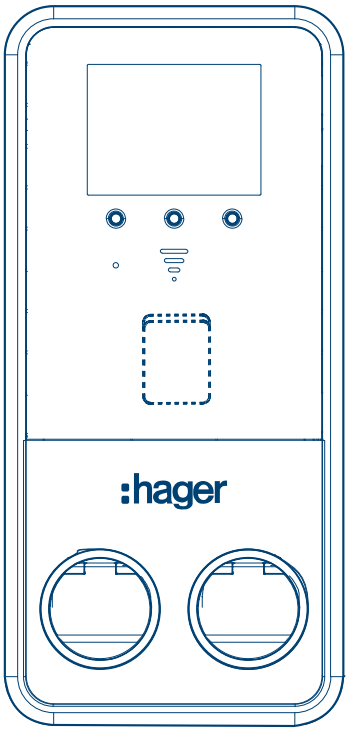
Operating and installation instructions

Energy management

Charging station

Plug-in hybrid vehicles



XVP222S, XVG222S
Charging station witty park 2 2x 22 kW T2S wall mounting/freestanding
XVP222SYO, XVG222SYO
Charging station witty park 2 2x 22 kW T2S with payment terminal wall mounting/freestanding

CE

:hager

EN

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1 About these instructions

These instructions set out how to safely and correctly install and commission the electric vehicle charging station. These instructions are part of the device. Keep the instructions for use throughout the life of the device and pass them on if necessary.

1.1 Symbols used

Symbol	Description
●	Instruction for a single step or in any order.
❶	Instruction for multiple step actions. The order must be followed.
①	Identification and description of device components
-	List
▶	Reference to documents / additional information

	Contents of the packaging		Product dimensions		Required tools
	Assembly		Installation		Final installation
	Device overview		Settings		Optional accessories
	Installed by an electrician		Alternating current (IEC 60417-5032)		Protective earth (IEC 60417-5019)
	Applicable in all Europe and in Switzerland		Note on disposal of waste electrical and electronic equipment (WEEE)		For further information, refer to the installation and commissioning instructions
	Two-person assembly				

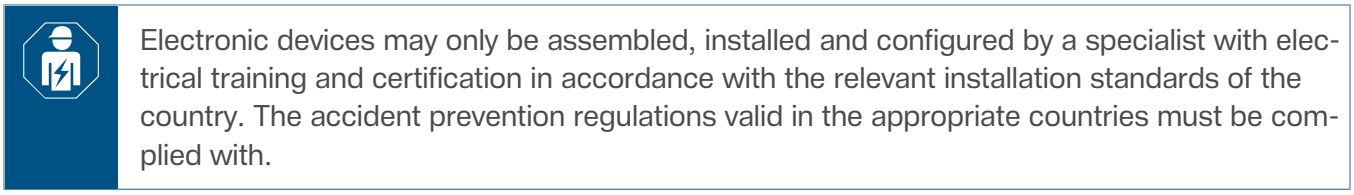
Danger levels of warnings

Symbol	Signal word	Consequences in the event of non-compliance
	**Danger**	Causes serious injury or death.
	Warning	May cause serious injuries or death.
	Caution	May cause minor injury.
	Caution	May cause serious damage to the device.
	Note	May cause damage to the device.

Symbol	Description
	Risk of electric shock.
	Risk of damage due to mechanical overload.
	Risk of damage to the equipment due to electricity. Risk of electric shock.
	Risk of fire damage.

Symbol	Signal word	Definition
	Note	Indicates important instructions.
	Information	Indicates useful information about the product.

1.2 Target groups



Electronic devices may only be assembled, installed and configured by a specialist with electrical training and certification in accordance with the relevant installation standards of the country. The accident prevention regulations valid in the appropriate countries must be complied with.

In addition, this manual is intended for the operator of the charging station and trained electricians.

Knowledge of network technology is required for commissioning.

2 Safety

2.1 Intended use

The charging station is used to charge plug-in hybrid vehicles and electric vehicles. It is only suitable for use in commercial, public and semi-public areas with unrestricted access. It is equipped with an energy meter and monitoring system. It is designed for fixed, vertical-wall mounting or pedestal mounting indoors or outdoors.
The charging station must be permanently connected to the alternating current supply network. The charging stations with item numbers **XVP222S**, **XVG222S**, **XVP222SYO**, **XVG222SYO** comply with the Radio Equipment Directive 2014/53/EU (RED).
The device can only be operated in conjunction with a Hager load manager, local RFID management and direct connection to a charging point operator (CPO).

Note

The witty park 2 charging station can be operated as a stand-alone device. An additional configuration application is required for configuration.

2.1.1 Predictable incorrect use

Any intervention in internal-component areas and any change to the pre-wiring that goes beyond the instruction set out in these instructions, is prohibited and will result in the legal warranty, along with any other form of warranty, becoming null and void. These interventions can damage electronic components.

2.1.2 Mounting location

Danger

Risk to life from fire or explosion!

A fire can occur on electrical devices.

- Do not mount the device in an explosive area (so-called explosion zone) or in the immediate vicinity of a potential explosion source, such as a gas pipe or gas tank (explosion zone 0 for gases and vapors, explosion zone 20 for fog).
- Rooms that require fire protection regulations or avoid areas with highly flammable materials.
- Do not mount the device in areas that are susceptible to flooding.

The charging station must only be used for fixed installation. It can be mounted on a wall or a pedestal. Horizontal mounting on a ceiling or horizontal mounting on the floor is prohibited.

The following must be taken into account when selecting an appropriate location for installation:

- The charging station is suitable for use in indoor areas and can also be used in weatherproof outdoor areas (IP protection class 5x): Operation in a garage, under a carport or under an outside canopy is possible, provided that the charging station will not be exposed to strong jets of water.
- At the location for installation, operation must be ensured throughout the year within the permissible ambient temperature range of -25°C to +50°C. Exposure to direct sunlight or prolonged charging may cause the charging station to overheat and activate the protective shutdown function.

Internal ambient temperature	Control
> 70°C	25%
> 75°C	50%
> 80°C	Charging interruption

– Install the charging station away from heat sources and ensure sufficient air circulation when in operation.

2.2 Safety instructions

Risk of injury with possible death from electric shock

- Before working on the device, disconnect the power supply from the upstream protection devices. After opening the charging station, check that all leads are current-free.
- When installing the charging station, make sure that environmental conditions such as rain, fog, snow, dust and wind do not pose a risk when working on the device or when restarting the power supply.

Fire risk due to device overload

In case of an insufficient dimension of the supply cable, there is a risk of fire due to overload of the device.

- Design power supply cables in accordance with local standards and regulations.

Risk of injury from falling/tipping charging station

Using unsuitable fixings can cause the charging station to fall and cause injury.

- Adapt the mounting accessories to the specific conditions at the location for installation. The supplied fixings are suitable for concrete and brick wall.

Risk of damage to the charging station due to improper charging accessories

- Do not use connection adapters between the charging station and the charging cable, or between the charging cable and the vehicle.
- Only use a charging cable up to a maximum of 7.5 m in length.
- The charging cable must not be extended.

Risk of data loss when connected to the Internet

Unauthorized access can result in data loss.

- Safety precautions must be put in place to protect the network against unauthorised access before operating the device.

Risk of malfunction due to electromagnetic influences

Electromagnetic fields can interfere with signal transmission over extra low voltage cables.

- When installing and routing cables, always comply with the applicable regulations and standards for SELV circuits.
- Route high-current and extra low voltage cables (Ethernet) separately from each other.

2.3 Rated operating conditions

The charging station is used for its intended purpose only if the national environmental regulations are complied with. The charging station and its counters are not designed for measuring time periods to determine the charging service duration or for time stamping kWh measured values for subsequent central charging.

The accuracy of the charging station at the discharge point corresponds to MID class B and is indicated accordingly on the type label.

Note

To prevent manipulation and ensure data security, the charging station only works in conjunction with a Hager load manager or when directly connected to an external billing system.

3 Overview

Product variants

	Wall installation	Free standing	with payment terminal	without payment terminal
XVP222S	x			x
XVP222SYO	x		x	
XVG222S		x		x
XVG222SYO		x	x	

Table 1: Product variants witty park 2

Note

The following illustrations are for illustration purposes. Depending on the product variant, the actual design may differ from the illustrations shown.

3.1 Scope of delivery

- Check the contents of the package for completeness and damage.

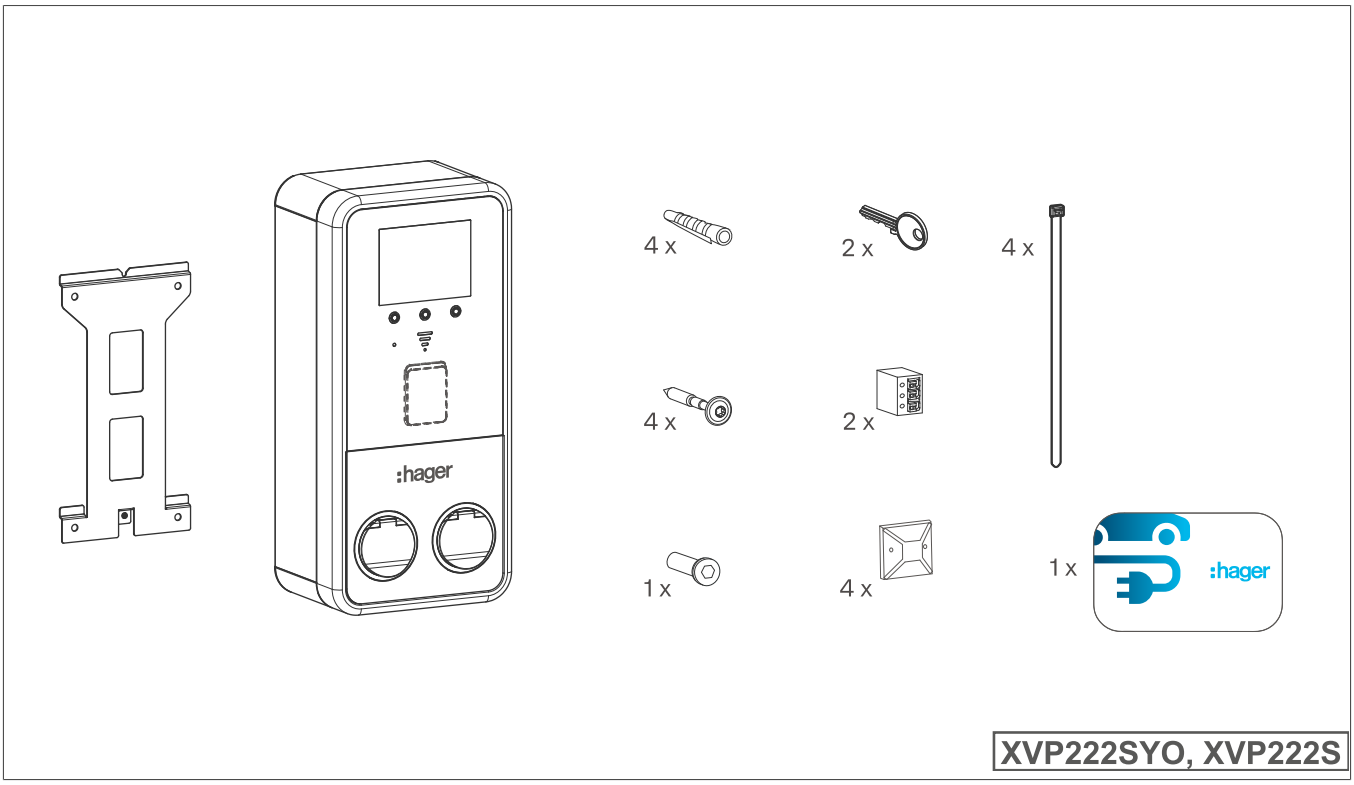


Fig. 1: Charging station witty park 2 2x 22 kW T2S wall mounting

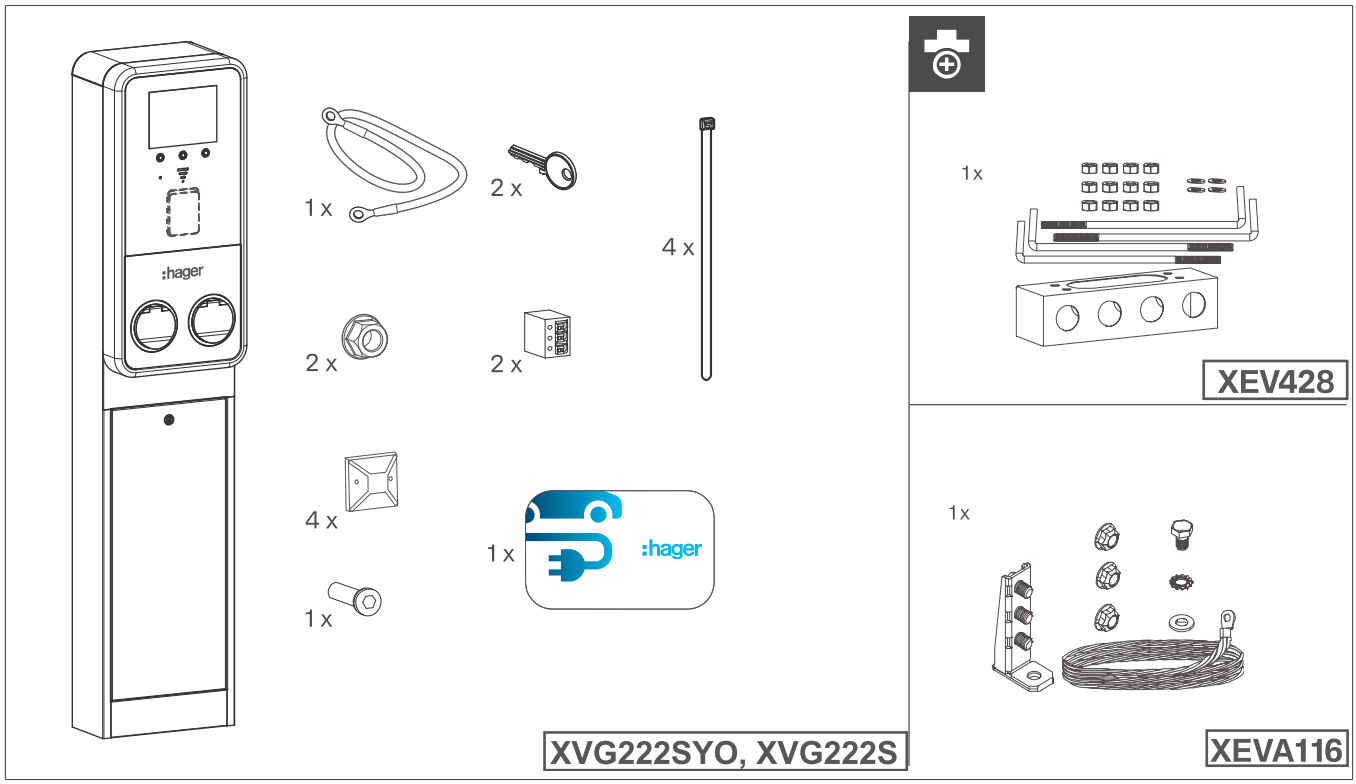
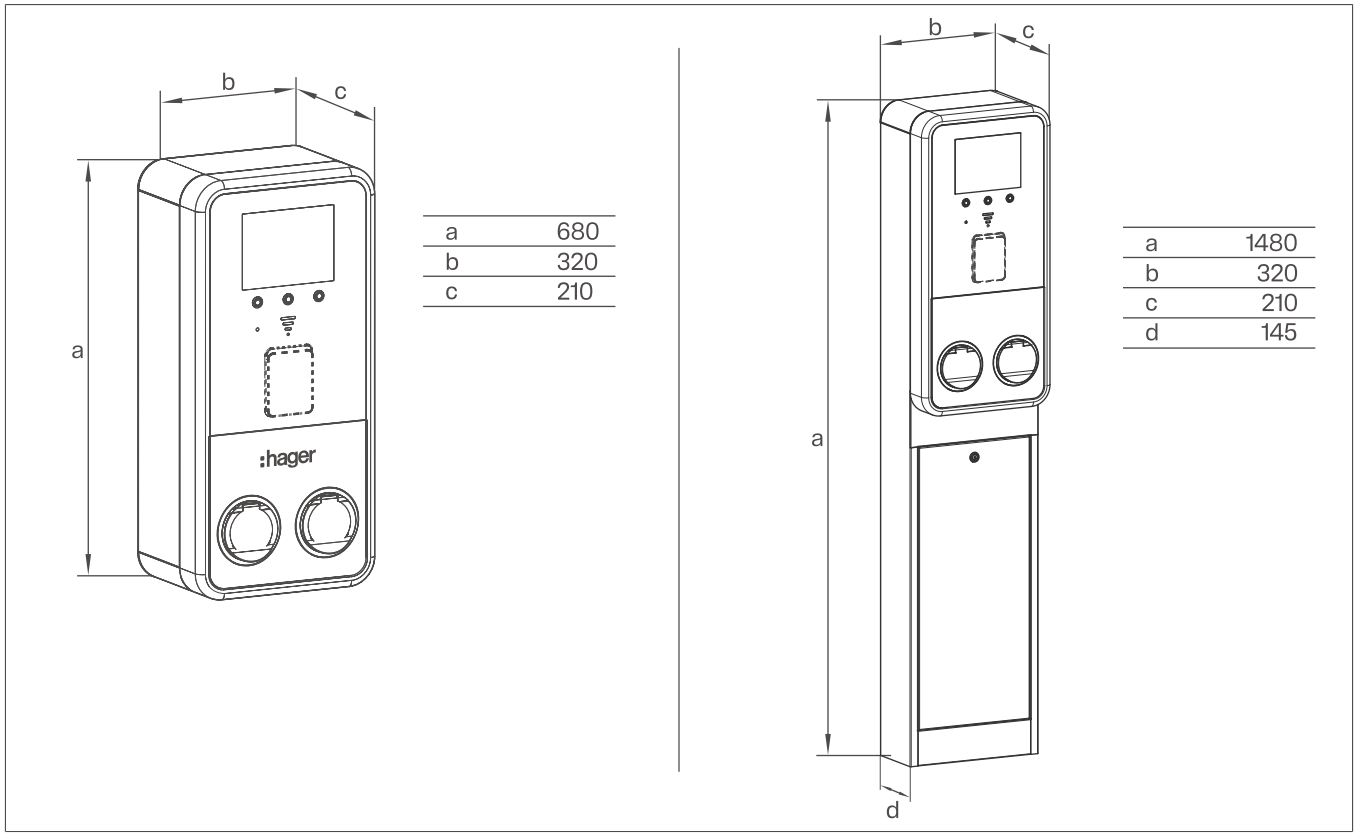


Fig. 2: Charging station witty park 2 2x 22 kW T2S freestanding

3.2 Dimensions and required tools



a	680
b	320
c	210

a	1480
b	320
c	210
d	145

Fig. 3: Dimensions of charging station (wall mounting/freestanding)

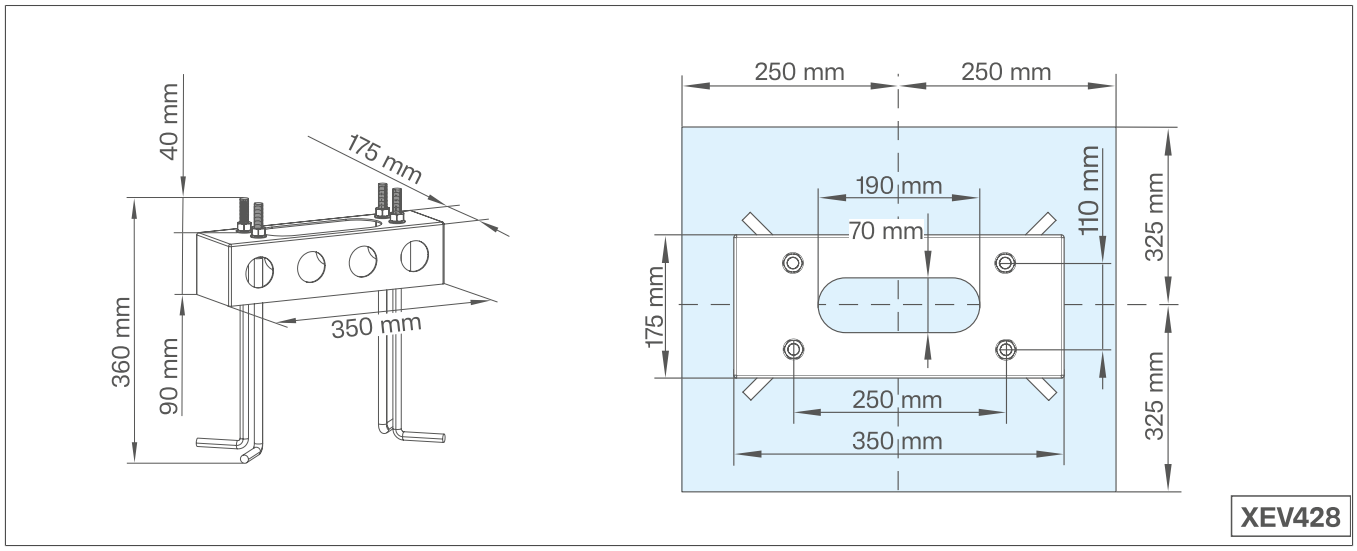


Fig. 4: Dimensions of ground anchor XEV428

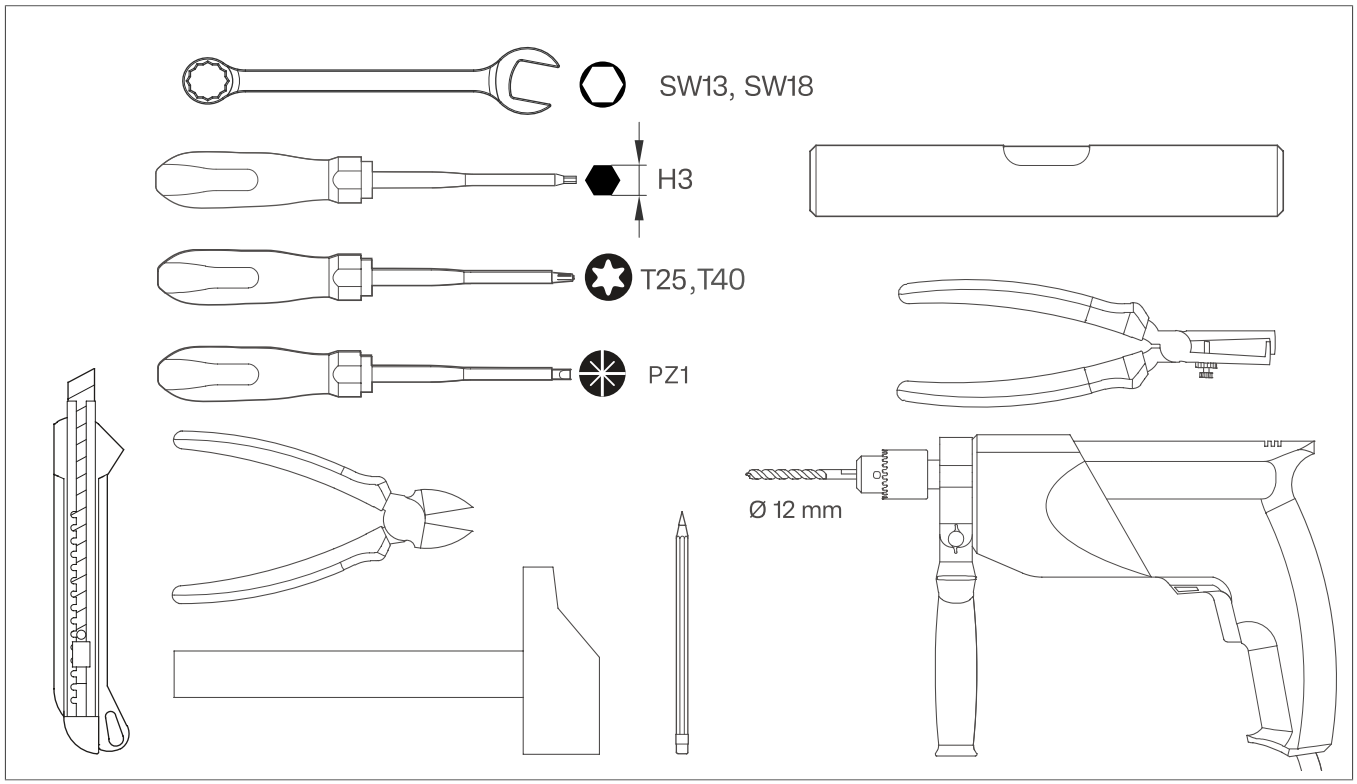


Fig. 5: Tool

4 Device overview

4.1 Exterior device overview

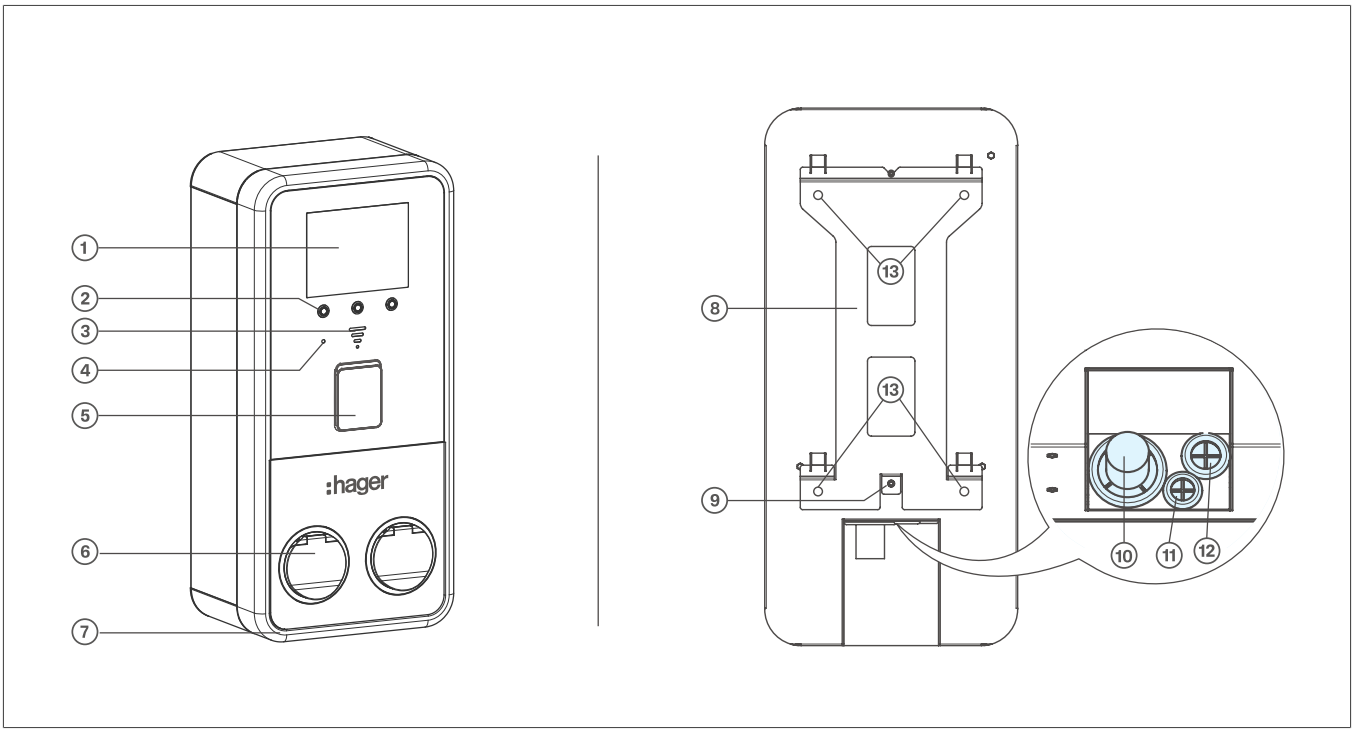


Fig. 6: External view

1. Display
2. Menu keys
3. RFID reader
4. Brightness sensor
5. Payment terminal (XVP222SYO and XVG222SYO only)
6. Mode 3 T2S charging sockets
7. Edge protection
8. Wall-mounting plate
9. Screw for fixing the charging station to the wall-mounting plate
10. Power supply cable ≤ 35 mm^2
11. Ethernet/LAN cable
12. Optional connections
13. Four holes for fixing the wall-mounting plate

4.2 Internal device overview

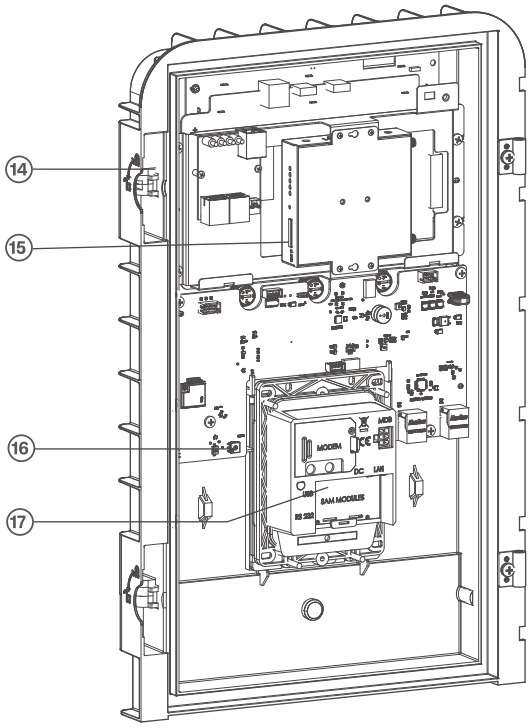


Fig. 7: Device cover

14 Lock cylinder
15 Plug-in interface for mini SIM card (25 mm x 15 mm)
16 Selection switch for selecting the maximum current
17 Rear face of the payment terminal (XVP222SYO and XVG222SYO only)

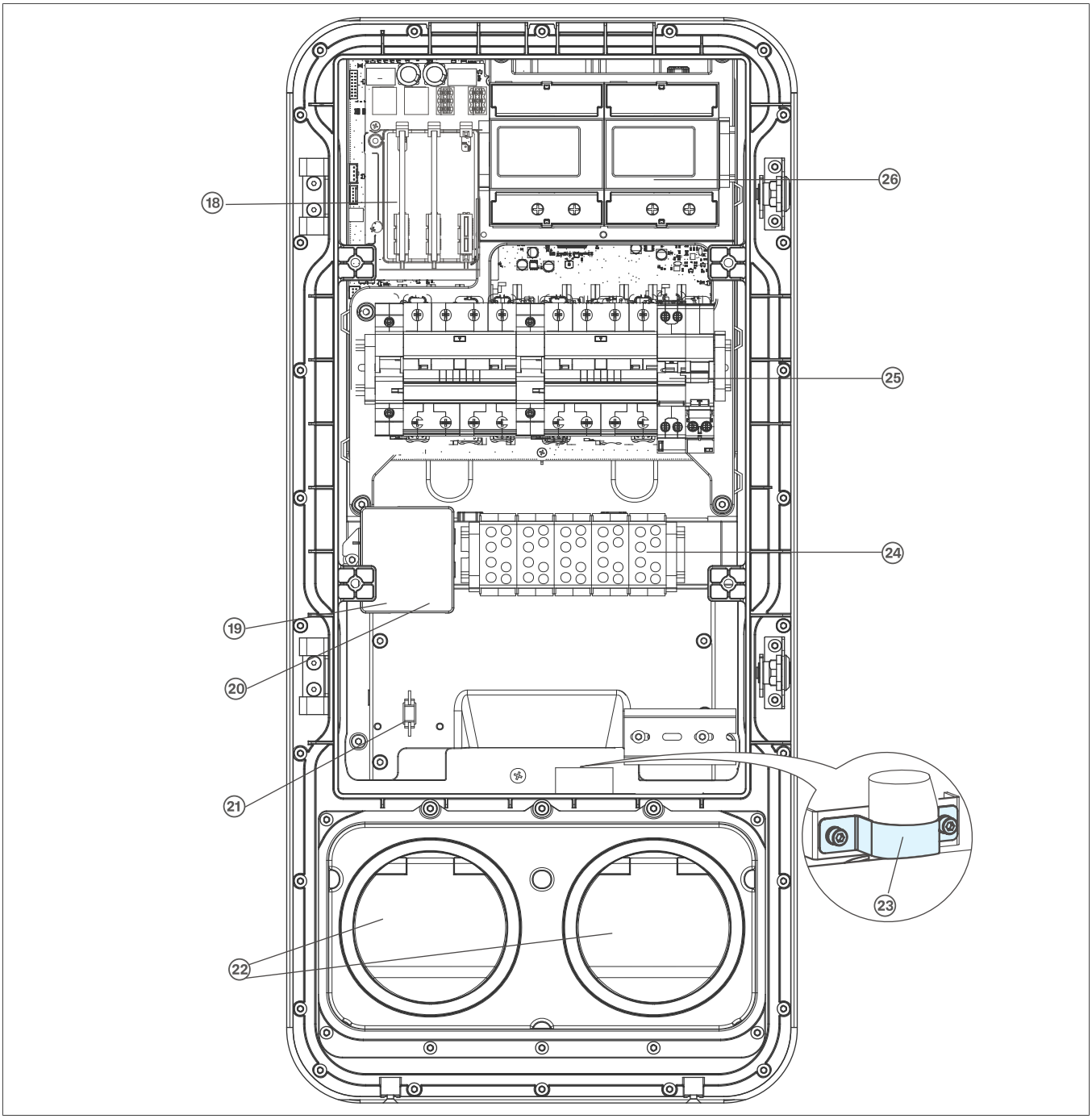


Fig. 8: Device plinth

18 ISO 15118 communication boards
19 RJ45 socket: Ethernet for **IN**
20 RJ45 socket: Ethernet for **OUT**
21 Strain relief for LAN cables
22 2 x Mode 3 Type T2S socket
23 Cable clamp
24 Connection terminals for power supply, 3-phase, 380–415 V~ 3N.
25 Protection devices
26 Measuring devices



Fig. 9: Type label - XVP222S



Fig. 10: Type label - XVG222S



Fig. 11: Type label - XVP222SYO



Fig. 12: Type label - XVG222SYO

4.3 Pedestal device overview

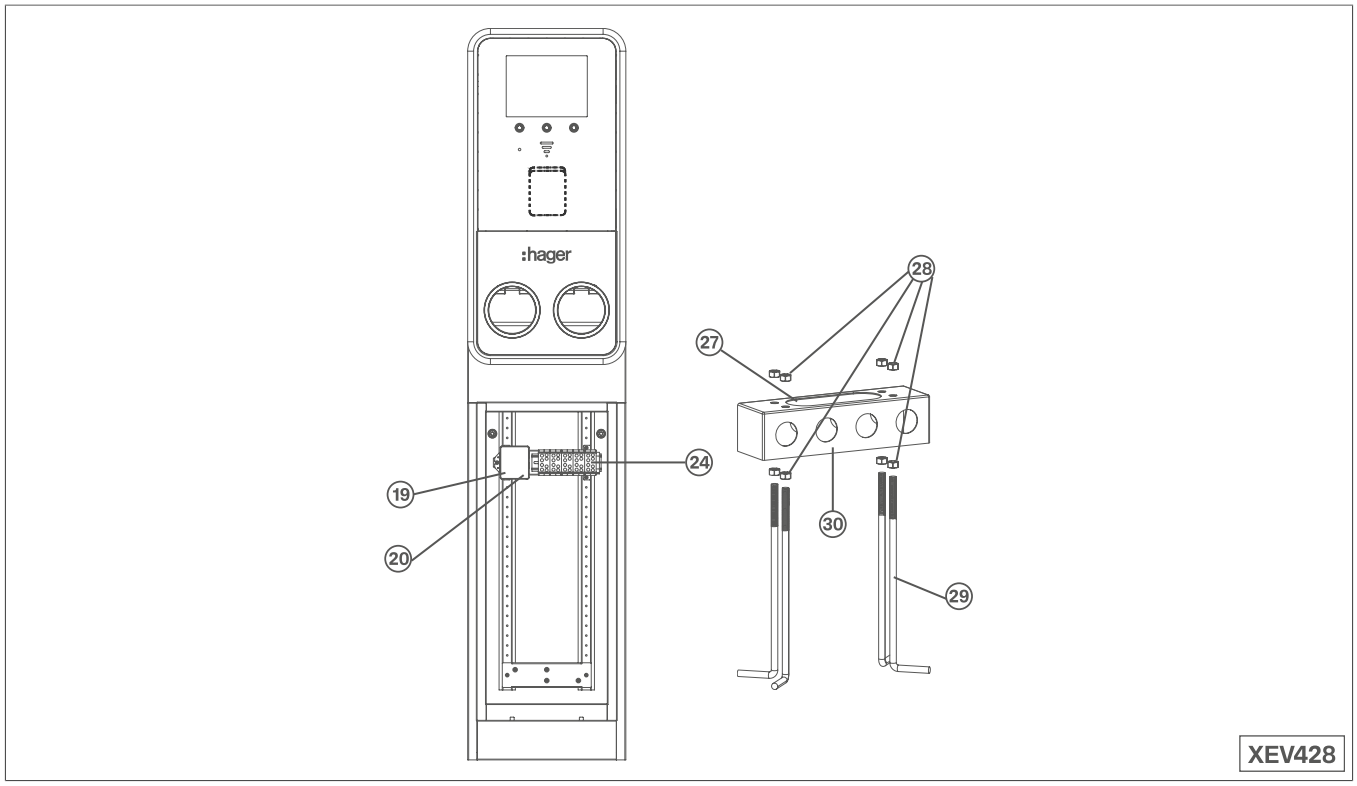


Fig. 13: Pedestal

(19) RJ45 socket: Ethernet for **IN**
(20) RJ45 socket: Ethernet for **OUT**
(24) Connection terminals for power supply, 3-phase, 380–415 V~ 3N.
(27) Cable penetration
(28) Fixings (in scope of delivery)
(29) 4 x concrete anchor
(30) Base

5 Construction-side installation

Danger

Risk to life from electric shock.

- Before working on the device, disconnect all associated miniature circuit breakers, check that they are volt-free and secure them against restarting.
- Cover all live parts in the vicinity.

Warning

Fire risk due to device overload.

In case of an insufficient dimension of the supply cable, there is a risk of fire due to overload of the device.

- Design the power-supply cable in accordance with the technical data of the device and install it in accordance with the applicable installation regulations.

5.1 Requirements for the protection device

This charging station contains two charging points and is designed for connection to only one lead. The protection devices between the connection point and the charging station shall be designed for double the charging current. Each charging point is fused with a built-in type A residual-current circuit breaker at 4P 10 kA C-40A 30 mA (ADX490D).

The upstream protection devices outside the charging station shall meet the following requirements:

- ☑ The charging station shall be protected in the main distribution board by a four-pole circuit breaker rated at 80 A to protect the supply line from damage.
- ☑ The protection device shall be able to switch off all phases—including the neutral conductor—in the event of a fault.
- ☑ The charging station must be powered by a circuit that cannot supply more than 6 kA short circuit current at the connection point.

Note

The effectiveness of this protection depends on the installation conditions. If the protection is limited, the maximum power must be set with the rotary switch on the door of the charging station.

Selectivity of the protection devices

The maximum charging current at the rotary switch (Fig. 15: Rotary and selection switch settings) shall be set in accordance with the specifications on the type label and in the technical data in these instructions.

$$I_{(setting\ dial)} \leq I_{(protective\ device)} \leq I_{(power\ cable)} \leq I_{(nominal\ current)}$$

Depending on the required charging current, you can use, for example, Hager:

– Residual current circuit breaker, 4-pole

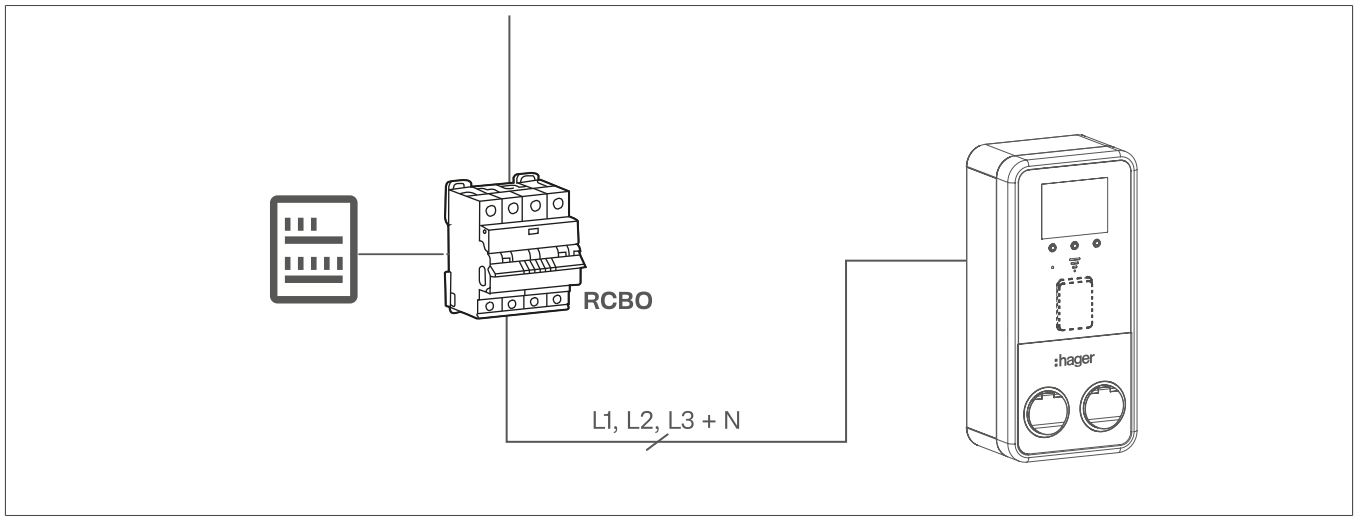


Fig. 14: Connection 3-phase

Caution

In compliance with EN IEC 61851-1, this charging station integrates a DC-CDC unit (Direct Current to Direct Current Converter) that meets the requirements of IEC 62955.

If more than 6 mA DC is detected in the rated fault current, this DC-CDC acts on the integrated power relays of the charging station and automatically interrupts the power supply to the charging point.

- Do not install a type B residual-current circuit breaker in combination with this device, which is designed to detect 6 mA DC leakage.
- Install all building electrical circuits within a single, unified structure from an electrical standpoint.

Operation of multiple charging stations

The number of charging stations that can be operated via a connection point depends on the capacity of the connection provided by the network operator. An increase in the rated current at the connection point must be requested from the local network operator and usually also requires adjustments to the installation.

Detection of welded contacts

The witty park 2 charging station is equipped with a welding contact detection system for each charging point. This function provides additional protection by interrupting the power supply to a charging point when the internal relay contacts are welded or blocked.

Dimensioning of the cable cross-section

The cross-section of the lead to the charging station depends on the charging capacity, cable length, ambient temperature and type of installation. A larger cable cross-section may be required to reduce voltage drop and power dissipation.

Over voltage protection



Attention

Damage to the charging station or the electric vehicle during the charging operation due to high voltages.

Transient overvoltages caused by atmospheric influences or switching operations can destroy electronic components.

- Install overvoltage protection units upstream of the electronic meter. The design should take conditions at the location into consideration when designing.

Charging stations in public and semi-public areas must be fitted with surge-protection devices in accordance with the applicable standards of the relevant country.

To protect the charging station and the installation from lightning and overvoltage damage, it is recommended to install a type 1+2+3 combined surge arrester, e.g. Hager **SPA412**.

6 Installing the charging station

6.1 Preparation



Danger

Risk to life from electric shock.

If live parts are touched, an electric shock may result in death.

- Before working on the device, disconnect all associated miniature circuit breakers, check that they are volt-free and secure them against restarting.
- Cover all live parts in the vicinity.



Warning

Risk of injury from falling charging station.

Using unsuitable mounting accessories can cause the charging station to fall over and cause injury.

- Use suitable mounting accessories for the specific conditions at the installation site. The supplied mounting accessories are suitable for concrete and masonry.



Warning

Risk of injury from heavy equipment.

If the charging station falls, people can be injured and the device can be severely damaged.

2 people are required to install the charging station.

Requirements

The charging station can be mounted on a wall or on a pedestal. Horizontal installation on a ceiling or on the floor is prohibited.

All necessary cables and leads are routed to the location for installation:

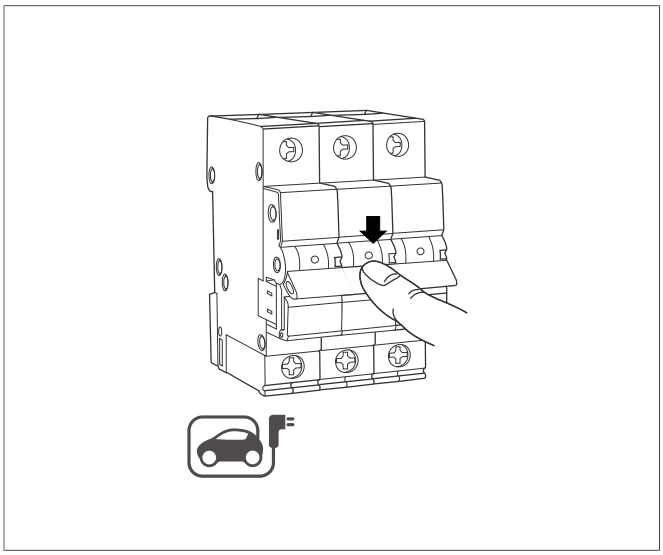
- 3L + N + PE for 3-phase connection, flexible or rigid cables of type 5G.
- The minimum conductor cross-section for a charging station depends on the regional regulations applicable in the country. It is essential to adhere to the maximum permissible cable length.
- The maximum conductor cross-section is 35 mm² for multi-wire and single-stranded conductors.

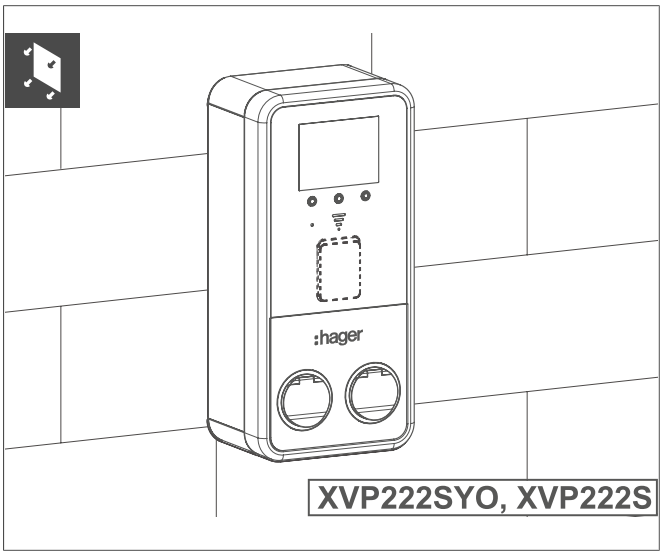


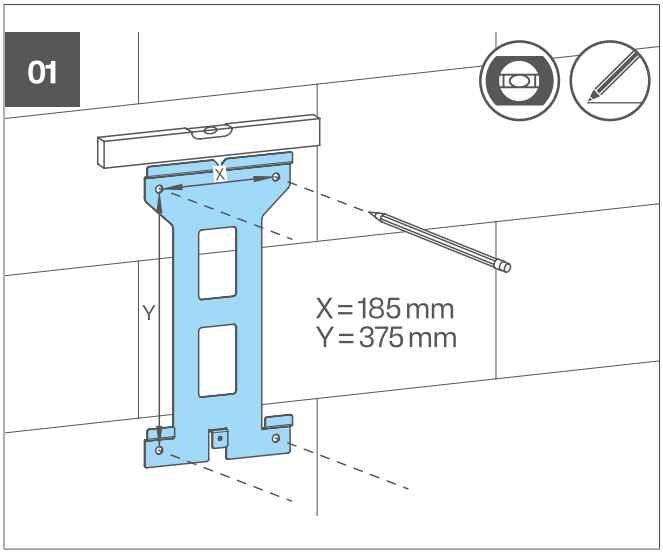
Note

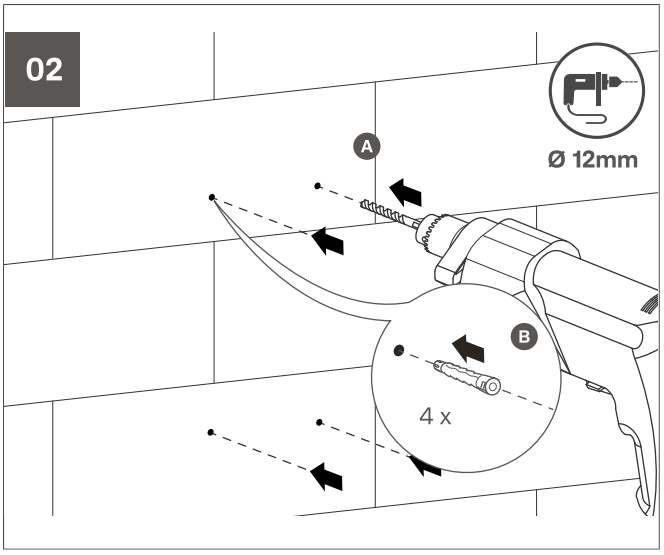
Only copper conductors may be used for connection to the terminal block. For aluminium conductors, bimetallic connectors (Al > Cu) must be used.

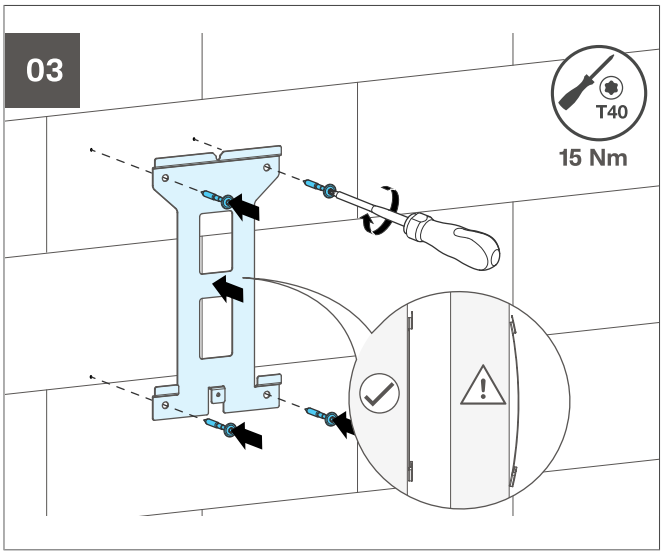
6.2 Wall installation

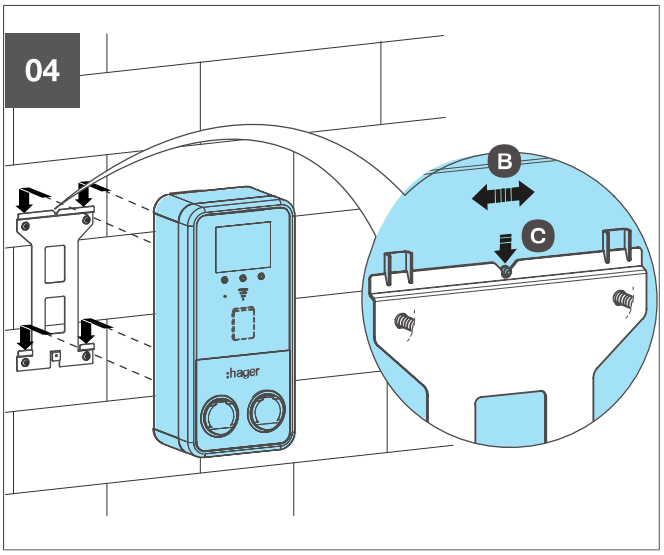










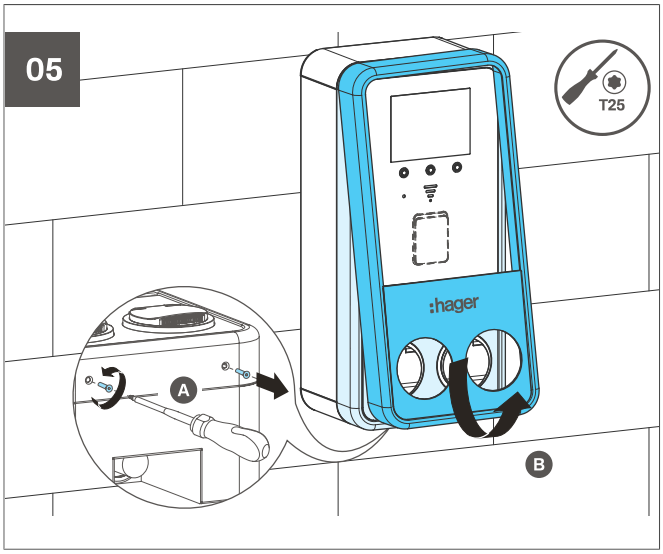


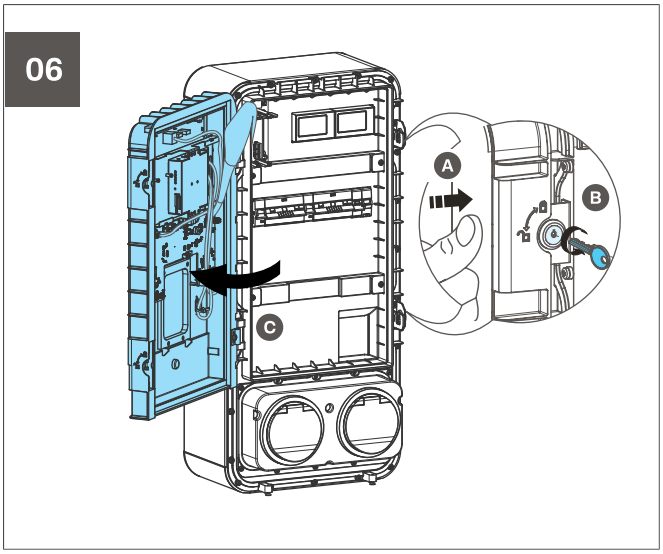
Caution

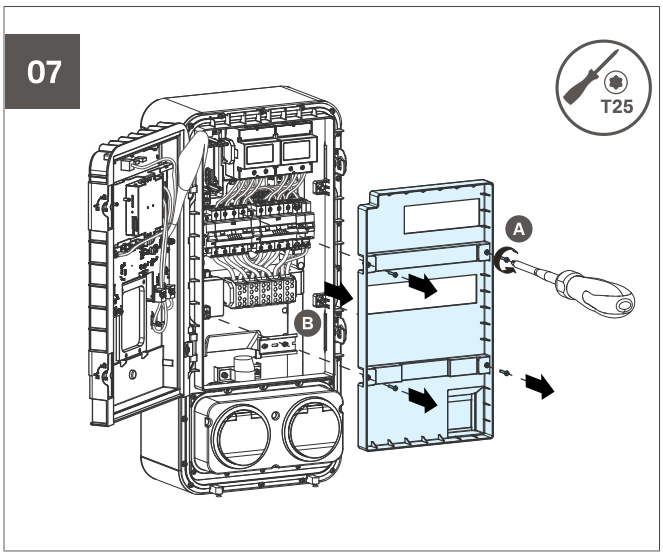
Risk of personal injury due to the charging station falling.

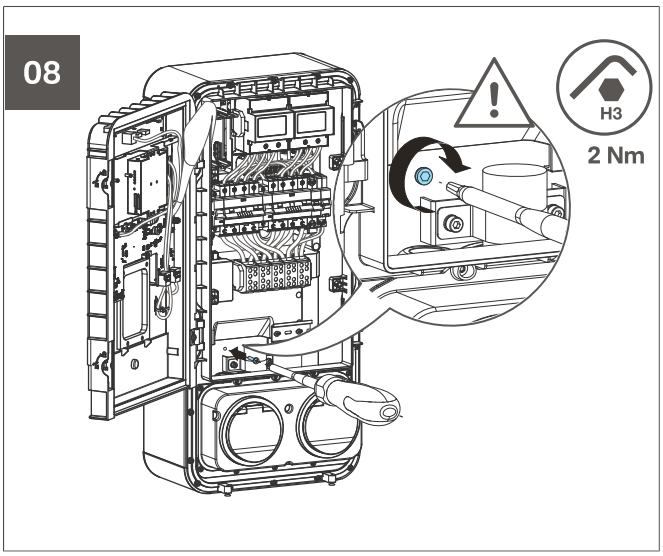
The charging station can fall and injure people.

- The charging station must be installed by at least two people.
- It is imperative that step 8 is adhered to, so that the charging station is secured and that dismantling protection is provided.

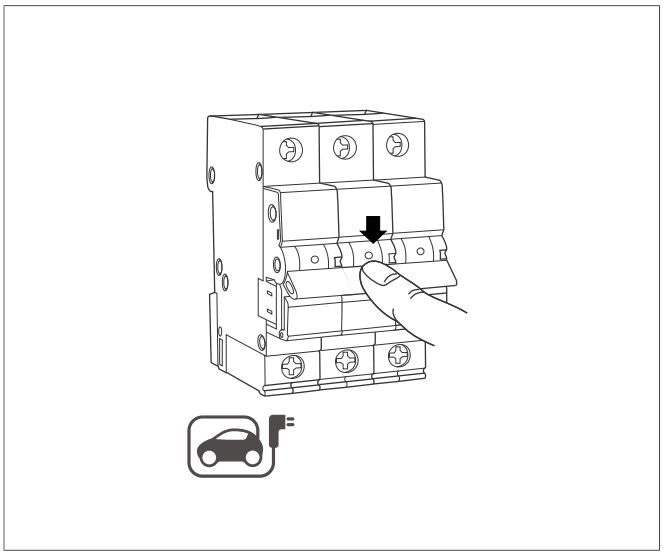


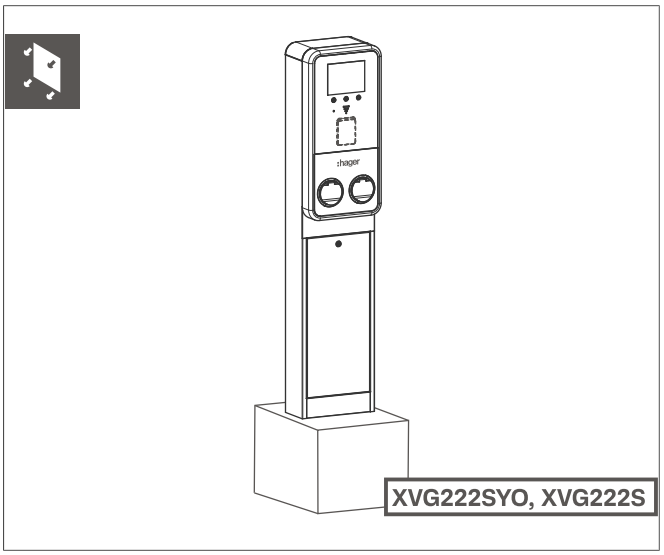






6.3 Pedestal mounting





Caution

Risk of personal injury due to the charging station falling.

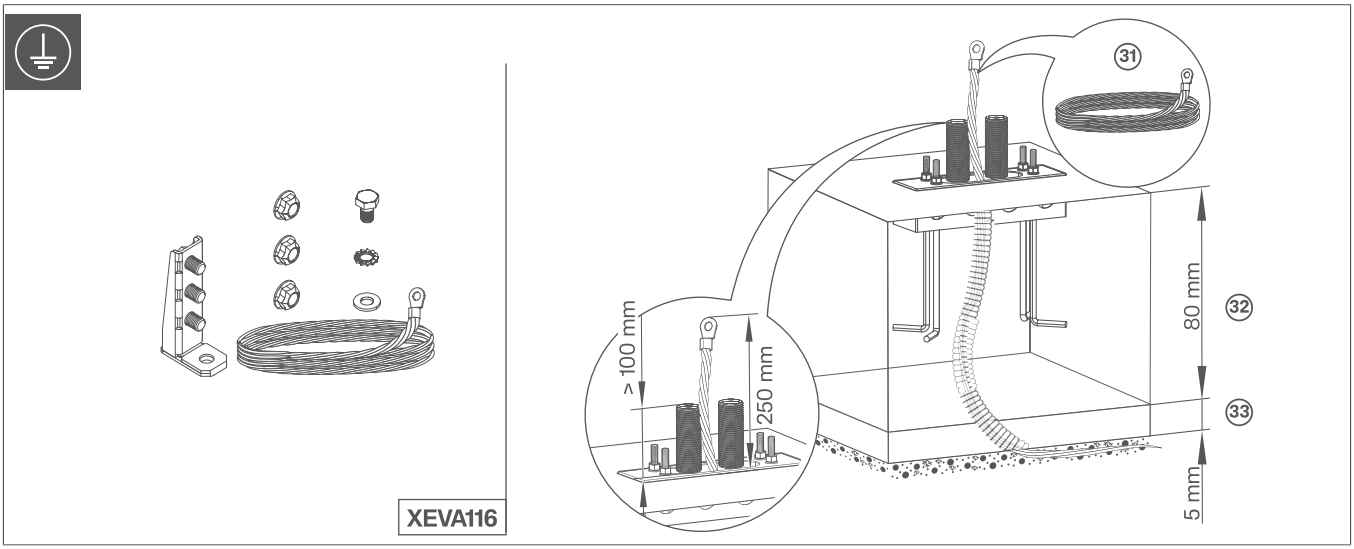
The charging station can fall and injure people.

- The charging station must be installed by at least two people.

Recommendation:

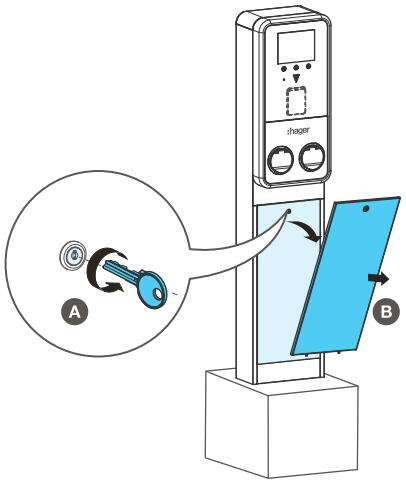
To reduce condensation in direct sunlight:

– Base filling accessories ZAY95075

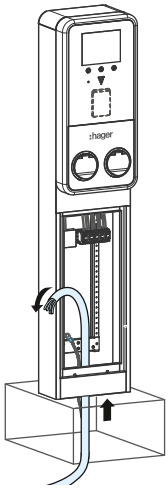


(31) Braided-shield grounding cable (50 mm²), coiled prior to sealing and intended for underground installation.
(32) Foundation: C20/25, X0 Depth: 80 cm
(33) Binder layer: C8/10 Depth: 5 cm

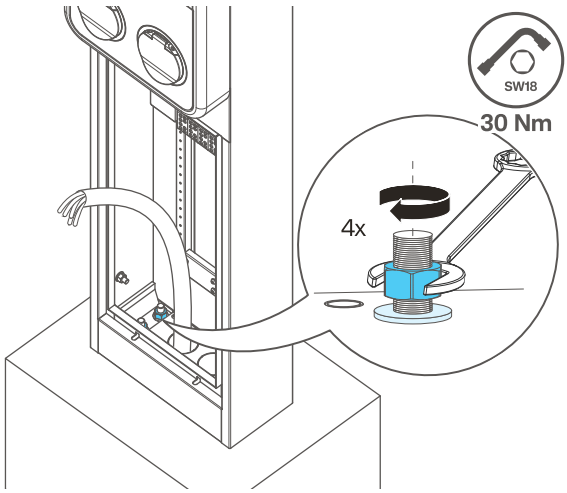
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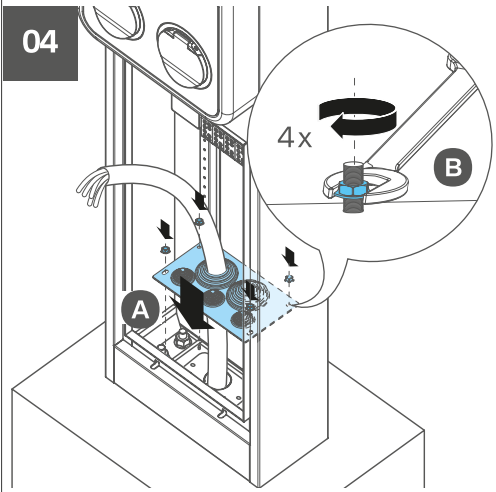
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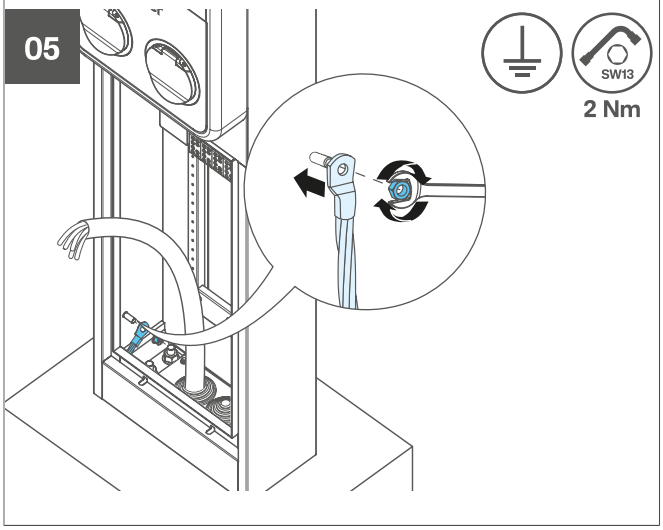
03



04



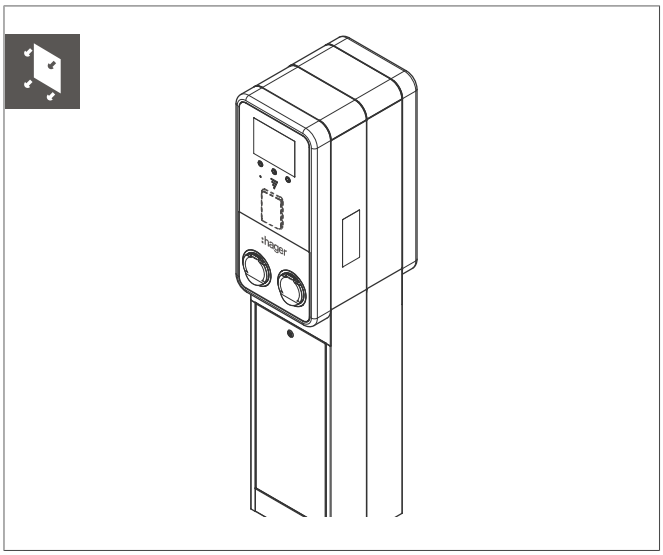
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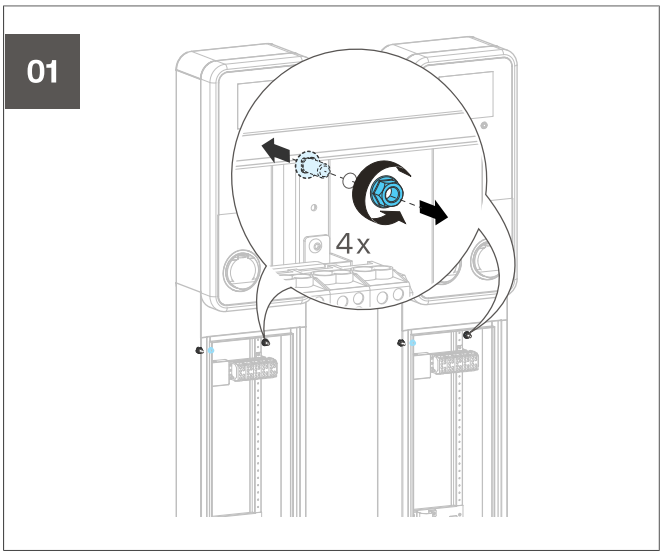


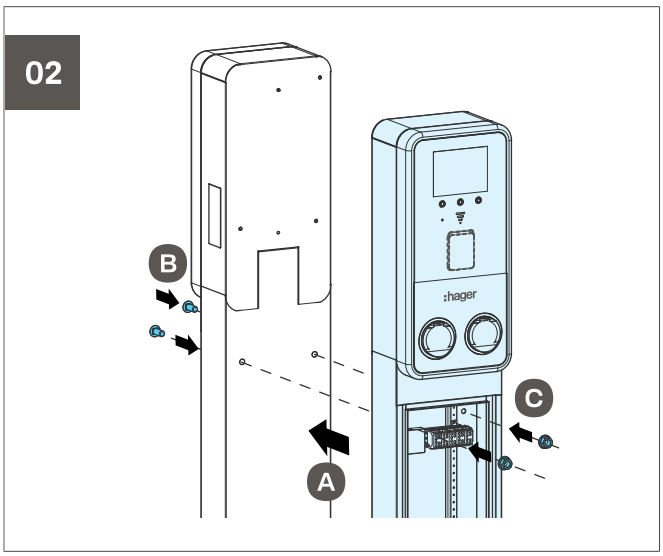
Dual installation of the pedestal (optional)

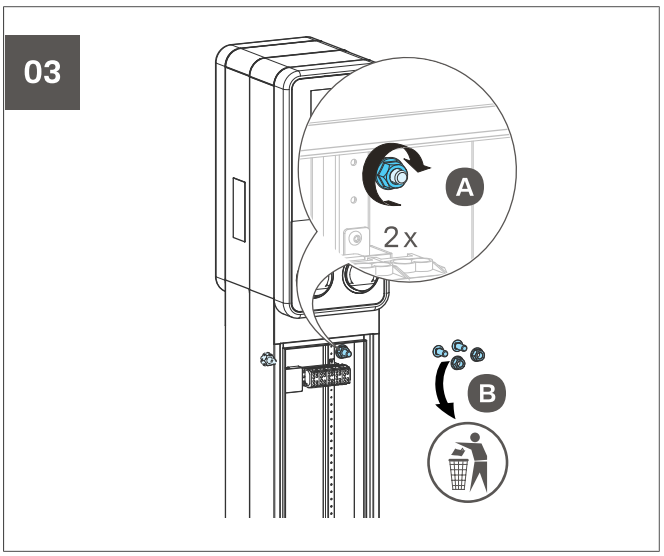
The pedestal is designed so that it can be connected to a second pedestal.

- ☑ Sufficient space has been provided for the installation of a second pedestal.
- ☑ The pedestal has not yet been electrically connected.









7 Electrical connection

Danger

Risk to life from electric shock.

If live parts are touched, an electric shock may result in death.

- Before working on the device, disconnect all associated miniature circuit breakers, check that they are volt-free and secure them against restarting.
- Cover all live parts in the vicinity.

Notice

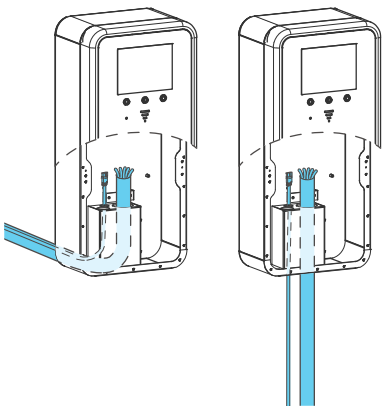
When connecting to the terminal strip (labeled with L3-L2-L1-N), special attention must be paid to the phase sequence. A critical error that causes the status LED to glow red continuously occurs if the phase sequence is not followed. This safeguard ensures that the consumption data is measured and calculated correctly.

- Connect the connecting cables to the terminal block as follows:

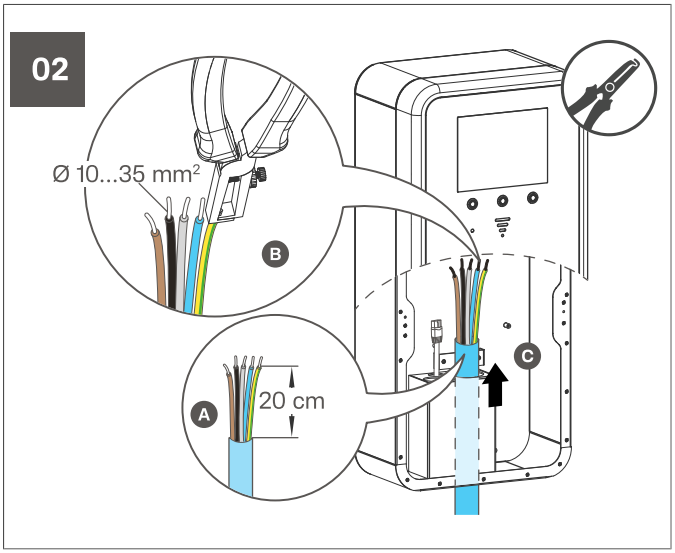
– N-L1-L2-L3 OR
– N-L3-L1-L2 OR
– N-L2-L3-L1.

7.1 Wiring the device

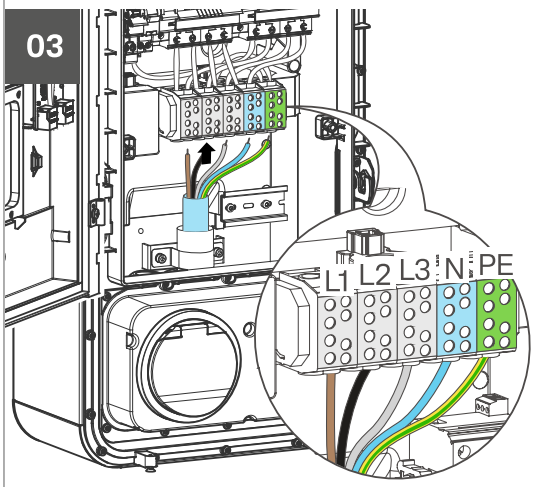
01



02

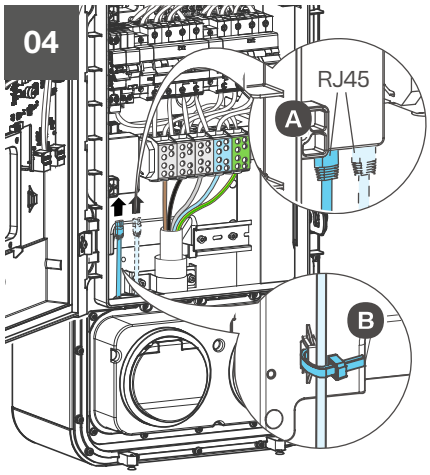


03



PZ1
3.5 Nm

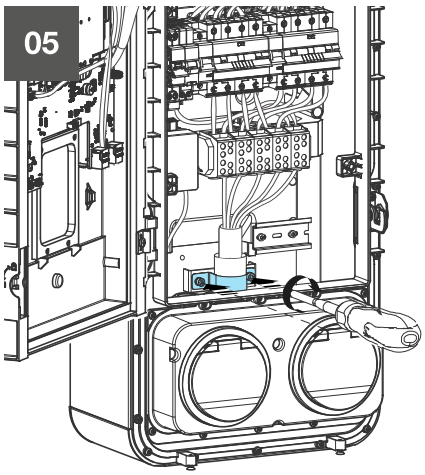
04



Daisy chain

When the witty park 2 is daisy-chained, the first charging station is connected via the router or network distributor, while all other charging stations are connected in series via an RJ45 cable.

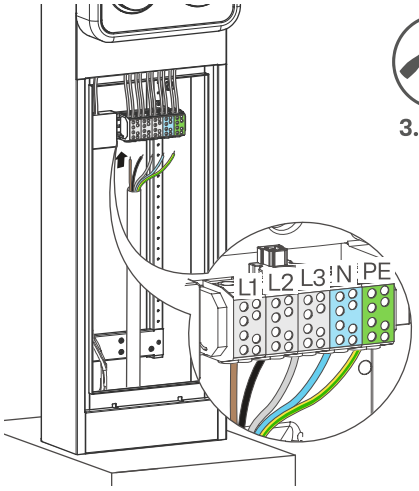
05



H3
2 Nm

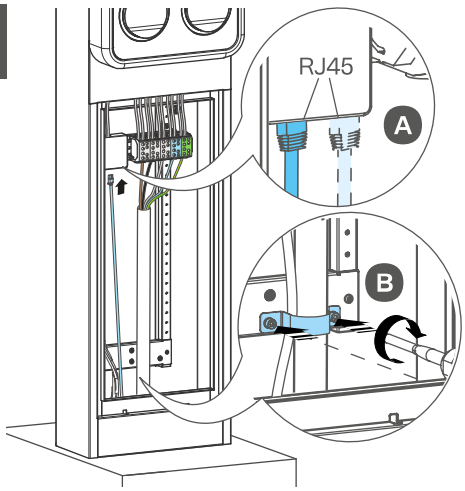
7.2 Wiring the pedestal

01



PZ1
3.5 Nm

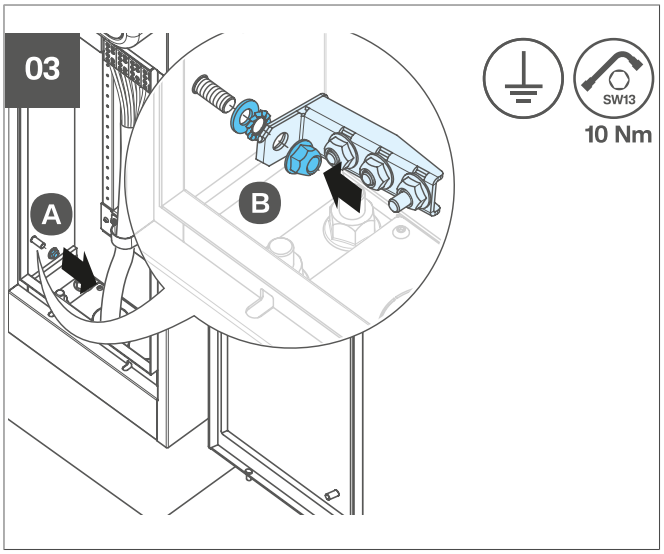
02

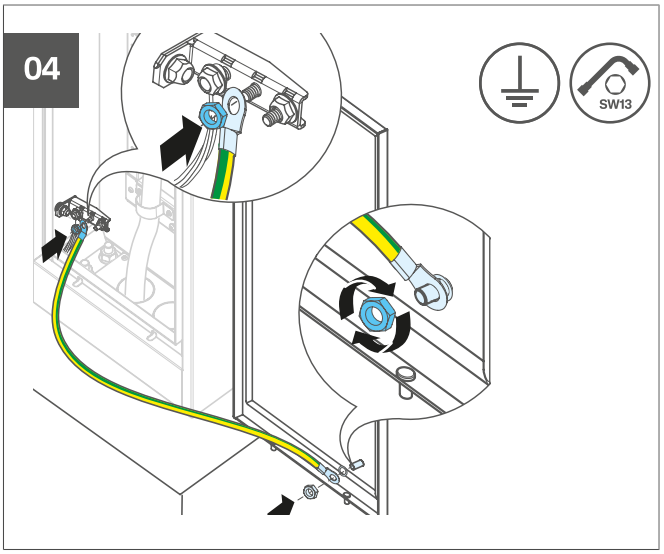


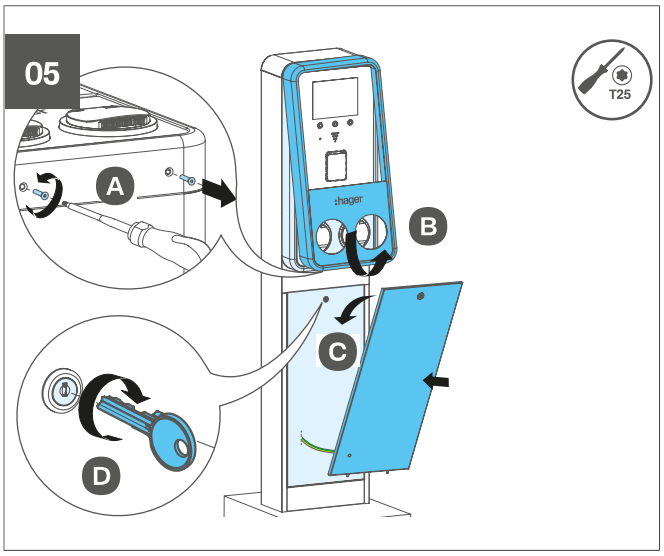
H3
2 Nm

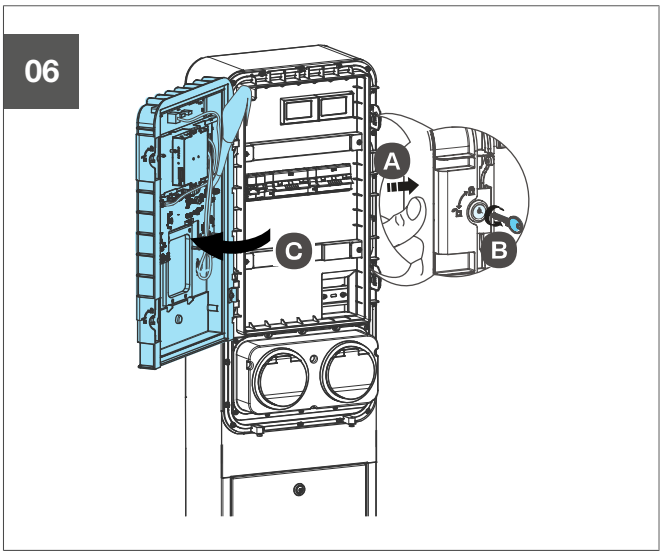
Daisy chain

When the witty park 2 is daisy-chained, the first charging station is connected via the router or network distributor, while all other charging stations are connected in series via an RJ45 cable.









8 Settings

8.1 Operating current and connection mode

The factory-set values (64 A operating current for 3-phase connection) must be checked and adjusted if necessary.
The rotary switch sets the maximum operating current, and the selection switch sets the phase sequence.

Information

The application is only suitable for a 3-phase connection.

If the software configuration settings and the hardware board settings are different, the smaller value is used.

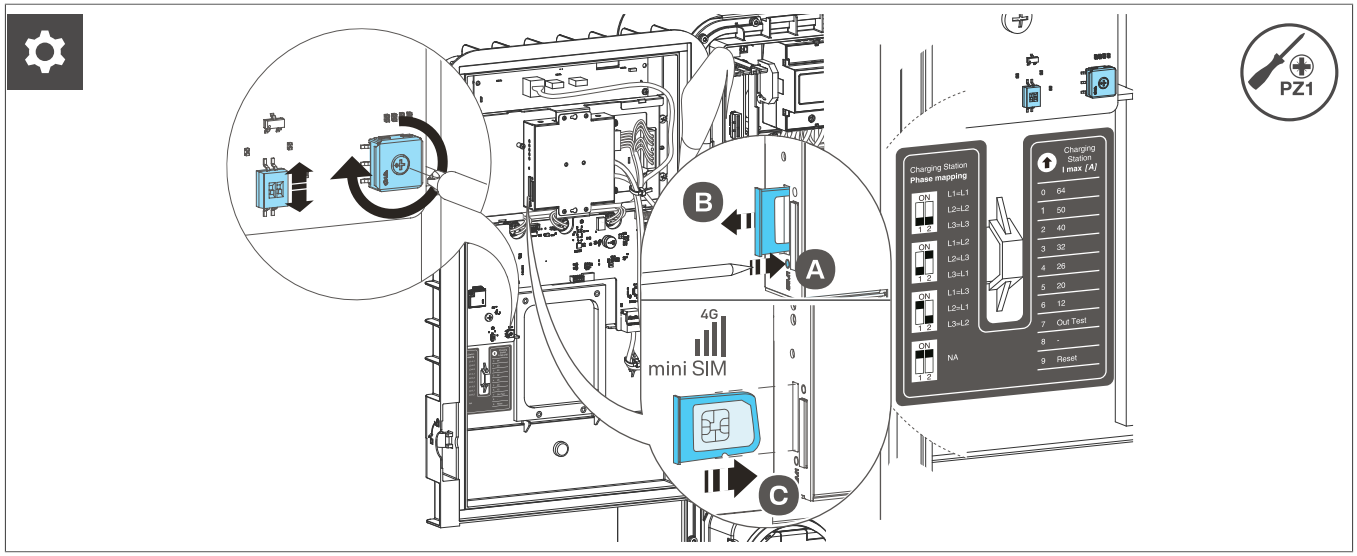
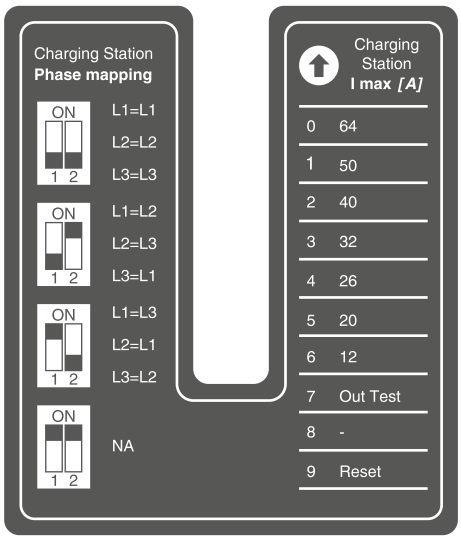


Fig. 15: Rotary and selection switch settings



8.2 Resetting to factory settings

Information

If a setting has already been changed, or in the event of an error, reset the charging station to factory settings first.

Resetting using the rotary switch or the configuration application results in the following effects:

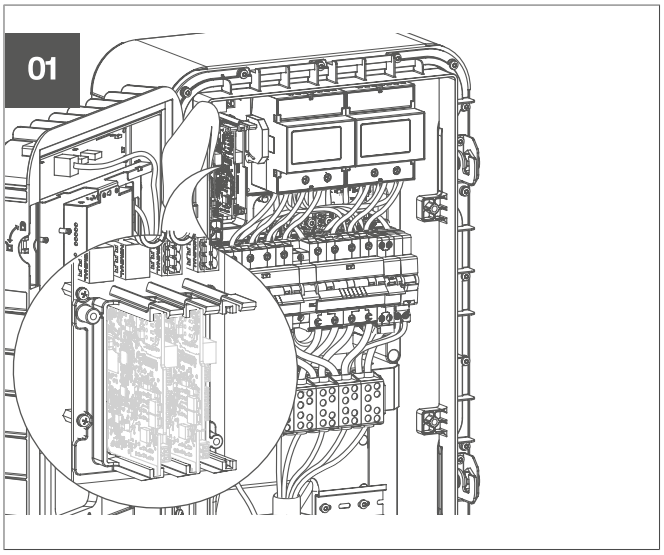
- The password is reset.
- All local RFID cards are deleted.
- The network configuration is deleted.
- The CPO connection parameters are deleted.

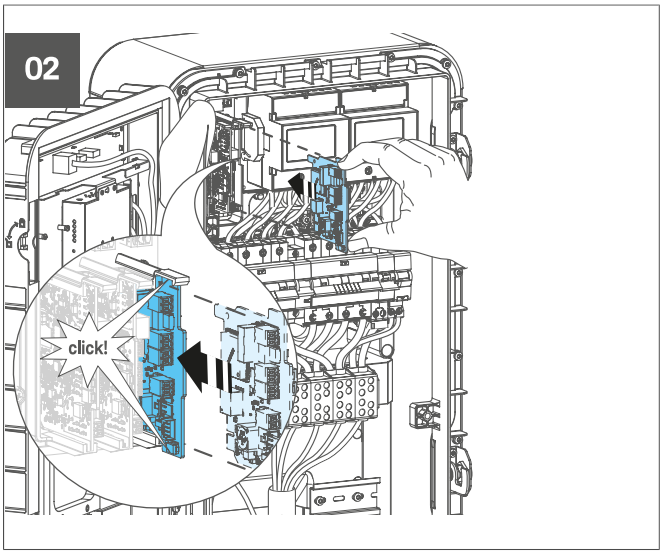
8.3 Install the optional load balancing card

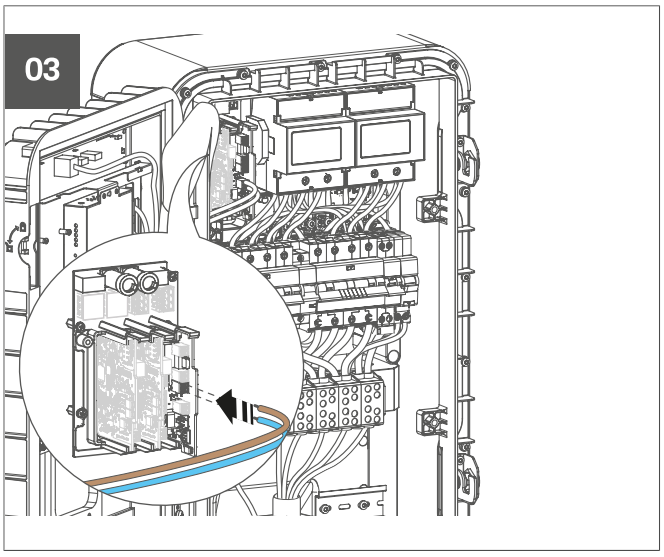
Further information on the product can be found in the operating instructions.

Circuit board	XVA200

► www.hgr.io/r/XVA200







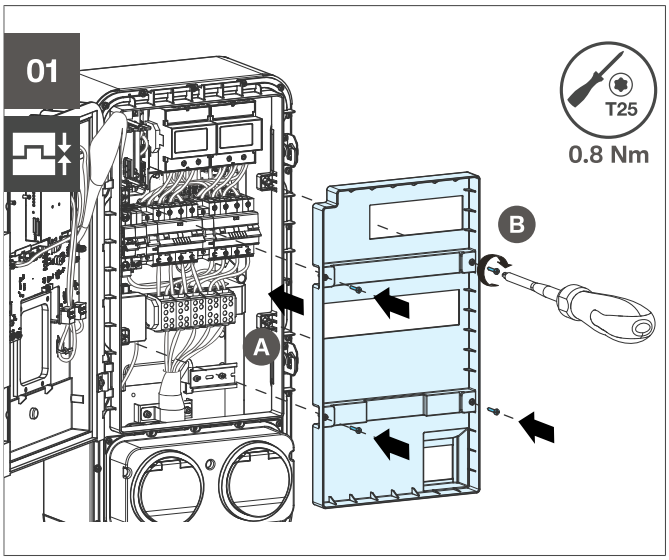
9 Final installation

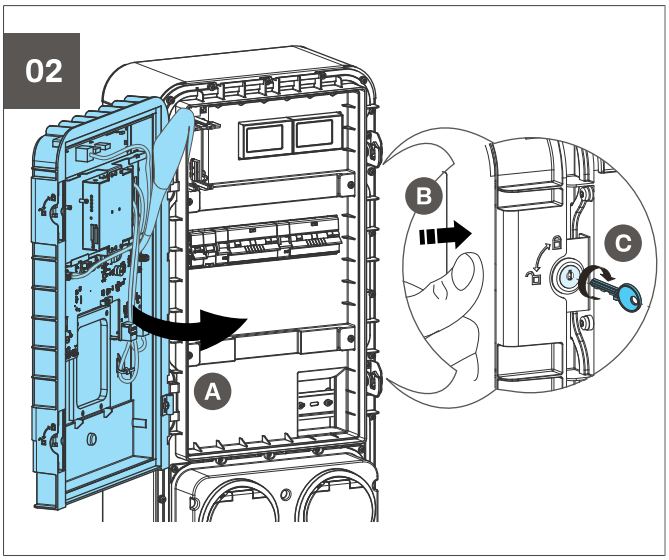
Danger

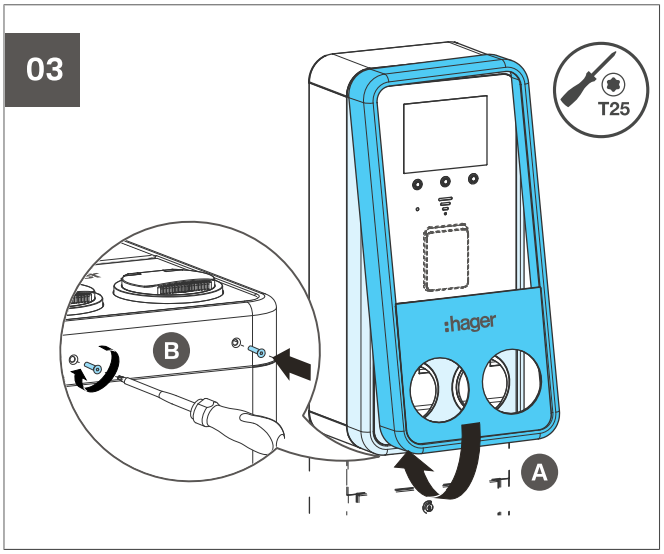
Risk to life from electric shock.

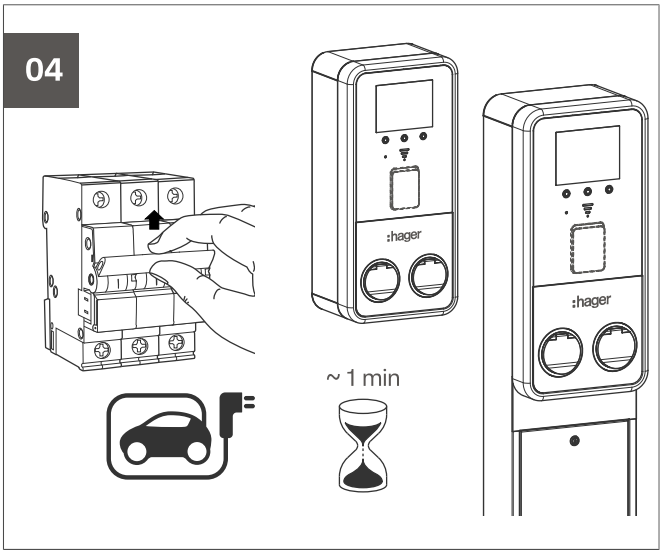
If live parts are touched, an electric shock may result in death.

- Do not switch on the charging station or connect an E-vehicle until the front of the charging station is locked.









Note

Wait up to one minute for charging operation to start.

Note

IP-55 protection could be lost due to incorrect tightening torque.

10 Commissioning

Information

Before commissioning, ensure that no electric vehicle is connected to the charging station.

The charging station can be commissioned in three ways:

1. Connection via WiFi hotspot on the charging station
2. Connection via Ethernet to the local load manager
3. Connection via Ethernet

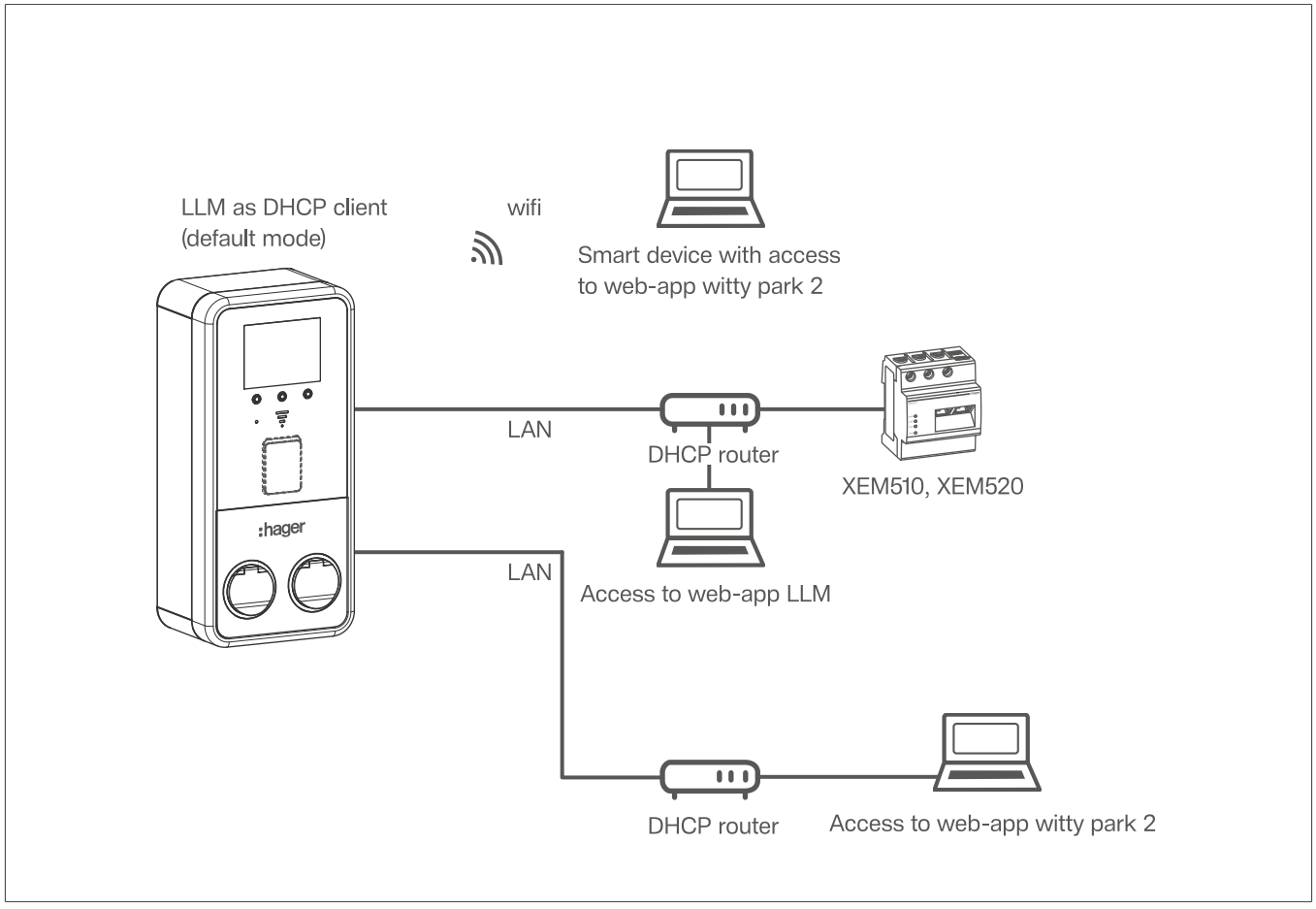


Fig. 16: Connection options

Notice

Data loss when connected to the Internet.

Unauthorized access can result in data loss.

- Before operating the device, take security measures to protect the network against unauthorized access.

Note

Only one connection is permissible. The configuration can therefore only be operated by one person.

10.1 Access via WiFi

Connecting to the network using a WiFi hotspot

- Hold the RFID card with pairing access rights in front of the RFID reader for more than seven seconds.

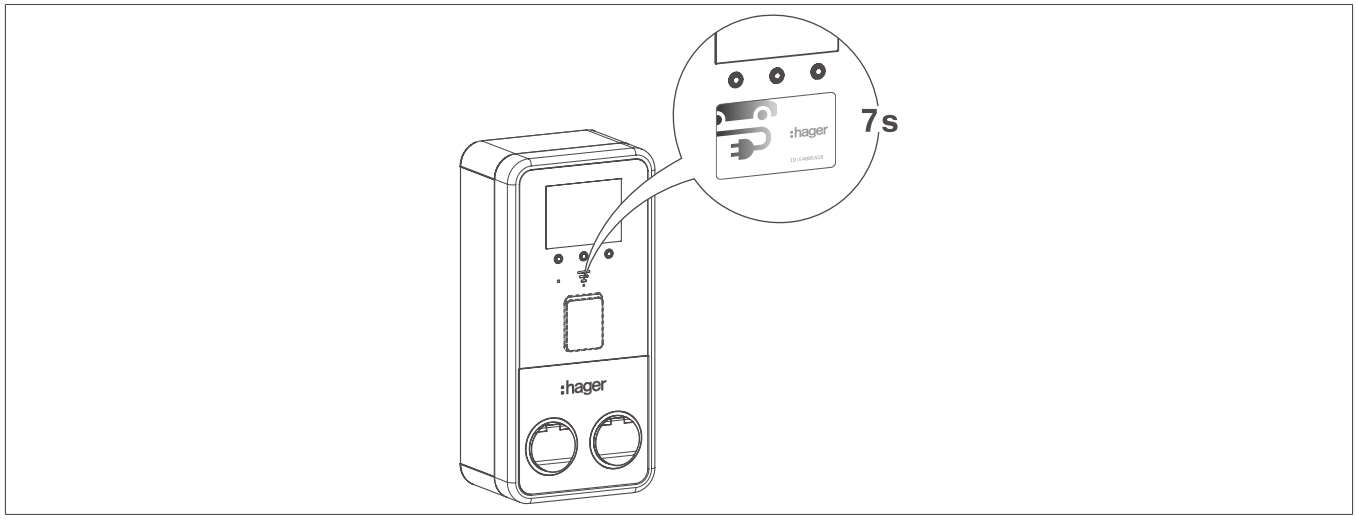


Fig. 17: Activate the WiFi hotspot using the RFID card

The access point is created.

A white LED lights up to indicate that the RFID card has been successfully authorised.

Note

Each charging station has its own serial number (SUID), which can be found on the type label.

- On the end device, select the correct network name of the WiFi network and connect.
  Network name: **witty-xxxxxx (the last six digits of the SUID)**

  No password is required.

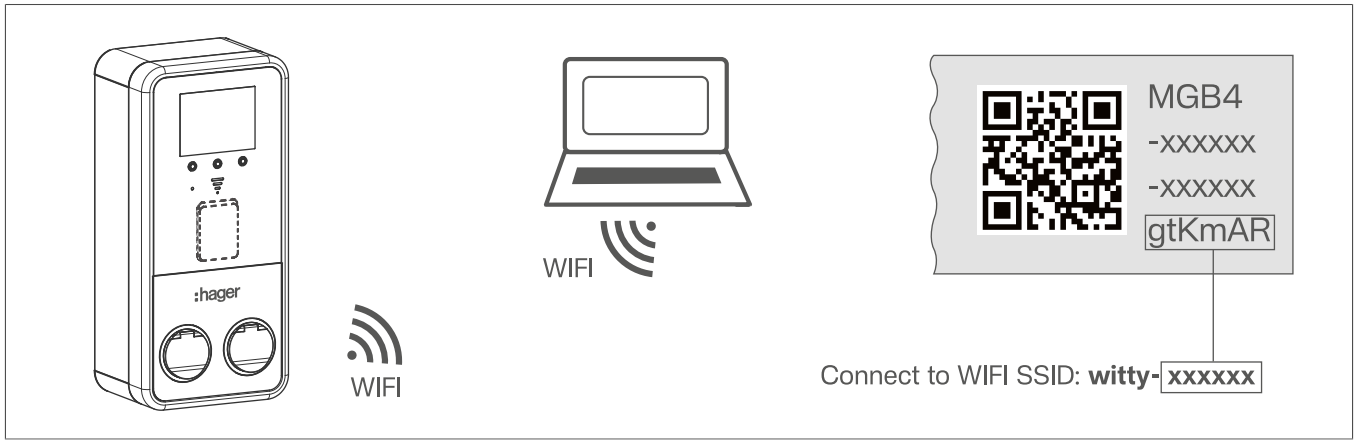


Fig. 18: Connection via WiFi

Note

If no activity is detected after 5 minutes, the connection is automatically deactivated.

Connection to the configuration application

Note

The configuration application can be accessed directly by entering the computer name (HostName) or the IP address of the charging station.

- Open your preferred web browser.
- Enter the IP address of the charging station or the computer name (HostName) in the browser's URL bar.
  IP address: **192.168.3.5**
  Computer name: **hager.local**

  The configuration tool will open.

10.2 Access via Ethernet

Connecting to the network via Ethernet

If the connection is via Ethernet, the charging station uses the IP address of the external router (DHCP server).

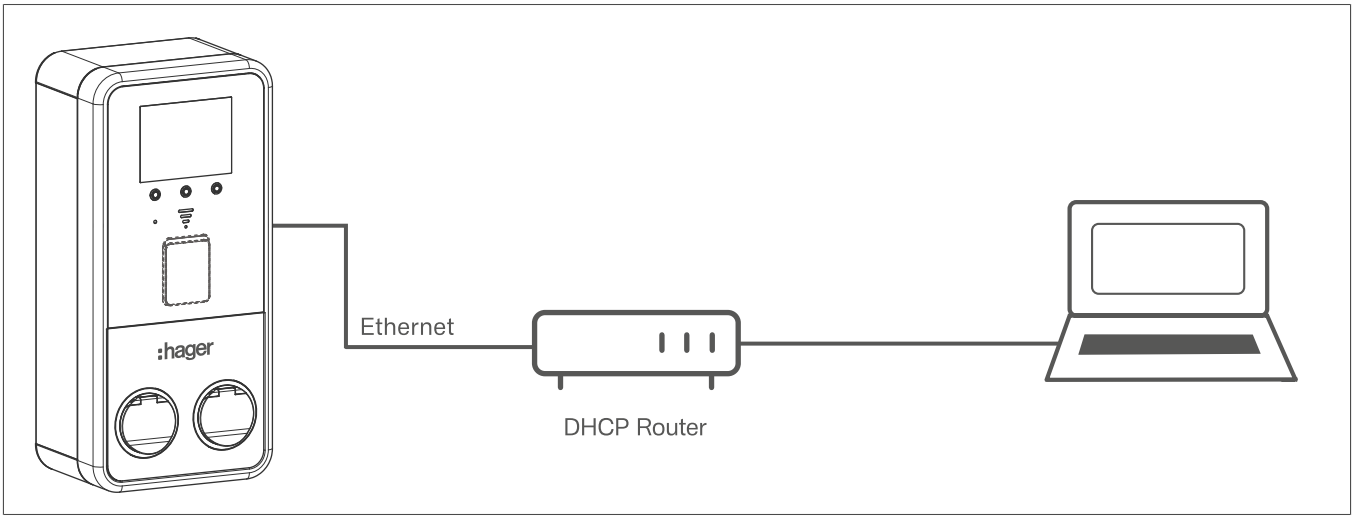


Fig. 19: Connection via Ethernet

Connection to the configuration application

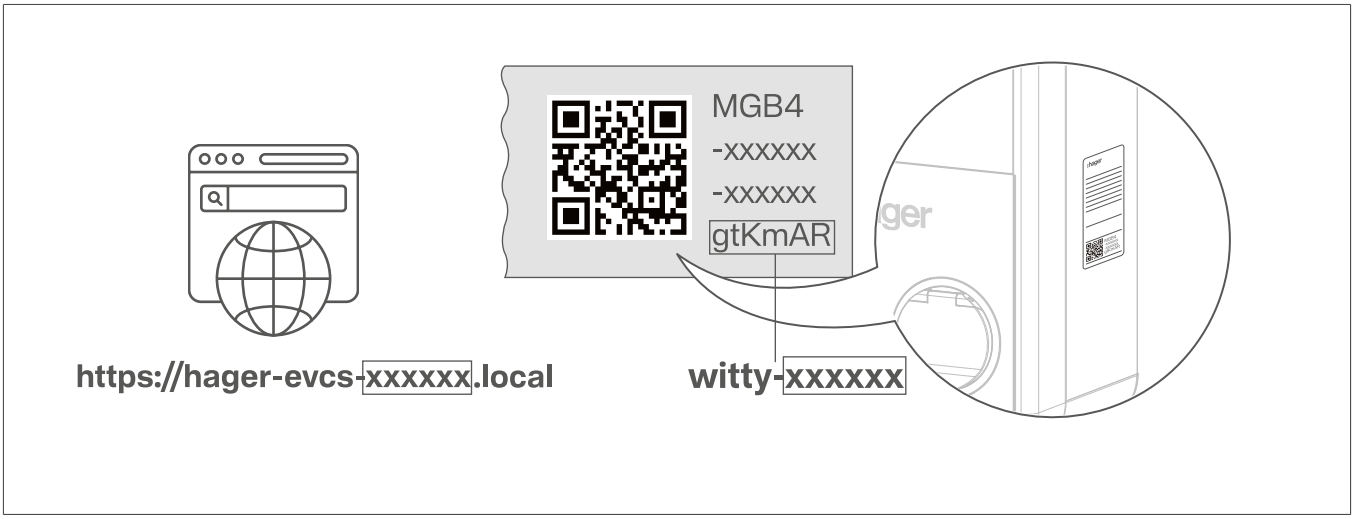
Note

The configuration application can be accessed directly by entering the computer name (HostName) or the IP address of the charging station.

Note

Each charging station has its own serial number (SUID), which can be found on the type label.

- Open your preferred web browser.
- Enter the IP address of the router or the computer name in the URL bar.



Computer name: **hager-evcs-xxxxxx.local** (the last six digits of the SUID)

The configuration tool will open.

10.3 Access via Local Load Manager (LLM)

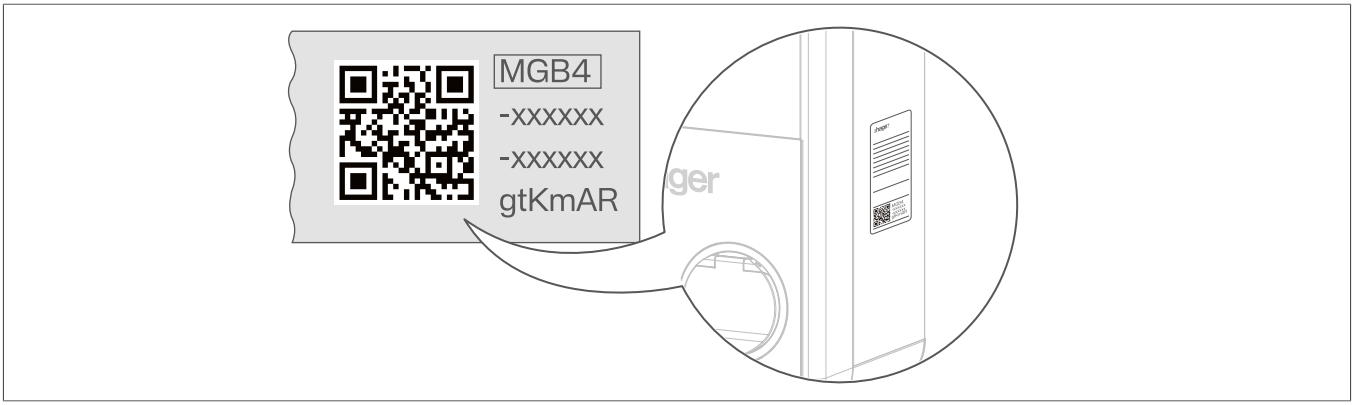
For more information on accessing the Local Load Manager (LLM), refer to the user manual.

▶ hager.com/de

10.4 Logging in

☑ This assumes that the device has a stable connection to the network.

- Enter credentials.
  Username: **admin**
  Password: The **first 4 digits of the serial number**



After the first login, the user is prompted to change the password and set a strong password. A strong password must meet the following requirements:

- At least 8 characters,
- At least 1 special characters,
- At least one uppercase character,
- At least one lowercase character,
- At least one number.

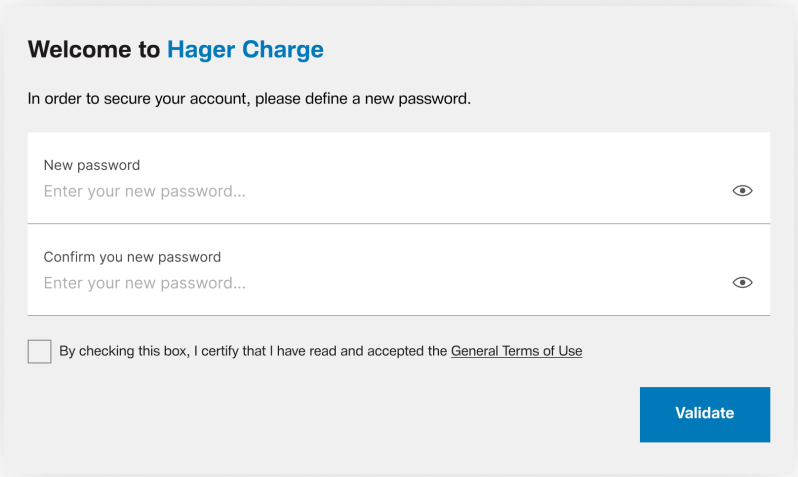


Fig. 20: Set a new password

If this login data is lost or after 10 input attempts, the charging station must be reset to the factory settings (see Resetting to factory settings).

Information

Resetting to factory settings will clear all parameters.

10.5 Configuration application

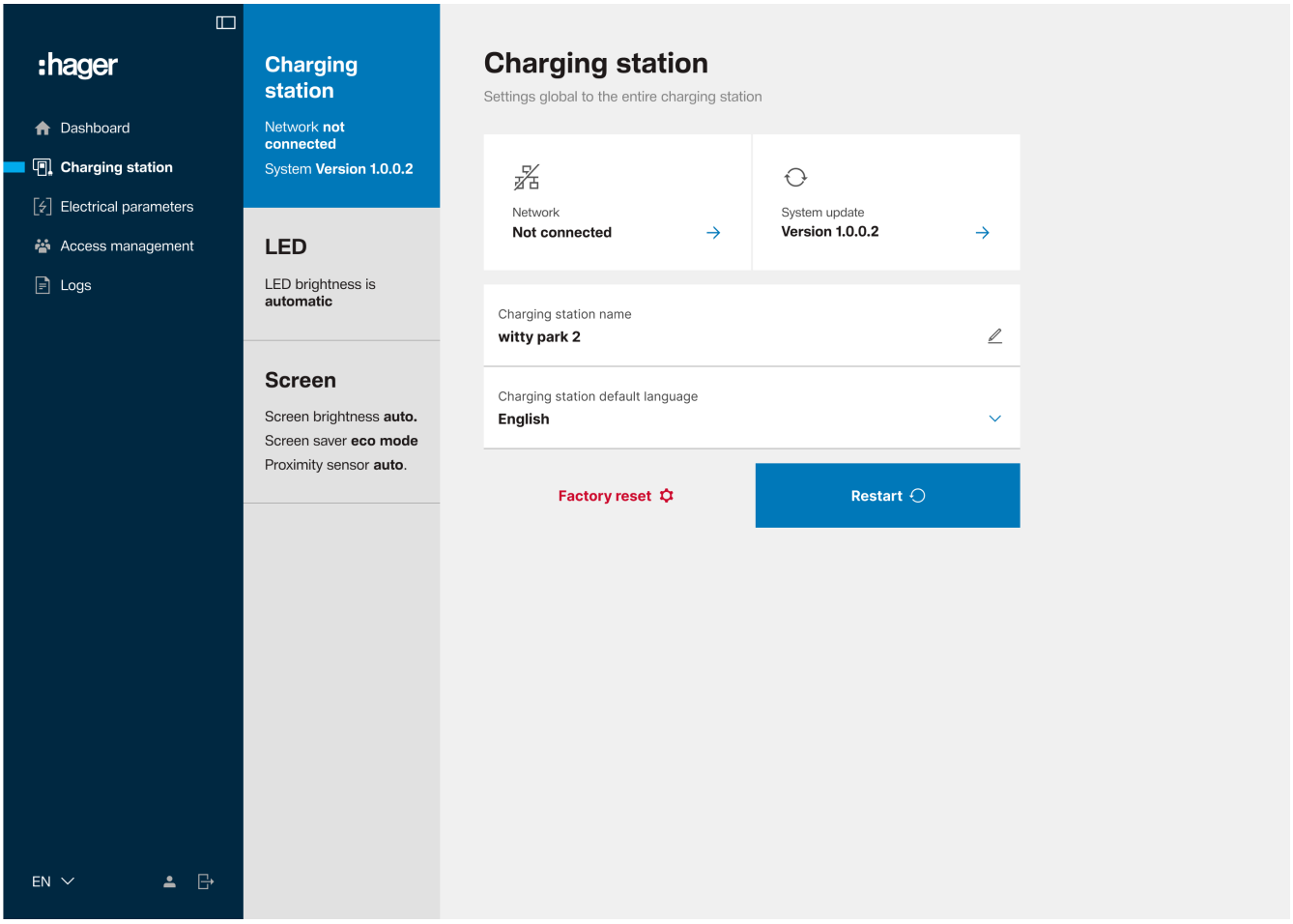
The configurator can be used to adjust the parameters of the witty park 2 and display operating data in real time.

Charging station

The Charging station tab is used to configure the charging station's basic settings, such as network and device settings.

Connecting the charging station to the network

1. Open the **Charging station** tab.
2. Select **Network**.



The **Network** dialog box appears.

3. Activate the connection.

Note

When connecting via Wi-Fi or Ethernet, the network connection is established automatically. To do this, the connection must be activated in the **Network** dialog box.

When using a mini-SIM card, additional settings are required for the mobile data connection.

Note

Specific settings can be made in the **Charging station** tab to customise the charging station. These include the brightness settings for the LED displays and the screen, as well as the activation or deactivation of the proximity sensor.

Connecting the charging station via mobile data

☑ A mini SIM card (25 mm × 15 mm) is inserted.

4. Select mobile data.
5. Activate the connection.
6. Enter the APN (Access Point Name) and associated PIN code.
7. Select the authentication type.

   PAP (Password Authentication Protocol): password is transferred in plain text.

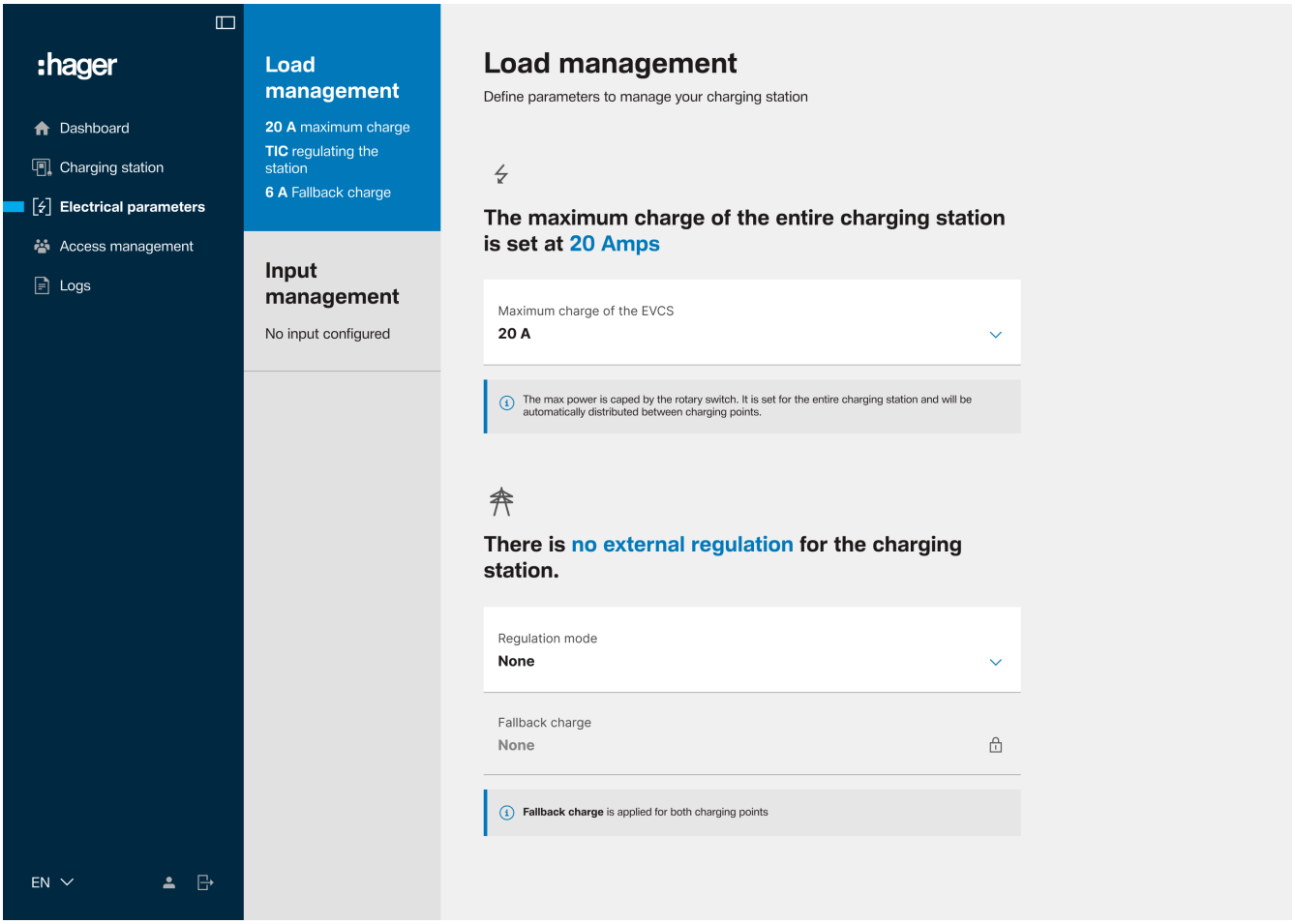
   CHAP (Challenge Handshake Authentication Protocol): password is not transferred directly. Challenges are sent so that the password is only used to calculate a hash.

Electrical parameters

In the Electrical Parameters tab, settings relating to the charging capacity and power regulation of the charging station are configured.

Setting the electrical parameters

1. Open the **Electrical parameters** tab.
2. Set the maximum charging capacity of the charging station.



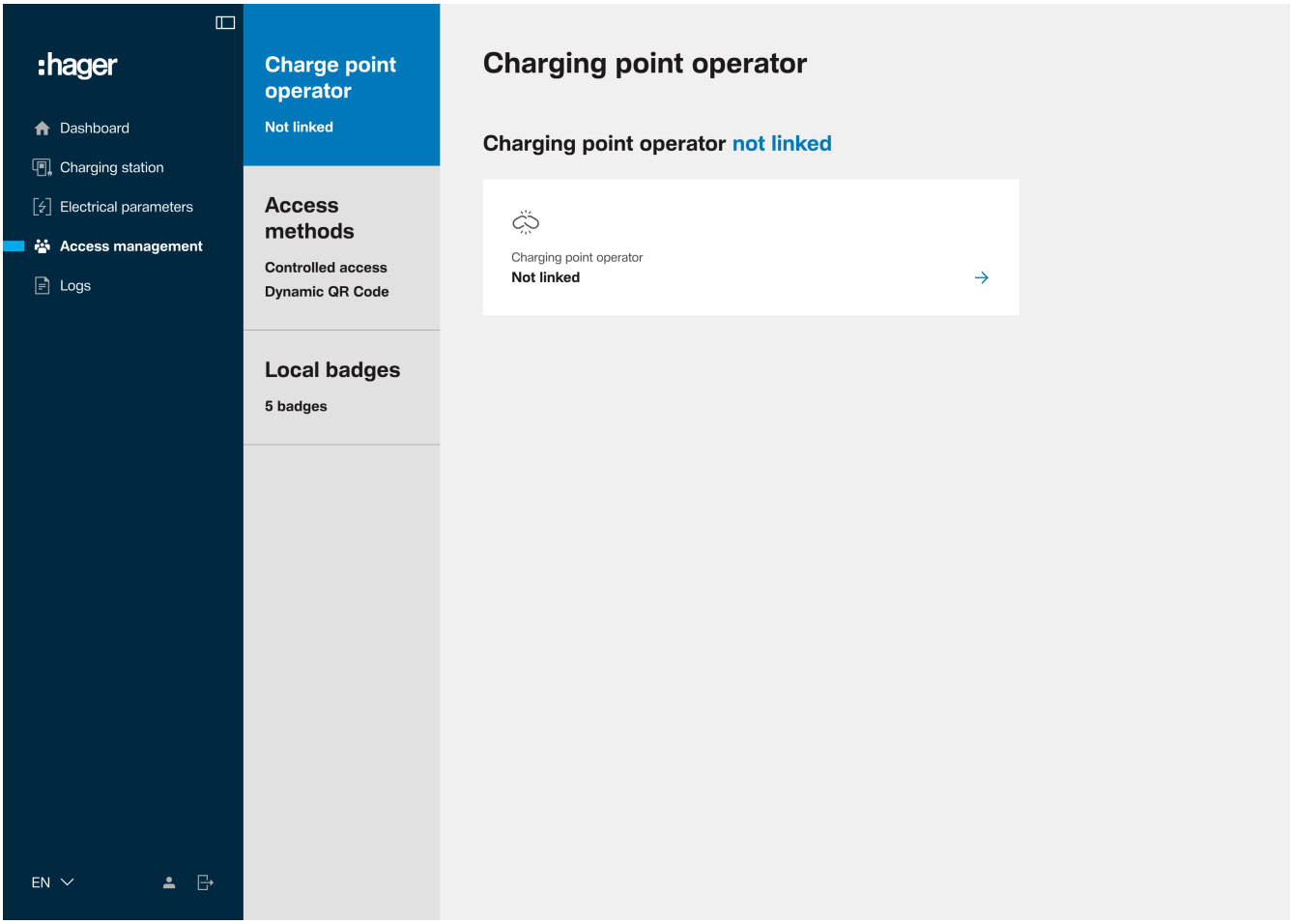
3. Determine the regulation mode.
4. Determine a fallback value in the event that communication is lost.

Access management

The access management tab is used to configure the access and authorisation settings of the charging station. This includes configuring the Charge Point Operator (CPO) and managing RFID cards.

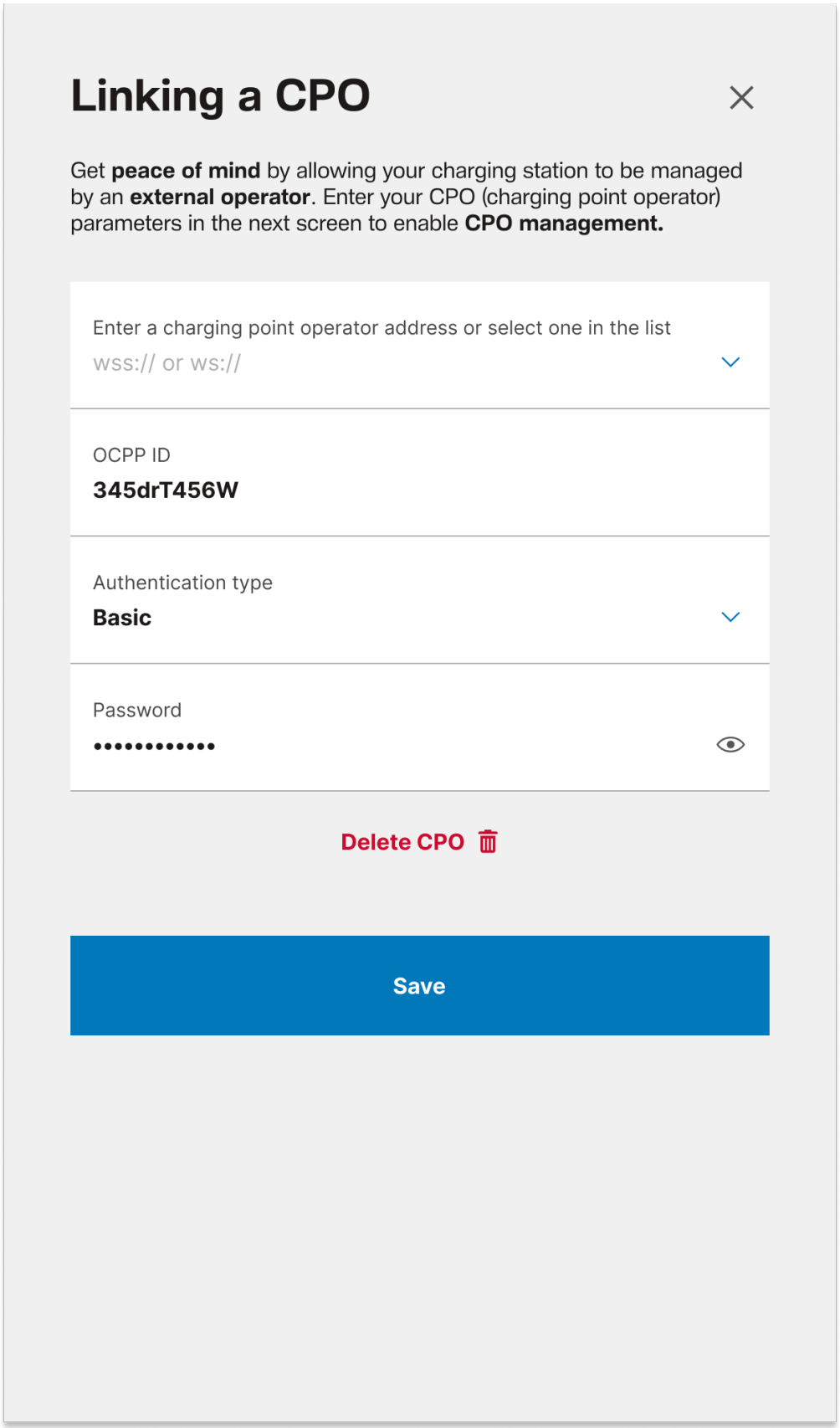
Configuring CPO access

1. Open **Access Management**.
2. Select **Charging Point Operator**.
3. Select **Unlinked**.

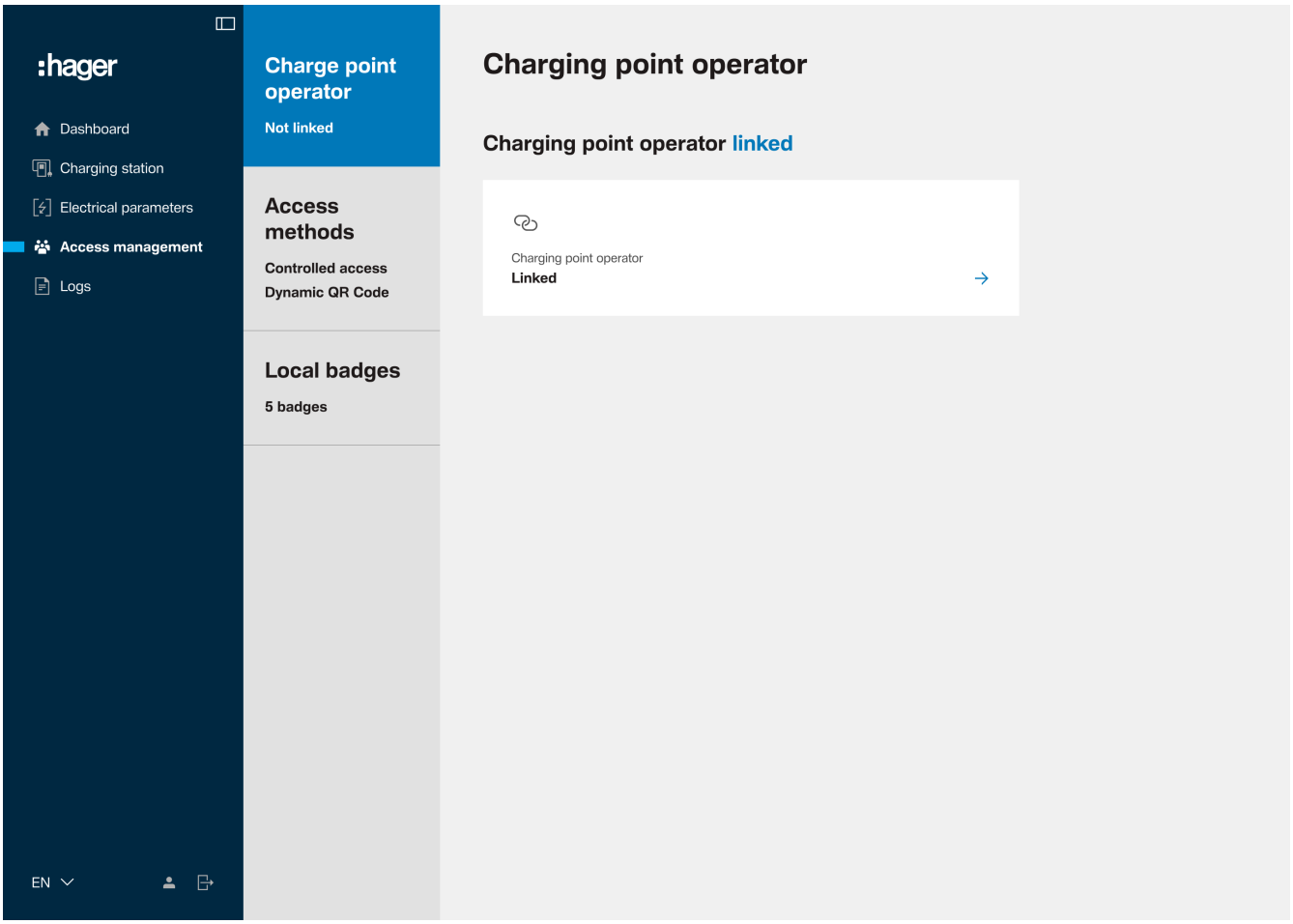


A side window opens.

1. Enter the OCPP server address provided by the Charge Point Operator (CPO), e.g. wss://example.com/ocpp.
2. The default identifier can be changed in the OCPP ID field. By default, the serial number of the device is used.
3. Select the authentication type
4. Select Save to apply the settings.



The Charge Point Operator (CPO) connection has been completed.



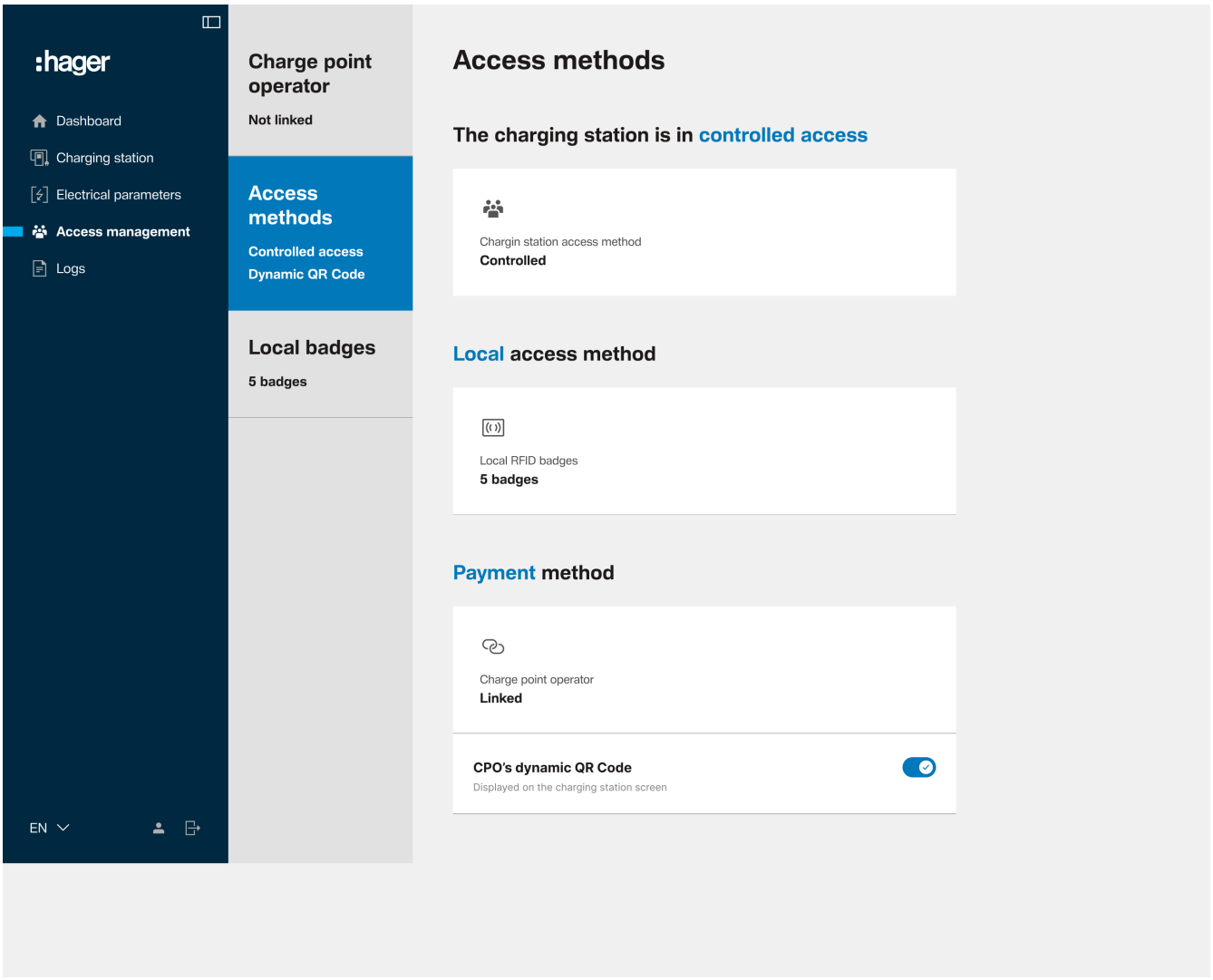
Access methods

If a Charge Point Operator (CPO) is linked to the charging station, the charging station is automatically operated in **controlled access** mode. It is not possible to switch to **free access** mode.

Dynamic QR code

If the Charge Point Operator (CPO) supports a dynamic QR code, this can be shown on the display of the charging station. The QR code appears after connecting a vehicle and is updated every 20 seconds.

The QR code URL is provided via the OCPP keys HagerQrCodeURL1 and HagerQrCodeURL2.



Dashboard

The Dashboard tab provides an overview of the current settings and usage of the charging station in real time.

Diagnostics

The Diagnostics tab displays detailed information about the operating status of the charging station and its charging points.

Log

The Log tab displays information about past loads and events within a selected time period.

10.6 Configuring the payment terminal

The full description is contained in the documentation MyPayter Quick Start Guide English.

11 Charging the electric vehicle

11.1 Make the device ready for charging

☑ The charging station is ready for operation.
☑ The status LED lights up green.
☑ The vehicle is on the dedicated parking location for charging.

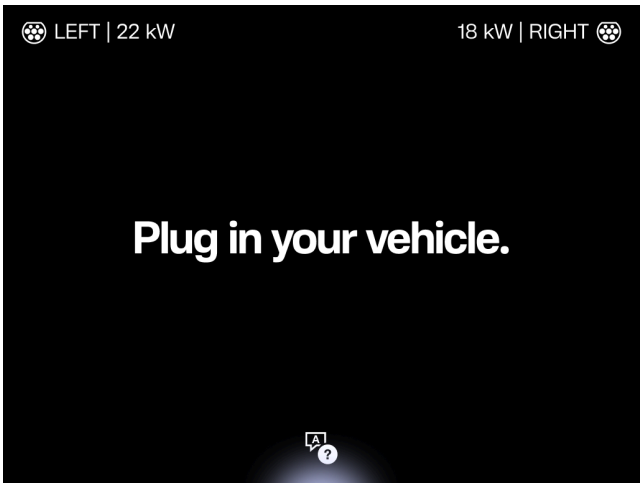
- Open the vehicle's charging flap.
- Connect the charging plug into the vehicle’s charging socket.
- Make sure the charging plug is properly connected.

11.2 Starting the charging operation

Note

The vehicle can be connected both before and after authentication or payment.

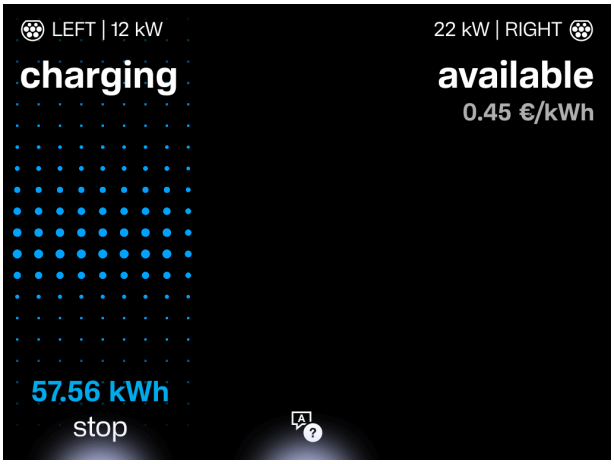
- Connect the vehicle to the charging station or perform authentication or payment using one of the following methods:
  - Hold the RFID card in front of the charging station RFID reader.
  - Scan the QR code (if supported by the Charge Point Operator).
  - Make payment using the card terminal (if available).



RFID card accepted: The RFID reader lights up green.

RFID card not recognised The RFID reader lights up red.

- Connect the vehicle to the charging station (if not already done).
  The charging plug is locked in the charging station and can no longer be pulled out.
- The status LED is flashing blue and the charging operation begins.
  The display shows the amount of charged power.



11.3 Ending the charging operation

Information

The charging operation can only be stopped by the user who started it.

☑ The charging operation is complete and the status LED is solid blue.

1. Unlock the charging socket on the vehicle.



2. Disconnect the charging plug from the vehicle's charging socket.



3. Disconnect the charging plug from the charging station's charging socket and stow it away.



Information

Grasp the charging plug on the connector housing to prevent damage to the charging cable.

Information

In the event of a mains breakdown or a loss of voltage to the charging station, the mechanical interlock of the charging plug in the charging station is automatically unlocked. The plug can be pulled out of the charging socket.

11.4 Malfunction during charging

If the status LED lights up red continuously, there is a fault with the charging station. Charging is not possible on this charging station.

- Contact the operator of the charging station.

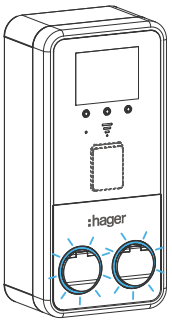
11.5 Payment options

The cost of the energy varies and depends on the provider and operator of the charging station. Information on payment options can be obtained from the operator of the charging station or the corresponding provider.

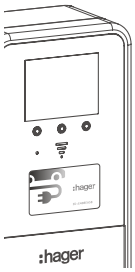
12 LED display

The charging station offers a range of checking parameters that allow diagnosis to be performed during all operating phases. The results can be found in the built-in configurator on the Live Debug and Logs page.

12.1 Operating status



LED signal		LED status description
	Permanent white light	Charging station is powered on, restarted, reset, or updated
	Permanent green light	Charging station ready for use (without vehicle)
	Permanent blue light	A connection between the vehicle and the charging station has been established



LED signal		LED status description
	White flashing	Wi-Fi access activated
	Permanent blue light	Waiting for RFID authentication
	Permanent green light	RFID card accepted
	Permanent red light	RFID card rejected
	Flashing blue light	Waiting for authorisation User successfully authenticated
	Permanent blue light	Charging operation is in progress
	Flashing red light	Error in the charging station

12.2 Error indication

Attention

Damage to the charging station due to critical faults.

- In the event of a critical fault indicated by a continuous red light, turn off the charging station for 2 minutes to reset the fault.

Error messages are displayed on the witty park 2 screen.

An error message can relate, for example, to the hardware, a faulty power supply or a communication error between the vehicle and the charging station.

- Follow the instructions on the screen.

13 Requirements for vehicle adapters

According to EN IEC 61851-1-1, vehicle adapters must not be used to connect a vehicle coupling to a vehicle appliance plug.
Adapters between the electric vehicle socket and the electric vehicle plug may only be used if they are specifically designed for this application and approved by the manufacturer of the vehicle or electric vehicle power supply and, where applicable, comply with national requirements.
These adapters must comply with the requirements of this standard and other applicable standards relating to the electric vehicle plug or electric vehicle socket part of the adapter. The adapters must have labels that reflect the specific conditions of use approved by the manufacturer, such as in the IEC 62196 series.
These adapters must not allow the transition from one charging mode to another.

14 Maintenance



Danger

Risk to life from electric shock.

- Before working on the device, unlock all associated miniature circuit breakers.
- Cover all live parts in the vicinity.
- Disconnect the charging cable from the charging station and the electric vehicle before working on the device.

The maintenance work should be carried out at regular recurring intervals, subject to the age and state of the device, ambient influences and loads.

Half-yearly maintenance by the operator/end customer (recommendation)

- Check the housing for external damage. In cases of damage, decommission the device immediately and contact a qualified electrician.
- Check the electrical switching and safety equipment in the distribution box for its function and for visual defects.

Cleaning and care



Attention

Damage to the charging station due to improper cleaning.

- Do not use cleaning agents such as glass cleaners, waxes or solvents, or abrasive sponges or a high-pressure cleaner.

- Clean the charging station using a dry cloth or a cloth dampened with mild soapy water.

Annual maintenance by an electrician (recommendation)

- Check the connection connections.

  The following tightening torques must be observed.

  Meters (MID): 2 Nm

  Fault protection device: 2 Nm

  Connection terminals: 3.5 Nm

15 Appendix

15.1 Technical data

Environmental conditions	
Operating temperature	-25 °C to +50 °C
Storage temperature	-35 °C to +70 °C
Relative humidity	5 % to 95 %
Protection class IP — impact resistance rating IK	IP 55 – IK 10
Screen protection IK	IK 08
Maximum operating height	2000 m
Degree of contamination	3
Rated impulse voltage U_{imp}	4 kV
Breaking capacity Icn AC according to IEC 60898-1	10 kA
Electrical properties	
Rated voltage U_e	380–415 V~ 3N -15%/+10%
Nominal insulation voltage U_i	500 V~
Frequency fn	50/60 Hz
Rated current Ina/charging capacity Mode 3 connection T2S	64 A — 2x22 kW (3-phase)
Output current range (Class B integrated MID meter)	Mode 3: 1-32 A
Electrical protection class	Class 1 (earthing)
Overvoltage category	III
Earthing diagram	TN-S / TN-C / TT
Conductor cross-section, single-stranded	10 mm^2 ... 35 mm^2, use only copper conductors
Conductor cross-section, multi-wire	10 mm^2 ... 35 mm^2, use only copper conductors
Compatibility with upstream differential protection	Type A (6 mA DC detection integrated)
Permitted Modbus/Ethernet circuit type	SELV (safety extra low voltage) according to IEC62368-1
Upstream protection	
Maximum permissible back-up fuse	80 A
Mechanical properties	
XVP222S, XVP222SYO:	
Weight	20.8 kg
Height	680 mm
Width	320 mm
Depth	210 mm
XVG222S, XVG222SYO:	
Weight	33.3 kg
Height	1480 mm
Width	320 mm
Depth	210 mm
Classification	
Classification of the charging station	Enclosed installation, AEVCS (Assemblies for Electric Vehicle Charging Stations), stationary equipment
Supply input	Electric vehicle supply system (EV), permanently connected to AC power supply
Supply output	Alternating current supply system for EV
Charging mode	Mode 3 via T2S connection
Electrical connection	via plug
Intended environmental conditions	Indoor/outdoor use
Special environmental conditions	Set up for locations with restricted access Set up for locations with unrestricted access
Type of fastening	Fixed equipment Surface mounting: mounting on the wall Pedestal mounting: anchored to the floor Horizontal mounting on the ceiling or floor is not permitted.
External ventilation	not supported
Type of user	Ordinary and authorised persons
EMC classification	Residential and non-residential areas (commercial, light industrial and industrial)
RFID reader	
Frequency range	13.553 to 13.567 MHz
Maximum radiated power	42 dBµA/m (for 13.56 MHz)
WLAN (for configuration only)	

Frequency range	802.11b, 802.11g, 802.11n20 :2412 MHz~2472 MHz 802.11n40: 2422 MHz~2462 MHz
Radio transmission power	Max. 100 mW
WLAN protocol	802.11xxxx
Proximity sensor	
Frequency range	5.725-5.875 GHz
Maximum output power	25 mW
Mobile service	
4G LTE	
Frequency range	B1/B3/B7/B8/B20/B28
Max. radiated power	23 dBm
GSM	
Frequency range	GSM 900 (≈ 900 MHz) DCS 1800 (≈ 1800 MHz)
Max. output power	2 W/1 W
3G WCDMA	
Frequency range	Band I (≈ 2100 MHz) Band VIII (≈ 900 MHz)
Max. output power	250 mW

15.2 Identifying compatible vehicles in accordance with EN17186

Alternating current	EN 62196-2	Type 2	Plug base power socket	≤ 480 V RMS	C

15.3 Valid standards

Electromagnetic Compatibility (EMC)	**EN IEC 61851-21-2** **EN 301489-3** **EN 301489-17** **EN 301489-52**
Safety	**EN IEC 61851-1** **IEC 62955**
Cybersecurity	**EN 18031-1**
Radio frequency	**EN 301908-1** **EN 300328** **EN 300330** **EN 300440** **EN 301511**
Evaluating electrical and electronic equipment with respect to limitations on exposure of persons to electromagnetic fields (0 Hz to 300 GHz)	**EN 50364** **EN IEC 62311**
ROHS	**EN IEC63000**

15.4 EU Declaration of Conformity

Hager Controls hereby declares that the radio equipment type electric vehicle charging stations referenced XVP222S, XVP222SYO, XVG222S and XVG222SYO comply with Directive 2014/53/EU.
The complete text of the EU declaration of conformity is available at the following Internet address: hager.com

15.5 ISO 15118 compatibility

The XVP222S, XVP222SYO, XVG222S and XVG222SYO charging stations comply with standard ISO 15118. Features such as Plug & Charge will be available remotely with future software updates.

15.6 Disposal of the charging station



Correct disposal of this product (electrical waste).

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its documentation indicates that it should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this device from other types of waste. Recycle the device responsibly to promote the sustainable reuse of material resources.

Household users should contact either the dealer where they purchased this product, or their local government office, for details of where and how they can take this device for environmentally safe disposal.

Commercial users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

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2026-11

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