

Solo 3 Charger

Enabling Works Requirements

7kW - External - Freestanding Mount
With Array SP Load Management



1 Power Capacity

Customer is responsible for ensuring there is sufficient power capacity.

2 Circuit Protection

Customer is responsible for the installation of all circuit protection.

3 Cabling

Customer is responsible for all Civil's work and the installation of all cabling.

4 Earthing

Customer is responsible for installation of Earthing hardware to meet the current regulations.

5 Fix & Commission Responsibilities

Pod Point is responsible for the fixing and commissioning of Array EVDB and charging units on site.



This document is written to provide guidance surrounding the Enabling Works Requirements in preparation for Pod Point attending to fix and commission Commercial Solo Units (S7-UP-3 or S7-UPB-3) installed externally on Freestanding Mount (FSM) with Array SP load management system on a dedicated single-phase supply.

This guidance should be read and followed by installers undertaking the Enabling works in preparation for Pod Point’s attendance. Evidence of completed enabling works must be provided to your allocated Pod Point Project Manager for review prior to requesting an installation date.

Failure to confirm the works fully completed may result in Pod Point’s attendance being delayed and in some circumstances rectification works being required prior to the system being commissioned.

Table of contents

Related Documents	3
Array Load Management System	4
Power Capacity	6
Circuit Protection	6
Earthing	7
Array System Location	9
Cabling	14
Clustering	15
Charging Unit Location	16
Communication	19
Completion Confirmation & Evidences	20
Fix & Commission Responsibilities	21
Pod Point Company Details	23
Examples of Acceptable Enabling Works	24

Related Documents

This document should be read in conjunction with the following documents:

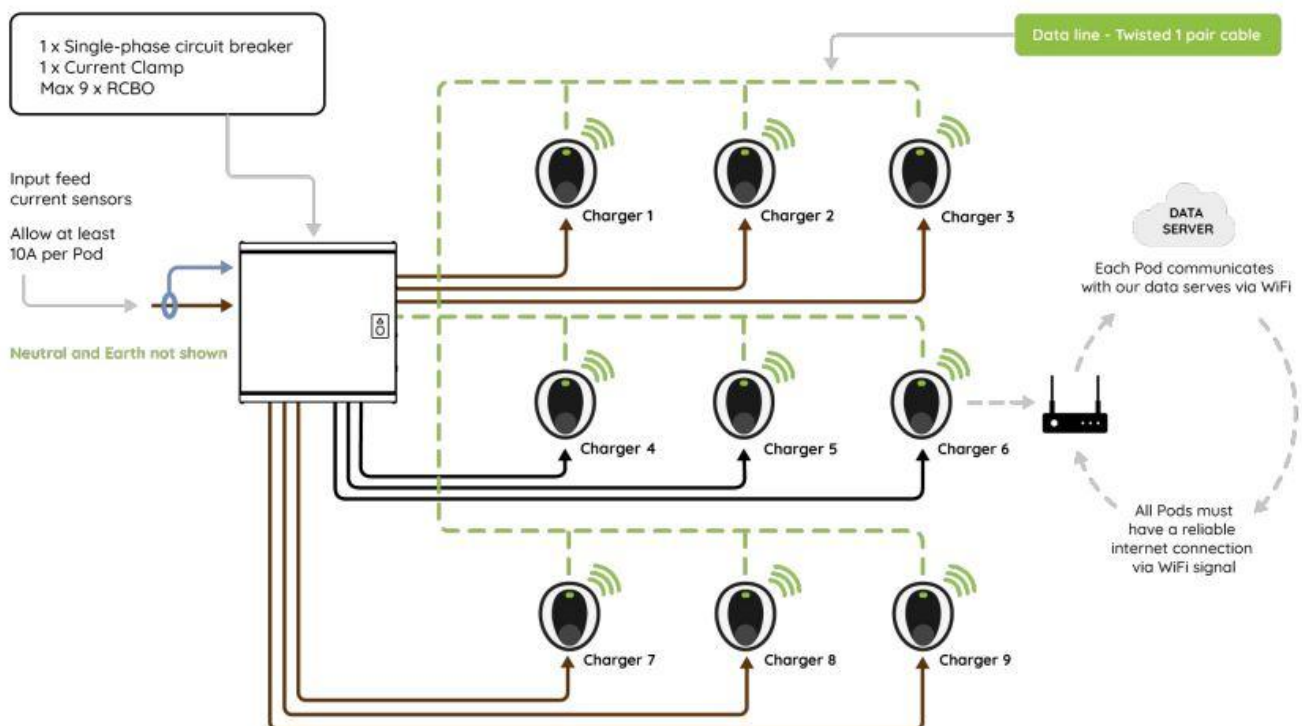
- Pod Point Solo 3 - Commercial - Datasheet (PP-D-210111-1)
- Pod Point Array charging - Solo3 - Datasheet (PP-D-160103-4)
- Pod Point Solo 3 - Freestanding Mount - Datasheet (PP-D-200094-3)
- Pod Point Solo 3 - Commercial - Install Guide (PP-D-210110-2)
- Pod Point Solo 3 - Commercial - User Guide (PP-D-190096-3)

System description:

A Commercial Solo3 unit is a single-phase charger with 1x 7kW charging socket. The Array charging system allows multiple chargers to manage their individual and total charging load within the limits of a fixed supply. An Array system allows many more chargers to be fitted than would normally be the case, as each charger will de-rate their charging power (min. 10A) as necessary to never overload the incoming mains feed.

Array SP (Single-Phase) configuration:

The Array SP system is using the dedicated single-phase power supply connected to the Array Distribution Board (EVDB). The Pod Point EV charging points (EVCP) are connected to the Array EVDB via power and data cables. The system continuously monitors the amount of units plugged in demanding charge and automatically de-rates and up-lifts the charging power of each EVCP. The Array SP load management system is able to supply power up to 9x single-phase units with max. 32A and min. 10A (100A Single-Phase supply).



- **Power cable** to connect the Array distribution board to charging units - to be wired as radial circuits,
- **Data cable** (purpose only for active load management) to connect Array SP and each charging unit with clustering up to 9x units with Star, Daisy-chained or mixed connection method,
- **3G/4G signal or Wireless internet** connection required reaching each charging unit on the proposed locations for communication with the Smart Reporting System.

Array SP (Single-Phase) set-up:

The Array SP load management system consists **1x EV Distribution Board** installed on top, under or side of a metal trunking, which is pre-fitted with the Pod Point Array controller electronics and RCBOs for each EV charging socket.

The Array EVDB's dimensions are 532Hx470Wx140D.

A Fully assembled Single-Phase system includes:

- 1x C100 4P MCB main switch - upstream circuit protection,
- 1x Pod Point Single-Phase Array controller - active load management,
- 1x current clamp fitted on the submain's Live conductor - overall load monitoring,
- 9x C40A 2-pole 30ma type“A” RCBOs - downstream circuit protection.



Maximum amount of EVCPs allowed for different dedicated supplies:

A chosen number (max number shown below) of Pod Point chargers to be wired to these cabinets depending on dedicated supply rating.

A total number of 9 x charging sockets can be wired into the array system installed on a dedicated 100A single-phase supply.

Customer must confirm the total number of Active and Passive chargers.

Supply Demand (Single-Phase)	Total Number of Sockets Served
40 Amp	3
60 Amp	5
80 Amp	7
100 Amp	9

40/60/80/100A Single-Phase supply:

It is the customer's responsibility to ensure that on the metered single-phase supply there is constant dedicated capacity for the chosen Array SP rating with no diversity applied.

Assessment of available power capacity should be undertaken by a qualified electrician. They may;

- undertake a visual assessment,
- review your Energy Report and statement,
- undertake current clamping measurements,
- Review maximum demand reading from smart meter installed at DNO service head (if applicable).
- Consult with relevant design engineers to review power allocations.



Upstream Circuit

The upstream circuit must be installed in alignment with current BS7671 regulations to supply power for the EV load management system.

Upstream protective device (40/63/80/100 SP):

- Sub-main to be connected to an adequately rated and locked-off or isolated upstream protective device (either Fused isolator, Switch fuse, MCCB or MCB).



Upstream cabling:

- Sub-main cable rated for the intended load and installed to current wiring regulations to run between upstream protective device and Array SP proposed position.

Termination:

- Preferable: Upstream cable to be terminated into an adequately rated SP isolator/rotary isolator/Open PEN device/RCD installed onto metal trunking next to the proposed Array SP location.
- If the sub-main cable is required to be terminated directly into the Array SP main switch, it is allowed up to 35mm² core size. The customer must gland the cable into the metal trunking with 1.5m spare cable left coiled and terminated into an adaptable box ready for final termination into the Array EVDB by the Pod Point engineer.

Electrical Installation Certificate (EIC of upstream circuit):

The customer is to provide EIC for the installed upstream circuit containing all supply details and live test results. To complete live testing of upstream circuit an adaptable box is to be installed by the customer at the end of the spare cable. This will then be removed by the Pod-Point engineer before making final connections.

Considering Equipotential Zones - Touch distance:

Electric vehicle supply element must be installed to current BS7671 regulations and in line with the IET Electric Vehicle Charging Equipment Installation Code of Practice, section 7.3.3.4.

Customer is to complete a risk assessment that the risks of simultaneous contact with electrical installations connected to different earthing systems, including other street furniture with PME earthing, are minimized.

Generally, this will require the charging equipment to be installed in a location that ensures that both the exposed-conductive-parts of this equipment and the vehicle themselves on charge, **are at least 2.5m** from:

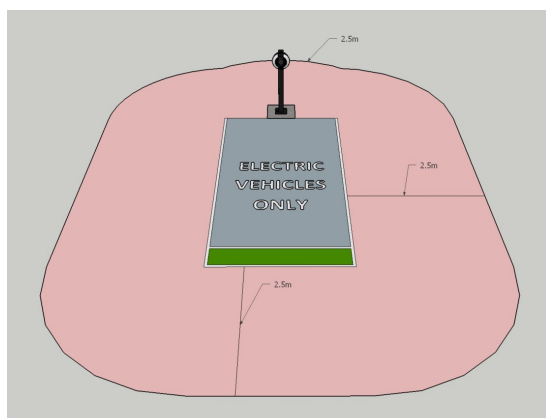
- Any extraneous or exposed conductive parts connected to a different earthing system to the electric vehicle charging equipment

Otherwise, the exposed earthed equipments (lamp post, bollard, gate, building etc.) within touch distance (2.5m) must be connected to the same earthing system (same DNO source) as the EVCP(s).

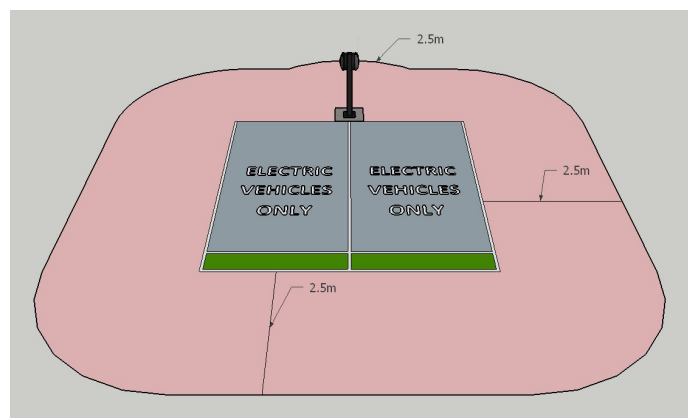
Touch distance (2.5m)

- From the proposed EV charger(s) location and
- From the boundaries of dedicated Electric Vehicle charging bays. Electric Vehicle's body while on charge must be considered as earthed exposed equipment.

Single Freestanding Mount



Double Freestanding Mount



Planned Earthing arrangement:

Customer is to confirm site/planned earthing arrangement for the EV charging system to the assigned PM after completing an assessment on touch distances.

Array load management system - Earthing distribution:

The Array load management system requires one overall earthing system throughout Array EVDB and the charging units.

- The Array SP system must be earthed at the location of the Array EV Distribution board i.e. TN-C-S (PME), TN-S, TT-earthing system.
- The earthing distributed downstream from the Array SP system location to the charging units must be via a dedicated CPC (circuit protective conductor) of the SWA power cables.
- The Armouring of the SWA cable will NOT be accepted as earthing for the charging units.

TN-C-S (PME) system - Most cases

Open PEN protection UPDATE using TN-C-S(PME) system

- Pod Point chargers supplied by Array load management system do NOT offer in-built open PEN fault protection due to system setup. Where an Array load management system is to be supplied from a TN-C-S (PME) system an open PEN protection device must be installed upstream of the Array distribution equipment.

TN-S system - Privately owned transformer by client on-site

- Pod Point Array load management system can only be connected to a TN-S earthing system without the use of overall Open PEN protection device or earth rod, where it can be guaranteed that this will not be converted to PME in the future. In general, this can only be achieved if the site has a dedicated, privately owned electrical substation that uses a TN-S earthing system. If this is not confirmable, TN-C-S (PME) earthing system rules would be applied.

TT-earthing - Local earth rod installed

- Earthing rod must be installed next to the Feeder Pillar (within 5m) with an appropriately rated 2P 100mA-300mA (depending on design) type "B" time delayed RCD installed upstream of the Array distribution equipment.
- Installed earth rod must be mechanically protected (earth pit), with the correct clamp that allows a crimped termination to be made. It must be clear of any underlying services.
- Earth reading must be under 100 Ohms.
- A suitably sized sheathed Green/Yellow earthing cable should be provided in radial between the earth rod and Array SP system location.
- Earth cable can run in the same duct with supply cables.
- Where separate Earth cable duct (50mm sized twin wall) is to be installed, the entirety of the run must be enclosed, from the earth pit to the Feeder Pillar foundation.

Charging units and other earthed equipments on same TT-earthing:

- Where there are other exposed earthed equipment within touch distance (2.5m) intended to be connected to the same TT-earthing system with the EVCPs, the current BS regulations must be followed regarding circuit protection, cabling and labelling.
- If multiple earth pits/rods are installed, **the earth rods must be linked together** and connect back to the the Array location.

Array SP system location key considerations:

The location to be decided by the client (or their appointed electrical designer) of the project. Customer to **share site plan drawings at earliest possible time** and confirm the below details to the appointed Pod Point Project Manager for review.

Key location considerations include;

Array EVDB planned location:

- Installed on **Internal wall area** or,
- Installed in **External Feeder Pillar**.

Dry wall conditions required:

The Array load management system shall be installed within a dry area. The EVDB comes with lockable door, however the enclosure is not IP rated.

Where the Array area is expected to be exposed to weather/high moisture or water from the sprinkler system, it is the client's responsibility to provide IP rated enclosure to in-house Array EVDB and other equipment.

Supply connection details:

- Connecting to **Existing metered supply** (EV dedicated rating to confirm) or,
- Connecting to **New metered supply connection** (EV dedicated rating to confirm).

Earthing system:

- Site's overall earthing system,
- **Planned Array SP earthing system:**
 - TN-C-S(PME) system - Open PEN protection device (MCB+PEN) required,
 - TT-system - 2P 100mA-300mA type"B" time delayed RCD required,
 - TN-S system - no additional hardware, but confirmation required.
- Risk assessment to complete for EVCPs, boundaries of EV dedicated parking bays, Feeder Pillar and other earthed metal structures (Buildings, lighting columns, bollards, AC-units etc) within 2.5m touch potential distance.

Available wall space:

- Space for **1x Array EVDB, metal trunking, isolator, Open PEN device or RCD**, cable management.

Cable length/size (Supply to Array EVDB to Charger):

- Length of sub-main cable, max. 35mm² core size allowed to directly connect into the Array main switch, above 35mm² core size a local upstream three-phase Isolator must be fitted to decrease the spare cable core size left for final connection.
- Length of downstream cables to the chargers (max. 16mm²).

Array SP system location (Internal Wall area):

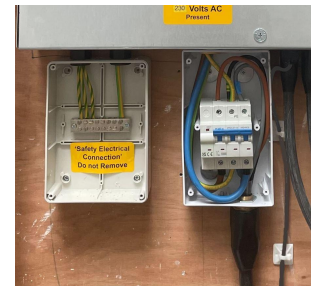
Space requirements:

For the Array SP system to be installed appropriately on internal wall, the following space requirements/details need to be considered.

- 1x EVDB: An Array SP system contains 1x Array EVDB with following dimensions: 532H x 470W x 140D (mm),
- Configuration: Array EVDB can be installed on top, under or side of metal trunking,
- Metal trunking: min. of 150mm x 150mm required for cable terminations,
- Space for upstream cable containment and cabling,
- *Local upstream 1phase isolator (if required),
- Space for all downstream cable containment (towards charging units) and cabling for both power and data cables,
- Open PEN protection: Correctly rated single-phase Open PEN device (MATT:E - MCB+PEN) fitted for using PME earthing system (with Earth separation box),
- Any additional equipment required due to site set-up, earthing configuration, clustering etc. (data junction box, earth separation box).

Earthing system:

- TN-C-S(PME): If a building's TN-C-S (PME) earthing system intended to be used, Customer to install appropriately rated **single-phase Open PEN device (MATT:E - MCB with inbuilt PEN detection)** to protect the Array system against Open PEN fault with separating the outgoing CPCs via earth bar installed in a junction box. (max 25mm² core size)
- TN-S: There is no need for additional earthing hardware as long as a privately owned transformer (by Customer) located on site and guaranteed by the DNO that the earthing system will not be converted to PME in the future.
If this is not confirmable, TN-C-S (PME) earthing system rules would be applied.



Metal trunking (min. 150mm x 150mm):

- Minimum size of 150mm x 150mm galvanised steel trunking to be installed horizontally, vertically or both, with enough length to cover the EVDB for cable entry.
- If the metal trunking is lifted off the wall for any reason, the customer must provide materials to lift off the Array EVDB to fix to metal trunking.
- It is preferred to have the trunking slotted at the expected Array EVDB locations with 300mm length and 70mm width for cable entry.

Expected preparation works at Array location (Internal Wall area):

Customer's responsibility:

- Install suitable metal trunking (slotted if possible),
- *Install local upstream isolator (if required),
- *PME earthing: Install a single-phase Open PEN protection device (MCB+PEN) with an Earth separation junction box with appropriately rated earth bar(s) inside,
- Sub-main cable to gland into trunking/local isolator/local Open PEN device with min. **1.5m spare cable** left coiled up and terminated into an adaptable box. Max. 35mm² core size allowed for direct termination into the Array EVDB.
- Gland all downstream cables into metal trunking (power and data) with min. **1.5m spare cable** left coiled up,
- Label all cables appropriately (power & data with clustering),
- Provide Electrical Installation Certificate of upstream circuit and dead test for all downstream cable,
- Provide photographic evidence of Array location prepared and upstream circuit protection for review prior to requesting an installation date.

Pod Point's responsibility:

- Pod Point scoped to install the 1x Array EVDB above/under/on the side of metal trunking with paxolin (slotted) or bushes and couplers,
- Terminate existing cables (sub-main, power and data) into the Array system.



Array SP system location (External Feeder Pillar):

Feeder Pillar (FP) size & Space requirements:

For the Array SP system to be installed appropriately in an external Feeder Pillar, the following space requirements/details to be considered to choose suitable Feeder Pillar size.

- Supply connection details:
 - Existing metered supply: sub-main cable to run into EV feeder pillar,
 - New metered supply connection: New DNO cut-out/electric meter/isolator to be installed inside EV feeder pillar,
- 1x EVDB: An Array SP system contains 1x Array EVDB with following dimensions: 532H x 470W x 140D (mm),
- Configuration: Array EVDB can be installed on top, under or side of metal trunking,
- Metal trunking: min. of 150mm x 150mm required for cable terminations,
- Space for upstream cable containment and cabling,
- *Local upstream 1phase isolator (if required),
- Space for all downstream cable containment (towards charging units) and cabling for both power and data cables,
- *Open PEN protection: Correctly rated single-phase Open PEN device (MATT:E - MCB+PEN) fitted for using PME earthing system (with Earth separation box),
- *RCD protection: Correctly rated 2P 100mA-300mA type”B” time delayed RCD protection fitted in a separate enclosure for using newly introduced TT-earthing system (earth rod),
- Any additional equipment required due to site set-up, earthing configuration, clustering etc. (data junction box, earth separation box, lighting distribution board).

Earthing system:

- TN-C-S(PME): Customer to install appropriately rated single-phase **Open PEN device (MCB+PEN)**, with separating the outgoing CPCs via earth bar installed in junction box.
- TN-S: There is no need for additional earthing hardware as long as a privately owned transformer (by Customer) located on site and guaranteed by the DNO that the earthing system will not be converted to PME in the future.
If this is not confirmable, TN-C-S (PME) earthing system rules would be applied.
- TT-system: Introducing new TT-earthing system by connecting to a locally installed earth rod in an earthing pit next to feeder pillar (reading to be less than 100 Ohm). Appropriately rated **2P 100mA-300mA type”B” time delayed RCD** protection must be fitted in the feeder pillar upstream the Array SP system.

Feeder Pillar size guide:

Installation type	Feeder Pillar requirement - Height x Width (mm)
Single Phase Array only	Min. ET4 (1100 x 750)
Single Phase Array + Open PEN device/RCD	Min. ET6 (1270 x 1065)
Single Phase Array + New supply connection + Open PEN device/RCD	Min. ET9 (1515 x 1400)

Metal trunking (min. 150mm x 150mm):

- Minimum size of 150mm x 150mm galvanised steel trunking to be installed horizontally, vertically or both, with enough length to cover the EVDB for cable entry,
- It is preferred to have the trunking slotted at the expected Array EVDB locations with 300mm length and 70mm width for cable entry.

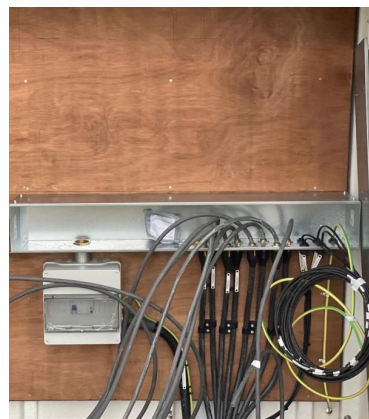
Expected preparation works at Array location (External Feeder Pillar):

Customer's responsibility:

- Install suitable size Feeder Pillar on appropriate foundation with enough internal space (plywood) to fit all equipment according to site setup,
- Run suitable size sub-main cable to FP from existing metered supply OR bring in new supply connection with electric meter installed prior Pod Point's attendance,
- Install suitable metal trunking (min. 150x150 and slotted if possible),
- *Install local upstream isolator (if required),
- *PME earthing: Install a single-phase **Open PEN protection device** (MCB+PEN) with an Earth separation junction box with appropriately rated earth bar(s) inside,
- *TT-earthing: Install **2P 100mA-300mA type"B" time delayed RCD** protection upstream and install earthing rod (<100 Ohm) in earth pit with earth cable connecting the rod and the feeder pillar.
- Sub-main cable to gland into the local isolator/local Open PEN device/local RCD with min. **1.5m spare cable** left coiled up and terminated into an adaptable box.
- Gland all downstream cables into metal trunking (power and data) with min. **1.5m spare cable** left coiled up,
- Label all cables appropriately (power & data with clustering),
- Provide Electrical Installation Certificate of upstream circuit and dead test for all downstream cable,
- Provide photographic evidence of Array location prepared and upstream circuit protection for review prior to requesting an installation date.

Pod Point's responsibility:

- Pod Point scoped to install the 1x Array EVDB above/under/on the side of metal trunking with paxolin (slotted) or bushes and couplers,
- Terminate existing cables (sub-main, power and data) into the Array system.



Electrical Supply Cable:

- A **3core SWA Cable** (L+N+E) - min. 6mm² - subject to volt-drop calculation and reference method for C40 circuit protection.
- Each charging socket must be supplied by a dedicated power cable (radial) between the load management board and the EVCP.
- All power cables must include a CPC (dedicated protective earthing conductor).

The Customer is responsible for producing their own cable calculations in alignment with the BS7671 Standards. All cables must be installed to the current wiring regulations and adequately rated for the intended load.



When sizing your cabling please consider:

- Particular attention required where multiple cables are to share a duct.
- The maximum cable size that can be terminated into the unit is 16mm².
- Minimum of **2m of spare cable** to be left coiled up above ground level at the proposed unit location for Pod Point engineers to ensure successful termination.
- The Array EVDB contains 1x “C” Curve 40A rated Double Pole 30ma type “A” RCBO for each socket.
Maximum earth fault loop impedance (Zs) values of overcurrent protective devices should be considered.



Data cable (active load management):

Hardwire data cable required between Array DB and EVCPs for the purpose of active load management.

- 2 core Screened Belden data cable required rated min. 400V r.m.s.

Recommended:

- Up to 60m cable length - **7-2-2C Defence Standard 61-12 part4**
- above to 60m cable length - **16-2-2C Defence Standard 61-12 part5** (or 7-2-4C Def Stan 4 core cable with doubling up the cores)
- Cable size increase required to avoid signal weakening with distance.

Note:

- Data cables can be run in radials to each EVCP or daisy-chained up to 9x units or with mixed connection methods.
- Power and data cables can run together in the same cable containment if rated with minimum 400V r.m.s.

However recommended to install separate power and data cable ducting until the last local inspection chamber near Solo chargers, from where the cables to run together in one duct to unit location.

- Minimum of **2m of spare cable** to be left coiled up above ground level at the proposed unit location for Pod Point engineers to ensure successful termination.



Array SP system Clustering/Data cabling distribution:

The Array SP system is using the dedicated Single-Phase power supply connected to the Array Distribution Board. The Pod Point EV charging points (EVCP) are connected to the Array EVDB via power and data cables.

The maximum amount of units connected to the Array SP system is determined by the rating of the dedicated SP supply:

- 40A SP - max 3x EV charging sockets can be served
- 60A SP - max 5x EV charging sockets can be served
- 80A SP - max 7x EV charging sockets can be served
- 100A SP - max 9x EV charging sockets can be served

Data cables must connect all charging units to the array controller in the Array EVDB. These cables can run with Star (radial), Daisy-chained or mixed connection method.

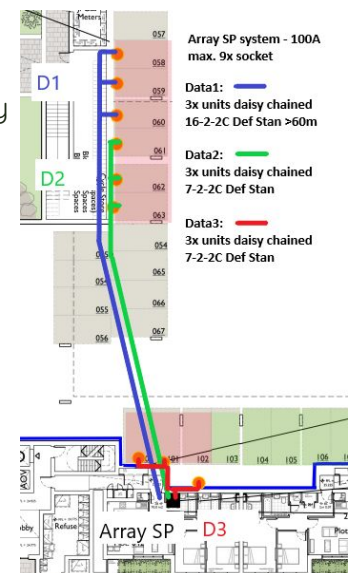
- **Star:** 1x radial of data cable to run to each individual charger, these will be joined together by Pod Point engineer.
- **Daisy chained:** 1x Data cable connects chargers in series.
- **Mixed method:** Multiple data cables to run either with radials or daisy chained or both.

Data clustering plan (site specific):

The number of data cables recommended to use can vary depending on the connection method and the site plan (charging unit locations).

Notes:

- Mostly: Individual data cables to run between Array SP location and each charging unit as the ducting routes usually not suitable for daisy chaining. If all chargers have individual data cable, the customer must highlight to the allocated Pod Point Project Manager.
- Location: If chargers are located on two different areas on the site, it is recommended to run min. 2x separate data cable if daisy chained.
- Signal weakens due to distance: Where data cables (daisy chained) are longer than 40m and more than 5x units to be connected on the same data cable, it is recommended to split and install 2x data cable to reduce the unit number connected on each cable.
- If possible, it is recommended to use max. 3x data cables.



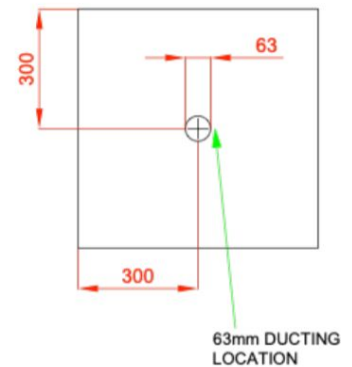
Customer to **share site plan drawings at earliest possible time** and confirm the cable distribution method and clustering plan to the appointed Pod Point Project Manager for review.

EV charger proposed location:

- The optimal charging unit location shall be behind/on side of the dedicated EV charging bay with the user interface on the front of the charger facing the allocated parking bay.
- The Pod-Point or its signage should not obstruct the pavement and in no circumstances should the width of a public footway be restricted to less than 1.2m, to allow suitable access for wheelchair users.

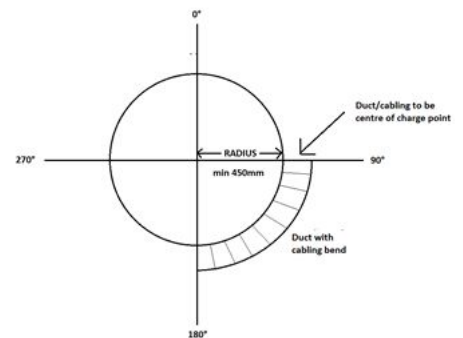
Concrete foundation:

- **600mm x 600mm x 400mm (WxLxD)** non-reinforced concrete,
- The foundation must have a flush and levelled surface finish,
- Ducting must run directly to the centre of the foundation, (Off centre ducting causes issues for positioning of unit and guard rail).



Supply cable duct:

- Continuous twin wall duct for the entirety of the run, directly to the centre of the EVCP concrete foundation for unit entry from below,
- Minimum depth of 450mm except for roadways where depth should be 600mm,
- Minimum duct size of 63mm (should be adequate for the cable size running through),
- Maximum duct size of 110mm to concrete foundation,
- Minimum bend radius 450mm.

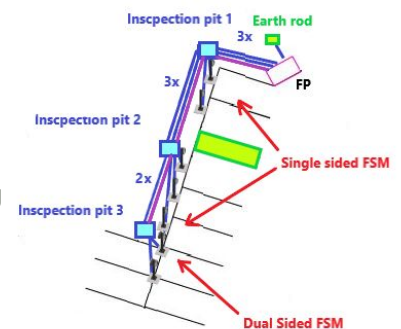


The Freestanding mount that is installed to mount the Solo unit on, has a 70mm square hole on the bottom for cable entry.

Upstream cable duct sizes need to be calculated which may require parallel ducts to be laid if supply cables will not fit within the max duct size of 450mm.

Data cable duct:

Recommended to install separate power and data cable ducting until the last local inspection chamber near the Solo chargers, from where the cables to run together in one duct to centre of unit base as long as data cables rated with minimum 400V r.m.s.



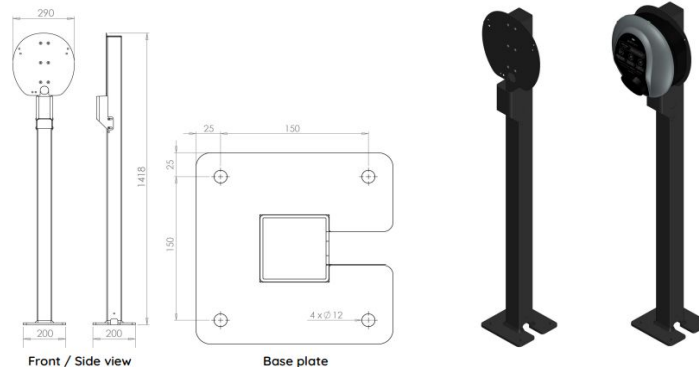
Surface finish:

- The Free-Standing Mount can be installed on plain concrete, finished tarmac or block paving surface with the required concrete base in place.
- The finishing surface must be completed prior Pod Points attendance.
- Customer to highlight to the assigned Project Manager the surface finish type to select the correct fixing kit.



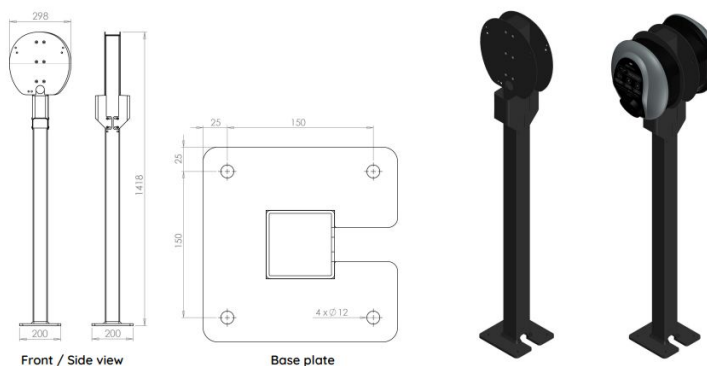
Single Freestanding Mount (1418mm x 290mm x 200mm HxWxD):

- The single Freestanding Mount allows one Solo Charger to be securely installed in locations where wall mounting installation is not suitable. The electrical supply cable for the Solo unit is fed through the base (70mm square internal void), internally up the vertical post and to the charging unit fixed on the backplate.



Double Freestanding Mount (1405mm x 360mm x 250mm HxWxD):

- The double Freestanding Mount allows two Solo Chargers to be securely installed in locations where wall mounting or Twin charging unit installation is not suitable due to space requirements. The required **2x electrical supply and 2x data cables** for two the Solo units are fed through the base (70mm square internal void), internally up the vertical post and to the units fixed on the backplates.



Expected preparation works at Charging unit location:

Customer's responsibility:

- Complete a risk assessment that the risks of simultaneous contact of different earth potentials avoided (2.5m distance from edge of EV bays),
- Markup exact charging unit location behind EV dedicated bays (one socket to serve 1x EV dedicated parking bay),
- Complete all Civil's work (ducting system between Array SP location and charging units.
- Install a concrete foundation 600x600x400 for each charging unit, with finished flush levelled surface (plain concrete or finished tarmac or block paving)
- Label all cables appropriately (power & data with clustering),
- Leave min. **2m spare cables** left coiled up above ground level at unit location for final connection for Pod Point engineer,
- Provide dead test for all downstream cable,
- Provide photographic evidence of Charging unit location prepared (finished surface at unit bases with cables in place) prior to request Pod Point's attendance.

Pod Point's responsibility:

- Pod Point scoped to install the charging units on Freestanding Mounts at the proposed unit locations behind/between EV dedicated parking bays,
- Terminate existing cables (power and data) into the charging units,
- Complete Live testing and connect chargers to communication network.



Communication with Smart Reporting system:

Pod Point Commercial Charge Points are required to communicate with the smart reporting system at all times, through available 3G signal OR accessible Wi-Fi signal to reach the unit location. Units that do not communicate can not be warranted.



You can find detailed guidance on connecting your Pod Point to Wi-Fi here:

[Pod Point Solo 3 or Twin Wi-Fi Connection Guide](#)

External:

Where units are mounted outdoors with available 3G/4G signal, Pod Point will supply a suitable amount of units to the site with inbuilt 3G routers.

Up to 7 sockets can connect to the same signal providing they are in adjacent parking bays and the signal is not interfered with by any obstructions such as concrete pillars.

Pod Point should be consulted if one router is to be used for multiple units to connect to.

External without 3G/4G signal:

Customer to provide external accessible Wi-Fi communication signal to reach each unit. Passwords must be shared with the Pod Point representative and Pod Point must be informed of password changes to avoid drop-out in service.

Wi-Fi requirements:

- 2.4Ghz frequency,
- NOT a public network requiring login/email confirmation,
- NOT a network with a regularly changing password,
- NOT a network with additional security features,
- Name of the Wi-Fi profile (SSID) to be less than 10 characters.

The Customer must take responsibility for any cost and revisits related to signal coverage issues.

The customer is to confirm proposed charging unit locations and accessible Signal availability (3G/4G or Wi-Fi signal) to the appointed Project Manager.

Enabling Works completion evidences:

The customer must provide evidence of the completed enabling works prior to Pod-Point allocating any labour resources or giving a proposed date for an engineer(s) to attend site. To reduce any potential delays on-site, your allocated Pod-Point Project Manager will review the **Photographs and Electrical Installation Certificate (EIC)** sent to them to confirm that the enabling works are completed to specification. If needed, they will also advise on any required rectifications or amendments and assist as much as possible to get the site ready for the engineer(s) to attend.

Please inform your Pod-Point Project manager if there are any reasons as to why you may be unable to provide the evidence of completed enabling works upfront and - due to strict handover dates or site requirements - need to set a date for Pod-Point to attend. We then may be able to provide you with a preliminary installation date but please be aware that we still require all evidence to be submitted no later than 14 working days prior to the preliminary date given. If the site's readiness cannot be verified 14 working days before Pod-Point is due to attend site, then any allocated labour resources will be automatically reassigned.

Images required:

All photos sent must be clear with high resolution and include close ups of equipment and wide shots of areas. Blurry pictures will not be accepted as Pod-Point must be able to identify the specific equipment installed. Please check the **Examples of Acceptable Enabling Works** section for example of photographs required:

- Close up of upstream circuit protective device installed (fuses/switchfuse/MCCB/MCB).
- Prepared Array location free from materials with proposed internal wall or external feeder pillar ready:
 - Suitable metal trunking mounted in position (slotted out if possible).
 - Close range of earthing hardware installed:
 - Open PEN device + ESB / type "B" time delayed RCD + earthing rod installed.
 - Sub-main cable glanded into trunking or terminated into local isolator with spare cable left coiled up and terminated into adaptable box.
 - Downstream supply and data cables glanded into trunking with spare cable left coiled up.
- Cable management system installed towards charging units (trunking, tray work).
- Charging unit locations:
 - Concrete foundations with centrally located ducting.
 - Spare cables (power and data) left coiled up above finishing surface completed (plain concrete/tarmac/block paving).
- Wide angle of proposed EV charging bays shown.

Electrical Installation Certificate (EIC):

The customer is to provide EIC for the installed upstream circuit containing all supply details and live test results. To complete live testing of upstream circuit an adaptable box is to be installed by the customer at the end of the spare cable.

Pod-Point also requires dead testing to be carried out on all downstream supply cabling to charge points which will verify that the installed circuits are safe to connect to.

Pre-works details discussion:

It is recommended for the customer to get in touch with the allocated Pod Point Project Manager to discuss details prior commencing the on-site works to ensure the enabling works to be completed are suitable and comply with the requirements.

Customer responsibilities:

- ☐ Ensure sufficient dedicated capacity available for the proposed Array SP load management system with no diversity applied (40/60/80/100A Single-Phase supply).
- ☐ Correct Upstream circuit protection and sub-main cable has been installed (Functionality verified).
- ☐ Install suitable size Feeder Pillar (if required).
- ☐ Install suitable metal trunking at Array location (slotted if possible).
- ☐ Install all required earthing hardware depending on earthing system, Open PEN device (MCB+PEN) / type “B” time delayed RCD + earthing rod.
- ☐ Install local upstream isolator (if required) and gland the sub-main cable into trunking with 1.5m spare cable left coiled up and terminated into an adaptable box.
- ☐ Gland all downstream cables into metal trunking (power and data) with min. 1.5m spare cable left coiled up.
- ☐ Label all cables appropriately (power and data with clustering).
- ☐ Complete all Civil's work (ducting, concrete foundations, finished surface).
- ☐ Markup exact charging unit locations.
- ☐ Leave min. 2m spare cables (power and data) left coiled up above ground level at unit location for final connection for Pod Point engineer.

Provide confirmation and evidence of the completed enabling works:

- ☐ Share site plan/drawings with unit locations and confirm clustering plan at earliest possible time to the appointed Pod Point Project Manager for review.
- ☐ Complete risk assessment of simultaneous contact with electrical installations connected to different earthing systems.
- ☐ Confirm charging unit locations has accessible Signal availability (3G/4G or Wi-Fi signal).
- ☐ Provide Electrical Installation Certificate of installed upstream circuit and dead test for all downstream cables.
- ☐ Provide photographic evidence of installed upstream circuit protection, Array location and Unit locations prepared with cabling in place.
- ☐ Customer to confirm to the appointed Pod Point Project Manager that the above responsibilities have been completed in full prior to requesting Pod Point's attendance.

Pod Point responsibilities:

Pod Point will be responsible for the fitting of Array SP EVDB and charge points.

Array SP load management system:

- Pod Point to notify the customer of the proposed shutdown time for the relevant upstream circuit, Distribution Board (if required).
- Pod Point to install the Array SP EVDB attached to the metal trunking at the proposed location.
- Pod Point to use the existing upstream circuit protection.
- Pod Point to use existing upstream cables to connect the Array SP system to the dedicated supply.
- Pod Point to use the existing downstream cables (power and dedicated data cables) to connect the charging units to the Array SP system.
- Pod Point to connect a pre-fitted DP C40A type "A" 30ma RCBO for each socket in the EVDB.

Charging unit(s):

- Pod Point to install charging units on Freestanding Mount at the proposed unit locations behind/between EV dedicated parking bays.
- Pod Point to terminate the cables (power and data) into the units.
- Pod Point to connect units to the Smart Reporting system via 3G/4G router or provided Wi-Fi communication network.
- Pod Point to complete functional testing of Array SP system and Solo units.
- Pod Point to commission charging units.
- Pod Point to complete Electrical Installation Certificate for the installed Array SP load management system.
- Pod Point to conduct site handover.

Contact Us

Please contact the Project Manager assigned to your order with any questions. If you are unclear who your Pod Point Project Manager is please email us quoting the Pod Point quotation number (found in the top left of your Pod Point Quote).

Enquiries@pod-point.com

www.pod-point.com

Company details

Pod Point Limited, Registered in England, no: 6851754

Registered Office

Ground Floor,
Discovery House,
28-42 Banner St,
London
EC1Y 8QE

Circuit protection:

Supply MCCB



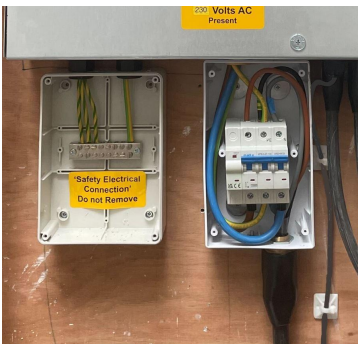
MCB



Isolator



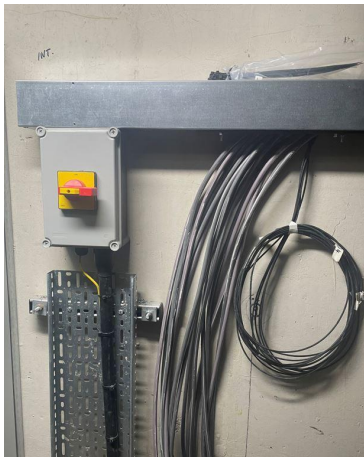
MATT:E (MCB+PEN)



Internal Array SP location enabling works & installed system:
TN-C-S(PME) - MATT:E (MCB+PEN) with Earth Separation Box (ESB)



TN-S earthing system



External Array SP location in Feeder Pillar:

Existing Metered Supply Connection enabling works & installed system:

TN-S system (min. ET4)

TN-C-S(PME) - MATT:E with ESB (min. ET6)



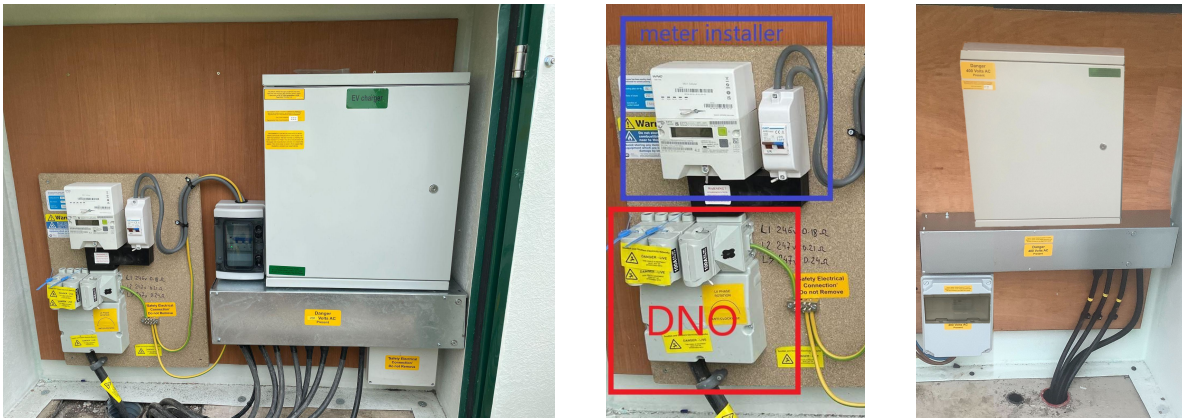
TT-system - type”B” time delayed RCD protection + Earth rod (min. ET6)



New Metered Supply Connection enabling works & installed system (min. ET9):

TN-C-S(PME) - MATT:E with ESB

TT-system - RCD protection + Earth rod



Charging unit location:



Installed Solo3 charging units:



Completed installation (predecessor model):



pod POINT