COMPLEO

Installation instructions Compleo ePOLE duo

for Compleo eBOX smart, professional and touch

Contents

Safety information

Danger

Danger to life and limb

Warning of electrical voltage!

Caution

Significant risk of injury/material damage

Caution: Significant risk of injury or material damage!

NOTE

Information on optimising the application

Observing this information can improve the product's application.

These installation instructions are intended for specialised electricians. The ePOLE duo may be installed by qualified, specialised electricians only. Greater priority must be given to the accident prevention regulations, the safety rules applying nationwide to the specific operations, and the medical regulations at the workplace.

The product can afterwards be commissioned free of faults only after this document has been observed. These operating instructions constitute an integral part of the product and must be available to the fitters, also after the installation. So keep this document in a safe place, also after the installation.

Note in addition that safety is ensured only when the affected devices are stored, installed, used, serviced, and, if necessary, dismounted and disposed of properly as described in this document.

- Before installing and using this product, please read the provided documentation to familiarise yourself with the safety regulations and other information.
- This product has been developed and tested in compliance with international standards.
- This product may be used exclusively for its intended purpose.
- This product may be installed by qualified personnel only.
- This product is maintenance-free and cannot be repaired on site.
- Incorrect installations may entail risks for the user.
- This product is used in combination with a power source.
- Make sure that the product is used under the correct operating conditions only.
- Make sure that the power supply to this product has been connected properly to a fuse box with RCD and circuit breaker.
- The RCD and circuit breaker selected must be suitable for the electrical connection and installed in an upstream fuse box as described in this document.
- Make sure that the fitted RCD is serviced at the intervals specified by the manufacturer.

Before installing, check the specifications under the grid connection regulations, the technical connection requirements, and those issued by the utility and follow specifically the compulsory registration, approval, and listing procedures.

Product subject to modification without prior notice. This document might not contain the latest changes to the product's specifications or processes described herein.

Qualifications for electrical work

The specialised personnel performing or supervising the electrical installation and maintenance of the device must have read and must follow these installation instructions. Also, this personnel must have been assigned by the system owner.

Germany

Applicable are the requirements under DGUV Regulation 3 or DIN VDE 0105-100:

- Technical training (electrical installations)
- Knowledge and experience in the assigned field of work
- Knowledge of the pertinent standards
- Ability to assess the assigned work
- Ability to recognise dangers

Austria

Applicable are the requirements under ÖVE/ÖNORM EN 50110-1:

A specialised electrician is a person who has undergone suitable technical training and has the knowledge and experience to recognise and prevent the potential dangers of electricity.

Switzerland

Applicable are the requirements under NIV, SR 734.27:

Section 2: Approval for installation work, Subsection 1: Compulsory approval, Art. 6

Persons assigned to install, modify, or repair electrical installations, hardwire electrical products to electrical installations, or disconnect, modify, or repair such connections must first be approved by the Inspectorate.

Subsection 2: General installation approval, Art. 7 – Approval for natural persons

Natural persons performing installation work on their own responsibility are granted general installation approval when:
a) they have had special training;
b) their training corresponds to the state of the art and their continued training is assured; and
c) they can furnish verification that they obey the regulations under this ordinance.

Danger
Handling live components incorrectly may cause grievous injuries and death. So heed at all times the five safety rules under DIN VDE 0105:

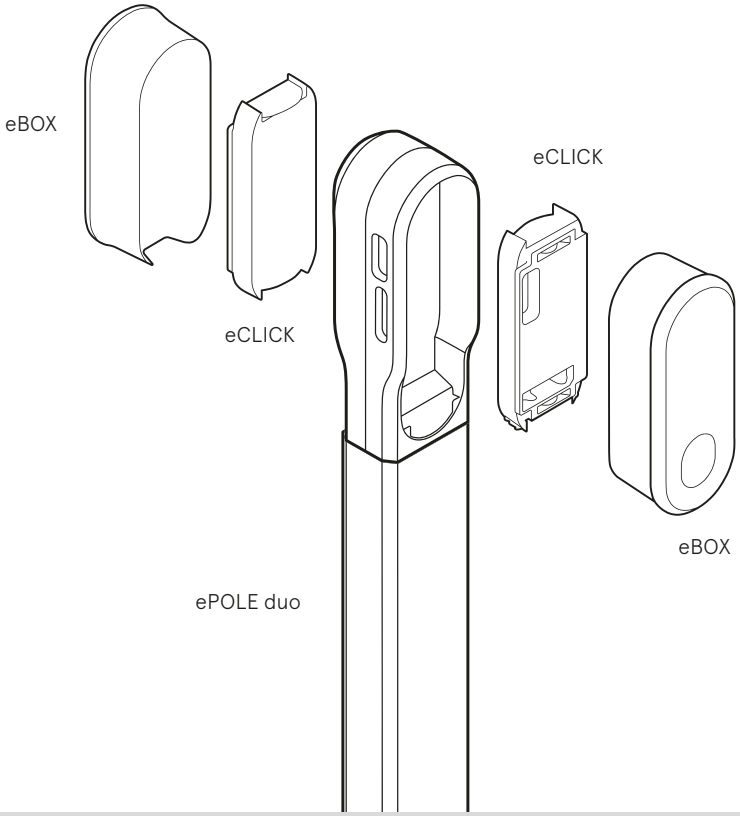
- Disconnect from all power sources
- Lock against reactivation
- Verify zero voltage (all poles)
- Earth and short circuit
- Cover or partition-off adjoining live parts

Caution
Small parts are dangerous for children. Do not install in the presence of children.

Caution
Ensure that all components are dry throughout the installation.

Product overview

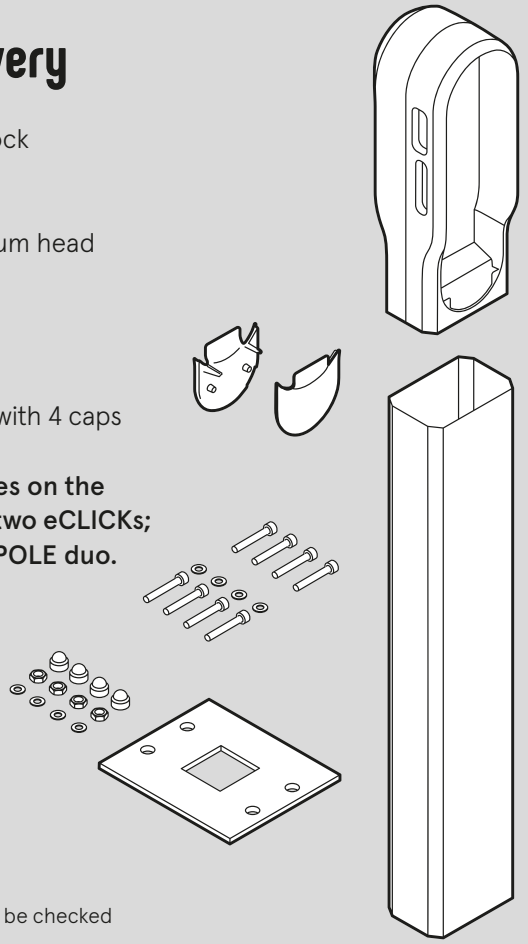
The ePOLE duo serves as mounting column for two eBOXes with two eCLICKs. The modular concept of the overall product also allows for a separate installation of the ePOLE duo in advance.



Included in delivery

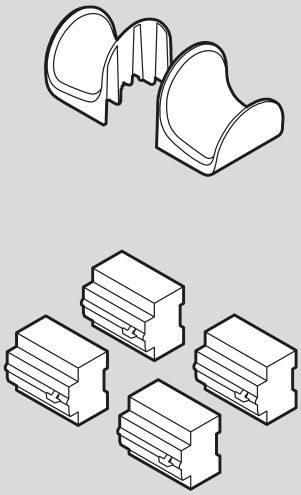
1 Aluminium head with 1 lock
1 Aluminium column
1 Base plate
2 Cover plates for aluminium head
Assembly material
4 Screws for base plate
4 Screws with 4 washers for aluminium head
4 M16 nuts with 4 washers with 4 caps

Note: To mount the eBOXes on the ePOLE duo, you will need two eCLICKs; they are not part of the ePOLE duo.

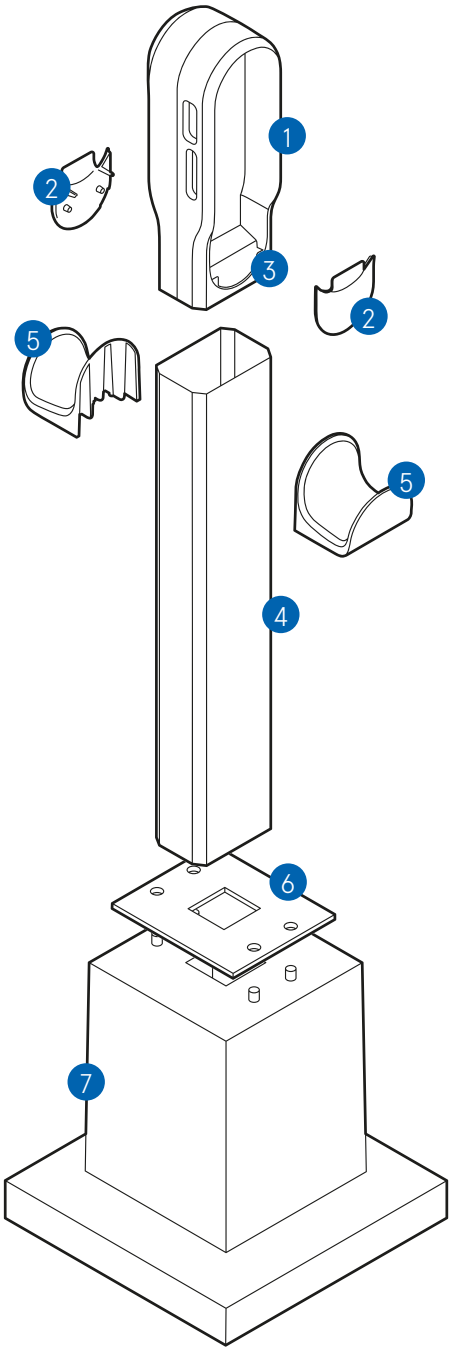


Caution
The contents of the delivery must be checked for completeness and intactness.

The following products can be ordered separately:
· Cable hanger
· Concrete foundation
· Residual-current device (RCD)
· Circuit breaker



Compleo ePOLE duo – the product details



1 Aluminium head
2 Cover plates for aluminium head
3 Lock
4 Aluminium column
5 Cable hanger (optional, not included)
6 Base plate
7 Concrete foundation (optional, not included)

Specifications

Measurements H x W x D	1,608 mm x 208 mm x 175 mm (without cable hangers)
	1,608 mm x 208 mm x 427 mm (with two cable hangers)
Dimensions of short variant H x W x D	1,280 mm x208 mm x 175 mm (without cable hangers)
	1,280 mm x 208 mm x 427 mm (with two cable hangers)
Installation type	Free-standing on concrete foundation
Weight	19,3 kg (short version 17,0 kg), cable hanger 1,5 kg
IP	IP55 (with eBOX or protective cover)
Operating temperature	-30 °C to +50 °C

Installation

This chapter is split into installation, supply lines, assembly and next steps.

Danger
Before installing, familiarise yourself with the safety instructions.

Caution
Each eCLICK must be protected in the distribution box with a residual current device and a circuit breaker. Coordinate with the customer in advance regarding the desired power output and use the protective components matching the current (Table Y).

Before installing

Check and ensure that the electrical installation intended for connection can supply the required electrical power.

Each eCLICK must be protected, in the pre-installation, corresponding to the respective supply line, with an FI/ RCD (residual current device) and an LS (circuit breaker).

No additional electrical devices may be integrated in any of these circuits.

Before installing, first consult the owner or operator of the system for the required output power, and fit adequate guards.

Line selection

When selecting the cable, the valid, international, country-specific nd regional regulations and standards must be observed. When selecting the cable, the connection to a three-phase or single-phase AC circuit must be made in accordance with the regulations and standards.

The cable cross-section must be selected so that the self-heating is limited to 15K.

RCD	Variant 1	Variant 2
Charging power	3.7 kW; 11 kW	7.4 kW; 22 kW
Charging current	16 A	32 A
Example	F204A, 4-pole, 25/0,03 A ABB	F204 A, 4-pole, 40/0,03 A ABB
Standards	DIN EN 61008-1/DIN EN 61008-2-1	DIN EN 61008-1/DIN EN 61008-2-1
Type	A	A
Operating voltage	230/400 V AC	230/400 V AC
Poles	4-pole	4-pole
Rated residual current	30 mA	30 mA
Rated current	25 A	40 A
Tripping time	300 ms	300 ms
Operating characteristic		short-time delayed (AP-R)
Overvoltage category	III	III
Fouling factor	2	2
Ambient temperature	Tmax +55 °C, Tmin -25 °C	Tmax +55 °C, Tmin -25 °C
Material number	10284822	10118695

Circuit breaker	Variant 1	Variant 2
Charging power	3.7 kW; 11 kW	7.4 kW; 22 kW
Charging current	16 A	32 A
Example	S203-NA K, 20A ABB	S203-NA K, 40A ABB
Standards	DIN EN 60947-1, -2/DIN EN 60898-1	DIN EN 60947-1, -2/DIN EN 60898-1
Tripping characteristics	K	K
Poles	4-pole	4-pole
Rated switching capacity	6,000 A	6,000 A
Rated current	20 A	40 A
Insulation voltage	4 kV	4 kV
Overvoltage category	III	III
Fouling factor	2	2
Ambient temperature	Tmax +55 °C, Tmin -25 °C	Tmax +55 °C, Tmin -25 °C
Material number	10133671	10118694

- Installation of overvoltage protection equipment, if demanded under national standards
- Routing of the connecting line to the installation site
- Connection of the supply line between the eCLICK / eBOX and the sub-distribution

Caution
For space reasons, the supply line chosen must have whenever possible a conductor area no greater than 6 mm².

Choosing the site

Typically, the location of the ePOLE duo has been agreed upon with the customer, in advance of the installation, upon the on-site inspection.

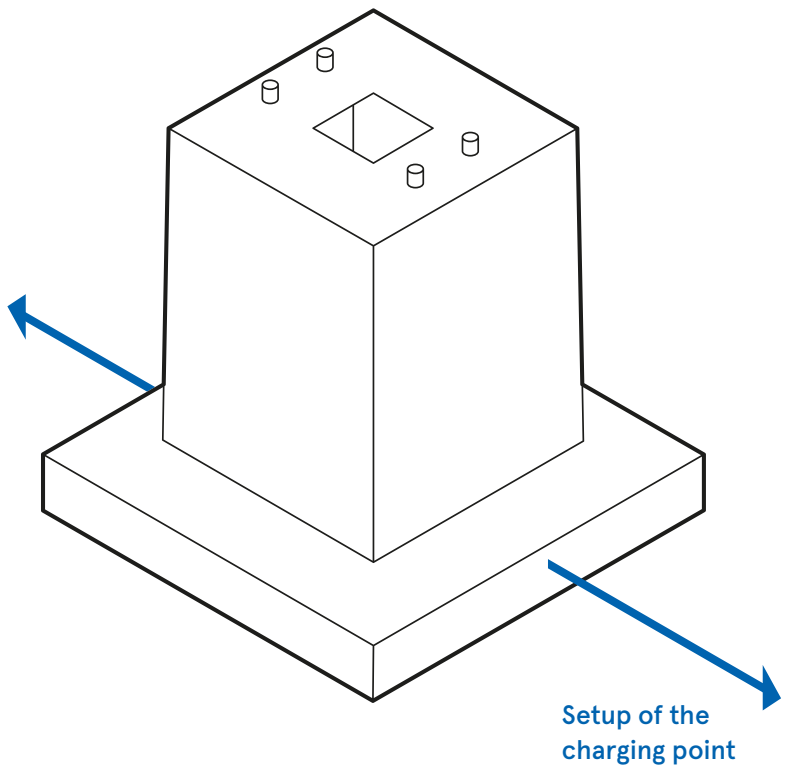
For a smooth flow of the installation, the following prep work must be performed.

Danger
Do not install in and around ex-zones!

Concrete foundation

The ePOLE duo must be installed on a concrete foundation.

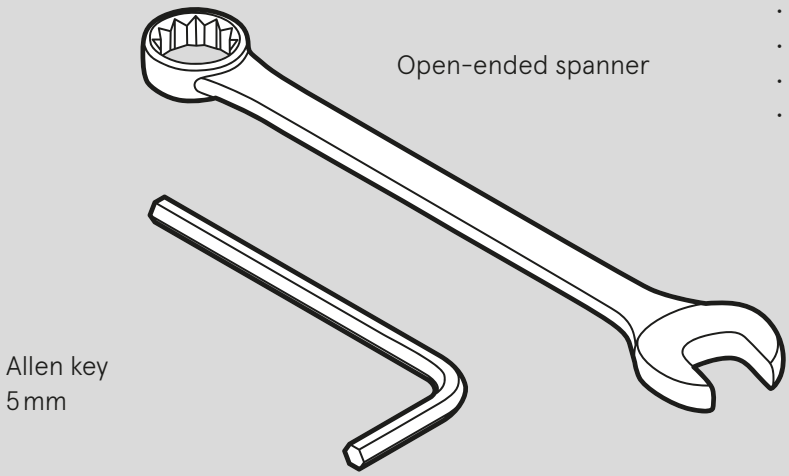
Setting the concrete foundation
The fitting concrete foundation can be ordered from Compleo (article number 10122614). This concrete foundation is equipped with four threaded bolts. The ePOLE duo is mounted on the concrete foundation by means of the base plate included in the scope of delivery.



Tools needed

The following tools are needed to assemble the ePOLE duo:

- Allen key 5 mm
- Cable ties
- Open-ended spanner 24 mm
- Spirit level
- (Battery-operated) drill

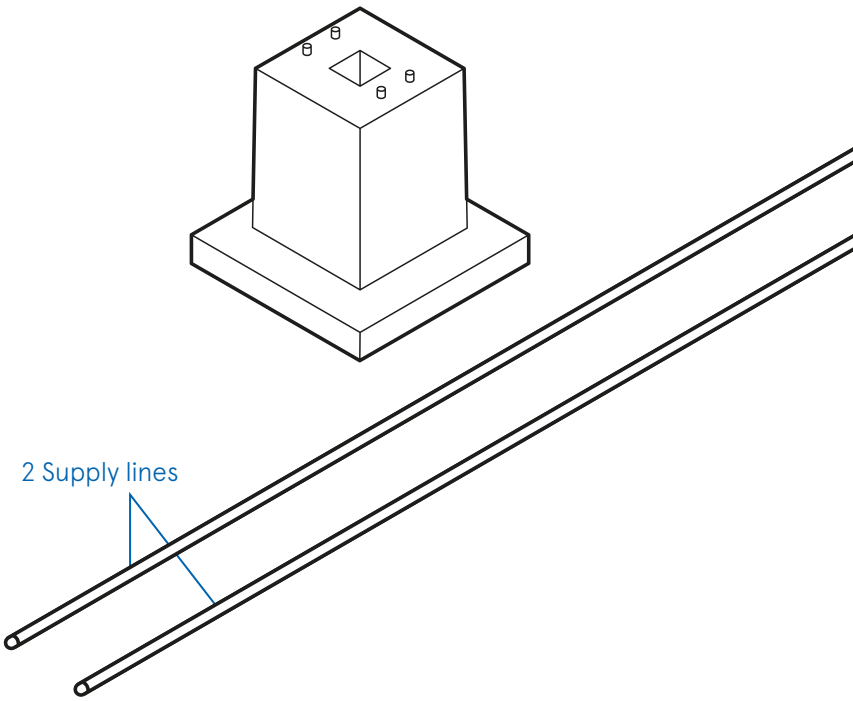


Supply lines

Since each eCLICK must be equipped with a separate residual current device and a circuit breaker in the sub-distribution, it is necessary to feed two electrical supply lines through the ePOLE duo.

Danger
There is a danger of electric shock!

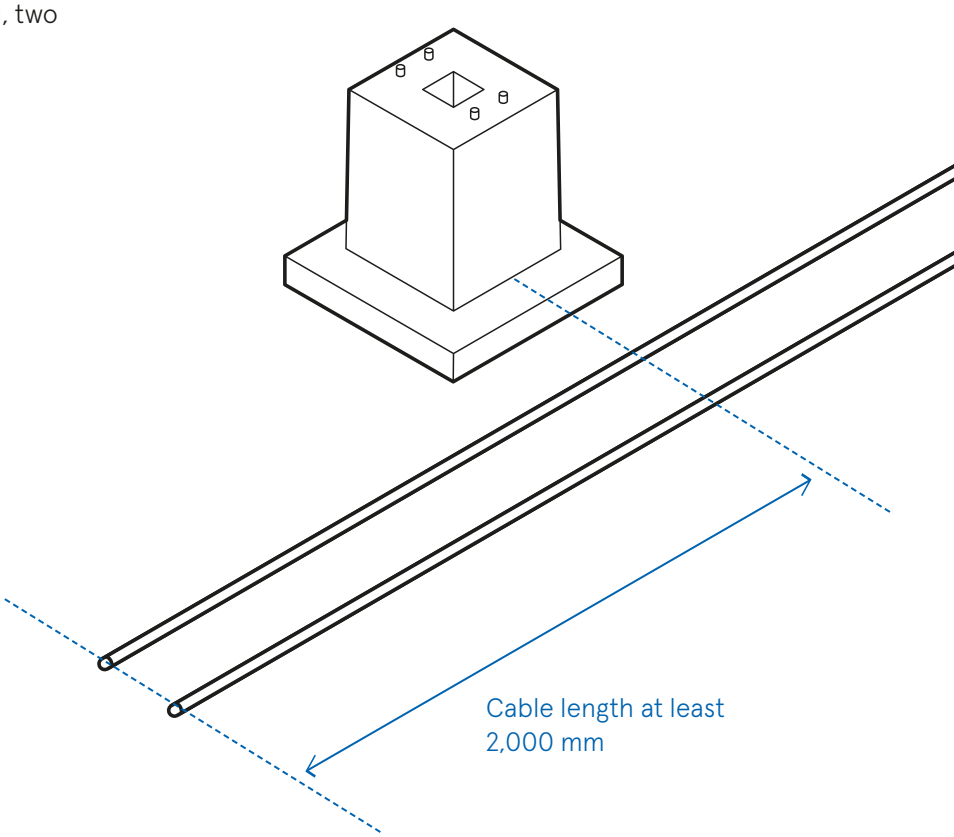
Danger
Make sure that the fusing for the circuits has been disconnected and there is no voltage across the fitted components.



Lead the two electrical supply lines to the installation site. There, keep at least 2,000 mm cable length available at the installation point in order to be able to later feed the feeds through the ePOLE duo and be able to connect the eCLICKs.

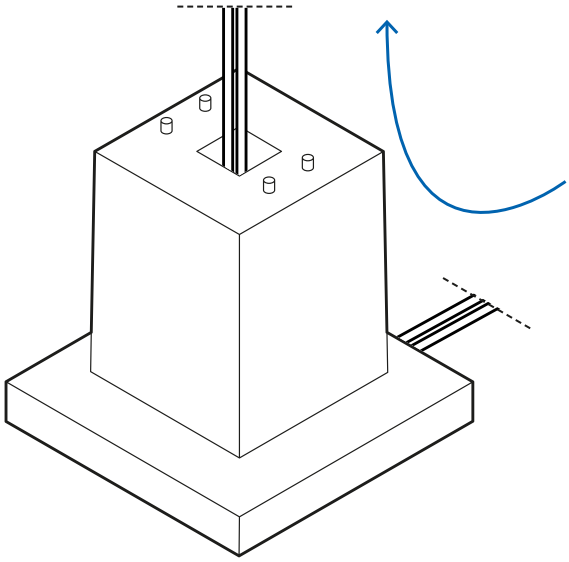
If the two eBOXes are to be connected via LAN, two Ethernet cables must be laid analogously.

Danger
Make sure that the electrical supply lines are voltage-free during the entire installation.



Mounting

Before assembling the ePOLE duo, obtain an overview of the steps required.



01

Feed the electrical supply lines and, where applicable, the Ethernet cables through the concrete foundation. At the top, at least two metres of each supply line should still be available to you.

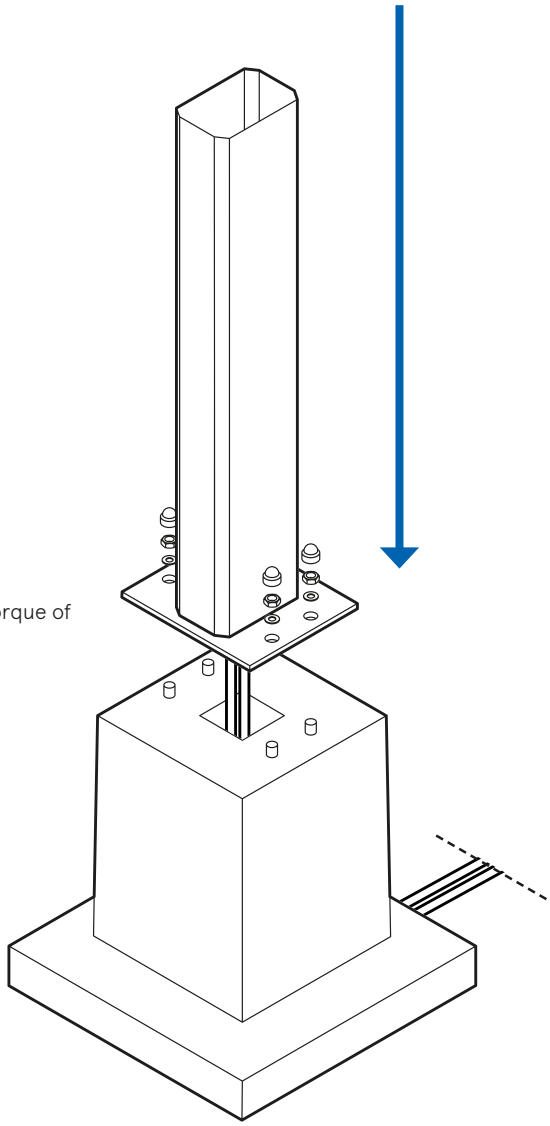
02

Place the aluminium column on the base plate and screw it on with the four screws provided. This step must take place before the base plate is bolted onto the concrete foundation.

03

Place the base plate bolted together with the aluminium column on the concrete foundation and bolt the base plate onto the bolts of the concrete foundation with the help of the washers, nuts and caps that are included in the scope of delivery.

Caution
Tighten the nuts with a torque of at least 35 Nm.

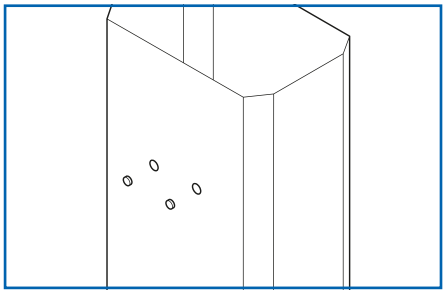


04

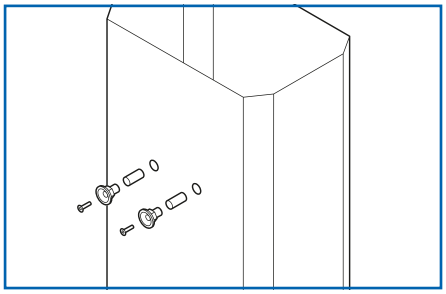
In the meantime, connect the electrical supply lines and, where applicable, the Ethernet cables with cable ties to the top end of the aluminium column.

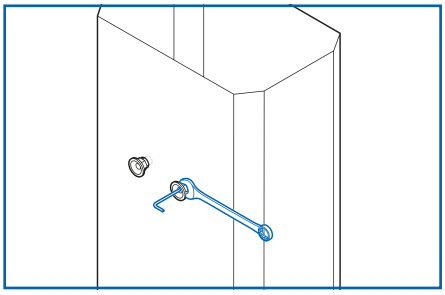
05

If you would like to install cable hangers, mount these now to the aluminium column in accordance with steps 05.01 to 05.04. Otherwise, skip to Point 6.

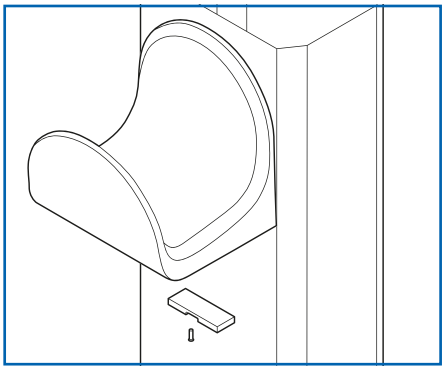


05.01
Push out, from the inside, the two inserts each at the upper end of the aluminium column.

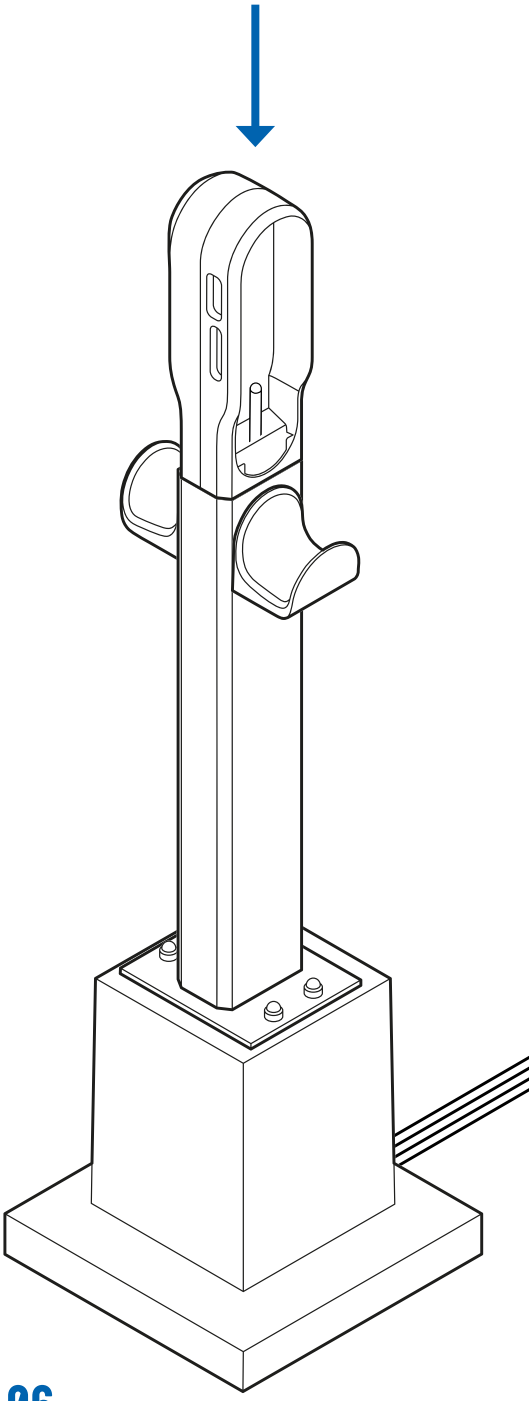




05.03
Tighten the screws with the help of an Allen wrench while fixating the mounts with an open-ended spanner.

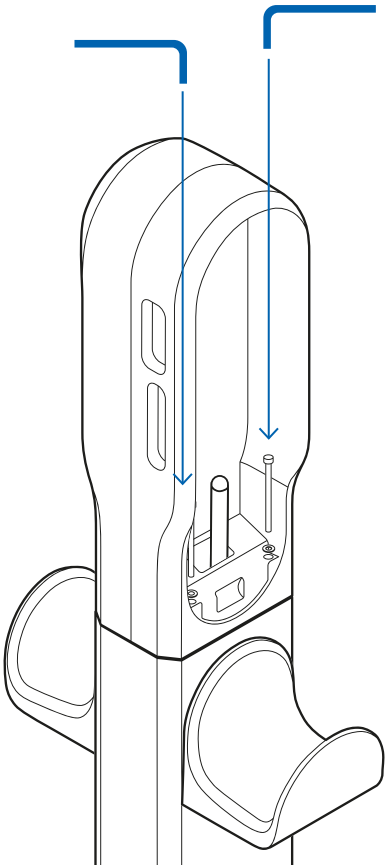


05.04
Place the cable hanger on the mounts and fixate it to the aluminium column with the included metal piece and the screw.



06

Before placing the aluminium head onto the column, pre-drill four holes with the battery-operated drill. Put on the aluminium head and you lead one supply line for each side (electrical and if necessary Ethernet cable) through the aluminum head.



07

Finally, firmly bolt the aluminium head to the aluminium column with the four included washers and screws.

Next steps

Subsequent to the assembly of the ePOLE duo:

- eCLICKs and eBOXes can be installed immediately **or**
- eCLICKs and eBOXes later.

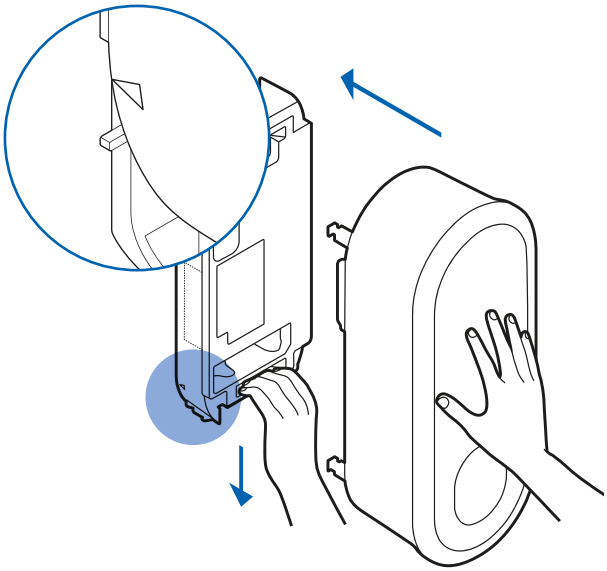
A) Installing eCLICKs and eBOXes immediately

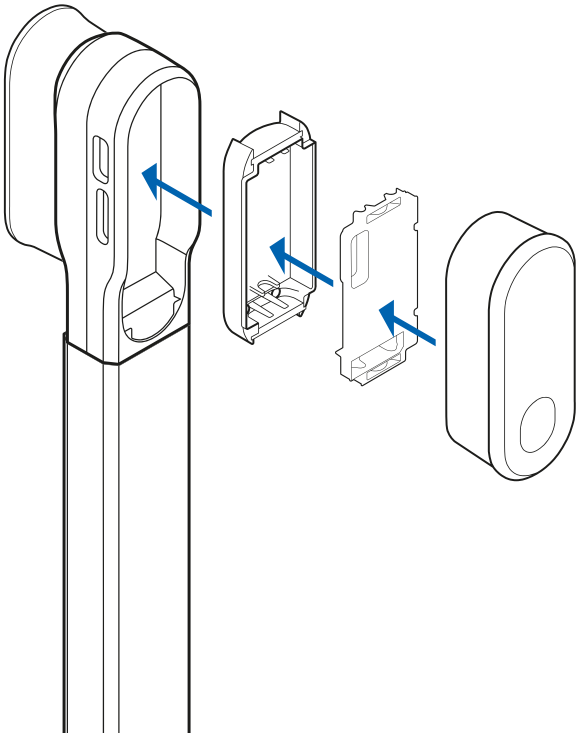
If the eCLICKs and eBOXes are available, install them immediately.

Danger
There is a danger of electric shock!

01

Click in the two eBOXes.



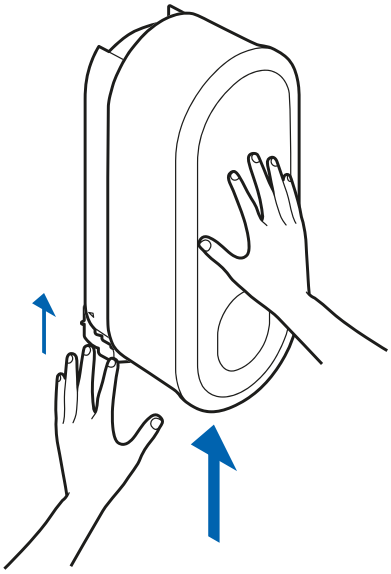


02

Please prepare the installation by pulling down the locking bracket completely and ensuring to hold it firmly in this position. Now place the eBOX carefully on the eCLICK and push it firmly in the middle with the other hand until it stops. Be careful not to exert excessive pressure on the circle LEDs.

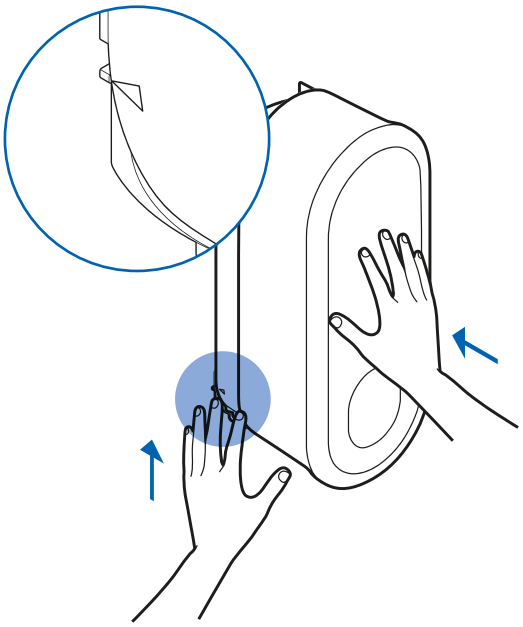
03

Now release the bracket and let it lift automatically. Please hold the eBOX in place with one hand.



04

Please continue to hold the eBOX in place with one hand. Check the final position of the locking bracket, it must be fully raised. The enlarged detail view demonstrates the desired final position. The pin on the locking bracket must be exactly level with the triangle on the eBOX. If the bracket has not reached the desired final position, please push it further upwards to the desired final position.



05

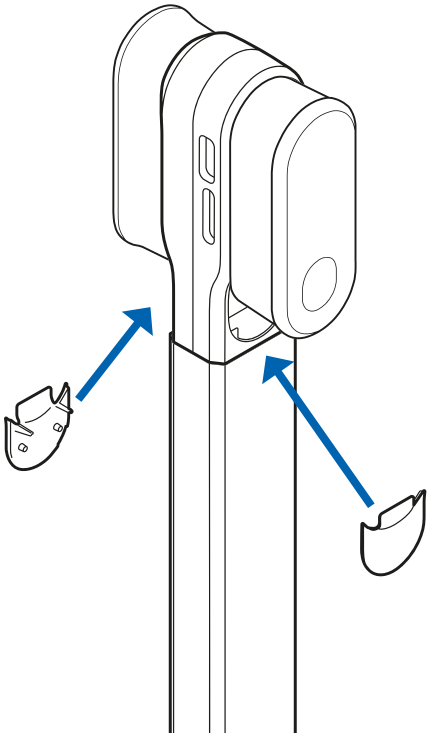
(Only for eBox with design complying with calibration regulations):

Please attach the user seal as shown below:

Attach to both eBOX and eCLICK.

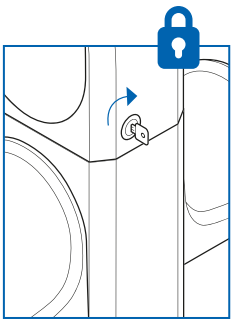
06

On both sides, place the cover plates of the ePOLE duo onto the aluminium head below the eBOXes.



07
Lock the lock so that the two cover plates are locked.

The lever of the eCLICKs to release the eBOXes is now no longer accessible.



08
Hand the key to the owner or operator of the ePOLE duo.

09
Commission the eBOXes in accordance with the included installation instructions.

B) Installing eCLICKs and eBOXes later

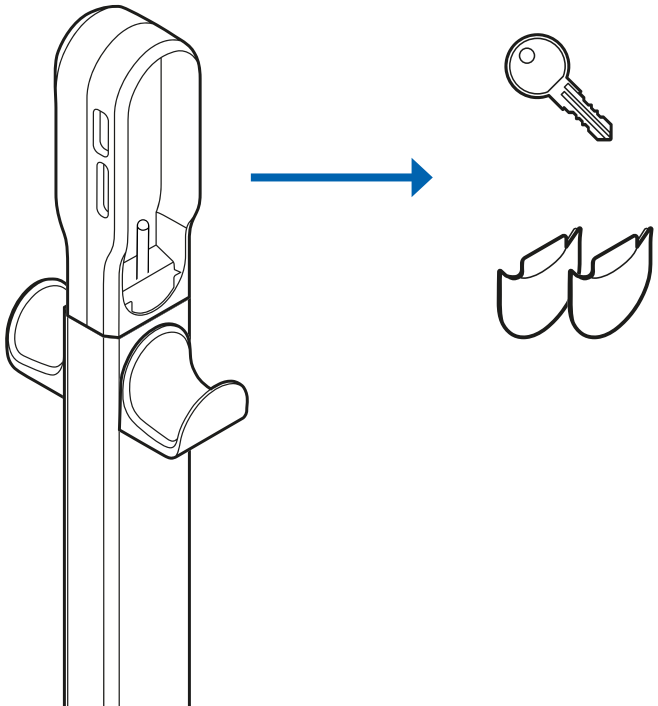
If no eCLICKs are available, make sure that the supply lines are permanently in a voltage-free state.

Danger
There is a danger of electric shock!

01
If no eCLICKs are available, yet, fixate the supply lines such that they are easily accessible for a later installation of the eCLICKs.

02
Hand the key to the owner or operator of the ePOLE duo.

03
Leave the electrical supply line voltage-free so that the supply lines are not provided with voltage!



Dismounting

The eCLICK must be dismounted by a qualified electrician.

For de-installation of the ePOLE duo, set the two eBOXes and eCLICKs voltage-free first. Leave the supply lines voltage-free for the whole duration of the de-installation.

The deinstallation of the eCLICKs and of the eBOXes is described in the eCLICK installation instructions.

As soon as the eCLICKs and the eBOXes have been de-installed in accordance with the eCLICK installation instructions, the aluminium head can be unbolted and subsequently the aluminium column can be removed. Unbolt the steel mounting bracket from the concrete foundation.

Ensure that the electrical supply lines are also voltage-free after de-installation of the ePOLE duo.

Disposal

Please dispose of the aluminium and steel parts in a professional manner.

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Document Center:

Imprint

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