

DXH45618 69 Dickenson Rd

EV Charger Specification

DATE: 23/04/2024

EV Charger

The EV charging points are to be supplied and installed in the locations as indicated on the drawings.

The charging points are to be as manufactured by Alfen or equal and approved and are to meet the following as a minimum:

- Suitable for connection to TT, TNC and TNC-S earthing systems.
- Electricity Supply - 230 Volt single phase
- Socket Outlet - Type to be T2 with shutter.
- Access control System - Badge RFID conforming to ISO/IEC 14443 and ISO/IEC 15693.
- Operations and Maintenance - Postponed charge, load management, user privilege configuration, diagnosis
- Configuration – Cultured Architecture where required otherwise standalone.
- Webserver – Embedded in charger.
- Standards – IEC 61851-1, IEC 61851-22, all chargers must also be manufactured in accordance with BS EN 61000-3-12.
- Plugs, socket outlets and connectors – IEC 62196-1 and IEC 62196-2.
- IP protection – IP54 (or higher) both off and on load.
- IK protection – IK10 (or higher) for both charger and socket.
- Ambient air temperature Operation – minus 30 to plus 50 degrees centigrade.
- Compliance with the Electric Vehicle Smart Charging Regulations 2021

The charger is to be 7.4KW wall mounted charging point complete with two outlets. These chargers are to manage the charging when two vehicles are being charged from the same charger to ensure that the charger and associated power supply are not overloaded.

Wall mounted charging points are to be installed securely fixed to the walls as indicated on the drawing and in accordance with the manufactured instructions.

Chargers are to be selected which do not need a second supply to the charging controls, if chargers are used requiring a separate control board supply the contractor is to include for the supply wired from the switch room complete with switchgear as required and local isolator to enable final connections to the charger, any wiring is to be as indicated on the drawings.

WIRING

The charge point is to be wired in EV-Ultra 3C6.0 SWA (3 x 6.0mm² + DATA) exterior grade cable.

The contractor shall allow for the installation of 2 additional CAT6 data cables from the data network hub located in the staff meeting room to the twin charging point.

The contractor is to employ a specialist data contractor to terminate and test the data cables, the cables will be connected to the monitoring equipment and chargers in accordance with the manufacturer's instructions.

Where equipment is installed internally, cables shall be installed on cable trays. All cable routes shall be confirmed on site before installation. Cables shall be as indicated on the drawings.

Where equipment is installed externally it shall be mechanically protected by steel trunking/conduit.

The cable route across to the 'Bin-Store' shall be via a segregated trench, catenary wire between the 2 buildings is not to be used. Cabling shall be installed internally within the bin-store so as not to be exposed to possible vandalism.

Final connections to chargers shall be via IP65 rotary isolators, final connections to the charger are to be made with LSF/LSF flex installed from the isolator to the charger.

Rotary isolators are to be the type which may be locked in the ON or OFF position and are to be supplied with suited padlocks with 2 keys for each padlock issued to the client. The isolators are to be locked in the ON position.

Electric Vehicle Charger connection units are to be installed as indicated on the drawings to prevent the need to install separate earth electrodes.

The units are to be as the Matt-e Vehicle charger connection units, these units shall be as described on the drawings.

COMMISSIONING

The new EV charging points are to be commissioned by the contractors' appointed engineers onto the 'GeniePoint' back-office system, once commissioned the software will be issued to Manchester City Councils FM department & Fleet Management to allow access to the software in the future, to alter any setting or install updates as required.

All settings are to be recorded on the commissioning certificates which are to be included in the as operating and maintenance manual.

The contractor shall allow for 2 x GeniePoint back-office subscriptions for a 5-year period.

The contractor shall allow for 1 x SIM card & Data Services subscriptions for a 5-year Period.

Alfen do not offer any commissioning engineers for their equipment and the contractor is to commission the system in accordance with the instructions as supplied by Alfen, if available an engineer may be used to assist from an Alfen approved installer.

The contractor will include for all equipment and commissioning as required to install a complete and operational monitoring system.

TESTING

All testing is to be carried out in accordance with the requirements of BS7671 and installation certificates are to be forwarded to the C.A. on completion.

SPARES

The contractor will supply and hand to the client the following spares: -

- Any Specialist tools required to access equipment installed.
- Keys for padlocks
- All items as per general specification.

The contractor will obtain a signed receipt from the client's representative for the spares, a copy of the receipt must be forwarded to the C.A., payment will not be made for the spares until the receipt is received.