



Ohme Home Pro

First fix electrical requirements

This document details the first fix electrical requirements, to make a residential property ready to fit the Ohme Home Pro electric vehicle charger.

If you are unsure on any information within this document, please contact Ohme's Technical Support Team for further guidance (help@ohme-ev.com, 02033751586)

Safety

All cables shall be left dead and steps shall be taken, using lock off equipment where necessary, to eliminate the risk of inadvertently energizing the circuit. All equipment shall be appropriately marked to prevent accidental energization of the circuit..

Power requirements

There must be sufficient capacity for the proposed EVCP's, with no diversity applied for the charge point (32A single phase, per unit)

Overcurrent & fault protection

Either of the two options below must be installed:

Option 1: B40 SP MCB + 30mA Type A 2 pole RCD (L+N must be switched on operation)

Option 2: B40 30mA Type A 2 pole RCBO (L+N must be switched on operation)

Surge Protection Device (SPD)

Surge Protection has to be included on every installation.

Cabling

Cabling Type (Option 1 - recommended): EV-Ultra cable, 3-core (L+N+E) + Data

Cabling Type (Option 2): SWA cable, 3-core (L+N+E), and Data cable (2-core screened 400VAC)

NOTE:

- All cabling must be installed to the current IET Wiring Regulations (BS 7671:2018, Section 722)
- The power cable must be adequately rated for the intended load (6mm² minimum, subject to voltage drop calculations).
- If multiple EVCP's are being installed, each circuit must be a dedicated radial from the RCD/ RCBO to the unit position. Cables are not to be daisy-chained between EVCP's.
- All power cables must include a CPC
- 1 meter of additional data cable is to be left at the incoming supply, to allow for the CT clamp to be connected

Termination

The Home Pro is supplied with a fixed 1metre input lead, therefore usually, the supply cable is terminated at a low height.

The supply cable shall be fed into a junction box, rated for continuous 32A use with IP rating of at least IP55. The junction box shall be sized to allow fitting of a 25mm gland. The junction box shall be installed at a height not exceeding 0.5m from the ground. Ohme recommends a Wiska 607 junction box.

There shall be at least 100mm of cabling inside the junction box to allow for the final connection.

Earthing

The Ohme Home Pro has an in-built PEN fault detection function, as described in 722.411.4.1 (iv) of the Wiring Regulations 18th Edition, to disconnect the vehicle from the live, neutral and earth conductors if the voltage is greater than 253 V and less than 207 V. The units can therefore be connected to the PME on TN-C-S single phase supplies.

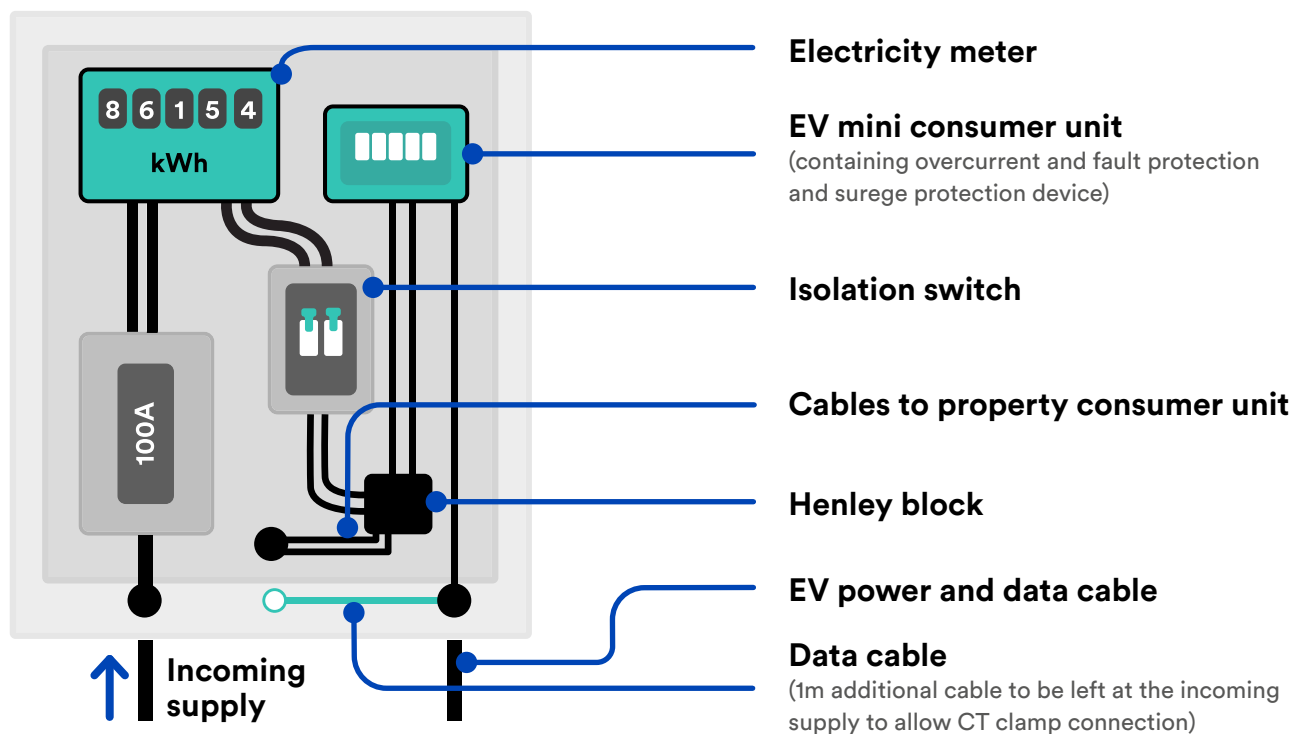
Avoidance of trip hazards & obstruction

The Ohme Home Pro shall not be installed in a position that causes unnecessary obstruction to public or private footpaths, access passages, and doorways.

Consider where the charging cable will need to be run between the charging unit and the parked vehicle. This may influence the site of the junction box.

Diagram of Meter Box Wiring

In many installation cases, the supply for the EV charger originates from the meter cabinet. This can avoid wiring inside the property. In this case, Henley Blocks are used to split the meter tails and a small secondary consumer unit (CU) is installed. The CU can be fitted inside the meter cabinet where there is sufficient space, ensuring that access to the meter or DNO equipment is not obstructed. Alternatively, the CU can be fitted below, or alongside the meter cabinet.



Where the supply is being fed from the main property CU, it is essential that any RCD or RCBO that is used to protect the circuit is at least Type A. It is not permitted to supply an EV charger circuit from a Type AC RCD. We recommend that the EV charger is supplied from a dedicated RCD or RCBO, so in the event of tripping, the house circuits are unaffected.