

mKey access control



1 Product overview

1.1 Product introduction

This product uses high-strength zinc alloy body, Proximity card (EM card, also known as ID card) or password to open the door, built-in highly integrated microcontroller, simple circuit, safe and reliable, economical and durable, suitable for office, villa etc.

1.2 Features

- > 1000 user cards bound with 1000 user passwords, and the user can modify password by himself
- > Opening door modes: card, card + PIN, card or PIN, PIN.
- > Opening time: 50mS, 1-98 seconds for normal mode, 99 seconds for switch mode;
- > Electric lock mode: power-on unlocking (such as electric rim lock, electric strike), power-off unlocking (such as electric bolt, magnetic lock);
- > Built-in high-current MOS tube can directly drive the electric lock, and can resist strong magnetic unlocking
- > Security mode can be set: 10 times invalid card or password will automatically lock the machine for 10 minutes;
- > Can connect with an exit button, convenient to open the door from inside.

1.3 Functional component



1.4 Technical parameters

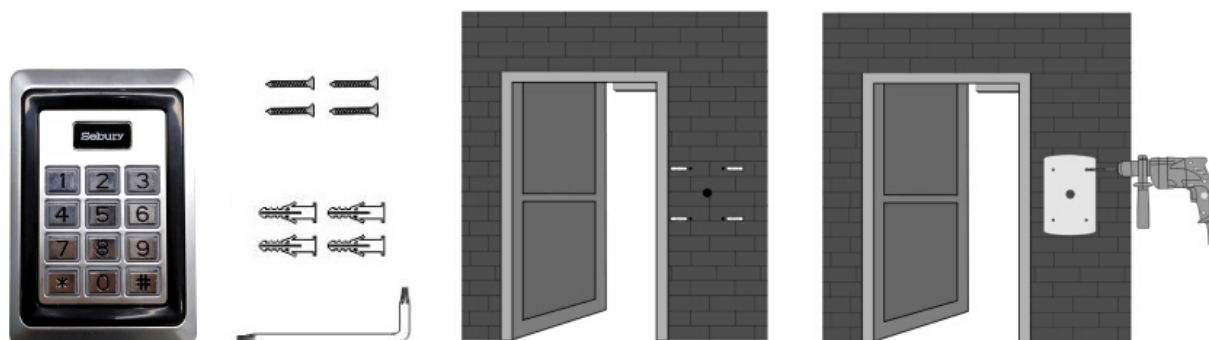
- > Working voltage: DC12±2V
- > Static current: ≤20mA
- > Operating current: ≤100mA
- > Drive electric lock current: ≤3A
- > Working environment temperature: -20~50°C
- > Working environment humidity: 0~95% (no condensation)
- > Maximum card reading distance : 5cm

2 (Installation, wiring and Debugging)

2.1 Installation

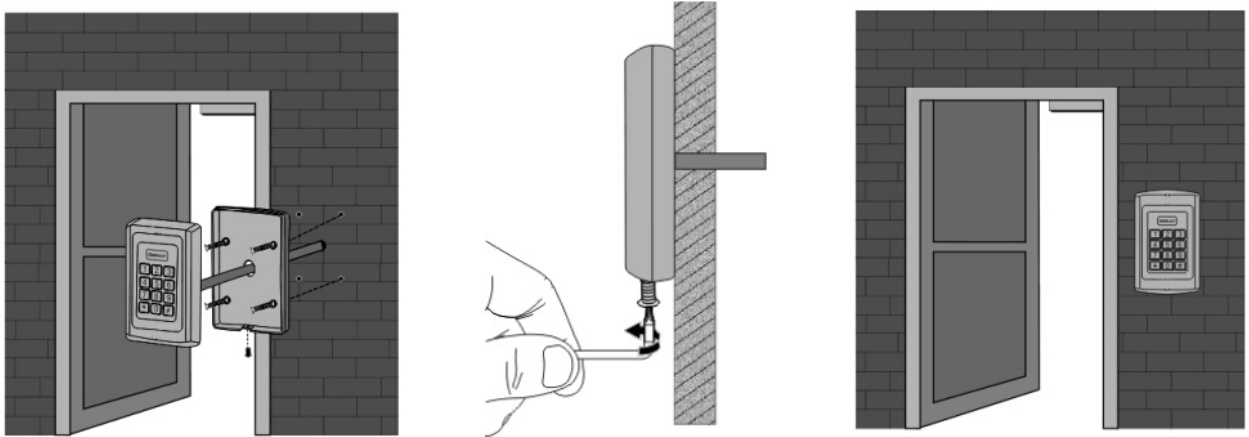
Unscrew the screw on the bottom of the product with the screwdriver, remove the back case of the product, then according to the opening position of the back case, use the impact drill to open the corresponding holes on the wall, including a wire outlet hole with diameter larger than 8mm, and four plastic expansion screw holes with diameter of 6mm, then insert four matching plastic expansion screws, and fix the back case to the wall with four matching self-tapping screws.

As shown below:



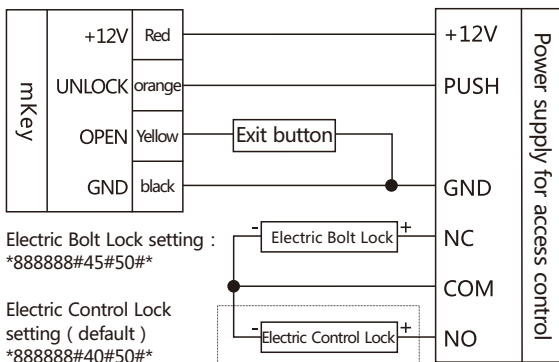
2.2Wiring

According to the selected wiring diagram, connect the four lead wires to the system cable one by one, and then insert one end of the plug into the 4P socket of the access control, taking care not to short circuit, otherwise the power may be burned out. Please Check and briefly power on to test if the indicator light is normal, and whether the buzzer will beep once, if not please cut off the power immediately, and check the wiring again. After checking, install the front case of the product to the bracket on the wall, fasten with anti-temper screw. As shown below:

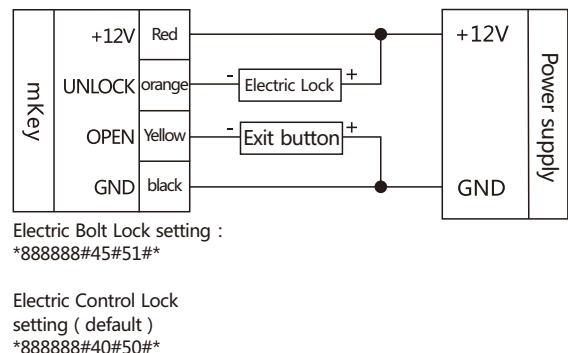


The correspondence between the color of wire and their function:

| Order | Mark | Colour | Function |
|-------|--------|--------|---|
| 1 | +12V | Red | Positive of power supply (positive of electric lock) |
| 2 | UNLOCK | Orange | negative of electric lock |
| 3 | OPEN | Yellow | One end of the exit button |
| 4 | GND | Black | Negative of power supply (Another end of the exit button) |



Wiring diagram adopting power supply for access control



Wiring diagram adopting ordinary power supply

2.3 Debug

Power on and test according to the instructions. The debugging will be completed until the lock opened successfully by reading card, password and exit button.

3 Basic functions

Operating conventions :

- > A long sound " Di- " indicates correct operate. Three short sounds " Di Di Di " indicates wrong operate . The indicator light flash in green means operate successfully.
- > " # " indicates confirmed completely, normally used behind pass word, ID number, or parameter.
- > " * " indicates cancel the current operation or return to the previous menu.
- > The management menu is fixed to 1 digit. from 0-6, cannot press key " # " after it. After entering setting menu, the indicator light turns to orange.
- > Under administrator mode, it will automatically exit to standby state if there is no operation within 30 seconds.
- > Under non-administrator mode, it will automatically exit to standby state if there is no operation within 5 seconds.

Light and buzzer indication:

| Operation status | Light color | Buzzer |
|---------------------------------------|-------------|-------------------|
| Standby | Red | |
| PIN inputting | Red flash | |
| In Card & PIN mode after reading card | Red flash | |
| Enter into administrator mode | Red flash | |
| Enter menu setting status | Orange | |
| Successful operation | Green | A long sound |
| Unlock the lock | Green | |
| Press number key | | A short sound |
| Press key * | | A long sound |
| Failed operation | | Three short sound |

3.1 Enter into administrator mode

* 6 digit master code #

Example, press *888888# to enter into programming mode.

888888 is the default factory master code. Must enter into the programming mode first before undertake the following programming.

3.2 Change the master code

0 new code # new code #

Example, press 0 999999 # 999999# changed master code to 999999.

3.3 Add card user

There are three methods to add a card user, the ID number range is 0-999, the user password is fixed to 6 digits, and it can be operated continuously. Press key * to exit the add user menu.

3.3.1 Fast way to add card user

1 swipe card ... *

Example, continuously add 3 cards: Press 1, swipe card, swipe card, swipe card *

3.3.2 Add card by specify the ID number

1 ID number # swipe card ... *

Example, continuously add 3 cards with ID number 1,2,3

Press 1 1#swipe card 2# swipe card 3#swipe card *.

3.3.3 Add user password by specify ID number

1 (ID number) # (6 digits user password) # ... *

Example, consecutively set 3 passwords with ID numbers 4, 5, and 6:

14#444444#5#555555#6#666666#*.

3.4 Delete card user

Below are three ways to delete user. The ID number ranges from 0 to 999, each ID number corresponds to a card or a password. To delete one ID number means that one corresponding card or password is deleted, and this can be continuously operated. Press Key * means to exit the delete users menu.

3.4.1 Quick delete cards

2 swipe card ... *

Example, delete 3 cards continuously: 2, swipe card, swipe card, swipe card, *

3.4.2 Delete Cards or Passwords with specify ID Number

2 (ID number) # ... *

Example, delete three continuous users with ID numbers 1, 2, 3: 2,1#2#3#*.

3.4.3 Delete all users

2 0000 # *

Example, 20000#*

3.5 Setting the working mode

3 0 # card only.

3 1 # card and password.

3 2 # card or password. This is factory default mode.

3 3 # password only.

Example, set the working mode to card and password: 3,1#.

3.6 Setting door relay time

4 0 # door relay time is 50ms. This is factory default.

4 (1-98) # the door relay time is set to 1-98 seconds.

4 99 # Set to switch mode, means the relay changes state every time when swipe a valid card or password to open the door.

For example, set the relay time to 5 seconds: 4,5#.

Note: The 50ms is suitable for electric control lock or use special access control power supply. The switch mode is suitable for normally open or normally closed door.

3.7 Setting the lock mode

5 0 # power-on unlock mode is the default mode , for electric lock etc. If use special access control power supply, also should be set to this mode.

5 1 # is power-off unlock mode, such as electric bolt, magnetic lock, etc.

Example, set for electric bolt lock: 5,1#.

3.8 Setting the security mode

6 0 # Normal mode, this is the factory default mode

6 1 # Lock mode. When invalid card, invalid user password or invalid administrator password is continuously tried 10 times, the access control will be automatically locked for 10 minutes.

Example, set the security mode to lock mode: 6,1#.

3.9 Exit from the administrator mode

Press key * several times under the administrator mode until the indicator light turns to normal red.

3.10 Change user' s password

3.10.1 Change password by card

* swipe user card Old password # New password # New password #

Example, Change user' s password by card : * , Swipe card 1234#123456#123456#

Note: When add a new user card, an initial password 1234 is automatically generated. 1234 can' t be used to open the door, It can only be used to modify the user password. The new user password can only be 6 digits.

3.10.2 Change password by ID number

* ID number # old password # new password # new password #

Example, Change user' s password by ID number:* 1#123456#111111#111111#

Note: when change password by ID number, the old password can' t be initial password 1234.

3.11 Users to open the door

Swipe the valid card, or enter 6 digits user passwords, or press the Exit button.

Note: No need to press key # after entering the password, which reduced frequency use of key # and greatly improved the lifetime of key#. When opening the door, there will be a long sound of "beep" and the indicator light will turn into green. When the working mode is by card and password, the time between swipe the card and input the password can' t wait to exceed 5 seconds.

3.12 Resetting To Factory Default Setting

When forget the administrator password, or the users randomly adjust various parameters, you can reset to factory default setting by following below steps:

power off, press *and hold it, then power on, when hear two beeps Di Di ,then release *, the administrator password is revert to 888888 successfully. Meanwhile all the parameters were resetted to factory default mode shows in below "Administrator mode operation summary table" , the user' s card and password won' t be deleted.

4 Administrator mode operation summary table

| Enter into Administrator Operation Mode: *(6 digits master code) # | | | |
|--|---|-------------------------------------|---------|
| Menu | Parameters or operation steps | Function | Default |
| 0 | (new master code) #, (new master code again)# | Modify master code | 888888 |
| 1 | read card,...,* | Quickly add user card | |
| | (ID No.)# , swipe card,...,* | Add user card by specifying ID No. | |
| | (ID No.)#,(user password)#,...,* | Add user password by specify ID No. | |
| 2 | Swipe card,...,* | Quickly delete card | |
| | (ID No.)#,...,* | Delete card or password with ID No. | |
| | 0000# , * | Delete all users | |
| 3 | 0# | Entry by card only | 2 |
| | 1# | Entry by card and password together | |
| | 2# | Entry by card or password | |
| | 3# | Entry by password only | |

| | | | |
|---|------------|------------------------------|---|
| 4 | 0# | To set door relay time 50ms | 0 |
| | (1-98) # | To set door relay time 1-98s | |
| | 99# | To set to switch mode | |
| 5 | 0# | Tower-on unlock mode | 0 |
| | 1# | Tower-off unlock mode | |
| 6 | 0# | Set to normal mode | 0 |
| | 1# | Set to lock mode | |

5.Simple Troubleshooting

| Fault phenomenon | Possible reason | Exclusion methods |
|---------------------------------|--|--|
| Unusual Indicator light | Power voltage too low or too much interference | Change to qualified power supply, cable or restart power |
| No response | Set security mode to lock mode and Continuously swipe card or input password more than 10 times | Restart power or wait for 10 min |
| Abnormal unlocking | Wrong electric lock mode | Set to correct electric lock mode |
| | Wrong wiring | Wire strictly as required |
| Can' t enter administrator mode | Make sure the red indicator light is normally on before press * | Follow the right operation way |
| | Forget the master code | Factory reset |
| can' t enter by card | Set the mode of entry by password only | Set the right working mode |
| | Too much interference of power or power voltage too low | Change to qualified power supply or cable |
| Can' t enter by password | Need to set the password first, master setting or users change the original password 1234 to new 6 digits password | Set or change the user password |
| | Use wrong password | Use correct password |
| Digits key invalid | Set the entry by card only or card plus password | Set the right working mode |