



CIRCONTROL
Mobility & eMobility

Wallbox eNext Series

Installation Manual



Wallbox eNext Series

Installation Manual

COPYRIGHT INFORMATION

This document is copyrighted, 2019 by Circontrol, S.A. All rights are reserved. Circontrol, S.A. reserves the right to make improvements to the products described in this manual at any time without notice.

No part of this manual can be reproduced, copied, translated or transmitted in any form or by any means without the prior written permission of the original manufacturer. Information provided in this manual is intended to be accurate and reliable. However, the original manufacturer assumes no responsibility for its use, or for any infringements upon the rights of third parties that may result from its use.

All other product names or trademarks are properties of their respective owners.



Here's your guide to install eNext.

1 — So, hello!	02	5 — Installation	10
2 — Before the installation	04	6 — Technical Data	20
3 — Overview	06	7 — Need Help?	22
4 — Dimensions	08		



So, hello!

This manual provides commissioning information about Wallbox eNext, 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



ELECTRICAL RISK

Necessary precautions shall be taken to prevent any electrical risk while the operations are carried out within the unit.

Unit must be disconnected from any power source during commissioning.



ATTENTION!

Indicates that 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 61851-22).
- Complies with IEC 62196, Plugs, socket-outlets, vehicle couplers and vehicle inlets (IEC and IEC 62196-2).
- Standards: 2014/35/UE, LVD;2014/30/UE, EMC.

2

IMPORTANT SAFETY INSTRUCTIONS



Read carefully all the instructions before starting in order to ensure proper 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 assuring the adequate protections.

- Charge point must not be installed in areas where potential risk of explosions are.
- 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.
- This unit is no shall be used for anything other purpose than electric vehicle charging modes as 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 use any adapter, except those approved by the EV manufacturer
- Do not perform any repair or manipulation of the unit while it is energized.
- Only trained and qualified personnel should be able to access to low-voltage electrical parts inside the unit.
- Check the installation annually by qualified technician.
- Remove from service any item which have 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 starting 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, install a main circuit breaker (MCB) and a residual current device (RCD) upstream of the charger is mandatory.

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 several factors such as cable length between distribution board and charge point, maximum output current of the charge point may influence the criteria of cable selection.

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

3 – MAXIMUM OUTPUT CURRENT

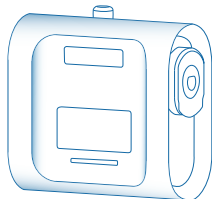
Please refer to the TECHNICAL DATA section to consult the default factory settings from maximum output current of the charge point.

If the power supply is lower than maximum output current, it is necessary to adjust the nominal current. To perform this adjustment, please refer to the INSTRUCTION MANUAL.

This value may vary depending on the model.

3

What's included:



Charge Point



Installation Manual

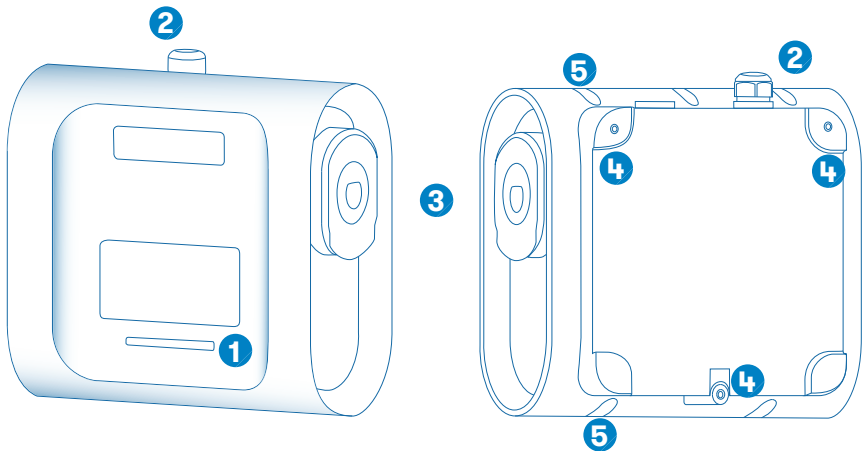


Allen wrench
2.5 mm



Identification label

Overview



1 – LED beacon

3 – Plugs*

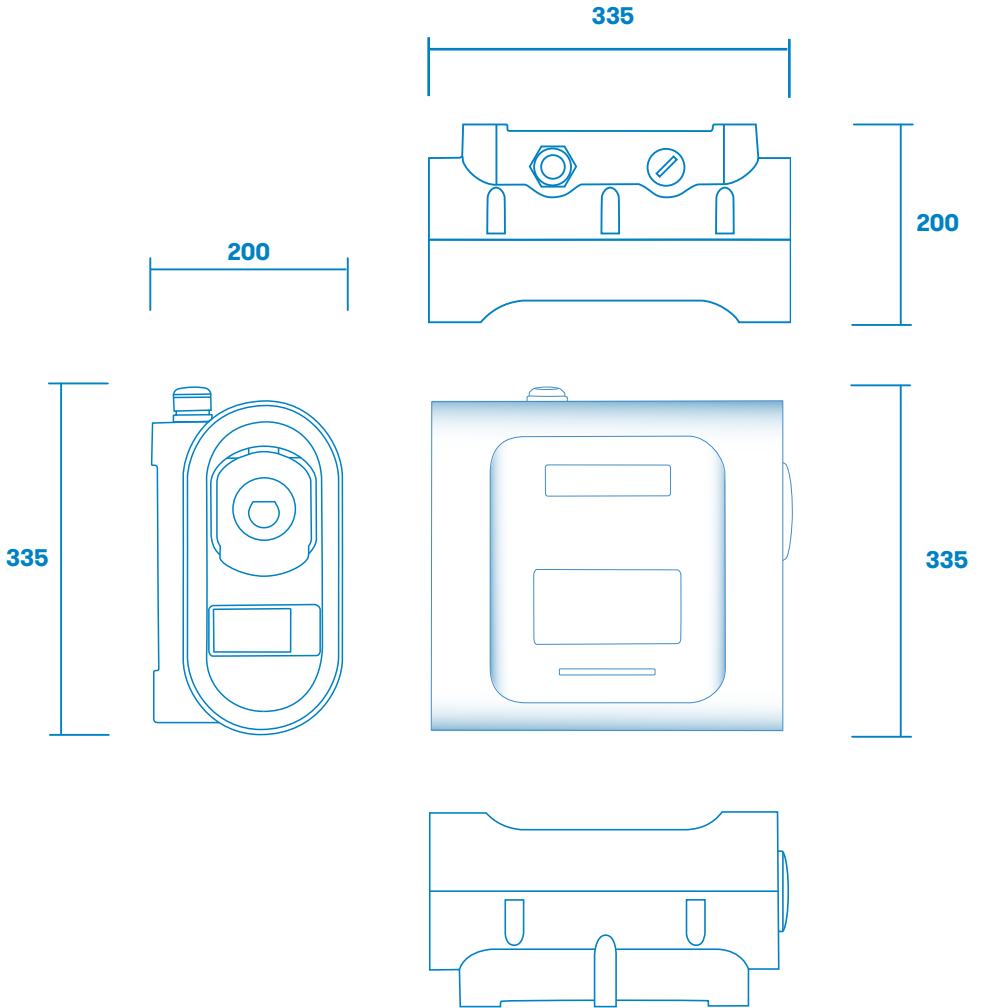
5 – Closing box holes

2 – Cable glands

4 – Wall support holes

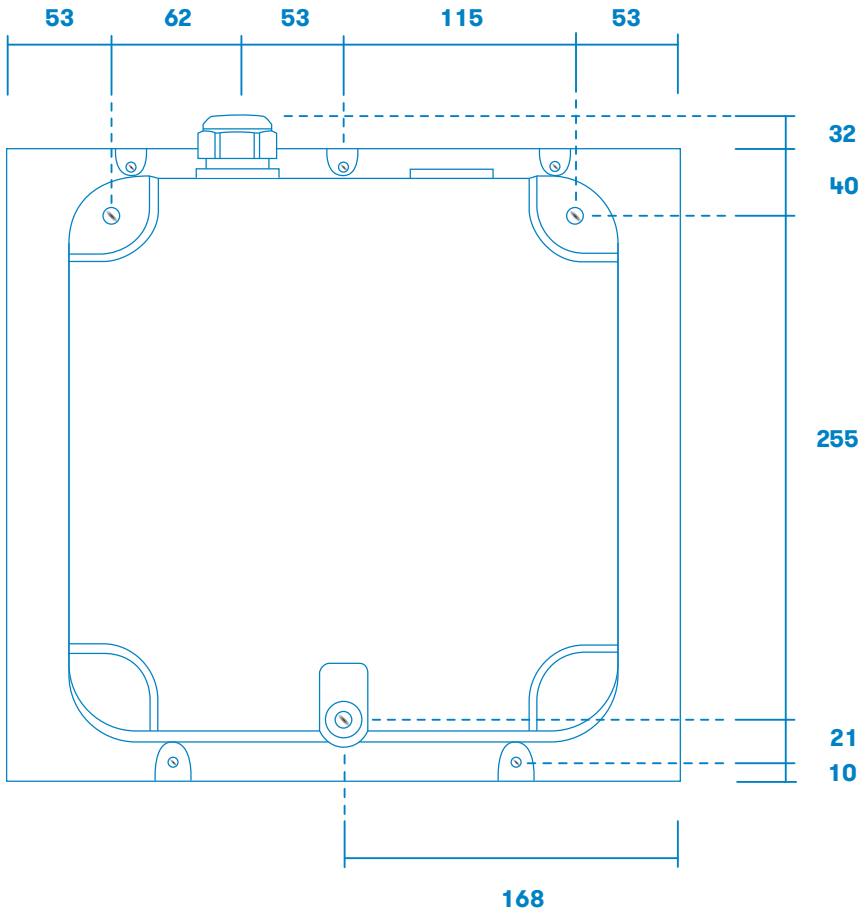
(*) Plugs may vary depending on the model

4



Dimensions in mm

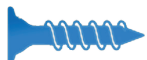
Dimensions



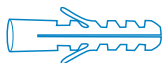
5

Material:

- Allen wrench of 2,5 mm is included in the installation kit.
- Screws, sealing washers and plastic anchors are not included.
- The fastening system of the charge point has been designed to be installed on a wall.
 - » This system has been tested on a concrete wall, to be securely fixed in such conditions is recommended to use:



3 x Inox A2 wall screws: DIN 7982 Ø4,8x38 or DIN 7981 Ø4,8x38



3 x plastic anchors: 6x40 or 8x40

- » If the wall surface has different properties, the screws and plastic anchors must be defined by a qualified installer.

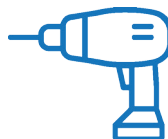
Tools:



Screw driver



Ratchet*
2.5mm Allen



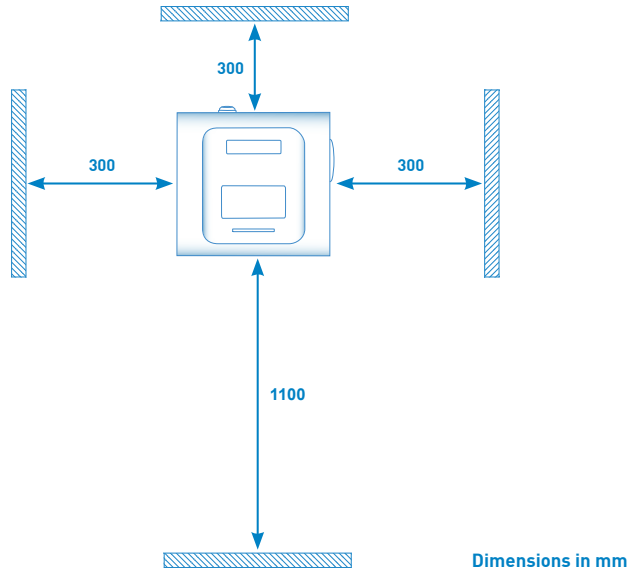
Driller
Tap drill 6/8M

(*) Ratchet tool can be used to open/close the charge point if the conditions of the installation requires it

Installation

A Requirements

- Please comply accordingly to your country specifications.
- The charge point shall be installed on the wall. The only exception is to use accessories designed by Circontrol.
- When installing the unit, some space shall be reserved for usability, maintenance and safety reasons. The picture below shows the recommended minimum distances:



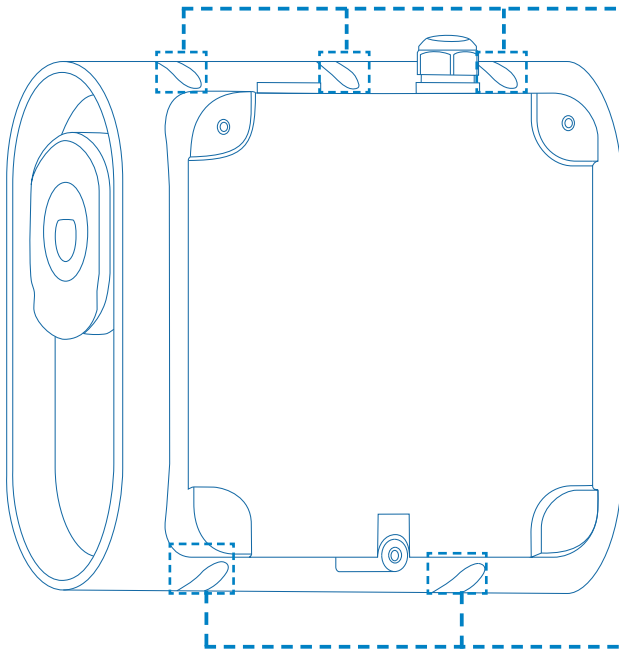
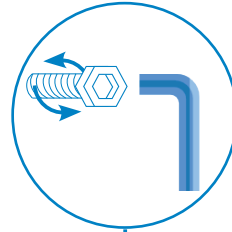
If the recommendations are not followed as described, Circontrol will reject all responsibility and the warranty will be void.

B Opening

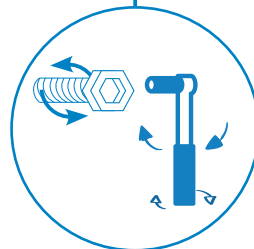
Open the Wallbox using allen wrench.



2.5mm Allen wrench

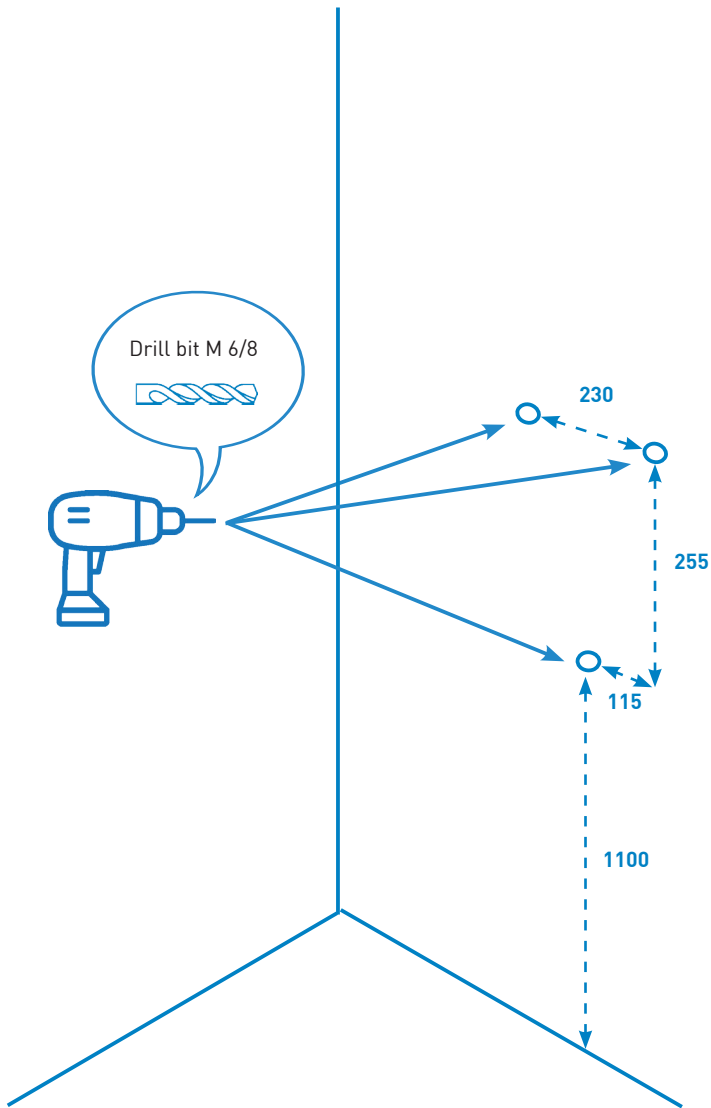


Use the ratchet tool to open / close in conditions that hinder access



Positioning

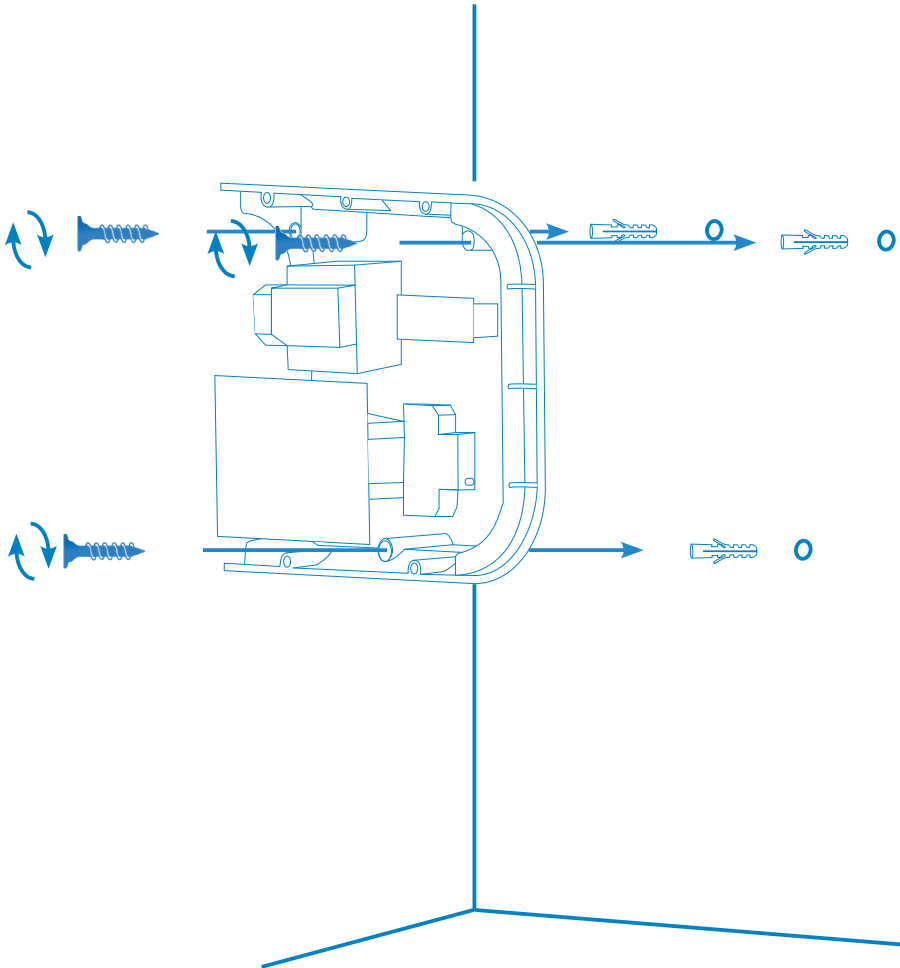
Pierce the wall.



Dimensions in mm

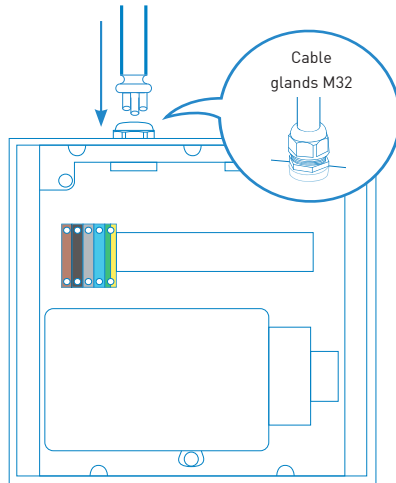
D Fixing

Place the unit on the previous pierced points and fix it with screws.



E Wiring

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

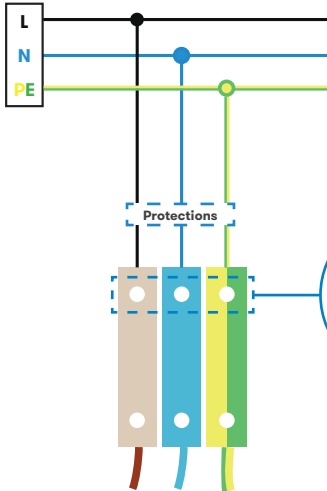


- The current of the power supply can be limited. In order to perform this adjustment please refer to the instruction manual.
- The IEC-61851-1 ed 3 standard indicates each plug shall have protections. In case the Charge Point has no protections inside, they shall be upstreams. It is recommended that these protections be as follows:
 - RCD: Residual current device. Standards: IEC 61008-1, IEC 61009-1, IEC 60947-2 and IEC 62423
 - Rated residual operating current not exceeding 30 mA.
 - › RCD(s) protecting connecting points shall be at least type A.
 - › The DC fault current shall be measured by a RCD type B or a appropriate equipment that ensures the disconnection of the supply in case of DC fault current above 6 mA
 - MCB: Miniature circuit breaker. Standards: IEC 60898-1 or IEC 60947-2 or IEC 61009-1
 - › During first second shall be able to withstand 30 A

NOTE: In the following countries automatic reclosing of protection means is not allowed: DK, UK, FR, CH.

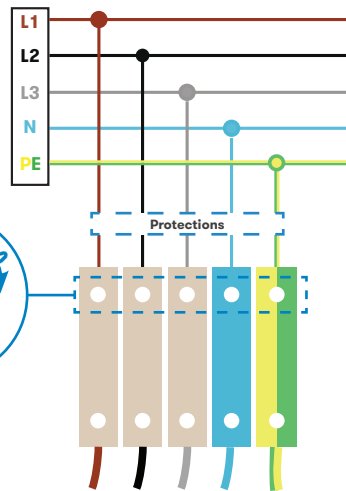
SINGLE-PHASE CHARGE POINT

- Connect to the **230VAC**.



THREE-PHASE CHARGE POINT

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



Terminal block maximum cross-section: 10mm²



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




Type of cable allowed by the terminal block: Copper



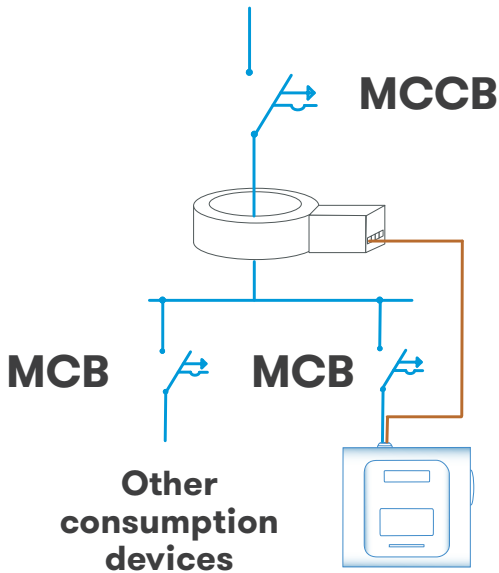
Make sure all screws are securely tightened at 4 - 5 Nm

F BeON

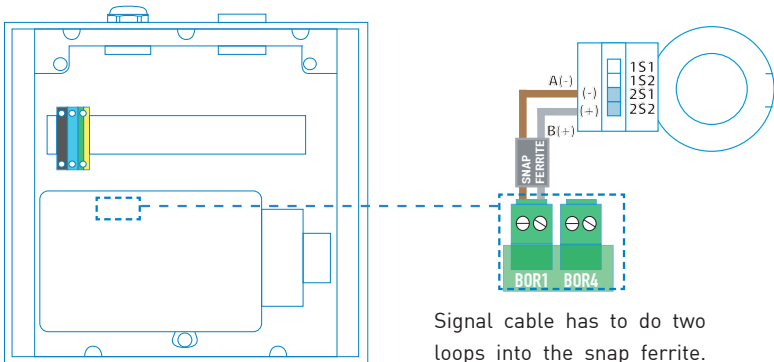
Be-On is an optional device that can optimize the Electric Vehicle (EV) Charger. It is responsible for analyzing the total current consumption in the residential, and to manage the remaining current for the EV Charger, avoiding any Main Circuit tripping.



BeOn is only available on single-phase charge points.



BeON is connected downstream of the main power switch and upstream of the main loads.

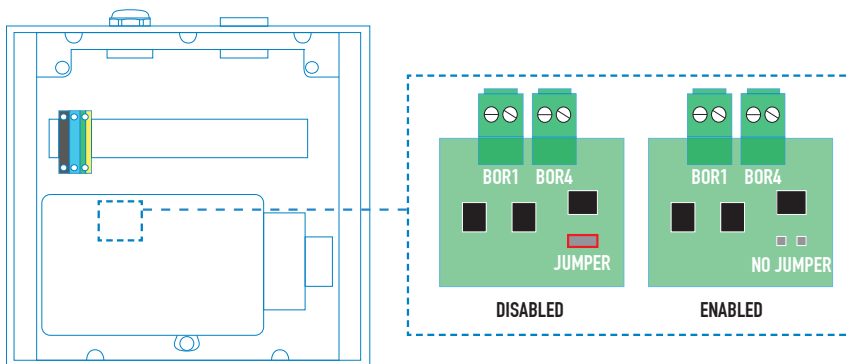


Signal cable has to do two loops into the snap ferrite.

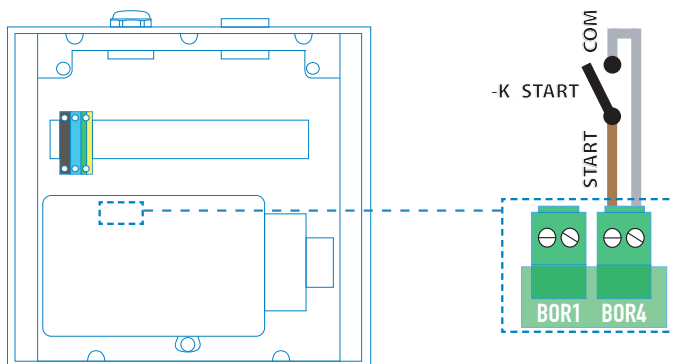
Remote control input

Remote control input is a potential free contact which allows the charge transaction remote start and stop.

This remote control input is disabled by default, by means of a jumper (as shown in the picture below). You must remove the jumper to use this function.



When the jumper is removed, a device, outside of the charge point, should control the charge transaction. This device should close the contact START to allow the charge transaction and if the EV is connected to the charge point, it will start the charge transaction straight away.



Be sure that the jumper is connected by default, otherwise the charge transaction process cannot start.

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 – CAREFUL WITH THE WIRES

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

3 – CHECK THE PLUGS

Plugs should be in good conditions before starting the unit.

4 – ELECTRICAL PROTECTIONS

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

5 – CHECK THE BEACON INDICATORS

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

PLUG STATE	BEACON COLOR
Available	Green
Charging	Blue
Fault	Red

6 – OPERATION

Check no abnormal noise appears while the unit is charging.

7 – PREVENTIVE MAINTENANCE

It is recommended to perform one preventive maintenance per year.



GENERAL DATA

Light beacon	Frontal LED bar
Wireless communication	Bluetooth v4.2 + BLE
Connectors	Shutter Type 2 Socket
	Cable Type 1
	Cable Type 2

MECHANICAL DATA

Enclosure rating	IP54 / IK10
Enclosure material	ABS / PC
Enclosure closure system	Anti-vandalism Allen screws
Net weight	4 kg
Dimensions (W x H x D)	335 x 335 x 200 mm

IK8 in some components appended to the body ie: beacon light.

ENVIRONMENTAL CONDITIONS

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

Technical Data

ELECTRICAL DATA	
Power supply	1P+N+PE / 3P+N+PE
Input voltage	230VAC+/-10% / 400VAC+/-10%
Frequency	50Hz / 60Hz
Protections (optional)	MCB (curve C) - includes shunt trip
	Leakage detector (MCB/RCBO with shunt trip is required to open the circuit)
	RCBO: RCD Type A (S) + MCB (S) - includes shunt trip
Overvoltage protection (optional)	Transient surge protector IEC 61643-1 (Class I)



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	32A	7,4kW	10mm ²
T	Type 2 Socket	32A	22kW	10mm ²

(*) Please consult the availability to your local supplier

(**) This is the minimum 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



Need help?

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



ps-support@circontrol.com



circontrol.com



(+34) 937 362 940



(+34) 937 362 941



CIRCONTROL

Mobility & eMobility

**CIRCONTROL
WALLBOX ENEXT
INSTALLATION MANUAL**

A comprehensive guide on
how to install and verify
your Wallbox eNext.

V1.3, June edition 2019