

CX6192

Clex prime
Electronic cabinet lock



Operating and assembly manual

Imprint

Operating and assembly manual (english)
Electronic cabinet lock CX6192

Document number: 0B64

Version: 2.2

Stand: 23.06.2023

Manufacturer

Uhlmann & Zacher GmbH
Gutenbergstraße 2–4
97297 Waldbüttelbrunn
Germany
Tel.: +49 931 40672-0
E-Mail: contact@UundZ.de
<http://www.UundZ.de>

This operating and assembly manual is copyright protected. The information contained in this manual should not be reproduced, distributed or used for competitive purposes or shared with third parties. It is likewise forbidden to manufacture any component using this manual without prior written consent.

Table of Contents

1	About this Document.....	3
1.1	Warnings	3
1.2	Symbols	3
2	Security	4
2.1	Intended use	4
2.2	Improper use.....	4
2.3	General safety instructions.....	4
3	Product description	5
3.1	Functional description	5
3.2	Design.....	9
3.3	Options	9
3.4	Technical data	10
3.5	Management accessories	11
4	Assembly.....	13
4.1	Assembly instructions	13
4.2	Assembly	14
5	Commissioning	18
5.1	Managing the locking system.....	18
5.2	Advanced cabinet lock settings	18
5.3	Configuring the cabinet lock.....	20
6	Operation	21
6.1	Waking up.....	21
6.2	Open / close the door	21
6.3	Toggling the cabinet lock	21
6.4	Indications	22
7	Cleaning and maintenance.....	23
7.1	Cleaning.....	23
7.2	Maintenance.....	23
8	Faults during operation	24
8.1	Fault indications	24
9	Disassembly and Disposal.....	25
9.1	Disassembly	25
9.2	Disposal	25
10	Glossary.....	26

1 About this Document

This operation and assembly manual describes the Clex prime electronic cabinet lock (in short: CX6192). 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 CX6192 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 CX6192 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 CX6192 can be used only indoors.

2.2 Improper use

The CX6192 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.
- ▶ Do 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 CX6192 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 CX6192, for example, ISO card or key fob.

CX6192 has the following system properties:

- Up to 60,000 key/locking authorizations can be stored
- Up to 512 events in the cabinet lock be recorded
- Up to 32 holidays can be configured
- Automatic summer and winter time changeover
- 5,296 locking groups
- Permanent engagement possible without additional power consumption
- Up to 20 time circuits can be programmed for daily activation (automatic permanent engagement)
- 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
- Advanced setting options: free selection of cabinet, mail box function,
- No cabling required
- Can be combined with other systems (for example Clex private)
- Versions for HITAG 1, MIFARE® and LEGIC® Transponder can be supplied

3.1.1 Authorisations

Groupauthorisations

There are up to 296 groups in the Clex prime locking system. When a cabinet lock becomes member in one or more of these groups, all keys that are also members of this group are authorised to open the cabinet lock provided the key access rights are not restricted by setting time zones.

Extra groups-authorisations

In addition to the normal groups, there are 5000 other groups in the Clex prime locking system. Each key can be a member of up to 16 of these other groups.

Individual authorisations

An individual authorisation entitles a key to operate one cabinet lock. Individual authorisations are written either on the key (up to 16 individual authorisations per key) or in the cabinet lock (up to 60,000 individual authorisations), depending on the type of the key (writeable, not writeable).

Toggle authorisation (permanent engagement)

Keys with toggle authorisation can permanently engage a cabinet lock, hence the cabinet door can be opened even without a key.

- Four-Eyes-Group** A Four-Eyes-Group is used to ensure that a cabinet lock can only be opened when two different keys are held in front of it; one of them needs to be a member of a Four-Eyes-Group while the other user has to be authorised for the cabinet lock as usual. Which group is defined as the four-eyes group can be configured for each cabinet lock.
- Advanced setting options** By using the advanced setting options, one can allow the cabinet lock to be used by keys, which do not have the authorisation or do not even belong to the locking system (free selection of cabinet).

3.1.2 Time zone

You can restrict the locking access right in terms of time by using a time zone. The time restriction along with the locking authorizations are programmed in the key in the Clex prime system.

The following time restrictions are possible:

- Total interval
- Day interval
- Weekly schedule
- Holidays
- Special time zones



For detailed information on the different time zones, please refer to the Keyvi software manual.

3.1.3 Automatic expiry date

Using the automatic expiry date, it is possible to restrict the validity of a key regardless of the time zones applicable for the key.



For detailed information on the automatic expiry date, please refer to the Keyvi software manual.

3.1.4 Wireless network

If a corresponding wireless network is installed in the building, then the cabinet lock CX6192 can be integrated with this network. The following functions can be then be executed via radio:

- Programming access rights
- Changing access rights
- Configuring time zones / timer circuits
- Reading event log
- Engaging the cabinet lock (for the duration defined by locking time)
- Viewing battery and maintenance messages
- Reading the battery value
- FW update

3.1.5 Key feedback

Even for cabinet locks operated offline, there is an option to send the battery status of the cabinet locks to the Keyvi management software. To do this, the battery status of the 16 most recently operated locking units is stored on the key. The battery status information is sent to Keyvi and deleted from the key if the key is read by an automatic programming terminal or a programming station. A prerequisites is that the key should have been prepared for writing the information and the option *Key feedback* should be set in the cabinet lock.

Key Feedback can only be used with the transponder types MIFARE[®] and LEGIC[®] advant.

3.1.6 Battery management system

The electronic cabinet lock CX6192 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 7.2.17.2.1 Battery Replacement).

The signal is given out in two phases:

Phase 1 The battery needs to be changed soon.

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

Phase 2 The battery needs to be changed.

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 cabinet lock is delayed by 5 seconds, during which time the green LEDs flash.

Phase 3 The battery needs to be changed immediately.

If an authorised key is held before the cabinet lock, locking authorisation is no longer granted but only indicated (red flashing 5 times and 5 short audible signals).

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.

3.1.7 Event Log

The last 512 events of the cabinet lock are stored in the event log.

The following events are logged:

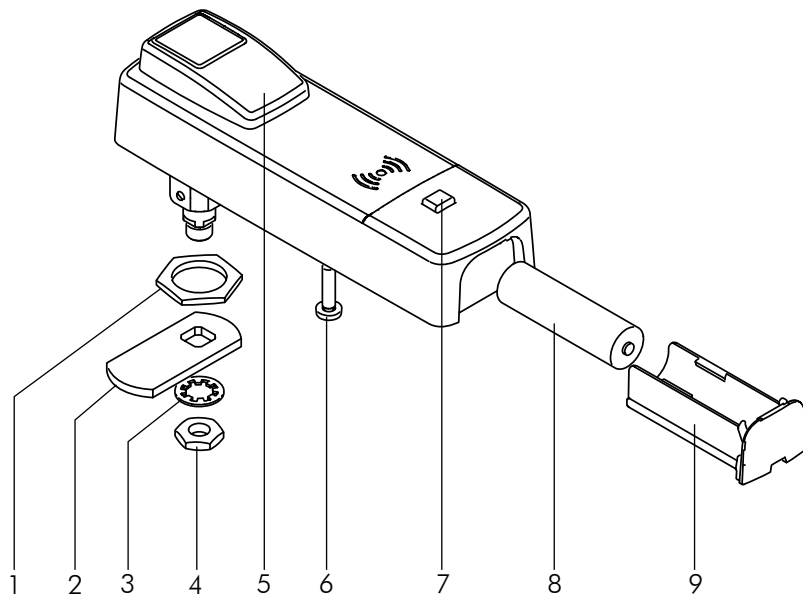
- Unauthorised
- Authorised
- Service opening
- Timer circuit open
- Timer circuit closed
- Reset
- Summer time On
- Summer time Off
- Coupling error
- Battery Ok
- Battery weak Phase 1:
- Battery weak Phase 2:
- Battery weak Phase 3:
- Toggle off
- Toggle On
- Unknown position
- Service mode
- Radio diagnosis
- Automatic wake up off
- Wireless opening not OK
- Wireless opening OK

The following information are recorded for every event: Event code, date, time, key code if necessary.

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 using the service unit CX6510 or using ClexTouch CX6522. If the cabinet lock is located in a Keyvi radio network, it can also be read via radio.

3.2 Design

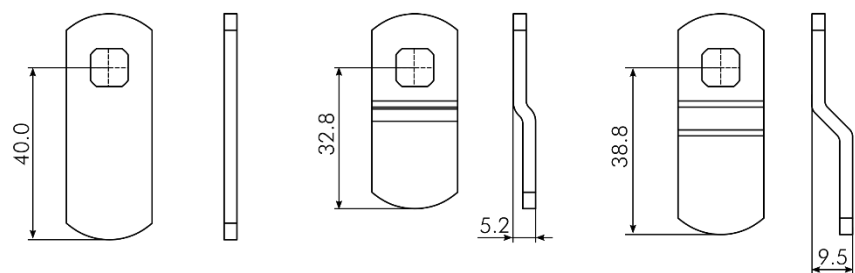


- | | | | |
|---|--|---|------------------------------|
| 1 | Mounting nut (Cabinet lock) | 6 | Mounting screw |
| 2 | Locking lever (has to be ordered separately) | 7 | Button for manual activation |
| 3 | Lock washer | 8 | Battery |
| 4 | Mounting nut (locking lever) | 9 | Battery compartment |
| 5 | Operating lever | | |

3.3 Options

Different versions are available:

- 3 versions of the locking lever



- Different transponder types: 125 kHz (HITAG/EM), MIFARE®, LEGIC®
- Basic version without date/time and event memory

3.4 Technical data

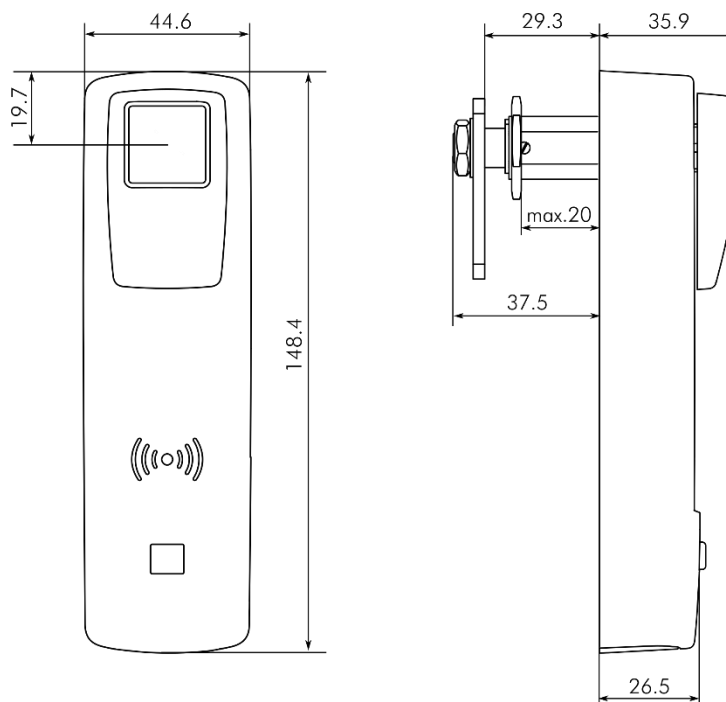
3.4.1 General technical data

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 versions	<p>Version 1: 125 kHz EM4102, EM4450, HITAG 1, Active transponder (868 MHz)</p> <p>Version 2: MIFARE® 13,56 MHz MIFARE® Classic, MIFARE® DESFire®, Active transponder (868 MHz)</p> <p>Version 3: LEGIC® 13,56 MHz LEGIC® prime, LEGIC® advant, MIFARE® DESFire®, Active transponder (868 MHz)</p>
Power supply	Battery ER14505M 3.6V (1 piece)
Battery life	<p>125 kHz: up to 131,000 operations or 10 years</p> <p>MIFARE®: up to 180,000 operations or 9.8 years</p> <p>LEGIC®: up to 131,000 operations or 7.0 years</p>

3.4.2 Ambient conditions

Description	Value
Operating temperature	+5°C to +55°C
Storage temperature	-40°C to +65°C
Maximum relative humidity	Up to 95% non-condensing
Installation location	Indoors

3.4.3 Dimensions



3.5 Management accessories

The components of the Clex prime system described below are used to manage a Clex prime locking system.

3.5.1 CX6530 Keyvi management software

The locking system can be managed centrally and conveniently from the PC using the Keyvi management software for Clex prime. Even complex locking programs can be easily created, monitored and maintained using the software.

3.5.2 CX6522 ClexTouch



ClexTouch is software that runs on handheld computers or laptops with Windows. It can be used to conveniently configure the locking system and (along with a corresponding wireless USB stick) and the relevant data can be sent directly to all the locking system components of Clex prime that are provided with a radio chip.

3.5.3 CX6520 Programming station



The programming station is an optional addition to the Keyvi management software and the CX6510 service device in order to conveniently program the key. In conjunction with MIFARE® or LEGIC® transponders, the programming station is always required to program the key. The programming station is connected to the PC using a USB cable.

3.5.4 Special keys

Service key

Using the service key, a user identifies himself as an administrator of the locking system. If this key is held in front of a locking system component, then the respective component goes into service mode, where it is possible, for example, to create or change authorisations, make settings or to read the event log.

Sub-service keys

A sub-service puts an already personalized locking unit into service mode. These sub-service keys have authorization only for certain areas or for specific times (for example, for a locking system with several houses and individual management).



Sub-service keys cannot be used to customise brand new locking units for the first time. Only existing customised locking system units can be set to the service mode.

4 Assembly

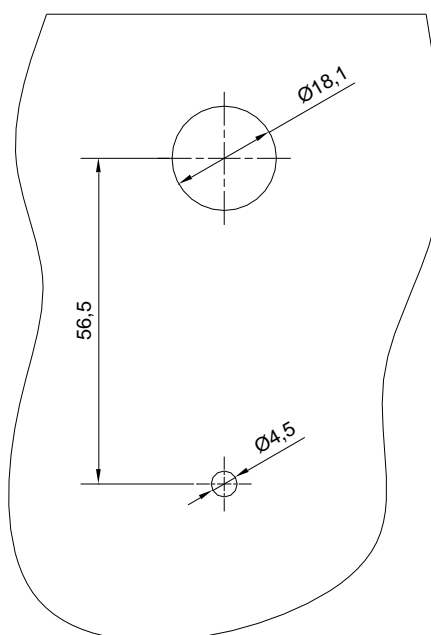
4.1 Assembly instructions

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 CX6192.
- 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.

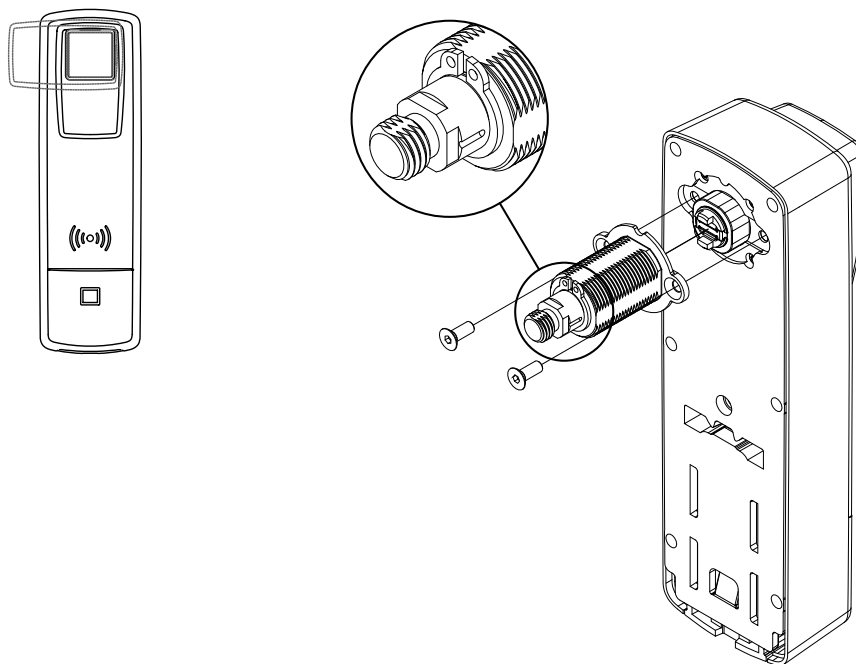


4.1.3 Determining the opening direction

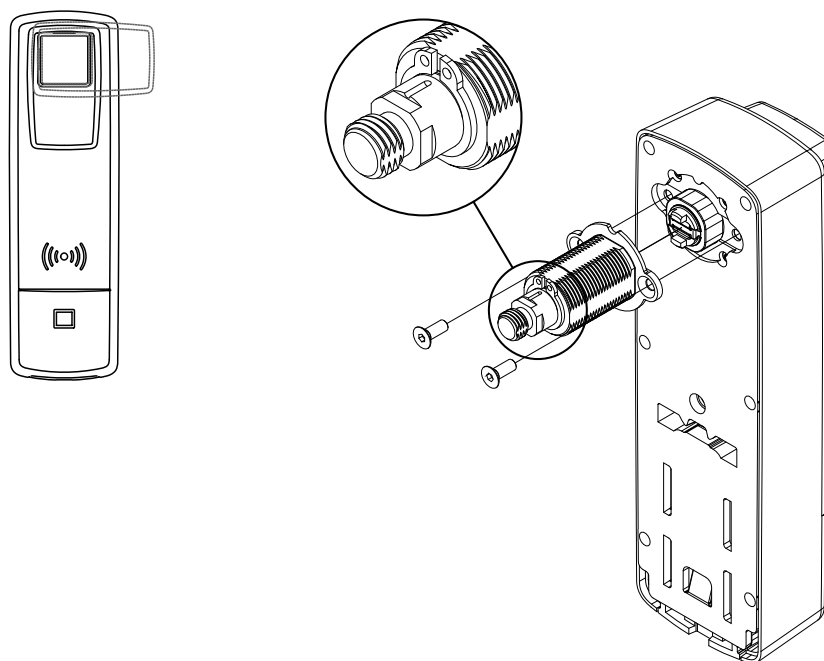
Devices produced
from June 2023

The operating lever is determined by the position of the axis of rotation in the threaded bolt. To change the direction of rotation, the threaded bolt must be unscrewed and the rotary axis rotated to the desired position:

- ▶ Opening by turning the actuating lever to the left:
In this position, the groove points to the right



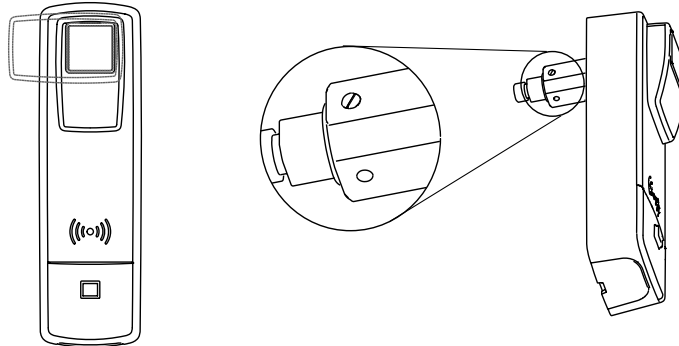
- ▶ Opening by turning the actuating lever to the right.
In this position, the groove points upwards.



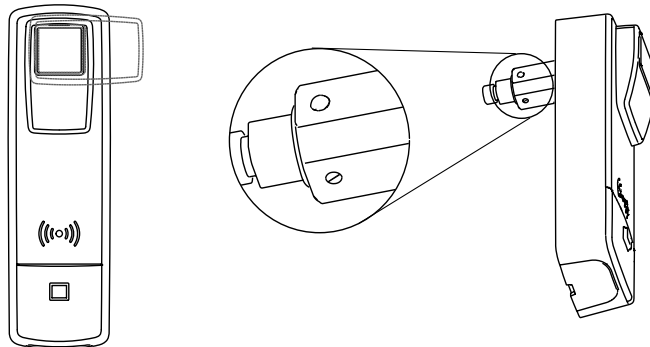
Devices produced
before June 2023

For devices with older production date, 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:

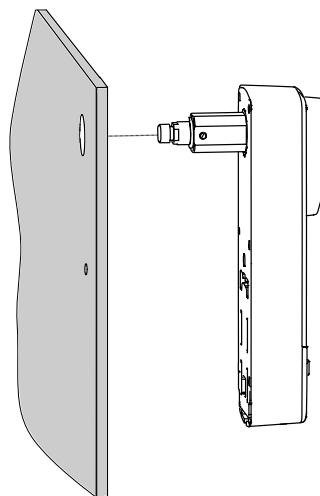


- ▶ Opening by turning the operating lever to the right:

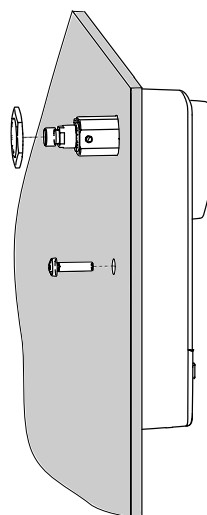


4.2 Assembly

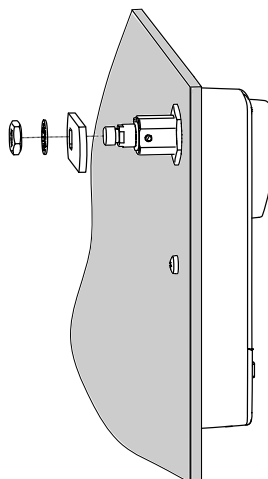
- ▶ Insert the cabinet lock through the holes in the door.



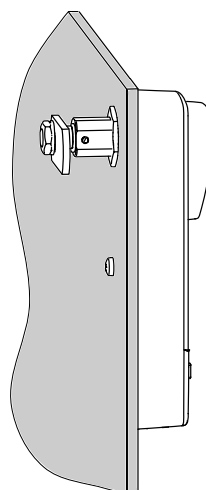
- ▶ Mount the cabinet lock using the mounting screw (maximum torque: 2 Nm) and mounting nut (maximum torque: 5 Nm).



- ▶ Secure the locking lever and lock washer with the mounting nut (locking lever). Maximum torque: 1 Nm.



- ▶ Check if the cabinet lock is functioning.



5 Commissioning

5.1 Managing the locking system

The locking system can be managed using the Keyvi management software. Before a locking system can be used, it has to be personalized and the settings have to be customized.

5.1.1 personalising

Every door and key in the electronic locking system Clex prime should be known to the management software for the respective locking system for subsequent programming. This procedure is called customisation.

During customisation, the door or the cabinet lock installed inside is assigned a Door ID (D-ID) and the key is assigned a Key ID (K-ID) by the management software Keyvi.

5.1.2 Changing the settings

The following settings can be changed:

- Authorisations (see chapter 3.1.1 Authorisations, page 5)
- Time zones (see chapter 3.1.2 Time zone, page 6)
- Time
- Engagement time (defines the time for which the cabinet lock remains engaged after holding up an authorised key, see chapter 6.2 Open , page 21)
- Wake-up sensitivity (see chapter 6.1 Waking up, page 21)
- Expiry date of a key (see chapter 3.1.3 Automatic expiry date, page 6)
- Radio response of the cabinet lock (wake-on-radio mode)
- Advanced cabinet lock settings (see chapter 5.2 Advanced cabinet lock settings, page 18)

The authorisations have to be changed first in the Keyvi management software for the individual cabinet locks or groups of cabinet locks. The software consolidates these settings into tasks, which then need to be transferred first to the service unit or to ClexTouch. From there, they can be sent to the individual cabinet locks.

If the cabinet lock is located in a Keyvi radio network, then the transfer can also be done via radio.



For additional information refer to the documentation on CX6530 Keyvi management software, CX6510 service device, CX6522 ClexTouch and CX6520 programming station.

5.2 Advanced cabinet lock settings

To cover the specific requirements for a cabinet lock, the cabinet lock CX6192 comes with advanced setting options. On the one hand, these are extensions of the usable key (even unauthorised or keys that are not part of the locking system) and, on the other hand, those which can open cabinet locks covered by other keys. The latter is realised using a general priority for the authorised system key (Clex prime priority) or by setting up a priority group - if neither of these settings is configured, then the cabinet lock can only be opened using the key which was used to lock it. In addition, you can also configure a single cabinet restriction (each key can only open one cabinet lock) and enable the mail box function (Open and disable the cabinet lock with only a single authorisation operation).

5.2.1 Predefined cabinet lock modes

The cabinet lock modes can be configured in ClexTouch under the menu item "Door options / Cabinet lock" or using the service device.

In the delivered condition, the cabinet lock is in mode 0.

- Mode 0: Only Clex prime

Only the functionalities known to Clex prime take place. Any authorised key can lock and unlock the cabinet, regardless of whether the cabinet is locked or unlocked at the moment or which key locked it.

In addition, the mailbox mode can be selected.

- Mode A: Any readable key + Clex prime priority

The functionality as in mode 0 applies for all the authorised Clex prime keys. Additionally, you can lock an unlocked cabinet lock with all the other keys where the serial number can be read (even the timezone is not checked). You can open this cabinet lock again only with this card, and with authorised Clex prime keys.

In addition, the single cabinet restriction can be selected in this mode so that unauthorised keys can operate only one cabinet (can only be used for Mifare and LEGIC®versions).

- Mode B: Any system key + Clex prime priority

The functionality as in mode 0 applies for all the authorised Clex prime cards. In addition you can lock an unlocked cabinet lock within the system with any unauthorised Clex prime key (even the timezone is not checked). You can unlock this cabinet lock again only with this key, and with authorised Clex prime keys.

In addition, the single cabinet restriction can be selected in this mode so that unauthorised keys can operate only one cabinet (can only be used for Mifare and LEGIC®versions).

- Mode C: Authorised system key + priority group

Only authorised Clex prime keys can lock an unlocked cabinet lock. But after locking, only this key can again unlock the cabinet lock. However, at the time of the unlocking this key should have the authorisation for this cabinet.

In addition, a priority group is setup. If this is set up, authorised keys with this group can also unlock a locked cabinet which has been locked using other keys.

In addition, the single cabinet restriction can be selected in this mode so that unauthorised keys can operate only one cabinet (can only be used for Mifare and LEGIC®versions).

Mode:	0	A	B	C
Only system key	On	Off	On	On
Only authorised keys	On	Off	Off	On
No single cabinet restriction	On	On	On	On
No Clex prime priority	Off	Off	Off	On
Mail box function	On	On	On	On
Priority group	-1	-1	-1	0...295

5.3 Configuring the cabinet lock

Prerequisites: Orders have been created in the Keyvi management software and sent to the service device or to ClexTouch.

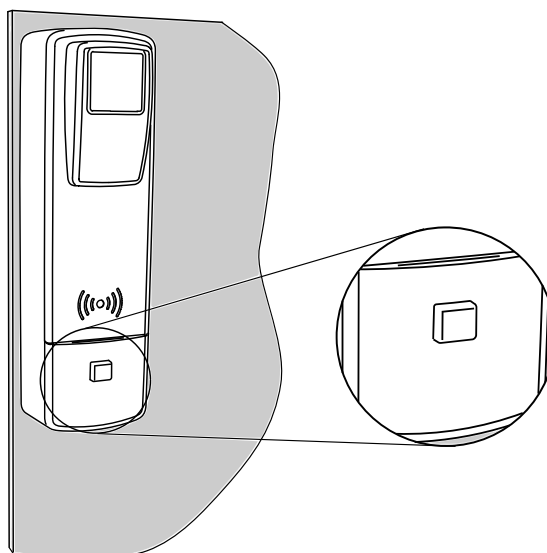
- ▶ Hold the service key in front of the reading unit of the cabinet lock to change the cabinet lock to service mode.
- ▶ Using the service device or ClexTouch, send the respective order to the cabinet lock (see operating manual of CX6510 service device or that of CX6522 ClexTouch)

6 Operation

6.1 Waking up

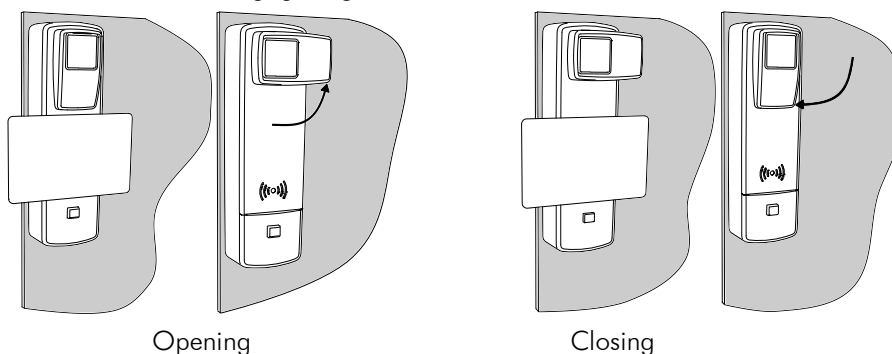
Automatic wake-up is disabled for the cabinet lock in the delivered condition. To check the authorisation of a key, it needs to be woken up from the sleep mode.

- ▶ 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.









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 Indications

Function	Signal (audible and visible) and explanation
Rest mode	No audible or visible signal
Begin Service mode	 Two audible signals of increasing intensity but equal length
End Service mode	 Two audible signals of decreasing intensity but equal length
Read mode (after waking)	 Red LEDs start flashing
Key not authorised	 Long low audible signal, red LEDs start glowing
Key authorised	 Green LEDs start glowing
Time changeover / toggling On	 Long loud beep, green LEDs start glowing
Time changeover / 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 brief high audible signals, red LEDs flash 5 times simultaneously
Battery warning Phase 2:	 5 brief high audible signals, 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

7 Cleaning and maintenance

7.1 Cleaning

- ▶ Clean the cabinet lock only with dry cloth.

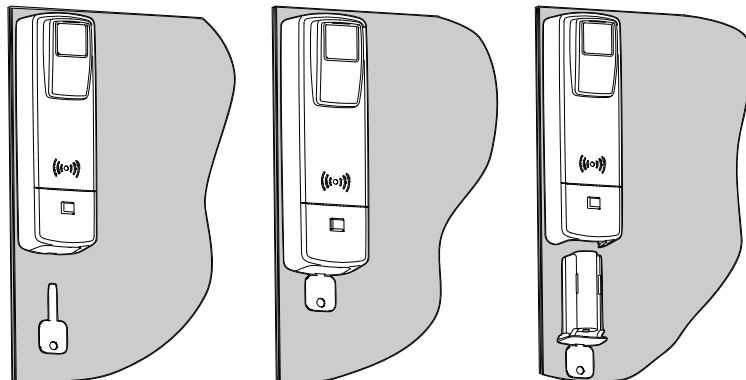
7.2 Maintenance

7.2.1 Replacing the battery

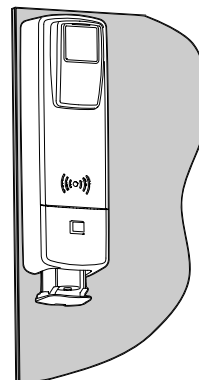
⚠ CAUTION

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 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.



- ▶ Check the time on the cabinet lock using the service device CX6510 or the CX6522 ClexTouch and adjust it if necessary (see chapter 5.1.2 Changing the settings, page 18).

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 4.1.3 (page 14).

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
ClexTouch	Software for Windows handheld computer for configuring a locking system
HITAG 1	Technology for contactless transfer of identification data
Keyvi	Software for managing a locking system
LEGIC®	Technology for contactless transfer of identification data
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 unit	Data can be exchanged between a PC having the Keyvi management software and the cabinet lock using the service device.
Service key	A special key with which you can identify yourself as the administrator of the locking system (see chapter 3.5.4 Special keys, Page 11)
Toggling	Permanently engaging a cabinet lock, so that the door can be opened without a key.
Transponder	See key
WoR	Wake-on-radio (radio response of a cabinet lock)