VETON

TWO (socket)

Manual

EN

For the most recent version of this manual check our website.
Do not discard this manual, it contains your device's serial number.

VETON®

Charging masterpieces.

EN

Foreword.

First of all, thank you for purchasing a Veton® Two charging station. We are proud of our craftsmanship and hope you enjoy it just as much.

Please read the operating instructions carefully. It contains, in addition to essential information on installation and use, important safety information, as well as the serial number of the Veton® Two charging station.

As our product is an application and assembly of electrical systems, this installation must be carried out by a competent installer. For this reason, it is also strongly discouraged to disassemble the assembly carried out by Veton.

Incorrect installation or (re-)assembly may lead to, among other things, short-circuits, fire and/or smoke, and serious bodily injury. Veton® cannot be held liable for damage to persons, animals and/or objects resulting from non-compliance with the requirements in this manual.

Veton® reserves the right to make any changes to the product (and/or its technical characteristics), and the instructions for use and/or installation, at any time and without prior notice.

If in doubt, always contact a professional or distributor of Veton® products.

1. General provisions

Purpose of the document.

This operating and installation manual is part of the product and contains information for the user to safely operate the Veton® Two charging point and for an authorized electrician to safely install it.

Handling this manual.

- Read the operation and installation manual before installing and commissioning the Veton® Two charging station.
- Keep this manual within reach.
- Pass this manual on to a subsequent owner or user of the charging station (this document contains the serial number).

Regulatory use.

The Veton® Two charging station is suitable for charging electric vehicles in accordance with IEC 61851-1, charging mode 3. In this charging mode, the charging station ensures that:

- The voltage is switched on only when the vehicle is connected correctly;
- The maximum current is adjusted.
- The AC/DC converter is located inside the vehicle.

Use of symbols and highlighting.

Danger.
High-risk hazard which, if not avoided, could result in death or serious injury.

indication.
The indication explains a technical peculiarity or possible damage to the product, if ignored.

Warranty and liability.

Veton® is not liable for defects and damage that can be traced back to non-observance of the operating and installation instructions. This exclusion of liability applies in particular to:

- Improper use.
- Installation and commissioning by an unauthorized electrician.
- Repairs not carried out by a Veton® service center.
- Use of non-original spare parts.
- Conversion of the device without explicit permission from Veton.

2. Safety

General.

The charging station may only be used by persons over 18 years of age.

The Veton® Two charging station has been developed, manufactured, tested and documented in accordance with the relevant safety and environmental regulations.

Only operate the device in a technically perfect condition. Faults that adversely affect the safety of persons or the device must be rectified immediately by an authorized electrician in accordance with the nationally applicable regulations. The signaling in the vehicle may differ from this description. For this, the operating instructions of the respective vehicle manufacturer should always be read and observed.

General safety instructions. ⚠

- Dangerously high voltages in the device.
- Check the charging station for optical damage before use. Do not use the charging station if it is damaged.
- Installation, electrical connection and commissioning of the charging station may only be carried out by an authorized electrician.
- Do not remove markings, warning symbols or rating plate from the charging station.
- The charging outlet should only be replaced by an authorized electrician according to the instructions.
- It is strictly forbidden to connect other devices to the charging station.
- When the charging outlet is not in use, ensure it is covered.
- Ensure that the charging cable is protected from being run over or trapped and other mechanical hazards.
- If the charging station or charging outlet is damaged, notify the service center immediately. Do not use the charging station again.
- No persons should be in the vehicle during the charging process.
- Protect the charging outlet from contact with external heat sources, water, dirt and chemicals.
- Do not extend the charging cable with an extension cable or adapter to connect it to the vehicle.
- Remove the charging cable only by pulling the charging plug.
- Never clean the charging station with a pressure washer or similar device.
- Switch off the electric external power supply before cleaning the charging station.
- Ensure that only persons who have read these operating instructions have access to the charging station.

Safety instructions for the installation. ⚠

- Installation and connection of the charging station should only be carried out by an authorized electrician.
- Use only the supplied mounting material.
- The Veton® Two safety concept is based on an earthing system that must always be guaranteed. The authorized electrician must ensure this during installation.
- Do not install the charging station in an explosive environment (Ex zone).
- Install the charging station so that the charging cable does not block passage.
- Do not install the charging station in environments with ammonia or ammonia-containing air.
- Do not mount the charging station where it could be damaged by falling objects (e.g. cable drums or tyres).
- Do not install the charging station near installations that spray water, e.g. car washes, pressure washers or garden hoses.
- Set up the charging station in such a way as to prevent vehicles from inadvertently driving into it and damaging it.

If damage cannot be excluded, take protective measures.

- If the charging station is damaged during installation, it must be taken out of service. It must be replaced.

Safety instructions for the electrical connection. ⚠

- You should take into account local legal requirements for electrical installations, fire protection, safety regulations and escape routes at the planned installation location.
- Ensure that the electrical connections are de-energized before connecting the charging station to electricity.
- When commissioning the charging station for the first time, do not connect a vehicle yet.
- Ensure that the correct connecting cable is used for connection to the mains.
- Do not leave the charging station unattended when the installation cover is open.
- Do not install the charging station without an installation frame.
- Observe any notifications to the grid operator.

Safety instructions for commissioning. ⚠

- Commissioning of the charging station must only be carried out by an authorized electrician.
- The correct connection of the charging station must be checked by the authorized electrician before commissioning.
- Before commissioning the charging station, check the charging station and charging outlet for optical damage. It is not permitted to commission a damaged charging station or a charging station with a damaged charging outlet.

3. Scope of delivery

Charging station packaging contents

- 1 x Veton® Two charging station
- 1 x Veton® One/Two ground plate (including 4 x set screw - M8 x 10)
- 2 x wedge anchor - M10 x 130 (if delivered without concrete base)
- 2 x set screw - M8 x 20
- 2 x hexagonal flange nut - M10 (if delivered without concrete base)
- 2 x hexagon socket head cap screw – M10 x 12 (if delivered with concrete base)

Installation cabinet contents

- 1 x Veton® Components Cabinet (components available separately on request)

4. Technical specifications

Charging controller
Phoenix Contact Charx SEC Series
SEC-3XXX / SEC-1XXX

Connectivity
Ethernet, MQTT, Modbus TCP/RTU, REST API
Optional 4G/2G connection

Charging specifications
Mode 3 / 3,7 - 22 kW
3 x 400V+N
16A - 32A per phase

Charging output
2x charging port (type 2)
2 x 32A

Overload protection
Dynamic load balancing

EV charging platforms
Connect with provider of choice (via OCPP)

Authentication
By RFID reader
Included

Energy monitoring
MID certified monitor
Calculation of transaction costs

Web application
Integrated web app to manage charging sessions

Dimensions
1152 x 154 x 186 mm
H x W x D

Component housing
Integrated in utility closet
600 x 315 x 155 mm

Residual Current Detection
Built-in residual current protection
6mA DC / 30mA AC

Cable
5G 6mm^2 + 18 x 0.34mm^2
(E)XVB (2x) + CAT 7 SFTP (3x)

Max cable distance
100 metres (CAT 7)
Between components and charger

Open platform
For own applications
PLC Next based

Courtesy light
LED courtesy light
Separate control possible

Charger housing
Powder coated steel & aluminium

Protection degrees
IP65 / IK10

5. Installation ⚠

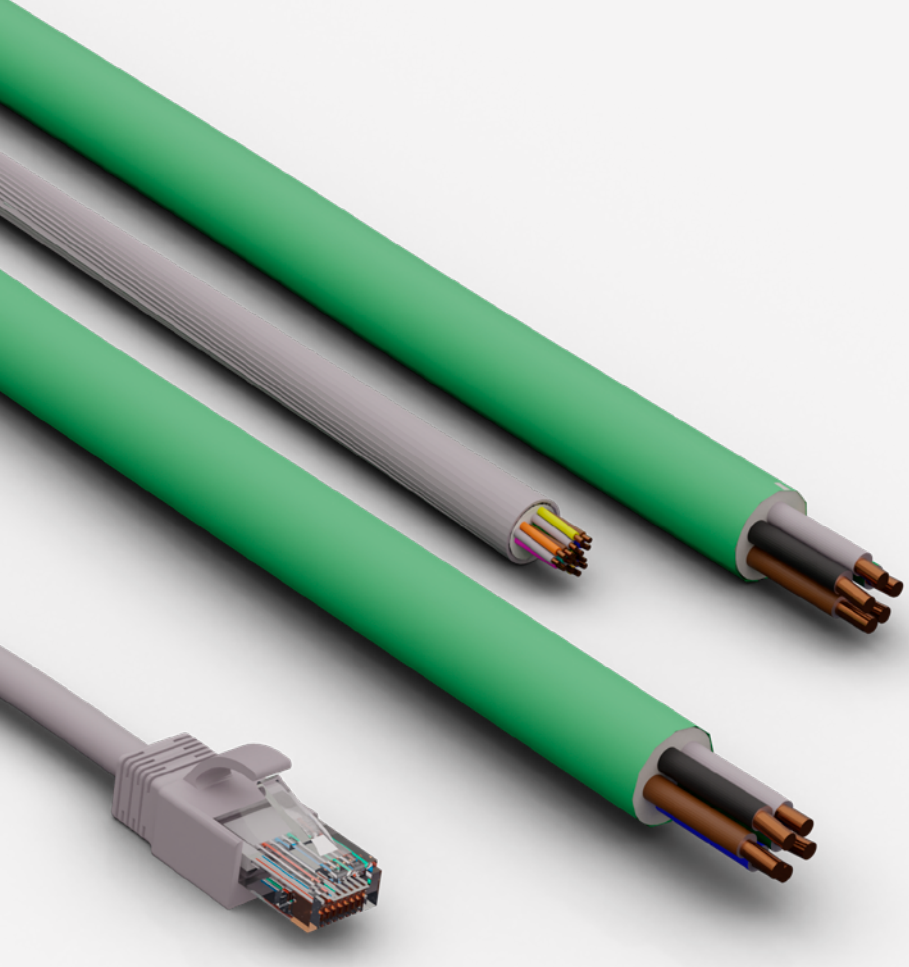
This manual describes the (basic) installation of a Veton® Two charging station. For reasons ranging from sustainability to modularity, the actual charging point and the electrical charging components are separated. The charging point is installed within reach of the vehicle(s), the charging components are placed in an installation cabinet, or other DIN-rail compatible cabinet.

The description of the installation in this chapter is limited to the placement of the charging station and the connection to the above-mentioned electrical charging components (cables to be laid prior to installation). The connection of the charging infrastructure to the current electrical installation is possible in several ways, and should be carried out with the professional judgment of an experienced electrician.

Tools and materials needed.

- Rapid concrete*
- Socket spanner or open-end spanners
- Socket spanner / socket spanner attachment - 8 mm
- Socket spanner / socket spanner attachment - 15 mm
- Allen spanner - 3 mm

* The installation described in this manual uses rapid concrete for the installation. Alternative methods are possible.



1. Cabling.

A well working charging infrastructure starts with the right cabling. Make sure that the cables described below have been pulled before installing the charger.

Overview cabling Veton® Two (socket):

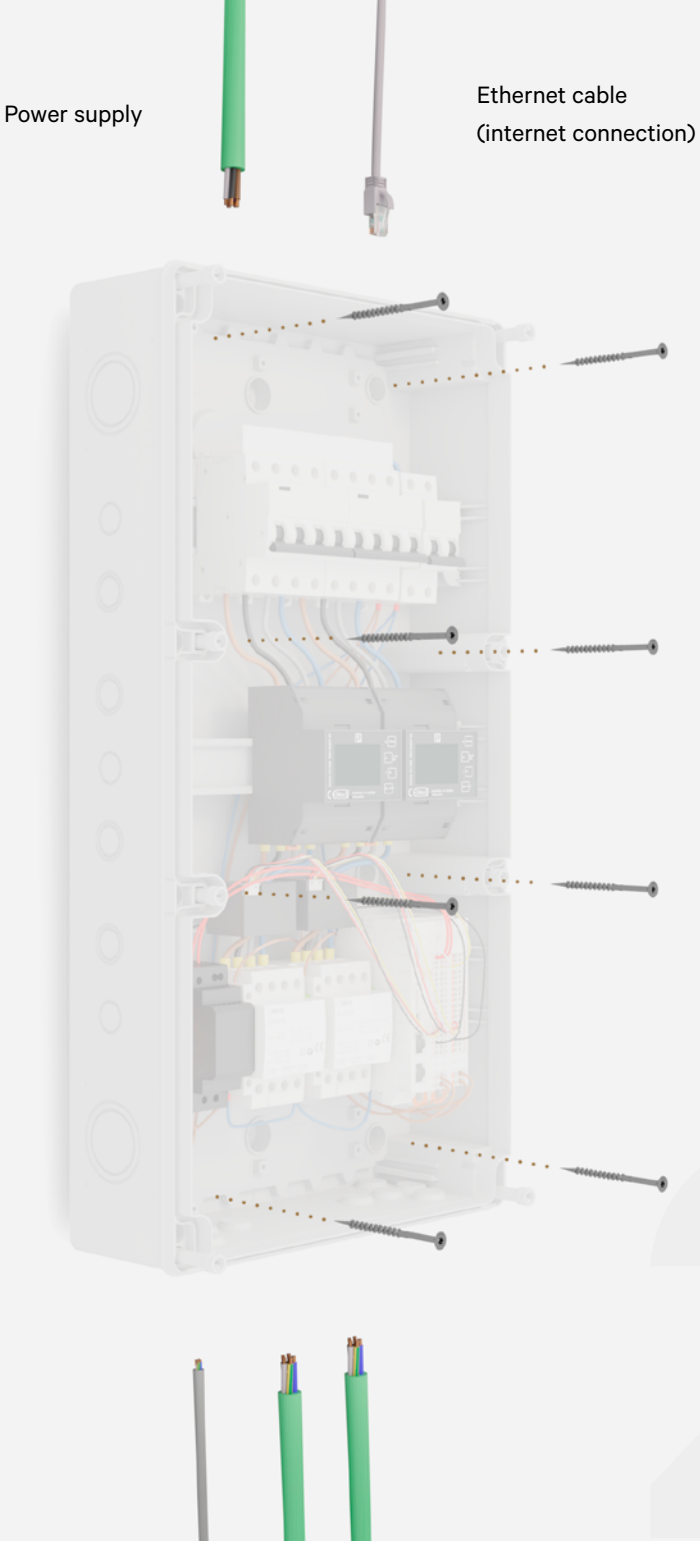
Default installation

Power supply	
5G 6mm²	x 2
Internet	
Ethernet cable (CAT 6 or CAT 7)	x 1

Signal	*Cores*
Control pilot	2
Proximity pilot	2
Lock	8
LED lighting	2
RFID reader*	4

Example: For a Two (socket) including RFID reader, 2 x 5G 6mm² cable and 3 x CAT 7 SFTP cable with (at least) 18 cores must be present between the charging point and the (Veton®) Components Cabinet. Additionally, an Ethernet cable (CAT 6 or CAT 7) with an internet connection must be available.

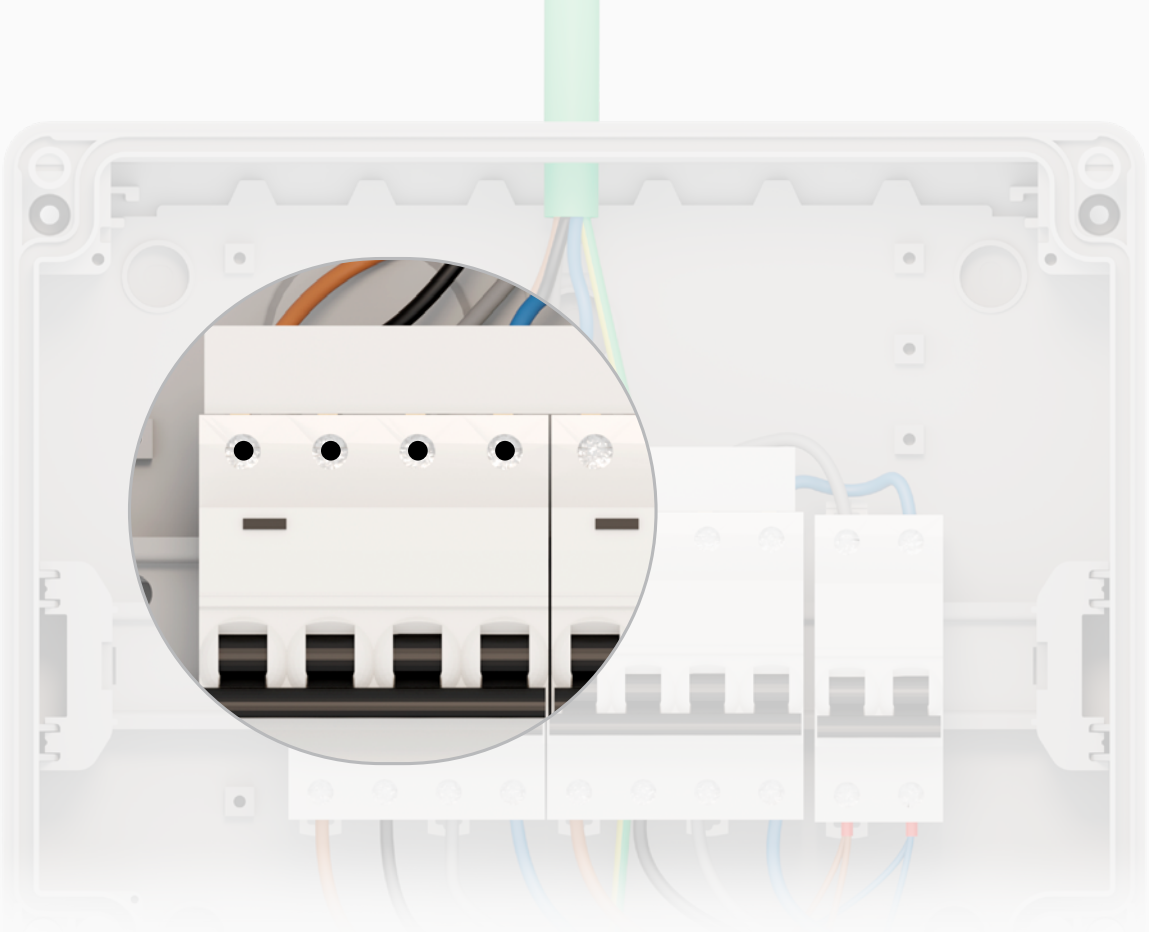
The + and - cables of the RFID reader and the LED lighting can be combined.

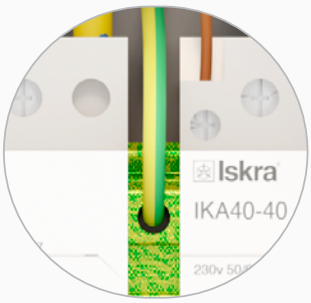


2. Hang the electrical cabinet*.

Attach the electrical cabinet supplied with the charging components near the electrical set-up of the property.

* This step only applies if your electric charging components were supplied in an installation cabinet.

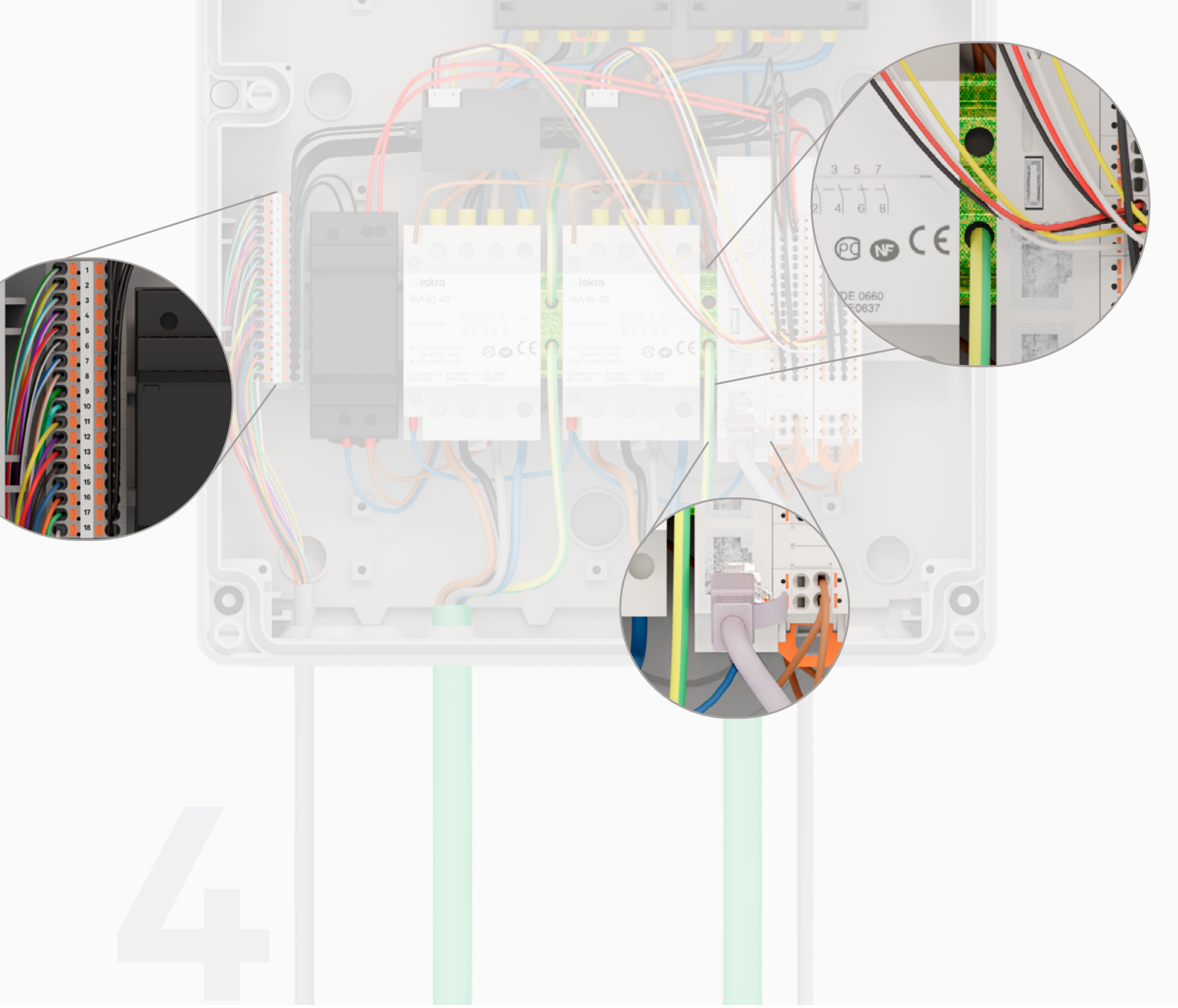




3. Power supply.

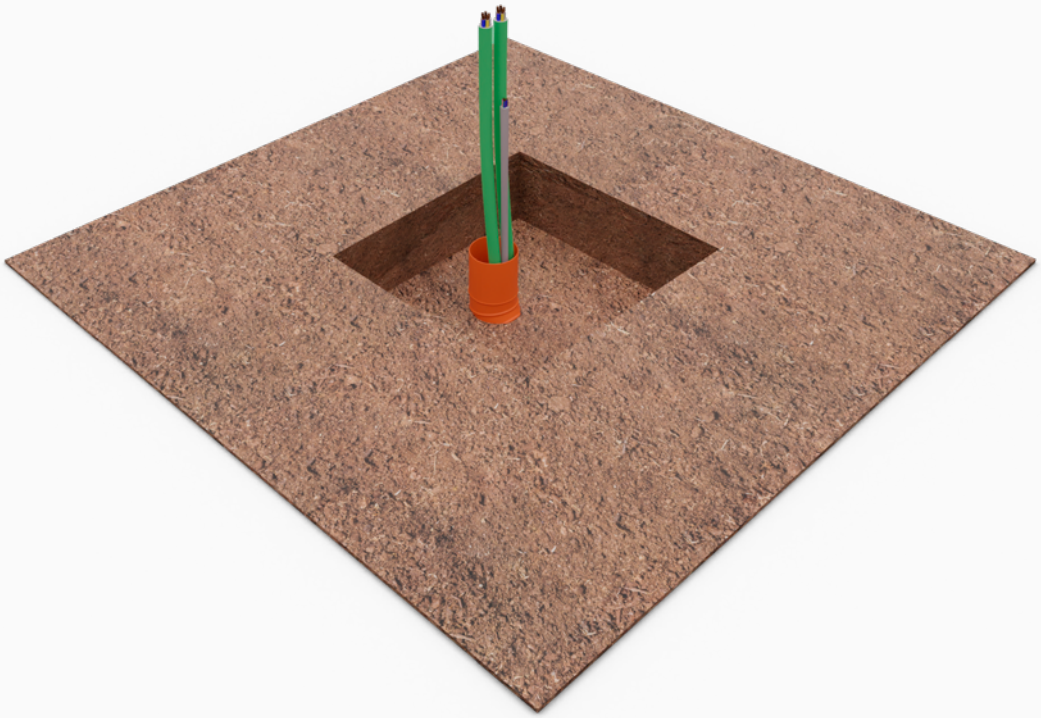
Connect the power supply to the electrical cabinet by connecting the cores to the residual current breaker (use schedule below). Connect the core for grounding to one of the ground terminals. The ground is passed to the other ground terminal via the DIN rail.

Type aansluiting	●	●	●	●
3 x 400 + N	L1	L2	L3	N
3 x 230V			L1	L2
1 x 230V			L1	N



4. Connecting the charging ports, signal cable, and ethernet cable.

Connect the charging ports to the contactors. It is important to connect the grounding conductors to the grounding terminals. Then, connect the signal cables by connecting the required number of cores to the provided terminal blocks. Be sure to record the chosen colors, as they must be connected in the same order inside the charging station. Finally, connect the ethernet cable (connected to modem, router or switch) to the ETH0 port.

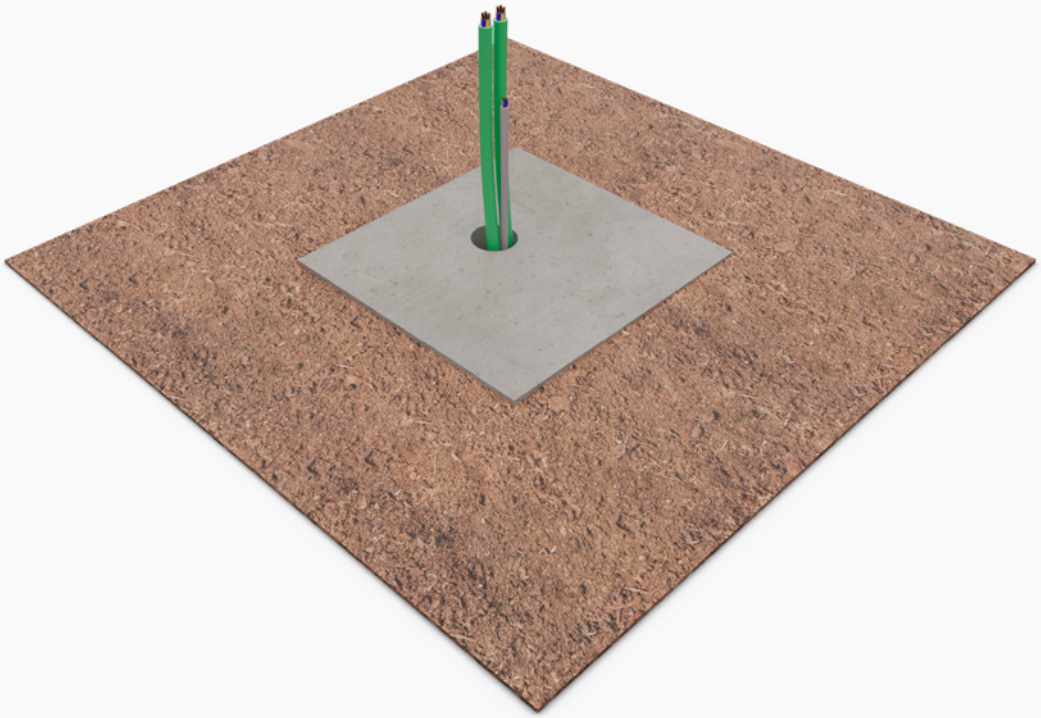


5A

5A. Pull cables.

Provide the cables as specified in step 1 between the (Veton®) Components Cabinet and the charging point. Ensure that the required cables on the charging point side are positioned at the rear of the charging point (use the supplied template if necessary).

* There are several ways to place the ground plate. This method guarantees a secure fixing in the majority of situations. Alternative methods depend on the substrate and materials used when constructing the location where the charging station will be placed.

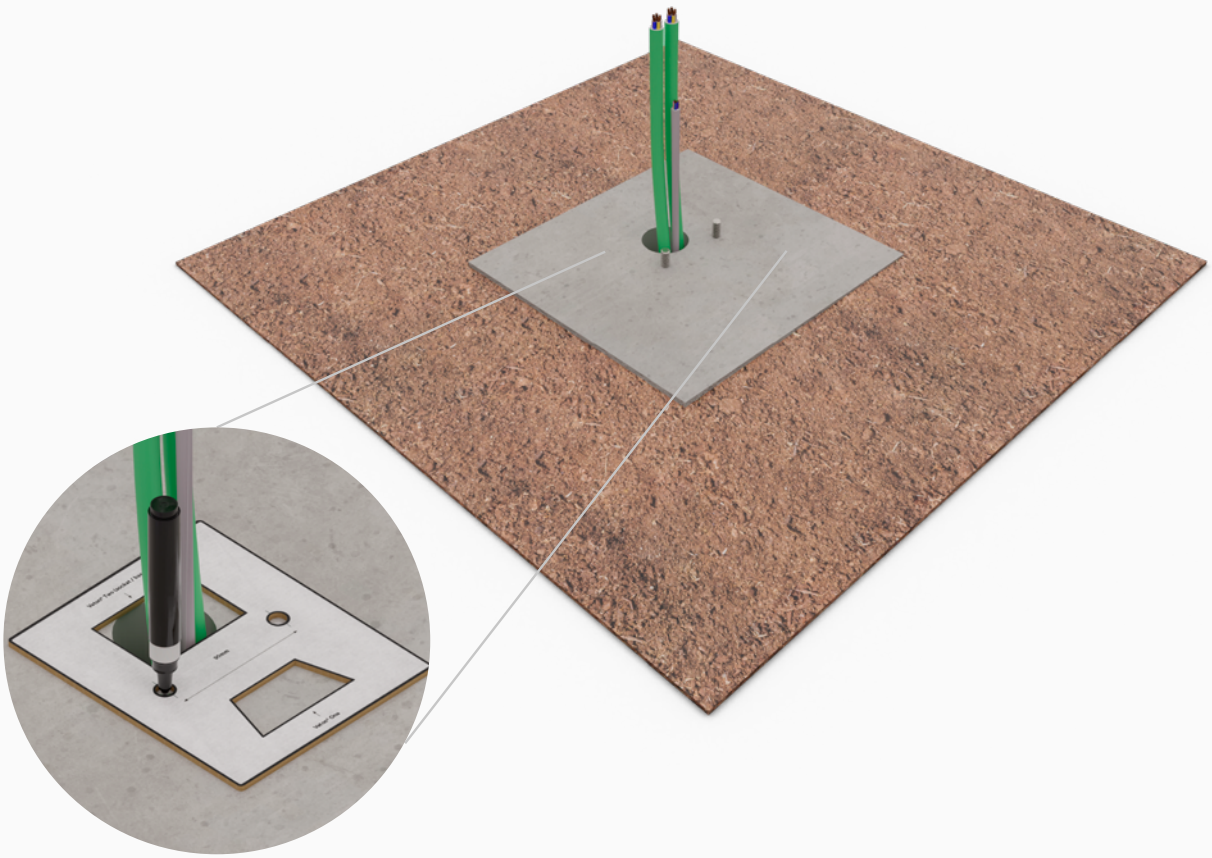


5B

5B. Pour concrete*.

Pour the necessary amount of rapid concrete to fill the excavated pit. Make sure that the concrete layer extends just below the ground plate. Any further finishes are to be done by yourself.

* Do you have a concrete base? Please proceed to steps 5D and 5E.

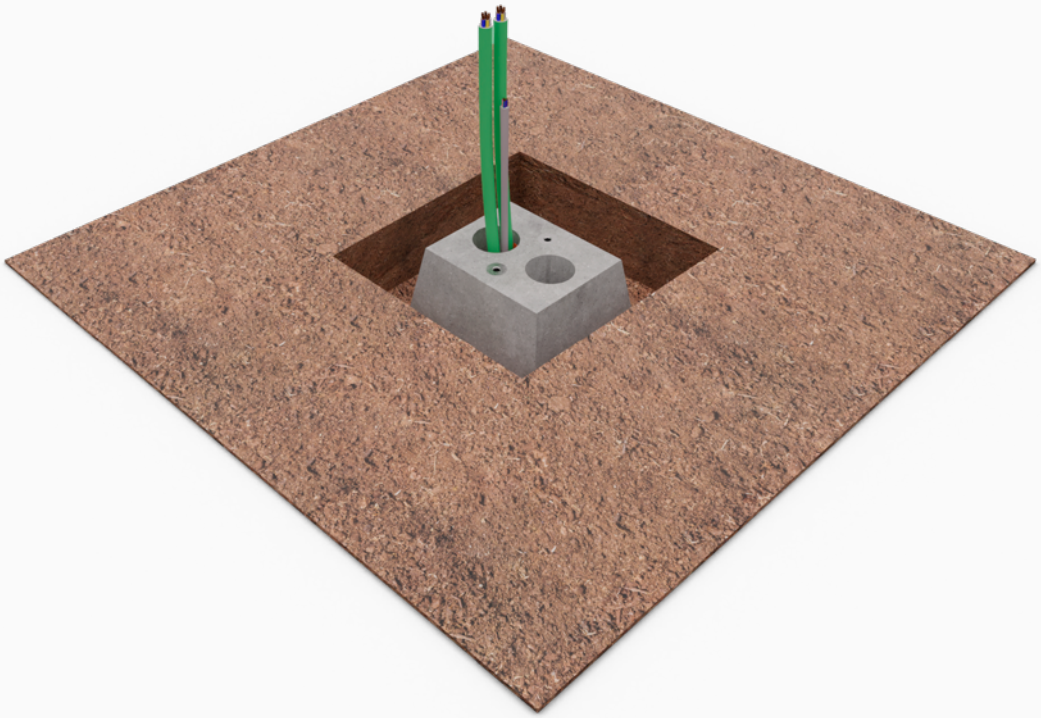


5C

5C. Attach ground plate and level*.

Use the supplied template to simulate the position of the charging point and mark where the holes need to be drilled. Then drill holes with a diameter of 10 mm and a depth of approximately 85–90 mm. Next, drive the anchor bolts into the holes until they protrude about 20–30 mm above the surface.

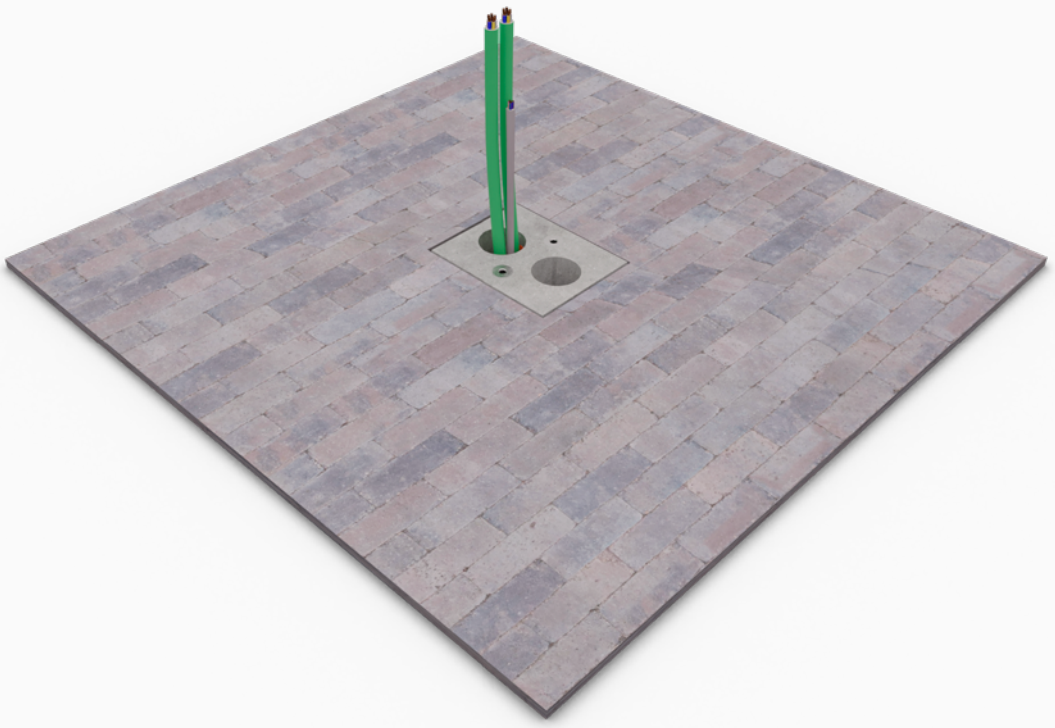
* Do you have a concrete base? Please proceed to steps 5D and 5E.



5D

5D. Place concrete base.

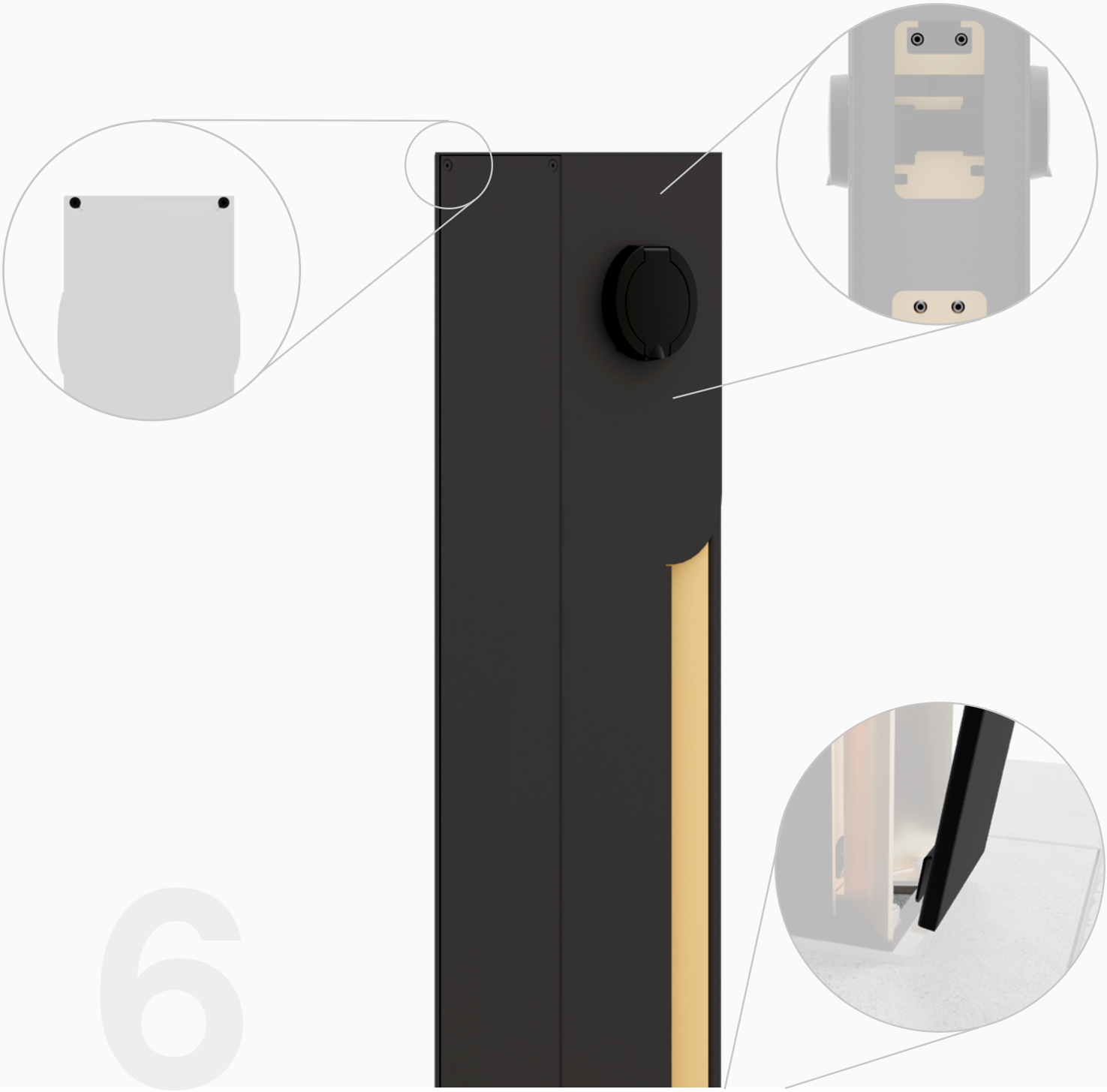
Place the concrete base in the excavated pit (within reach of the vehicle(s)). Pull the prepared cables through the rear opening of the concrete base, as well as the ground plate. Make sure the cables are long enough (at least 75 to 100 cm above the ground plate), these cables are later used to make connections.



5E

5E. Finishes.

Fill the rest of the excavated pit with soil or rapid concrete. Any further finishes are to be done by yourself. Make sure that the finishing layer extends just below the ground plate.

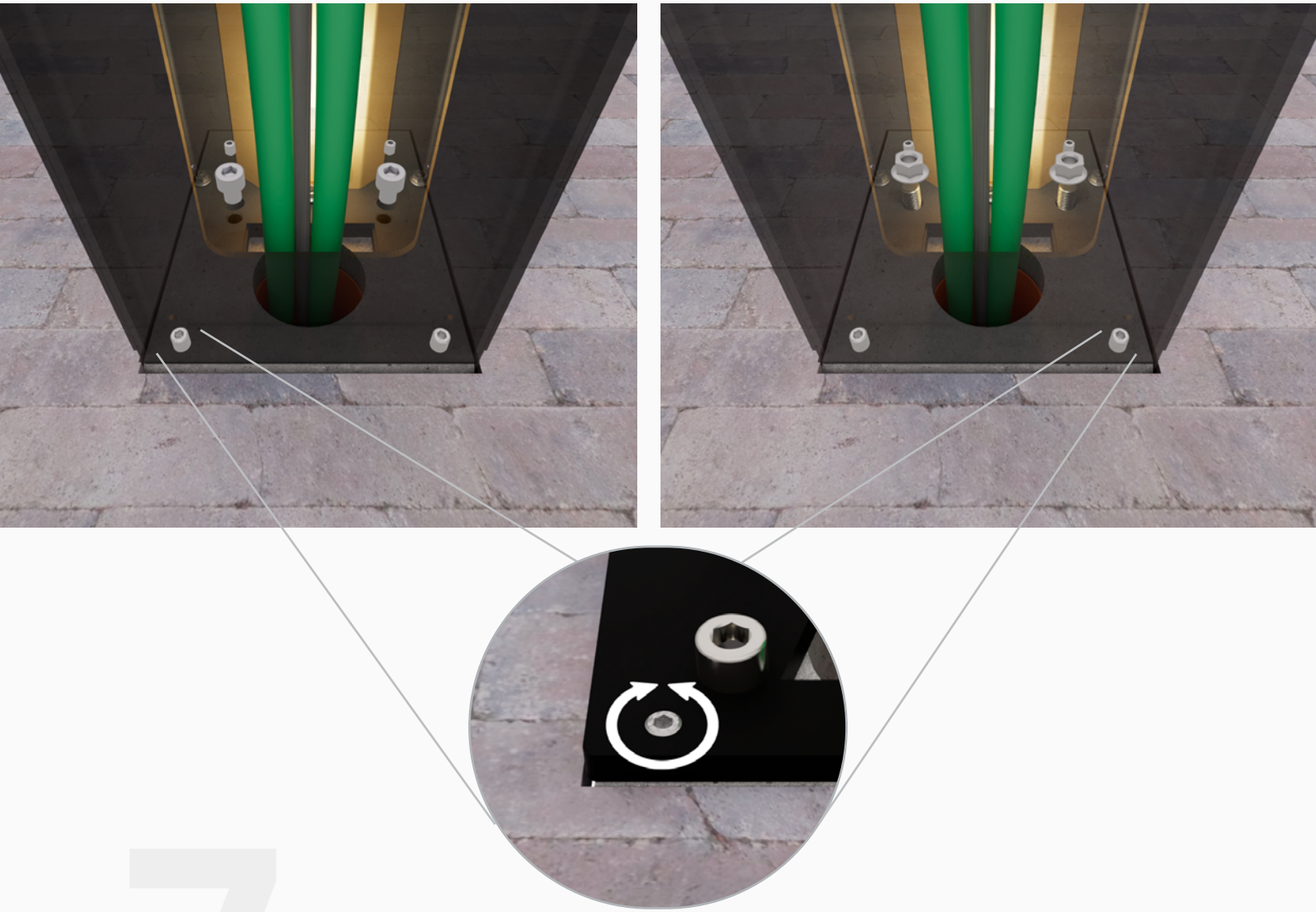


6. Remove the front and rear panels.

Remove the countersunk bolts (4 x M5) at the rear of Veton® Two. Carefully remove the rear panel and place it on a soft surface to avoid surface damage. Then loosen the nuts (4 x M5) on the inside of the charging unit to release the front panel. Tilt the front panel forward and remove it. Also place the front panel on a soft surface.

Concrete base

Alternative method with wedge anchors



7. Mount and level Veton® Two.

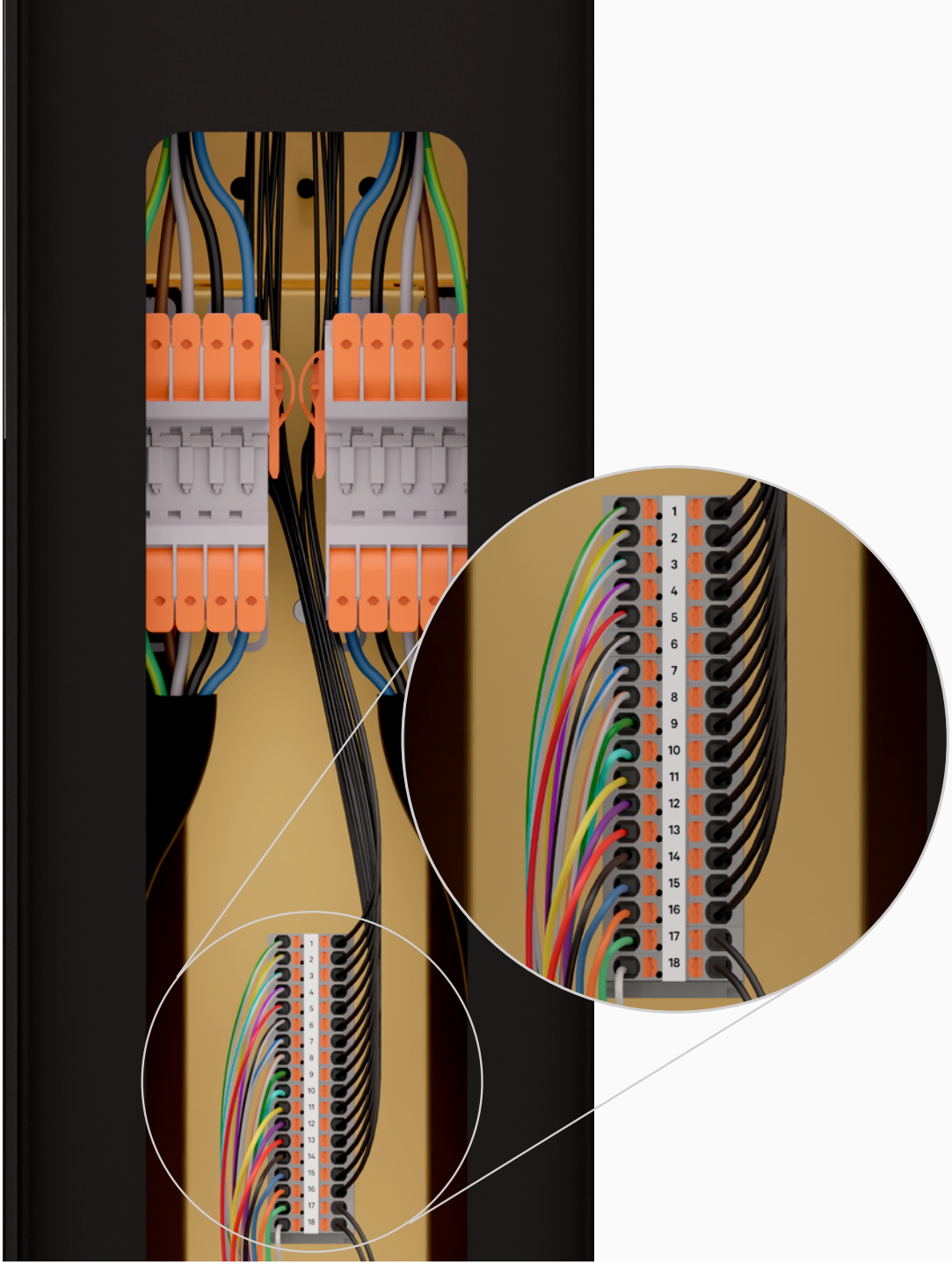
Guide the cables through the designated opening in the base plate (see template) and position the Veton® Two at the intended location.

- For installation on a concrete base: ensure that the cut-outs in the base plate are properly aligned with the provided threaded inserts in the concrete base. Then secure the charging station using the supplied bolts (2 x M10).
- For installation on anchor bolts: slide the charging station over the anchors, ensuring that the cut-outs in the base plate fit over the bolts. Secure it by fastening the nuts (2 x M10).

Then level the charging station using the adjustment screws* in the base plate, both at the front and rear. Tighten or loosen them until the desired level is achieved. Verify this using a spirit level.

* If the set screws already inserted are too short, the ground plate can be further adjusted by replacing them with the supplied longer set screws.

8

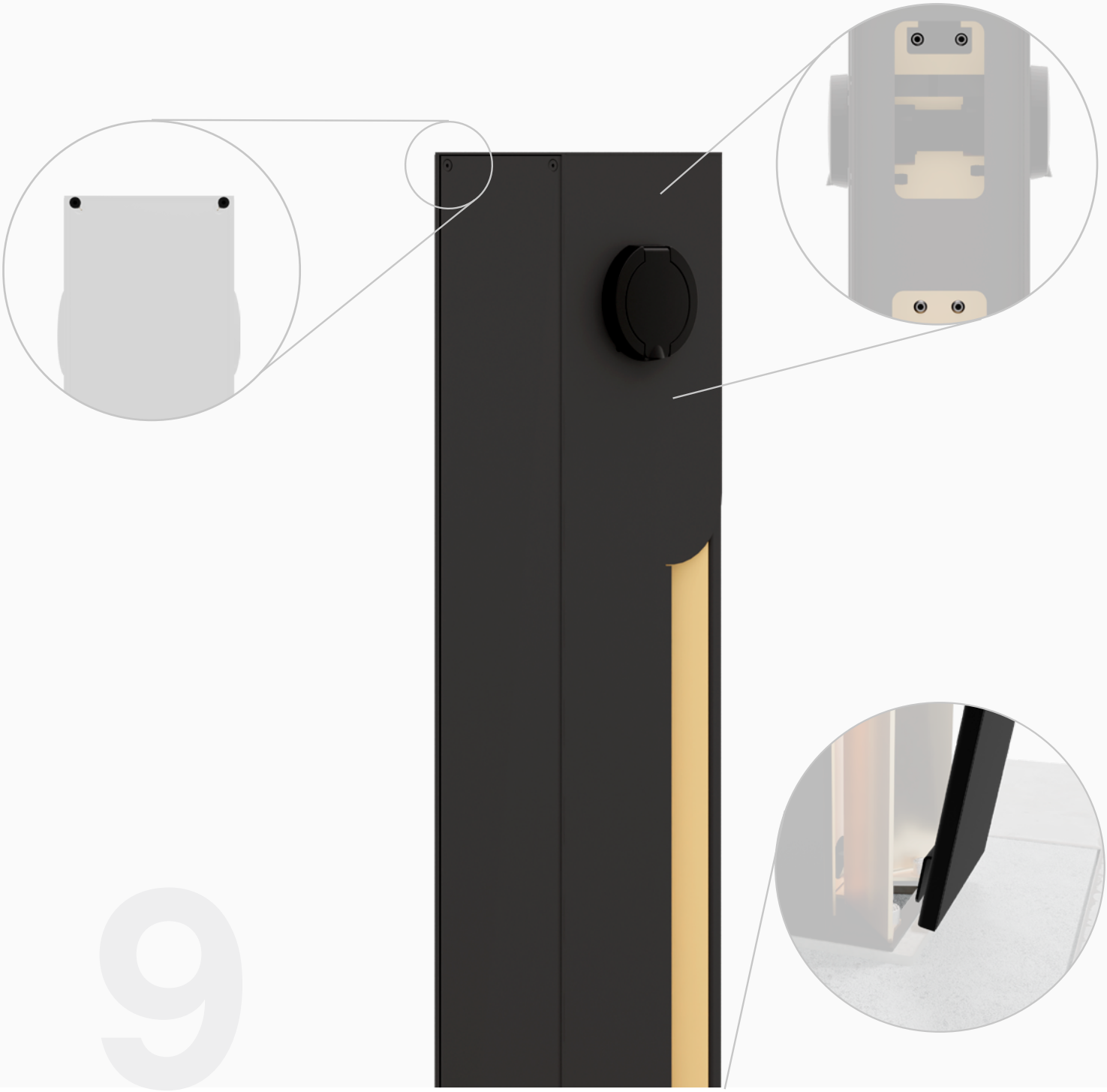


8. Connections.

Connect the power cables from the contactors to the charging ports by clicking the corresponding wires into the male and female parts of the WAGO connectors.*

For the connection of the LED lighting, Control Pilots, Proximity Pilots, locks and RFID reader, dedicated terminals are provided. These are pre-wired to the correct components, both inside the charging station and in the distribution cabinet. Connect the signal cable using the same colors and in the same order as in step 4.

* The charging station may be supplied with BBC Cellpack gel boxes instead of WAGO connectors. In that case, the corresponding wires must be screwed into the terminal block and then placed inside the supplied gel box.



9

9. Attach the front and rear panels.

Place the front panel in front of the unit, ensuring that the hook is at the bottom. Tilt the front panel and insert the hook into the designated slot. Then tilt the top towards the unit and make sure the bolts align with the corresponding holes. Secure the panel by tightening the nuts (4 x M5) onto these bolts.

Next, align the holes of the rear panel concentrically with the holes in the frame. Secure the panel by tightening the countersunk screws (4 x M5).

10

10. Configuration.

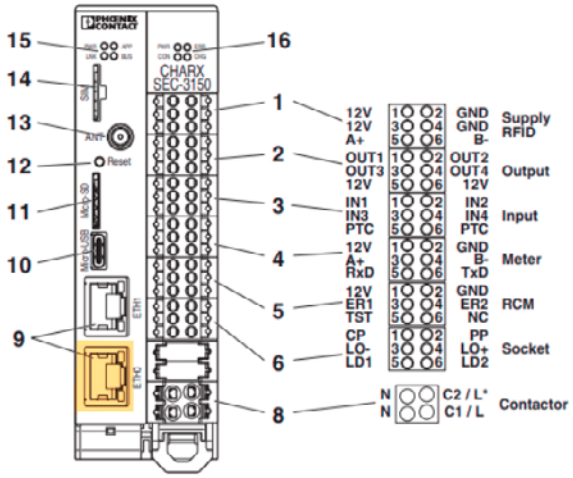
The basic controller settings have already been set up, prior to delivery. Surf to the web interface of the controller by following the steps stated on the next page.

Follow one or more of the manuals and/or quick start guides on our website by following the above QR code or by surfing to **www.veton.be/downloads**. This page provides information about basic configuration of the charging points, OCPP, RFID whitelist, and others.

Check network cable.

1

Make sure the controller is connected to the network by connecting a network cable to a router or switch on the one side, and the ETH0 port of the charging controller on the other.



CHARX SEC-3xxx

Switch on the circuit breaker.

2

Wait about 5 minutes until the controller has booted after turning on the circuit breaker.

Surf to the address of the controller.

3

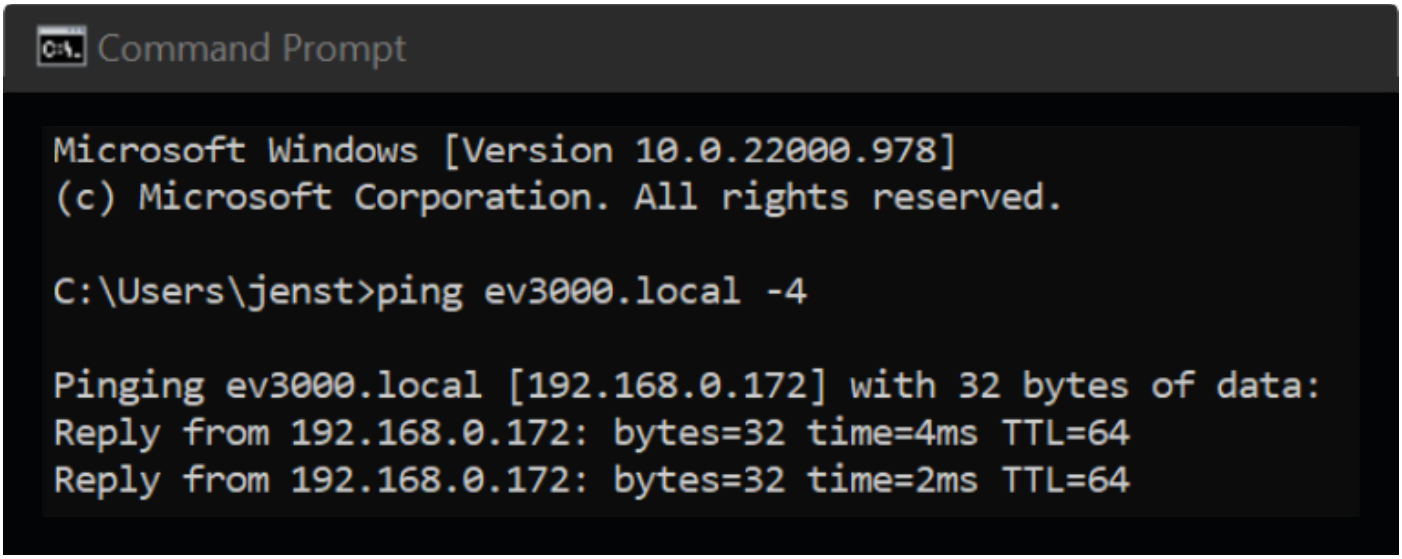
If a DHCP server exists in the network, the controller will automatically be assigned an IP address and host name. The controller can be accessed by surfing to http://ev3000.local/.

If any problems occur, follow the steps below to surf directly to the IP address of the controller.

Execute the following command in Command Prompt (Windows) or Terminal (Mac) to ping the host name.

> ping ev3000.local -4 (Windows)
> ping ev3000.local (Mac)

In this example, the IP address is 192.168.0.172. Surf to http://192.168.0.172/ to access the controller.

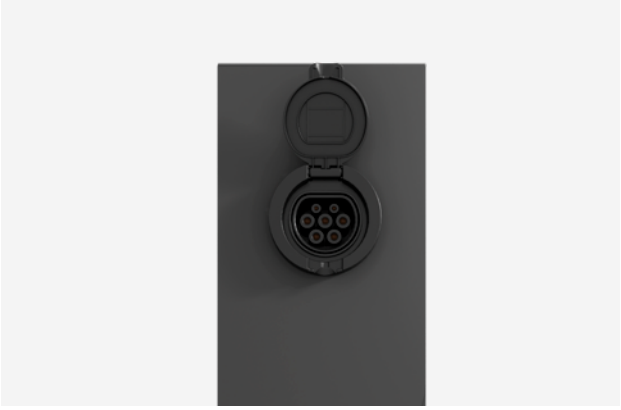


6. Operation

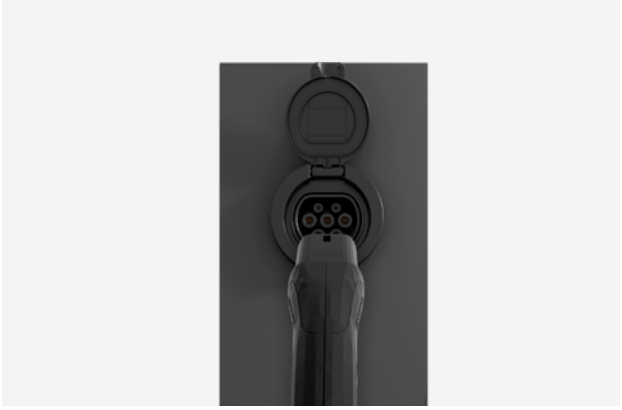
Your Veton® Two charging station has been installed, inspected, and is ready for use. This section of the manual describes how to use the charging station, and what to consider to safely use it.

- Always consider the vehicle requirements before starting vehicle charging.
- Park the vehicle at the charging station in such a way that the charging cable is not tense.

Start charging



Open the charger's flap.



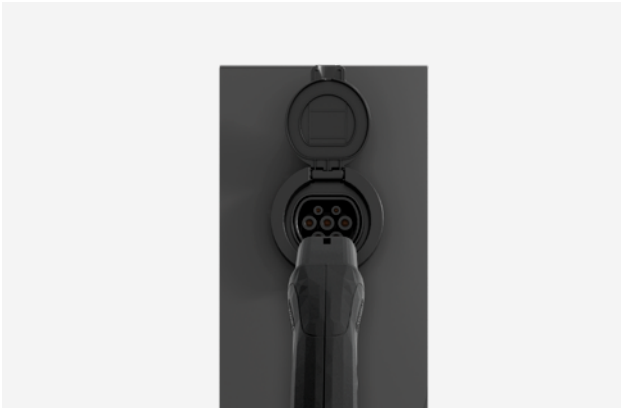
Insert the charging plug into the charger's outlet.

Insert the charging plug into the car's charging port (maximum 4 meters from the Two).

Scan RFID (if applicable).

Stop charging

Interrupt the charging process on the vehicle side and remove the plug (this step is vehicle-specific).



Disconnect the charging cable on the charger’s side.

The flap of the charging outlet closes automatically.

Status and LED feedback

Veton Two chargers can display their status via an LED status light. See below table for the different possible status indications, both for starting up a charging session as well as frequent status and error notifications.

Status	LED indication	Type & duration
Starting a charging session		
Vehicle connected, awaiting authentication		Blink (1 sec)
Waiting for RFID card		Fade (1 sec)
RFID card accepted		On
RFID card not accepted		On
Other status & error notifications		
(OCPP) backend online, charging points available		Fade (2 sec)
Charging point offline & unavailable (error)		On

Visit **www.veton.be/support** to find troubleshooting for common problems and notifications.

7. Declaration of conformity

Manufacturer information

Veton® BV
Boomsesteenweg 78/10
2630 Aartselaar
Belgium

Declares the conformity of the product:

Veton® charging stations type One, Two, Wall and Wall+

In accordance with European directives:

Low voltage directive 2014/35/EU
EMC directive 2014/30/EU

CE

Application (harmonisation of legislation):

- ÖVE/EN 61851-1
- NBN EN 61851-1
- NEN EN IEC 61851-1
- SFS-EN 6185
- NF EN IEC 61851-1
- DIN EN 61851-1
- BS EN 61851-1
- CEI EN 61851-1
- NEK-EN-6185-1

All products listed bear the CE mark.

Duffel, 1 February 2022

Brendan Brentjens, business manager

Jens Téblick, business manager

VETON

Charging masterpieces.

Veton BV

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Serial number

Serienummer / Numéro de serie