



Listo EMS Controller Model: UP3006CTa

Installation Manual

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May 2024
208-10337-01
v1.3 (English)



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Getting to Know Your Listo Controller

Congratulations on your purchase of a Unico Power Home Energy Management Controller, the Listo™ EMS Model 3006CTa.

Before you having your Controller installed, check the package contents (see “[Unpacking Your New Controller](#)” on page 1). Become familiar with the front and back panels of your router—especially the current transformer input jacks - and the important information on the Controller label (see “[Hardware Features](#)” on page 3). Then, read the section on “[Positioning your Listo Controller](#)” on page 4 to ensure that you have selected the best location to install your router.

Unpacking Your Controller

Your product package should contain the following items:

- The Listo Controller
- An AC Power Adapter with USB C output
- Qty 2 – 100 or 200 Ampere Current Transformers
- Qty 2-4 – 100 or 200 Ampere Current Transformers (Optional)
- Qty 4 - #8 x 3/4 inch mounting screws (in package)



Once your Listo EMS is installed and commissioned, you can access all operating instructions and help via the mobile app or desktop browser at <https://app.unicopower.com>.

If any of the package contents are incorrect, missing, or damaged, contact Unico Power at support@unicopower.com. Keep the carton, including the original packing materials, in case you need to return the product for repair.



DANGER

DANGER: Hazardous Voltage. The Listo EMS must be installed by a qualified electrical professional and requires access to the service compartment of your electrical panel.

Contact with live electrical wires can result in serious injury or death.

To prepare your Listo EMS Controller prior to installation:

1. Open the White Box labeled Listo Controller and remove the items from the protective packaging - save the box and packaging. See Figures 1, 2 below.

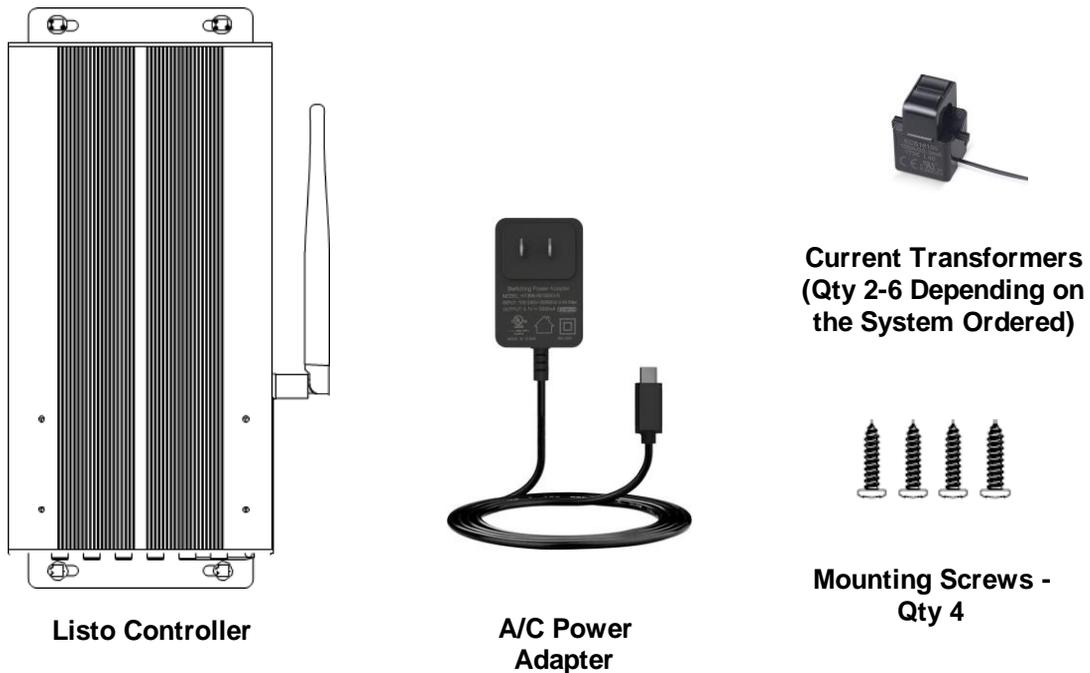


Figure 1 - Listo EMS Components

2. Depending on the system ordered, your EMS will come with from 2-6 Current Transformers, a Wi-Fi Repeater, one or more EVSEs (Electric Vehicle Supply Equipment also known as Electric Vehicle Chargers), and mounting hardware. Instructions for Installing the EVSE and Wi-Fi Adapter are product specific and not included in this manual.

Hardware Features

Before you install and connect your router, take a moment to become familiar with important information on the label, and with the front and back panels of the router—especially the status lights on the front panel.

Front Panel

The controller front panel, shown in [Figure 2](#), contains two (2) status lights and six (6) Current Transformer input ports, labeled CT1 to CT6. CT1 and CT2 are required for monitoring the main service current levels. If left unplugged the EV chargers will default to the minimum set current (failsafe current).

Current Transformer Inputs CT3 to CT6 support the monitoring of additional loads and are not required for the system to operate normally.

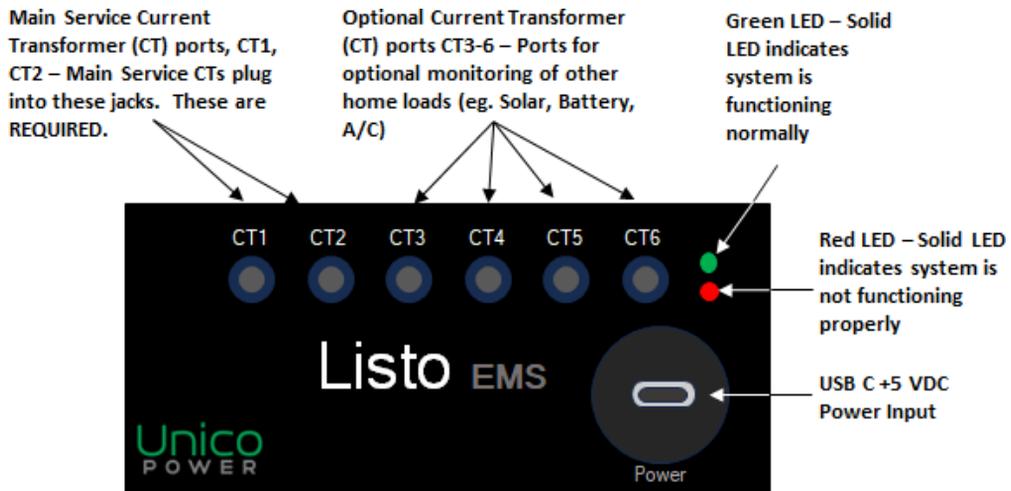


Figure 2 - Listo Controller Front Faceplate

Positioning Your Listo EMS Controller Prior to Mounting

The Listo EMS controller must be located close to your main electrical panel. For best results, place your controller:

- Accessible to an AC power outlet.
- Within 1 Meter (3.25 feet) from the top of the electrical panel where the main current transformers (CTs 1 and 2) will be located.
- Away from electrical devices which are potential sources of interference, such as ceiling fans, home security systems, microwaves, or the base for a cordless phone.
- Within range of your home wireless router.



To ensure proper the best dissipation, it is recommended that you mount the controller with the antenna pointing up or down.



Failure to follow these guidelines can result in performance degradation or an inability to wirelessly connect the device to your home router and/or EVSE.



Warning: Keep this device away from any heat sources such as direct sunlight, heaters, radiators, or other A/V receivers or devices that emit heat.

Installing The Listo EMS Controller

1. The Listo EMS Controller comes with four mounting holes located on the faceplate and rear panel. Locations are shown in Figure 3 below.
2. The unit should be mounted with the Antenna facing up as shown below, and must be mounted using the included #8 x 3/4" black mounting screws.
3. The controller unit must be mounted onto a minimum 3/4" thick plywood backing.



Warning: Failure to securely mount the unit may result in damage to the unit, damage to flooring, or harm to users.

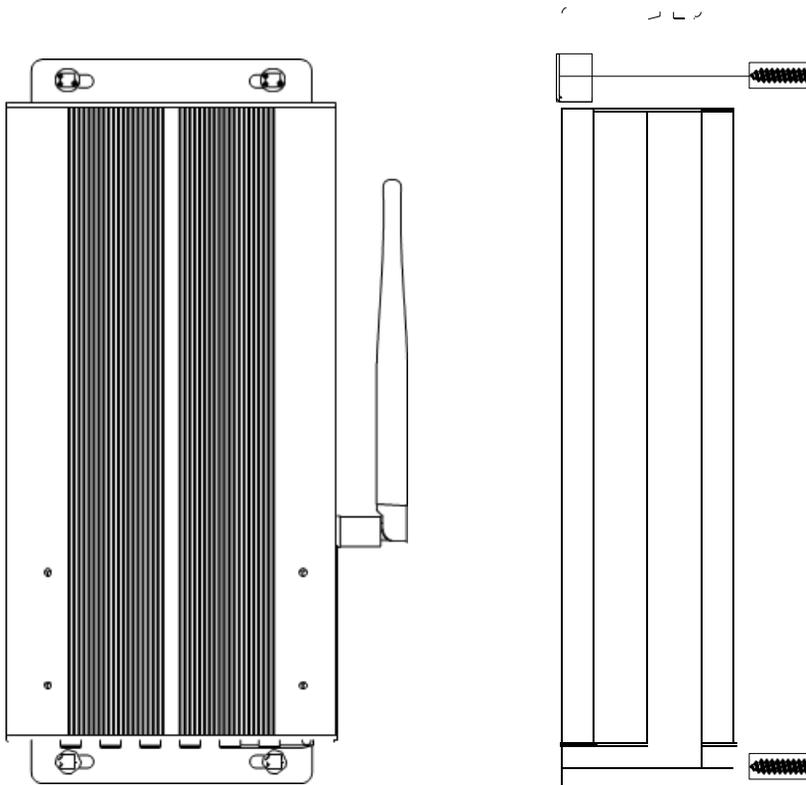


Figure 3 - Listo Controller Mounting Orientation

Installing The Current Transformers



DANGER: Hazardous Voltage. The Listo EMS must be installed by a qualified electrical professional and requires access to the service compartment of your electrical panel.

Contact with live electrical wires can result in serious injury or death.

Precautions

- Only qualified personnel or licensed electricians should install the current transformer (CT). The line voltages of 120 Vac to 240 V can be lethal!
- Install in accordance with ANSI/NFPA 70, “Canadian Electrical Code” (CEC) or National Electrical Code (NEC). Follow all local electrical codes.
- Electrical codes prohibit installation of CTs in equipment where they exceed 75% of the wiring space of any cross-sectional area.
- Do not install CTs where they block ventilation openings.
- Do not install CTs in the area of breaker arc venting.
- Verify that the line currents will not exceed the listed CT amp maximum rating under normal operation.
- The Current Transformers can be damaged by sharp impacts or by being dropped. This can result in reduced accuracy.

Pre-Installation Checklist

- The CT’s rated current must be greater than or equal to the maximum current of the measured circuit. Ensure that the fuse or circuit breaker’s rating does not exceed the CT’s maximum continuous current rating.
- For highest accuracy, try to separate the CTs on different phases by 1 inch (25 mm) to minimize magnetic interference.
- Confirm that the CT opening of the split core current transformers is large enough to close around the service or load wires. The Current Transformers provided are sized to sufficiently close around most service conductors; however, if the CT will not close around the wire, contact our support group using the information provided at the end of this manual.

Installing the Current Transformers



Warning: To reduce the risk of electric shock, always open or disconnect the circuit from the power-distribution system (or service) before installing current transformers.

1. Locate the arrow on the bottom of the CT. Ensure that the CT is installed so that the arrow points TOWARDS the load (into the panel). See Figure 4.
2. NOTE: The Current Transformers are provided with an internal burden resistor that provides protection, however best practice is to not place the CT onto the conductor until the jack end of the CT has been plugged into the controller.
3. Open the Service section of the Electrical Panel and locate the two 120 Vac service lines to the panel.
4. Without placing the CT onto the conductor, route the lead from the CT out of the panel and firmly plug the first CT into CT1 on the front faceplate of the controller. Ensure the 3.5 mm jack is fully inserted into the CT port on the controller.
5. To open the CT, lift the tab on the top section and pull / rotate the top open.
6. Place the CT around the A conductor and close the CT. Ensure the clasp on the CT engages and that the CT is firmly closed.
7. Repeat steps 4 to 6 for the second CT. Place the CT around the B conductor and plug the 3.55 mm jack firmly into port CT2 on the controller.
8. If the customer has purchased additional current transformers for monitoring of other loads or supplies into the panel (eg. solar or batteries), add these CTs using the same steps. Note that for Solar feeds, both 120 Vac feeds should be monitored with CTs, for Batteries and other 240 Vac loads, one CT is sufficient.
9. Secure the CTs to the conductors with a cable tie.
10. Optional: For added security, wrap a cable tie around the outside of the CT or through the loops at the front of the CT.
11. Close the Service Panel

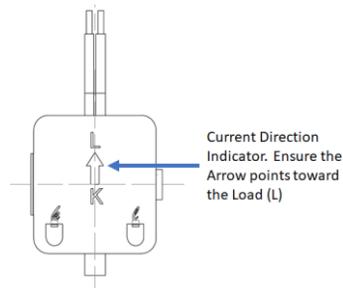


Figure 4 - Bottom View of Current Transformer

Configuring Your Listo EMS



Installation of Home Router, Wi-Fi Repeater, and EVSEs are not described in this manual. Refer to the manuals provided with this equipment.

Figure 5 depicts a typical home installation and identifies the components required to activate your Listo EMS. These are 1) Listo Controller, 2) EVSE (or EVSEs if more than one EVSE is installed), Wi-Fi Repeater, Current Transformers, and Internet Connected Home Router.

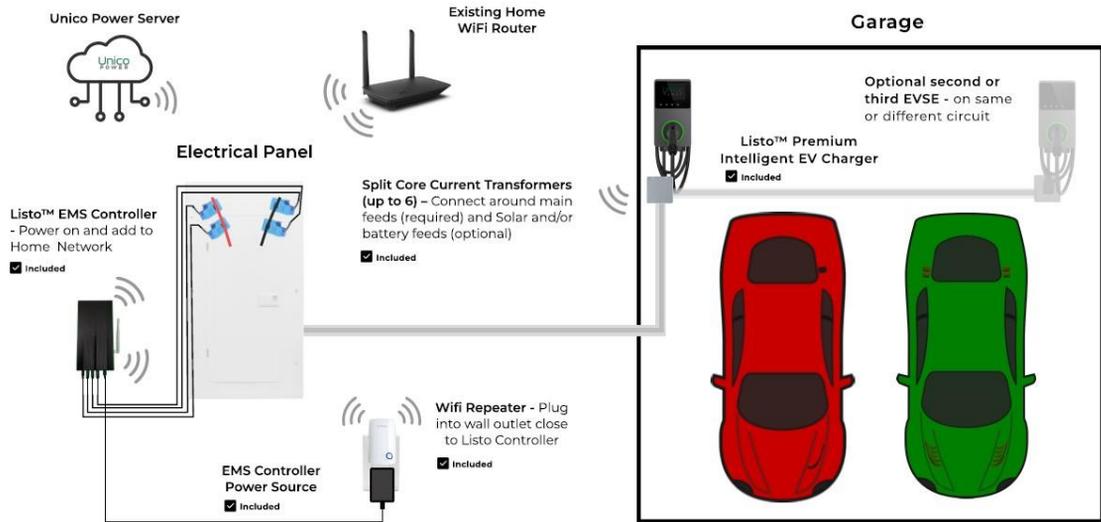


Figure 5 - Typical Home EMS System

Connecting To Your Listo Controller

1. Ensure the Listo Controller and Current Transformers are installed according to the previous sections in this manual.

Note: Have the SSID name and password of your home 2.4 GHz Wi-Fi network ready.

2. Plug the included AC power adapter into the USB C port on the right side of the front of the Listo Controller. The green light will begin flashing.
3. Plug in the included Wi-Fi repeater somewhere near the Listo Controller.
4. Use another Wi-Fi-enabled device (phone, tablet, or desktop) to look for and join a Wi-Fi hotspot called "Listo Internet Setup". No password is required.

Note: Most devices will require you to go to the Wi-Fi settings and search for available networks, and some may take up to 30 seconds to show all available networks.

5. After joining the network, go to <http://192.168.42.1> in your browser to see the Wi-Fi setup form. From the list of networks listed, select your home Wi-Fi network. You will be prompted to enter your network password. Click Continue. The Listo Controller will connect to your home network. Leave the page with the form open.
6. The Listo Controller will attempt to join the Wi-Fi network. The Listo Internet Setup hotspot may become unavailable. Your device will need internet access again (and should use whatever other connection you had before). Once the form page detects that there is internet access, your browser will be redirected to the Unico Power app to sign up/in and set up your account information.
7. The remaining steps are explained in the Unico Power app. If the Unico Power app shows that the Listo Controller is disconnected, you may need to repeat steps 4-6. Beyond that, if the process becomes interrupted for any reason, you can return and refer to app.unicopower.com or the *Unico Power mobile app*.

LED	Meaning
Flashing Green	System starting up, Wi-Fi setup required (see step #4 above)
Solid Green	Online and connected to charging station
Flashing Red	Not connected to Wi-Fi or no internet available (check home network)
Solid Red	Disconnected from charging station (contact Unico Power)