

Installation and operating instructions for the following CodeLoxx versions:

CLX-LA-S/SP, CLX-LB-SP, CLX-LHZ-SP, CLX-LA-RP, CLX-LA-AFP and CLX-LA-EF/EFP CLX-LCA-S/SP, CLX-LCA-AFP and CLX-LCA-EF/EFP CLX-LPxA-S/SP, CLX-LPxB-SP, CLX-LPxHZ-SP, CLX-LPxA-RP, CLX-LPxA-AFP & CLX-LPxA-EF/EFP, including PANIC & security versions

#### Contents:

Preliminary remarks	3
Technical data	4
General operation with media	5
1. Installation	7
Double knob cylinder scope of delivery	7
3. Tool set scope of delivery	8
4. Codeloxx double knob cylinder installation	8
5. Fitting to the door thickness	10
6. Dismantling the telescopic axis	12
7. Codeloxx half cylinder scope of delivery	13
8. Installing the Codeloxx half cylinder	14
9. Fitting to the door thickness	15
10. Registering CLX with FE, AEBasic or FR	
11. Deleting CLX from FE, AEBasic or FR	19
12. Showing the reception strength of FE, AEBasic or FR	20
13. Malfunctions of FE, AEBasic or FR	20
14. Programming	21
15. Creating the programming key	21
16. Changing the standard opening time	23
17. Creating new authorisations	24
18. Deleting individual authorisations	28
19. Deleting all authorisations	30





20. Operation	31
20.1 Operating from outside	31
20.2 Operating from outside using the digit ring	31
20.3 Time blocking	31
20.4 Operating from inside	31
20.5 Manual activation of permanent access	32
20.6 Manual deactivation of permanent access	32
20.7 Time-controlled activation/deactivation of permanent access.	34
21. Using the "special key for guard duty"	36
22. Switching between ARMED/DISARMED with evaluation units	37
23. Possible acknowledgments	40
24. Additional functions with AEBasic	43
25. Changing the battery	43
26. Eliminating possible malfunctions	44
27. Restrictive conditions	44



#### Preliminary remarks:

We are delighted that you have chosen our CodeLoxx double knob cylinder. The CodeLoxx has a modular construction and can be adapted to various door thicknesses.

Please read this manual carefully and thoroughly before installation.

If you gave us length measurements when ordering, your CodeLoxx will be delivered fully assembled. If no length measurements were given, the CodeLoxx double cylinder will be delivered in A: 30, I: 30 and the CodeLoxx half cylinder in A: 30, I: 10.

The CLX-Z-WS tool set is not supplied. It must be ordered separately (Order No. 501480).

The ABUS double knob cylinder CodeLoxx standard can be programmed either with a locking medium (programming key) or using PC software (ABUS Seccor Key Manager). This manual primarily deals with the programming key version. The additional function "time-controlled arming/disarming of permanent access" (ZAAP see 4.6) is programmed with the ABUS Seccor Key Manager.

#### **General information and battery advice:**

This product meets the requirements of applicable European and national guidelines. Conformity has been established and the relevant statements and documents are kept on file by the manufacturer. To maintain this state of affairs and ensure safe operation, the user must follow these assembly instructions. The product should not be changed or modified. Finger contact with the board should also be avoided.

ABUS Security-Center GmbH & Co. KG accepts no liability for loss or damage due indirectly or directly to these instructions or any damage alleged to have been caused due to them. The contents of these instructions may be altered without prior notice.

#### **Battery advice:**

The unit is powered with DC via a 3V lithium battery that is included in the delivery. When inserting the battery, ensure the polarity is correct. To ensure long life and to prevent fire and injury, comply with the following instructions:

- Under the Battery Disposal Regulation, the disposal of batteries in household waste is prohibited. They must be handed in at designated collection points.
- Batteries may not be exposed to direct sunlight or other heat sources or stored in places exposed to very high temperatures.
- Keep batteries away from children.
- These batteries are not rechargeable.
- Batteries must not be dismantled, pierced or otherwise damaged. They must not be burned, come into contact with water or be short circuited.
- If batteries are replaced, take note of temperature details specified by the manufacturer.



**Technical data:** 

Additional functions: Permanent access, timed switching-on and off of permanent access

(ZAAP - only with SP electronics, not possible with AFP or EF/P;

Opening duration: adjustable between 6 or 12 seconds.

Scope of delivery: Double knob cylinder or half cylinder, installation-operating manual, battery CR2.

Accessories required: ABUS chip key, CLX-Z-WS tool set

Optional accessories: PELT, ESE, SKM with TG-SKM, CLX-Z-WS tool set (see general accessories)

**Recording and** Optional: Recording of the last 1,000 events; 30 week profiles,

time function: 6 locked day profiles

Locking media: ABUS chip key, the Proximity tag and Proximity card from our company can also be

used as locking media. We assume no liability for the use of other media.

Range of application: Doors with PZ mortise locks, multi-point locks,

Panic locks (approved for the free-running of the locking nose). If a defined locking lug

position is required, please use the CLX-PANIC or a ZL).

Max. Number of media: 511 authorisations

**Programming:** Via programming key and/or PELT or SKM with TG-SKM

(see general accessories)

Power supply: 3 Volt lithium battery CR2 (approx. 60,000 / approx. 50,000 (AFP, EF/EFP, RP)

openings);

Emergency power supply ESE or PELT (see general accessories)

Operating conditions: External: -20 °C to +60 °C / IP43 or IP42 for CLX-LCA

Internal: -10 °C to +60 °C / IP44 or IP 43 with readers on both sides and half

cylinder.

Dimensions

of outer knob:

Diameter 30 mm, length 39 mm

Dimensions of inner knob:

Diameter 33 mm, length 45 mm, (reader both sides) 64 mm

Material: Stainless steel knobs

**Standard length:** Min. external 30mm/ internal 30mm, length in 5mm increments.

Factory settings: The systems are delivered in a coupled state in order to make it easier to

position the cam during installation. Only after initialisation, programming with a locking medium and performance of the first locking procedure will the system

switch to free-running mode.



#### General operation with media

#### 1. ABUS chip key (ACS)



To operate, the ABUS chip key is inserted into the reader module (reading slot on the outer knob) and taken out again.



The ABUS chip key is reversible; the plug-in direction is variable.

**Important:** Operation approval only occurs after the key has been removed.

#### 2. Proximity / Hitag1 / Hitag2 transponder:



To operate using a Proximity / Hitag1 / Hitag2 transponder, touch the centre of the reading module with the transponder. During programming: Place the transponder on the reading module on the outer knob.



A rapidly blinking green light confirms the reading of a valid locking medium. The locking medium must be removed from the reading module (at least 100 mm distance) before further reading can be started. During the coupled period no other reading with a locking medium is possible.

Throughout the operating instructions, the insertion and removal of the chip key - as well as the presentation and removal of the transponder - is indicated by the word "present".

Every input of a valid locking medium produces an approval for 6 or 12 seconds: during this time the door can be unlocked and opened. The system then goes back to the free-running state.

For further functions you require a recording system, the transfer device and the SKM software:

- Recording function, setting the time,
- Defining time limitations,
- Automated changeover to summer/winter time
- Time-controlled activation/deactivation of permanent access (ZAAP)



Valid locking media include:

1. ABUS chip key:

Every chip key is unique, is equipped with a set code from the factory and is protected from being copied and rewritten.

- 2. Proximity / Hitag1 / Hitag2 transponder: (not permitted for use in a VdS installation)A Proximity / Hitag1 / Hitag2 transponder is a contactless locking medium, equipped with a set code.
- →NOTE: Keys and locking media should always be kept safe so that only authorised persons have access to them. If you lose the key, follow the steps outlined in this manual immediately so that third-party use of the lost key can be avoided.
- **3.** CODE input with a digit ring: A valid authorisation can be created with a 4, 5 or 6 digit code on the CodeLoxx with digit ring (a 6 digit code must be used in a **VdS** environment).
- →NOTE: Select codes that cannot be found out by trial and error. Avoid:
  - Several of the same digits (e.g. 3333, 8888 etc.)
  - Digit chains that arise due to keypad arrangement
  - Common codes (e.g. 4711, 0815 etc.)
  - Numeric sequences (e.g. 1234, 6789 etc.)
  - Birthdates (e.g. 280769 for 28th July 1969)
  - · Write the code down and keep the document safe
  - Check the code several times before shutting the door to make sure you do not get shut
     out

There are 511 memory spaces available. Each memory space can store a locking medium or code. Locking media and codes can be used on their own or as combination codes.

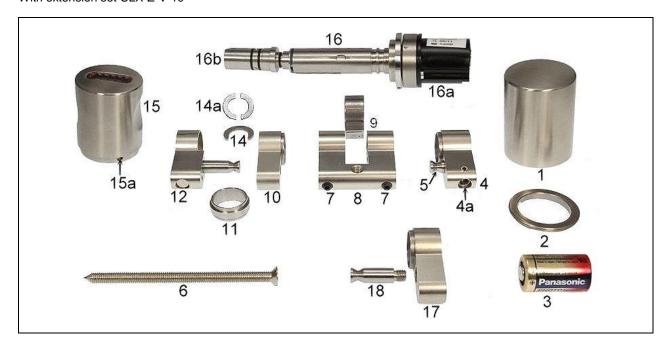
The following describes the operation of the first two locking media types. Later in the manual, examples of the operation of the ABUS chip key will be described. Operation with Proximity / Hitag1 / Hitag2 transponders occurs analogously. Operation with code input is described in 4.2.

→NOTE: Please keep a distance of 5cm between the knobs when storing CodeLoxx with Proximity additional equipment. These can activate each other's reading units and thus prematurely discharge the battery.



- 1. The installation of all versions of CodeLoxx electronic double knob cylinders and half cylinders
- 2. Scope of delivery CodeLoxx double knob cylinder (example total length 70 a: 40/ i: 30)

With extension set CLX-Z-V-10



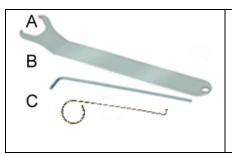
- 1. Inner cap
- 2. Mounting disk
- 3. Battery
- 4. Inside of cylinder4a. Handle bolts
- 5. Adapter bolts base unit
- 6. Fore-end screw
- 7. Grub screw cylinder body
- 8. ZL adapter
- 9. Complete CLX cam
- 10. Cylinder extension 10 mm
- **11.** Adapter housing external
- **12.** Cylinder external side (*exposed side during attempted break-ins*)
- 13. Adapter bolts 10 mm
- 14. Fixing washer

14a. Fixing washer VdS

- 15. External knob
  - 15a retainer ring
- 16. Telescopic axis
  - 16a. Battery holder
  - 16b. Axis section (exposed side during attempted break-ins)
- **17.** Cylinder extension 10 mm Scope of service extension set CLX-Z-V-10
- 18. Adapter



#### 3. Scope of delivery tool set (must be ordered separately):



- A. Opening key inner cap
- B. Allen key
- C. Hook spanner for half cylinder

#### 4. Codeloxx double knob cylinder installation:



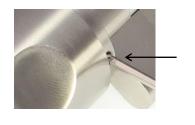
#### CodeLoxx in as-delivered condition

- External knob (15) and inner cap (1) are installed.
- The battery (3) has not yet been inserted.
- The CodeLoxx in this example is delivered in a length of 40/30
- The closing cam is coupled to prevent accidental entrapment



#### Dismantling the external knob

In order to insert the CodeLoxx double knob cylinder into the lock, the external knob (15) must be dismantled:



#### Loosen the grub screws on the retainer ring

Rotate the retainer ring (15a) until you can see the first grub screw. Now loosen the screw with the Allen key (B). The screw cannot be fully unscrewed. Once a screw touches the retainer ring, turn it in a clockwise direction. The retainer ring cannot turn in the opposite direction. Loosen the other two grub screws using this same method. To do this, the retainer ring (15a) must be turned 120° each time until the next grub screw becomes visible. Now the external knob (15) can be removed.



#### Dismantled external knob

External knob (15) fully dismantled.





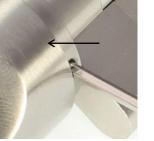
#### Installing the CodeLoxx into the door

After the external knob (15) has been disassembled, the CodeLoxx can be pushed through the door from the inside. The CodeLoxx is fixed like a mechanical locking cylinder, with the fore-end screw (6) in the lock case.



#### Assembling the external knob (15)

Now the external knob (15) can be reassembled. The method of assembling the external knob (15) is similar to its disassembly. First, slide the external knob (15) onto the axis end part (15a) of the telescopic axis (16). Then turn the external knob (15) until it connects directly with the outer side of the cylinder (12). To affix the external knob (15), turn the retainer ring (15a) until you can see the first grub screw. Screw in the grub screw using the Allen key (B). Tighten the other two grub screws using this same method.



It is advisable to dismantle the inner cap (1) before this step (see 4.5) and hold the CodeLoxx battery holder (16b) with your hand. This prevents the telescopic axis (16) from rotating with the external knob (16) and means it will not be possible to push out the external knob (15) on the outer side of the cylinder (12).



#### Dismantling the inner cap (1)

Dismantle the inner cap (1) to insert batteries (3) or to press the initialisation button.

Fix the mounting disk (2) onto its notch and unscrew the inner cap (1) using the inner cap's opening key (A).



#### **Battery compartment**

To insert the battery (3) you will need to swivel the contact plate [metallic plate on the battery holder (16a)] to the side. Now the battery (3) can be inserted. Make sure the polarity is correct: Positive pole faces the contact plate.



#### **Initialising CodeLoxx** (also see point 15 of these instructions)

The reset button is not visible at first glance [groove on the battery holder (16a), see arrow]. To initialise the CodeLoxx, press the reset button with the rounded side of the Allen key (B) for approx. 4 seconds. After about 1.5 seconds a rapidly blinking (red/green) light will appear on the external knob, which lasts for approx. 6 seconds. During this blinking period, insert a chip key or suitably programmed transfer device into the key reader. Once the blinking stops, initialisation has been successful.





#### Assembling the inner cap

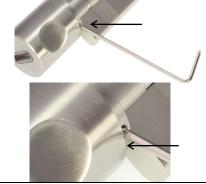
The inner cap (1) is screwed on with the help of the opening key (B) by fixing the mounting disk (2).



# To be considered when installing CLX-LCA:

For proper operation you must ensure that the cam locking nose of the CLX double cylinder is not held under pressure by the spring tension of the mortise lock during the opening process. In rare combinations of the CLX double knob cylinder and mortise lock there can be tension between the cam locking nose and screening of the axis after pressing the CLX-LCA, whereby the coupling pin of the axis is prevented from decoupling. We therefore recommend testing this during installation and, where necessary, turning the knob one quarter towards the closing direction after the opening process. This results in the relaxation of the individual components and allows the CLX double knob cylinder to decouple. The CLX-LCA can also be rebuilt on-site without screening to ensure decoupling. An adapter piece without ball bearings will need to be used on the outside for the modification. (Optional accessories: CLX-Z-A-A1).

**5.** Assembling CodeLoxx: Fitting the cylinder body to the door thickness (This example uses a CodeLoxx of extended total length 80 a:40/i:40)



# Dismantling the external knob (15)

Dismantle the external knob (15) as described in 4.2.



#### Dismantle the external side of the cylinder (12)

First, unscrew the cylinder body grub screw (7) with the Allen key (A). The outer side of the cylinder (12) can be removed and extension is possible.

Even when only the inside of the cylinder (4) is extended (as in this example), the outer side must first be removed.





#### Dismantle the ZL adapter (8) and cam (9)

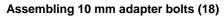
Before an extension of the inside of the cylinder (4) can take place, the ZL adapter (8) must be removed from the inside (4). To do this, remove the inside of the cylinder (4) from the ZL adapter (8) using the Allen key (A). The ZL adapter (8) and cam (9) can be removed from the telescopic axis (16 in the direction of the arrow) using a turning motion.

You can now extend the inside of the cylinder (4).



#### Dismantling adapter bolt base unit (5)

Firstly, remove the screwed on adapter bolt base unit (5) from the inside of the cylinder (4).



In this second step, the 10 mm adapter bolts (18) from the extension set must be screwed in on the inside of the cylinder (4).



The inside of the cylinder (4) must now be screwed together with the suitable 10 mm cylinder extension (17) and the ZL adapter (8) using the Allen key (B) (analogous to disassembly).



#### Assembling the outer side of the cylinder (12)

To extend the outer side of the cylinder (12) to 40 mm (the delivered state in this example), you must slide the relevant 10 mm cylinder extension (17) onto the telescopic axis (16).



# Assembling the outer side of the cylinder

In the next step you need to plug the adapter housing (11) onto the suspended 10 mm cylinder extension (17). Now the fixing plate (14) must be inserted between the adapter housing (11) and the axis end (see photo). In the next step, the outer side of the cylinder (12) with the mounted 10 mm adapter bolts (17) can be inserted onto the already assembled cylinder. Now the successively assembled parts can be fixed to the ZL adapter (8) using grub screws (7) (as in disassembly 5.2).

The CodeLoxx with digit ring (LCA) follows the same assembly steps as the standard assembly of the outer side of the cylinder (12), with one small difference: Only by slightly turning the end of the axis (16b) when attaching the outer side of the cylinder (12) will the ball bearing snap into place in the outer side of the cylinder (12).





# Please note when assembling VdS BZ+ systems:

#### Assembling the outer side of the cylinder VdS BZ+

In the case of axis version **Vds BZ+**, both the fixing disks (14a) are placed into the outer side of the cylinder (12) (see photo) before the cylinder outer side is inserted onto the already assembled cylinder. Now the successively assembled parts can be fixed to the ZL adapter (8) using grub screws (7) (as in disassembly 5.2).

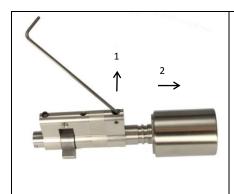


#### Assembling the external knob (15)

Finally, the external knob (15) is fixed on again. Proceed as described in point 4.4.

#### 6. Dismantling the telescopic axis

For maintenance and cleaning work or for replacing the entire telescopic axis, proceed as follows.



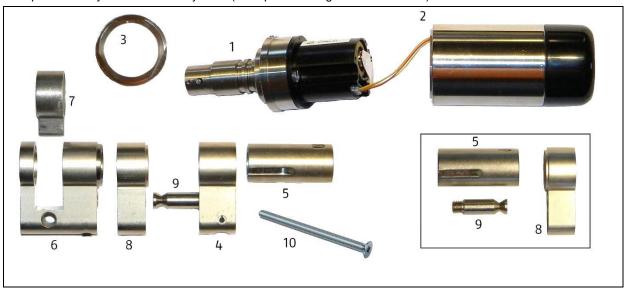
# Assembling the telescopic axis (16)

To dismantle the telescopic axis (16) you must first dismantle the external knob (15) and the outer side of the cylinder (12). The telescopic axis (16) can then be pulled from the ZL adapter (8) in the direction of arrow 2. It is important to note that the handle bolts (4a) must be pulled upwards with the Allen key (B) (leveraged, see arrow 1). Follow the same procedure when reassembling the axis (16). This disassembly process is only required when replacing the entire telescopic axis.



# 7. Scope of delivery CodeLoxx half cylinder CLX-LHZ-S / SP and CLX-LPxHZ-S / SP

Scope of delivery CodeLoxx half cylinder (example total length 40 - a: 30/ i: 10) + extension set CLX-Z-VH-10



- 1. Cylinder axis with electronics and CR2 lithium battery holder
- 2. External knob
- 3. Mounting disk
- 4. Outer side of cylinder
- 5. Coupling housing (component of the CLX-Z-VH-10 extension set)
- 6. ZL adapter
- 7. Complete CLX cam
- 8. Adapter extension (component of the CLX-Z-VH-10 extension set)
- 9. Adapter bolts (component of the CLX-Z-VH-10 extension set)
- 10. Fore-end screw



#### 8. Installing the Codeloxx half cylinder



#### CodeLoxx half cylinder as delivered

- The external knob and half cylinder are already installed.
- Disassembly of the external knob (2) is required to insert the battery.
- The cam is coupled when delivered. This only decouples after the first authorised closure.



# Dismantling the external knob

#### Loosen the retainer ring

 Turn the mounting disk (3) anti-clockwise with the hook spanner from the tool set (CLX-Z-WS).



 Pay attention to the cable. The cable must not be detached to insert the CR2 lithium battery. When inserting the battery, ensure the polarity is correct. The polarity is shown on the sticker on the battery holder. The contact plate is the positive pole.

#### Note:

The initialisation (initial start-up) is carried out in the same way as for the CodeLoxx double knob cylinder. Please see point 15 of these instructions. Please refer to the instruction manual for details.



# Assembling the external knob (2)

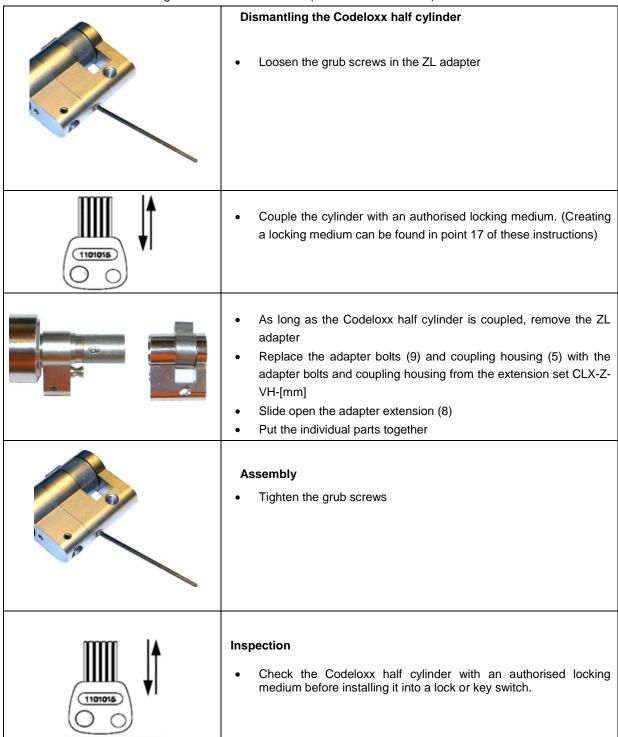
- Pay special attention to the cable. The plug connection must be attached. The cable must not be pinched.
- Turn the mounting disk in a clockwise direction on the external knob using the hook spanner.



# 9. Codeloxx half cylinder: Fitting the cylinder body to the door thickness

(this example uses a CodeLoxx of extended length a: 40/i: 10)

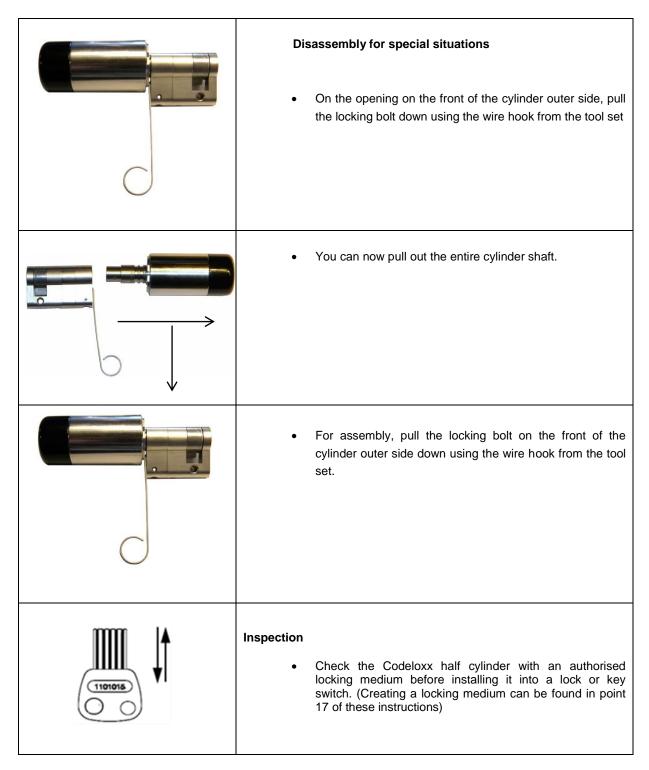
A base rate for dismantling on 30/10 mm is available (Art.-No. CLX-Z-VH-00).



#### Note:

In certain assembly situations it might be necessary to use the Codeloxx half cylinder without a knob at first. There exists the option to completely remove the axis.





# (i)

### Notes:

- The VdS version of the cylinder is provided with standard anti-drill protection on the outside of the cylinder, as well as with anti-drill protection on the cylinder shaft.
- Profile cylinder with pulling protection VdS BZ+



Doors in danger of break-in are protected by a profile cylinder with a VdS-approved burglar-resistant doorplate of class B or C. These doorplates conform to DIN 18 257 classes ES 2 or ES 3.

- The body of the cylinder must not stick out more than 3mm from the burglar-resistant protective rosette or doorplate once it has been assembled. Adjustments to door thicknesses are obligatory.
- Only cylinders from the VdS series are marked as such and approved for such applications. There is also a difference in the assembly procedure.
- The Codeloxx half cylinder is not suitable for installation in safety-relevant doors or entrances.

# 10. Registering the systems with wireless receiver FE for AE255F, evaluation unit AEBasic or wireless remote unit FR.

The CLX door systems (CLX-xx-AFP, CLX-xx-EF/P or CLX-xx-RP) are factory-set to stand-alone service. A logging-in procedure to the FE, AEBasic or FR must be carried out. Each door system must be registered individually.

Authorised locking media must also be saved in the evaluation unit for the arming and disarming switching function in connection with the AE255F evaluation unit. Please see point 15 of these instructions for notes on how to create the programming key.

#### 10.1 Radio channel selection

Please refer to the relevant sections of instructions for FE (AE255F), AEB or FR.



Carry out a new registration of the registered CLX when changing the radio channel.

#### 10.2 Registration of FE (AE255F), AEBasic or radio remote unit FR

Function FE / AEB / FR	Control element	Operation	Display
1. Start menu	Button T1	press x 1	LED D1 blinks for max. 60 s

The registration described under 10.3 must be carried out whilst D1 is flashing.



# 10.3 Registering CLX with FE (AE255F), AEBasic or FR

1101016 P	1. Present the programming key x1.
GREEN	2. A slowly flashing green signal indicates "ready for programming".
(101018) P (	3. Insert the programming key and <u>leave it in.</u>
RED	4. A slowly flashing red signal will come on.
RED	5. This is then followed by a solid red light.
(1101016) P ()	Whilst this red light is on:     Remove the programming key.

Display FE, AEBasic or FR

Display	Meaning
LED <b>D1</b> is lit up	Registration successful
LED <b>D1</b> is still flashing	Registration unsuccessful. Reduce the distance between CLX and FE, AEBasic or FR. Perform the registration again
LEDs <b>D1</b> and <b>D7</b> are lit up	The memory for the FE, AEBasic or FR door systems is full. Log out individual systems.



# 11. Deleting registered CLX from FE (AE255F), AEBasic or radio remote unit FR

# 11.1 Deregistration

Function FE / AEB /	Control	Operation	Display
FR	element		
1. Start menu	Button T1	press x 3	LED D4 blinks for max. 60
			S

The logging out method described under 11.2 must be carried out whilst D4 is flashing.

# 11.2 Logging out CLX from FE (AE255F), AEBasic or radio remote unit FR

1101018 P	1. Present the programming key x1.
GREEN	2. A slowly flashing green signal indicates "ready for programming".
(1101018) P	3. Insert the programming key and <u>leave it in.</u>
RED	4. A slowly flashing red signal will come on.
RED	5. This is then followed by a solid red light.
(1101016) P ()	Whilst this red light is on:     Remove the programming key.



# Display for FE (AE255F), AEBasic or FR

Display FE/ AEBasic / FR	Meaning
LED <b>D4</b> is lit up for 20 s	Deregistration successful
LED <b>D4</b> is still flashing	Deregistration unsuccessful. Reduce the distance between CLX and
	FE, AEBasic or FR. Perform the logging out process again.

# 12. Show reception strength

The reception strength can be shown to check the radio link between the CLX and FE (AE255F), AEBasic or FR. (Creating a locking medium can be found in point 17 of these instructions)

Function FE, AEBasic	Control element	Operation	Display
or FR			
1. Start menu	Button T2	press x 1	LED D1 - D8 blinks for
			max. 60 s
2. Show	Valid locking medium,	Present the locking	The LEDs D1 - D8 might
reception strength	registered door system	medium	light up.
	(remote only rotate the		The more LEDs that light
	outer knob)		up, the stronger the
			reception signal



Secure data transfer is only possible if there is a sustained exclusion of outside interference on a frequency of 868 MHz.

#### 13. Malfunctions

Malfunction that occurs	Acknowledgment on CLX	Cause
Ctondard reporting		No overing delicovering a powering in
Standard negative	9x red flashing	No arming/disarming permission.
Special negative	9x red flashing,	Feedback EMZ does not de-energise during disarming
	pause, 1x red flash	switching attempt. No radio connection to AEB.
	3x red flashing	No EMZ feedback during arming switching attempt.
	After 10/15 s	
	5x red flashing	Blocking magnet / bolt contact is not active
LED D8 (AEBasic, FE, FR)	-/-	Disturbance in the radio link
flashes		External source of disturbance for the radio signal
		Defect in the door system's radio transmitter circuit
		board



#### 13.1 Actions to take in the case of radio link disturbance

In case of a power failure at the FE or AEBasic, interruption of the radio link or lack of feedback from EMA/EMZ, it can be necessary to carry out an emergency opening.

This requires a special negative acknowledgment (see 26. Malfunctions).

In the case of the radio remote unit, this means that valid locking media can also be opened by interrupted radio links.



The EMA/EMZ can be switched to armed. A transfer of the EMA/EMZ state to the coupled door system does not take place. There is the risk of triggering an alarm.

#### Procedure:

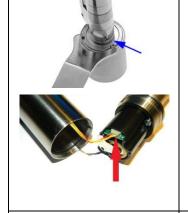
Present an authorised locking medium <u>during the pause</u> in the special negative acknowledgment. Repeat this process eight times. After the eighth time, the door system couples for a pre-set coupling period of 6 or 12 seconds.

#### 14. Programming

#### 15. Creating the programming key (Initial start-up)

The valid programming key must be created before locking media can be programmed. The entire authorisation memory is deleted when creating a new programming key.

Any ABUS chip key can be used as a programming key. It is also possible to create a programming key from a transponder. However, it is always recommended you use an ABUS chip key as a programming key. Only one programming key can be created per cylinder. A programming key should be suitably labelled and kept secure.



# 1. Disassembling the inner cap

Dismantle the cap of the inner knob. Fix the mounting disk onto its notch and unscrew the inner cap using the opening key.

If you are using a double knob cylinder with readers on both sides or a half cylinder, please carefully remove the cable from the plug.

Follow this procedure during other times you need to assemble/disassemble the product. Make sure that the cap plug is inserted again before completing installation.



#### 2. Insert the battery

Swivel the contact plate to the side. The positive pole of the CR2 battery is shown on the contact plate. Insert the battery and close the contact plate again.



	3. Initialisation  The black plastic battery holder has 3 vertical grooves: there is an opening at the end of the narrowest groove - under this you will find the RESET button (see arrow in the picture). To initialise the CodeLoxx, press the reset button with the rounded side of the Allen key (B) for at least 6 seconds.
RED	4. Display readiness  Confirmation of initialisation is shown by a rapid red/green flashing light. This display goes off after approx. 6 seconds if no action is taken.
1181015	5. Creating the programming key As long as the display continues, present any key. The flashing will then cease. This key is now set up as a new programming key.
1101018 P	6. Label the programming key  Label the new programming key with a sticker marked "Prog".  You can now reinstall the cap of the inner knob.

# 16. Changing the default opening time (6 or 12 seconds)

The standard opening time is automatically set to 6 seconds with each initialisation. The opening time can manually be changed to 12 seconds (e.g. for the operation of a multi-point lock).

# Process of changing to a 12 second opening time



	Disassembling the inner cap  Dismantle the cap of the inner knob. Fix the mounting disk onto its notch and screw the inner cap downwards using the opening key.
1101018 P	2. Present the programming key once.
GREEN	3. A slowly flashing green light blinks for 6 seconds.  Whilst this light is on: Perform step 4.
	4. Press the RESET button quickly Procedure as described in picture 2: it must only be pressed for a short time - less than 1 second - to avoid unwanted initialisation.  The flashing immediately stops.
	5. Assembling the inner cap

When you enter a valid authorisation the system will now always be set to a duration of 12 seconds.

If desired, you can reset the opening time to 6 seconds by following the same steps as you took to change it to 12 seconds.

# 17. Creating new authorisations

# 17.1 Creation of a new locking medium



1101016	Present the programming key x1
GREEN	2. A <b>slowly</b> flashing green signal indicates "ready for programming"
1101015	Whilst this flashing continues, present any new locking medium 1 time.  The flashing stops.

# 17.2 Creation of a new locking medium with additional function "permanent access"

110101B P	Insert the programming key and <u>leave it in.</u>
GREEN	2. Whilst the <b>slow</b> green light flashes: wait.
RED	3. This is then followed by a solid red light.
1101016 P )	Whilst this red light is on:     Remove the programming key.
1101015	Present any new locking medium 1 time.     (This should <b>not</b> already be programmed as a standard locking medium!)  The continuous light stops.



#### 17.3 Creation of a new code (LCA)

#### General note "CLX with digit ring"(CLX-LCA):

The CLX-LCA is marked with 10 digits (0-9) and a ★ symbol on the outer knob.

- The digits 0-9 are required for code input.
- The★ symbol stands for the "stop function". This allows you to cancel code input. The "stop" procedure is confirmed by a double, red flashing signal.
- Turn the knob to enter the desired number. The digit selected is the one in the uppermost position. Make sure the cylinder is kept horizontal. We recommend installation in the door before inputting a code.
- Operation takes place by quickly pressing the knob; this is then confirmed by a short, green, one-time blinking signal.
- Pressing any digit for longer (at least 2 seconds) will end the code input (with the exception of the \* symbol). Before the code can be re-entered you must wait
   6 seconds or alternatively press the \* symbol.

1101018 P	Present the programming key.
GREEN	2. A <b>slowly</b> flashing green signal indicates it is ready for programming.
0)	<ol> <li>Select the first digit of the code:         Turn to the desired number so that it is in the uppermost position.     </li> <li>Press the knob once. A simple green flashing signal confirms the input.</li> <li>Repeat this step for the following digits. Codes with 4 - 6 digits are permissible.</li> </ol>
GREEN	<ol> <li>The programming procedure is ended by pressing any digit for at least 2 s (with the exception of the * symbol). A green light flashes twice to confirm successful programming.</li> </ol>



Check the input with a function test on an open door to prevent accidentally being locked out.

#### 17.4 Creation of a new combination code "Code + locking medium" with PELT or CLX-LCA

You will need a professional input device with reader + keypad (PELT) with a programming cable for individual deletion (PKE) to carry out the following processes. Combination codes can be created with ABUS chip keys or Proximity / Hitag1 / Hitag2 transponders.

It is recommended that for every key created according to 17.1 and 17.2, an **additional** combination code is also created. This has the advantage of allowing you to individually delete any lost keys later on if required. (This is done with the help of the keypad codes that you created together with the key as a combination code).

Use a 4 to 5-digit keypad code for each key.

Keep a record of the combination codes created. Record the key, the code and the user, e.g. line by line in a table.

Insert the programming cable's (PKE) connector into the Sub-D plug of the PELT and the attached chip key of the PKE into the reading slit of the CodeLoxx.

Perform the following processes on the professional input unit (PELT):

1101018 P	<ol> <li>First, press the 'on' button on the PELT and keep this pressed throughout.</li> <li>Put the programming key into the PELT reading slit 1 time.</li> </ol>
GREEN	Green flashing signal     "Ready for programming": <b>slow</b> green flashing
	4. Whilst the blinking signal continues, enter the new keypad code on the PELT keypad: choose 4 to 5 digits; when you press the first button the flashing stops.
1101015	Present the desired combination code locking medium in the PELT reading slit 1 time (*1)

(\*1) You will need a Proximity adapter module (AM-Prox) to create combination codes with transponders.

#### **Combination codes CLX-LCA**

A combination code can be programmed directly using the digit ring on CodeLoxx with digit ring models (CLX-LCA-xx):



Programming is identical to point 17.3 - with the following exception: Completion of the programming process occurs by inserting the key into the reader of the CLX-LCA. <u>Not</u> by pressing any digit for a longer period.

#### 17.5 Creating a "special key for guard duty" (only in combination with an AE255F)

A special key can be created for guard duty. This does not open the door system unless an alarm goes off.



Use only the ABUS Seccor Key Manager Software for this function.

The following functions can be carried out using the special key for guard duty:

- In the DISARMED state: Switch to ARMED
- In the EXTERNAL ARMED state and an alarm is triggered: Switch to DISARMED
- In the INTERNAL ARMED state and an alarm is triggered: Switch to DISARMED

# 17.6 Create a code for a silent alarm (only in conjunction with keyboard ET/ELT and evaluation unit AE255F)

If a CLX is operated on an AE255F evaluation unit, a silent alarm can be triggered using the code keypad. To do so, a special 6-digit code must be specially created.



Use only the ABUS Seccor Key Manager Software for this function.

#### 18. Deleting individual authorisations

#### 18.1 Locking media available

10005E P	Present the programming key x2.
RED	<ul> <li>This is followed by a red flashing signal.</li> <li>→ "Ready to delete": rapid red blinking.</li> </ul>
1101019 ()	As long as this blinking continues: present once the locking medium to be deleted.



#### 18.2 Code available (CLX-LCA)

110101S P	Present the programming key x2.
RED	<ul> <li>This is followed by a red flashing signal.</li> <li>→ "Ready to delete": rapid red blinking.</li> </ul>
80	<ol> <li>The flashing signal stops after you enter the first digit of the code that is to be deleted.</li> <li>Input the other digits of the code.</li> </ol>
GREEN  18.3 Locking modia not avails	<ul> <li>The deletion procedure is ended by pressing any digit for longer (at least 2 s)         (with the exception of the ★ symbol).</li> </ul>

18.3 Locking media not available (e.g. lost)

# Individual deletion with the professional input unit (PELT) or with CLX-LCA.

You can delete a lost key individually with the PELT if you created it with an additional combination "deletion code" in accordance with 17.4. A CodeLoxx with Digit Ring (CLX-LCA-xx) does not require PELT.

# **Deletion procedure:**

Insert the PKE cable's connector into the Sub-D plug of the PELT. Slide the attached chip key of the PKE programming cable into the reading slit of the CodeLoxx. The following processes are performed on the PELT.

1101038 P	<ol> <li>First, press the 'on' button on the PELT and keep this pressed throughout.</li> <li>Insert the programming key into the PELT reading slit 2x.</li> </ol>
RED	This is followed by a red flashing signal - "ready for deletion" - for 6 seconds: rapid red blinking.



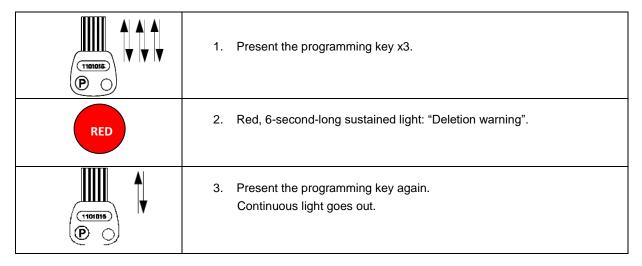
	As long as this flashing continues:     Enter the keypad code (combination code) of the lost locking medium into the keypad of the PELT.  When you press the first button the flashing stops.
(AB) (SEC) (	5. Press the "PROG" button on the PELT.

The lost locking medium has now been deleted.

<u>Inspection:</u> If you want to check whether the locking medium has really been deleted: Repeat the above deletion process. When you press the "PROG" button you will see a short green acknowledgement signal. This is evidence that both the locking medium and the combination code have been deleted. If you do not see a green acknowledgement signal, repeat the deletion process.

### 19. Deleting all authorisations

# 19.1 Deleting all locking media



Now all the locking media aside from the created individual codes, combination codes and the programming key have been deleted. You can delete all media and the programming key by initialising the CodeLoxx (see programming)



#### 19.2 Deleting all codes with CLX-LCA or PELT

1101018 P	Present the programming key x3.
RED	2. Red, 6-second-long sustained light: "Deletion warning".
80	Briefly pressing a digit once will delete all codes.



Deleting the codes does not delete any keys. Keys which were created along with a combination code in accordance with **17.4** cannot be individually deleted after carrying out "Delete all codes", but they are still authorised. They must be individually deleted according to **18.1.** 

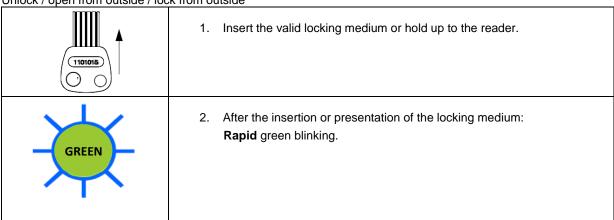
#### 20. Operation



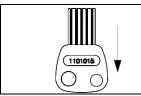
#### 20.1 Operating from outside

Possible with all valid created locking media.

Unlock / open from outside / lock from outside







Remove or pull out the locking medium.
 The system will be coupled for 6 or 12 seconds.

Open the door lock with the external knob.

#### 20.2 Operating from outside using the digit ring (CLX-LCA)

Turn to the desired number so that it is in the uppermost position. The first number of the code is confirmed by a one-time, short pressing of the knob. Enter the other digits in the same way. Once the 4-6 digits of the code have been entered, the system will be coupled for 6 or 12 seconds.

#### 20.3 Time blocking

The system will be locked for 10 minutes after 10 unsuccessful entry attempts. If entered incorrectly again, the system will again be locked for 10 minutes. The time block can be cancelled using a valid key or the programming key. The timed closure is signalled by a slowly flashing red light. The timed closure can be cancelled with a valid locking medium. The programming key interrupts the timed closure so that one-time entry is possible. See details in the error descriptions at the end of the manual.

#### 20.4 Operating from inside

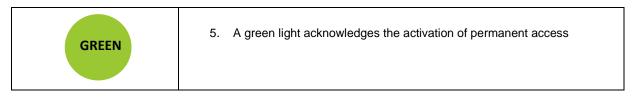
The door can always be locked or unlocked with the internal knob. Exception: Model CLX-XxxX-<u>LB</u> with readers on both sides. Using this from the inside is described in **20.1**.

#### 20.5 Manual activation of permanent access

The manual activation of permanent access is only possible with keys that were awarded the additional function of "permanent access" during programming. See 17.2

1101018	Insert the key and leave it in     (Hold up the transponder and keep it up)
GREEN	During this process:     rapid green blinking
RED	<ol> <li>This is then followed by a red light after 6 seconds. The CodeLoxx cylinder couples.</li> </ol>
(1101018) (101018)	Whilst the CodeLoxx cylinder is coupled, remove the locking medium and present 1 more time



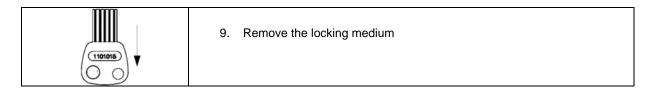


The system remains in an OPEN state: It can be permanently locked and unlocked.

# 20.6 Manual deactivation of permanent access

1101018	Insert the key     (Hold up the transponder)
GREEN	2. Green light
(110101S)	3. Remove the locking medium
1101018	As soon as the green light goes off:     Insert the locking medium for a 2nd time  (Hold up the transponder)
GREEN	5. Green light
(110101S)	6. Remove the locking medium
(1101018)	7. As soon as the green light goes off: Insert the locking medium for a 3rd time (Hold up the transponder)
GREEN	8. Green light

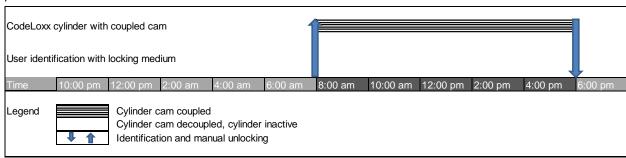




The system goes into free-running mode. Permission for locking or unlocking is required.

#### **Example of manual activation:**

At 8am a locking medium with permanent authorisation is used for activation, at 6pm a locking medium with permanent authorisation is used for deactivation. See 20.6



<u>Note:</u> After manual deactivation, a subsequent ZAAP time profile is not carried out when using the SKM software and two active ZAAP time profiles on one calendar day. The manual shutdown of permanent access takes precedence.

#### 20.7 Time-controlled activation/deactivation of permanent access (ZAAP)

Only possible with recording standard systems and CLX-LA/LPxA/LCA (SP). A time profile can be stored in the locking system using the ZAAP additional function. During this time permanent access turns on for a time set out in the time profile. This function can only be set using the ABUS Sector Key Manager (SKM).



When editing a door (installing a new door or updating an existing door) there is a tick next to the "Recording function/time profile function" in the door properties.

You can also tick the box for "Automatic arming/disarming of permanent access".

A weekly profile is necessary and must be created in SKM beforehand (see SKM operating instructions). You can select individual days on which arming/disarming does not take place using the locked day profile.

It is advisable to record your own weekly profile for the ZAAP additional function.

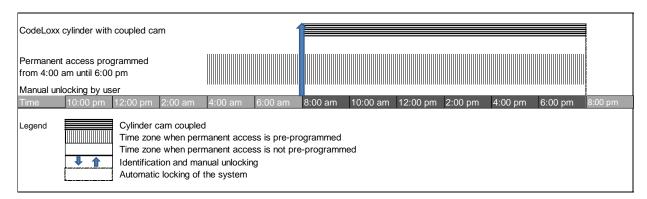
01 - (Art.-No. 800050)



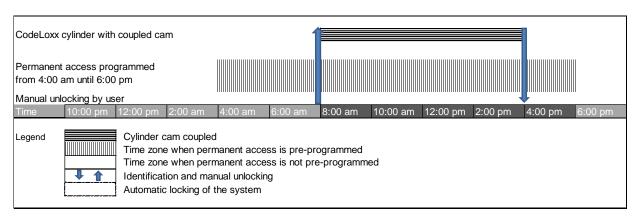
#### Activating ZAAP on the locking system:

The activation of ZAAP is only possible within a time profile that has been set using ABUS Seccor Key Manager. The activation within the time interval only starts when the locking system is operated with a valid authorisation. The release of the locking system occurs as usual. After one-time operation, permanent access is activated until the end of the time interval. At the end of the interval, the deactivation of permanent access occurs automatically.

**Example:** The active ZAAP time profile begins at 4am, an authorised locking medium is only presented at 8am. Therefore, the coupling of the double knob cylinder only occurs at 8am. The active ZAAP time profile ends at 6pm, the cylinder decouples.



**Example:** The active ZAAP time profile begins at 4am, an authorised locking medium is only presented at 8am. Therefore, the coupling of the double knob cylinder only occurs at 8am. At 4pm the ZAAP time profile is deactivated with a locking medium which has the permanent access option. The system decouples.



#### Manual activation of ZAAP outside of the set time profile:

- Permanent access can be activated outside of the selected time profile.
- The first activation occurs with the manual activation of permanent access (see 4.4)
- The timed shutdown of permanent access occurs after the end of the next valid time interval or at the end of a day.



#### Manual deactivation within a set ZAAP time profile:

- Permanent access within a valid time interval can be deactivated.
- Deactivation occurs in the same way as deactivation of permanent access (see 4.5).
- If there is a second ZAAP time profile on the same calendar day, this will no long be activated. The manual shutdown of permanent access takes precedence.

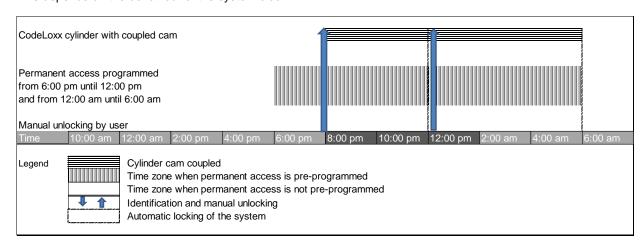


#### WARNING:

If permanent access is manually deactivated within a time interval, re-activation is not possible with the simple operation of a valid authorisation. Re-activation of permanent access is only possible through manual activation. This renewed activation results in permanent access after the end of the time interval being automatically turned off.

#### Restriction:

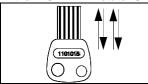
If two consecutive ZAAP time profiles are programmed over midnight, the renewed presentation of an authorised locking medium may be necessary. It is also possible that the ZAAP function will remain active over midnight. This depends on the behaviour of the system clock.



# 21. Using the "special key for guard duty" on CLX (only with AE255F) - only with SKM

The following functions can be carried out using the special key for guard duty:

In the DISARMED state: Switch to ARMED.



1. Present the guard duty key x2.

In the EXTERNAL ARMED state and an alarm is triggered: Switch to DISARMED.

In the INTERNAL ARMED state and an alarm is triggered: Switch to DISARMED.



1. Present the valid locking medium.



#### 22. Switching to ARMED, DISARMED, opening with ABUS evaluation units

Switching to DISARMED and opening is possible with any valid locking medium. The locking medium must also be authorised in the evaluation unit when using AE255F.

If the burglar alarm centre (EMZ) switches to DISARMED after the end of authorisation input, this will be confirmed by a short period of green flashing (= positive acknowledgement). This positive acknowledgement can take place immediately after the end of input or - depending on the EMZ - after up to 10 seconds of delay.

Now the system is unlocked for 6 seconds (for multi-door applications without EMZ state feedback, the unlocking only occurs after a delay interval set out in the configuration of the AEBasic). No adjustment of the delay period is possible when using AE255F.

Various operating modes and special functions are possible depending on the configurations and products used. Please refer to the instructions for evaluation devices AEBasic or AE255F.

#### 22.1 Switching to ARMED or DISARMED with CLX and evaluation unit AE255F or AEBasic.

The CLX can be operated with a locking medium or 6-digit code.

#### Switch to DISARMED

1101015	Present the locking medium x1.
GREEN	EMZ switches to DISARMED.  Green light as positive acknowledgement.

#### Switch to ARMED

1101016	Present the locking medium x1.
GREEN	Green light     CLX couples, it can be locked (lock contact).
TIGIOIS O	Present the locking medium 1 more time.
RED	4. Red light EMZ is switched to ARMED.



# 22.2 Switching to ARMED or DISARMED. Operating with CLX-LCA and evaluation unit AE255F or AEBasic

# Switch to DISARMED with keypad code (Jumper A set on AE255F)



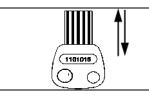
1. Enter the valid 6-digit code.

# Switch to DISARMED with combination code (Jumper A set on AE255F)



- 1. Enter the valid 4 or 5-digit code.
- 2. Present a valid ABUS chip key. This must have been created with the input code.

# Switch to DISARMED with ABUS chip key (Jumper B/C set on AE255F)



1. Present the valid locking medium.

# Switch to DISARMED with Code + ABUS chip key (Jumper SG5 set on AE255F)





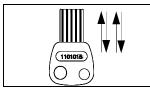
- 1. Enter the valid 6-digit code.
- 2. Present a valid ABUS chip key.



#### **Switch to ARMED**

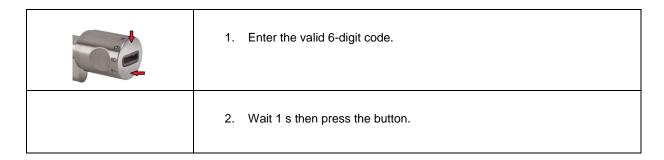
Firstly, lock the door system.

# Switch to ARMED with ABUS chip key



1. Present the locking medium x2.

#### Switch to ARMED with code



#### Switch to ARMED with combination code



- 1. Enter the valid 4 or 5-digit code.
- 2. Present a valid ABUS chip key x2. This must have been created with the input code. Waiting time between presenting the key 1 4 s.

# 22.3 Switch to INTERNAL ARMED (only with AE255F and SKM)

Firstly, lock the door system. With the special code INTERNAL ARMED you cannot switch to DISARMED.



1. Input the 6-digit special code INTERNAL ARMED.

# Switch to INTERNAL DISARMED (only with AE255F)

To switch to INTERNAL DISARMED, use the same procedure as you would to switch to ARMED.



# 22.4 Trigger silent alarm and switch to DISARMED (only with AE255F)

To set off a silent alarm, this must first have been created as a special code in the evaluation unit. Please refer to the instructions for evaluation devices.

#### Trigger silent alarm (Jumper A set on AE255F)



1. Enter in the "Silent alarm" special code.

#### Trigger silent alarm (Jumper SG5 set on AE255F)



- 1. Enter in the "Silent alarm" special code.
- 2. Present a valid ABUS chip key within 4 seconds.

#### Trigger silent alarm when DISARMED

#### Trigger silent alarm



1. Input the 6-digit "Silent alarm" special code on the ET or ELT keypad.

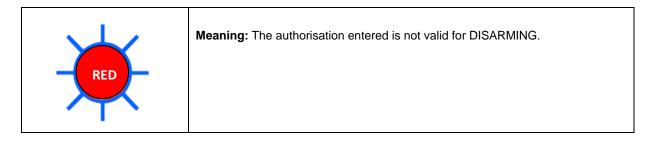
# 23. Possible acknowledgements

# Positive acknowledgement switching to ARMED/DISARMED

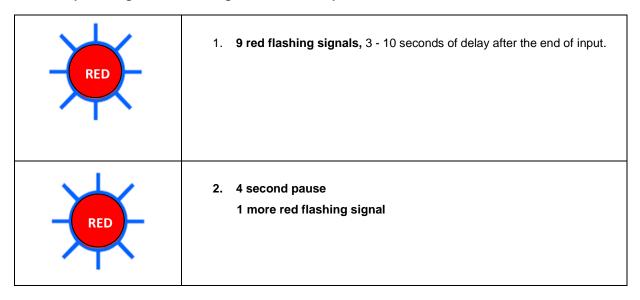
GREEN	EMZ switches to DISARMED.  Brief green light as positive acknowledgement.
RED	EMZ switches to ARMED.  Red light for 2 seconds as positive acknowledgement.

Possible 10x red flashing as negative acknowledgement after attempt to switch to DISARMED





#### Possible special negative acknowledgement after attempt to switch to DISARMED



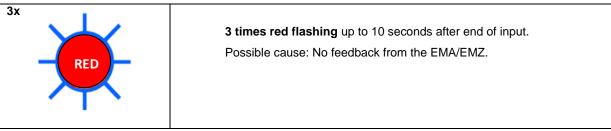
Possible meaning of this special negative acknowledgement:

- CLX has no connection to AEBasic or AE255F evaluation units.
- EMZ is not DISARMED.

If such a negative acknowledgement is signalled, the CLX can be opened after presenting an authorised locking medium 8 times - regardless of the status of the evaluation unit (possibly also **causing an alarm to be triggered).** The locking medium must be presented in the 4 second pause after the 10th blinking signal. The CLX can be opened again after the 8th time.

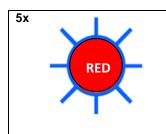
If the locking medium is presented too late during this emergency opening action (if you are already seeing the red flashing signal after the 4 second pause), the locking medium must again be presented 8 times.

#### Possible 3x red flashing as negative acknowledgement after attempt to switch to ARMED



Possible 5x red flashing as negative acknowledgement after attempt to switch to ARMED

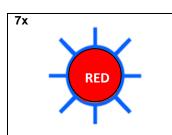




5 times red flashing immediately after the end of input.

Possible cause: EMA/EMZ not ready for switching to ARMED (block magnet). Check the ARMED switching conditions within the property.

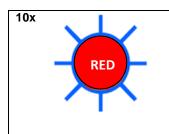
#### Possible 7x red flashing as negative acknowledgement after attempt to switch to ARMED



7 times red flashing immediately after the end of input.

Possible cause: EMA/EMZ not ready for switching to ARMED (lock contact). Check the ARMED switching conditions within the property.

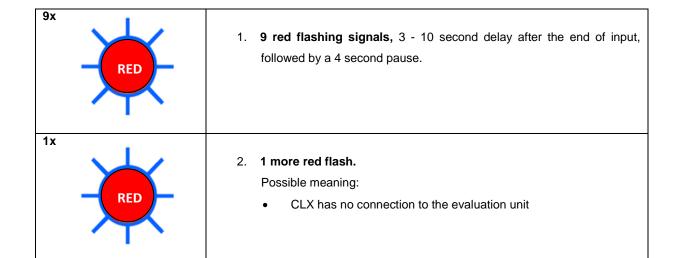
#### Possible 10x flashing as negative acknowledgement after attempt to switch to ARMED



**9 times red flashing** immediately after the end of input or up to 10 seconds after the end of input.

Possible cause: Not specified. Contact your dealer.

# Possible special negative acknowledgement after attempt to switch to ARMED





#### 24. Additional functions with AEBasic

#### 24.1 Locking function

If the installer sets the operating mode "locking function" in the AEBasic configuration, the CLX-AFP is connected to an externally locking system via the AEBasic. As long as the external locking system is active, the CLX-AFP remains locked. In this locked state, even valid inputs are not allowed access. Locking is signalled on the CLX-AFP by a red light flashing 3 times.

#### 24.2 Switching function

If the installer sets the operating mode "switching function" during AEBasic configuration, the switching function on the AEBasic will be activated by any valid input parallel to the door opening.

#### 24.3 Combination switching function + locking

If the installer sets the operating mode "switching function + locking" during AEBasic configuration, the switching function on the AEBasic will be activated by any valid input - as long as no lock is applied - parallel to the door opening. As long as the externally locking system is active, the CLX-AFP remains locked. In this locked state, even valid inputs do not allow access or activate the switching function. Locking is signalled on the CLX-AFP by a red light flashing 3 times.

#### 25. Changing the battery

The CodeLoxx cylinder is powered by a CR2 lithium battery.

This is sufficient for up to 60,000 openings (50,000 in remote or alarm versions) under optimal conditions.

The electronics check the battery status during every valid authorisation input. If this drops below a threshold value, a red/green light will flash three times before opening. It will not be possible to open the door until the flashing signal has stopped. At first this warning signal will only occur sporadically as the stress state initially oscillates around the threshold value. The warning signal will occur after every valid input if the threshold value is consistently not met.

All saved keys and codes are preserved during battery change. However, errors related to the time and date may occur.

The time must therefore be reset in systems with time and recording functions.

To do this, use the update function of the SKM software and the transfer device (TG-SKM-EN).



#### 26. Elimination of possible malfunctions

Malfunction encountered	Possible cause	Action
Permanent access cannot be turned on with the use of a permanent access-authorised locking medium	Locking medium is already a standard key	Delete the locking medium individually: see page 5, section 2.1 then recreate the key according to 1.2
The individual deletion of a lost locking medium (without software / with PELT) is not possible	The locking medium failed to be created with an additional combination code according to 1.3	Deletion of all locking media according to section 3. Then recreate existing locking media - and do so according to 1.1 (or 1.2) and also create a combination code with each locking medium according to 1.3 (with PELT)
A red/green flashing light comes on three times after valid authorisation input. Door operation is only possible after the flashing signal.	Battery empty warning	Replace battery
The transfer device is not transferring any data to the CodeLoxx	Version of the transfer device is too old  The connection cable is defective  There is no data in the TG transfer device	Update the transfer device with the newest version.  Exchange the connection cable  Reload the transfer device
Red flashing every 2 seconds, no code input possible	Timed lockout after multiple inputting of an incorrect code	Operate 1x with an authorised key or programming key

#### 27. Restrictive conditions

- The CodeLoxx double knob cylinder can be used in profile cylinder locks.
- The CodeLoxx has a freely turning cam. It may only be used in conjunction with panic locks that require the free-running of the cam (usually these are multi-point locking systems with panic function).
- The modular principle allows for a gradual adjustment to door thicknesses in 5mm intervals. The
  extension kits are available in DIY lengths up to max. door thickness 90mm, external max. 55mm,
  internal max. 50mm. For details please see our price list. Lengths for door thicknesses 95-120mm and
  125-150mm are only available factory assembled.
- The following special lengths can also only be ordered from the factory:

TS 90, A: 30, I: 60 mm; TS 90, A: 35, I: 55 mm

The following special lengths <u>cannot</u> be delivered:



TS 85, A: 30, I: 55 mm; TS 115, A: 30, I: 85mm; TS 145, A: 30, I: 115 mm;

TS 150, A: 30, I: 120 mm; TS150, A: 35, I: 115 mm

- Only one extension kit must be used on both the external and internal areas.
- The CodeLoxx double knob cylinder with digit ring (LCA) is protected against moisture. However, it must
  not be installed in areas directly exposed to rain. Freezing water can impair the function of the turning
  mechanism for code input.
- The CodeLoxx with digit ring (LCA) has a position sensor. Installation in glass doors at a twisted angle of 90° is not possible. The numbers and symbols on the knob would look off-centre due to the mechanical grid and would not permit accurate operation.
- Installing the CodeLoxx with digit ring (LCA) on ships/vehicles is not possible.
- The CodeLoxx with digit ring (LCA) is protected against moisture. However, it must not be installed in areas directly exposed to rain.
- Freezing water can impair the function of the turning mechanism for code input.

#### **Disposal**



Devices with this symbol must not be disposed of with household waste. Dispose of the product according to statutory requirements at the end of its lifespan.

Please contact your dealer or dispose of the product at a communal collection point for electronic waste.

ABUS Security-Center GmbH & Co KG.

Linker Kreuthweg 5 86444 Affing Germany

Please contact your dealer with technical queries and for technical support.