Installation Guide & User Manual

Standalone Metal RFID Series

Version: 2.1
Date: January, 2015

Important Note

Document Privacy Note:

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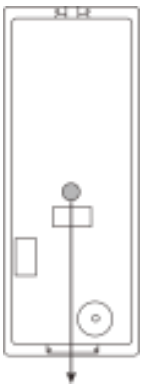
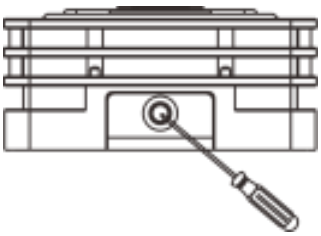


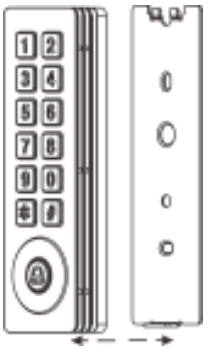
Optical Tamper Switch

①



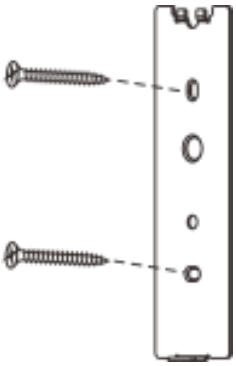
Remove the screw on the bottom of device.

②



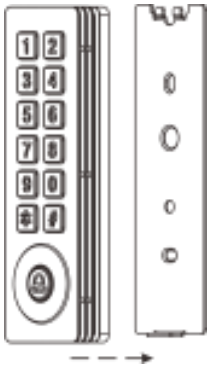
Take away the back cover.

③



Fix the back cover on the wall.

④



Fix the device to the back cover.

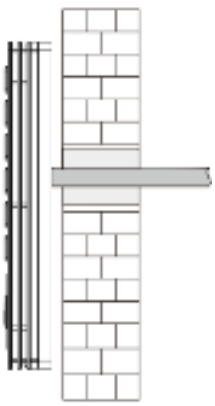
⑤

Fix the screw.

⑥

Exposed wire

⑥



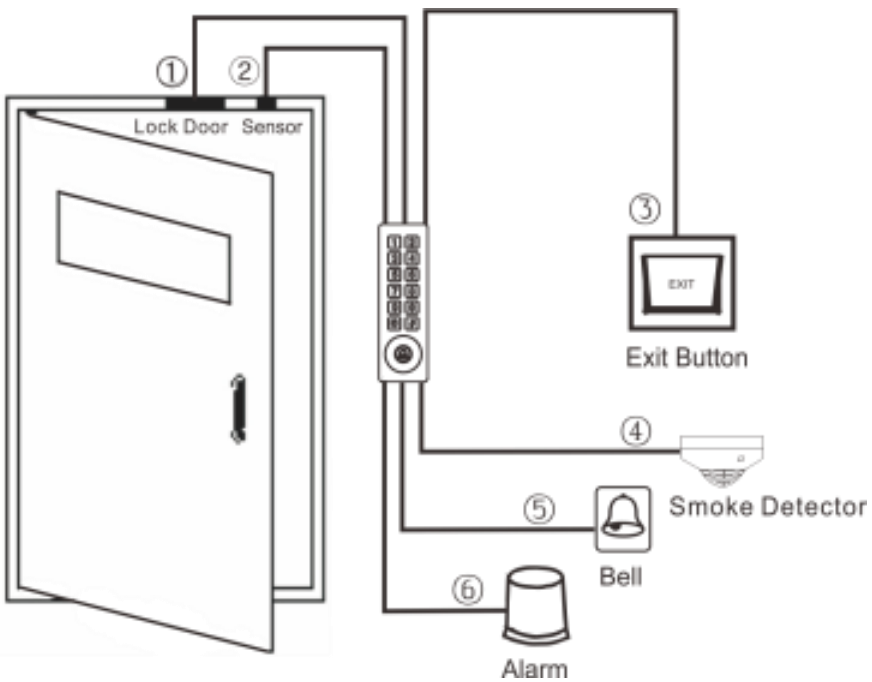
Buried wire

Please pick off the plastic when exposed wire

2. Structure and Function

Access Control System Function

(1) If a registered user is verified, the device will send a signal to unlock the door.
(2) Door Sensor will detect the door is open or not. If the door is unexpectedly opened or improperly closed, the alarm will be triggered.
(3) It supports Exit Button; it is convenient to open the door inside.
(4) It supports Smoke Detector etc., it will alarm and open the door when receives the signal of detector.
(5) It supports Door Bell; visitors could call by the door bell.
(6) If the device is dismantled, it will send an alarm signal.



④ Linkage Function

This device has an Auxiliary Input interface (AUX+) which allows it to be connected with an external source, for instance a smoke detector, gas detector, infrared sensor or emergency switch.

Trigger Linkage

Once detectors or sensors are connected to AUX+ and are triggered, the

system receives the linkage signal and would generate an alarm and open the door, the door keeps open and alarm keeps on until the linkage is canceled.

Cancel Linkage

The linkage can be canceled when a user is verified, or the Administrator opens the door with password.

3. Lock Connection

Warning: No operation when power on!

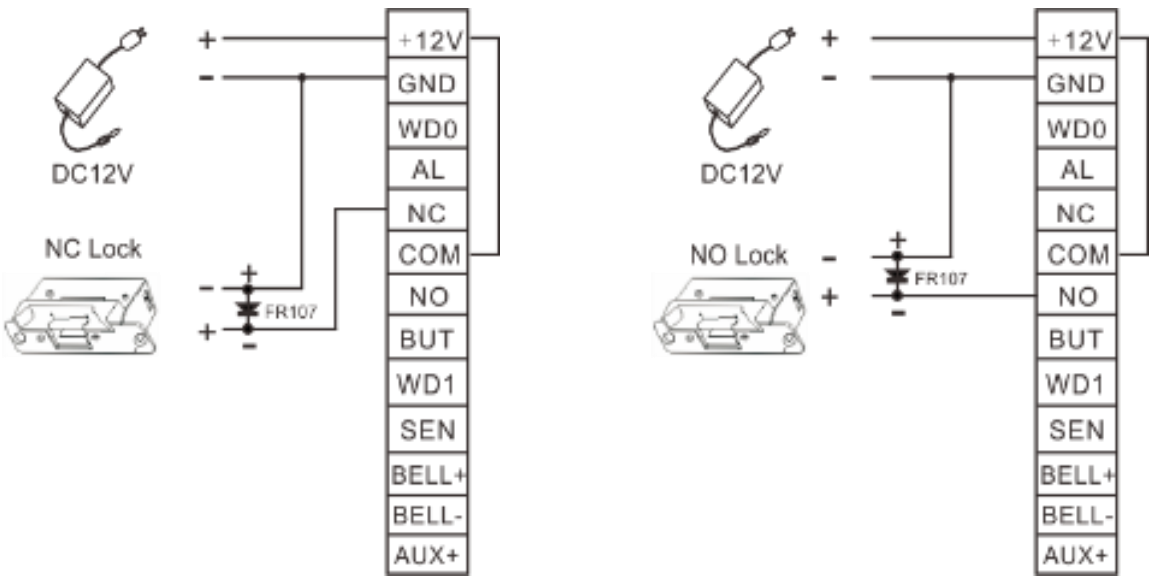
(1) The system supports NO LOCK and NC LOCK. For example the NO LOCK (normally open by power on) is connected with **NO** terminal, and the NC LOCK is connected with **NC** terminal.

(2) When the Electrical Lock is connected to the Access Control System, you need to parallel one FR107 diode (equipped in the package) to prevent the self-inductance EMF affecting the system, do not reverse the polarities.

(I) Share power with the lock

① U_{LOCK}=12V, I ≥ I_{Device} + I_{Lock} (The maximum operating current of device is 100mA, and the rated current is 60mA);

② And the lock is near to the device.



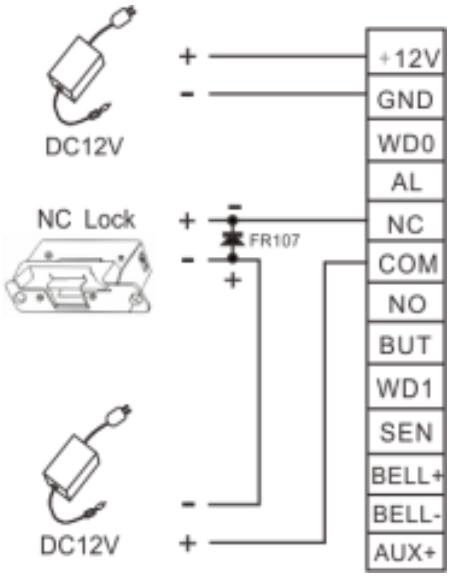
(II) Does not share power with the lock

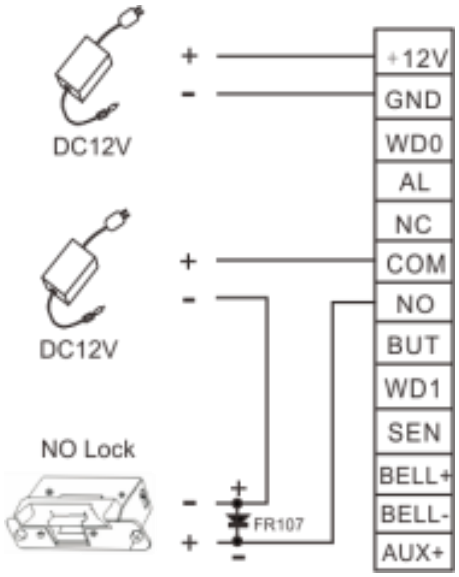
Device does not share power with the lock:

① U_{LOCK}=12V, I < I_{Device} + I_{Lock} (The maximum operating current of device is 100mA, and the rated current is 60mA);

② U_{LOCK}≠12V;

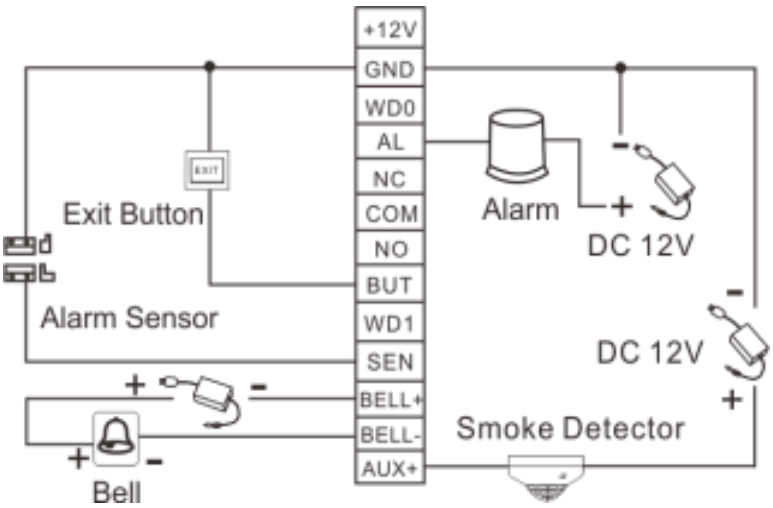
③ The lock is far from the device.





I: device output current; **U_{LOCK}**: lock voltage; **I_{LOCK}**: lock current.

4. Connect with Other Parts



Voltage output ≤ DC 12V for Alarm

5. Connect with Power

Input DC12V, ≤110mA (≤80mA standby) Positive is connected with **+12V**, negative is connected with **GND** (do not reverse the polarities).

Recommended procedure

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

Step 2: Change the administrator password, and configure access control parameters, including unlocking duration, authentication mode, concealed mode, door sensor mode, and alarm etc.

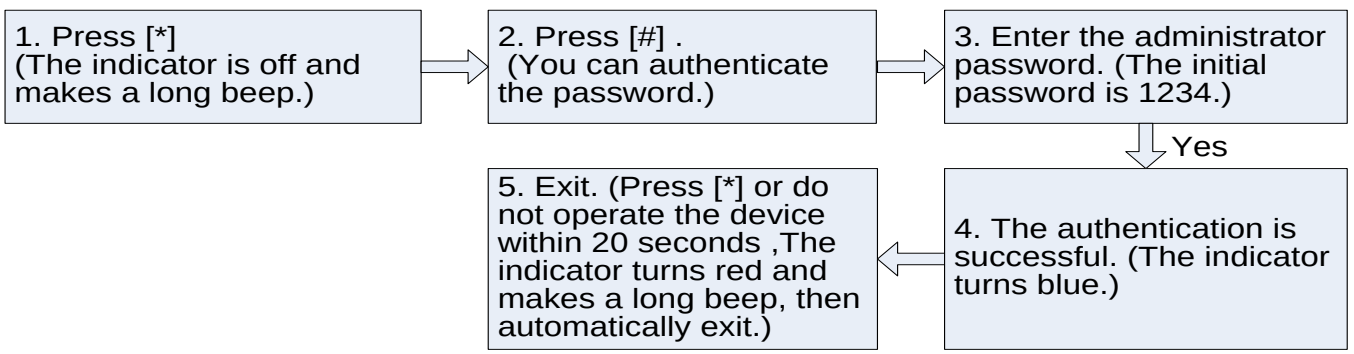
Step 3: Register users' cards, or eight passwords.

1. User Management

1.1 Administrator Operations

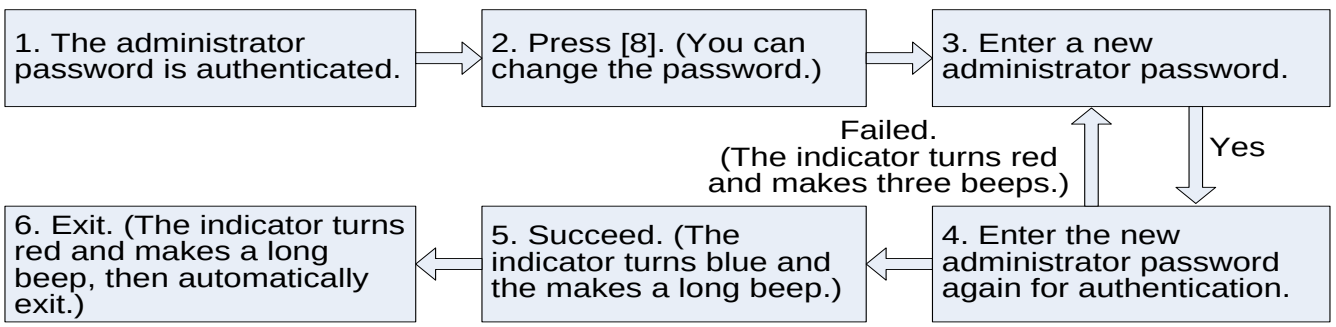
To ensure data security of the device, you can operate the device only after the administrator password is authenticated.

❖ Authenticate the Administrator Password



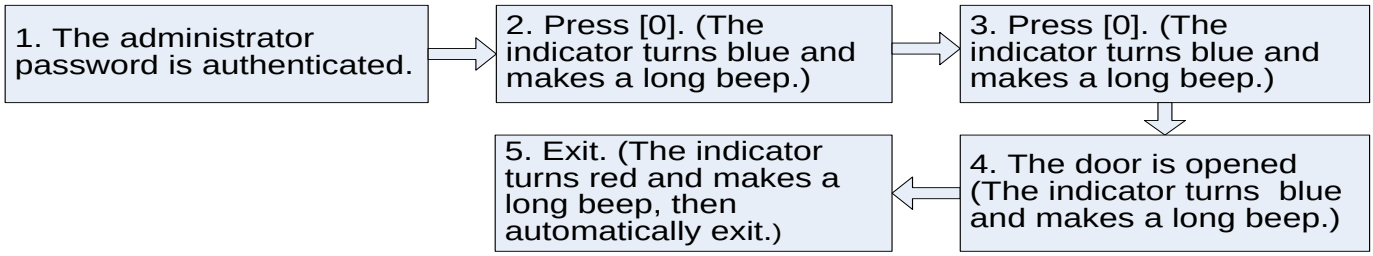
☺Note: The initial administrator password is 1234.

❖ Change Administrator Password



☺Note: Four-digit passwords are automatically verified. For passwords with less than four digits, press [#] to enter the verification process.

❖ Open the Door by Entering the Administrator Password



☺Note: This function can be used to open the door.

❖ Administrator Password is Forgotten?

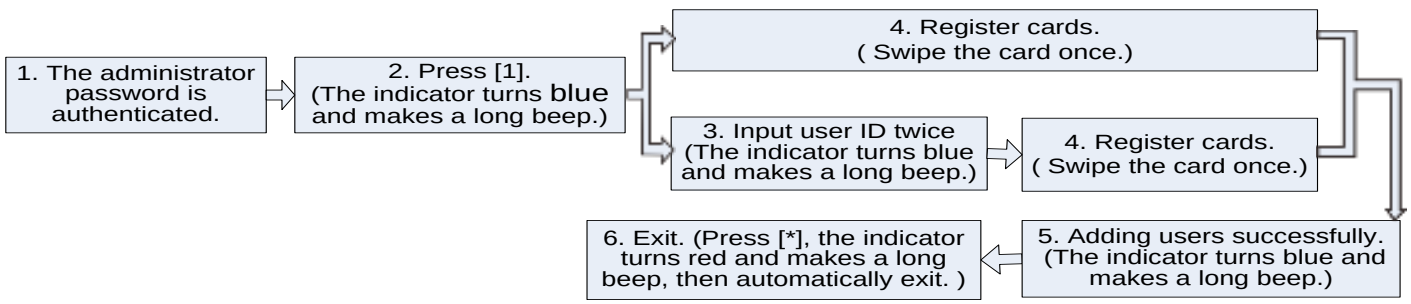
If the administrator password is forgotten, please dismantle the device and wait 30 seconds when there is a long beep, then press the Optical Tamper Switch three times to reset to the initial administrator password, each press shall take 2~5 seconds and it comes a beep each time, note this operation must be done within 30 seconds. It is successfully reset when it has a long beep after the third press; the Red LED blinks and quits the operation by itself.

☺Note: The initial administrator password is 1234.

1.2 Add Users

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

❖ Add Users

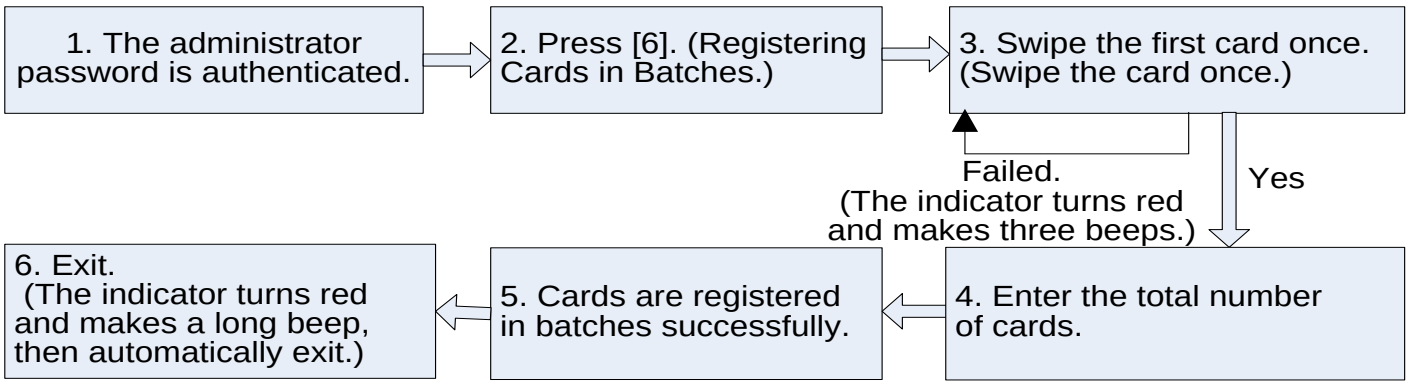


☺Note:

1. Nine-digit user ID is automatically verified. For user ID with less than nine-digit, 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 or the card has been registered (the indicator turns

red and makes three short beeps). When the indicator turns blue, you can register the user again. If you fail in swiping card or entering user ID three times, the device will enter the standby state.

❖ Register Cards in Batches

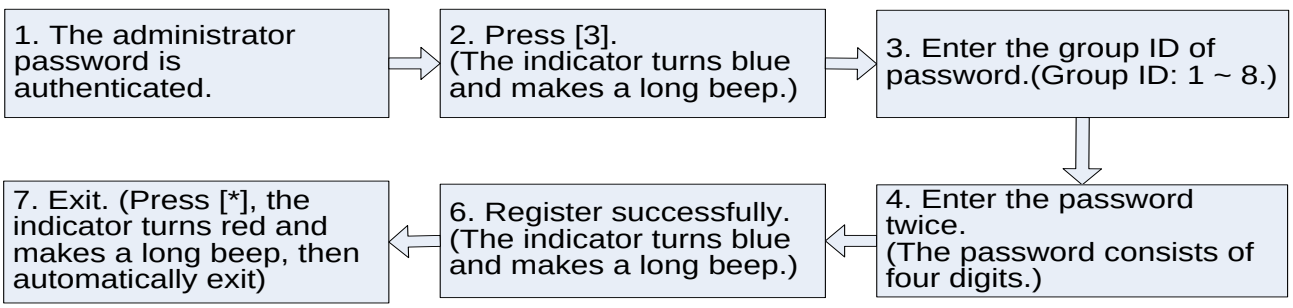


☺Note:

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 enter the verification process. Press [*] to reenter the total number of cards.
2. IDs of to-be-registered cards must be consecutive numbers.

1.3 Register Eight Passwords for Opening the Door

This device supports 8 passwords, each password has a Group ID ranges from 1~8. The default password value is 0 for all groups, which means passwords are disabled. You can modify the passwords under 8 groups to open the door.

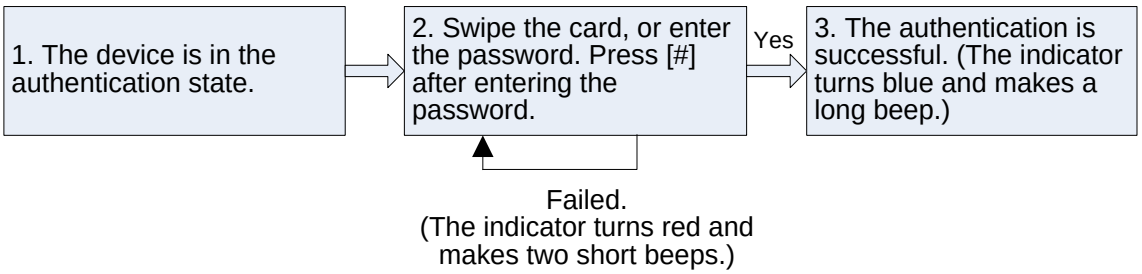


☺Note: If a password is successfully changed, enter the Group ID to change next one.

1.4 Authenticate User

Card / Password Authentication

After the device is powered on, it enters the authentication state for unlocking the door.

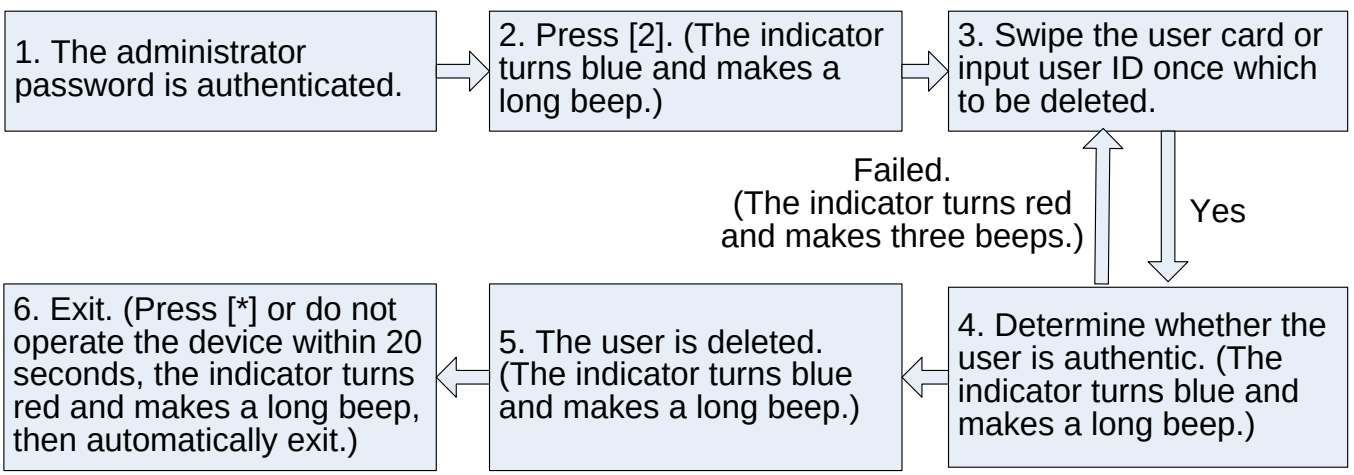


☺Note: Press [#] after entering a password for authentication. The door opens if the entered password is identical with one of the eight passwords for opening the door.

1.5 Delete Users

Delete a user whose card is registered, or delete all users.

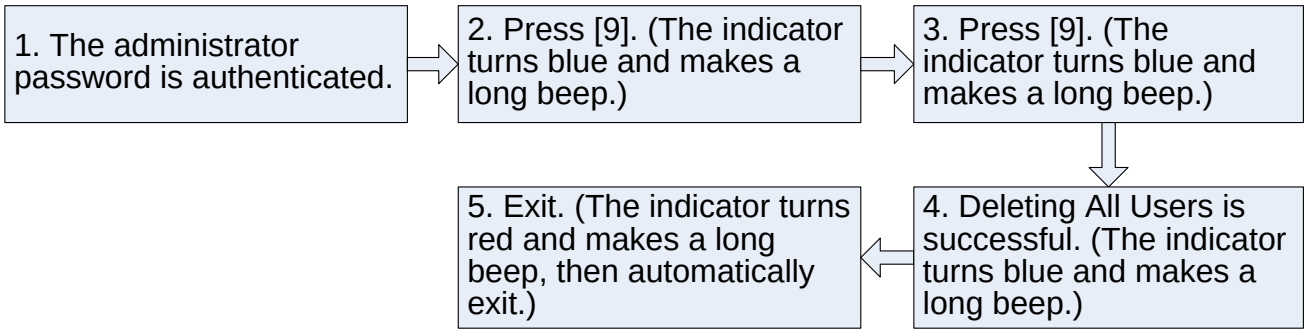
❖ Delete a User



☺Note:

1. You can swipe the card or input user ID to delete a user. Nine-digit user ID is automatically verified. For user ID with less than nine-digit, press [#] to confirm.
2. The device automatically enters the process of deleting the next user when a user is deleted, or press [*] to exit.

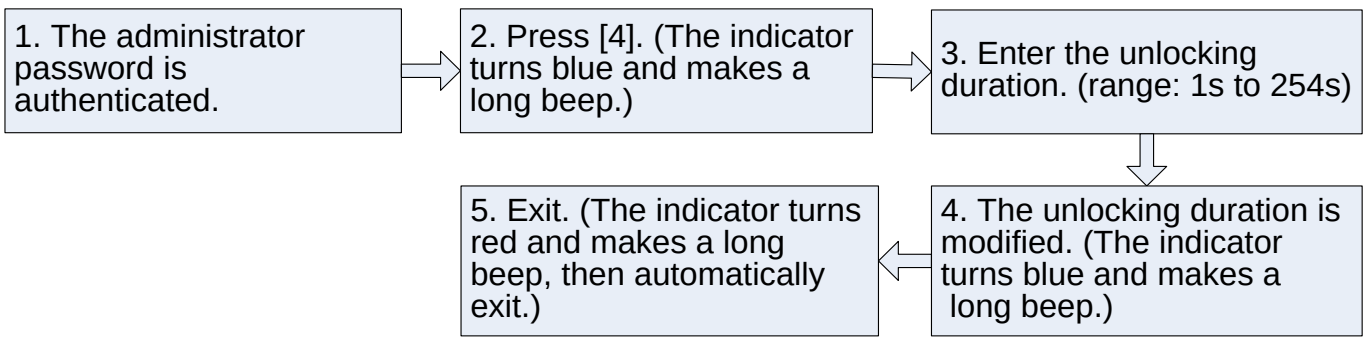
❖ Delete All Users



☺Note: Press [9] for automatic confirmation. Other values are considered invalid. If an invalid value is entered, the device indicator turns red, and the device makes a long beep and exits the process.

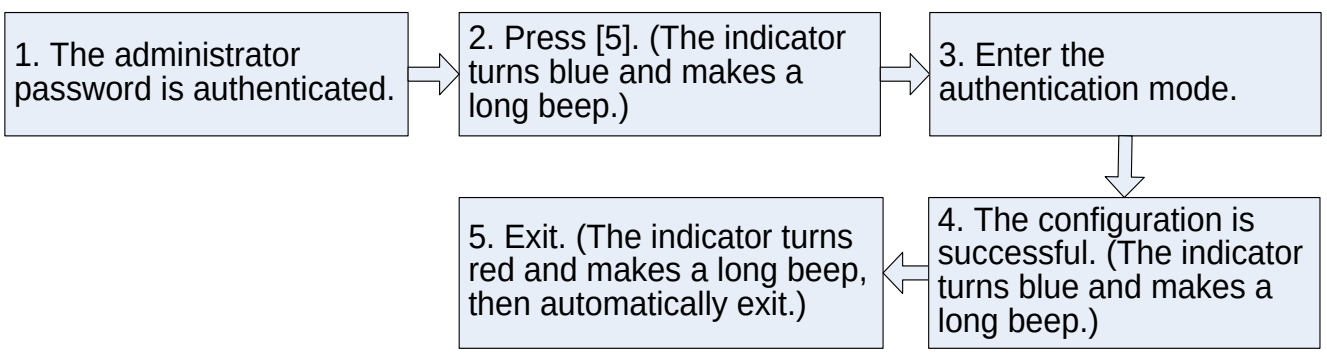
2. Access Control Management

2.1 Configure Unlocking Duration



☺Note: The unit of Unlocking Duration is second. Three-digit values are automatically verified. For values with less than three digits, press [#] to enter the verification process.

2.2 Configure Authentication Mode



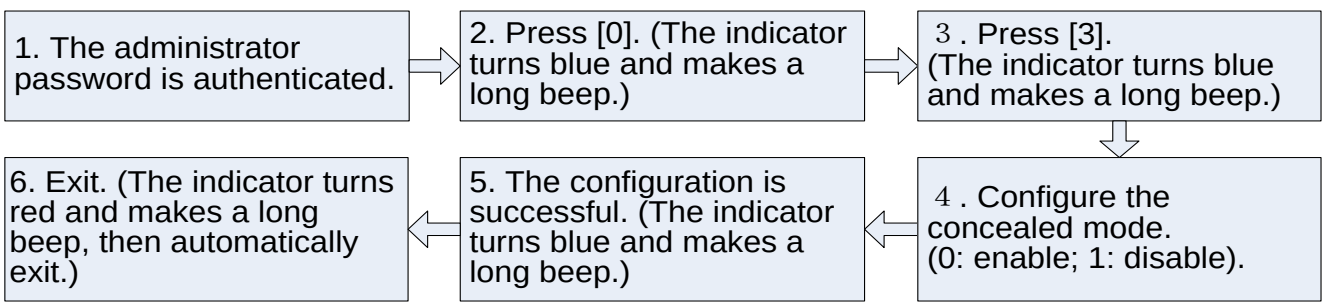
☺Note:

1. When the authentication mode is **RF & password**, swipe card and then enter the passwords please.
2. Details about the authentication modes are as follows:

Authentication Mode	Value	Description
PW	1	Only password verification
RF	2	Only RF Card verification
RF/PW (default)	3	RF or password verification
RF&PW	4	RF and password verification

2.3 Configure Concealed Mode

If the Concealed Mode is enabled, the indicator is off.

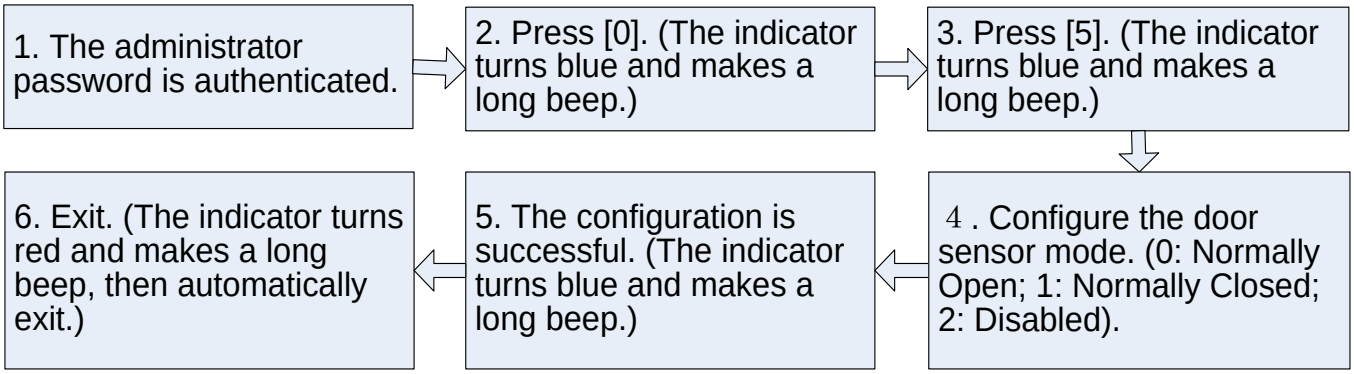


☺Note: An indicator blinks to indicate the status of this function when users are authenticating their cards or passwords.

2.4 Configure Door Sensor Mode

The door sensor has three modes:

- **NONE**: The door sensor is disabled.
- **NO**: The door sensor will send an alarm signal if it detects the door is closed.
- **NC**: The door sensor will send an alarm signal if it detects the door is open.

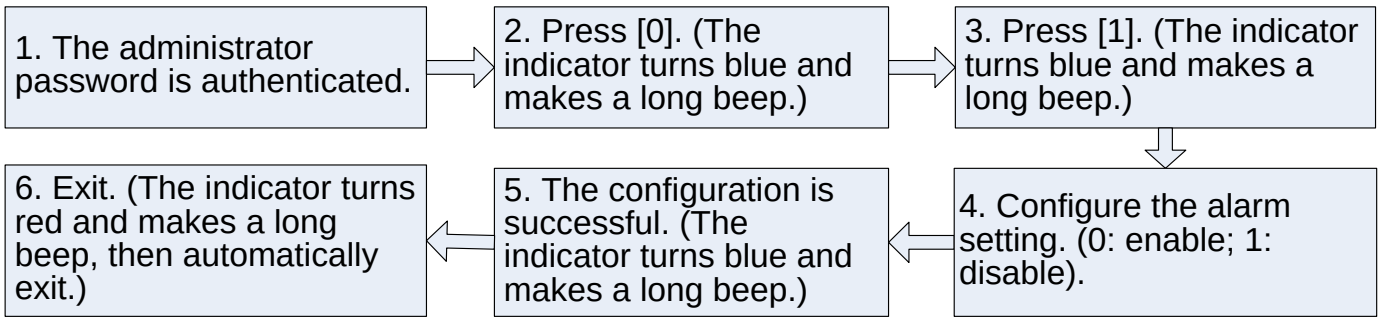


☺Note: The door sensor mode configured here is used as the basis for the door sensor alarm.

2.5 Configure Alarm

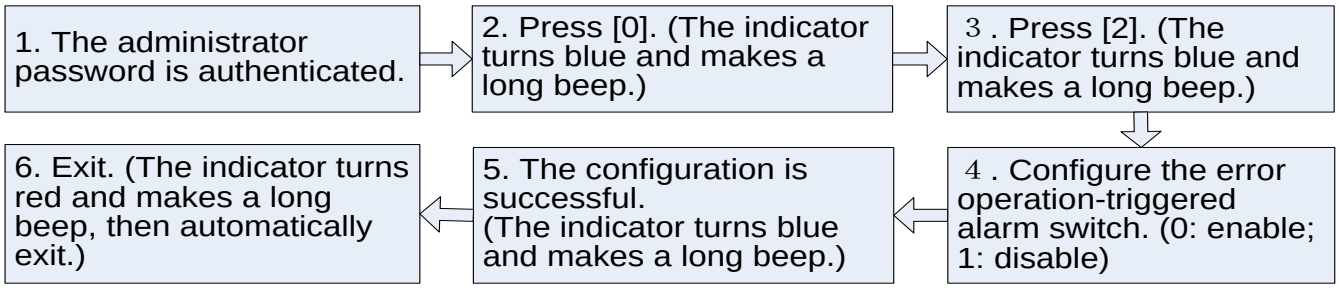
❖ Configure Alarm Switch

The alarm switch is turned on by default. When it's disabled, then Error Operation-Triggered Alarm and the Alarm Delay for the Door Status Sensor will be disabled, but Tamper Alarm still works.



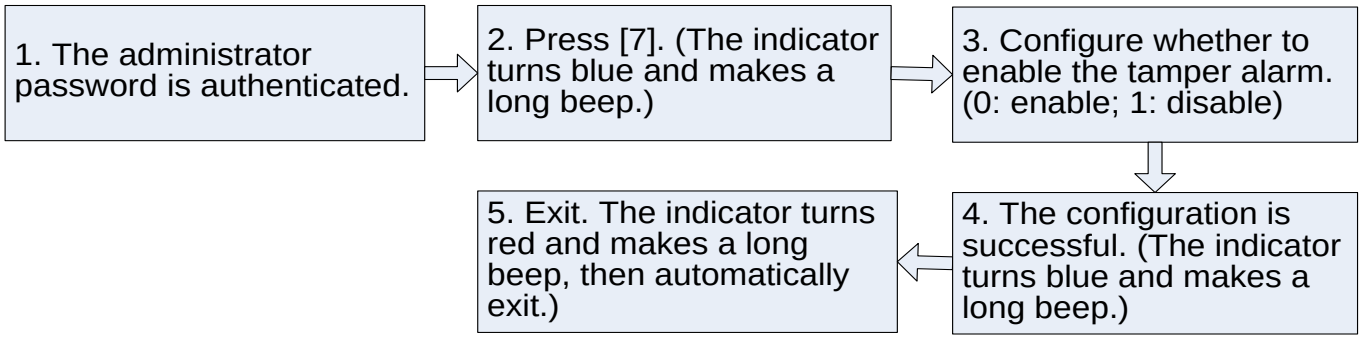
❖ Configure Error Operation-Triggered Alarm

Alarms will be generated if the administrator fails the authentication upon three attempts under this function enabled, and it is not allowed to continue within 20 seconds.



❖ Configure Tamper Alarm

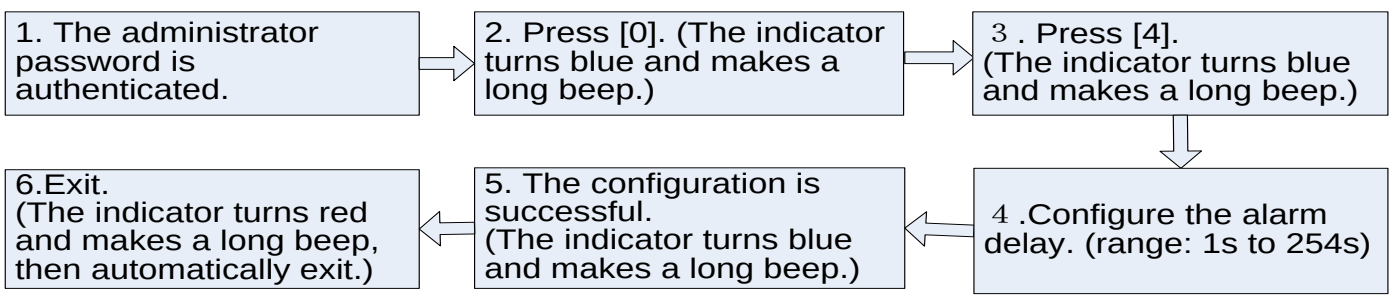
If this function is enabled, alarms will be generated when device is dismantled from the wall.



❖ Configure Alarm Delay for the Door Status Sensor

DSen. Delay (Door Sensor Delay):

It is to configure the time how long would the door sensor would do check the door status.



☺Note: Three-digit values are automatically verified. For values with less than three digits, press [#] to confirm. Values greater than 254 are considered invalid.

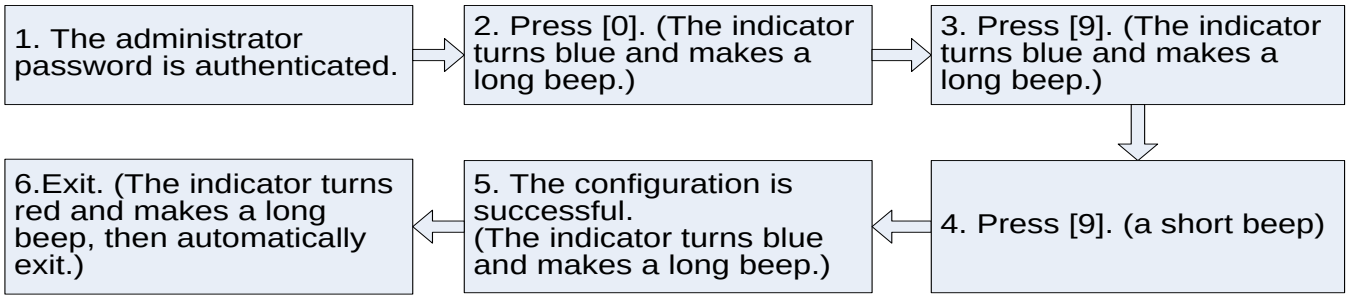
2.6 SRB

Security Relay Box (SRB) is a relay switch to control electric lock, exit button to provide higher security level for access control.

It is installed on a secured place and connected with standalone access control devices by Wiegand out.

☺Note: For electrical parameters and connection guide, please consult ***SRB Simple Access Controller Connection Guide***.

2.7 Factory Reset



The Factory Default Settings

Unlock Authentication Mode	RF/PW
Door Sensor Mode	None
Alarm Switch	Enabled
Error Operation-Triggered Alarm Switch	Enabled
Tamper Alarm Switch	Enabled
Concealed Mode	Disabled
Unlocking Duration	5 seconds
Door Sensor Delay	15 seconds

3. Switch Working Mode

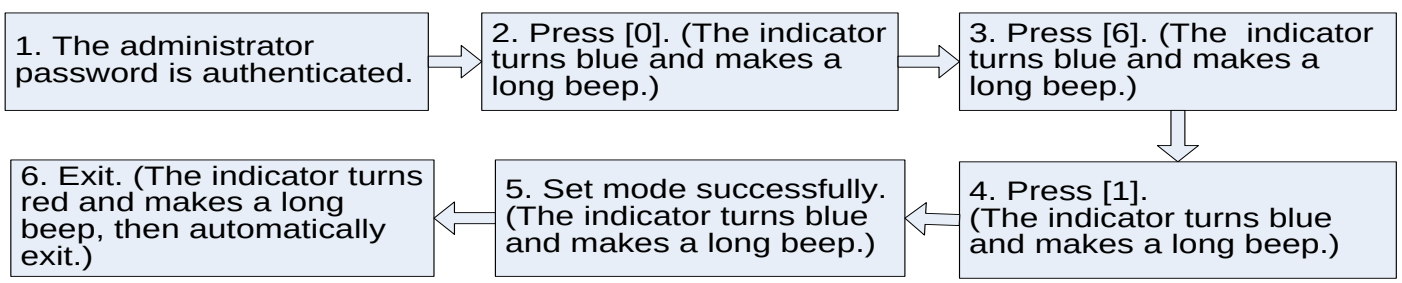
This device could work as a standalone controller or as a wiegand reader, which offers flexibility to use depending on actual needs. It is a standalone controller by default setting but you could switch the working mode by the following instruction.

If the indicator blinks blue, indicates that the device is set to Controller Mode.

If the indicator stays in red, indicates that the device is set to Reader Mode.

☺Note: For wiring diagram of reader mode, please consult Appendix.

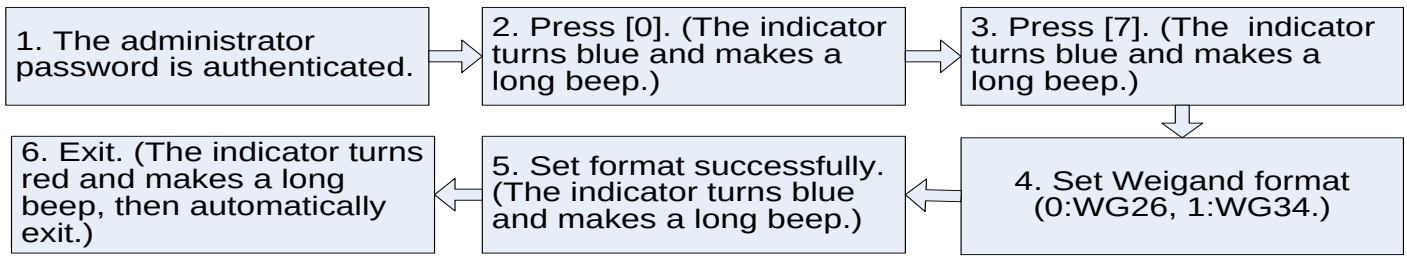
3.1 Controller Mode Switch to Reader Mode



☺Note: The device makes three short beeps when fails in setting, then the indicator turns red and makes a long beep, then automatically exit.

Set Weigand Format

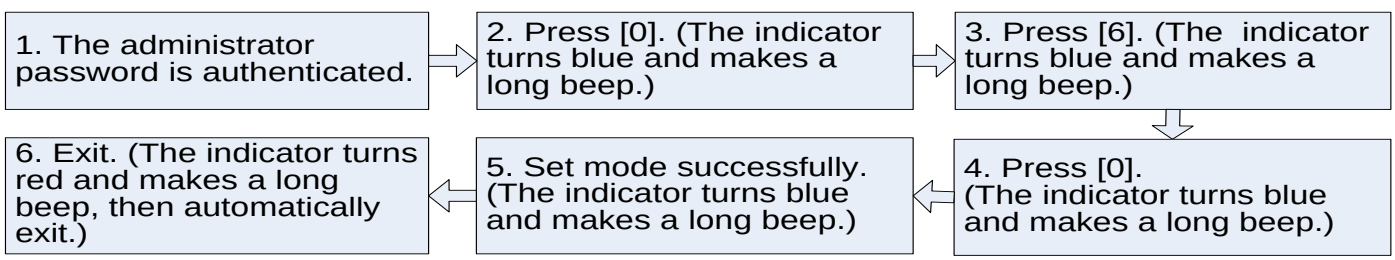
When the device is in Reader Mode, hold and press [*] five seconds, press [#] when the red indicator turns off, then input administrator password to enter the device. It can be set to Weigand 26 or Weigand 34.



☺Note: The device makes three short beeps when fails in setting, then the indicator turns red and makes a long beep, then automatically exit.

3.2 Reader Mode Switch to Controller Mode

When the device is in Reader Mode, hold and press [*] five seconds, press [#] when the **red** indicator turns off, then input administrator password to enter the device.



☺Note: The device makes three short beeps when fails in setting, then the indicator turns red and makes a long beep, then automatically exit.

Appendix

Wiring Diagram of Controller Mode

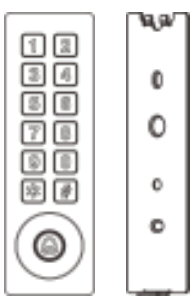
Red: DC 12V	Light Blue: SEN
Black: GND	Gray: BUT
Yellow: NC	Purple: BELL+ (Bell)
Pink: COM	Brown: BELL- (Bell)
Blue: NO	

Weigand Output	**Linkage Function**
Green: WD0	Orange: AL (Alarm)
White: WD1	Light Green: AUX+

Wiring Diagram of Reader Mode

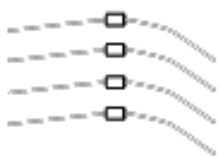
Red: DC 12V	Black: GND
Green: WD0	White: WD1
Gray: BEEP	Light Blue: LED
Purple: BELL+ (Bell)	
Brown: BELL- (Bell)	

Packing List

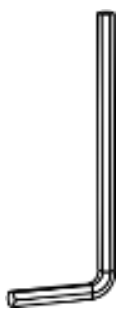


Access Device & Mounting Plate

1 Card



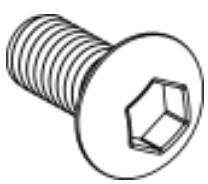
4 Diodes (FR107)



Screwdriver

4 Screws

4 Wall Plugs



1 Star-shaped Screw

1 Installation Guide