



## User Manual

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## 1. Description

The device is a standalone as well as a Wiegand access control keypad and proximity card reader which supports EM and HID card types, it's one of the most advanced standalone access control. Its build-in USA Atmel microprocessor, with strong anti-interference ability, high security and reliability, powerful function and convenient operation. It is widely used in high-end buildings, residential communities and other public places. This device can be used as standalone and also connected to a central Access Control Panel.

## 2. Features

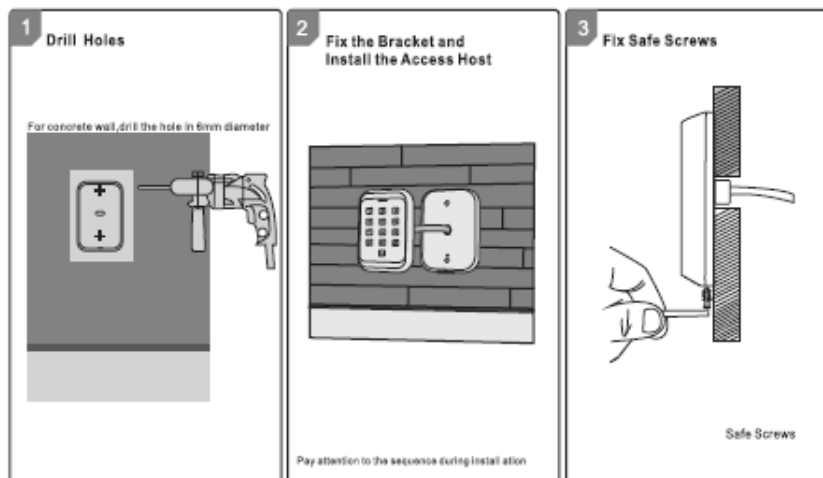
- Ultra-low power consumption: Standby current is less than 30mA.
- Input & Output: Wiegand26.
- Reading Time: Less than 0.1s after reading card.
- Backlight Keypad: Easy to operate at night.
- Doorbell interface: Support external wired doorbell.
- Entry Methods: Card, code, card+code.
- Pin only: Card are not necessary if you choose pin only method.
- Change Codes: Users can change codes by themselves.
- Anti-tamper alarm: Alarm is activated if device is torn off or illegally removed.
- Delete Users by card NO.: Delete card NO via keypad to reduce security issues.

## 3. Specification

- Input Voltage: DC 12V
- Idle Current:  $\leq 25\text{mA}$
- Card reading distance: 2-3 cm
- Card Frequency: 125KHz for EM and HID
- Card transmission format: wiegand26
- Keypad transmission format: 4bit, 8bit and Virtual card number
- Operating Temperature:  $-45^{\circ}\text{C} \sim 55^{\circ}\text{C}$  ( $-49\text{F} \sim 131\text{F}$ )
- Operating Humidity: 0%~95%

## 4. Installation

Install base plate onto wall and attach device using bottom screw



## 5. Wiring

No.	Marks	Color	Description
1	BELL_A	Pink	Doorbell button
2	BELL_B	Pink	Doorbell button
3	D0	Green	Wiegand output D0
4	D1	White	Wiegand output D1
5	+12V	Red	Positive pole of power supply
6	GND	Black	Negative pole of power supply
7	OPEN	Yellow	Exit button
8	D_IN	Brown	Door contact
9	ALARM	Gray	Alarm Output
10	NO	Blue	Relay NO end
11	COM	Purple	Relay Com end
12	NC	Orange	Relay NC end

## 6. Sound and Light Indication

Operation	LED Color	Buzzer
Standby	Red flash	
Press key		Di
Read card	Green	Di-
Door Open	Green	Di-
Operation Successful	Green	Di-
Operation Failed		Di Di Di
PIN Inputting	Red	
Card&PIN Inputting	Red	
Multi Card Reading	Red	
Under Menu	Red	
Under Setting	Orange	
Manager Card Enter	Orange	Di Di
Manager Card Exit	Red Flash	Di-
Alarm	Red Quick Flash	Alarm

## 7. Quick Programming Guide

### 7.1 Administrator Setting

Stand by	Master Code	Menu	Setting	Remarks	Functions
Red Flash	Red	Red	Orange		
*	Master code# (Code length: 6-8 digits)	00	New master code# Repeat new master code #	Factory default: 999999	Change the master code
		01	Read Manager Add Card		Set Manager Add Card
		02	Read Manager Delete Card		Set Manager Delete Card
		03	Read Anti-duress card		Set Anti-duress card
		05	Anti-duress PIN#		Set Anti-duress PIN
		07	0000#		Delete All Users
		51			Master open Lock

### 7.2 System Setting

Stand by	Master Code	Menu	Setting	Remarks	Functions
Red Flash	Red	Red	Orange		
*	Master code# (Code length: 6-8 digits)	30	0-15 #	Default 0	To set facility code
		31	0 #	Unable to initialize	Wiegand reader mode
			1 #		Standalone mode (factory default setting)
			5 #		Anti-passback mode
		32	26 #	Default 26	To set Wiegand format
		33	0-2 #	Unable to initialize	To set keypad transmission format
		34	1-3 #	Default 1	To set alarm time
		35	0 #	Default 0	Safe mode 0
			1 #		Safe mode 1
			2 #		Safe mode 2

### 7.3 User Setting

Stand by	Master Code	Menu	Setting	Remarks	Functions
Red Flash	Red	Red	Orange		
*	Master code# (Code length: 6-8 digits)	11	Read card #	Users can be added continuously without exiting programming mode	To add card users
			ID number # read card#		
			Card number #		
			ID number # card number #		
			ID number # PIN #		To add PIN users
		12	Read card #	Users can be deleted continuously without exiting programming mode	To delete users
			ID number #		
			Card number #		
		13	0 #	Default 2	Entry by Card
			1 #		Entry by card+PIN
			2 #		Entry by Card or PIN
		14	0-99 #	Default 5	Set door relay time
		15	0 #	Default 0	Relay Setting-Pulse mode
			1 #		Relay Setting-Toggle mode
		16	1-10 #	Default 1	To set open door by multi cards
		17	ID number#, card number#, card quantity#		To add a series cards users

## 7.4 User Optional Setting

Stand by	Master Code	Menu	Setting	Remarks	Functions
Red Flash	Red	Red	Orange		
*	Master code# (Code length: 6-8 digits)	41	0 #		Buzzer will be in silence except enter the programming mode
			1 #	Default 1	Buzzer will sound when press the key
		42	0 #		Disable keypad backlight
			1 #		Enable keypad backlight
			2 #	Default 2	Automatic mode
		43	0 #		LED Light Disable when stand-by status
			1 #	Default 1	LED is constantly flash when stand-by status

### Instruction:

- Master code must be 6-8 digits, Anti-duress PIN must be 8 digits, user PIN is 4-6 digits,
- The user ID number is 1-4 digits ,which can be any number among 1-2000,Invalid 0 can be omitted; card number must be 8 or 10 digits, if the card number is less than 8 or 10 digits, input 0 before the card number,
- Door open time is 0-99 second,0=50mS
- When register one card user into the device, the device will automatically generate a PIN 1234, but this PIN 1234 can't open the door, you need to change PIN 1234 to other numbers to open the door.
- When an invalid master pin is pressed, the device will go back to the standby status after 5 seconds, when a valid master pin is entered, it will go back to standby status after 30 seconds.
- In operating the keypad, pressing # means to confirm the input digits ,In operation of a cycle adding or deleting cards, pressing # means to end the cycle operation and back the up operation; pressing \* means to exit the operation.
- When add a series cards, this unit will make the ID number and card number as initial value; after adding one user, then it will increase the ID number and card number automatically, until the specified number of card is added.The card number must be consecutive card quantity is between 1-2000.
- Working mode and keypad transmission format have been set before shipping, customer can change according to requirement, but cannot be restored to factory settings by initialization.
- When users is registered successfully, LED will turn green.

## 8. Administrator setting

### Administrator setting on keypad

Press \* Master code # factory default:999999.

### 8.1 Change the master code

Press 00 new code # repeat new master code #

Note: Master Code length: 6~8 digits.

### 8.2 Set Manager Card

Set manager add card

Press 01 read manager add card

Set manager delete card

Press 02 read manager delete card

Note: When add the new manager card, the new one will automatically cover the old card, only one manager card for one device.

### 8.3 Set Anti-duress card

Set Anti-duress card

Press 03 read anti-duress card

Note: when add the new anti-duress card, the new one will automatically cover the old card, only one anti-duress card for one device.

### 8.4 Set Anti-duress PIN

Set Anti-duress PIN

Press 05 8-digit duress PIN #

Note: 1.The anti-duress pin is 8 digits .  
2.When set the new anti-duress PIN, the new one will automatically cover the old anti-duress PIN, only one anti-duress PIN for one device.

### 8.5 Delete all users

Press 07 0000 #

Note: All users will be deleted. This is a dangerous option, so use with care.

### 8.6 Set administer open lock

Set administer open Lock

Press 51 #

### 8.7 Users setting

#### 8.7.1 Read card to add user

Press 11 read card # read card ... #

#### 8.7.2 Use ID Number and read card to add user

Press 11 ID number # read card ... ID number # read card ... #

#### 8.7.3 Use card number

Press 11 card number # ... card number # ... #

Note: 1. Card number must be 8 or 10 digits, if the card number is less than 8 or 10 digits, input 0 before the card number.

2. Automatically increases, the user ID will be generated by the machine automatically, the range is 1 ~ 2000, and automatically search from 1 to 2000.

#### 8.7.4 Use ID number and card number to add user

Press 11 ID number # 8-digits card number # ... ID number # 8-digits card number #  
... #

Note: 1. ID number is 1~4 digits, the range is 1~2000, for example 1,01,001,0001, all these mean ID number 1.

2. Add card user, it will generate one "1234" PIN, this PIN can not open door, only for user modify PIN.

#### 8.7.5 Use ID number and PIN to add user

Press 11 ID number # PIN # ... ID number # PIN # ... #

Note: It applies to PIN user, pin is irrelevant with card, the PIN is any 4-6 digits, but cannot be "1234".

### 8.8 Delete user

#### 8.8.1 Read card to delete user

Press 12 read card read card ... #

#### 8.8.2 Use ID number to delete user

Press 12 ID number # ID number # ... #

#### 8.8.3 Use card number to delete user

Press 12 card number # card number # ... #

#### 8.8.4 Delete all users

Press 07 0000 #

Note: All users will be deleted.

### 8.9 Set opening door mode

#### 8.9.1 Entry is by card only

Press 13 0 #

#### 8.9.2 Entry is by card and PIN together

Press 13 1 #

#### 8.9.3 Entry is by card or PIN (factory default)

Press 13 2 #

### 8.10 set door relay time



Press 14 0~99 #

Note: 0~99 is to set the door delay time 0-99 seconds, factory default is 5 seconds.

### 8.11 Set Relay mode

Relay setting -pulse mode

Press 15 0 #

Every time a valid card/tag read or PIN input, the relay will operate, for the pre-set relay pulse time. (Factory default setting)

Relay setting-Toggle mode

Press 15 1 #

Every time a valid card/tag read or PIN input, the relay changes state, which will not turn back until read card/tag or input PIN again.

### 8.12 Set opening door by multi cards

Press 16 card quantity #

Note: It is only for card entry mode (Factory default setting : 1, card quantity "1-10").

### 8.13 Add a series consecutive cards users

Press 17 ID number # card number # card quantity #

Note: The card number must be consecutive card quantity is between 1~2000; card number is 10 digits or 8 digits.

### 8.14 System setting

#### 8.14.1 To set facility code

Press 30 0~15 #

Note: Code should be 0~15, factory default setting: 0.

#### 8.14.2 Wiegand Reader Mode (Wiegand 26)

Press 31 0 #

#### 8.14.3 Standalone Mode (Factory default setting)

Press 31 1 #

#### 8.14.4 Anti-passback Mode

Press 31 5 #

#### 8.15 To set wiegand format

Press 32 26 #

Note: factory default setting: WG26.

### 8.16 Setting keypad transmission format

Press 33 0~2 # (Unable to initialize)

Note: Keypad transmission format is 0 1 2, factory default is 0.

### 8.17 Setting alarm time

Press 34 1~3 # (Unable to initialize)

Note: 1. factory default is 1 minute.

### 8.18 Setting safe mode

#### 8.18.1 Normal mode (factory default)

Press 35 0 #

#### 8.18.2 Dead mode

Press 35 1 #

If read invalid card or input wrong PIN 10 times in 10 minutes, system will be dead for 10 mins.

#### 8.18.3 Alarm mode

Press 35 2 #

if read invalid card or input wrong PIN 10 times in 10 minutes, external alarm and built-in buzzer will work.

### 8.19 User optional setting

#### 8.19.1 Setting buzzer silence in non -setting state

Press 41 0 #

setting buzzer to normal work (Factory default setting)

Press 41 1 #

#### 8.19.2 Setting keypad backlight

Disable keypad backlight

Press 42 0 #

Enable keypad backlight

Press 42 1 #

Automatic mode (factory default setting)

Press 42 2 #

The keyboard light is off during standby, the light is on when press key.

#### 8.19.3 Setting LED light (stand-by status)

Disable LED light

Press 43 0 #

Flash LED light (factory default setting).

Press 43 1 #

## **Manager card operation**

### **8.20 Add user**

Read Manager Add Card, read user cards continuously, read Manager Add card again.

### **8.21 Delete user**

Read Manager Delete Card, read user cards continuously, read Manager Delete card again.

## **9. User Operation**

9.1 Entry by card mode, Set multi cards to open door when card quantity is 1.

Read user card, lock will be unlocked.

9.2 Entry by card mode, Set multi cards to open door when card quantity is 2-10.

Read these cards one by one, present each card in 5 seconds, lock will be unlocked.

9.3 Entry by card and PIN

Present card, then press PIN (4 to 6 digits), #, lock will be unlocked.

9.4 Entry by card or PIN mode

Present card, lock will be unlocked.Or Press PIN (4 to 6 digits), #, lock will be unlocked.

### **9.5 Relay mode**

Relay setting -pulse mode

Every time a valid card/tag read or PIN input, the relay will operate, for the pre-set relay pulse time.

Relay setting-Toggle mode

Every time a valid card/tag read or PIN input, the relay changes state, which will not turn back until read card/tag or input PIN again.

### **9.6 Modify user PIN (no need enter programming mode)**

\*, read user card, press old 4 to 6 digits PIN, #, new 4 to 6 digits PIN # ,repeat new 4 to 6 digits PIN #.

Or \*, press ID number # old 4 to 6 digits PIN,# ,new 4 to 6 digits PIN # ,repeat new 4 to 6 digits PIN #.

Notice: User who do not have user card must get ID number and origin PIN from Admin.

## **10. Alarm Function**

### **10.1 Anti-tamper alarm**

If the device is disassembled illegally, the buzzer and the external alarm will operate.

### **10.2 Door contact alarm**

When connect with door contact, if the door is opened illegally, the buzzer and the external alarm will operate.

### **10.3 The Anti-duress alarm**

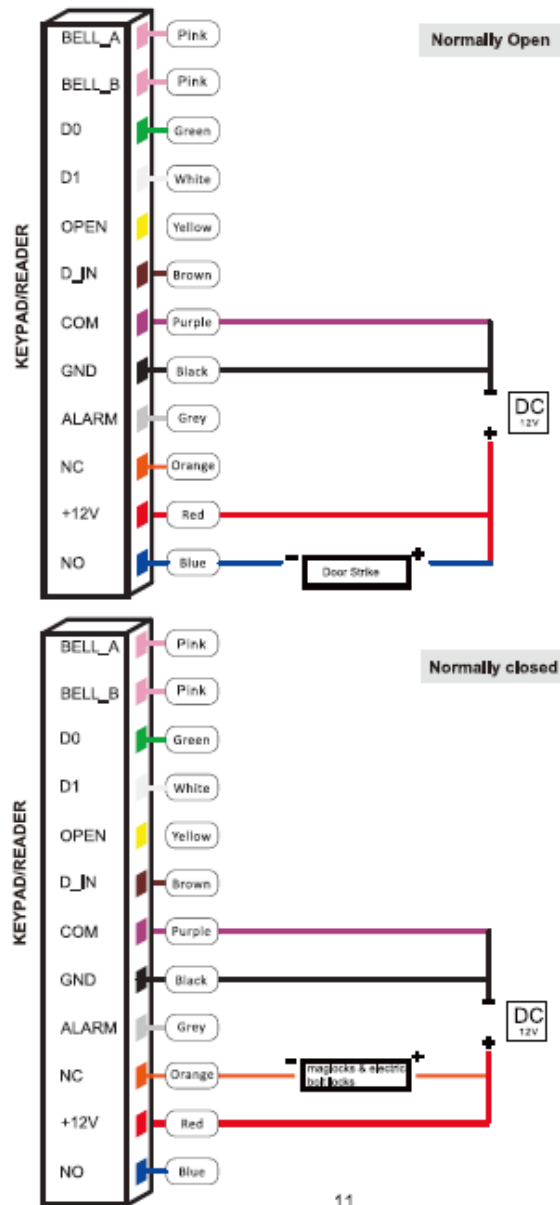
When read anti-duress card or input 8-digit anti duress PIN, then press #, the corresponding lock will open, at the same time, the external alarm will operate, but the device buzzer will not operate.

### 10.4 Remove alarm

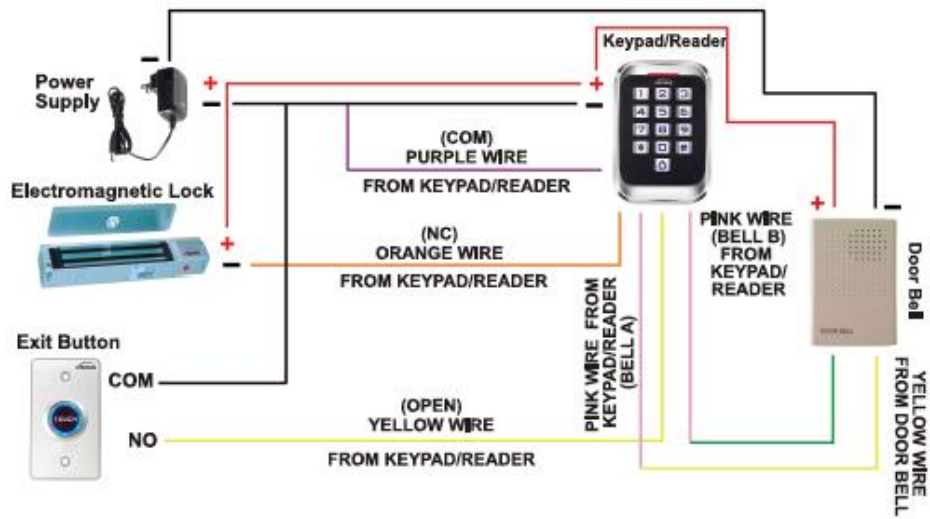
Read valid user card, manager card or input master code, then alarm will be removed. If no any operation, alarm will be removed automatically.

## 11. Connection Diagram

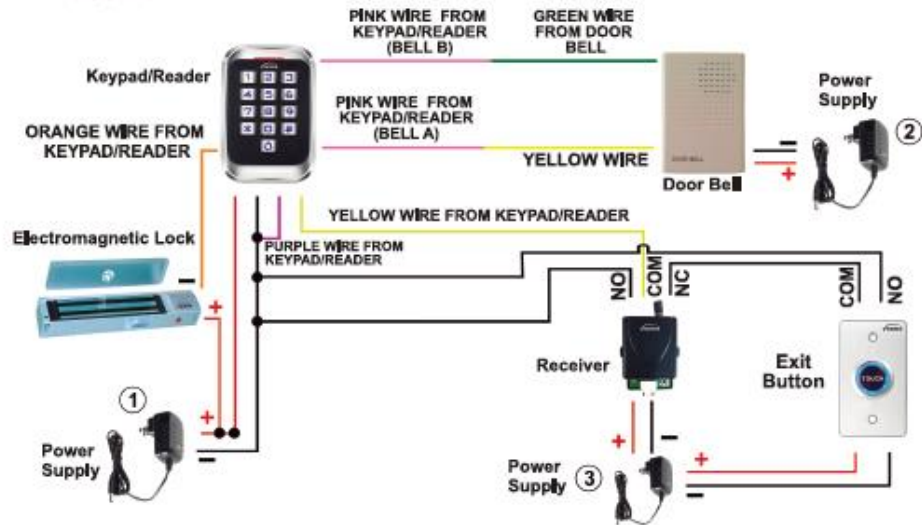
### 11.1 NO/NC Locks



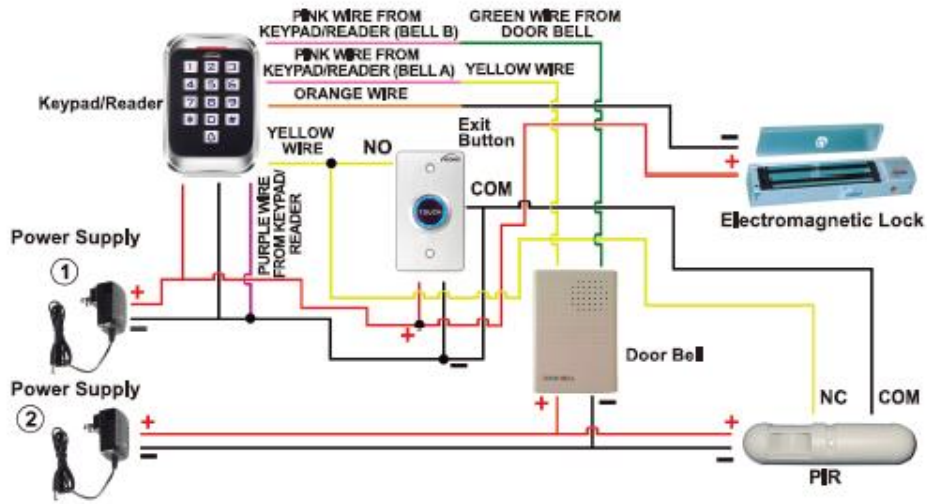
### 11.2 Connection with Accessories: Doorbell and Exit button



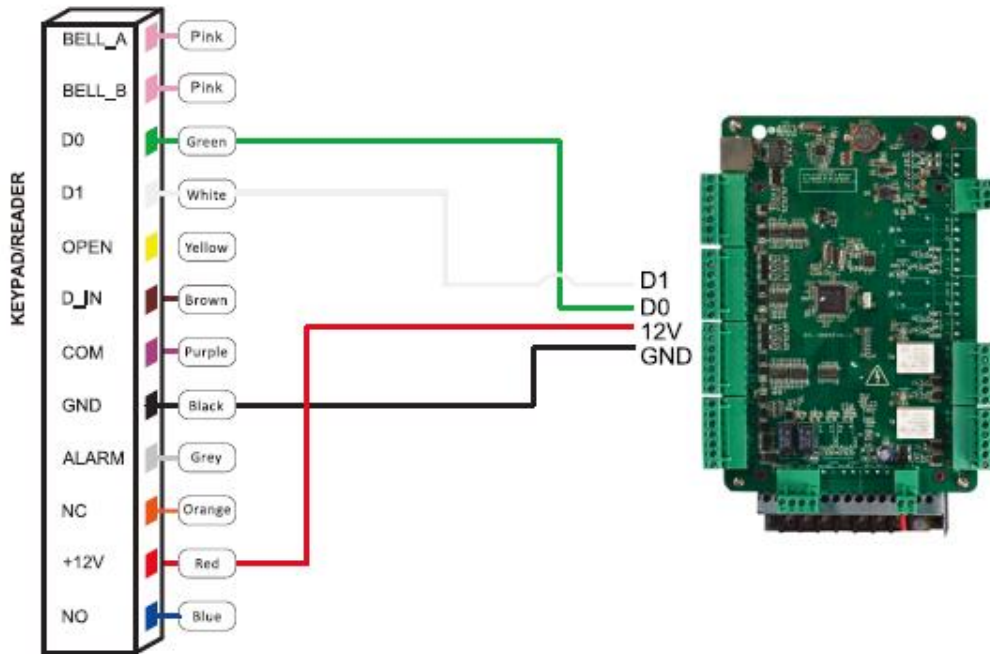
### 11.3 Connection with Accessories: Doorbell, Exit button, and Wireless Receiver



### 11.4 Connection with Accessories: Doorbell, Exit button, and PIR



### 11.5 Connection with Access Control Panel



## 12. Reset to Factory Default

- a. Power off.
- b. Press and hold # key, then power on.
- c. Release # key until hearing short beeps twice. When hearing long beep once, the device is in normal working state and reset to factory default setting, but the user data will not be deleted.

## 13. Packing List

Name	Model/size	Quantity	Remarks
Keypad		1	
User manual		1	
Self-tapping screws	Φ4mm×28 mm	2	Used in fixing
Rubber plug	Φ6mm×30 mm	2	Used in fixing
Star screw driver	Φ20mm×60mm	1	Special for Keypad

### Warning Tip:

- a. Please do not to repair the device privately, if you have problems, please return to the supplier.
- b. Before installing on the wall, please check carefully concealed wiring or wire tube, in case of broken concealed wiring etc. when drilling, please use safe glasses.
- c. If the product update, manual may be different, Without Prior Notice.

#### FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.