Uhlmann & Zacher

CX2172/4

Clex private
Electronic door handle

Operating and assembly manual

Imprint

Operating and assembly manual
Electronic door handle CX2172/4

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1 About this document

This operating and assembly manual describes the Clex private electronic door handle in rosette fitting (in short: CX6172) and the electronic door fitting (in short: CX2174). It is part of the product and contains important information that is necessary for proper operation and maintenance.

This operating and assembly manual is valid for all versions of CX2172 and CX2174 and is intended for technicians, who are responsible for assembling and disassembling, as well as for end customers.

- Read this operating and assembly manual carefully for smooth and safe operation and follow the instructions given in it before operating the door handle.
- Keep the operating and assembly manual in a safe place.
- After the installation, hand over the manual to the end customer and make sure that the customer familiar with its use.

Uhlmann & Zacher GmbH does not assume any responsibility for disruptions or hazards such as as non-access to injured personnel, malfunctions, property damage or other damages resulting from non-compliance with this operating and assembly manual or incorrectly configured door handles.

- If there are still any doubts after reading this operating and assembly manual, please contact your respective dealer or Uhlmann & Zacher GmbH directly.

1.1 Warnings

Warnings warn against hazards which may arise when using the door handle. There are two levels of warnings that can be identified based on the signal word:

Signal word	Meaning
CAUTION	Indicates a hazard with a low risk that can lead to mild or moderate injury if not avoided.
ATTENTION	Indicates a hazard that results in property damage.

1.2 Symbols

The following symbols may be used in this manual:

- This symbols indicates a usage instruction that must be followed by the user.
- This symbol indicates an entry in a list.

This symbol indicates useful and important information.

2 Security

2.1 Proper use

The electronic door handle CX2172/4 is intended to be installed in building doors and for opening the doors. It is compatible with the commonly used European standards for locking systems.

The different versions allow it to be used in all the common doors such as wood, steel and aluminum doors as well as doors with narrow frames having a backset of more than 18 mm (depending on the product version).

The CX2172/4 can be used indoors as well as outdoors (depending on the product version).

The version for fire and smoke-resistant doors, emergency exit locks can be used on the corresponding doors. The applicable regulations should be followed.

2.2 Improper use

The CX2172/4 should not be used for locking up supplies required in case of emergencies (for example defibrillator, emergency medication, fire extinguishers, etc.).

The CX2172/4 should not be used in potentially explosive surroundings.

Specially approved versions that are intended for the purpose should be installed and used in fire, smoke resistant doors and emergency exit locks. The applicable regulations should be followed.

The CX2172/4 should not be used if the housing or the electronics is damaged. Changes or retrofits to the product are not allowed. The knob module should not be used outside the given specifications.

The CX2172/4 should not be used in doors that do not open freely or in doors or lock cases that are damaged. The product should not be used as a stopper against obstacles.

2.3 General safety instructions

Follow these basic safety instructions when using the door handle:

- Installation and battery replacement should only be done by qualified technicians according to the instructions in this operating and assembly manual.
- Do not use the door handles in potentially explosive areas.
- Do not make any kind of modifications to the door handles, with the exception of those described in this operating and assembly manual.
- Do not apply paints or acids to the door handles.
- Do not heat the door handle and battery beyond the specified storage temperature.
- Use only original spare parts and accessories from Uhlmann & Zacher to prevent malfunctions and damages.
- Only use batteries procured from Uhlmann & Zacher.

3 Product description

3.1 Functional description

The electronic door handle CX2172/4 is a product in the Clex private system. The reading unit, the communication electronics, the mechanical system and power supply, are integrated within the door handle.

Different transponder carriers can be used as key in the CX2172/4, for example, ISO card or key fob.

CX2172/4 has the following system properties:

- Up to 1,000 key/locking authorizations can be stored
- Up to 128 events can be recorded in the fitting*
- Up to 32 holidays can be configured*
- Automatic summer and winter time changeover*
- 15 weekly schedules can be programmed*
- Permanent engagement possible without additional power consumption
- Engagement time can be programmed from 1 to 15 seconds
- Can be connected to the IDS module CX6934
- Pre-configured by default for 868 MHz wireless networking
- Inner fitting fixed mechanically (only for one-sided electronic authorization)
- Different handle shapes available
- Suitable for all doors having a thickness of 30 mm to 110 mm
- Square thickness of 7 mm, 8 mm, 8.5 mm, 9 mm and 10 mm are available
- No cabling required
- Can be combined with other systems (for example Clex prime)
- Version for MIFARE® transponder available
- Optional management via the CX2530 Keyng software

3.1.1 Battery management

The electronic door handle CX2172/4 comes with a battery management system, which indicates the need for battery replacement by means of a visible and audio signal, when the battery power reduces (capacity loss) during the final 1,000 operations of the battery (see chapter 7.2.1 Battery Replacement).

The signal is given out in two phases:

Phase 1 The battery needs to be changed soon.

If an authorized key is held in front of the reading unit, then the engaging of the door handle is accompanied with flashing of red light (5 times) and 5 short audible signals.

Phase 2 The battery needs to be changed immediately.

If an authorized key is held in front of the reading unit, then the red LEDs flash (5 times) accompanied by 5 short audible signals. The engaging of the door handle is delayed by 5 seconds, during which time the green LEDs flash.

The access data, the events log, the settings of the cabinet lock and the time are stored on non-volatile memory and thus retained even when there is no power supply, for example, when changing the battery or if the battery discharges completely. The time is written to the non-volatile memory once every 30 minutes. If the power supply remains off, then the clock comes to a standstill after a few seconds and starts running from the last stored value onwards after the power supply is restored.

* When using CX2530 Keyng

3.1.2 Event log

The last 128 events of the door handle are stored in the event log.

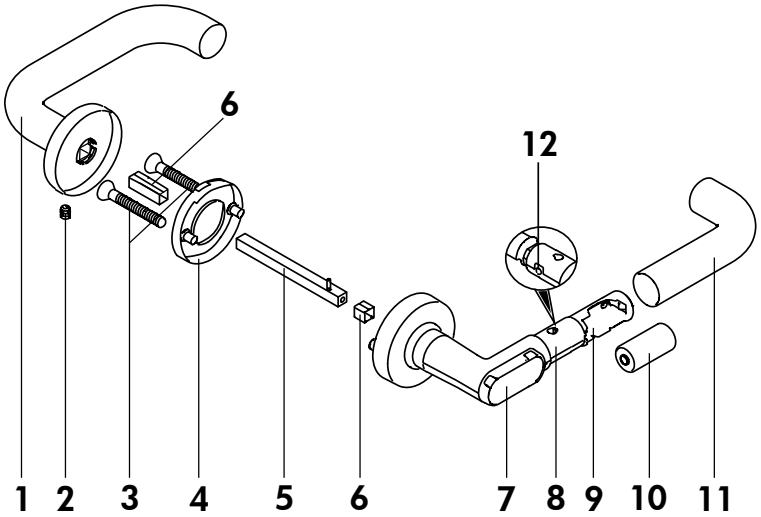
Event logging can be enabled or disabled for each door handle individually, to comply with specific data privacy guidelines.

The event log can be read via the CX2530 Keyng.

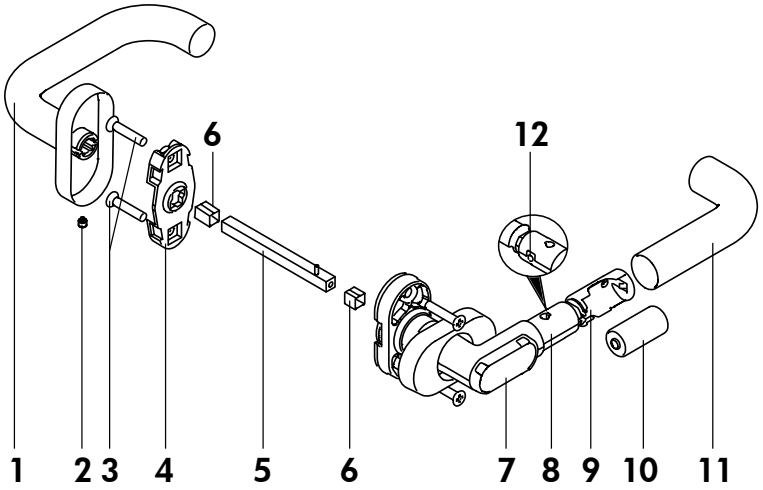
3.2 Design

3.2.1 One-sided electronic authorization

Circular rosette

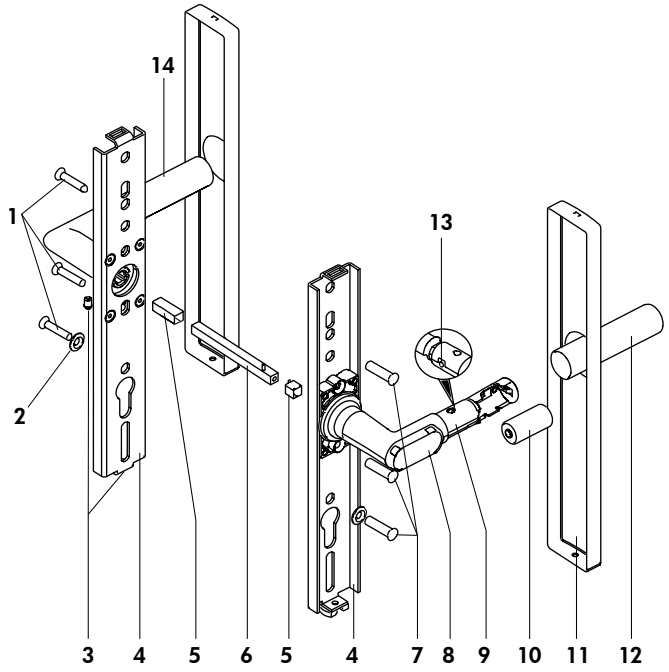


Oval rosette

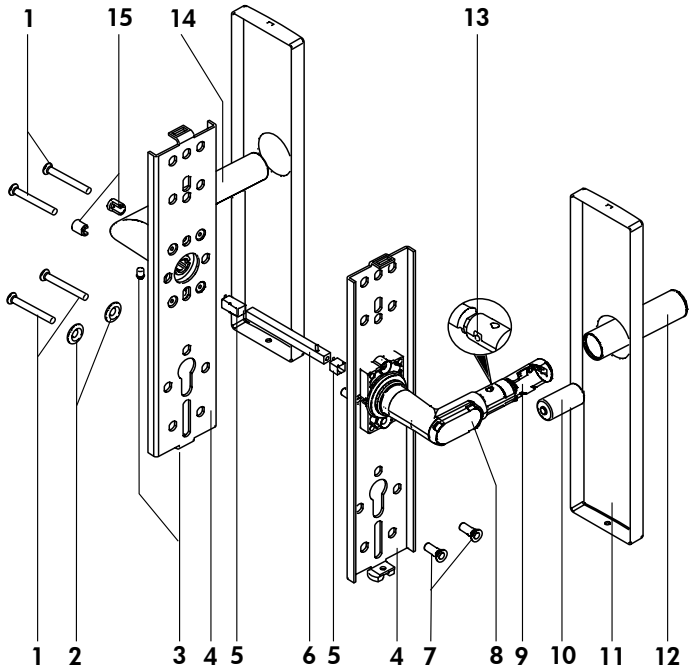


1	Mechanical door handle	7	Reading unit
2	Locking screw	8	Electronic door handle
3	Mounting screw	9	Battery compartment
4	Opener holder (with bayonet lock)	10	Battery
5	Square pin with spiral clamping	11	Gripping sleeve
6	Adapter sleeve (only for 7 mm square pin)	12	Grub screw for gripping sleeve

Long narrow plate

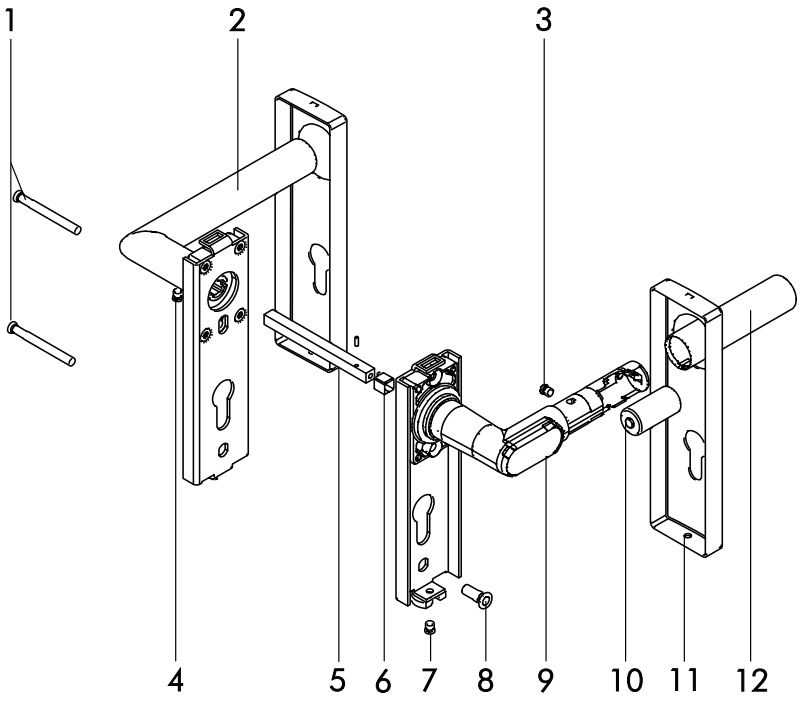


Long wide plate



1	Mounting screws	9	Electronic door handle
2	Washers	10	Battery
3	Locking screws	11	Plate cover
4	Base plate	12	Gripping sleeve
5	Adapter sleeve (only for 7 mm square pin)	13	Grub screw for gripping sleeve
6	Square pin with spiral clamping	14	Mechanical door handle
7	Threaded sleeves	15	Screw-type sleeve
8	Reading unit		

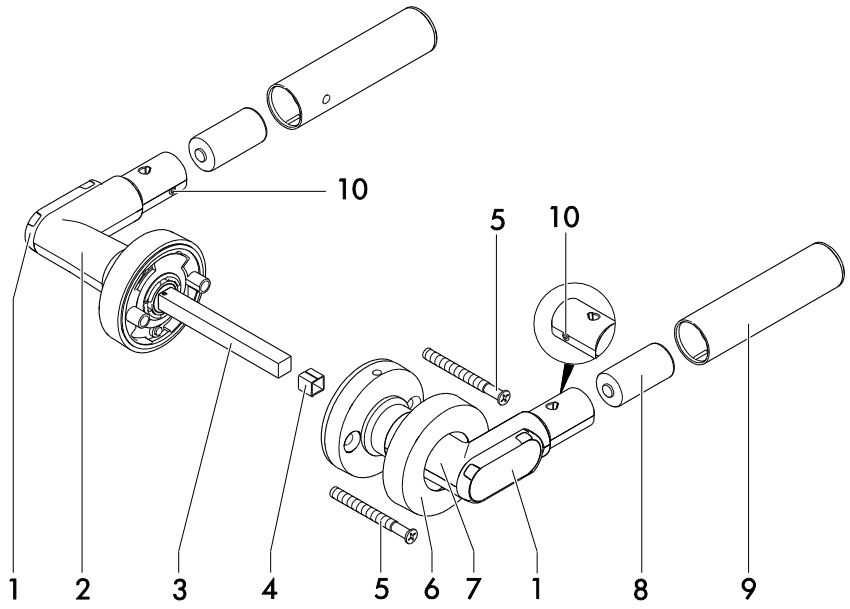
Short plate



1	Mounting screws	7	Locking screw
2	Mechanical door handle	8	Threaded sleeve
3	Grub screw for gripping sleeve	9	Electronic door handle
4	Locking screw	10	Battery
5	Square pin with spiral clamping	11	Plate cover
6	Adapter sleeve (only for 7 mm square pin)	12	Gripping sleeve

3.2.2 Two-sided electronic authorization

Two-sided electronic authorization is possible only in certain combinations of the variants circular rosette, oval rosette, long narrow plate and long wide plate.

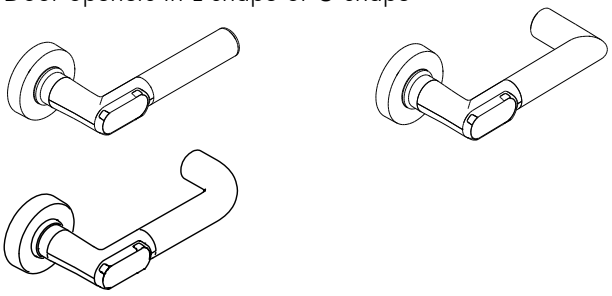


1	Reading unit	6	Rosette cover
2	Electronic door handle (outside)	7	Electronic door handle (inside)
3	Square pin	8	Battery
4	Adapter sleeve (only for 7 mm square pin)	9	Gripping sleeve
5	Mounting screw	10	Grub screw for gripping sleeve

3.3 Versions

Different opener shapes and versions are available:

- Door openers in L-shape or U-shape



- One or two-sided electronic authorization
- Circular rosette, oval rosette, long narrow plate and long wide plate
- For emergency exit locks, fire and smoke resistant doors
- For door hinged on the right or left
- For indoor or outdoor use
- Various square sizes (7 mm, 8 mm, 8,5 mm, 9 mm, 10 mm)

3.4 Technical data

3.4.1 General technical data

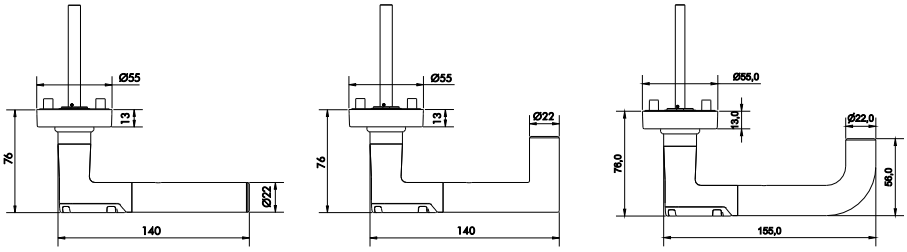
Name	Value
Minimum backset	Circular rosette: 28 mm Oval rosette: 18 mm Long narrow plate: 22 mm Long wide plate: 33 mm
Door thickness	30 mm to 110 mm
Maximum door weight	300 kg
Swivel angle	45°
Transponder	MIFARE® Classic (868 MHz) MIFARE® DESFire® (868 MHz) Active transponder (868 MHz)
Radio	Frequency: 868.3 MHz Maximum transmission power: 1 mW
Power supply, Rated voltage	CR123A 3V battery (1 piece), 3 volts
Battery life	up to 170,000 operations or 9.8 years
Power consumption in sleep mode	0.06 mW

3.4.2 Ambient conditions

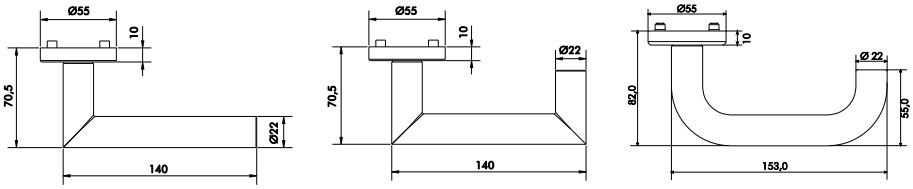
Name	Value
Operating temperature	+5°C to +55°C (indoor version) -25°C to +65°C (outdoor version)
Storage temperature	-40°C to +65°C
Maximum relative humidity (door handle)	Up to 95% non-condensing
Installation location	Indoor or outdoor (depending on the product model)
Protection class	Indoor version: IP40 Outdoor version: IP66

3.4.3 Dimensions

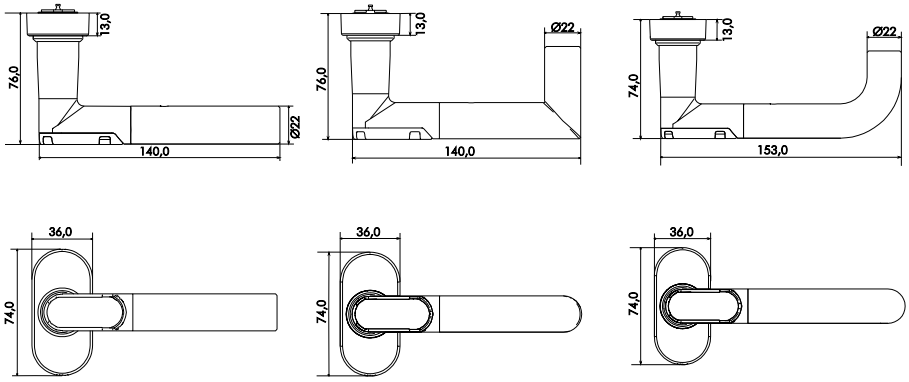
Circular rosette electronics side and handle versions



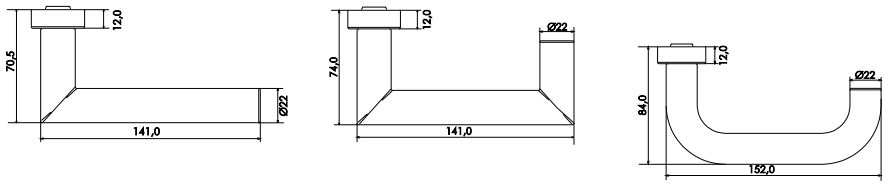
Circular rosette mechanical side and handle versions



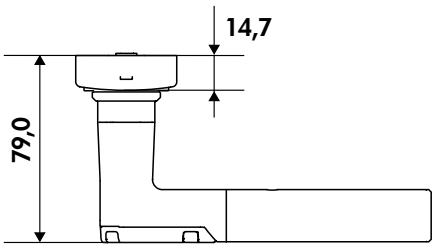
Oval rosette electronics side

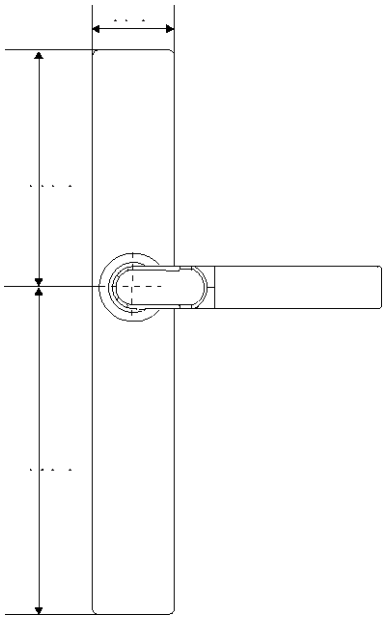


Oval rosette mechanical side

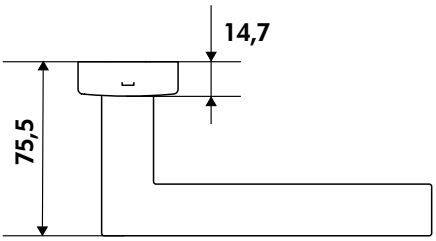


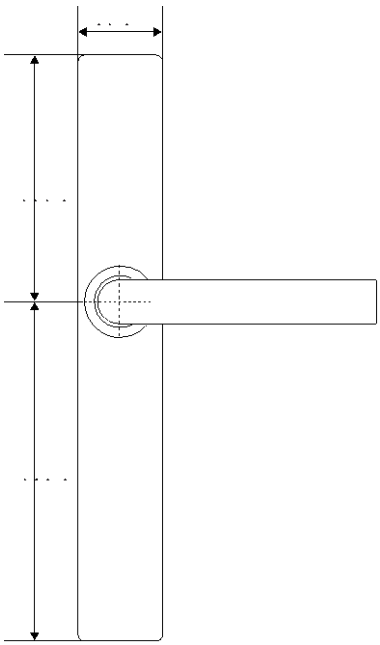
Long narrow plate electronics side



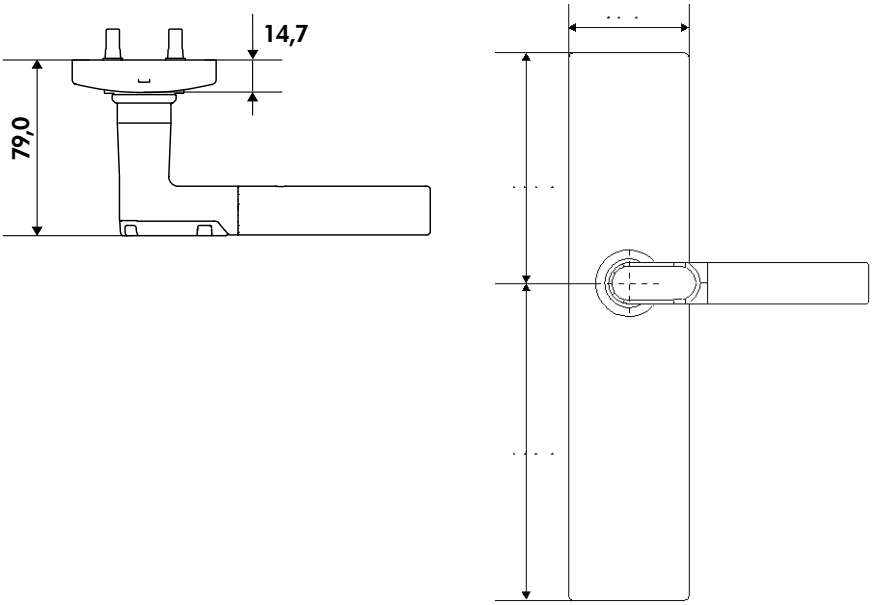


Long narrow plate mechanical side

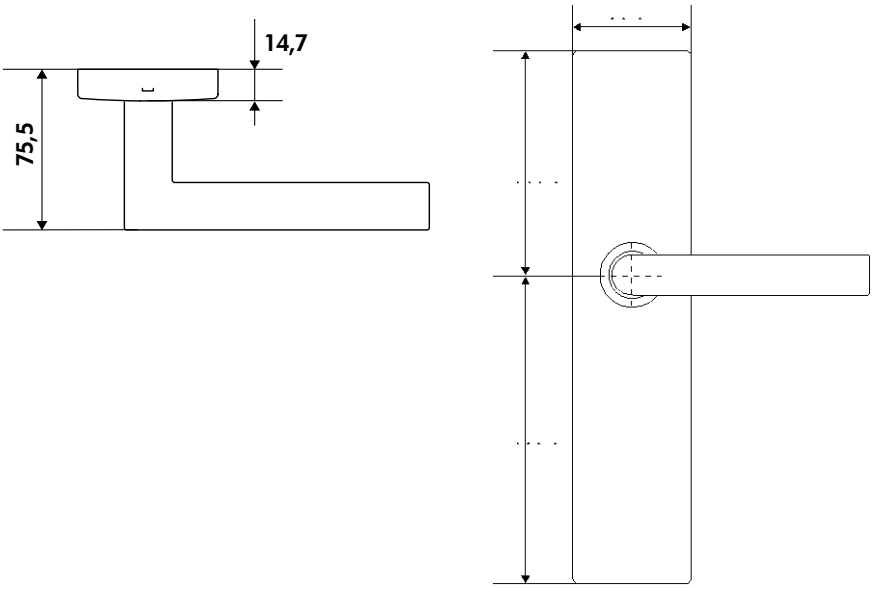




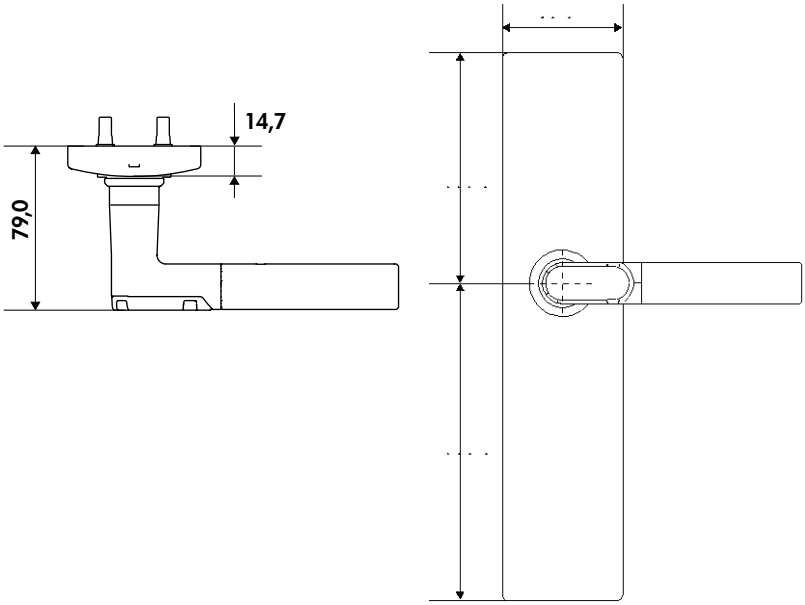
Long wide plate electronics side



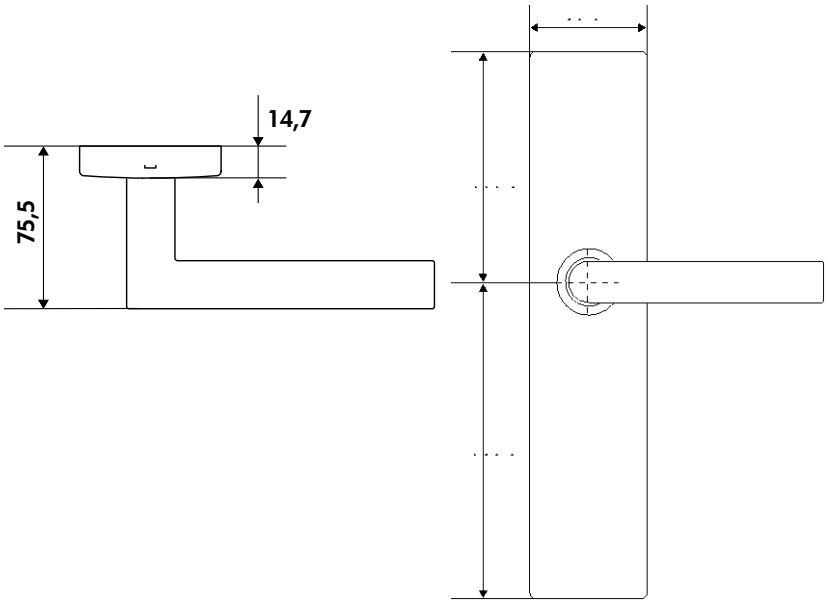
Long wide plate mechanical side



Short plate electronics side



Short plate mechanical side



3.5 Standards

The electronic door handle CX2172/4 meets the following standards:

- EN 16867:2020, classification 47-B11D00 (version for indoor use)
  47-B11D40 (version for outdoor use)
- EN 1906:2012

3.6 Management accessories

3.6.1 CX2530 Keyng

The CX2530 Keyng management software helps easy management of the electronic locking system Clex private via the PC. The software, in comparison to the learning / clearing system, offers an extended function range.

The communication between the locking units and the management software takes place via a USB wireless stick.

3.6.2 Service key

Using the service key, a user identifies himself as an administrator of the locking system. If the service key is held in front of a component of the locking system, then the respective component goes into programming mode. It is then possible, for example, to authorize keys, adjust settings or read the event log.

4 Assembly

4.1 Assembly instructions

CAUTION

- The cover of the electronic door handle can be damaged if the mounting screws are too long!
- Tighten the mounting screws with a torque of 2 Nm.

4.1.1 General assembly instructions

- Check the approval when installing the CX2172/4 door handle in a fire / smoke resistant door or in an escape door.
- If a cylinder holder is present in the door, then it should be sealed properly, for e.g. using a dummy cylinder.
- Carry out the assembly with the door open.
- Ensure that the latches or seals fitted to the door do not hinder the proper operation of the CX2172/4.
- Ensure that the door handle does not protrude and prevent the door from swinging freely.
- When installing the CX2172 door handle in the circular and oval rosettes version, the hole in the door for inserting the handle pin should have a diameter of at least 25 mm.
- When installing the CX2174 door handle in the long plate version, the plate has to be fixed at least at four points distributed as evenly as possible over the length, such that the corresponding force can be applied on the plate.
- Before assembling the door handle, always check whether all the components can move freely.
- After assembly, check the function with the door open.

4.1.2 Drilling template

The drilling template supplied is used to mark the drilling holes.

Circular rosette There should be a distance of at least 38 mm between the two drilling holes for the handle rosette and that for the key rosette.

Oval rosette There should be a distance of at least 50 mm between the two drilling holes for the handle rosette and that for the key rosette.

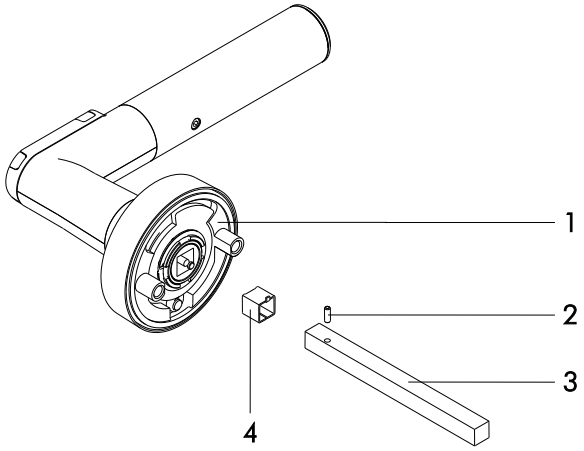
Long plate The base plates of the two long plate versions are provided with holes for different doors. Usually the same holes are used for the long narrow plate version as for the oval rosettes versions, for the wide version that of the circular rosette version.

Short plate The base plate of the short plate is provided with holes for mounting a short plate. Usually the upper short plate hole and a hole below the locking cylinder are used for fixing.

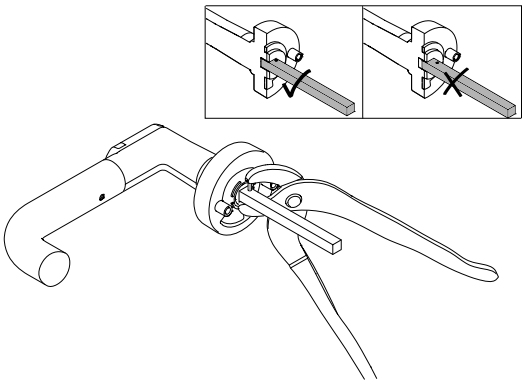
4.2 Assembly

4.2.1 Assembling the square pin

The square pin has to be assembled before installation on the electronic door handle (outside). This applies to all the versions and is shown here using an example of the circular rosette version.



1 Electronic door handle
2 Spiral clamping pin
3 Square
4 Adapter sleeve for square (only for 7 mm square)

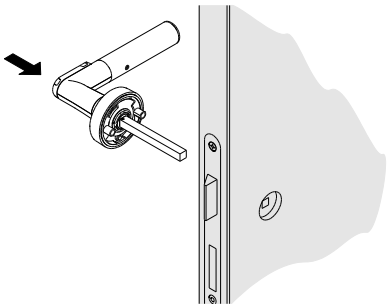


- Insert the adapter sleeve into the square holder (if required)
- Insert the square onto the retaining pin and into the square holder
- Insert the spiral clamping pin into the square

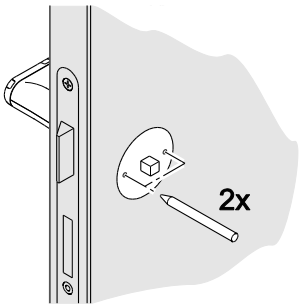
4.2.2 One-sided electronic authorization

Circular rosette

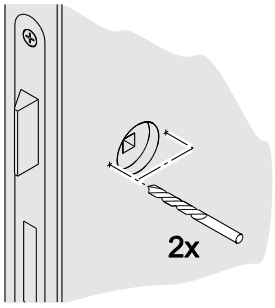
- Insert the square pin of the electronic door handle into the square nut of the lock.



- Place the drilling template on the square pin, align horizontally and centre punch the hole markings.

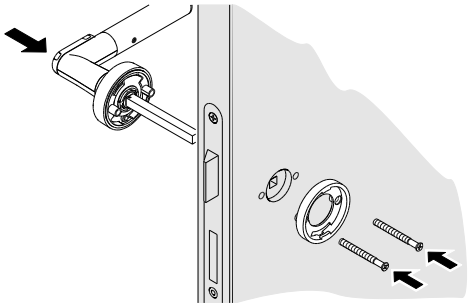


- Remove the square pin again.
- Drill holes of diameter 8 - 8.5 mm at the marked positions. Do not drill into or through the lock casing.

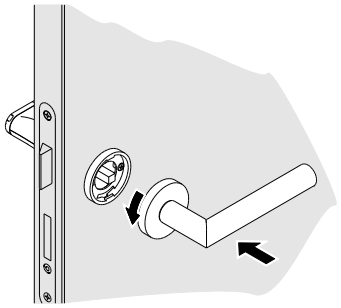


- Insert the square pin of the electronic door handle once again into the square nut of the lock. If necessary place the adapter sleeve supplied on the square pin.

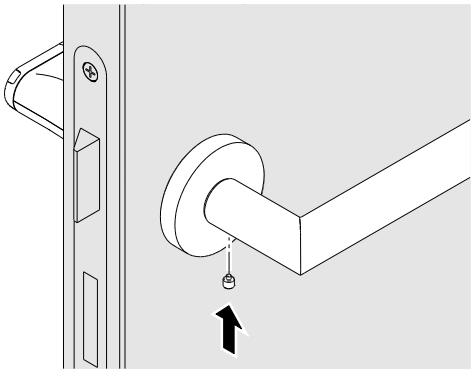
- Insert the holder of the mechanical door handle from the other side and screw it along with the electronic door handle through the door panel. Use the supplied mounting screws.



- Insert the mechanical door handle keeping it in a horizontal position. For door handles pointing to the right, tighten the rosette towards the left, guide it over the handle holder and engage the bayonet lock. Accordingly, tighten the rosette towards the right for door handles pointing to the left.



- Insert the locking screw from the bottom of the handle and tighten it.

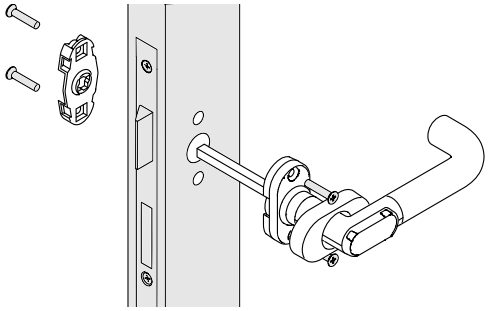


- Check the functionality and easy movement of the door handle with the door open. The handle is already engaged when delivered.
  When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.
- To operate the door handle, insert the battery and close the housing (see chapter 7.2.17.2.1 Battery replacement). The electronic door handle disengages only after the battery is inserted.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

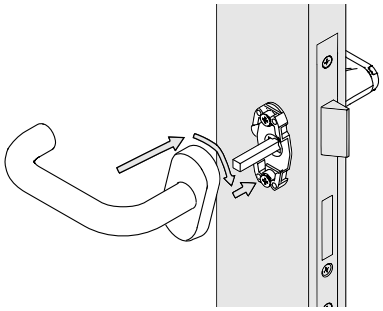
Oval rosette

The oval rosette version is mostly used for tubular frame doors. These doors often have pressed threaded bushes, such that the base plate has to just be screwed onto the door. Other types of attachment depend on the various door designs and are not explained here.

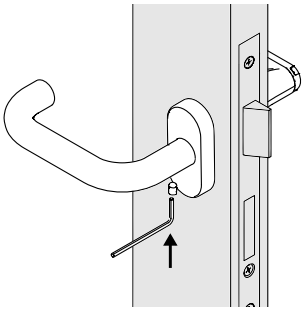
- Pull the rosette cover of the electronic door handle back, turn by 90° and screw the electronic door handle onto the door panel. Insert the holder of the mechanical door handle from the other side and screw it to the door panel as well. Use the supplied mounting screws.



- Replace the rosette cover of the electronic door handle on the rosette.
- Insert the mechanical door handle keeping it in a horizontal position. For door handles pointing to the right, tighten the rosette towards the left, guide it over the handle holder and engage the bayonet lock. Accordingly, tighten the rosette towards the right for door handles pointing to the left.



- Insert the locking screw from the bottom of the handle and tighten it.



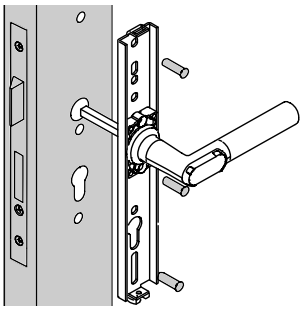
- Check the functionality and easy movement of the door handle with the door open. The handle is already engaged when delivered.
  When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.

- To operate the door handle, insert the battery and close the housing (see chapter 7.2.17.2.1 Battery replacement). The electronic door handle disengages only after the battery is inserted.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

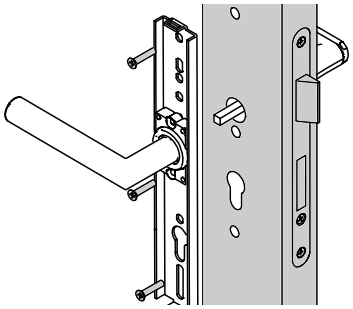
Long narrow plate

The long plate narrow version is mostly used for tubular frame doors. These doors often have pressed threaded bushes, such that the base plate has to just be screwed onto the door. Other types of attachment depend on the various door designs and are not explained here.

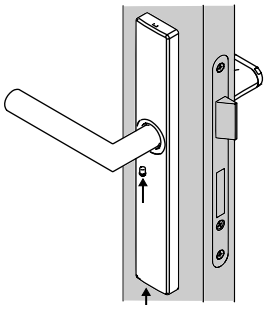
- Insert the square pin of the electronic door fitting into the square nut of the lock.



- Screw the base plate of the electronic fitting onto the door panel. Use the supplied mounting screws.
- Insert the base plate of the mechanical door handle from the other side and screw it to the door panel. Use the supplied mounting screws.



- Place the plate cover of both the door handles on the base plate and unscrew the locking screw at the bottom of the plate such that the plate sits firmly.
- Insert the locking screw from the bottom of the handle and tighten it.

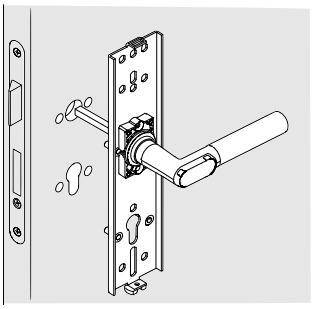


- Check the functionality and easy movement of the door handle with the door open. The handle is already engaged when delivered.
  When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.
- To operate the door handle, insert the battery and close the housing (see chapter 7.2.17.2.1 Battery replacement). The electronic door handle disengages only after the battery is inserted.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

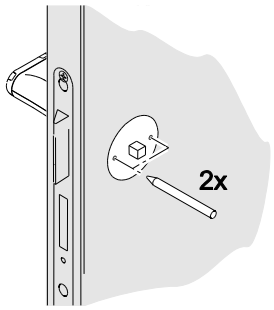
Long wide plate

The long wide plate is mostly used in doors, where the holes are available for a circular rosette in the lock casing. These holes are used to fix the base plate. The holes have to be drilled in the door subsequently if required, as described below. Other types of attachment depend on the various door designs and are not explained here.

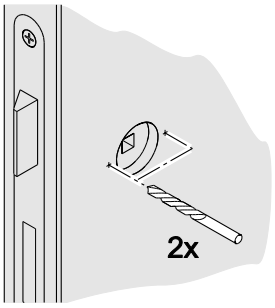
- Insert the square pin of the electronic door handle into the square nut of the lock.



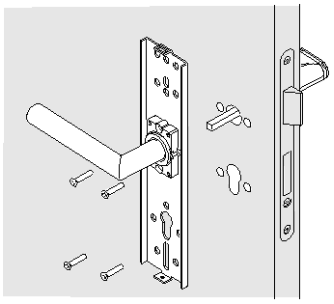
- Place the drilling template on the square pin, align horizontally and centre punch the hole markings.



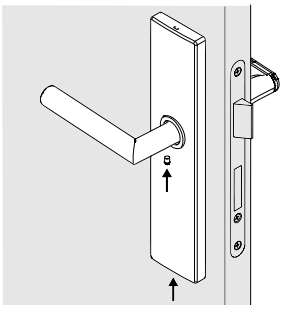
- Remove the square pin again.
- Drill holes of diameter 8 - 8.5 mm at the marked positions. Do not drill into or through the lock casing.



- Insert the square pin of the electronic door handle once again into the square nut of the lock. If necessary place the adapter sleeve supplied on the square pin.
- Insert the base plate of the mechanical door handle from the other side and screw it along with the electronic door handle through the door panel. Use the mounting screws and threaded bolts provided.



- Place the plate cover of both the door handles on the base plate and unscrew the locking screw at the bottom of the plate such that the plate sits firmly.
- Insert the locking screw from the bottom of the mechanical door handle and tighten it.



- Check the functionality and easy movement of the door handle with the door open. The handle is already engaged when delivered.

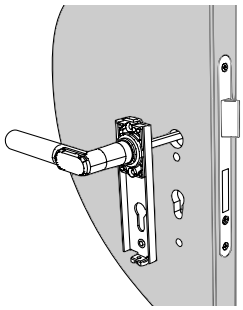
When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.

- To operate the door handle, insert the battery and close the housing (see chapter 7.2.17.2.1 Battery replacement). The electronic door handle disengages only after the battery is inserted.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

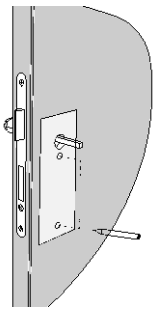
Short plate

The short plate is mostly used in steel doors, where the two standardised holes for a short plate fitting are often already present. The holes have to be drilled in the door subsequently if required, as described below.

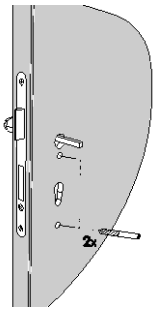
- Insert the square pin of the electronic door handle into the square nut of the lock.



- Place the drilling template on the square pin, align horizontally and centre punch the hole markings.

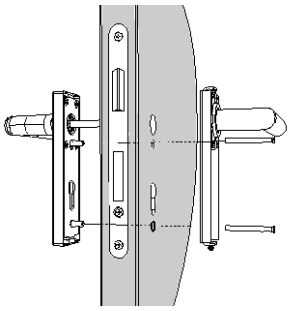


- Remove the square pin again.
- Drill holes of diameter 8 - 8.5 mm at the marked positions. Do not drill into or through the lock casing.

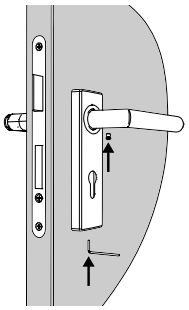


- Insert the square pin of the electronic door handle once again into the square nut of the lock. If necessary, place the adapter sleeve supplied on the square pin.

- Insert the base plate of the mechanical door handle from the other side and screw it along with the electronic door handle through the door panel. Use the mounting screws and threaded bolts provided.



- Place the plate cover of both the door handles on the base plate and unscrew the locking screws at the bottom of the plate such that the plate covers sit firmly.
- Insert the locking screw from the bottom of the mechanical door handle and tighten it.

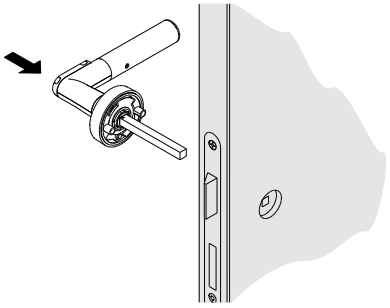


- Check the functionality and easy movement of the door handle with the door open. The handle is already engaged when delivered.
  When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.
- To operate the door handle, insert the battery and close the housing (see chapter 7.2.1 Battery replacement). The electronic door handle disengages only after the battery is inserted.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

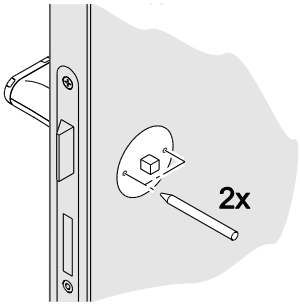
4.2.3 Two-sided electronic authorization

Two-sided electronic authorization is possible in the versions of circular rosette, oval rosette, long narrow plate and long wide plate.

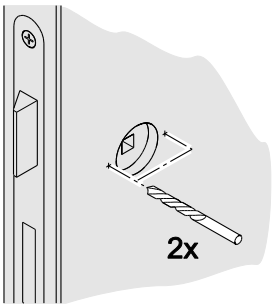
- Insert the square pin of the outer electronic door handle into the square nut of the lock.



- Place the drilling template on the square pin, align horizontally and centre punch the hole markings.

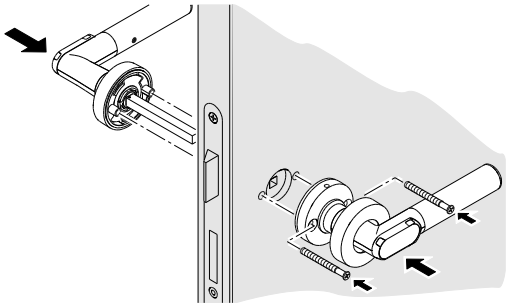


- Remove the square pin again.
- Drill holes of diameter 8 - 8.5 mm at the marked positions. Do not drill into or through the lock casing.

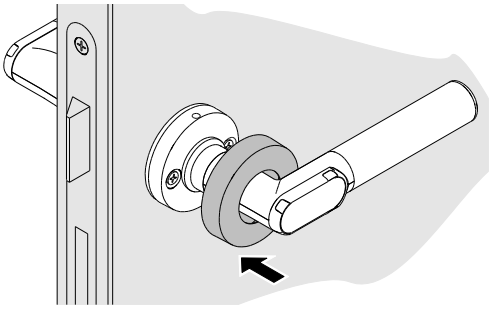


- Insert the square pin of the outer electronic door handle once again into the square nut of the lock. If necessary place the adapter sleeve supplied on the square pin.
- Check the extent to which the square pin protrudes out of the door panel and shorten it if required, in order to completely insert the inner electronic door handle. The square pin should protrude 6 mm ± 0.5 mm over the door panel, to ensure proper functioning.

- Retract the rosette cover of the inner electronic door handle to the maximum extent and screw both the electronic door handles together through the door panel. Use the supplied mounting screws.



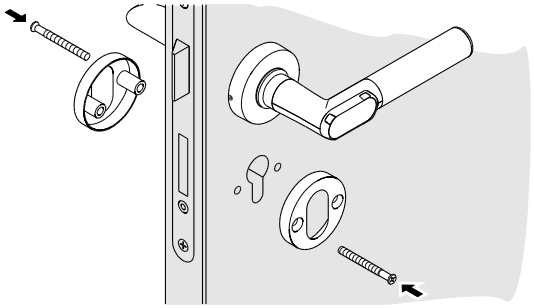
- Place the rosette cover.



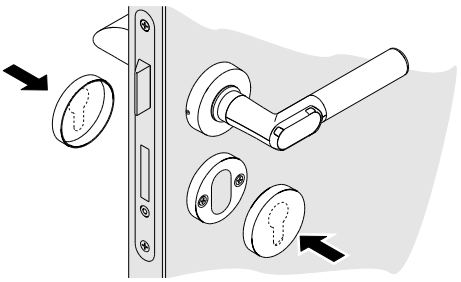
- To operate the door handle, insert the battery and close the housing (see chapter 7.2.17.2.1 Battery replacement).
- Check the functionality and easy movement of the door handle with the door open. To do this, hold an authorized key in front of the reading unit.
  When engaged, the catch of the lock should be completely inside the lock casing when the latch is pressed down.
  After holding up an authorized key for the first time, only the two upper LEDs light up as an indication. When inserting the battery, make sure that the handle is in its designated horizontal position. This is necessary for the orientation sensor to calibrate and the device to function correctly.

4.2.4 Assembling the key rosette

- Place the drilling template, align horizontally and center punch the hole marks.
- Drill holes of diameter 7 - 7.5 mm at the marked positions. Do not drill into or through the lock casing.
- Screw both the key rosettes together through the door panel.



- Place the rosette covers and press firmly, till they engage audibly.



5 Commissioning

Basically, there are two ways of managing a Clex private locking system and thereby programming the electronic door handles:

- Management as programming / clearing system
- Management using the CX2530 Keyng software and wireless stick

5.1 Programming the service key

In its original condition (delivery status), the service key is not yet programmed into the electronic door handle. For example, to program the service key, the door handle is woken up by holding a key in front of the reading unit. Upon success, the door handle responds with three long audible beeps. Within the next 15 seconds, the service key can be programmed by holding it in front of the reading unit. Once the service key has been programmed successfully, the door handle indicates this with two short and one long beep.

After programming, the door handle enters the programming mode when the service key is held up.

5.2 Management as programming / clearing system

5.2.1 Programming the key

- Hold the service key in front of the reading unit of the door handle. The door handle enters the programming mode.
- Hold the key to be programmed in front of the reading unit until two short audible signals indicate the success.
- Optionally, program additional keys as described in the previous step.
- Hold the service key in front of the reading unit or wait 15 seconds to exit the programming mode.

To create a key with toggle authorisation, hold the key for 3 seconds in front of the reading unit during the programming process until the success is indicated by 3 short audible signals.

5.2.2 Delete key

- Hold the service key in front of the reading unit of the door handle. The door handle enters the programming mode.
- Hold the key to be deleted in front of the reading unit until two long audible signals indicate success.
- Optionally, delete additional keys as described in the previous step.
- Hold the service key in front of the reading unit or wait 15 seconds to exit the programming mode.

5.2.3 Delete all keys

- Hold the service key in front of the reading unit of the door handle. The door handle enters the programming mode.
- Hold up the service key until the door handle exits the programming mode.
- Within 60 seconds, return the door handle to the programming mode and hold up the service key in front of the reading unit. In the meantime, the door handle indicates success using short audible beeps.

- Once the programming mode is exited after 15 seconds, all the keys would have been deleted.

5.3 Management with Keyng CX2530

The CX2530 Keyng software enables convenient and easy management of the electronic locking system.

You will find more detailed information in the CX2530 Keyng documentation.

5.4 Changing the settings

The following settings can be adjusted using the CX2530 Keyng software:

- Time
- Enable/disable the event log
- Locking time (defines how long the door handle remains connected after holding up an authorised key).
- Wake-up sensitivity
- Radio response of the door handle (wake-on-radio mode)

6 Operation

The electronic door handle operates only the latch. Hence it should be ensured that the locking cylinder of the door is unlocked or the door is not locked in some other manner. Otherwise, the door cannot be opened even after holding up an authorized key.

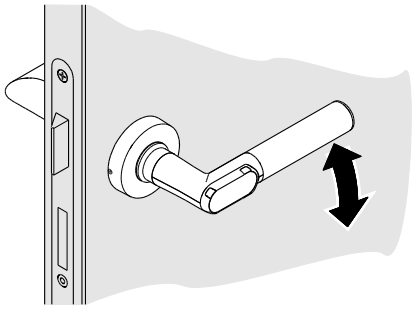
6.1 Automatic wake up

The door handle is in sleep mode as long as it is not used. To check the authorization of a key, it needs to be woken up from the sleep mode. This normally happens automatically when a key is held in front of the reader unit.

If, however, the electronic door handle has been woken up 24 times (for example by metallic objects in the surroundings) without reading a key, then automatic wake up is disabled.

In this case the door handle has to be woken up manually.

- Press the door handle a few times to wake up the reading unit, till an LED starts glowing.
- Hold up the key in front of the reading unit only after this.



The automatic activation is reactivated when an authorized key is scanned.

The wake up sensitivity (that is the number of times the door handle need to be pressed to wake up the reading unit) can also be configured.

6.2 Opening the door

Precondition: Handle is in horizontal position.

- Hold the authorised key in front of the reading unit till the green LED starts glowing.

The door handle engages and the door can be opened by pressing the door handle.

The time duration for which the door handle remains engaged can be configured (1 to 15 seconds, the default value is 5 seconds). After successful authorization (engaging) at the door handle, the engagement time starts counting down. The engagement-time timer is reset as soon as the door handle is pressed.

The door handle disengages after the configured engagement time, if it is not pressed or when it is pressed and held.

The door handle disengages immediately, if it is released.

6.3 Toggling the door handle

- Hold the key with toggle authorisation for two locking cycles in front of the reading unit.

Depending on the initial state, the door handle either engages or disengages permanently.

6.4 Signals

Function	Signal (audible and visible) and explanation
Rest mode	No audible or visible signal
Programming mode start	– • Long beep followed by a short beep
Programming mode end	• – Short beep followed by a long beep
Key programmed	• • 2 short beeps, LEDs glow green
Key cleared	– – 2 long beeps, LEDs glow red
Read mode (after waking)	 Red LEDs start flashing
Key not authorised	– Long low beep, red LEDs start glowing
Key authorised	 Green LEDs start glowing
Toggling On	– Long loud beep, green LEDs start glowing
Toggling Off	– Long loud beep, red LEDs start glowing
Reset	– Long low beep, all the LEDs are switched on briefly one after the other
Battery warning Phase 1:	• • • • • 5 short loud beeps, red LEDs flash 5 times simultaneously
Battery warning Phase 2:	• • • • • 5 s 5 short loud beeps, red LEDs flash 5 times simultaneously, then 5 seconds engagement delay, green LEDs start flashing at the same time
Battery warning Phase 3:	• • • • • 5 short loud beeps, red LEDs flash 5 times simultaneously, no connection but change battery position
Hold up authorized key with door handle pressed	• • • No engagement, 3 brief high audible signals, then green LED flashes once

7 Cleaning and maintenance

7.1 Cleaning

- Clean the door handle with a slightly damp cloth. Use only commercially available household cleaners.
- Do not use any abrasive or caustic cleaning agents.

7.2 Maintenance

7.2.1 Replacing the battery

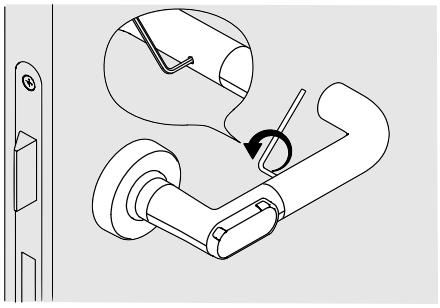
⚠ CAUTION

Danger of injury caused by improper use

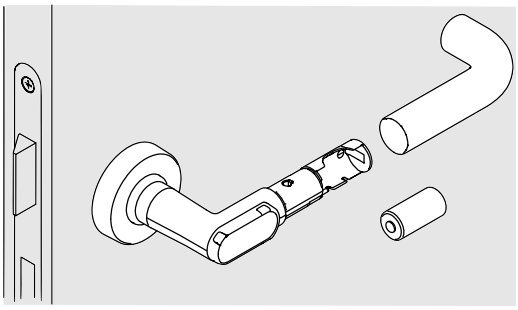
- Do not charge, open or heat the battery.
- Always replace discharged batteries with new batteries.
- Pay attention to the correct polarity when inserting the batteries.

Change the battery only with the door open. As long as the battery is removed, the door handle cannot engage and thus cannot open the door.

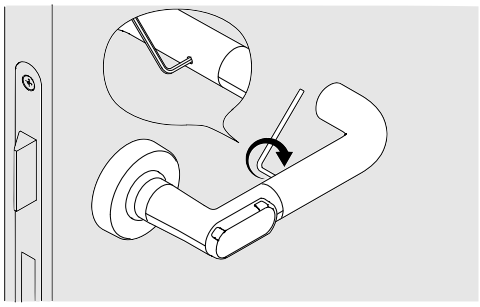
- Using the Allen key provided, countersink the screw on the inside of the door handle.



- Remove the gripping sleeve.



- Remove the used battery and insert the new battery, paying attention to the polarity. The minus pole of the battery faces towards the gripping sleeve.
- If the door handle is used outdoors, then replace the sealing ring of the door handle (see chapter 7.2.2 Replace the sealing rings, page 38).
- Insert the gripping sleeve back.



- Unscrew the screw on the inside of the door handle till the stop, such that the gripping sleeve cannot be removed.
- When managing the locking system using the Keyng software, check the door handle time, using Keyng CX2530 and adjust it if required.

7.2.2 Replace the sealing rings (for the outdoor version of the doors)

The outdoor version of the electronic door handle is provided with two seals (large sealing ring and grub screw with sealing ring) which prevent water from entering. To further ensure the leak-tightness of the electronic door handle, both the seals have to be replaced every time the handle is opened. These are available as a set from your dealer.

Precondition: Gripping sleeve is removed (see chapter 7.2.1Replacing the battery, Page 37)

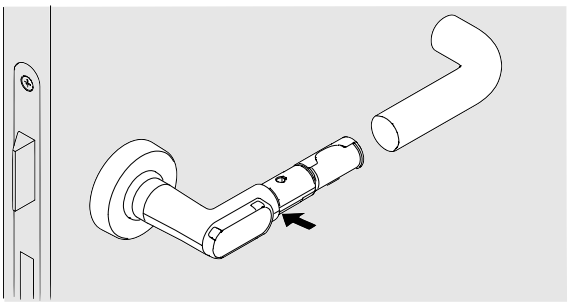
7.2.2.1 Replace the large sealing ring

CAUTION

Damage to the sealing ring caused by improper handling

- Do not use any sharp objects and do not stretch the sealing ring more than what is required for mounting.

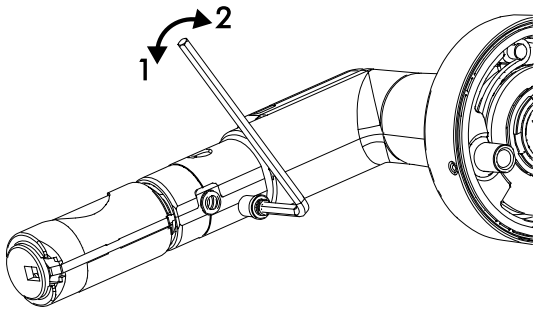
Precondition: Gripping sleeve is removed (see chapter 7.2.1Replacing the battery , Page 37)



- To remove the sealing ring, hold down the sealing ring on one side with the thumb and slide the finger nail of the middle finger on the opposite side. The sealing ring can now be grasped by the index finger.
- Insert a new sealing ring.

7.2.2.2 Replace the sealing ring with grub screw

Unscrew the screw on the inside of the door handle in the direction of "1" completely and replace it with the new grub screw from the set. Insert the screw again until it stops in the direction of "2".



8 Faults during operation

8.1 Fault indications

Function	Audible signal	Explanation
Memory fault / configuration fault	— — — — — •	5 long beeps, 1 short beep
Coupling error	— — — — — • •	5 long beeps, 2 short beeps
RTC fault (clock)	— — — — — • • •	5 long beeps, 3 short beeps
Internal error (unhandled interrupt)	— — — — — • • • •	5 long beeps, 4 short beeps
Internal error (bus conflict)	— — — — — • • • • •	5 long beeps, 5 short beeps
Internal error (bus conflict)	— — — — — • • • • • •	5 long beeps, 6 short beeps
Internal error (bus conflict)	— — — — — • • • • • • •	5 long beeps, 7 short beeps

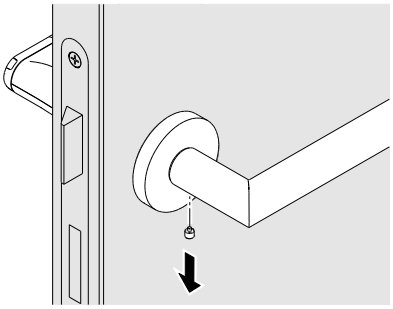
- If the faults mentioned above occur repeatedly, then please contact the concerned dealer.

9 Disassembly and Disposal

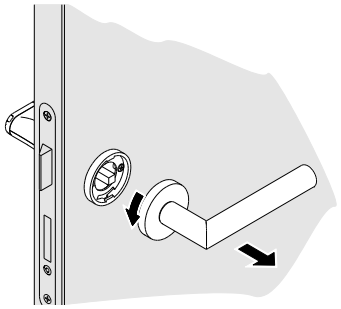
9.1 Disassembly

9.1.1 One-sided electronic authorization

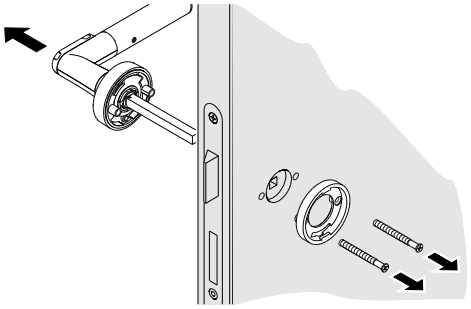
- Unscrew the locking screw at the bottom of the rosette.



- Loosen the bajonet lock. To do this, tighten the rosette to the left for door handles pointing to the right and remove the mechanical door handle from the square pin. Accordingly, tighten the rosette towards the right for door handles pointing to the left.



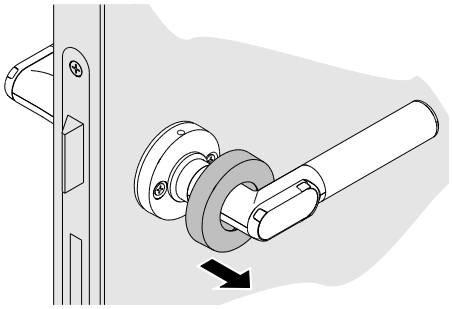
- Unscrew the handle holder. Remove the electronic door handle from the lock.



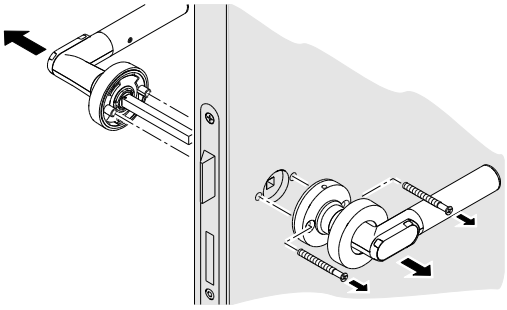
9.1.2 Two-sided electronic authorization

Two-sided electronic authorization is possible in the versions of circular rosette, oval rosette, long narrow plate and long wide plate.

- Lift the rosette cover on the inner electronic door handle using a small screwdriver and pull it back as far as possible.

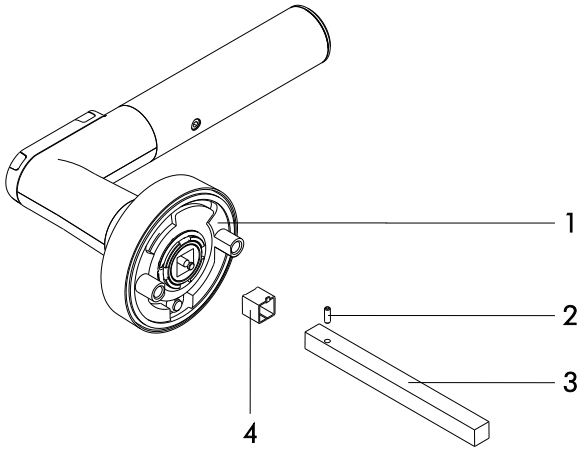


- Loosen the mounting screws. Remove the inner electronic door handle from the square pin. Remove the outer electronic door handle from the lock.



9.1.3 Removing the square pin

For shortening the square or if the length of the square does not match the lock, it may be necessary to remove the square.



1 Electronic door handle
2 Spiral clamping pin
3 Square
4 Adapter sleeve for square (only for 7 mm square)

- Remove the spiral clamping pin from the square using a punch
- Remove the square from the holder.
- Remove the adapter sleeve from the square holder (if required)

9.2 Disposal

- Do not dispose the door handle with domestic waste. Disposal should be in accordance with the European Directive 2002/96/EC at a collection point for electrical waste.
- Defective or used batteries should be recycled in accordance with the European Directive 2006/66/EC.
- Follow the local regulations on separate disposal of batteries.
- Recycle the packaging in an eco-friendly manner.

10 FAQ

10.1 Door handle does not come to rest position

If the electronic door handle does not come to horizontal resting position by itself after being assembled, it may be due to the fact that the lock is not aligned properly. This can be partly corrected by increasing the hole diameter from 8 to 8.5 mm for mounting the door handle. The door handle can be mounted without any stresses.

10.2 Door does not open even though the motor is running

If the motor of the electronic door handle moves audibly when an authorised transponder is held up, but does not engage, then the position of both the door handles with respect to the lock casing has to be checked in resting position. Both the door handles have to be at 90° ± 1° with respect to the lock casing.

11 Glossary

Definition	Description
IDS	Intrusion Detection System (IDS)
Keyng	Software for managing a locking system
MIFARE®	Technology for contactless transfer of identification data
Key	Data carrier that contains the authorization information. This can, for example, be an ISO card or a chip. The key is sometimes also known as transponder.
Service key	A special key with which you can identify yourself as the administrator of the locking system.
Toggling	Permanently engaging a door handle, so that the door can be opened without a key.
Transponder	See key
WoR	Wake-on-radio (radio response of a door handle)