U&Z Uhlmann & Zacher

CX2192

Clex private
Electronic cabinet lock

Operating and assembly manual

Imprint

Operating and assembly manual (english)
Electronic cabinet lock CX2192

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1   About this Document

This operation and assembly manual describes the Clex private electronic cabinet lock (in short: CX2192). 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 CX2192 and is intended for technicians 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 cabinet lock.

▶ 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 non-access to injured personnel, malfunctions, property damage or other damages resulting from non-compliance with this operating and assembly manual or incorrectly configured cabinet locks.

▶ 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 cabinet lock. There are two levels of warnings that can be identified based on the signal word:

Signal word	Significance
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   Intended use

The electronic cabinet lock CX2192 is intended to be installed in cabinet doors and for opening the doors.

The cabinet lock can be installed in doors with a maximum thickness of 20 mm. The different versions of the locking lever enable it to be used in many commonly available cabinet doors

The CX2192 can be used only indoors.

2.2   Improper use

The CX2192 should not be used for locking up supplies required in case of emergencies (for example defibrillator, emergency medication, fire extinguishers, etc.).

2.3   General safety instructions

Follow these basic safety instructions when using the cabinet lock:

▶   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 cabinet lock in potentially explosive areas.

▶   Do not make any kind of modifications to the cabinet lock, with the exception of those described in this operating and assembly manual.

▶   Do not apply paints or acids to the cabinet lock.

▶   Dot not heat the cabinet lock 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 cabinet lock CX2192 is a Clex private system product. The reading unit, the communication electronics, the mechanical system and power supply, are integrated within the cabinet lock.

Different transponder carriers can be used as key in the CX2192, for example, ISO card or key fob.

The CX2192 has the following system properties:

- Up to 1,000 key/locking authorizations can be stored
- Up to 128 events in the fitting can be recorded[*]
- 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
- Pre-configured by default for 868 MHz wireless networking
- Different locking plates are available
- Suitable for all doors having a thickness of up to 20 mm
- Can be mounted in vertical and horizontal position, for left or right cabinet doors
- 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 system

The CX2192 knob module 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 7.2.17.1.1 Battery Replacement).

Signalling happens in 3 phases:

Phase 1   The battery needs to be changed soon.

If an authorised key is held in front of the cabinet lock, the locking access right is issued. The engagement is accompanied by red flashing (5x) and 5 brief audible beeps.

Phase 2   The battery needs to be changed.

If an authorised key is held in front of the cabinet lock, the cabinet lock first flashes green for 5 seconds, then the cabinet lock engages. The engagement is accompanied by red flashing (5x) and 5 brief audible beeps.

Phase 3   The battery needs to be changed immediately.

If an authorised key is held in front of the cabinet lock, no locking access right is issued, but rather the cabinet lock goes to the battery replacement position. In addition, the cabinet lock flashes red 5x and gives 5 brief audible beeps.

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.

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[*] When CX2530 Keyng is used

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.

Check the time after replacing the battery, and set the current time if necessary.

3.1.2   Event log[*]

The last 128 events of the cabinet lock are stored in the event log.

Event logging can be enabled or disabled for each cabinet lock individually , to be able to comply with specific data privacy guidelines.

The event log can be read via the CX2530 Keyng.

3.1.3   Locking time [*]

The locking time defines how long the cabinet lock remains connected after scanning an authorised key. It can be adjusted from 1 to 15 seconds. The set default value is 5 seconds.
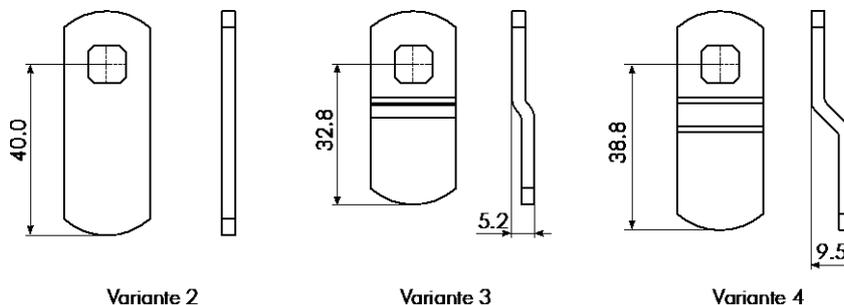
3.2   Design
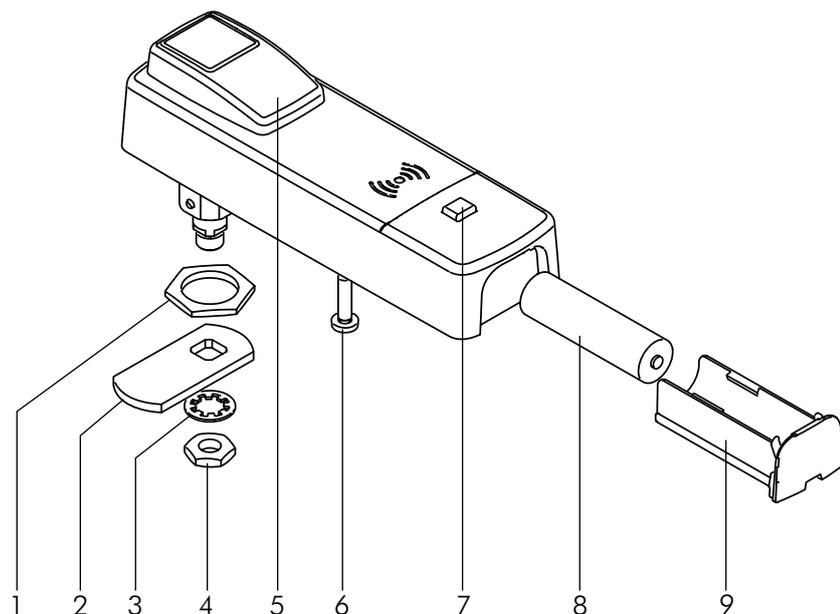
1	Mounting nut (Cabinet lock)	6	Mounting screw
2	Locking lever (has to be ordered separately)	7	Button for manual activation
3	Lock washer	8	Battery
4	Mounting nut (locking lever)	9	Battery compartment
5	Operating lever		

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[*] When CX2530 Keyng is used

3.3   Options

Different versions are available:

- 3 versions of the locking lever

Variante 2   Variante 3   Variante 4

3.4   Technical data

3.4.1   General technical data

Description	Value
Dimensions (when installed)	148.5 mm x 44.7 mm x 35 mm (H x W x D)
Door thickness	up to 20 mm
Transponder	MIFARE® Classic MIFARE® DESFire® Active transponder (868 MHz)
Power supply	Battery ER14505M 3.6V (1 piece)
Battery life	up to 180,000 operations or 9.8 years

3.4.2   Ambient conditions

Description	Value
Operating temperature	+5°C to +55°C
Storage temperature	-40°C to +65°C
Installation location	Indoors

3.4.3 Dimensions

44.6

19.7

148.4

$((\!(\!(\!(\!\circ\!)\!)\!)\!))$

29.3   35.9

max.20

37.5

26.5
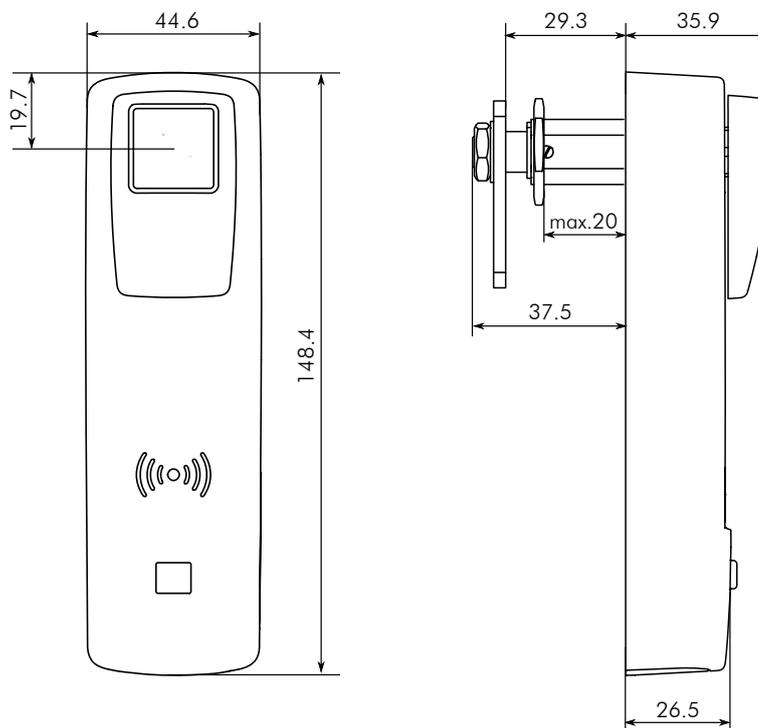
3.5 Management accessories

3.5.1 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 or a programming station.

3.5.2 CX6522 wireless stick

The Clex wireless stick is required for the basic operation of the Keyng software.

3.5.3 CX6520 Programming station

The Clex programming station is optional addition to the Keyng software and helps conveniently read the key.

3.5.4 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

4.1.1   General assembly instructions

- Carry out the assembly necessarily with the door open.
- Ensure that the latches or seals fitted to the door do not hinder the proper operation of the CX2192.
- Ensure that the cabinet lock does not protrude and prevent the door from swinging freely.
- After assembly, check the function with the door open.
- The locking lever should be tightened with a maximum torque of 1 Nm.
- The operating lever can be rotated by 90°, the *down* position corresponds to the *closed* state.
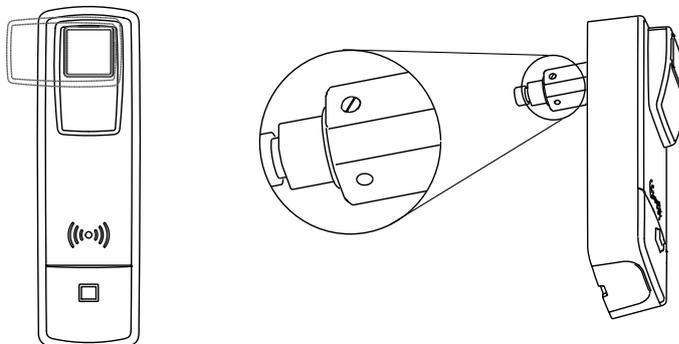
4.1.2   Drilling template

Holes as per the drawing shown below are required in the door for assembling the cabinet lock.
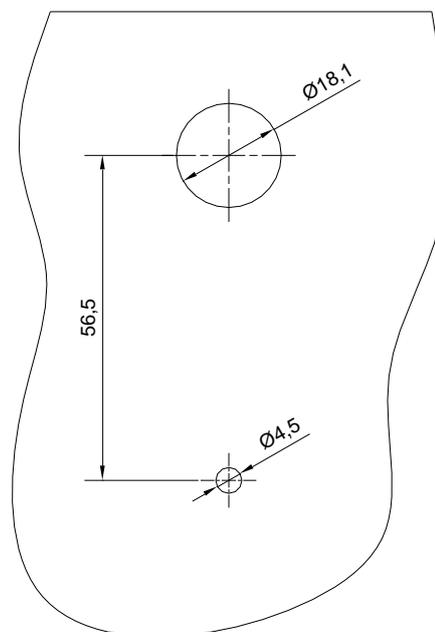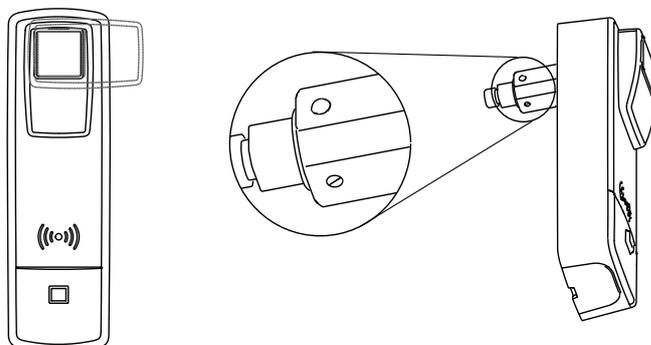
4.1.3 Determining the opening direction

The direction of rotation of the operating lever is determined by the position of the small screw on the mounting thread.
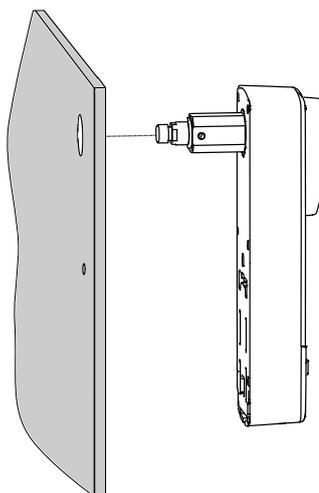
▶ Opening by turning the operating lever to the left:

▶ Opening by turning the operating lever to the right:

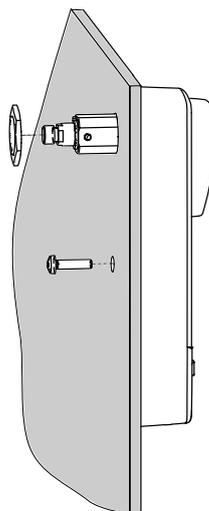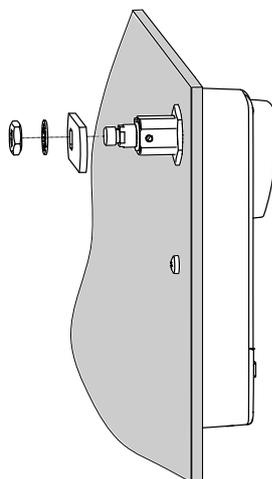## 4.2 Assembly

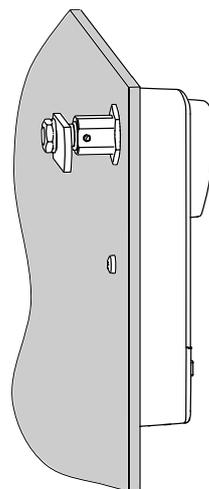▶ Insert the cabinet lock through the holes in the door.

▶   Mount the cabinet lock using the mounting nut and mounting screw.

▶   Secure the locking lever and lock washer with the mounting nut (locking lever).

▶   Check if the cabinet lock is functioning.

5   Commissioning

Basically, there are two ways to manage a Clex private locking system and thereby programming the CX2192 cabinet lock:

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

5.1   Programming the service key

In its original condition (delivery status), the service key is not yet programmed into the cabinet lock.

▶ Wake the electronic cabinet lock by pressing the button. Upon success, the electronic locking cylinder responds with three long audible signals.

▶ Within the next 15 seconds, the service key can now be programmed by holding it in front of the electronic cabinet lock. Once the service key has been programmed successfully, the cabinet lock indicates this with two short and one long audible signal.

After programming, the cabinet lock 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 cabinet lock. The cabinet lock 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.

ℹ️ 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 cabinet lock. The cabinet lock 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 cabinet lock. The cabinet lock enters the programming mode.

▶ Hold up the service key until the cabinet lock exits the programming mode.

▶ Within 60 seconds, return the cabinet lock to the programming mode and hold up the service key in front of the reading unit. In the meantime, the cabinet lock indicates success using short audible signals.

▶ 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 cabinet lock remains connected after holding up an authorised key).
- Wake-up sensitivity
- Radio response of the cabinet lock (wake-on-radio mode)

## 5.5   Advanced cabinet lock settings

- Mode 0: Only Clex private (default setting)
  Only the functionalities known to Clex private take place. Any authorised card can lock and unlock the cabinet, regardless of whether the cabinet is locked or unlocked at the moment or which card locked it.
- Mode 1: Clex private override+free cabinet selection with serial no The functionality as in mode 0 applies for all the authorised Clex private cards. In addition, you can lock an unlocked cabinet lock using any other readable card where the serial number can be read for the cabinet lock. You can unlock this cabinet lock again only with this card, and with authorised Clex private cards.

6   Operation

6.1   Waking up

Automatic wake-up is disabled for the cabinet lock in the delivered condition. To check the authorisation of a key, it needs to be woken up from the sleep mode.

▶   To wake-up the reading unit, press the button on the front of the cabinet lock until the LED glows.

▶   Hold up the key in front of the reading unit only after this.
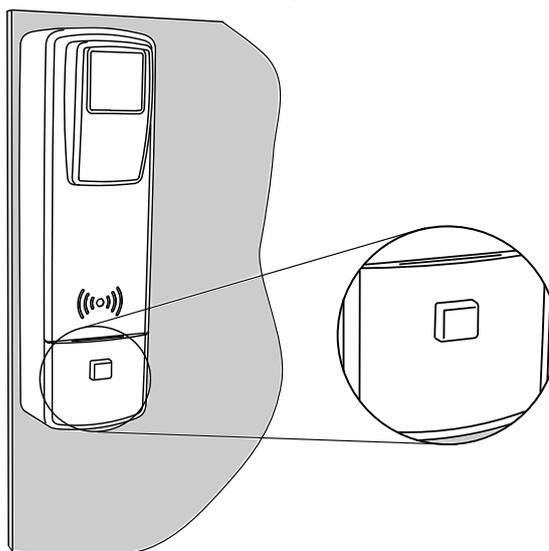
6.2   Open / close the door

▶   Wake up the cabinet lock by pressing the button.

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

▶   Open or close the cabinet by turning the operating lever by 90°. Immediately after turning the lever, but after the locking time (default 5 seconds), the cabinet lock disengages again.

Opening   Closing
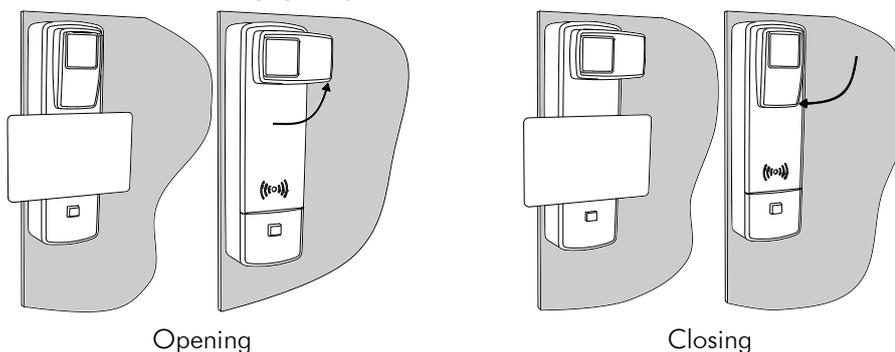
6.3   Toggling the cabinet lock

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

Depending on the initial state, the cabinet lock 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
Read mode (after waking)	Red LEDs start flashing
Key not authorised	— ● Long low beep, red LEDs start glowing
Key authorised	● Green LEDs start glowing
Timer circuit / toggling On	— ● Long loud beep, green LEDs start glowing
Timer circuit / 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
Delete all keys	• • • • • 15 s 15 seconds short beeps, green LEDs flash simultaneously

7 Cleaning and maintenance

▶ Clean the cabinet lock only with dry cloth.

7.1 Maintenance

7.1.1 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 battery.

▶ Open the battery compartment of the cabinet lock with the battery replacement tool. For this purpose, press the tool into the opening below the cabinet lock until the battery compartment can be removed.
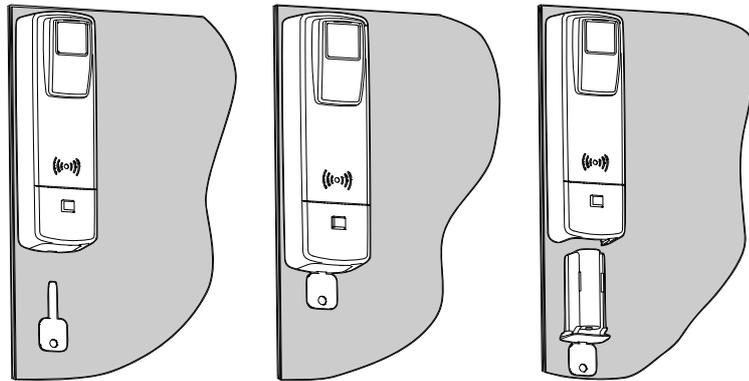
▶ Remove the used battery and insert the new battery, paying attention to the polarity.

▶ Push the battery compartment into position until it locks into place.
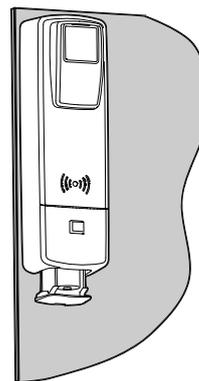
▶ When managing the locking system using the Keyng software, check the cabinet lock time, using Keyng CX2530 and adjust it if required.

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

The disassembly is carried out in reverse order of the assembly described in chapter 4.2 (page 10).

9.2   Disposal

▶ Do not dispose of the cabinet lock 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   Glossary

Definition	Description
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 knob module, so that the door can be opened without a key.
Transponder	See key
WoR	Wake-on-radio (radio response of a knob module)