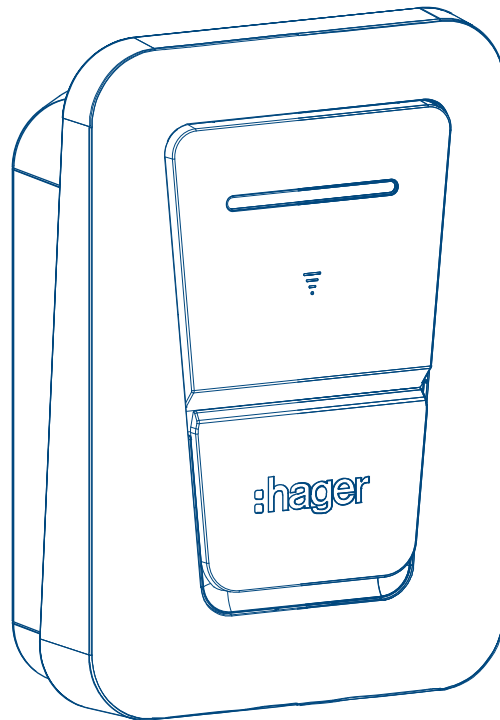


# Charging station

## witty pro



Electric vehicle charging station

**XVL122SCH**



|          |                                                |           |
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# 1 About this manual

This manual describes the correct and safe installation and commissioning of the charging station for electric vehicles. These instructions are an integral part of the device. Keep these instructions throughout the service life of the device and pass them on if necessary.

## 1.1 Symbols used

### Text icons

| Symbol | Description                                                       |
|--------|-------------------------------------------------------------------|
| ●      | Action instruction in a single step or in any order.              |
| ①      | Instructions for multi-step actions. Order must be complied with. |
| -      | Enumeration                                                       |
| ▶      | Reference to documents / additional information                   |

### Indication icons

|                                                                                     |                                              |                                                                                     |                                                                                                                                                                                                                 |                                                                                       |                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Contents of the package                      |    | Product dimensions                                                                                                                                                                                              |    | Tools required                                                                                                                                                       |
|   | Mounting                                     |   | Installation                                                                                                                                                                                                    |   | Final mounting                                                                                                                                                       |
|  | Description of the device                    |  | Settings                                                                                                                                                                                                        |  | Optional accessories                                                                                                                                                 |
|  | Installation by an electrician               |  | Alternating current (IEC 60417-5032)                                                                                                                                                                            |  | Protective earth (IEC 60417-5019)                                                                                                                                    |
|  | Applicable throughout Europe and Switzerland |  | When displayed on a device or attached to the documents of the product, the symbol opposite indicates that the device must not be disposed of with household waste when it reaches the end of its service life. |                                                                                       |  For more information, refer to the installation and commissioning instructions |

### Degrees of danger warnings

| Symbol                                                                              | Signal word | Consequences in case of non-compliance |
|-------------------------------------------------------------------------------------|-------------|----------------------------------------|
|  | Danger      | Causes serious injury or death.        |
|                                                                                     | Warning     | May cause serious injuries or death.   |
|                                                                                     | Caution     | May cause minor injuries.              |
|                                                                                     | Attention   | May cause damage to the device.        |
|                                                                                     | Comment     | May cause damage.                      |



| Symbol                                                                            | Description                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------|
|  | Risk of electric shock.                                    |
|  | Risk of damage due to mechanical overload.                 |
|  | Risk of damage from electricity.<br>Risk of electric shock |
|  | Risk of fire damage.                                       |

### Information

| Symbol                                                                            | Signal word | Definition                                      |
|-----------------------------------------------------------------------------------|-------------|-------------------------------------------------|
|  | Comment     | Indicates important instructions for use.       |
|  | Information | Indicates useful information about the product. |

## 1.2 Affected groups



The assembly, installation and configuration of electronic devices must only be carried out by a specialist trained in the electrotechnical field and certified in compliance with the local installation standards in force. Accident prevention recommendations applicable in the country must be complied with.

These instructions are also intended for the operator of the charging station and for specialists trained in the electrotechnical field.

Commissioning requires knowledge of network technology.

## 2 Safety

### 2.1 Correct use

The charging station is used to charge electric or rechargeable hybrid vehicles. It is only intended for use in private and semi-public areas with open access (private properties, company car parks or depots). It is designed to be mounted in a fixed vertical position on a wall or stand, either indoor or outdoor.

The charging station should be permanently connected to the AC mains. The charging stations comply with the Radio Equipment Directive 2014/53/EU (RED).

#### Restrictions on use

Installation on the ceiling of a room or on the ground is prohibited. Any intervention in internal areas of the device and any modification of the pre-wiring, other than the operations described in this manual, is prohibited and voids the warranty, as well as any other form of guarantee. Interventions of this type can damage electronic components.

### 2.2 Safety instructions



#### Danger

Risk of injuries that may cause death in case of electric shock

- Before working on the device, the upstream circuit breaker(s) must be switched off. After opening the charging station, make sure that all power cables are voltfree.
- When installing, doing maintenance work, or restoring power to the charging station, ensure that ambient conditions, such as rain, fog, snow, dust or wind, do not constitute a source of danger.



#### Warning

Risk of fire due to device overload

If the power cable is not properly dimensioned, there is a risk of fire due to device overload.

- Prepare the power cable according to the technical specifications of the device.



#### Caution

Risk of injury due to falling/tipping of the charging station

Use appropriate fixings to prevent the charging station from falling and causing injuries.

- Adapt the installation accessories to the requested conditions at the installation location. The fixings supplied are suitable for concrete and masonry.



#### Caution

Risk of damage to the charging station if prohibited charging accessories are used

- Do not use a connection adapter between the charging cable and the vehicle.
- The charging cable must not be extended.

**Warning**

Risk of data loss when connected to the Internet

Unauthorised access can result in loss of data.

- Before operating the device, appropriate security measures must be taken to protect the network from unauthorised access.

**Warning**

Risk of malfunctioning due to electromagnetic influences

Electromagnetic fields can interfere with the transmission of signals through very low voltage lines.

- Please follow the recommendations and standards applicable for SELV electrical circuits during cable installation.
- Lay power lines and extra low voltage (Ethernet) lines separately from each other.

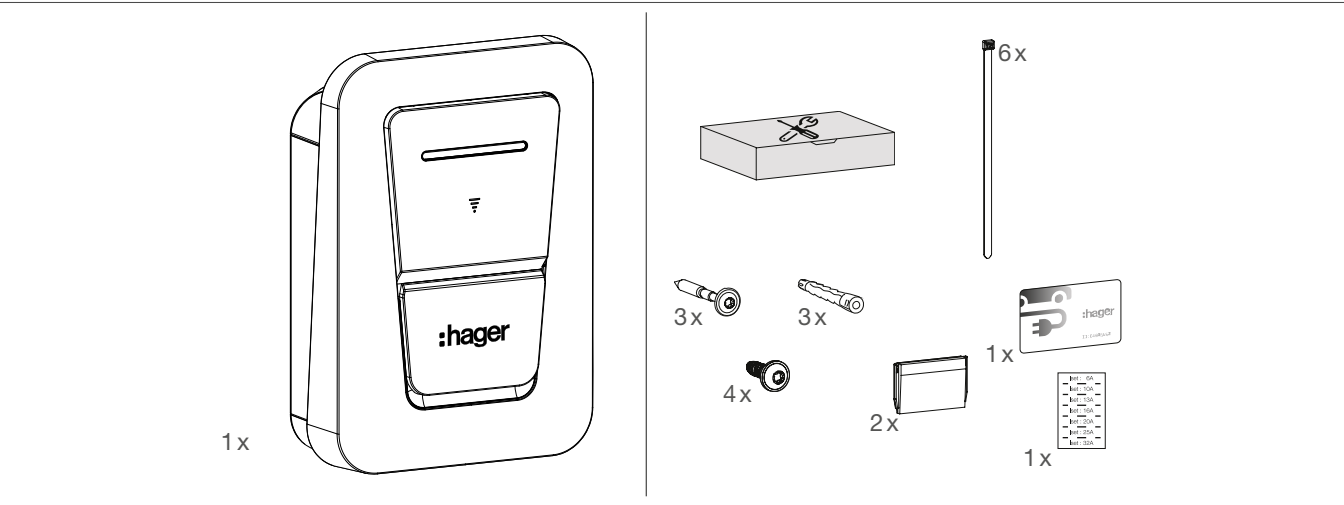
### 3 Overview

#### 3.1 Overview of the range

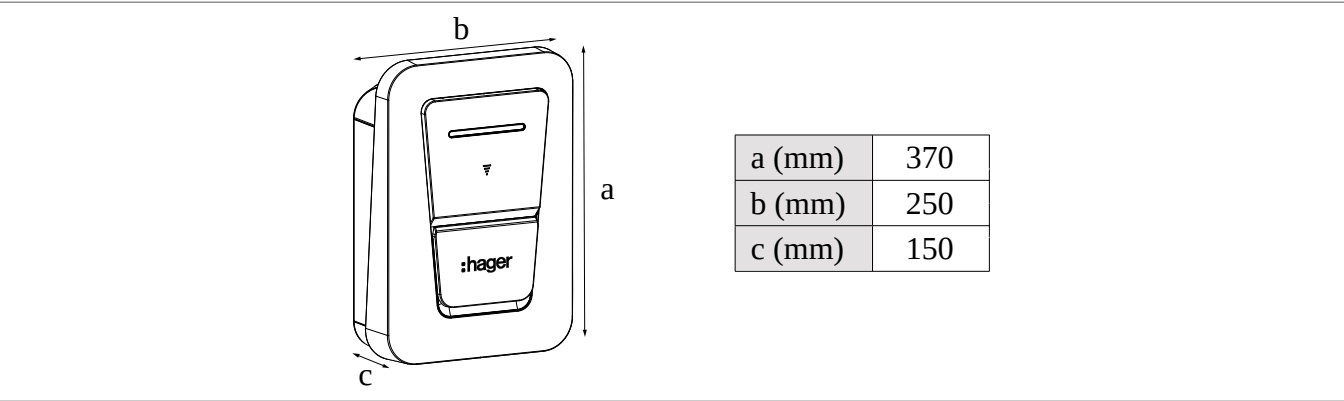
|                   |           |                                                                              |
|-------------------|-----------|------------------------------------------------------------------------------|
| Charging stations | XVL122SCH | Charging station witty pro 7/22kW 1/3-ph T2S socket for the Swiss market     |
|                   | XVL122CCH | Charging station witty pro 7/22kW 1/3-ph attached cable for the Swiss market |

#### 3.2 Scope of delivery

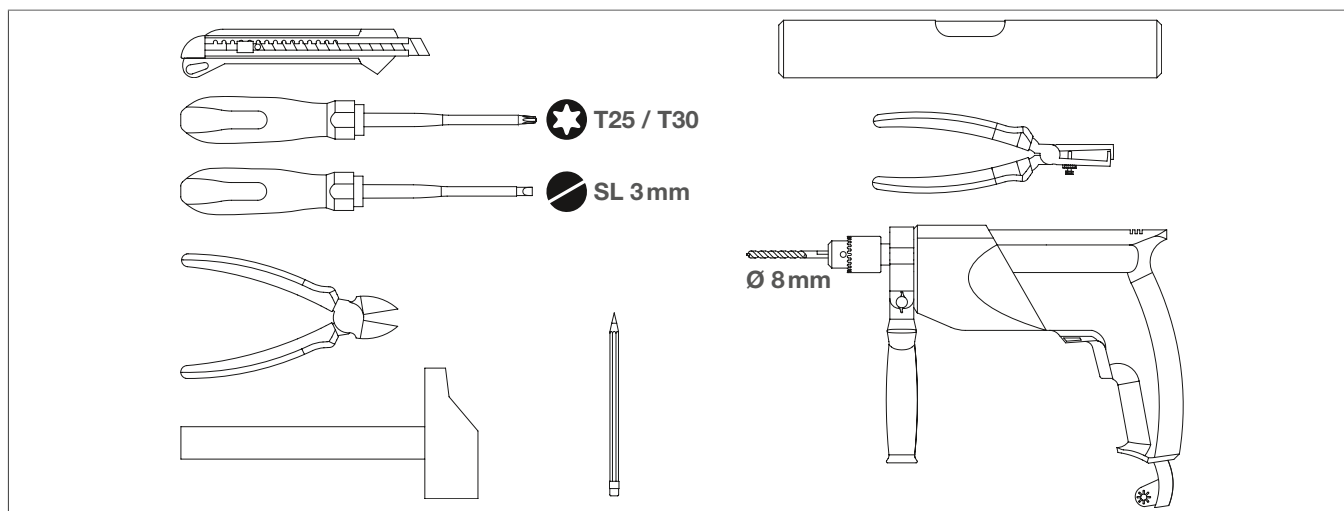
– Make sure the contents of the package are complete and intact.



#### 3.3 Dimensions

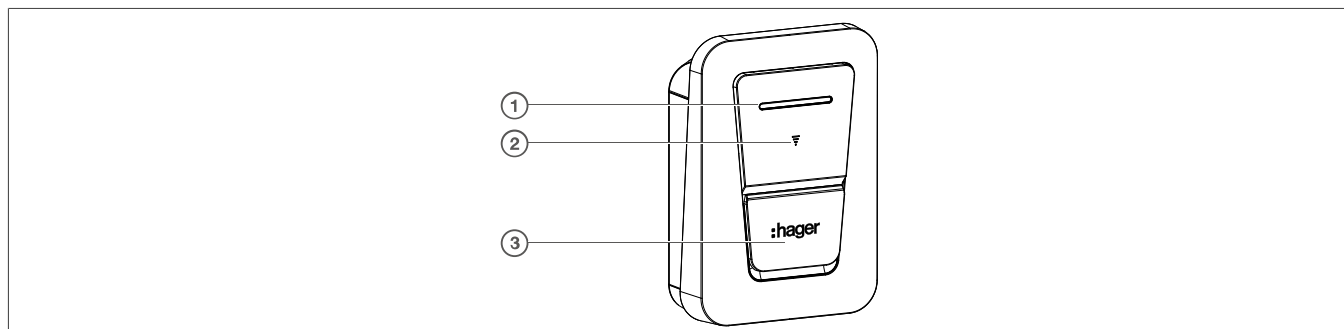


### 3.4 Tools required



## 4 Overview of the device

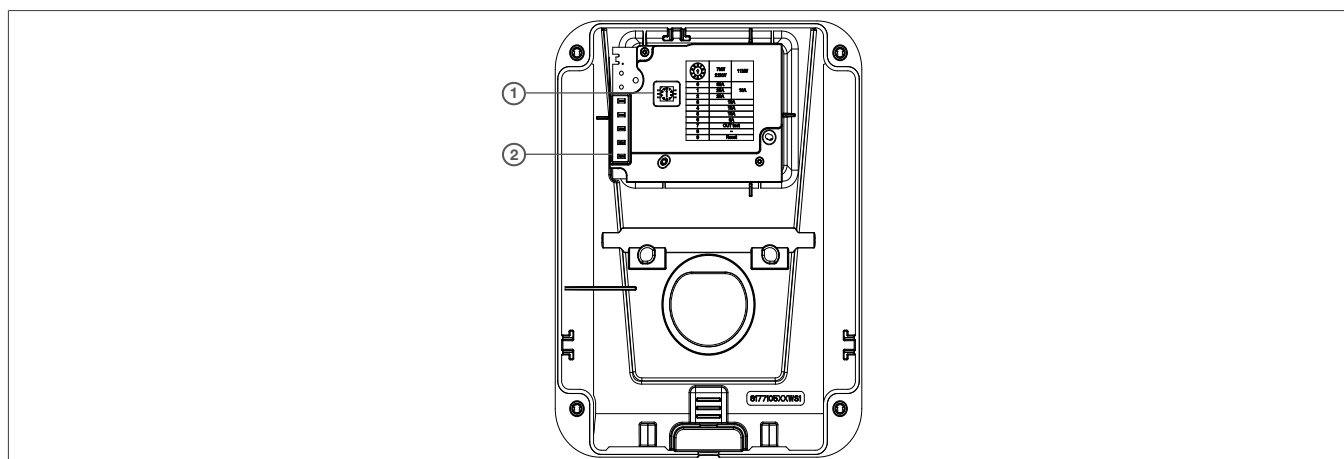
### 4.1 External view of the device



- ① LED light strip
- ② RFID card reader
- ③ Mode 3 socket type T2S

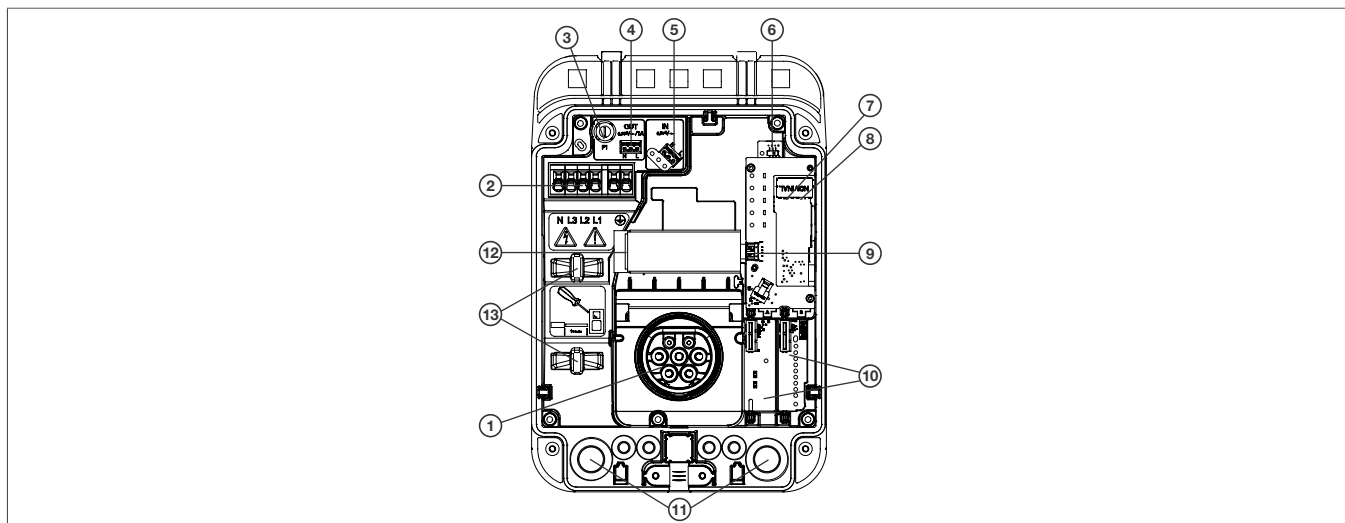
### 4.2 Internal view of the device

#### Cover



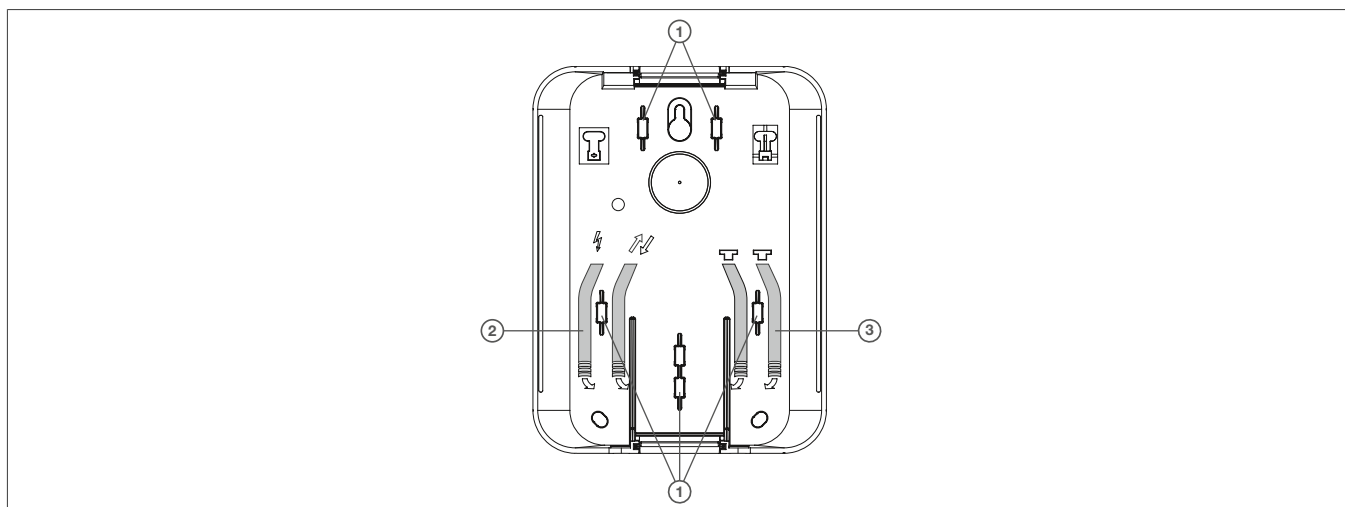
- ① Rotary switch for max. current
- ② Blade connector for HMI

#### Charging station body



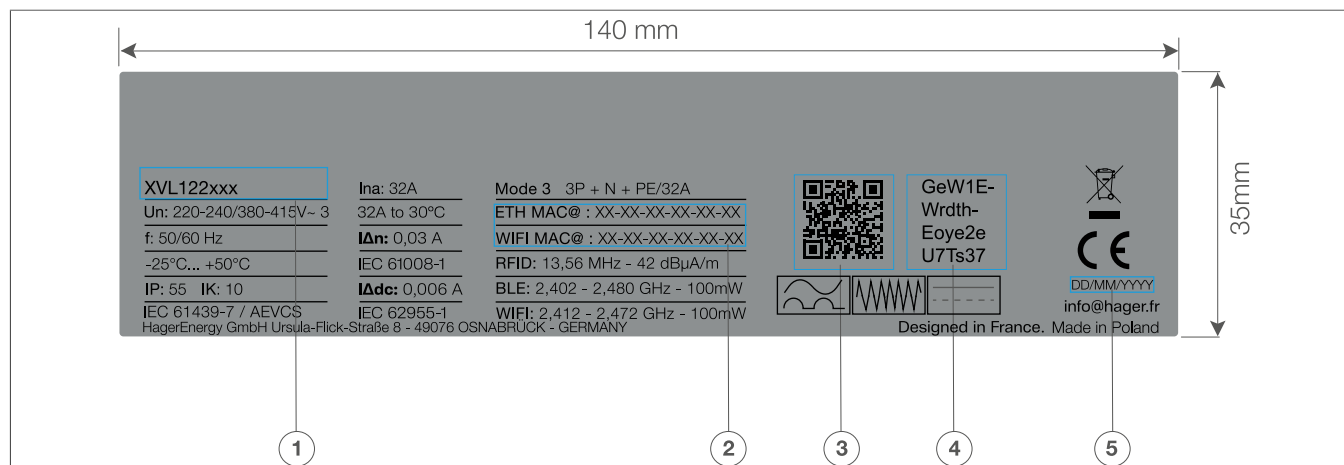
- ① Mode 3 type T2S connection socket
- ② Supply terminal block
- ③ Output contact protection - fuse T3.15AH250V 5x20mm
- ④ Output contact terminal block 220-240 V~ 1 A max
- ⑤ Input contact terminal block 220-240 V~
- ⑥ Not used
- ⑦ RJ45: Ethernet
- ⑧ RJ45: Ethernet
- ⑨ USB connector
- ⑩ Slots for optional cards
- ⑪ Cable entry sleeve
- ⑫ MID meter
- ⑬ Cable fastener

#### Charging station base



- ① Securing the cables
- ② Sleeve for power supply cable and input/output cables (optional)
- ③ Cable inlets and outlets for optional cards

### Label



- ① Product reference - Variable field
- ② Ethernet and Wi-Fi MAC address - Variable field
- ③ QR code - Variable field
- ④ IUD (Unique IDentifier) – Variable field
- ⑤ Manufacturing date- Variable field



## 5 Installation



### Danger

Danger of death by electric shock.

Contact with live parts can cause death by electric shock.

- Before working on the device, unlock all the corresponding circuit breakers, check that they are voltage-free and secure them before restarting the device.
- Cover the nearby conductive parts.



### Warning

Risk of fire due to device overload.

If the power cable is not properly dimensioned, there is a risk of fire due to device overload.

- Prepare the power cable according to the technical specifications of the device.

The charging station has been designed for indoor and outdoor use. It is therefore necessary to comply with the installation conditions.

- Do not install the charging station in an explosion-hazard area (EX environment), or in premises where ammonia is present.
- Do not install the charging station in a passageway area to avoid any risk of tripping on the charging cable.
- The charging station must not be exposed to a water jet (wash station, pressure washer, garden hose)
- The charging station must be protected, as far as possible, from direct sunlight to avoid overheating and visual degradation of the plastic components.
- The power supply line of the charging station must be dimensioned according to the technical characteristics of the device and installed in compliance with the installation requirements in force.

### 5.1 Protective device requirements

- Each individual charging station shall be protected by a separate RCD with a rated residual current of 30 mA. This charging terminal includes a built-in protection of 30 mA AC according to EN 61008-1 and SN EN 61008-1.
- No other load should be connected to this circuit.
- The protective device shall cut off all phases, including the neutral conductor. This charging station has a built-in protection of 6 mA DC and is therefore compatible with type A and F residual-current devices.

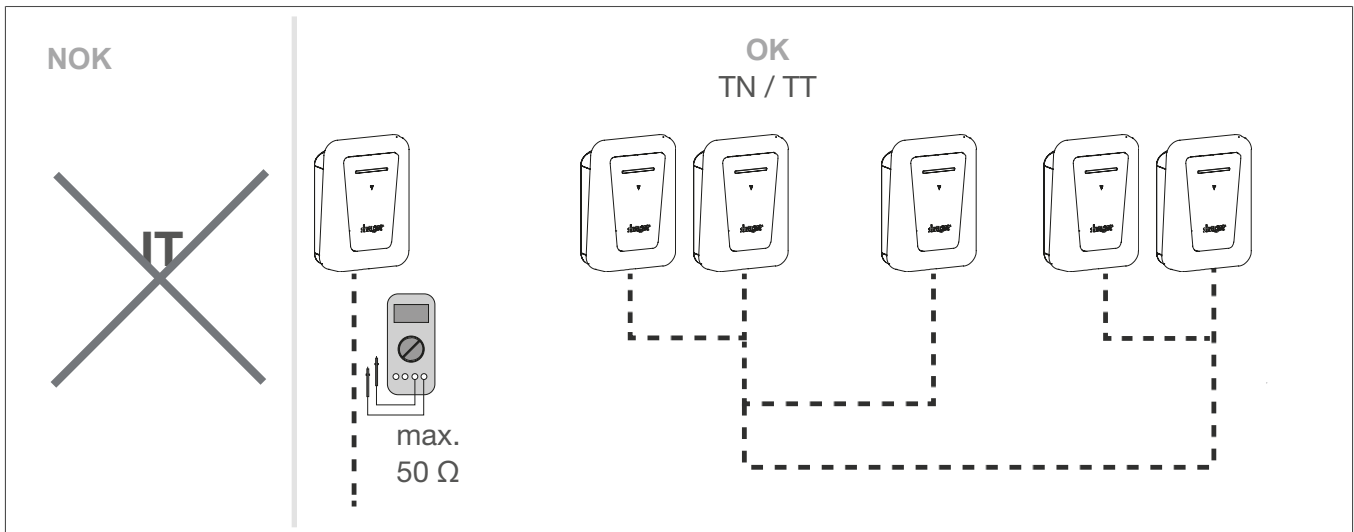
#### Dimensioning of the protective device

The charging station must be protected by a 32 A circuit breaker, curve type C, with the appropriate breaking capacity for the installation.

Dimension the devices according to the information on the rating plate, the technical specifications and the setting dial of the charging station.

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

#### Earth resistance and neutral systems allowed



#### Caution

According to EN IEC 61851-1, this charging station incorporates a DC-CDC compliant with IEC 62955. If a DC component  $> 6$  mA is detected at the fault current, this DC-CDC acts on the embedded power relays of the charging station, which automatically cut off the power supply to the charge point. This 6 mA DC detection device makes a type B residual current device redundant. All circuits of the building must be installed in completely the same structure (from the electrical point of view).



#### Caution

As per SNG 491000-2123, this charging station incorporates a DDR of 30 mA AC in accordance with EN 61008-1 and SN EN 61008-1. If an AC component greater than 30 mA is detected at the rated fault current, the DDR acts on the power relays built into the charging station which automatically cut off the power supply to the charging station. To provide a maximum safety level, this feature can be coupled to a trip coil (mounted on the upstream protection device) and controlled by the output referenced OUTPUT of the charging station.



#### Information

A maximum of 5 charging stations can be connected to one earth terminal, with a recommended earth resistance of max. 50  $\Omega$ .



#### Danger

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

Transient overvoltages due to atmospheric phenomena or switching can destroy electronic components.

- Install overvoltage protection units upstream of the electronic household consumption meter. Upon the dimensioning step, take local conditions into account.

Provide surge protection devices for charging stations in public and semi-public areas, in accordance with the local standards in force.

## 6 Mounting the charging station

### 6.1 Preparatory work



#### Danger

Danger of death by electric shock.

Contact with live parts can cause death by electric shock.

- Before working on the device, unlock all the corresponding circuit breakers, check that they are voltfree and secure them before restarting the device.
- Cover the nearby conductive parts.



#### Danger

Risk of injury due to falling/tipping of the charging station

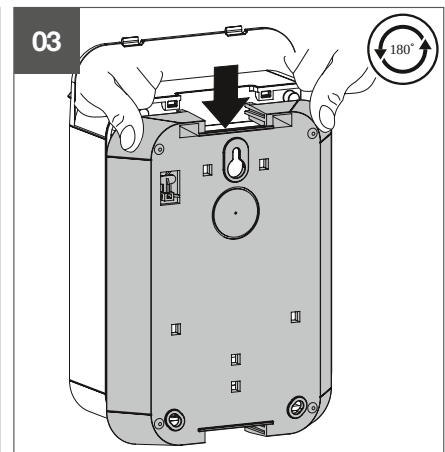
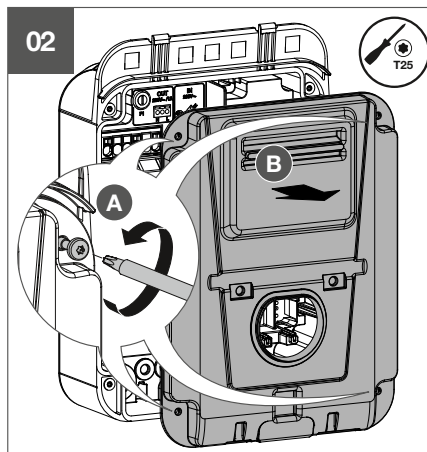
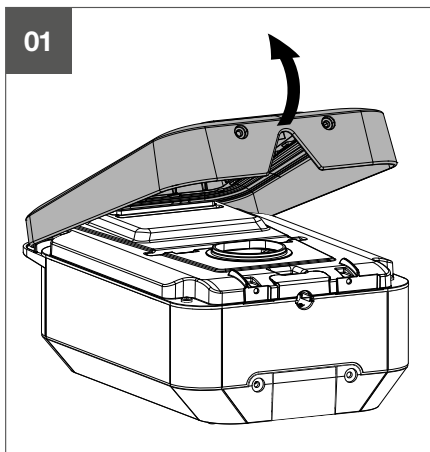
Use appropriate fixings to prevent the charging station from falling and causing injuries.

- Adapt the installation accessories to the requested conditions at the installation location. The fixings supplied are suitable for concrete and masonry.



#### Information

Upon delivery, the front panel and the mounting bracket are not screwed in.



#### Prerequisites

Mounting can be done on a wall, column or pole. Horizontal installation on the ceiling or floor is prohibited.

If the temperature difference between the storage and the installation site is too high, the charging station must be brought to ambient temperature

Before mounting the charging station, make sure that all of the cables are present:

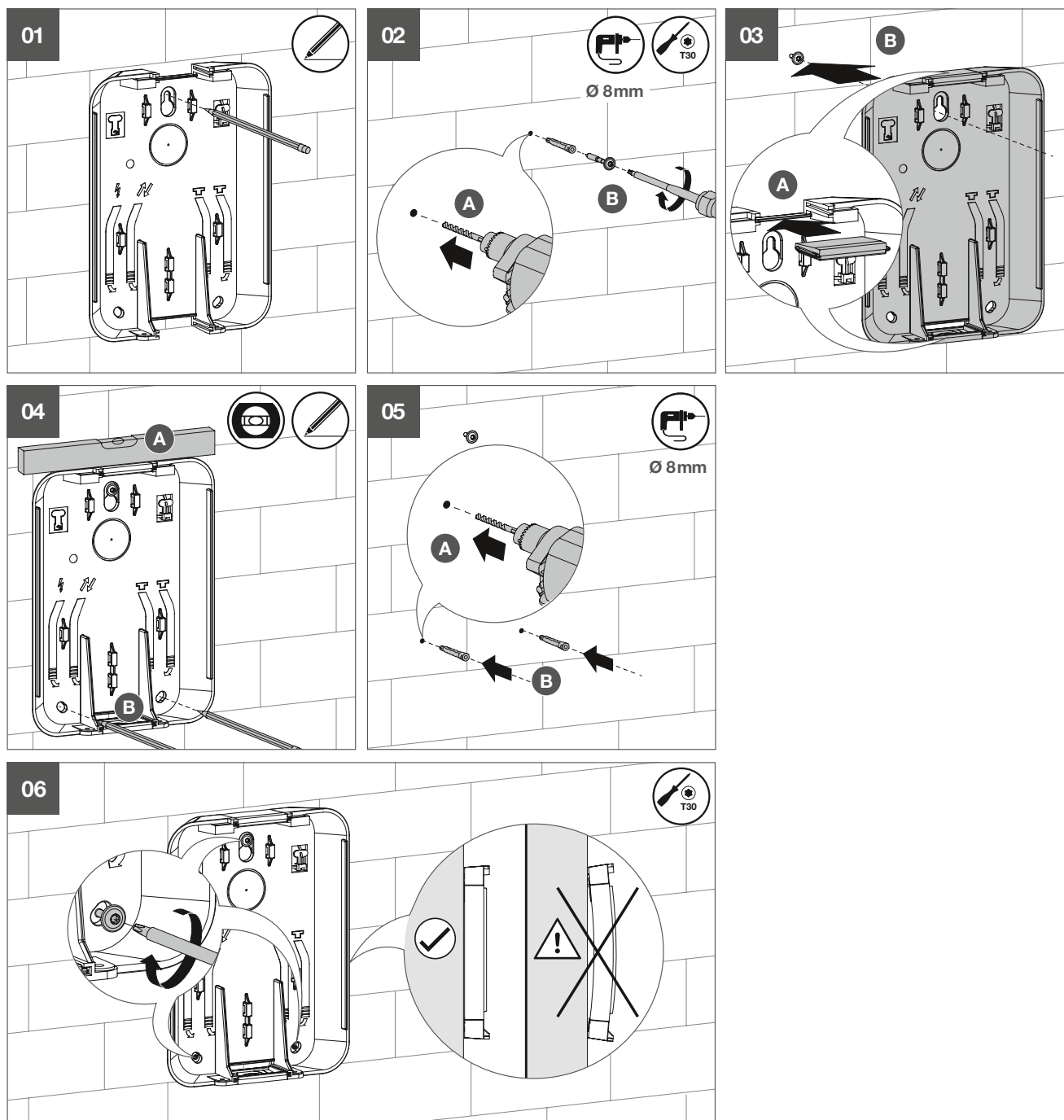
- L + N + Earth for a 1-phase terminal cable section: The minimum cable section for a charging terminal with a 32 A power supply is 10 mm<sup>2</sup>. It is absolutely necessary to take into account the maximum admissible length of cable.
- 3 L + N + Earth for a 3-phase terminal cable section: The minimum cable size for a load terminal rated at 32 A is 10 mm<sup>2</sup>. It is absolutely necessary to take into account the maximum admissible length of cable.
- The maximum cross-section of the power conductors is 10 mm<sup>2</sup> for multiwire and single-stranded conductors.

The optional cables (input / output) are laid at the mounting location:

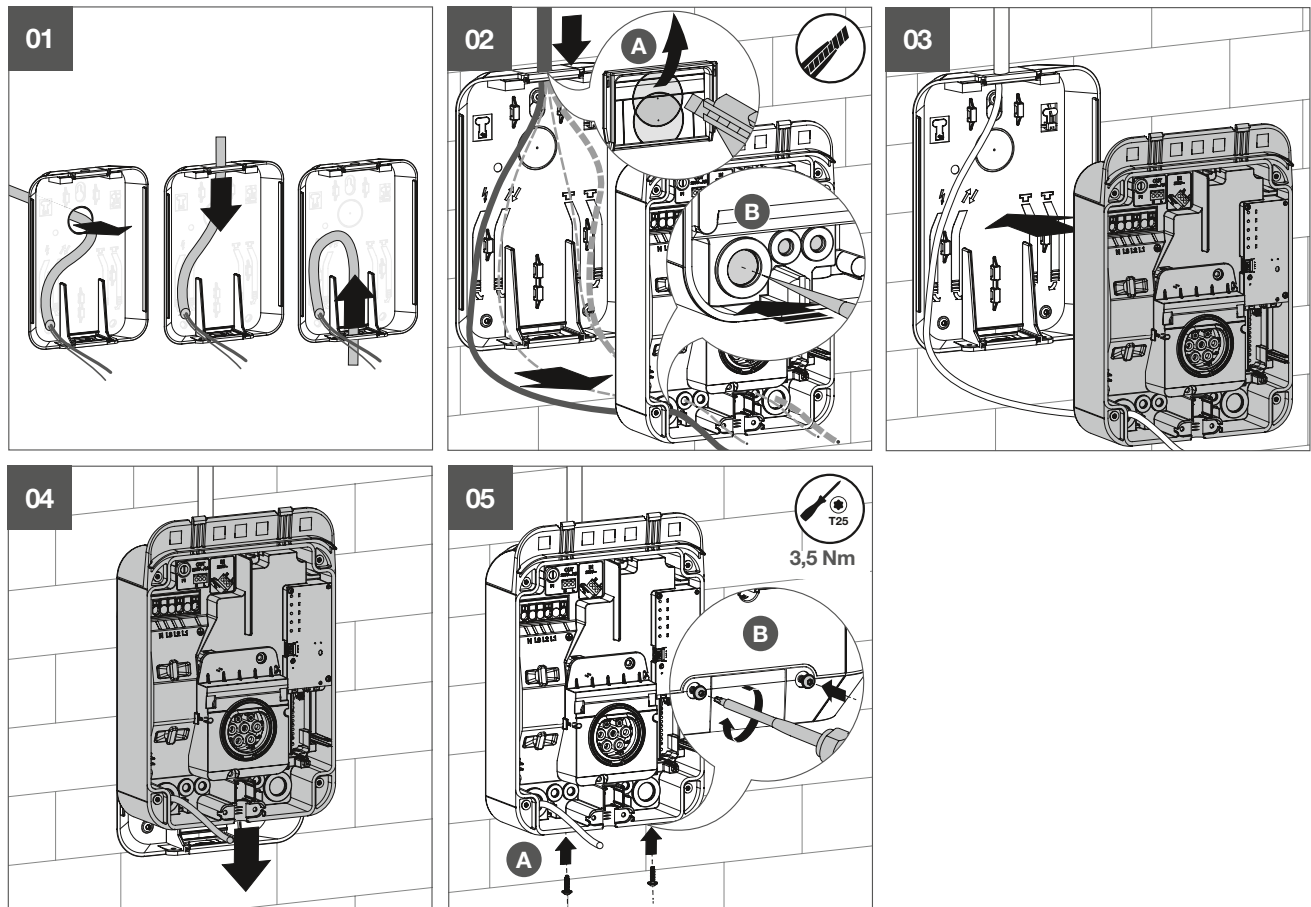
- L + N for connection of input IN and/or output OUT.
- The cross-section of the conductors must be between 0.75 mm<sup>2</sup> and 2.5 mm<sup>2</sup>. It is absolutely necessary to take account of the power conveyed on these cables as well as their length.

The optional cables used to connect the optional cards (see the optional card installation instructions)

## 6.2 Wall mounting



The connecting cables can enter the charging station from the rear, the top, or from below.



## 7 Electrical connection



### Danger

Danger of death by electric shock.

Contact with live parts can cause death by electric shock.

- Before working on the device, unlock all the corresponding circuit breakers, check that they are voltage-free and secure them before restarting the device.
- Cover the nearby conductive parts.



### Caution

Special attention must be paid to the phase order when connecting to the terminal block (marked N-L3-L2-L1-PE).

This protection ensures correctly measured and calculated power consumption data.

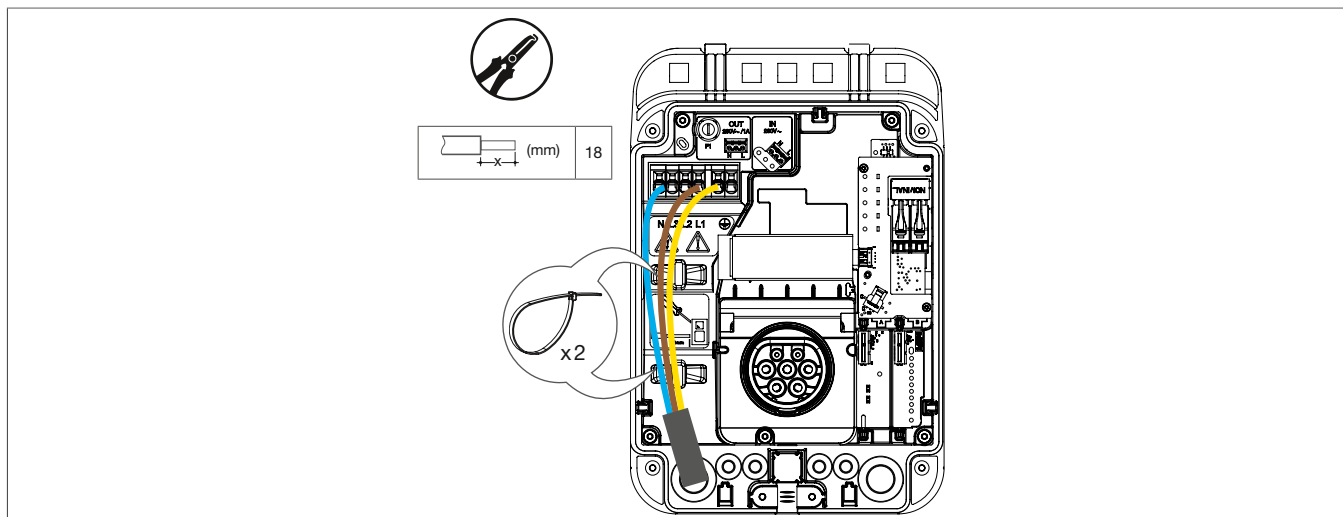
Phase rotations are allowed but must be configured using the mobile app.



For earth connection to the mounting pedestal, please refer to the mounting pedestal manual (XVA130-XVA135)

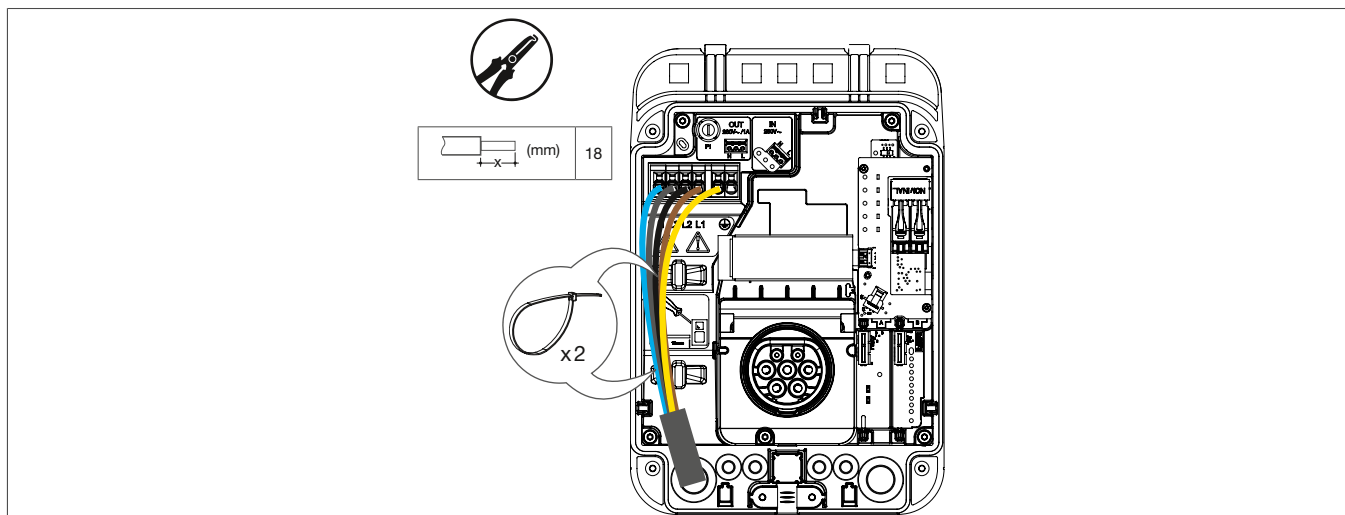
### 7.1 Connection to the power terminal block

**1-phase connection:**



**3-phase connection:**





The power supply terminal block is a spring terminal block.

The admissible cable cross-sections are:

- Rigid (min-max): 0.75 mm<sup>2</sup> ... 16 mm<sup>2</sup>
- Flexible (min-max): 0.75 mm<sup>2</sup> ... 16 mm<sup>2</sup>
- Flexible with end piece (min-max): 0.75 mm<sup>2</sup> ... 16 mm<sup>2</sup>

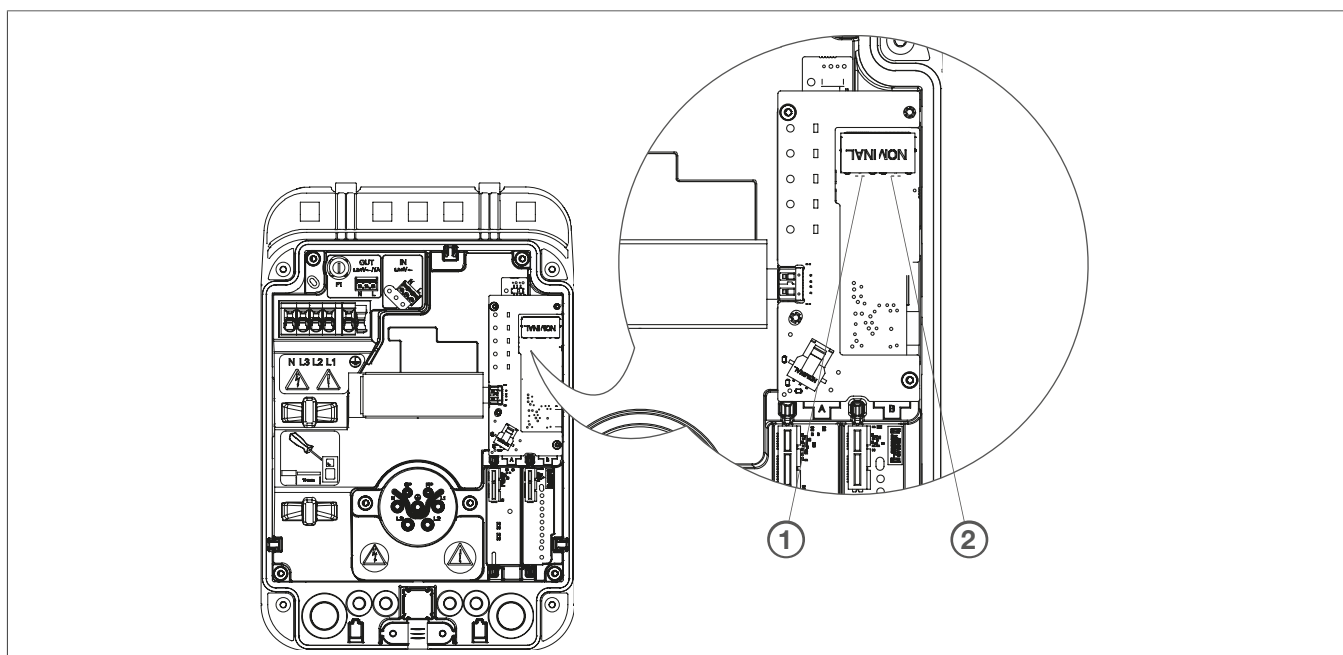
Conductors must be stripped over a length of 18 mm.

## 7.2 Connection to the communication interface

The charging station for electric vehicles is fitted with 2 Ethernet ports.

The Ethernet interface provides a fast, stable connection to the local network or the Internet, making it easy to add charging stations into wider network infrastructures, enabling effective remote monitoring and control.

### Principle



- ① RJ45 connector: Ethernet connection
- ② RJ45 connector: Ethernet connection

The charging station is fitted with 2 RJ45 connectors for Ethernet network connection.

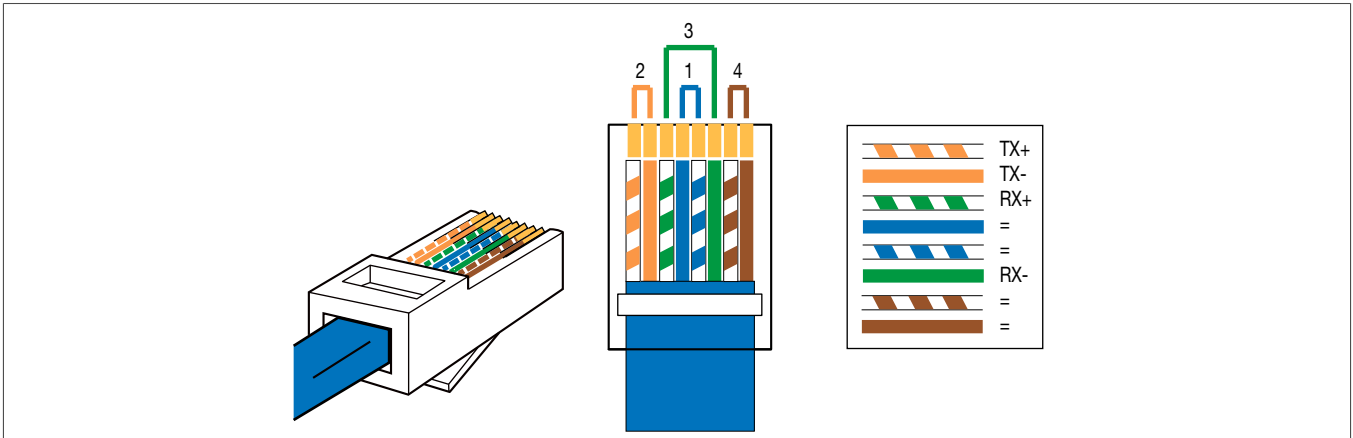
The presence of two Ethernet ports allows Daisy Chain operation which consists of connecting several devices in series, like a chain.

### Wired Ethernet connection

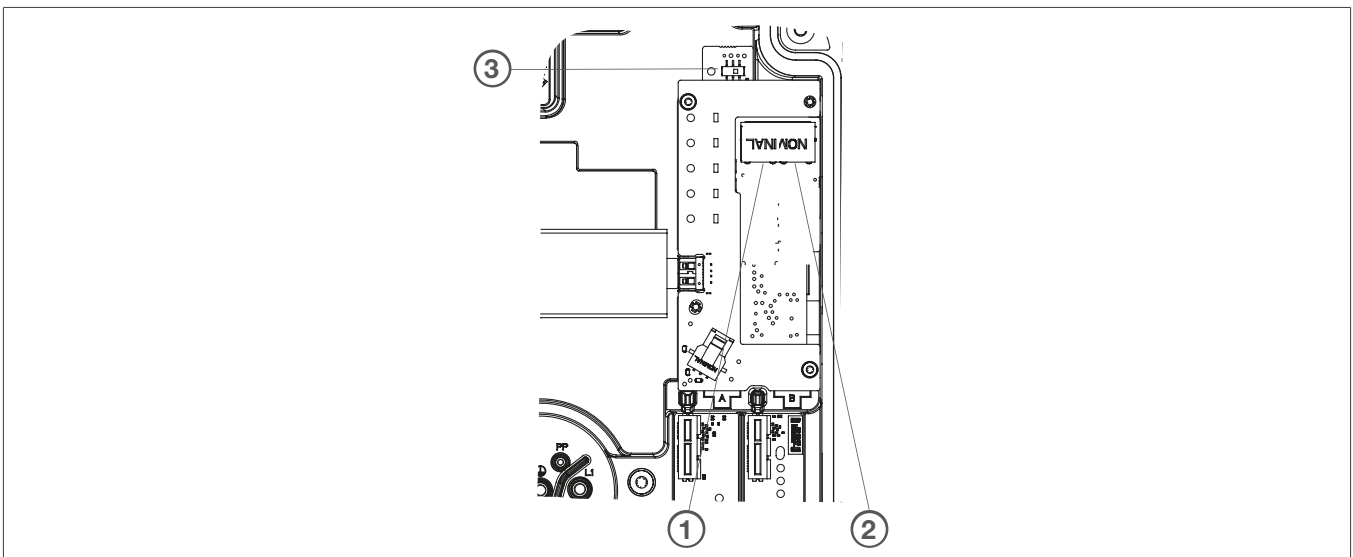


#### Warning

Use an AWG 23 or AWG 24 Ethernet network cable if possible  
The R02V or twisted telephone cable type is prohibited.



- ① Not used
- ② TX Ethernet
- ③ RX Ethernet
- ④ Not used

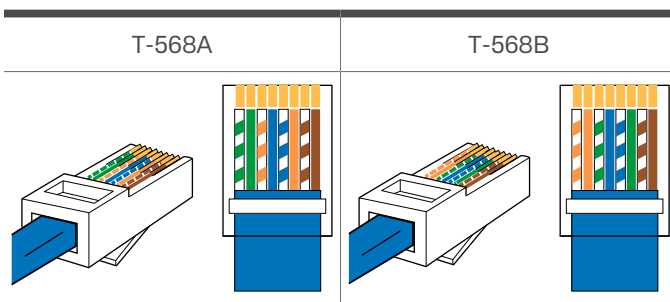


- ① Connect the RJ45 connector to location or (Ethernet connection).

### - Type of wiring

The T-568A and T-568B standards define wiring diagrams for RJ45 connectors used in Ethernet networks. They determine the exact order of the wires in a twisted pair Ethernet cable

#### RJ45 pinout



### Main differences between T-568A and T-568B

- Reversal of orange and green pairs:
  - The orange pair and the green pair are reversed between the two standards.
  - In T-568A, the green pair is placed before the orange pair, while in T-568B, it is the reverse.
- Compatibility:
  - Both standards ensure identical transmission performance.
  - As long as both ends of an Ethernet cable follow the same standard (T-568A or T-568B), the cable will function as a straight-through cable.



#### Best practices

- Choosing a single standard for the entire installation ensures consistency of wiring and helps avoid errors during connections.
- T-568A is recommended for installations that comply with international standards (TIA/EIA-568).
- T-568B is the most frequently used standard in commercial networks.



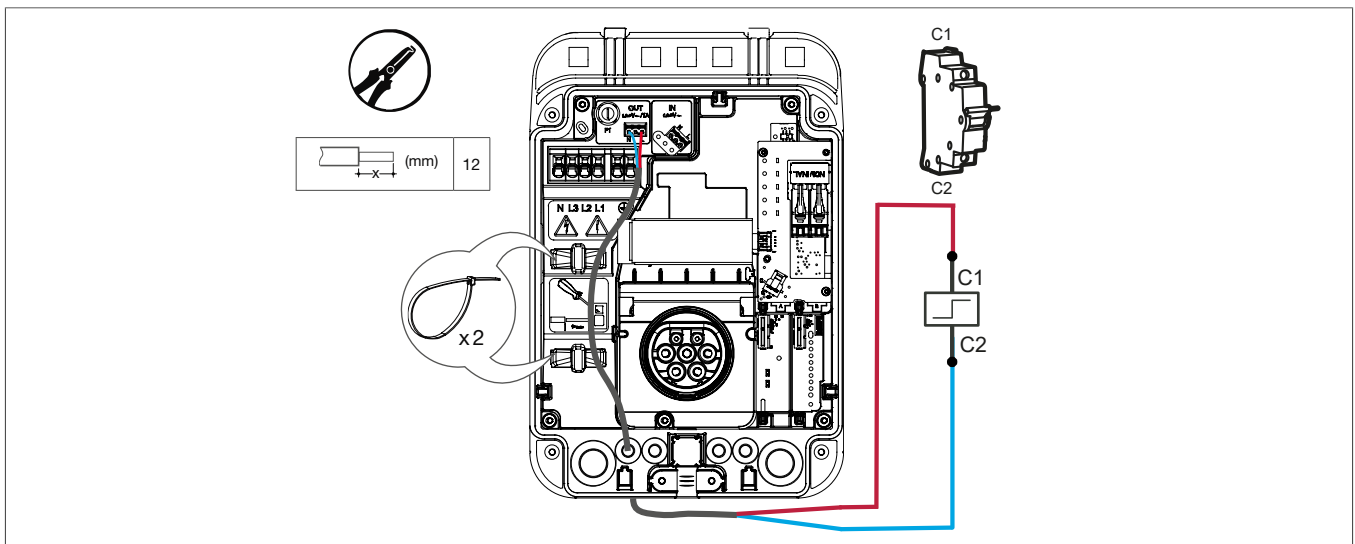
For network connection configuration, please refer to the chapter [Advanced Configuration](#)

## 7.3 Connection of the output (optional)

### Bonded contact detection function wiring

The 220-240V output can be used to add additional protection to the charging station

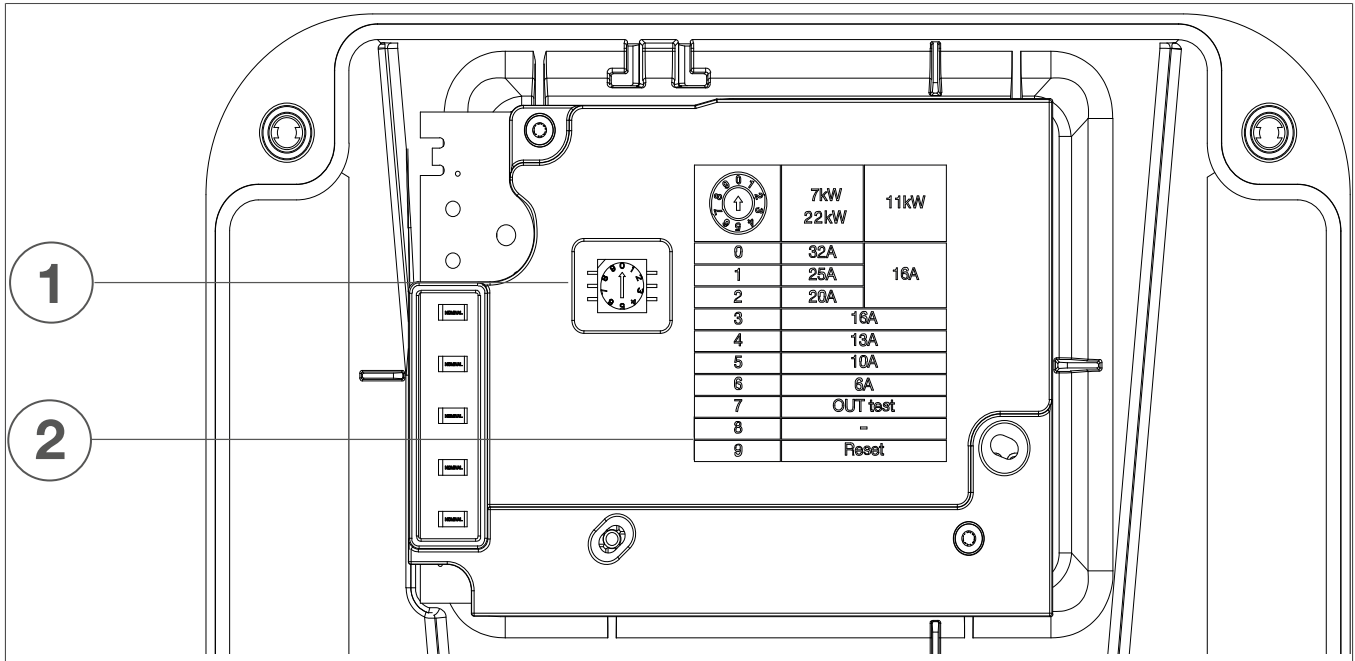
The shunt trip - 230/415 VAC - HAGER MZ203, also called shunt trip coil, provides comprehensive electrical safety for your charging station as an optional addition to the compulsory dual-safety provided by the residual-current disconnecter and circuit breaker. It is used to cut off the power supply to the charging station if the relay of the T2 socket is stuck.



The charging station delivers a 230V supply to this output terminal block, with short circuit protection provided by a 3.15A/250V fuse.

### Output contact testing

The output contact can be tested using the setting dial(1).



#### Process for output contact testing:

- 1 Turn off the charging station for 20 seconds.  
When doing so, take the RCD and all circuit breakers into account.
- 2 Set the dial to 7.
- 3 Close the cover and turn on the charging station again.  
The charging station status LED flashes red. The output contact closes and remains closed until the terminal is de-energised.
- 4 Turn off the charging station for 20 seconds.  
The output contact opens.
- 5 Open the charging station cover and set the dial between 0 and 6.
- 6 Close the cover and turn on the charging station.

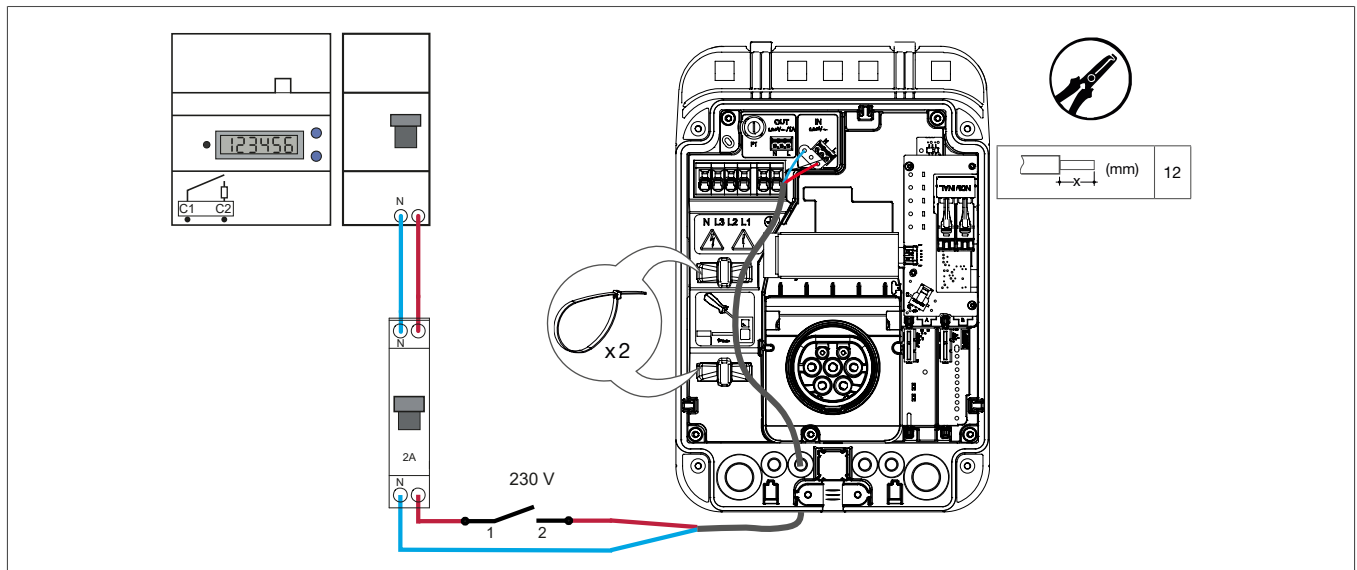
## 7.4 Connection of the input (optional)

The 220-240V input can be used to control the operation of the charging station with an external component. It must be configured using the embedded WEB app during commissioning.

Add input protection (circuit breaker 2A curve C)

## Electrical connection

### Connection of the input (optional)



The admissible cable cross-sections are:

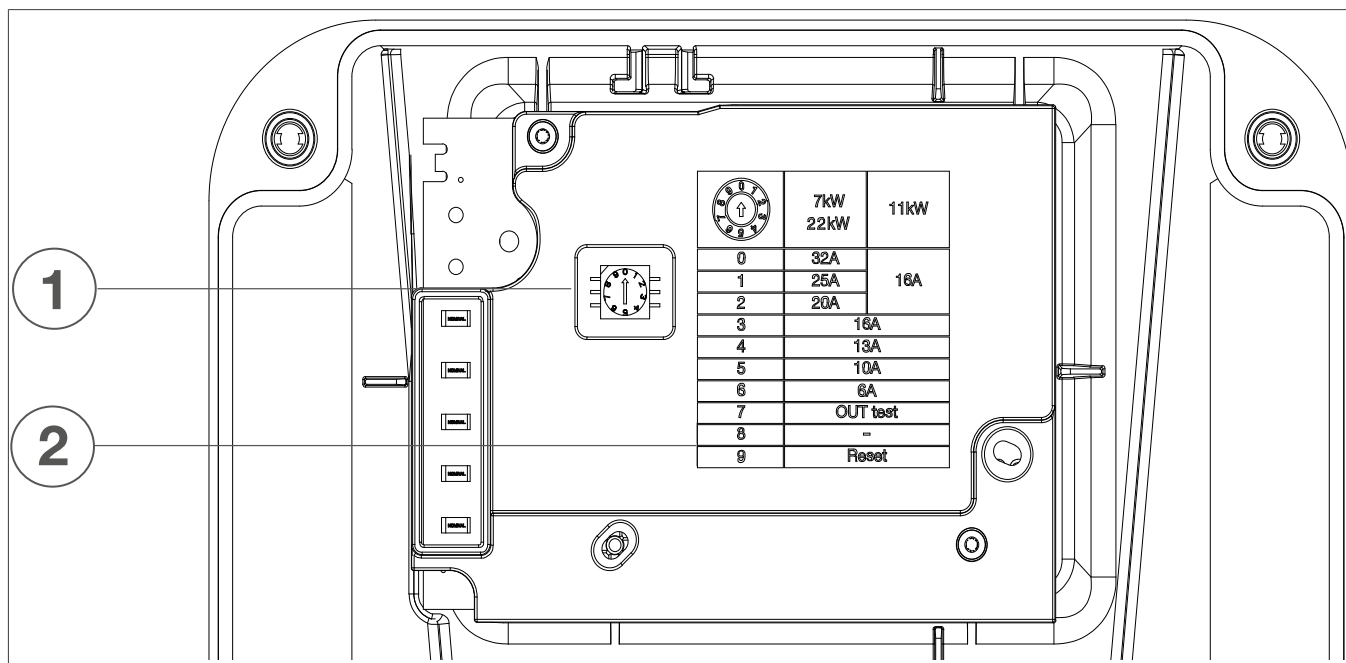
- Rigid (min-max): 0.75 mm<sup>2</sup>...2.5 mm<sup>2</sup>
- Flexible (min-max): 0.75 mm<sup>2</sup>...2.5 mm<sup>2</sup>
- Flexible with end piece (min-max): 0.75 mm<sup>2</sup>...2.5 mm<sup>2</sup>

Conductors must be stripped over a length of 12 mm

## 8 Settings

### 8.1 Operating current and connection type

The factory-set values (32 A operating current for a 3-phase connection) must be checked and adjusted if necessary. The maximum operating current (2) can be set by means of the setting dial (1).



Note the maximum operating current setting on the device:

- Peel off the sticker corresponding to the adjustment made
- Attach this sticker to the charging station near the rating plate.

### 8.2 Reset from the charging station

This procedure resets the charging station without using the application.



#### Information

This procedure will delete :

- the connection with paired phones
- the connection to paired badges and their parameters
- the parameters for the network load-shedding input.

#### Reset procedure:

- 1 Turn off the charging station for 20 seconds.  
When doing so, take the RCD and all circuit breakers into account.
- 2 Set the dial to 9.
- 3 Close the cover and turn on the charging station again.  
The charging station status LED turns red. The charging station is being reset. This is effective as soon as the status LED flashes red.
- 4 Turn off the charging station for 3 minutes.  
When doing so, take the RCD and all circuit breakers into account.

## Settings

### Reset from the charging station

---



- 5 Open the charging station cover and set the dial between 0 and 6.
- 6 Close the cover and turn on the charging station.



### 9 Final assembling

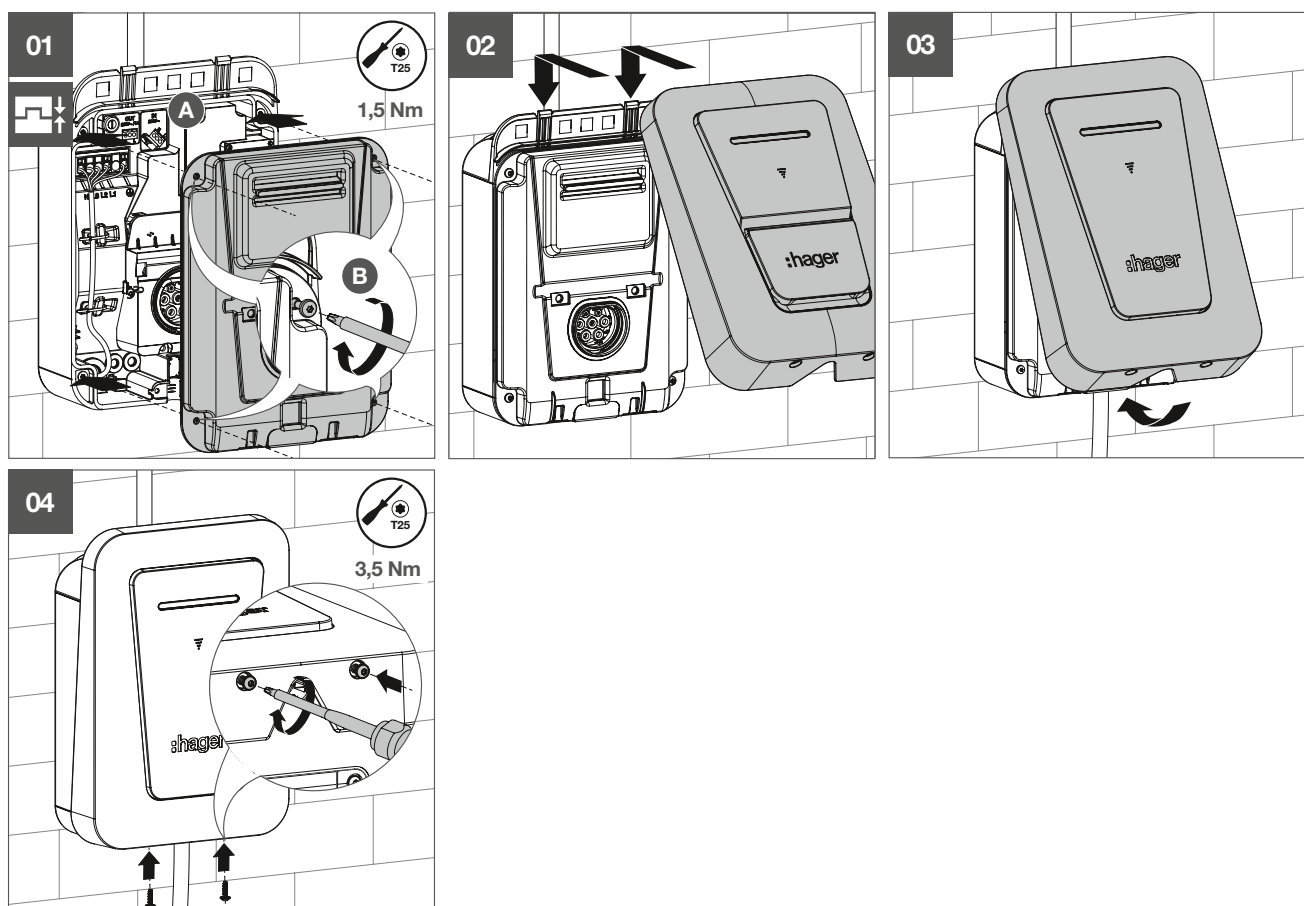


#### Danger

Danger of death by electric shock.

Contact with live parts can cause death by electric shock.

- Do not switch on the charging station until the front of the charging station is locked.



#### Information

IP55 protection could be lost:

- If the tightening torque is not respected (see tightening torque picture 1)

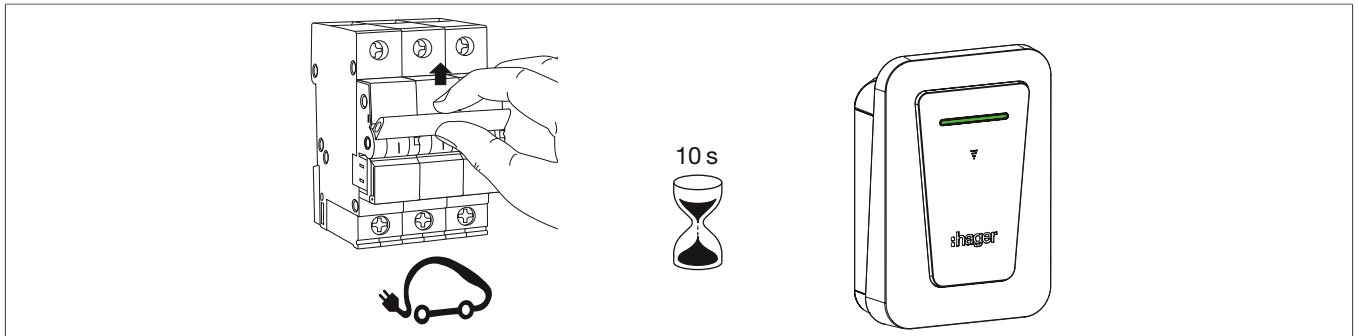
## 10 Commissioning



### Information

Before commissioning, check that the charging station is not connected to the electric vehicle.

After the charging station is switched on for the first time, initialization is complete when the LED indicator strip remains solid green.



The charging station is now functional. It can be used to recharge an electric vehicle.

## 11 Advanced Configuration

The charging station shown is compatible with the Open Charge Point Protocol (OCPP) in version 1.6 JSON, guaranteeing complete interoperability with supervision systems compliant with this open standard.

The startup configuration and permanent communication with the backend is via an RJ45 Ethernet interface, ensuring a stable, low latency and secure network connection. The device incorporates OCPP compliant firmware, supporting essential features such as the management of charging sessions, remote firmware updating, status monitoring, and transmission of technical events or alarms in real time.

Configuration of the charging station can be performed in 3 different ways:

- Via the LLM (cf. chapitre 11.1, Configuration via LLM ),
- Via the embedded webapp, in a wired TCP/IP connection (cf. chapitre 11.2, Configuration via a wired TCP/IP connection ),
- via the embedded webapp, via wifi (cf. chapitre 11.3, WiFi configuration ).

### 11.1 Configuration via LLM

Configuration is performed via our load manager with OCPP 1.6.

For more information, please refer to <http://www.hgr.io/r/xem510> or <http://www.hgr.io/r/xem520> depending on the product range.

### 11.2 Configuration via a wired TCP/IP connection

The computer used for configuration must be in the same LAN as the charging station.

Open the web browser and enter the following address:

Last [http://hager-evcs-\[Last 6 characters of the UID\]](#)



#### Information

The last 6 characters of the UDI can be found on the identification plate of the charging station next to the QR code ( [See label](#) ).

Login: admin

Password: the first 4 characters of the UID

### 11.3 WiFi configuration

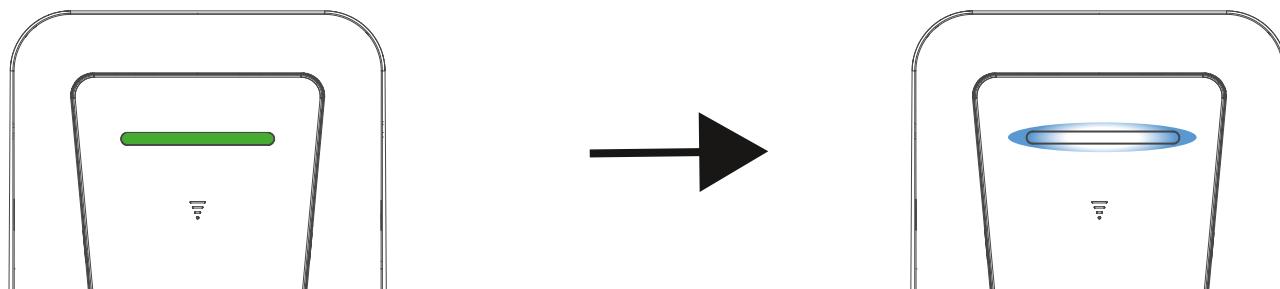
The charging station allows the creation of a temporary hotspot to facilitate configuration.

To do so, a video is available at <https://r.hagerenergy.com/witty-pro-commissioning-wifi>

## 12 Charging station operation

### 12.1 Operation without a badge

If the charging station does not have access management or restrictions linked to the 220-240V input or a card option, the charging process starts automatically.



The signal strip flashes blue when charging.

If the signal strip flashes green and white alternately, the charging station is waiting for a charging authorisation.

It can be done with an RFID badge properly configured to be passed close to the  logo on the front of the charging station.

### 12.2 Operation with a badge

Access control can be configured on the charging station or via the load manager interface. To do so, a valid RFID badge for the charging station is needed.

After connecting the charging station plug to the vehicle, the signal strip flashes (green and white) while waiting for the badge.

- Display the badge close to the logo on the front of the charging station.



If the badge is valid, the signal strip flashes blue. Charging begins.

If the badge is not valid, the warning strip flashes red.

### 13 Charging an electric vehicle

#### 13.1 Preparation for a charging session

The charging station is ready to operate when the LED signal strip is green.

- Connecting the charging cable to the vehicle
- Connect the charging cable to the charging socket of the charging station.

The vehicle is ready to be charged and the charging process can start.

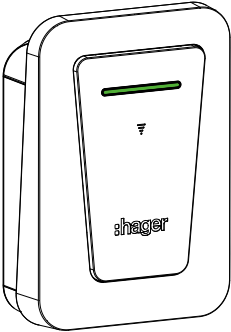
#### 13.2 Stopping a charging session

If the charging station does not have access management, charging is stopped through the vehicle. Please refer to your vehicle's owner's manual for more information.

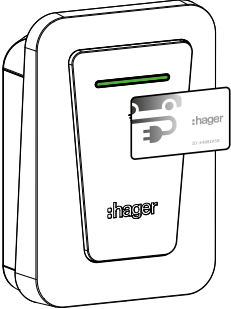
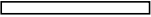
If access to the charging station is controlled, charging can then be stopped through the vehicle or by passing an authorised RFID badge near the  logo on the front of the charging station.

#### 13.3 LED light strip

Operation:

|                                                                                    |                                                                                     |                                                                                  |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|  |   | Charging Station Ready                                                           |
|                                                                                    |  | Waiting for vehicle authorisation or waiting for sufficient power on the network |
|                                                                                    |  | Waiting for user authorisation                                                   |
|                                                                                    |  | Charging in progress                                                             |

Operation with the badge:

|                                                                                     |        |                                                                                     |                                                  |
|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------------------------------------------------|
|  | <1s    |  | RFID badge reading                               |
|                                                                                     | 3s< 6s |  | Charging to forcing or returning to default mode |
|                                                                                     | 6s<    |  | Pairing mode                                     |

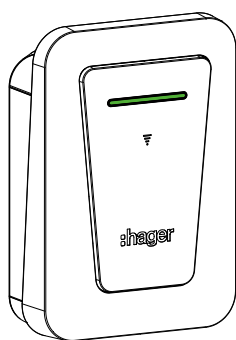
Fault display:



#### Caution

Damage to the charging station due to a critical error.

- If a critical error is indicated by a solid red light, turn off the charging station for 2 minutes to clear the error.



Charging station faulty

## 14 Maintenance



### **Danger**

Danger of death by electric shock.

Contact with live parts can cause death by electric shock.

- Before working on the device, switch off all relevant circuit breakers.
- Cover the nearby conductive parts.
- Before carrying out any work on the device, disconnect the charging cable from the charging station and the electric vehicle

Maintenance work must be carried out at regular intervals, taking into account the age and condition of the device, environmental factors as well as usage levels.

Semi-annual maintenance by operator/end customer (recommendation)

- Check that there is no damage to the outside of the unit. In case of damage, take the unit out of service immediately and contact a qualified electrician.
- Check that the electrical switching and safety devices in the secondary distribution system are functioning perfectly and have no visible defects.

## 15 Appendix

### 15.1 Technical specifications



#### Information

This document is not contractually binding and is subject to change without notice

#### Environmental conditions

|                                                             |                                      |
|-------------------------------------------------------------|--------------------------------------|
| Operating temperature                                       | -25°C to +50°C                       |
| Storage temperature                                         | -35°C to +70°C                       |
| Relative humidity                                           | 5% to 95%                            |
| Protection                                                  | IP 55 - IK 10                        |
| Maximum operating altitude                                  | 2000 m                               |
| Degree of contamination                                     | 3                                    |
| Shock voltage $U_{imp}$                                     | 4 kV                                 |
| Rated breaking capacity $I_{cn}$ AC according to IEC60898-1 | 6 kA                                 |
| Use                                                         | intended for use by ordinary persons |

#### Electrical characteristics

|                                                                      |                                                                                   |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Voltage $U_e$                                                        | 220-240/380-415V~                                                                 |
| Nominal insulation voltage $U_i$                                     | 250 V~ / 500 V~                                                                   |
| Frequency of use $f_n$                                               | 50/60 Hz +/- 1%                                                                   |
| Rated current $I_{na}$ / Maximum charging capacity Mode 3            | 32A - 22 kW                                                                       |
| Electrical protection class                                          | Class I (protective earth)                                                        |
| Overvoltage category                                                 | III                                                                               |
| Earth connection diagram                                             | TN-S, TN-C, TT                                                                    |
| Upstream protection                                                  | RCBO 3P+N C CURVE 40A<br>RCBO 1P+N C CURVE 40A<br>(In accordance with IEC60898-1) |
| Power consumption at idle                                            | 4.7 W                                                                             |
| Conductor cross-section (rigid)                                      | 2.5 - 16 mm <sup>2</sup>                                                          |
| Conductor cross-section (flexible)                                   | 2.5 - 16 mm <sup>2</sup>                                                          |
| Built-in differential protection in accordance with IEC62955         | 6 mA DC                                                                           |
| Modbus/Ethernet circuit type permitted in accordance with IEC62368-1 | SELV TRT-1 (1500V max transient overvoltage)                                      |

#### Mechanical properties

|        |        |
|--------|--------|
| Weight | 3.8 kg |
| Height | 370 mm |
| Width  | 250 mm |
| Depth  | 150 mm |

#### Packaging specifications

|        |        |
|--------|--------|
| Weight | 7.9 kg |
| Height | 595 mm |
| Width  | 270 mm |
| Depth  | 300 mm |

#### Classification

|                                        |                                                                                                          |
|----------------------------------------|----------------------------------------------------------------------------------------------------------|
| Power input                            | power supply system for electric vehicles (EV) permanently connected to alternating current power supply |
| Power output                           | alternating current power supply system for EV                                                           |
| Environmental and operating conditions | for indoor and outdoor use                                                                               |
| Location                               | for open or restricted access areas                                                                      |
| Ventilation                            | not supported                                                                                            |



### Classification

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Types of badges accepted                                 | MIFARE classic, 1k/4k; MIFARE DESFire EV1 & EV2 SAM AV3 - RFID ISO 14443A/B; ISO15693. - NFC tags 1, 2, 3, 4, 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Compatibility with differential protection               | Detection 6 mA DC is integrated in the charging station according to EN 61851-1. Detection 30 mA AC integrated in the charging station according to EN 61008-1 and SN EN 61008-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electric vehicle (EV) power supply input                 | Power system connected to AC mains (permanently connected)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Power supply output                                      | Alternating current power supply system for the EV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Assembly type                                            | AEVCS, enclosed mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| EMC classification                                       | Immunity and emission (Class B) for residential application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mounting type                                            | Stationary equipment for surface-mount installation on walls, pedestals, fixed poles, columns or conduits. DO NOT INSTALL horizontally on ground or ceiling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Charging mode                                            | Mode 3 via T2S socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Adapter (in accordance with the standard EN IEC 61851-1) | No plug adapter may be used between the charging station and the charging cable or between the charging cable and the car. Adapters may only be used in the charging socket of the electric vehicle if they have been specially designed and approved for this purpose by the vehicle or charging station manufacturer and comply with applicable national standards. These adapters must comply with all standards applicable to the adapter parts that are connected to the charging cable plug or the charging socket of the electric vehicle. These specific conditions of use must be indicated on the adapter, e.g. IEC 62196 series. The use of adapters that change the charging mode of the charging station is prohibited. |
| Cable length and cable extension                         | No extension of the charging cable is permitted; the charging cable must be in one piece and no longer than 7.5 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### Input (IN) / Output (OUT)

|                     |           |
|---------------------|-----------|
| Input voltage       | 220-240V~ |
| Output voltage      | 220-240V~ |
| Max. output current | 1 A       |

### RFID

|                     |                          |
|---------------------|--------------------------|
| Frequency band      | 13.553 - 13.56 MHz       |
| Max. radiated power | 42 dBμA/m (at 13.56 MHz) |

### Bluetooth

|                     |                   |
|---------------------|-------------------|
| Frequency band      | 2.402 - 2.480 GHz |
| Max. radiated power | 100 mW            |

### Wi-Fi

|                     |                   |
|---------------------|-------------------|
| Frequency band      | 2.412 - 2.472 GHz |
| Max. radiated power | 100 mW            |

### Ethernet

|                |                   |
|----------------|-------------------|
| Flow rate      | 10/100 Mbps       |
| Shape of cable | FTP cat5e minimum |

### Modbus

|                |                                                                                      |
|----------------|--------------------------------------------------------------------------------------|
| Baud rate      | 1200 baud to 38400 baud                                                              |
| Shape of cable | RJ45 Hager cable HTG465H or equivalent (2 twisted pairs 0.25m <sup>2</sup> shielded) |

### Integrated MID meter

|                 |        |
|-----------------|--------|
| Class index     | B      |
| Minimum current | 0.25 A |
| Maximum current | 32 A   |

## 15.2 OCPP Protocol

| Message                       | Core | Firmware<br>Manage-<br>ment | Local Auth<br>List Man-<br>agement | Remote<br>trigger | Reser-<br>vation | Smart<br>Charging |
|-------------------------------|------|-----------------------------|------------------------------------|-------------------|------------------|-------------------|
| Authorize                     | X    |                             |                                    |                   |                  |                   |
| BootNotification              | X    |                             |                                    |                   |                  |                   |
| ChangeAvailability            | X    |                             |                                    |                   |                  |                   |
| ChangeConfiguration           | X    |                             |                                    |                   |                  |                   |
| ClearCache                    | X    |                             |                                    |                   |                  |                   |
| DataTransfer                  | X    |                             |                                    |                   |                  |                   |
| GetConfiguration              | X    |                             |                                    |                   |                  |                   |
| HeartBeat                     | X    |                             |                                    |                   |                  |                   |
| MeterValues                   | X    |                             |                                    |                   |                  |                   |
| RemoteStartTransaction        | X    |                             |                                    |                   |                  |                   |
| RemoteStopTransaction         | X    |                             |                                    |                   |                  |                   |
| Reset                         | X    |                             |                                    |                   |                  |                   |
| StartTransaction              | X    |                             |                                    |                   |                  |                   |
| StatusNotification            | X    |                             |                                    |                   |                  |                   |
| StopTransaction               | X    |                             |                                    |                   |                  |                   |
| UnlockConnector               | X    |                             |                                    |                   |                  |                   |
| GetDiagnostics                |      | X                           |                                    |                   |                  |                   |
| DiagnosticsStatusNotification |      | X                           |                                    |                   |                  |                   |
| FirmwareStatusNotification    |      | X                           |                                    |                   |                  |                   |
| UpdateFirmware                |      | X                           |                                    |                   |                  |                   |
| GetLocalListVersion           |      |                             | X                                  |                   |                  |                   |
| SendLocalList                 |      |                             | X                                  |                   |                  |                   |
| TriggerMessage                |      |                             |                                    | X                 |                  |                   |
| CancelReservation             |      |                             |                                    |                   | X                |                   |
| ReserveNow                    |      |                             |                                    |                   | X                |                   |
| ClearChargingProfile          |      |                             |                                    |                   |                  | X                 |
| GetCompositeSchedule          |      |                             |                                    |                   |                  | X                 |
| SetChargingProfile            |      |                             |                                    |                   |                  | X                 |

## 15.3 Identification of compatible vehicles in accordance with EN 17186

|                     |            |        |                           |             |                                                                                     |
|---------------------|------------|--------|---------------------------|-------------|-------------------------------------------------------------------------------------|
| Alternating current | EN 62196-2 | Type 2 | Plug<br>Power socket base | < 480 V RMS |  |
|---------------------|------------|--------|---------------------------|-------------|-------------------------------------------------------------------------------------|

## 15.4 Power reduction

The maximum load current can be limited by the charging demand from the vehicle and/or the temperature inside the charging station.

## 15.5 CE Declaration of Conformity

Hager hereby declares that the charging station products with reference XVL122SCH comply with the RED 2014/53/EU directive. The EU declaration may be viewed at: [www.hagergroup.net](http://www.hagergroup.net).

## 15.6 Disposal of the charging station

### Disposal note



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.

## 15.7 Warranty

We reserve the right to make technical and design changes to the product in the interest of technical progress.

Our products are under warranty within the scope of the statutory provisions in force. For warranty cases, please contact your trade partner.



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