

Installation Guide

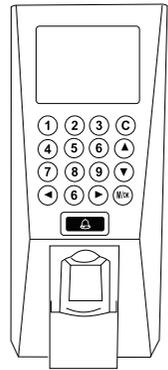


F18 Standalone Reader

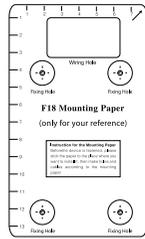
ZKACCESS®

ZKAccess.com

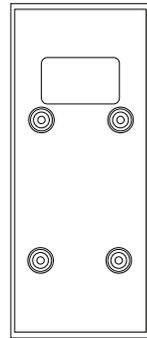
What's in the Box



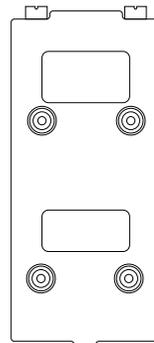
F18



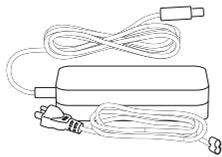
Installation Template



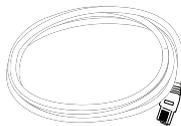
Rubber Gasket



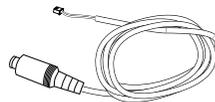
Back Plate



AC Power Adaptor



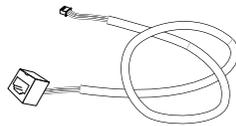
Network Cable



Power Cable Adaptor



Cables



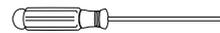
Network Cable Adaptor



ZKAccess Software



4 Large, Small Screws & Anchors



Screwdriver



Diode

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ZKAccess | CLASSIC 3.5
 Software Installation and Setup
 starts at page 30

Optional accessories



Wiegand Card Reader



Prox Card



FR1200 FP Reader



K1-1 Exit Button

Safety Precautions

The following precautions are to keep user's safe and prevent any damage. Please read carefully before installation

- 

Do not install the device in a place subject to direct sun light, humidity, dust or soot

- 
Do not place a magnet near the product. Magnetic objects such as magnet, CRT, TV, monitor or speaker may damage the device.

- 
Do not place the device next to heating equipment
- 
Be careful not to let liquid like water, drinks or chemicals leak inside the device.

- 
Do not let children touch the device without supervision
- 
Do not drop or damage the device
- 
Do not disassemble, repair or alter the device.
- 
Do not use the device for any other purpose than specified.
- 
Clean the device often to remove dust on it. In cleaning, do not splash water on the device but wipe it out with smooth cloth or towel.

Contact your supplier in case of a problem.

Product PIN Diagram

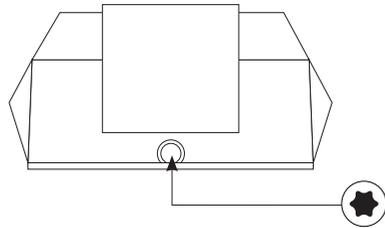
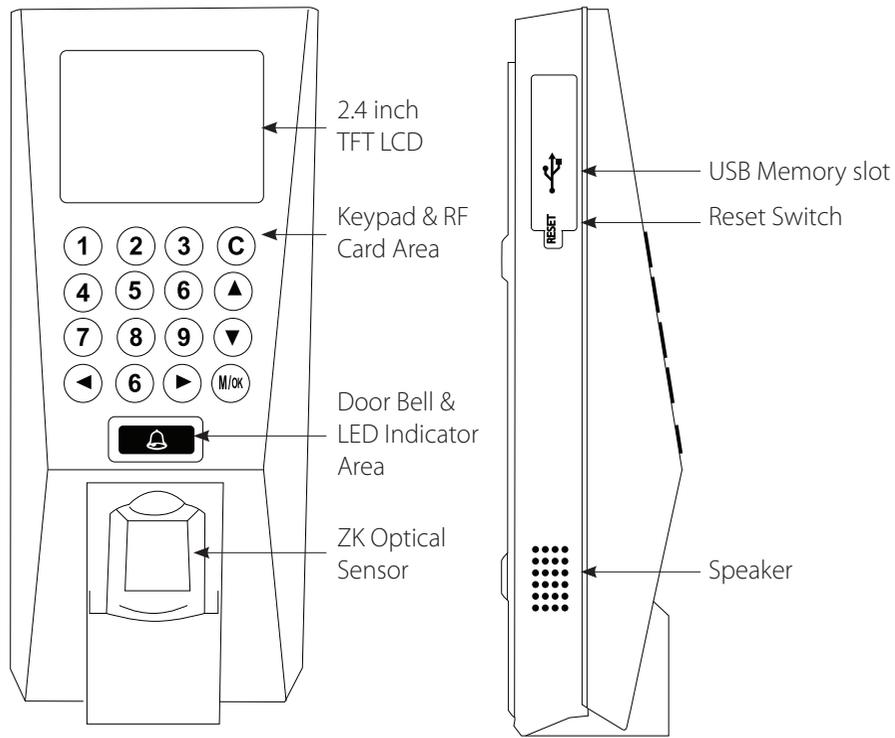
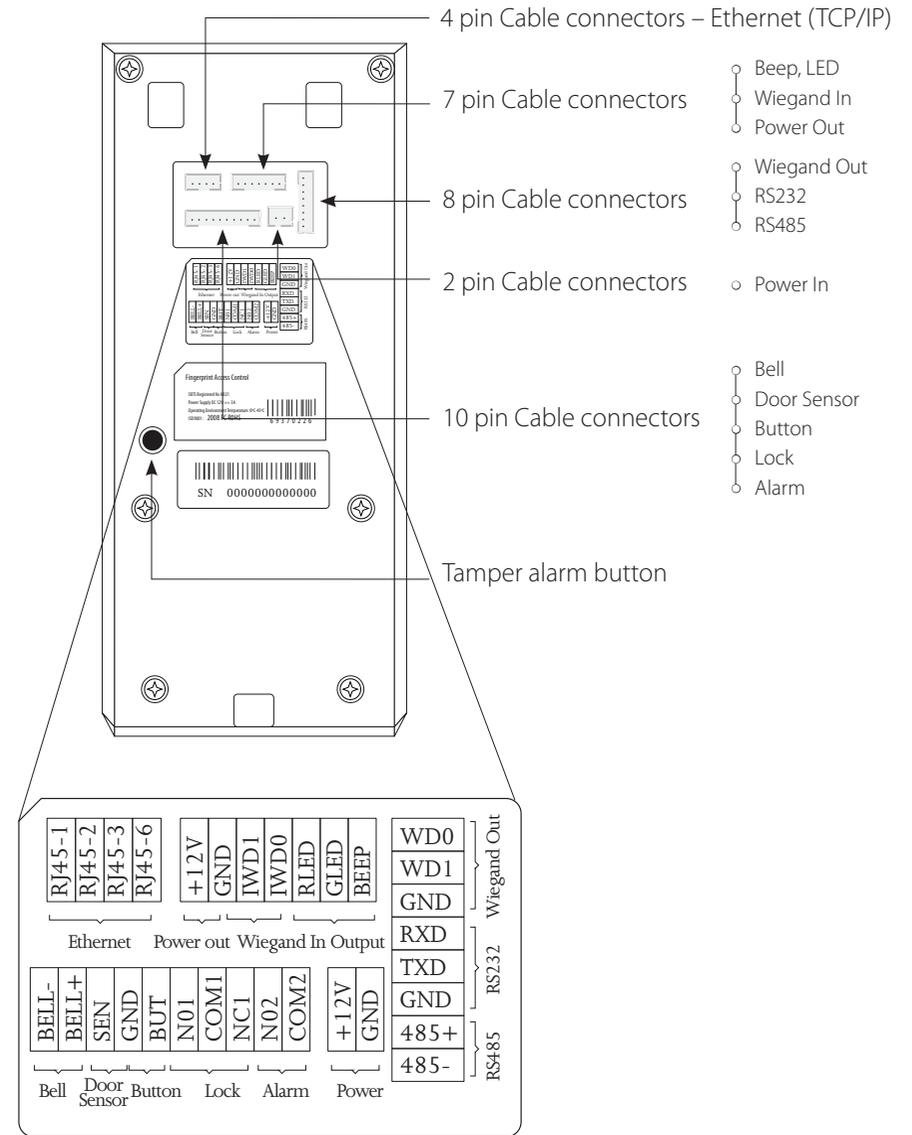
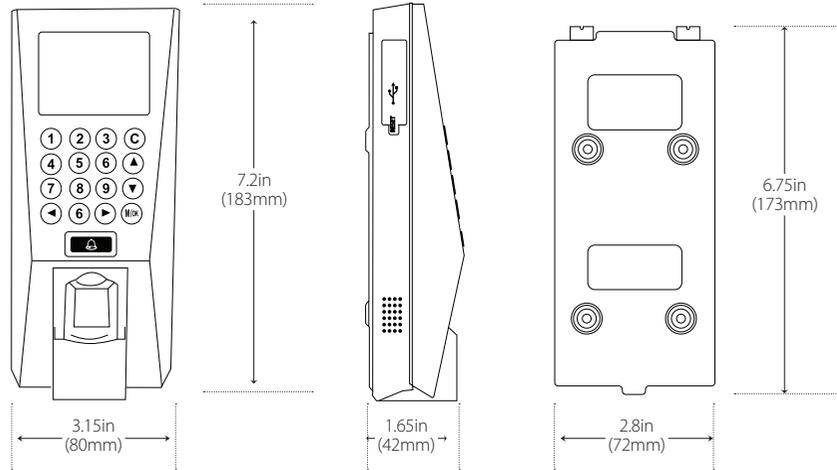


Figure 1

Star-shaped screw hole for fixing reader to the back plate

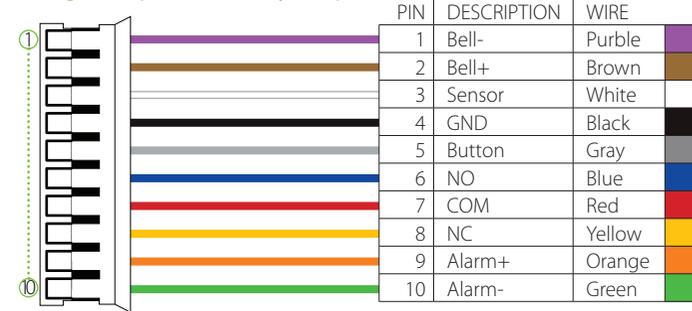


Product Dimension



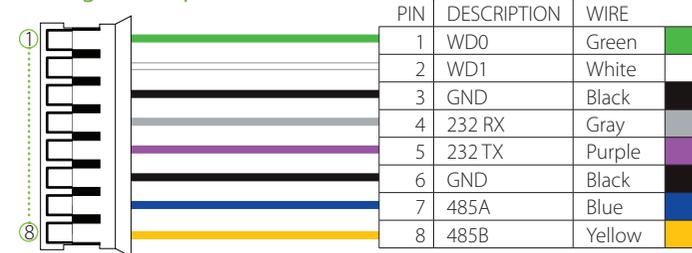
Cables and Connectors

Digital input and Relay output



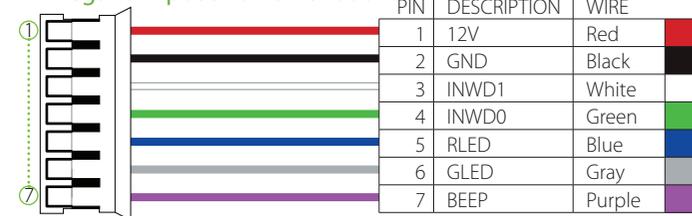
- o Alarm
- o Lock
- o Button
- o Door Sensor
- o Door Bell

Wiegand output and RS485



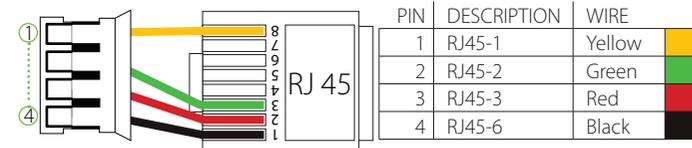
- o Wiegand Output
- o RS232
- o RS485

Wiegand input and Power out



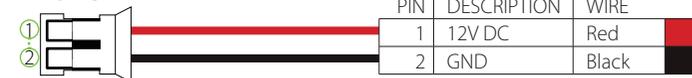
- o Wiegand Output
- o LED
- o Power Out
- o Beep

Ethernet



- o TCP/IP

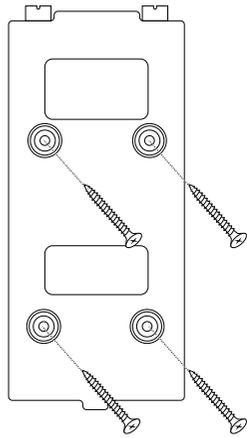
Power



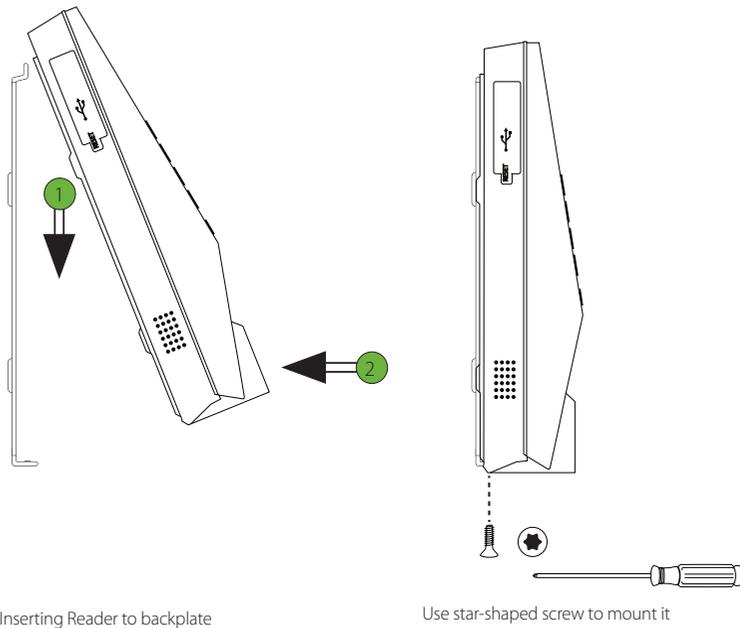
- o Power In

Mounting the reader on the Wall

Fix back plate to the wall using wall mounting screws

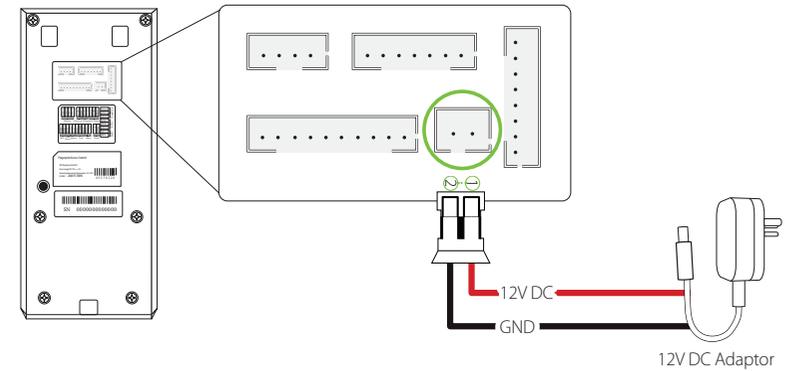


We recommend drilling the mounting plate screws into solid wood (i.e. stud/beam). If a stud/beam cannot be found, then use the supplied drywall plastic mollies (anchors).

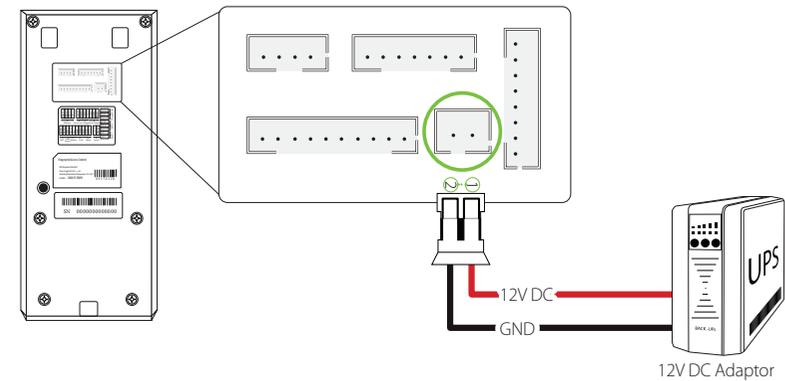


Power Connection

Without UPS



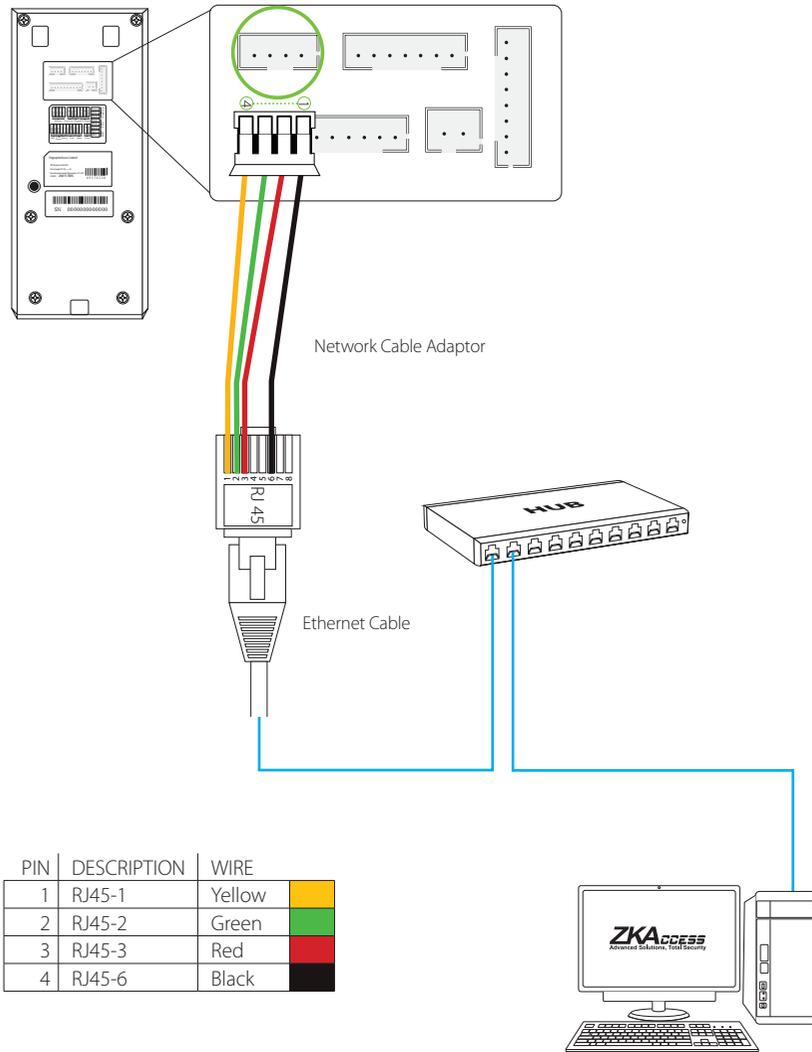
With UPS (Optional)



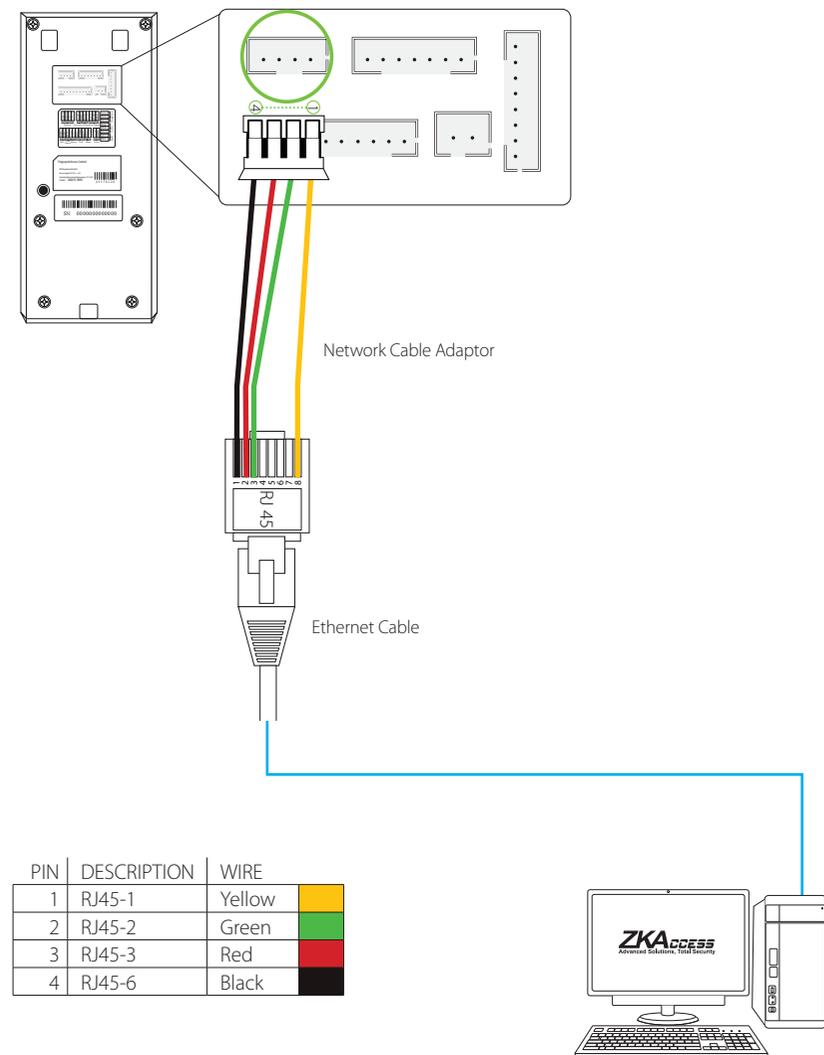
Recommended power supply

- 12V \pm 10%, at least 500mA.
- Comply with standard IEC/EN 60950-1.
- To share the power with other devices, use a power supply with higher current ratings

LAN Connection

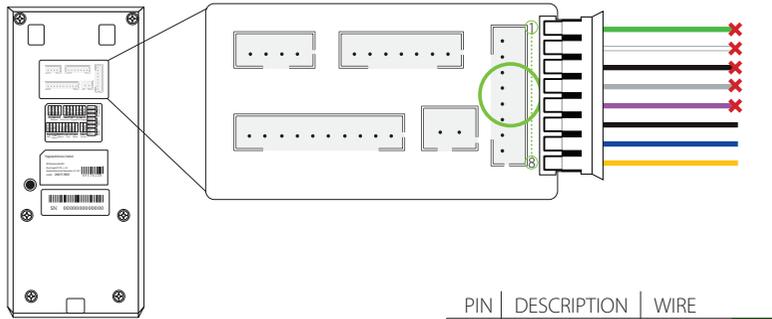


Direct Connection



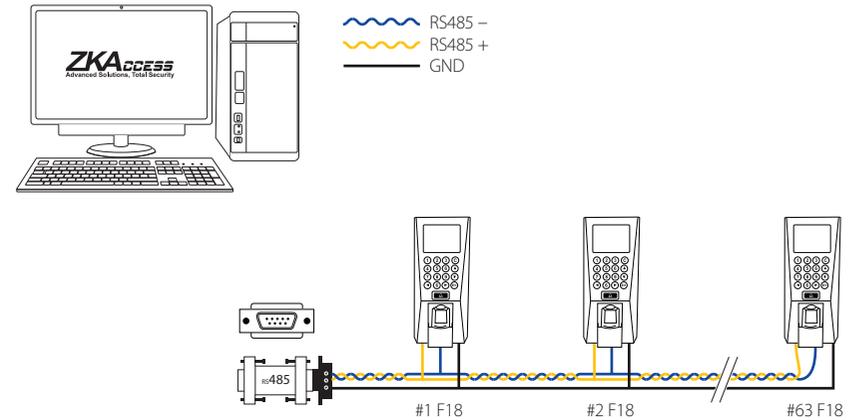
RS485 Connection

PC Connection

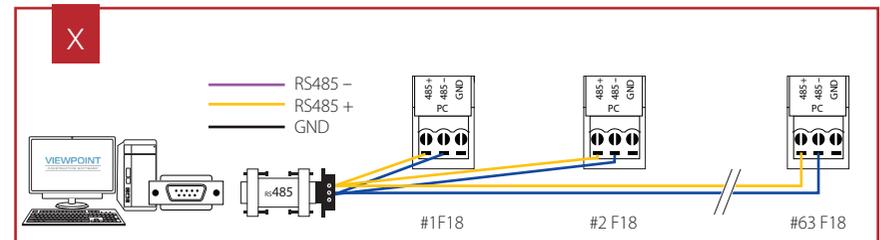
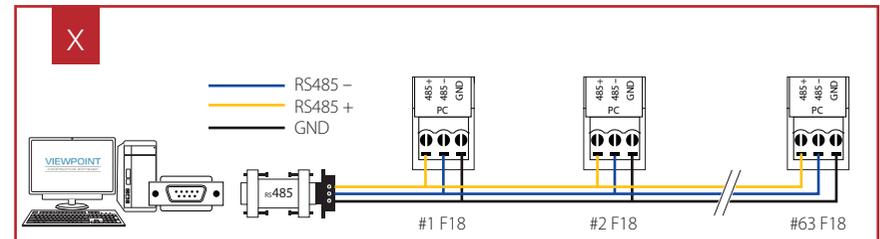


| PIN | DESCRIPTION | WIRE |
|-----|-------------|--------|
| 1 | WD0 | Green |
| 2 | WD1 | White |
| 3 | GND | Black |
| 4 | 232 RX | Gray |
| 5 | 232 TX | Purple |
| 6 | GND | Black |
| 7 | 485A | Blue |
| 8 | 485B | Yellow |

✗ Do not use



Incorrect RS 485 connections



Important Notes:

1. RS485 communication wires should be a shielded and twisted pair cable.
2. RS485 communication wires should be connected in a bus cascade instead of a star form, to achieve a better shielding effect by reducing signal reflection during communications.
3. Adjust the communication speed as needed. The signal quality vary depending on wiring conditions, and it maybe necessary to lower the baudrates.
4. The GND Signal may be omitted **if and only if** the GND potential difference is less than $\pm 5V$

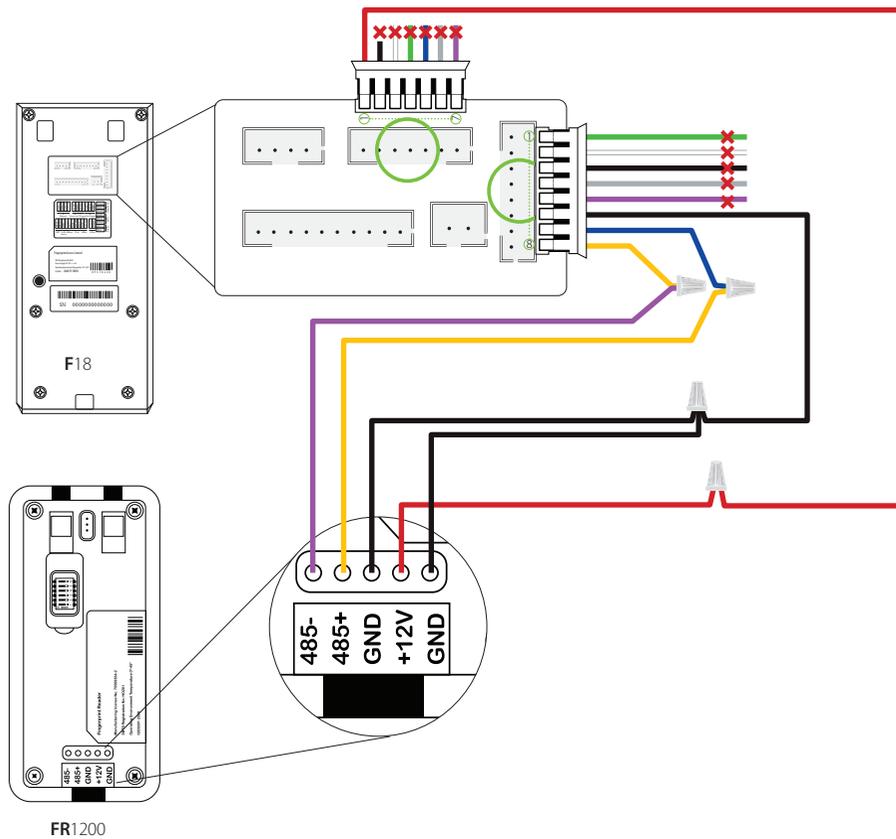
RS485 Connection

FR1200 Connection

| PIN | DESCRIPTION | WIRE |
|-----|-------------|--------|
| 1 | 12V | Red |
| 2 | GND | Black |
| 3 | INWD1 | White |
| 4 | INWD0 | Green |
| 5 | RLED | Blue |
| 6 | GLED | Gray |
| 7 | BEEP | Purple |

✗ Do not use

| PIN | DESCRIPTION | WIRE |
|-----|-------------|--------|
| 1 | WDO | Green |
| 2 | WD1 | White |
| 3 | GND | Black |
| 4 | 232 RX | Gray |
| 5 | 232 TX | Purple |
| 6 | GND | Black |
| 7 | 485A | Blue |
| 8 | 485B | Yellow |



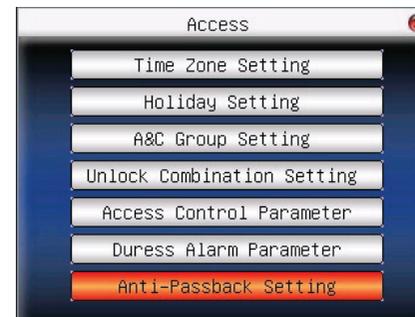
System Settings



Select > User Management



Select > Access Setting



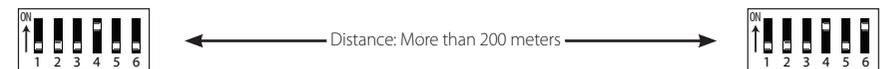
Select > Anti-Passback setting



Change > 485 Reader Fun to (Y)

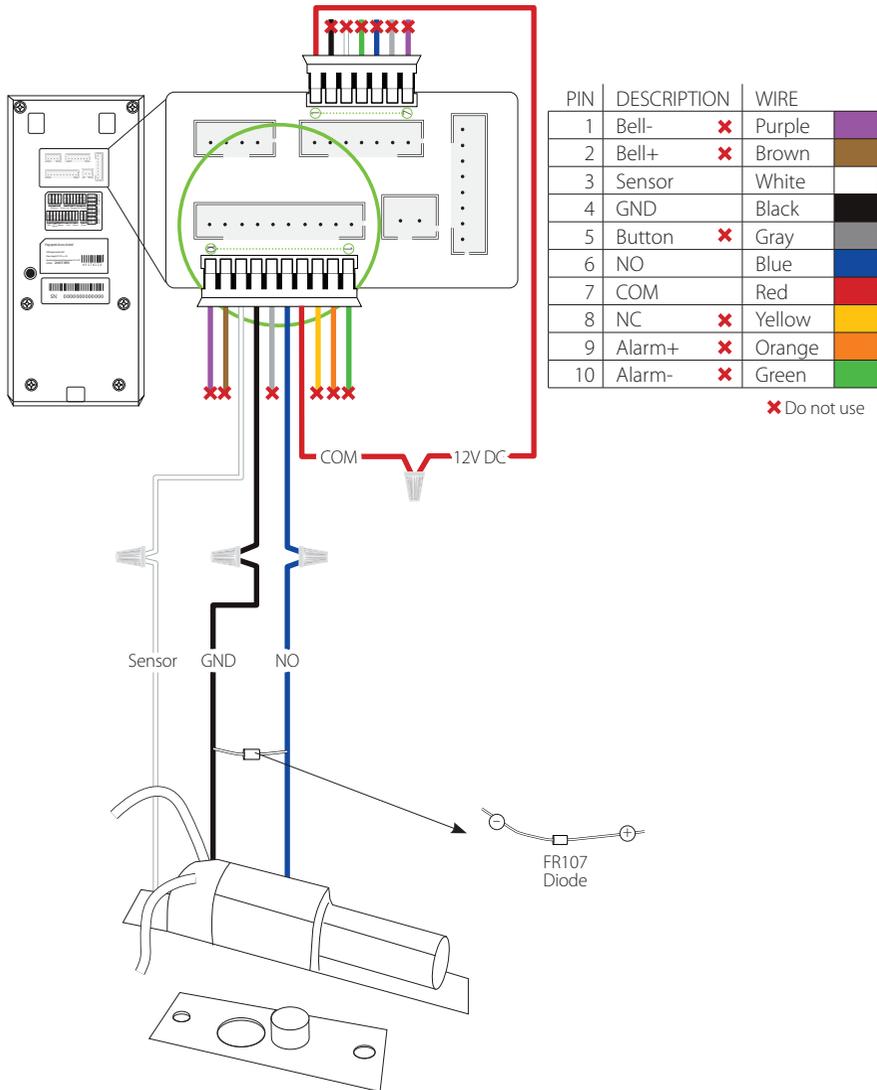
DIP Settings

1. There are six DIP switches on the back of FR1200, switches 1-4 is for RS485 address, switch 5 is reserved, switch 6 is for reducing noise on long RS485 cable.
2. If FR1200 is powered from F18 terminal ,the length of wire should be less than 100 meters or 330 ft.
3. If the cable length is more than 200 meters or 600 ft., the number 6 switch should be ON as below

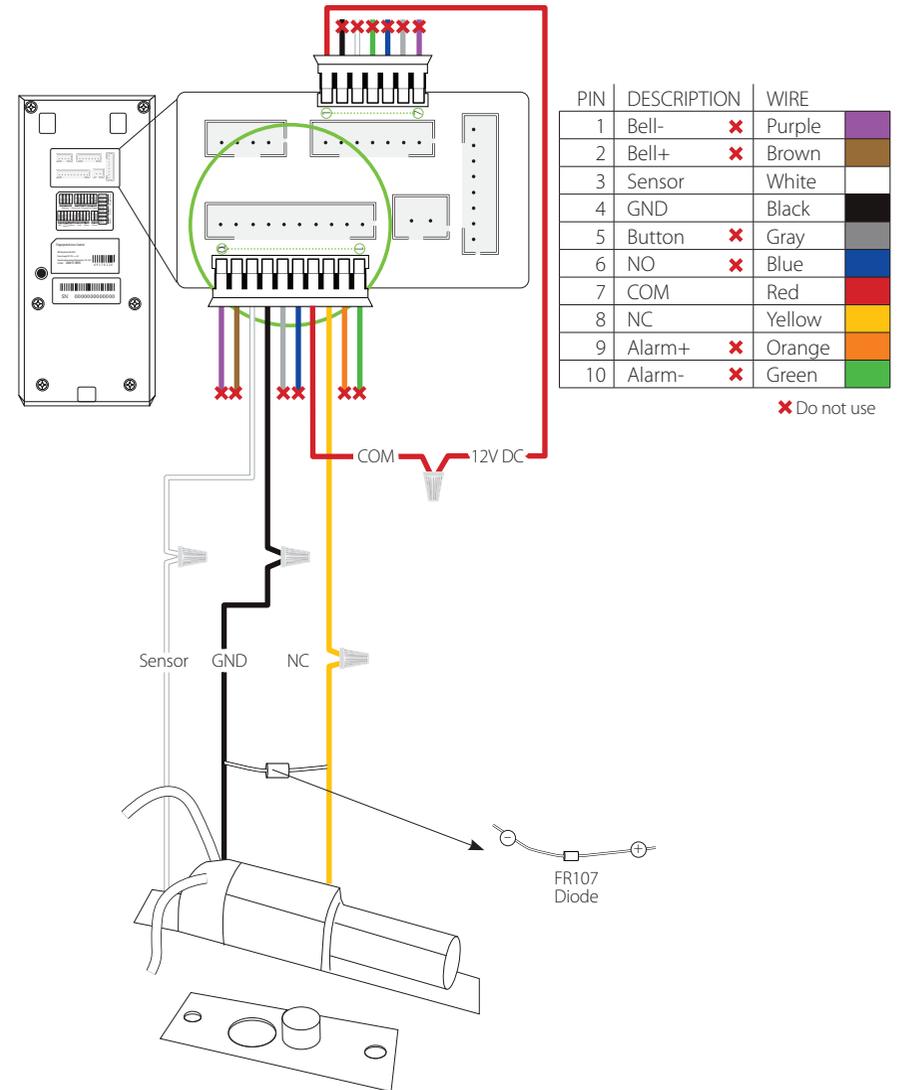


Lock Relay Connection

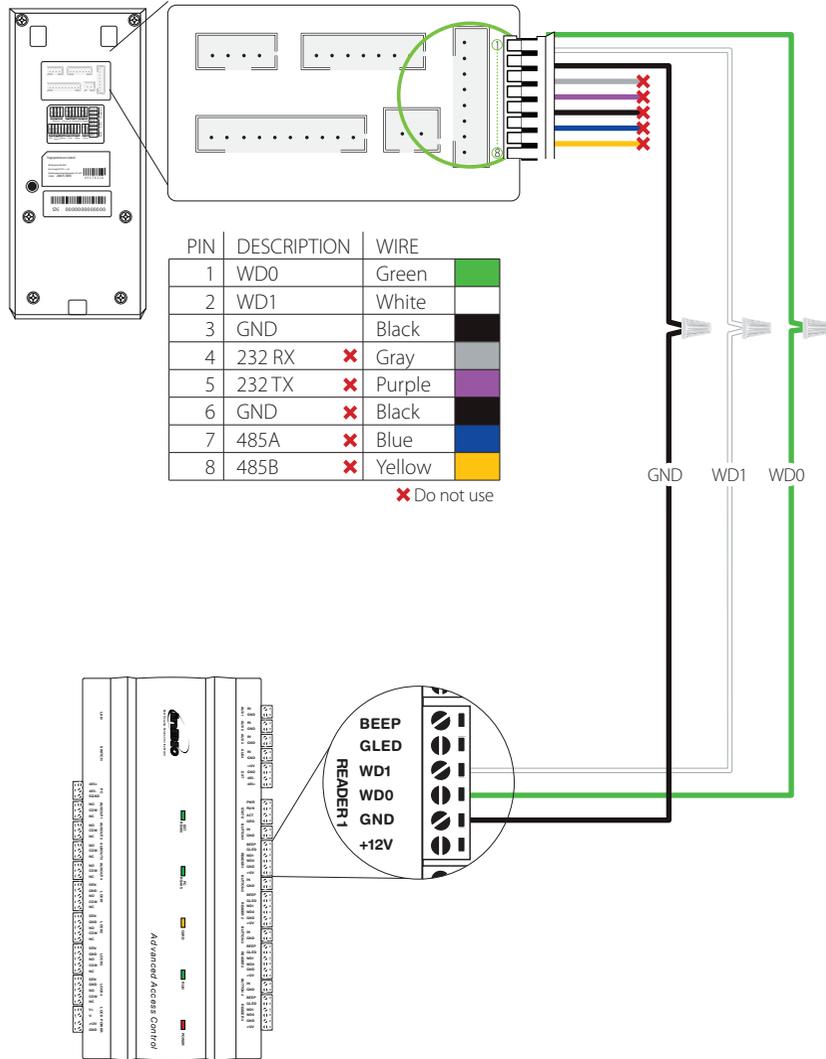
Normally Open Lock



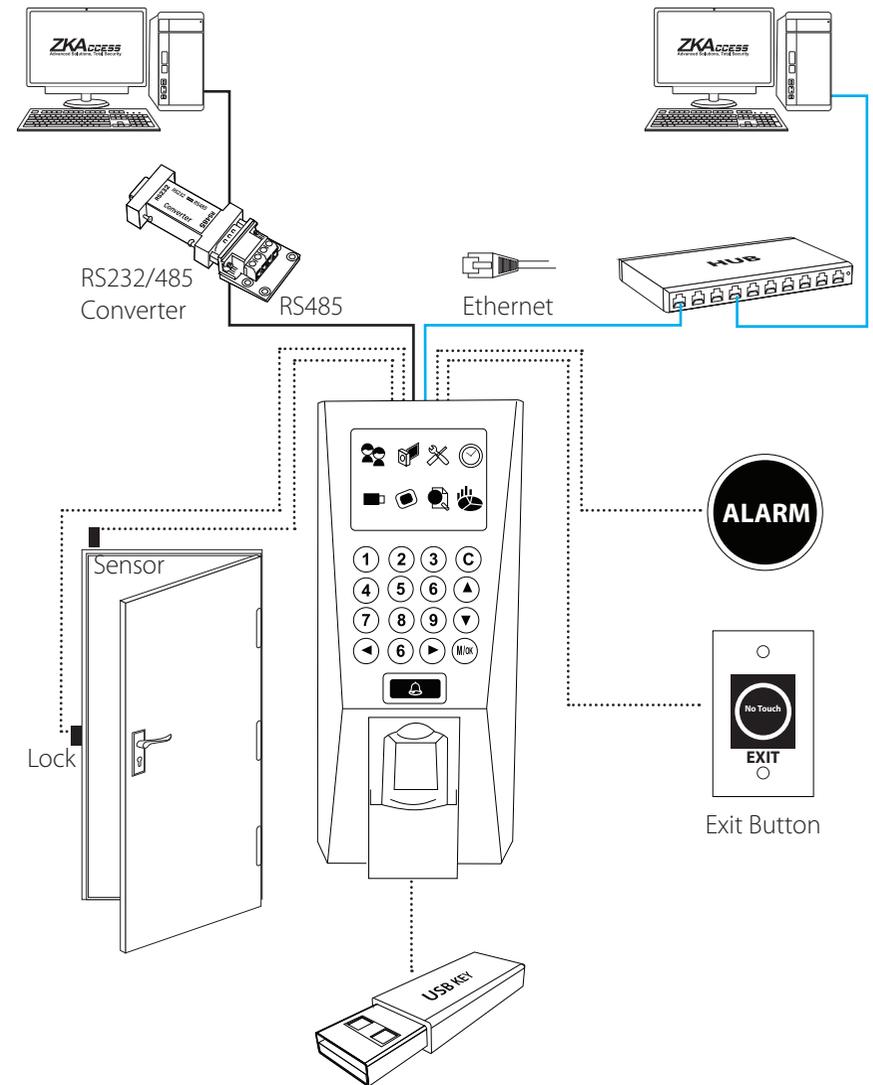
Normally Closed Lock



Wiegand Output Connection

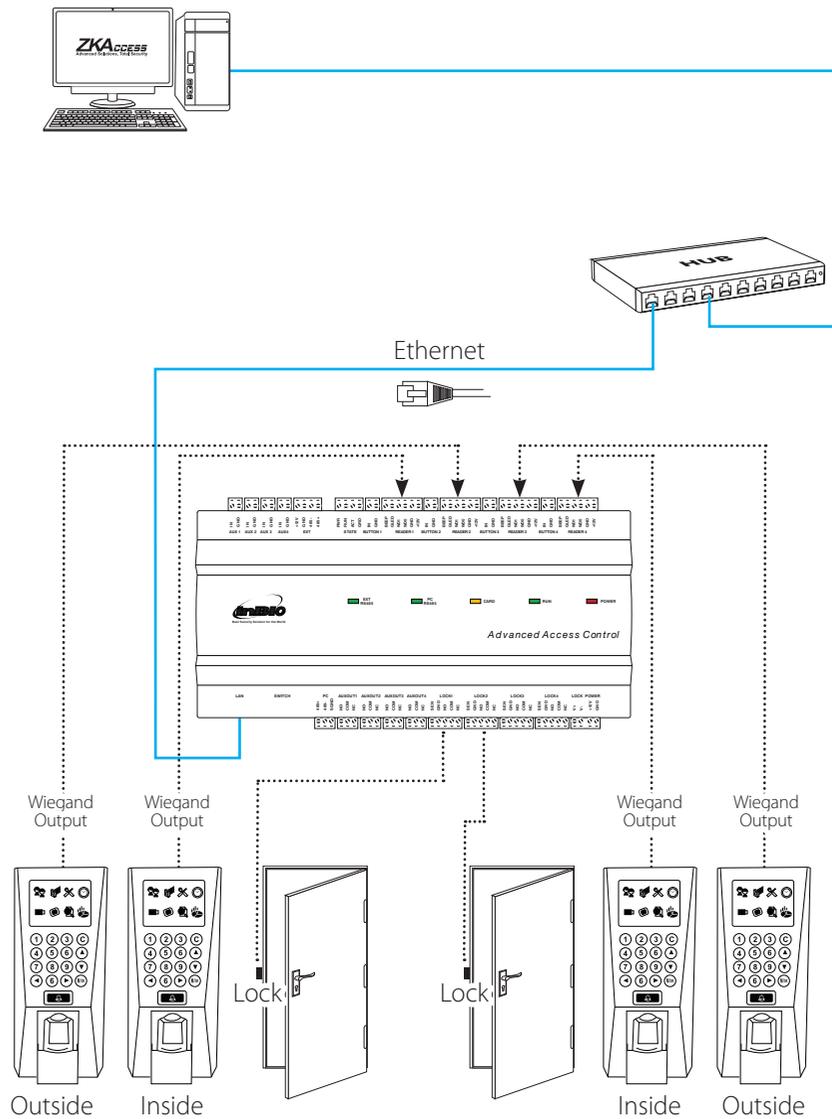


Standalone Installation

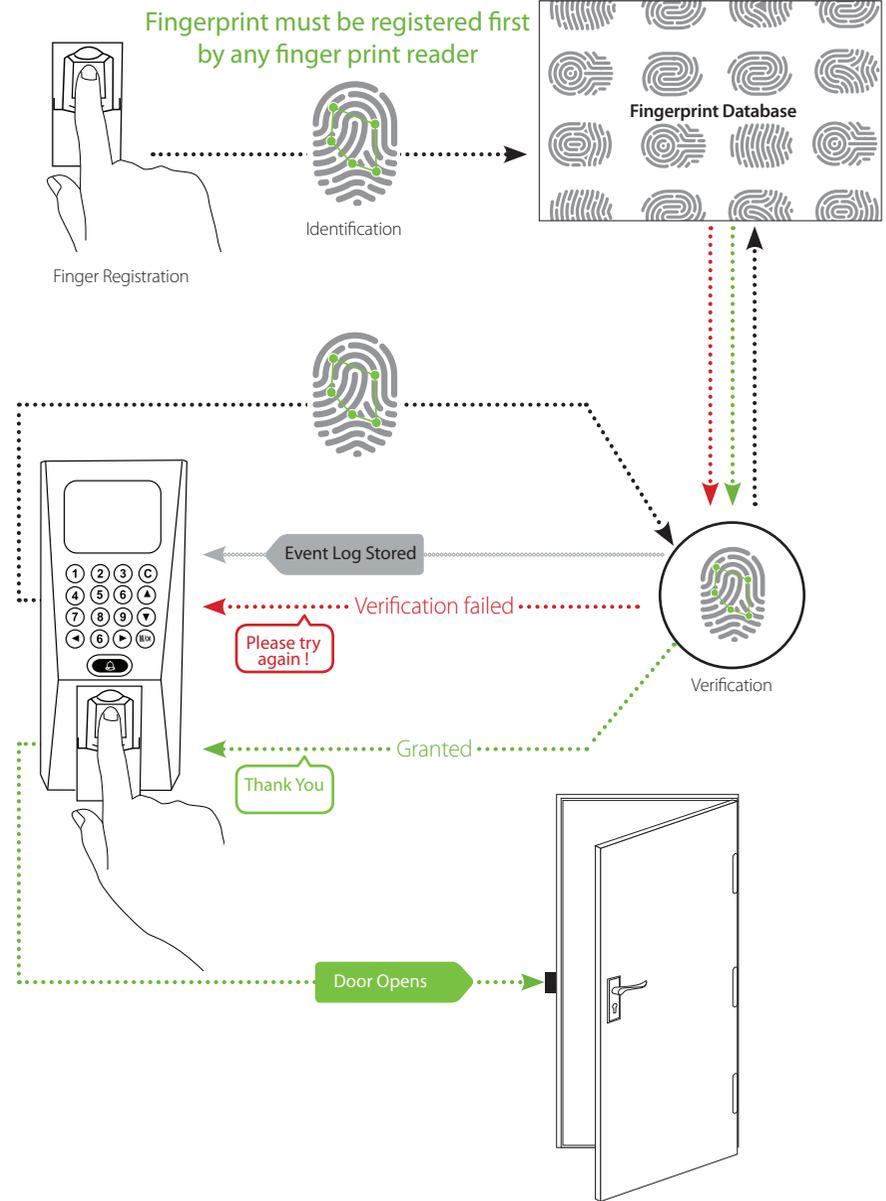


Third Party Controller

Wiegand Output Connection



How Does F18 work

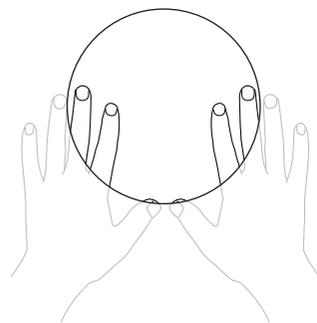


How to Place a Finger on Scanner

ZKTeco's fingerprint readers will give optimal results for fingerprint matching if the following recommendations and suggestions are followed.

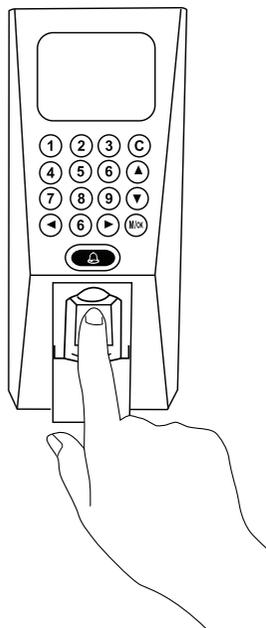
Select a finger to enroll

- It is recommended to use an index finger or a middle finger.
- Thumb, ring or little finger are relatively difficult to place in the correct position

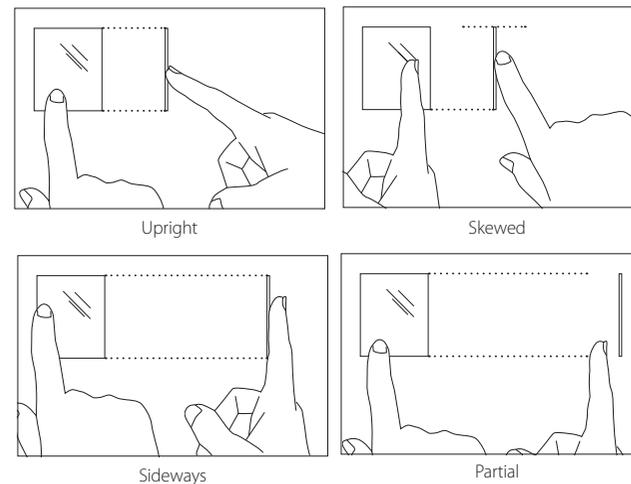


How to place a finger on a sensor

- Place a finger such that it completely covers the sensor area with maximum contact.
- Place core of the fingerprint at the center of the sensor. *The core of a fingerprint is a center where the spiral of ridges is dense. (Usually core of fingerprint is the opposite side of the lower part of a nail.)*
- Place a finger such that the bottom end of a nail is located at the center of a sensor.



DO NOT place the finger in the following positions



If a finger is placed as shown on the left, only a small area of a finger is captured. So it is recommended to place a finger as shown on page 24.

Tips for different fingerprint conditions

- ZKTeco's fingerprint products are designed to verify fingerprints with highest security irrespective of the conditions of the skin of the finger. However, in case a fingerprint is not read on the sensor, please refer to the followings tips.
 - › If a finger is stained with sweat or water, scan after wiping moisture off.
 - › If a finger is covered with dust or impurities, scan after wiping them off.
 - › If a finger is way too dry, please blow some warm air from your mouth on the finger tip.

Tips for fingerprint enrollment

- In fingerprint recognition, enrollment process is very important. When enrolling a fingerprint, please try to place the finger correctly with utmost care.
- In case of low acceptance ratio, the following actions are recommended.
 - › Delete the enrolled fingerprint and re-enroll the finger.
 - › Try another finger if a finger is not easy to enroll due to scar or cuts.
- In case of an enrolled fingerprint cannot be used due to injury or if the hand is full, it is recommended to enroll more than two fingers per user.

1. Fingerprint can not be read or it takes too long.

- › Check whether a finger or fingerprint sensor is stained with sweat, water, or dust
- › Retry after wiping off finger and fingerprint sensor with dry paper tissue or a mildly wet cloth.
- › If a fingerprint is way too dry, blow on the finger and retry.

2. Fingerprint is verified but authorization keeps failing.

- › Check whether the user is restricted by group or time zone.
- › Check with administrator whether the enrolled fingerprint has been deleted from the device for some reason.

3. Authorized but door does not open.

- › Check whether the lock open duration is set to appropriate time, which opens the lock.
- › Check whether anti-passback mode is in use. In anti-passback mode, only the person who has entered through that door can exit.

4. Why device display “system broken” and the alarm is ringing.

- › Check whether the device and back plate are securely connected to each other. If not, a tamper switch is activated which triggers the alarm and keeps it ringing.

5. How to set F18 used as fingerprint reader on inBio access controller.

- › Reference the Wiegand Output Connection on page 20.
- › Enroll personnel's PIN in inBio panel as a card

| | Minimum | Typical | Maximum | Notes |
|-------------------------------------|---------|---------|---------|---------------------------------------------------------------------------------|
| WORKING POWER SUPPLY | | | | |
| Voltage (V) | 9.6 | 12 | 14.4 | Use regulated DC power adaptor only |
| Current (A) | | | 2 | |
| ELECTRONIC LOCK RELAY OUTPUT | | | | |
| Switching voltage (V) | | | 36V | Use regulated DC power adaptor only |
| Switching Current (A) | | | 2 | |
| SWITCH AUX. INPUT | | | | |
| VIH (V) | | TBD | | |
| VIL (V) | | TBD | | |
| Pull-up resistance (Ω) | | 4.7k | | The input ports are pulled up with 4.7k resistors |
| WIEGAND INPUT | | | | |
| Voltage (V) | 10.8 | 12 | 13.5 | |
| Current (mA) | | | 500 | |
| TTL/WIEGAND OUTPUT | | | | |
| VoH (V) | | | 5 | |
| VoL (V) | | | 0.8 | |
| Pull-up resistance (Ω) | | | 4.7K | The outputs ports are open drain type, pulled up with 4.7k resistors internally |
| ZK ELECTRONIC LOCK | | | | |
| Voltage (V) | 10.8 | 12 | 13.2 | |
| Current (mA) | | | 500 | |

ZKAccess CLASSIC 3.5 Installation Guide



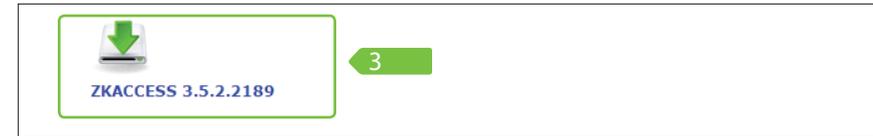
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Downloading



1. Go to zkaccess.com
2. Hover over **Downloads** then click **Software Downloads** in the dropdown menu.

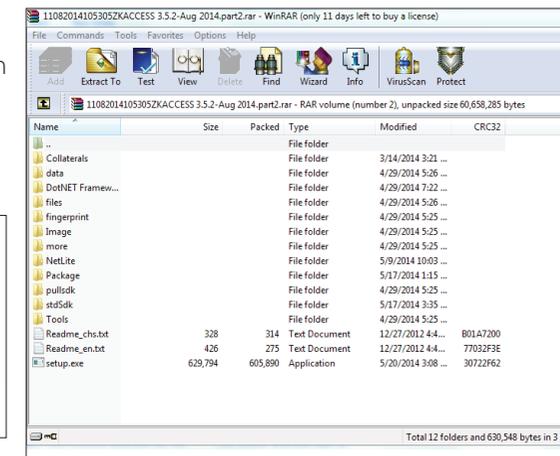


3. Scroll to the bottom of the page and click **ZKACCESS CLASSIC 3.5** to download

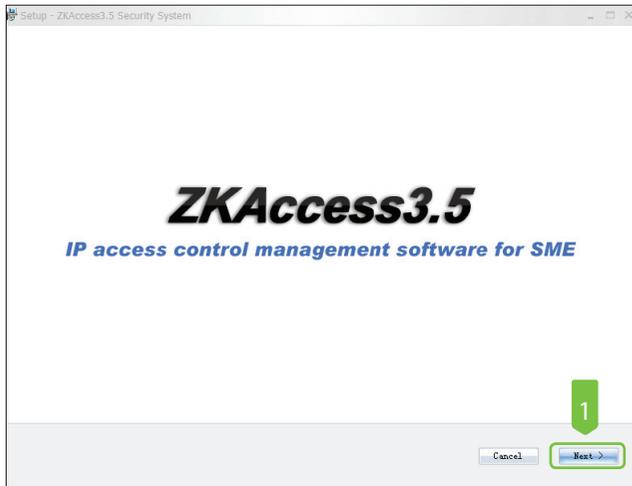


If you do not have software to extract compressed files, Scroll up on the same page to find **Winrar 32** or **Winrar 64** to download

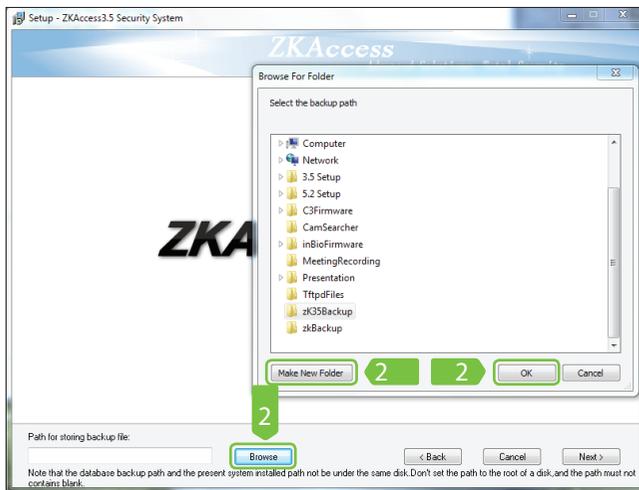
4. Extract Files to a Setup Folder
5. Open the setup folder and run **setup.exe** to install



Installation



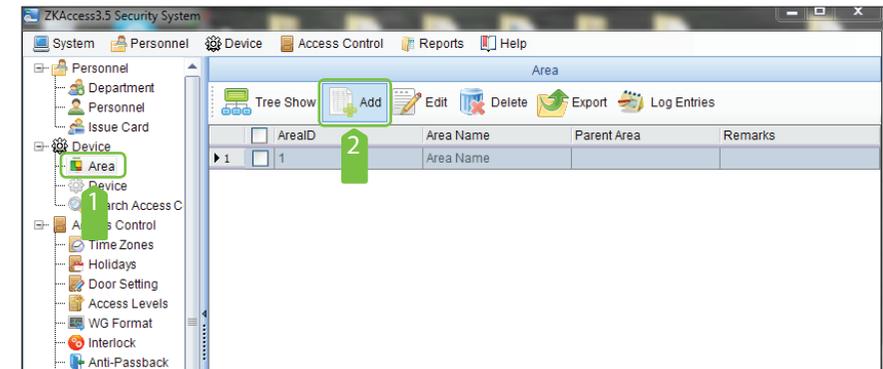
1. Click **Next** until asked to choose a path for storing backup files



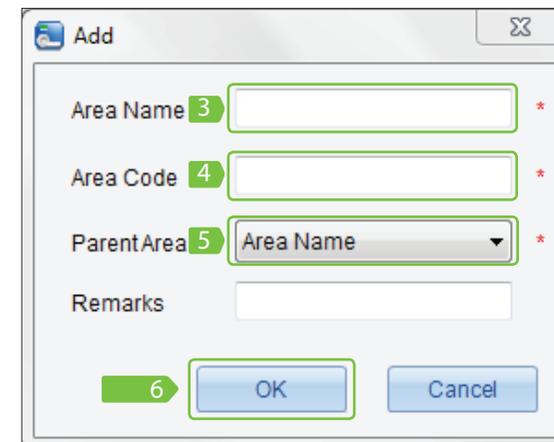
2. Click **Browse** and **Make New Folder**, now hit **OK**
3. Click **Next** and then **Install**

Adding an Area

Before adding devices, it is required to add an area to manage devices. The system, by default, has set an area named **Area Name** and **Area ID [1]**.



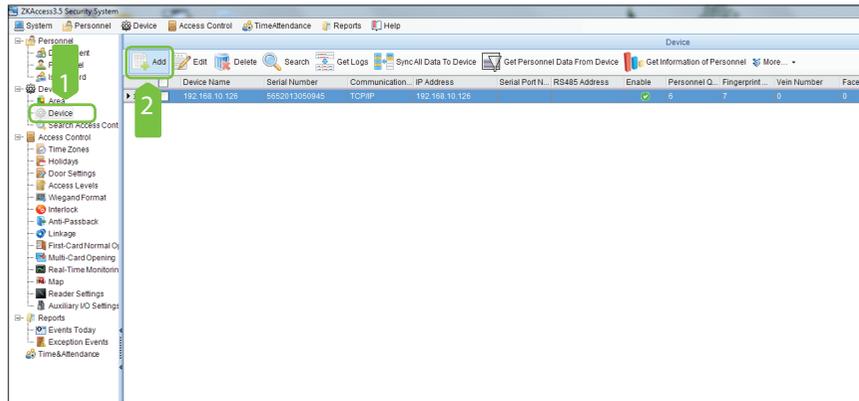
1. Click **Area**
2. Click **Add**



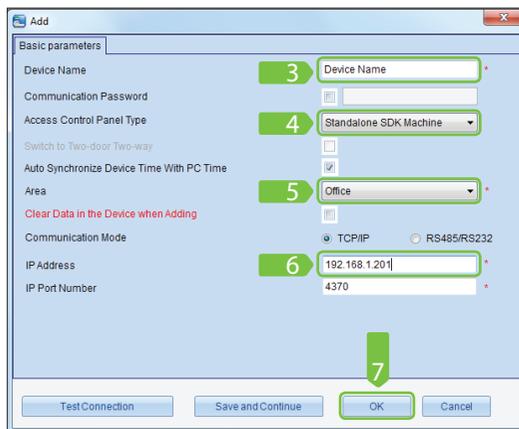
3. Input the Area Name,
4. Area Code (Unique ID number up to 8 digit)
5. Choose a Parent Area from the dropdown menu
6. Click **OK**

Adding a Device

To add a standalone device:

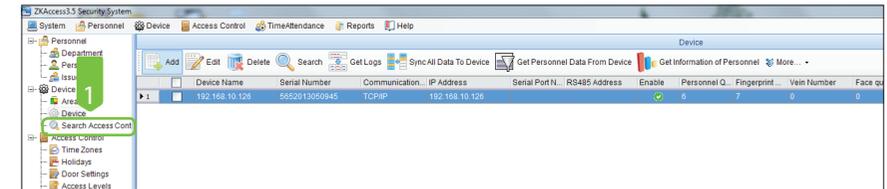


1. Click **Device**
2. Click **Add**



3. Input a Device Name
4. For Access Control Panel Type, select [Standalone SDK Machine]
5. Choose an Area
6. Input the device's IP Address
7. Click **OK**

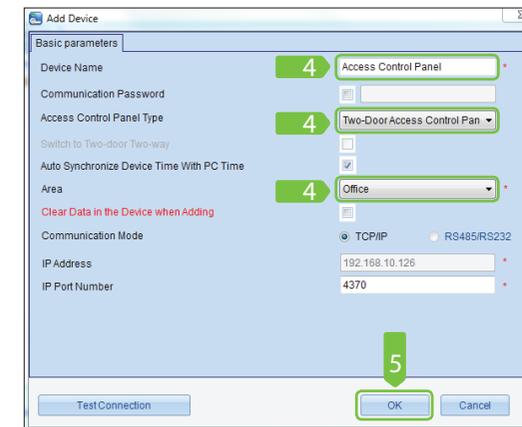
To add an Access Control Panel:



1. Click **Search Access Control Panels**, to show the Search interface, supports Ethernet and RS485 search.



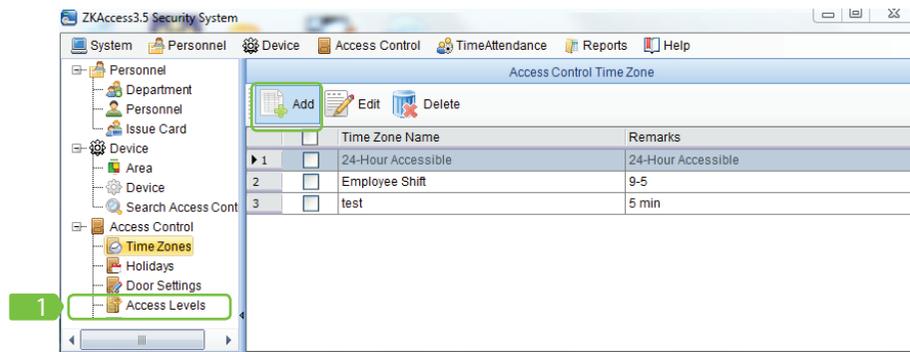
2. Click **Search**, and it will prompt [Please wait.];
3. Click the device you wish to add. Click **Add Device**



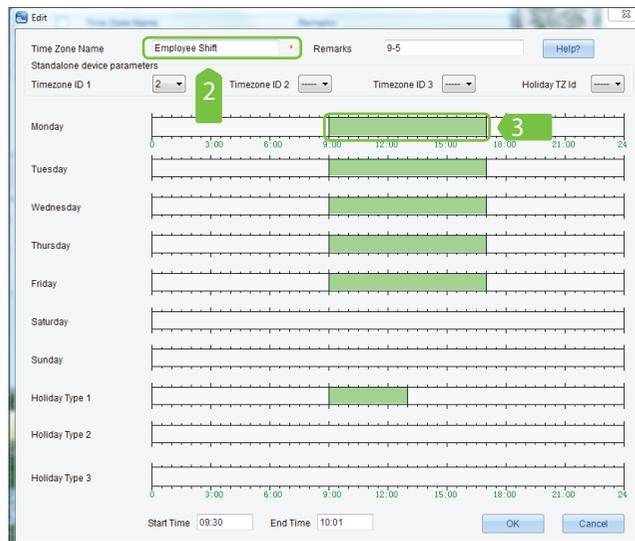
4. Input a device name, type, and area.
5. Click **OK**

Creating a Time Zone

Time Zones are used to set when readers will be active, when doors will be open, and when specified users will have access to specified doors.



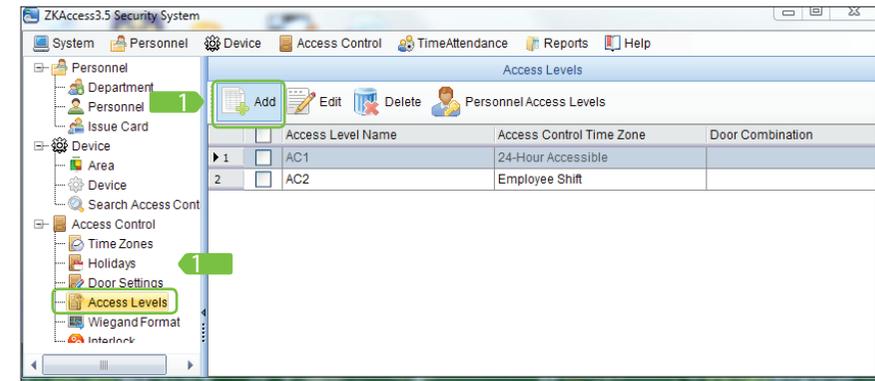
1. Click **Access levels** > **Add** to enter Add access levels edit interface;



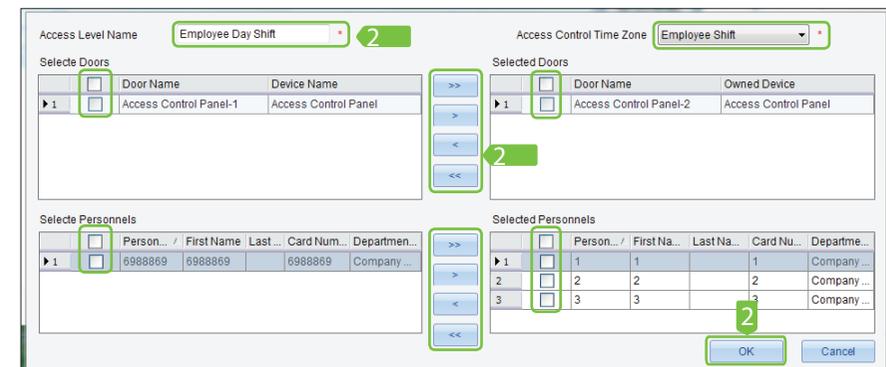
2. Input a Time Zone Name
3. Click and drag in each day's frame to set up to three intervals per day or holiday

Creating an Access Level

Access levels means in a specific time period, which door or door combination can be opened through verification



1. Click **Access levels** > **Add**

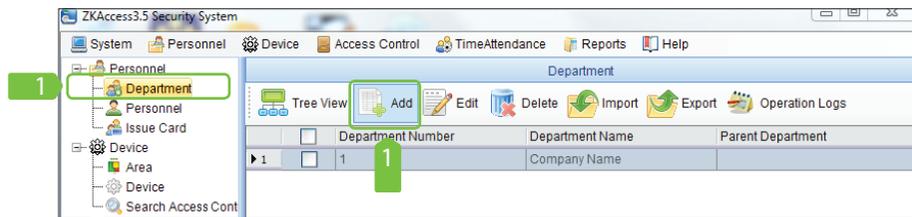


2. Set the access level name, time zone, doors, and personnel that will have access.
3. Click **OK** to complete setting and quit

Creating Departments / Enrolling Personnel

Before managing Personnel it is required to describe the company's departmental organization.

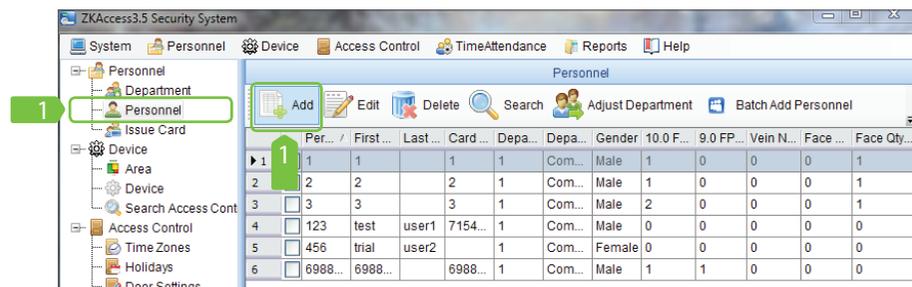
Creating Departments



1. Click **Department** > **Add** to create Departments.

2. Input department name and department number. Choose parent department. Then click **OK**

Enrolling Personnel



1. Click **Personnel** > **Add** to show personnel profile edit interface

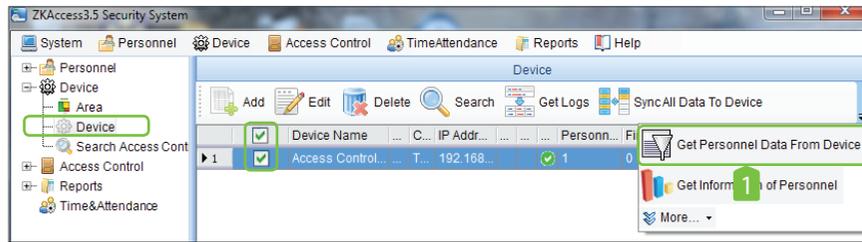
2. Enter a Personnel Number. It cannot exceed 9 digits.
3. Select a department from the pull-down menu
4. (Optional) Enter a card number manually or using a card issuer.
5. (Optional) Enter a password for readers with keypad
6. (Optional) Click USB Sensor to enroll fingerprints.

7. Select a finger and press on the sensor three times. When you see "Succeed in fingerprint registration" Click **OK**

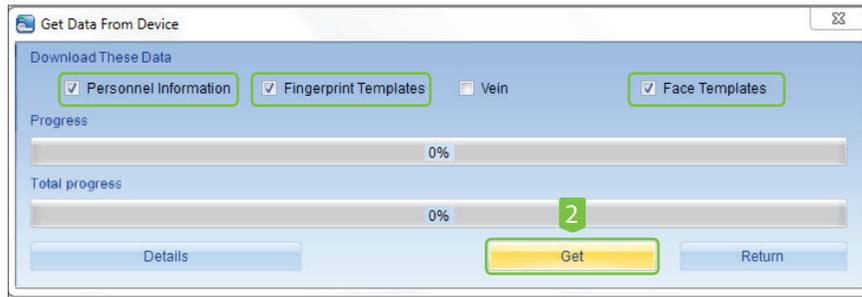


8. (Optional) Register employee as Administrator through [Terminal Management]
9. Click the **Alternative Access Levels** tab choose the user's Access Level. Click **OK**

Importing Personnel Data from Device

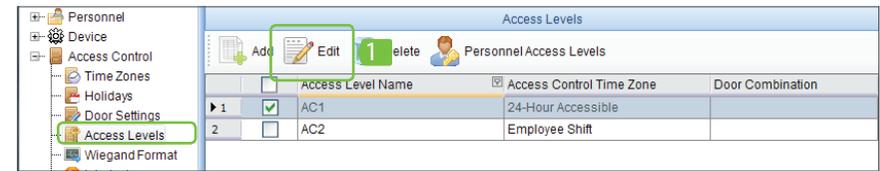


1. Click **Device**. Choose a device to import personnel from. **Get Personnel Data From Device** to import from device

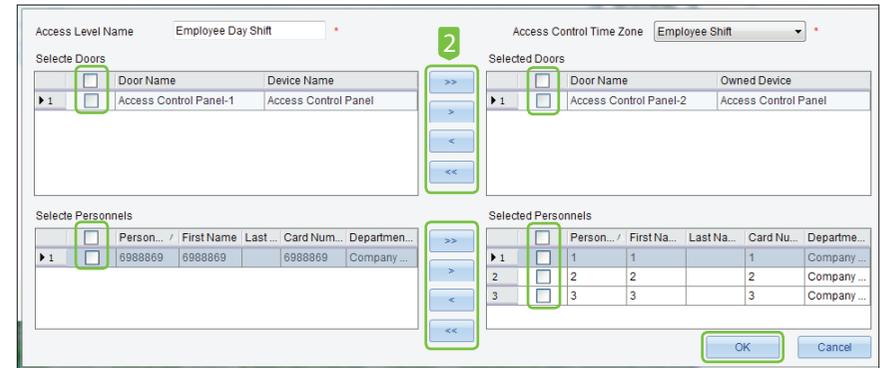


2. Choose Personnel, Fingerprints, or Face Templates to download, click **Get**

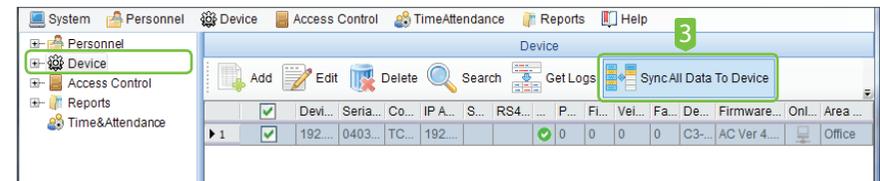
Exporting Personnel Data to Device



1. To export personnel data to another device, go to **Access levels** > **Edit**

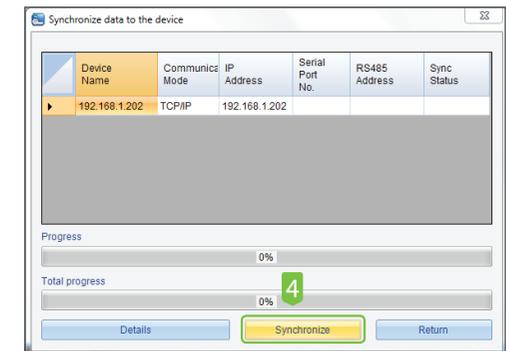


2. Add the personnel and device to an access level. Click **OK**

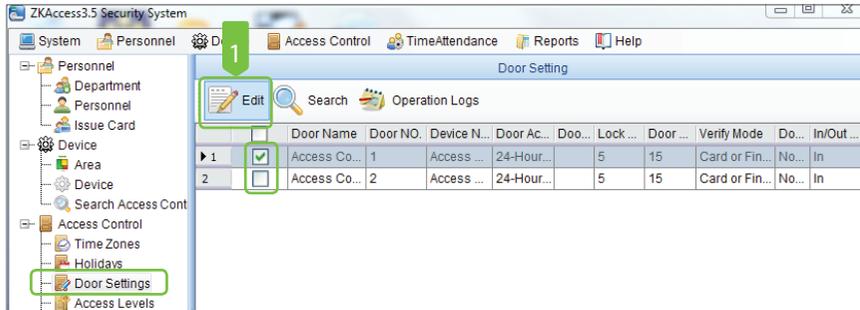


3. Go to **Device**, choose a device to export the personnel to, and click **Sync All Data To Device**

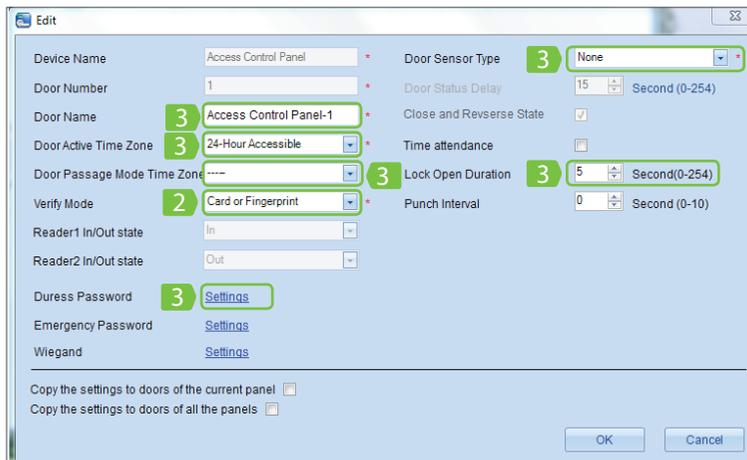
4. Click **Synchronize**.



Door Settings



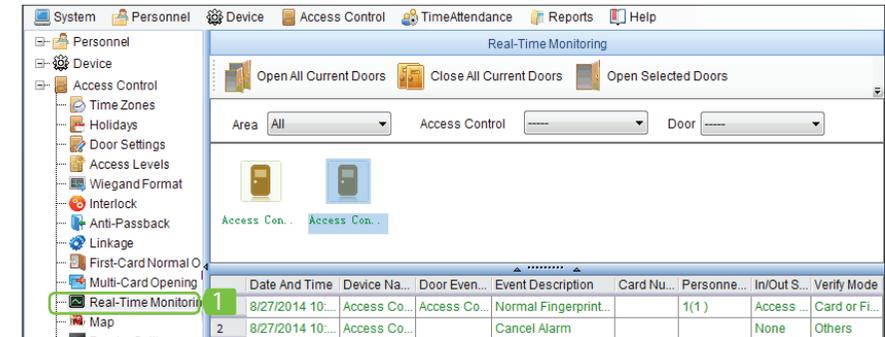
1. Click **Door Setting**, select the door to be modified, click **Edit**



2. Set the verification mode desired for the door.
3. (Optional) Modify the Door's name, active time zone, passage mode, sensor type, lock open duration, and duress settings.

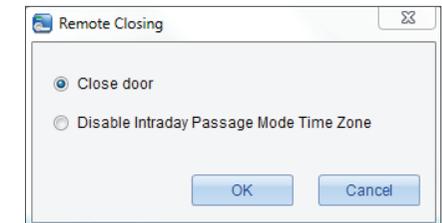
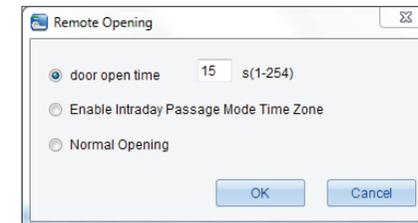
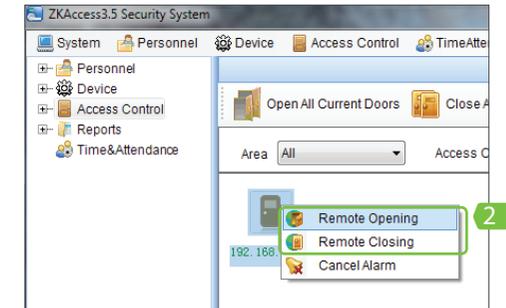
Real Time Monitoring

Monitor the statuses and real-time events of doors under the access control panels in the system in real-time.



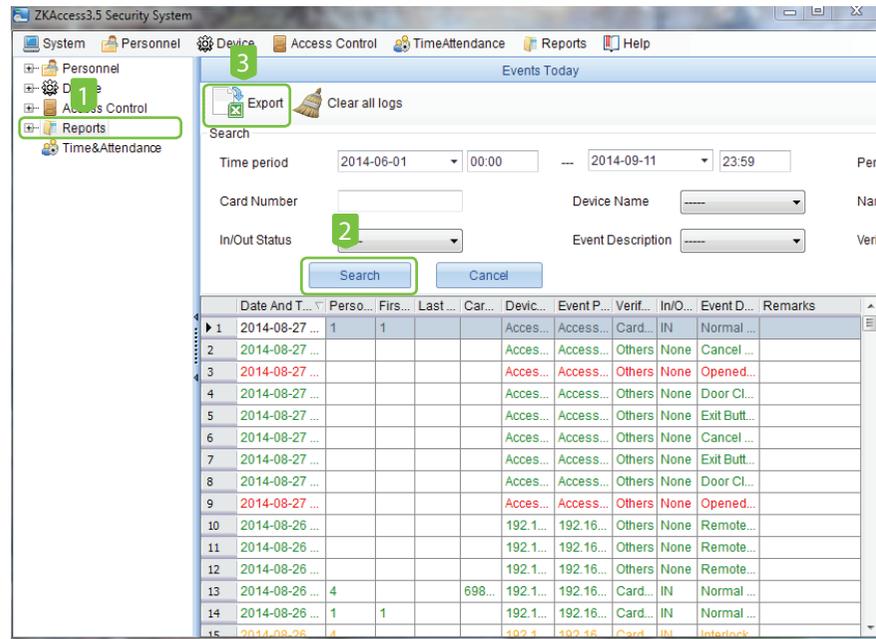
1. Click **Real-Time Monitoring** to view live events

2. Right click on the door icon to remote open/close.



3. Choose door open time or Enable Intraday Passage Mode
4. Choose close door or Disable Intraday Passage Mode

Exporting Reports

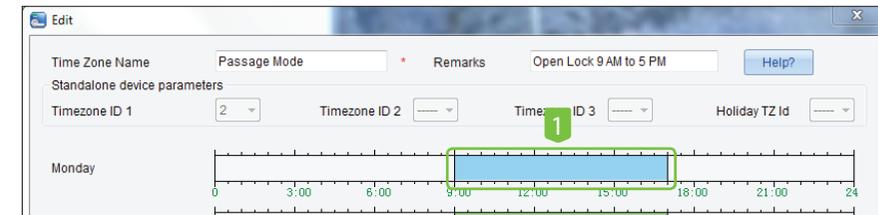


1. Click **Reports** to access transaction logs
2. Set filters to examine desired transactions, click **Search**
3. Click **Export** to export reports in XLS, PDF, or TXT file format

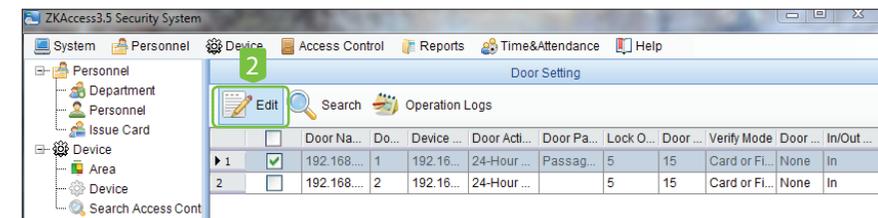
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Passage Mode

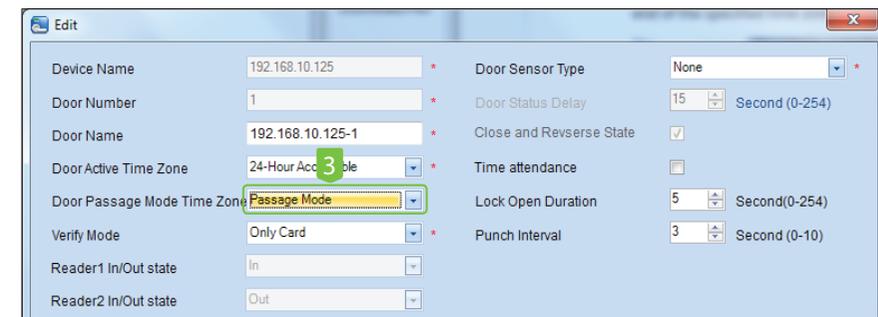
The Passage Mode feature will keep a door unlocked during a specified time zone. It will automatically unlock at the beginning of the time zone and will lock automatically at the end of the specified time zone.



1. Create a new Time Zone with the hours you want the door to be unlocked.



2. In Door Settings, Click Edit to change door settings.



3. Click the dropdown menu titled "Door Passage Mode Time Zone" and select your new time zone



ZKAccess - a division of ZKTeco

Version: December 2014

