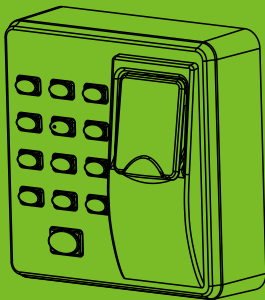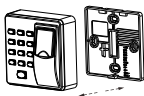# User Manual
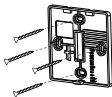
## X7 Access Control System

Version: 1.2.1

## 1. Equipment Installation

(1) Remove the screw on the bottom of device.

(2) Take away the back cover.

(3) Fix the back cover on the wall according to the mounting paper.
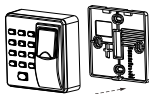
(4) Fix the device to the back cover.
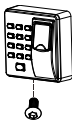
(5) Fix the screw.
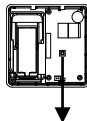
Tamper Alarm Button

## 2. Structure and Function
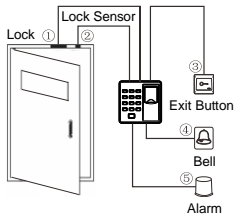
**Access Control System Function**:
(1) When a registered user's identity is verified, the Access Control device will send out signal to unlock the door.
(2) The door sensor will detect the status of the lock. If the door is unexpectedly opened or improperly closed, the alarm will be triggered.
(3) It supports the exit button for opening the door from inside.
(4) It supports door bell.
(5) If the Access Control device is dismantled, the alarm will be triggered.

Lock ①
Lock Sensor ②
③ Exit Button
④ Bell
⑤ Alarm

## 3. Lock Connection

### ⚠ **Warning**: **No operation when power on!**

(1) The system supports NO LOCK and NC LOCK. The NO LOCK (normally open at power on) is connected with **NO** terminal, and the NC LOCK is connected with **NC** terminal.

(2) To prevent the generation of self-inductance EMF which would affect the system, when the electrical lock is linked to the Access Control System, it is required to connect one FR107 diode (equipped in the package, do not reverse the polarities) in parallel in order to release the self-inductance EMF.

(1) Device shares power with the lock

When Device share power with the lock:
$U_{LOCK}=12V$, $I \cdot I_{LOCK} >1A…$ ①
and the lock is near to the device.
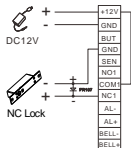


(2) Does not share power with the lock

Device does not share power with the lock:
A. When $U_{LOCK}=12V$ $I \cdot I_{LOCK} \leq 1A$;
B. When $U_{LOCK} \neq 12V$;
C. When the lock is far apart from the device.
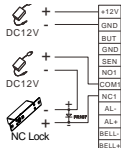


① **I**: device' output current, **U**$_{LOCK}$: lock voltage, **I**$_{LOCK}$: lock current.

(3) One device controls one lock
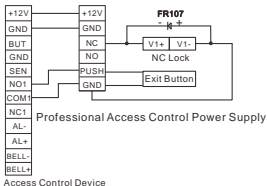
## 4. Connected with Other Devices



| |
|---|
| +12V |
| GND |
| BUT |
| GND |
| SEN |
| NO1 |
| COM1 |
| NC1 |
| AL- |
| AL+ |
| BELL- |
| BELL+ |

Exit Button

Sensor

Alarm Power

Alarm

Bell Power

Bell
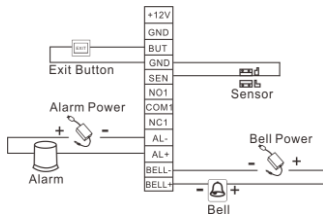
Only devices with an alarm ≤ DC 12V can be connected.

## 5. Connect with Power



DC12V

+12V
GND
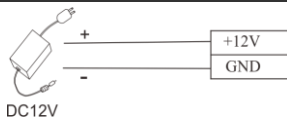
Input DC 12V, 500mA (50mA in idle status) Positive is connected with **+12V**, negative is connected with **GND** (do not reverse the polarities).

## Instructions

**Step 1**: Power on after the device is completely installed on the wall.

**Step 2**: Authenticate administrator password and change it immediately. Adjust access control parameters, which include changing passwords for door opening, and setting unlocking duration, authentication mode, concealed mode, door sensor mode and alarm etc.

**Step 3**: You may register and authenticate user accounts, cards or passwords.

## Operation Instructions

### 1. User Management

#### 1.1 Administrator Operation

To ensure data security of the device, users can operate the device only after the administrator password is authenticated.

❖ **Administrator Authentication**

| | | |
|---|---|---|
| 1. Press [*]<br>(The indicator is off and makes a long beep.) | → 2. Press[#].<br>(Enter step of password authentication.) | → 3. Enter the administrator password.<br>(The default password is 1234.) |
| 5. Exit.<br>(Press [*] or do not operate the device within 20 seconds, The indicator turns red and makes a long beep, then automatically exit.) | ← 4. Authentication succeeds.<br>(The indicator turns green.) | ↓ |
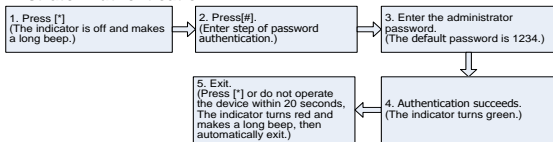
☺Note: The default administrator password is 1234. You are advised to change the initial password at the beginning.

❖ **Change Administrator Password**

| | | |
|---|---|---|
| 1. The administrator password is authenticated. | → 2. Press [8]. | → 3. Enter a new administrator password. |
| 6. Exit.<br>(The indicator turns red and makes a long beep.) | ← 5. Password is successfully changed. (The indicator turns green and makes a long beep.) | ← 4. Enter the new administrator password again for authentication. |

Fail (The indicator turns red and makes three beeps.) / Succeed
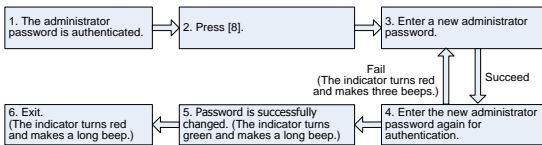
☺Note: Four-digit passwords are automatically verified. If passwords less than four digits, press [#] to confirm.

❖ **Open Door by Entering Administrator Password**

```
┌─────────────────────┐    ┌──────────────────────────┐    ┌──────────────────────────┐
│ 1. The administrator │ →  │ 2. Press [0] or [#].     │ →  │ 3. Press [0] or [#].     │
│ password is          │    │ (The indicator turns     │    │ (The indicator turns     │
│ authenticated.       │    │ green and makes a long   │    │ green and makes a long   │
│                      │    │ beep.)                   │    │ beep.)                   │
└─────────────────────┘    └──────────────────────────┘    └──────────────────────────┘
                                                                        ⇓
┌──────────────────────────┐    ┌──────────────────────────┐
│ 5.Exit.                  │ ←  │ 4. The door is opened    │
│ (The indicator turns red │    │ (The indicator turns     │
│ and makes a long beep.)  │    │ green and makes a long   │
│                          │    │ beep.)                   │
└──────────────────────────┘    └──────────────────────────┘
```
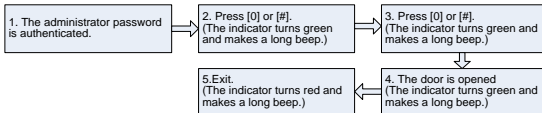
☺Note: This function can be used to open the door.

❖ **Forgot Administrator Password**

If administrator password is lost, you may reset the password to default through tamper switch. Dismantle the device and wait for 30 seconds until a short beep is heard, then press the Tamper Switch three times to reset to the initial administrator password, this operation must be done within 30 seconds.

☺Note: The default administrator password is 1234.

**1.2 Adding Users**

Register the fingerprint or card of a user or register cards in batches.

❖ **Adding a User**

```
┌─────────────────────┐                         ┌──────────────────────────────┐
│ 1. The administrator │ → ┌──────────────┐  →   │ 4. Register fingerprint or   │
│ is authenticated.    │   │ 2. Press [1].│      │ card. (Press fingers three   │
└─────────────────────┘   └──────────────┘      │ times or swipe the card once.)│
                                  ↓              └──────────────────────────────┘
                          ┌──────────────────┐   ┌──────────────────────────────┐
                          │ 3. Input user ID │   │ 4. Register fingerprint or   │
                          │ twice (The       │ → │ card. (Press fingers three   │
                          │ indicator turns  │   │ times or swipe the card once.)│
                          │ green and makes a│   └──────────────────────────────┘
                          │ long beep.)      │                  ↓
                          └──────────────────┘   ┌──────────────────────────────┐
┌──────────────────────┐                         │ 5. Registration succeeds.    │
│ 6. Exit.             │ ←                        │ (The indicator turns green   │
│ (Press [*], the      │                         │ and makes a long beep.)      │
│ indicator turns red  │                         └──────────────────────────────┘
│ and makes a long     │
│ beep. )              │
└──────────────────────┘
```

☺Note:

1. Five digits user ID is automatically verified, if user ID is less than five digits, press [#] to confirm.
2. If the user ID is not available, the ID number increases automatically. It continues to register new one once a user is successfully registered.
3. The registration fails if the user ID, fingerprint or the card has been registered (the

2

indicator turns red and makes three short beeps). When the indicator turns green, you can register the user again. If you fail to swipe card, press fingerprint or enter user ID for three times, the device will enter in idle status.

❖ **Registering Cards in Batches**

| 1. The administrator password is authenticated. | → | 2. Press [6]. (Register cards in batches) | → | 3. Swipe the first card once. |
|---|---|---|---|---|

Fail (The indicator turns red and makes three beeps.)  Succeed

| 6. Exit. (The indicator turns red and makes a long beep, then automatically exit.) | ← | 5. Cards are successfully registered in batches. | ← | 4. Enter the total number of cards. |
|---|---|---|---|---|

☺Note:
1. In the process of entering the total number of cards, three-digit numbers are automatically verified. For numbers with less than three digits, press [#] to confirm. Press [*] to enter the total number of cards again.
2. You must clear all the registered users before registering cards in batches. IDs of the to-be-registered cards must be consecutive numbers.

**1.3 Register Access Passwords**

This device supports 8 passwords, each password has a Group ID ranged from 1 ~ 8. The default password value is 0 for all groups, which means those passwords are disabled.

| 1. The administrator password is authenticated. | → | 2. Press [3]. (The indicator turns green and makes a long beep.) | → | 3. Enter the group ID of password.(Group IDs: 1 ~ 8.) |
|---|---|---|---|---|

| 7. Exit. (Press [*], the indicator turns red and makes a long beep, then automatically exit) | ← | 6. Registration succeeds. (The indicator turns green and makes a long beep.) | ← | 4. Enter the password twice. (The password is consists of four digits.) |
|---|---|---|---|---|

☺Note:
1. When a password is changed to be 0, 00, 000, or 0000, the password is disabled.

2. When a password is successfully changed, you can immediately change the next password by entering another group ID.

## 1.4 User Authentication
### Card / Fingerprint / Password Authentication
When the device is power-on, it enters user authentication state.
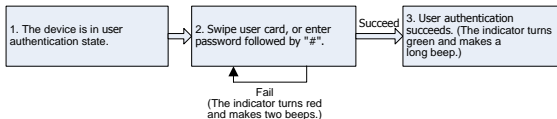


☺Note: Press [#] after entering a password for authentication. The door opens if the entered password is identical with one of the 8 passwords. The initial eight passwords for opening the door are empty.

## 1.5 User Deletion
Delete one, multiple or all registered user(s).
### ❖ Deleting One User
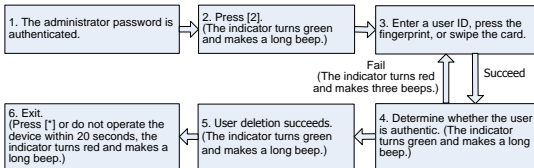


☺Note:
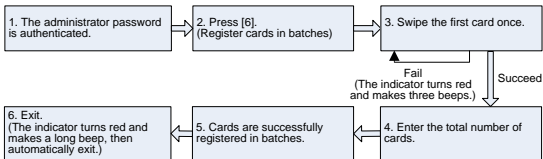1. You can either swipe the card, press fingerprint or input user ID to delete a user. Five digits user ID will be automatically verified, if user ID is less than five digits, press [#] to confirm.

2. After successful deletion, the device will automatically enter the process of deleting next user. Press [*] to exit.

❖ **Deleting All Users**

```
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ 1. The administrator │    │ 2. Press [9].       │    │ 3. Press [9].       │
│ password is          │───▶│ (The indicator turns│───▶│ (The indicator turns│
│ authenticated.       │    │ green and makes a   │    │ green and makes a   │
│                      │    │ long beep.)         │    │ long beep.)         │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
                                                                  │
┌─────────────────────┐    ┌─────────────────────┐               ▼
│ 5.Exit.             │    │ 4. Deletion of all  │
│ (The indicator turns│    │ users succeeds.     │
│ red and makes a long│◀───│ (The indicator turns│
│ beep, then          │    │ green and makes a   │
│ automatically exit.)│    │ long beep.)         │
└─────────────────────┘    └─────────────────────┘
```

☺Note: In step 3, Press [9] for automatic confirmation. Other numbers are considered invalid. If an invalid number is entered, the device indicator turns red and makes three short beeps, then makes a long beep and exits the process.

## 2. Access Control Management
### 2.1 Unlocking Duration Configuration

```
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ 1. The administrator │    │ 2. Press [4].       │    │ 3. Enter the        │
│ password is          │───▶│ (The indicator turns│───▶│ unlocking duration. │
│ authenticated.       │    │ green and makes a   │    │ (range: 1s to 10s)  │
│                      │    │ long beep.)         │    │                     │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
                                                                  │
┌─────────────────────┐    ┌─────────────────────┐               ▼
│ 5.Exit.             │    │ 4. Modification of  │
│ (The indicator turns│    │ the unlocking       │
│ red and makes a long│◀───│ duration succeeds.  │
│ beep again.)        │    │ (The indicator turns│
│                     │    │ green and makes a   │
│                     │    │ long beep.)         │
└─────────────────────┘    └─────────────────────┘
```
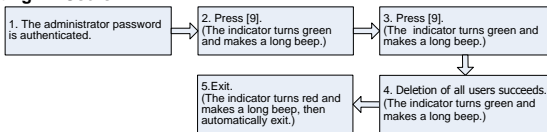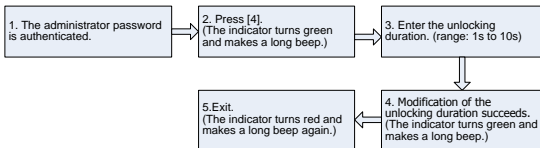
☺Note: Press [10] for automatic confirmation. For values with less than 10, press [#] to confirm. Values greater than 10 will be considered invalid.

### 2.2 Authentication Mode Configuration

```
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ 1. The administrator │    │ 2. Press [5].       │    │ 3. Enter            │
│ password is          │───▶│ (The indicator turns│───▶│ authentication mode.│
│ authenticated.       │    │ green and makes a   │    │                     │
│                      │    │ long beep.)         │    │                     │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
                                                                  │
┌─────────────────────┐    ┌─────────────────────┐               ▼
│ 5.Exit.             │    │ 4. Configuration    │
│ (The indicator turns│    │ succeeds.           │
│ red and makes a long│◀───│ (The indicator turns│
│ beep.)              │    │ green and makes a   │
│                     │    │ long beep.)         │
└─────────────────────┘    └─────────────────────┘
```
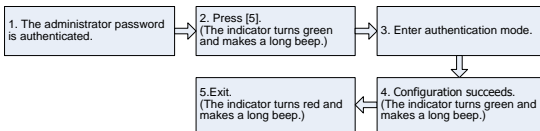
☺Note: Details about authentication modes are as follows:

| Authentication Mode | Value | Description |
|---|---|---|
| PW | 1 | Only password verification |
| RF | 2 | Only RF Card verification |
| FP | 3 | Only fingerprint verification |
| FP/PW/RF | 4 | fingerprint or password or RF Card verification |
| RF&PW | 5 | RF Card and password verification (swipe card before entering password) |
| FP&PW | 6 | fingerprint and password verification (fingerprinting before entering password) |

## 2.3 Concealed Mode Configuration

Under standby mode, when the Concealed Mode is on, the indicator will be turned off.



1. The administrator password is authenticated. → 2. Press [0]. (The indicator turns green and makes a long beep.) → 3. Press [3]. (The indicator turns green and makes a long beep.) → 4. Configure the concealed mode (0: enable; 1: disable). → 5. Configuration succeeds. (The indicator turns green and makes a long beep.) → 6.Exit. (The indicator turns red and makes a long beep.)
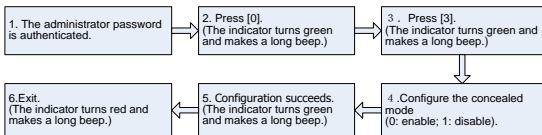
☺Note: When user is authenticating the card or fingerprints or password under Concealed Mode, the indicator will still blink correspondingly to denote process status.

## 2.4 Door Sensor Mode Configuration

The door sensor has three modes:

● **NONE**: The door sensor is disabled.

● **NO** (**Normally Open**): The door sensor will send an alarm signal if it detects the door is closed.

● **NC** (**Normally Close**): The door sensor will send an alarm signal if it detects the door is open.

```
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 1. The administrator│   │ 2. Press [0].       │   │ 3．Press [5].        │
│ password is         │ → │ (The indicator turns│ → │ (The indicator turns│
│ authenticated.      │   │ green and makes a   │   │ green and makes a   │
│                     │   │ long beep.)         │   │ long beep.)         │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
                                                               ↓
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 6.Exit.             │   │ 5. Conflagration    │   │ 4 .Configure the    │
│ (The indicator turns│ ← │ succeeds.           │ ← │ door sensor mode    │
│ red and makes a long│   │ (The indicator turns│   │ (0: NO;1: NC; 2:    │
│ beep again)         │   │ green and makes a   │   │ None).              │
│                     │   │ long beep.)         │   │                     │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
```
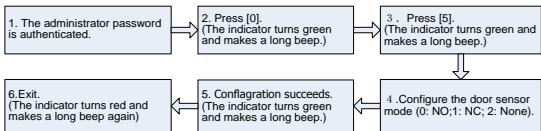
## 2.5 Alarm Configuration

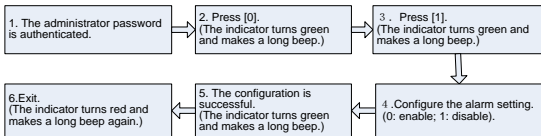☺Note: If an alarm is triggered, it can be terminated after the user is authenticated.
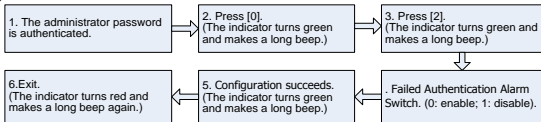
### ❖ Configuring Alarm Switch

Only if the alarm switch is set to be ON will the Failed Authentication Alarm and Door Sensor Alarm be effective. The default status of the alarm switch is ON.

```
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 1. The administrator│   │ 2. Press [0].       │   │ 3．Press [1].        │
│ password is         │ → │ (The indicator turns│ → │ (The indicator turns│
│ authenticated.      │   │ green and makes a   │   │ green and makes a   │
│                     │   │ long beep.)         │   │ long beep.)         │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
                                                               ↓
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 6.Exit.             │   │ 5. The configuration│   │ 4 .Configure the    │
│ (The indicator turns│ ← │ is successful.      │ ← │ alarm setting.      │
│ red and makes a long│   │ (The indicator turns│   │ (0: enable; 1:      │
│ beep again.)        │   │ green and makes a   │   │ disable).           │
│                     │   │ long beep.)         │   │                     │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
```

☺Note: The Temper Alarm is still effective even if the alarm switch is OFF.
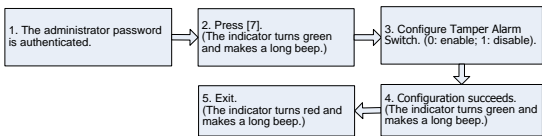
### ❖ Configuring Failed Authentication Alarm

If the administrator fails in authentication in 3 attempts, Failed Authentication Alarm will be triggered. No authentication can be made within 20 seconds.
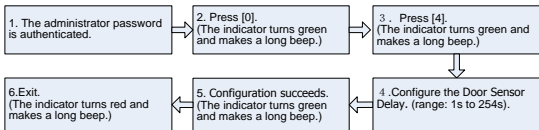
```
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 1. The administrator│   │ 2. Press [0].       │   │ 3. Press [2].       │
│ password is         │ → │ (The indicator turns│ → │ (The indicator turns│
│ authenticated.      │   │ green and makes a   │   │ green and makes a   │
│                     │   │ long beep.)         │   │ long beep.)         │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
                                                               ↓
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│ 6.Exit.             │   │ 5. Configuration    │   │ . Failed            │
│ (The indicator turns│ ← │ succeeds.           │ ← │ Authentication Alarm│
│ red and makes a long│   │ (The indicator turns│   │ Switch. (0: enable; │
│ beep again.)        │   │ green and makes a   │   │ 1: disable).        │
│                     │   │ long beep.)         │   │                     │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
```

### ❖ Configuring Tamper Alarm

If this function is enabled, alarms will be raised when the device is dismantled from the wall.

| 1. The administrator password is authenticated. | → | 2. Press [7]. (The indicator turns green and makes a long beep.) | → | 3. Configure Tamper Alarm Switch. (0: enable; 1: disable). |
|---|---|---|---|---|
| 5. Exit. (The indicator turns red and makes a long beep.) | ← | 4. Configuration succeeds. (The indicator turns green and makes a long beep.) | ← | |

### ❖ Configuring Door Sensor Delay

When the door is not closed well after a time period, the Door Sensor Delay will raise an alarm to alert users. Its configured value is the time period denoting how long after the door is opened will the alarm ring.

| 1. The administrator password is authenticated. | → | 2. Press [0]. (The indicator turns green and makes a long beep.) | → | 3. Press [4]. (The indicator turns green and makes a long beep.) |
|---|---|---|---|---|
| 6.Exit. (The indicator turns red and makes a long beep.) | ← | 5. Configuration succeeds. (The indicator turns green and makes a long beep.) | ← | 4 .Configure the Door Sensor Delay. (range: 1s to 254s). |

☺Note:

1. Three-digit values will be automatically verified. For values with less than three digits, press [#] to confirm. Values greater than 254 are considered invalid.
2. When an alarm is triggered, the device interior alarm will be triggered first, 30 seconds later, the device exterior alarm will be triggered.

ZKTeco Europe S.R.L.

Av. Camino de lo Cortao 10, Nave 1. 28703 S.S. de los Reyes. Madrid. SPAIN

Tel: +34 916 532 891

www.zkteco.eu