

## 19.11 - EV Chargers

### Technical Specification

#### Description:

7.2kw external charging point for the use of electric vehicles to meet the new Part S of the Building Regulations, expected to be implemented in December 2021.

#### Performance:

- To operate using standard single phase, 50hz, 230v, AC electrical supply.
- Unit capable of up to 7.2kw output.
- To be 'untethered' Universal Type 2 outlets.
- To be supplied via dedicated 40A RCBO as third split load within consumer unit. The connection to the charger unit must feature a double pole isolator (BS7671: 722.537) installed at a suitable height to meet AD-M or if the RCBO is two-pole, this is an acceptable means of isolation.
- Cabling must be in line with manufacturers requirements.
- Charging cable does not need to be supplied. Unit should be 'untethered'. The customer is required to provide their own cable (this will normally come with the vehicle that they have purchased).
- Ingress Protection: IP54 or better.
- Install and Earthing to be compliant to BS7671:2018. A TN-C-S earthing system is required if not inherent within the EV charger.
- Must feature a smart user-experience (i.e. smartphone app controlling basic functions such as charging schedules) that monitors the main incoming supply by means of a clamped connection.

Criteria that applies only in specific circumstances:

- **Smart Load Management:**
  - Smart load-management (i.e. a means of connection back to the local substation, via the cloud, that allows the charger unit to ramp-up or down depending on the total demand on the substation, monitored in real-time). This includes a data cable between the main incoming supply (before the primary isolator) and the EV unit.
- **Free Standing Mount:**
  - Where free-standing, (i.e. there is no suitable masonry wall to fix the unit to) a dedicated steel mount will be needed. In this scenario, SD251 applies. Refer to this detail in Section 1 of this tender pack '1. Key Info & Working Drawings'.

The following items are not standard specification, they are optional extra items to be installed only where directed on particular house types.

- **[ELE-015] Key Lock:**
  - Key lock can be installed on developments with specific security concerns or where chargers are remote from property.

## Execution:

- Install in compliance with IET Wiring Regulations, 18<sup>th</sup> Edition
- Unit to be installed and set out in line with NSD251 - Working Drawings in Part 1. Generally this position is mounted externally to a side elevation, adjacent to driveways. This position will also allow the unit to connect to the property Wi-Fi network.
- Install between 750-1200mm above finished external level.
- Proprietary gromet to be used for the cable connection from internal to external. This should be fully sealed with weatherproof sealant. The penetration should be slightly angled to the exterior (minimum 5mm) to prevent water ingress.
- Supply cables to the EV charger must enter from the bottom, sides or back.
- Unit to be left in untarnished condition, free of scuffs, marks, cracks etc. Suitable plastic protection to be provided to protect against paint splatter.
- Once installed, be tested and commissioned in line with manufacturers requirements and provide Gleeson with this test certificate.
- Where installed remote from the property within the red line boundary or where being provided to an isolated parking space, mount to a free-standing pole. For details of trench depth, ducting, fixings etc, refer to NSD251.
- Install in line with manufacturers requirements generally.

## Image (if applicable):

Indication of design intent only, equal similar products are acceptable and should be agreed at the discretion of the attending Gleeson QS, Buyer or Technical Manager.

