ostra

Installation Manual

OSTRA Charging Station

Table of contents

1	Preface	3
2	Installation manual OSTRA	4
3	Product description	7
4	Conditions for installing the OSTRA	11
5	Installing the OSTRA	13
6	Mounting OSTRA Pole or OSTRA Column	28
7	Setting up the OSTRA Charging Controller	40
8	Use of the OSTRA	46
9	Maintenance and malfunctions of the OSTRA	48
10	Manually unlocking the Type 2 socket	52
11	Declaration of Conformity	54

1. Foreword

The OSTRA is the smart single-socket charging station for charging electric vehicles. This manual provides information necessary to install and use the OSTRA. Therefore, please read this manual carefully before getting started and save it for future use.

Do you have questions or need help?
Please contact BlueMarble Charging BV or visit www.ostracharger.com.

2. OSTRA Installation Manual

This is the installation manual for the OSTRA. This manual contains instructions for installation, use and maintenance of the OSTRA. The OSTRA is a smart charging station equipped with a special socket for charging electric vehicles (Type 2, mode 3 compatible).
The purpose of this manual is to inform all persons involved in the installation, connection and maintenance of the OSTRA charging station on how to safely install, use and maintain the charging station.
In this manual, these individuals are assumed to meet the suitability requirements to work on electrical installations.

2.1 Use of symbols

The following symbols are used in this manual.

Caution, Electricity! If careless or not acting according to the guidelines, there is a risk of a life-threatening electric shock.

Caution, Danger! There is a risk of personal injury or damage to the product if you are careless or do not follow the guidelines.

2.2 Safety regulations

The following safety regulations apply to installation and use of the charging station. Read these regulations carefully and make sure to act accordingly.

- Install the charging station only on a designated power circuit and fully comply with local technical requirements and safety regulations.
- The installation and cables must be laid according to the maximum charging current at the input of the charging station. A continuous load must be assumed. The cable diameters mentioned in this manual are indicative. The installer remains responsible for determining the correct

cable diameter and compliance with relevant standards and regulations.

- Make sure that the charging station is always de-energized before any (maintenance) work is carried out. Only the OSTRA Front and the OSTRA Perla (see Figure 5.1.2) can be (de)mounted without de-energizing.
- Work on the charging station must be performed by a qualified employee who has read this manual and acts in accordance with standard IEC 60364 (Electrical Installations for Buildings). Failure to do so may result in injury or dangerous situations when working with electricity.
- The charging station contains electrical components that may still contain electrical charge after being disconnected from power. Wait at least 10 seconds after disconnecting before resuming operations.
- The work should not be carried out when it rains or when the humidity exceeds 95%.
- Do not place a charging station in an environment of explosive and/or highly flammable substances.
- Do not place a charging station in flood-prone areas without taking additional measures.
- The installation location should have a flat and firm surface and an ambient temperature of -25 to 50 degrees Celsius.
- When attached to a wall, the load capacity should be at least 40 kg.
- Make sure the location of the charging station is such that users can use their charging cable without putting it under tension (tight).
- Make sure the charging cable cannot come into contact with heat sources.
- Make sure the charging cable is not kinked or pinched, cannot be run over, and cannot cause a tripping hazard to the surrounding area.
- In the event of damage and/or accidents, the charging station should be immediately de-energized.
- Make sure the equipment is used under proper operating conditions.
- Unroll the charging cable completely during charging and avoid loops.
- Make sure your hands are dry when inserting or removing the plug.
- Always pull the handle of the plug, never the cable.
- Do not use powerful water jets for cleaning.

3. Product Description

3.1. OSTRA

The OSTRA is a smart charging station for charging electric vehicles. The OSTRA Perla forms the intelligent heart and when there are multiple OSTRA Charging Stations in one location, the charging stations communicate wirelessly to one or more OSTRAs through RF. This makes it easy to wirelessly interconnect multiple OSTRAs.

3.2 Connecting to back office

Connecting the OSTRA to MyOSTRA requires an OSTRA Charging Controller. Depending on the version, an OSTRA Charging Controller can wirelessly connect up to 100 OSTRA Charging Stations. The OSTRA Charging Controller is supplied as an external accessory and as such is not part of the charging station itself. Optionally, the OSTRA Perla can be equipped with an internal OSTRA Charging Controller including SIM card for a stable 4G connection.

3.3 Conditions of use

Charging power is switched on when both plugs of the charging cable are inserted into both the OSTRA and the car AND authorizations have taken place. For the OSTRA models connected to MyOSTRA through an OSTRA Charging Controller, starting and stopping a charging transaction is done by using an authorized charging card or through the remote OSTRA back office. The OSTRA Plug & Charge does not require a charging card.

The maximum charging power of 22 kW is determined by the resistance of the charging cable, the charging power of the car and the fuse of the OSTRA Charger.

A charging session of the OSTRA is not started until:

- The charging cable is connected to both the car and the charging station
- A charging card has been presented for the OSTRA's RFID reader, a charging session using an app or other interface has been requested, and the session has been authorized
- The car has accepted the charging session

3.4 Turning OSTRA On/Off

The OSTRA can be de-energized by switching off the circuit breaker in the fuse cabinet.

3.5 Intended and unintended use

The OSTRA is intended for charging mode 3 compatible electric vehicles only.

3.6 Technical Specifications

Technical properties	
Laadvermogen*	Max. 3.7 / 7,4 / 11 / 22 kW
Charging mode	Mode 3
Socket	Type 2, IEC 62196-2 (optionally a fixed Type 2 charging cable)
Number of sockets	1
Hallmarks	CE declaration of conformity
Main connection	1-phase or 3-phase, 230V - 400V, 16A and 32A
Internal overcurrent protection	DC 6mA (DC leakage current) AC 30mA (config setting)
kWh measurement*	Embedded or MID certified kWh meter
Ambient temperature	-25°C to +50°C
Humidity	Max. 95%
Authorization*	Auto Start / RFID pass
Status information	LED indicator

Communication*	Stand alone, external OSTRA Charging Controller, OSTRA Internal Charging Controller 4G
Communication protocol	OCPP 1.6
Designed according to	IEC 61851-1 (2011), EC 61851-22 (2002)
Degree of protection	IP65 (OSTRA Base) IP54 (OSTRA Perla), IK10
Installation instructions	NEN 1010
Cable Entry	Strain relief on underside
Cable connection	Terminal strip - max 6mm2 - Internal connector
Housing	Polycarbonate (PC) / ABS
Dimensions in mm	370 x 135 x 210 mm
Weight	3.4 kg
Assembly	Wall, on pole or built-in
Standard colors	RAL 7021 anthracite gray, RAL 9010 white

* Depending on which version of the OSTRA.

3.7 Specifications by Type OSTRA

OSTRA	Plug & Charge	Home	Home & Work	Business	Business P1	Business PoE	Business 4G
1-3 phase 32A	✓	✓	✓	✓	✓	✓	✓
Type 2 socket	✓	✓	✓	✓	✓	✓	✓
Fixed cable Type 2	O	O	O				
DC60 mA protection	✓	✓	✓	✓	✓	✓	✓
AC30mA ground fault protection	✓	✓	✓	✓	✓	✓	✓
Plug & Charge	✓						
RFID card reader		✓	✓	✓	✓	✓	✓
Internal kWh meter		✓					
MID certified 3-phase kWh-meter			✓	✓	✓	✓	✓
RF technology		✓	✓	✓	✓	✓	✓
OSTRA Charging Controller		Home P1	Home P2		Business P1	Business PoE	Business 4G

O = Options

3.8 Warranty

BlueMarble Charging B.V. guarantees the equipment and software against production errors and defects in material and workmanship for 2 years from the date of delivery. Problems arising from causes not attributable to the manufacturer shall be at the expense and risk of the installer and/or customer.

The manufacturer is in no way liable for damages and the warranty if:

- The instructions and directions in this manual have not been followed
- This charging station is not used exclusively for charging mode 3 compatible electric vehicles
- The installation was not performed by an authorised installer
- There have been self-initiated modifications to the product
- There is third-party damage (vandalism)

Please refer to the general and full warranty conditions at www.bluemarblecharging.com.

4. Conditions for installation of the OSTRA

The OSTRA charging station must be connected and installed by a licensed installer. The installer and the owner are responsible for the installation, operation and maintenance of the charging station, observing both the law for safety of persons, animals and goods (EU: NEN-EN 50110) as well as the legal installation regulations of the respective country.

The installer will clearly mark the circuit breaker in the meter box for the benefit of the OSTRA.

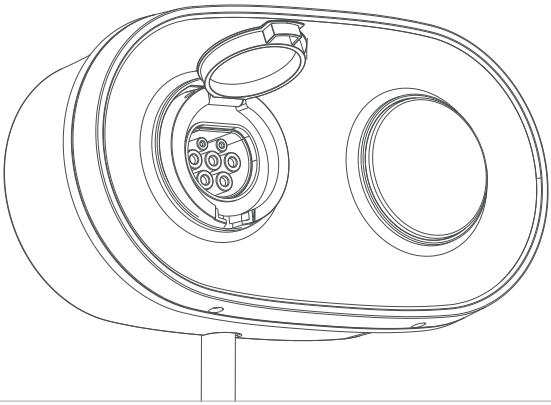
As standard, the OSTRA is suitable for both wall, pole and column mounting and optionally as built in. For wall installation, an installation height between 950 mm and 1500 mm is recommended.
For built-in installation, contact BlueMarble Charging BV.

- Chapter 5.6 for wall mounting
- Chapter 6.1 for mounting to OSTRA Pole
- Chapter 6.2 for mounting to OSTRA Column

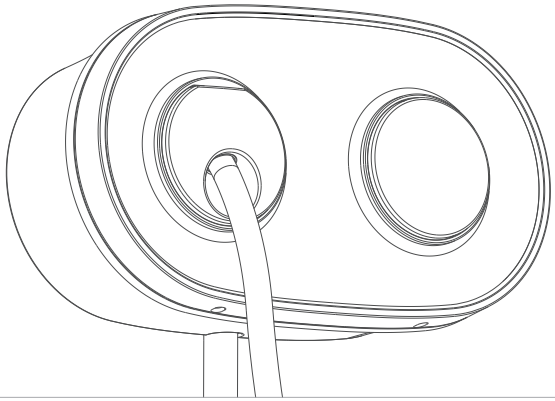
5. Installing the OSTRA

The OSTRA charging station comes in two types:

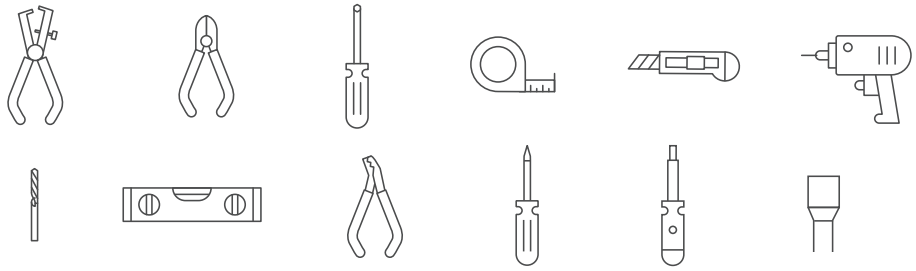
– Type 2 socket
– Fixed charging cable with Type 2 plug



OSTRA Charging Station with Type 2 socket



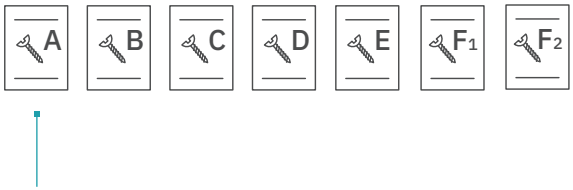
OSTRA Charging Station with fixed charging cable



5.1 Unpacking

Use the following tools and materials for installation:

- Wire stripper
- Cutter
- Hex screwdriver (size 2.5, size 3)
- Torx screwdriver (size T25)
- Tape measure
- Breaking Knife
- Hammer or impact drill (for the purpose of wall mounting)
- Drill bit (6 mm)
- Levelling spirit
- Voltage Sensing Screwdriver
- Ferrule in case of a power cable with flexible core

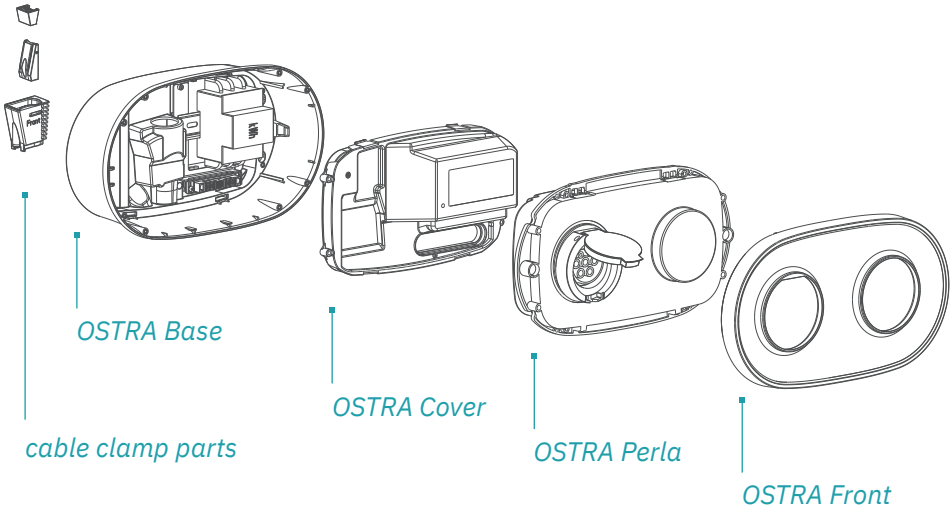


bags of fasteners

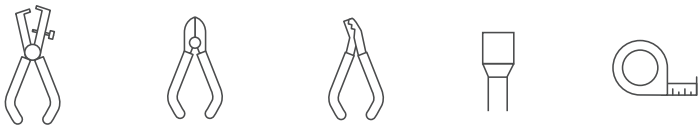
5.1.1

An OSTRA charging station consists of:

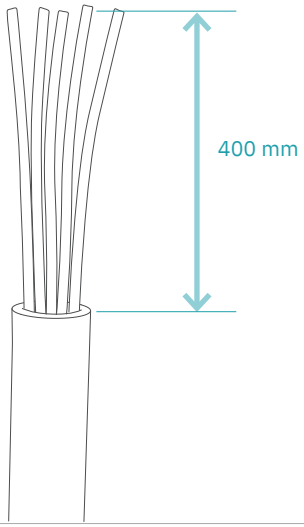
- OSTRA Base
- OSTRA Cover (transparent)
- OSTRA Perla
- OSTRA Front
- Cable clamp set
- Swivel
- Bolts, screws and wall plugs
- OSTRA Charging Controller (depending on OSTRA model)
- OSTRA User interface sticker and infographic
- Charging Station Identifier Label (C) and infographic



5.1.2

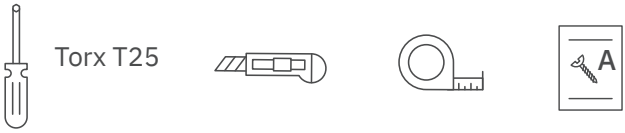


5.2 Preparing the power cable

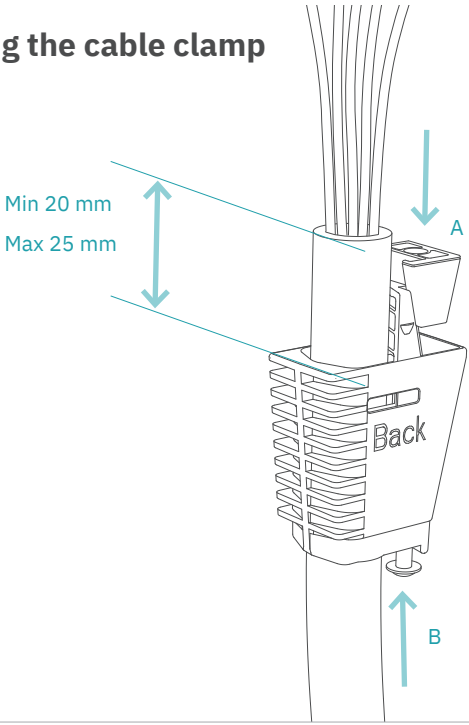


5.2.1

Strip the outer jacket of the 3- or 5-wire power cable up to 400 mm so that the inner colored power cables are exposed. Then strip the inner cables so that the core is exposed. If applicable, finish the soft core with appropriate conductor end sleeves. (Figure 5.2.1).



5.3 Mounting the cable clamp



5.3.1

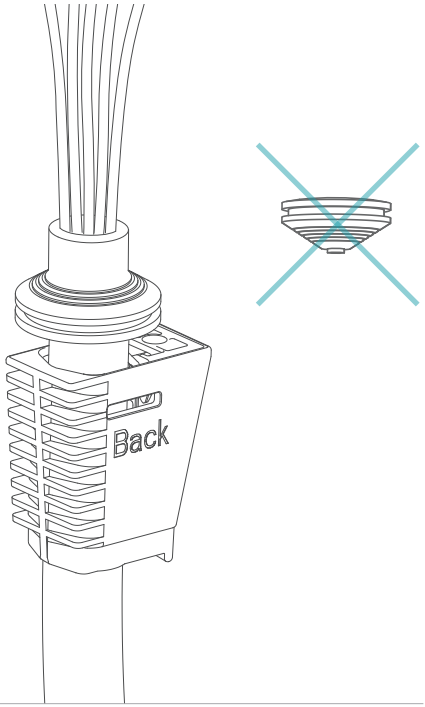
Screw: KN6038 5x50 (T25)

Slide the cable clamp over the power cable as shown in the illustration above. Be aware of the minimum and maximum length that the power cable may extend. Make sure the clamp (arrow A) is properly pressed while tightening the screw (arrow B). Now the cable clamp is attached to the cable. (Figure 5.3.1).

! Note

Fix the cable clamp at the correct height in relation to the stripped section (Figure 5.3.1).

5.4 Assembly of the cable gland



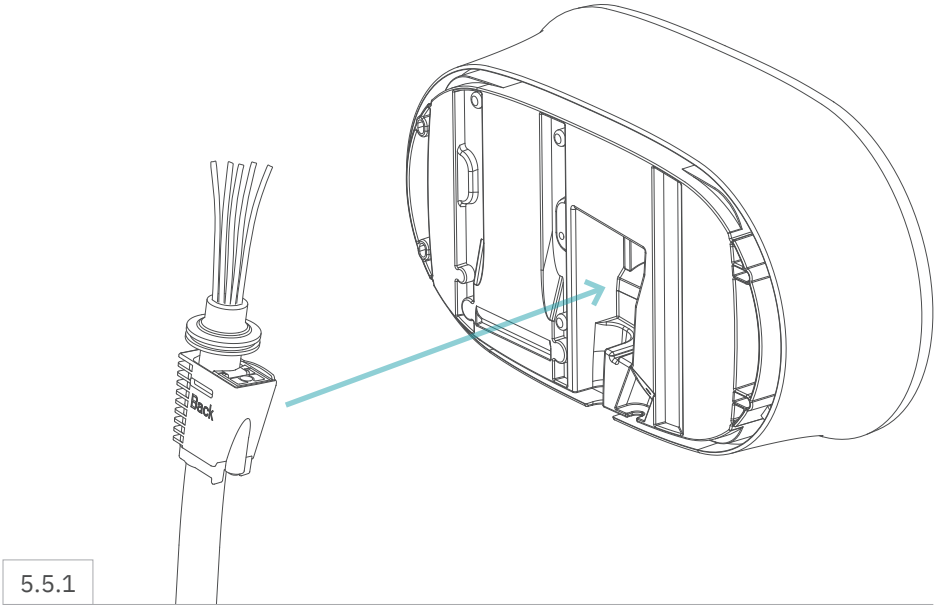
5.4.1

Cut out the swivel for a suitable seal between the cable and swivel. Feed the cable through the gland and ensure the correct orientation of the gland as shown in the illustration.

! Note

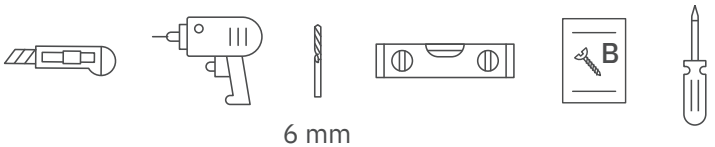
The orientation of the swivel is important, the swivel can be found in bag A.

5.5 Mounting the power supply cable

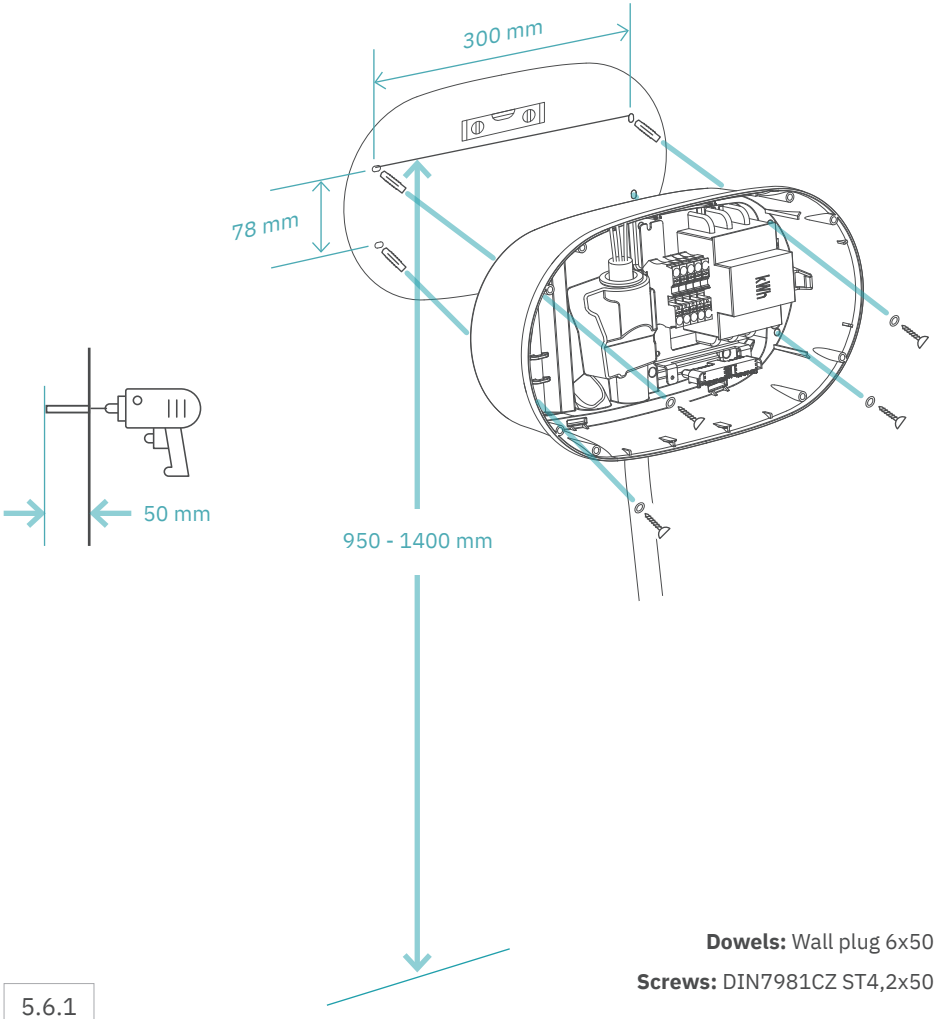


5.5.1

Feed the cable into the housing with the swivel.



5.6 Wall mounting of the OSTRA charging station



Dowels: Wall plug 6x50

Screws: DIN7981CZ ST4,2x50

5.6.1

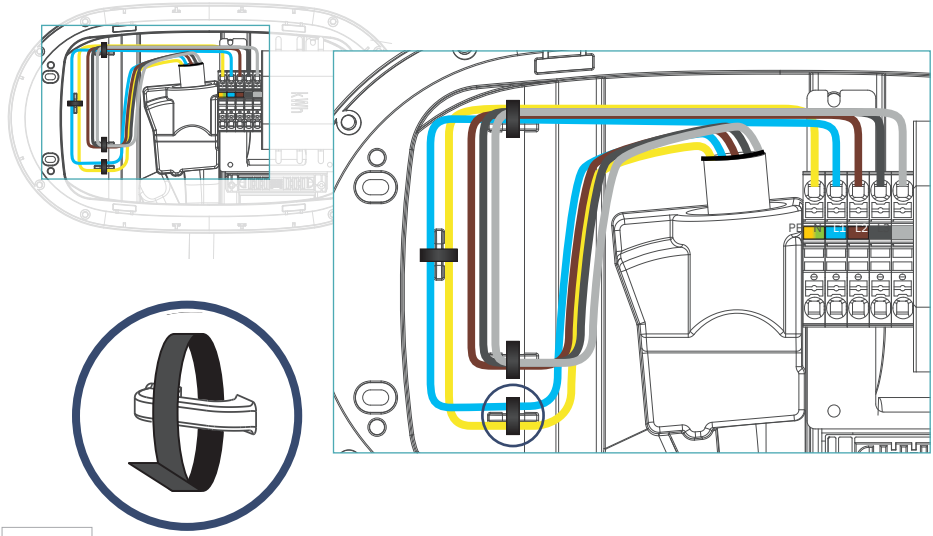
Select a suitable wall to attach the OSTRA charging station to. Avoid extreme sunlight. Using a level and the drilling template, ensure horizontal attachment to the wall. Mount the OSTRA charging
station to the wall using the fasteners from bag B. Ensure that the OSTRA charging station does not deform, or deforms as little as possible, for proper front panel closure.
(Figure 5.6.1).

> **! Note**
> Check the indicated drill holes with a tape measure. The distances between the drill holes horizontally and vertically are; 300mm and 78mm respectively.

5.7 Connecting the cables to the terminal strip

Connect the cables as shown in Figure 5.7.1.

Use tie-wraps from bag B to mount and hold the cabling to the OSTRA charging station together. Cut off the excess pieces of tie-wrap for a nice finish.



5.7.1

! Note

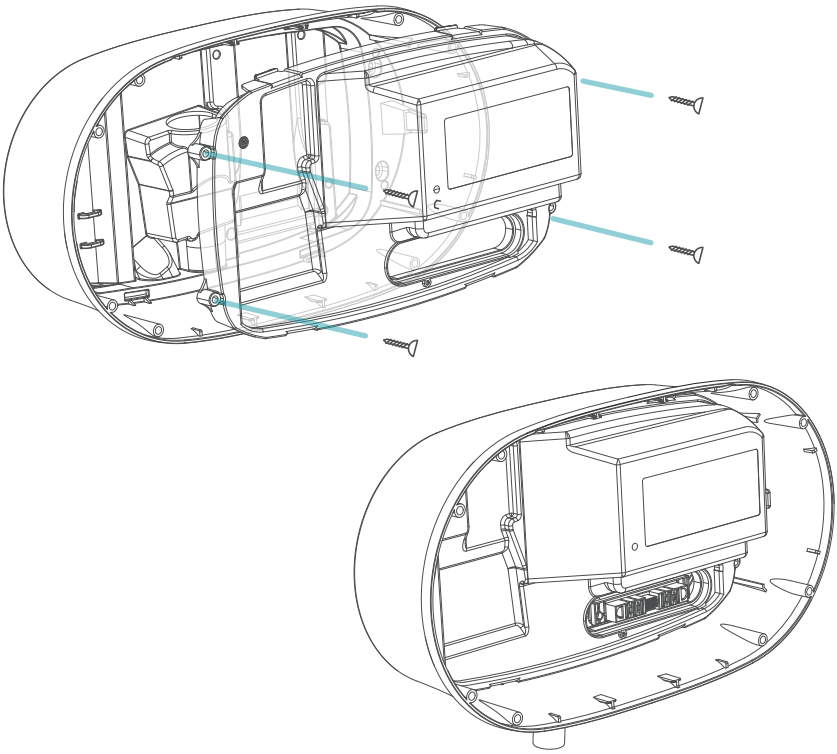
The cable clamps are suitable for a maximum wire thickness of 6mm^{2}.

! Tip

Using tie-wraps reduces unwanted forces on the electrical connection.

Hex key
size 3

5.8 Placement of the OSTRA Cover



5.8.1

Screw: DIN912 M4x20

Mount the OSTRA Cover over the kWh meter using the fasteners from bag C.

! Attention

Not electric screwing.

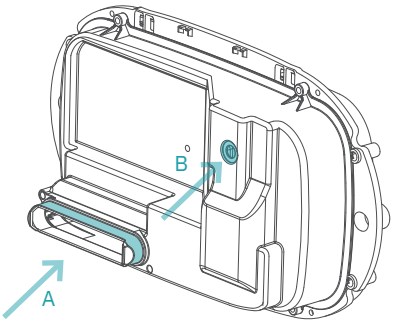
! Tip

Assemble all screws halfway before fully tightening them one by one. After the 4 screws are assembled, they can be hand-tightened.

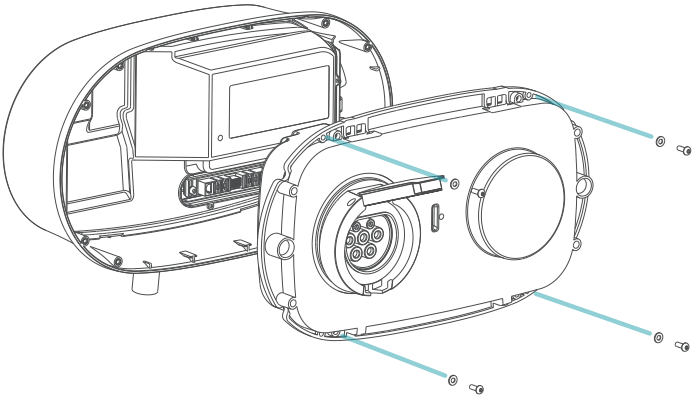
Hex key size 2.5

D

5.9 Assembly of the OSTRA Perla



5.9.1.a



5.9.1

Screw: DIN912 M4x12

Mount the OSTRA Perla in the OSTRA Base using the fasteners from bag D.

! Attention

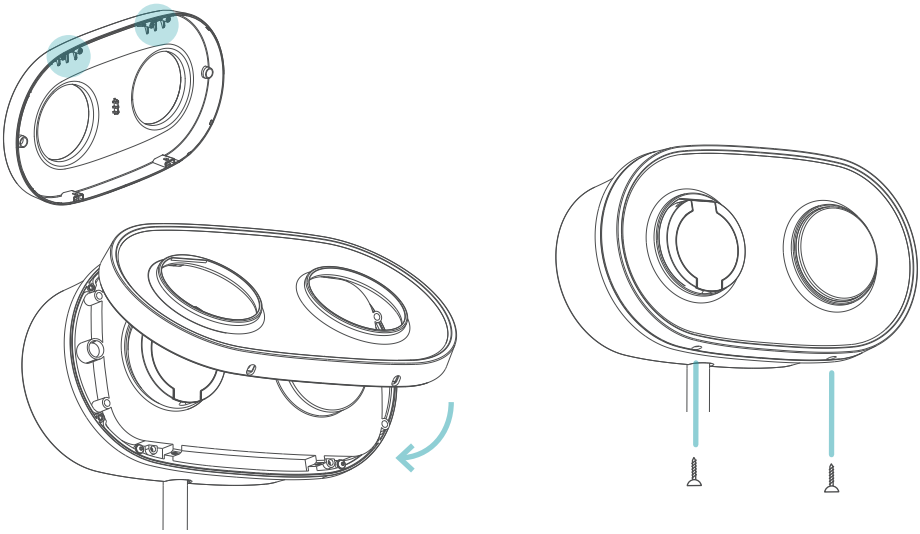
Check the presence of a rubber O-ring (arrow A) and the rubber plug (arrow B) at the rear of the OSTRA Perla, shown in Figure 5.9.1.a.

Hex key
size 3

5.10 Mounting the OSTRA Front

Ensure a proper connection of the OSTRA Front to the OSTRA Base by properly pressing the OSTRA Front when tightening the screws. DO NOT use power tools

5.10.1 Models equipped with type2 socket

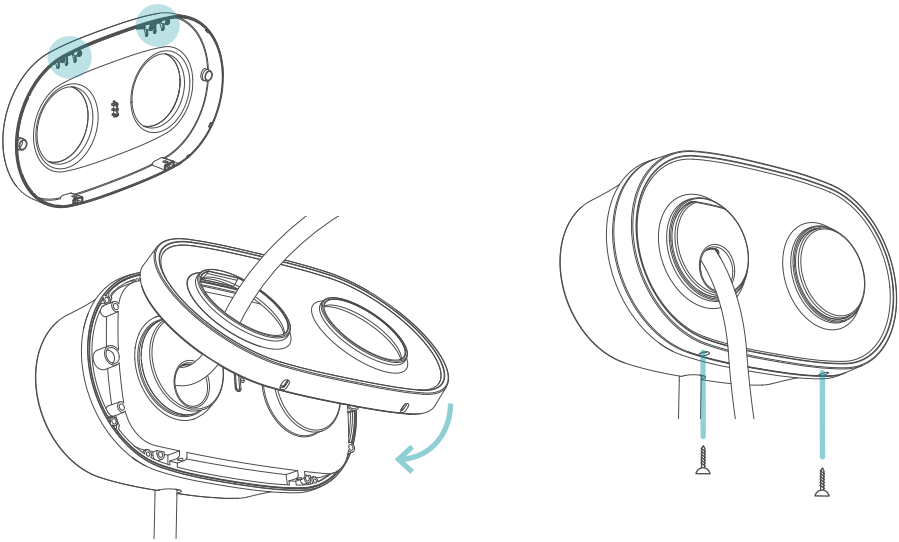


5.10.1

Screw: DIN912 M4x8

Orient the front panel so that the hinges fall into the lugs of the OSTRA Perla. Tighten the bolts from bag E at the bottom. If you are dealing with a fixed cable connection, the charging cable should be inserted through the front panel (Figure 5.10.2).

5.10.2 Models equipped with fixed cable



5.10.2

Screw: DIN912 M4x8

! Attention

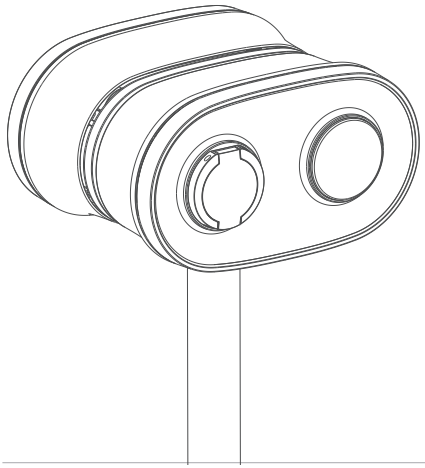
Before tightening the screws, the front panel should be pressed onto the OSTRA to prevent any keel formation around the OSTRA. Only then can both screws be tightened.

! Attention

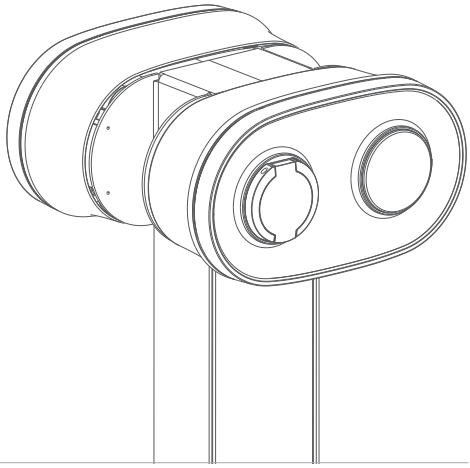
Do not use power tools to tighten the screws.

6. Mounting OSTRA Pole or OSTRA Column

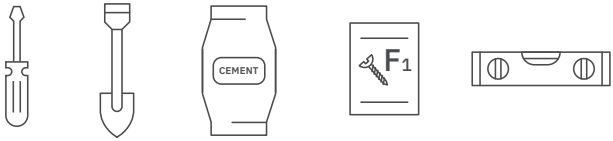
In addition to wall mounting, the OSTRA charging station can be mounted to an OSTRA Column or an OSTRA Pole, available in several designs. This chapter describes the installation of the OSTRA Column and the OSTRA Pole. Due to the wide variety of substrates, no fasteners are provided for mounting the column or post on a hard surface. The installer will need to determine on site which fasteners are suitable for installing the OSTRA Column or the OSTRA Pole.



OSTRA Pole



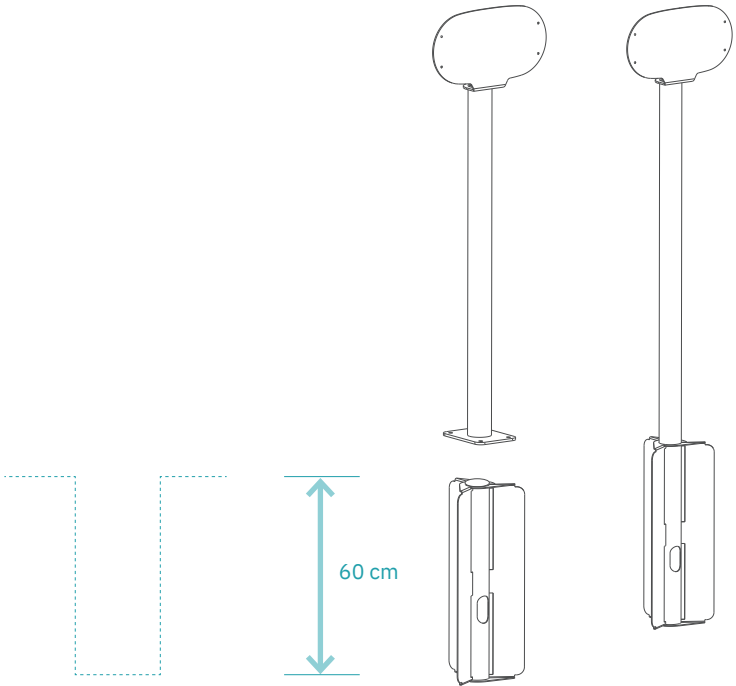
OSTRA Column



6.1 Mounting the OSTRA Pole

Ground anchor application for soft ground

The Pole may be equipped with a fixed ground anchor. If no fixed ground anchor is used, the following steps should be performed for mounting an OSTRA Pole on a loosely supplied ground anchor. If applicable, assemble the ground anchor according to the instructions provided with the ground anchor.



6.1.1

1. When using an OSTRA Ground Anchor, go through the installation instructions for the ground anchor.
2. Feed the cable through the bottom of the pole to the top.
   When installing an OSTRA Pole, you may choose to install the base plate:
   - Visibly mount. Place top of ground anchor approx. 10 mm above ground level;
   - Not to be mounted visibly. Place top of ground anchor approx. 50 mm below ground level by digging the entire anchor 50 mm deeper;
   - Consider the thickness of any paving

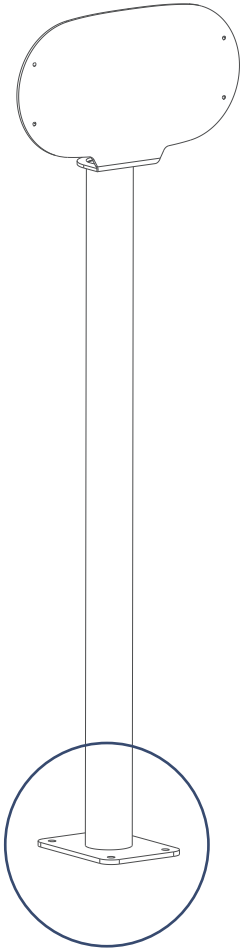
3. Attach the pole to the ground anchor using the fasteners from bag G.
4. Connect the OSTRA (see sections 5.2 to 5.10, excluding 5.6) and attach the OSTRA to the pole using the fasteners from bag F1.

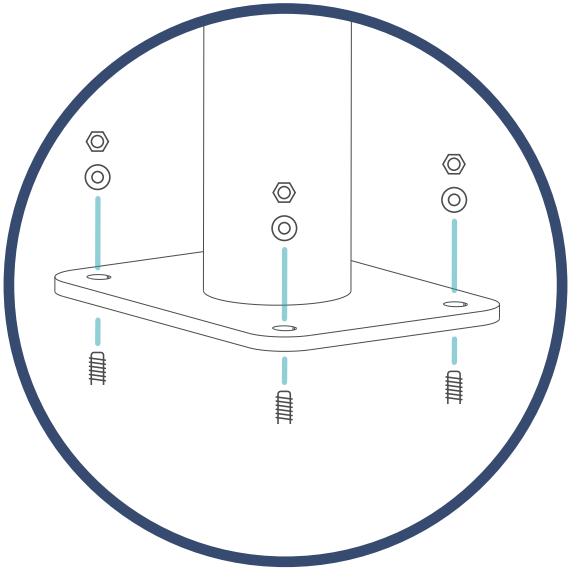
> **! Tip**
> For loose substrates, the use of additional sand cement is recommended (not included).

Paved surface

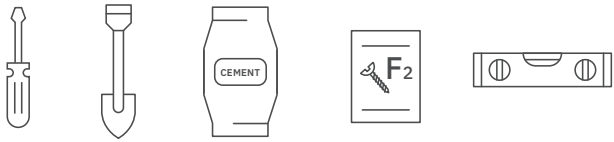
The OSTRA pole has holes at the bottom that provide a bolt-nut connection. Perform the steps below.

1. Determine location of the pole and prepare fixing points in the ground.
2. Feed the cable through the bottom of the pole to the top.
3. Attach the pole to the ground. The fasteners are not included.
4. Connect the OSTRA and attach the OSTRA to the pole with fasteners from bag F-1.





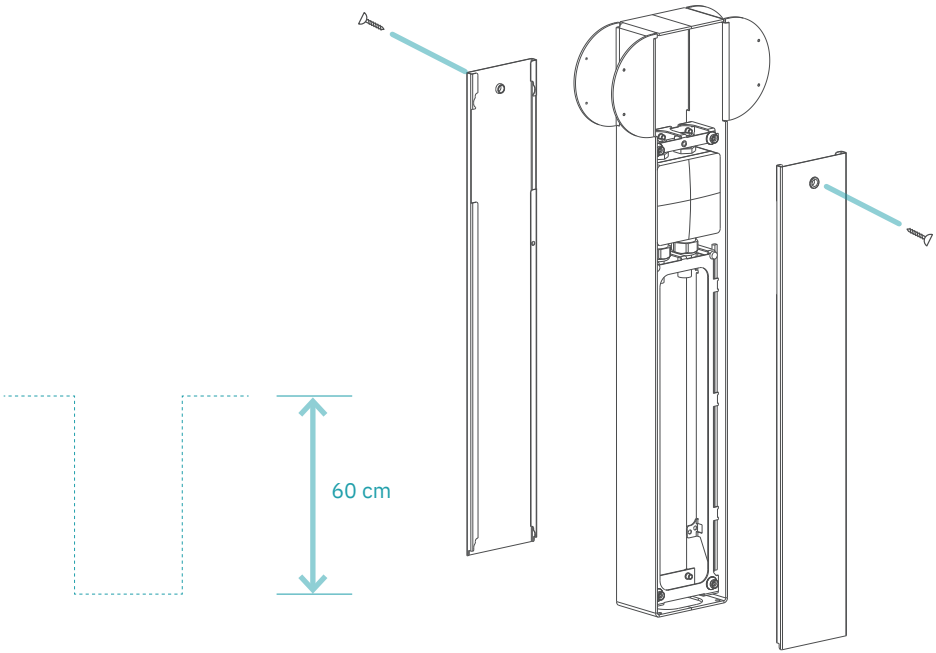
6.1.2



6.2 Mounting the OSTRA Column

Ground anchor application for soft ground

Mounting an OSTRA Column requires an OSTRA ground anchor. Please go through the instruction below:



6.2.1

Screw: DIN912 M6x25

1. Go through the installation instructions for the ground anchor.
2. Install the casing pipe by routing it through one of the holes in the bottom plate or sides, making sure that the power cable extends at least 95cm above ground level.
3. Feed the cabling through the casing tube and set the ground anchor completely horizontal. The top of the ground anchor just above ground level (consider the thickness of any pavement).
4. Panels of the OSTRA Column are connected to the frame by a ground wire. The frame should be connected to the anchor by a ground wire.
5. Pour preferably rapid concrete and soil in and around the ground anchor. Backfill to about 50mm below the edge.
6. Restore ground level and level off with soil, sand and paving if necessary.

! Tip

For loose substrates, the use of additional sand cement is recommended.

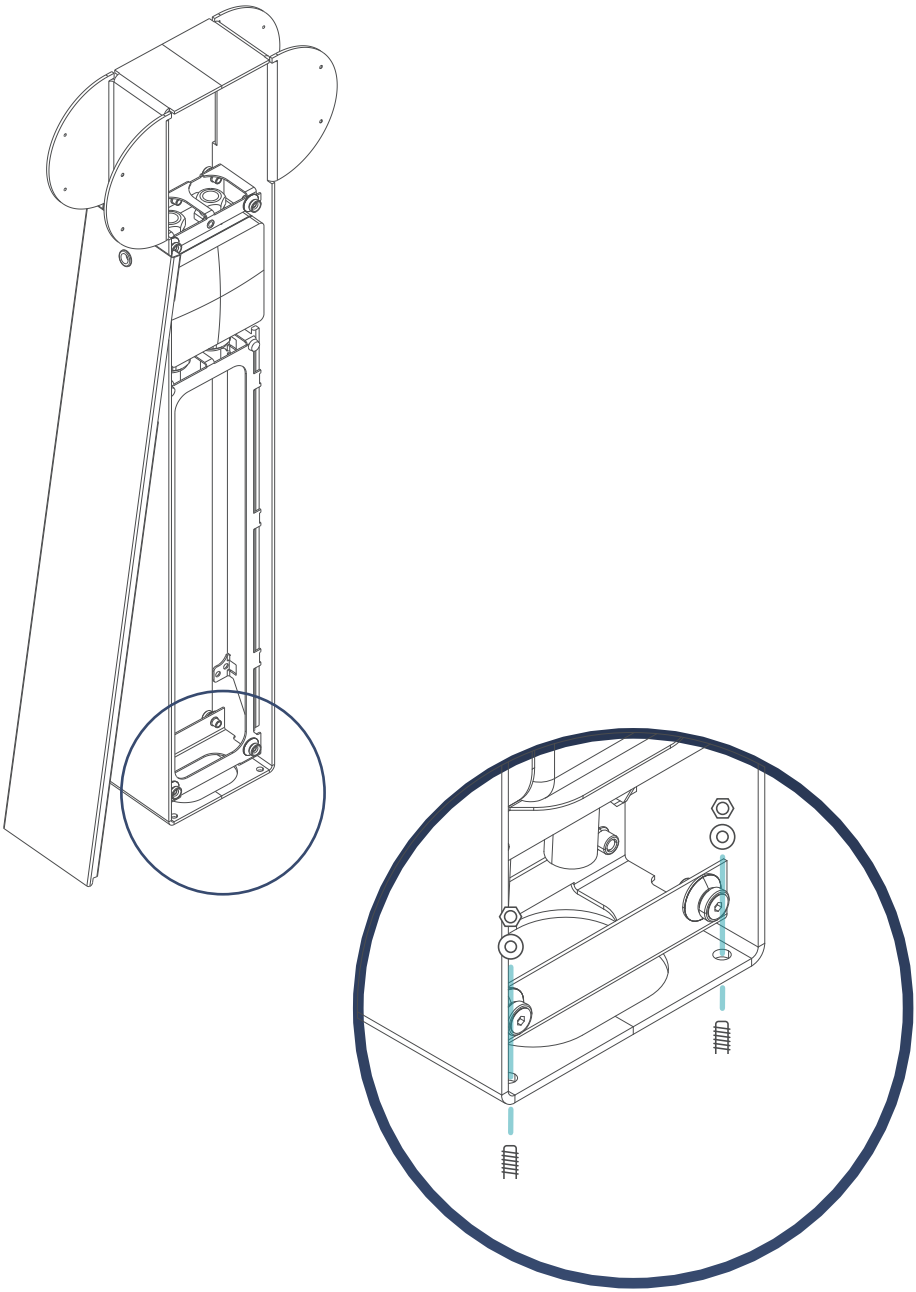
Paved surface

The OSTRA Column has holes on the bottom that provide a bolt-nut connection. Perform the steps below.

1. Determine the location of the OSTRA Column and provide an appropriate mounting method.
2. Detach the front and rear panel of the column, save the screws carefully! *
3. Feed the cable through the bottom of the pole.
4. The OSTRA Column has four round 8mm mounting holes in the base for screw connection to the hard surface **.
5. Make sure the Business column is level and tighten the nuts.

* Both panels are connected to the frame with a wire for grounding purposes.

** Fasteners are not included

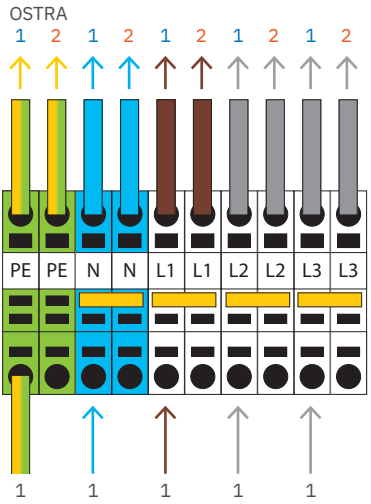


6.2.2

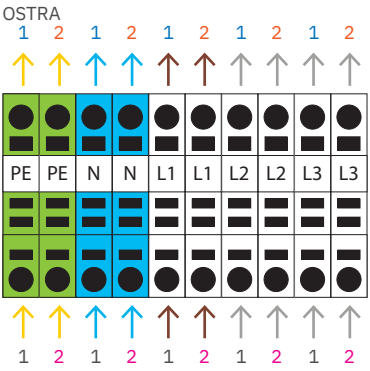
6.3 Connecting the power cable

The OSTRA Column supports 3 possible connections. Follow the steps below to connect the cables in an OSTRA Column.

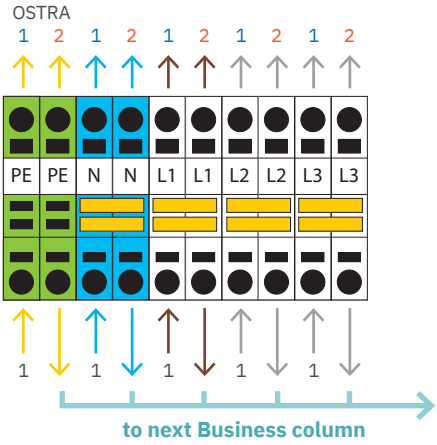
1. Make sure the installation and power cable is de-energized and it is safe to operate.
2. Loosen the cover of the junction box housing, keep the screws carefully!
3. Check that the grounding of the column and panels are properly connected. Each panel should be connected to the frame and from here to the “PE terminal” in the junction box.
4. Connect the power cable in the manner appropriate to your situation.
5. After connecting the power supply cables, replace the junction box cover with the corresponding screws and use the screw provided. NOTE: Tighten the screw sufficiently (as high as the outside of the panel) into the frame so that the panel cannot slide up or down.



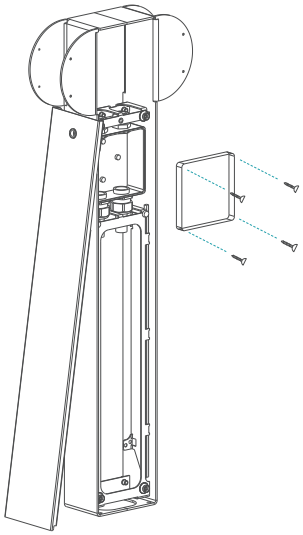
A. Supply single feeder cable



B. Supply double feeder cable



C. Supply single power cable and loop through

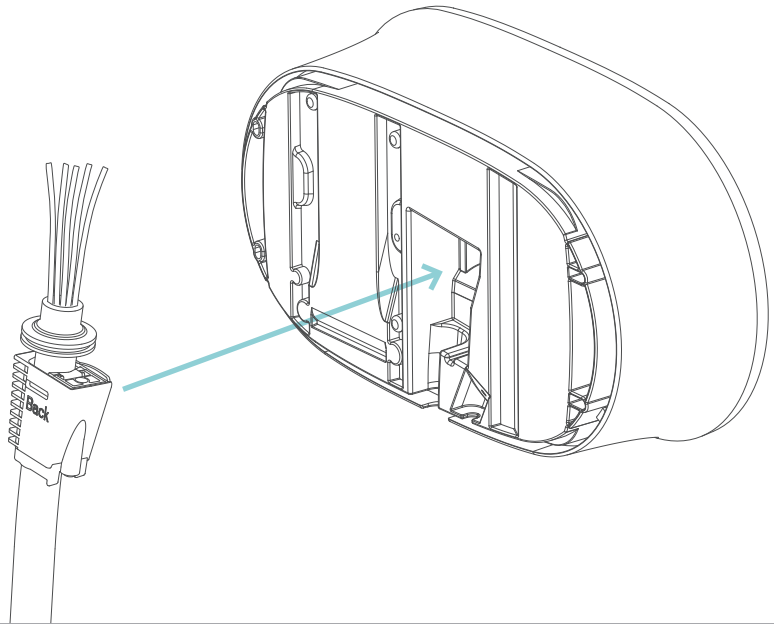


6.3.1

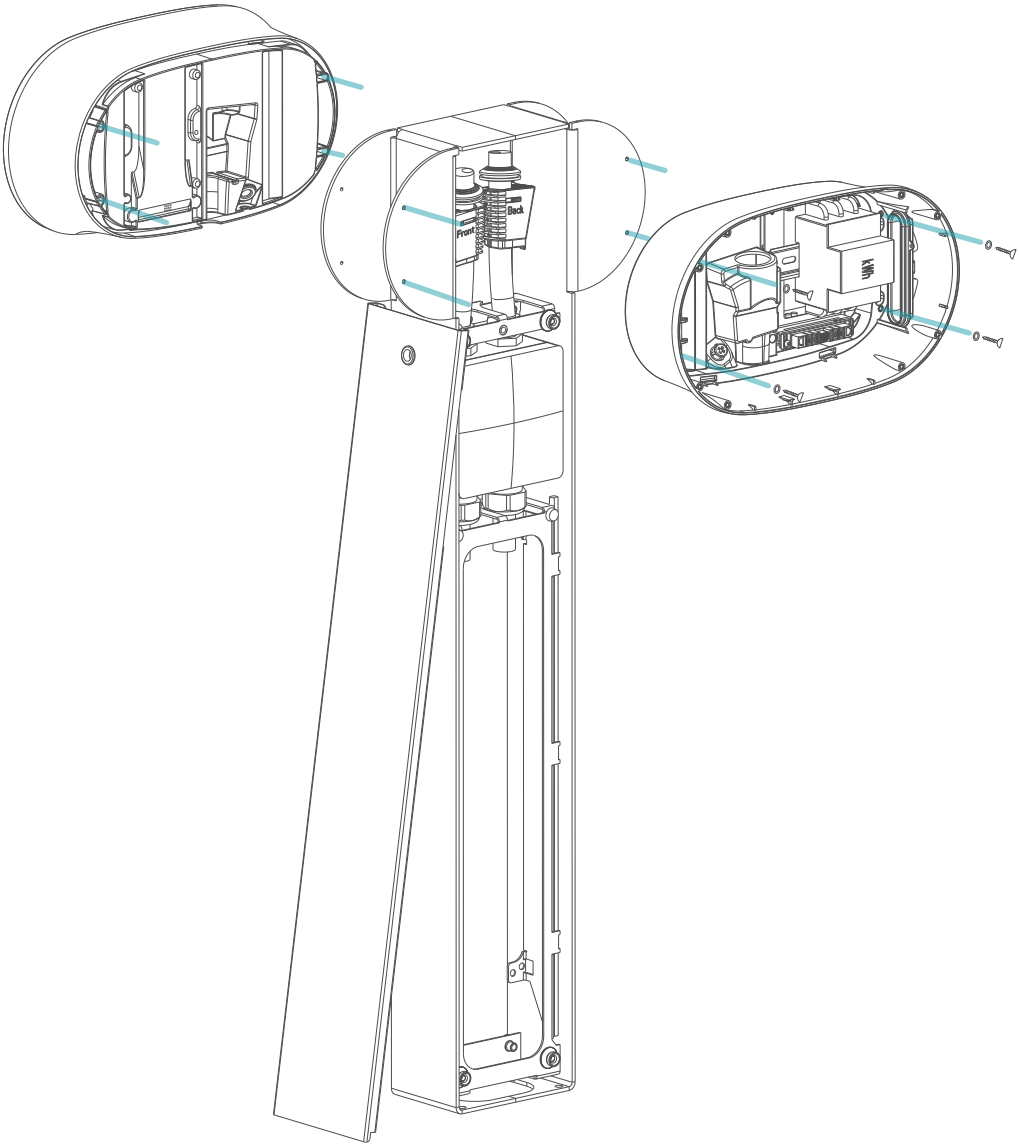
Hex key
Size 2.5

6.4 Mounting an OSTRA on the OSTRA Column

1. Prepare the strain relief as shown in Section 5.3 and insert the power cable into the OSTRA(s).
2. Screw the OSTRA(s) onto the OSTRA Column using the screws in bag F2.
3. See 5.7. Connection of cables to the terminal strip for further installation of the OSTRA(s).



6.5.1



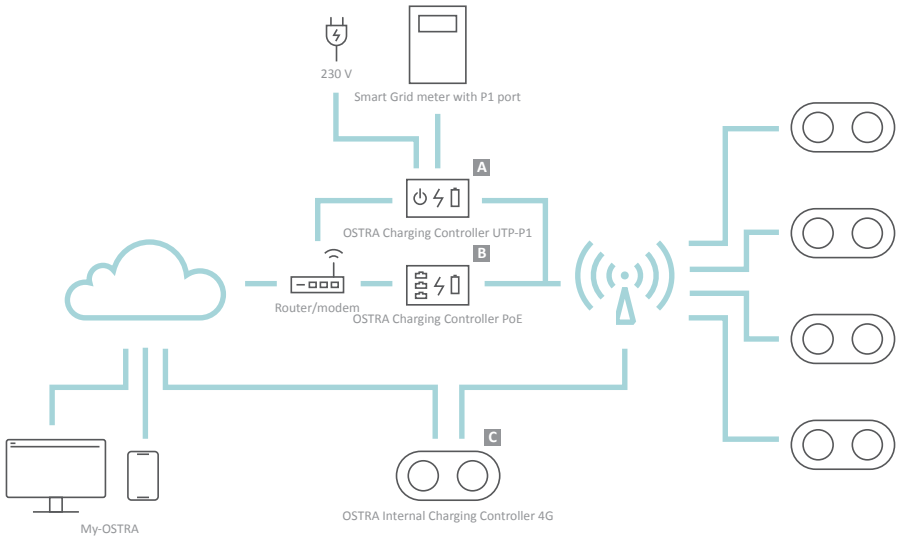
Screws: DIN912 M4X25

6.5.2

7. Putting the OSTRA Charging Controller into use

7.1 The OSTRA Charging Controller

All connected OSTRA charging stations use an OSTRA Charging Controller for connection to the online management platform. The OSTRA Charging Controller also houses the local settings for smart charging. The following figure shows the position of the various components graphically.



The OSTRA Charging Controller is available in three variants:

- OSTRA Charging Controller UTP-P1; in the preceding illustration indicated by “A”
- OSTRA Charging Controller PoE; indicated by “B” in the preceding figure.
- OSTRA Internal Charging Controller 4G; indicated by “C” in the preceding figure.

7.2 Connecting OSTRA Charging Controller

Before an OSTRA Charging Controller can be connected and configured, the OSTRA charging stations must be installed and connected as described in Chapters 5 and 6.

7.2.1 Determining position of OSTRA Charging Controller

The following factors play a role in determining the proper position to place the OSTRA Charging Controller:

Obstructing obstacles can negatively affect the RF signal

The wireless RF connection between the OSTRA Charging Controller and the OSTRA charging stations is based on professional standards, and the signal basically passes through walls, partitions and other physical obstacles. However, exceptional obstacles such as concrete pillars/columns with iron reinforcement and steel structures can adversely affect the signal.

For optimal results, avoid as much as possible that such structures break the imaginary line between the OSTRA charging stations and the OSTRA Charging Controller and position the OSTRA Charging Controller in relation to the OSTRA charging stations in such a way that signal loss is prevented. For example, by placing it in a clear spot on the ceiling of a garage.

OSTRA charging stations from the same configuration group transmit the signal to each other, allowing wireless connection of OSTRA charging stations in hard-to-reach locations as well.

A maximum distance of 15 meters between the OSTRA charging stations and the OSTRA Charging Controller

The RF signal reaches approximately 15 meters at a 360-degree angle. Within a circle around the OSTRA Charging Controller with a diameter of 30 meters, up to 100 OSTRA charging stations can be connected. In specific cases, an OSTRA Access Point can contribute to an optimal connection as a range extender.

Configuring OSTRA charging stations within a group with its own OSTRA Charging Controller

Configuring multiple OSTRA charging stations within a specific group with its own OSTRA Charging Controller, provides the following options:

– Load balancing of available power between OSTRA charging stations within the configuration group.
– If desired, different pricing for OSTRA charging station users compared to OSTRA charging station users in other configuration groups.
– If desired, another beneficiary of EV charging revenue, for example, in a parking garage or at a charging plaza of a commercial building.

7.2.2 Connecting OSTRA Charging Controller to power supply

OSTRA Charging Controller UTP-P1

The OSTRA Charging Controller UTP-P1 is connected to a 230V wall outlet through a power adapter. By connecting the OSTRA Charging Controller to the P1 port of the Smart Grid meter with P1 port in the meter box, the OSTRA Charging Controller takes into account the current available power of the installation when distributing power to charging stations, preventing overloading.

OSTRA Charging Controller PoE

The OSTRA Charging Controller PoE is powered via Ethernet cable by a router, modem or switch that supports power over Ethernet. If the connected router, modem or switch does not support PoE, a PoE injector is available. Please contact your supplier for this.

OSTRA Charging Controller 4G

The OSTRA Charging Controller 4G is built into the OSTRA charging station and receives its power supply when the OSTRA is energized.

7.2.3 Connecting OSTRA Charging Controller to the Internet

All OSTRA Charging Controllers are configured by default for an internet connection to MyOSTRA. The following options can be selected for connection to the Internet:

OSTRA Charging Controller UTP-P1 and OSTRA Charging Controller PoE

Connection to the Internet through a UTP cable to a router, modem or switch connected to the Internet. Next, the OSTRA Charging Controller needs to be configured. This is further explained in section 7.3.

OSTRA Charging Controller 4G

4G connection to the Internet through a SIM card inserted into the OSTRA Internal Charing Controller 4G.

7.2.4 Connecting OSTRA Charging Controller to the OSTRA charging stations

The OSTRA charging stations are in contact with the OSTRA Charging Controller through an RF connection. In locations where the signal may be adversely affected by environmental factors, additional access points can be added. The OSTRA charging stations also transmit messages to each other via RF so that an always optimal situation can be achieved.

7.3 Configuring and commissioning OSTRA Charging Controller

7.3.1. Configuring and commissioning OSTRA Charging Controller via the installation portal

Perform the following steps to configure and commission the OSTRA Charging Controller and connect to MyOSTRA and/or the BlueMarble Charging management platform. NOTE: The OSTRA Charging Controller must be connected and connected to the Internet.

1. Scan the QR code on the OSTRA Charging Controller or go to https://installation.ostracharger.com/smartcharginghub and log in. If no account has been created yet, follow the procedure via Register to do so in a few easy steps. After registration, a confirmation email will be sent. After the mail is confirmed, login can be done immediately.
2. Enter the serial number located on the outside of the OSTRA Charging Controller as well as the security code. Click Search and the settings will be displayed.
3. Scroll down to configure the OSTRA Charging Controller.
   Fill in the requested information and click “configure chargestations and connectors”.
   1 First, the fuse value of the connection must be entered.
   2 If the dynamic load balancing option was ordered and an unlock code was received, this option can be checked and the unlock code must be entered.
   3 In case there are multiple OSTRAs at one locations and it is desirable for the customer, it can be chosen to divide / cluster OSTRA Charging

Stations across different charging stations. This allows the customer, for example, to choose to set different charging rates for each charging station.

Depending on the type of OSTRA Charging Controller, up to 10 OSTRA Charging Stations can be configured per charging station. The clustering of OSTRA Charging Stations per double OSTRA Column or per set of wall-mounted OSTRA Charging Stations are, for example:

- 1 charging station with 1 OSTRA Charging Station
- 1 charging station with 2 OSTRA Charging Stations
- etcetera

In the specific case with an OSTRA Charging Controller PoE with the capability of 50 OSTRA Charging Stations or more, one can choose to cluster ten OSTRA Charging Stations per charging station.

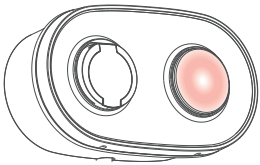
4. Going through the menu, fill in the requested information.
   A summary then shows which settings have been entered. If agreed: click on “send configuration”. The OSTRA Charging Controllers are now configured automatically, this takes a few minutes.
5. Then, from the page, send an email to the client so that they can complete the process and purchase subscriptions where necessary or desired to gain visibility and manage the charging stations.
6. BlueMarble Charging’s BackOffice is an open Platform working with open standards. It is possible to link any existing charging stations from other manufacturers with the MyOSTRA Platform (provided they support OCPP). All charging stations can thus be managed in one environment.

7.4 Putting the OSTRA charging station into operation

Perform the following steps to put the charging station into operation.

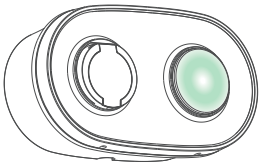
1. Turn on the power supply at the distribution device.
   The OSTRA will perform a self-test and connect to the OSTRA Charging Controller*, this takes approximately 1 minute. During this startup phase, the LED indicators give the following color indications.

   * The OSTRA Plug & Charge & OSTRA Swipe & Charge will not connect to an OSTRA Charging Controller



Red flashing: Connecting to OSTRA Charing Controller

Red:A ground fault has been detected

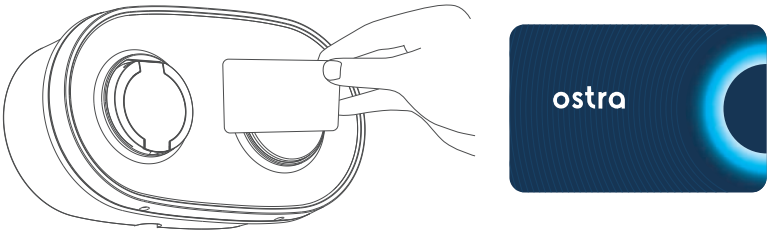


Green: Ready to charge

2. For a field test, plug the charging cable into the car and the charging station and start a charging session using one of the included charging passes.

8. Use of the OSTRA

8.1 Starting charging



1. Plug the charging cable into the car's socket and then into the charging station's socket
2. Hold the charging card in front of the RFID reader. The charging station checks the charging card for competence, the LED indicator briefly flashes yellow and emits a short tone if the card is accepted. If the pass is not accepted, a double tone sounds and the LED indicator flashes red.
3. The indicator of the corresponding socket turns yellow for a few seconds and the cable locks.
4. After a few seconds, the indicator turns blue, followed by a short tone. The car is now charging.

8.2 Ending charging

1. Hold the same charging card used to activate the charging session in front of the card reader again. A short tone will sound.
2. The charging session ends, the lock is lifted and the indicator briefly turns yellow and then green.
3. The charging cable can now be removed.

8.3 LED color codes

A user interface sticker is supplied with each OSTRA Charging Station, when it is desirable for the customer it can be chosen to stick it on top of the OSTRA front. This allows the status of the charging station and charging session to be read at any time in accordance with the table below.

LED color codes

Red flashing	Connect to the OSTRA Charing Controller or the OSTRA Charging Controller is not connected to the internet
Green	OSTRA is available & ready to load
Yellow	Charging card authorization, pending awaiting authorization from the car to charge Either the car is fully charged
Blue	Active charging transaction
Red	Charging card authorization, pending awaiting authorization from the car to charge Either the car is fully charged
Red flashing once	The charging card is not authorized to starting or stopping the charging transaction

8.4 Charging without the use of a charging card

OSTRA Charging Stations come standard with the ability to use direct payment to initiate a charging transaction without using a charging card. A QR code is pasted under the socket cover. Scanning the QR code with your smartphone connected to the Internet will take you to the direct payment page of the OSTRA. From this menu, you can initiate a charging transaction and payment of the charging transaction will be made by our directpayment partner. The direct payment functionality should always be activated in the charging station back office.

9. Maintenance and malfunctions of the OSTRA

! Danger

The electrical system must be completely disconnected from any power outlet before performing installation and maintenance work.

! Danger

The charging station contains electrical components that may still contain electrical charge after disconnecting from the power connection.
Wait at least 10 seconds after disconnecting before starting operations.

The owner or user is responsible for maintenance of the charging station, whereby both the law for safety of persons, animals and goods (in NL NEN3140, in ENG 50110) must be observed and the installation regulations applicable in the country of installation (in NL NEN 1010, in ENG HD-IEC60364).

9.1 Cleaning

! Note

Do not use powerful water jets for cleaning. This poses the risk of electric shock.

! Note

The sockets must not be cleaned inside.

The OSTRA can be cleaned on the outside with a soft, damp cloth. When doing so, always leave the socket closed.

9.2 Failures & Solutions

The table below can help you find a solution to simple malfunctions. Can't use the table below to fix the fault? Then contact the supplier or installer.

Problem	Possible cause	Possible solution
Charging station not responding	– No voltage at the charging station	– RCD and/or circuit breaker and/or earth leakage circuit breaker in the distribution system is not switched on – Contact the installer
Ground fault circuit breaker fails	– Ground fault in the charging station – Special grounding resistor required for the vehicle – Vehicle defect – Improper charging cable	– Check electrical wiring for damage. Replace damaged wires – Moisture or condensation on electrical connections. Dry the connections if necessary – Replace the charging cable – Measure the earth resistance and compare it with the requested resistance from vehicle supplier, e.g. Renault Zoe < 150 Ohm – Contact the installer

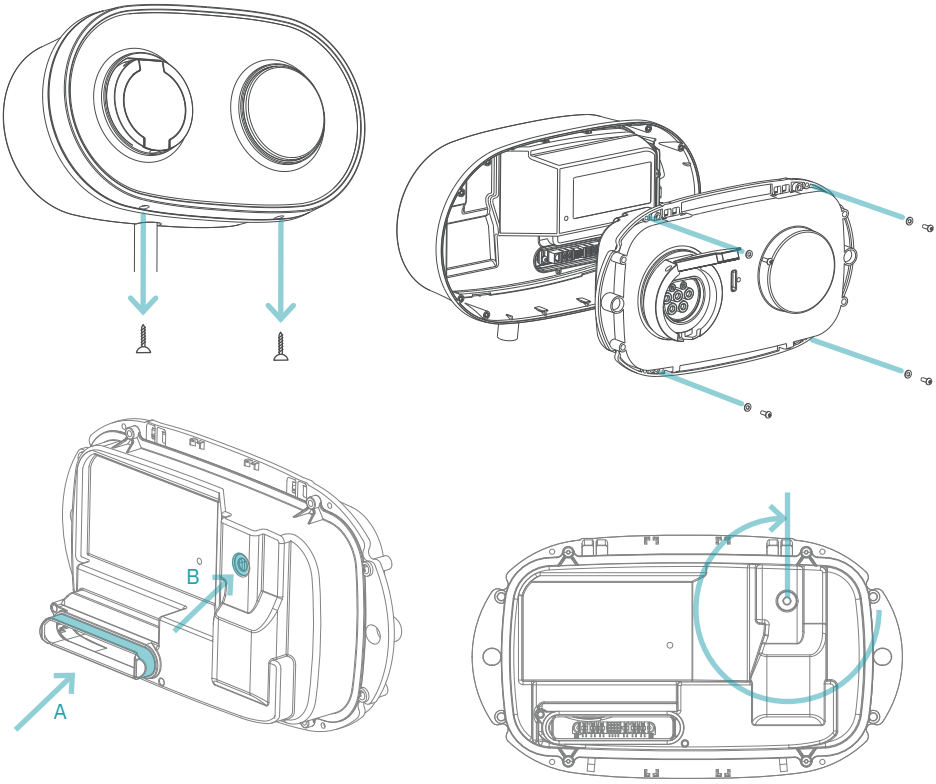
LED indicator flashes red when holding up the charging card	– charging card is not authorized – There is no communication with the BackOffice	– Check the settings in the BackOffice whether the charging card is linked to the charging station and/or interoperable (roaming set) – Check that the gateway has connection to the charging station or if applicable the (internal) modem has an active connection to the GSM/GPRS network – Contact the charging station operator
LED indicator turns red	– Charging cable is not connected properly – No connection to gateway or poor reception router – No or poor GSM/GPRS signal (if applicable) – There is no communication with the BackOffice	– Charging cable is not inserted far enough into the socket (check also at the vehicle) – Check for a working Internet connection – Contact the installer

Plug of the charging cable will not come out of socket	– Wrong pass used to stop loading – Release pin does not come up	– Use the same pass to stop charging as was used to start charging – Push the plug further into the socket and hold the pass in front of the card reader again – Earth leakage switch in the meter cupboard off and on again after 1 minute – Manually unlocking the socket (see Chapter 10) – Contact the service desk of the charging station operator

9.3 Disposal & Environment

Electrical and electronic devices including accessories should be disposed of separately from general household waste. Reusing materials saves raw materials and energy and makes an important contribution to protecting the environment.

10. Manually unlocking the Type 2 socket



10.1.1

Maintenance: Type 2 socket manual release

- Please de-energize the charging station
- Disassemble the OSTRA Front as described in section 5.10
- Disassemble the OSTRA Perla as described in chapter 5.9.
- Take the rubber plug (arrow B) out of the back of the OSTRA Perla
- Using a small screwdriver, move the red pallet in the OSTRA Perla clockwise until the connector is unlocked
- Before reinstalling the OSTRA Perla, check that the O-ring (arrow A) and rubber plug (arrow B) are inserted at the rear of the OSTRA Perla, indicated in Figure 10.1.1.
- Replace all parts in reverse order; use proper fasteners

! Danger

The electrical system must be completely disconnected from any power outlet before performing installation and maintenance work.

! Danger

The charging station contains electrical components that may still contain electrical charge after disconnecting from the power connection. Wait at least 10 seconds after disconnecting before starting operations.

11. Declaration of Conformity

The charging station complies with the RoHS directive (RL 2011/65/EU). The corresponding declaration of conformity is available from the manufacturer.

Manufacturer's Statement

BlueMarble Charging B.V., Radioweg 4, 1324 KW Almere, the Netherlands, declares under its sole responsibility that its products under the name 'OSTRA Charger', to which this declaration refers, are CE certified and in compliance with the essential requirements of EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and Radio Equipment Directive 2014/53/EU according to the standards:

EN 62311:2008
EN 61851-1:2011
EN 61851-22:2002
EN 61000-6-1:2007
EN 61000-6-3:2007+A1
EN 301489-1 V2.2.0 (draft)
EN 301 489-3 V2.1.1 (final draft)
EN 301 489-52 V1.1.0 (draft)
EN 301511 V9.0.2
EN 300330 V2.1.1
EN 62479:2010