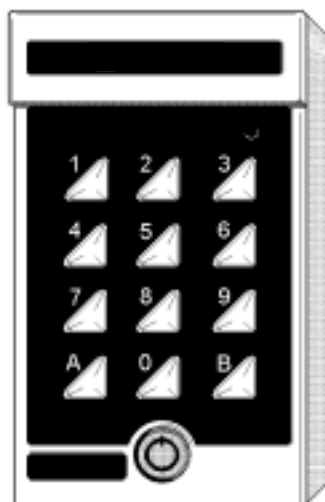


*K44 Duo*

GB

*Technical manual*



 BEWATOR

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### **What is K44 Duo?**

K44 Duo is a compact code lock with two relay outputs. This makes K44 Duo capable of controlling two doors – or one door and an optional function, e.g. a light switch. Either a four- or a six-digit code can be used to open connected doors. All programming is done from the keypad.

### **Open two doors using one code**

The advantage of using two relay outputs is that two functions can be activated at the same time, using only one code. For example, the code can open the lock and turn on a light switch at the same time.

Another setup is to connect the code lock to two doors. One code is programmed to operate both doors, while the other only opens one of the doors.

If the code is programmed to open both doors, you can set K44 Duo so that the other door does not open until the first door has been opened and closed (see the *Delay* section).

For each code, choose whether to activate both relay outputs, only one or only the other.

***Disable the codes  
whenever needed***

K44 Duo offers the possibility to disable codes at certain times. For example, the cleaning staff's access to the building can be limited to certain hours, while tenants/staff can have access to the door 24 hours a day.

By connecting two time clocks to K44 Duo, three different time zones can be used to control the codes: one controlled by time clock 1, one controlled by time clock 2 and one that is valid 24 hours a day, i.e. no time control.

***Duress or alert***

K44 Duo is equipped with an output that can be activated for one of the following reasons:

- A user enters a duress code (see the *Duress on/off* section)
- or
- The door held warning time expires or the door is forced open (see the *Alert on/off* section)

Choose which alternative to use. Then connect e.g. a burglar alarm or similar to the output.

**Zero opening**

To make entrance easier, e.g. during office hours, connect an external contact. Then use the contact to activate or deactivate zero opening, i.e. opening the door by pressing the zero button on the keypad. Note that this is only applies to relay output 1.

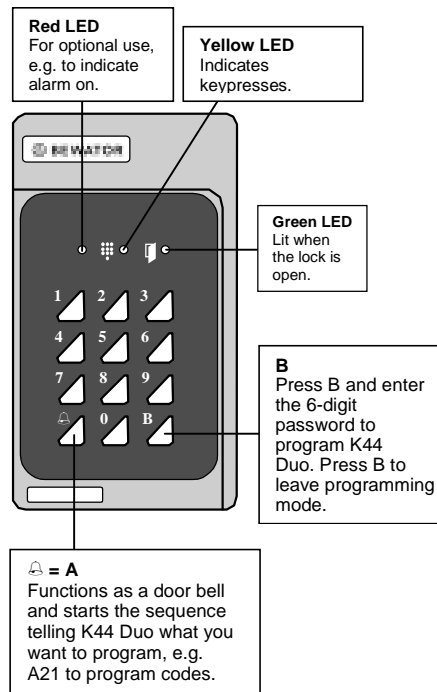
**Unlock the door permanently**

If the *Toggle* function is activated, the code can be used to unlock the door. The door remains open until a valid code is entered once again (see the *Toggle on/off* section).

**Door bell**

If needed, a door bell can be connected to K44 Duo. To ring the bell, the visitor presses the button labelled with a bell on the code lock's keypad.

## The keypad

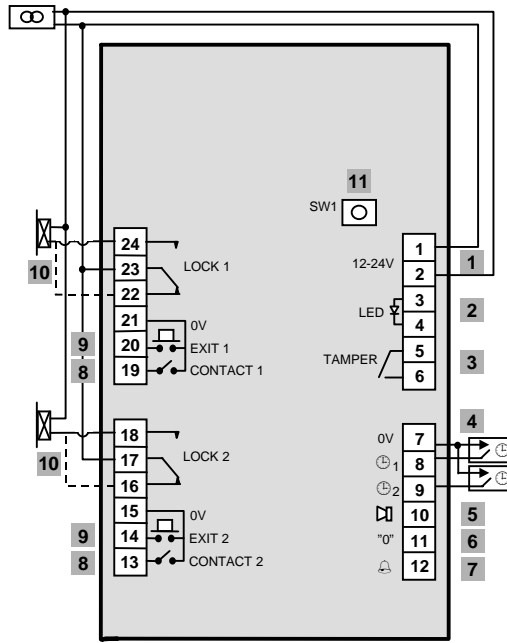


## Wiring

The numbers refer to the diagram on the right.

- 1** Power in, terminal nos 1 and 2. 12-24 V.
- 2** Input for extra LED (red), terminal nos 3 and 4. 10-35 V DC.
- 3** Tamper switch, terminal nos 5 and 6. Closed when the housing is closed.
- 4** Code disabling from external time clock.  
Input 1: Close terminal nos 8 and 7.  
Input 2: Close terminal nos 9 and 7.
- 5** Output for alert or duress. Use E7 relay (connect between terminal nos 10 and 7).
- 6** Contact for zero opening. Close terminal nos 11 and 7.
- 7** Door bell. Output to activate buzzer. Use E7 relay (between terminal nos 12 and 7).
- 8** Input for door contacts. The contact is closed when the door is closed. Terminal nos 13 and 15 (19 and 21 respectively).
- 9** Exit button. The door opens on closing terminal nos 14 and 15 (20 and 21 respectively).
- 10** Electric locking device. Dashed line refers to locks with failsafe function.
- 11** SW1 push button. Used when choosing password and erasing memory.





## **Programming**

Before you start programming K44 Duo, make a note of the codes to be used, to what timing group they should belong and which relay output they should control. At the back of this manual you will find a chart designed for this purpose. Look at the chart as you program K44 according to the instructions below.

### **Buzzer and LEDs**

During programming you will be guided by the buzzer and the LEDs.

**In programming mode before a function is chosen:** Green and yellow LED flashes.

**During programming:** Yellow LED goes out. Green LED is lit.

**Correct instruction:** Confirmed by a rising signal consisting of two quick beeps.

**Faulty instruction:** Confirmed by a falling signal consisting of two quick beeps.

Note! During programming mode, if a button is not pressed within 20 seconds, the code lock goes back to normal operation.

**Choose password**

The first thing to do before you can start programming is to choose a password.

- 1 Press and hold the SW1 button on the code lock's circuit board. Both LEDs are lit.
- 2 Enter a 6-digit password.
- 3 Make a note of the new password in the chart at the back of the manual.

**Change password**

- 1 Press B and enter the current password.
- 2 Enter A27.
- 3 Enter the new password. A warning tone is heard.
- 4 Enter the new password once again.
- 5 Press B to leave programming mode.
- 6 Make a note of the new password in the chart at the back of the manual.

**Program codes**

- 1 Press B and enter the password.
- 2 Enter A21.
- 3 Enter the desired code location using two digits (01-30).
- 4 Enter the code for the current code location (four digits for code location 01-20 or six digits for code location 21-30).  

Note! The four first digits in a 6-digit code must not be the same as the digits in a 4-digit code and the other way around.
- 5 Choose whether or not the code should be disabled from a time clock.  
  - 0 = no time control
  - 1 = code disabled from time clock 1
  - 2 = code disabled from time clock 2
- 6 Choose which relay output to control.  
  - 0 = both relay outputs
  - 1 = relay output 1
  - 2 = relay output 2
- 7 Program the next code by continuing from step 3 or press B to exit.
- 8 Press B (leaves programming mode).

**Erase codes**

- 1 Press B and enter the password.
- 2 Enter A22.
- 3 Enter the current code. If it is a 4-digit code, enter A after the last digit.
- 4 If it is a 4-digit code, enter 0000. If it is a 6-digit code, enter 000000.
- 5 Enter 0000 (000000) again.
- 6 Enter 0.
- 7 Enter 0 once again.
- 8 Erase the next code by continuing from step 3 or press B to exit.
- 9 Press B to leave programming mode.

**Change codes**

- 1 Press B and enter the password.
- 2 Enter A22.
- 3 Enter the current code. If it is a 4-digit code, enter A after the last digit.
- 4 Enter the new code using four or six digits.
- 5 Enter the new code once again.
- 6 Choose whether or not the code should be disabled from a time clock.
  - 0 = no time control
  - 1 = code disabled from time clock 1
  - 2 = code disabled from time clock 2
- 7 Choose which relay output to control.
  - 0 = both relay outputs
  - 1 = relay output 1
  - 2 = relay output 2
- 8 Change the next code by continuing from step 3 or press B to leave code programming.
- 9 Press B to leave programming mode.

**Set opening time**

The opening time determines for how long the lock should remain open following a correct entrance code. When K44 Duo is delivered the opening time is 7 seconds for both relays.

- 1 Press B and enter the password.
- 2 Enter A28.
- 3 Enter the desired opening time (01-99) using two digits, e.g. 09 for 9 seconds.
- 4 Choose which relay output the new opening time applies to:
  - 0 = both
  - 1 = relay output 1
  - 2 = relay output 2
- 5 Press B to leave programming mode.

**Background lighting on/off**

This is how to turn off the keypad's background lighting, if needed.

- 1 Press B and enter the password.
- 2 Enter A60.
- 3 Enter 0.
- 4 Press B to leave programming mode.

To reactivate background lighting, press 1 in step 3 instead.



**Buzzer on/off**

This is how to deactivate the buzzer if sound on keypresses and door opening is not desired. Note that the buzzer will keep sounding during programming.

- 1 Press B and enter the password.
- 2 Enter A65.
- 3 Enter 0.
- 4 Press B to leave programming mode.

To reactivate the buzzer, press 1 in step 3 instead.

**Toggle function on/off**

To be able to unlock a door permanently, the toggle function has to be activated.

Proceed as follows:

- 1 Press B and enter the password.
- 2 Enter A81.
- 3 Enter 1.
- 4 Choose what relay outputs the toggle function should apply to.
  - 0 = both
  - 1 = relay output 1
  - 2 = relay output 2
- 5 Press B to leave programming mode.

To deactivate the toggle function, follow the above steps, only enter 0 in step 3 instead.

In the *Unlock the door permanently* section you will find instructions on how to unlock the door permanently.

***Duress on/off***

With the *Duress* function activated, a user can enter a special code if he or she is forced to open the door under threat. It is important to have a plan for what action to take when a duress code is entered.

This is how to activate *Duress*:

- 1 Press B and enter the password.
- 2 Enter A69.
- 3 Enter 1. (By doing this, the *Alert* function is deactivated).
- 4 Press B.

To deactivate the function, enter 0 in step 3 instead. (By doing this, the *Alert* function is reactivated).

The *Enter duress code* section describes how a user should enter the duress code.

Note! If *Duress* is activated, make sure you have not programmed codes with consecutive digits. Code 1234 must not exist with codes 1235 and 1233. Code 5679 must not exist with codes 5670 and 5678.

**Door control on/off**

If door contacts are used and this function is activated, a warning signal sounds during the time set as door held warning time, i.e. when the opening time has expired and the door is still open.

If the door held warning time expires and the door is still open, the alert output is activated (if the *Alert* function is activated). This also happens if the door is forced open.

This is how to activate *Door control*:

- 1 Press B and enter the password.
- 2 Enter A67.
- 3 Enter 1.
- 4 Press B to leave programming mode.

To deactivate *Door control*, press 0 in step 3 instead.

**Set door held warning time**

If the door is still open when the opening time has expired, a buzzer sounds as to remind the visitor to close the door immediately – or the alarm output will be activated. The buzzer sounds until the door is closed.

Note that door contacts must be connected and that *Door control* must be activated for this to work.

This is how to change the door held warning time, if needed:

- 1 Press B and enter the password.
- 2 Enter A29.
- 3 Enter the desired door held warning time (01-99) with two digits, e.g. 09 for 9 seconds.
- 4 Choose to which relay outputs the new door held warning time should apply:
  - 0 = both
  - 1 = relay output 1
  - 2 = relay output 2
- 5 Press B to leave programming mode.

**Alert on/off**

When K44 Duo is delivered, the alarm output is set to be activated if the door is open too long or if the door is forced open.

Note that door contacts must be connected and that *Door control* must be activated for this to work.

This is how to deactivate the function:

- 1 Press B and enter the password.
- 2 Enter A69.
- 3 Enter 1. (By doing this, the *Duress* function is activated).
- 4 Press B to leave programming mode.

To reactivate the function, enter 0 in step 3 instead. (By doing this, the *Duress* function is deactivated).

**Delay on/off**

When this function is activated, the following happens: If a code is programmed to open two doors, lock relay 2 is not activated until door 1 has been opened and closed.

If door 2 is opened with the exit button, door 2 has to be opened and closed before door 1 can be opened.

Note that door contacts must be connected and that *Door control* must be activated for this to work.

This is how to activate *Delay*:

- 1 Press B and enter the password.
- 2 Enter A80.
- 3 Enter 1.
- 4 Press B to leave programming mode.

To deactivate *Delay*, press 0 in step 3 instead.

**Erase the memory**

This is how to erase all programmed information (including the password):

- 1 Press B and enter the password.
- 2 Press SW1 on K44 Duo's circuit board.
- 3 Enter 112186.
- 4 Enter 112186 once again. The memory is now erased and K44 Duo goes back to the factory settings.
- 5 Press B.



## **Using K44 Duo**

### **Entrance**

To open the lock, a 4-digit (or 6-digit) code should be entered on the code lock's keypad.

K44 Duo is blocked if a visitor performs 12 keypresses without finding the correct code. To release the blockage, enter a correct code twice in succession.

### **Unlock the door permanently**

To unlock the door permanently, proceed as follows:

- 1 Press B.
- 2 Enter the entrance code.
- 3 Enter 1.

The door is now unlocked (green LED is lit). To lock the door, follow the above steps, only enter 0 in step 3 instead.

**Enter duress code**

This is how to activate the alarm output when forced to open the door under threat:

- 1 Enter the usual entrance code, only add 1 to the last digit in the code.

Example 1: If the entrance code is 1234, enter 1235 instead.

Example 2: If the code is 1239, enter 1230 instead.

When a duress code is entered, the door will open at the same time as the duress output is activated. It will remain activated until reset by somebody entering programming mode.

**Technical data**

Power supply: 8-24 V AC  
10-35 V DC

Power consumption: 75 mA.

Maximum load over  
the relay contacts: 2 A 28 V DC

Dimensions: 140x80x40 mm  
(HxWxD)

Suitable  
height: 1200-1400 mm from  
ground to bottom edge

If needed, complete the installation with  
flushmounting kit BB3.

### ***Programming overview***

Always start by pressing B and entering the password. Exit: Press B.						
Function	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
New entrance code	Enter A21	Enter code location (2 digits). Code locations 21-30 = 6-digit codes.	Enter code (4 or 6 digits)	Enter timing group 0 = none 1 = group 1 2 = group 2	Enter relay output 0 = both 1 = relay 1 2 = relay 2	<b>Next code:</b> Proceed from step 2. <b>Exit:</b> Press B (back to programming mode).
Change entrance code	Enter A22	Enter old code. <b>4-digit code:</b> Enter code + A	Enter new code ( <b>twice</b> )	Enter timing group 0 = none 1 = group 1 2 = group 2	Enter relay output 0 = both 1 = relay 1 2 = relay 2	<b>Next code:</b> Proceed from step 2. <b>Exit:</b> Press B (back to programming mode).

Function	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Erase entrance code	Enter A22	See above	Enter 0000 (00) (twice)	Enter 0	Enter 0	See above
Change password	Enter A27	Enter new code (6 digits)	Enter new code again			
Change opening time	Enter A28	Enter seconds (01-99)	Enter relay output (0, 1 or 2)			
Change door held warning time	Enter A29	Enter seconds (01-99)	Enter relay output (0, 1 or 2)			
Background lighting on/off	Enter A60	0 = off 1 = on				
Buzzer on/off	Enter A65	0 = off 1 = on				

### ***Programming overview***

Always start by pressing B and entering the password. Exit: Press B.						
Function	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Door control on/off	Enter A67	0 = off 1 = on				
Alert/Duress	Enter A69	0 = alert on, duress off 1 = duress on, alert off				
Delay on/off	Enter A80	0 = off 1 = on				
Toggle function on/off	Enter A81	0 = off 1 = on	Enter relay output (0,1 or 2)			
Erase memory	Press SW1	Enter 112186	Enter 112186			

Password:			
Loc	Code	Timing group	Relay
01		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
02		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
03		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
04		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
05		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
06		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
07		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
08		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
09		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
10		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
11		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
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13		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>
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30		None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/>

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