

INTRODUCTION

The keypad is a single-entry multi-function Access Control with integrated keypad and card reader. It is designed and manufactured to perform in a wide range of indoor, outdoor and harsh environments. The keypad supports up to 1000 users (990 normal users + 10 visitor users) in multiple access configurations (Card, PIN, or Card + PIN). The built-in card reader supports 125KHz EM / 13.56MHz Mifare frequency cards. The relay can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines...etc). The keypad offers advanced programming features like: Facility code, Wiegand 26-37bits input and 26bits output interface. These features make it an ideal choice for door access not only for small shops and domestic households but also for commercial and industrial applications such as factories, warehouses, laboratories, banks and prisons.

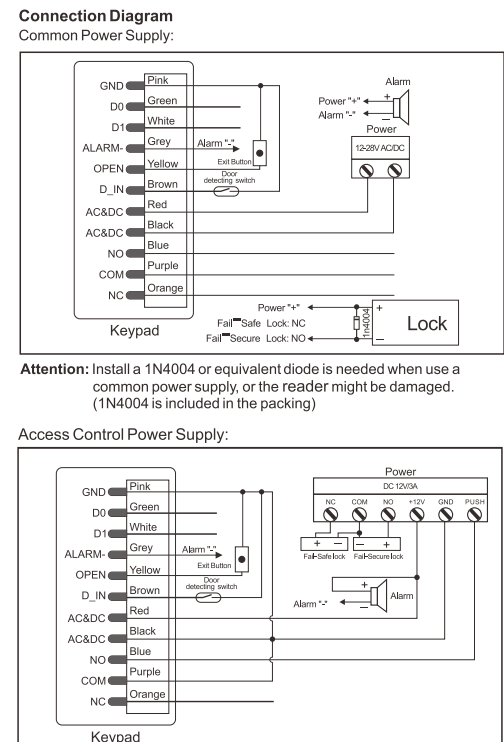
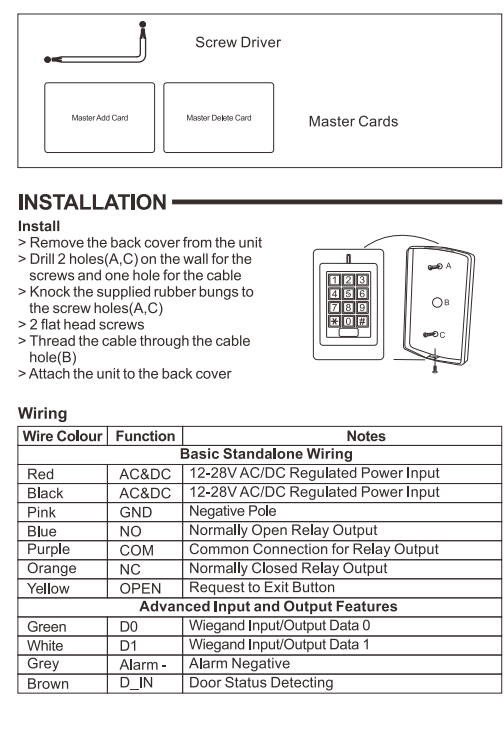
Features

- > Waterproof, meets IP66
- > Vandal-resistant metal enclosure
- > One programmable relay output
- > Standalone or pass-through operation
- > 1000 users (990 normal users + 10 visitor users)
- > Access method: Card, PIN, Card+PIN
- > Card type: 125KHz EM card / 13.56MHz Mifare card
- > Latch mode to hold door or gate open
- > Wiegand 26-37bits input and 26bits output
- > Facility code programmable
- > Integrated alarm & buzzer output
- > Low power consumption (50mA)
- > Anti-tamper alarm
- > Backlit keypad
- > Multi-color LED status display
- > 12-28V AC/DC power input

Specifications

User Capacity	1000 Cards/PINs
Normal Users	990
Visitor Users	10
Operating Voltage	12-28V AC/DC
Idle Current	35mA
Active Current	80mA

PIN length	4-6 digits
Proximity Card Reader	EM/Mifare (Optional) 125KHz EM / 13.56MHz Mifare Card
Radio Technology	125KHz EM / 13.56MHz Mifare Card
Read Range	3-6cm
Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm, Wiegand (input)
Relay	One (NO, NC, COM) Adjustable Relay Output Time: 0-99 Seconds (5 seconds default) Adjustable Alarm Output Time: 0-3 minutes (1 minute default) Lock Output Load: 3 Amp Maximum Alarm Output Load: 3 Amp Maximum
Wiegand Interface	Wiegand 26 bits input/output
Environment	Meets IP66 Operating Temperature: +40°C ~ -50°C, or -40°F ~ -140°F Operating Humidity: 10% ~ 90% Non-Condensing
Physical	Zinc-Alloy Enclosure Surface Finish: Powder Coat Dimensions: 1.117" x 0.974" x 0.250" Unit Weight: 600g Shipping Weight: 700g
Carton Inventory	Access Control Diode 1N4004 (For relay circuit protection) Self Tapping Screws Wall Anchors



To Reset to Factory Default: To reset to factory default, power off, press [2], hold it and power on, release it until hear two beeps and the LED shines in orange, then read any two 125KHz EM / 13.56MHz Mifare cards, the LED will turn red, means reset to factory default setting successfully. Of the two 125KHz EM / 13.56MHz Mifare cards read, the first one is Master Add Card, the second one is Master Delete Card. Remarks: Reset to factory default, the user's information is still retained.

Anti-tamper
The keypad uses a LDR (light dependent resistor) as an Anti-tamper alarm. If the keypad is removed from the cover then the tamper alarm will operate.

STANDALONE OPERATION

1.1 User Settings

To enter the programming mode: [2] Master code # [123456 is the factory default master code]

Note that to undertake the following programming the master user must be logged in

To change the master code: [0] New code # [New code #]

The master code is any 6 digits

Setting the working mode:

Set valid card or PIN users: [3] [0] # Entry by either card or PIN (Factory Default)

Set valid card and PIN users: [3] [1] # Entry by card and PIN

Set valid card Only users: [3] [2] # Entry by card only

To set a user in either card or PIN mode [3] [0] # (Factory Default)

To add a PIN user	[1] User ID number # [PIN #] OR [1] PIN # The ID number is any number between 0-999. The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved. [1] User ID no. # [PIN #] User ID no. 2 # [PIN #]
To delete a PIN user - By user ID	[2] User ID number # Users can be deleted continuously without exiting programming mode
To delete a PIN user - By PIN	[2] Input PIN # Users can be deleted continuously without exiting programming mode
To change the PIN of a PIN user (This step must be done out of programming mode)	[*] ID number # [Old PIN #] [New PIN #] [New PIN #]
To add a card user (Method 1) This is the fastest way to add cards using ID number auto generation	[1] Read card / Input 8/10 digits card number # Cards can be added continuously without exiting programming mode
To add a card user (Method 2) This is the alternative way to add cards using User ID Allocation. In this method a User ID is allocated to a card. Only one user ID can be allocated to a single card	[1] ID number # [Read card / Input 8/10 digits card number #] The ID number is any number between 0-999
To delete a card user - By card	[2] Read Card #
To delete a card user - By user ID	[2] User ID #
To delete a card user - By card number	[2] Input 8/10 digits card number #
To set a card and PIN user in card and PIN mode	[3] [1] #

Simplified Instruction

Function Description	Operation
Enter the Programming Mode	* (Master Code) # (123456 is the factory default master code)
Change the Master Code	0 (New Master Code) # (Repeat New Master Code) # (code: 6 digits)
Add Card User	1 (Read Card)
Add PIN User	1 (User ID # (PIN) # The ID number is any number between 0-999. The PIN is any 4-6 digits between 0000-999999
Delete User	2 (Read Card) # 2 (User ID) #
Exit from the Programming Mode	*
How to be granted access	
Card User	Read Card
PIN User	Enter (PIN) #

To Add a card and PIN user
The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved.

To change a PIN in card and PIN mode (Method 1)
Note that this is done outside programming mode so the user can undertake this themselves

To change a PIN in card and PIN mode (Method 2)
Note that this is done outside programming mode so the user can undertake this themselves

To delete a Card and PIN user just delete the card

To set a card user in card mode [3] [2] #

To add and delete a card user
The operating is the same as adding and deleting a card user in [3] [0] #

To delete All users
Note that this is a dangerous option so use with care

To unlock the door
For a PIN user: Enter the PIN then press #
For a card user: Read card
For a card and PIN user: Read card then enter PIN #

1.2 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.

To Add Visitor PIN User
[1] User ID number # [0-9] # [PIN] #
PIN is any 4-6 digits number except 1234

To Add Visitor Card User
[1] User ID number # [0-9] #
[Read card] Input 8/10 digits card number #

To Delete Visitor Users
[2] User ID #

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

1.3 Master Cards Using

Using Master Cards to add and delete card users

1. (Read Master Add Card)
2. (Read User Card)
3. (Read Master Add Card)

Add a User Card
Repeat Step 2 for additional user cards

Delete a User Card
Repeat Step 2 for additional user cards

1.4 Relay Setting (Pulse mode, Toggle mode)

Pulse mode (factory default)
[4] 1-99 #
The door relay time is between 1-99 seconds, the factory default setting is 5 seconds.

Toggle mode (Latch mode)
[4] 0 #

1.5 Door Detecting, Alarm, Sound and Light Settings

Door Open Detection
Door Open Too Long (DOTL) warning, When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door and continue for 1 minute before switching off automatically.

Door Forced Open warning: When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened by force, or if the door is opened after 60 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate. The Alarm Output time is adjustable between 1-3 minutes with the factory default setting 1 minute.

To set alarm time: [5] [0-3] # (Factory default 1 minute)
Enter Master Code # or valid user card/ PIN to silence

To disable door open detection: [6] 0 # (factory default)

To enable door open detection: [6] 1 #

Set Audible and Visual Response

LED always OFF	[6] 2 #
LED always ON	[6] 3 # (Factory default)
Keypad Backlit always OFF	[6] 4 #
Keypad Backlit always ON	[6] 5 #
Keypad Backlit Automatic OFF	[6] 6 # (Factory default)
Keypad Backlit Automatic ON	[6] 7 #
Disable Sound	[6] 8 #
Enable Sound	[6] 9 # (Factory default)

Set Keypad Lockout & Alarm Output
If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period either the keypad will lockout for 10 minutes or the alarm will operate for 10 minutes, depending on the option selected below.

Normal status	[7] 0 # (Factory default)
No keypad lockout or alarm	[7] 0 # (Factory default)
Keypad Lockout	[7] 1 #
Alarm Output	[7] 2 #

Sound and Light Indication

Operation Status	Red LED	Green LED	Yellow LED	Buzzer
Power on	Bright	—	—	Short Ring
Standby	Bright	—	—	—
Press Keypad	—	—	—	Short Ring
Operation successful	—	Bright	—	Short Ring
Operation failed	—	—	—	3 Short Ring
Enter into programming mode	Bright	—	—	Short Ring
In the programming mode	—	—	Bright	—
Exit from the programming mode	Bright	—	—	Short Ring
Open the door	—	Bright	—	Short Ring
Alarm	Bright	—	—	Alarm

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 bit input, and then the keypad will operate as a slave reader.

Wiring Diagram

Transmission Format

Keypad Transmission:

- 1) When the keypad facility code is 0 (Factory default is 0) The Reader will transmit the PIN data when it receives the last key (#) press after PIN code.
- 2) When the keypad facility code is between 1-255 The reader will transmit the facility code and PIN Data (for 4 digits PIN only) when it receives the last key (#) after PIN code.

Example:
PIN code: 3456
Facility code: 5
Press 3456#, then the output format will be: 00123456

Example:
PIN code: 3456
Facility code: 5
Press 3456#, then the output format will be: 00503456

SET DEVICE ID

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Set Device ID	8 (0-255) # (Factory default is 0)
3. Exit	*

Proximity Card Transmission:
The Reader will transmit the card data when it reads the Card.
Format: Card Number
(Note: no matter the card is valid or invalid, the data will be transmitted)

