



# Installation Manual

Post eVolve Series





# Post eVolve Series Installation Manual

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# Here's your guide to install eVolve

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# 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 appropriate precautions are not taken.

- Complies with IEC 61851, Electric vehicle conductive charging system (IEC 61851-1 and IEC 61851-21-2).
- Complies with IEC 62196, Plugs, socket-outlets, vehicle couplers and vehicle inlets (IEC 62196-1 and IEC 62196-2).
- Complies with Directives: 2014/35/EU, LVD; 2014/30/EU, EMC.
- Complies with *The Electrical equipment (safety) regulations 2016 guidance* and *The Electromagnetic compatibility regulations 2016 guidance*.
- RFID complies with ISO/IEC 14443A/B.
- RFID and Modem 4G complies with 2014/53/EU, RED; and *Radio Equipment Regulations 2017*.

# 2

## 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 to be installed both 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 shall 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 Charge Point can be installed in locations with non-restricted access.
- The surface where the Charge Point is placed must withstand mechanical forces.
- Do not use this unit for anything other than electric vehicle charging modes considered in IEC 61851-1:2017.
- 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 any 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 a qualified technician.
- Remove from service any faulty item potentially 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 sign of damage.

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



# Before installation

## ELECTRICAL WIRING CONSIDERATIONS



Take into consideration this section before starting wiring the connections of the Charge Point.

### 1 – ELECTRICAL PROTECTIONS

Charge Point may not include elements of electrical protection. If this equipment has internal electrical protections, they are installed for each socket-outlet for the protection of the user against an electrical failure, according to the international standard IEC 61851-1:2017.

The chargers equipped with Type A RCDs require an additional RCD installed upstream in order to ensure the whole installation is compliant with the standard IEC 60364-7-722. This RCD shall be of Type B or Type A with additional protection for DC leakage of 6mA (RCD-DD) according to the IEC 62955.

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 shall be checked by a qualified electrician. Note that various factors such as cable length between distribution board and Charge Point and maximum output current of the Charge Point may have influence on the selected cable. In such cases, increasing the cable cross-section is required to adapt the temperature resistance of the power supply line.

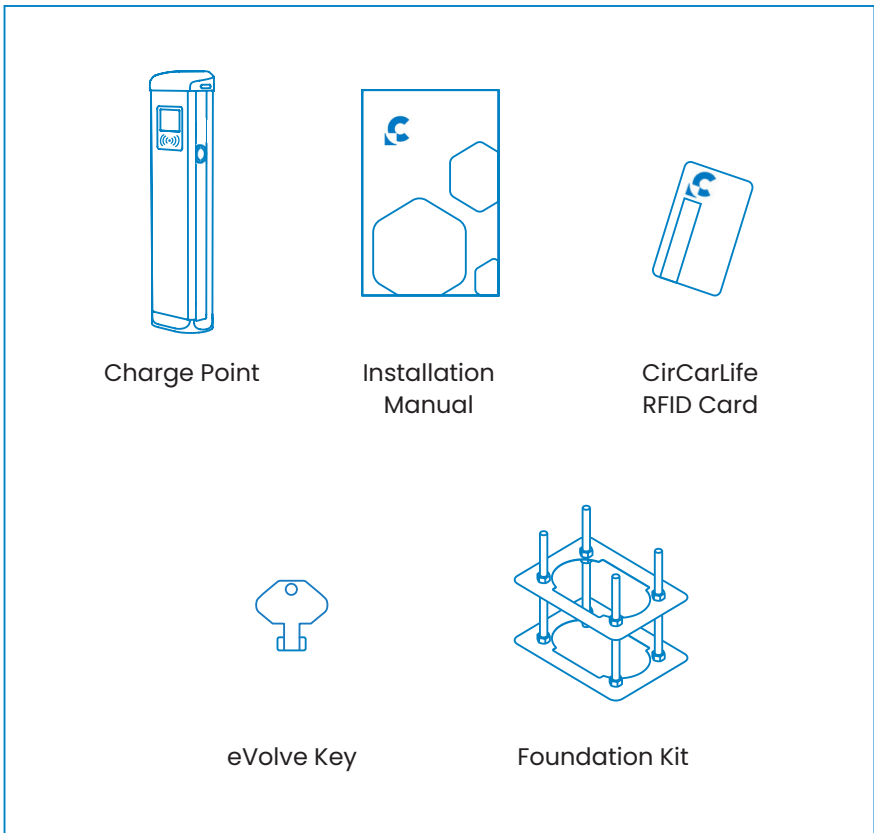
### 3 – MAXIMUM OUTPUT CURRENT

Please refer to the TECHNICAL DATA section to consult the default factory settings of 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 USER MANUAL.

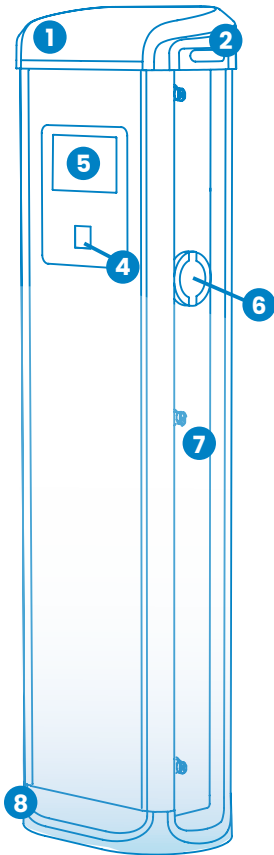
**Depending on the model this value may vary.**

# 3

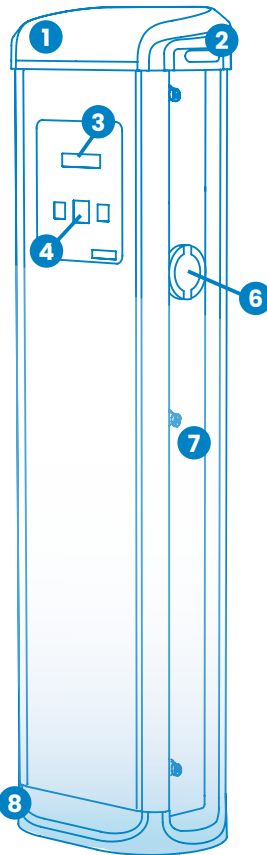
What's included:



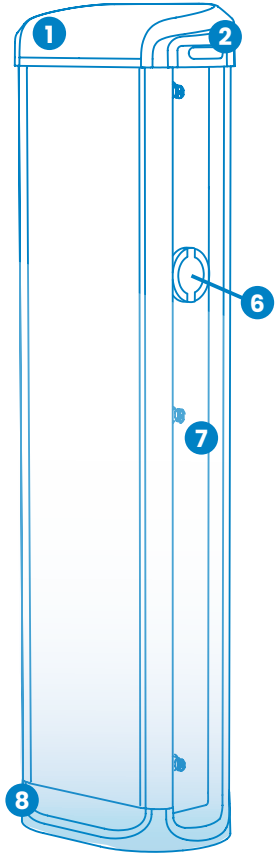
# Overview



**Master**



**Smart**



**Satellite**

1 – Hat

2 – LED Beacons

3 – Display LCD

4 – RFID Reader

5 – Touch screen TFT 8"

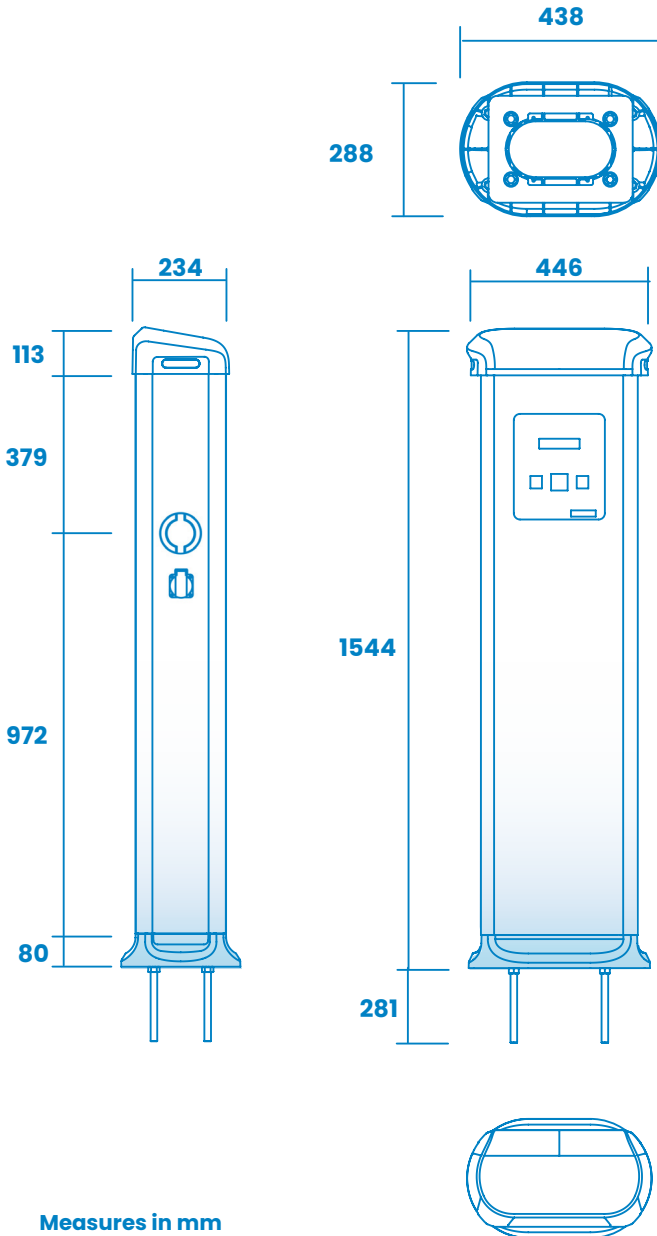
6 – Socket-outlet\*

7 – Key lock access

8 – Base

(\* ) Socket-outlets may vary depending on the model

4



# Dimensions

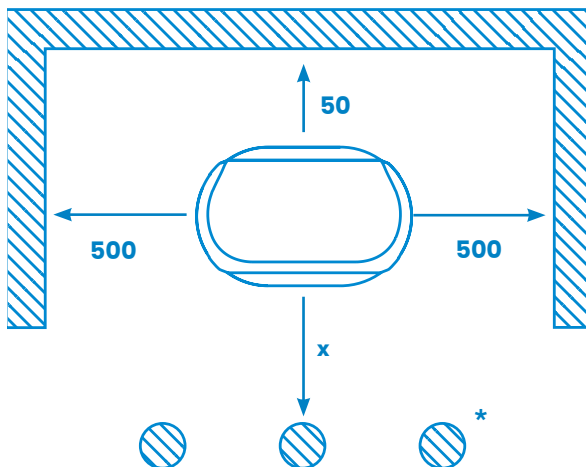
## A Minimum distances

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

Please comply with your country specifications.

The following image shows how it should be installed.

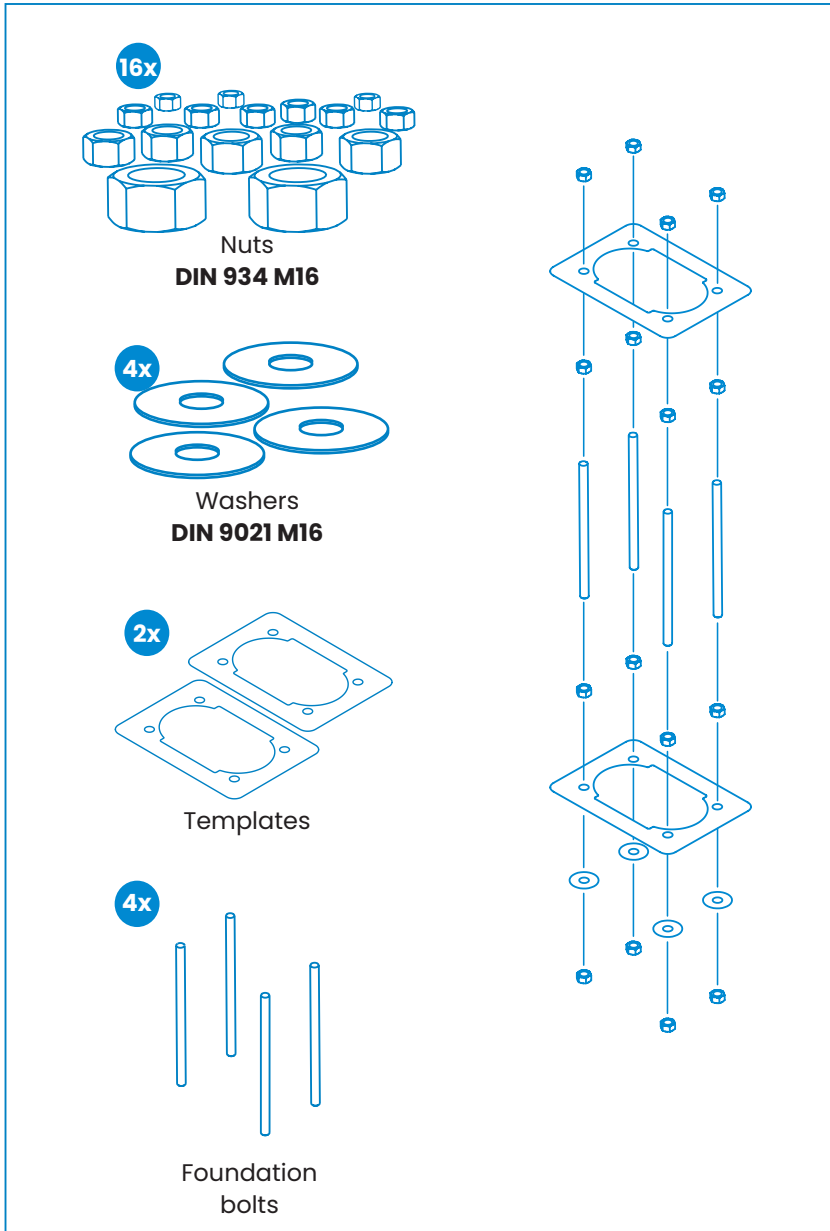
- Do not install near areas where water or fluids can penetrate into the unit.
- Do not install the unit on unstable terrain.



Measures in mm

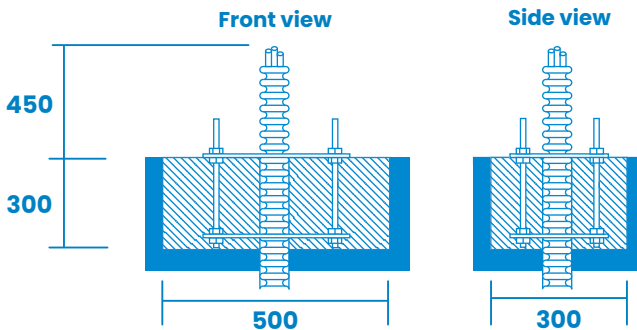
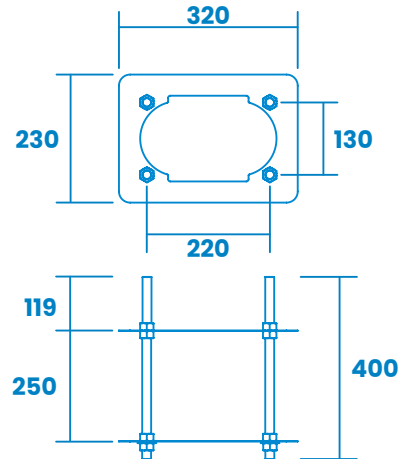
(\*) If Bollard Impact Protector is installed, keep **500 mm** as a minimum distance in order to allow enough space to open the frontal door of the Charge Point for maintenance tasks.

Foundation Kit:



## B Foundation

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



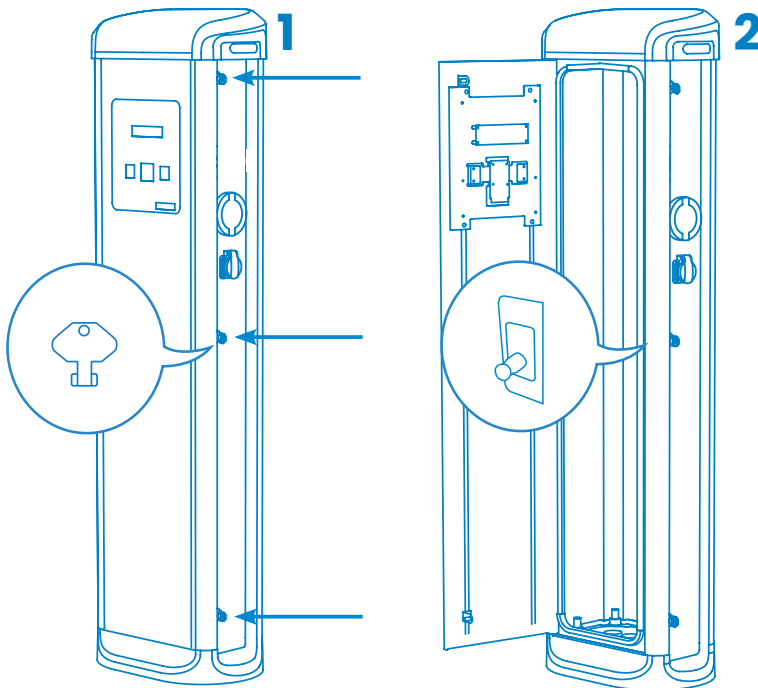
Measures in mm

**Note:** If there is any further 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 shall be performed a dedicated technical project by an architecture firm prior to its installation.

# 5

## A Opening

1. Use the 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 to avoid any charging session with the doors open.

It has three positions.

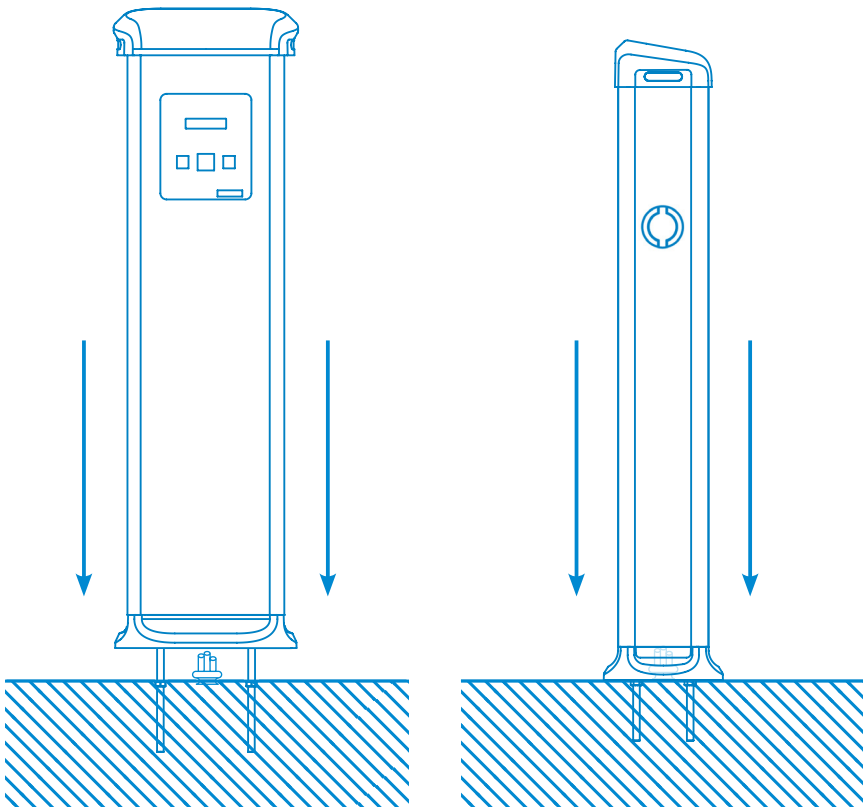
1. Operative position: The Charge Point is closed.
2. Error position: The Charge Point is opened without supervision.
3. Maintenance position: The Charge Point is opened under maintenance (Pulling outward the tamper switch).



# Installation

## B Positioning

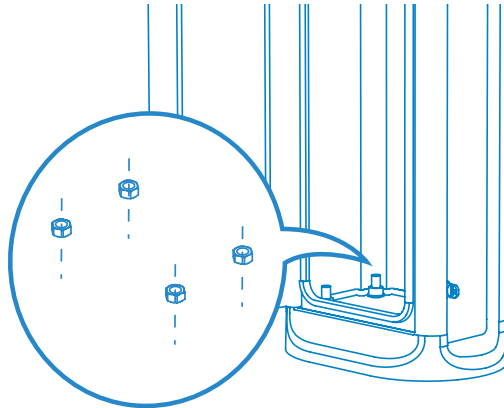
1. Remove the template nuts before proceeding.
2. Place the Charge Point through the four foundation bolts. Make sure that the Charge Point pre-holes of the metal plate match with the cable glands.



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

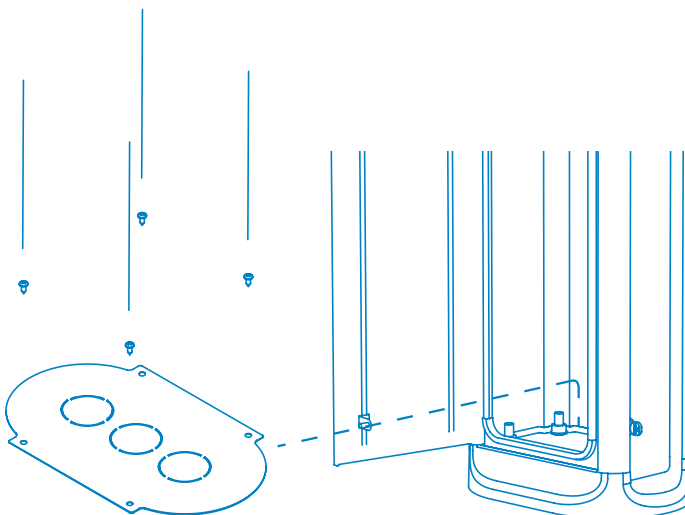
## **C** Fixation

- 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.





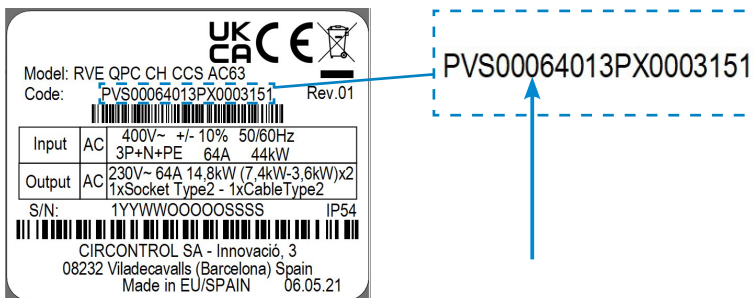
# Wiring



The following steps only apply to **Post eVolve Smart**. For any other cases (Post eVolve Master or Post eVolve Satellite), just take into account the first diagram located in page 16.

The appropriate wiring depends on whether your Post eVolve Smart is second or third generation.

To find out, you must check the sixth position of the code located in the sticker on the side of the Charge Point.



If the code has a number 3 in the specified position it means that your Post eVolve Smart is third generation.

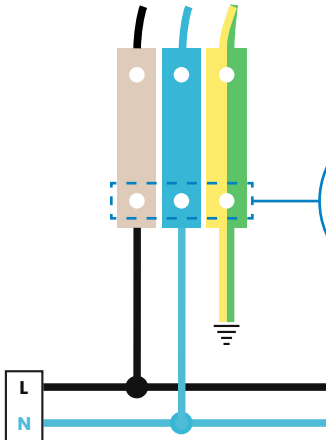
Please make sure to follow the appropriate diagram according to the generation of your Charge Point. If your Charge Point is Post eVolve Smart Gen 3, follow the diagram located in page 17. Otherwise, follow the diagram located in page 16.

**Note:** The proper earthing system shall be II or IN-S. The ground loop impedance measurement for the entire installation shall 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 a qualified personnel when the terrain is drier.

1. WIRING DIAGRAM *POST eVOLVE SERIES*

**SINGLE-PHASE Charge Point**

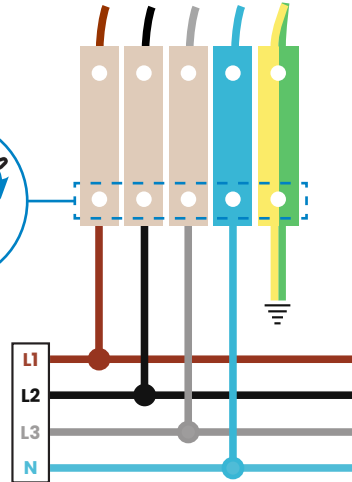
- Connect to the **230VAC**.



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



**Terminal block maximum cross-section: 35 mm<sup>2</sup>**



**Type of cable allowed by the terminal block: Aluminium & copper**



**Do not forget to connect the ground cable to the ground terminal**

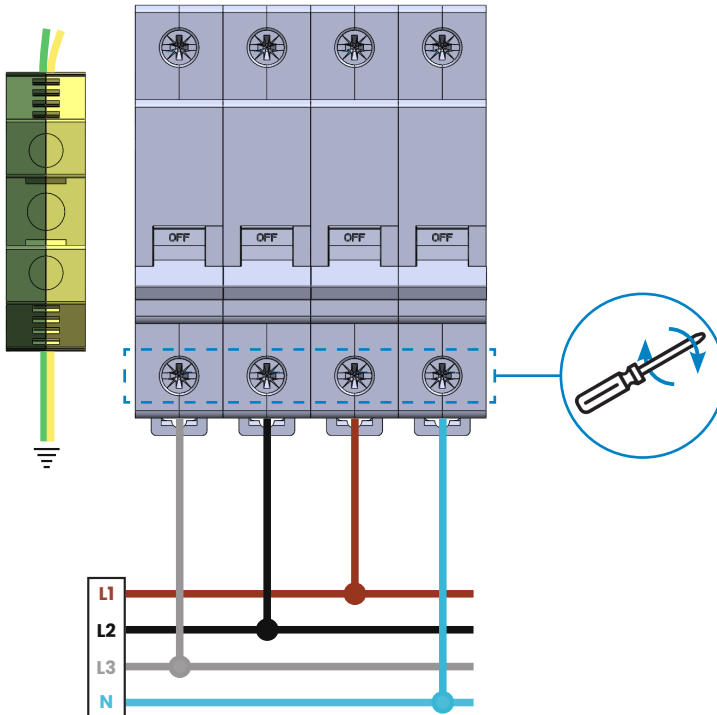


**Make sure all screws are securely tightened at 4.5 Nm**

## 2. WIRING DIAGRAM POST eVOLVE SMART GEN 3

### 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 maintain the IP protection



**Disconnecter maximum cross-section: 35 mm<sup>2</sup>**



**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:  
Disconnecter 3 Nm; Terminal block 4.5 Nm**

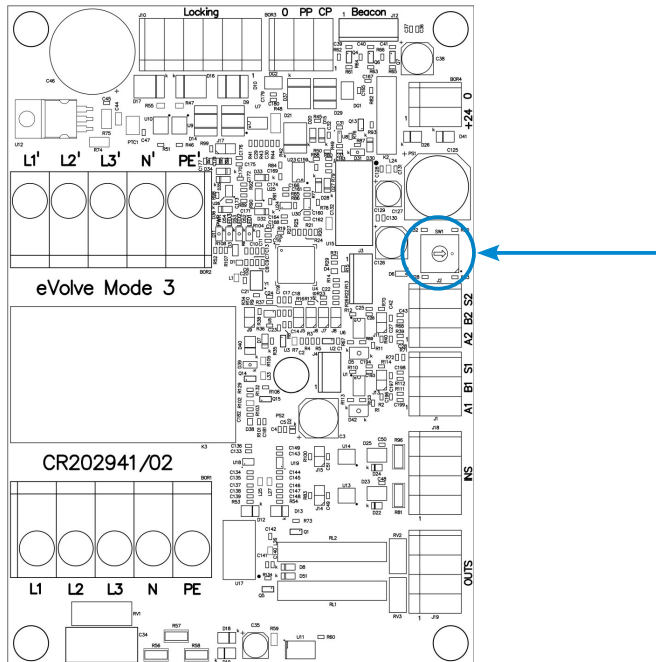


## Current Limit Selector

This section only applies to **Post eVolve Smart Gen 3**.

Please note that the current limit can be defined both by rotating the Dip-Switch and the configuration website. **Regardless of how the current limit is set, the lower value will always prevail.**

Depending on the position given to the Dip-Switch, the equipment will limit the current to the defined maximum amperage value.



To limit the current of the eVolve, the table in the next page must be followed:

Whenever the position of the DIP Switch is changed, to apply the changes, the equipment must be restarted by disconnecting the power supply.

DIP-SWITCH Position	eVolve Limit Current (A)
0	0 A
1	6 A
2	10 A
3	16 A
4	20 A
5	25 A
6	32 A
7	32 A
8	32 A
9	32 A
A	32 A
B	32 A
C	32 A
D	32 A
E	32 A
F	32 A



# 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. The behaviour of Post eVolve Smart Gen 3 is slightly different.

Here are both references:

Post eVolve Series:

PLUG STATE	BEACON COLOR
Available	Green
Charging	Blue
Fault	Red



**Post eVolve Smart Gen 3:**

<b>PLUG STATE</b>	<b>BEACON COLOR</b>
Available	Green
Pause*	Blue (Blinking)
Charging	Blue
Fault/Disable	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.

(\*) This state refers to all cases at which the charge is stopped, e.g.: charging is ready but has not started yet, charging finished but the EV is still connected or just paused during charging.

# 6

DATA	GENERAL SPECIFICATIONS	
MECHANICAL	<b>Light beacon</b>	RGB Colour indicator
	<b>Enclosure rating</b>	IP54 / IK10
	<b>Enclosure material</b>	Aluminium & ABS
	<b>Enclosure door</b>	Frontal key locked door
	<b>Net weight</b>	55 Kg
	<b>Dimensions (W x H x D)</b>	450 x 1550 x 290 mm
	<b>Socket</b>	Type 2 + Locking System
	<b>Type 2 socket protection (Optional)</b>	Shutter
	<b>Cable (Optional)</b>	Type 1; Type 2 Type 2 <sup>3</sup>
ELECTRICAL	<b>Power supply</b>	1P+N+PE / 3P+N+PE
	<b>Input voltage</b>	230V AC+/-10% / 400V AC+/-10%
	<b>Frequency</b>	50 Hz / 60 Hz
ENVIRONMENTAL CONDITIONS	<b>Operating temperature</b>	-5°C to +45°C -5°C to + 50°C <sup>3</sup>
	<b>Minimum operating temperature with Low Temperature Kit (Optional)*</b>	-30°C
	<b>Operating humidity</b>	5% to 95% Non-condensing
PROTECTIONS	<b>Overcurrent protection</b>	Miniature Circuit Breaker (MCB) IEC 60898-1 (Curve C)
	<b>Residual current protection</b>	RCD Type A (30 mA) + 6 mA DC** / Type B (Optional)

(\*) Equipment to be installed outdoors shall be provided with the Low Temperature Kit in order to comply with the IEC 61851-1:2017.

(\*\*) This protection is not available for model C63 One.

# Technical Data

GENERAL DATA		MODELS			
Display	Touch screen 8"	M	L	S	3
	LCD Multi-language	M	L	S	3
RFID reader	ISO/IEC 14443 A	M	L	S	3
RFID reader <sup>3</sup>	ISO/IEC 14443 A&B Felica ISO/IEC 15693/ICODE	M	L	S	3
Legic RFID reader (optional)	ISO/IEC 14443 A&B ISO/IEC 18092 ECMA-340 ISO/IEC 15693 Legic Prime	M	L	S	3
Meter	MID Class 1 – EN50470-1/3	M	L	S	3
Ethernet	10/100BaseTX (TCP-IP)	M	L	S	3
Wi-Fi	Wi-Fi 2.4 GHz (IEEE 802.11 b/g/n)	M	L	S	3
Cellular (optional)	Embedded modem 4G LTE/3G/GPRS	M	L	S	3
	Modem 4G LTE/WiFi Hotspot/3G/GPRS	M	L	S	3
Interface protocol	OCPP 1.6J / OCPP 2.0.1 Ready	M	L	S	3

MODEL*	CONNECTORS	OUTPUT CURRENT	OUTPUT POWER	MINIMUM CABLE CROSS SECTION**	SERIES
S	2 x Type 2 Socket	2 x 32 A	2 x 7,4 kW	25 mm <sup>2</sup>	M L S 3
T	2 x Type 2 Socket	2 x 32 A	2 x 22 kW	25 mm <sup>2</sup>	M L S 3
TM4	Type 2 Socket / CEE 7/3 Type 2 Socket / CEE 7/3	32 A / 16 A 32 A / 16 A	22 kW / 3,6 kW 22 kW / 3,6 kW	25 mm <sup>2</sup>	M L S 3
C48	2 x SAE J1772 Cable	2 x 48 A	2 x 11.5 kW	35 mm <sup>2</sup>	M L S 3
C63 One	Type 2 Cable	63 A	44 kW	25 mm <sup>2</sup>	M L S 3

**M** Master

**L** Satellite

**S** Smart

**3** Smart Gen 3

(\*) Please check availability with your local supplier.

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

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# Notes

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# Need help?

In case of any query or if further information is required, please contact our **Post-Sales Department**.



[support@circontrol.com](mailto:support@circontrol.com)



[www.circontrol.com](http://www.circontrol.com)



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(+34) 937 362 941



**CIRCONTROL  
POST eVOLVE SERIES  
INSTALLATION MANUAL**

A comprehensive guide on  
how to install and verify your  
Charge Point.

v4.1 - June 2023

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