

Charge-M8 PDB

Power Distribution Board



Specification and Installation Manual

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Copyright

This manual along with all its contents is the intellectual property of Charge-M8 Limited. Any unauthorised alteration, modification, reproduction, or translation of this manual is strictly prohibited without the prior explicit consent of Charge-M8 Limited. Charge-M8 reserves the right to modify or update this manual without prior notice as part of our continuous improvement policy and product development process.

Pre-Installation Notes

Thank you for purchasing the Charge-M8 Power Distribution Board®.

Please read these instructions carefully before installation and retain them for future reference. The Charge-M8 PDB is a high-current passive power distribution board intended exclusively for professional use within EV charging infrastructure. Installation must be carried out by qualified engineers.

The board is intended for use within load-curtailed EV charging circuits. Its stated design rating is 76A continuous, while the manufacturer recommends a continuous load of 63A. The board rating must not be treated as the current rating of the complete installation.

Safe operation depends on adherence to the manufacturer's installation requirements, component specifications and enclosure protection requirements. Obtain the approved wiring diagram, mounting instructions, terminal specifications and enclosure requirements before proceeding with installation.

If the board or any supplied components are damaged, do not proceed with installation. Contact Charge-M8 for technical support.

WARRANTY

Charge-M8 Limited provide a 3-year manufacturer's warranty from the date of purchase, conditional upon the installation being compliant with these guidelines and all local regulations, subject to installation in line with the manufacturer's instructions.

Technical support can be obtained by contacting the customer team on sales@charge-m8.com or calling +44 333 242 3328



Signed on behalf of Charge-M8 Limited:

J Smith

Name: Julian Smith

Position: Managing Director

Date: 5th October 2026

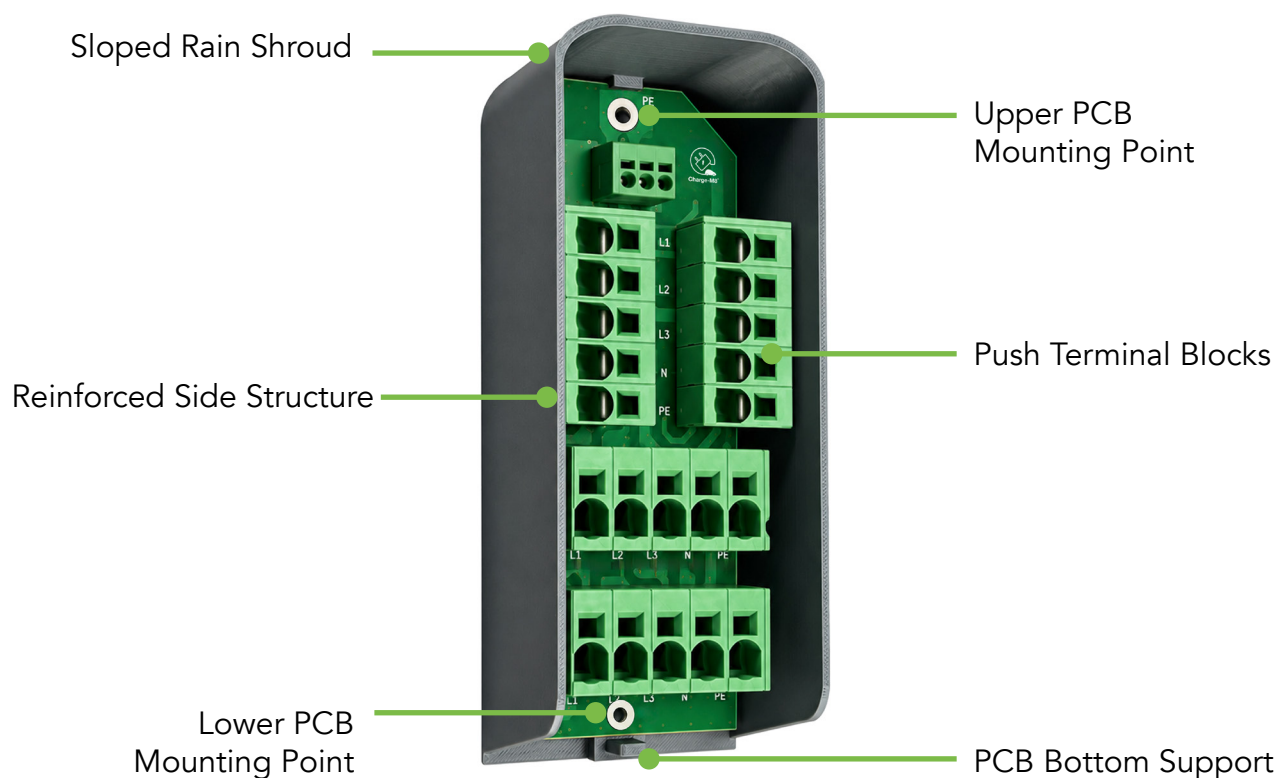
1. Introduction

The Charge-M8 Power Distribution Board® is a passive power distribution component for use within EV charging infrastructure.

It provides a connection point for power distribution and contains no active electronic switching components.

The post, charger, foundation and electrical supply must be specified as a compatible installation. Charger mounting arrangements and electrical connections must follow the approved drawings for the supplied EV Post configuration or alternative EV charger post brand.

1.1 Product Appearance



1.2 Box Contents

1. PDB Protection Shroud
2. PCB Board
3. 2 x M6 Fixing Nuts

1.3 Product Specification

POWER DISTRIBUTION BOARD	
Product name	Charge-M8 Power Distribution Board
Description	High-Current Passive Power Distribution Board
Part number	470-5076
Model/type	PDB-400V-76A-V1
Supply specification	400V AC, three-phase
Board design rating	76A continuous
Manufacturer-recommended continuous load	63A
Intended application	Load-curtailed EV charging circuits
Cable reference in the declaration	16mm ² , five-core cable

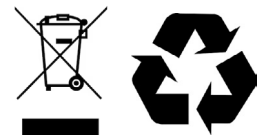
The UL 94 V-0 rating refers to the board laminate; it is not a fire rating for the complete installation.

The reference to 16mm² five-core cable does not establish a permitted conductor-size range or replace the installer's cable design assessment. The permitted operating load must account for all components and installation conditions. Charge-M8 recommend the use of ferrules for all connection terminations.

1.4 Storage, Transportation & Recycling

Keep the board protected from moisture, contamination and mechanical damage before installation. During transportation, secure it to prevent movement and impact damage. Inspect the board after delivery and before installation.

Recycle packaging where suitable facilities exist. At the end of the product's service life, use an appropriate disposal or recycling route for electrical components.



2. Installation

2.1 Before You Start

Installation must be carried out by qualified engineers. Before commencing work, confirm that:

- The supplied board is the correct part for the installation and is undamaged.
- The electrical supply, connected equipment and protective arrangements are suitable for the installation.
- The approved wiring diagram and product-specific mounting and terminal instructions are available.
- The enclosure and cable-entry arrangements meet the manufacturer's requirements.
- The circuit design accounts for the manufacturer's recommended continuous load of 63A.
- The required load-curtaiment arrangements have been specified.

2.2 Mechanical Installation

Install the board using the mounting arrangement specified by Charge-M8 for the supplied configuration. Protect the board and its connections from mechanical damage during installation. The supplied documentation defines mounting positions for use with the Charge-M8 EV Post. Fixings, clearances & fixing torque values for alternative EV posts/enclosures should be checked with the relevant manufacturer.

2.3 Electrical Installation

Isolate the electrical supply and verify that it is safe to work on before accessing or connecting electrical components.

Connect the board in accordance with the approved wiring diagram and confirmed terminal identification. Cable selection, termination and protective arrangements must be suitable for the circuit and installation conditions. Charge-M8 recommend the use of ferrules.

The manufacturer recommends a continuous load of 63A. Do not use the stated 76A design rating as permission to operate the complete installation at 76A.

The supplied documentation does not define terminal assignments, permitted conductor sizes, stripping lengths, terminal tightening torques, protective earth connections or specific circuit protection. Obtain these details from Charge-M8 before making electrical connections.

The PDB contains no inherent active electronic switching components. The required load-curtaiment arrangements must therefore be specified as part of the charging installation.

3. INSPECTION AND COMMISSIONING

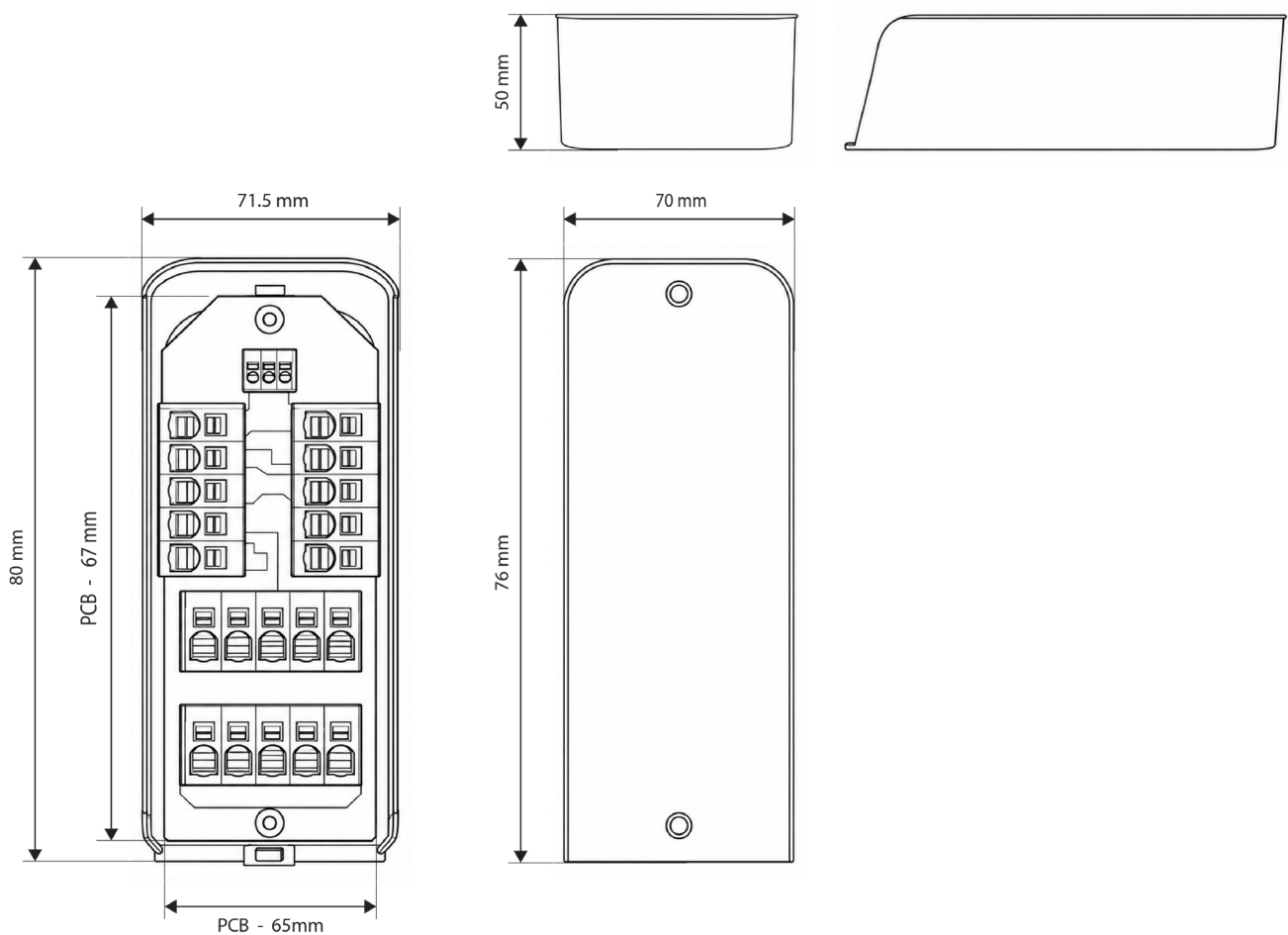
Before energising the installation, the qualified installer must complete the inspection and testing required for the installation and connected equipment.

Confirm that the board mounting and electrical terminations comply with the approved product instructions, that cables are protected and that the enclosure and cable entries are correctly secured.

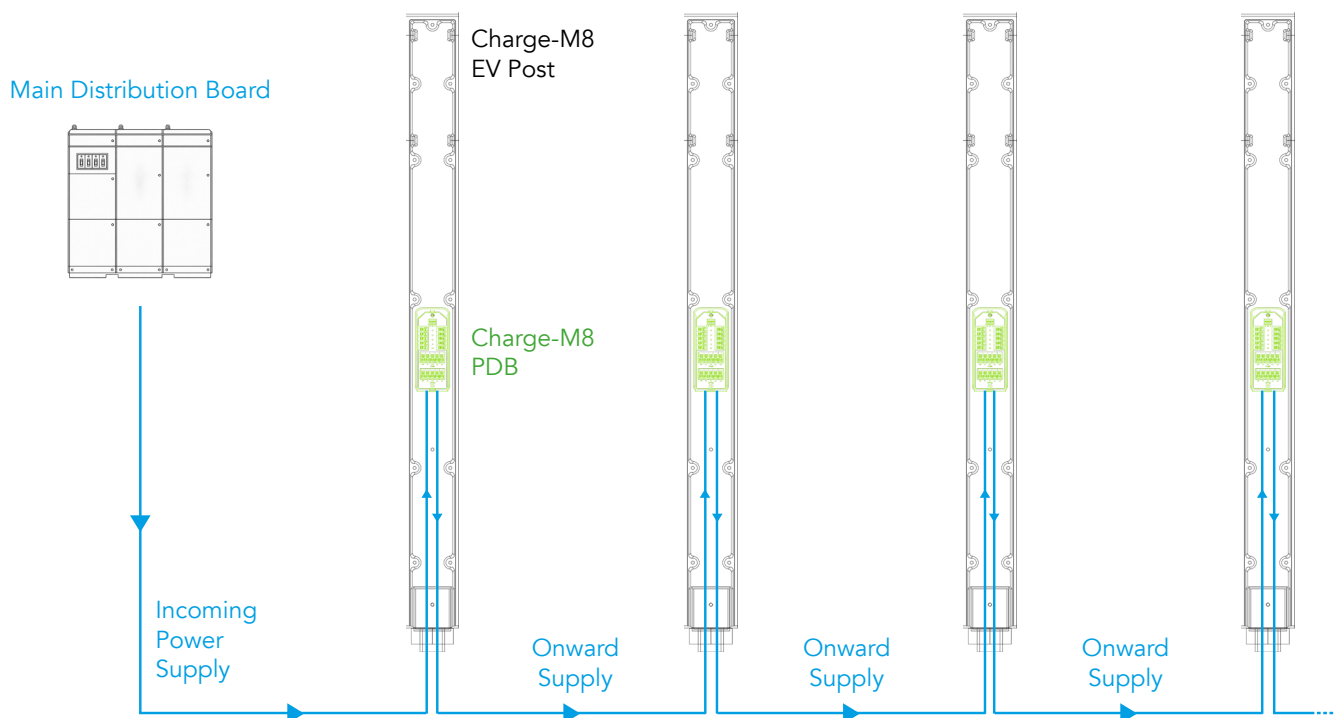
Verify the protective arrangements and load-curtailement settings before placing the installation into service. Record the inspection and test results and provide the relevant documentation to the site operator.

4. Technical Information

4.1 Dimensional Drawing (Unit: mm)



4.2 Loop-in, loop-out power distribution for multi-charger EV installations



EU DECLARATION OF CONFORMITY

CM8/470-5076/260916



1. Product Model / Identification: 470-5076

Product Name: EV POST Power Distribution Board (High-Current Passive Power Distribution Board) Model/Type: PDB-400V-76A-V1

2. Manufacturer Details:

- Company Name: Charge-M8 Limited
- Address: Mirwell Business Centre, Carrington Lane, Sale, Manchester M33 5NL United Kingdom

3. Object of the Declaration:

Description: 400V AC Three-Phase, 76A Continuous Current Passive Power Distribution Board: utilising 5 oz (175 µm) heavy copper laminate; intended exclusively for professional use; installation into Electric Vehicle (EV) charging infrastructure by qualified engineers; for use within load curtailed EV charging circuits, typically running at 63-68A with 16mm² 5-core cable.

4. Statement of Compliance:

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Low Voltage Directive (LVD) 2014/35/EU

Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU

5. References to Harmonised Standards:

References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

- EN 60664-1:2020 - Insulation coordination for equipment within low-voltage systems (Clearance, creepage, and solid insulation assessments for 400V AC).
- EN IEC 63000:2018 - Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances (RoHS).
- IPC-2152 - Standard for Determining Current Carrying Capacity in Printed Board Design (Verified for 5 oz copper at 76A continuous)

6. Additional Information:

This product is a passive distribution board containing no inherent active electronic switching components or components vulnerable to electromagnetic disturbances. Therefore, it is considered electromagnetically benign and falls outside the operational scope of formal testing requirements under the Electromagnetic Compatibility (EMC) Directive 2014/30/EU.

Safe operation relies strictly on adherence to the manufacturer's installation instructions and specifications and enclosure IP ratings detailed in the manufacturer's technical installation manual. Whilst the product design and components are rated at 76A continuous load, the manufacturer recommends a lower continuous load rating of 63A. In practice, given real-world EV charging curves and cable limitations the load is unlikely to exceed 63A

7. Signed for and on behalf of:

Place of Issue: Manchester, United Kingdom

Date of Issue: 16th September 2026

Name: Julian Smith

Function/Title: Director

Signature: 

Signature: _____



DECLARATION OF ROHS COMPLIANCE



- Product Name / Description: EV POST Power Distribution Board (High-Current Passive Power Distribution Board)
- Model/Type: PDB-400V-76A-V1
Part Number: 470-5076

We hereby declare that the Assembled Printed Circuit Board (PCBA) referenced above complies with Directive 2011/65/EU (RoHS 2) and its amendment Directive (EU) 2015/863 (RoHS 3) of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Compliance is verified at the homogeneous material level for all components, the bare PCB (including its ENIG finish), and all assembly materials (solder paste, fluxes, and adhesives) used in production.

This product does not contain any of the restricted substances above the specified maximum concentration values, unless allowed by a valid exemption:

- Lead (Pb) (< 0.1%)
- Mercury (Hg) (< 0.1%)
- Cadmium (Cd) (< 0.01%)
- Hexavalent Chromium (Cr VI) (< 0.1%)
- Polybrominated Biphenyls (PBB) (< 0.1%)
- Polybrominated Diphenyl Ethers (PBDE) (< 0.1%)
- Bis(2-ethylhexyl) phthalate (DEHP) (< 0.1%)
- Butyl benzyl phthalate (BBP) (< 0.1%)
- Dibutyl phthalate (DBP) (< 0.1%)
- Diisobutyl phthalate (DIBP) (< 0.1%)

This declaration is issued under the sole responsibility of the manufacturer.

Manufacturer Name: Charge-M8 Limited

Address: Mirwell Business Centre, Carrington Lane, Sale, Manchester M33 5NL United Kingdom

Authorized Signatory:

Name: Julian Smith

Title: Director

Date: 16th September 2026

Signature:  _____



