



Eve Double Plus



EV Charging Stations

Installation Manual

1.	Safety and usage instructions	3	7.	Disposal	42
1.1	Legal entity	3	7.1	Decommissioning and returning	42
1.2	Disclaimer	3	7.2	Waste electrical and electronic equipment (WEEE)	42
1.3	Improper use	3			
1.4	Copyright	3			
1.5	Trademarks	3			
1.6	Languages	3			
1.7	Purpose and intended audience	3			
1.7.1	Article numbers	3			
1.8	Explanation of text instructions used	4			
1.8.1	Safety symbols	4			
1.9	General safety	4			
1.10	Software and complementary documentation	4			
1.11	Environmental conditions	6			
1.12	Using this document	6			
2.	Product overview	8			
2.1	Scope of delivery	8			
2.2	Product overview interior	10			
2.3	Installation tools and parts	10			
2.4	Surge Protection Device (SPD)	11			
3.	Installing and Connecting	13			
3.1	Safety warnings and precautions	13			
3.2	Electrical installation requirements	13			
3.2.1	Overview safety components	13			
3.2.2	Overview safety components - type 2 shutter socket, 1 power supply cable variants (art. no. 904463013 & 904463023)	15			
3.2.3	Cable and earthing requirements	16			
3.3	Installation prerequisites	16			
3.4	Mechanical installation procedure	16			
3.4.1	Installing the charging station on a wall	17			
3.5	Electrical installation procedure	24			
3.6	Additional installation procedure for model with fixed charging cables	31			
3.7	Finishing the installation	34			
4.	Commissioning	39			
4.1	Initial start-up	39			
4.2	Testing the charging station	39			
5.	Connectivity	40			
5.1	Configuration tools	40			
5.2	Before using the software	40			
5.3	Configuring the charging station	40			
5.3.1	Wired network connection	40			
5.3.2	Backoffice management systems	40			
5.4	Configuring Smart Charging functionalities	40			
6.	Maintenance	41			
6.1	Display window cleaning procedure	41			
6.2	Casing cleaning procedure	41			

1. SAFETY AND USAGE INSTRUCTIONS

1.1 Legal entity

In this document "Alfen" refers to Alfen B.V., a private limited company, registered with the trade register of the Dutch Chamber of Commerce under number 39037364.

1.2 Disclaimer

This document has been subjected to technical review before being published. It is revised at regular intervals, and any modifications and amendments are included in the subsequent issues. Although Alfen has made its commercially reasonable efforts to keep the document as precise and up-to-date as possible, Alfen does not assume any liability for defects and damage which results from the use of the information contained herein.

NOTE

This manual is subject to updates and changes. Errors and omissions excepted.

Any deviation to the products as assembled by Alfen including, but not limited to,

- customer-specific modifications,
- components to the product specified or, where appropriate, instructed by third parties such as the placement of stickers, SIM cards, grid connection components required by grid operators or the usage of different colours (all referred to as 'Customization')

may affect the final product, its experience, appearance, quality and / or lifespan (the Customized Product). Alfen is not liable for any damage to, or caused by, the Customized Product if this damage is caused by this applied Customization.

In addition, Alfen shall not be liable in any way, for any kind of damage, and the (B2B) warranty for the product and the accessories shall not apply in the following cases:

- Failure to comply with the instructions in this manual in general and with the operating conditions specifically.
- Improper use.
- External damage.
- Installation, commissioning or faulty repair or maintenance by unqualified persons.
- Failures from the grid or the mobile connectivity provider.
- Modification or configuration of the product or accessories without the knowledge of Alfen.
- Use of spare parts not approved or manufactured by Alfen.
- The charging station is used outside the environmental conditions stated in this manual.
- Situations have occurred that are beyond the control of Alfen (force majeure).

- Malfunction of an (Open Charge Point Protocol) back office.
- Damage to the electric vehicle.

1.3 Improper use

Using the charging station is safe when used as intended. Any other use or changes to the charging station are considered improper use and therefore not permitted. The user is responsible for any personal injury or material damage arising from improper use.

1.4 Copyright

The reproduction, distribution and utilization of this document, as well as the communication of its contents to other parties without explicit authorization by Alfen B.V. or one of its affiliates, is strictly prohibited. © Alfen B.V.

1.5 Trademarks

Eve®, ICU®, Alfen® are trademarks by Alfen B.V.. Any unauthorized use of the trademarks is therefore illegal.

1.6 Languages

The English version of this document is the original source. Documents in other languages are translations of this source.

1.7 Purpose and intended audience

This manual applies to the Eve Double Plus (in this document also indicated as "charging station") produced by Alfen ICU B.V., Hefbrugweg 79, 1332 AM Almere, the Netherlands, reg. no. 64998363 ("Alfen"). The Eve Double Plus is intended exclusively for charging electric vehicles and, when installed correctly, may be used by untrained individuals. Follow this manual to install and commission the charging station correctly.

DANGER

Risk of injury and electrocution. Installation, (de)commissioning and maintenance of the charging station may only be performed by an instructed person.

1.7.1 Article numbers

This manual is intended for charging stations with the following article numbers:

904463021	904463026	904463125
904463022	904463121	904463126
904463023	904463122	904463145

1. SAFETY AND USAGE INSTRUCTIONS

904463024	904463141	904463146
904463025	904463142	904463013

1.8 Explanation of text instructions used

Safety warnings and precautions are indicated in this document as follows:

DANGER

Signal word used to indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Signal word used to indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Signal word used to indicate a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTE

Signal word used to provide additional information or information on possible product damage.

1.8.1 Safety symbols

The following symbols are attached to (parts of) the charging station:

Symbol	Description
	Dangerous voltage
	Protective earth

1.9 General safety

Follow the stated safety aspects when operating the charging station:

DANGER

Risk of injuries, explosion or fire. Do not use the charging station in the vicinity of explosive or highly flammable substances.

DANGER

Risk of electrocution. Do not use the charging station if it is partially submerged in water.

DANGER

Risk of injury and electrocution. Do not use the charging station if it is damaged or plugs and cables are defective.

DANGER

Risk of injury and electrocution. Do not allow children or individuals who are not able to assess the risks associated with this product to use the product.

More extensive safety information is available in the relevant sections of this document.

1.10 Software and complementary documentation

The charging station uses firmware version 2.6.0 at the time of publication.

NOTE

The ACE Service Installer does not notify if a new firmware version is available. You can check this in the menu "Device/ Upload new firmware...".

NOTE

You can request a printed copy of this manual in your language from Alfen at any time. Refer to the contact details on the back page.

Detailed information about the Eve Double Plus charging station can be found through the QR codes and links below.

1. SAFETY AND USAGE INSTRUCTIONS



[Alfen YouTube channel](#)

Provides installation, service and information videos.



[Declaration of Conformity Eve Double Plus](#)



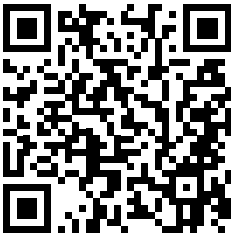
[Datasheet - Eve Double Plus](#)

Provides detailed information on models, technical features and equipment.



[Declaration of Conformity Eve Double Plus-DE](#)

For German market only.



[Knowledge Base](#)

Provides service and procedure instructions.



[Konformitätserklärung für Messgeräte](#)

For German market only.



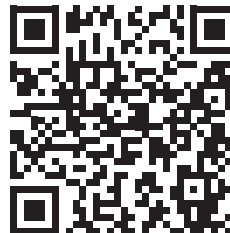
[Firmware updates and release notes](#)



[Smart Charging Configuration Manual](#)



[Troubleshooting and error codes](#)



[Trainings for Alfen charging stations](#)

1. SAFETY AND USAGE INSTRUCTIONS



[B2B Warranty](#)



[Verwendungsanlage für Eichrechtkonforme EV Ladestationen](#)

Information for the operator (CPO) and mobility service provider (MSP).

For German market only.

1.11 Environmental conditions

Operating temperature -25 °C to +40 °C

Environmental conditions

- Indoor use
- Outdoor use

Electrical safety class Class I

Ingress protection IP54

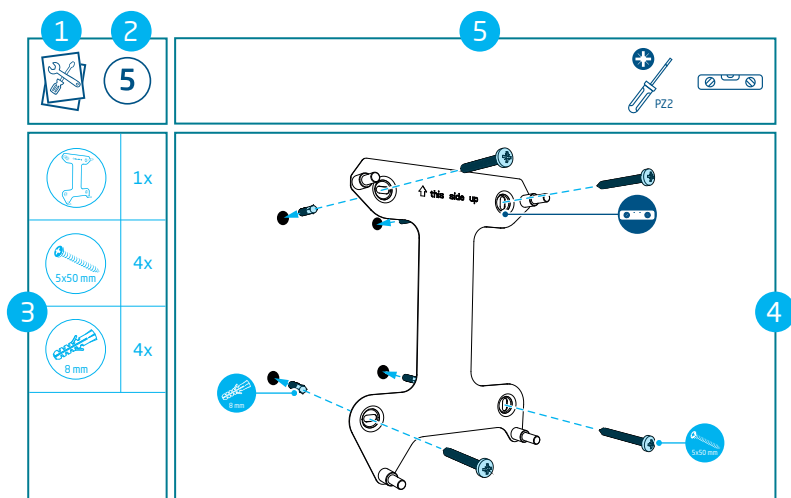
Impact protection IK10

NOTE

- The stated charging performance is solely applicable to the charging station itself. The actual performance depends on the vehicle and the grid connection.
- A front cover in a colour other than RAL9016 Traffic White, and the addition of customizations, can increase the heat transfer from solar radiation transferred to the charging station. This also affects the charging performance.

1.12 Using this document

Below you can find an example illustration and a description of the used symbols.



1. SAFETY AND USAGE INSTRUCTIONS

No.	Description	Symbol	Description
1	Chapter symbol of this step		Scope of delivery
			Product overview
			Mechanical installation procedure
			Electrical installation procedure
			Additional installation procedure for model with fixed charging cable
			Finishing the installation
2	Step number		Number in the image corresponds to the number of the step described in the corresponding chapter
3	Parts required for this step		Symbols in dark blue colour identify tools or parts that must be provided by the installer
			Symbols in light blue colour identify tools or parts that are part of the Alfen scope of delivery
4	Visualization of the step		Detailed description can be found in the related chapter
5	Tools required for this step		Symbols in dark blue colour identify tools or parts that must be provided by installer
			Symbols in light blue colour identify tools or parts that are part of the Alfen scope of delivery

	A	
	1x	
	1x	
	1x	
	1x	
	2x	

8

Symbol	Description	QTY
	Reduction sealing insert for cable gland M32-M25	2
	Ferrite core *	2
	Mounting block	1
	Hexagon head screw 8x50 mm	4
	Wall plug SX 10 mm	4
	M8 washer	4
	M8 nut (only required for installation to a pole)	4

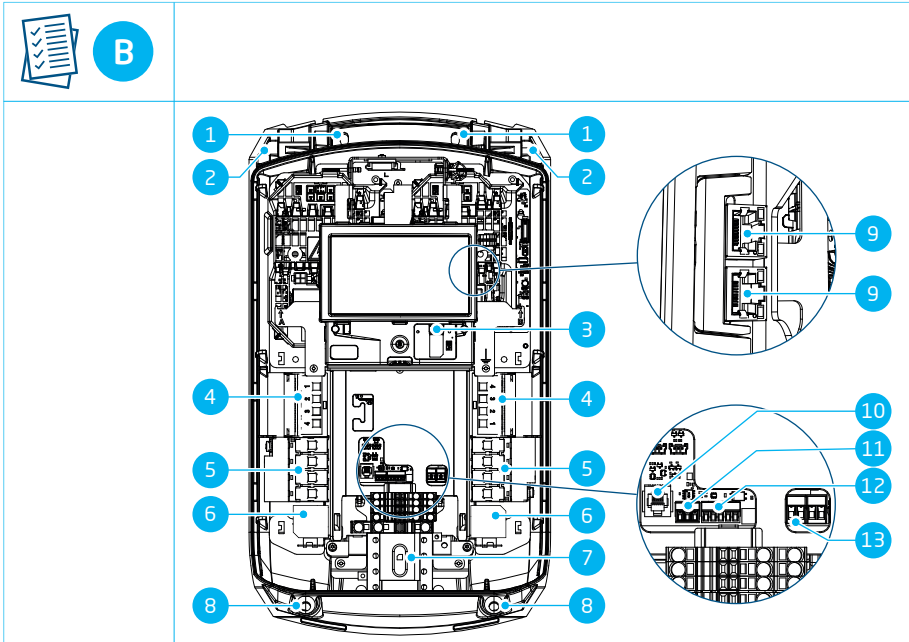
Symbol	Description	QTY
	Anti-theft screw M8x20 mm	2
	Removal tool for hybrid connector **	2
	Cable gland M25 **	2
	Hybrid connector **	2

* Only provided with charging stations with fixed charging cables. Not provided with DE variants.

** Only provided with charging stations with fixed charging cables. Not provided with DE variants. These materials are delivered in a separate box.

2. PRODUCT OVERVIEW

2.2 Product overview interior



No. Description

- | | |
|----|--|
| 1 | Screw holes for wall or pole mounting |
| 2 | Torx 25 screws |
| 3 | SIM-card holder |
| 4 | kWh meter |
| 5 | Residual current device (RCD) |
| 6 | Surge Protection Device (SPD) (Germany only) |
| 7 | Switch disconnector |
| 8 | M8x20 anti-theft screws |
| 9 | RJ-45 connection for network connection or for external energy meter |
| 10 | RJ-11 connection for smart meter connection (the Netherlands and Belgium only) |
| 11 | PCB connection for Suspend Signal §14a EnWG (Germany only) |

No. Description

- | | |
|----|---|
| 12 | PCB connection for TIC (France only) or for RS-485 Modbus RTU external energy meter |
| 13 | PCB connection for Payment Terminal Accessory |

2.3 Installation tools and parts

Symbol Description



Pencil or marker



Wire stripper



Tape measure

Symbol	Description	Symbol	Description
 T20	T20 Torx screwdriver		Crimping tool
 T25	T25 Torx screwdriver		Scissors
	Ferrules		Cutting pliers
	Spirit level		Ethernet cable(s)
	Hammer drill		Power supply cable(s)
 10 mm	Drill bit 10 mm (concrete)		Torque wrench 2-5 Nm (with 13 mm hex bit socket, PZ2 bit, T20 Torx bit and 34 & 41 mm spanner head)
 RJ-45	RJ-45 connector(s)		

2.4 Surge Protection Device (SPD)

 NOTE

SPD is only available on charging stations ordered with SPD. The datasheet states for which charging station variants SPD is available.

Over-voltage protection is provided by an Surge Protection Device (SPD). The SPD limits the voltage supplied to the electrical devices to a certain threshold. This reduces damage to the charging station or equipment connected to it when an internal voltage peak occurs.

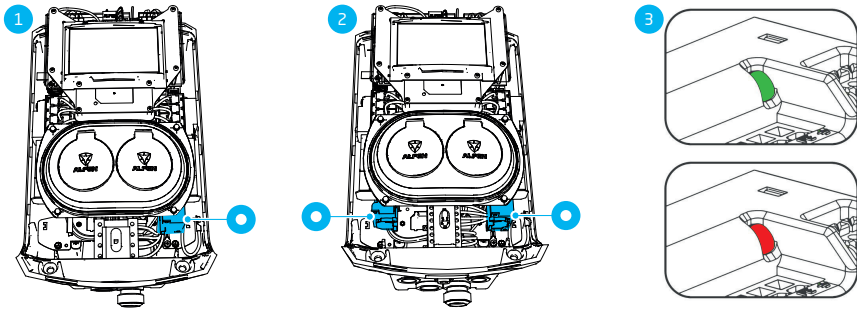
 NOTE

Alfen is not liable for any damage to a charging station or equipment connected thereto caused by an external power surge.

The SPD is located inside the charging station:

- A charging station with one power supply cable has one SPD installed.
- A charging station with two power supply cables has two SPDs installed.

2. PRODUCT OVERVIEW



No. Description

- | | |
|---|--|
| 1 | Position of the SPD in a charging station with one power supply cable |
| 2 | Positions of the SPDs in a charging station with two power supply cables |
| 3 | SPD indicator |

The status of the SPD is shown by the color of the indicator on the SPD. A green indicator means the SPD works normally. If the SPD has tripped, the indicator shows red. The state of the SPD can change over time. Excessive voltage peaks (such as by lightning or switching) can cause the SPD to become faulty.

! CAUTION

If an SPD has tripped it no longer provides protection against over-voltage.

! CAUTION

Visually inspect the SPD indicator at least once a year, depending on grid quality and location of installation. Do this always in accordance with the SPD manufacturer's specifications.

3.1 Safety warnings and precautions

DANGER

Risk of injury and electrocution. Installing the charging station incorrectly may result in fatal injury! When working with electricity, failure to comply with relevant regulations can lead to dangerous and life-threatening situations.

DANGER

Risk of injury and electrocution. When carrying out installation or maintenance work, always follow the five safety rules:

1. Disconnect from the main switchboard.
2. Secure against reconnection.
3. Verify that the system has no voltage.
4. Carry out earthing and short-circuiting.
5. Provide protection against adjacent live parts.

DANGER

Risk of injury and electrocution. The charging station contains electrical components that still contain a charge after being disconnected from the system. Before performing any installation or maintenance work, always test with correct equipment that there is no residual current.

WARNING

Risk of injuries, explosion or fire. Never install a charging station in a potentially explosive atmosphere.

WARNING

Risk of electrocution. Never install in areas prone to flooding without implementing compensatory measures.

WARNING

Risk of injury and electrocution. Do not perform installation work during rain or if the air humidity exceeds 95 %.

WARNING

Risk of injury and electrocution. The installation must be performed by an instructed person who has read this manual and will do the installation in accordance with IEC 60364 (Low-voltage electrical installations) and local standards.

CAUTION

Risk of injury and damage. Mechanical impact and/or collisions might cause damage to the equipment. Products installed in public areas must be protected against mechanical impact.

CAUTION

Risk of injury and damage. When dimensioning the power supply cable and the protection components, diversity factor = 1 must be taken into account.

NOTE

Risk of damage. A charging station must always be installed on a separate power circuit.

NOTE

Risk of damage. The use of (conversion) adapters is not allowed.

3.2 Electrical installation requirements

3.2.1 Overview safety components

WARNING

There is an increased risk of injury or hazard during the installation of charging stations with two power supply cables. Follow the installation instructions carefully.

3. INSTALLING AND CONNECTING

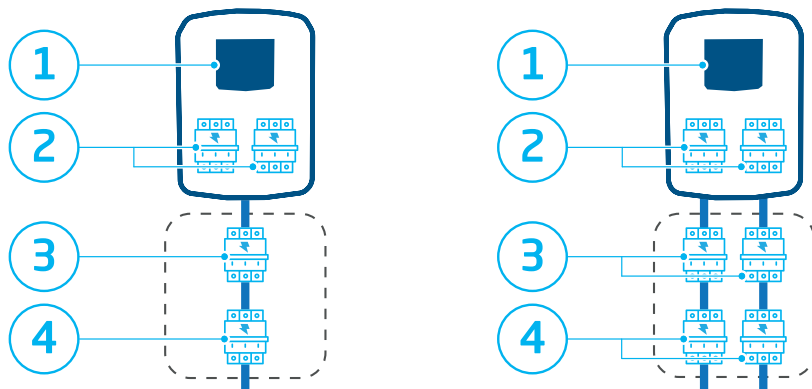


Figure 3.1: Overview safety components

No. Safety components - 1 power supply cable

1 Standard Load Balancing

Mandatory

2 2x Residual current protection

Included in the charging station

4-pole 30 mA Type B RCD

3 1x Residual current protection

Not included in the charging station

Optional (depending on installation and local regulations):

- 4-pole ≥ 100 mA Type B RCD

- 4-pole ≥ 100 mA Type A Selective RCD *

4 1x Over-current & short-circuit current protection

Not included in the charging station

Rated conditional short-circuit current: 10 kA

4-pole 40 A MCB or fuse gG

* A limited number of suppliers have an A type RCD available

Safety components - 2 power supply cables

Standard Load Balancing

Optional

2x Residual current protection

Included in the charging station

4-pole 30 mA Type B RCD

2x Residual current protection

Not included in the charging station

Optional (depending on installation and local regulations):

- 4-pole ≥ 100 mA Type B RCD

- 4-pole ≥ 100 mA Type A Selective RCD *

2x Over-current & short-circuit current protection

Not included in the charging station

Rated conditional short-circuit current: 10 kA

4-pole 40 A MCB or fuse gG

3.2.2 Overview safety components - type 2 shutter socket, 1 power supply cable variants (art. no. 904463013 & 904463023)

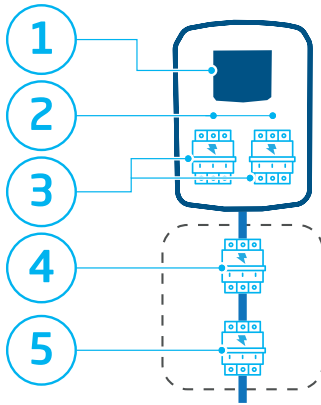


Figure 3.2: Overview safety components

No. Safety components - 1 power supply cable

1 Standard Load Balancing

Mandatory

2 2x 6 mA DC RCD functionality, with disconnection times according to IEC 62955

Included in the charging station

Peak let through current: 3 kA

Let through energy: 6.5 kA²s

3 2x Residual current operated circuit-breaker with integral overcurrent protection

Included in the charging station

- Single phase installation: RCBO 2P, 40 A curve C, 30 mA, Type A

- Three phase installation: RCBO 3P+N, 40 A curve C, 30 mA, Type A

3. INSTALLING AND CONNECTING

No. Safety components - 1 power supply cable

4 1x Residual current protection

Not included in the charging station

Optional (depending on installation and local regulations):

- Single phase installation: 2-pole ≥ 100 mA Type B RCD
- Three phase installation: 4-pole ≥ 100 mA Type B RCD
- Single phase installation: 2-pole ≥ 100 mA Type A Selective RCD *
- Three phase installation: 4-pole ≥ 100 mA Type A Selective RCD *

5 1x Over-current & short-circuit current protection

Not included in the charging station

Rated conditional short-circuit current: 10 kA

- Single phase installation: 2-pole 63 A MCB or fuse gG
- Three phase installation: 4-pole 63 A MCB or fuse gG

Peak let through current: 3 kA

Let through energy: 6.5 kA²s

* A limited number of suppliers have an A type RCD available

3.2.3 Cable and earthing requirements

- The charging station must be connected to a single phase power supply (L1-N-PE) or three phase power supply (L1/L2/L3-N-PE).

Advised cable cross-section of the power supply cable(s): (based on assumed max. 50 m cable length)

- 1-phase 14.4 kW: 3 x 16 mm²
- 3-phase 44 kW: 5 x 16 mm²

Advised Ethernet cable types:

- CAT5, CAT5e or CAT6

Nominal frequency:

- 50 Hz

Earthing system:

- The charging station is suitable for a power supply from a meter switchboard or low-voltage distributor with the TN or TT system. In both cases, a PE conductor between the charging station and the power supply point is mandatory. For a TT system, a separately installed grounding electrode $< 100 \Omega$ spreading resistance is required.

3.3 Installation prerequisites

- Charging stations installed outdoors will be affected by environmental conditions and may discolour. Alfén recommends installing the charging stations in a sheltered environment to optimize the lifetime of the product.

- If the charging station will be installed on a wall instead of on a pole, the wall must be stable and vertical.
- There must be no explosive atmosphere within a radius of 5 m from the location where the charging station is to be placed.
- The power supply cable and the power supply must be prepared and de-energised.
- The charging cable (usually between 5 and 7.5 m) must be able to easily reach the vehicle's charging port without putting tension on the cable.

3.4 Mechanical installation procedure

- Verify that all listed parts are supplied.
- Remove the charging station from the box.
- Put the charging station on a non-scratching surface to prevent damage.

NOTE

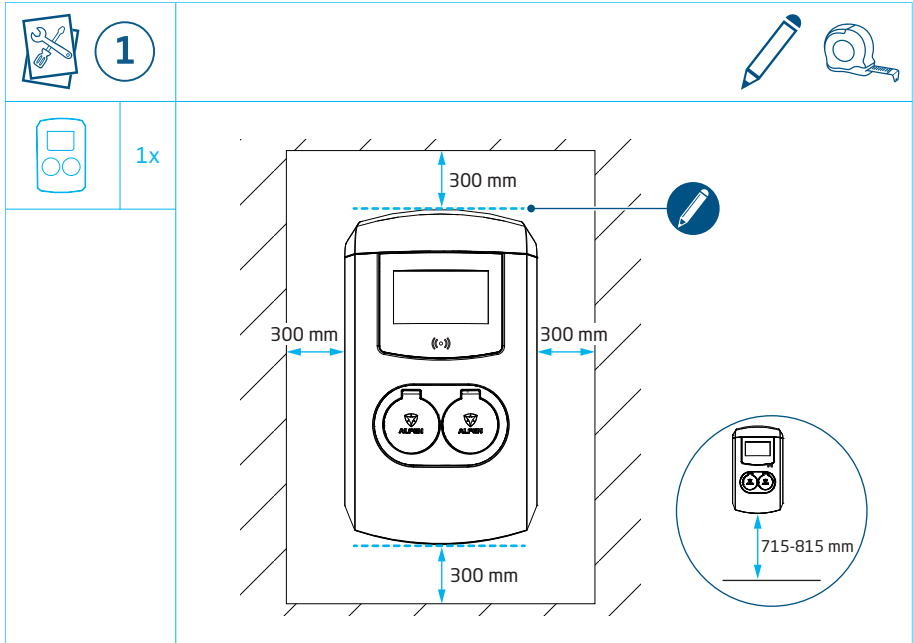
This manual only describes the procedure for wall mounting. The charging station can also be mounted on a pole. Installation instructions are supplied with the pole.

NOTE

Charging stations can be equipped with sockets or fixed charging cables.

3.4.1 Installing the charging station on a wall

1. Determine the position for the charging station at the preferred location:
 - a. Choose a location that ensures 300 mm clearance on all sides of the charging station.
 - b. Choose a comfortable height between 715 and 815 mm from the ground to the bottom of the casing.
 - c. Mark the top and bottom of the charging station.

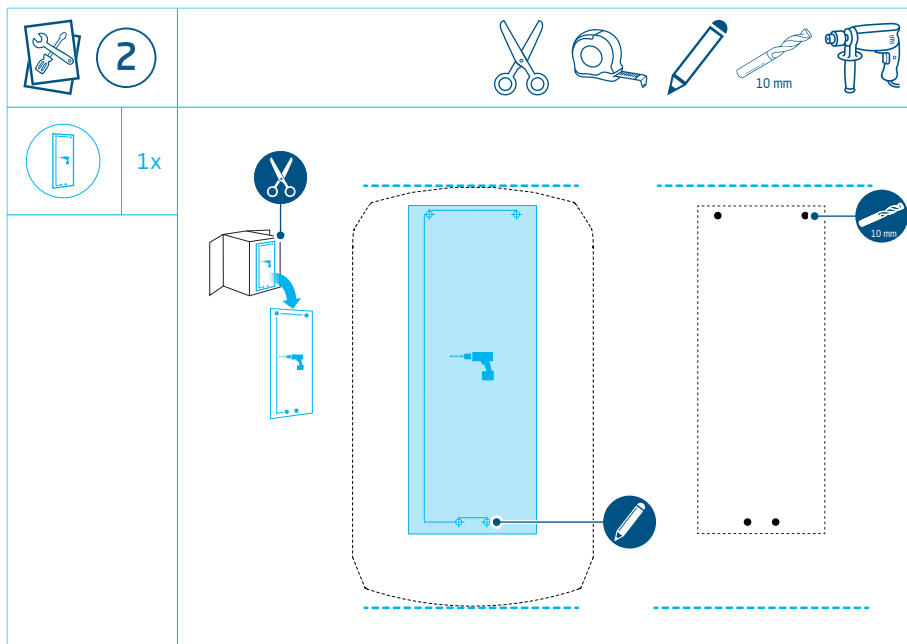


3. INSTALLING AND CONNECTING

2. Use the drilling template.
 - a. Cut the drilling template from the cardboard packaging of the charging station.
 - b. Hold the drilling template against the wall.
 - c. Mark the screw holes, then remove the drilling template.
 - d. Use a 10 mm drill bit to drill the four holes 50 mm deep.

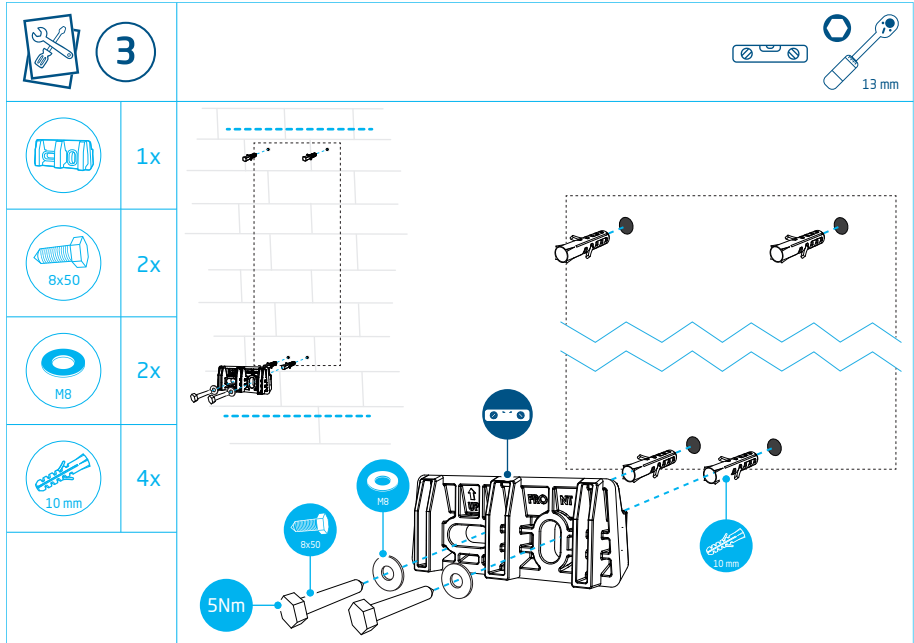
NOTE

Verify the indicated measures on the drilling template with a tape measure.



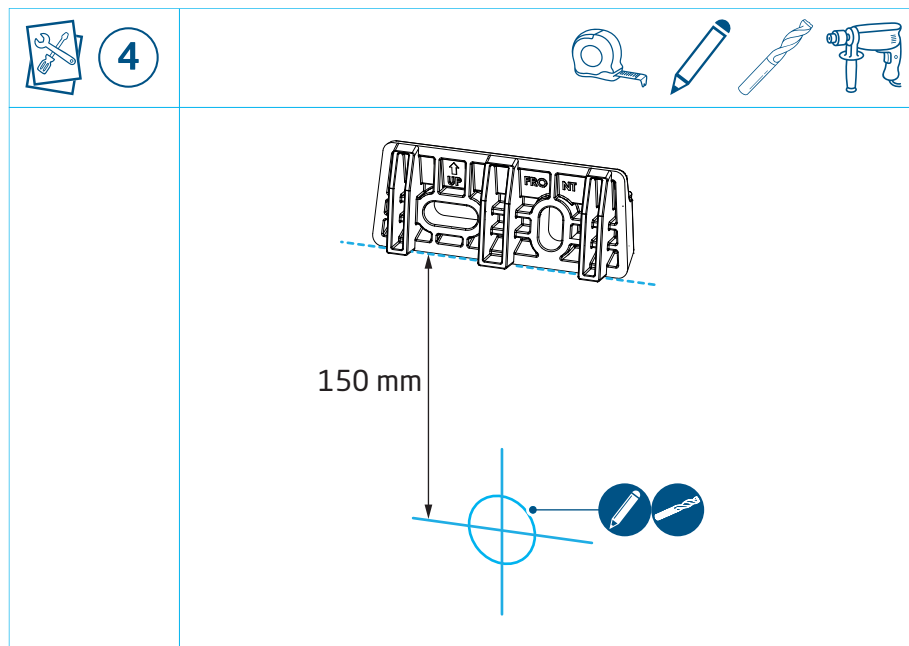
3. INSTALLING AND CONNECTING

3. Attach the mounting block to the wall.
 - a. Push 10 mm wall plugs into the four drill holes.
 - b. Attach the mounting block at the two bottom holes using two 8x50 mm hexagon head screws and M8 washers.
 - c. Level the mounting block with a spirit level before fully tightening the screws to a torque of 5 Nm.

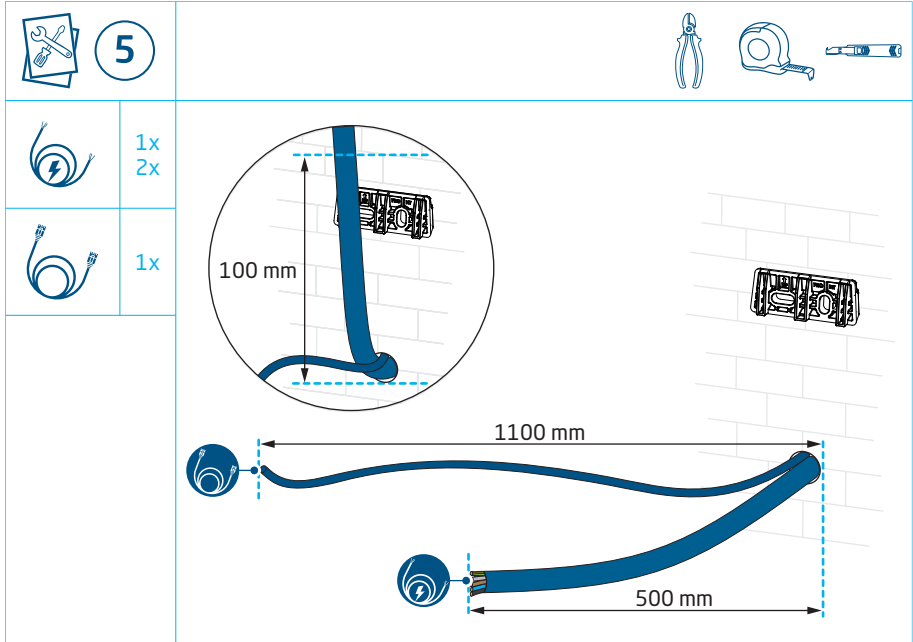


3. INSTALLING AND CONNECTING

4. Choose the best routing for the Ethernet and power supply cables. If the cables come through the wall under the charging station, the minimum distance from the mounting block is 150 mm.



5. Cut the cables to the required lengths.
 - a. Pull the power supply cable(s) and the Ethernet cable through the hole in the wall. Cut the power supply cable(s) at 500 mm and the Ethernet cable at 1100 mm length.
 - b. Pull the power supply cable(s) upwards and mark it at 100 mm measuring from the hole. Keep enough insulation for the cable gland to seal off the power supply cable(s).
 - c. Strip the outer insulation from the power supply cable(s), leaving enough insulation to seal at the cable gland(s). Put yellow/green tape on the earth wire(s).



3. INSTALLING AND CONNECTING

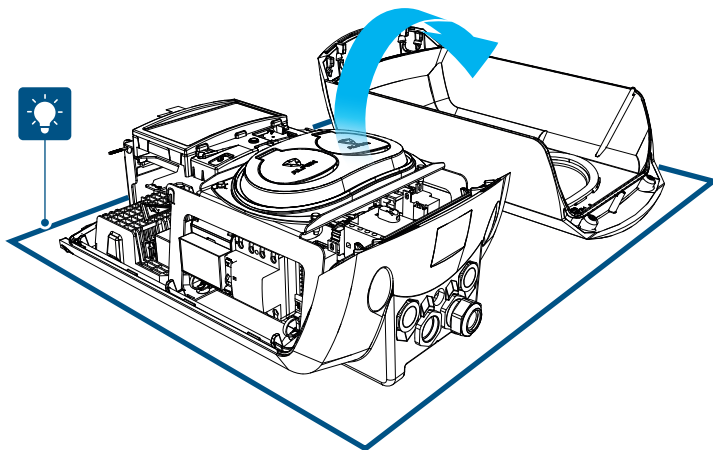
6. Preparing the charging station.
 - a. Put the charging station on its back.
 - b. Remove the front cover from the charging station and put aside.

NOTE

To prevent damage, do not put the charging station on a rough surface. Tip: Use the packaging.

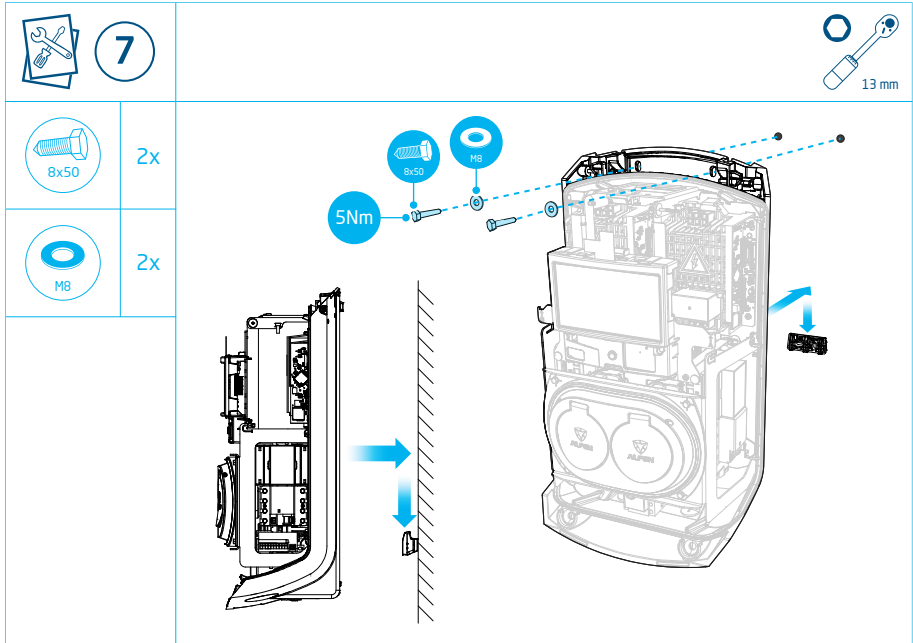


6



3. INSTALLING AND CONNECTING

7. Install the charging station to the wall.
 - a. Hold the charging station against the wall and move the charging station down onto the mounting block.
 - b. Put two 8x50 mm hexagon head screws and M8 washers through the holes at the top of the casing and tighten them to a torque of 5 Nm.



The mechanical installation procedure is finished. The charging station is ready for electrical installation.

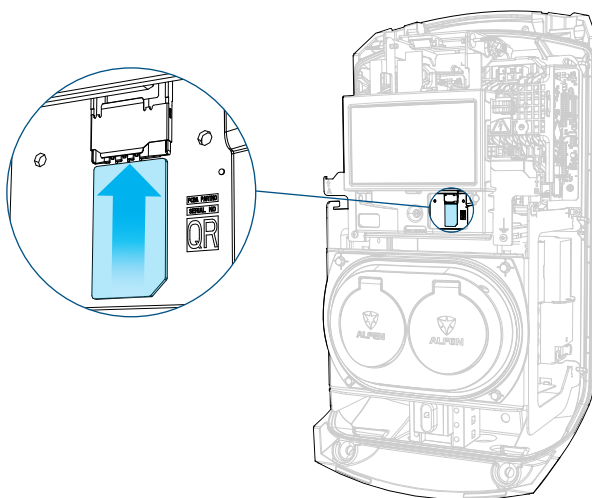
3. INSTALLING AND CONNECTING

3.5 Electrical installation procedure

1. If a SIM card, which is required for a backoffice connection, has been ordered separately, it must be installed in this step. Put it in the SIM-card holder below the display with the chip facing towards the back of the casing. Use only a gold plated SIM card.



1

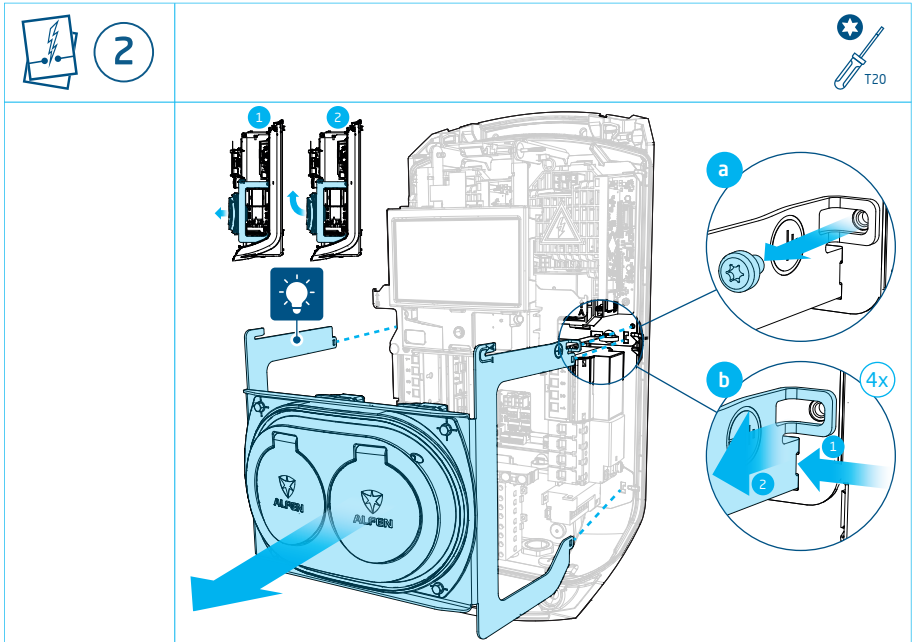


3. INSTALLING AND CONNECTING

2. Remove the metal subframe from the charging station.
 - a. Remove the ground screw at the right side of the metal subframe and keep it safe.
 - b. Push the legs of the subframe inwards, first on one side followed by the other side to release the subframe. The subframe is equipped with a push fit lock-in mechanism on all four connection points.

NOTE

Gently pull the metal subframe towards you and then tilt it 90 degrees upwards (refer to small illustrations 1 and 2).

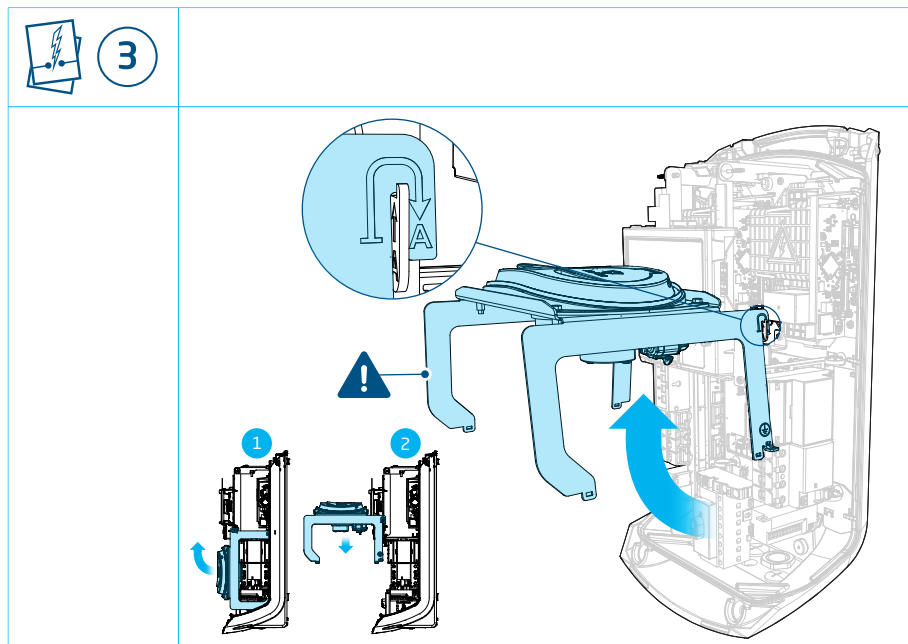


3. INSTALLING AND CONNECTING

- Turn the metal subframe 90 degrees up and hang it on the hook system of the display bracket. For models with type 2 sockets: do not stress the wiring.

WARNING

Risk of injury or damage. Be careful not to hit your head on the metal subframe.



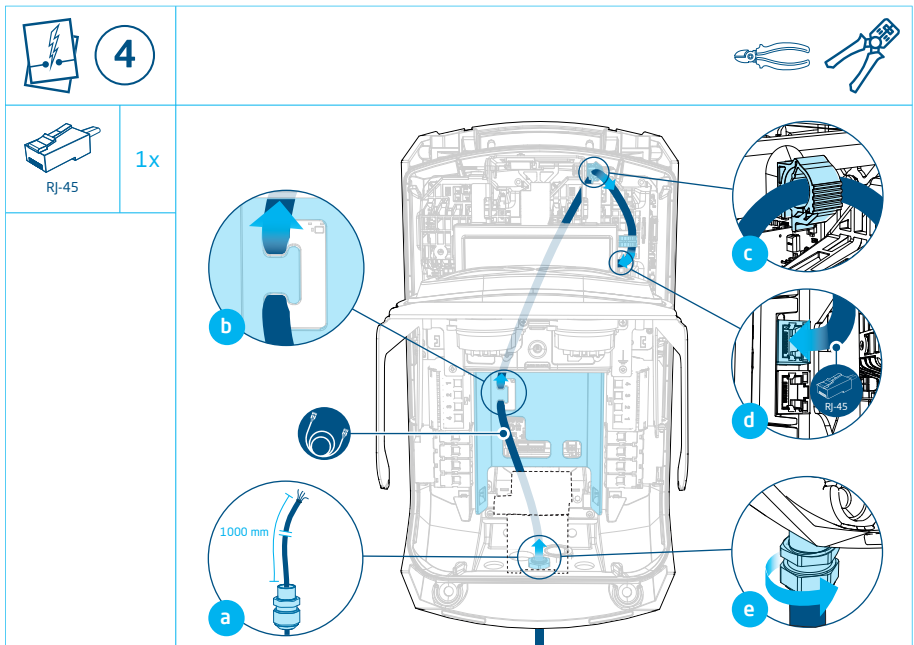
3. INSTALLING AND CONNECTING

4. Install the Ethernet cable.

NOTE

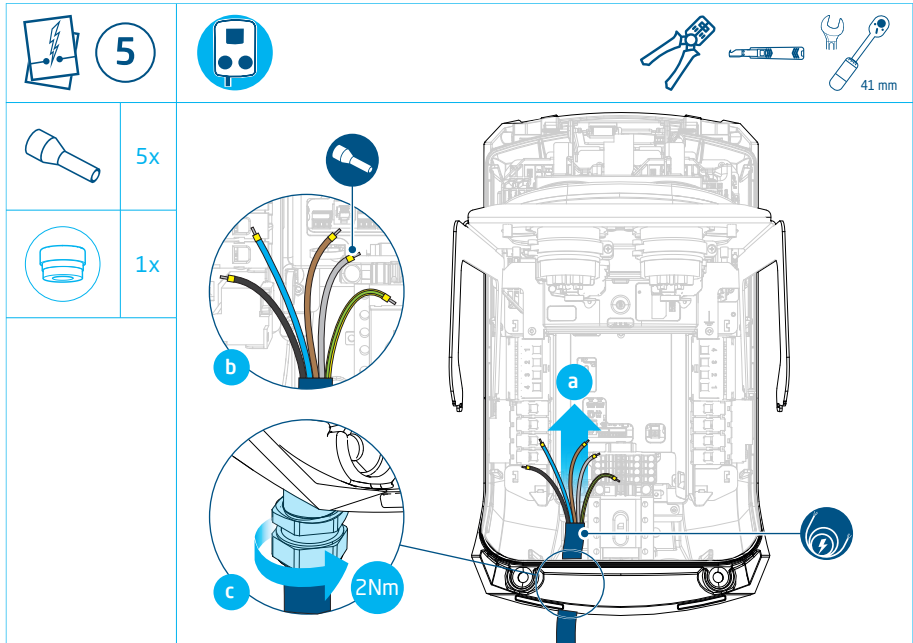
It is possible to daisy chain the charging station by connecting an Ethernet cable to the second RJ-45 female connector.

- Put the Ethernet cable through the M20 cable gland in the bottom of the charging station and pull the cable 1000 mm into the charging station.
- Make a loop with the cable through the plastic cover.
- Move the cable to the top right of the charging station and put the cable through the two cable tie clips.
- Attach an RJ-45 male connector to the Ethernet cable. Make sure that the insulation of the cable is also in the connector. Put the Ethernet cable into the top female connector on the right side of the display.
- Pull back the cable carefully to prevent too much cable in the charging station. Tighten the cable gland to prevent movement of the cable. The cable gland also functions as a strain relief.



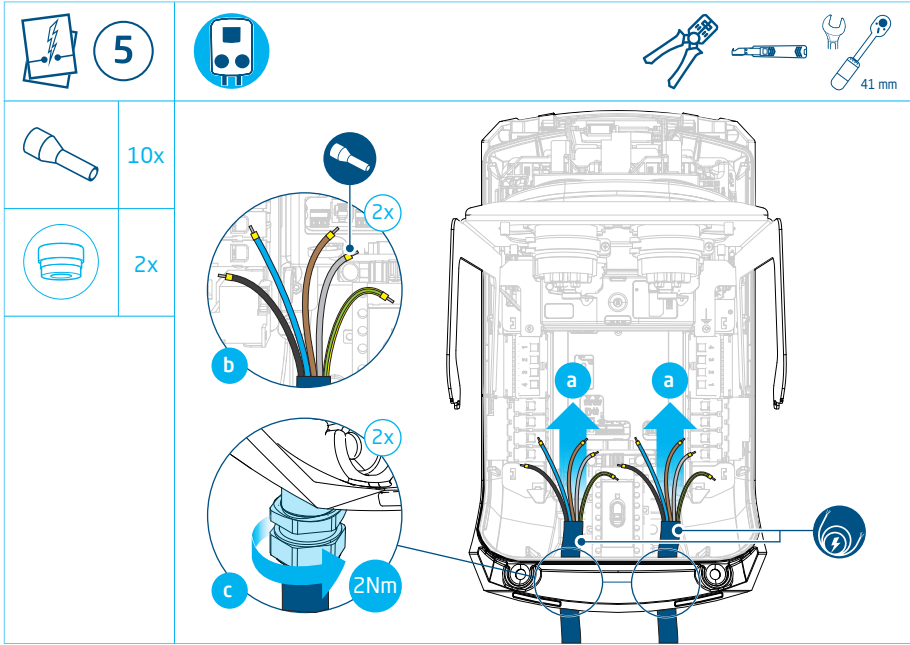
3. INSTALLING AND CONNECTING

5. Install the power supply cable(s). Use the applicable illustration for your product variant: one or two power supply cables.
- Put the power supply cable(s) through the cable gland(s) into the charging station. Use a reduction sealing insert if needed.
 - Cut the wires to the correct length. Make sure the wires can reach the switch disconnector and the PE terminal. Strip the wires with a wire stripper and attach ferrules to the ends.
 - Tighten the cable gland(s) to a torque of 2 Nm to prevent movement in the power supply cable(s). A cable gland also functions as a strain relief.



3. INSTALLING AND CONNECTING

NE



6. Connect the power supply cable(s) to the switch disconnector and PE terminal. Tighten the screws to a torque of 2 Nm. Use the applicable illustration for your product variant: one or two power supply cables.

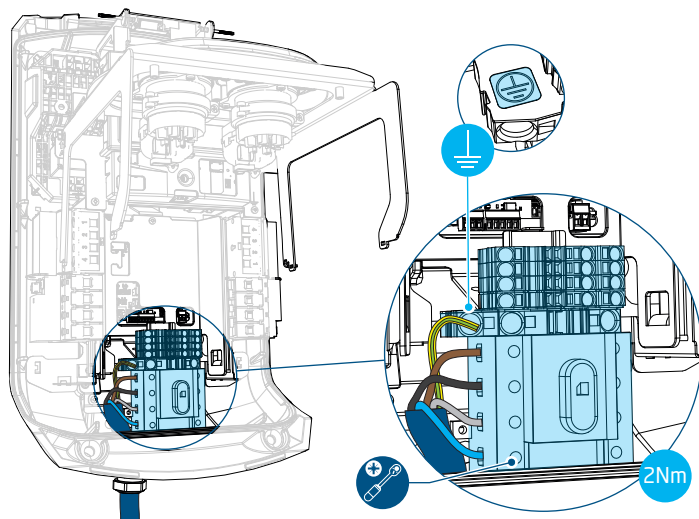
3. INSTALLING AND CONNECTING



6



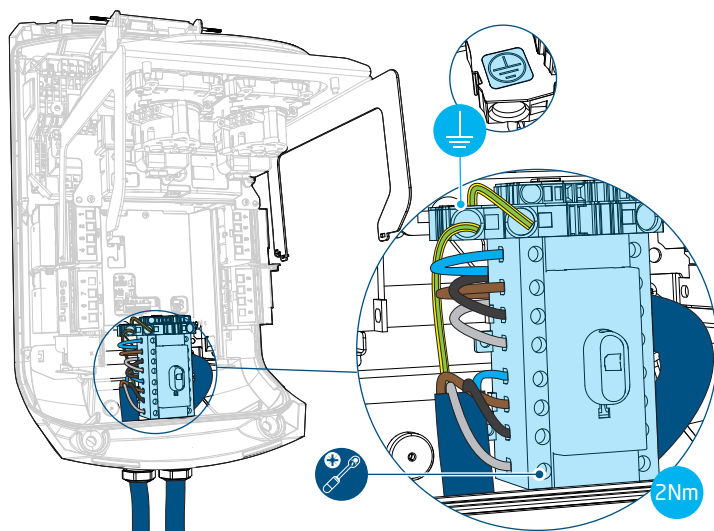
PZ2



6



PZ2

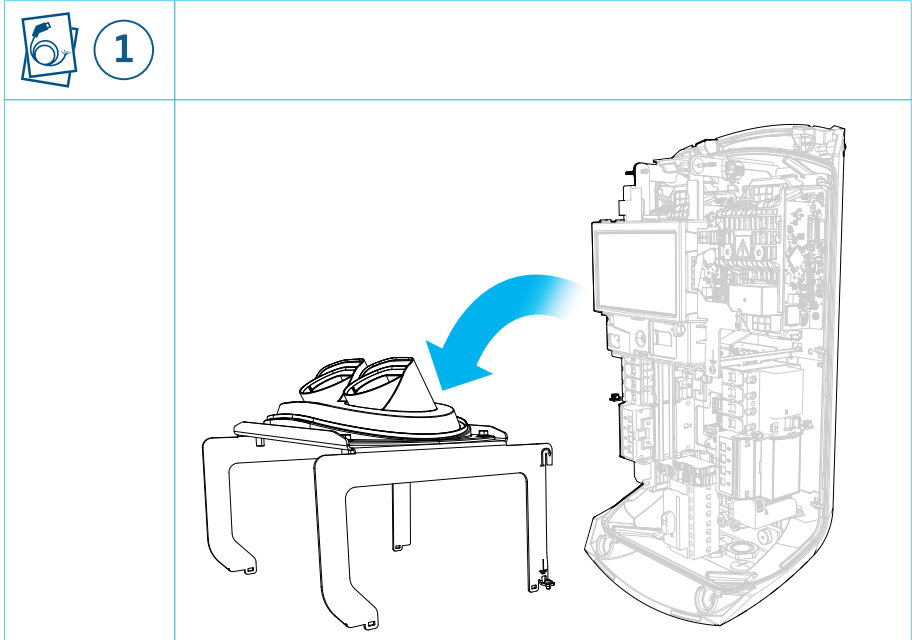


3.6 Additional installation procedure for model with fixed charging cables

NOTE

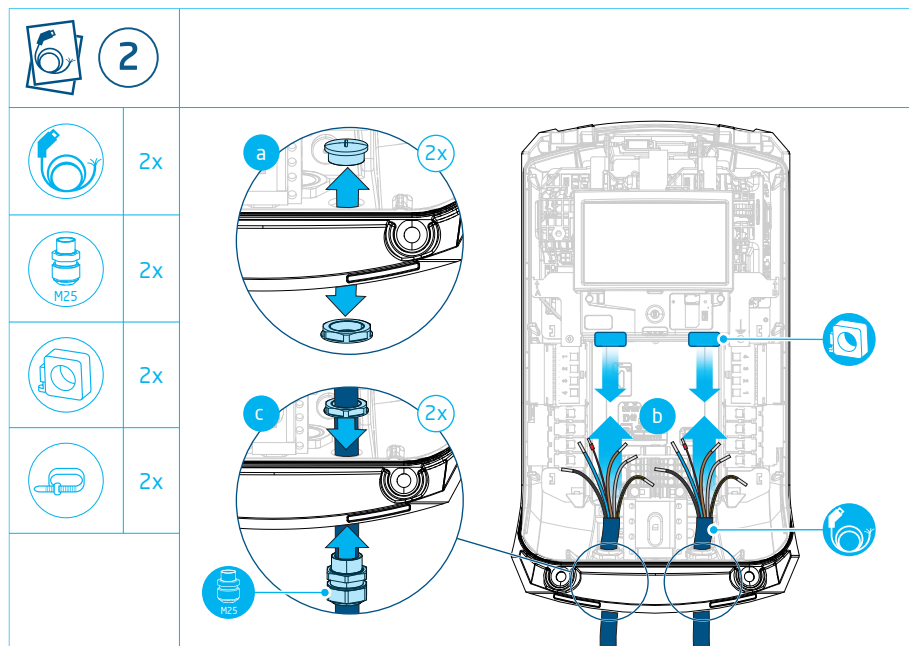
This chapter does not apply to DE variants because these charging stations have the fixed charging cables connected to the charging station ex-factory.

1. Remove the metal subframe from the hook system and put aside on the packaging.



3. INSTALLING AND CONNECTING

2. Install the fixed charging cables.
 - a. Remove the two caps from the bottom of the charging station.
 - b. Put the fixed charging cables, with the M25 cable glands attached to them, through the holes into the charging station. Put the ferrite cores on the fixed cables and attach them with a tie wrap.
 - c. Hand tighten the cable glands.

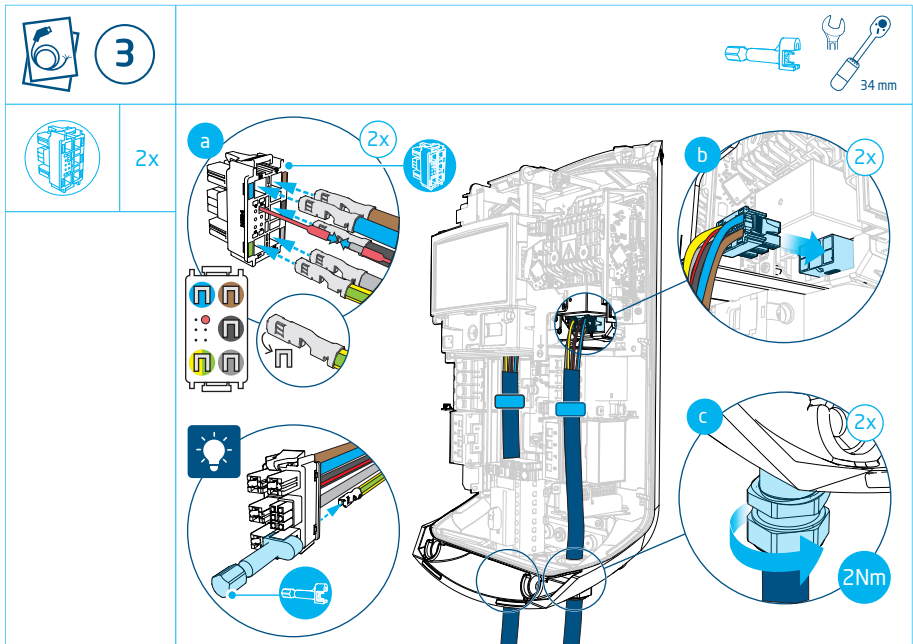


3. INSTALLING AND CONNECTING

3. Connect the fixed charging cables.
 - a. Put the wires into the terminal slots of the hybrid connectors. Each wire must go into a terminal slot that has the same colour as the wire. Make sure that the wires are put into the slots correctly, see the corresponding illustration. Connect the red CP wires to the red connectors.
 - b. Connect the hybrid connectors to the female connectors.
 - c. Tighten the cable glands to a torque of 2 Nm.

NOTE

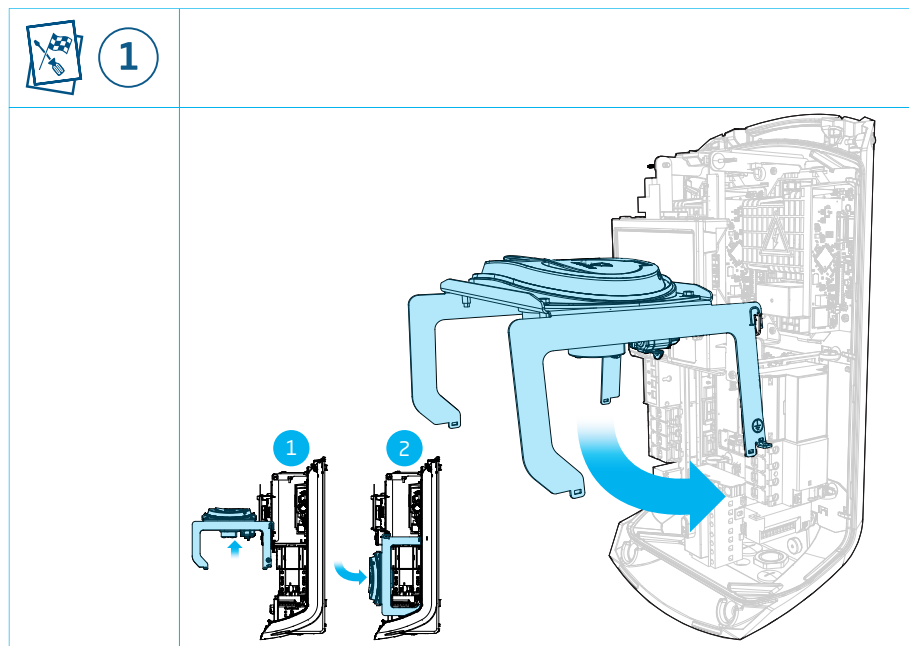
If you put a wire into an incorrect terminal slot, use the removal tool to remove the wire. Do not pull the wire out of a terminal slot without the removal tool or with a different tool because this can damage the hybrid connector.



3. INSTALLING AND CONNECTING

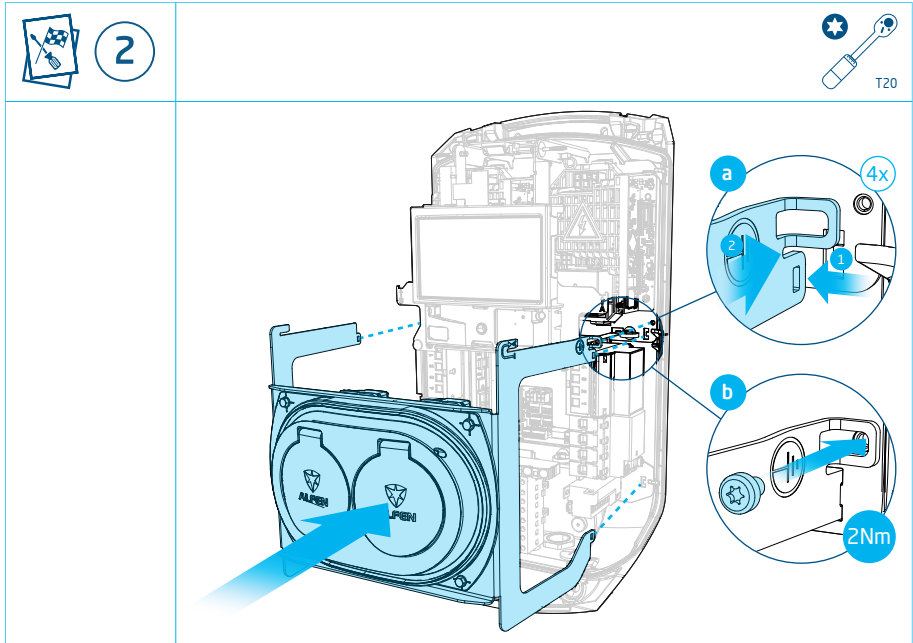
3.7 Finishing the installation

1. Carefully lift the metal subframe from the hook system and turn it 90 degrees.



3. INSTALLING AND CONNECTING

2. Put the metal subframe back into position in the charging station.
 - a. Push the legs of the subframe inwards and into the designated holes in the charging station. Start with one side followed by the other side.
 - b. Tighten the ground screw at the right side of the metal subframe to a torque of 2 Nm.

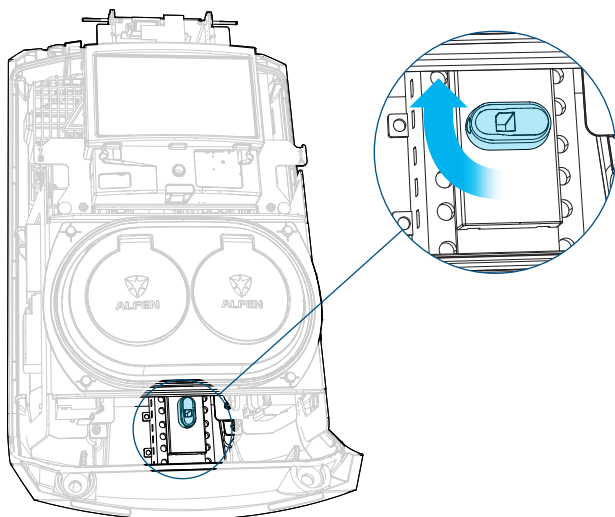


3. INSTALLING AND CONNECTING

3. Switch on the main switch.



3

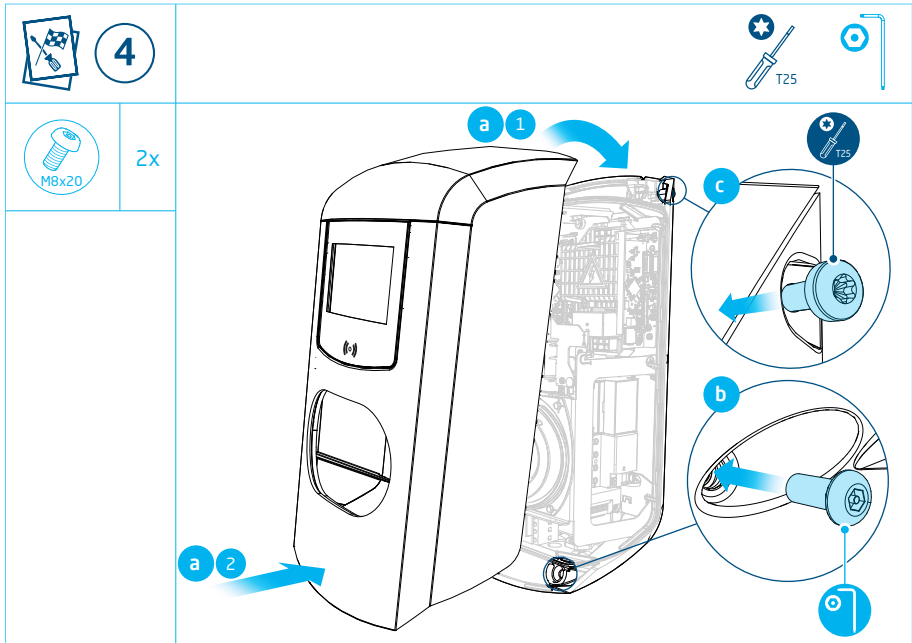


3. INSTALLING AND CONNECTING

4. Put the front cover back onto the charging station.
 - a. Start by securing the top of the front cover, followed by pressing the bottom of the front cover into position.
 - b. Install and tighten the two anti-theft screws on the bottom of the charging station with the provided Allen key with hole. Tighten them hand-tight.
 - c. Tighten the two Torx 25 screws at the top of both sides of the charging station. Tighten them hand-tight.

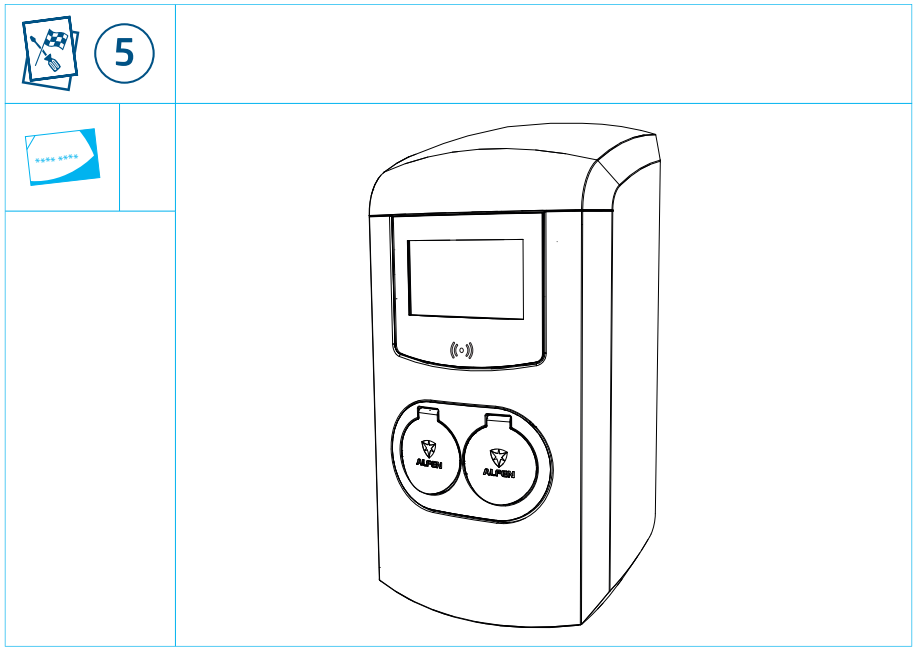
NOTE

There must be no gaps between the individual parts of the casing. Moisture and dust entering the charging station will have a negative effect on the lifespan of the charging station.



3. INSTALLING AND CONNECTING

5. Remove the transparent foil from the sockets and the display window.



The electrical installation is finished. The charging station is ready for commissioning.

4.1 Initial start-up

1. Switch on the power supply at the main switchboard.
After successfully performing self diagnostics the charging station will start up and show the home screen.

4.2 Testing the charging station

Models with sockets can use a test charging cable to simulate charging. Models with fixed charging cables must use the installed charging cables.

1. Plug the (test) charging cable into the socket (not applicable to models with fixed charging cables).
The text 'Please plug cable into vehicle' is shown.
2. Plug the charging cable into the car. When using a test charging cable, an electrical load needs to be connected to simulate the electric vehicle.
3. Charging session starts.
The text 'Charging in progress' is shown.
4. Remove the charging cable from the car and the socket (if applicable).
5. Repeat the same procedure for the other socket or fixed charging cable.

The charging station is functional and ready to use.

5. CONNECTIVITY

5.1 Configuration tools

The charging station can be configured using the ACE Service Installer.

5.2 Before using the software

1. Download the ACE Service Installer from the Alfen website to your laptop:
<http://alfen.com/downloads>
2. Request an account at this e-mail address:
ace.aftersales@alfen.com.

NOTE

It may take some days until you receive the login-data.

3. If you have the ACE Service Installer installed, make sure you have the latest version. If updates are available, you will be asked to update when you start the application.
4. Make sure the firewall settings on your device are not blocking the ACE Service Installer.

5.3 Configuring the charging station

5.3.1 Wired network connection

How to establish a wired network connection by connecting the charging station to your laptop using an Ethernet cable:

1. Log in to the ACE Service Installer.
2.
 - a. Connect your laptop directly to the charging station with an Ethernet cable.
 - b. Connect your laptop to the same local area network (LAN) the charging station is connected to.
3. Select your charging station from the list in the ACE Service Installer.

NOTE

If the charging station(s) is (are) not detected automatically, the ACE Service Installer might be blocked by the security settings on your laptop. Check the settings of your laptop and try again.

4. Enter the password provided on the password card supplied with the charging station.

The network connection has now been established. In the ACE Service Installer you can configure the settings.

5. After finishing the configuration, hand over the card with password (recovery) information to the owner.

5.3.2 Backoffice management systems

If additional services by a backoffice provider have been purchased, the charging station has been configured ex-factory to connect to the selected backoffice management system.

NOTE

A connection with a backoffice management system can only be established if arrangements with the supplier of this system have been made. The service of third parties is not provided by Alfen.

NOTE

If the charging station is set up to connect to a backoffice management system, it will connect automatically.

NOTE

Manually configuring and connecting to a backoffice management system can be done with the ACE Service Installer. A (gold plated) SIM card needs to be installed during installation. If you do not have a SIM card, please contact your backoffice provider.

NOTE

If a mobile communication (SIM card) Internet connection has been purchased, the charging station is already equipped with a SIM card and will automatically connect, once the charging station is being commissioned.

5.4 Configuring Smart Charging functionalities

If you have purchased Smart Charging functionalities such as Active Load Balancing and Smart Charging Network, these must be configured in the ACE Service Installer. A description of how to configure these functionalities can be found in the Smart Charging Configuration Manual.

6.1 Display window cleaning procedure

NOTE

Handle the display window with care to ensure proper drying and prevent damage and colour change. Do not use aggressive cleaning agents, a high-pressure cleaner or abrasive materials. Do not use a cloth or a squeegee to clean the display.

NOTE

Be careful with cards, tags, keys, and jewellery to avoid damaging the display window.

1. Make sure the charging station is fully closed before performing any cleaning procedure.
2. Use a gentle stream of air to blow off any dust or sand particles.
3. Rinse the surface with a generous amount of water or a mild detergent solution.
4. If the surface appears to be clean, let the remaining water evaporate.
5. If needed, gently remove any remaining dirt and water:
 - Use a clean, soft brush.
 - Brush from top to bottom.
 - Apply minimal force.
 - Avoid circular motions.

6.2 Casing cleaning procedure

NOTE

The casing of the charging station can be easily damaged. Do not use aggressive cleaning agents, a high-pressure cleaner, scouring pads or other aggressive cleaning supplies.

1. Make sure the charging station is fully closed before performing any cleaning procedure.
2. Annual cleaning:
 - Use water and mild soap to clean the casing of the charging station.

7. DISPOSAL

7.1 Decommissioning and returning

WARNING

Risk of injury and electrocution. Installation, (de)commissioning and maintenance of the charging station must only be performed by an instructed person.

For returning charging equipment to Alfen Charging Equipment, create a 'Request for Service' ticket at support.alfen.com.

For further instructions, see [How do I return a charging station to have it repaired in Alfen's manufacturing facility \(Carry-in\)?](#) You will then promptly receive all shipping instructions in the ticket.

7.2 Waste electrical and electronic equipment (WEEE)



Electrical and electronic equipment contains materials, components and substances that may be hazardous and present a risk to human health and the environment if not handled correctly.

Equipment marked with the illustrated crossed out wheeled bin is electrical and electronic equipment. The crossed out wheeled bin indicates that this waste must be collected separately and must not be discarded together with household waste.

Refer to your local authority for collection schemes under which residents can dispose waste electrical and electronic equipment at a recycling center or other collection points.

Contact

Alfen ICU B.V.

Hefbrugweg 79
1332 AM Almere
The Netherlands

P.O. box 1042
1300 BA Almere
The Netherlands

Alfen Knowledge Base:

knowledge.alfen.com

Alfen Service Portal:

aftersales.alfen.com

Tel. Service:

+31 (0)36 54 93 402

Website:

alfen.com