

Safe code lock control

Task

“easy” is required to implement a code lock for access control.

The length of the code is limited to 8 digits. The code can consist of up to 7 different digits. All other digits not required for the code must be associated in parallel with input I8 via the hardware. The number sequence of the code can be selected as required, however, the same digit cannot be used twice in succession (incorrect: 4711).

The entire code must be entered within a set time (default setting: 8 seconds). If an incorrect digit is entered (also unassigned digits = I8), the previous entry is invalid and is cleared. A wait time of 10 seconds must elapse before a new entry is made.

The 10 second entry pause is restarted every time that entry is made during the wait time. If the code is not correct, an indicator light is activated after the entry time (8 sec.) has elapsed and is not switched off until the wait time has elapsed.

Once the correct sequence of digits has been entered, the lock is released for 5 seconds after a time delay (3 sec.).

In the example: required code: 12135156

→ easy input assignment:

1	>	I1
2	>	I2
3	>	I3
5	>	I5
6	>	I6
4,7,8,9,0	>	I8

Wiring

1. Inputs:

I1-I7 Assignment of entry keypad (1-7 different digits)

(e.g.: I1=> 1. I2 => 2. I3 => 3, ..., I7=> 7)

I8 Assignment of remaining digits of the entry keypad (e.g. digits 8,9,0)

2. Outputs:

Q1 Open code lock

Q2 Indicator light H1I (code entry aborted)

3. Parameters:

T1	Wait time on incorrect entry (10 sec.)
T2	Duration of code entry (8 sec.)
T3	On-delay of door opener (3 sec.)
T4	On-delay of door opener (5 sec.)