

# Manual

NL | EN | FR

For the most recent version of this manual check our website.

Do not discard this manual, it contains your device's serial number.

Version 2.0.0





Charging masterpieces.

# **EN**

## Foreword.

First of all, thank you for purchasing a Veton Wall Plus 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 Wall Plus 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 Wall Plus 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 Wall Plus 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 Wall Plus 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 Wall Plus 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. A

- 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 cable or 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.
- Wall Plus Plug: when the charging cable is not in use, store it in the provided holder.
- Wall Plus Socket: 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 cable/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 cable/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 Wall Plus 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 Wall Plus charging station
- 1 x Phoenix Contact charging cable (20A)\*
- 1 x Veton Wall/Wall Plus mounting plate (including 4 x bolt anchors\*\* 8 x 71 mm)
- 1 x BBC Cellpack EasyCell® gel box

## Installation cabinet contents

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

<sup>\*</sup> A charging cable is only delivered for model Wall Plus - Plug.

<sup>\*\*</sup> The installation described in this manual uses bolt anchors for the installation. Alternative methods are possible.

# 4. Technical specifications



#### Charging controller

Phoenix Contact Charx SEC Series SEC-3XXX / SEC-1000



#### Connectivity

 ${\it Ethernet, MQTT, Modbus\ TCP/RTU, REST\ API}$ 

Optional 4G/2G connection



#### Charging specifications

Mode 3 charging capability 3,7 - 22kW\*

3 x 400V+N (16A - 32A per phase)



#### Overload protection

Dynamic load balancing



## Web application

Integrated web app to manage charging sessions



## **Charging output**

Type 2 charging cable/outlet

20A (effective length of 4 meters) / 32A



## **OCPP** compatibility

Connect with provider of choice
Optional MID certified monitor required



## **Energy monitoring (optional)**

1 x MID certified energy monitor Calculation of transaction costs



#### Authentication

Optional RFID integration



#### Open platform

For own applications
PLC Next based



#### **Residual Current Detection**

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



#### **Dimensions**

350 x 350 x 150 mm  $H \times W \times D$ 



## **Component housing**

Built-in utility closet 450 x 315 x 155 mm



#### Cable

5G 4/6mm2 + 3 to 12 x 0.34mm2 (CAT 7 SFTP)

Between components and charger



## Max. cable distance

100 meters

Between components and charger



## **Ambient lighting**

LED courtesy light
Separate control



#### **Charger housing**

Powder coated steel & aluminium



## **Degree of protection**

IP65 / IK10

 $<sup>^{</sup>st}$  For model Wall Plus - Plug there's a maximum charging capability of 13,5kWh.

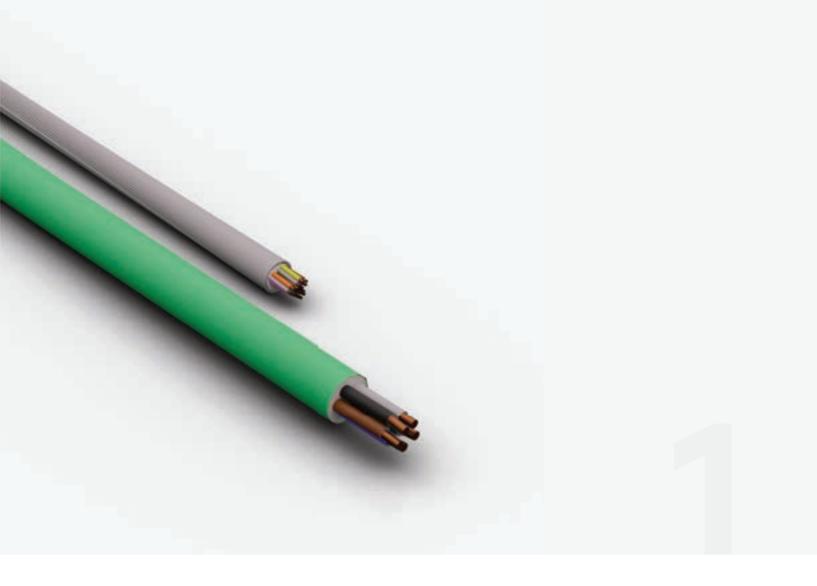
## 5. Installation A

This manual describes the (basic) installation of a Veton Wall Plus 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.

- Drill
- Concrete drill bit 8 mm
- Socket spanner
- (Extended) socket spanner attachment 13 mm
- Allen spanner 2.5 mm (included with BBC Cellpack EasyCell® gel box)
- Allen spanner 3 mm



## 1. Cabling.

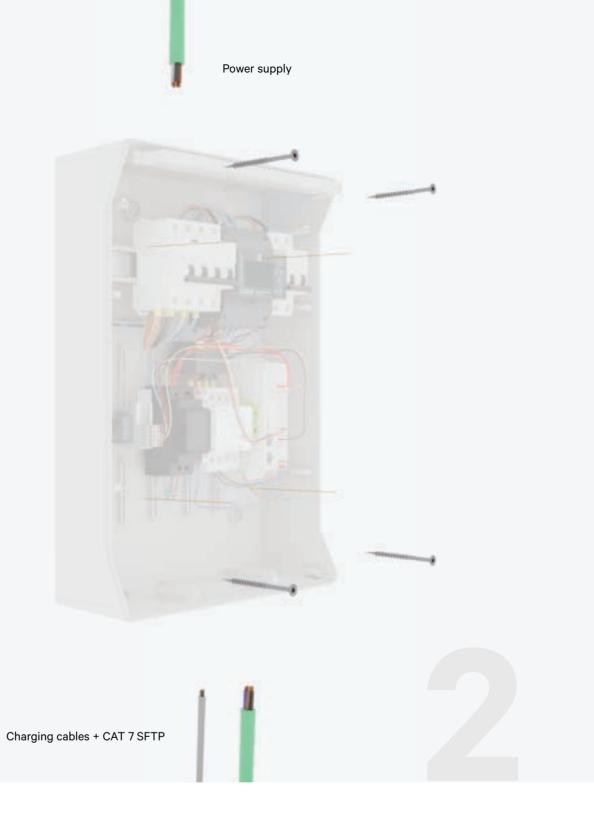
A correctly working charging infrastructure starts with the right cabling. Make sure that the cables described below have been installed before installing the charger.

## Overview cabling Veton® Wall Plus:

Default installation		Optional extras	
Power supply		Signal	Core
5G 4mm² (plug) / 5G 6mm² (socket)	x 1	RFID reader*	4
Signal	Cores		
Control pilot	1		
Proximity pilot (socket)	1		
Lock	4		
LED lighting	2		

Example: A Wall Plus (socket) incl. RFID reader requires  $1 \times 56 \text{ 6mm}^2$  cable and  $2 \times CAT \times 7 \text{ SFTP}$  cable or  $1 \times SVV$  cable with (at least) 10 cores.

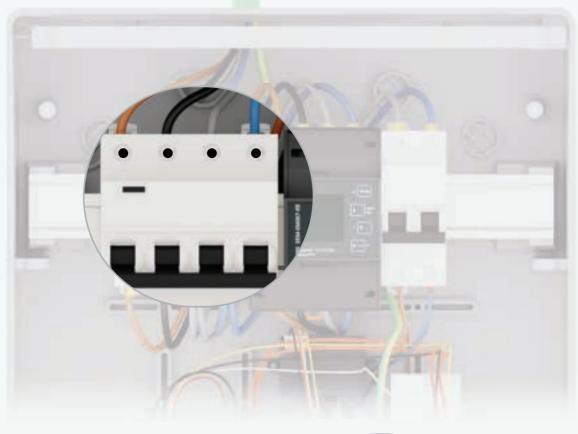
<sup>\*</sup> When connecting an optional RFID reader / Connect package, the + and - cables of the RFID reader can be combined with those of the LED lighting.



## 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.

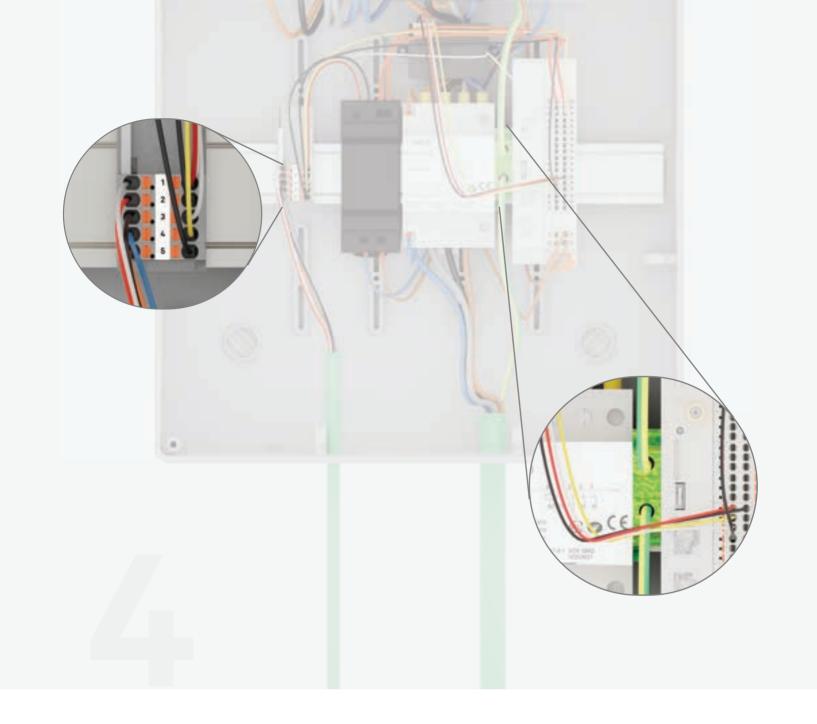




## 3. Power supply.

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 the ground terminal.

Connection type	•	•	•	•
3 x 400 + N	L1	L2	L3	N
3 x 230V			L1	L2
1 x 230V			L1	N



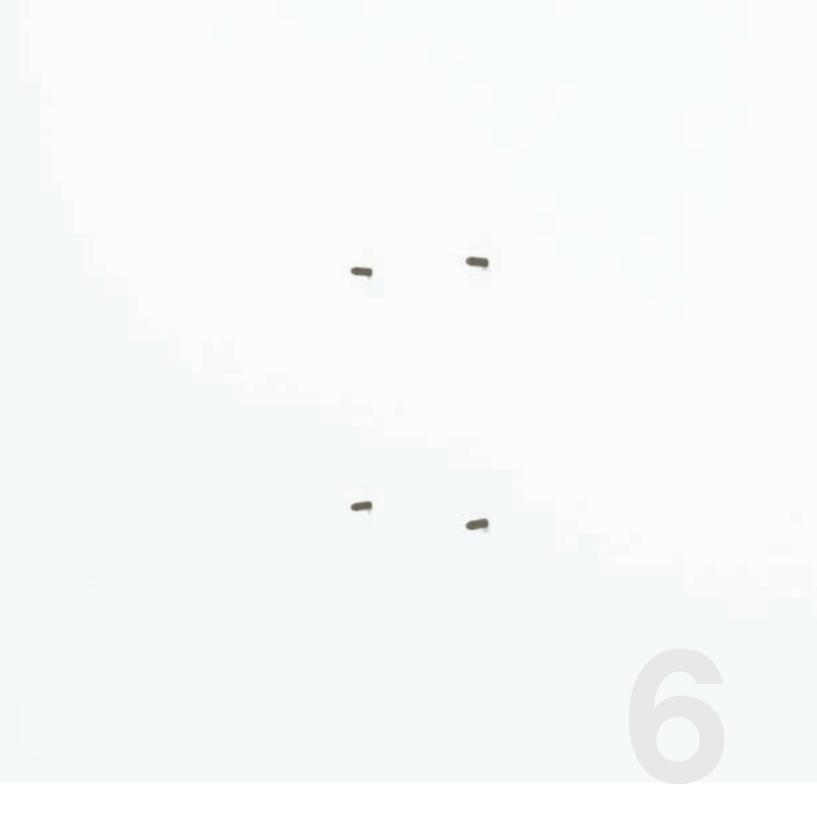
## 4. Connecting the charging cable and the signal cable.

Connect the grounding cable with the grounding terminal. Subsequently, connect the signal cable by connecting the necessary amount of cores to the provided terminal blocks. Make sure to note the chosen colors, as they will be connected to the charger in the same order.



## 5. Mark holes and drill.

Use the mounting plate as a stencil to drill the holes for the bolt anchors (step 3). Subsequently, drill 8 millimeter holes on these markings, about 6 cm deep. The bolt anchors should stick about 2 cm outside the wall.



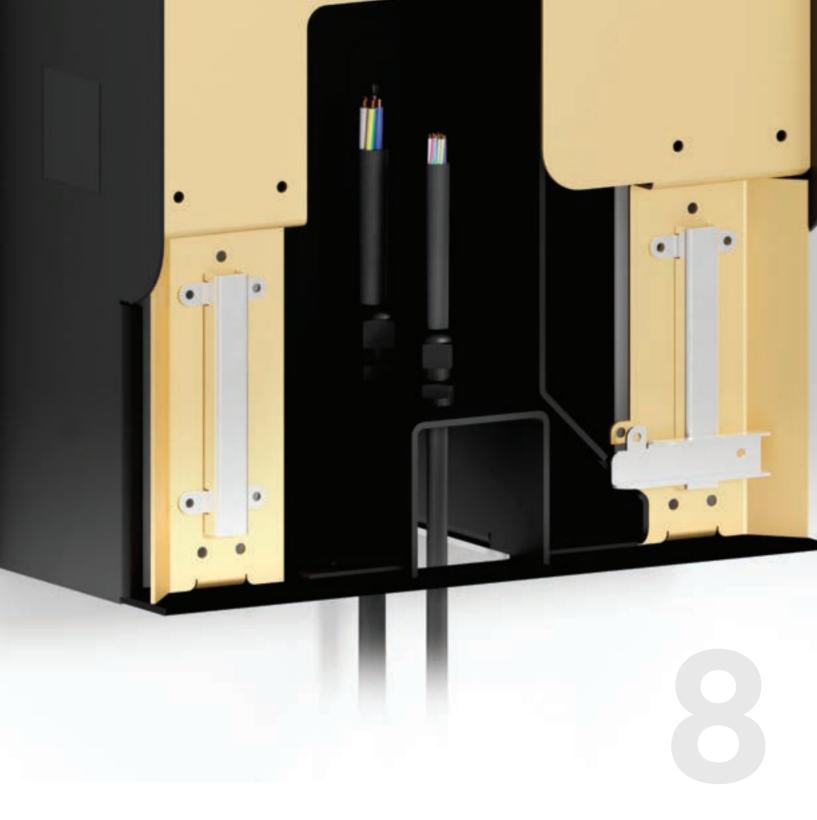
## 6. Insert bolt anchors.

Insert the 4 bolt anchors (M8) into the holes by means of a hammer. Make sure the bolts stick out about 2 cm.



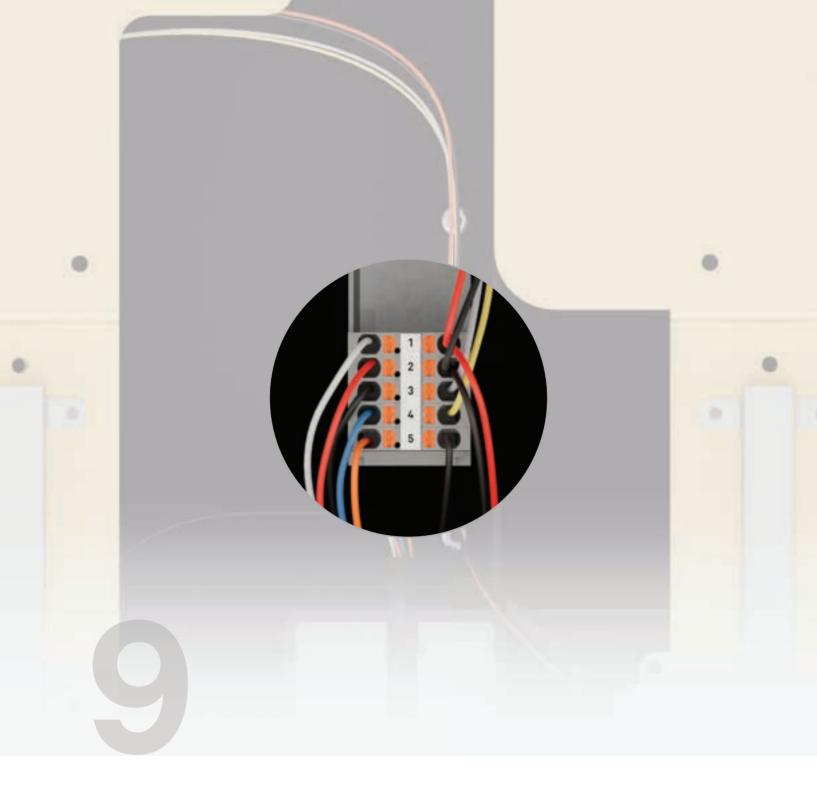
## 7. Attach mounting plate and box.

Slide the mounting plate over the bolt anchors and subsequently do the same with the box. If desirable, insert the cables through the cable glands beforehand (see step 5). Attach the box and mounting plate with the provided nuts (M8).



## 8. Insert cables.

Insert the cables originating from the electrical cabinet into the cable glands and fix them tightly. Make sure that the cable is long enough to make connections inside the box.



#### 9. Connections.

Connect the power cable from the contactor to the charging cable by screwing the corresponding wires into the terminal block included with the supplied BBC Cellpack EasyCell® gel box.

Place the terminal block with the fastened cables in the provided BBC Cellpack EasyCell® gel box. Then close the box until a distinct clicking sound is heard. If necessary, use the provided straps to close. Subsequently, place the gel box behind the provided brace.

To connect the LED light, Control Pilot, the Proximity Pilot (socket), the lock (sokcet) and RFID reader (optional), terminal blocks are provided. These are prewired to the right components, both within the charger as within the electrical cabinet. Connect the signal cable's cores with the same colors and in the same order as was done in step 4.



## 10. Attach front plate.

Position the front plate in front of the box. Make sure the 2 hooks are positioned at the bottom, and the hook on top is aligned with the provided opening inside the box. Insert the front plate through the opening and tilt so the bottom hooks can be inserted into the provided slots. Slide upwards so the bottom hooks are aligned with the slots, and gently push forwards. The top hook should snap into the cavity in the upper part of the box.

Attach the front plate with the 2 provided countersunk screws (M5).





## 11. Configuration.

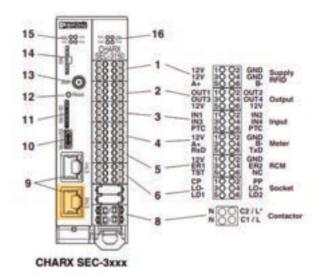
The basic controller settings have already been set up, prior to delivery. Surf to the web interface of the controller by following the steps stated on the next page.

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 <a href="https://www.veton.be/downloads">www.veton.be/downloads</a>. This page provides information about basic configuration of the charging points, OCPP, RFID whitelist, and others.

## Check network cable.

controller on the other.

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 ETHO port of the charging



#### Switch on the circuit breaker.

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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 <a href="http://ev3000.local/">http://ev3000.local/</a>.

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  $\frac{\text{http://192.168.0.172/}}{\text{to access the controller.}}$ 

# Command Prompt

Microsoft Windows [Version 10.0.22000.978]

(c) Microsoft Corporation. All rights reserved.

C:\Users\jenst>ping ev3000.local -4

Pinging ev3000.local [192.168.0.172] with 32 bytes of data:

Reply from 192.168.0.172: bytes=32 time=4ms TTL=64

Reply from 192.168.0.172: bytes=32 time=2ms TTL=64

# 6. Operation.

## Wall Plus - Plug

Your Veton Wall Plus (Plug) 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 câble is not tense.

# Start charging



Open the door of the charging station.



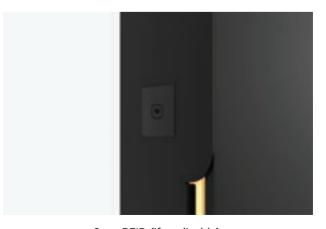
Remove the charging cable from the holder (Wall Plus - Plug).



Insert the charging plug into the car's charging port.



Close the door of the Wall Plus.



Scan RFID (if applicable).

# Stop charging



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



Open the door of the charging station.



Insert the connector into the Wall Plus's cradle.



Close the door of the Wall Plus.

## Wall Plus - Socket

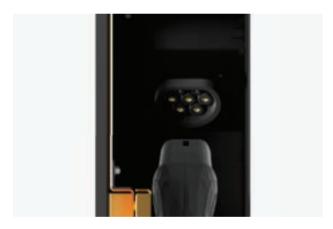
Your Veton Wall Plus charging station has been installed, inspected, and is ready for use. This section of the manual describes how to use the charging station, and what to consider to safely use it.

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

# Start charging



Open the door of the Wall Plus.



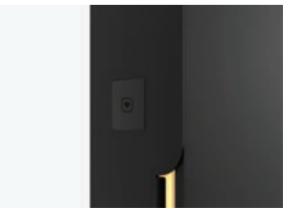
Insert the charging plug into the charger's outlet.



Insert the charging plug into the car's charging port.



Close the door of the Wall Plus.



Scan RFID (if applicable).

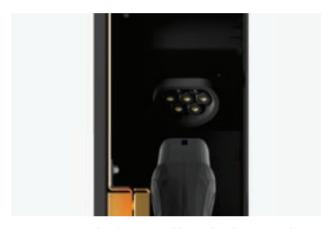
# Stop charging



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



Open the door of the Wall Plus.



Disconnect the charging cable on the charger's side.



Close the door of the Wall Plus.

# Status and LED feedback



Veton® One chargers that are equipped with the optional RFID reader 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		
Charging point available, no vehicle connected		Continuously on
Vehicle connected, awaiting authentication		Blink (1 sec)
RFID card accepted		On (1 sec)
Authentication request in process	111111111111111111	Blink (0.5 sec)
Vehicle connected, charging active		Fade (4 sec)
Other status & error notifications		
Vehicle connected, charging completed		Continuously on
RFID card not accepted		On (1 sec)
Vehicle connected, charging suspended (vehicle)		Fade (3 sec)
Vehicle connected, charging suspended (charging point)		Fade (0.5 sec)
(OCPP) backend online, charging points available		Fade (2 sec)
(OCPP) backend offline, charging points unavailable		Blink (1 sec)
Charging point reserved		Blink (1 sec)
Charging point offline & unavailable (error)		Continuously 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 Plus and Wall Plus+

## In accordance with European directives:

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



## 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



Charging masterpieces.

## **Veton BV**

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## Serial number

Serienummer / Numéro de serie