

EnergySync™ electric vehicle load management systems

EV load management systems are crucial for managing safe and efficient operation of a building's electrical infrastructure



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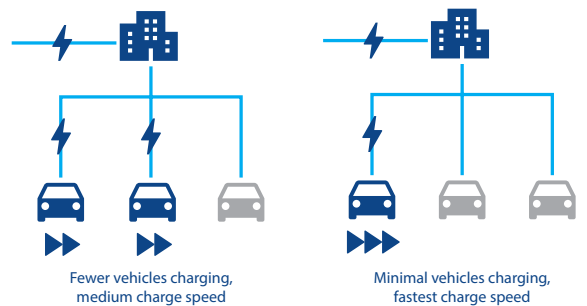
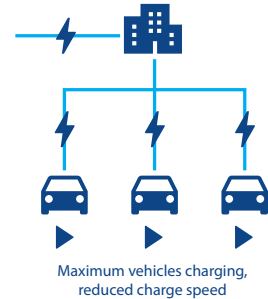


Why use an EV load management system?

The increasing demand for electric vehicle (EV) chargers in buildings has necessitated the integration of load management systems. An EV load management system dynamically regulates each charger's power consumption, comparing it against the building's electrical capacity.

In situations where the electrical supply is limited, an EV load management system restricts the power output of the EV chargers. It operates on a rapid cycle, constantly reassessing the available power data to swiftly respond to any fluctuations in demand, ensuring optimal power distribution and maintaining the building's electrical integrity.

NHP's EnergySync™ load management system limits the power drawn from the supply when it restricts the EV chargers, preventing potential power outages. It dynamically adjusts the power allocation to each charger based on total demand and available capacity, ensuring efficient and safe use of the power supply while maintaining EV charging services. This is crucial for managing the escalating demand for EV charging and for ensuring the safe and efficient operation of the building's electrical infrastructure.



How the systems works

EnergySync™ from NHP can connect to up to 24 charging points using the Open Charge Point Protocol (OCPP 1.6J). This connection can be established through either a hardwired Ethernet or Wi-Fi, forming a local network. The system also interfaces with upstream energy meters via the Modbus TCP protocol. EnergySync™ is engineered to be integrated within the electrical distribution board of the building or facility that houses the electric vehicle supply equipment.

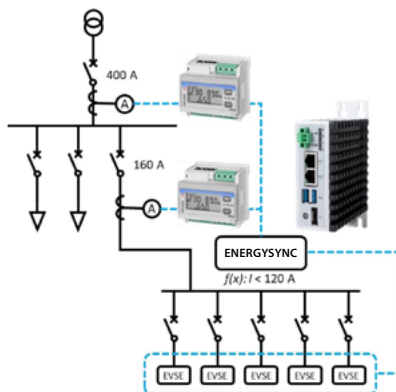
The configuration and monitoring of the EnergySync™ EV Load Management system are carried out using a web browser, offering straightforward configuration options without the need for specialised programming tools or knowledge. The EnergySync system can operate independently or in combination with other EV load management systems to manage a myriad of electric vehicle supply equipment distributed across multiple power distribution boards within a single site. For outdoor and remote sites, a 4G SIM card solution is recommended.

Modes of operation

There are two modes of operation which can be deployed with the EnergySync™ EV load management system, depending on the availability of the energy meter measurements.

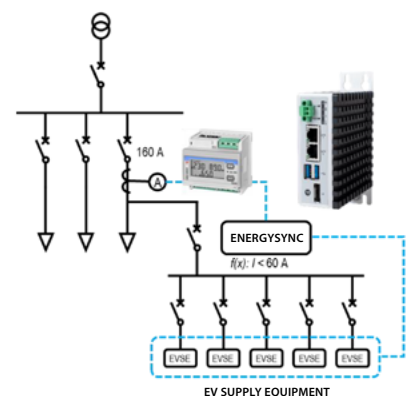
Dynamic mode

- The EnergySync™ EV load management system monitors both EV charger energy usage and building load.
- It adjusts EV charging during periods of peak demand.
- This adjustment prevents the building load from being exceeded.
- By managing demand contribution, it helps reduce infrastructure costs.



Static mode

- EnergySync™ monitors only the energy use of the EV charger.
- It adjusts the charge rates of the connected EV charger.
- This adjustment capacity of the distribution board prevents load from being exceeded.
- Charger board and the availability of charging.



Commission and monitor

EnergySync™ is configured using a web interface, which is accessed via a web browser on a computer or device connected to the same network and entering its IP address. Enter the EV load management system into the web browser address bar. The dashboard page provides a summary of the EnergySync™ system status, including the status of the electric vehicle supply equipment, energy meters and the current load management status.



Value

With a one-time cost of purchasing EnergySync™, everything required to manage 24 charge points will be at your fingertips with no subscription fee. NHP is constantly working on improvements and updates to our software. Therefore, as new features and updates become available, they can be downloaded from NHP website for free. This gives you the flexibility to choose the features that best suit your site.

For optimal performance and reliability, NHP's EnergySync™ connects to 24 EV charge points at any one time. Options are available for 6, 12 or 24 charging points which aligns perfectly with NHP EV distribution boards

as well as NCC section J 9D4 requirements. For large sites and future upgrades, EnergySync™ is easily scalable for a further 6, 12 or 24 charge points to be connected.

Charge point operator integration

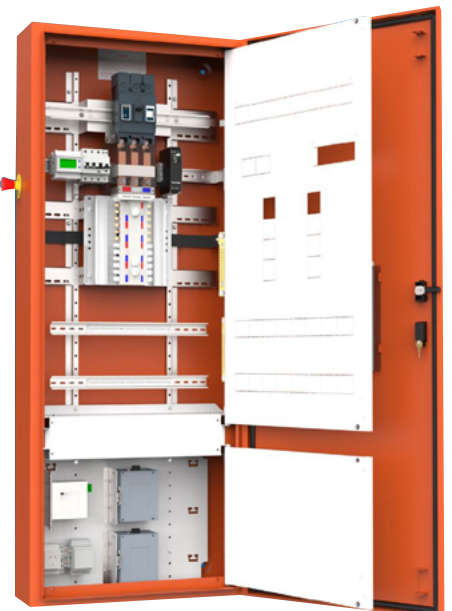
NHP works closely with local charge point operators to ensure maximum compatibility EnergySync™ and their overarching systems. This means you can connect your favourite charge point operator concurrently with NHP's EnergySync™ load management system.

Installation and parts

EnergySync™ fits perfectly into NHP's EV distribution boards for a smart, compact and clean installation.

Load management kits				
Programmed number of chargers	Available ethernet ports	Charger plug capacity	EVDB control zone	Catalogue no.
12	4	12	Single	EVLM2CP12DBA*
24	4	24	Single	EVLM2CP24DBA*
12	12	12	Double	EVLM2CP12DBB
24	24	24	Double	EVLM2CP24DBC

* External ethernet switch may be required



Which EV chargers work with NHP's EnergySync™

EnergySync™ is product agnostic, however NHP recommends Delta branded AC and DC chargers due to their exceptionally robust operation and reliability.

Product description:	Part number:
Delta AC Max 7.4/22kW Smart Cable	EIAWE22KTSE5A04
Delta AC Max 7.4/22kW Smart Socket	EIAWE22KTSH0A04
Delta DC Wallbox 25kW CCS2 4M	EVDE25E4DUM
Delta DC Wallbox 25kW CCS2+CHA 4M	EVDE25D4DUM
Delta DC Wallbox 25kW CCS2+CHA 7M	EVDE25D7DUM
Delta DC Wallbox 50kW CCS2+CCS2 4M	EIDWE50TSEE05
Delta DC City Charger 50kW CCS2+CHA	EVHE503EJCA05
Delta DC City Charger 50kW CCS2+CCS2	EVHE503EECA05
Delta DC City Charger 50kW CCS2+CHA+AC	EVHE503EMCA05
Delta DC City Charger 100kW CCS2+CCS2	EVHE104EFCA05
Delta DC City Charger 100kW CCS2+CHA+AC	EVHE104ENCA05
Delta DC City Charger 200kW CCS2+CCS2	EIDSE200TSEE01

To learn more about any of the above chargers, please visit:

Australia: nhp.com.au/ev

New Zealand: nhpnz.co.nz/ev





The NHP logo consists of the letters 'NHP' in a bold, white, sans-serif font, centered within a solid blue square.

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NHP ELECTRICAL ENGINEERING PRODUCTS

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