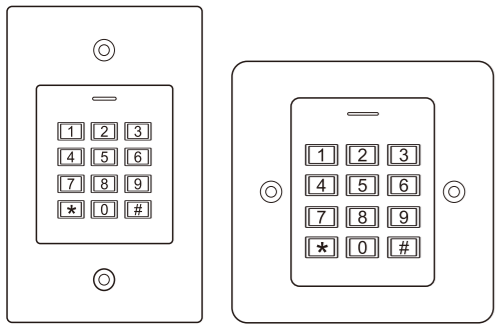


Embedded Keypad Access Control



Rectangle Square

User Manual

INTRODUCTION

The keypad is a single entry access control with integrated card reader. It is an easy to operate device, designs in 8 wires for mounting, with user-friendly programming.

The device is embedded design with metal plate. It supports up to 1000 users in multiple access configurations (Card Only, Card or PIN, or Card + PIN). The built in card reader supports 125KHz EM card.

Features

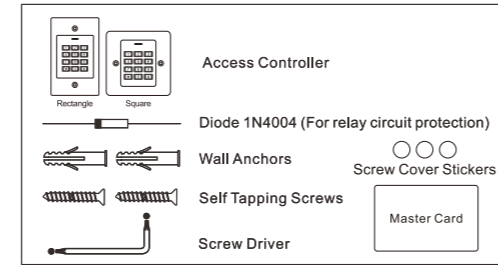
- > Metal case, embedded design
- > Waterproof, conforms to IP66
- > One relay, 1000 users (990 Normal Users + 10 Visitor Users)
- > 3 access modes: Card, PIN, Card + PIN
- > Card type: 125KHz EM card
- > PIN length: 4-6 digits
- > Anti-tamper alarm
- > Wiegand 26 bits output
- > Wiegand 26/34 bits input automatic identification

Specifications

User Capacity Normal Users Visitor Users	1000 Cards/PINs 990 10
Operating Voltage Idle Current Active Current	12-18V DC ≤30mA ≤120mA
Keypad	12 Keys
Proximity Card Reader Radio Technology Read Range	EM 125KHz EM Card 0-6cm
Wiring Connections	Relay Output, Exit Button, Wiegand (in/out)
Relay Adjustable Relay Output Time Lock Output Load	One (NO, NC, Common) 0-99 Seconds (5 seconds default) 2 Amp Maximum
Environment Operating Temperature Operating Humidity	Outdoor -40°C~60°C, -40°F~140°F 10%-98% Non-condensing

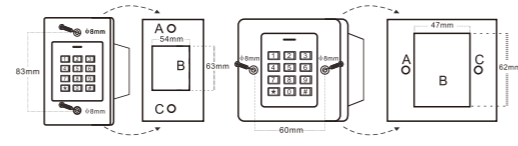
Physical Color	Stainless Steel Plate Silver & Black
Dimensions	115x70x25mm(Rectangle) 86x86x25mm(Square)
Unit Weight	245g
Shipping Weight	285g

Carton Inventory



INSTALLATION

- Drill 2 holes(A,C) on the wall for the screws and one hole for the device
- Knock the supplied rubber bungs to the screw holes(A,C)
- Thread the cable through the hole(B)
- Attach the unit to the hole(B)
- Fix the unit firmly on the wall with 2 flat head screws
- Cover the screws by Screw Cover Stickers

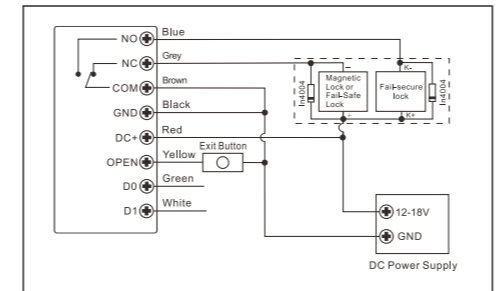


Wiring

Colour	Function	Notes
Red	Power +	12-18VDC Regulated Power Input
Black	GND	Ground
Blue	NO	Normally Open Relay Output
Brown	COM	Common Connection for Relay Output
Grey	NC	Normally Closed Relay Output
Yellow	OPEN	Request to Exit input(REX)
Green	D0	Wiegand Input/Output Data 0
White	D1	Wiegand Input/Output Data 1

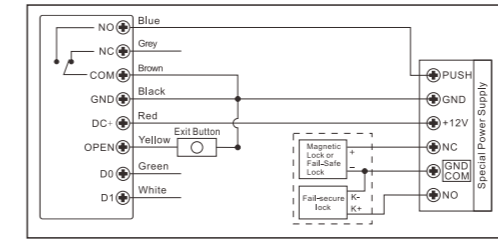
Connection Diagram

Common Power Supply:



Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the keypad might be damaged. (1N4004 is included in the packing)

Access Control Power Supply:



STANDALONE MODE

Programming will vary depending on access configuration. Follow the instructions according to your access configuration.

Programming 1 ----- Configure the Keypad

Change the configure settings according to your application (optional). Multiple configuration settings can be changed at one time: enter program mode, change desired settings, then exit program mode.

Set Master Code

The 4-6 digit Master Code is used to prevent unauthorized access to the system. To interface with the Keypad the manager will need a Master Code (factory default code: 123456). We highly recommend immediate update and record of your Master Code.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Update Master Code	0 (New Master Code) # (Repeat New Master Code) #
3. Exit Program Mode	*

Set Access Configuration

There are 3 types of access configurations for the Keypad
 > **Card or PIN (Default):** The User must present a valid Card to the Keypad or enter their PIN code followed by the # key, in order to be granted access.
 > **Card Only:** The User must present a valid Card to the Keypad in order to be granted access.
 > **Card + PIN:** The User must first present a valid Card to the Keypad and then enter their PIN code followed by the # key, in order to be granted access.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Card or PIN OR 2. Card + PIN OR 2. Card only	3 0 # (factory default) 3 1 # 3 2 #
3. Exit Program Mode	*

Set Relay Configuration

The relay configuration sets the behaviour of the output relay on activation.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Pulse Mode OR 2. Latch Mode	4 (1-99) # The relay time is 1-99 seconds. Default is 5 seconds. 4 0 # Sets the relay to ON/OFF Latch mode
3. Exit Program Mode	*

Set Alarm Time (Apply for Strike-out Alarm, Anti-tamper Alarm)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Set alarm timer	5 (0-3) # Factory default is 1 minute
3. Exit Program Mode	*

Set Strike-out Alarm

The strike-out alarm will engage after 10 failed card/PIN attempts in 10 mins. Default is OFF. The strike-out alarm can be set to deny access for 10 minutes after engaging or it can be set to disengage only after entering a valid card/PIN or Master code. (Press exit button can open the door when the keypad in deny access mode)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Strike-Out OFF OR 2. Strike-Out ON OR 2. Strike-Out ON	6 0 # (factory default) 6 1 # Access will be denied for 10 minutes 6 2 # The buzzer alarms
3. Exit Program Mode	*

Programming 2 ----- Program Cards and PINS

Programming will vary depending on the access configuration. Follow the instructions according to your access configuration.

GENERAL PROGRAMMING INFORMATION

> **User ID Number:** Assign a user ID number to the access code in order to keep track of the users of access cards or PINs. The normal user ID can be any number from 0-989, and the 10 groups of visitor is from 990-999. **IMPORTANT:** User IDs do not have to be proceeded with any leading zeros. Recording of User ID is critical. Modifications to user data require either the card or the User ID be available.
 > **Proximity Card:** 125 KHz EM Card.
 > **Keypad PIN:** The PIN can be any 4-6 digits between 0001-999999 (except 1234 which is reserved).

ACCESS CONFIGURATION: CARD OR PIN & CARD ONLY -----

Add User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Card: Using Auto ID (Allows Keypad to assign Card to next available User ID number) OR 2. Add Card: Select Specific ID (Allows manager to define a specific User ID to associate the card to)	1 (Read Card) Cards can be added continuously. 1 (User ID) # (Read Card) The user ID is any number from 0-989.
3. Exit Program Mode	*

Delete User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Delete Card: By card OR 2. Delete Card: By User ID	2 (Read Card) Cards can be deleted continuously. 2 (User ID) # The user ID is any number from 0-989.
3. Exit Program Mode	*

Add or Delete a PIN

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add a PIN OR 2. Delete a PIN	1 (User ID) # (PIN) # OR 1 (PIN) # The ID number is any number between 0-989. The PIN is any 4-6 digits between 0001-999999 with the exception of 1234 which is reserved. 2 (User ID) # OR 2 (PIN) # PINs can be deleted continuously.
3. Exit Program Mode	*

Change a PIN

This operation is executed from outside of Program Mode.

Programming Step	Keystroke Combination
1. Change a PIN	* (User ID) # (Old PIN) # (New PIN) # (New PIN) #

ACCESS CONFIGURATION: CARD+PIN -----

Add a Card+ PIN User

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add a User Card by ID number	1 (User ID) # (Read Card)
3. Exit Program Mode	*
4. Add PIN	* (Read Card) (1234) # (New PIN) # (New PIN) # This operation is executed from outside of Program Mode

Change PIN

Allows card user to update the PIN for their card + PIN User ID. This operation is executed from outside of Program Mode.

Programming Step	Keystroke Combination
1. Change PIN using a Card OR 1. Change PIN using ID	* (Read Card) (Old PIN) # (New PIN) # (New PIN) # Default PIN binding to Card:1234 * (User ID) # (Old PIN) # (New PIN) # (New PIN) #

Delete User by User ID

Deleting by ID number will clear cards and PINS

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Delete User by User ID	2 (User ID) #
3. Exit Program Mode	*

Visitor User Setting

There are 10 groups Visitor PIN/card available, the users can be specified up to 10 times of usage, after a certain number of times, i.e. 5 times, the PIN/card become invalid automatically.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Visitor PIN User	8 (0-9 #) (User ID #) (PIN #) PIN is any 4-6 digits number except 1234
OR 2. Add Visitor Card User	8 (0-9 #) (User ID #) (Read Card))
2. Delete Visitor Users	2 (User ID #)
3. Exit Program Mode	*

Note:
 Number of time is 0-9, 0=10 times
 User ID number must be any number between 990-999
 Visitor PIN/card must be unique, should be distinguished from common PIN and card

Master Card Usage

Using Master Card to add and delete users

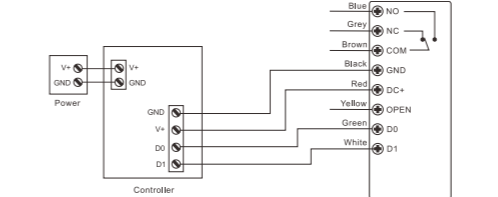
Add Card / PIN Users	1. Input (Master Card) 2. Input (Card) or (PIN #) Repeat step 2 for additional users 3. Input (Master Card) again
Delete Card / PIN Users	1. Input (Master Card Twice within 5s) 2. Input (Card) or (PIN #) Repeat step 2 for additional users 3. Input (Master Card) again

WIEGAND MODE

Pass-through Mode

(The keypad Operates as a Wiegand Output Reader)
 In this mode the keypad supports a Wiegand 26bits output so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 bits input, and then the keypad will operate as a slave reader.

Wiring Diagram



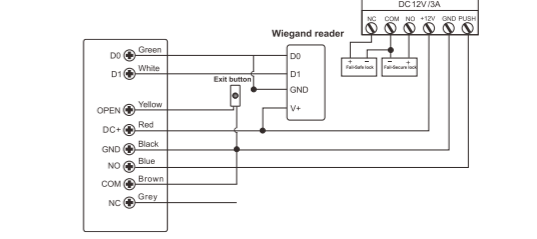
Keypad Transmission Format

Virtual Card Number
 The reader will transmit the PIN data when it receives the last key (#) after PIN code
 Example: PIN code: 999999
 Press 999999 #, then the output format will be: 00999999

Controller Mode

(The keypad Operates as a Controller)
 It supports Wiegand 26/34 bits input (Automatic Identification), so an external Wiegand device with 26/34 bits output can be connected to the Wiegand input terminals on the keypad. Either an EM card reader (125 KHz) or an Mifare card reader (13.56MHz) can be connected to the keypad.
 Cards are required to be added at the external reader, except where an external EM card Reader is used, in this case cards can be added at either reader or controller.

Wiring Diagram



OTHERS

To reset to factory default & Add Master Card:
 Power off, press the * button, hold it and power on, there will be two beeps, then release the exit button, the LED light turns into yellow, then read any 125KHz EM card, the LED will turn into red, means reset to factory default successfully. Of the card reading, it is the Master Card.

Remarks:

- ① If no Master Card added, must press the Exit Button for at least 10 seconds before release. (this will make the previous registered Master Card invalid)
- ② Reset to factory default, the user's information is still retained.

Erase all Users

This will delete ALL User data.
 1. Enter Program Mode by press: * (Master Code) #.
 2. Press 20000 #
 3. Exit *
 All configuration data is retained.

Reset Strike-Out Alarm

Enter Master Code or Valid Card/PIN to silence

Sound and Light Indication

Operation Status	Red LED	Green LED	Sounds
Power on	Bright		Short Single Beep
Stand by	Bright		
Press Keypad	Flashing		Short Single Beep
Enter Master Code Entry Mode	ON		Short Single Beep
In program mode	ON		Short Single Beep
Entered Program Step Successfully	ON	Single Flash	Short Single Beep
Entered Program Step Incorrectly			Short Single Beep
Exit from the programming mode	Bright		3 Short Beeps
Entry Granted		ON	Short Single Beep
Open lock	Green light bright		One beep
Alarm Mode Engaged	Flashing		Alarm
Alarm	Red light Shines quickly		Beeps
Pressing * Toggles Standby / Master Code Entry	ON/Flashing		Short Single Beep