

USER MANUAL

CM1000 by CONLAN

CM1000 is a flexible keypad and Mifare reader in one unit for many different applications.

Mykey - Art. No: 480010 (black), 480011 (white)
Classic - Art. No.: 482010 (black), 482011 (white)

www.conlan.eu

USER MANUAL:

CM1000

CONLAN

A **SALTO** GROUP COMPANY



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1. INSTALLATION

To learn how to install the keypad, please refer to the installation guide.

2. ACCESS

The combined keypad and Mifare reader is a stand alone device that allows access to open a lock by entering a custom user PIN code or a Mifare key fob.

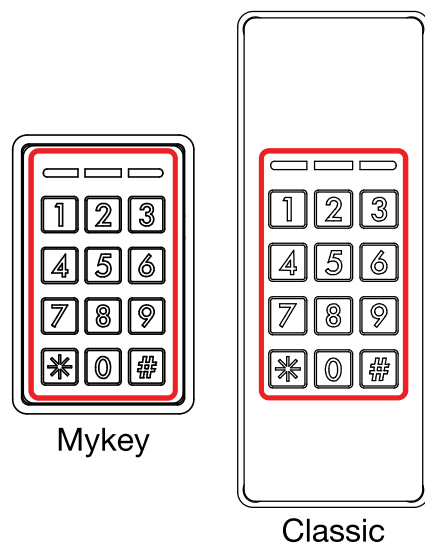
2.1. Using the device

The CM1000 can store up to 190 fixed PIN codes that range 1 to 8 digits long or key fobs. Each user is allocated their own PIN code or key fob to operate the lock, which also enables sharing one lock between different users.

By default position 1 to 100 activates output 2 (yellow wire), position 101 to 150 activates output 1 (white wire) and position 151 to 190 activates both outputs.

The default fixed PIN code '1234' is pre-configured at position 1 during fabrication and can be used to test the device.

The Mifare antenna is highlighted by a red box on the drawing to the right. This is the spot where the Mifare key fobs can be registered. The reading range is max. 30 mm.



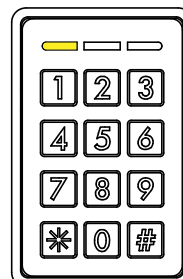
To manage the fixed user programming, please refer to chapter 3 'FIXED USER MANAGEMENT' on page 5.

2.1. Default LED States

Idle state

When the device is idle, the yellow light (factory default) is always ON, and the keypad is waiting for user interaction.

The back-lights are OFF by default but turn on when a key is touched or a key fob is presented.

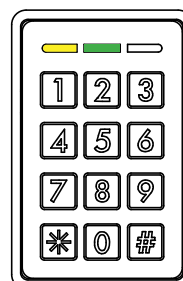


Opening and closing

Example:

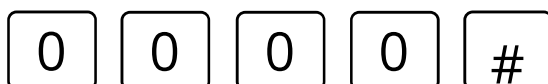


When a valid user PIN code is inserted or a valid key fob presented, a confirmation beep will sound, and the green yellow and LED will light up as long as the output is activated (default 5 seconds).

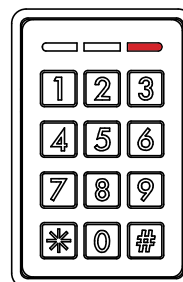


Wrong code/key fob

Example:



When a wrong code is entered or wrong key fob presented, a rejection beep will sound, and the red LED will light up on 1 second.



3. FIXED USER MANAGEMENT

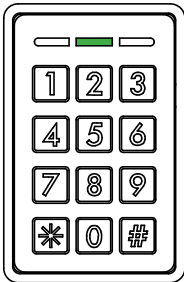
Each user code and key fob is stored in a specific address of internal memory (from 1 to 190). We recommend keeping a record of the position number and user names for future management.

To add or delete user codes/key fobs, you need to access the user configuration menu by entering the user configuration code (factory default is 4711) followed by ‘#’.

User configuration menu

Enter: 4 7 1 1 #

The green LED will light up solidly, indicating that the keypad is ready to add or delete fixed user PIN codes/key fobs.



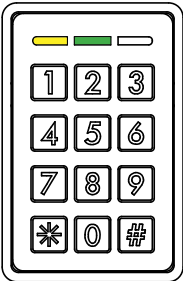
Position	User	PIN
1	Carlos	148954
17	Torbjörn	Key fob No. 17
23	Juan	1111

The next sections uses Juan as example to add and delete fixed PIN codes on the device.

3.1 Add user PIN codes

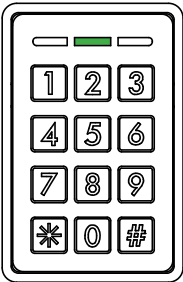
Example: 2 3 #

When a valid position is entered, the yellow and green LED will light up until a new user PIN code is inserted. It’s important to note that the new user PIN must consist of a numeric sequence that ranges from 1 to 8 digits.



Example: 1 1 1 1 #

It’s important to note that all positions can be overwritten, which means that you should keep a record of all configured PIN codes and their corresponding positions. This will help you avoid accidentally deleting or modifying any existing PIN codes.



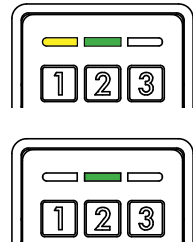
3.2 Delete user PIN codes

To delete one or more fixed PIN codes, you don't need to know the specific code, but you must know its position.

Deleting a specific PIN code

Example: 2 3 # #

If a valid position is entered, a confirmation beep will sound, then the keypad go back to user configuration menu and is ready to perform another user PIN handling action.



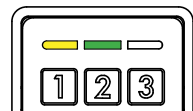
3.3 Add user Mifare key fobs

Example: 1 7 #

When a valid position is entered, the yellow and green LED will light up until a new user Mifare key fob is ready to be presented.

The Mifare reading spot is located on the keypad's digits. The device gives a beep sound for approved key fob and the green LED lights solidly.

It's important to note that all positions can be overwritten, which means that you should keep a record of all configured key fobs and their corresponding positions. This will help you avoid accidentally deleting or modifying any existing key fobs.



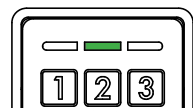
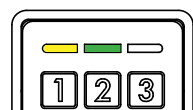
3.4 Delete user Mifare key fobs

To delete one or more fixed key fobs, you don't need to know the specific code, but you must know its position.

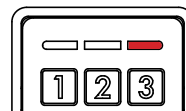
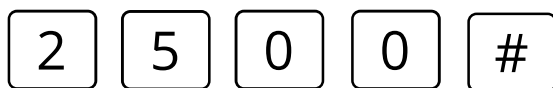
Deleting a specific Mifare key fob

Example: 1 7 # #

If a valid position is entered, a confirmation beep will sound, then the keypad go back to user configuration menu and is ready to perform another user PIN handling action.



3.5 Delete All Users



All user PIN codes and key fob are now deleted.

3.6 Add users for toggle modes

It is possible to add user PIN codes or key fob to activate the output on additional 3 different modes.

1. Toggle/Office mode: The same user PIN code or key fob can activate and deactivate the lock.

To enable toggle mode. The same user PIN code or key fob must be programmed on the same position twice.

2. Opening mode : The user PIN code or key fob can only activate the lock.

To enable opening mode. The same user PIN code or key fob must be programmed on the same position 3 times.

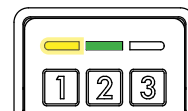
3. Closing mode : The user PIN code or key fob can only de-activate the lock.

To enable closing mode. The same user PIN code or key fob must be programmed on the same position 4 times.

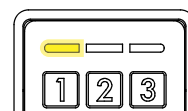
3.7 Speed adding users

This function makes it possible to add users without entering the positions every time for each user PIN code or key fob.

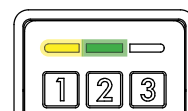
Enter: 0 5 #



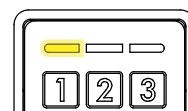
1. Enter the start position and press # (yellow LED blinks).



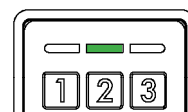
2. Enter the user PIN code and press # or present the key fob.
(The green LED will blink one time to for approved user PIN code or key fob).



3. Repeat step 2 untill all user PIN codes or key fobs i added.



Press * (Mykey) or  (Classic) to return to user configuration Menu



4. CONFIGURATION

To configure the CM1000, you need to access the service configuration menu with the service configuration code (12347890 as factory default). This code is used to authenticate and access the menu.

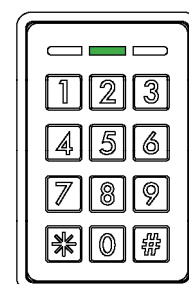
You can access this menu within the first 60 seconds after the device has been powered up, after which it becomes inaccessible.

Within the first 60 seconds after the device has been powered up

Insert:

1 2 3 4 7 8 9 0 #

The green LED will light up, indicating that the keypad is ready to be configured.



4.1 Software factory reset

If you need to reset the device to its factory default settings, please follow these steps:

Enter:

0

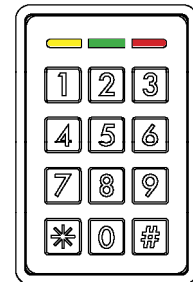
2

5

0

#

A confirmation beep will sound and all indication LEDs will light up for a few seconds. Then, the device will automatically restart and return to the idle state.



4.2 Change user configuration code

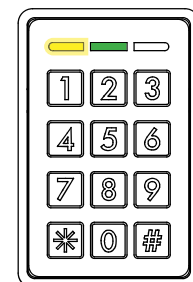
Enter:

0

0

#

The yellow and green LED will light solidly. Insert a new user configuration code between 4 to 8 digits



Example:

4

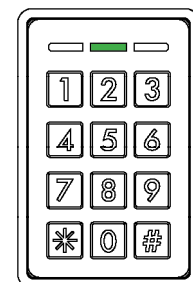
3

2

1

#

The user configuration code has been changed. The keypad will go back to service configuration menu and is ready to perform another service configuration action.



4.3 Change service configuration code

Enter:

0

1

#

The yellow and green LED lights up. The keypad is ready to receive a new Service Configuration Code. Insert a code that is between 4 to 8 digits.

Example:

1

2

3

4

7

8

9

0

#

The yellow and green LED will blink until the new service configuration code is inserted again to confirm the action. Insert the same code again.

Example:

1

2

3

4

7

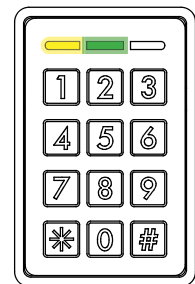
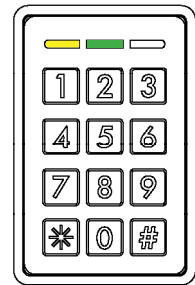
8

9

0

#

The service configuration code has been changed. The keypad go back to service configuration menu and is ready to perform another service configuration action.



4.4 Light indications

The light indications for different device states can be customized as follows:

To access the LED configuration menu:

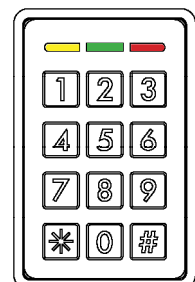
Enter:

0

2

#

All 3 LEDs light solidly.

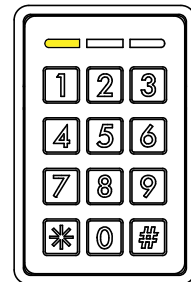


Idle state indication

Is the device normal state, it remains idle until a user action is performed.

Enter: 1 #

The device shows the current idle state indication. The yellow LED is ON as default.

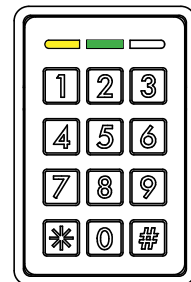


Output 2 active state indication

This will show when output 2 is active (regardless of whether it's floating or GND as output signal) by a right user PIN code inserted or a REX input triggered for example.

Enter: 2 #

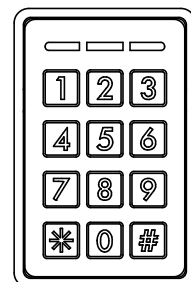
The device shows the current output 2 active state indication. The yellow and green LED's ON as default.



Key indication

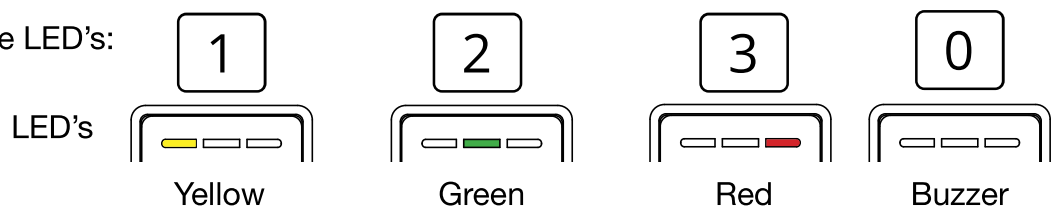
Enter: 3 #

The device shows the key indication. Default the yellow LED blinks when a digit is touched.



To customize these three configurations, the desired LED can be turned ON or OFF by pushing 1 to toggle the yellow LED, 2 to toggle the green LED, 3 to toggle the red LED and 0 to toggle buzzer (works only on 'Output 2 active state indication' and 'Key indication'). Once the indication is as desired, push # to save it.

Values to toggle the LED's:



Press: # To save the changes. After each customization, the device returns to the light indications menu, and another configuration can be performed.

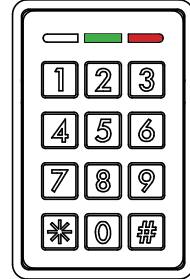
4.5 Outputs configurations

The output time, split and active modes can be customized as follows:

To access the output configuration menu:

Enter: 0 3 #

The green and red LEDs will light solidly.



Output 1 and 2 activation time

By fabrication the activation time on Output 1 and 2 is 5 seconds. The activation time can be changed as follows:

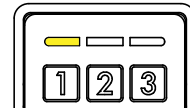
Output 1 (white wire), insert:

1 #

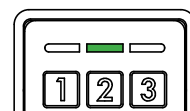
Output 2 (yellow wire,) insert:

2 #

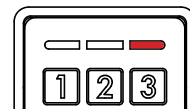
Insert hours 0 to 60 and press #.



Insert minutes 0 to 60 and press #.



Insert seconds 0 to 60 and press #.



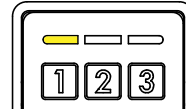
If no values is inserted on hours, minutes or seconds when pressing #. The value is automatically set to 0 and the outputs is set to toggle/office mode.

Output 1 and output 2 split

By fabrication position 1 to 100 activate output 2 (yellow wire), position 101 to 150 activates output 1 (white wire) and position 151 to 190 activates both outputs. To customize the output split do as follows:

Output1 (white wire)

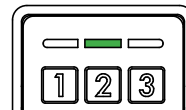
Enter:



Insert value 2 to 190 and press #.

Output2 (yellow wire)

Enter:



Insert value 1 to 189 and press #.

The inserted value is the highest position that can activate the output. Position 1 is bound to Output 2 and position 190 is bound to Output 1. These positions cannot be changed.

Note: It is not possible to cross the outputs when splitting.

Below tells a fictional story about changing output splits:

A CM1000 is installed to control two doors. Both doors must provide access to 90 user positions each for employees and 10 user positions for managers and cleaning staff.

Enter:

Output 2

To set the highest user position to activate Output 2.

Enter:

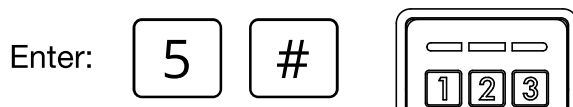
Output 1

To set the highest user position to activate Output 1.

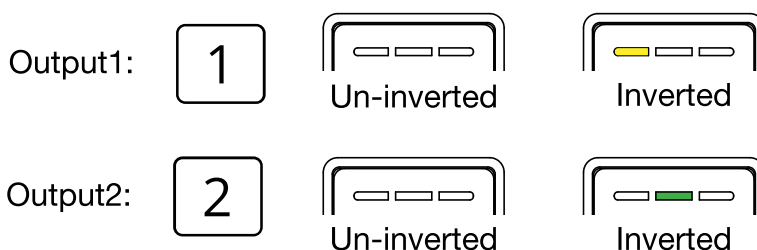
The outputs on CM1000 is now split up so user positions 1 to 90 activates Output 2, user positions 91 to 180 activates Output 1 and user positions 181 to 190 activates both outputs.

Invert outputs

Both outputs are during idle state inactive. When a valid code is entered or a valid key fob is presented, the output(s) gives a 0V (GND) to the lock. If the lock requires a solidly 0V on idle state and deactivate to unlock do as follows:



To invert or un-invert the outputs. Press to toggle the following digit below:



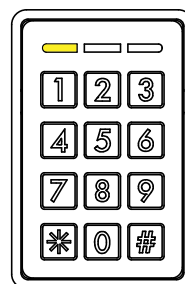
4.6 Special Functions

You can enable or disable six special functions:

1. **Service configuration code timeout:** By default ON, it means you can only use the service configuration code within the first 1 minutes after powering up. When this option is turned OFF, the service configuration code will work anytime.
2. **User configuration code change:** By default OFF, it means you can only change the user configuration code from the service configuration menu. When this option is turned ON, the user configuration code can be changed by the user configuration code.
3. **Mute:** To turn ON/OFF the device's sound.
4. **Brown wire function:** By default ON, it means that the brown wire is set to high security when connected to GND. When turned to OFF, the brown wire activates the external buzzer when receiving GND.
5. **High security:** By default OFF, it means one PIN code or key fob is needed to open the lock. When turned ON, two users on neighboring positions is required to open the lock (remember to turn 'brown wire function' to ON).
6. **Bell/star key function:** By default OFF, it means output1 is activated by user PIN code and key fobs (default position 101 - 150) and the bell/star key deletes non-finished codes. When ON, all PIN codes and key fobs activates Output 2, and bell/star key activates Output 1.

Enter:    To configure the special functions

The yellow LED will light solidly.



You can enable or disable the six special functions by pressing the corresponding key. The LED indicators will show whether a function is enabled (green light) or disabled (red light):

Press:

1

For service configuration code timeout

Press:

2

For user configuration code change

Press:

3

For mute

Press:

4

For brown wire function

Press:

5

For high security

Press:

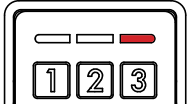
6

For bell/star key function

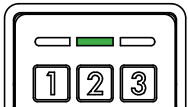
Press:

#

To save the changes. The device returns to the service configuration menu, and another configuration can be performed.



Function OFF



Function ON

Special positions

CM1000 have additional 4 more positions 191 to 194 to enable or disable special functions. These positions can be accessed by a PIN code or key fob.

To add PIN code or key fob on these positions, please refer to chapter 3 ‘FIXED USER MANAGEMENT’ on page 5.

Position	Function
191	Mute: PIN code/key fob can turn the device's sound ON/OFF.
192	Brown wire function: PIN code/key fob can change the brown wires function between external buzzer or high security on GND.
193	High security: PIN code/key fob can set the keypad to accept one PIN code/key fob or two PIN code/key fob on neighboring positions.
194	Bell/star key function: PIN code/key fob can switch between that PIN code/key fobs activates Output 2 and bell/star key activates Output 1 or PIN codes/key fobs activates Output 1 and bell/star key delete non-finished codes.

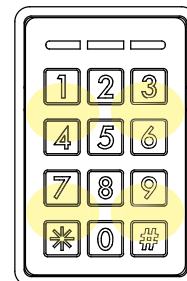
Note: When using special positions to change the functions, a power failure will reset the settings to those made in special functions.

5. BACKLIGHT

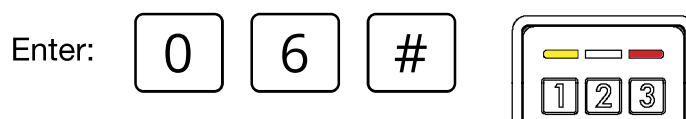
When touching the keypad or presenting a key fob, four LEDs lights up between the keys. This is the backlight to help navigating on the keypad in case of poor lighting conditions.

The backlights are located as shown on the drawing to the right.
By default the backlight active time is 5 seconds.

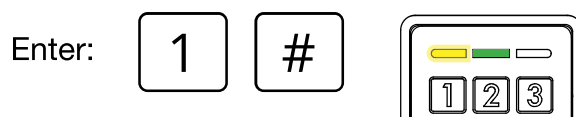
Changing active time, idle light strength and set the backlight to be set to fixed light is available.



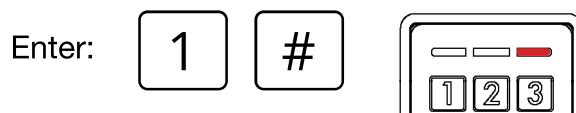
To enter the backlight settings, do as follows:



Changing backlights active time and idle light strenght:

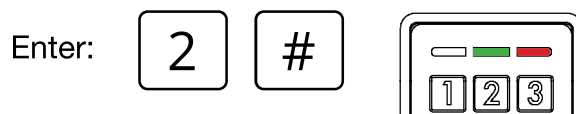


Backlights active time:



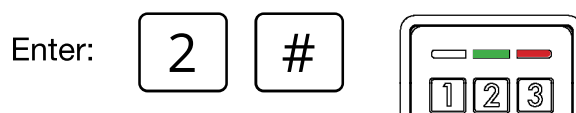
Time value is in seconds. Key in 1 to 255, press # to save the setting.

Idle light strength:



Value is in percents. Key in 0 (no light) to 100 (max strength), press # to save the setting.

Changing fixed light strength:

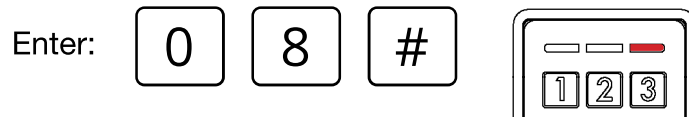


Value is in percents. Key in 0 (no light) to 100 (max strength), press # to save the setting.

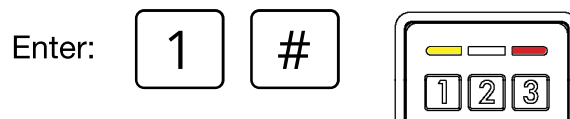
6. CLONING CARD

User PIN codes, key fobs and settings can be saved and loaded on a CM1000 by a cloning card sold separately (article number 480080).

To use the cloning card. Do as follow (works in user and service configuration menu):



Save on cloning card:



Select what information types that need to be saved on the cloning card:

User PIN codes, key fobs and settings:



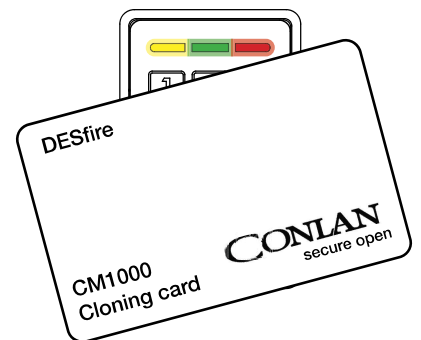
User PIN codes and key fobs only:



Settings only:



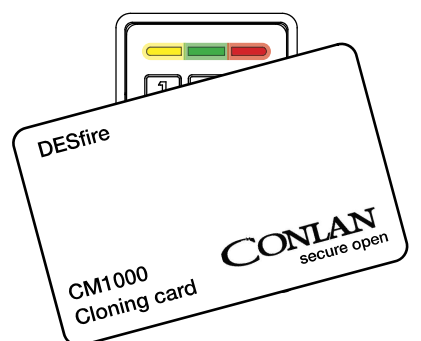
The LEDs wil now blink. Places the cloning card in front of the CM1000 (max. 10 mm.) and wait till the LEDs turn off and a long beep sounds. The yellow and red LEDs indicates that the informations is saved on the cloning card.



Load from cloning card:

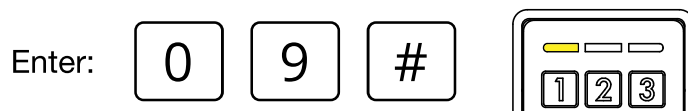


The LEDs wil now blink. Places the cloning card in front of the CM1000 (max. 10 mm.) and wait till the LEDs turn off and a long beep sounds. The yellow and red LEDs indicates that the informations i loaded from the cloning card to the CM1000.



7. KEYPAD SENSITIVITY

The sensitivity digits on the keypad can be affected with the front label attached or with the environments. By default, the sensitivity is set to medium. To change the keypad sensitivity, do as follows:



The keypad sensitivity can be set to 3 stages:

Low sensitivity: Recommended if the keypad is registering 'phantom' touch.

Press: 

Medium sensitivity: Default set. Commonly used.

Press: 

High sensitivity: Recommended if the keys on the keypad isn't responding, when being touch by a finger.

Press: 

Press:

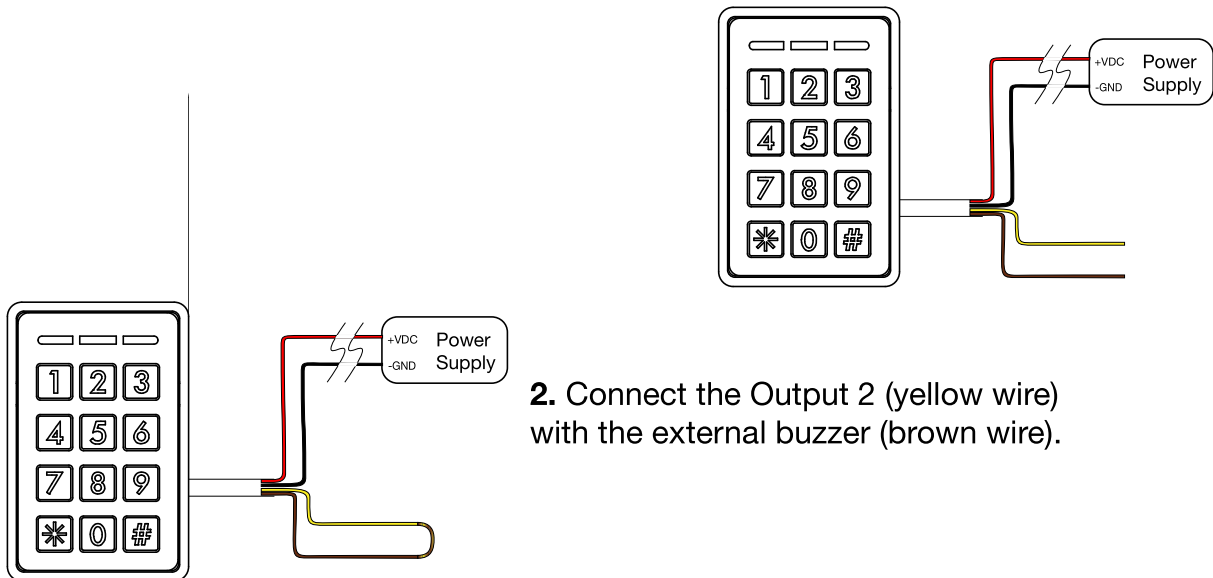


To save the changes. The device returns to the service configuration menu, and another service configuration can be performed.

8. HARDWARE FACTORY RESET

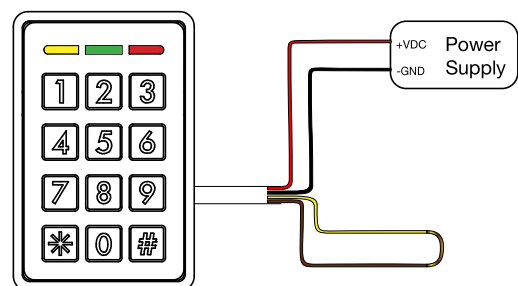
If you need to reset the device to its factory default settings, please follow these steps:

1. Disconnect the power supply, ensure the device is not powered.

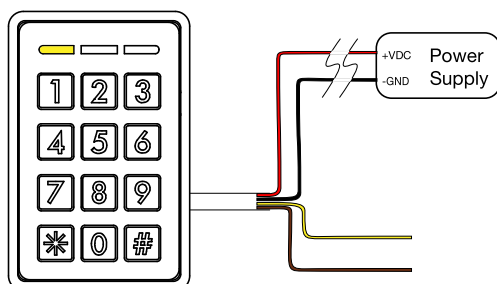


2. Connect the Output 2 (yellow wire) with the external buzzer (brown wire).

3. Connect the power supply again and power the device. All three LED's turns ON and the buzzer makes a confirmation beep.



4. Disconnect the power supply, ensure the device is not powered.



5. Disconnect the Output 2 (yellow wire) and the external buzzer (brown wire). The device is now ready to be used again and all configurations are set as factory default.

9. TECHNICAL SPECIFICATIONS

Device measures:	(Mykey model) 49 mm x 76 mm x 8 mm (Classic model) 50.3 mm x 130.3 mm x 8 mm
Power source:	9 to 24 VDC (should NEVER exceed 24 VDC)
RFID reading range:	Max. 30 mm
Inputs:	externally controllable green LED, externally controllable red LED, externally controllable buzzer / high security and REX [active LOW (-/GND)]
Outputs:	Output 1 and Output 2, Open Collector [active LOW(-/GND)]
Protection rate:	IP67 and IK06
Color:	Black or white