Electronic safe lock

Combi B Alarm box

Mounting instruction

V2.0 - 09/2018

EN

dormakaba

dormakaba EAD GmbH
Siemensstraße 33
42551 Velbert
Deutschland
T: +49 (0)2051 9111 0

www.dormakaba.com

Table of contents

1	**About this document**	**4**
1.1	Purpose and objective	4
1.2	Target group	4
1.3	Compliance with safety and standard	4
2	**Safety information**	**5**
2.1	Intended use	5
2.2	Hazard category	5
3	**System overview**	**6**
4	**System description**	**7**
4.1	Overall system	7
4.2	Wiring	7
5	**Technical data**	**8**
5.1	Mechanical components	8
5.2	Electrical data	8
6	**Schematics and Layout**	**9**
6.1	Circuit diagram	9
6.2	Connectors and Component layout	10
7	**Unpacking and checking delivery**	**11**
7.1	Checks before installation	11
8	**Installation**	**12**
8.1	Power supply	12
8.2	Opening monitoring line	13
8.3	Tamper line	13
8.4	Lock monitoring line via the main bolt contact of the lock	13
8.5	Silent alarm	14
8.6	Input	15

1 About this document

1.1 Purpose and objective

This Mounting Instruction describes the Alarm box for the CB30 electronic safe lock with mechanical redundancy.
It gives information on:

- The system and components
- Technical data
- Installation

1.2 Target group

This document exclusively addresses itself to skilled personnel (technicians) trained and authorized by the manufacturer.

1.3 Compliance with safety and standard

For safety and warranty reasons all actions described in this document must only be carried out by skilled personnel (technicians). Skilled personnel must comply with the respective regulations on work safety and prevention of accidents.

2 Safety information

2.1 Intended use

The purpose of the alarm box is to connect the lock of a safe, vault or data cabinet to an intrusion detection system.
Do not modify the alarm box since it will impair the security and safety of the unit. The alarm box is only designed for indoor applications. It must be applied in environmentally protected areas.

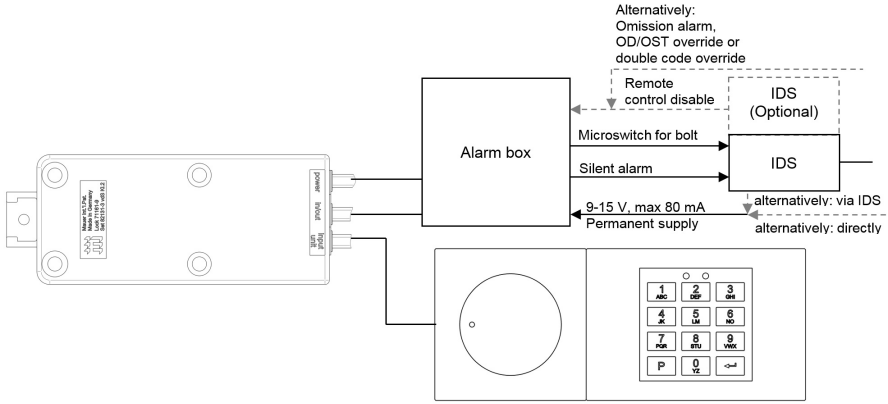
2.2 Hazard category

NOTICE

Information on how to handle the product correctly.

Failure to observe this information may result in malfunctions. The device or something in its vicinity could be damaged.

3 System overview



Overall system

- Combi B lock
- Combi B input unit
- Alarm box
- Intrusion detection system (IDS)

4 System description

4.1 Overall system

To integrate the Combi B lock into a VdS-compliant intrusion detection system, the Combi B alarm box must be used. The box allows transmission of a threat alert (silent alarm) and of the status message of the bolt lock to an intrusion detection system (IDS). In addition, the operation of the lock can be disabled via an input. Finally, the box allows permanent power supply of the lock if a suitable supply by the IDS or a power supply is in place.

4.2 Wiring

The alarm box makes the inputs and outputs of the lock available to an intrusion detection system (IDS) connected down-stream. Installation and commissioning should be performed exclusively by authorized skilled personnel. The line resistors to be installed separately are not part of the scope of delivery and must be soldered in accordance with the specifications of the manufacturer of the IDS.

Terminals	Description	Data & remarks
X1.1 ($+U_{on}$) X1.2 ($-U_{on}$ or GND)	Power supply	12VDC ±10% max. 80mA
X1.3 to X1.8	Opening monitoring line	Line resistors, either R101, R103 or R104 (see Schematics).
X1.9 to X1.12 X2.1, X2.2	Tamper line	Line resistors, either R102 or R104 (see Schematics).
X2.3 to X2.8	Lock monitoring line	Line resistors, either R105 or R106 (see Schematics).
X2.11 ($+U_{on}$) X2.12 ($-U_{on}$ or GND)	Input	12V ±10% / 10mA +20% Series resistor R110 (see 8.6)

5 Technical data

5.1 Mechanical components

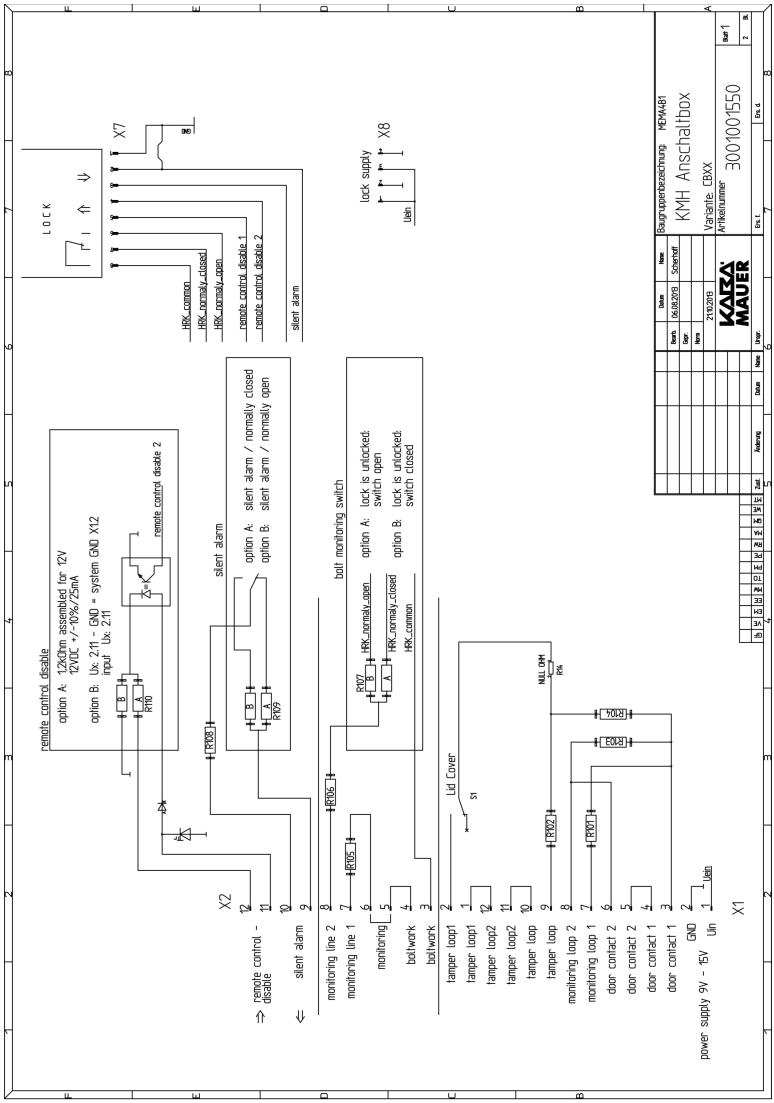
Technical data	Component property
Dimensions	85 mm x 85 mm x 26 mm
Environmental class	II
System of protection	IP 30

5.2 Electrical data

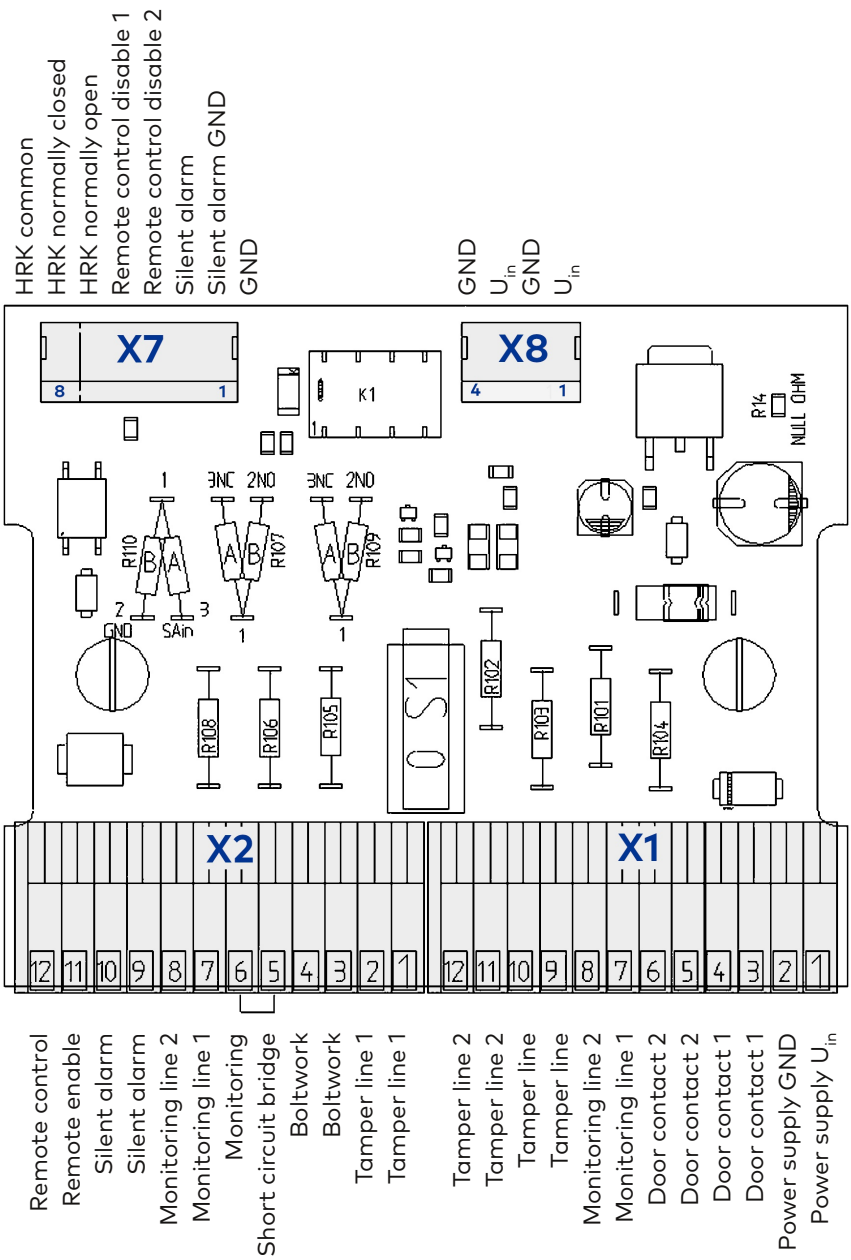
Connection	Property
Power supply	12V DC ±10% / max. 80mA
Bolt switching contact	30V DC/ < 0.1A
Tamper switch/cover contact	30V DC/ < 0.1A
Silent alarm output	30VDC / 1A resistive load Switching capacity: 30W DC
Remote control disable Omission alarm OD/OST override Double code override	12VDC ±10 % / 10mA +20% incoming only 1 signal possible at a time

6 Schematics and Layout

6.1 Circuit diagram



6.2 Connectors and Component layout



7 Unpacking and checking delivery

7.1 Checks before installation

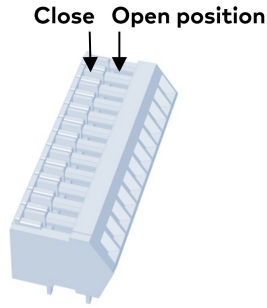
Requirements:
- Unpack the delivery.
- Make sure that the content is complete.

Make sure that the delivery includes:
- Alarm box
- Connecting cable lock 8 terminal
- Connecting cable lock 4 terminal
- 2 wire jumpers
- 2 zip ties

8 Installation

For installation, all components of the system (lock, input unit and alarm box) must be free of voltage. Please remove all connections of the lock and the batteries of the operating unit, if necessary.

The alarm box must be provided with the required line resistors while de-energized. In the delivery state, the terminals X1 and X2 to the intrusion detection technology are in the close position.



To close the spring clamps, the white sliders are pushed toward the cable using a screwdriver. The connected cable must then be checked for tight fit.

8.1 Power supply

Once the lock has been de-energized, the 8-pin interface cable of the alarm box is plugged into the "IN/OUT" socket at the Combi B lock. The 4-pin power cable of the alarm box is plugged into the "Power" socket at the Combi B lock.
The Combi B alarm box must be supplied with power from an external voltage source. Either the KMH "Combi B alarm box power pack" (article number 3002501230) or an alternative voltage source of the required specifications of 9-15 volts DC and max. 80mA current consumption lock/box must be used, e.g. the supply of an IDS. The power pack or the alternative voltage source is connected to the two terminals X1.1 (U_{on}) and X1.2 (GND, see chapter Connectors) of the alarm box. Despite the power supply of the lock by means of the alarm box ("Power" plug of the lock), the batteries must also be inserted again into the Combi B input unit. Without inserted batteries, a continuous undervoltage display will be shown at the lock (see operating instructions chapter 13.3)!

8.2 Opening monitoring line

Terminals: X1.3 to X1.8, see Connectors
Line resistors, R101, R103 or R104, see Schematics

Depending on the structure and design of the secure storage unit, the door contacts, monitoring lines and tamper lines can be looped in or used as separate lines. 2 door contacts can be connected / inserted to the connections of the opening monitoring line. Similarly, the tamper line can be included using R104.

8.3 Tamper line

Terminals: X1.9 to X1.12, X2.1 and X2.2, see Connectors
Line resistors R102 or R104, see Schematics

Up to 3 further sabotage detectors (externally, optional) can be inserted into the tamper line. The cover contact of the alarm box is part of the line. The cover contact is actuated by closing the alarm box.
Optionally the opening monitoring line can be inserted into the loop by means of R104.

8.4 Lock monitoring line via the main bolt contact of the lock

Terminals: X2.3 to X2.8, see Connectors
Line resistors, either R105 or R106 and R107, see Schematics

The main bolt contact of the lock is part of the lock monitoring line. It does not have to be activated, as it is always active.
If variant A (see Schematics, R107) has been mounted, the main bolt contact will function as NC contact. If variant B (see Schematics, R107) has been mounted, the contact can be used as NO contact.
Further possible connections for boltwork contacts or monitoring contacts can be incorporated in the line.

8.5 Silent alarm

Terminals: X2.9 and X2.10, see Connectors
Line resistor R108, see Schematics
Short-circuit bridge for variant A or alternative B on R109, see Schematics (variant A: switch contact normally closed; variant B: switch contact normally open)

When the silent alarm is set at the lock for the first time, the output is switched once for four seconds for checking purposes (for the terminals and resistors, see above).
To check the silent alarm during lock operation, an alarm code must be entered at the lock. Unlike the actual opening code, the alarm code is entered with ±1 at the last digit (for more details on activating and entering an alarm code, please refer to the operating instructions Combi B chapters 9.5 and 10.4). If wired correctly, the appropriate alarm signal should trigger the connected system (e.g. IDS). If this is not the case, the installation must be checked.

NOTICE

If a master code has not yet been activated at the lock, but the installer code is still operating, no alarm will be triggered! More details can be found in the operating instructions chapter 8.

Depending on the mounting position of the resistors in the alarm box, the installer configures the silent alarm as NC contact (variant A, see Schematics) or NO contact (variant B, see Schematics) at the terminals of the box for the IDS.

8.6 Input

Terminals: X2.11 and X2.12, see Connectors
Series resistor R108 for variant A or B, as desired, see Schematics

NOTICE

If a master code has not yet been activated at the lock, but the installer code is still operating, no alarm will be triggered! More details can be found in the operating instructions chapter 8.

The lock has a signal input. This input is inactive ex works. Via the PC software (see PC Software Manual), the input can be configured as remote control disable, omission alarm, override of the opening delay / opening stand-by time or double code override (for details, see Combi B PC Software Manual).

- If the remote control disable signal is active, the lock cannot be opened nor reprogrammed. In this case, each key press at the operating unit of the lock is acknowledged by the red LED flashing once.

NOTICE

Opening by means of the emergency key is not blocked by the remote control disable.

- An omission alarm is only triggered if prior to the code input no separate signal generator is pressed or no additional authorization is given.
- The override function of the opening delay / opening stand-by time (OD/OST) has the effect that the opening delay time can be skipped when a switch is actuated (see above).
- The double code override works identical as the OD/OW override, except that not the opening delay time is skipped, but the set double code is replaced by a simple code when a signal is active.

Depending on which functions are active (inactive ex works, others set via the PC software), the installation must be checked as follows:

- To check the remote control disable, energizing must be carried out as described in chapter 4.2 and an opening in-tent must be carried out at the lock (see operating instructions chapters 8 and 10).
  If a signal from the red LED is received each time a key is pressed, the disable function works correctly.
  If the lock operates as usual or even is openable or programable, the remote control disable does not work and the installation must be checked.
  With the remote control disable working, it must be checked whether it can be disabled again and whether the lock can be opened by means of the correct code.
- To test the omission alarm, the signal must be triggered (see chapter 4.2), a valid code must be entered at the lock and a check as to whether a silent alarm was triggered must be carried out. This must be followed by entering a valid code without triggering the signal prior to that and checking whether a silent alarm (duration of 4 seconds) has now been triggered. If this is not the case, the installation and the setting of the lock must be checked by means of the PC software.
- To test the override of the opening delay/opening stand-by time, make sure that the opening delay/opening stand-by time at the lock is active (see operating instructions chapter 9.3). Now the signal must be triggered (see chapter 4.2) and a valid code must be entered at the lock. It should be possible to open the lock directly without starting the opening delay. If this is not the case, the installation and the setting of the lock must be checked. If the override is working, check whether the opening delay proceeds as programmed if the signal is not triggered. If the opening delay is not working properly, the opening delay programming of the lock must be checked (see operating instructions chapter 9.3).
- To test the double code (DC) override, make sure that the DC is active (see operating instructions chapter 9.4). Now the signal must be triggered (see chapter 4.2) and a valid code must be entered at the lock. It should be possible to open the lock directly without expecting the second code. If this is not the case, the installation and the setting of the lock must be checked. If the override is working, check in a second step whether the DC is requested if the signal is not triggered. If no DC is requested, the DC programming of the lock must be checked (see operating instructions chapter 9.4).

dormakaba Schweiz AG
Mühlebühlstrasse 23
8620 Wetzikon
T: +41 44 931 61 11
www.dormakaba.com

www.dormakaba.com

II_Alarmbox_CB30, September 2018
Art.Nr. 1760000261
Subject to change without notice!