



SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

About this Product (Small and Mighty!)

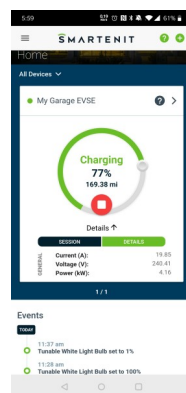
SmartElek is an easy to use, maintenance-free, smart and connected Level 1 / Level 2 EV charger. As well as simple and reliable plug and go operation, SmartElek provides unparalleled smart functionality.

Connectivity to IoT/Home Automation networks uses built-in Zigbee and Wi-Fi radios. Connected functionality allows for monitoring and controlling EV charging sessions, from plug-in, authorization and charging start, through plug-out or end of charge.

Zigbee operation requires our Harmony G2 or other compatible hub. Wi-Fi connectivity is done through the Smartenit ElekNet cloud service without a hub.

High precision built-in metrology measures the energy delivered to the EV as well as other parameters including power, voltage, current, frequency, power factor, etc.

Install with the safety guidelines, tips and suggestions in this guide and use our mobile or web app to get the benefits of this Internet of Things EVSE.



Electrical Specifications	
In/Out Voltage	208-240 VAC 50/60Hz
Output Current	30A Continuous
Operating Power	< 0.25 Watts
Relays	Two independent latching relays rated 50A @ 277VAC
Input Cable	1 ft. 10-3 with NEMA 14-50 plug
Vehicle Cable	24 ft. with J1772 plug rated NEMA 3S
Metrology	Supports EN 50470-1, EN 50470-3, IEC 62053- 21, IEC 62053-21, IEC 62053-22, and IEC 62053-23
Radio Frequency	Wi-Fi, Zigbee, and BLE: 2.4G band
Mechanical Specifications	
Size	4.5" L X 3.5" W X 2.25" H
Weight	14.5 Oz. (exclusive of EV cable and plug)
Indoor/Outdoor Mounting	Indoor or outdoor enclosure rated NEMA 4X. Charging Plug is NEMA 3S. Mounting plate provided
Environmental Specifications	
Temperature	-30 to +40 °C (-22 to +104 °F)
Humidity	5 to 80 %RH non-condensing

Table of Contents	
About this product	1
Specifications	1
Important Safety instructions	2
Instructions pertaining to a risk of fire or electrical shock	2
Additional safety instructions	3
Moving and storage instructions	3
Maintenance / cleaning instructions	3
Installation instructions	4
Operation instructions	5
EVSE setup with Mobile App	6
Wi-Fi Setup with Mobile App	7
EVSE operation with Mobile App	8



SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions and the EV owner's manual before using this product. [Lisez ces instructions et le manuel du propriétaire du véhicule électrique avant d'utiliser ce produit.](#)

The following symbols and markings may be found on labels affixed to the SmartElek EVSE or in this guide:



CAUTION / ATTENTION: Means to be careful as there is potential to do something that may result in damage to the EVSE or EV. [Signifie d'être prudent car il est possible de faire quelque chose qui pourrait endommager l'EVSE ou l'EV.](#)



WARNING / AVERTISSEMENT: Means danger of a situation that may cause bodily injury. When using electric products, basic precautions should always be followed including those contained in this guide and printed on the EVSE labels. [Signifie le danger d'une situation pouvant entraîner des blessures corporelles. Lors de l'utilisation de produits électriques, des précautions de base doivent toujours être suivies, y compris celles contenues dans ce guide et imprimées sur les étiquettes EVSE.](#)

SAVE THESE INSTRUCTIONS FOR FUTURE USE / [CONSERVEZ CES INSTRUCTIONS POUR UNE UTILISATION FUTURE](#)



Instructions Pertaining to a Risk of Fire or Electric Shock / Instructions se Rapportant à un Risque d'Incendie ou de Choc Électrique

- Use to charge only electric vehicles equipped with a SAE J1772 charge port. [À utiliser pour charger uniquement des véhicules électriques équipés d'un port de charge SAE J1772.](#)
- This product contains no user serviceable parts. For support write to support@smartenit.com or contact your local dealer. Do not attempt to repair or service the EVSE. [Ce produit ne contient aucune pièce réparable par l'utilisateur. Pour obtenir de l'aide, écrivez à support@smartenit.com ou contactez votre revendeur local. N'essayez pas de réparer ou d'entretenir l'EVSE.](#)
- This device should be supervised when used around children. [Cet appareil doit être surveillé lorsqu'il est utilisé à proximité d'enfants.](#)
- Do not put fingers into the electric vehicle connector. [Ne mettez pas les doigts dans le connecteur du véhicule électrique.](#)
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs of damage. [N'utilisez pas ce produit si le cordon d'alimentation flexible ou le câble EV est effiloché, a une isolation cassée ou tout autre signe de dommage.](#)
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage. [N'utilisez pas ce produit si le boîtier ou le connecteur EV est cassé, fissuré, ouvert ou présente toute autre indication de dommage.](#)
- Do not operate outside ambient temperature of -30 – 40 °C. [Ne pas faire fonctionner en dehors de la température ambiante de -30 à 40 °C](#)
- **GROUNDING INSTRUCTIONS / INSTRUCTIONS DE MISE À LA TERRE:** 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. [Ce produit doit être mis à la terre. En cas de dysfonctionnement ou de panne, la mise à la terre fournit un chemin de moindre résistance au courant électrique afin de réduire le risque de choc électrique. Ce produit est équipé d'un cordon doté d'un conducteur de mise à la terre de l'équipement et d'une fiche de mise à la terre. La fiche doit être branchée dans une prise appropriée correctement installée et mise à la terre conformément à tous les codes et règlements locaux.](#)
- Improper connection of the equipment-grounding conductor can 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. [Une mauvaise connexion du conducteur de mise à la terre de l'équipement peut entraîner un risque de choc électrique. Consultez un électricien ou un réparateur qualifié si vous avez un doute quant à la mise à la terre du produit. Ne modifiez pas la fiche fournie avec le produit - si elle ne rentre pas dans la prise, faites installer une prise appropriée par un électricien qualifié.](#)



SmartEtek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

ADDITIONAL SAFETY INSTRUCTIONS



WARNING / AVERTISSEMENT

- To reduce the risk of fire, connect only to a circuit provided with 40 amperes maximum branch circuit overcurrent protection in accordance with the applicable National Installation Codes. *Pour réduire le risque d'incendie, connectez uniquement à un circuit équipé d'une protection contre les surintensités de circuit de dérivation maximale de 40 ampères conformément aux codes d'installation nationaux et provinciaux applicables.*
- Turn off power to the EVSE at the circuit breaker panel before moving, servicing or cleaning the unit. *Coupez l'alimentation de l'EVSE sur le panneau du disjoncteur avant de déplacer, d'entretenir ou de nettoyer l'unité.*
- Always turn off input power to the EVSE at the circuit breaker panel prior to plugging into or unplugging from a wall socket. *Coupez toujours l'alimentation d'entrée de l'EVSE sur le panneau du disjoncteur avant de le brancher ou de le débrancher d'une prise murale.*
- Not for use with vehicles requiring external ventilation. *Ne pas utiliser avec des véhicules nécessitant une ventilation extérieure.*

Moving and Storage Instructions

Note that your SmartEtek EVSE is intended for fixed installations but can be removed without tools for occasional relocation or replacement. For mounting requirements, see the Mounting Procedures section of the Installation Instructions in this guide.



WARNING / AVERTISSEMENT: Always turn off input power to the EVSE at the circuit breaker panel prior to plugging into or unplugging from a NEMA socket. *Veiller à toujours couper l'alimentation en électricité de l'EVSE au niveau du panneau de disjoncteurs avant de brancher ou de débrancher une prise NEMA.*

When transporting the EVSE, do not lift or carry the entire unit by the charge cord. Likewise, do not lift or carry the entire unit by the NEMA plug.

The EVSE has a non-operational storage temperature range of -40°C to +80°C (-40°F to +176°F).

Maintenance / Cleaning Instructions

Your SmartEtek EVSE does not require maintenance other than occasional cleaning.



WARNING / AVERTISSEMENT: Always turn off input power to the EVSE at the circuit breaker panel and unplug the device prior to cleaning. Use a soft cloth with a mild detergent solution and NEVER use flammable solvents, abrasive pads or scouring cleaning powder. *Coupez toujours l'alimentation d'entrée de l'EVSE sur le panneau du disjoncteur et débranchez l'appareil avant de le nettoyer. Utilisez un chiffon doux avec une solution détergente douce et n'utilisez JAMAIS de solvants inflammables, de tampons abrasifs ou de poudre de nettoyage à récurer.*



SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

Installation Instructions

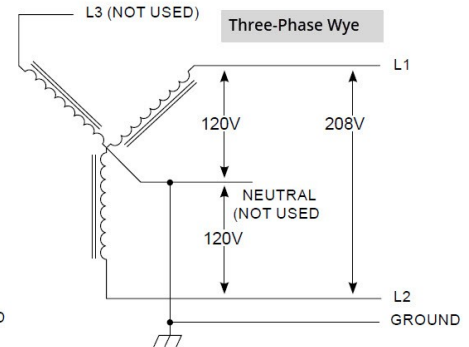
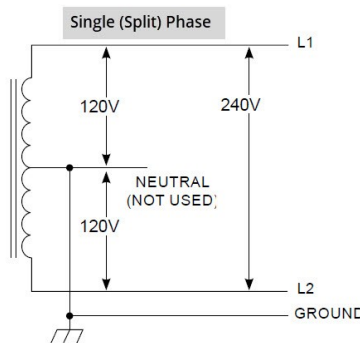


To reduce the risk of fire, connect only to a circuit provided with overload protection according to the National Electrical Code, ANSI/NFPA 70 (US) or the Canadian Electric Code C22.2 NO. 280-13 (Canada). **Pour réduire le risque d'incendie, connectez uniquement à un circuit équipé d'une protection contre les surcharges conformément au National Electrical Code, ANSI / NFPA 70 (US) ou au Canadian Electric Code C22.2 NO. 280-13 (Canada).**

This is a single-phase or split-phase device that does not require a Neutral line. Only Line 1, Line 2 and Ground are required.



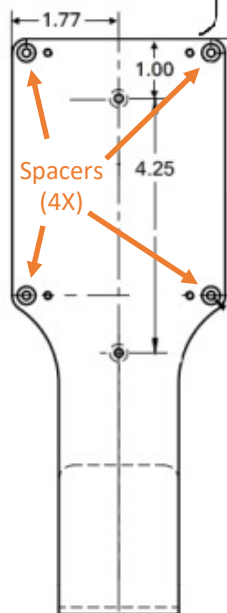
When connecting to a 3-phase wye configuration, any two of the phases may be used. However, the Neutral of the three phases **MUST** be bonded to Ground somewhere in the site. **Il s'agit d'un appareil monophasé ou biphasé qui ne nécessite pas de ligne neutre. Seules la ligne 1, la ligne 2 et la masse sont requises. Lors de la connexion à une configuration en étoile à 3 phases, deux des phases peuvent être utilisées. Cependant, le neutre des trois phases DOIT être lié à la terre quelque part dans le site.**



If installing outdoors / Si l'installation à l'extérieur: The provided NEMA 6-50P is not water-tight, so care must be taken that the socket the device will be plugged into is rated for outdoor use. **Le NEMA 6-50P fourni n'est pas étanche, il faut donc veiller à ce que la prise sur laquelle l'appareil sera branché soit conçue pour une utilisation en extérieur.**



Carefully measure distance to ensure AC input cord reaches snugly.



The device can be installed indoors or outdoors and must be mounted to a suitable surface through the provided mounting plate/bracket adapter. This plate/bracket permits periodic EVSE removal for relocation, interchangeability, maintenance or repair without the use of a tool. Additionally, the mounting plate provides a convenient place to coil the charging cable and J1772 away from the floor.

Ensure the orientation of the device matches the position/orientation of the NEMA 6-50P socket/receptacle.

Use the mounting plate as a template to mark the two screw holes used to mount the plate to the mounting surface. Drill the holes on the mounting surface. Then affix the plate to the mounting surface with two 6-32 flat-head screws.

Note the back surface of the EVSE has four round sockets (approximately 5/16" in diameter) that are not connected to the inside of the unit. These sockets are intended to match the four spacers that are on the top of the mounting plate.

Carefully align the four sockets on the back of the EVSE with the four spacers on the mounting plate. When satisfied with the alignment, press evenly and firmly on the front surface of the EVSE until it slides evenly on the four spacers. Ensure there is no gap between the mounting plate and the EVSE.

The fit between the EVSE and mounting plate through the four spacers is intended to be firm but not overly tight, so as to allow placement and removal of the EVSE without the use of a tool.



SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

OPERATING INSTRUCTIONS

Upon powering up the EVSE: the device completes its internal checks and turns the STATUS light to a steady green indicating normal operation without any faults detected. If the STATUS light flashes red, a fault was detected such as GFCI check, missing ground, software error, etc., and it is not safe to operate the EVSE. On a fault condition the EVSE may attempt to recover by resetting itself.

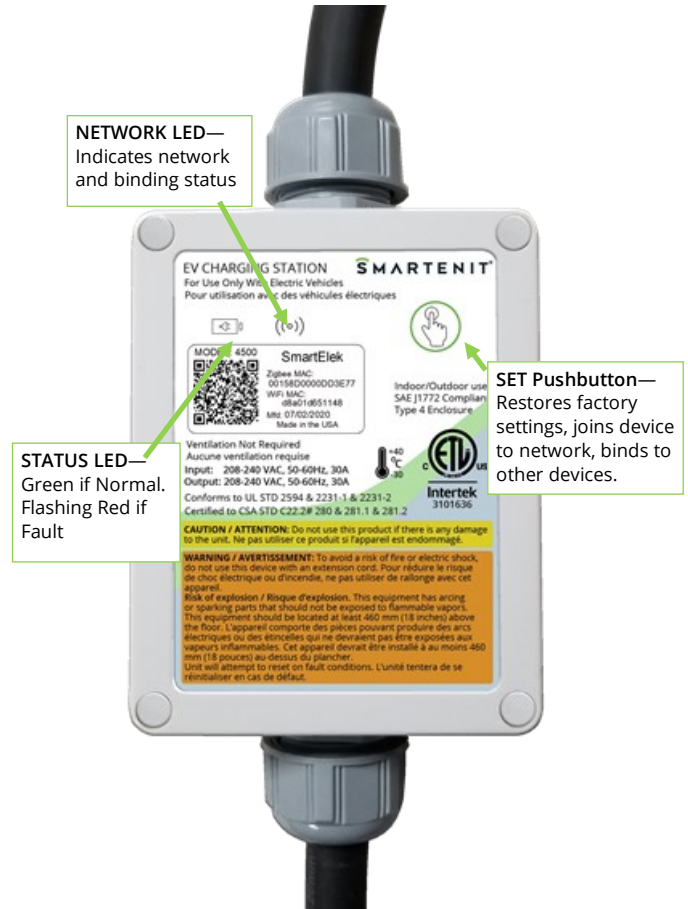
Note that in normal operation **some faults may require resetting the unit through the SET button to recover even after the fault is removed.**

Get familiar with your EVSE control pushbutton and indicators as all interaction with the unit is done via the single pushbutton and two LED indicator lights. The SET button functionality is explained in the table below, as is the behavior of the two LEDs.

Under normal operation, the device is a plug-and-forget appliance and you should never have to interact with it, other than to look at the indicator lights to check the status of the charging session. The blue LED is useful when initially adding the unit to a home automation network and later checking its connectivity status.

At this point, you can plug-in to a vehicle for simple, unattended charging, or set up for convenient use with our app and optionally our ElekNet IoT Services. The NETWORK light will flash blue if the device is not connected to an IoT service. Refer to the following instructions for setup with Zigbee or Wi-Fi networks.

Get Familiar with SmartElek



NETWORK LED (Blue) Indications	
Pattern	Indication
Fast Flashing	Searching for Zigbee network
Solid	Joined to a Zigbee network or Wi-Fi enabled and operational
Flash once per second	Open permit join Zigbee
2 blips per second	Disconnected from Zigbee network
STATUS LED (Green/Red) Indication	
Color/Pattern	Indication
Off	EV is not plugged-in
Green / Solid	Plugged in. Not charging
Green / Flashing	Plugged in, charging
Red / Flashing	Fault—Unplug to reset

SET Pushbutton Functionality		
Operation	Pushbutton	Device Behavior
Factory reset and leave network	Tap 13 times	Status LED will begin fast blinking
Close Zigbee Permit Join	Press and hold for 3 seconds when device is in open permit join	Status LED will stop flashing
Soft Reset (Reboot Device)	Tap 10 times	Device restarts
Request Firmware Update (OTA)	Tap 6 times	
Toggle Wi-Fi	Tap 7 times	Switch to Wi-Fi mode
Restore Factory Settings	Tap 9 times	Metering reset without leaving network

SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

Operating SmartElek With WebApp and Mobile Apps

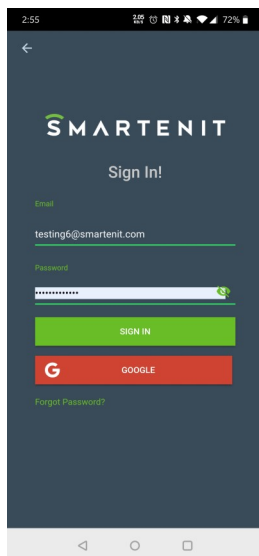
Smartenit offers both a WebApp and a Mobile App to monitor and control the SmartElek EVSE. The operation and functionality of the apps is the same independently of the connectivity method employed (Zigbee, Wi-Fi, Cellular, Bluetooth). The apps provide the following functions:

- * Commission (enroll) the device to a given service such as the Smartenit ElekNet backend (cloud server),
- * Attach the device to an individual user account with specific permissions,
- * Authenticate and connect to the backend such that the device can be managed from anywhere an Internet connection is available,
- * Set up behavioral rules for unattended operation such as timers and cost of energy scheduling,
- * Monitor, store and display on demand charging sessions (events from plug-in to plug-out),
- * Inform the EVSE that it is part of a local network of devices (multi-vehicle dwelling or large parking lot) and what the electrical capacity of the circuit branch is (Amps per circuit).

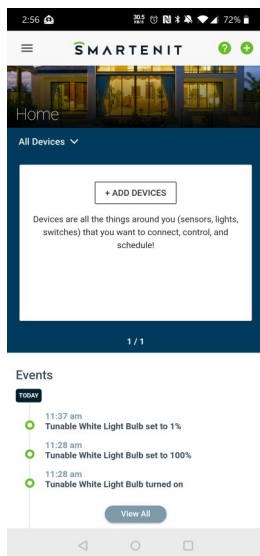
Mobile App Setup

1) Factory Reset (Restore factory settings to ensure clean install)

While powering the device, press the SET button and release it once the device powers up. Alternatively, if the device is already joined to a network, quickly tap the SET button 13 times. The NETWORK LED will go out for 1 second and then begin flashing rapidly.



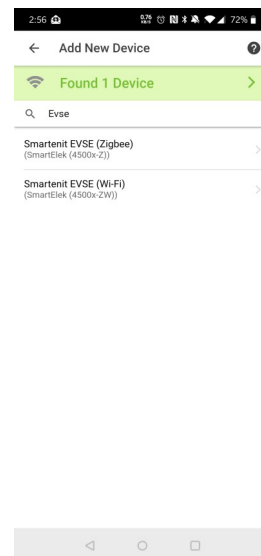
2—Download Smartenit app from Google or Apple stores. Then (if not yet created) create an account at Smartenit.com and login.



3—In the “Dashboard” screen, press the green (+) symbol at the top of the screen. This will start the sequence to “add” the EVSE to the network.



4—In the “Add Devices” screen, select the EVSE type to add, either Zigbee if using a Zigbee hub, or Wi-Fi if using ElekNet (the Smartenit IoT Cloud).

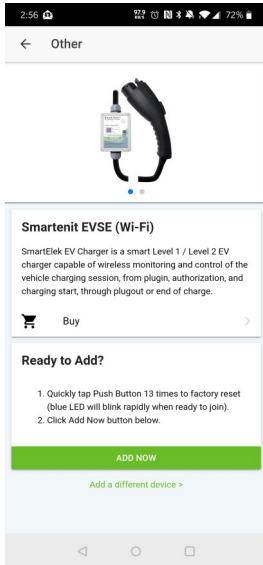


5—Once the EVSE is found, select the connecting method to be used (Zigbee or Wi-Fi)

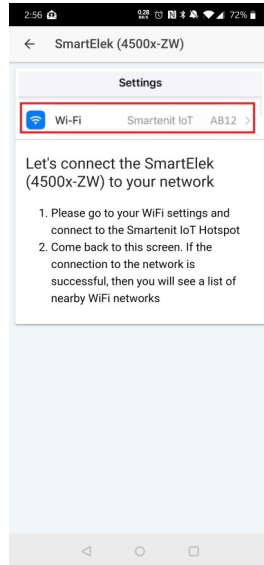


SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

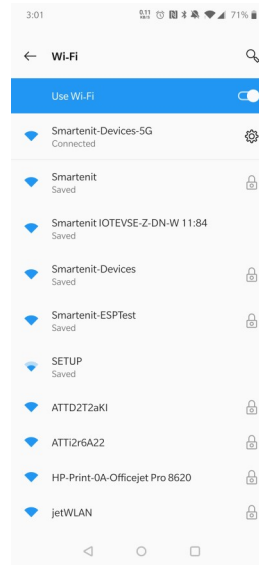
App Setup Continued (Highlighted for Wi-Fi connection Only)



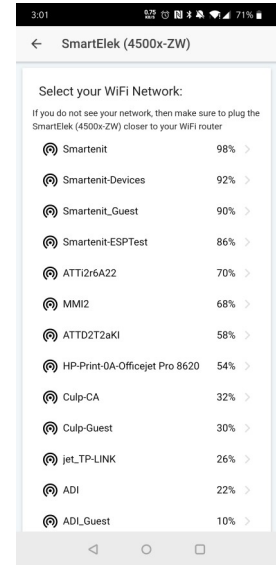
6—If Wi-Fi version was selected, confirm on this screen by pressing on the “ADD NOW” button.



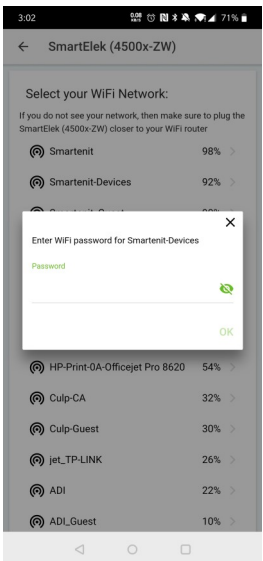
7—The app will find the EVSE as a “Wi-Fi Access Point or Smartenit IoT Hotspot”. Note the last 4 digits matching the MAC ID of your EVSE.



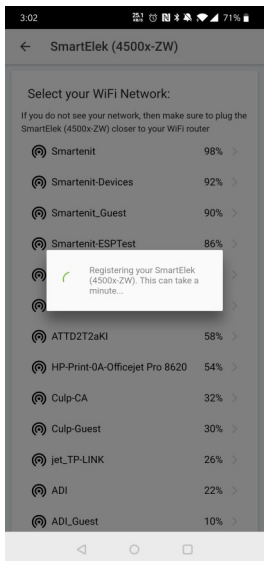
8—Once the EVSE is connected to the app, the next step is to select the desired Wi-Fi network to join.



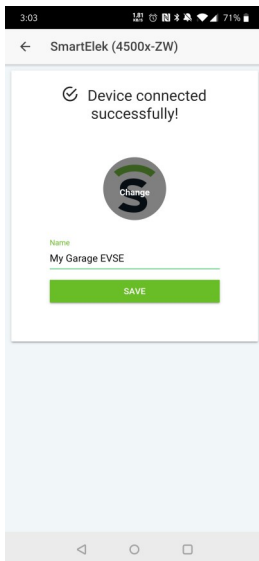
9—The app will present a list of the available networks. Choose the one where the EVSE will connect to the Internet.



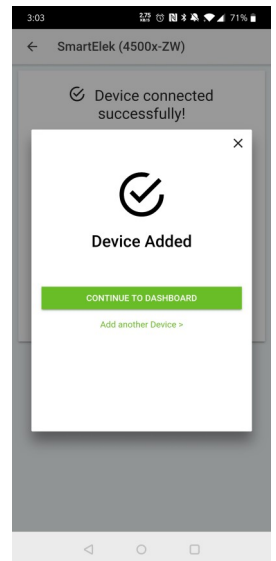
10—If the desired Wi-Fi network is password protected, please enter here.



11—Finally, the EVSE is joined to a Wi-Fi network and the Internet, and proceeds to be registered with the IoT service.



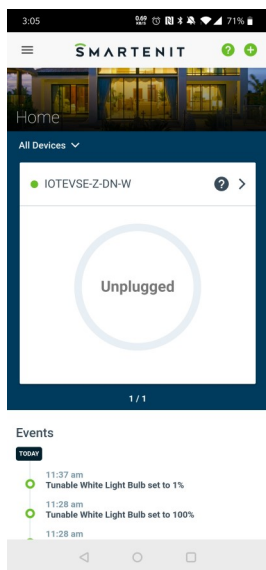
12—Once registered, the device is connected successfully. Now choose a name for the device that will be used subsequently by the app.



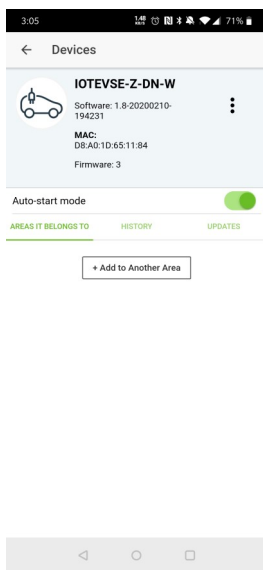
13—(both Zigbee and Wi-Fi) When properly added, the device will be connected and ready to be used with the application.

SmartElek Model #4500 IoT Connected 30A L1/L2 EVSE (EV Charging Station)

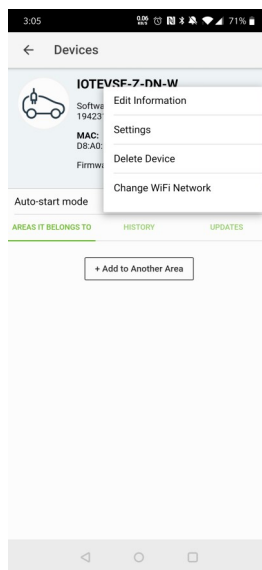
App EVSE Operation



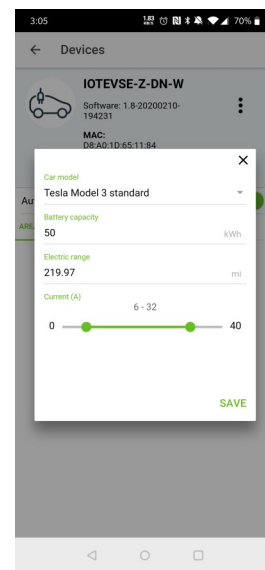
1—The “Dashboard” view of the app will display the status of the EVSE (unplugged, plugged not charging, charging, etc).



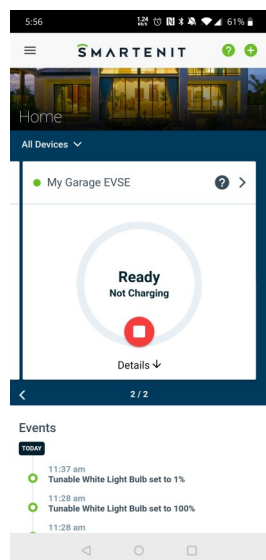
2—Use the information view to set auto-start mode (starts charging upon EV plugin), to change the device icon, device name and other settings, and to



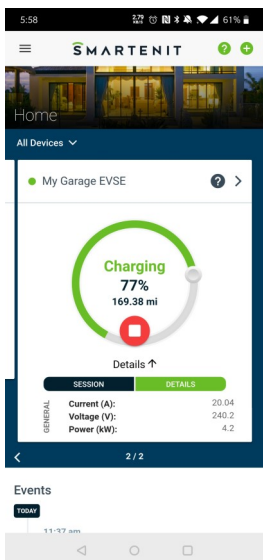
3—The menu in this view allows EV settings to be changed, removal of the device, or change the Wi-Fi network the device is connected to (if any).



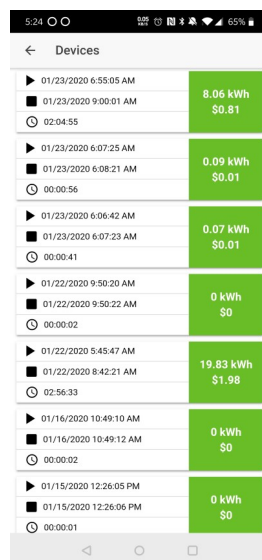
4—Set operating parameters such as min and max current allowed, battery level and estimated range for a specific EV through the Settings menu.



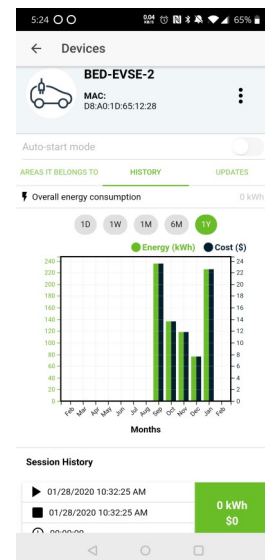
5—Upon EV plug-in, the dashboard will display the EVSE status before the EV begins to demand charging current.



6—During active charging, details such as current, voltage, power and charging level are displayed. Note the level is approximate based on user input.



7—The “History” section displays a list of the logged charging sessions and the details for a selected session.



8—Overall energy consumption in kWh and cost can be displayed for a specified period.