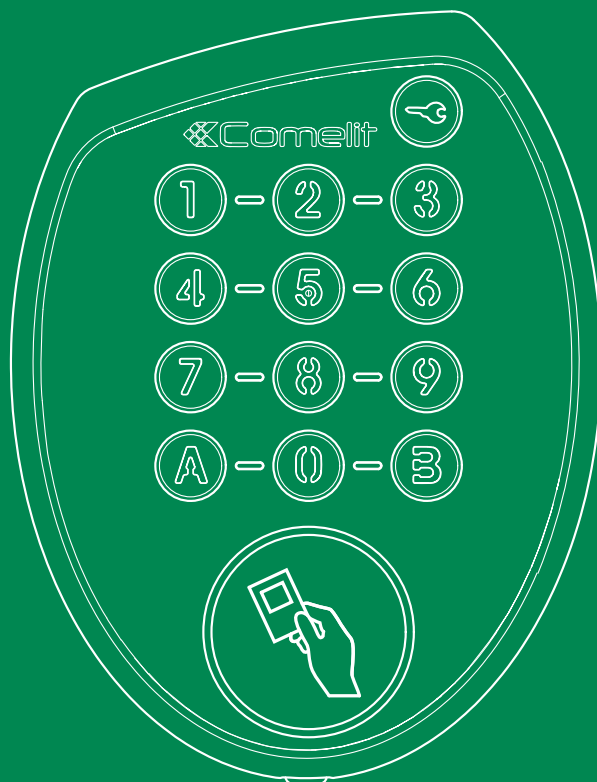


EN

FULL  
DETAILS



SKR  
Vandal Resistant keypad  
Full Details

 **Comelit**<sup>®</sup>  
Passion. Technology. Design.

# Warnings

- When installing the apparatus, please respect to the letter all instructions provided by the supplier and in full conformity with all current standards.
- All apparatus must strictly be used for the purpose it was designed to fulfil. The **Comelit Group S.p.A.** company will accept no responsibility whatsoever in case of misuse of the apparatus, in case of modifications carried out to the product for whatever reason and in case of use of accessories or material which prevent the installation from conforming with current standards.
- All the products comply with the requirements of the 2014/30/UE, 2014/35/UE directives, as certified by the **CE** mark they carry.
- It is essential to comply with current standards and to avoid placing wires and in immediate proximity to power supply cables (230/400 v)

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# General description

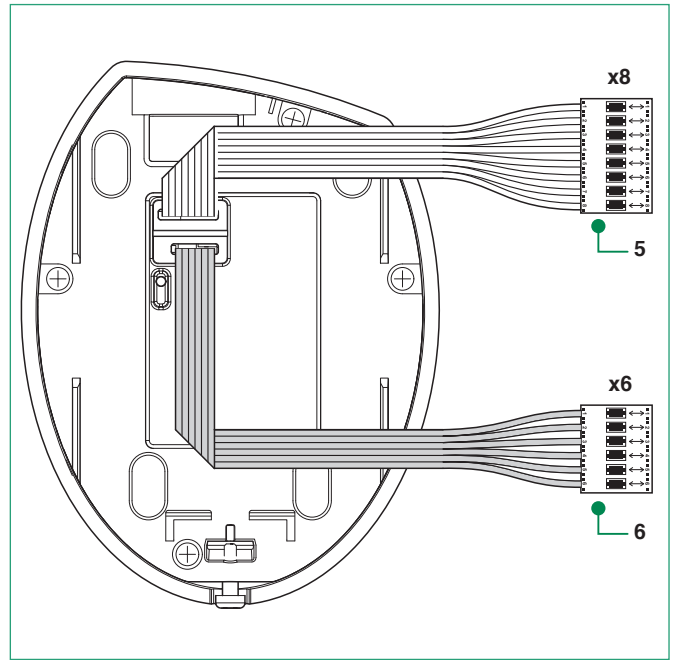
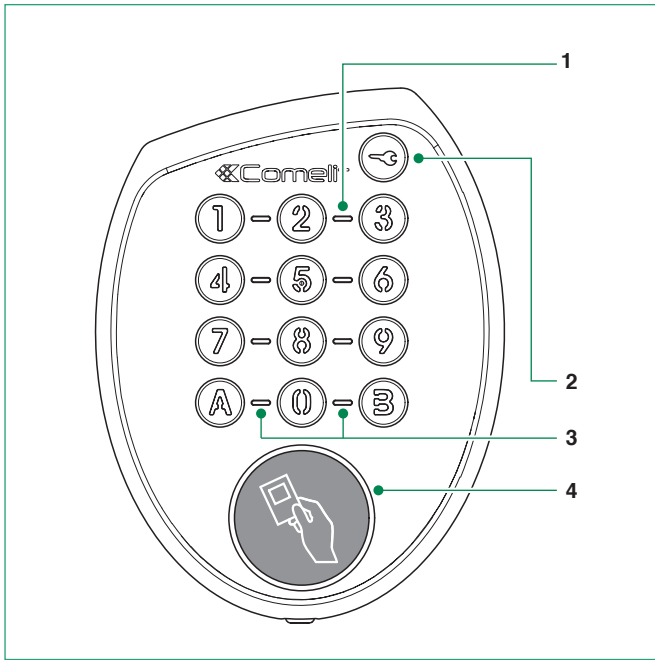
## Technical Characteristics

- Power Supply: 12-35 V DC or 12-24 V AC
- Absorption when running with power supply 13.98 Vdc (mA)  
In standby with backlighting on: 70  
With 2 relays active and buzzer on: 170
- 100 user code and 1 supervisor code capacity (programming mode)
- Code length: can be set from 3 to 6 digits
- 500 user badge and 1 supervisor badge capacity (programming mode)
- Badge programming by learning
- Badge compatible with (Ref COMELIT): SK9050B/A, SK9050G/A, SK9050GB/A, SK9050GG/A, SK9050GO/A, SK9050GR/A, SK9050GY/A, SK9050O/A, SK9050R/A, SK9050Y/A, SK9052
- Badge and/or code combination possible
- Backlighting of buttons (configurable option)
- Number of relays: 2
- Latching or two-state relay modes
- Relay timer setting from 1 to 99 seconds (0 = two-state)
- "RTE" input management: allows for opening of relay N°1
- Buzzer management
- "Clock" input management
- Alarm management (1)
- Wiegand management. Every time a button is pressed, its code will be emitted in 4 bits. (2)
- External relay management (2)
- Operating temperature: from -25°C to +55°C
- Protection rating: IP54
- Dimension (h x l x d): 120x90x20 mm

(1) Not available in Wiegand mode

(2) Wiegand and External Relay management cannot function simultaneously

## Description



1. Status light: Uses different colours to indicate the result of the action performed:

**BLUE:** Standby mode

**Flashing GREEN:** Input in progress

**GREEN:** Activation of relay number 1, following the input of an authorized code

**MAUVE:** Activation of relay number 2, following the input of an authorized code

**Flashing PURPLE:** Wait for programming of keypad code associated with badge

**WHITE:** Activation of relays 1 and 2 the same time, following the input of an authorized code

**RED:** Code, badge or transaction rejected

**Flashing RED:** Following the input of 3 consecutive rejected entry codes (wait 15 seconds before you can re-enter a code)

**Continuous RED:** WEIGAND mode activated. Each time a button is pressed, its code will be emitted in 4 bits

**YELLOW:** Programming mode

**Flashing BLUE:** Clock activated (key button operational)

2. **Key Button:** Triggers the opening of relay number 1 if the clock input is activated

3. Blue indicators

4. Badge reader

5. **MARRON / ROUGE:** Alimentation 12 - 35V DC OU 12 - 24V AC

**ORANGE:** Entrée RTE / Sortie Wiegand D0

**JAUNE :** Entrée Horloge / Sortie Wiegand D1

**VERT :** RS485 D-

**BLEU :** RS485 D+

**VIOLET :** GND

**GRIS :** Sortie Alarme / Entrée Wiegand commande LED

6. **BLANC :** Commun Relais 2

**NOIR :** NC Relais 2

**MARRON :** NO Relais 2

**ROUGE :** Commun Relais 1

**ORANGE :** NC Relais 1

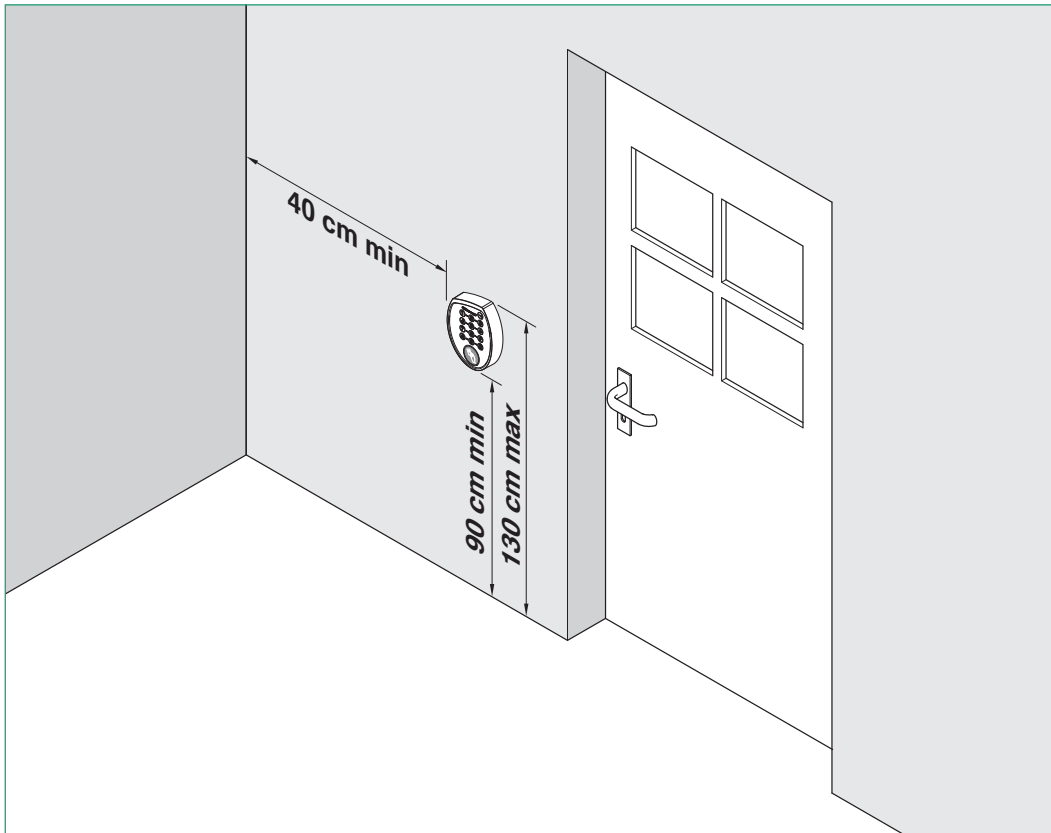
**JAUNE :** NO Relais 1

# Installation

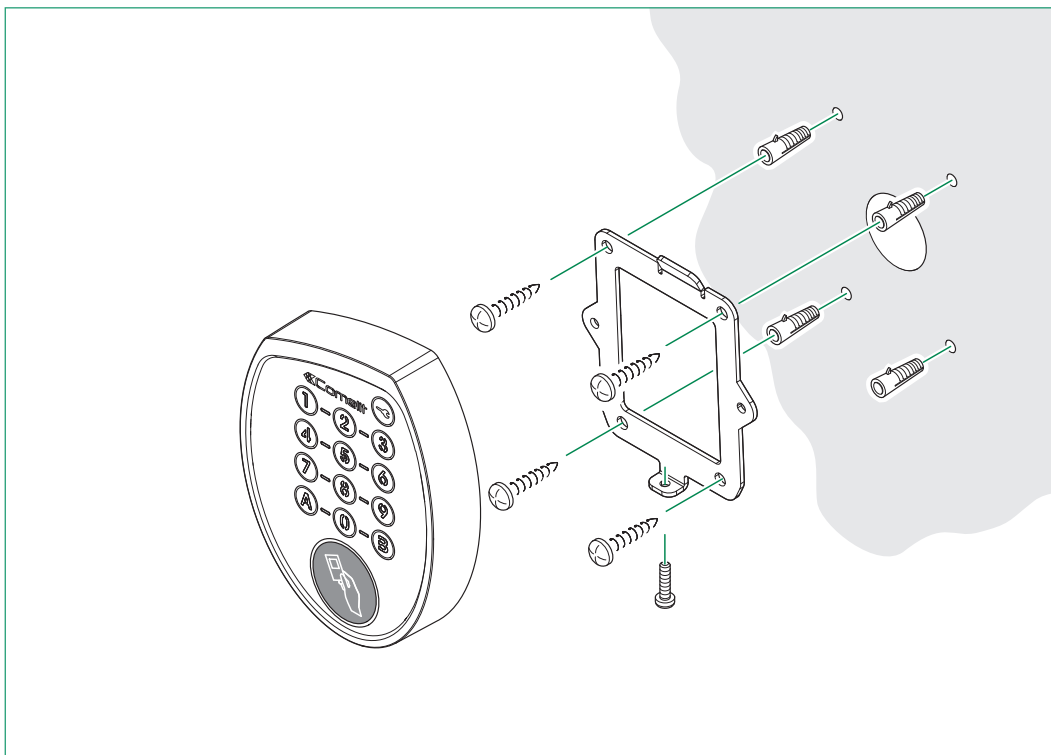
## Positioning

In order to comply with laws regarding accessibility, access control systems have to be placed at a height of between 0.9m et 1.30m.

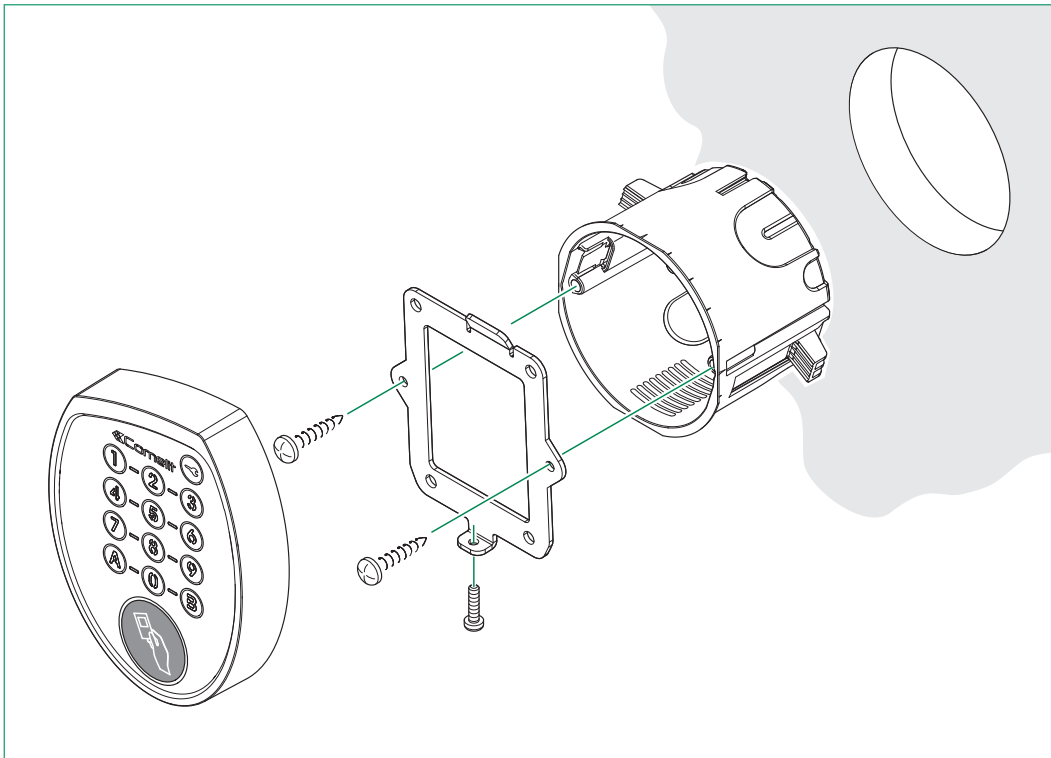
They must also be placed more than 0.4m from a wall angle or any other object which could restrict wheel chair access.



## On a wall



## On plasterboard



# Overall configuration

Your SKR keypad is delivered with the following default settings:

Master code	123456
Number of terms per code	5
Relays associated with opening	1
Validity counter	Permanent
Relay N°1 time delay	5 seconds
Buzzer Relay N°1	Disabled
Anti-Attack Mode	Disabled
Wiegand Mode	Disabled
Relay Mode	Internal
Backlighting	Permanent
Programming Type	Code

If this is not modified, this will be the configuration which will be used when the opening codes and/or badges are programmed. According to your requirements, you will always be able to modify the configuration before programming the codes and/or badges.

## Master Code: code [B4]

This code is the one which provides authorization to programme the keypad. By default this code is set as "123456". According to the definition of the number of terms for your keypad, its use will be partial or total. For example, if your keypad is set to 5 characters (factory setting), you will only need to use the first 5 characters of this code "12345" in order to access programming.

This code can be modified by the B4 register. In this case you must always programme a new code of 6 characters.

### Example - Setting the master code "062015" with a keypad set to 5 characters

1. Input "12345" (programming mode),
2. then "B4" (select register B4),
3. then "062015" (input new master code),
4. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
4		Flashing green	Input mode
0		Flashing green	Input mode
6		Flashing green	Input mode
2		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
5		Green (2secs) then yellow	Saving new master code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Note:**

If you lose this code, it remains possible to change it. Before switching on your keypad, create an electrical bridge between the "GND" and "ALARM OUTPUT / WIEGAND LED CONTROL INPUT" terminals.

When you switch the keypad on the indicator light will be yellow, thereby showing that programming mode is activated. You then simply have to programme a new code in the following way:

**Example - Setting the master code "062015" in case of loss**

1. Create an electrical bridge between the two terminals described above,
2. switch power supply to keypad on (programming MODE),
3. input "B4" (select B4 register),
4. then "062015" (input new master code),
5. & lastly "BB" (exit programming mode).



*When you have completed this operation, make sure the electrical bridge is removed. This will avoid an unwanted reactivation of programming mode if the power supply to the keypad is cut.*

## Master Badge: code [B6]

When the master badge has been programmed beforehand, it allows you direct access to programming mode by passing the badge in front of the keypad's scanner.

Unlike the master code, using the master badge allows you to activate the type of programming required, badge or badge + code.

The keypad is set by default to unique programming of codes. If you want to programme badges, you must necessarily activate the register [B7]. The advantage of the master badge is that it automatically carries out this operation; unlike the master code which requires manual activation of the register [B7] prior to programming badges.



*Only COMELIT badges are compatible with the keypad.  
(Badges authorize: SK9050B/A, SK9050G/A, SK9050GB/A, SK9050GG/A, SK9050GO/A, SK9050GR/A, SK9050GY/A, SK9050O/A, SK9050R/A, SK9050Y/A, SK9052.*

This badge can be modified via the B6 register.

**Example - Programming a master badge with a keypad set to 5 characters**

1. Input "12345" (programming mode),
2. then "B6" (select B6 register),
3. present the master badge,
4. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
6		Flashing green	Input mode
	PRESENT MASTER BADGE	Green (2secs) then yellow	Saving master badge to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode


**Note:**

**If this badge gets lost, you can still replace it by accessing programming mode via the master code. If this is also lost, you can reprogramme it via the procedure described above.**



## General settings: code [B0]

This section contains the main working settings of your keypad. The list of settings follows.

Setting	Values authorized	Description
<b>Number of characters</b>	3 - 4 - [5] - 6	This setting allows you to define how long the opening codes are (default setting = 5). The choice of the number of characters applies to all the codes.  If this value is modified then all the opening codes/badges previously set will be deleted.
<b>Backlighting</b>	[0] - 1	This allows you to choose between permanent lighting of the buttons (value 0) or temporary lighting (value 1). In temporary mode and in the absence of keypad activity, the lighting will be switched off after 20 seconds.
<b>Wiegand</b>	[0] - 1	Activation or non-activation of Wiegand mode <b>0 = Disabled / 1 = Activated</b> Every time a button is pressed, its code will be emitted in 4 bits. For the badge, this will be in 32 bits.
<b>Internal/ External relays</b>	[0] - 1	When you wish to use relays external to the SKR, set the value to 1. It is not possible to use the keypad's internal relays and external ones simultaneously. <b>0 = Internal Relays 1 and 2 / 1 = External Relays 1 and 2</b>
<b>Anti-Attack Management</b>	[0] - 1	This function allows an alarm to be triggered when a specific character is typed in after an authorized opening code. <b>0 = Disabled / 1 = Activated</b>
<b>Anti-Attack Button</b>	[0] - 1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 - A - B	Defines the anti-attack button to be used when this function is activated.

[ ] : Default settings value

Once you have defined all of the settings described above, you can then configure your keypad as set out in the following example (5-character setting applying to keypad):

### Example - tastiera preconfigurata a 5 caratteri

1. Input "12345" (programming mode),
2. then "B0" (select register B0),
3. then "300000" (3 characters/permanent backlighting/Wiegand disabled/internal relays/no anti-attack management/anti-attack button "0"),
4. & lastly "BB" (exit programming mode).

#### Note:

Although in this example Anti-Attack management is not activated, procedure nevertheless means that a value must be applied regarding the Anti-Attack button.

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
0		Flashing green	Input mode
3		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Green (2secs) then yellow	Saving setting to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

### Example using the master badge

1. Present the master badge (programming mode),
2. input "B0" (select register B0),
3. then "300000" (3 characters/permanent backlighting/Wiegand disabled/internal relays/no anti-attack management/anti-attack button "0"),
4. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
0		Flashing green	Input mode
3		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Green (2secs) then yellow	Saving settings to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

## Factory Settings

It is possible to return to the default configuration if this has been modified. To do this, first input the master code (or alternatively present the master badge in front of the reader), the initialisation code "BA0BAB" and finally press the "B" button twice to exit programming.

### Example - Initialisation factory settings with a keypad set to 6 characters

1. Input "12345" (programming mode),  
or present master badge in front of reader
2. then "BA0BAB" (input of factory setting initialisation code),
3. & lastly "BB" (exit programming mode).




*Reinitialisation of factory settings does not delete the opening codes which have already been programmed. However, if the previous configuration contained a certain number of character settings other than 5, then all the opening codes will be deleted. This will result the badges combined with these codes being disabled.*

# Programming/code deletion/opening badges

## Relay selection and opening code validity: code [B5]

This register allows you to define the relays combined with an opening code/badge to be programmed. By default, it is Relay N°1 which is defined, combined with the value "0" on the counter (permanent validity).

**If your choice regarding the relay or the validity counter differ, it is absolutely essential to define this register during the programming phase for opening codes/badges.**

Setting	Values authorized	Description
Relay	[1] - 2 - 3	This setting allows you to define the relay which will be combined with the programmed opening code/badge (by default relay N°1). <b>1 = Relay N°1 / 2 = Relay N°2 / 3 = Relays N°1 and N°2</b>
Counter	[0] - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9	This defines the validity of the programmed opening code. If you choose "0", your code will always be authorized (permanent validity). If you want to limit the execution number of the opening code, you simply need to choose the required number between "1" and "9". For example, if you choose "5", it will be possible to use an opening code 5 times. The code will subsequently be disabled.   This function can only be used for opening codes. It will not be possible to set this for a badge or a badge + code combination. In this case, you will need to set the value "0".

[ ] : Default settings value

**Example - Setting relays N°1 and N°2 for 6 openings, with a keypad set to 5 characters and an opening code of "55623"**

1. Input "12345" (programming mode),
2. then "B5" (select register B5),
3. then "36" (relays N°1 and N°2 management – valid for 6 openings),
4. then "55623" (input opening code),
5. then "B" (saving code to memory),
6. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
3		Flashing green	Input mode
6		Green (2secs) then yellow	Saving settings to memory
5		Flashing green	Input mode
5		Flashing green	Input mode
6		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example - Setting relay N°2 for a badge programmed to memory slot "011". To do this, the master badge will be used**

1. Present the master badge (programming mode),
2. input "B5" (select register B5),
3. then "20" (relay N°2 management – permanent validity),
4. then "011" (select memory slot11),
5. Present the badge to be programmed (badge registration),
6. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
2		Flashing green	Input mode
0		Green (2secs) then yellow	Saving settings to memory
0		Flashing green	Input mode
1		Flashing green	Input mode
1		Flashing green	Input mode
	PRESENT BADGE TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°11
B		Flashing green	Input mode
B		Blue	Exit programming mode

## Opening code

The SKR has 100 memory slots for programming opening codes. According to the configuration of the keypad, you can programme codes containing 3 to 6 characters. The choice of the number of characters is applicable to all the codes.

**Note:**

**The keypad comes with the default setting of 5-character programmable codes, combined with relay N°1. This configuration can be modified before programming your opening codes.**

If during the operation the LED turns to red, this means that the operation has been rejected. In this case, you will need to start the operation over again.

In order to save a code, input the master code, your code (same length as the master code), then press the "B" button to confirm and lastly press the "B" button twice to exit programming mode.

If the master badge is used to access keyboard programming, you need to disable "badge or badge + code" management in the register [B7], which is activated by reading of the master badge.

If you wish to only programme opening codes you need to set this register to the value of "0" (see example N°4).

**Example N° 1 - Registering a 5-character code, "A15B1" for activation in permanent validity with relay N°1.**

1. Input "12345" (programming mode),
2. then "A15B1" (input opening code),
3. then "B" (saving code to memory),
4. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
A		Flashing green	Input mode
1		Flashing green	Input mode
5		Flashing green	Input mode
B		Flashing green	Input mode
1		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example N° 2 - Registration of 5-character code, "52462" for activation in permanent validity with relay N°2**

1. Input "12345" (programming mode),
2. then "B5" (select register B5),
3. then "20" (relay N°2 management – permanent validity),
4. then "52462" (input opening code),
5. then "B" (saving code to memory),
6. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
2		Flashing green	Input mode
0		Green (2secs) then yellow	Activation Relay N°2 in permanent mode for the codes.
5		Flashing green	Input mode
2		Flashing green	Input mode
4		Flashing green	Input mode
6		Flashing green	Input mode
2		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example N° 3 - Registering 3-character codes "789" and "A0B", for temporary validity of 5 uses with relays N°1 and 2 (See configuration section to modify the number of characters)**

1. Input "123" (programming mode),
2. then "B5" (select register B5),
3. then "35" (relays N° 1 and N°2 management – temporary validity for 5 uses),
4. then "789" (input first opening code),
5. then "B" (saving code to memory),
6. then "A0B" (input second opening code),
7. then "B" (saving second code to memory),
8. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
3		Flashing green	Input mode
5		Green (2secs) then yellow	Activation Relays N°1 and N°2 in temporary mode for 5 uses.
7		Flashing green	Input mode
8		Flashing green	Input mode
9		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
A		Flashing green	Input mode
0		Flashing green	Input mode
B		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example N°4 - Registration of 5-character codes "56789" and "98765", with use of master badge for permanent validity**

1. Present the master badge (programming mode),
2. input "B7" (select register B7),
3. then "0" (code management only),
4. then "56789" (input first opening code),
5. then "B" (saving code to memory),
6. then "98765" (input second opening code),
7. then "B" (saving code to memory),
8. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
7		Flashing green	Input mode
0		Green (2secs) then yellow	Activation solely of opening code mode
5		Flashing green	Input mode
6		Flashing green	Input mode
7		Flashing green	Input mode
8		Flashing green	Input mode
9		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
9		Flashing green	Input mode
8		Flashing green	Input mode
7		Flashing green	Input mode
6		Flashing green	Input mode
5		Flashing green	Input mode
B		Green (2secs) then yellow	Saving code to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

*It is not possible to programme opening codes which start with the "B" button. If you try to carry out this operation, you may damage the configuration of the keypad.*



*The master code (set by default to 123456) cannot be used as an opening code. Therefore according to the number of characters set, the codes 123, 1234, 12345 and 123456 will be refused.*

*Use of the master badge to programme opening codes requires that settings for register B7 must be defined.*

## Opening badge

The SKR has 500 memory slots, N°001 to N°500, for programming opening badges. For each badge to be programmed, you need to define a memory slot.



Only COMELIT badges are compatible with the keypad.  
(Badges authorize: SK9050B/A, SK9050G/A, SK9050GB/A, SK9050GG/A, SK9050GO/A, SK9050GR/A, SK9050GY/A, SK9050O/A, SK9050R/A, SK9050Y/A, SK9052.

### Notes:

**When you programme badges, relay N°1 will be associated with them by default. This configuration can be modified before you programme your opening badges.**

If the LED turns red during this operation, it means that the operation has been rejected. In this case, you will need to start the operation over again.

In order to register a badge present the master badge, input the memory slot number (3 figures), present the badge to be programmed and finally press the "B" button twice to exit programming mode.

If you use the master code to access your keypad's programming mode, you need to activate "badge or badge + code" management in the register [B7].

If you wish to programme opening badges, you need to set this value to "1" (see example N°4).

### Example N°1 - Registration of a badge to memory slot "001" for activation of relay N°1

1. Present the master badge (programming mode),
2. input "001" (select memory slot 1),
3. Present the badge to be programmed (badge registration),
4. & lastly "BB" (exit programming mode).

#### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
0		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
	PRESENT BADGE TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°1
B		Flashing green	Input mode
B		Blue	Exit programming mode

### Example N° 2 - Registration of a badge to memory slot "125" for activation of relay N°2

1. Present the master badge (programming mode),
2. input "B5" (select register B5),
3. then "20" (relay N°2 management),
4. then "125" (select memory slot 125),
5. present the badge to be programmed (badge registration),
6. & lastly "BB" (exit programming mode).

#### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
2		Flashing green	Input mode
0		Green (2secs) then yellow	Activation Relay N°2
1		Flashing green	Input mode
2		Flashing green	Input mode
5		Flashing green	Input mode
	PRESENT BADGE TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°125
B		Flashing green	Input mode
B		Blue	Exit programming mode



**Example N°3 - Registration of a badge to memory slot "007" for relays N°1 & 2 and a badge to memory slot "114" for use with relay N°1**

1. Present the master badge (programming mode),
2. input "B5" (select register B5),
3. then "30" (relays N°1 and 2),
4. then "007" (select memory slot N°7),
5. present badge N°1 to be programmed (badge registration),
6. input "B5" (select register B5),
7. then "10" (relay N°1 management),
8. then "114" (select memory slot N°114),
9. present badge N°2 to be programmed (badge registration),
10. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
5		Flashing green	Input mode
3		Flashing green	Input mode
0		Green (2secs) then yellow	Activation Relays N°1 and N°2
0		Flashing green	Input mode
0		Flashing green	Input mode
7		Flashing green	Input mode
	PRESENT BADGE N°1 TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°7
B		Flashing green	Input mode
5		Flashing green	Input mode
1		Flashing green	Input mode
0		Green (2secs) then yellow	Activation Relay N°1
1		Flashing green	Input mode
1		Flashing green	Input mode
4		Flashing green	Input mode
	PRESENTER BADGE N°2 TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°114
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example N°4 - Registration of two badges to memory slots "001" and "002", with use of master code "12345", for use with relay N°1**

1. Input "12345" (programming mode),
2. input "B7" (select register B7),
3. then "1" (badge or badge + code management),
4. then "001" (select memory slot N°1),
5. present badge N°1 to be programmed (badge registration),
6. input "002" (select memory slot N°2),
7. present badge N°2 to be programmed (badge registration),
8. & lastly "BB" (exit programming mode).

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
7		Flashing green	Input mode
1		Green (2secs) then yellow	Activation of badge or badge + code management
0		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
	PRESENT BADGE N°1 TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°1
0		Flashing green	Input mode
0		Flashing green	Input mode
2		Flashing green	Input mode
	PRESENT BADGE N°2 TO BE PROGRAMMED	Green (2secs) then yellow	Saving badge to memory slot N°2
B		Flashing green	Input mode
B		Blue	Exit programming mode



*Use of the master code to programme opening badges means that settings for register B7 must be defined.*

## Opening badge and code combination

As described in sections "Opening badge" and "Opening badge and code combination", it is possible to independently programme opening via use of a code or a badge.

To reinforce the level of security the SKR keypad allows you to programme opening by use of a badge + code combination.



*Only COMELIT badges are compatible with the keypad.*

*(Badges authorize: SK9050B/A, SK9050G/A, SK9050GB/A, SK9050GG/A, SK9050GO/A, SK9050GR/A, SK9050GY/A, SK9050O/A, SK9050R/A, SK9050Y/A, SK9052.*

If the LED turns red during the operation, it means that the operation has been rejected. In this case, you will need to start the operation over again.

In order to register a badge+ code combination, you will need to:

1. Present the master badge (or input the master code & activate the register B7),
2. Input the memory slot number "000" (code combination insertion mode),
3. Input the opening code (note that the default length is 5 characters)
4. Input the number of the memory slot chosen for the badge (001 to 500)
5. Present the badge to be programmed
6. Input "B" to combine the code and the badge
7. Input "BB" to exit programming mode

### Example N°1 - Registration of a badge/code combination with the code "55555" and a badge set to memory slot "001" for activation with relay N°1

1. Present the master badge (programming mode),
2. input "000" (code combination insertion mode),
3. then "55555" (input opening code),
4. input "001" (select memory slot N°1),
5. present the badge to be programmed (badge registration),
6. input "B" (combination of code 55555 with the relevant badge),
7. & lastly "BB" (exit programming mode).



*When you have presented the badge to be programmed and the LED flashes mauve, you have 5 seconds to confirm the code/badge combination by pressing the "B" button. After this time limit the badge will be registered as a simple opening badge.*

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
5		Flashing green	Input mode
5		Flashing green	Input mode
5		Flashing green	Input mode
5		Flashing green	Input mode
5		Green (2secs) then yellow	Saving code to memory
0		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
	PRESENT BADGE TO BE PROGRAMMED	Flashing mauve	Saving badge and waiting for badge combination confirmation (maximum 5 secs)
B		Green (2secs) then yellow	Saving combination to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

**Example N°2 - Registration of 3 badges (memory slots 1 to 3) combined with the code "11111", for activation with relay N°1**

1. Present the master badge (programming mode),
2. input "000" (code combination insertion mode),
3. then "11111" (input opening code),
4. input "001" (select memory slot N°1),
5. present the badge to be programmed (badge registration),
6. input "B" (combination of code 11111 with the relevant badge),
7. input "002" (select memory slot N°2),
8. present the badge to be programmed (badge registration),
9. input "B" (combination of code 11111 with the relevant badge),
10. input "003" (select memory slot N°3),
11. present the badge to be programmed (badge registration),
12. input "B" (combination of code 11111 with the relevant badge),
13. & lastly "BB" (exit programming mode).



*When you have presented the badge to be programmed and the LED flashes mauve, you have 5 seconds to confirm the code/badge combination by pressing the "B" button. After this time limit the badge will be registered as a simple opening badge.*

**Breakdown of button/reader stages in the example**

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
0		Flashing green	Input mode
0		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
1		Flashing green	Input mode
1		Flashing green	Input mode
1		Flashing green	Input mode
1		Green (2secs) then yellow	Saving code to memory
0		Flashing green	Input mode
0		Flashing green	Input mode
1		Flashing green	Input mode
	PRESENT BADGE N°1 TO BE PROGRAMMED	Flashing mauve	Saving badge and waiting for badge combination confirmation (maximum 5 secs)
B		Green (2secs) then yellow	Saving combination to memory
0		Flashing green	Input mode
0		Flashing green	Input mode
2		Flashing green	Input mode
	PRESENT BADGE N°2 TO BE PROGRAMMED	Flashing mauve	Saving badge and waiting for badge combination confirmation (maximum 5 secs)
B		Green (2secs) then yellow	Saving combination to memory
0		Flashing green	Input mode
0		Flashing green	Input mode
3		Flashing green	Input mode
	PRESENT BADGE N°3 TO BE PROGRAMMED	Flashing mauve	Saving badge and waiting for badge combination confirmation (maximum 5 secs)
B		Green (2secs) then yellow	Saving combination to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

## Deletion of one or several codes

All the opening codes programmed in the SKR can be deleted individually, as a group or all at once.

### Notes:

**When you delete a code which is combined with one or more badges, you will also delete the badge or badges combined with the code in question.**

If during the operation the LED turns red it means that the operation has been rejected. In this case, you will need to start the operation over again.

### Example N° 1 - Deletion of 5-character code "A15B1"

1. Input "12345" (programming mode),
2. then "A15B1" (input opening code to be deleted),
3. then "A" (deletion of code from memory),
4. & lastly "BB" (exit programming mode).

### Example N° 2 - Multiple deletion of 3-character codes "789" and "A0B"

1. Input "123" (programming mode),
2. then "789" (input first opening code to be deleted),
3. then "A" (deletion of code from memory),
4. then "A0B" (input second opening code to be deleted),
5. then "A" (deletion of second code from memory),
6. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Led status	Description
1	Flashing green	Input mode
2	Flashing green	Input mode
3	Yellow	Programming mode activated
7	Flashing green	Input mode
8	Flashing green	Input mode
9	Flashing green	Input mode
A	Green (2secs) then yellow	Deletion of code from memory
A	Flashing green	Input mode
0	Flashing green	Input mode
B	Flashing green	Input mode
A	Green (2secs) then yellow	Deletion of code from memory
B	Flashing green	Input mode
B	Blue	Exit programming mode

### Example N° 3 - Deletion of all opening codes. The following case refers to a keypad set to 5-character codes

1. Input "12345" (programming mode),
2. then "BOA" (input total deletion code),
3. & lastly "BB" (exit programming mode)

## Deletion of one or several badges

All the opening codes programmed in the SKR can be deleted individually, as a group or all at once.

### Notes:

**When you delete a badge which is the only one to be combined with a certain code, you will also delete the code. If several badges are combined with a certain code only deletion of all the relevant badges will result in deletion of the code.**

If during the operation the LED turns red it means that the operation has been rejected. In this case, you will need to start the operation over again.

### Example N° 1 - Deletion of a badge saved to memory slot N°1

1. Present the master badge (programming mode),  
or input the master code & activate the register B7,
2. input "001" (select memory register N°1),
3. then "A" (badge deletion),
4. & lastly "BB" (exit programming mode).

### Example N° 2 - Multiple deletion of two badges saved to register N°20 and N°340

1. Present the master badge (programming mode),  
or input the master code & activate the register B7
2. input "020" (select memory register N°20),
3. then "A" (badge deletion),
4. then "340" (select memory register N°340),
5. then "A" (badge deletion),
6. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
0		Flashing green	Input mode
2		Flashing green	Input mode
0		Flashing green	Input mode
A		Green (2secs) then yellow	Saving combination to memory
3		Flashing green	Input mode
4		Flashing green	Input mode
0		Flashing green	Input mode
A		Green (2secs) then yellow	Saving combination to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

### Example N° 3 - Deletion of all opening badges

1. Present the master badge (programming mode),  
or input the master code & activate the register B7
2. input "B0B" (input total deletion code),
3. & lastly "BB" (exit programming mode).

## Timer – Operating mode – Buzzer relay: code [B1] & [B2]

To define the timer settings for relays N°1 or N°2, respectively use registers B1 or B2. The two relays are have a default setting of 05 seconds. However, this value can be set to between 1 and 99 seconds.

If you wish to use the relay in a two-state role, i.e. as a switch, then you need to choose the timer value of "00".

The "Buzzer" setting, if activated (value 1), will trigger a sound sequence during the entirety of the relay activation phase.

Setting	Values authorized	Description
Tens	[0] - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9	Value for relay timer
Units	0 - 1 - 2 - 3 - 4 - [5] - 6 - 7 - 8 - 9	Value for relay timer
Buzzer	[0] - 1	Activation or non-activation of buzzer when relay is triggered. <b>0= Disabled / 1 = Activated</b>

[ ] : Default settings value

### Example - Defining setting for relay N°1 timer to 3 seconds and buzzer management with keypad set to 5 characters

1. Input "12345" (programming mode),
2. then "B1" (select register B1 corresponding to relay N°1),
3. then "031" (Timer of 03 seconds with activation of buzzer),
4. & lastly "BB" (exit programming mode).

#### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
1		Flashing green	Input mode
2		Flashing green	Input mode
3		Flashing green	Input mode
4		Flashing green	Input mode
5		Yellow	Programming mode activated
B		Flashing green	Input mode
1		Flashing green	Input mode
0		Flashing green	Input mode
3		Flashing green	Input mode
1		Green (2secs) then yellow	Saving settings to memory
B		Flashing green	Input mode
B		Blue	Exit programming mode

For relay N°2 use the same procedure with the register B2.

## Programming type: code [B7]

The keypad is delivered with default settings to make programming of opening codes as quick and as simple as possible (register B7=0). In this case, use of the master code (to open programming mode) allows you to input the required opening codes directly (see section "Opening code").

When you want to programme badges (see section "Opening badge") or badges & codes (see section "Opening badge and code combination"), it is essential for this register to be activated (register B7=1). The two ways to activate this register are as follows:

- ▶ Present the master badge. This will activate programming mode and switches the register B7 to value 1.
- ▶ Input the master code (set by default to 12345) and set the register B7 to value 1.



*When you activate programming mode via the master badge and you wish to only programme opening codes, it is essential to disable this setting (register B7=0). According to the type of programming you wish to carry out (code only or badge & code), the value for this register must be in accordance with the method used to access the SKR's programming mode (master code or master badge).*

Setting	Values authorized	Description
Programming type	[0] - 1	This setting allows you to define whether you want to only set opening codes or badges & opening codes. <b>0 = Code / 1 = badge or badge &amp; code</b>

[ ] : Default settings value

### Example - Defining settings for "code" mode only via the master badge

1. Present the master badge (programming mode),
2. then "B7" (select register B7),
3. then "0" (code programming mode only),
4. carry out programming operations
5. & lastly "BB" (exit programming mode).

### Breakdown of button/reader stages in the example

Button	Reader	Led status	Description
	PRESENT MASTER BADGE	Yellow	Programming mode activated
B		Flashing green	Input mode
7		Flashing green	Input mode
0		Green (2secs) then yellow	Programming mode code only
CARRY OUT PROGRAMMING OPERATIONS			
B		Flashing green	Input mode
B		Blue	Exit programming mode



# Use

## Code

In order to trigger the system connected to your keypad, you simply need to input the code which was previously programmed. According to the setting defined, this code may contain from 3 to 6 characters.

When you carry this operation out, each time a button is pressed a sound will be emitted and the status light will turn to flashing green (Input mode). When the last character is input:

- » If the code is correct, the SKR will trigger the relevant relay, and the status of the indicator lights will change to a constant colour (green=relay N°1 - mauve=relay N°2 – white=relays 1 and 2). According to the settings defined, the relay will have a timer setting or will operate in bistable mode. Similarly if the buzzer has been set to sound, the emission time will be the same as that set for the relay.
- » If the code is incorrect, the indicator lights will turn red.



*If an incorrect code is entered 3 times in a row, the keypad will be inoperable for a period of 15 seconds during which it will be impossible to attempt to input a new code. The keypad's indicator lights will indicate that no new code can be input by flashing red.*

## Badge


In order to trigger opening by a badge which has already been programmed, it simply needs to be presented in front of the reader.

When this operation is carried out the SKR will seek the badge in its internal memory (flashing green phase). Then, if the badge is authorized, The keypad will trigger the relevant relay in the same way as for an authorized code. If the badge is refused, the LED will turn red.

## Badge + Code

In order to trigger opening via a badge & code combination, you first need to present the badge in front of the reader. If the badge is authorized, the SKR will trigger a countdown of 5 seconds (flashing blue indicator lights) for the combined code to be input. This code simply needs to be input to trigger opening. If the badge or code is refused, the LED turns red.

## Clock

 For installations equipped with a management system via a clock (see diagrams section), the key button will be used to trigger activation of relay N°1.

When the SKR's clock input is activated, the clock function is activated and signalled by the indicator lights flashing blue. In this case, there is no need to input a code for management of relay N°1. Pressing the key button is all that is required in order to trigger activation of the relay.

However, it is still possible in this mode to also trigger relay N°2 by inputting the relevant opening codes.

## Alarm

When the installation requires it, it is possible for an alarm signal to be emitted via the relevant output (see diagrams section). In order to use this function, you need to have activated it and defined its settings.

In order to trigger the alarm, input the relevant button after an authorized code. In this case, the alarm will be activated for a period of one minute.

## Register of programmed badges (example)

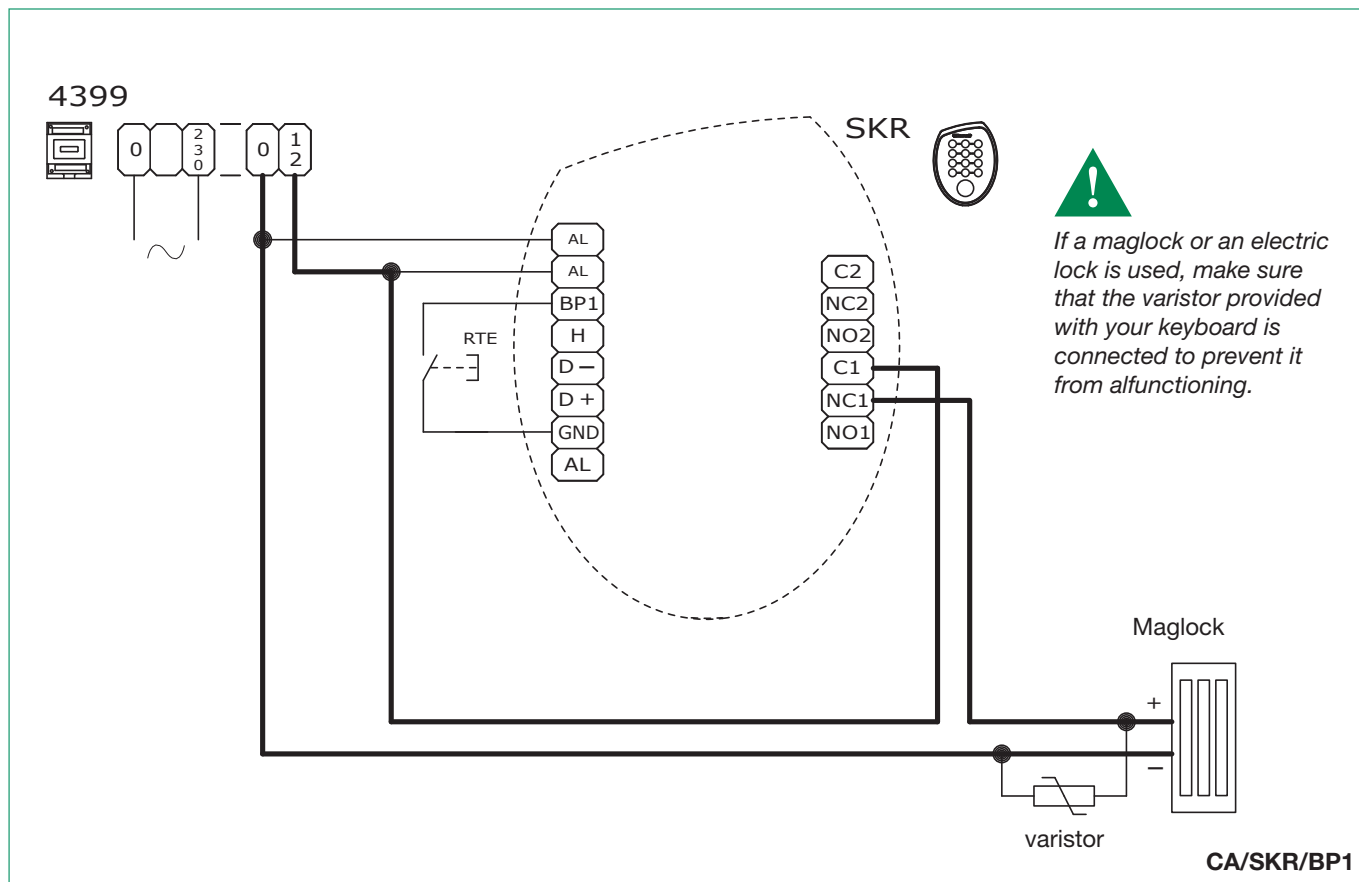
The following table is an example which will allow you to keep a record of the first 100 memory registers (500 in total) for your keypad.

RegisterN°	Badge series N°	Code if combined	Relay
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
011			
012			
013			
014			
015			
016			
017			
018			
019			
020			
021			
022			
023			
024			
025			
026			
027			
028			
029			
030			
031			
032			
033			
034			
035			
036			
037			
038			
039			
040			
041			
042			
043			
044			
045			
046			
047			
048			
049			
050			

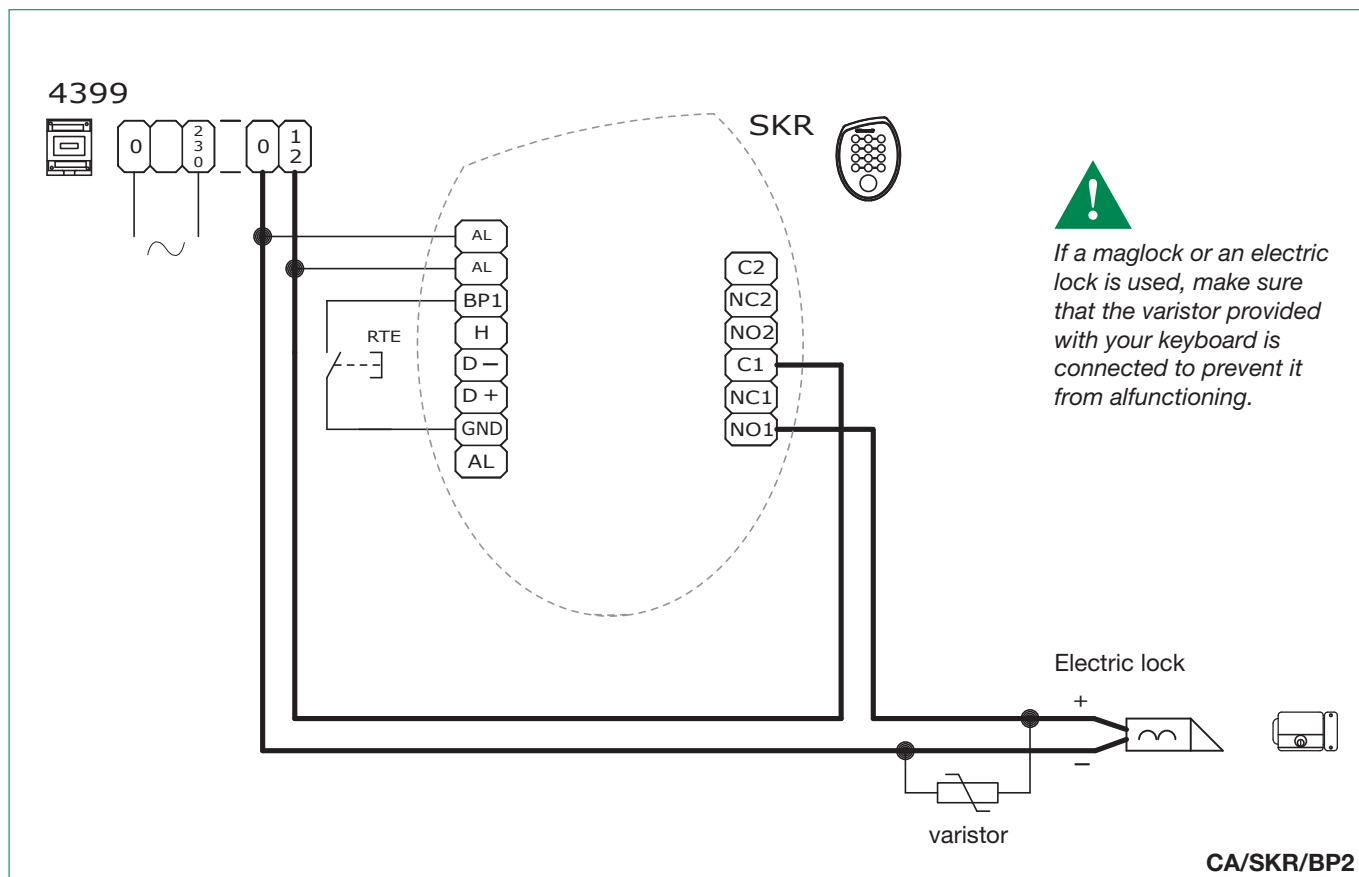
RegisterN°	Badge series N°	Code if combined	Relay
051			
052			
053			
054			
055			
056			
057			
058			
059			
060			
061			
062			
063			
064			
065			
066			
067			
068			
069			
070			
071			
072			
073			
074			
075			
076			
077			
078			
079			
080			
081			
082			
083			
084			
085			
086			
087			
088			
089			
090			
091			
092			
093			
094			
095			
096			
097			
098			
099			
100			

# Wiring

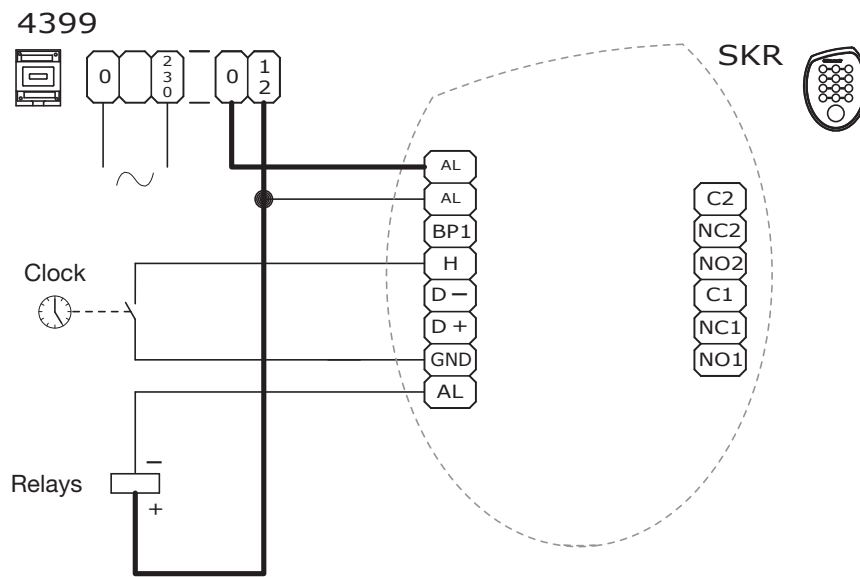
## With maglock



## With electric lock



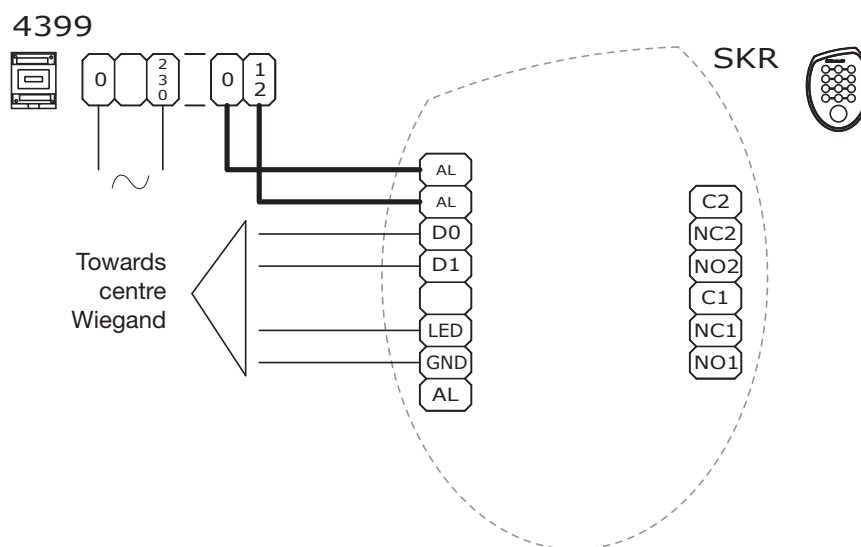
## With clock and alarm



When the alarm is triggered, the output is active for 1 minute.

CA/SKR/OR

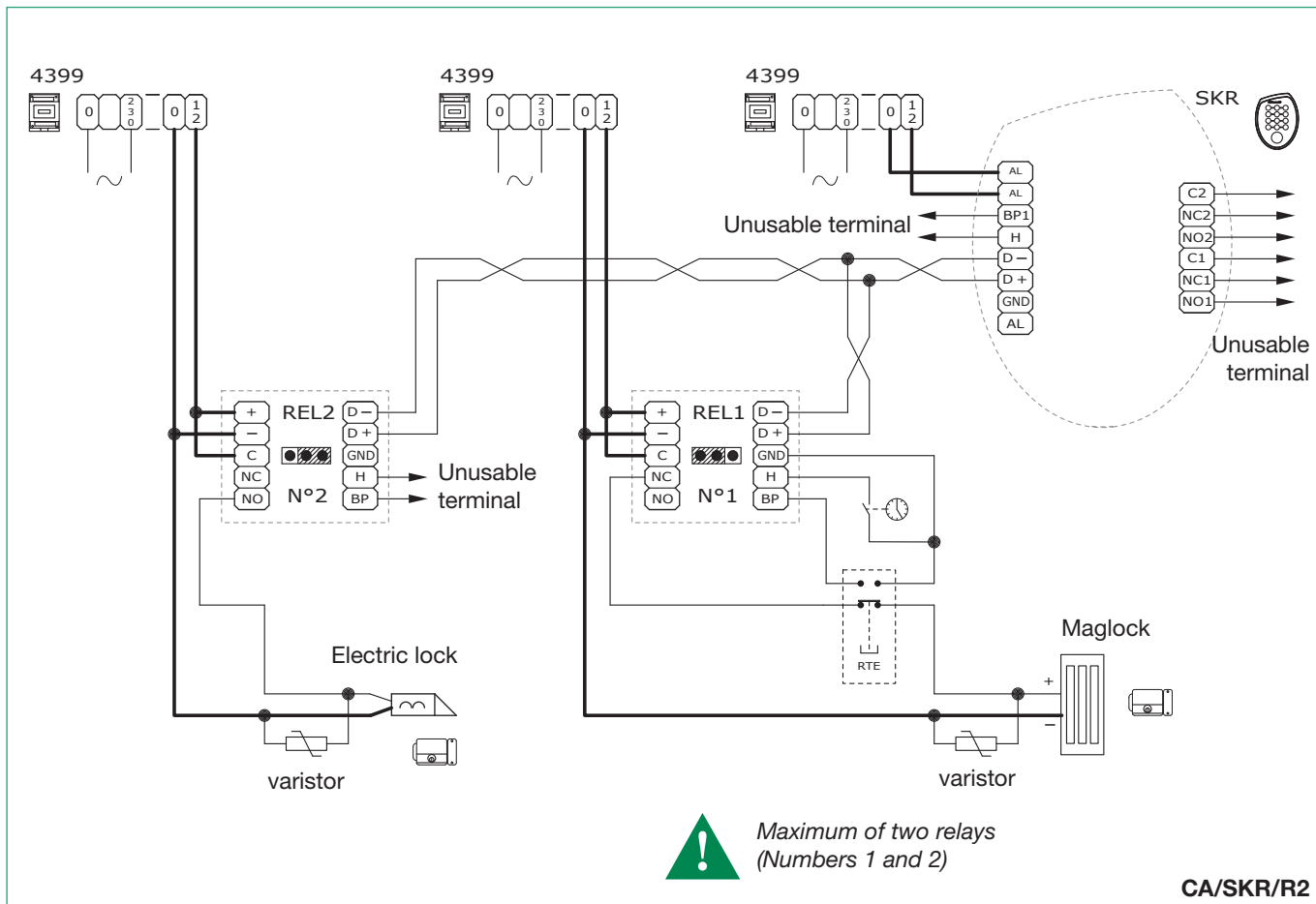
## Wiegand Connection



Each time a button is pressed, its code will be emitted in 4 bits.

CA/SKR/CW

With external relays





[www.comelitgroup.com](http://www.comelitgroup.com)

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