

EVC Power Solutions guide to EV Switchgear

EVCPOWER
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LVPOWER
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About Us

EVC Power Solutions offer a wide range of pre built bespoke products to provide power and protection for EV chargers. Our range enables; the distribution of power, over current and earth leakage protection. Each unit is available with full metering and monitoring solutions, ensuring boards are configured to your needs.

Services & Support

Consultative Approach

We have 50+ years experience in the Electrical Engineering industry and always offer a full consultative approach. We are here to provide guidance, value added solutions and technical submissions.

Quality Build

Our documented quality procedure ensures rigorous control of design, including; in-process inspection, component and assembly traceability, final inspection, testing and product certification.

Bespoke Design

No design is too big or small for EVC Power Solutions and we pride ourselves on our complete system design and application service. A member of the Project team will always be available to help and advise on any project.

Delivery AND Installation

We don't believe in "curb side deliveries", that's why each one of our panels can be transported, delivered, offloaded and installed by our engineers at a time convenient for our clients.

Value Engineering

Our project team are always looking for added value options, so when required a specification will be evaluated and analysed thoroughly to offer clients the best solution.

Maintenance

We have a robust quality control procedure to guarantee the conformity of each EV board to ensure everything is manufactured to the latest International Standards.

Transition-Over-Time Approach

Key Facts

2023



As announced by the Prime Minister in 2023, the sale of new petrol and diesel cars will be phased out by 2035, seeing 8% of new cars and 70% of new vans sold in Great Britain with zero emissions by 2030.

Electric vehicle technology, vehicles and infrastructure have developed rapidly in recent years and the transition to EVs is a crucial step towards achieving the UK's net zero target.



2023



There has been an increase in consumer demand along with greater availability of electric vehicles, with an estimated 1,000,000* fully electric cars on the UK roads, a further 645,000* hybrids and around 60,000* electric vans by early 2024.



2024

At the end of March 2024, there were 59,590* EV charging points in the UK, across 32,322* locations. This represents a 47% increase in the total number of charging devices within a 12 month period.

With this in mind, the UK's EV charging infrastructure is rapidly growing and changing shape to meet the needs of the EV drivers.



2027

The UK government has set an ambitious target of installing 300,000 EV charging points by 2027.



The commitment is to ensure ALL new vehicles are fully electric by 2035. This transition-over-time approach will support manufacturers, families and the UK infrastructure in making the switch to electric.

2035



2030



By 2030, it is estimated that there will be over 9 million Electric Vehicles on British roads.

*Source: ZapMap

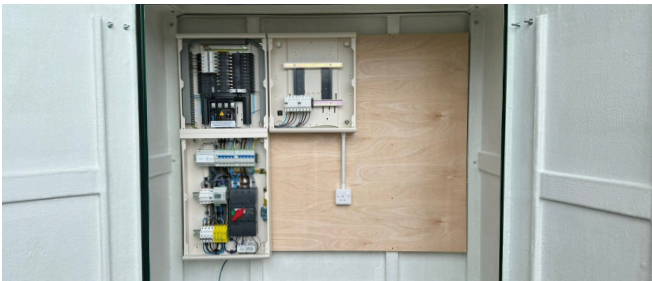
Bespoke Switchgear Solutions

EVC Power Solutions understand the substantial requirements to satisfy growing demand and the need for a robust public charging infrastructure to achieve the Governments targets, which is why we offer a wide range of products to suit your needs. Whether you have restricted space or require advanced monitoring, all boards can be fully customised and assembled in our UK based manufacturing facility; ensuring the EV charging network is efficient, effective and tailored to meet the demands of drivers across the country.

200A 3P Acti9P

Matt:3 O:PEN Complete with:

- Type 2 surge protection
- Mid multifunction metering
- 2off 32A 3P MCB
- 2off 40A 4P 30mA Type 5i RCDS



Types of EV Charge points



Workplaces



Leisure centres



Shopping centres



Public carparks



Petrol stations



Hotels



Manufacturing facilities

Smart, Cost Effective Expansion is the Key

The UK's EV charging infrastructure requires a stable and sufficient power supply, therefore, cost effective expansion is pivotal. Intelligent "smart charging" systems can optimise electricity consumption, alleviate peak loads, and safeguard grid stability.

However, the issue with "smart chargers" that are currently available is that you have an expensive commodity sitting outside, which is connected to "the cloud", making them susceptible to damage, vandalism and increasingly, cyber attacks.

To remedy this, EVC Power Solutions have partnered with MATT:E who have developed a unique solution which manages power, security and safety to an unprecedented level.

The Matt:e solution has 2 parts: part 1 is a "smart socket" which sits outside the building and part 2 "the brains" of the system sits in a secure location, called the "hub". This hub can control over 200 smart sockets, allowing the customer to simply and efficiently expand when required.

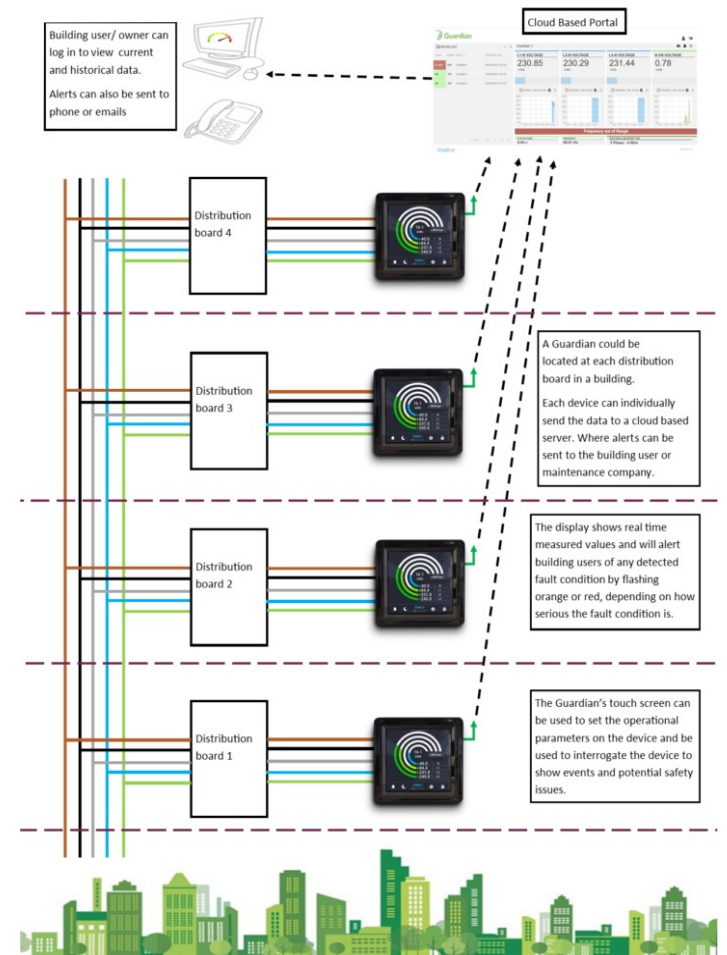
The hub will dynamically balance the power given to all chargers, ensuring the safety and integrity of the buildings electricity supply, thanks to The Guardian, a revolution in electric supply!

Incorporating the patented O-PEN[®] technology, The Guardian, once simply installed next to your distribution boards, will continually monitor the electrical infrastructure of a building, helping to detect fault and safely isolate or warn the building owner of any potential faults.

Including:

- Loss of Neutral
- Broken PEN conductor, TN-C-S supply
- Voltage on protective earth / ground conductors
- High and low line voltages
- High and low frequency

The Guardian can also connect to a cloud based portal where building owners and maintenance companies can remotely view the device. The device can also send alerts via SMS and email, providing a warning before catastrophic failure occurs.



Incoming 100A 4p isolator

EVC Protected 100A matte O-PEN Protected distribution boards are available in 3 different options:

Unpopulated



All outgoing ways remain empty for client population.

MCB Populated



All outgoing ways fully populated with 40A 3P Type B MCB (bespoke population available on request)

Fully Populated



All outgoing ways fully populated with 40A 3P Type B MCB and 40A 4P Type-Si RCD (bespoke population available on request)

Type 2 Surge protection included as standard – Type 1 available on request. Multi-Function meter ready and available on request.

Type 2 surge protection included. MID metering available on request.

Unpopulated	Outgoing Ways 3P	Description
LV-PEV-1-04-UP	4 off 3P Maximum 63A	4Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-06-UP	6 off 3P Maximum 63A	6 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-08-UP	8 off 3P Maximum 63A	8 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-12-UP	12 off 3P Maximum 63A	12 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-16-UP	16 off 3P Maximum 63A	16 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-18-UP	18 off 3P Maximum 63A	18 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
LV-PEV-1-24-UP	24 off 3P Maximum 63A	24 Way - 100A 3PN Unpopulated - EVC O-PEN Protected Distribution Board

MCB - Populated	Outgoing Ways 3P	Description
LV-PEV-1-04-MP	4 off 40A 3P Type B MCBs Included	4Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-06-MP	6 off 40A 3P Type B MCBs Included	6Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-08-MP	8 off 40A 3P Type B MCBs Included	8Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-12-MP	12 off 40A 3P Type B MCBs Included	12Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-16-MP	16 off 40A 3P Type B MCBs Included	16Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-18-MP	18 off 40A 3P Type B MCBs Included	18Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-24-MP	24 off 40A 3P Type B MCBs Included	24Way - 100A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board

MCB/RCD - Populated	Outgoing Ways 3P	Description
LV-PEV-1-04-FP	4 off 40A 3P Type B MCBs + 4 off 40A 4P 30mA Type-Si RCD Included	4Way - 100A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-06-FP	6 off 40A 3P Type B MCBs + 6 off 40A 4P 30mA Type-Si RCD Included	6Way - 100A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-1-08-FP	8 off 40A 3P Type B MCBs + 8 off 40A 4P 30mA Type-Si RCD Included	8Way - 100A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
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LV-PEV-1-16-FP	16 off 40A 3P Type B MCBs + 16 off 40A 4P 30mA Type-Si RCD Included	16Way - 100A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
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LV-PEV-1-24-FP	24 off 40A 3P Type B MCBs + 24 off 40A 4P 30mA Type-Si RCD Included	24Way - 100A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board

Incoming 200A 4p isolator

EVC Protected 200A matt:e O-PEN Protected distribution boards are available in 3 different options:

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All outgoing ways fully populated with 40A 3P Type B MCB (bespoke population available on request)

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All outgoing ways fully populated with 40A 3P Type B MCB and 40A 4P Type-Si RCD (bespoke population available on request)

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LV-PEV-2-08-UP	8 off 3P Maximum 63A	8 Way - 200A 3PN Unpopulated - EVC O-PEN Protected Distribution Board
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LV-PEV-2-24-MP	24 off 40A 3P Type B MCBs Included	24Way - 200A 3PN MCB-Populated - EVC O-PEN Protected Distribution Board

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LV-PEV-2-06-MRP	6 off 40A 3P Type B MCBs + 6 off 40A 4P 30mA Type-Si RCD Included	6Way - 200A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
LV-PEV-2-08-MRP	8 off 40A 3P Type B MCBs + 8 off 40A 4P 30mA Type-Si RCD Included	8Way - 200A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board
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LV-PEV-2-24-MRP	24 off 40A 3P Type B MCBs + 24 off 40A 4P 30mA Type-Si RCD Included	24Way - 200A 3PN FULL-Populated - EVC O-PEN Protected Distribution Board



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