CIRCONTROL
Mobility & eMobility

Post eVolve Series

Installation Manual

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Installation Manual

Here's your guide to install eVolve.

1

So, hello!

This manual provides commissioning information about CIRCONTROL Charge Points, which have been designed and tested to allow electric vehicle charging, specified in IEC 61851.

This document has different sections such as step-by-step installation procedure and technical data.

THE FOLLOWING SYMBOLS ARE USED FOR IMPORTANT SAFETY INFORMATION IN THIS DOCUMENT

ELECTRIC RISK

Take precautions to make the electrical connection inside the unit.

Unit must be disconnected from any power source during commissioning.

ATTENTION!

Indicates that the damage to property can occur if appropiate precautions are not taken

- Complies with IEC 61851, Electric vehicle conductive charging system (IES 61851-1 and IEC 61851-22).
- Complies with IEC 62196, Plugs, socket-outlets, vehicle couplers and vehicle inlets (IEC 62196-1 and IEC 62196-2).
- Standards: 2014/35/UE, LVD;2014/30/UE, EMC.
- RFID complies with ISO 14443A/B.
- Modem 4G complies with CE/RED

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IMPORTANT SAFETY INSTRUCTIONS

Read carefully all the instructions before starting in order to ensure properly installation of the charge point.

The charge point is designed for installation in indoor and outdoor areas. For each of the different conditions of installation, the unit must be installed safely and ensure adequate protection.

- Charge point must not be installed in areas where there is potential risk of explosions.
- Do not install the charge point where falling objects may damage the equipment.
- The surface where the charge point is placed must withstand the mechanical forces.
- Do not use this unit for anything other than electric vehicle charging modes contemplated in IEC 61851.
- Do not modify this unit. If modified, CIRCONTROL will reject all responsibility and the warranty will be void.
- Comply strictly with electrical safety regulations according to your country.
- Do not make repairs or manipulations with the unit energised.
- Only trained and qualified personnel should have access to low-voltage electrical parts inside the unit.
- Check the installation annually by qualified technician.
- Remove from service any item that has a fault that could be dangerous for users (broken plugs, caps that don't close...).
- Use only Circontrol supplied spare parts.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

Refer to TECHNICAL DATA section for more information about environmental installation conditions.

Before the installation

ELECTRICAL WIRING CONSIDERATIONS

Take into consideration this section before start wiring connections of the charge point.

1 — ELECTRICAL PROTECTIONS

Charge point may not include elements of electrical protection.

If this equipment has internal electrical protections, are installed in each socket-outlet for the protection of the user against an electrical failure, according to the international standard IEC 61851-1:2017.

In order to guarantee the total protection of the users and the installation (power supply line included) in front of any electrical hazard, it is mandatory to install a main circuit breaker (MCB) and a residual current device (RCD) upstream of the charger.

These electrical protections and the rest of the installation have to be aligned with the local and national rules. The selectivity of the protections has to be guaranteed at all times.

2 — POWER SUPPLY LINE DIMENSIONING

The dimensioning of the input power supply line of the charge point must be checked by a qualified electrician. Note that various factors such as cable length between distribution board and charge point, maximum output current of the charge point may have influence of the selected cable.

In such cases, increasing the cable cross-section it is required to adapt the temperature resistance of the power supply line.

3 — MAXIMUM OUTPUT CURRENT

Please refer to the TECHNICAL DATA section to consult the default factory settings from maximum output current of the charge point.

If the power supply is less than maximum output current and adjustment to a lower nominal current needs to be performed, please refer to the INSTRUCTION MANUAL.

Depending of the model this value may vary.

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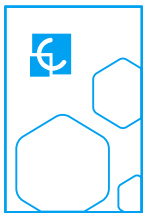
What's included:

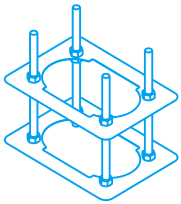
Charge Master Point



Installation Manual

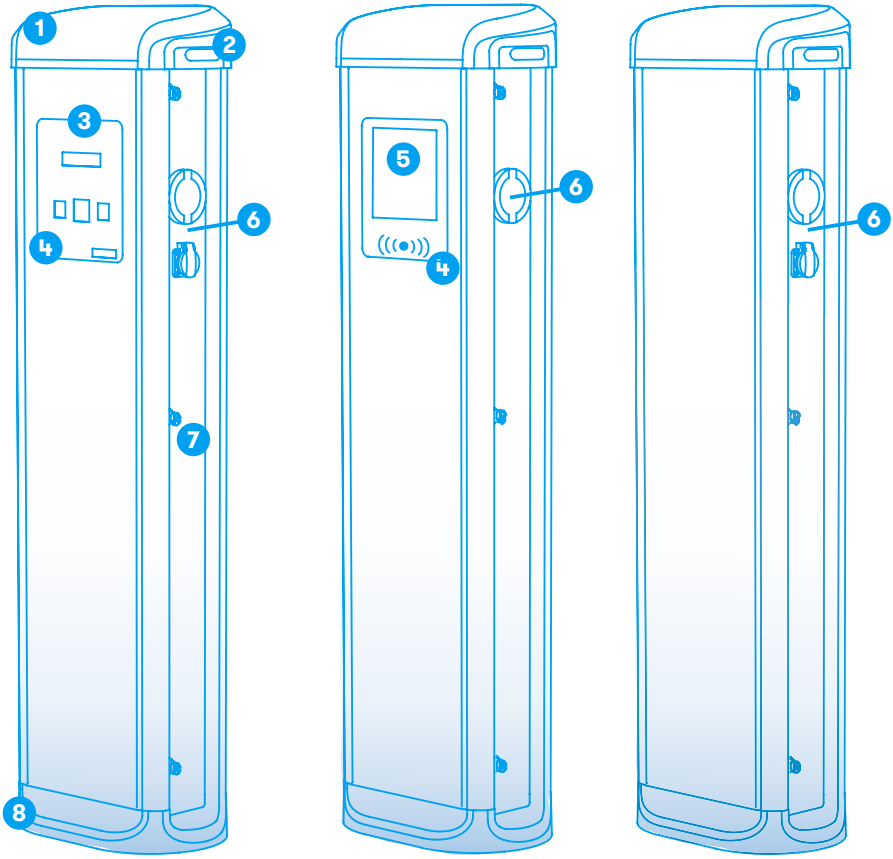
CirCarLife RFID

eVolve Post Key



Foundation Kit

Overview



1 — Hat

2 — LED Beacons

3 — Display LCD*

4 — RFID Reader***

5 — Touch screen TFT 8”**

6 — Plugs****

7 — Key lock access

8 — Base

(*) Only Smart Series
(**) Only Master Series
(***) Only Master & Smart Series
(****) Plugs may vary depending on the model

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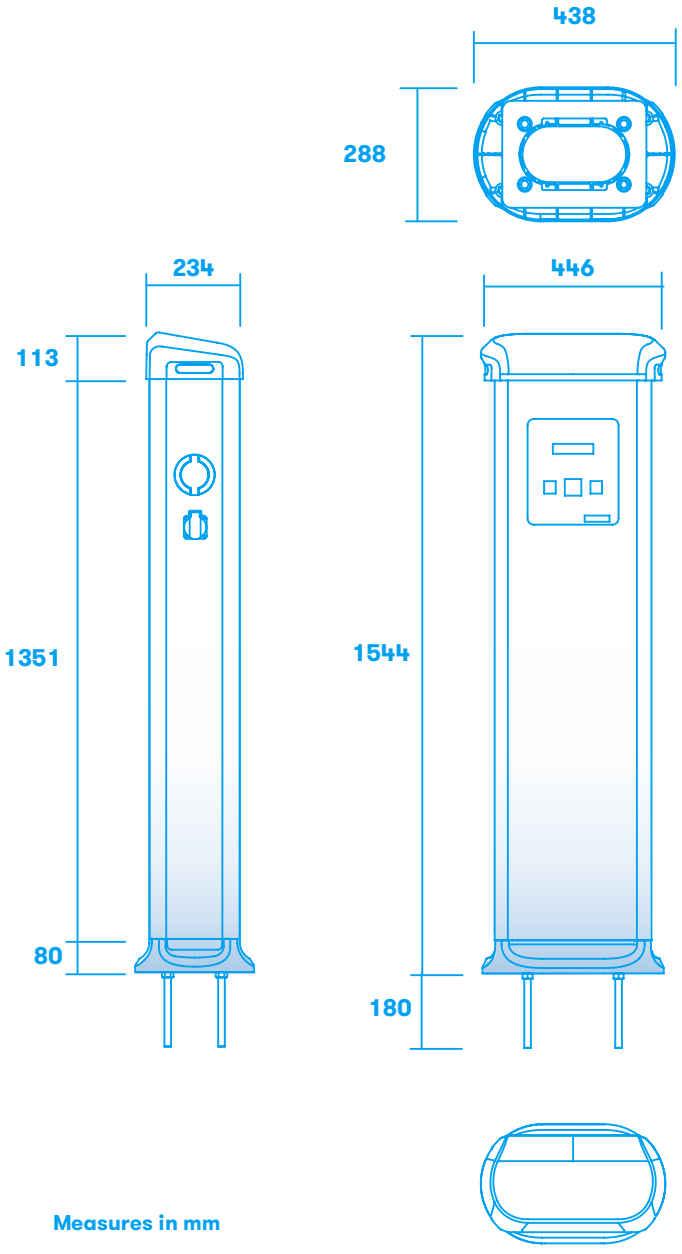


Measures in mm

Dimensions

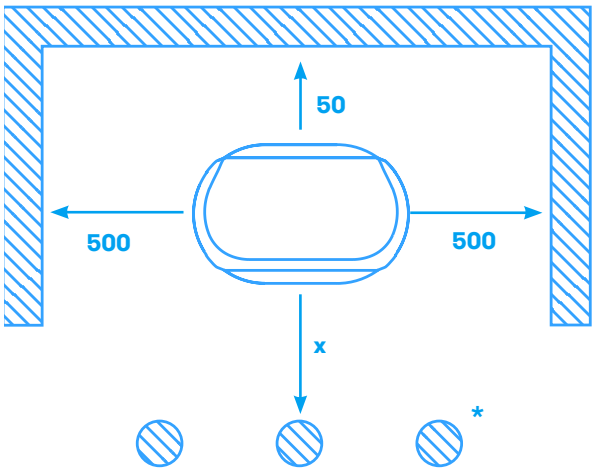
A Minimum Distances

When installing the unit, respect the minimum distances space for maintenance and safety reasons.

Please comply accordingly to your country specifications.

The next picture shows how it should be installed.

- Do not install near areas where water or fluids can penetrate into the unit.
- Do not install the unit in unstable terrain.

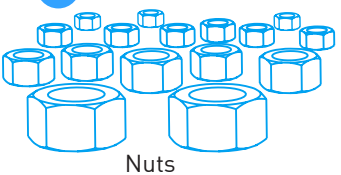


Measures in mm

(*) If Bollard Impact Protector is installed, keep **500 mm** as a minimum distance in order to give enough space to open the frontal door of the charge point for maintance tasks.

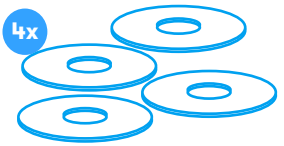
Foundation Kit:

16x



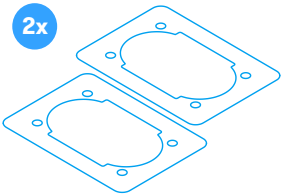
Nuts
DIN 934 M16

4x



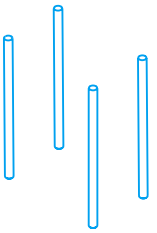
Washers
DIN 9021 M16

2x

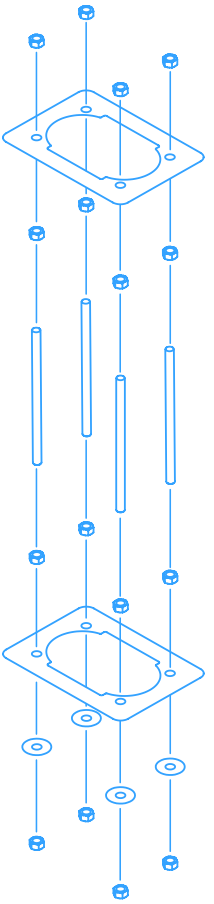


Templates

4x

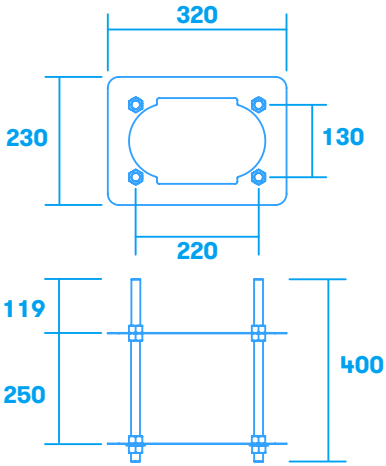


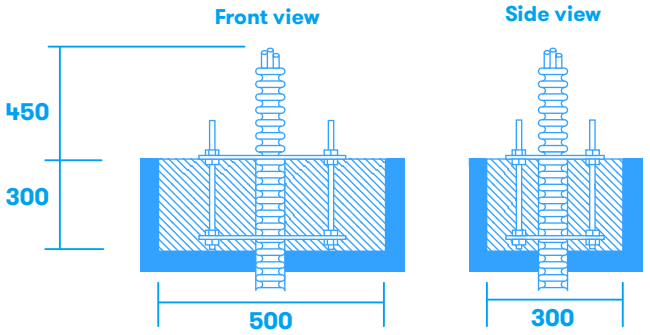
Foundation bolts



B Foundation

- Place the foundation bolts into the template using provided nuts with the help of a **24mm open-end wrench**.
- Once the kit is assembled, it must be placed in the ground taking into consideration the following measures.





Measures in mm

Note: In the event of any doubt about the terrain regarding the installation of this unit, due to the weight and dimensions, it will be necessary to define a final solution to install the unit. It must be confirmed by a specific technical project made for an architectural firm prior to its installation.

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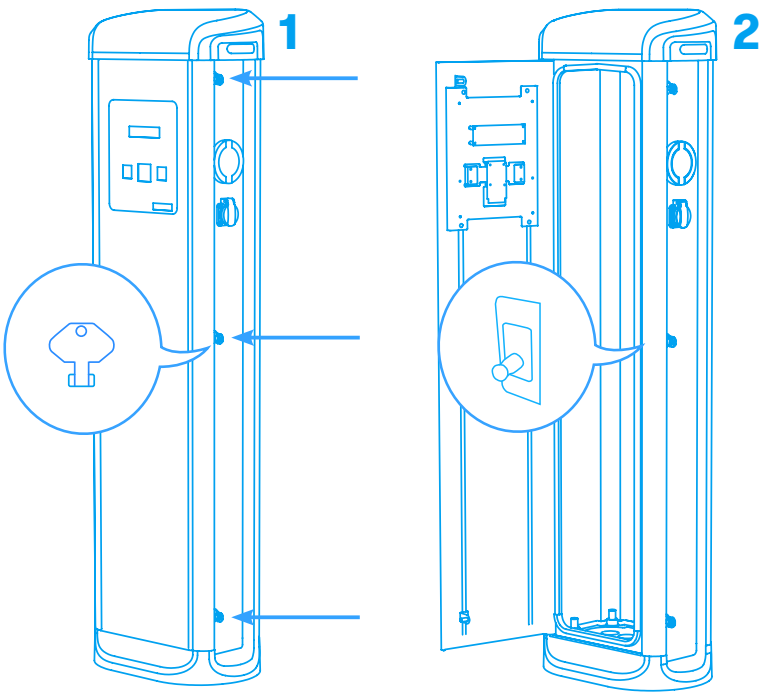
A Opening

1. Use provided key in order to open the unit.

2. Pull outward the Tamper switch* to operate the charge point.



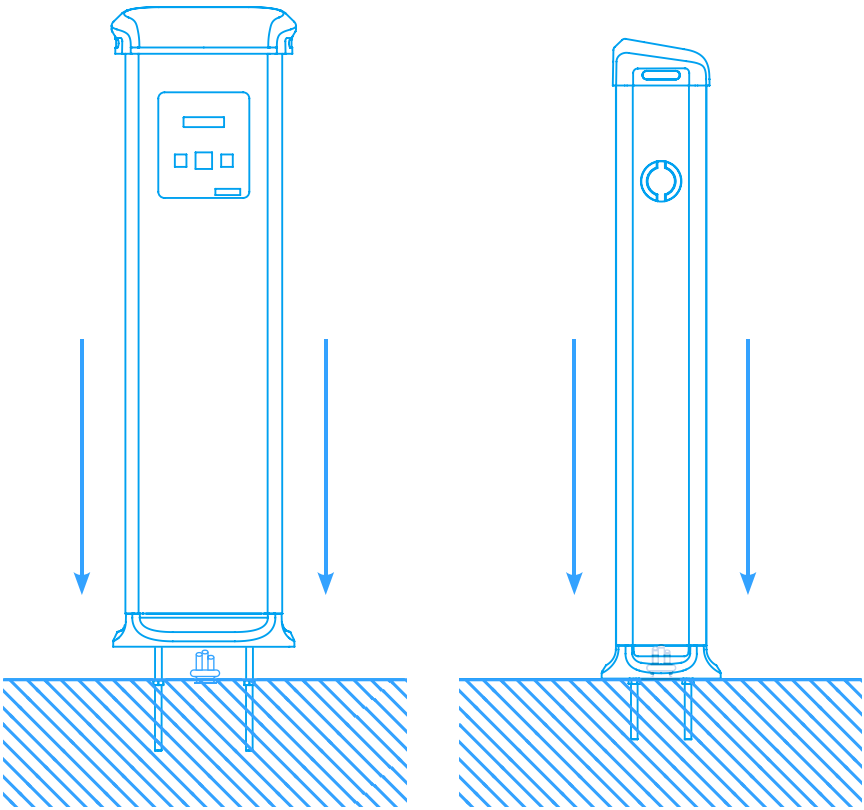
(*) Tamper Switch: The Charge Point has a security switch (antitamper protection) installed that will avoid any charging session if the doors are opened.
It has three positions.
1. Operative postition: The charge point is closed.
2. Error position: The charge point is opened without supervision.
3. Mantenance position:The charge point is opened under mantenance (Pulling otward the tamper switch).

Installation

B Positioning

1. Remove the template nuts before proceeding.

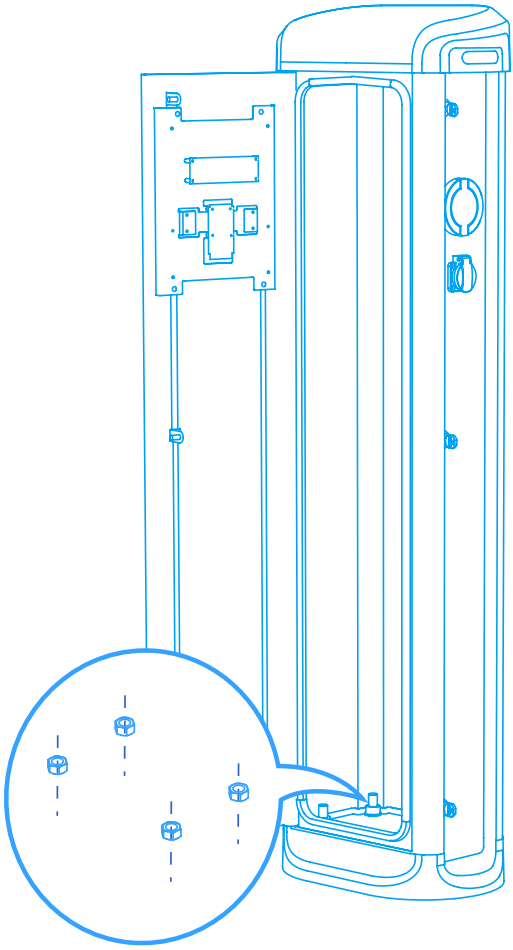
2. Place the charge point through the four foundation bolts. Consider that charge point pre-holes of the metal plate matches with cable glands.



Post eVolve charge point series can be placed at outdoor or indoor areas to charge electric vehicles. This product series is designed to placed on the ground.

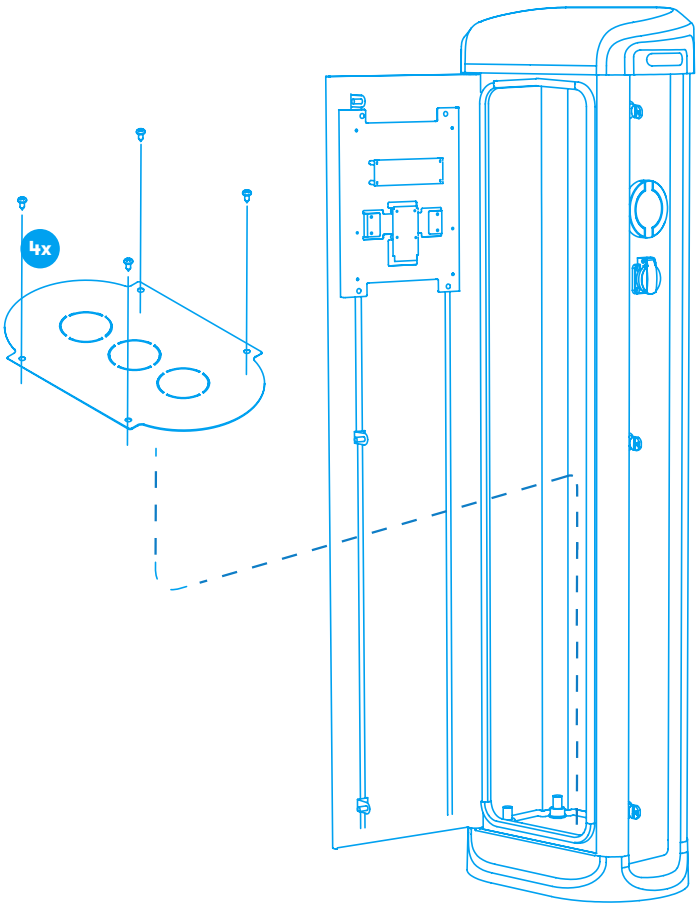
C Fixation

- Firmly tighten the 4 nuts using a **24mm open-end wrench**.



D Metal plate

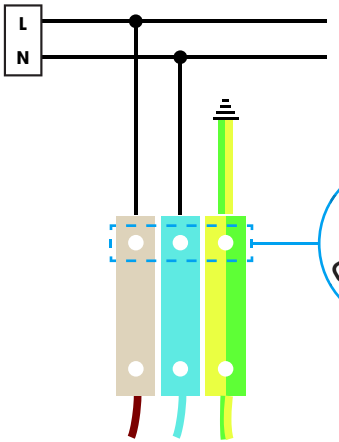
- It is recommended to install a cable glands (not supplied) in pre-holes position.
- Assembly metal plate using the 4 supplied screws.



E Wiring

SINGLE-PHASE CHARGE POINT

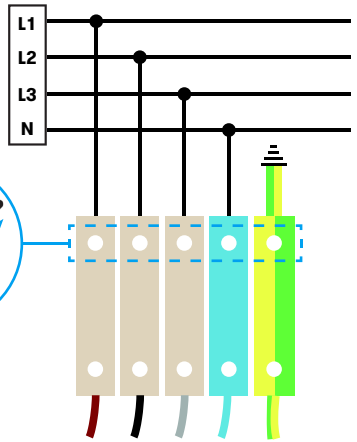
- Connect to the **230VAC**.



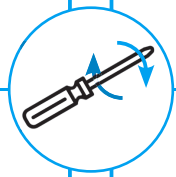
- Use provided cable glands in order to mantain the IP protection

THREE-PHASE CHARGE POINT

- Connect to the **400VAC**.
- If the Power Supply is Single-Phase, connect L1 and N.



- Use provided cable glands in order to mantain the IP protection



- Terminal block maximum cross-section: 35mm²
- Type of cable allowed by the terminal block: Aluminium & copper
- Do not forget to connect the ground cable to the ground terminal
- Make sure all screws are securely tightened at 4...5 Nm

Note: The proper earthing system must be TT or TN-S. The ground loop impedance measurement for the entire installation must be less than 80 ohms; however, it could be even less if required by national regulations. At least once a year it is recommended to carry out the verification of the installation grounding by qualified personnel when the terrain is drier.

F Verification

1 — POWER INPUT

Before proceeding, make sure voltage is present in the terminal blocks.

For Three-Phase models pay special attention to Neutral Cable.

2 — MAINTENANCE MODE

Pull outward the Tamper Switch located in the lower half of the Charge Point.

3 — CAREFUL WITH THE WIRES

Before closing the unit, keep in mind all cables should remain inside.

4 — CHECK THE PLUGS

Plugs should be in good conditions before starting the unit.

5 — ELECTRICAL PROTECTIONS

Rearm all the protections installed on the unit.

6 — CHECK THE BEACON INDICATORS

All beacon indicators should light properly. Here's the reference:

PLUG STATE	BEACON COLOR
Available	Green
Charging	Blue
Fault	Red

7 — OPERATION

Check no abnormal noise appears while the unit is charging.

8 — PREVENTIVE MAINTENANCE

It is recommended to perform one preventive maintenance per year.

5

GENERAL DATA	
Display*	LCD Multi-language / touch screen 8"
Light beacon	RGB Colour indicator
RFID reader*	ISO / IEC 14443A/B MIFARE Classic/Desfire EV1 ISO 18092 / ECMA-340 NFC 13.56MHz
Meter	MID Class 1 - EN50470-3

MECHANICAL DATA	
Enclosure rating	IP54 / IK10
Enclosure material	Aluminium & ABS
Enclosure door	Frontal key locked door
Net weight	55Kg
Dimensions (W x H x D)	450 x 1550 x 290 mm

ENVIRONMENTAL CONDITIONS	
Operating temperature	-5ºC to +45ºC
Operating temperature with Low Temperature Kit*	-30ºC to +45ºC
Storage temperature	-20ºC to +60ºC
Operating humidity	5% to 95% Non-condensing

CONNECTIVITY	
Ethernet*	10/100BaseTX (TCP-IP)
Cellular*	Modem 3G / GPRS / GSM Modem 4G LTE/WiFi Hotspot/GRPS/GSM
Interface protocol*	OCPP

Technical Data

ELECTRICAL DATA	
Power supply	1P+N+PE / 3P+N+PE
Input voltage	230VAC+/-10% / 400VAC+/-10%
Frequency	50Hz / 60Hz
Surge protection*	Transient surge protector IEC 61643-1 (Class II)

PROTECTIONS	
Overcurrent protection	MCB (curve C)
Safety protection	RCD Type A (30mA) / Type B*

Protections may not be included in the charge point, at this point, protections with the same characteristics, shall be placed upstream. The national regulations must be taken into account.

MODEL**	CONNECTORS	OUTPUT CURRENT	OUTPUT POWER	MINIMUM CABLE CROSS-SECTION***
S	Type 2 Socket Type 2 Socket	32A 32A	7,4kW 7,4kW	25mm^2
SS	CEE 7/3 CEE 7/3	16A 16A	3,6kW 3,6kW	10mm^2
T	Type 2 Socket Type 2 Socket	32A 32A	22kW 22kW	25mm^2
TM	Type 2 Socket CEE 7/3	32A 16A	22kW 3,6kW	16mm^2
T-one	Type 2 Socket	32A	22kW	10mm^2
TM4	Type 2 Socket / CEE 7/3 Type 2 Socket / CEE 7/3	32A / 16A 32A / 16A	22kW / 3,6kW 22kW / 3,6kW	25mm^2
C63	Type 2 Cable	63A	43kW	25mm^2

(*) Depending on the model, some components may vary

(**) For availability of models, please consult your local supplier

(***) This is the minimun cable section recommended for the maximum AC input current, the final section must be calculated by a qualified technician taking into account the specific conditions of installation

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Need help?

In case of any query or need further information, please contact our **Post-Sales Department**

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CIRCONTROL
Mobility & eMobility

CIRCONTROL eVOLVE INSTALLATION MANUAL

A comprehensive guide on how to install and verify your eVolve.

V2.4, September edition 2018