

Quick Start Guide



C3 Pro
+
ZKBioSecurity 3.0

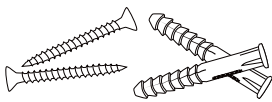
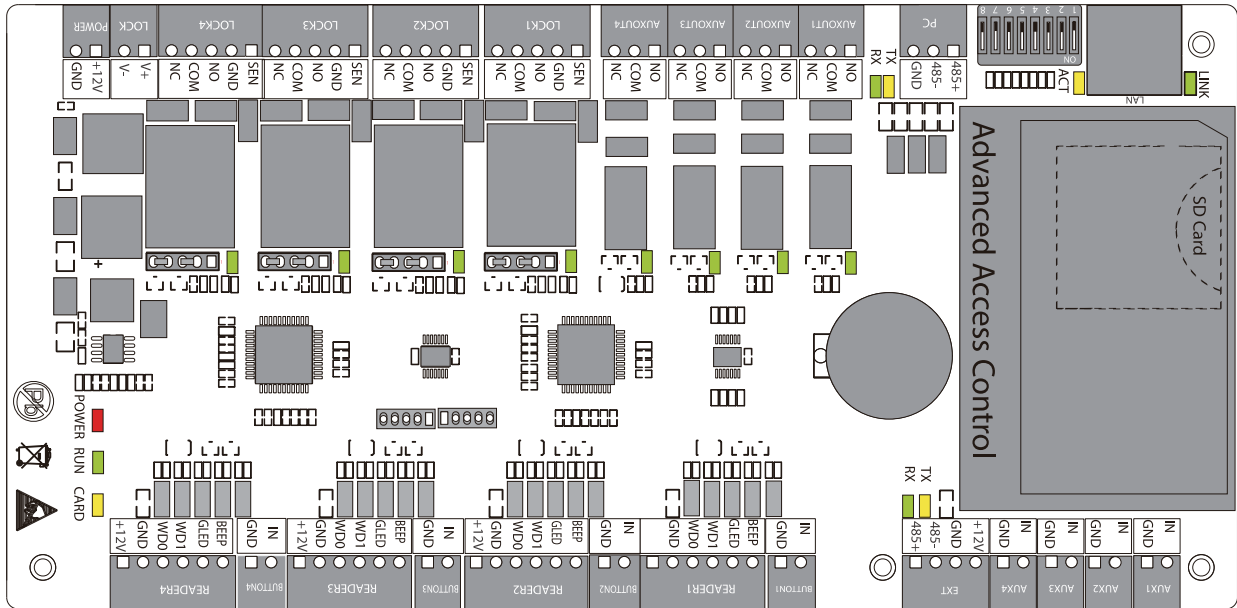
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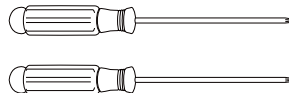


ZKBioSecurity Software Installation and Setup starts at Page 29

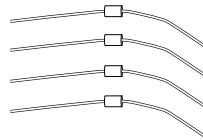
What's in the Box



2 Screws & Anchors



2 Screwdriver



4 Diode

Optional accessories



Wiegand Card Reader



Prox Card



C3 Pro Cabinet



PTE-1 Exit Button



RS485 Convertor



Card Enroller



Alarm

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

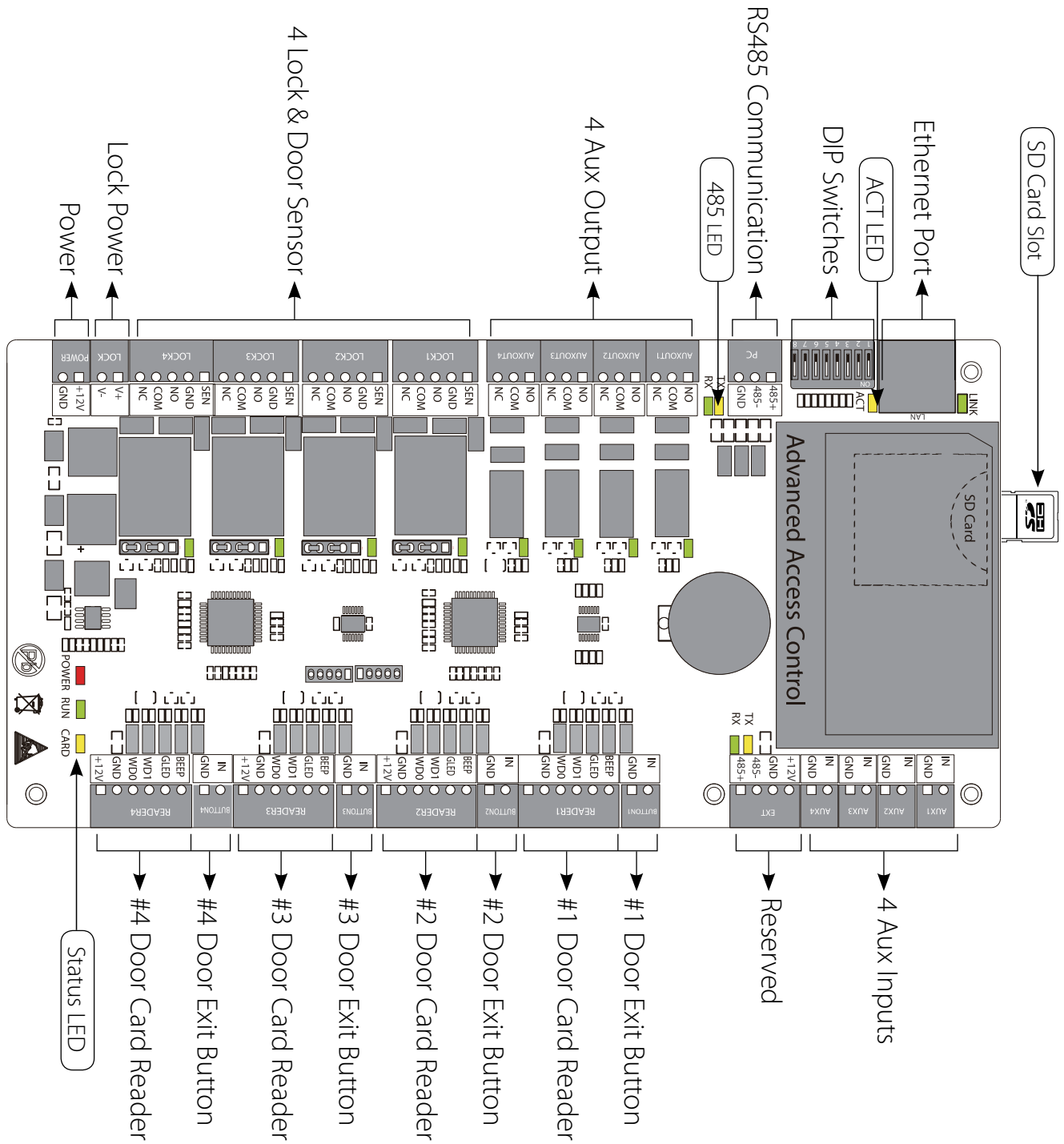


Figure 1

LED Indicators

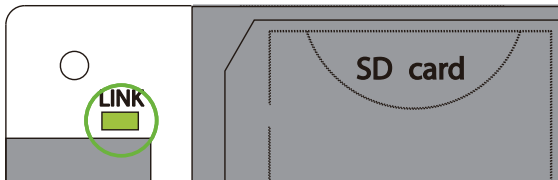


Figure 2

LINK Solid Green LED indicates TCP/IP communication is normal.

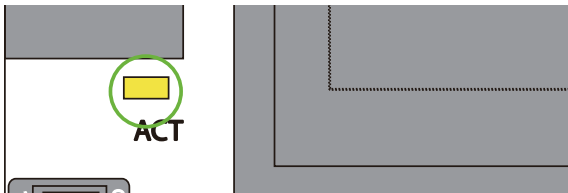


Figure 3

Flashing (ACT) Yellow LED indicates data communication is in progress.

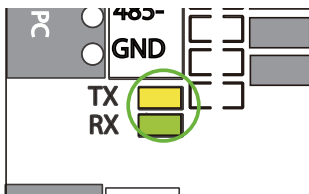


Figure 4

EXT RS485 (TX/RX) Flashing Yellow & Green LED indicates communication is in progress.

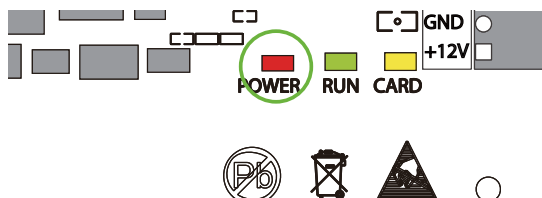


Figure 5

Flashing (POWER) Red LED indicates the panel is powered on.

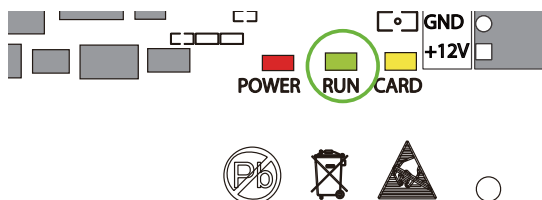


Figure 6

Flashing (RUN) Green LED indicates that panel is in normal working state.

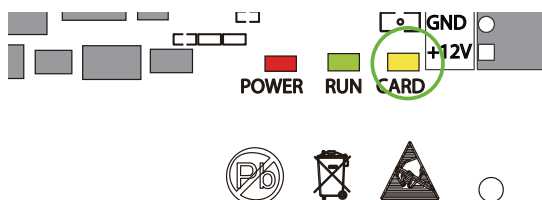


Figure 7

Flashing (CARD) Yellow LED indicates that the card is read by the panel.

Product Dimension

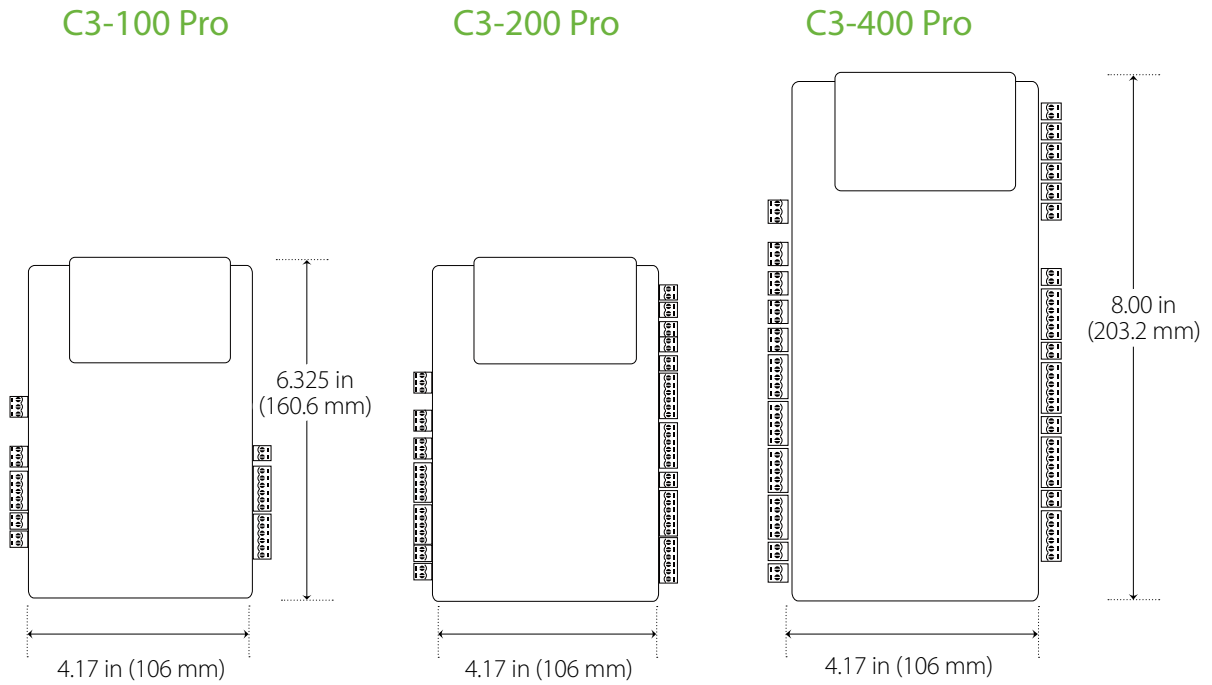


Figure 8

C3 Pro- Metal Cabinet

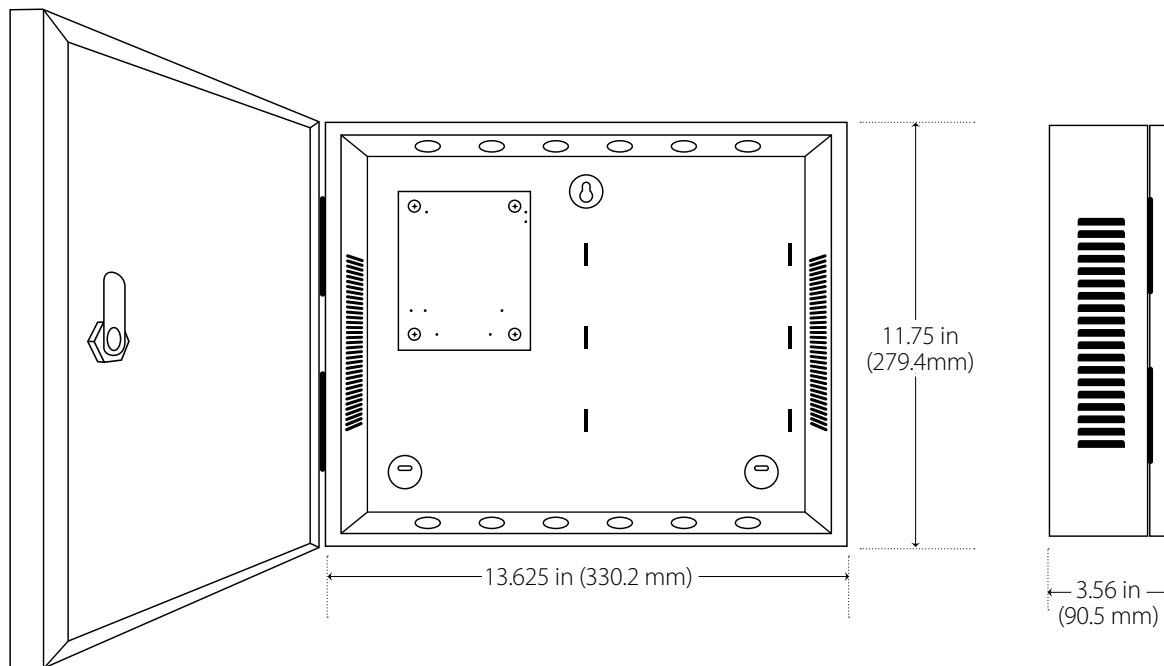


Figure 9

Installation of Panel & Cabinet

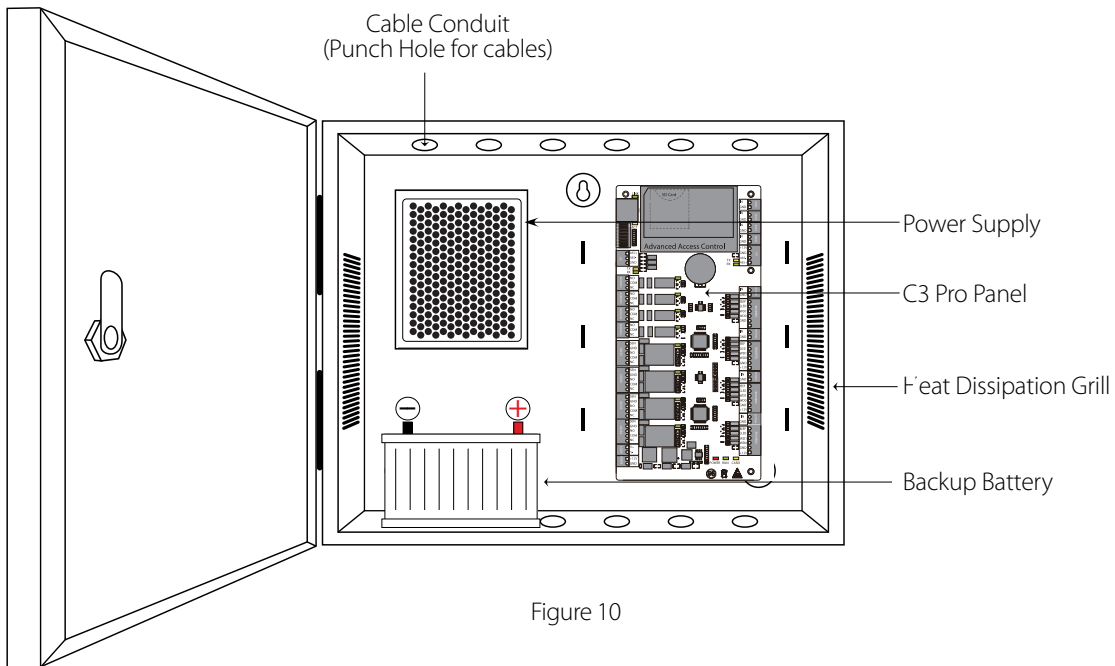


Figure 10

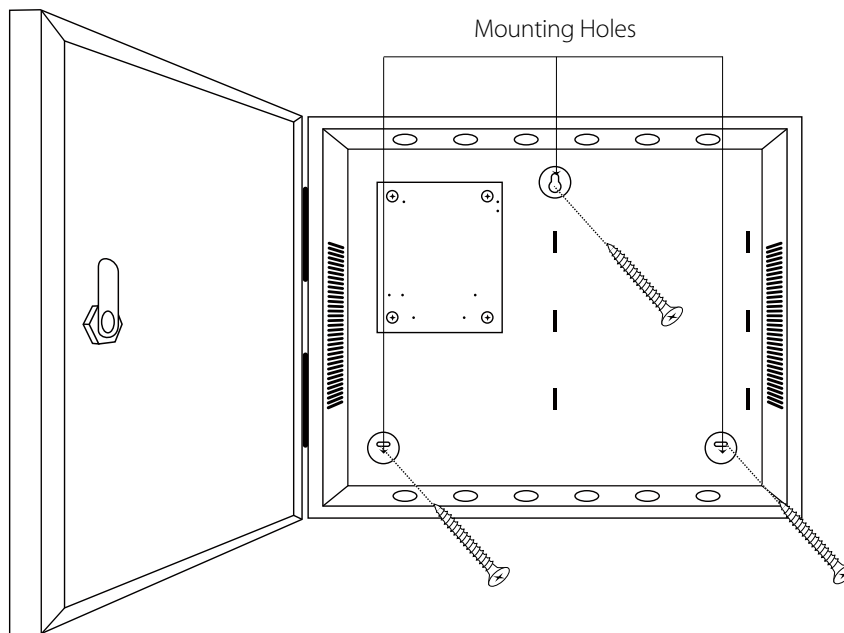


Figure 11

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 Wiring Diagram

Without Backup Battery

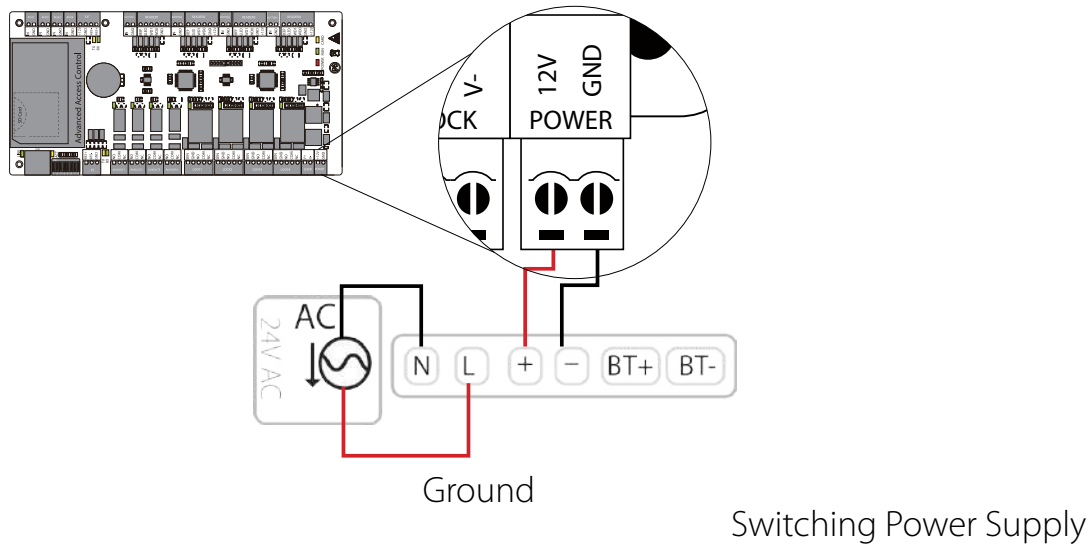


Figure 13

With Backup Battery

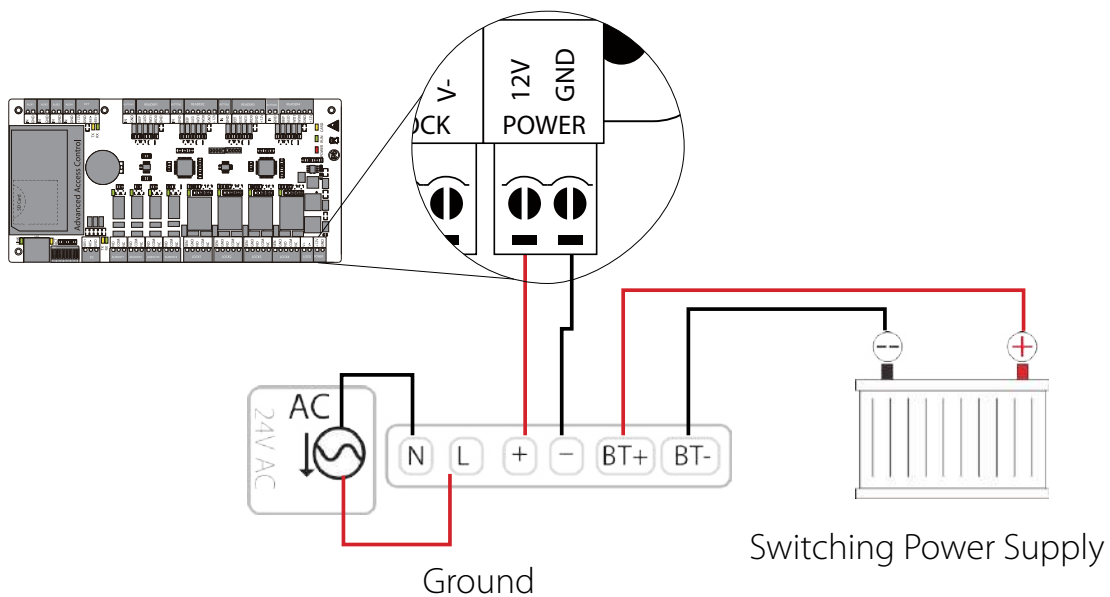
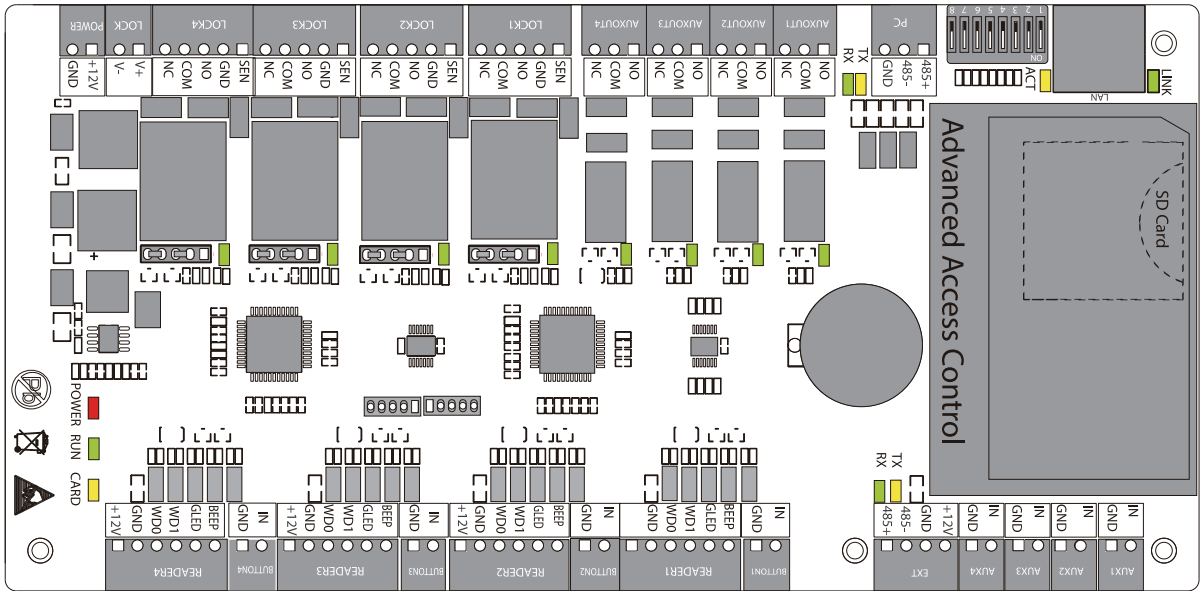
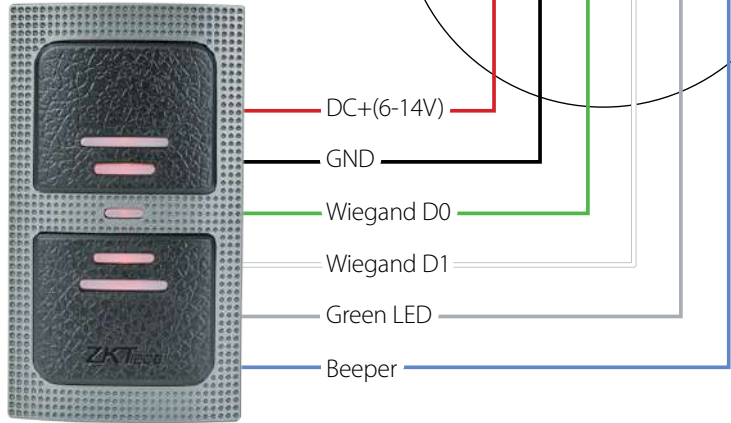
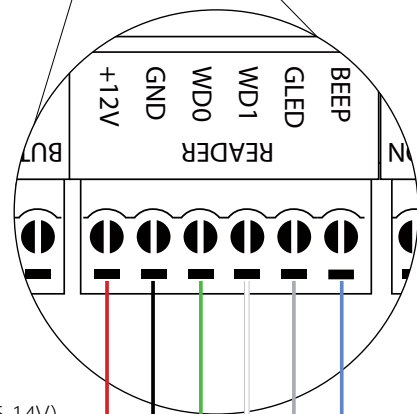


Figure 14

Wiegand Connection



16 or 18 AWG shielded cable recommended



Wiegand Card Reader

Figure 15

REX Connections

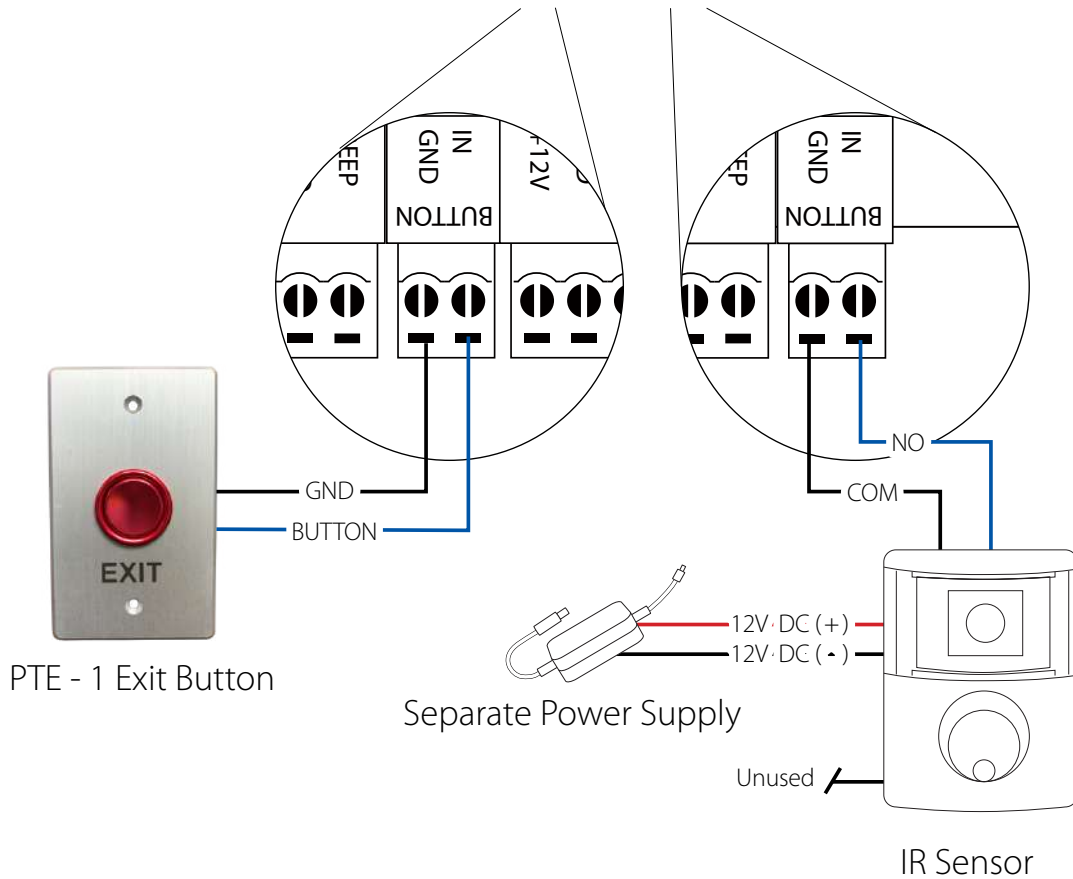
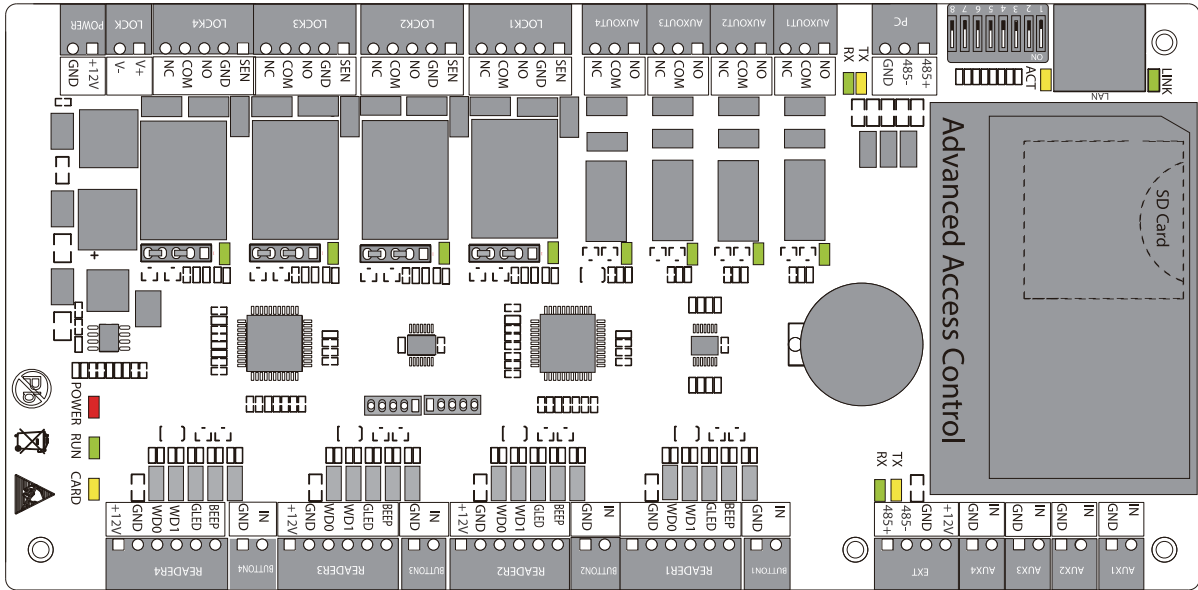


Figure 16

Lock Connection

Connecting a lock with external power supply

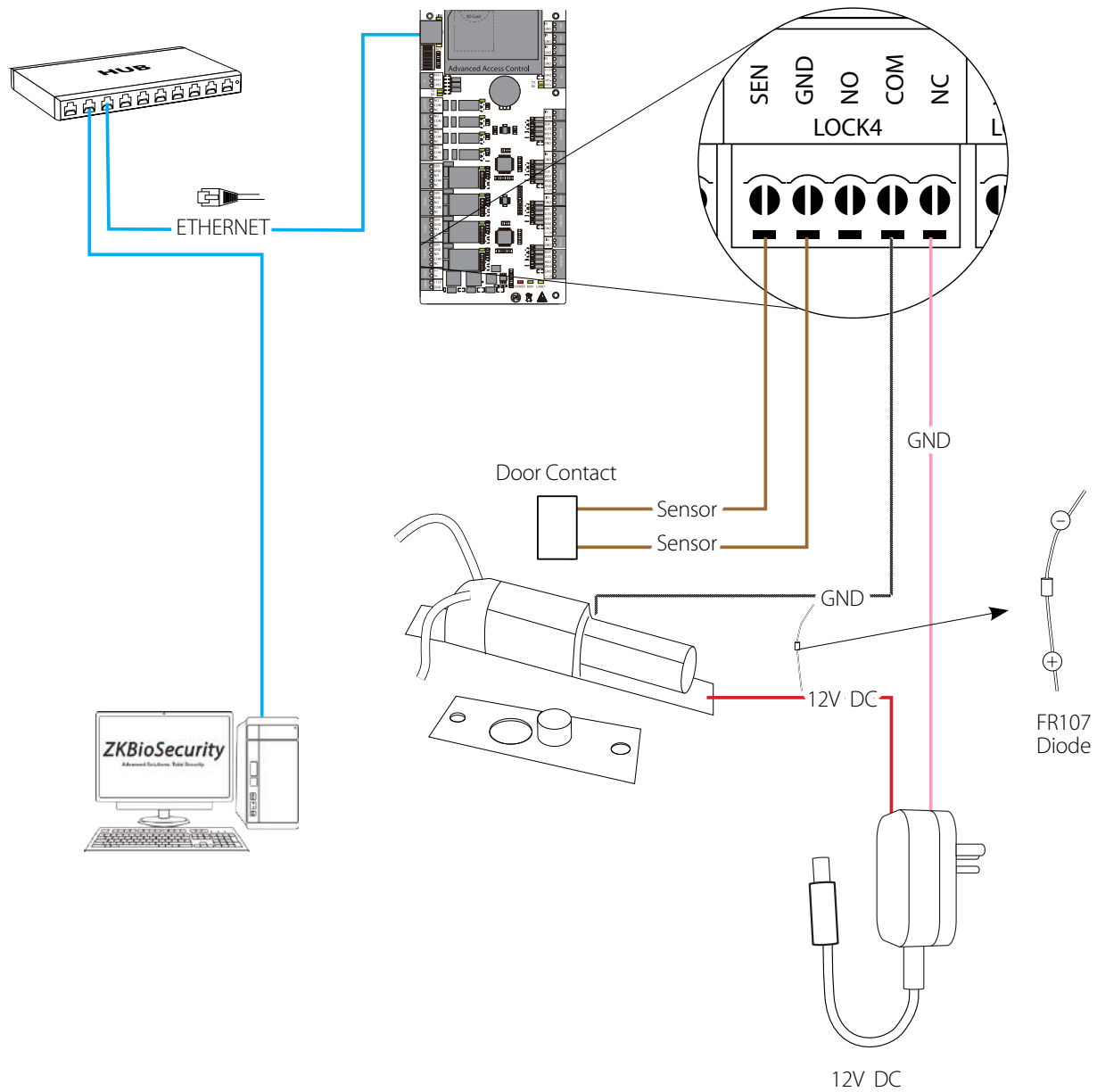

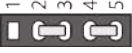


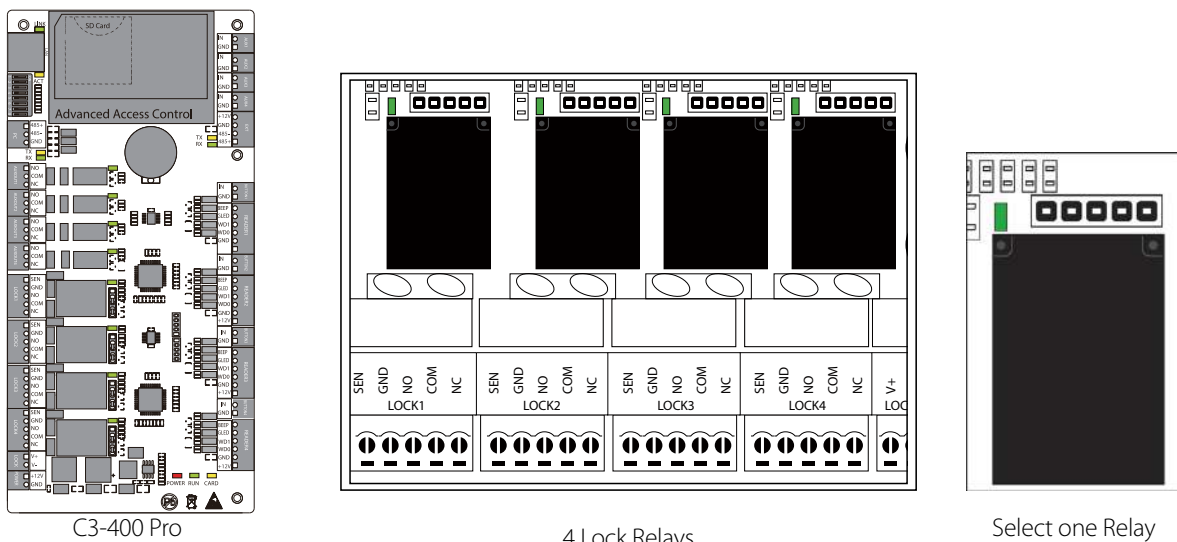
Figure 17

Switching from Dry to Wet

Important Notes:

The factory default jumper setting is set as dry mode. If you want to power the lock from the panel, you must take the following steps:

1. Take apart the cover of C3-400 Pro. Push the tab inward (see figure 21)
2. Select the appropriate lock relay and find its jumpers
3. Take off the jumpers and change  to 
4. Connect the lock as show in the diagram, (see figure 23 and 24)



4 Lock Relays

Figure 18

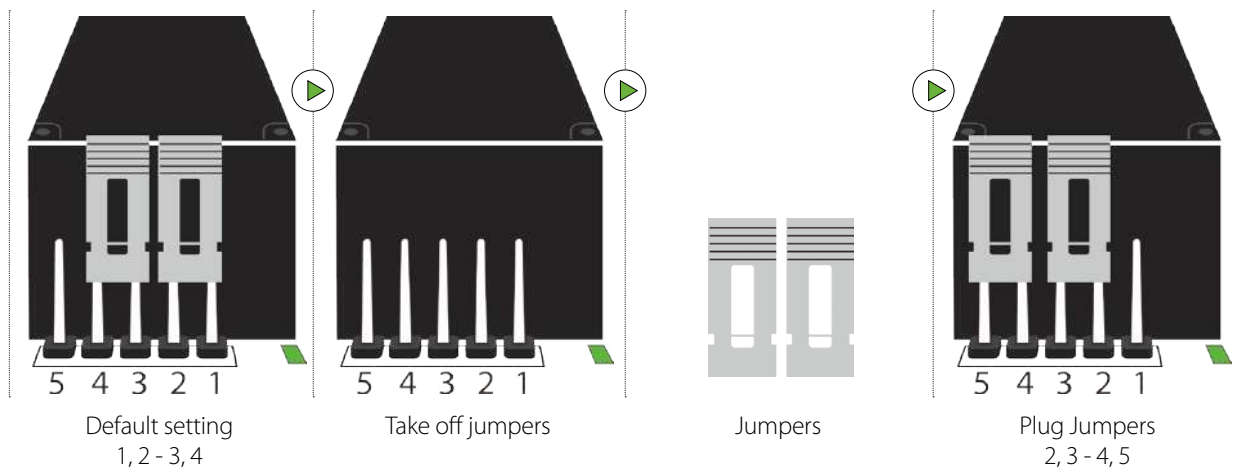


Figure 19

Lock Connection

Normally Open Lock Powered From Lock Terminal (Wet Contact)

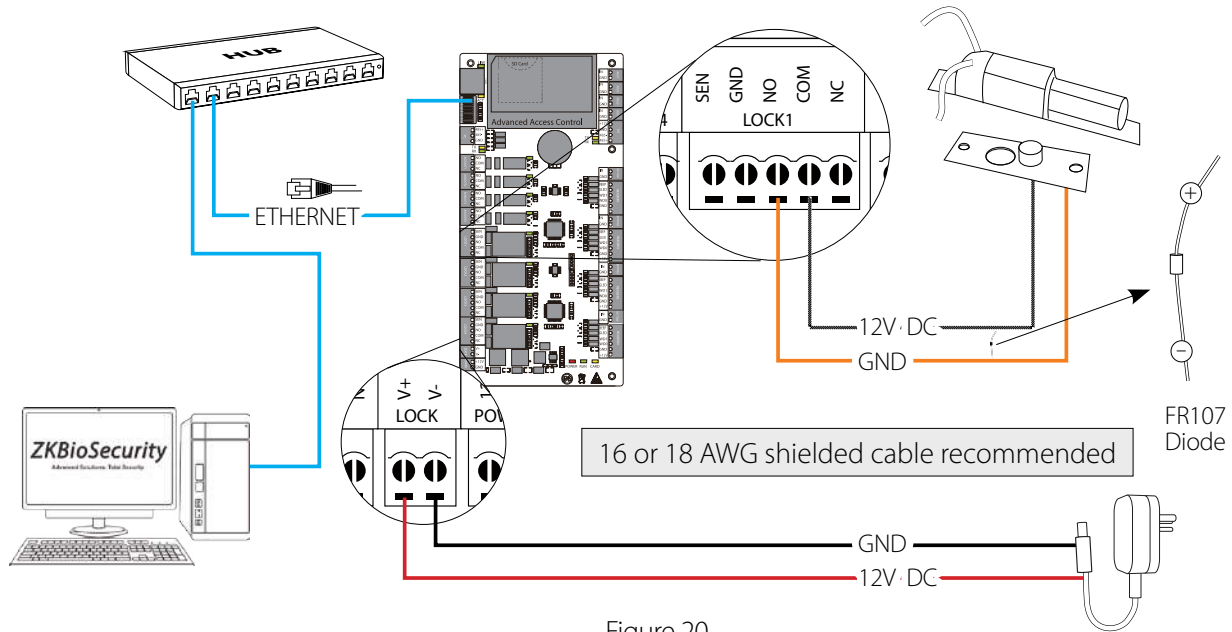


Figure 20

Normally Closed Lock Powered From Lock Terminal (Wet Contact)

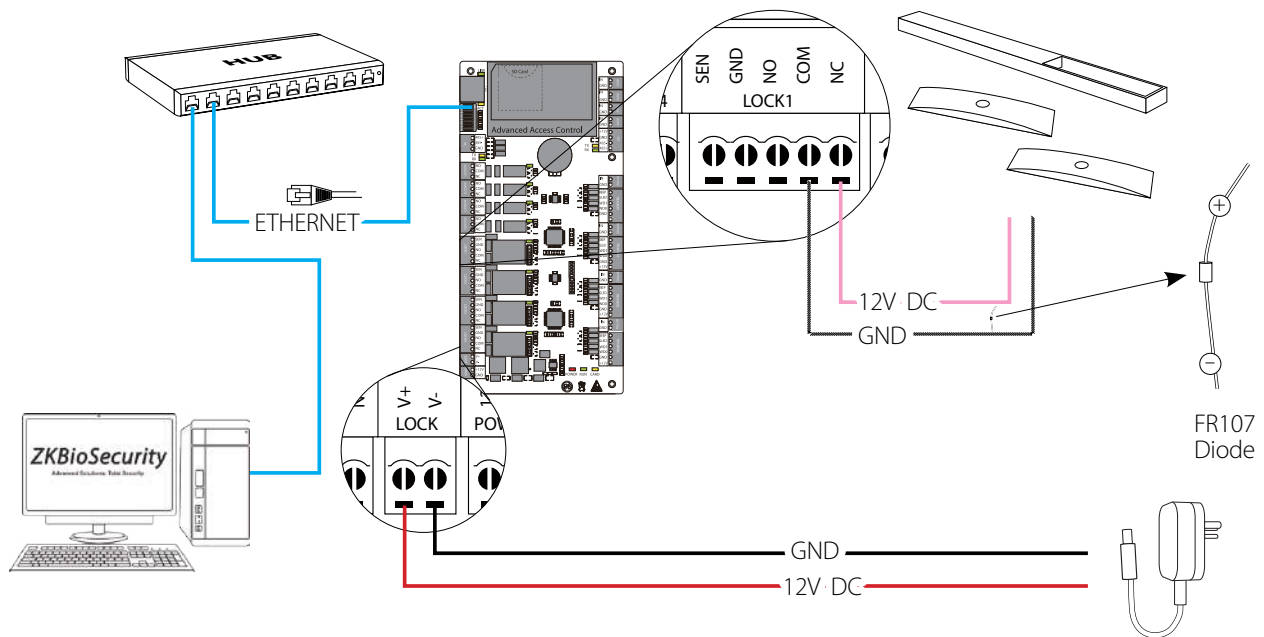


Figure 21

Aux. I/O Connection

Aux. Input Connection

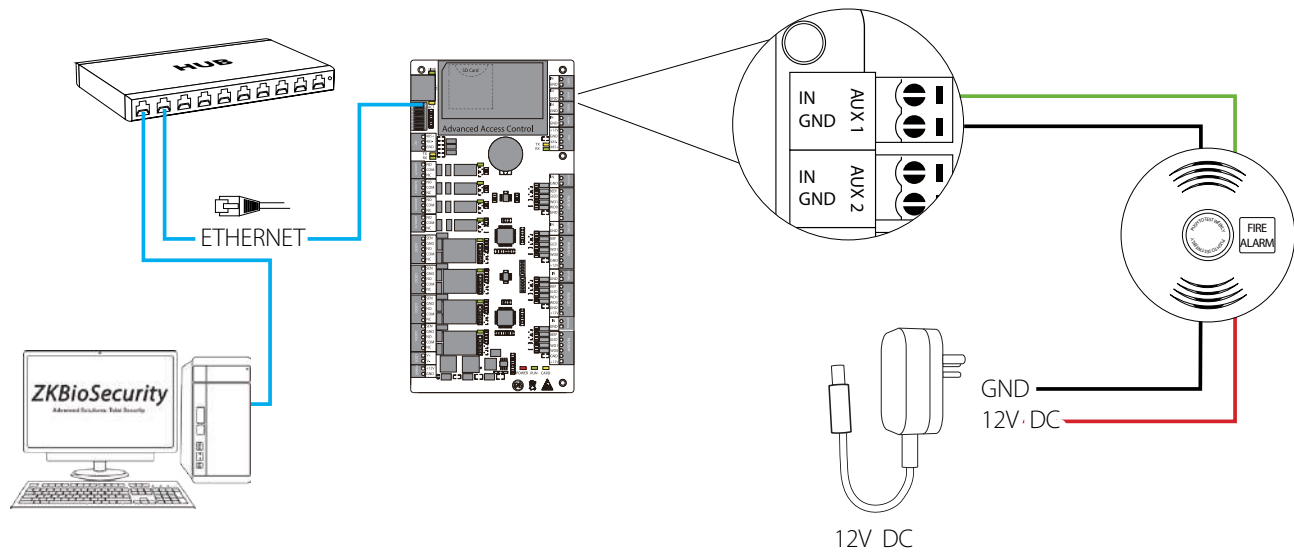


Figure 22

Aux. Output Connection

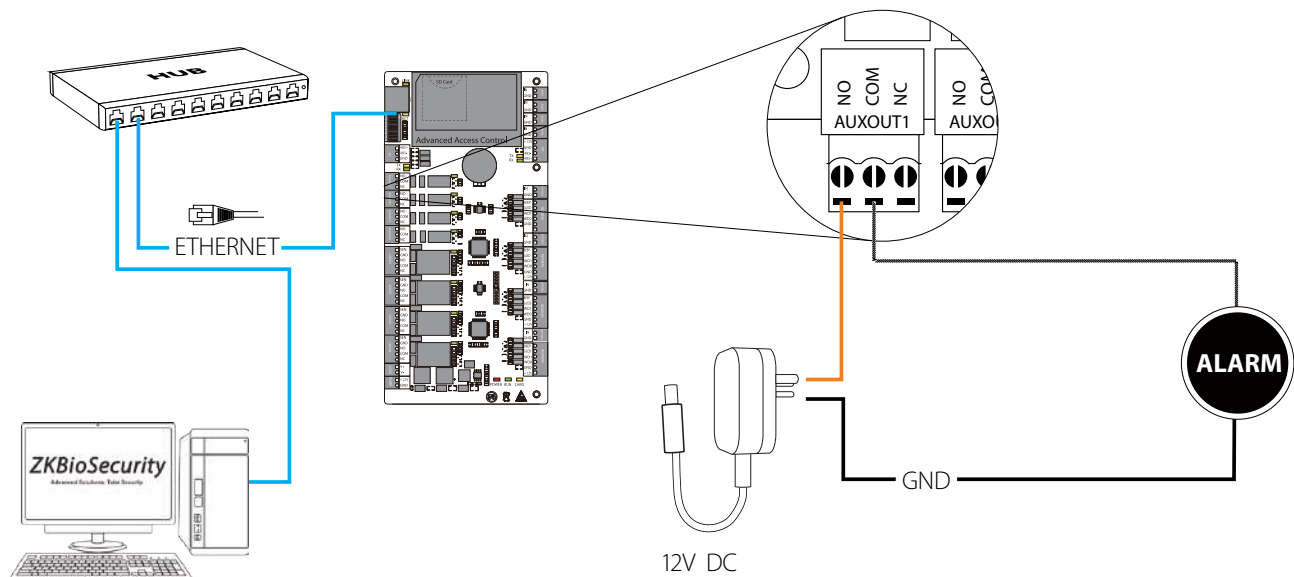


Figure 23

Ethernet Connection

LAN Connection

Important Notes:

1. Both 10Base-T and 100Base-T are supported
2. This cable distance must be less than 330 ft. (100m)
3. For cable length of more than 330 ft. (100m). use HUB to amplify the signal.

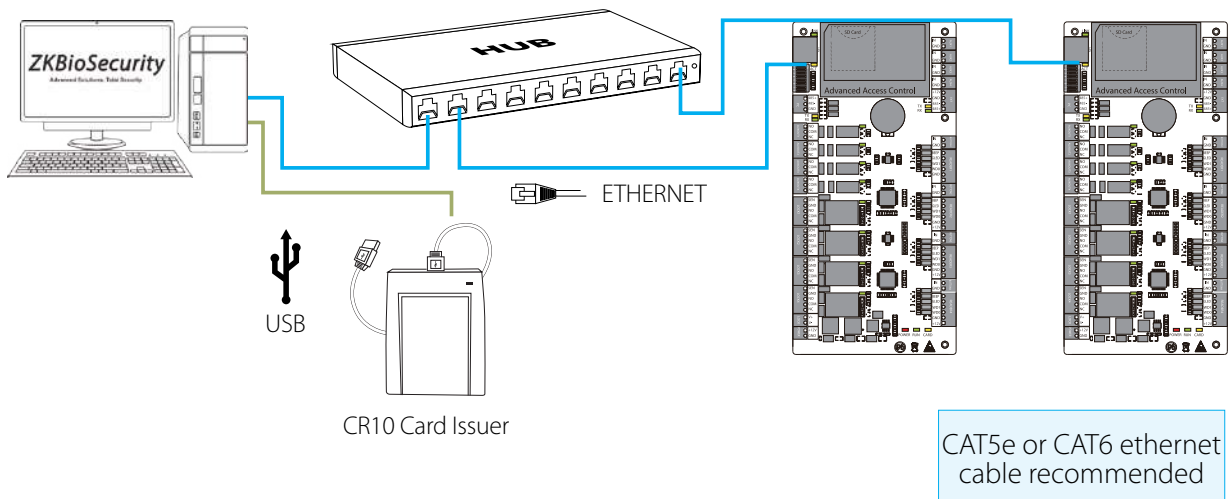


Figure 24

Direct connection

To connect C3-400 Pro with a PC directly, connect both devices with a straight network cable. As the C3-400 Pro supports auto MDI/MDIX, it is not necessary to use a crossover type cable.

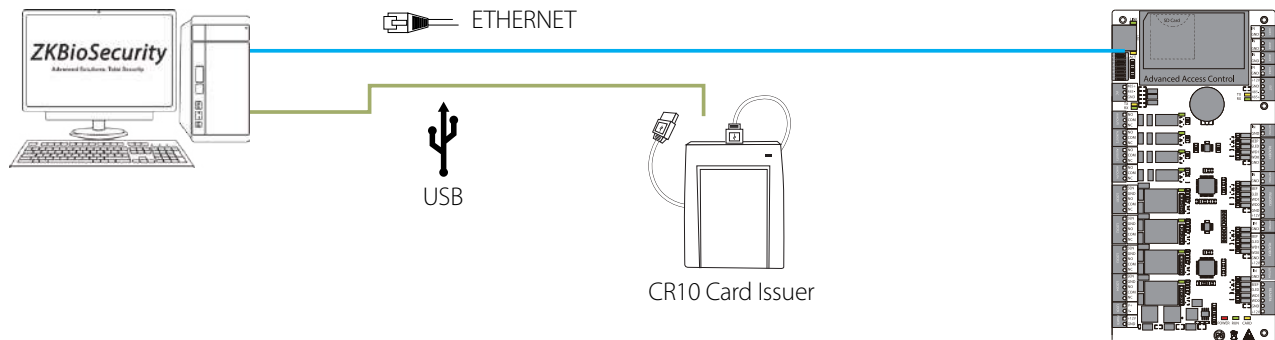


Figure 25

RS485 Connection

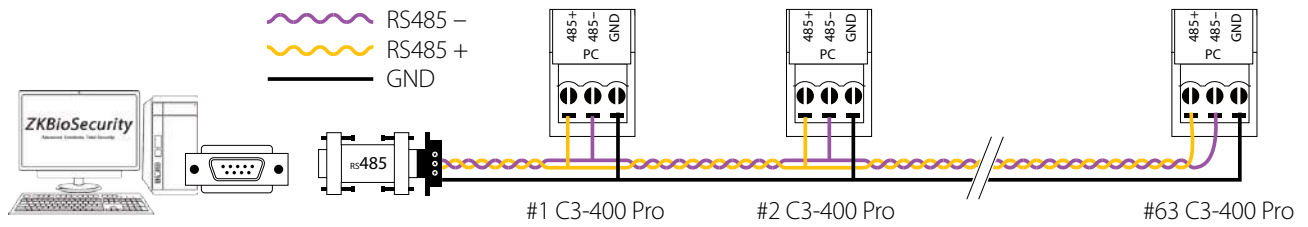


Figure 26

Important Notes:

1. RS485 communication wires should be a shielded twisted pair cable. RS485 communication wires should be connected in a bus cascade topology instead of a star topology, to achieve a better shielding effect by reducing signal reflection during communications.
2. A single RS485 bus can connect up to 63 access control panels, but preferably 32 is recommended maximum.
3. To eliminate signal attenuation in communication cables and suppress interference, if the bus is longer than 200 meters, set the number 8 DIP switch to the ON position. This is equivalent to a parallel connection of one 120ohm resistance between the 485+ and 485- lines.

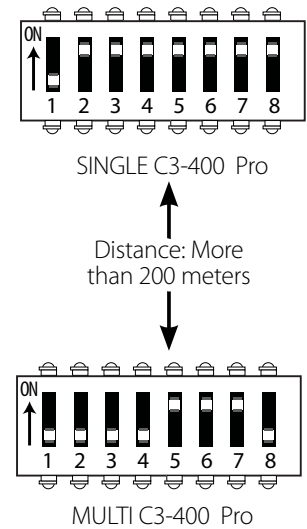


Figure 27

Incorrect RS 485 connections

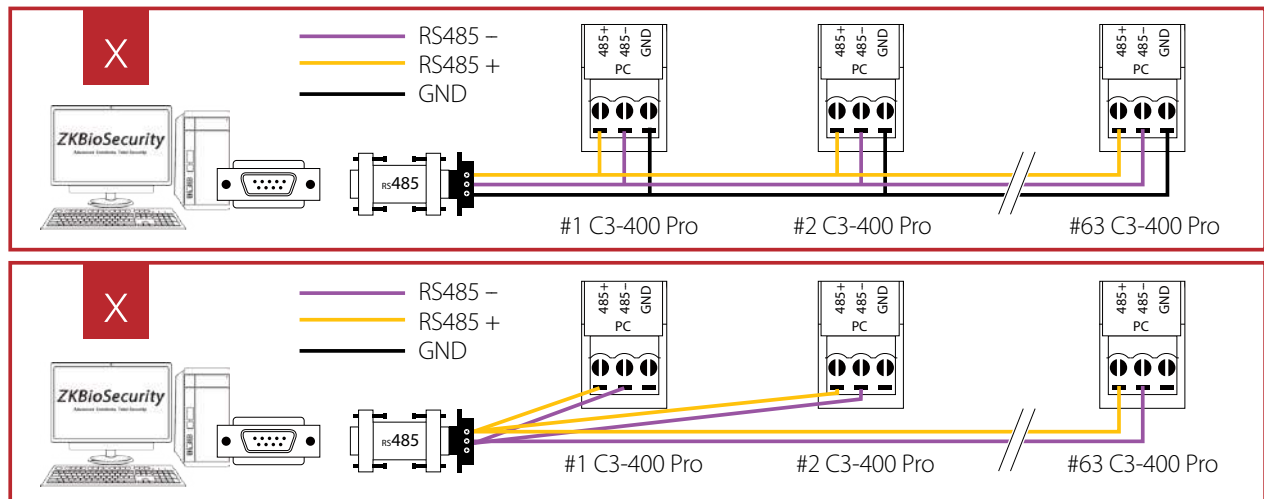


Figure 28

RS485 Connection

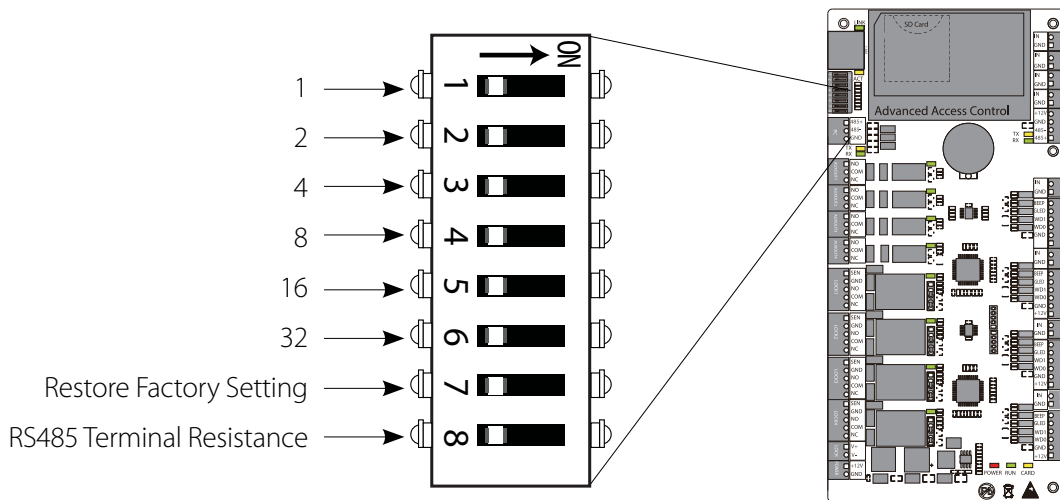


Figure 29

Restore factory setting

1. If you forget the IP address of the C3 panel or the device does not work normally, you can use the number 7 DIP switch to restore C3-400 Pro to factory default settings. The parameters which gets reset are device IP address, communication password, gateway, and subnet mask.
2. The switch is OFF by default. When it is moved up and down for three times within 10 seconds and finally returned to OFF position, the factory settings will be restored after the access control panel is restarted.

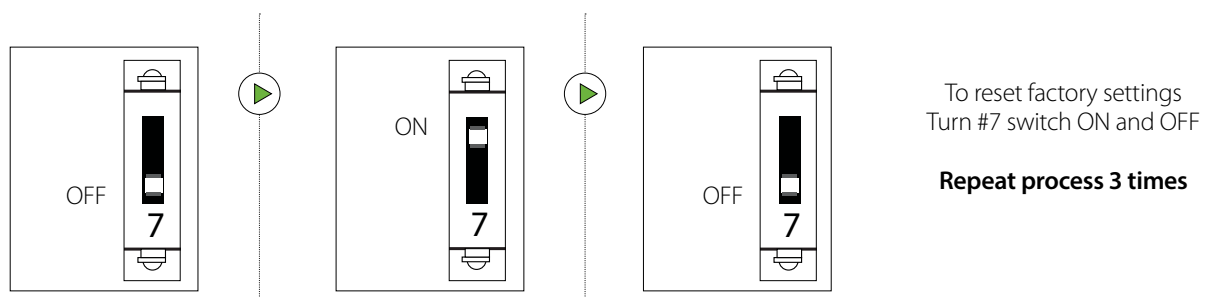


Figure 30

DIP Switch Setting

RS485 Address

- Number 1-6 are reserved to set the device number for RS485 communication. The code is binary, and the numbering starts from left to right. When the switch is set to ON position, it indicates 1 (on); when the switch is set downwards, it indicates 0 (off). For example, to set a device number $39=1+2+4+32$, which corresponds to the binary code 111001, put number 1, 2, 3, and 6 to ON position, as illustrated below.

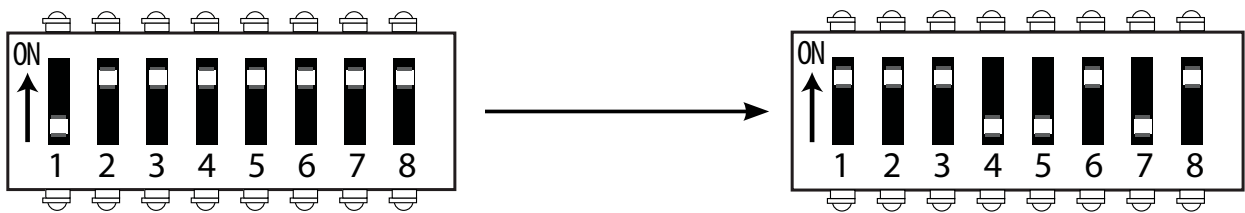


Figure 31

- For more details, please check the table at the end of this document.

Terminal Resistance

- Number 8 is for setting the RS485 termination resistance. Putting the switch to ON position is equivalent to parallel connection of a 120 ohm termination resistance between 485+ and 485- lines.

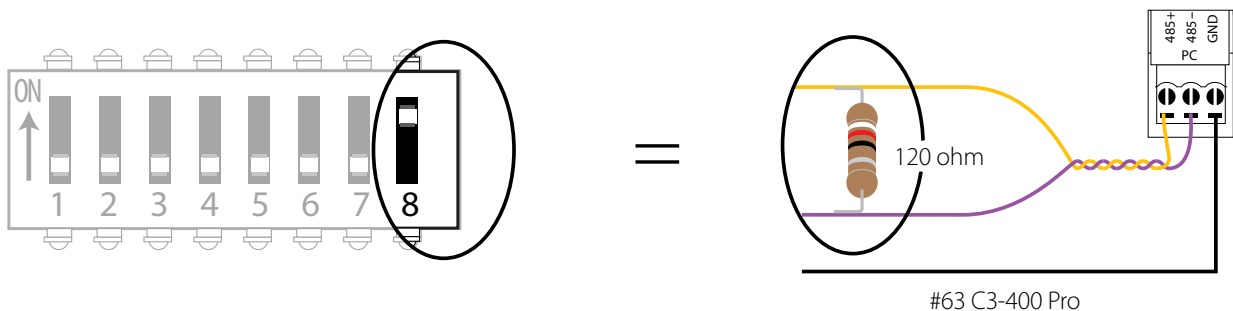


Figure 32

Installation Diagram

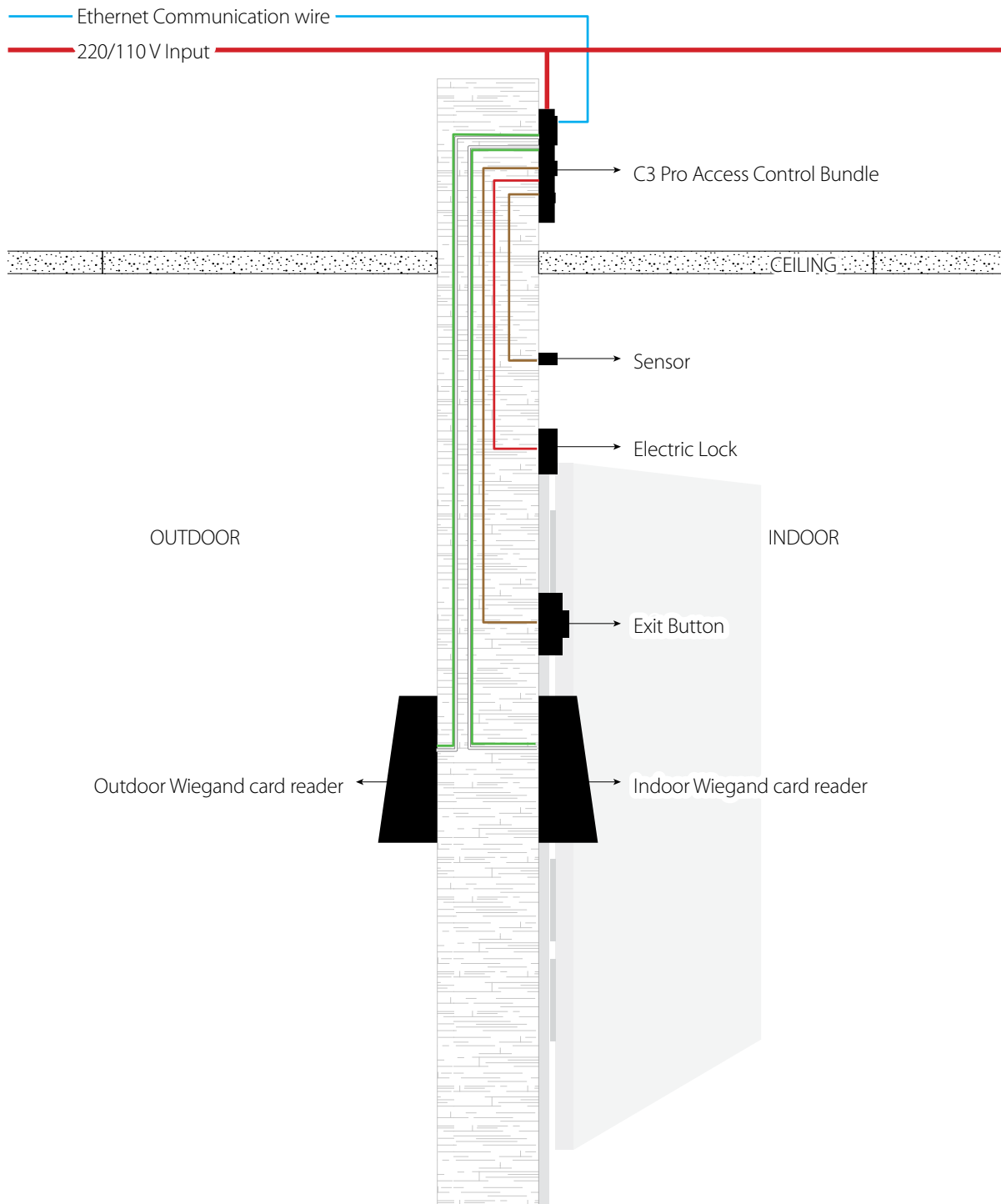


Figure 33

Troubleshooting

1. How to switch four door one way to two door two way?

- › Connect four readers from reader 1 to reader 4.
- › Connect two door locks, one connected to LOCK1, another connected to LOCK3.
- › In the software configure reader 1-Indoor, and reader 2-Outdoor.

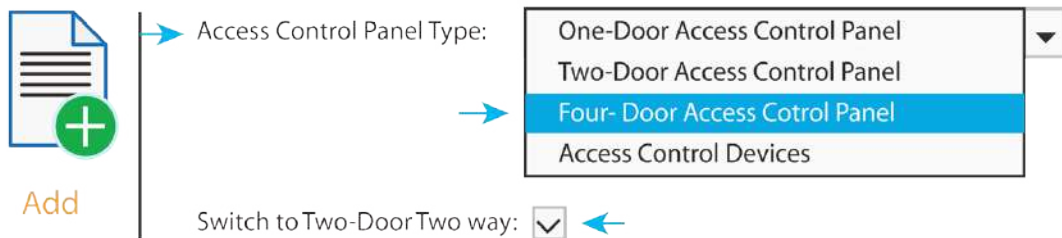


Figure 34

2. Can we integrate IP Camera and NVR?

- › Currently ZKBiosecurity software supports ZKTeco's IP Cameras and NVR
- › You can associate a camera to the door and setup a linkage for the same.

3. What does it mean when I get a "Wiegand Format Error"?

- › Your WD0 and WD1 wiring is reversed.

4. How do I connect a third party reader or a stand-alone reader to a C3 Pro panel?

- › Connect the wiegand output to the WD0 and WD1 of the stand-alone readers on the panel's reader port.

Note: The board can only supply 12 V DC, 300mA power so an external power supply may be required.

5. What is the SD card slot used for?

- › SD card, stores transactions from the panel and creates a back up in additional to internal memory.

6. What kind of wire is recommended for the panel?

- › 16 or 18 AWG twisted shielded wire is recommended.

7. What is the default IP of the panel?

- › 192.168.1.201

8. How long is the device under warranty?

- › 2 Years from original purchase date, replacement/repair of hardware under ZK standard warranty requires an evaluation of the failed system by a ZK Technical Support specialist, and the issuance of a Technical Support RMA number.

PC 485 Setting Table

Address No.	Switch Setting					
	1	2	3	4	5	6
01	ON	OFF	OFF	OFF	OFF	OFF
02	OFF	ON	OFF	OFF	OFF	OFF
03	ON	ON	OFF	OFF	OFF	OFF
04	OFF	OFF	ON	OFF	OFF	OFF
05	ON	OFF	ON	OFF	OFF	OFF
06	OFF	ON	ON	OFF	OFF	OFF
07	ON	ON	ON	OFF	OFF	OFF
08	OFF	OFF	OFF	ON	OFF	OFF
09	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON

Address No.	Switch Setting					
	1	2	3	4	5	6
	1	2	4	8	16	32
33	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON
35	ON	ON	OFF	OFF	OFF	ON
36	OFF	OFF	ON	OFF	OFF	ON
37	ON	OFF	ON	OFF	OFF	ON
38	OFF	ON	ON	OFF	OFF	ON
39	ON	ON	ON	OFF	OFF	ON
40	OFF	OFF	OFF	ON	OFF	ON
41	ON	OFF	OFF	ON	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON
43	ON	ON	OFF	ON	OFF	ON
44	OFF	OFF	ON	ON	OFF	ON
45	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	ON	ON	OFF	ON
47	ON	ON	ON	ON	OFF	ON
48	OFF	OFF	OFF	OFF	ON	ON
49	ON	OFF	OFF	OFF	ON	ON
50	OFF	ON	OFF	OFF	ON	ON
51	ON	ON	OFF	OFF	ON	ON
52	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	ON	OFF	ON	ON
54	OFF	ON	ON	OFF	ON	ON
55	ON	ON	ON	OFF	ON	ON
56	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	ON	ON	ON
58	OFF	ON	OFF	ON	ON	ON
59	ON	ON	OFF	ON	ON	ON
60	OFF	OFF	ON	ON	ON	ON
61	ON	OFF	ON	ON	ON	ON
62	OFF	ON	ON	ON	ON	ON
63	ON	ON	ON	ON	ON	ON

Electrical Specifications

	Minimum	Typical	Maximum	Notes
WORKING POWER SUPPLY				
Voltage (V) DC	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	
Auxiliary relay output				
Switching voltage (V)			36V	Use regulated DC power adaptor only
Switching Current (A)			1.25	
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	
ZK ELECTRIC LOCK				
Voltage (V) DC	10.8	12	13.2	
Current (mA)			500	

Specifications

Communication	RS485, TCP/IP
Baud Rate for RS485	9600-15200
Power Supply	12V DC, 1.5A
Card Holders Capacity	30,000
Log Events Capacity	100,000
LED Indicator	Indicator for communication, power, status and prox card
Environment	32-113 °F (0-45°C)
Operating Humidity	20% to 80%
Number of doors controlled	Four Door (four door one way and two door two way)
Number of readers supported	4
Types of readers supported	26-bits WIEGAND, others upon request
Number of Inputs	12 (4 Exit Device, 4 Door Status, 4 AUX)
Number of Outputs	8 (4- Form C relay for lock and 4- Form C relay for Aux output)
Weight	7.8lbs (3.55kg)
Enclosure	Stainless Steel
Mounting	Wall Mount
Dimensions (Bundle Only)	15.7in. x 3.56in. x 13.0in 400mm(L) x 90.5mm(W) x 330mm(H)
Dimensions (Board Only)	8.0in. x 4.17in. 203.2mm(L) x 106mm(W)
CPU	32 bit 400MHz
RAM	32MB
Flash	256MB
Certified	

ZKBioSecurity 3.0

It is recommended to install software version 3.0.3.0 or above



Installation & Setup

Downloading.....	29
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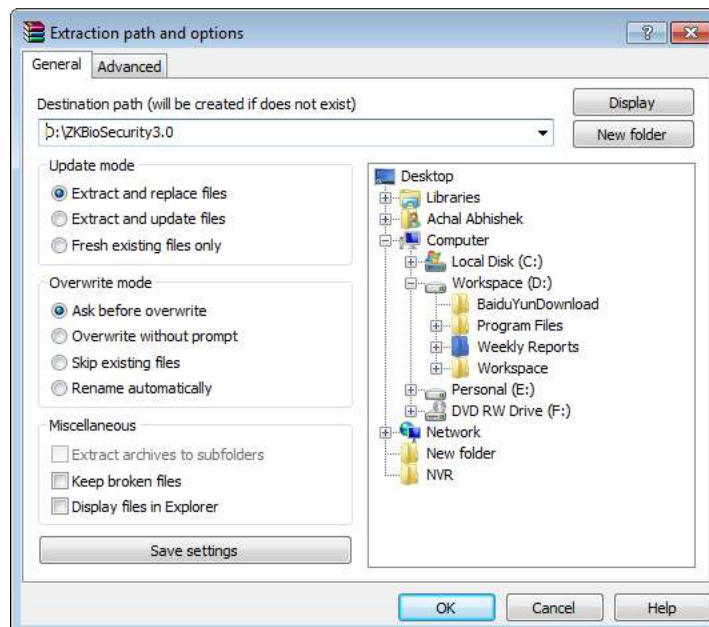
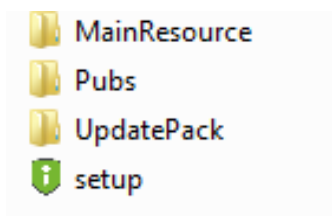
Downloading

1. Go to <http://https://zktecousa.com/software-downloads/>
2. Download the latest software and related files as required.



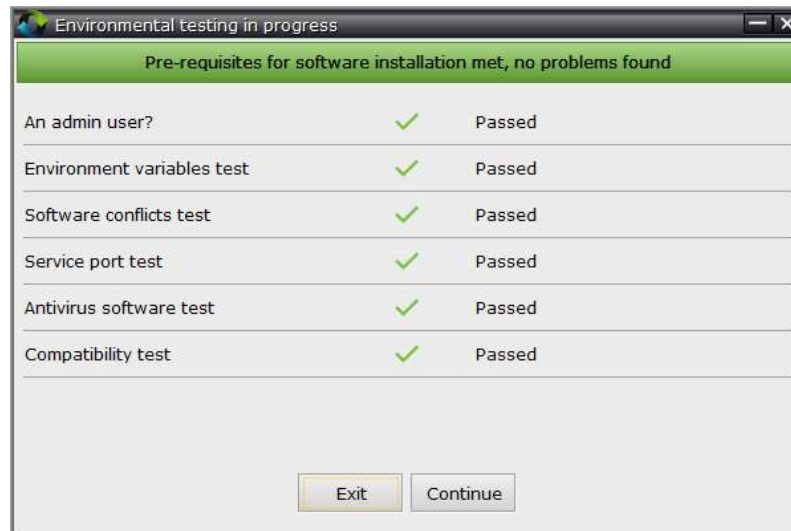
3. Once downloaded, extract the rar file to a new folder.

4. Click on setup to begin installation.



Installation

1. System will check the requirements to install the software. Click Continue if all tests are passed, else check the issues and re-test.



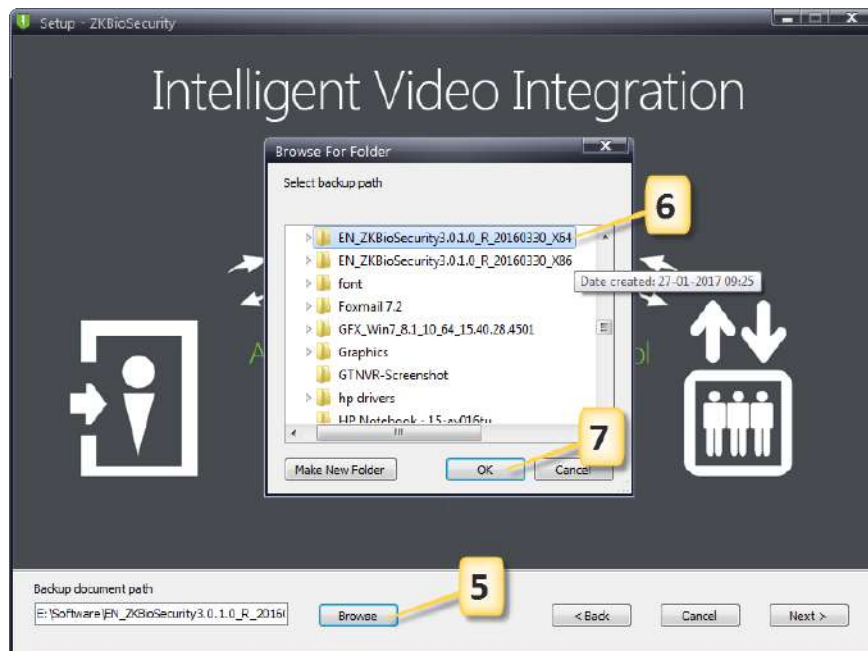
2. Add an open port (Default 8088) or ask a network administrator for an open port.
3. Click the check box to add firewall exception for this port.

Installation

4. Select the mode of database. The default will be PostgreSQL, if you want to select any other database, then select *Alternative database*.

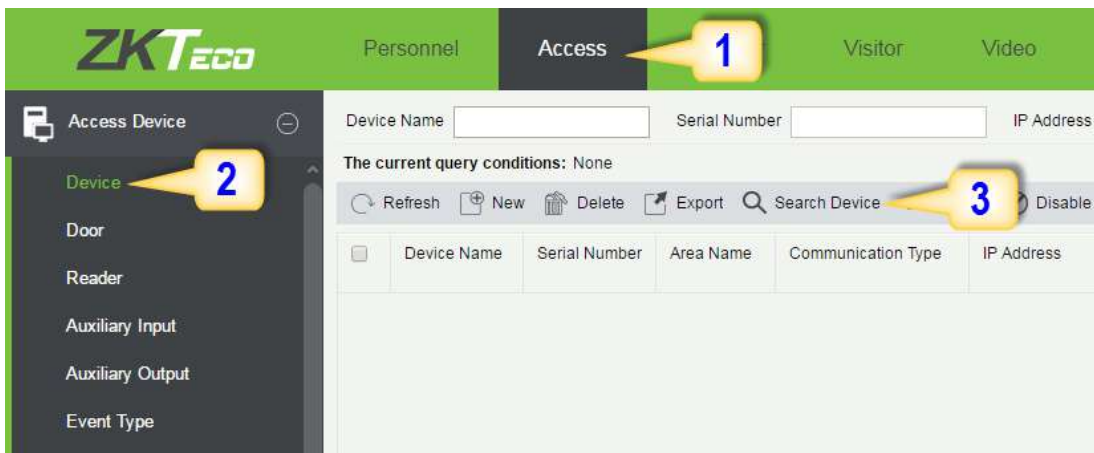


5. Click Browse and choose or create a folder to store your backup files.
6. Select/Create the required folder.
7. Click OK.



Adding Device

1. Click on Access to get below interface of Access Module of the software.



2. Click on Device.
3. Click on Search Device.



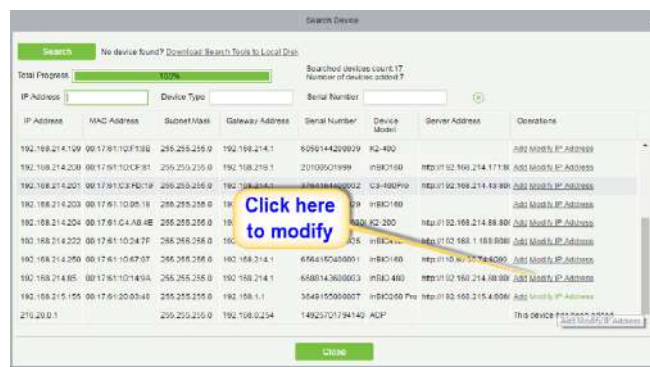
4. Click **Search** to search all the access controllers on the network.
5. From the list, click **Add** to add the required device.



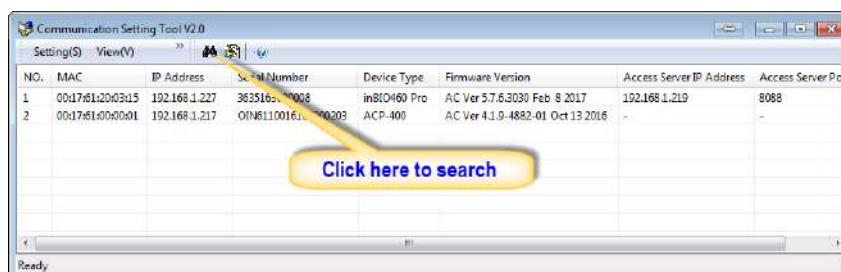
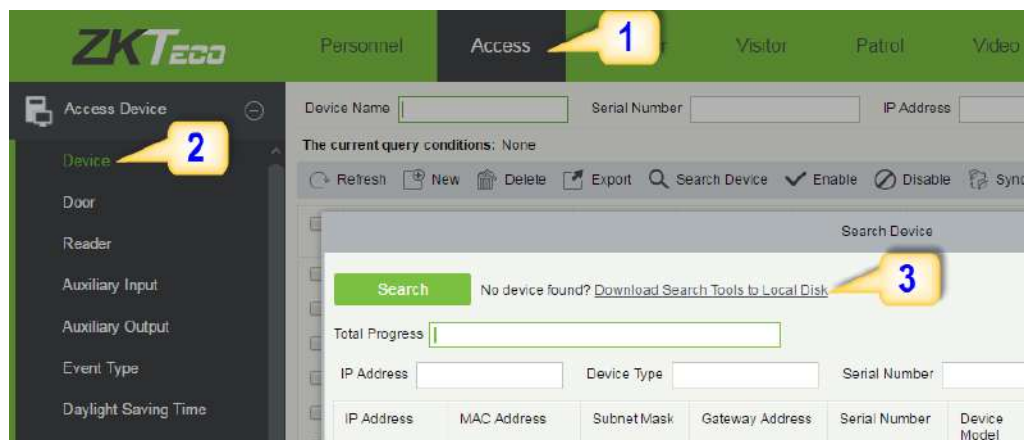
Adding Device

6. Enter a unique name.
7. Enter the IP address of current system (PC).
8. Enter the access point of system.
9. Click on this option, after adding device, the system will clear all data in the device (except the event logs).
10. Click OK to finish.

The default IP address may conflict with the device IP of other devices. In order to avoid that problem, modify the IP address as shown below:

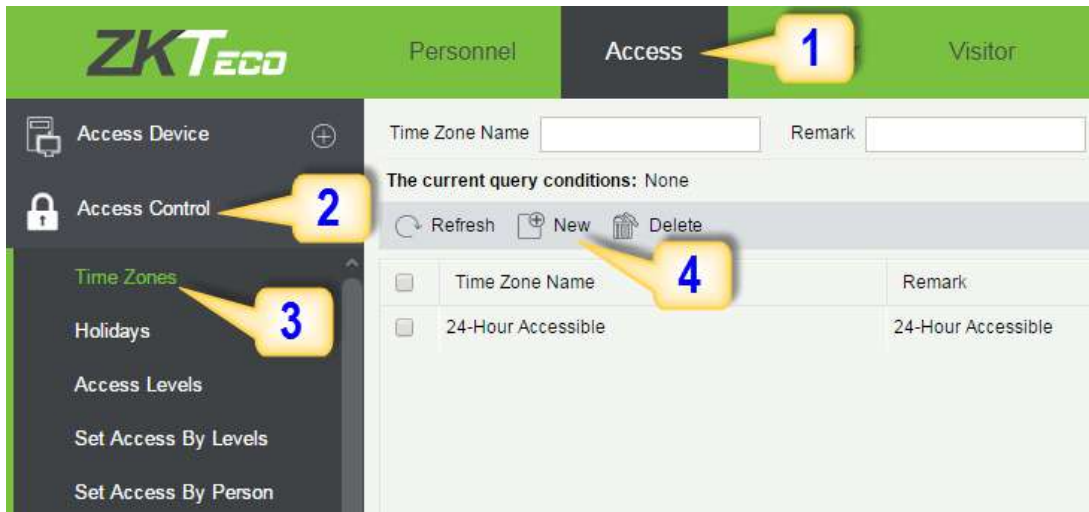


When the device is not in the same network with server, customers should download the tool and search the device as shown below:

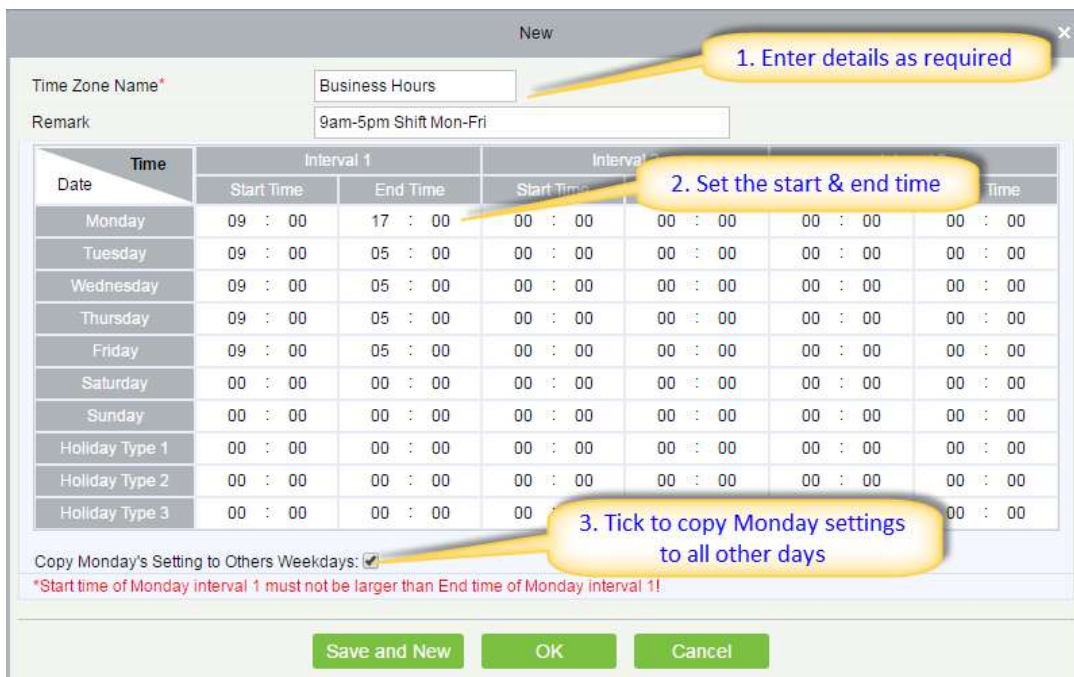


Creating a Time Zone

Click Access Control > Time Zones > Add to access the time zone setting interface.



After setting the time zone, click OK to save, and the time zone will appear in the list.

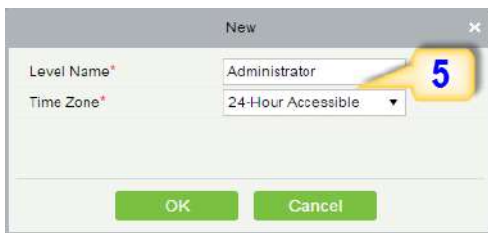


Creating an Access Level

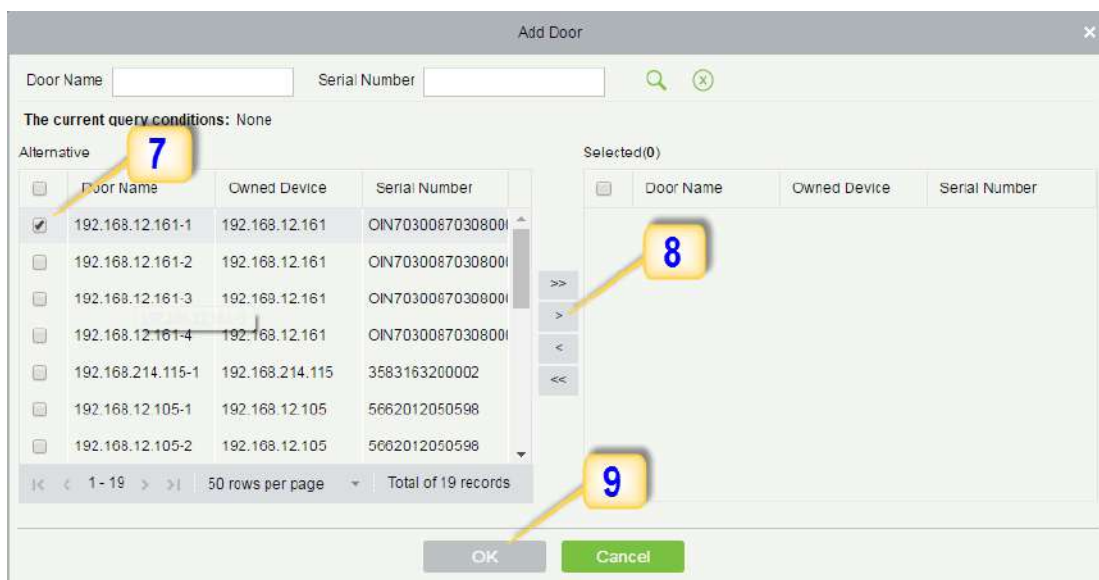
1. Click Access
2. Click Access Control
3. Click Access Levels
4. Click New.



5. Enter the details and click OK.
6. You need to add doors to the access levels.

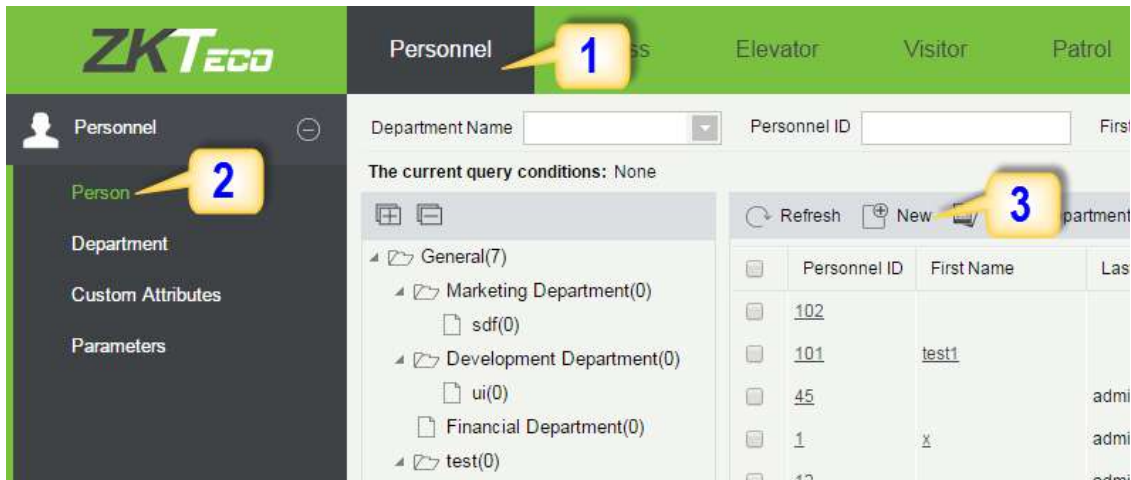


7. Select the required door(s).
8. Move the selected door(s).
9. Click OK to finish adding doors.



Enrolling Personnel

1. Click Personnel
2. Click Person
3. Click New to add personnel.



The screenshot shows the 'New' personnel enrollment form. The form contains fields for Personnel ID, First Name, Last Name, Gender, Social Security Number, Reservation Code, Fingerprint, Finger Vein, Department, Password, License Plate, Mobile Phone, Birthday, and Card Number. There are also buttons for 'Register', 'Download New', 'Browse', and 'Capture'. The 'Master' checkbox is checked under 'Levels Settings'.

A. Personnel ID: It must be a unique 9 characters length with the valid range of 1-79999999. It can be configured based on actual conditions. The Personnel No. contains only numbers by default but may also include letters after setting parameters.

Enrolling Personnel

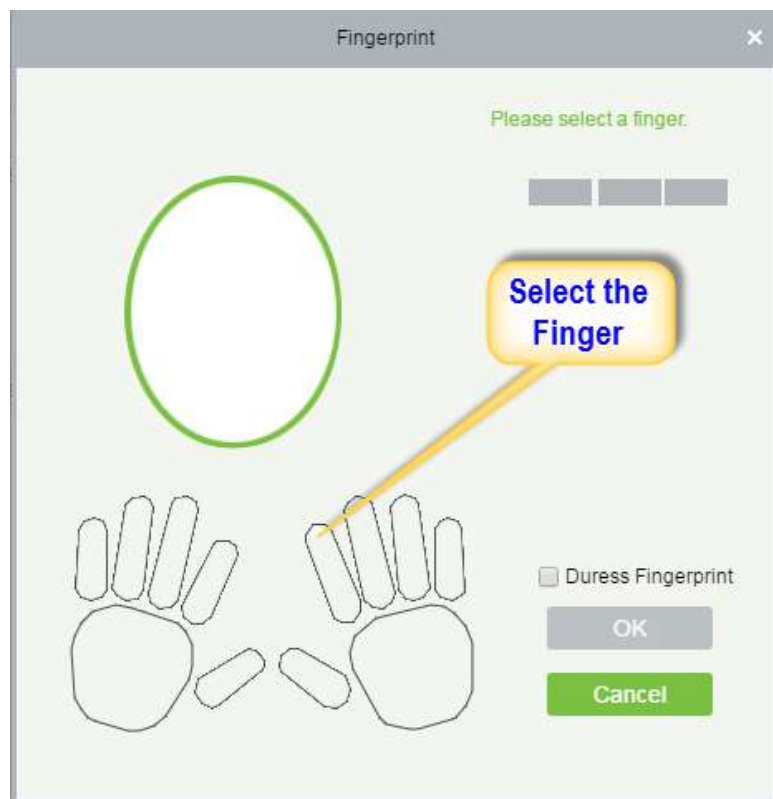
B. Department: Select from the pull-down menu and click *OK*. If the department was not set previously, you can only select the default [Company Name] department.

C. Password: Set personnel password. It only supports 6-digit passwords. If password exceeds the specified length, the system will truncate it automatically. It can't be same with duress or other passwords.

D. Card Number: You can add a card number through manual entry or a card issuer. For issuing through issuer, click on the card icon directly. For issuing card manually, you must enter both the card number and the site code, then the software converts the numbers to the card number for access control system verification.

E. Access Control: Here you will get all the access levels created by you and by default. Tick the required box.

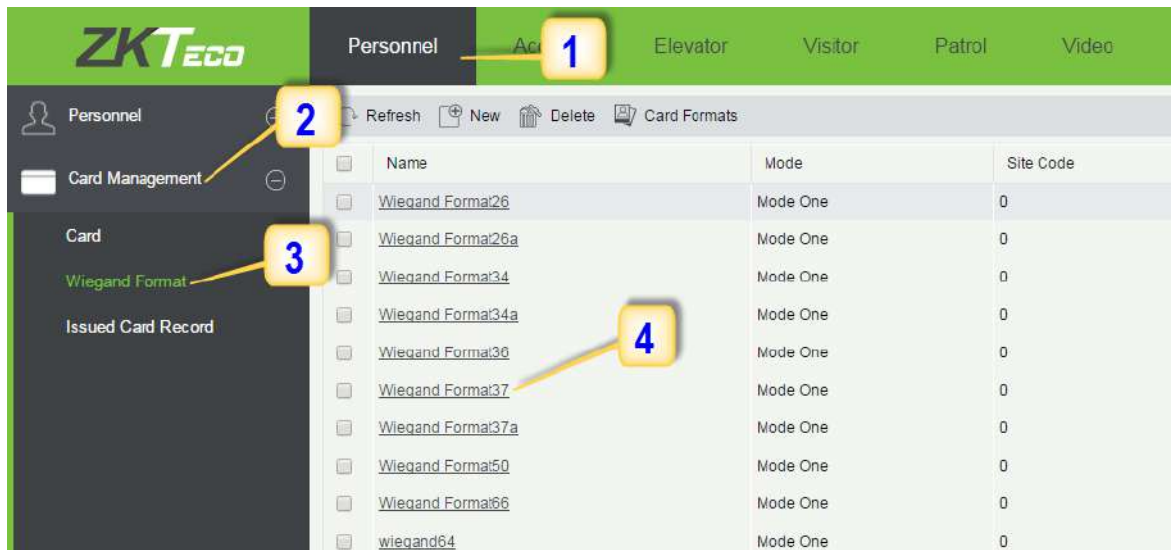
F. Fingerprint: Enroll the Personnel Fingerprint or Duress Fingerprint. Duress Fingerprint is to trigger the alarm and send the signal to the system in case of emergency.



Wiegand Format

Wiegand Format is the card format that can be identified by Wiegand reader. The software is embedded with 10 Wiegand formats. You may set the Wiegand card format as required.

1. Click Personnel
2. Click Card Management
3. Click Wiegand Format.
4. Taking Wiegand Format37 as an example. Click to edit.



This software supports two modes for adding Wiegand Format, if mode 1 does not meet your setting requirement, switch to mode 2.

Wiegand Format37

Total Bit: 37
Site Code: 0
Auto:

Mode One

First Parity Check(p): 1
Second Parity Check(p): 37

Odd Parity Check(o)		Even Parity Check(e)		CID(c)		Site Code(s)		Manufactory Code(m)	
Start Bit	The Maximum Length	Start Bit	The Maximum Length	Start Bit	The Maximum Length	Start Bit	The Maximum Length	Start Bit	The Maximum Length
20	18	1	18	18	19	2	16	0	0

Mode Two

Card Check Format: psssssssssssssscccccccccccccccccp
Parity Check Format: eee... ooooooooooooooooooooo

If required, you can change the mode

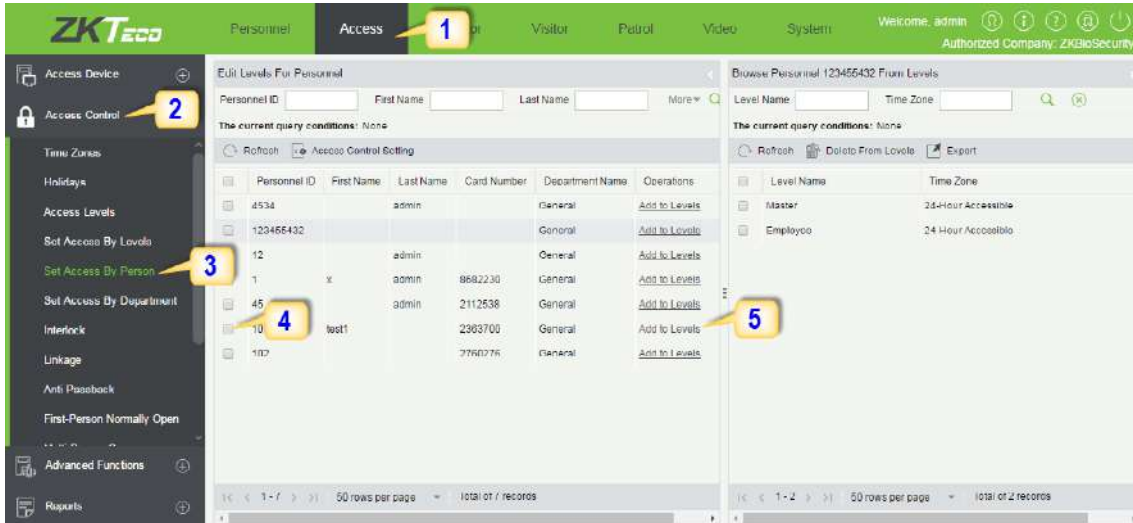
OK Cancel

p indicates Parity Position, s indicates Site Code, c indicates Cardholder ID, f indicates Facility Code, m indicates Manufactory Code, e indicates Even Parity, O indicates Odd Parity, b indicates both odd check and even check, x indicates parity bits no check.

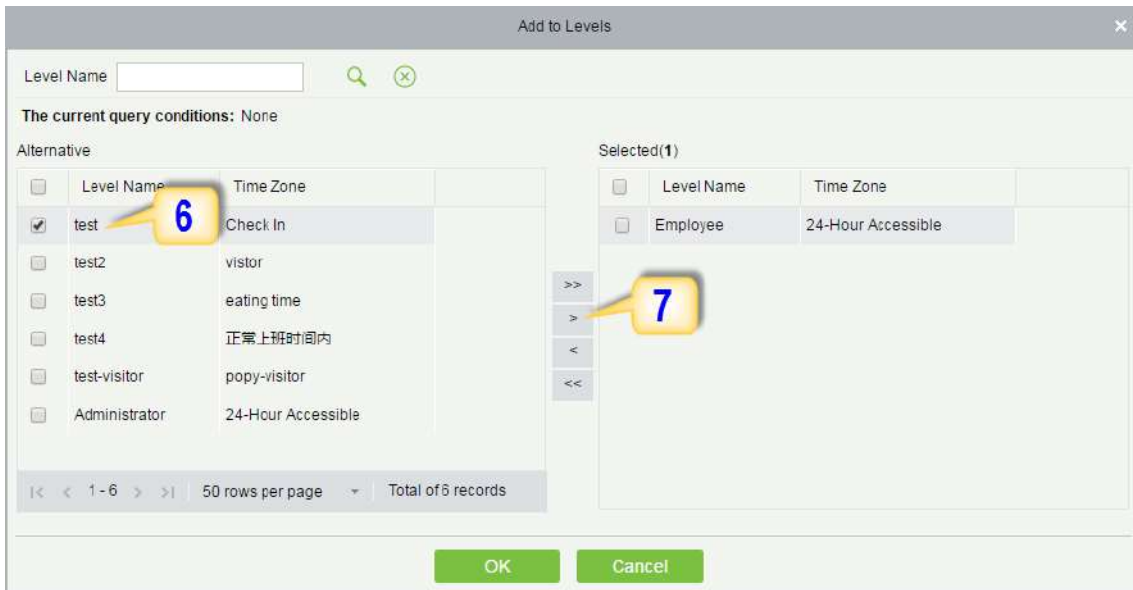
The previous Wiegand Format37: the first parity bits (p) check "eeeeeeeeeeeeeeee", the second parity bits check "oooooooooooooooo". Card Check Format only can be set "p, x, m, f, c, s", Parity Check Format only can be set "x, b, o, e".

Add & Delete Personnel to Access Level

1. Click Access
2. Access Control
3. Set Access by Person
4. Click on the required employee
5. Click Add to Levels.



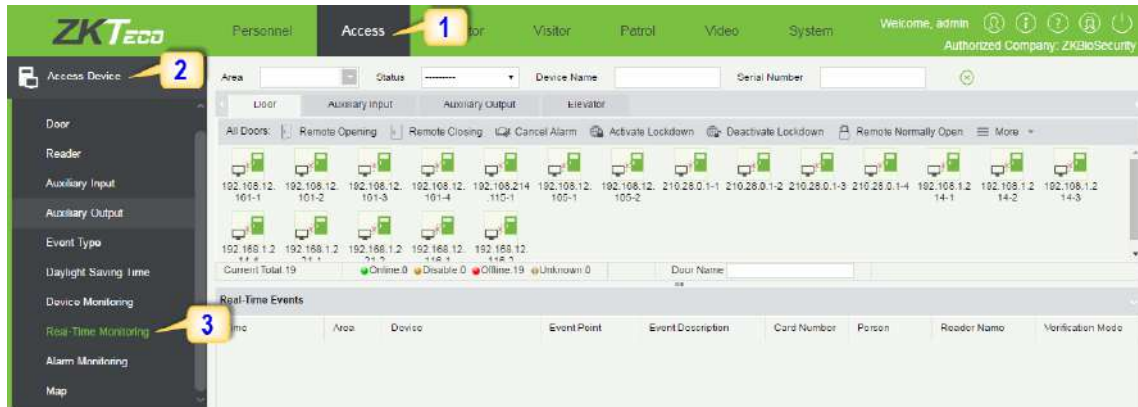
6. Select Level(s).
7. Click to move the selected level(s) to the right, and then click OK to complete adding. The added level(s) will appear in the list on to the right side.



Real-Time Monitoring

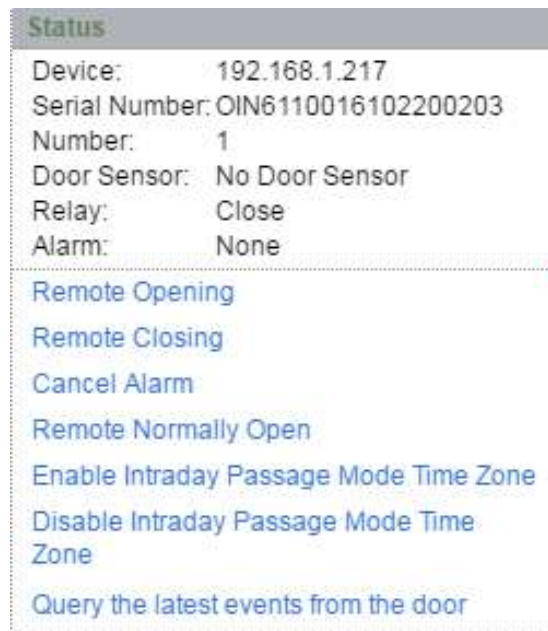
1. Click Access
2. Click Access Device
3. Click Real-Time Monitoring

Real-time monitor the status and real-time events of controllers in the system, including normal events and abnormal events (including alarm events) device transactions.



You can also filter by Area, device name, Serial number to check a specific device transactions or all at once.

Hover over a door icon to open pop up menu as shown below and click Remote Closing, Remote Opening, or Cancel Alarm and more.



Exporting Reports

Access Module:

1. Click Access 2. Click Reports 3. Filter the data (time, Personnel ID, Device Name and more) if required and click on search 4. Click All transactions or as required.

The screenshot shows the ZKTeco Access Module interface. The 'Access' tab is selected. The left sidebar shows the 'Reports' menu with 'All Transactions' highlighted. The main area displays a table of transactions with columns for Time, Device Name, Event Point, Event Description, Media File, Personnel ID, First Name, Last Name, Card Number, and Department Name. The table contains several rows of data, including 'Disconnected' and 'Normal Verify Open' events. The 'Export' button is highlighted with a yellow callout '5'.

5. Click on Export to get the list.

6. Click OK.

The screenshot shows the 'Export' dialog box. The 'The File Type' dropdown is set to 'EXCEL File'. The 'Export Mode' section has two radio buttons: 'All data (Can export up to 40000 data)' (selected) and 'Select the amount of data to export (Can export up to 40000 data)'. The 'OK' button is highlighted with a yellow callout '6'.

Personnel Module:

1. Click Personnel 2. Click Person 3. Filter the data (Department, Personnel ID, and more) if required and click on search 4. Click on Export to get the list.

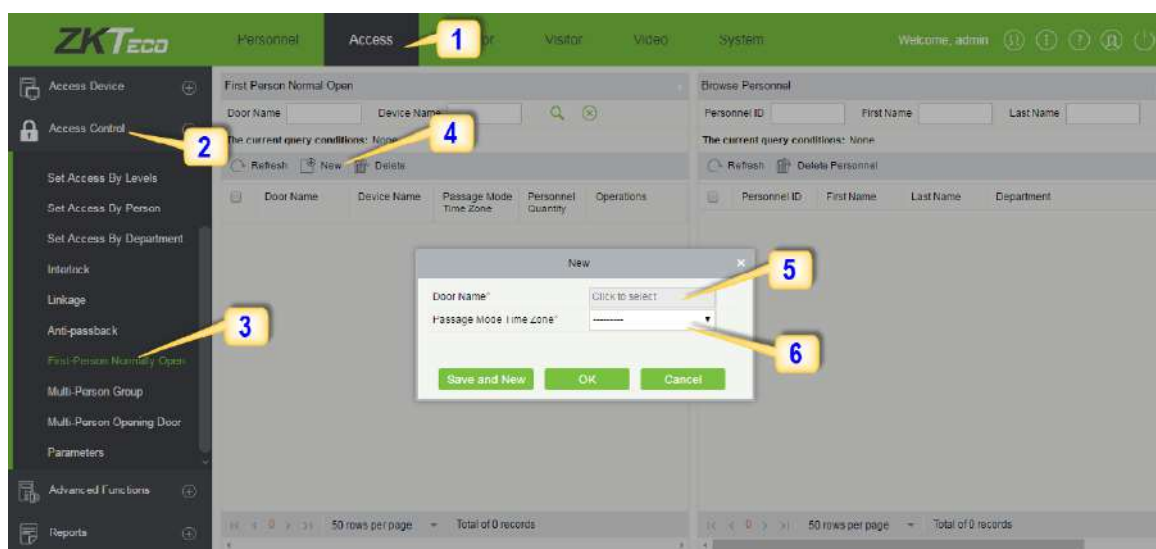
The screenshot shows the ZKTeco Personnel Module interface. The 'Personnel' tab is selected. The left sidebar shows the 'Person' menu with 'Person' highlighted. The main area displays a table of personnel with columns for Department Name, Personnel ID, First Name, Last Name, Department Name, Card Number, Biometric Templates Quantity, and Status. The table contains several rows of data, including personnel with IDs 102, 101, 45, 1, 12, 4534, and 123456789. The 'Export' button is highlighted with a yellow callout '4'.

First-Person Normally Open

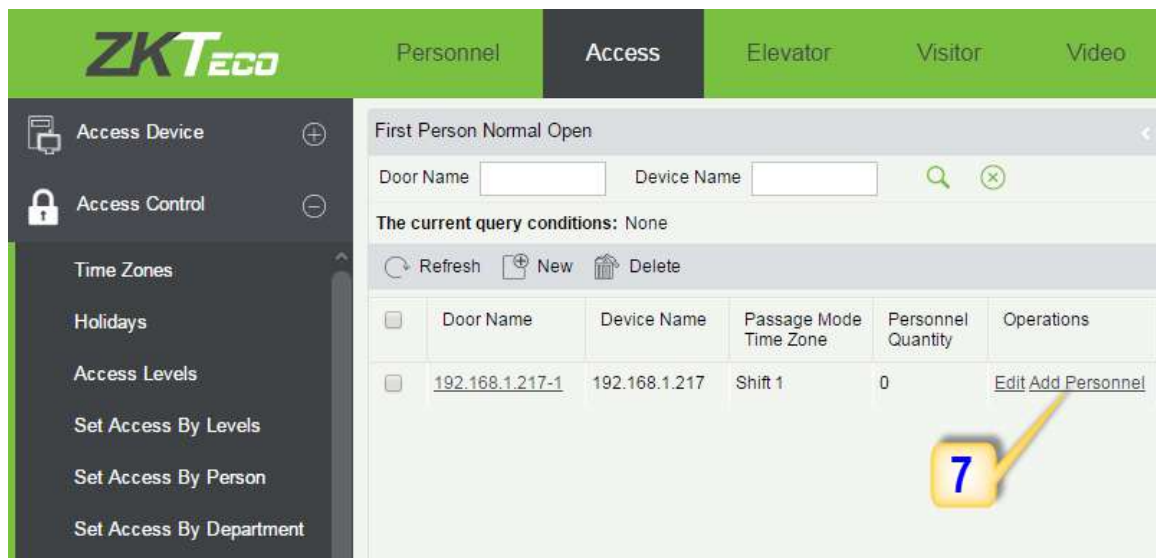
This feature will keep a door unlocked during a specified time zone. It will automatically unlock at the beginning of the time zone and will lock automatically at the end of the specified time zone.

The First Person Normally Open feature will keep a door unlocked during a specified time zone when triggered by specified personnel. After the specified personnel unlocks, this feature keeps the door unlocked till the end of the time zone and it will lock automatically at the end of the specified time zone.

Before using this function, create a new time zone with the hours you want the door to be unlocked.



1. Click Access
2. Click Access Control
3. Click First-Person Normally Open
4. Click New
5. Select the door
6. Select the Time Zone.
7. Add the specific person. Once this person checks in, this feature is activated.



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