



CIRCONTROL
Mobility & eMobility

Post eVolve Rapid Series

Installation & User Manual



Post eVolve Rapid Series Manual

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Here's your guide to install Post eVolve Rapid

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So, hello!

This manual provides commissioning and use instructions information about Post eVolve Rapid, which has 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.

- Compliant with IEC 61851; Electric vehicle conductive charging system (IEC 61851-1 and IEC 61851-23).
- Compliant with IEC 62196; Plugs, sockets-outlets, vehicle connectors and vehicle inlets- Conductive charging of electric vehicles (IEC 62196-1, IEC 62196-2 and IEC 62196-3).
- Directives: 2014/53/UE, Radio and Telecommunication Terminal equipment; 2014/30/UE, Electromagnetic Compatibility (EMC); 2014/35/UE, Low Voltage.
- Meets the CCS specification, DIN SPEC 70121. ISO 15118 ready.

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A 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 at 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 explosion or any salinity level.
- Charge point must not be installed in industrial areas with high level of humidity or pollutants.
- 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 are expected 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 energized.
- Only trained and qualified personnel should have access to the electrical parts inside the Charge Point.
- 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 unit 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 installation

B 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 charge point.

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. Depending on the model this value may vary.

Important Electrical Safety Instructions



Read carefully all the instructions before starting in order to ensure properly handling of electrical parts.

A safe work environment is not enough to control all potential electrical hazards. It is recommended to be very cautious and work safely. So, the safety rules shown below could help to control risks of injury or death from workplace hazards.

- Avoid contact with energized electrical circuits.
- Disconnect the power source before servicing or repairing electrical equipment.
- Use only tools and equipment with non-conducting handles when working on electrical devices.
- Never use metallic pencils or rulers, or wear rings or metal watchbands when working with electrical equipment.
- Enclose all electric contacts and conductors so that no one can accidentally come into contact.
- When it is necessary to handle equipment that is plugged in, be sure hands are dry and, when possible, wear nonconductive gloves, protective clothes and shoes with insulated soles.
- Never handle electrical equipment when hands, feet, or body are wet or perspiring, or when standing on a wet floor.

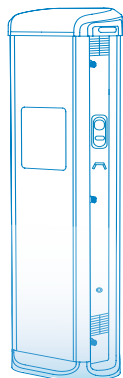
EVSE Classification

Classification of the unit according to the IEC 61851-1:2017:

1 — Power supply Input	<ul style="list-style-type: none">• EV supply equipment connected to AC supply network• Permanently connected
2 — Power supply Output	<ul style="list-style-type: none">• DC EV supply equipment
3 — Environmental conditions	<ul style="list-style-type: none">• Indoor and outdoor
4 — Access	<ul style="list-style-type: none">• Equipment for locations with restricted access and;• Equipment for locations with non-restricted access.
5 — Mounting method	<ul style="list-style-type: none">• Stationary equipment<ul style="list-style-type: none">- Ground mounted; floor mounted
6 — Protection against electric shock	<ul style="list-style-type: none">• Class I
7 — Charging modes	<ul style="list-style-type: none">• Mode 4

3

What's included:



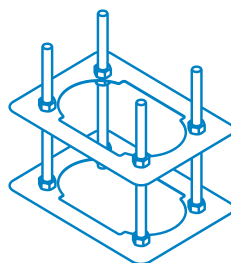
Charge Point



Installation &
User Manual

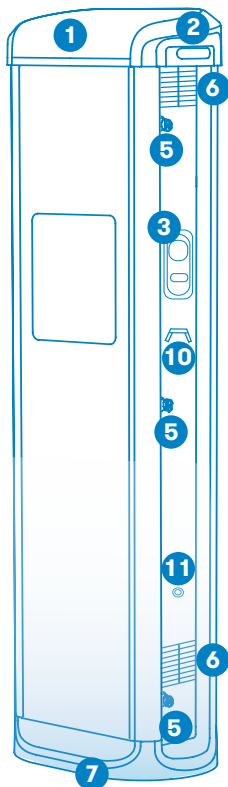


Electric
cabinet key +
security key

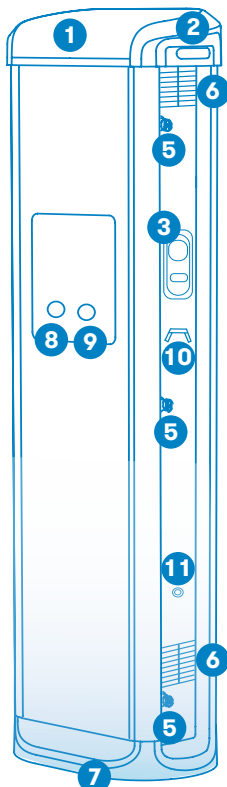


Foundation
Kit

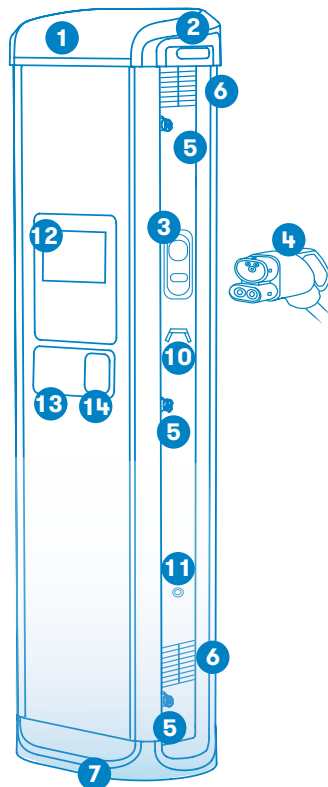
Overview



Satellite Serie



Basic Serie



Master Serie

1 — Hat

2 — LED beacon light

3 — Holder

4 — Cable

5 — Key lock access

6 — Ventilation

7 — Base

8 — Start button

9 — Stop button

10 — Cable roller

11 — Cable gland

12 — Screen

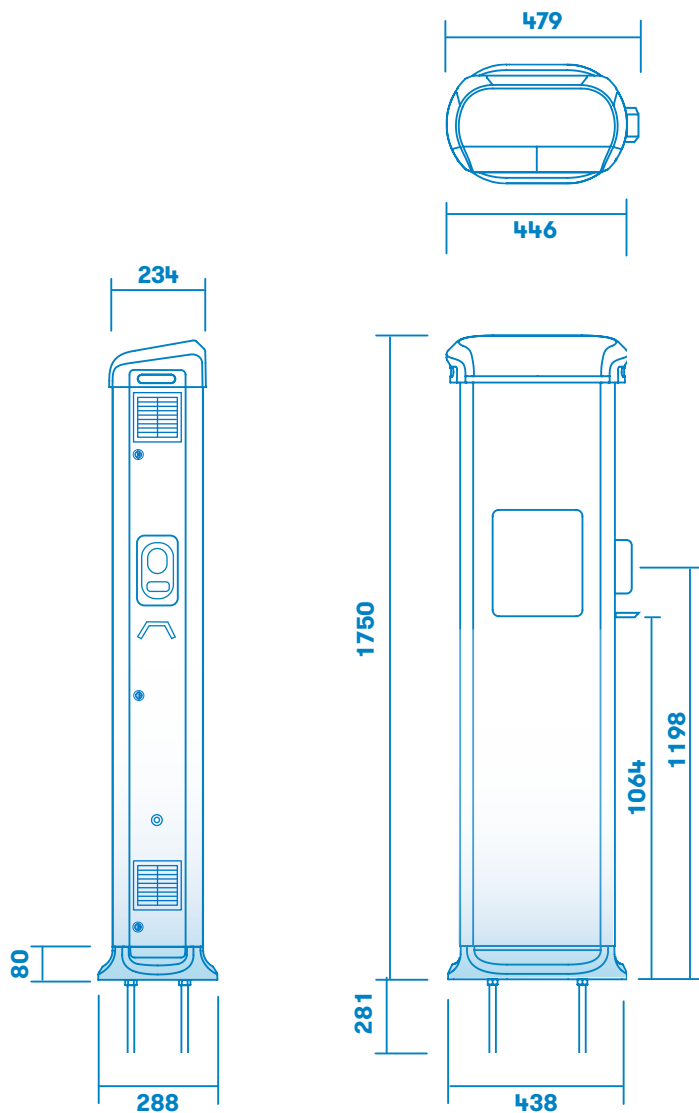
13 — RFID reader

14 — Credit card payment *

[*] Depending on the model, the components can vary.



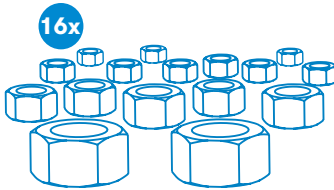
Dimensions



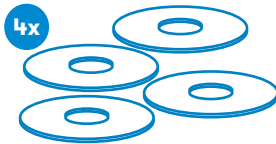
Measures in mm

5

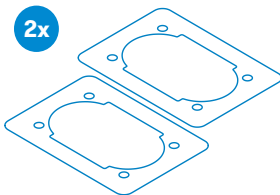
What is needed:



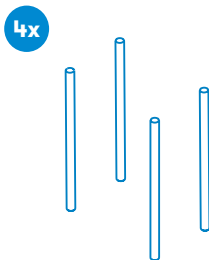
Nuts
DIN 934 M16



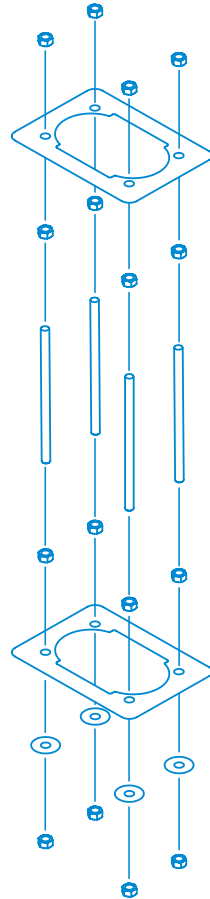
Washers
DIN 9021 M16



Templates



Foundation bolts



Installation



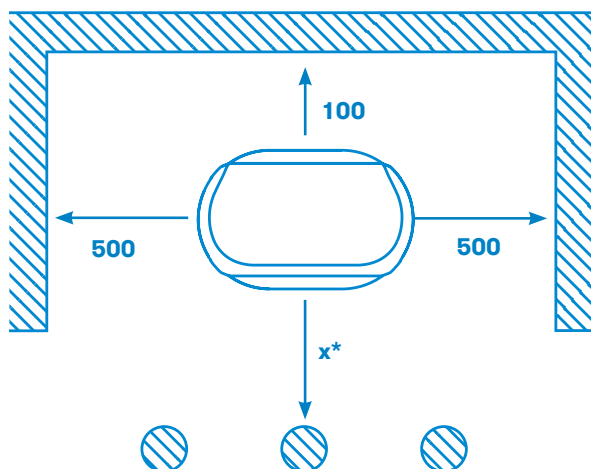
Space requirements

When installing the unit, respect the minimum distances 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 on unstable terrain.

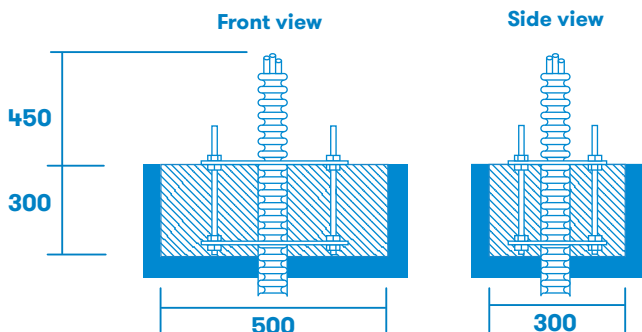
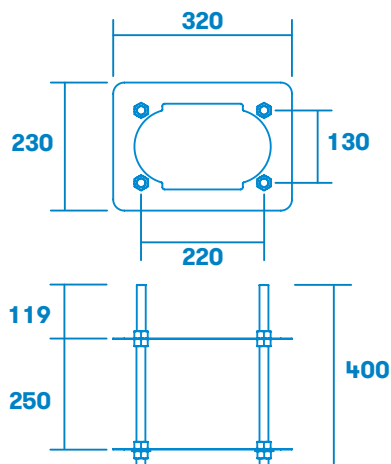


Measures in mm

[x*] 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 maintenance tasks.

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 in the ground taking into consideration the following measures.



Measures in mm

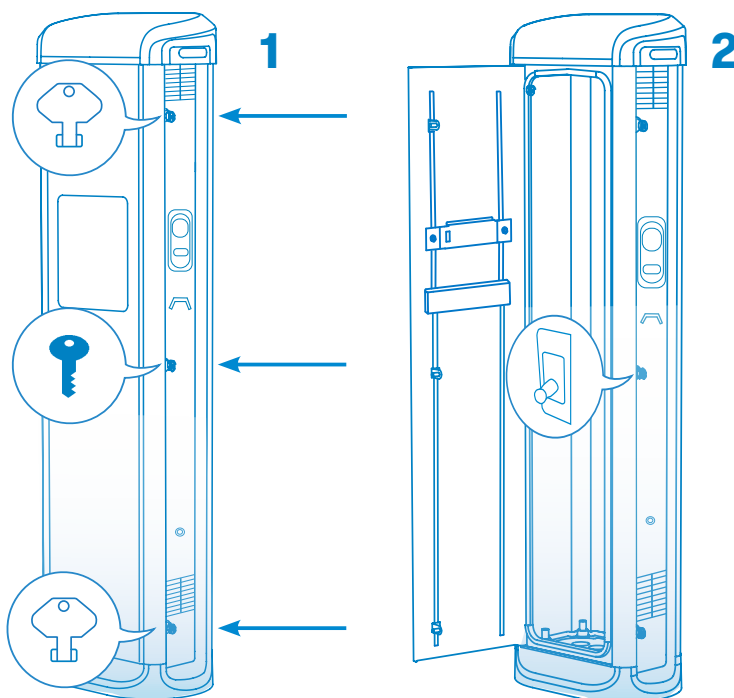
Note: If there is any further doubt about the terrain regarding the installation of this unit, due to the weight and dimensions, it will be necessary to define a final solution to install the unit. It shall be performed an specific technical project made by an architectural firm prior to its installation.



Opening

1. Introduce provided eVolve Rapid security key in the lock located at the mid part of the unit and the electric cabinet key at the top and bottom locks of the unit. Then, the unit is unlocked and ready to be opened.

2. Pull outward the Tamper switch* to operate the Charge Point.

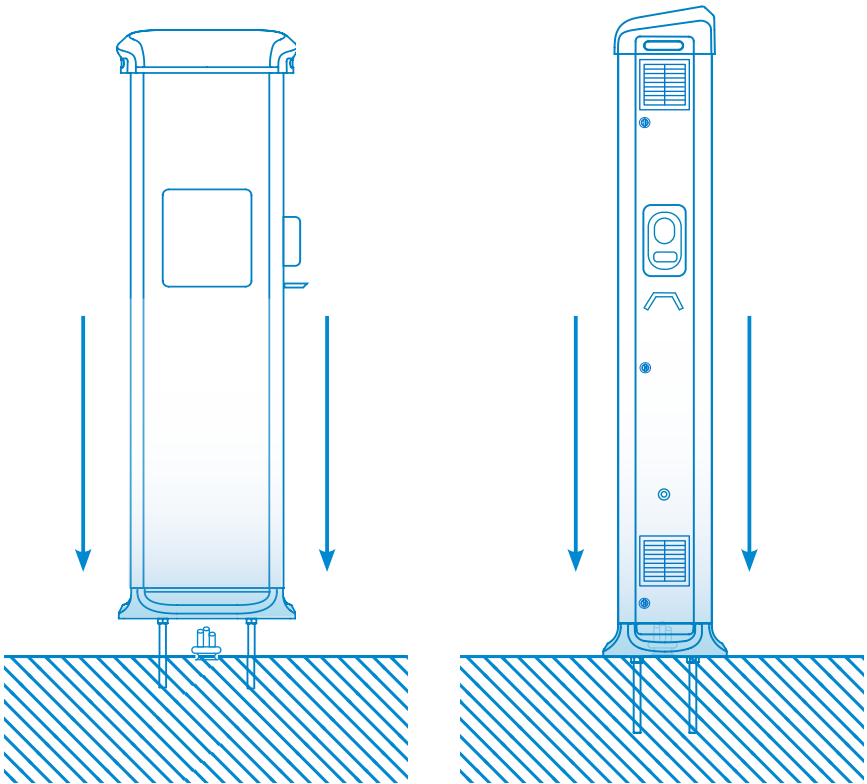


(*) Tamper Switch: The Charge Point has a security switch (antitamper protection) installed that will avoid any charging session if the doors are opened. It has three positions.

1. Operative 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).

Positioning

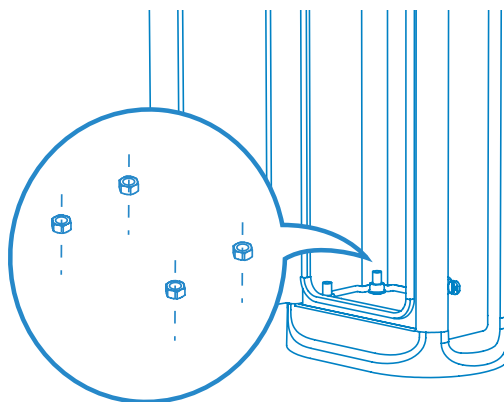
1. Remove the template nuts before proceeding.
2. Place the Charge Point through the four foundation bolts. Make sure that the Charge Point pre-holes of the metal plate match with the cable glands.



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

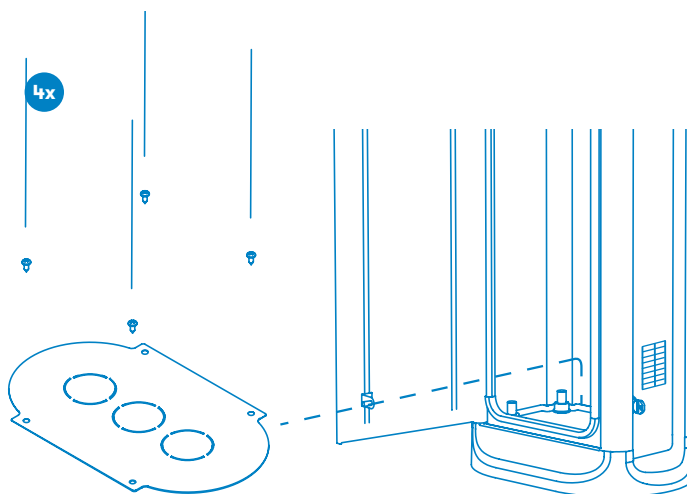
E Unit fixation

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



F Metal plate

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



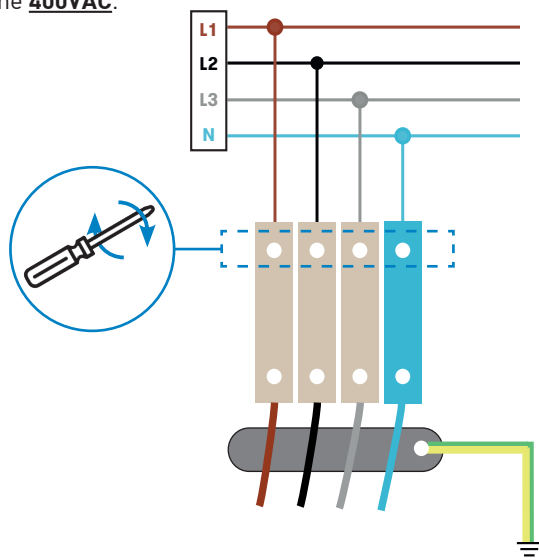


Wiring



THREE-PHASE CHARGE POINT

Connect to the **400VAC**.



Terminal block maximum cross-section: 16mm²



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

Verification

1 — POWER INPUT

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



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 that all cables should remain inside.

4 — CHECK THE PLUGS

Plugs should be in good conditions before starting the unit.

5 — ELECTRICAL PROTECTIONS

If the unit includes electrical protections, rearm all of them.

6 — CHECK THE BEACON INDICATOR

The beacon indicator 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.

6



Go to Master-satellite User Manual in order to know how to use Post eVolve Rapid Master and Satellite version.

As detailed in previous chapters, the unit has a LED beacon light and two illuminated buttons, the start and stop ones.

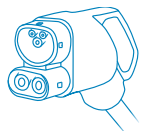
The LED beacon light is located in the top of side view where the cable is.



Standby



When LED beacon is green and the start button is also green, it means that the unit is available and ready to start a charge transaction (A status, according to IEC 61851).



Now, to start a new charge transaction, simply plug the cable.



Start charging



Once the cable is plugged, you are allowed to press start button, which is still in green colour.

At this moment, the charge transaction is about to start. The LED beacon shows a fix blue (B status, according to IEC 61851) and the start button blinks in green, which means that the car and the charging station have communication between them.



Charging

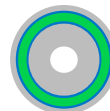


The charge transaction starts when stop button gets red. The LED beacon still continues being blue.

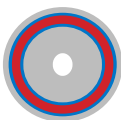
How to use Basic Post

D Charged

When the EV is fully charged, it turns to Standby step, in which both LED beacon and start button are green.

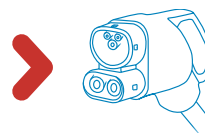


E Stop charging



While the unit is in charge status or is completely charged, the user is available to finish the charge pressing the stop button. Once the stop button is pressed, it starts to blink notifying that the energy transaction has finished.

At that time, the user is allowed to unplug the cable from the EV.



Once the cable is disconnected from the EV, the LED beacon turns back to green (A status, according to IEC 61851).



Until the status of stop button does not change from red to off, the charging station is not available to start a new charging transaction, whenever it is required.

F Error

The Charge Point has an error and it is not available to perform a charge transaction.

In case that a charge transaction is in course, unplug the cable and wait until the LED beacon and the start button turns into green to plug it again.



General Specifications

AC Power Supply	3P + N + PE
AC Input Voltage	400V +/- 10% three-phase
Power Factor	> 0.98
Efficiency	94% at nominal output power
Frequency	50 / 60Hz
Required power supply capacity	27 kVA
Maximum AC input current	39 A
Maximum output power	25 kW
Maximum output current	70 A
Output voltage	150-920 Vdc
Compliance	CE / Combo-2 (DIN 70121; ISO15118) IEC61851-1; IEC61851-23 IEC61851-21-2
Enclosure material	Aluminium & ABS
Enclosure rating	IP54 & IK10
Operating Humidity	Up to 95%
Ambient temperature storage	-40 °C to +60 °C
Lights for status indication	RGB colour indicator
Enclosure door lock	Security key lock
Enclosure access	Frontal door
Charge cable length	5.5 meters
MID	Class 1 - EN50470-3

Master

Network connection	10/100TX (TCP-IP)
Interface protocol	OCPP 1.5 / 1.6J / 2.0 HW Ready
Display HMI	8" anti-vandal touchscreen
RFID Reader	ISO/IEC 14443 A/B MIFARE Classic/DESFire EV1 ISO 18092 ECMA-340 NFC 16.53MHz
Wireless communication (only available in Master)	EMEA - 4G LTE/WiFi Hotspot/GPRS/GSM
Network hub	Switch TCP ethernet 8 ports
RFID Extension (only available in Master)	

Satellite







Master Communication	Ethernet UTP
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Technical Data

Optional devices	
Wireless communication <i>(only available in Master)</i>	LATAM/APAC - 4G LTE/GPRS/GSM
Network hub RFID Extension <i>(only available in Master)</i>	Switch TCP ethernet 16 ports
RFID Extension	Legic Advant / Legic Prime ISO 15693 / ISO 18092, Sony FeliCa
Contactless payment*	Integrated credit card payment terminal

*Ask for availability

Model Specifications

Models	Post Master	Post Satellite	Post Basic
Safety Protections	RCD type B 30mA MCB curve C	RCD type B 30mA MCB curve C	RCD type B 30mA MCB curve C
Operating Temperature	-25°C to +45°C (Low Temp. Kit)	-25°C to +45°C (Low Temp. Kit)	-25°C to +45°C (Low Temp. Kit)
Environment	Outdoor / Indoor	Outdoor / Indoor	Outdoor / Indoor
Dimensions (W x H x D)	480 x 1750 x 290 mm	480 x 1750 x 290 mm	480 x 1750 x 290 mm
Weight	70 kg	70 kg	65 kg
Cable support	Integrated con- nector holder and cable roller	Integrated con- nector holder and cable roller	Integrated con- nector holder and cable roller
Connection	CCS2  	CCS2  	CCS2  



Need help?

In case of any query or further information, please contact our
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CIRCONTROL
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CIRCONTROL
Post eVolve Rapid
Series Manual

A comprehensive guide on
how to install and use your
eVolve Rapid.

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