

Installation Guide

MODE 2 ELECTRIC VEHICLE CHARGER

- 2.3kW CHARGING VIA A UK 3-PIN SOCKET
- FOR USE WITH MODE 2 EV CHARGING CABLES (UK 3 PIN TO TYPE 1 OR TYPE 2)
- 16A, A-TYPE RCBO FOR ADDED SAFETY PROTECTION FOR PROLONGED CHARGING
- WEATHER AND DUST PROOF TO IP66 RATING



SAFETY WARNING

For your safety, this product must be installed in accordance with local Building Regulations. If in any doubt, or where required by the law, consult a competent person who is registered with an electrical self-certification scheme. Further information is available online or from your Local Authority. Please read carefully and use in accordance with these safety wiring instructions. Before commencing any electrical work ensure supply is switched off at the mains. Either by switching off the consumer unit or by removing the appropriate fuse. Wiring should be in accordance with the latest edition of IET regulations (BS 7671). To prevent fire hazard always use cable of the correct rating, size & type for the application.

Any bare earth wires must be covered with the appropriate green/yellow sleeving. Warning do not exceed the load rating of this device as stated on rear of the product.

MAINTENANCE

To keep the finish of this product, wipe over with a soft dry cloth periodically.

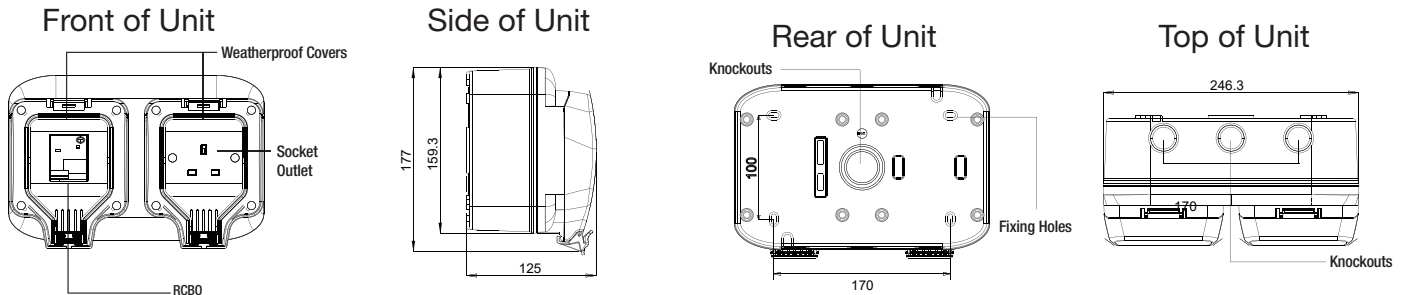
ENVIRONMENTAL PROTECTION

Electrical products should not be disposed of with your general household waste. Some chemicals contained within electrical products can be harmful to health and the environment. Only dispose of the items in separate collection schemes which can cater for recovery and recycling of materials contained within. Your co-operation is vital to ensure the protection of the environment.



TECHNICAL HELPLINE
+44 (0)3300 249 279

Line Drawings



Installation Instructions:

It is recommended that this Mode 2 Charging Unit is installed by a competent electrician in accordance with BS7671 and the IET Code of Practice
Ensure Safety Instructions Have Been Read First. Drain hole positions are provided in relation to conduit positions. Note position of earth terminal.

1. The unit should be mounted on a clean, rigid vertical surface suitable to accept screw type fixings. Surface should be reasonably flat as unevenness could cause product damage or affect operation.

2. For cable entry, decide if conduit is being used & entry positions. For side, top or rear entry the lowermost drain hole position MUST be drilled out using 5mm drill. ONLY ONE drain hole position must be drilled. For bottom entry a drain hole MUST NOT be drilled in rear box, but a drain hole MUST be drilled at lowermost point of conduit run. For rear entry, cut or drill out rear knock-out. For extra sealing protection, a channel around knock-out is provided to accept a bead of sealant (not supplied) when fixing to mounting surface.

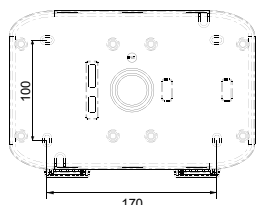
NOTE

The drilling out of a drain hole or removing rear knock-out will reduce the IP rating of the product.

3. Mounting the rear box using No.8 screws in all four positions on the fixings shown. The fixing holes are slotted to enable some rotation adjustment if required. Fit supplied bungs over all used fixing screw positions to seal aperture recesses.

4. Determine final lengths of cables and cut to suit. Strip outer insulation as required and then trim insulation on individual wires 10 -12mm to expose conductor ends.

5. The charging unit is pre-wired. Connect the incoming cable to the corresponding RCBO terminals and earth terminal. Connect the incoming cable to corresponding terminal block and RCBO.



(Note: charging unit is pre-wired)

Connect LIVE wire to RCBO LIVE (1/2) terminal
Connect NEUTRAL wire to RCBO NEUTRAL (N) terminal
Connect EARTH wire to the earth terminal block
Note - the colours of the wires will be dependant on the type of cable used.

6. All earth connections MUST be made & continuity maintained. Earthing provision has been provided to suit different earthing arrangements

7. Where any earth conductor is a bare wire, it MUST be sleeved with GREEN/YELLOW sleeving.

8. Ensure all terminal screws are tight and all wires are neatly routed & not unduly stretched or pinched

9. After wiring, refit front assembly onto rear box using fixing screws - DO NOT OVERTIGHTEN.

10. Fit screw covers to complete installation.

11. Switch power back on, check socket is working & ensure cover & catch operate correctly. The product is now ready to use .

12. During life of product, any cleaning should only be carried out with a damp cloth using a mild solution of detergent & warm water. DO NOT USE solvent based cleaners as these may cause damage. It is recommended to ONLY clean the external surfaces with cover closed. DO NOT get any water on socket if cover is open.

Mode 2 - IET Requirements

The IET Code of Practice for Electric Vehicle Charging Equipment Installation (3rd Edition) states that Mode 2 charging equipment should be protected by;

1) Type A RCD with DC leakage current sensing up to 6mA plus DC detection device inside in cable charger that limits leakage to 6mA

or

2) Type B RCD allows for 10mA DC leakage current where no 6mA limiter within charging device.

The Masterplug Mode 2 charging unit is fitted with a Type A double pole RCBO as all in-cable charging devices have the 6mA limiter fitted.

For the installation to conform to IET requirements, the appropriate MCB/RCD/RCBO should be selected by the electrician and fitted at the incoming source using a dedicated, separate circuit and not by connecting to an existing or extended ring or radial circuit.

Operating Instructions

- 1) Please check vehicle instructions for safe operation.
- 2) Plug EV cable into charger socket, and ensure cover is securely closed.
- 3) Plug cable into vehicle.
- 4) Charging will start once communication between vehicle and charger has taken place.
- 5) Disconnect from charger socket, and then remove connection from vehicle.

Note: This EV charger can be used as a standard outdoor socket.

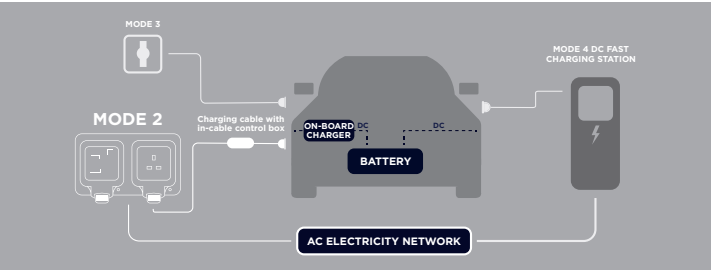
Technical Specification

Technical Specification	
Product Reference	EVH132S1SPA
Socket	UK 3-Pin Domestic Socket
Rated Output	2.3kW when used with mode 2 charging cable
Rated Current	13A
Charge Protocol	Mode 2
EV Charging Compliance	BS EN 62752, BS EN 61851-21-1
Input Voltage	220-240V AC 50Hz (Single Phase)
Overload & Fault Current Protection	Double Pole 16A 30mA A Type RCBO EN/IEC 61009-1
Dimensions (mm)	246 x 177 x 125
Gland Entry Positions	3 x M20 top, 3 x M20 bottom, 1 x M20/M25 on rear

Batch Code Explanation

yyWxx: Manufacturing date code; year of manufacturing (yy) and week of manufacturing (Wxx)

Typical Charging Times



	Maximum power output from EVSE (Kilowatts)	Example charging time (Hrs, Mins)	Input Voltage (Volts)	Maximum Current (Amps)	Mode
AC	2.3kW	8hrs 20mins	230 1-phase AC	10	2
	7.4kW	3hrs 30mins	230 1-phase AC	32	3
DC	20kW	1hr	400 1-phase AC	200	4

- Time calculations are theoretical. Nevertheless the figures above are calculated for an 80% charge and provide a reasonable comparison.
- Battery sizes vary significantly between vehicles, and charge times will vary accordingly - a battery twice as big will take twice as long to charge at the same rate.