

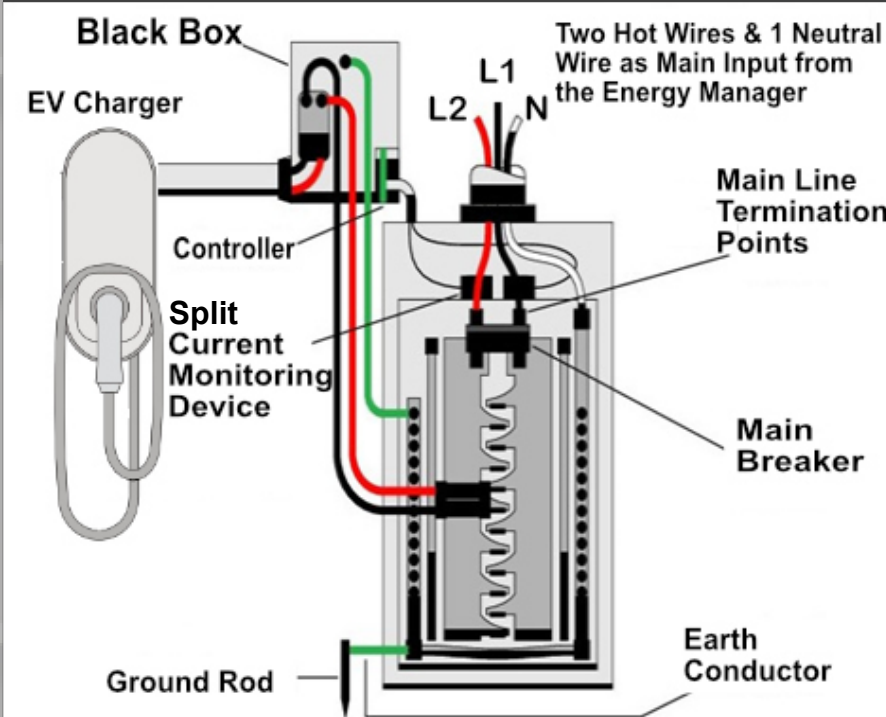
Black Box Innovations Fully Complies With The CEC

According to the Electrical Code, Black Box Energy Managers allow the addition of EV charging, without adding to the load calculation for the electrical service. As a result, there is no need for an electrical service or panel upgrade while providing optimal fast EV charge rates.

NEC 220.70 Energy Management Systems (EMSs) "If an energy management system (EMS) is used to limit the current to a feeder or service in accordance with 750.30, a single value equal to the maximum ampere setpoint of the EMS shall be permitted to be used in load calculations for the feeder or service." NEC - National Electrical Code 2023

*"CEC 8-106 (11) For the purposes of Rules 8-200 1) a) vi), 8-202 3) d), 8-204 1) d), 8-206 1) d), 8-208 1) d), and 8-210 c), where an electric vehicle energy management system as described in Subrule 10 monitors the consumer's service and feeders and controls the electric vehicle supply equipment loads in accordance with Rule 8-500, the demand load for the electric vehicle supply equipment shall not be required to be considered in the determination of the calculated load." * CSA – Canadian Electrical Code 2021*

Black Box Innovations has worked closely with Jurisdictions Having Authority and Inspection Agencies, enabling our products to be easily recognizable and approved by them.



Alternate locations for device installation are acceptable.

Living by its Motto,
"Technology with a Future"



Black Box Innovations is making EV charging quick, easy, and cost-effective with our Energy Management line. There is no longer a need to upgrade your electrical service and panel or do complicated load calculations.

For more information visit:

www.blackboxelectrical.com

Made in Canada



Contact Information

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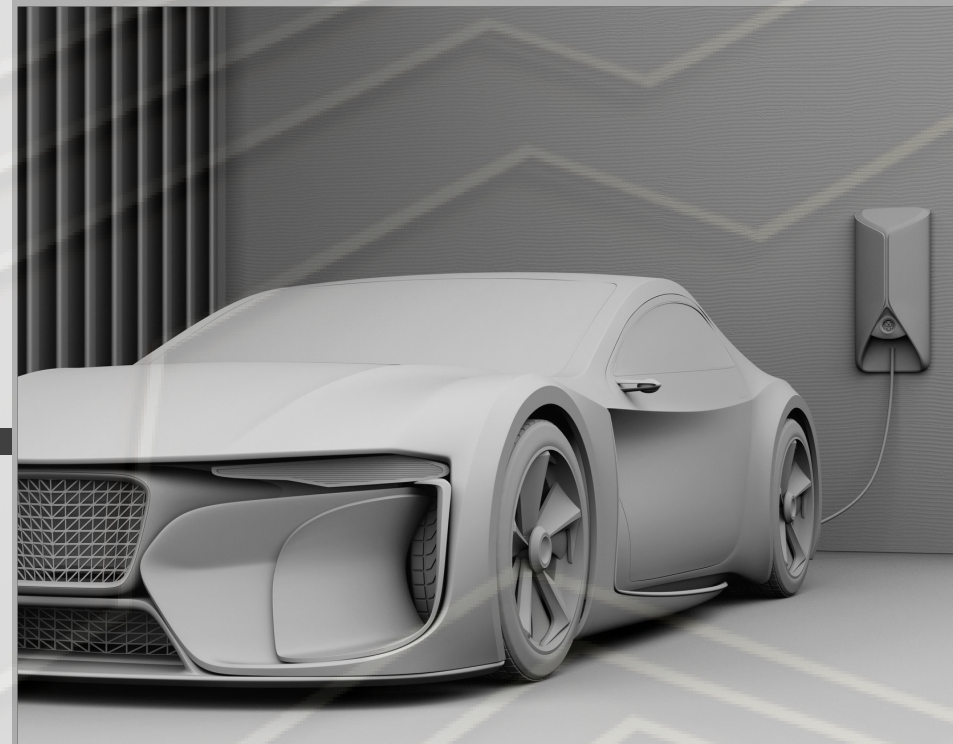
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Black Box Innovations

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ELECTRIC VEHICLE ENERGY MANAGER



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Black Box Innovations ends the need for consumers to upgrade their service and electrical panel for EV charging.

Introducing Black Box Innovations Electric Vehicle (EV) Energy Management System. This device allows an electrical service with a full load calculation, that would otherwise need an electrical service and panel upgrade, to connect an EV plug or charge point and get fast charging for a fraction of the cost. Previously, homeowners who wanted to install EV charging capability would have to spend thousands of dollars to modify their home's electrical service and panel. This new proprietary Energy Management device will eliminate electrical upgrade costs, and allow for an easy same-day installation and connection.

Black Box EV Energy Management technology also dramatically simplifies the installation of up to an 11.5KW or 48A electric vehicle charger on an existing electrical service without overloading risks. Many prefer a 48A charge rate as it allows for several advantages both now and in the future. For example, a second EV could split this charge capacity without having to install additional wiring and breakers by using a dual-head charger or a shared charging system available from many manufacturers. This higher charge rate also compensates for lower range in colder temperatures and electrical usage for battery conditioning. Lastly, with larger power-hungry vehicles coming to the market, it would be wise to consider getting the most charge capacity to future proof your installation with the use of Black Box Energy Managers instead of paying now and again later.

In addition to its compact size, a major advantage of Black Box is the fully automated computer-controlled algorithm which will automatically stop charging for the short times when appropriate electrical capacity is unavailable. This algorithm is used to filter out transients like momentary current spikes caused by motors or other electrical equipment starting. It also has a timing adjustment to minimize interruption periods. These features allow for the longest charge times at the maximum charge rates available. In turn, this prevents the short cycling of power by waiting until oscillating electrical loads have ended before initiating a charge. It will also automatically take into consideration any grid-tied solar generation in its ongoing calculation of capacity.

These products are approved for use with other devices that can be load shed when required.

The Black Box Energy Management System is also approved for general use with other electrical equipment that can be load shed (temporary power delivery interruption), as clearly indicated on the labeling for easy reference by inspections. Some examples of general loads that can be managed are: Hot Tubs, AC, Heat Pump, Steam Shower, Hot Water Heater, and more. Additional products are available for commercial or multi-family electrical load management applications and custom Energy Management devices are available upon request.

Equipped with Built-In Fail-Safe Technology

Fail-Safe de-energization is an important consideration when selecting energy management systems. Many other devices use a latching relay design that can leave the controlled device in a "powered state" indefinitely if the controller fails. This presents a serious electrical safety concern. The Black Box Energy Manager uses a switching system that de-energizes the end device and will prevent this safety issue. This is the preferred state of electrical device failure by Electrical Inspections and regulators.

Key Features:

- ◆ Fast and easy to install: 30-45 minutes
- ◆ Small size fits in tight areas around electrical panels (8" x 6" x 4")
- ◆ Longest charge times due to intelligent current monitoring
- ◆ No need to disconnect the main service wires
- ◆ No extra breakers needed
- ◆ Approved for general use or as an EVEMS by Intertek (ETL)
- ◆ Allows a 48A EV charger (60A breaker) or a 50A end device on a 100A panel. Several other settings for device ratings and service sizes provide flexibility
- ◆ Fail-Safe operation ensures safety even in the unlikely event of a controller failure by disconnecting the device being controlled
- ◆ Real-time reading of the total power consumption of the electrical panel
- ◆ Solar grid tie installation compatible
- ◆ Remote shutdown override equipped
- ◆ Backfeed capable

Products & Availability

EVEMS240-100

Electric Vehicle Energy Manager for Service Sizes 60A to 100A, and up to 60A EV Charger

&

EVEMS240-200

Electric Vehicle Energy Manager for Service Sizes 125A, 150A, 200A, and up to 60A EV Charger

***Also Available in NEMA 3R Enclosures**



Available for Immediate Purchase at your Local Electrical Wholesaler



VT-101

Handheld Operational Testing Device

This battery-operated device will enable the installing electrician or end users to plug into one of the current monitoring device slots and simulate the electrical service being loaded from 0 - 100%. This can be used to test and demonstrate the operation of the device to clients and others. It also allows for troubleshooting and performing a full maintenance cycle on the system as needed.