# Alfen Construction Signoff Form for Driver Management Solution

| Customer Information | |
|---|---|
| Customer name | |
| Customer contact name | |
| Customer contact phone | |
| Customer contact email | |

| Site Information | |
|---|---|
| Street and number | |
| City | |
| State | |
| Country | |
| Post code<br>Zip code | |
| Number of chargers to be installed | |
| Expected start of construction works | |
| Expected installation and commissioning date | |

| Site Contractor Information | | |
|---|---|---|
| Contractor type | ChargePoint designated | [☐] |
| | Customer designated | [☐] |
| Contractor company name | | |
| Contractor site lead name | | |
| Contractor site lead phone | | |
| Contractor site lead email | | |

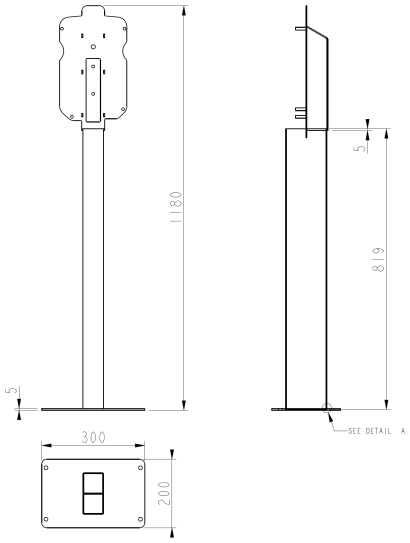
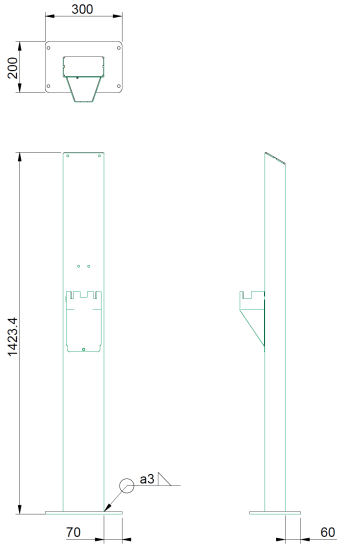
| Installer Information | | |
|---|---|---|
| Installer type | ChargePoint recommended | [☐] |
| | Customer recommended | [☐] |
| Installation company name | | |
| Installer contact name | | |
| Installer contact phone | | |
| Installer contact email | | |

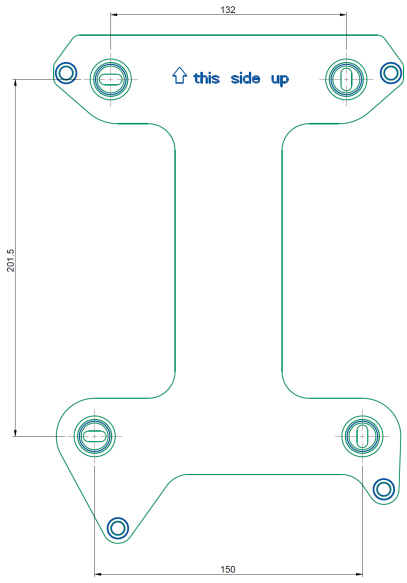
| 1 | Installation Location | |
|---|---|---|
| | a. Outdoor | ☐ |
| | b. Indoor | ☐ |
| | c. Underground | ☐ |
| | Will the station be exposed to outstanding environmental factors? *<br>*i.e. Dust, high humidity, sea salt, snow, corrosive substances | ☐ |

| 2 | Network Connectivity | | | |
|---|---|---|---|---|
| | Validate Mobile Network and Carrier availability *<br>*2G is only applicable for early versions of the Alfen stations.<br>If applicable, 4G Signal RSSP should be better than -90dB. A minimum of -85dB is recommended for good connectivity and smooth operation. | | | |
| | **Carrier name** | **4G (dBi)** | **3G** (dBi)** | **2G** (dBi)** |
| | 1. | | | |
| | 2. | | | |
| | 3. | | | |
| | Is a signal repeater necessary?<br>The installation of signal repeaters is recommended for areas with poor cellular connectivity.<br>For UK, devices readily available on the market can be installed. For EU/Continental Europe countries, a repeater should be requested through the local mobile carrier.<br>Are the readings in the table outside an acceptable range? | | | ☐ |
| | Will the station be connected to a local network* (ethernet connection?<br>Note: In case of home installation in a garage or where there is no 4G coverage, the station can be connected to internet using an ethernet cable connected to the home LAN (home router/modem) | | | ☐ |

| 3 | Location Requirements | | | |
|---|---|---|---|---|
| | Are all the minimum clearances available for installation and operation (space and serviceability)? | | | ☐ |
| | Are the stations pole mounted or wall mounted? | | | |
| | **Mounting Type** | **Single Socket (QTY)** | **Double Socket (QTY)** | **Installation Height (mm)** |
| | Wall mounted | | | |
| | Pole mounted | | | |

| 3 | **Location Requirements** | |
|---|---|---|
| | Are the height requirements met? *<br>*The height of the stations installed on a pole must be less than 1430 mm | ☐ |

| **Single Pole** | **Double (Twin) Pole** |
|---|---|
|  |  |

| **Wall Mounted** | |
|---|---|
|  | |
| Single Connector | Dual Connector |

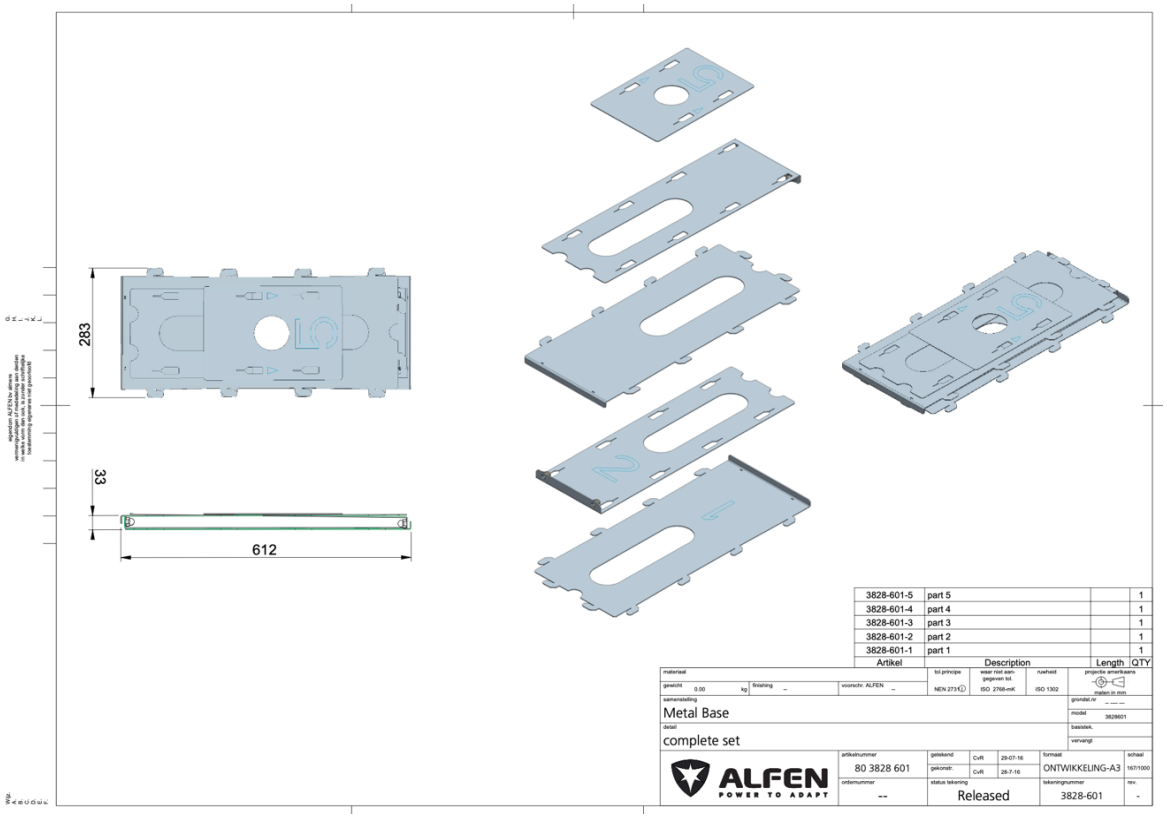
- The recommended installation height is 700 to 1200 mm from the ground to the bottom side of the casing.
- The gap between the drill holes must be 123.8 mm (top side), 39.6 mm (bottom side), and 434.3 mm (vertical).

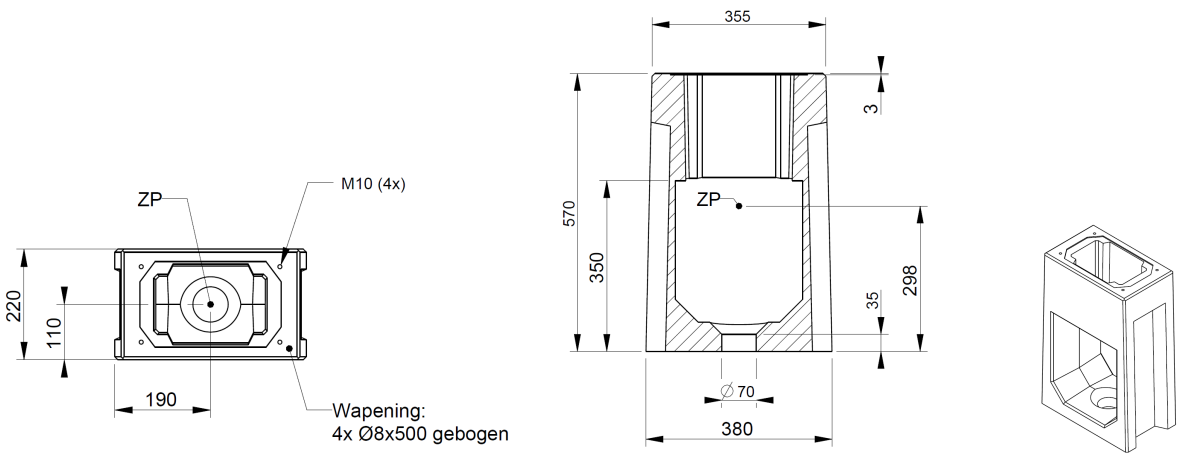
| 4 | Physical Installation |
|---|---|

Was the pre-fab foundation from Alfen used?

a. Metal ☐

b. Concrete ☐




Slab dimensions (Length x Width x Depth): 380 x 220 x 570 mm

| 5 | Grid Connection | |
|---|---|---|
| | What is the power available on site for the chargers? *<br>*Single stations are rated at 16-32 A input current at 400 V (3-Phase).<br>Dual stations are rated at 32 A or 2 x 32 A input current at 400 V (3-Phase) — two independent supply AC circuits required. | [ ] kVA |
| | What type of grid system is available? | |
| | TN-S | ☐ |
| | TN-C | ☐ |
| | TN-CS | ☐ |
| | TT<br>*TT System: a self-installed earth electrode, less than 100 Ohm earth dispersion resistance is required. | ☐ |
| | IT<br>*IT system: Not all the vehicles support the IT system. In that case, or with 3-Phase charging, an isolation transformer is required.<br>Grounding is connected to a shared reference (common earth) with other metal parts. | ☐ |
| | Will a grid connection upgrade be required? | ☐ |
| | Will a new electrical distribution panel be required? | ☐ |
| | Will any power management features be required? | |
| | a. Power limitation | ☐ |
| | b. Power sharing | ☐ |
| | Will the Alfen Dynamic Power Management feature be required?<br>*Smart Meter connection is only for home installation.<br>If Dynamic Power Management feature is required, specify the manufacturer and model of the Smart Meter that will be connected with the charging station. | ☐ |
| | Smart Meter manufacturer | |
| | Smart Meter model | |

| 6 | AC Supply Guide Installation | |
|---|---|---|
| | Was the Alfen installation manual followed when designing the electrical supply installation? | ☐ |
| | Is the installation ZE Ready compliant?*<br>*If EV/ZE Ready compliance is required, only use RCCB's of type A+ (high immunity) or type B. | ☐ |
| | For Dual Socket station, is a single or double AC input cable provided? | Single [☐]<br>Double [☐] |
| | What is the wire size of the AC supply cables provided to the stations? | |

| Station Type | Single Supply Cable ($mm^2$) | QTY | Double Supply Cable ($mm^2$) | QTY |
|---|---|---|---|---|
| Single | | | | |
| Dual | | | | |

| | | |
|---|---|---|
| Cable length necessary for station connection:<br>*For stations installed on a pole, at least 1200 mm of cable length should be available from the concrete slab level to the station.<br>For stations installed on a wall, at least 300 mm of extra cable length should be available from the height of the station installation. | | |
| Double Socket Station | Cable gland clamping range | 14-25.5 mm cable thickness |
| | AC input wires maximum size | • 16 $mm^2$ per wire: solid (VD) wire<br>• Maximum 6 $mm^2$ per wire: stranded (VDS) wire with ferrules |
| | AC input wires minimum size | • 16 A Station: 4 $mm^2$<br>• 32 A Station: 6 $mm^2$ |
| Single Station | Cable gland clamping range | Clamping range for 14-25.5 mm cable thickness |
| | AC input wires maximum size | • 10 $mm^2$ per wire: solid (VD) wire<br>• Maximum 6 $mm^2$ per wire: stranded (VDS) wire with ferrules |
| | AC input wires minimum size | • 16 A Station: 4 $mm^2$<br>• 32 A Station: 6 $mm^2$ |

## 6 AC Supply Guide Installation

| | With Circuit Breakers | | | With Fuses (gG) | Load Balancing |
|---|---|---|---|---|---|
| Short Circuit Protection | Single power supply, 1-Phase | 16 A | 1 x 40 A maximum, 1P, Curve B or C | 1 x 35 A maximum | Optional |
| | | 32 A | | | Required |
| | Double power supply, 1-Phase | 16 A | 2 x 20 A maximum, 1P, Curve B or C | 2 x 20 A maximum | Optional |
| | | 32 A | 2 x 40 A maximum, 1P, Curve B or C | 2 x 35 A maximum | |
| | Single power supply, 3-Phase | 16 A | 1 x 40 A maximum, 3P, Curve B or C | 3 x 35 A maximum | Optional |
| | | 32 A | | | Required |
| | Double power supply, 3-Phase | 16 A | 2 x 20 A maximum, 3P, Curve B or C | 6 x 20 A maximum | Optional |
| | | 32 A | 2 x 40 A maximum, 3P, Curve B or C | 6 x 35 A maximum | |
| | If you have opted for a capacity less than or equal to 16 A (3.7 kW or 11 kW charging), 20 A instead of 40 A is sufficient. | | | | |
| Residual Current Protection | Residual current circuit breaker (RCCB): minimum 100 mA (S) Selective, 4P, A EV, or B | | | | |

The cable trajectory from the main distribution station up to the Alfen Eve must be protected against short-circuiting and over-current with:

- Curve B or C circuit breakers (or otherwise in compliance with local standards and regulations).
- Type gG fuses (or otherwise in compliance with local standards and regulations).

## 7 Installation Documentation/Images

| | |
|---|---|
| Photo of the charger installation locations (walls or concrete pads, anchoring bolts, and conduit stub ups *) *For all applicable stations |  |
| Photo of the AC supply cable and termination of the cables (if applicable *) *For all applicable cable terminations |  |
| Photo of the available area around the chargers (for service clearances) |  |
| Photo of the installed bollards/wheel stops (if applicable) |  |
| Photo of the distribution panel (front open) with visible breakers |  |
| Photo of the distribution panel (external) |  |
| Photo of the Smart Meter Screen showing IP set-up (if applicable) |  |

| 7 | Installation Documentation/Images | |
|---|---|---|
| | Photo of the home modem/router port where station is wired (if applicable) | |
| | Photo of the distribution panel cable terminations | |
| | Photo of the station individual breakers and labels with visible breaker model / settings | |
| | Photo of the mains disconnect/breaker feeding station subpanel/breakers with visible breaker model/settings | |
| | Site SLD (Single Line Diagram)<br>*Including breaker settings | |
| | Site layout drawing (If available) | |
| | Make, model, and specification of the AC cabling (size, material, isolation, ratings) used to feed the stations | |
| | Electrical measurements: | |
| | a. Line to Line Voltage (L1-L2, L1-L3, L2-L3) | |
| | b. Line to N Voltage (L1-N, L2-N, L3-N) | |
| | c. N to G Voltage (N-G) | |
| | d. Grounding Impedence | |
| | Provide a list of serial numbers and MAC addresses of the stations installed on site<br>(*Only if station installation is included together with the civil works and electrical installation works) | |

| # | Serial | MAC Address | Comments |
|---|---|---|---|
| | | | |
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- The photos should be in .jpg format.
- The photos should be sharp and focused on the item being documented.
- The resolution of the photos should be between 5.0-12.1 MP.

**Legal Disclaimer**

ChargePoint is not responsible for verifying this information, and the creator of the protocol remains responsible for this information.

ChargePoint accepts no ongoing responsibilities for the electrical design and the installation specifics.

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