Code & Mifare
CM1000

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

User manual
Table of contents

1. Introduction ................................................................. page 3
2. Installation ................................................................. page 3
3. Programming users ....................................................... page 4
   3.1 User positions ....................................................... page 4
   3.2 Programming user codes .......................................... page 4
   3.3 Programming Mifare tags ......................................... page 5
   3.4 Programming codes/Mifare tags for special functions .... page 6
   3.5 Smart reading ....................................................... page 6
4. Configuration of CM1000 ............................................... page 7
   4.1 Service code ....................................................... page 7
   4.2 Configuration overview .......................................... page 7
   4.3 Change the Master code .......................................... page 7
   4.4 Change the Service code ......................................... page 8
   4.5 LED Indications ................................................... page 8
   4.6 Outputs ............................................................... page 9
   4.7 Special settings ................................................... page 10
5. Backup card ............................................................... page 11
6. Blocking ................................................................. page 11
7. Manual reset ............................................................. page 11
8. Technical specifications ............................................... page 11
9. Connection examples ................................................... page 12
1. Introduction

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

In standby the yellow LED is lit LED (● ○ ○)
Correct code/tag lights the yellow and the green LED (● ● ○)
Incorrect code/tag lights the red LED (○ ● ●)

CM1000 has a buzzer for indicating while keying, correct code/tag, incorrect etc. and 2 transistor outputs, independant from each other, so the CM1000 can give access by code and Mifare tag. 
The CM1000 is a stand alone unit, the can be programmed directly by Master code and Service code.

2. Installation

Mount the reader on a even surface. (use the following drill template for precise fitting).

Connect the wires to power supply, door strike, assembly board etc.

Colour scheme

![Colour scheme diagram]

Note: Right after applying the voltage all LED's lights and the buzzer sounds do not touch the reader until the yellow LED lights and the buzzer is silent.

See connection examples on the last page.
3. Programming users

Programming the CM1000 is simple and easy to understand.

3.1 User positions

CM1000 has 200 positions, which can contain a code or a Mifare tag. The positions are divided as following:

<table>
<thead>
<tr>
<th>User position</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 100</td>
<td>Activates output 2 (the code in position 1 is <strong>1234</strong> - default)</td>
</tr>
<tr>
<td>101 - 150</td>
<td>Activates output 1</td>
</tr>
<tr>
<td>151 - 190</td>
<td>Activates output 1 and 2</td>
</tr>
<tr>
<td>191 - 200</td>
<td>Reserved for special functions</td>
</tr>
</tbody>
</table>

3.2 Programming user codes

The Master code is used to program/change/delete the users. By default the Master code is **4711**.

LED indication: No light: ○ Light: ● Flash: * Clear buffer: 

**New users**

Key in the Master code

(4711 - standard)

Key in the user position

Key in the user code

To program more users, continue from “key in the user position” or press # to exit.

**Changing user codes**

It's the same procedure as programming new users, just overwrite the user positions.
Delete specific users

Key in the Master code
(4711 - standard) → # → Key in the user position → # → #

Delete all users

Key in the Master code
(4711 - standard) → # → Key in 2500 → # → #

3.2 Programming Mifare tags

CM1000 can read Mifare classic 1K, classic 4K, Ultralight, Ultralight C, PLUS and DES-FIRE.

Programming a new Mifare tag

Key in the Master code
(4711 - standard) → # → Key in the user position → # → Show Mifare tag → #

For more tags, continue from “key in the user position or type # to exit.

Changing Mifare tags

It's the same procedure as programming new users, just overwrite the position.

Delete a specific Mifare tag

Key in the Master code
(4711 - standard) → # → Key in the user position → # → #
3.4 Programming codes/Mifare tags for special functions

Programming the codes and Mifare tags is described in 3.2 and 3.3. This entry activates the output(s) for 5 seconds (factory setting). Only 1 user can enter at the time.

**Programming the same user twice**
By programming the same code/Mifare tag on the same position twice toggles the output.
(Ie. the code/Mifare tag is entered to unlock the door and entered to lock it again).

**Programming the same user 3 times**
By programming the same code/Mifare tag on the same position 3 times, the output is designated as switch on only.
(Ie. the door is permanently unlocked when the code/Mifare tag is entered).

**Programming the same user 4 times**
By programming the same code/Mifare tag on the same position 4 times, the output is designated as switch off only.
(Ie. the door is only locked when the code/Mifare tag is entered).

3.5 Smart reading

This position makes it possible to program codes/Mifare tags quicker without entering new positions. Key in a position and it counts automatically to the next position. Codes and Mifare tags can be programmed alternatively as you see fit.

![Diagram](image)

Key in the Master code

Key in the starting position

Key in the code or show tag

Note: This programming mode overwrites existing positions.
4. Configuration of CM1000

4.1 The Service code

The Service code is used for CM1000’s advanced settings such as changing the Master code and Service code, LED indications and much more. The overview of the settings and the factory settings can be seen in 4.2 Configuration overview.

The Service code is 12347890 (factory setting).

Note: Before the Service code can be used must the voltage be turned OFF and ON (the Service code can now be entered within 10 seconds).

After entering the Service code the reader is in programming mode (the green LED lights). Each time a setting is made the CM1000 goes back to the previous point and the next setting can be made.

The navigation is by entering the position/ value followed by #.

4.2 Configuration overview

<table>
<thead>
<tr>
<th>Position</th>
<th>Setting</th>
<th>Factory default</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Master code (1 til 8 cifre)</td>
<td>4711</td>
</tr>
<tr>
<td>01</td>
<td>Service code (1 til 8 cifre)</td>
<td>12347890</td>
</tr>
<tr>
<td>02</td>
<td>LED indications</td>
<td>Normal = Yellow, active = Yellow and green</td>
</tr>
<tr>
<td>03</td>
<td>Outputs</td>
<td>Output time for 1 and 2 is 5 seconds</td>
</tr>
<tr>
<td>04</td>
<td>Special functions</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>Smart reading</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>Background light</td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>Backup/cloning the settings</td>
<td></td>
</tr>
<tr>
<td>2500</td>
<td>Alle codes/Mifare tags on the user positions are deleted</td>
<td></td>
</tr>
<tr>
<td>0250</td>
<td>Reset to factory default</td>
<td></td>
</tr>
</tbody>
</table>

4.3 Change the Master code

By default the Master code is 4711 and can only be used to program, change or delete users on the CM1000.

To change the Master code, enter the following:

Key in Service code

#

Key in 00

#

Key in a new code or show tag

#
4.4 Change the Service code

The Service code is used to configure the CM1000’s settings.

To change the Service code, enter the following within 10 seconds after power on:

Key in the Service code → # → Key in 01 → # → Key in a new code or show tag → # → Repeat new code/tag → #

4.5 LED indications

The CM1000’s 3 LED’s can be adjusted at will.

To adjust the LED indications enter the following:

- **02 #**: adjust the LED’s for standby indication (normal).
- **1 #**: adjust the LED’s for correct code/tag indication (active).
- **2 #**: adjust the keying indication (how the LED will react while keying).

To adjust the LED’s press on the following:

- **1**: yellow LED (toggle by press)
- **2**: green LED (toggle by press)
- **3**: red LED (toggle by press)
- **0**: buzzer (works only on active and keying indication (toggle by press))
- **#**: save and go one step back

To save the settings press **#** or press **ستان** / ***** to go back to the previous point (not saving).
4.6 Outputs

The CM1000 has 2 transistor outputs, which both are activated for 5 seconds (factory default) when a correct code/Mifare tag is entered. The output activation time can be changed and inverted.

To change these settings key in:

- 03  #  acitvation time for output 1 (white core)
- 1  #  activation time for output 2 (yellow core)

The time is set as:

- Key in hours 0 to 60
- Key in minutes 0 to 60
- Key in seconds 0 to 60

If no value is entered in hours, minutes or seconds is the value automatically 0 (which corresponds to set the output as toggle).

- 3  #  bonding the positions and output 1
- 4  #  bonding the positions and output 2

Both outputs are bonded to specific positions. By factory default positions 1 to 100 are bounded to output 2 and positions 101 to 150 to output 1. The value can not be crossed.

- 5  #  inverted outputs
- 1  #  output 1 (● ○ ○ = inverted / ○ ○ ○ = not inverted)
- 2  #  output 2 (● ○ ○ = inverted / ○ ○ ○ = not inverted)

To save the settings press # or press / * to go back to the previous point (not saving).
4.7 Special settings

These settings are used to change the CM1000’s special functions such as turning the buzzer on/off, enable High Security etc.

To change these settings, key in: 04 #

1 = Service code without timeout (● = inactive / ● = active)
2 = Master code be changed by Master code (● = inactive / ● = active)
3 = Mute reader (● = off / ● = on)
4 = Brown wire function (● = external buzzer / ● = High Security)
5 = High Security (● = inactive / ● = active)
6 = Bell/star key (● = delete non-finished codes / ● = activates output 1*)

*When the bell/star key is set to activate output 1 can codes and Mifare tags only activate output 2.

High Security
High Security increases the CM1000’s security by ensuring 2 positions have to be activated before the output is activated (the positions must be next to each other).

Special positions
On positions 191 to 194 special functions can be activated by code/Mifare tag. The programming is like programming a new user.

191 = No buzzer
192 = Input 1 (brown wire) function (High Security or external buzzer)
193 = High Security
194 = Bell/star key function (activates output 2 by press)

To save the settings press # or press / * to go back to the previous point (not saving).

Note: A power cycle puts the functions back to the settings made by the Service code.
5. Backup card

The CM1000’s informations can be saved and loaded with a Backup card (Art. No: 480080).

Please view the following configuration scheme for further information.

6. Blocking

The CM1000 is blocked for 1 minute after 4 incorrect codes/Mifare tags.

LED indication: ○○●

7. Manual reset

The CM1000 can be reset to factory default manually.

• Turn the voltage off.
• Connect the yellow and brown wire.
• Turn the voltage on (9 - 25 VDC) the readers LED’s lights and the buzzer sounds.
• Turn the voltage off and disconnect the yellow and brown wire.

The CM1000 is now reset to factory default and the user codes/tags are deleted.

8. Technical specifications

| Voltage: | 12 VDC, 30 mA |
| Voltage range: | 9 - 25 VDC |
| Mifare reading: | Max. 50 mm |
| Output: | 2x open collector, max. 500 mA |
| Input: | External buzzer/High Security (brown) and REX, 0V active (blue) |
| Protection rate: | IP67 |
| Color: | Black or white |
| Cable: | 2,5 m white, 8 cores |
| Dimensions (HxWxD): | Mykey = 76x49x8 mm / Classic =130x50x8 mm |
9. Connection examples

Direct connection

Relay connection

Thank you for choosing Conlan’s products.

For further assistance please contact our support service