



HOME EV CHARGING

Home EV charging, made clear.

Understand your options, prepare for installation, and charge with confidence.



UNDERSTAND

How home charging works

A home charger supplies AC. The car turns that into DC for the battery. Public rapid chargers do the conversion outside the car, at much higher power.

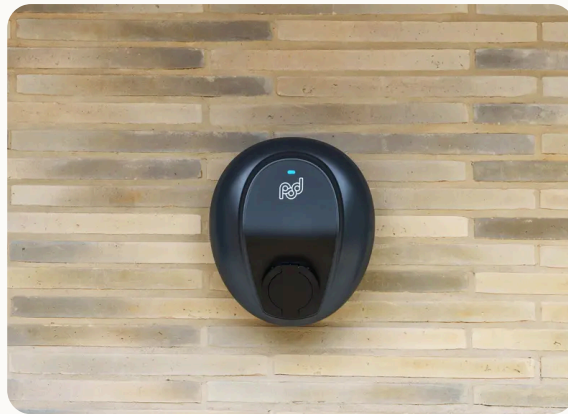
TETHERED



Cable stays on the charger

Easiest if it reaches the place you usually park.

SOCKETED



You bring the cable

Useful if cars or parking spots change. You need somewhere to store it.

Neither is automatically faster. Match the connector and the cable rating to the car.

KW

How fast

Charging power. About 7.4 kW is common on a single-phase UK supply.

KWH

How much

Energy delivered. One hour at 7.4 kW is about 7.4 kWh at the charger. Less reaches the battery.

~22 miles

illustrative range added in one hour at 7.4 kW

Assumption: about 3 miles per kWh, before weather, losses and the car's own limit. A low battery can take more than one night, especially in a short off-peak window. A schedule changes when you charge, not the charger's maximum power.

Three-pin sockets. A dedicated chargepoint is the everyday choice. A portable lead needs the vehicle instructions and an electrician's confirmation that the circuit can sustain charging. Do not use extension leads or multiway adaptors.

What three-phase charging changes

Most UK homes are single-phase. Three-phase can support 11 kW or 22 kW only when the charger and the car both allow it. A car with a lower AC limit cannot use the extra capacity. Ask the installer whether any supply work is worth it.

What V2G and V2H mean

Bidirectional charging lets a compatible car supply electricity as well as take it. Vehicle-to-grid supplies the grid. Vehicle-to-home supplies the house. Backup during a power cut needs equipment designed for that. An ordinary home charger includes neither.

INSTALLATION & SAFETY

What has to be in place

1 • Suitable equipment

A traceable model, instructions, a real warranty, and a way to hear about recalls. A badge on the box is not enough.

2 • Correct installation

Supply, cable route, protection and testing, to BS 7671 and the manufacturer's instructions.

3 • Verified handover

You see it work, you keep the certificate, and you know who to call.

You do not specify the components. You should understand what is provided, and receive evidence the work was tested. Safety measures are not dropped to fit a package.

Supply

The house must cope with charging as well as everything else. Load management may be used.

Wiring

Cable and joints suited to sustained charging and the actual route, including corners.

Shock protection

Devices that disconnect the supply on specified faults.

DC leakage

Charging can affect some ordinary protective devices. The installer accounts for that.

Earthing

Assessed for this supply, including relevant network faults.

Surges

Provision against brief voltage spikes.

Testing

The finished job is inspected. Appearance is not a test.

Your part

Do not open electrical covers. Off-street parking is the usual standard install.

How DC leakage protection works

An RCD detects specified leakage. An RCBO also covers overload and short circuit. A common EV arrangement is Type A protection plus 6 mA DC detection. Other designs use Type B. Detection inside the charger does not automatically replace every RCD. The installer checks the whole chain, including devices upstream.

Earthing and open-PEN faults

Some supplies need a precaution against a break in the network's combined earth and neutral, called an open-PEN fault. The right approach depends on that supply. Ask the installer to explain the one used at your home.

What surge protection does

A surge device limits brief spikes. That is a different job from leakage or overload protection. Ask whether what is already fitted is enough.

Where the car will sit

The cable should reach without crossing a path. A straight-line measure often misses corners. On-street parking needs the council's approved crossing. Do not trail a cable over the pavement. Renting, leasehold or shared parking needs written permission before booking. Planning permission and highway permission are separate. Grant rules are on [GOV.UK](https://www.gov.uk).

Before the installer leaves

- ☐ Start, stop and release the connector
- ☐ What the status lights mean
- ☐ The app is in your name. Do not share the password
- ☐ Schedule, charge target and immediate charge
- ☐ Where the isolation point is, and how to use it
- ☐ Cable storage, certificate and warranty registration

If the car is there, charge it once together. If not, ask how the first connection will be supported.

EVERYDAY USE

A simple charging routine

01

Park

The cable reaches, and the path stays clear.

02

Connect

Follow the order in your charger and car instructions.

03

Check

Charging has started, or a schedule is confirmed.

04

Finish

Stop the session, release the connector, and store the cable. Never force a lock.

Use the charge limit your car recommends. There is no single percentage for every EV.

Set up charging schedules

Either you choose the times, or your supplier charges to a target and a ready-by time. Use one arrangement. A second timer can block the session.

My car has not charged

If there is no smell, heat or damage: read the messages, seat both connectors, check the schedule and target, then look for a second timer.

Schedules, boost and a delayed start

Check the setup again after a new car, app or tariff. Some chargers wait before they start. That wait is not automatically a fault. For a charge now, use the documented boost. Do not bypass protection. Boost may fall outside your cheaper hours.

The connector is locked, or charging is slower

Use the documented release. Do not pull the connector or take it apart. A slower rate can be the car, the schedule, or load management. Repeated unexplained stops need a look. Follow the manufacturer's checks, then contact support.

What happens if the charger loses internet

Loss of Wi-Fi or mobile signal does not always stop charging. App control and off-peak schedules may change. Do not assume cheap-rate charging continues. Install updates only through the manufacturer's process, and keep recovery details secure.

Looking after the cable

Use the holder or cover. Keep the cable clear of water, wheels and doors, without tight bends. Look for cuts, cracked casing and damaged pins. Do not put tools or fingers in the connector, open the charger, or repair it. Outdoor-rated equipment is not safe to use if it is damaged or has been flooded.

Stop and get help

Burning smell, smoke, scorching, melting, a damaged cable or case, unusual heat, sparking, flooding, impact, or a breaker that keeps tripping.

Do not touch damaged, hot or flood-affected equipment. Do not keep resetting a tripping device. Use the isolation point only if you know how and can reach it safely.

Fire, smoke or immediate danger: move away and call emergency services.

Keep these

Model and serial number, installation date, electrical certificate, Building Regulations record where it applies, both warranties, and app recovery details. The product warranty and the installation warranty cover different things.

What would you like to do?

Choose a charger, ask about your own installation, or contact support.

Choose a home charger

Ask about your installation

Contact support

Current can explain this guide and arrange a follow-up. Chat is not design approval, fault clearance or emergency help. For an electrical fault, use qualified support. For immediate danger, call emergency services. Email customer.service@pretiumsynergy.co.uk with the model, the message on screen, and a photo taken from a safe place.

▼ Sources

- [Energy Saving Trust: charging electric vehicles](#)
- [Electrical Safety First: electric vehicle safety](#)
- [GOV.UK chargepoint grants](#)
- [Pretium installation terms, section 9.1](#)