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eMob-54/05.19

eMOBILITY
SOLUTIONS

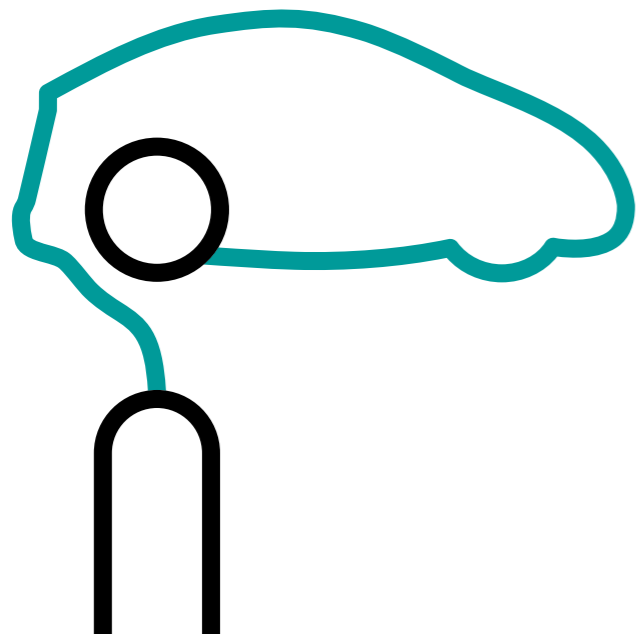


innogy

eBox professional OPERATING INSTRUCTIONS



Fuelling becomes charging



Dear EV Driver,

innogy offers you modern, leading-edge solutions for AC charging of electric vehicles (BEV and PHEV). Thank you for buying the eBox professional.

Your eMobility Team
innogy eMobility Solutions GmbH

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

IMPORTANT SAFETY INSTRUCTIONS

DANGER

Risk of fatal injury



Warning of electrical voltage! This symbol is in conjunction with the key word DANGER indicates an imminent danger. It will cause death or severe injuries if not avoided.

WARNING

Personal injury



This symbol is in conjunction with the key word WARNING indicates a possibly hazardous situation. It might cause death or severe injuries if not avoided.

CAUTION

Slight injury and / or material damage



This symbol is in conjunction with the key word CAUTION indicates a possibly hazardous situation. It might cause slight or minor injuries or a damage of the product or something in its vicinity if not avoided.

NOTE

Improvement of the application



This symbol is in conjunction with the key word NOTE indicates hints for the user or very useful information. This information helps with installation, set-up and operation of the product to ensure a fault-free operation.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS.
THEY MUST BE PROVIDED TO EACH NEW OWNER.

About this document

These operating instructions describe how the eBox professional is operated properly. The eBox must be handled as described here.

The eClick serves as a docking station, that must be installed before the eBox can be mounted. This prior installation is described in detail in the installation instructions provided with the eClick and must be performed by a qualified electrician.

Please refer to the above-mentioned installation instructions for the complete installation.

Your personal safety is assured and the eBox functions correctly only when you follow exactly the steps in these instructions for use. No work that is not described here may be carried out on the eBox. When in doubt, consult a qualified electrician.

In addition, use only accessory parts that have been manufactured specifically for the eBox.

Intended purpose

These operating instructions apply to the eBox professional and its use in USA and Canada. **Please note the safety standards applying in the country of use.**

eBox – intended use

The device is intended for indoor and outdoor use. The charging instructions are listed on an adhesive label provided with the eBox and may be affixed to the side of the eBox in a private environment. In the public environment, the adhesive label must be affixed.

Make sure that you do not obscure any information on the eBox. The owner ensures that these instructions are legible at all times in the public environment. All persons using



WARNING

When using electric products, basic precautions must always be followed, including the following.

the eBox must first have read and understood these instructions.

This design is intended exclusively for the charging of electric vehicles fitted with a Type-1 plug (SAE J1772-2009), and charging current control via the pilot signal (IEC 61851-1). The eBox may not be used to charge or supply other devices.

Please bear in mind:

- There must not be used any adapters, converters, or charging cable extensions.
- The circuit breaker is installed outside of the eBox and eClick and must be easily accessible.

- Read all the instructions before installing, operating, maintaining, or using this product.
- This device should be supervised when used around children.
- Do not put fingers into the electric vehicle connector.
- Do not use this product if the flexible power cord or the electric vehicle cable is frayed, has broken insulation, or any other signs of damage.
- Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open, or shows any other indication of damage.
- The maximum ambient temperature rating for this device is + 50 °C (122 °F).
- The information provided in this manual in no way exempts the user of responsibility to follow all applicable local and national codes and safety standards.
- BTC Power, Inc., is not responsible for physical injury, damage to property or equipment caused by the installation, usage, repair or maintenance of this product.
- This document provides docking and operating instructions for the eBox professional charging unit and must not be used for any other product. Before installation or use of this product, the user must read and review this manual carefully.
- This document describes the usage of the eBox in most commonly-used installation and mounting scenarios. If situations arise in which it is not possible to perform an operation following the procedures provided in this document, contact BTC Power, Inc. BTC Power, Inc., is not responsible for any damages that may occur resulting from custom installations or operations that are not described in this document.
- Personal protection equipment: Use of proper personal protection equipment, including, but not limited to eye protection, shock protection, gloves, and other appropriate protection, is recommended when installing or servicing any electrical equipment.
- Arcing component in contactor: The eBox professional includes contactors that, when opened or closed, will cause a short duration arc. The contactor is enclosed in an appropriate electrical enclosure, but caution is required if this arc occurs in the presence of flammable vapors, the vapors could ignite, creating an explosion. Store flammable sources away from all electrical equipment, and if flammable sources are present, allow sufficient time for ventilation before operating the eBox professional.
- Do not use extension cord to increase the length of the charging cable.

The eBox is not meant to be opened at any time during installation and operation!
Product subject to modification without prior notice. This document might not contain the latest changes to the product's specifications or processes described herein.

The eClick shall only be opened by trained personnel!

**DANGER**

Handling live components incorrectly may cause grievous injuries or death.

**DANGER**

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

**WARNING**

This equipment is intended only for charging vehicles that do not require ventilation during charging. The user should refer to the vehicle's owner's manual to determine its ventilation requirements.

**WARNING**

This equipment is not allowed to be used in and around ex-zones.

**WARNING**

The feet of the eBox are sharp-edged. Do not grip the eBox by its feet.

**WARNING**

If the electricity service to the eBox is damaged, immediately shut down the power to the eBox and contact your service representative or installer.

**WARNING**

Turn off circuit before remounting or replacing the eBox.

**CAUTION**

To reduce the risk of fire, connect only to a circuit provided with 1 x 50 A maximum branch circuit overcurrent protection in accordance with the National Electrical Code and local standards regulations and codes.

**CAUTION**

Ensure that all components are dry throughout the installation.

**NOTE**

The eBox professional is a maintenance-free product. It does not contain any repairable parts or components. Do not attempt any repairs. If a malfunction persists, replace the eBox.

EMC compliance statement: FCC Part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to two conditions:

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

eBox professional with Wi-Fi, SIM and RFID
 BTCPower, Inc.
 Model: eBox professional
 Contains FCC ID:
 UXS-SMR-3X4 and QIPELS61-US
 FCC ID: 2ASKCACCU20S

Certification
UL listed



Product overview

Included in delivery

- 1 eBox professional with adhesive operating instructions
- 1 operation instructions with PUK label stuck on for Bluetooth

eBox professional – product details

- 1 Shutter
- 2 Socket / plug compartment
- 3 Type plate
- 4 Information on use
- 5 LED ring
- 6 Bluetooth pairing button
- 7 Vehicle connection indicator
- 8 Authentication indicator
- 9 eClick (delivered separately)



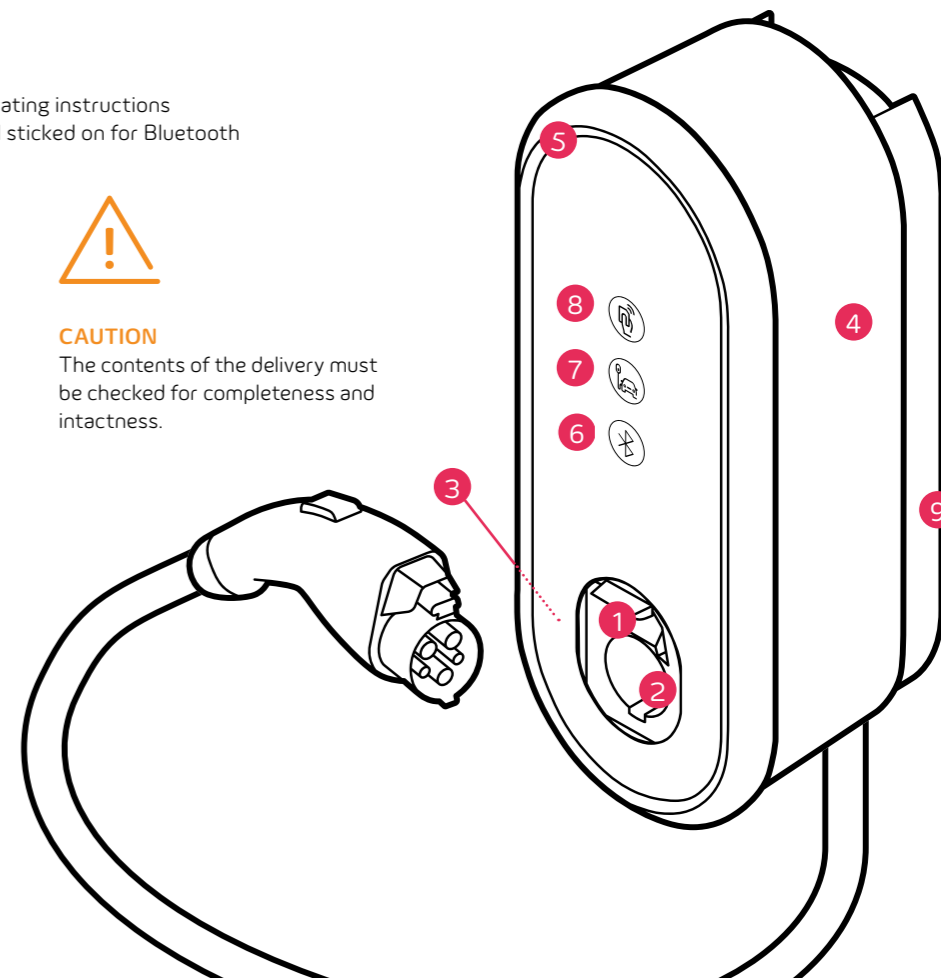
CAUTION

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



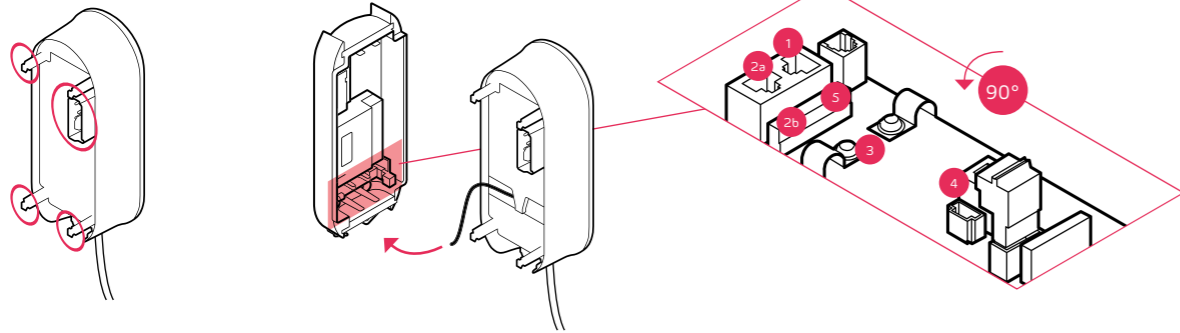
CAUTION

Check that the warranty seal on the back of the eBox is intact. Do not operate the product unless the warranty seal is undamaged. Damaged warranty seals void the warranty.



Clicking the eBox into the eClick

Before mounting the eBox, make sure the supply to the eClick is off.



01

Take the eBox and identify the connecting points (here red) on its rear side.

02

Connect the black ribbon data cable of the eBox to port 4 (Expansion terminal) at the bottom right of the eClick.

03

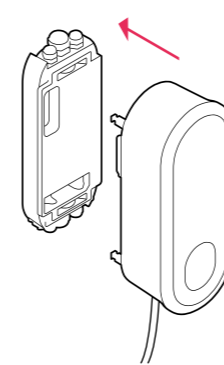
If the eBox/eClick is to be connected online via a router using a LAN cable, place the white ribbon data cable of the eBox on port 1 on the left of the eClick.

- 1 LAN 1 RJ45 (eBox communication)
- 2a LAN 2 RJ45 (deactivated)
- 2b LAN 2 LSA plus (deactivated)
- 3 Cable clips for S/FTP cable
- 4 Expansion terminal (eBox communication)
- 5 LAN 1 LSA plus to internet router



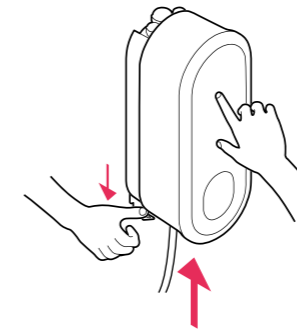
CAUTION

Ensure that the flat ribbon data cables are not trapped between the eClick and eBox when mounting the eBox.



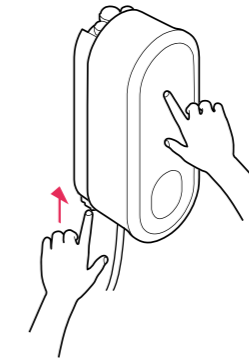
04

Place the eBox carefully on the eClick, and push in the eBox to the stop.



05

Keep a firm hold on the eBox while pulling down the locking bracket on the eClick. Now release the locking clip. As soon as the locking clip is pulled up, strongly press the eBox onto the eClick.



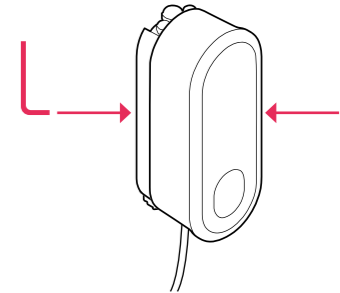
06

If necessary, readjust the locking bracket until it adopts its original position. Alignment marks (triangular recesses) are visible on the locking clip of the eClick. Check that the locking bracket is fully inserted. The triangular recesses to the left and right of the locking bracket must be flush with the eClick-housing.



CAUTION

The grub screws should only be fully inserted when the locking clip is fully inserted.



07

Tighten the two grub screws using the allen wrench at the rear left and rear right of the eClick to secure the locking mechanism in place and the eBox on the eClick.

08

Power on the eClick circuit.

**DANGER**

Radiofrequency radiation exposure Information:

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 7 3/4" (20 cm) between the radiator and your body.

Launching the app

To activate bluetooth please press bluetooth pairing button (see chapter Product overview).

Launching the app for a private installation:

1. Your electrician sets the installed charging capacity in the eConfiguration app (freely available in app stores, see QR codes at the end of the page) by entering the number of connected phases and amperages
2. **Start the eBox from the eCharge+ app (freely available in app stores, see QR codes at the end of the page), after which you can create an account, etc.**

Launching the app for a (semi-)public installation:

The eBox is commissioned by your electrician with the aid of the eConfiguration app.

The PUK must be entered before the eBox can be commissioned via the eCharge+ or eConfiguration app.

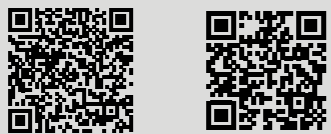
The PUK can be found on the back of this manual. Keep this PUK in a safe place, and hand it over to the next owner of the eBox.

The PUK will be needed again for every further commissioning and for every change to the configuration via the eConfiguration app.

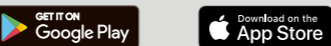
**WARNING**

In the apps, select the correct electrical network type and the current rating noted on the eClick by the installer. Otherwise, functional limitations may occur.

eCharge+ app

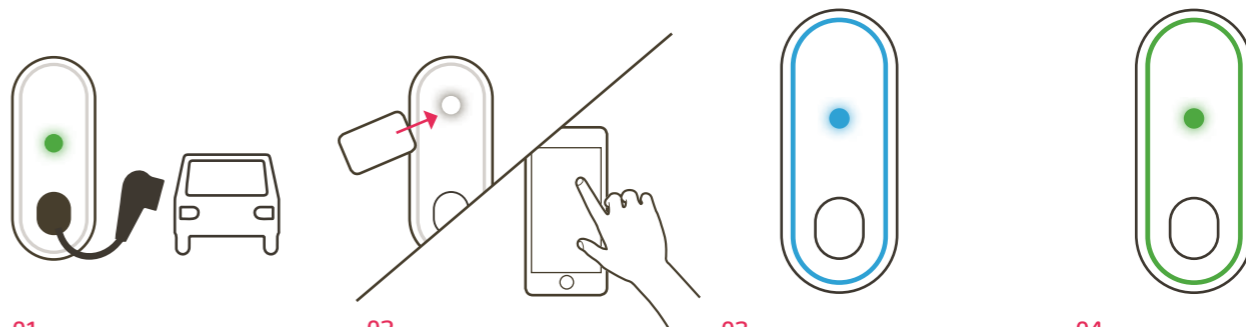


eConfiguration app



Charging

Charging involves connecting your vehicle to the eBox, authenticating the charging process, charging your vehicle, and finally disconnecting your vehicle from the eBox. Please make sure that the connected cable is hung carefully back up. (Steps 01 and 02 are interchangeable.)



01 Connect your electric vehicle to the eBox. When your vehicle is detected, the vehicle link indicator and the ring light up green.

02 Authenticate the charging process via RFID card or the eCharge+ app. For the latter you will need the charging port number displayed on the front of the eBox.

The eBox can also be activated from the backend.

Using charging cables properly
Do not use charging cables with adapters of any kind on the eBox. The use of extension cords is not permitted.

03 Shortly after successful authentication, the LED ring and vehicle link indicator start pulsing blue, and your vehicle starts to charge. For energy saving purposes, the ring goes out after some minutes when you move away from the eBox.

04 Charging is finished* when both the vehicle link indicator and the LED ring light up green. You can then disconnect your vehicle from the eBox.

* Optionally, charging may also be stopped via the RFID card you used before or the eCharge+ app.

Troubleshooting

Troubleshooting

Most eBox malfunctions are caused by incorrect use. These errors cannot be detected by the eBox and therefore can not be displayed by the device. This for example applies to the following situations:

- No power source connected
- Charging cable not plugged in correctly

If a malfunction persists despite adherence to the instructions for use, we recommend restarting the eBox. To do so, briefly disconnect the eBox from the mains by switching the (miniature) circuit breaker in sub-installation, and then reconnect it. If necessary, also check the connection on the vehicle side.

Charging malfunction

In rare cases, charging is disrupted or reduced by external effects. This can occur when:

- the eBox overheats:
The eBox down-regulates the charging power automatically when a temperature limit is exceeded and so temporarily reduces charging. Shield, therefore, the eBox from direct sunlight.
- There is a charging problem at the vehicle:
Check the fault display in your vehicle.

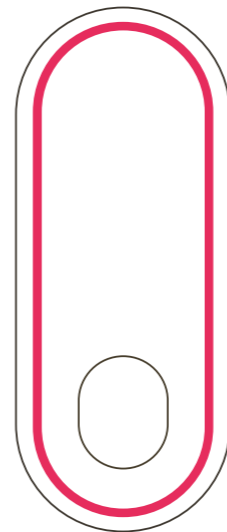
Authentication faults

- The authentication indicator does not light up when:
authentication fails via the eCharge+ app. Please repeat authentication via the eCharge+ app.
- Authentication indicator flashes red:
RFID card not detected or not configured. Please hold up again the configured RFID card against the authentication indicator, or configure an RFID card.
- Vehicle link indicator does not light up (does not light up green):
Communication fault between the vehicle and eBox. Check the connection between the vehicle and the eBox, and if necessary connect again.
- Bluetooth pairing button does not light up:
Bluetooth communication fault between the eBox and your smartphone / tablet (relevant only in the eBox private offline mode). Initialize the Bluetooth connection on your smartphone / tablet and the eBox by pressing the Bluetooth pairing button again.



DANGER

Device error. Warning of electrical voltage.



Critical fault

A serious device fault has rendered the eBox inoperable, and it must be disconnected immediately from the mains. If the fault persists after a restart and after the eBox has cooled down by itself, then consult a qualified electrician, and if necessary have the eBox replaced.

MOVING AND STORAGE INSTRUCTIONS

The eBox professional is not to be lifted or carried by the flexible cord. Make sure to keep an eye on the EV cable while carrying the eBox professional so that the cable does not

grind the ground. When stored, make sure that the cable does not cause any obstruction and be careful not to break the cable.

Specifications	With cable
Geometry	
Measurements H x W x D (without eClick)	17 3/4" x 7" x 5" (450 mm x 180 mm x 126 mm)
Cable length	21'-4" (6.5 m)
Installation type	Wall
Weight (without eClick)	6.4 kg
Environment	
Enclosure Rating	Type 3S
Ambient temperature	-22 °F to +122 °F (-30 °C to +50 °C) full load Thermal overload protection: output power reduced at higher temperatures
Storage temperature	-22 °F to +176 °F (-30 °C to +80 °C)
Mains connection	
Voltage supply	208 V AC, WYE; 240 V AC split phase / center tap delta
Connected load	up to 10.4 kW / 12 kW
Charging ports	
Number of charging ports	1
Output power	up to 10.4 kW / 12 kW
Cable	Type 1 SAE J1772
User interface	
Display	LED ring for charging level; 2 status LEDs: authentication / RFID, vehicle link; 1 status LED as touch button: Bluetooth
Backend link	WLAN with 2.4 GHz b/g/n with WPA2, LAN (only with eCharge+ app) or SIM (only with eOperate)
Backend protocol	eOperate using LG2WAN via SIM for business applications and eHome using OCPP 2.0 via WLAN / LAN for residential application
Commissioning	Via Bluetooth interface; Bluetooth Class 1 and 2 (power level)
Protective equipment	
AC and DC fault monitor	GFCI integrated (20 mA rms for AC and for DC)
Short circuit / overload protection	Needs to be installed as described in the installation manual of the eClick

Specifications	With cable
Authentication / activation	
Authentication-free charging	Pilot signal (IEC 61851-1:2017)
Plug&Charge	ISO 15118 ready
App activation	eCharge+ app activation (Smartphone App for iOS® / Android™)
Card activation	RFID card activation
Remote activation	Backend activation
Vehicle communication	
	Pilot signal (IEC 61851-1:2017)
Certifications	
	UL / FCC certificate (tested and confirmed by a certified body)

**Remark**

Android is a trademark of Google LLC

Notes

The product eBox professional must always be used in conjunction with the eClick.

Electric vehicle charger characteristics (IEC 61851-1 Ed 3):

1. The product must be connected to an AC mains.
2. The product is connected permanently to the mains.
3. The product is eClick-compatible. It is available with a Type-1 plug with connected cable.
4. The product is compatible with electric vehicles charged with AC in Mode 3.
5. The product can be installed and used in protected indoor areas and unprotected outdoor areas exposed to rain and direct sunlight.

6. The product can be used in closed and public areas.
7. The product can be installed on walls and in compatible Pole products.
8. The product eBox professional in conjunction with the eClick or coverage is rated electrical protection class I. The open eClick is rated electrical protection class I.

Disposal

The eClick and the eBox are electrical devices. These must be disposed according to national and local laws and regulations.

Cleaning

The eBox may only be cleaned with water; the use of lukewarm water is recommended. Do not use cleaning agents containing solvents.

Dismounting

Before dismantling the eBox, you must first disconnect it from the voltage supply. First loosen the two grub screws on the side and then take the eBox out of the eClick by pulling down the locking bracket, taking out the charging unit, and, if fitted, detaching the Ethernet cable connecting the eBox and the eClick. The eClick must be dismantled by a qualified electrician.



DANGER

The eClick must be disconnected from the power supply before disassembly. Make sure that all components are dry during disassembly.



CAUTION

When disassembling the eBox, make sure that the eBox is carefully removed from the eClick so that the flat ribbon data cables, the eClick and the eBox are not damaged during disassembly.

Legal notice

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