lower security screw
J	Power supply cord (optional)
K	NEMA plug (optional)

5.3.2. Interior Components

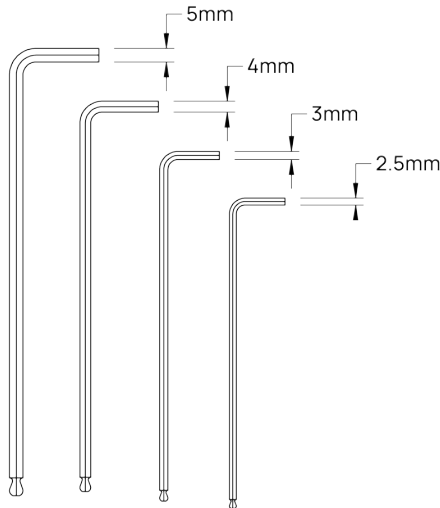
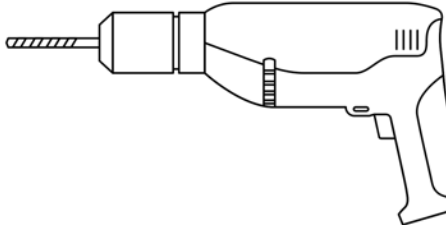
The following image displays the main interior components of the FLO Home X3 charging station:

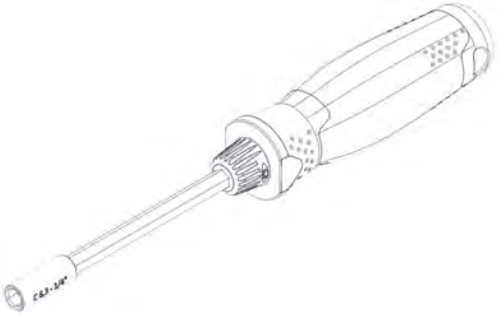
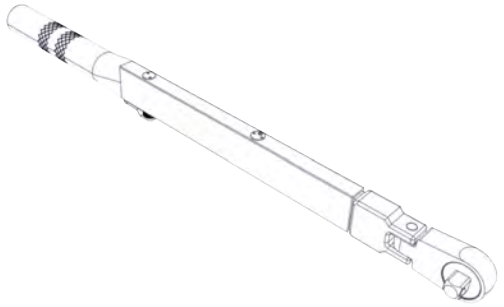
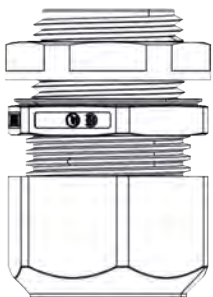


Part	Description
A	Front shell
B	Current selector (rotary switch)
C	Charging cable power terminal block
D	Charging cable pilot signal terminal block
E	Charging cable ground terminal block
F	Power input terminal block (L1 and L2)
G	Ground terminal block (GND)
H	Strain relief
I	Charging cable gland
J	Rear power input entry
K	Bottom power input entry

5.4. Recommended Tools and Material

FLO recommends using the tools in the following table to complete the FLO Home installation:

Tools/Material	Description	Image
Hex key wrench set	2.5 mm, 3 mm, 4 mm, 5 mm	
Screwdriver	Small flat-head	
Drill	The drill bit will depend on the screws selected NOTE: The drill should only be used when installing the wall mounting plate and the wall mounting plate lower screw	

Tools/Material	Description	Image
Pan head screws	(6x) to fasten the the wall mounting plate; selected according to the surface	
Multi-bit screwdriver	NA	
Torque wrench	NA	
Cable gland and strain relief	NA	

NOTE: Ensure that the type of mounting surface, either the wall or the post, will be strong enough to bear the minimum weight of the EVSE, and ensure that their anchors are compatible with the type of mounting surface.

NOTE: The cable gland and strain relief are not supplied because the installation contexts differ.

5.5. Electrical Considerations



WARNING – The charging station must be installed by a licensed electrician.



WARNING – Make sure the circuit powering the charging station is turned *OFF* at ALL TIMES during the installation process and follow the steps below.



CAUTION - Any alteration to any part of the charging station will void the warranty unless FLO has authorized in writing that such alteration, disassembly or repair may be carried out by a licensed electrician instead of an authorized service provider.

1. In the breaker panel, set the circuit breaker dedicated to the charging station to *OFF*.
2. Confirm that the charging station's light indicators are *OFF*.
3. Use a multimeter to determine if an electrical cable is live. Keep in mind, it is possible for more than one wire to be live.

5.6. Electrical Specifications

The station has built-in protection against overvoltage conditions and leakage current to ground. Follow the requirements for your configuration below:

5.6.1. For 50 A Charging Stations - FLO Home X3

Connecting the charging station requires:

- A single-phase 120/240 VAC supply (figure 1) or 3-phase 120/208 VAC supply (figure 2).
- A connection with the appropriate connector gauge. Refer to the table in [Connecting the Wiring on page 41](#) for more information.
- Protection by a 70 A, double pole circuit breaker or two fuses.
NOTE: A breaker of higher or lower amperage can be used in conjunction with the charging station if the power input is adjusted according to the position of the rotary switch. Refer to the table in the [Connecting the Wiring on page 41](#) section for more information.
- 2 phases and a ground connection with 120 VAC between each phase and ground.
NOTE: The neutral conductor not required.
- The maximum output power is: 12 kW @ 240 V.

Figure 1: Single-Phase 120/240 VAC

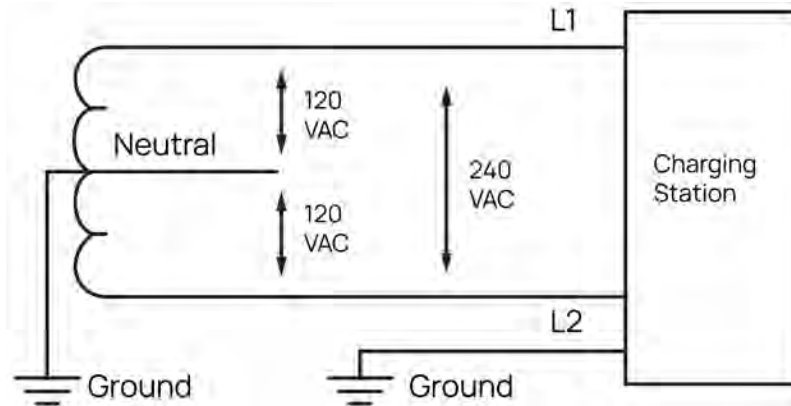
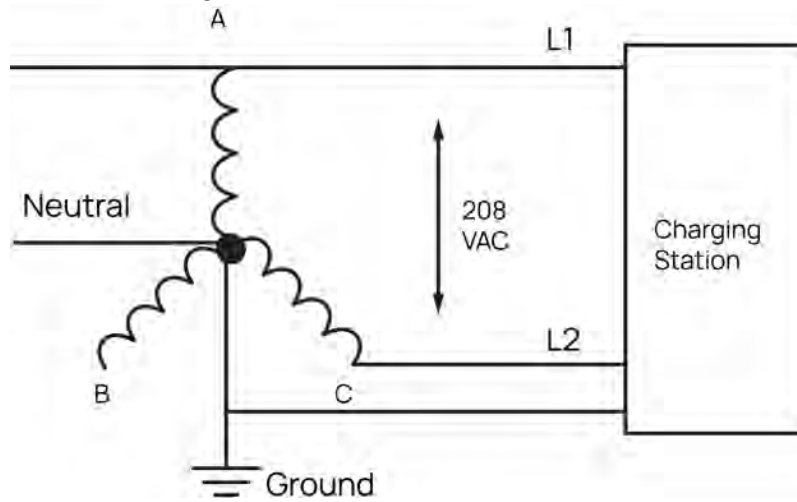


Figure 2: 3-Phase 120/208 VAC



5.7. General Specifications

Specification	FLO Home X3
Electrical	
Output power @ 240 VAC	12 kW
Output current	50 A (adjustable from 6 to 50 A)
AC Input voltage	208-240 V @ 60 Hz
AC Input connection	• Hardwired or • NEMA 14-50 (24 inches / 610 mm power cord)
Wiring schema	L1, L2, Ground
Compatible wiring type	Copper or Aluminum
Power supply wire entry options	• Bottom • Rear
Integrated protection	• Integrated GFCI 20 mA, auto retry • Charging connector temperature sensor • NEMA plug temperature sensor
Daisy chain	No
Environment	
Operating temperature	-40 °F to 122 °F (-40 °C to 50 °C)
Operating humidity	5%–95% (non-condensing)
Storage temperature	-40 °F to 140 °F (-40 °C to 60 °C)
Non-Operating humidity	5%–95% (non-condensing)
Certification and Compliance	
Certification	• UL2594 (UL listed) / CSA C22.2 No 280 (UL # E522756)

Specification	FLO Home X3
	• Energy Star certified
Compliance	• NEC 2023 section 625 / CSA C22.1 • FCC 47 CFR Part 15 / CAN ICES-003(B); NMB-003(B)
Communication	
Connection	Wi-Fi 2.4GHz Cellular LTE-M*
FLO mobile app	• Restrained mode • Remote start and stop • Charging schedule • Real-time status • Charging history • Charging notifications
Physical	
Dimensions (H x W x D)	15" x 7 1/4" x 7 3/16" (381 mm x 184 mm x 182.5 mm)
Weight without packaging	• 12.5 lbs (5.6 kg) • With NEMA plug: 13.6 lbs (6.3 kg)
Weight with packaging	• 15 lbs (6.8 kg) • With NEMA plug: 16.1 lbs (7.5 kg)
Cable length	25' (7.62 m)
Cable diameter	J1772: 0.55" (14 mm) NACS: 0.57" (14.5 mm)
Power cord length (Plug-In units)	24" (61 cm)
Charging connector	SAE J1772 or NACS
Pistol and cable holster	Fixed
Status Indicator	• Charging status LED • Connectivity status LED
Enclosure material	Industrial-grade thermoplastic
Enclosure rating	Type 4X enclosure (watertight and corrosion proof)

Specification	FLO Home X3
Mounting	• Wall mount • Pedestal mount
Impact Rating	IK10
Limited Warranty	• Three (3) years for residential use • One (1) year for commercial use
Finish	Absolute black
Wall Bracket	Included
Compatible accessories	• Basic residential pedestal • Premium residential pedestal • Wall mounted charging cable retractor
Installation	Must be installed by a licensed electrician

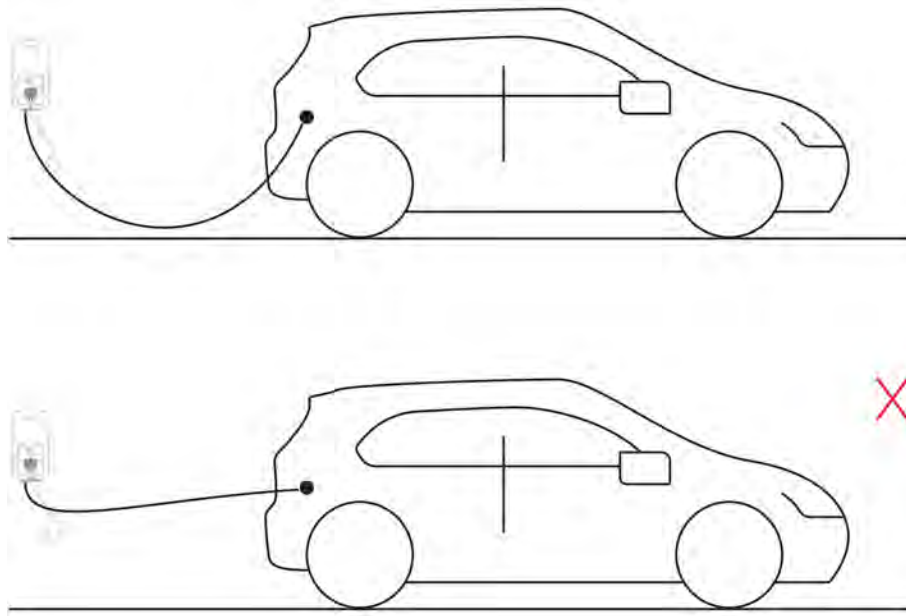
*Cellular connectivity to the FLO network is a feature in development and may not be enabled at the time of purchase. FLO uses cellular connectivity to administer certain over-the-air product updates and to better understand the location and energy usage of its customers. Please read our privacy policy at www.flo.com/en-ca/privacy-policy to learn about your privacy rights and how we handle personal information.

5.8. Charging Station Location

We recommend using the following criteria to determine the optimal location of the FLO Home charging station:

- The location where the EV is normally parked.
- The location of the vehicle's charge port.
- The length of the charging cable (25 feet / 7.62 m).
- Existing or potential obstacles, including seasonal obstacles.
- The Wi-Fi signal reach.

Ensure there is enough play in the charging cable so as not to apply strain to the cable, the cable connector or the car connector.



FLO RECOMMENDS minimizing the distance between the charging station and the electrical panel. This reduces installation costs and simplifies the installation process. It may also reduce energy losses.

For secure mounting, install the charging station on a vertical wall stud or on a solid wall with appropriate mounting screws capable of supporting the charging station weight.

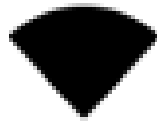
To allow for proper airflow and working room, the charging station should be located 12" (30 cm) from any other equipment, walls, or other obstructions.

The Wi-Fi signal reach can be evaluated by looking at the Wi-Fi strength of a smart phone connected to the network to be used by the charging station. The signal must preferably be at full strength at the desired charging station location.

NOTE: The symbols below are popular representations of internet signals on various devices:



Apple iOS signal



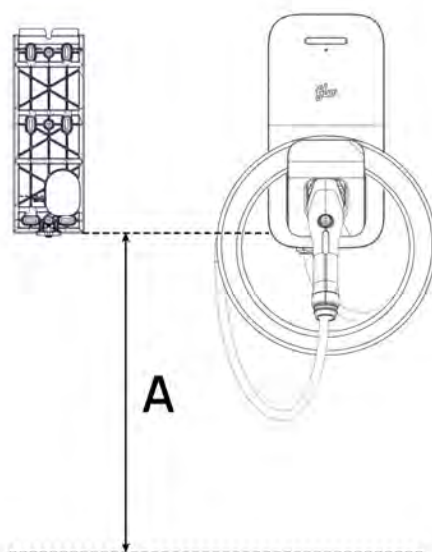
Google Android signal



Samsung signal

5.9. Positioning

The recommended installation height of the charging station is 39" to 45" (1 m to 1.2 m) from the bottom of the wall mounting plate to the ground/floor. Place the charging station at a height which will facilitate the handling of the connector, and prevent the cable from touching the ground.



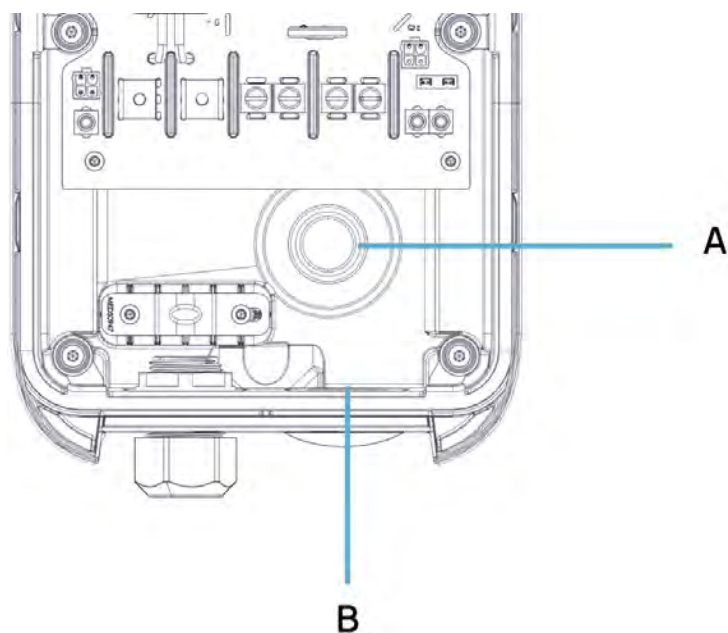
Distance	Description
A	Distance from the bottom of the mounting plate to the floor 39"-45" (1 m-1.2 m)

5.9.1. Hardwired Charging Stations - Rear and Bottom Entry

The power supply cable can be inserted from the rear (A) or from the bottom (B) of the charging station. A rear entry installation will generally be more aesthetic and create less potential obstacles than a bottom entry requiring tubing leading to the charging station but the rear entry installation may not be possible in all contexts.

NOTE: The rear and bottom entries can accommodate conduits with an opening size of 3/4" (19 mm) National Pipe Taper (NPT).

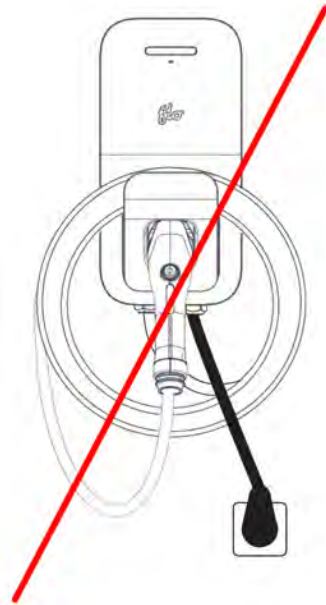
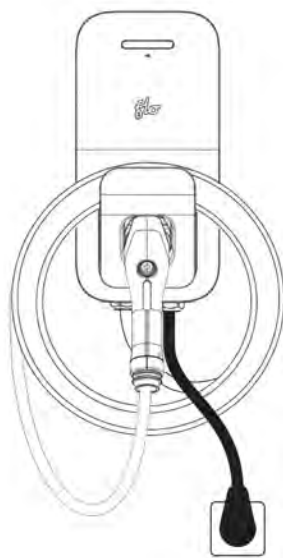
NOTE: Please note the cable gland to be used in conjunction with the rear or bottom power entry must be provided by the licensed electrician performing the installation as requirements may differ depending on the installation context.



Part	Description
A	Rear power input entry
B	Bottom power input entry

5.9.2. Plug-In Charging Stations

The placement of the NEMA outlet and of the charging stations must allow for an adequate connection of the 24" (61 cm) power cord. Once the station is plugged in, there must be enough play in the power input cable to not apply strain to it once it is connected to the outlet.



6. INSTALLATION INSTRUCTIONS

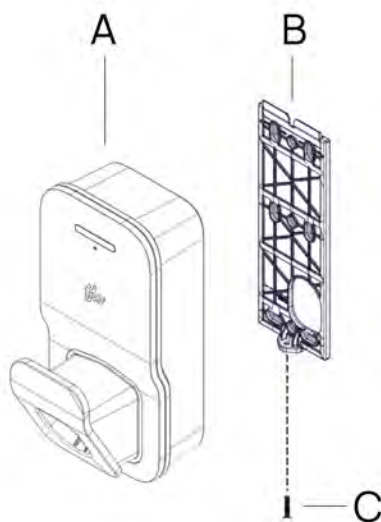


WARNING – The charging station must be installed by a licensed electrician.

NOTE: This guide does not provide an exhaustive list of required building modifications necessary for the installation of the station. Please refer to a licensed electrician for expertise on the matter.

6.1. Mounting a Hardwired Charging Station

Follow the instructions below to complete a hardwired installation of the FLO Home X3.



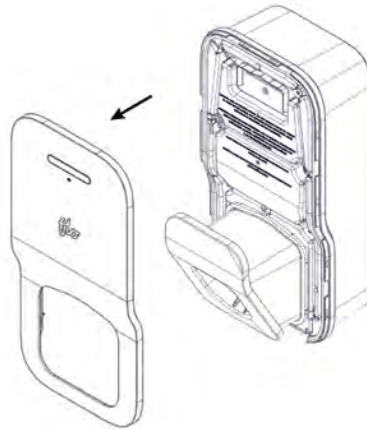
Part	Description
A	Charging station
B	Wall mounting plate
C	Wall mounting plate lower security screw

1. Use the wall mounting plate as a drilling template on the surface where the charging station will be mounted.
For rear power entry only: An entry point (hole) in the wall is required to pass the power input cable. Refer to [Positioning on page 31](#) for more information.
2. Hang the wall mounting plate securely to a stable and strong surface using a minimum of three screws, at least one per row. Select screws that are strong enough to bear the minimum weight of the EVSE.

FOR EXAMPLE: The use of Number 8, Pan head, 1-1/2" length screws is recommended for a typical installation on a framed wall with drywall/gypsum board.

NOTE: Screws are not provided because mounting surfaces differ.

3. Unclip the fascia. Pry open the lower part of the cover, working upward until the fascia comes off completely.

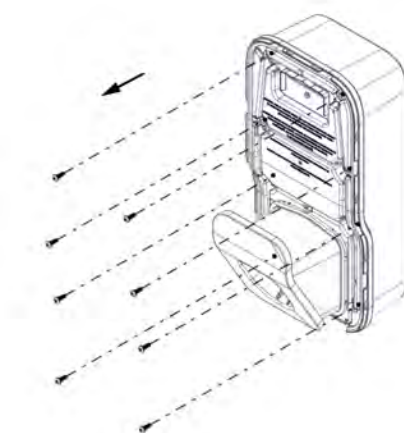


4. Unscrew the screws (8x) while holding the front shell to the charging station so it does not fall. Once all screws are removed, take off the front shell. The electronic boards can now be seen.

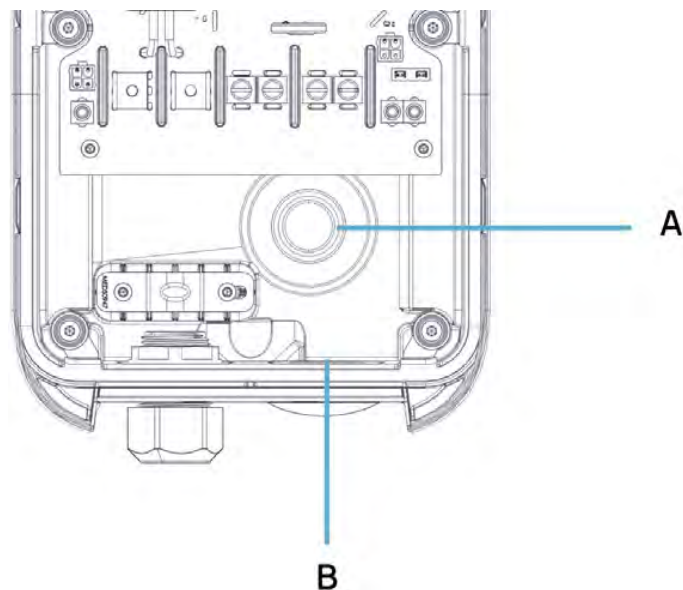
NOTE: Do not use a drill for this operation.



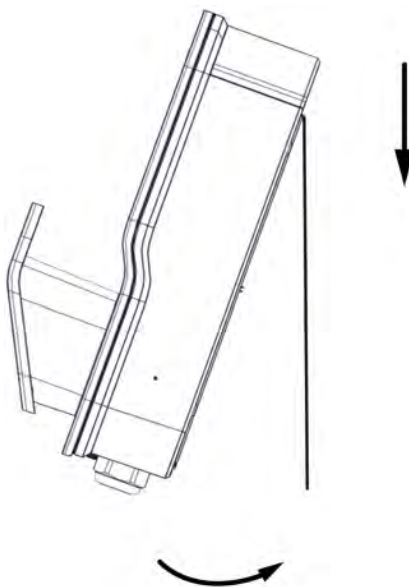
CAUTION Electronic equipment must be protected from the elements (such as rain, snow and dust) at all times.



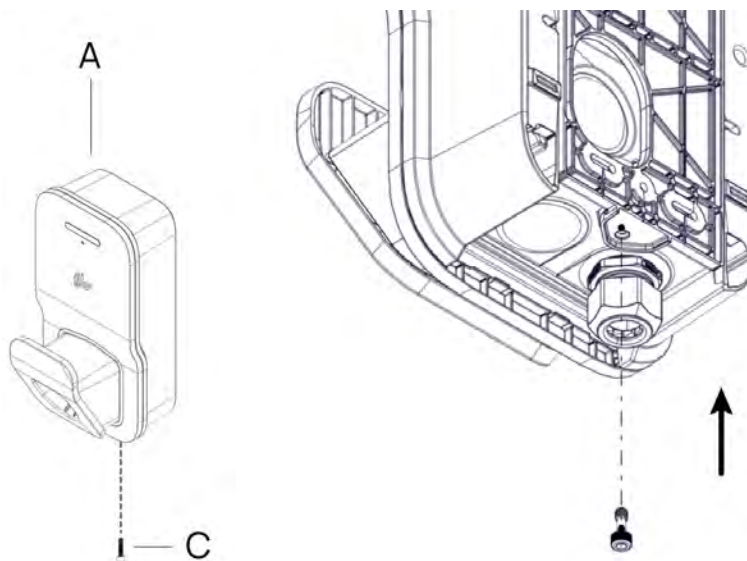
5. Remove the rear power input plug (A) for rear power entry installation OR bottom power input plug (B) for bottom power entry installation.



6. Install the back housing of the charging station. Hang it on the top of the charging station by presenting it at an angle of about 30 degrees, then pivot it down vertically without forcing it.



7. Screw in the mounting plate lower security screw to secure the charging station to the wall mounting plate with a nominal torque of 18 lb-in (2 N m).



6.2. Circuit Consideration

	WARNING – The values shown below are the minimum technical requirements. The values presented DO NOT reflect the requirements of the various electrical codes in effect in Canada and the United States. For a safe installation, it is imperative to respect the values provided by the electrical code of the jurisdiction where the charging station is installed. Charging stations must be installed by a licensed electrician familiar with the electrical code in effect in the jurisdiction where the charging station is installed.
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The tables below provide information on breaker capacity, input wire gauge and tightening torque requirements depending on the desired current configuration of the charging station and the desired wire type (copper or aluminum).

50 A Charging Stations						
Rotary Switch Position	Charging Station Current (A)	Recommended Minimum Wire Gauge (AWG)				
		Recommended Circuit Protection (A)	L1 - L2 COPPER (AWG)	Ground (GND) COPPER (AWG)	L1 - L2 ALUMINUM (AWG)	Ground (GND) ALUMINUM (AWG)
0	6	10	12	12	8	8
1	Do not use	-	-	-	-	-
2	NEMA plug (40 A)	50	-	-	-	-
3	12	15	12	12	8	8
4	16	20	12	12	8	8
5	24	30	10	10	8	8
6	32	40	8	10	8	8
7	40	50	8	10	6	8
8	48	60	6	10	4	8
9	50	70	6	8	4	6

NOTE: The terminal blocks for L1 and L2 support wire gauges from 3 to 12 AWG. The terminal block for Ground (GND) supports wire gauges from 8 to 12 AWG. Input terminal blocks support connections at 194 °F (90 °C).

NOTE: The FLO Home X3 sold as a hardwired option is set to 48 A (rotary switch position number 8) by default. The FLO Home X3 sold as a NEMA plug-in option is set to 40 A (rotary switch position number 2) by default. A different current delivery can be set depending on the household electrical infrastructure. Refer to [Setting the Current Limit on page 49](#) for more details on the current limit configuration.

The table below provides information on the torque to be used for the L1, L2 and ground wires depending on the wire gauge used:

Torque Chart 50 A Charging Station				
Wire Size	L1 -L2		Ground (GND)	
	Torque (IN. LBS)	Torque (N m)	Torque (IN. LBS)	Torque (N m)
12	35	4.0	20	2.3
10	35	4.0	20	2.3
8	40	4.5	25	3
6	45	5.2	35	4.0
4	45	5.2	NA	NA
3	50	5.7	NA	NA
2	50	5.7	NA	NA

NOTE: The torque setting is the same for copper and aluminum wiring.

6.3. Connecting the Wiring



CAUTION - To reduce the risk of fire, connect only to a circuit provided with over current protection in accordance with the Canadian Electrical Code CSA C22.1 and National Electrical Code ANSI/NFPA 70.

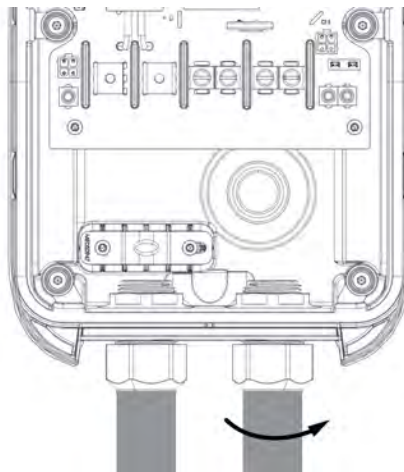
NOTE for the FLO Home X3: The rear and bottom entries can accommodate conduits with an opening of 3/4" (19 mm) National Pipe Taper (NPT).

Follow the steps below to connect wiring of the FLO Home X3:

1. Insert the conductors and secure the strain relief to the rear housing so that the conductors are long enough to reach the terminals.

NOTE: The cable gland and strain relief to be used in conjunction with the wiring supplying power is not provided as the installation contexts differ.

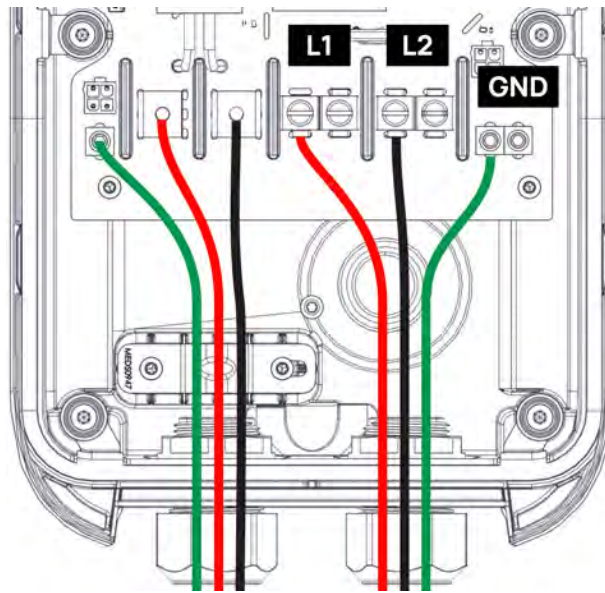
2. For bottom power input entry only: Tighten the connector nut and ensure the cable is secure.



NOTE: The input cable strain relief, conduits or armed-cable bushings and adapter must be:

- a. Certified for both Canada and USA.
- b. Waterproof (4X enclosure type).

- c. Suitable for the outside diameter of the chosen cable.
 - d. Suitable for mounting into an opening size of 3/4" (19 mm) National Pipe Thread (NPT).
3. Connect the ground wire (GND) and the two power wires (L1 and L2), as shown in the image below.



4. Ensure the wire is secure and has the appropriate torque. Refer to [Circuit Consideration on page 39](#) for more information.

6.3.1. Grounding Instructions for Products with a Permanent Power Connection

Products with a permanent power connection must follow the instructions below:

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.

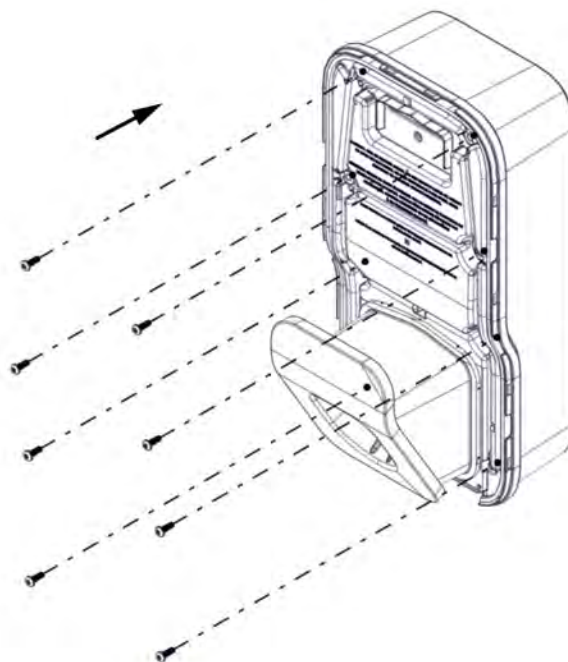
6.4. Closing the FLO Home X3 Enclosure



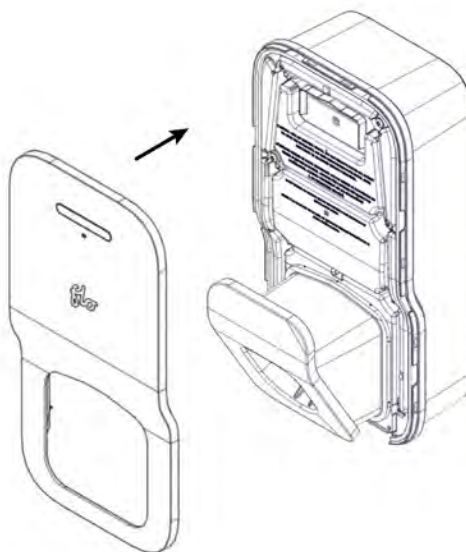
CAUTION – Always use a manual screwdriver only; DO NOT use a power tool at any time to tighten the screws holding the front shell into place; otherwise, the warranty will be voided.

Follow the steps below to close the FLO Home X3 enclosure:

1. Fasten the front shell of the charging station with the screws (8x) at a nominal torque of 26.5 lb-in (3 N m).



2. Clip on the front fascia.



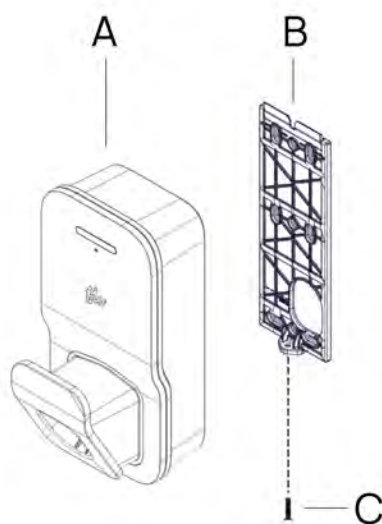
3. Switch on the electrical circuit breaker.

6.5. Installing a Plug-In Charging Station

Follow the instructions in the sections below to install a plug-in charging station.

6.5.1. Mounting the Charging Station

Follow the steps below to mount the charging station:



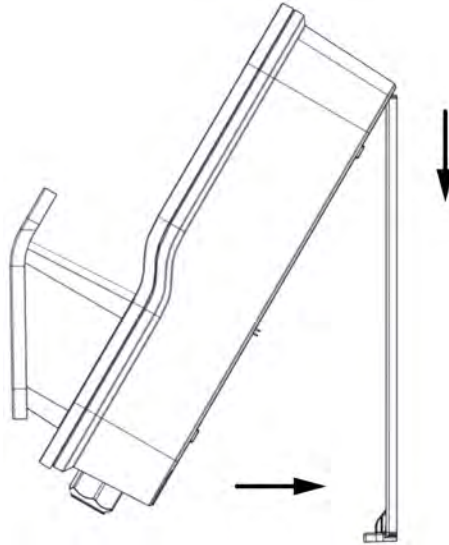
Part	Description
A	Charging station
B	Back plate
C	Wall mounting plate lower security screw

1. Use the wall mounting plate as a drilling template on the surface where the charging station will be mounted.
2. Hang the wall mounting plate securely on a stable and strong surface using a minimum of three screws (at least one per row). Select screws strong enough to support the weight of the EVSE.

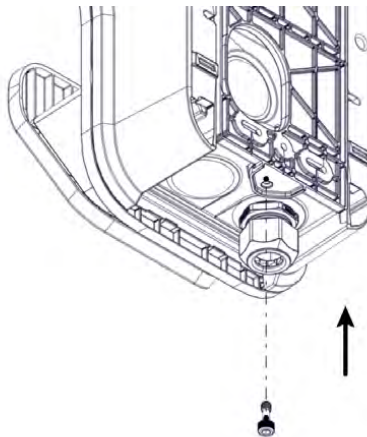
FOR EXAMPLE: The use of Number 8, pan head, 1-1/2" length screws is recommended for a typical installation on a framed wall with drywall/gypsum board.

NOTE: Screws are not provided because mounting surfaces differ.

3. Install the back housing of the charging station. Hang it on top of the charging station by presenting it at an angle of about 30 degrees, then lower it down slowly without forcing it.



4. Screw in the lower security screw to secure the charging station to the wall mounting plate with a nominal torque of 18 lb-in (2 N m).



5. Plug in the power plug and activate the circuit breaker.

NOTE: The FLO Home X3 sold as a plug-in option is set to 40 A (rotary switch position number 2) by default. A different current delivery can be set (from 6 A up to 40 A, or up to 50 A if the charging station is hardwired) depending on the household's electrical infrastructure. Refer to [Setting the Current Limit on page 49](#) for more details on the current limit configuration.

6.5.2. Grounding Instructions for a Permanently Connected Product

Permanently connected products must follow the grounding instructions below:

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 licensed electrician 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 licensed electrician.

6.5.3. Hardwiring a NEMA Unit

A fixed-connection charging station can be converted to a wired charging station using a NEMA plug. Follow the steps below to complete the operation:

1. Remove the charging station front shell.
Follow steps 3 and 4 from [Mounting a Hardwired Charging Station on page 34](#).
2. Remove the power supply cord by disconnecting the ground wire (GND) and the two power wires (L1 and L2) from the terminal block.
3. Continue with the charging station installation procedure in [Circuit Consideration on page 39](#).

NOTE: The default setting of plug-in charging stations from the FLO Home X3 is set to 40 A. By hardwiring the unit, it is possible to change the current limit up to 50 A. Refer to [Setting the Current Limit on page 49](#) for more information.



Adjustments of current limits must be performed by a licensed electrician.



To reduce the risk of fire, connect only to a branch circuit provided with the proper surge protection and conductors caliber in accordance with the Canadian Electrical Code (CSA C22.1-12) for installations completed in Canada or the National Electrical Code (ANSI / NFPA 70) for installations completed in the United States. Refer to *INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK on page 6* and *Important Safety Instructions on page 8* for more information.

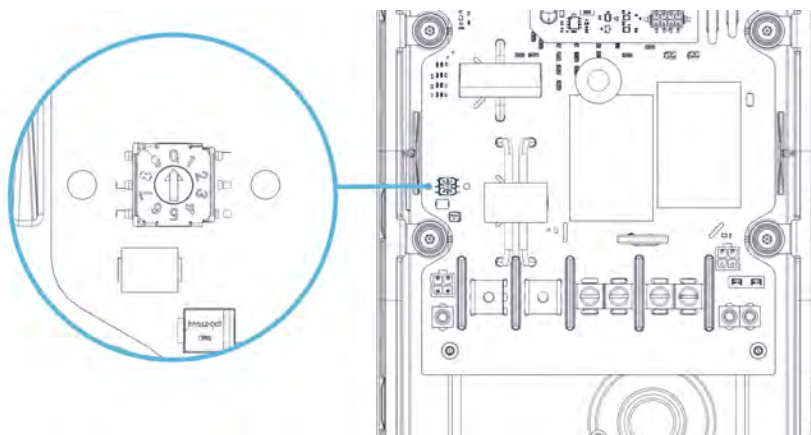
6.6. Setting the Current Limit



WARNING – Adjustments of current limits must be performed by a licensed electrician.

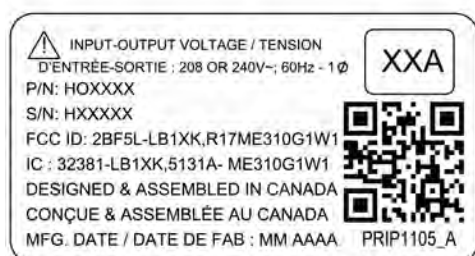
Follow the steps below to set the current limit:

1. Switch *OFF* the charging station:
 - a. In the breaker panel set the charging station circuit breaker to *OFF*.
 - b. Confirm that the charging status light Indicator is *OFF*.
2. Before handling the charging station, use a multimeter to determine if an electrical cable is live. Keep in mind, it is possible for more than one wire to be live.
3. Remove the charging station front shell.
Follow steps 3 and 4 from [Connecting the Wiring on page 41](#).
4. Locate the current selector (rotary switch).



5. Use a flat-bladed screwdriver to gently rotate the switch to the desired position. The first table in [Circuit Consideration on page 39](#) lays out the different current configurations related to the current selector (rotary switch) positions.
6. Close the enclosure as described in [Closing the FLO Home X3 Enclosure on page 43](#).

- Once the power limitation of the charging station is determined, use the label matching the new power setting (labels are provided on the *Important Information* document) and place it on the charging station's nameplate found on the left hand side of the charging station, indicated by XX A in the image below.



NOTE: Labels are also provided to identify the breaker assigned to the charging station in the electrical panel (breaker panel labels are provided on the same sheet illustrated above). The example image below shows a label applied to the charging station breaker on the electrical panel (A).



CAUTION: To reduce the risk of fire, connect only to a branch circuit provided with the proper surge protection and conductor caliber in accordance with the Canadian Electrical Code (CSA C22.1-12) for installations completed in Canada or the National Electrical Code (ANSI / NFPA 70) for installations completed in the United States.

NOTE: The FLO Home X3 sold as a hardwired option is set to 48 A (rotary switch position number 8) by default. The FLO Home X3 sold as plug-in option is set to 40 A (rotary switch position number 2) by default. A different current delivery can be set depending on the household's electrical infrastructure.

6.7. Connecting the FLO Home to the Internet

REMINDER TO ELECTRICIANS: Some owners may require assistance to complete the connectivity configuration of their charging station.

Before connecting the FLO Home charging station to a FLO account, it must first be connected to the household Wi-Fi network. The following items will be required:

- A smartphone with an up to date Operating System (OS): minimal requirements are Android 8 / iOS 15
- Wi-Fi internet access
- The Wi-Fi network password

NOTE: The FLO Home charging station uses the 2.4 GHz Wi-Fi band. Enabling the router 2.4 GHz band may be required to proceed with the pairing of the charging station. Please refer to the router's user guide for details on how to enable the 2.4 GHz band.

Follow the steps below to connect the FLO Home to the Wi-Fi network:

1. Ensure the charging station is powered and properly running. The charging station status light should be green and the connectivity status light should be white.
2. If not done already, download the FLO mobile App from the App store or the Google Play store and create an account by following the prompts on the application.
3. Go to **My Charger** to add the charging station and follow the steps in the app.

NOTE: The FLO Home unit can only be connected to one Wi-Fi network at a time. Connecting the charging station to a different network requires the station to be onboarded again. Refer to the help page below if assistance is required to re-initialise the onboarding of the charging station.

NOTE: If assistance is required, consult www.flo.com/help_pairing.

FLO RECOMMENDS: Connecting the charging station to benefit from the connected features and over-the-air updates. Connectivity also facilitates FLO troubleshooting.

IMPORTANT NOTE: The product warranty registrations are performed through the FLO mobile app. The charger does not need to be connected to internet or paired with a FLO account to complete the warranty registration.

6.8. Installing More than One Charging Station

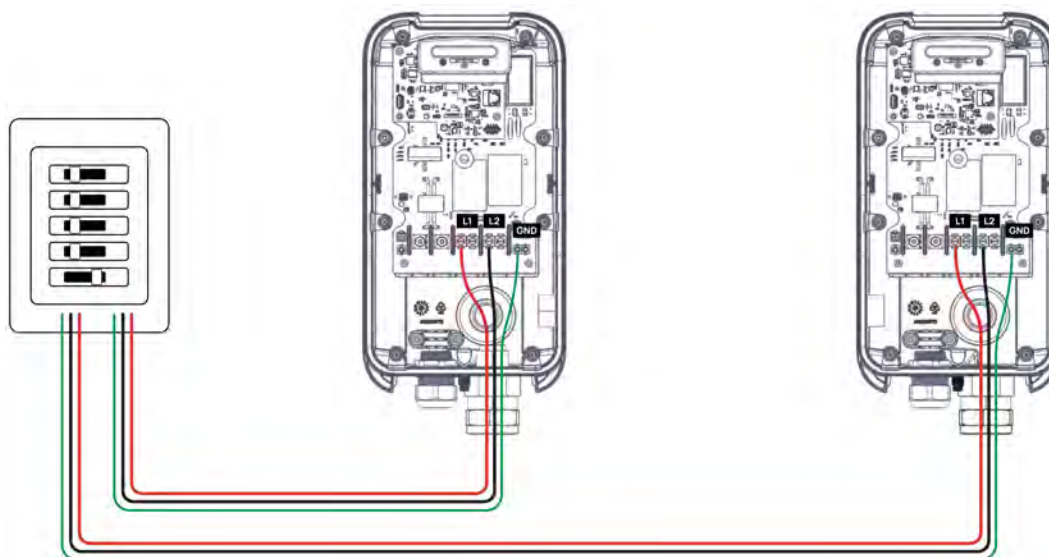
The FLO Home X3 may be installed in a single-family home in one of the following configurations or in a combination of them.



WARNING: The charging stations must be installed by a licensed electrician.

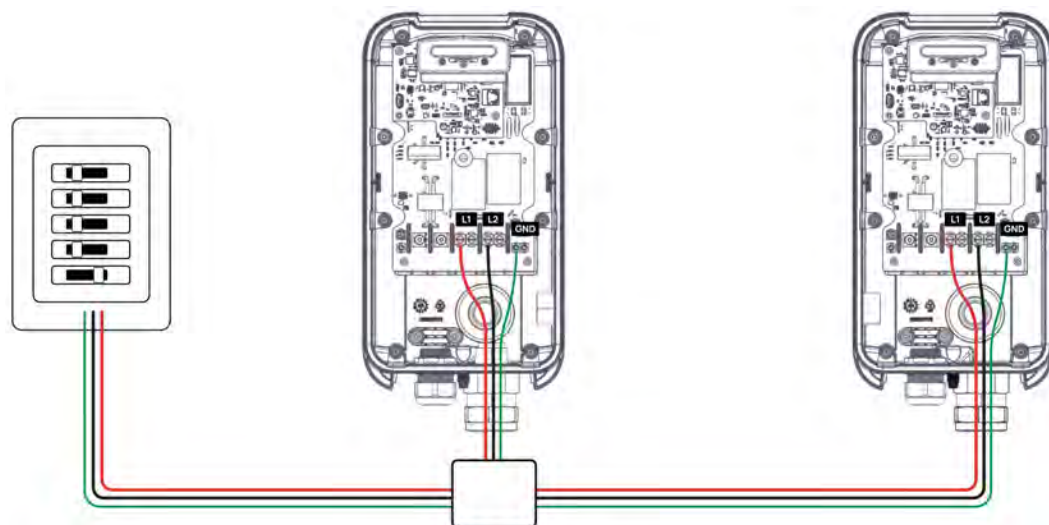
6.8.1. Installing Charging Stations on their own Dedicated Circuit Breakers

The FLO Home charging stations are installed so each is protected by its own dedicated circuit breaker within the circuit panel. This is the default configuration for plug-in models.



6.8.2. Mounting Several Charging Stations on One Breaker

The FLO Home charging stations are connected to the same circuit breaker via a junction box.



The circuit breaker used in this configuration will depend on the outstanding power capacity available to the charging stations OR the desired amount of power to be allocated to the charging stations. The breaker size may never exceed the highest breaker rating associated with the unit with the highest amperage. The current limit of each charging station can then be adjusted consequently. Refer to [Setting the Current Limit on page 49](#) for more information.

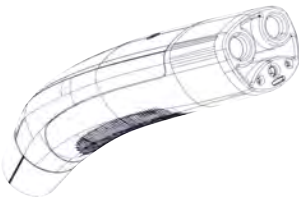
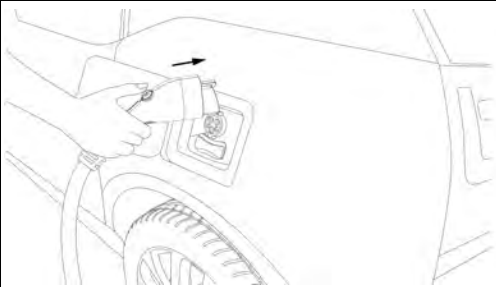
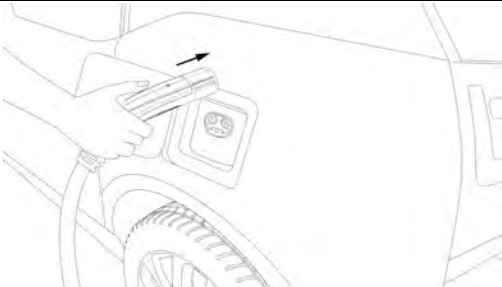
Situation 1: The current limits of both charging station A and charging station B could be set to 24 A each.

Situation 2: The current limit of charging station A could be set to 16 A and the current limit of charging station B to 32 A.

The circuit breaker used for this configuration must have a maximum rating of 60 A. The sum of the current configuration of the charging stations on the circuit cannot exceed 80% of its breaker rating.

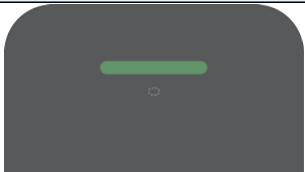
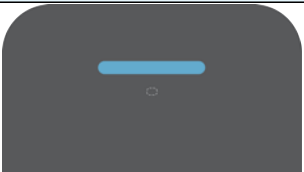
7. OPERATING INSTRUCTIONS

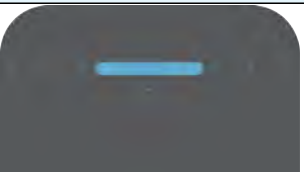
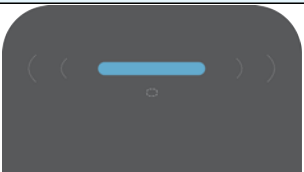
The unit must be installed in accordance with the installation instructions before being operated. Follow the steps below to use the FLO Home™ charging station to charge your Electric Vehicle (EV):

Step	J1772 connector	NACS connector
Connector types		
Pick up the connector and unwind the cable to the required length		
Plug the connector into the vehicle. The charging will start immediately		
Once charging is complete, replace the connector in the charging station's socket		

8. Charger Status Light Indicators

8.1. Charger Status Lights - Common Statuses

Green Not blinking	Blue Not blinking	White Not blinking
		
• Standby • Ready for use • No vehicle connected • No power restriction by time slot or lock via mobile app	• Charging completed • Vehicle connected • Session still ongoing until vehicle is disconnected	• Restrictions in effect • Vehicle is connected OR not • Active schedule is set to 0 A OR other restriction has set the station to 0A

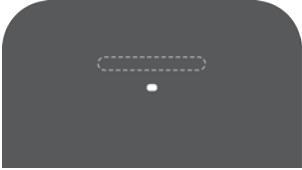
Blue Regular pulse (2 seconds cycles)	Blue Slow pulse (3 seconds cycles)	Blue Very slow pulse (7 seconds cycles)
		
• Charging 75-100% capacity • Vehicle connected and charging	• Charging 50-75% capacity • Vehicle connected and charging	• Charging less than 50% capacity • Vehicle connected and charging

8.2. Charger Status Lights - Auxiliary Statuses

Pink Regular pulse (2 seconds cycles)	Yellow Not blinking
	
• Default status on initial boot • Software update • Can only occur when no vehicle is connected • Blinks until the update is completed • Then resumes to usual LED status	• Charging station locked and powered on • Configuration set in "Lock Mode" through the mobile app • Even if vehicle is plugged in, color remains yellow • Color will change if a session is started/authorized

Orange Regular pulse	Green Blinking twice	Red Not blinking
		
• Access point • The charging station's access point mode is activated by user • Access point mode will remain on for 15 minutes to allow the user to complete the onboarding/pairing process in the mobile app	• Settings change confirmation • Used to confirm a successful setting modification through the FLO app: - schedule settings change - user addition - Time zone change - new user paired to station - charging station rename	• Error status • The charging station may require a restart (cycling of the circuit breaker; turning power off and then back on) • Contact the FLO support team if the problem persists; The station must be connected to the Internet in the first place, this will facilitate the FLO representative diagnosing the situation

8.3. Charger Connectivity Status Light

Green Not blinking	White Not blinking	Blue Regular pulse (2 seconds cycles)
		
• Connected • The charging station is connected to FLO and the signal is good	• Not connected. • The charging station is not connected. • This is the default status prior to the charging station being connected.	• Pairing in progress. • The charging station is currently going through the pairing process.

Yellow Not blinking	Orange Regular pulse (2 seconds cycles)	Red / Yellow Regular pulse (2 seconds cycles)
		
• Weak connection • The charging station is connected to FLO but the signal is weak	• Not connected to FLO • The charging station is connected to the Internet but not to FLO	• Not connected • The charging station has Wi-Fi credentials but can't connect to Internet.

9. Service and Support

A customer experience or technical support representative is happy to assist!

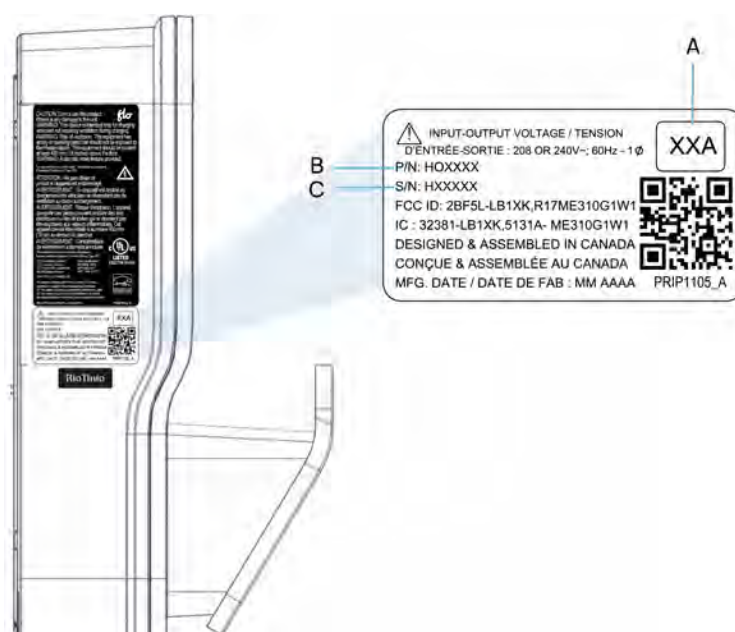
Contact customer and technical support for any questions regarding charging station installation, configuration or any technical problem:

<https://www.flo.com/support/Service@flo.com>

9.1. Locating the Charging Station Serial Number

When contacting the customer or technical support, please have your charging station serial number ready to provide to customer or technical support.

You may be required to provide the charging station serial number. The serial number is located on the left side of the charging station as illustrated in the image below.



Part	Description
A	Output current
B	Product model number
C	Serial number

10. USER MAINTENANCE INSTRUCTIONS

The FLO Home enclosure complies to the 4X enclosure type which is intended for indoor or outdoor use, primarily to provide a degree of protection against corrosion, windblown dust, rain, splashing water, and hose-directed water. The integrity of the enclosure must remain intact at all times, including from ice which can form.

As such, the maintenance required to protect the integrity of the charging station enclosure is minimal, except for cleaning which can be achieved with standard domestic products recommended for the type of dirt encountered.

When not in use, the charging cable must be properly rolled around the station enclosure holder (when possible) and the cable connector must be inserted in its enclosure at all times. Care should be taken not to bend, twist or pull on the cable from the connector alone, while pulling it towards the car, wrapping it around the enclosure or when trying to get it unstuck.

When manipulating the cable, please ensure the cable's outer insulation and the connector itself do not show any excessive sign of wear such as cracks or signs of abrasion, in which case please contact the FLO Customer Experience team. Contact details are provided in [Service and Support on the previous page](#).

11. FCC Statement - For USA Only

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

11.1. Supplier's Declaration of Conformity 47 CFR 2.1077 Compliance Information

Unique Identifier: FLO Home™

Model Name	Part Number
FLO Home X3	HOX3F2XXXX
	HOX3F0XXXX
	HOX3N2XXXX
	HOX3N0XXXX

NOTE: The X's in the table above represent configuration variables that do not affect the FLO Home installation instructions. X's have been used for visual representation purposes to reflect the set of product codes to which this guide applies.

Responsible Party - U.S. Contact Information

FLO Services
1270 Pacific Dr, Auburn Hills,
Michigan,
United States
48326

1 855 543 8356

Info@flo.com

FCC Compliance Statement

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.

12. Industry Canada Compliance - For Canada Only

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device. This device complies with the Canadian ICES-003 Class B specifications. CAN ICES-003(B) / NMB-003 (B).

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempt de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;*
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.*

13. Warranty

The product warranty registrations are performed through the FLO mobile app.

Details on the limited warranty are available online at the following URL in the documentation section: <https://www.flo.com/en-ca/products/hardware/flo-home/>



14. Copyright and Liability

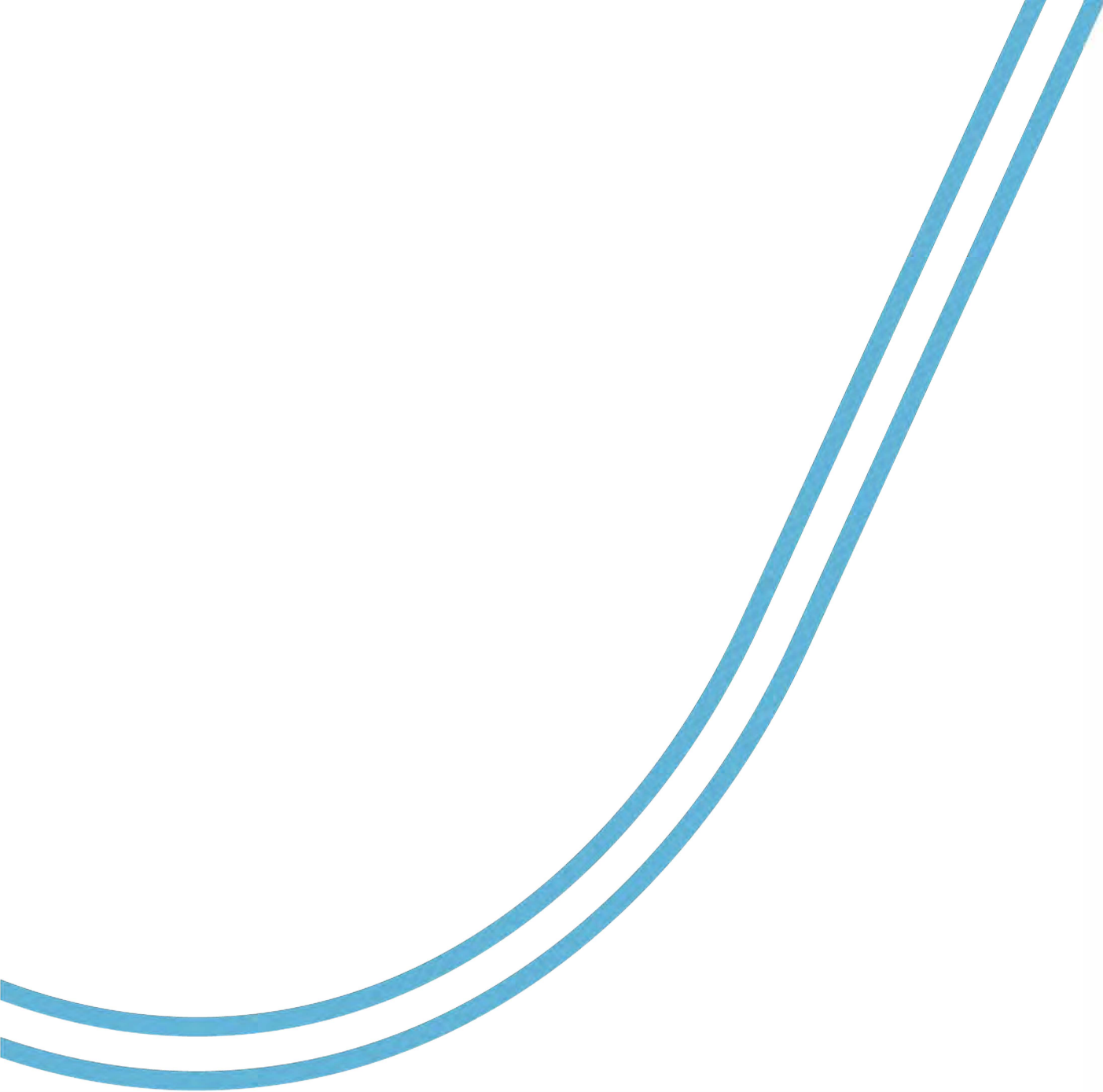
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