

EV Solar Powered Covered Car Parking Station



SUN  SYNK[®]

 badger^{ev}
LEADING THE CHARGE

PDQ Global, in collaboration with our Hong Kong and China building manufactures, and solar charging solutions partners, **Sunsynk** (www.sunsynk.org) and our domestic & commercial EV charging partners **BPE EMEAA** (www.badger-ev.com), are pleased to bring to the market our solar powered covered car parking charging stations.

These offer the perfect solution to multi charging requirements for NGOs with large on-site employees, customers visiting the local supermarket, hospital car parks, overnight charging for fleets of new, eco- friendly delivery vehicles, and in many other daily situations, including home use. In many cases, this solution can be erected over existing car park sites, with sizes of the overall structure based on required charging usage.

Cost effective and these bring shaded areas in both very hot climates and protection in inclement weather conditions.

The latest materials are used to construct the main steel framed structure, with a series of shallow angled roofs, where multi solar panels are placed allowing the most efficient capturing of the suns rays to charge and recharge the system. Each car parking bay has its own individual supply stanchion, fitted with double EV charging points.

The PDQ Global - **Solar Powered Covered Car Parking Charging Station** - is the most effective large scale solution to EV charging, utilising in many cases already existing sites, bringing an“electric idea” to the market!

Opportunities

170,000 EV Registered per year (UK)

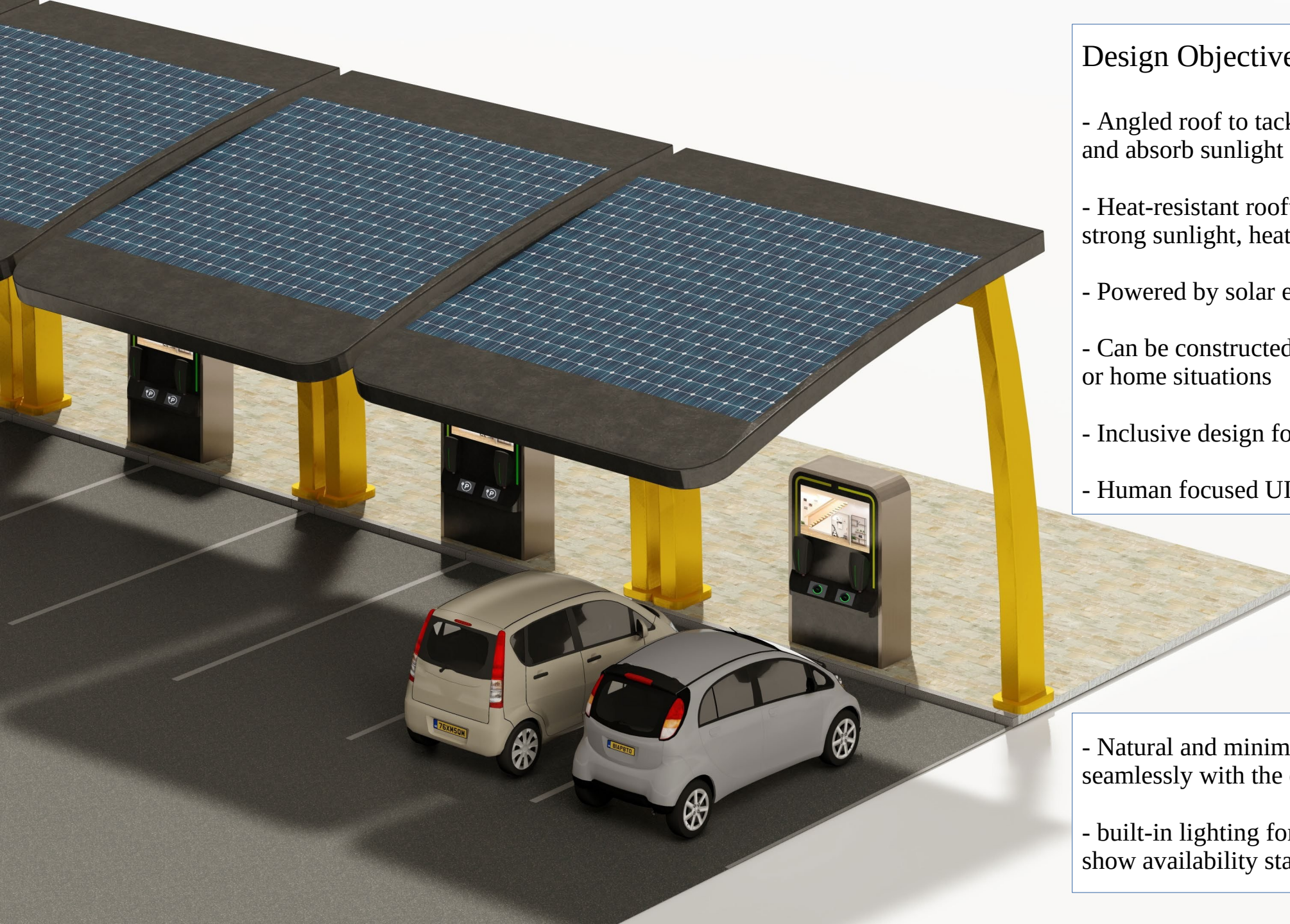
500,000 EV in total (UK)

Only 40,000 EV Charge points in
4 million parking spaces

15 EV drivers could therefore compete
for each available charging point

Full new EV sales by 2030





Design Objectives

- Angled roof to tackle wet weather, bird control and absorb sunlight
- Heat-resistant rooftop, allowing protection from strong sunlight, heat and extreme weather
- Powered by solar energy
- Can be constructed and used in both commercial or home situations
- Inclusive design for mobility-impaired users
- Human focused UI and UX design

- Natural and minimalistic design to integrate seamlessly with the environment
- built-in lighting for night time usage and to show availability status of the charging points

Applications



Lighting and inclusive design



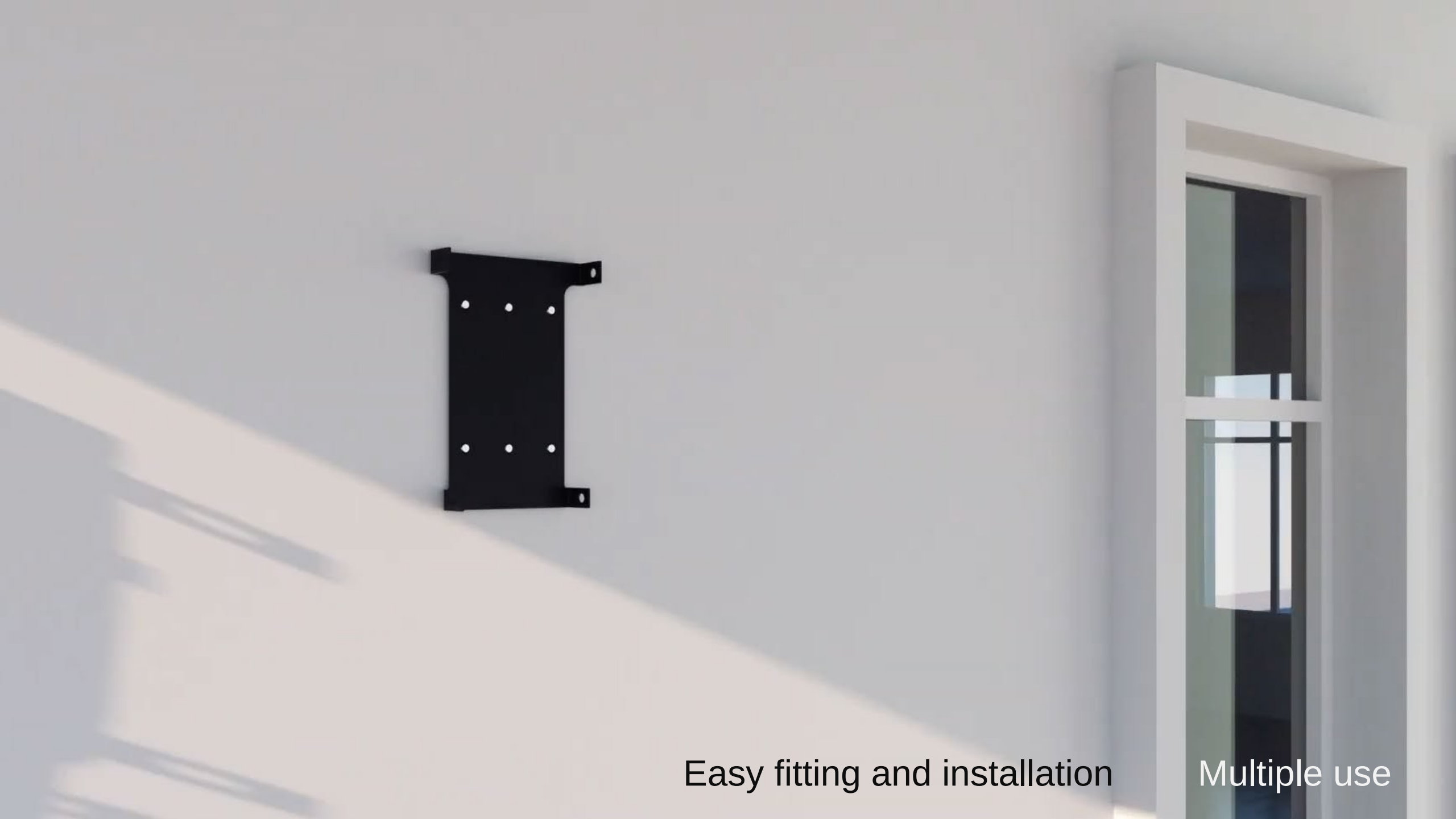
Protection from bad weather



Domestic use



BPE Charger Amstel 7 / 22kW
Charging time: 3-4 hrs, 90/hour of charge



Easy fitting and installation

Multiple use



BPE ChargeDepot – Amstel 7.4kW

The BPE Amstel 7.4kW is a Single Phase AC charger which is adjustable from 6 – 32A. The Amstel 7.4kW is available with a Type 2 socket or Type 2 tethered cable. The EV Charger comes with a separate Dynamic Load Balancing (DLB) box which is used to curtail the power output of the unit to prevent the home's main breaker from tripping and causing a blackout. Built-in Type A RCD offering 30mA AC protection and a separate 6mA DC leakage detection to meet international safety requirements. The unit also comes with an integrated PEN Fault detection device which eliminates the need for an earth rod to be installed on site. Located on the front of the unit there is a large LED light which indicates the current charging state as well as an emergency shutoff button located on the side.

Amstel 7.4kW Main Benefits:

- Adjustable from 6 – 32A (7.4kW)
- Operating temperature: -25°C to +55°C
- Five RFID cards included
- Dynamic Load Balancing up to 0 – 99A
- Type 2 Tethered or Socket variants available
- Compatible with Solar PV charging
- RFID or Auto-start features
- Smart Grid functionality with App control
- Integrated emergency shutdown button
- Integrated 30mA Type A RCD with separate 6mA DC detection device
- Integrated PEN Fault Detection Device

Dynamic Load Balancing

Dynamic Load Balancing regulates the charging power to harmonise with other household loads to avoid current overloading the main breaker. This is achieved by reducing the current draw of the EV charger so the system operates smoothly below the house's limit. This optimises home power usage and avoids tripping the breaker which would cause a power outage.

Amstel 7.4kW Specification

Power Input

Input Rating: 230Vac \pm 10% Single Phase

Wiring: L+N+PE

Frequency: 50/60Hz

Power Output

Output Power: 7.4kW max

Output Current: Adjustable from 6 – 32A

Charging Interface: Type 2 tethered or socket only

User Interface & Control

Status Indicator: RGB LED

Emergency Shutdown: External integrated isolator switch

Card Reader: ISO/IEC 14443 A/B Mifare RFID reader

Operating Features

Operating Modes: Adjustable DIP switches for RFID or auto-start modes

Dynamic Load Balancing: External adjustable DLB function up to 99A

Communication

Network Interface: Wi-Fi & Bluetooth

Environmental

Operating Temperature: -25°C to 55°C

Storing Temperature: -40°C to 70°C

Humidity: 0% to 95% (no condensation)

Altitude: <3000 m

Mechanical

Ingress Protection: IP65 (tethered) and IP55 (Socket)

Cooling: Passive cooling

Dimensions (WxHxD): 140 x 390 x 205mm

Weight: 6.2kg

Charging Cable Length (tethered only): 6m

Installation: Wall-mounted or pole-mounted

Regulation

Certificate: CE, UKCA, OZEV Approved

Warranty:

Warranty: 3 years

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