

AC Mini Plus Selection Guide

An AC electric vehicle charger with up to 7.4kW output, designed to suit your charging needs

ELECTRIC VEHICLE INFRASTRUCTURE



Why should you pick the Delta AC Mini Plus?

These units are optimal for workplaces, shopping centres, tourist spots, hotels/motels and for home use. The Delta AC Mini Plus provides a low-cost EV charging solution, that is easy to install.

The typical energy consumption for an electric vehicle is 1kWh per 5km driven. The AC Mini Plus provides up to 7.4kWh of energy per hour, which delivers 30-40km of range per hour plugged in. By comparison, a standard 10A power point can deliver ~10km of range per hour plugged in.

The average Australian drives 30-40kms per day, which can be recharged with 1 hour of usage of the AC mini plus. The AC Mini Plus can also deliver a full recharge to any passenger vehicle-type EV on the market overnight.

What connection type should you choose?

Figuring out which connection type will meet your needs, is an essential consideration when deciding which Delta AC Mini Plus unit(s) to purchase. The Delta AC Mini Plus is available in two connection types.

Type 2 socket outlet

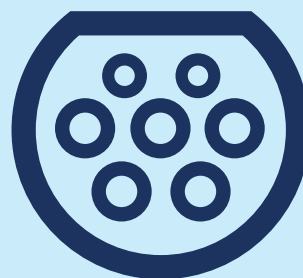
The type 2 socket is suitable for all electric vehicles. If the vehicle is not supplied with a cable, they are readily available after market from many suppliers including NHP.

Type 2 cable

In Australia, a type 2 inlet is used by all other EV manufacturers.

In Australia, all vehicles can use a type 2 socket outlet charger, provided they bring their own cable. This makes it the most practical solution where different vehicles might use the charger - if in doubt, use a type 2 socket charger!

Note: In Australia, a type 1 inlet is used by Mitsubishi and some pre-2018 EVs like the Nissan LEAF. To achieve 7.4kW single phase charging with the AC Mini, our recommendation is to use a type 2 socket charger with a type 1 to type 2 charging adapter.



Type 2 Cable (Mennekes)



Type 1 Cable (J1772)

Do you need network communication in your Delta AC Mini Plus?

Having communication onboard is useful if you need to implement a load management system to limit peak demand, track energy usage from the chargers, or connect the chargers to a cloud based management system. A Single Delta AC Mini Plus running at full load on its own will not contribute significantly to the overall load of a commercial building, but multiple units operating simultaneously may require either an electrical upgrade at the site, or a load management solution.

No communications

This option is the lowest cost and will suit the needs of smaller numbers of EV chargers, where there is no risk of exceeding the maximum available supply, and connection to smart systems is not required.

WiFi or 3G with Ethernet

A communications method is required where implementing smart load management systems or connecting the charger to charger management platforms.

The chargers can communicate using the OCPP protocol, which is the industry standard for EV charging. Please consult NHP if you'd like to discuss load management or billing for your electric vehicle charging project.

Do you need an isolator upstream of your AC mini plus?

An isolator is currently not required for installation to AS/IEC standards.

As a safe installation practice, NHP recommends one to be installed.



Recommended part number:
NL140L

What if the cable already installed is not suited to a 32 Amp load?

The Delta AC Mini Plus includes internal dip switches that allow for the unit to limit the current and provide a lower output. The installation manual shows the settings for a selectable maximum load of 6, 8, 10, 13, 16, 20, 25 or 32 Amps.

Do you need a cable bracket?

For Delta AC Max cabled models, we recommend that a cable bracket be installed. Without a cable bracket, the cable may be left exposed on the ground, where cars may run over it. For socket models, this part is not required as they do not have an inbuilt cable.



Recommended part number:
EVPEBKT01

Model codes

Model	Connector type	Communication
EVPE3220MNK	Type 2 Socket	No
EVPE3225MNK	Type 2 Cable 4 meters	No
EVPE3220MWN	Type 2 Socket	WiFi and Ethernet
EVPE3220MUN	Type 2 Socket	Ethernet and 3G

EV Charger Adapter, for use with type 2 socket outlet chargers

Model	Connector type	Rating
EVPP00105*	Type 2 to Type 2 EV Charging Adapter	32 A, Three Phase
EVPP00160	Type 1 to Type 2 EV Charging Adapter	32 A, Single Phase

*Single Phase charging can also be achieved using this adapter. Contact 1300 NHP NHP for availability.

What type of breaker should be used upstream?

NHP recommends that a 32 Amp C curve breaker be used upstream. NHP also recommends a 30mA Type A RCD be used up stream, in keeping with AS/NZS3000:2018 Appendix P.



Recommend part is a 32 Amp double module RCBO:
DSRCB3230A

As an alternative, if a double module RCBO is not suitable for the installation we recommend using a MCB and RCCB in combination.

What if charging at 30-40km of range per hour of charge isn't enough?

For most applications 30-40km of additional range per hour plugged in will be sufficient, but for cases where it is not, NHP offer a wide range of DC fast charging equipment as well. Please contact us to learn more.



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