Installation Guide

ZKAccess®
Software 5.0

✓ Easy to configure and use
✓ Door management
✓ Linkage settings
✓ Real time monitoring
✓ Maps, reports and maintenance
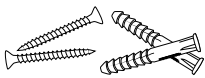✓ SDK available for third party integration

C3-Series
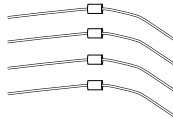### Access Control Panels

&

ZKAccess 5.2 software

ZKAccess®
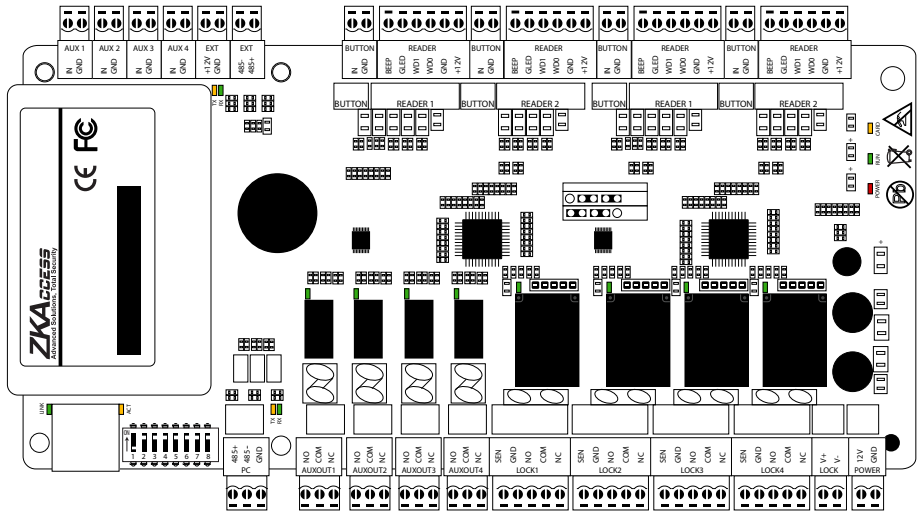
2 Screws & Anchors   2 Screwdriver   4 Diode

ZKAccess 5.2 software

Installation and Setup starts at page 28

Wiegand Card Reader

Prox Card

RS485 Convertor

K1-1 Exit Button

Door Sensor

Card Enroller

Alarm

C3 Cabinet

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.

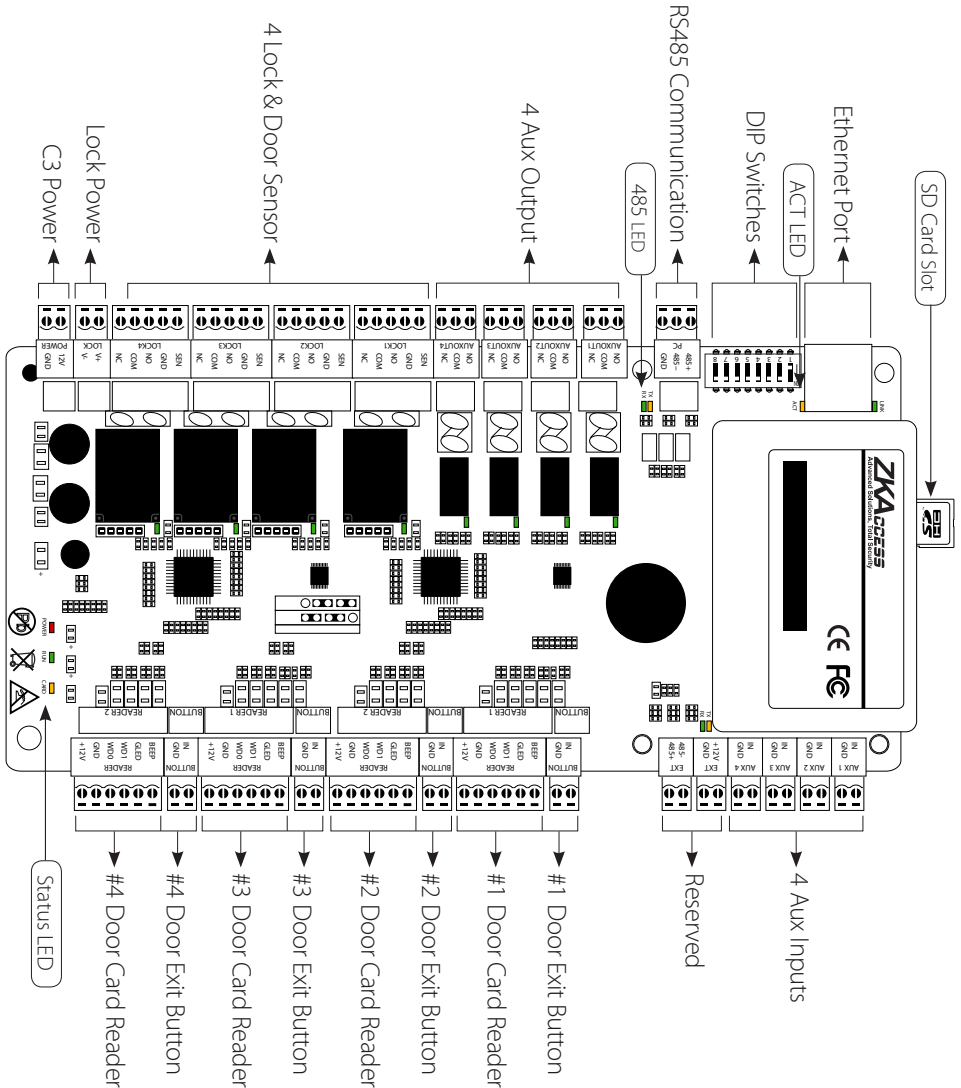**Contact** your supplier in case of a problem.

Figure 1

Labels (clockwise from left):
- C3 Power
- Lock Power
- 4 Lock & Door Sensor
- 4 Aux Output
- RS485 Communication
- 485 LED
- DIP Switches
- ACT LED
- Ethernet Port
- SD Card Slot
- 4 Aux Inputs
- Reserved
- #1 Door Exit Button
- #1 Door Card Reader
- #2 Door Exit Button
- #2 Door Card Reader
- #3 Door Exit Button
- #3 Door Card Reader
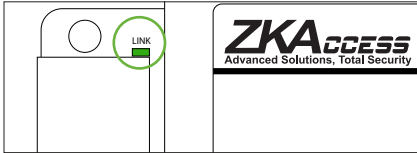- #4 Door Exit Button
- #4 Door Card Reader
- Status LED

Figure 2

LINK Solid Green LED indicates TCP/IP communication is normal

Figure 3

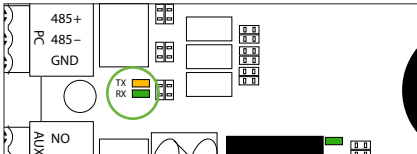**Flashing (ACT)Yellow LED** indicates data communication is in progress

Figure 4

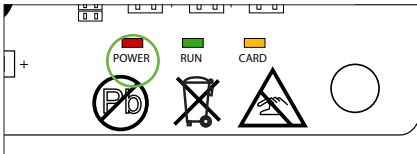**PC RS485 (TX/RX) Flashing Yellow & Green LED** indicates communication is in progress

Figure 5

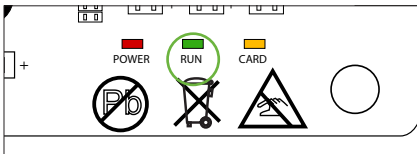**Flashing (POWER) Red LED** indicates the panel is powered on

Figure 6

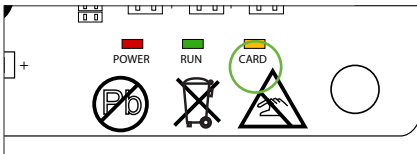**Flashing (RUN) Green LED** indicated that panel is in normal working state

Figure 7

Flashing (CARD) Yellow LED indicates that the card is read by the panel
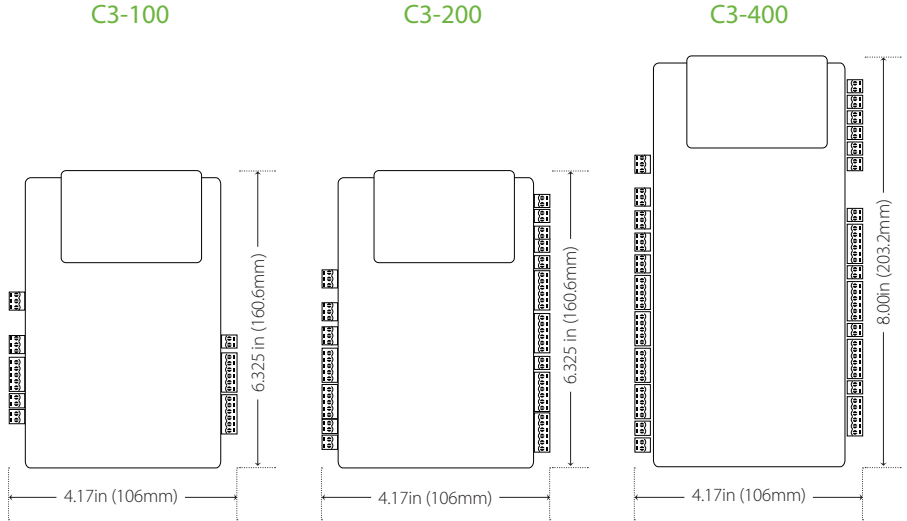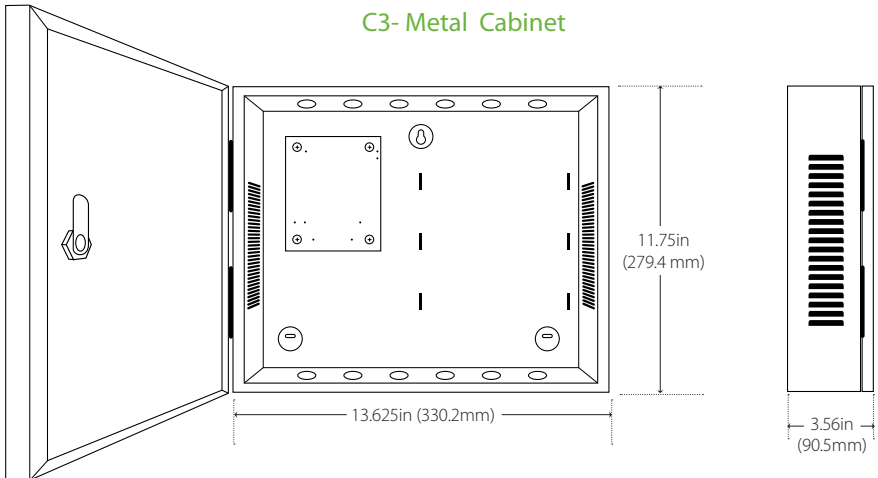
C3-100

C3-200

C3-400

6.325 in (160.6mm)

4.17in (106mm)

6.325 in (160.6mm)

4.17in (106mm)

8.00in (203.2mm)

4.17in (106mm)

Figure 8

C3- Metal Cabinet

11.75in
(279.4 mm)

13.625in (330.2mm)

3.56in
(90.5mm)

Figure 9

Cable Conduit
(Punch Hole for cable)

Power Supply

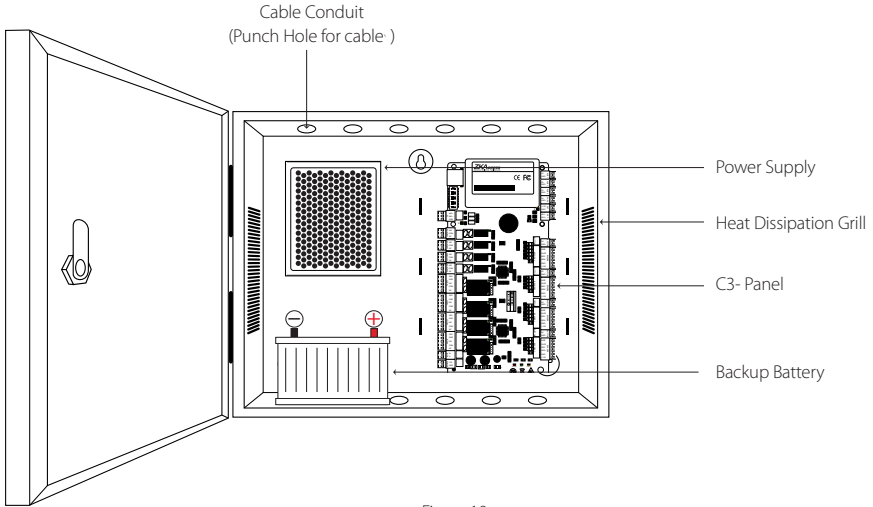Heat Dissipation Grill
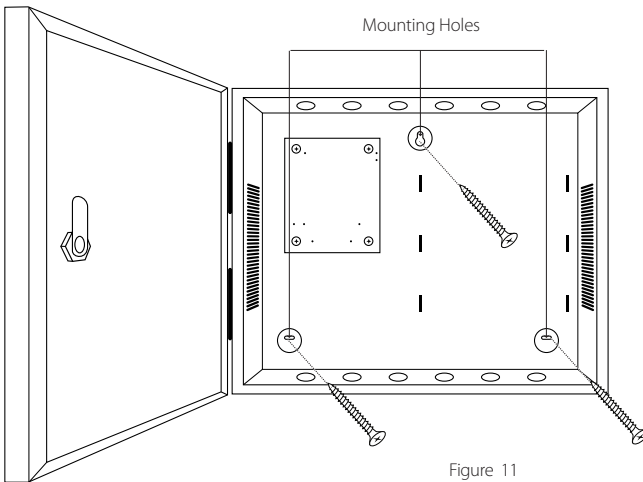
C3- Panel

Backup Battery

Figure 10

Mounting Holes

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).
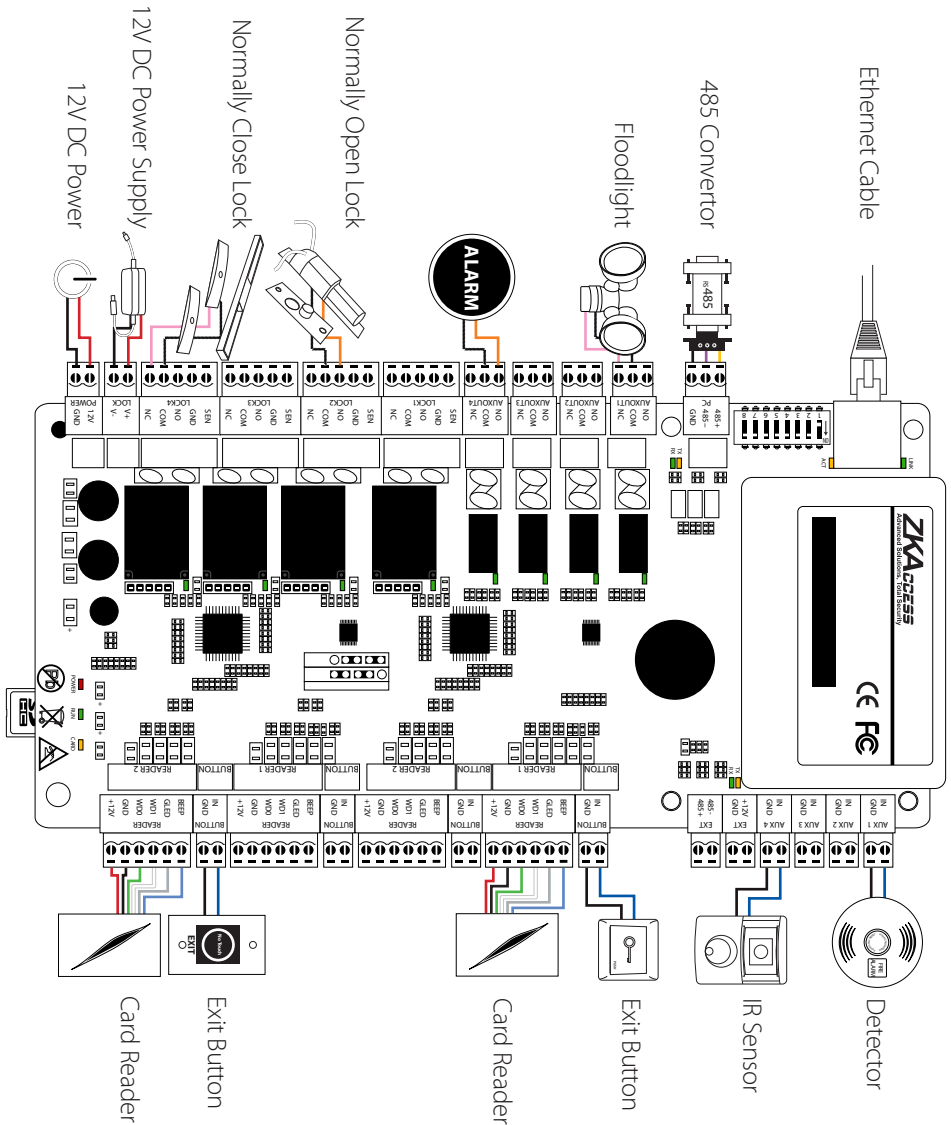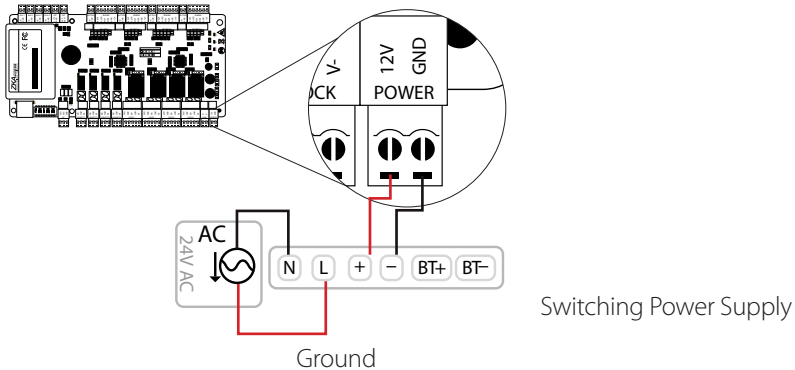
Figure 12

Without Backup Battery

Switching Power Supply

Ground

Figure 13

With Backup Battery

Ground

Switching Power Supply
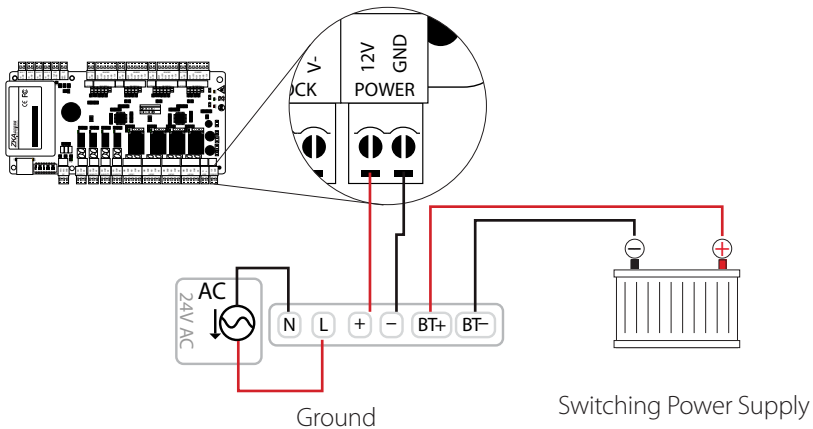
Figure 14

16 or 18 AWG shielded cable recommended

+12V
GND
WD0
WD1
GLED
BEEP
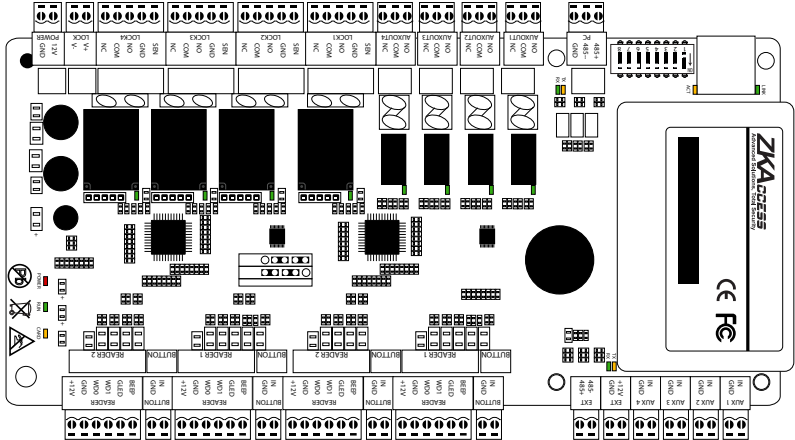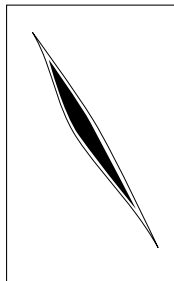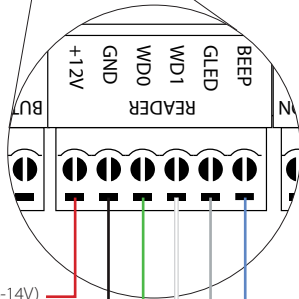
READER

DC+(6-14V)
GND
Wiegand D0
Wiegand D1
Green LED
Beeper

Wiegand Card Reader

Figure 15

GND
BUTTON

ZK ABK Exit Button

NO
COM

12V DC (+)
12V DC (•)

Separate Power Supply

Unused

No Touch

EXIT

K1-1 Exit Switch

Figure 16

Connecting a Lock with External Power Supply
(Dry Contact)

ETHERNET

SEN GND NO COM NC
LOCK4

GND

Sensor
Sensor

GND

12V DC

FR107
Diode

12V DC

Figure 17

Switching Dry Contact to Wet Contact

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

Select the appropriate lock relay and find its jumpers
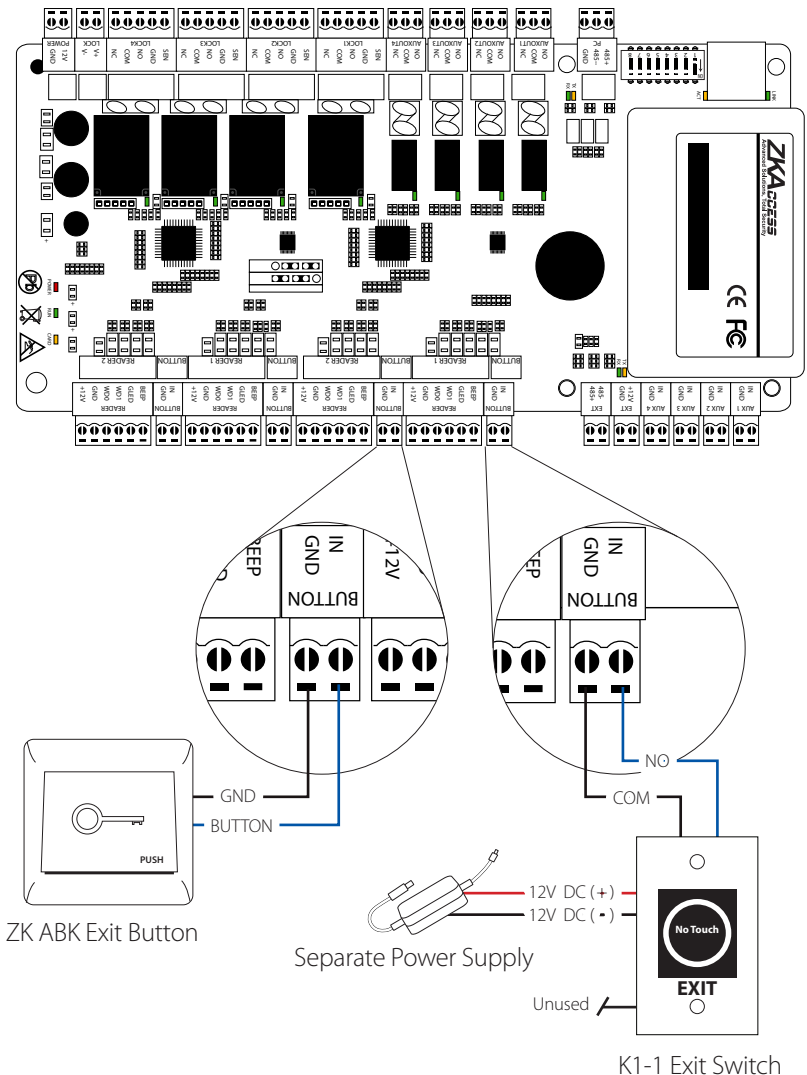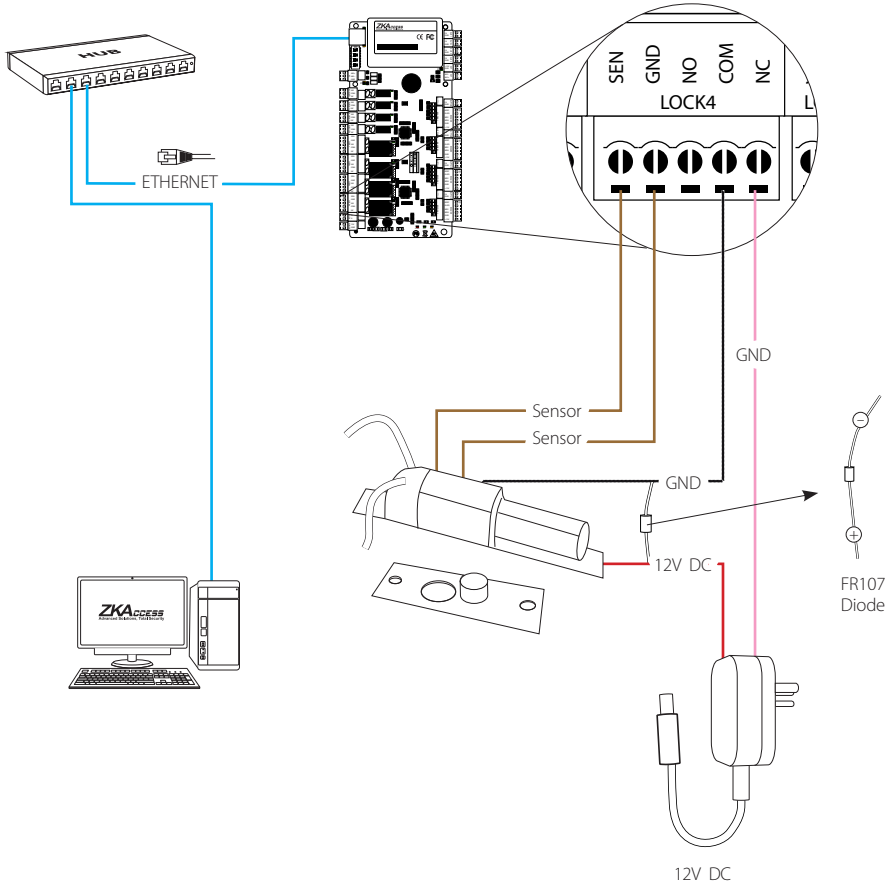
1. Take off the jumpers and change [jumper 1,2-3,4] to [jumper 2,3-4,5]

2. Connect the lock as shown in the diagram, (see figure 20 and 21)

C3-Panel   4 Lock Relays   Select one Relay

Figure 18

Default setting   Take off jumpers   Jumpers   Plug Jumpers
1, 2 - 3, 4   2, 3 - 4, 5

5 4 3 2 1   5 4 3 2 1   5 4 3 2 1
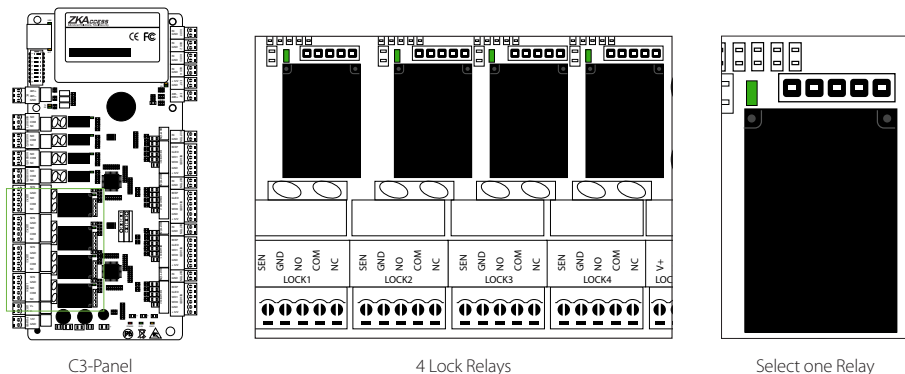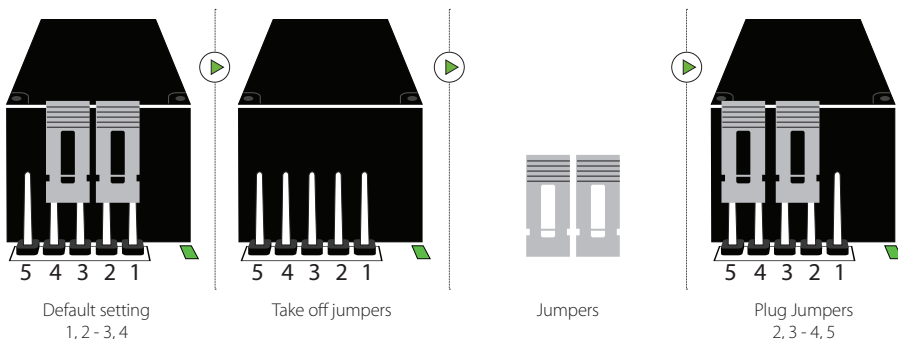
Figure 19

Normally Open Lock Powered From Lock Terminal
(Wet Contact)

ETHERNET

SEN GND NO COM NC
LOCK1

12V DC

GND

FR107
Diode

V+ V-
LOCK   PO

16 or 18 AWG shielded cable recommended

GND
12V DC
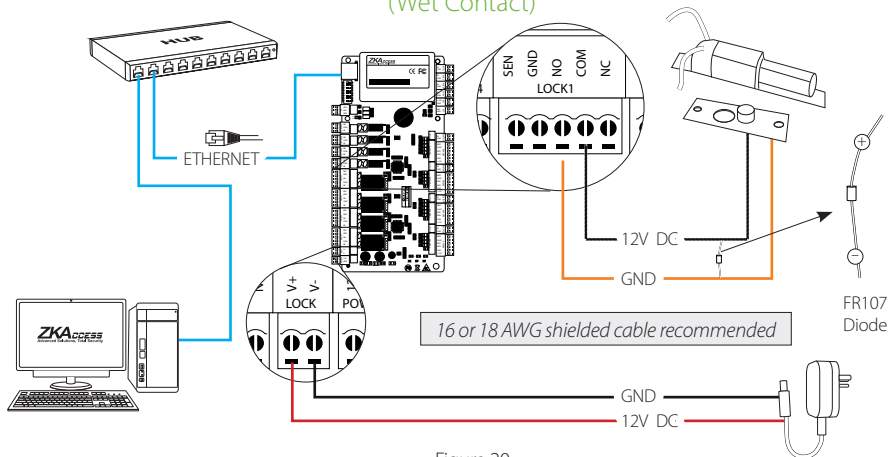
Figure 20

Normally Closed Lock Powered From Lock Terminal
(Wet Contact)

ETHERNET

SEN GND NO COM NC
LOCK1

12V DC

GND

FR107
Diode

V+ V-
LOCK   PO

GND
12V DC

Figure 21

Aux. Input Connection

Figure 22

Aux. Output Connection

Figure 23

LAN Connection

Important Notes:

1. Both 10Base-T and 100Base-T are supported.

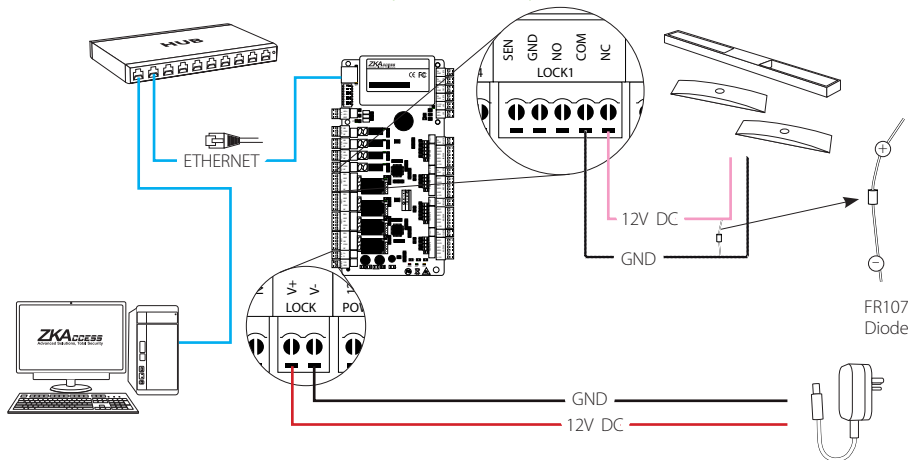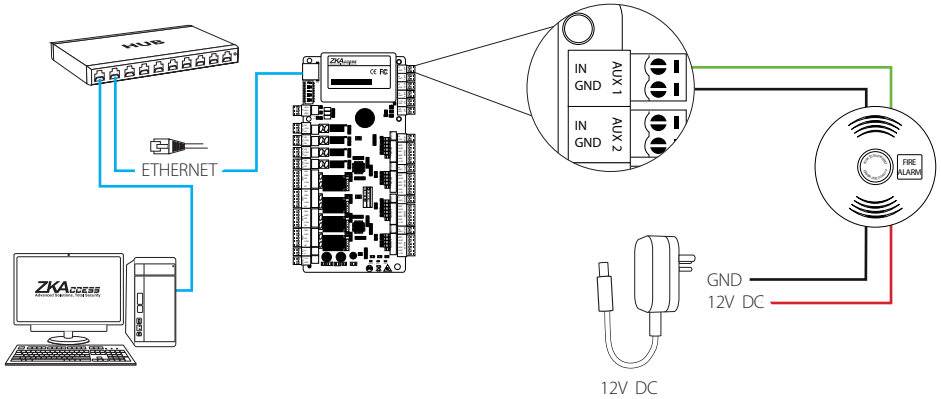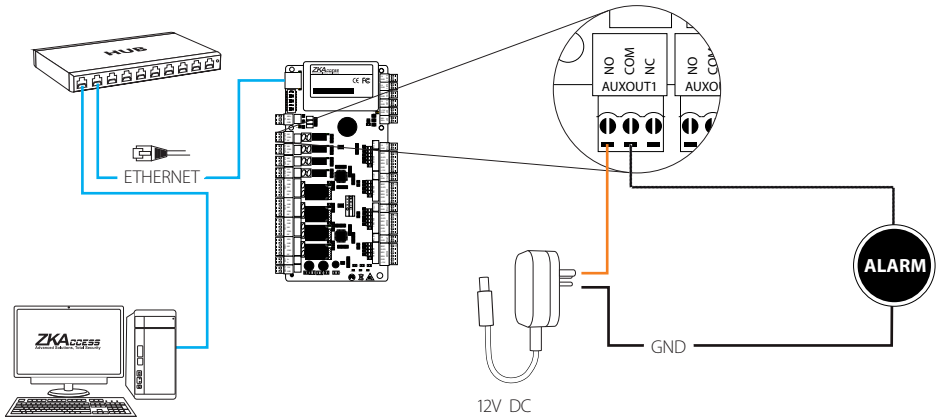**2.** This cable distance must be less than 330 ft. (100m).

3. For cable length of more than 330 ft. (100m). use HUB to amplify the signal.

USB

ETHERNET

CR10 Card Issuer
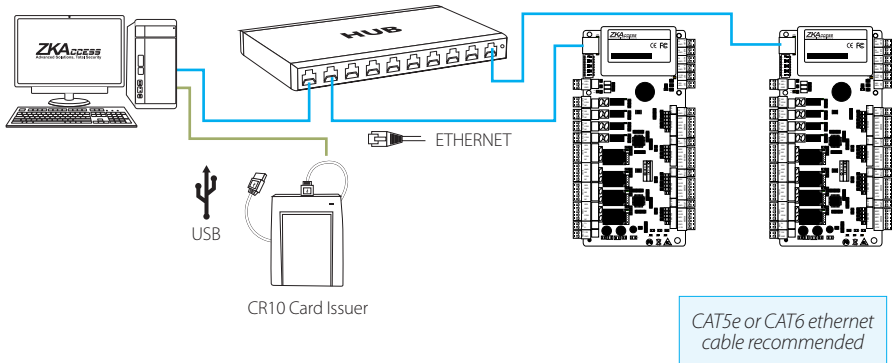
CAT5e or CAT6 ethernet cable recommended

Figure 24

Direct connection

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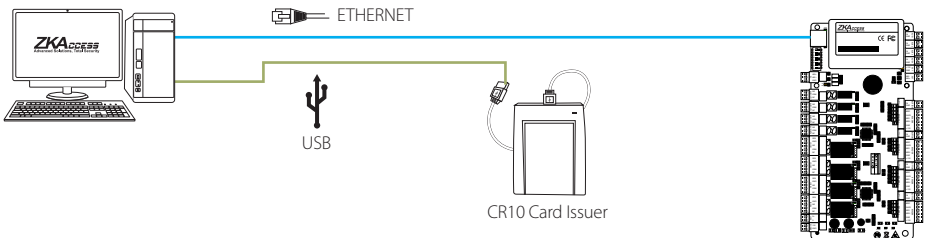

ETHERNET
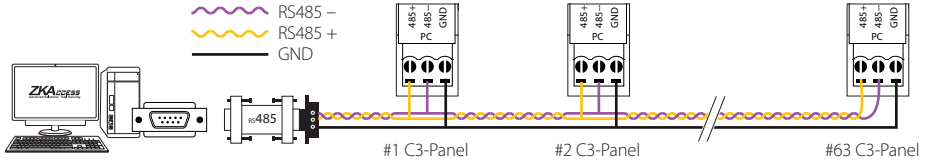
USB

CR10 Card Issuer

Figure 25

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.
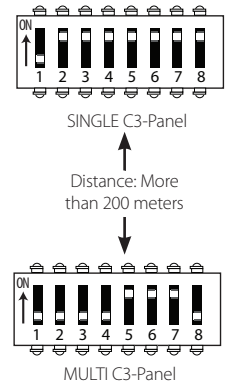

SINGLE C3-Panel

Distance: More than 200 meters

MULTI C3-Panel

Figure 27

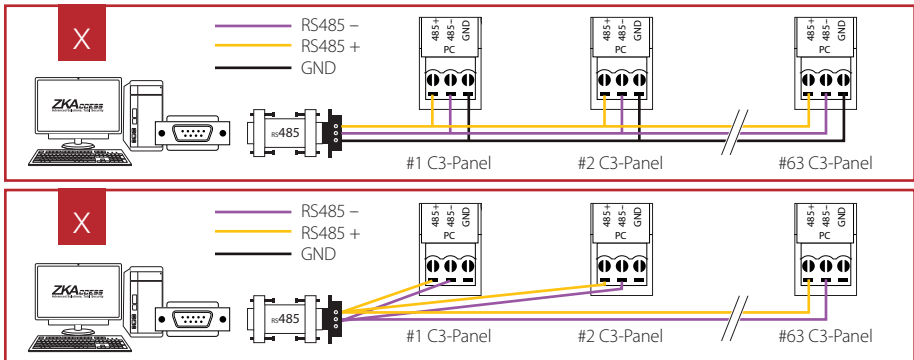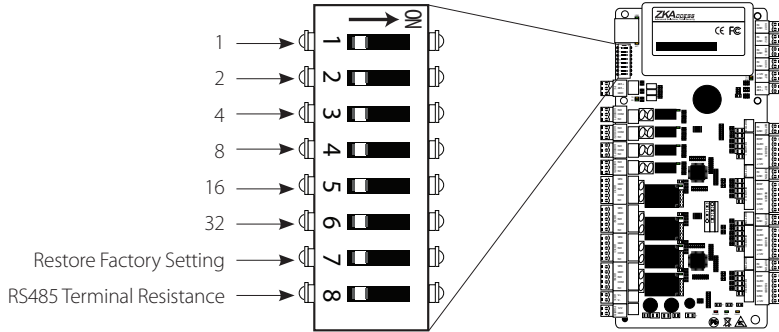## Incorrect RS 485 connections

Figure 28

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-Panel 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.
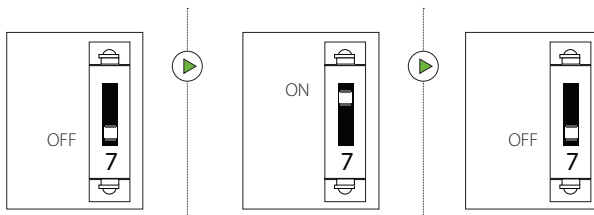
To reset factory settings
Turn #7 switch ON and OFF

Repeat process 3 times

Figure 30

RS485 Address

1. 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

1. 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.
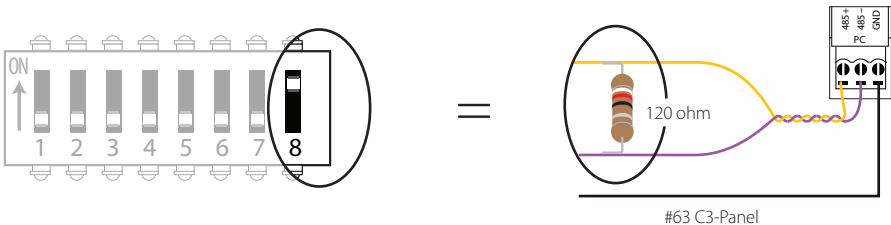

120 ohm

#63 C3-Panel

Figure 32

Ethernet Communication wire

RS485 Network Communication wire

220/110 V Input

C3 Access Control Bundle

CEILING

Sensor

Electric Lock

OUTDOOR

INDOOR

Exit Button

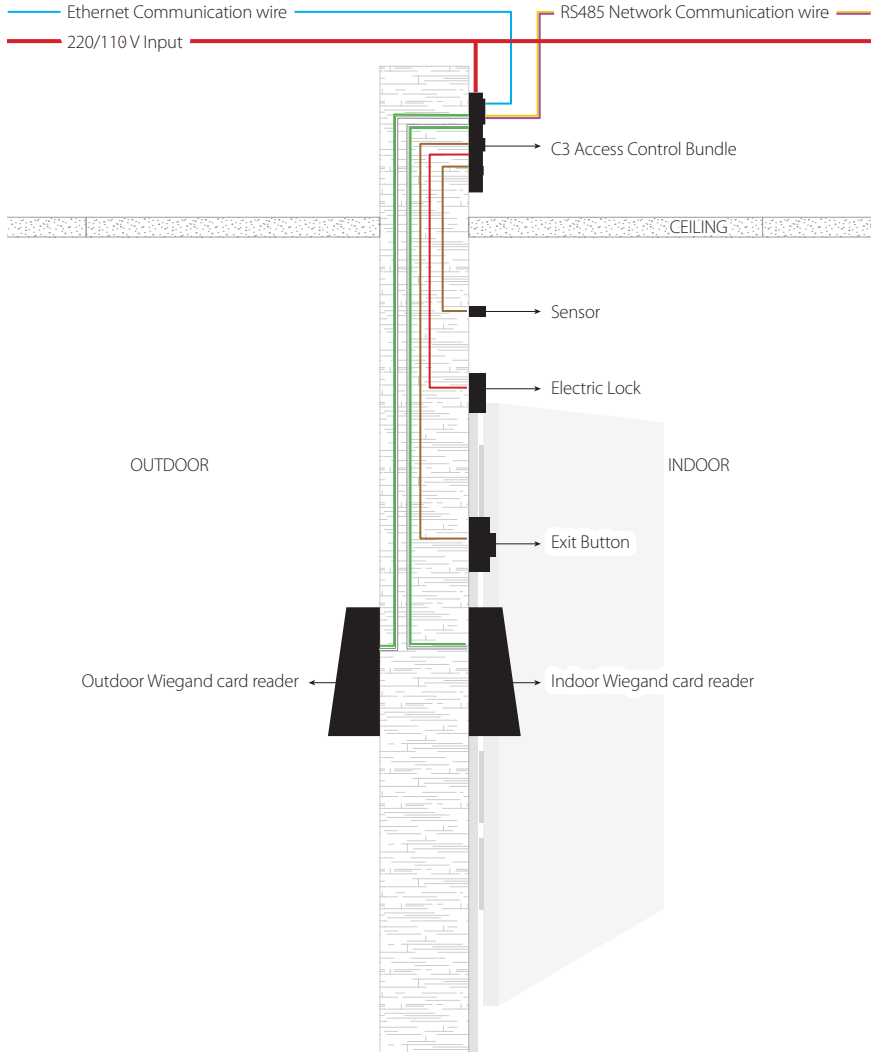Outdoor Wiegand card reader

Indoor Wiegand card reader

Figure 33

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.
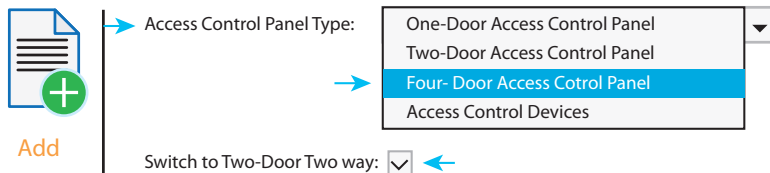- › In the software configure reader 1-Indoor, and reader 2-Outdoor.

Add

Access Control Panel Type:

One-Door Access Control Panel	▼
Two-Door Access Control Panel	
Four- Door Access Cotrol Panel	
Access Control Devices	

Switch to Two-Door Two way: ☑

Figure 34

2. Can we integrate IP Camera and NVR?
- › Currently ZKACCESS software supports ZKAccess' 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 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?
- › 1 Year 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.

Address No.	Switch Setting					
	1	2	3	4	5	6
	1	2	4	8	16	32
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

	Switch Setting					
	1	2	3	4	5	6
Address No.	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

	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)			12V	Use regulated DC power adaptor only
Switching Current (A)			2	
Auxiliary relay output				
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 ELECTRONIC LOCK				
Voltage (V)	10.8	12	13.2	
Current (mA)			500	

Communication	RS485, TCP/IP
Baud Rate for RS485	9600-15200
Power Supply	12V DC, 2A
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	128MB
Certified	CE FC RoHS ETL us

ZKAccess 5.2 software

Installation & Setup

Content

1. Go to zkaccess.com.

2. Click (Downloads) and then (Software Downloads) in the dropdown menu.
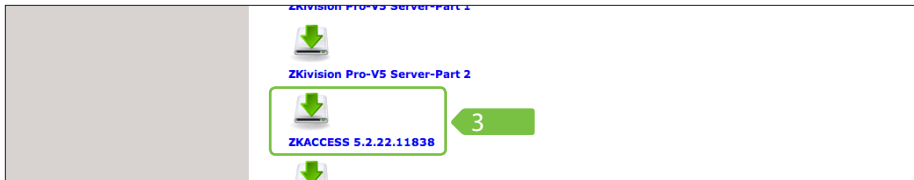
3. Scroll to the bottom of the page and click (ZKACCESS 5.2.22) to download.

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 the downloaded files to a new folder named "ZKAccessSetup"

5. Click (setup.exe) to begin installation.
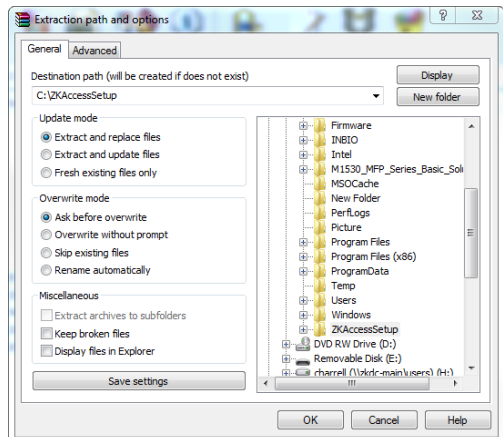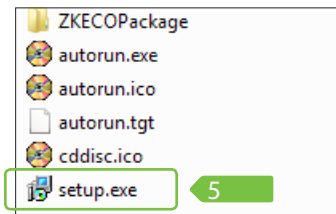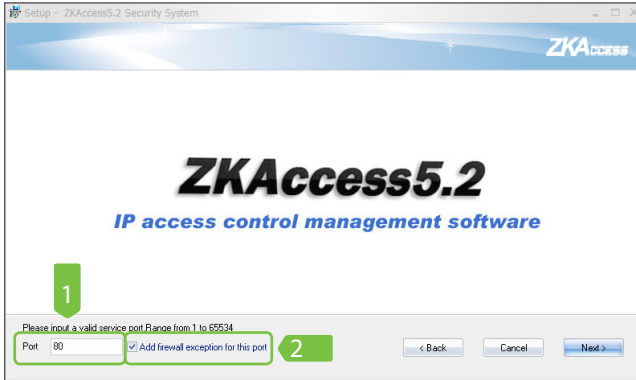
1. Add an open port (Default 80) or ask a network administrator for an open port

2. Click the (box) to "Add firewall exception for this port"
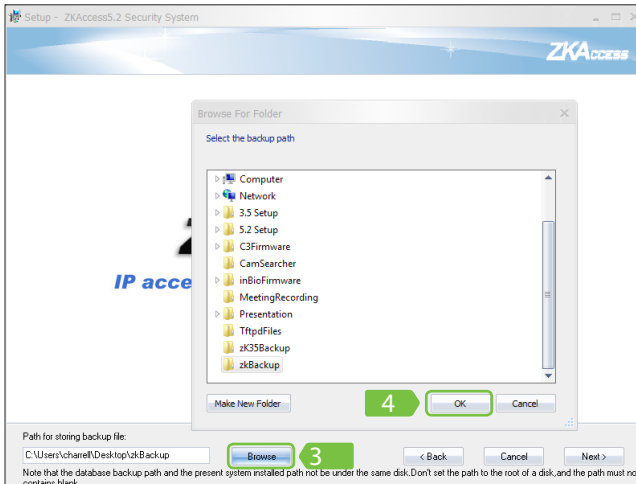
3. Click (Browse) and choose or create a folder to store your backup files in.

4. Click (OK)
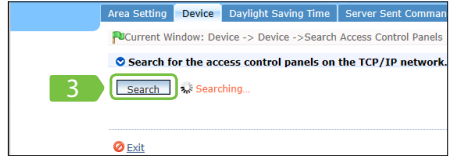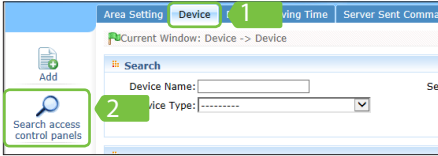
1. Click Device

2. Click Search Panels , to show the Search interface;

3. Click Search , and it will prompt [searching…….];
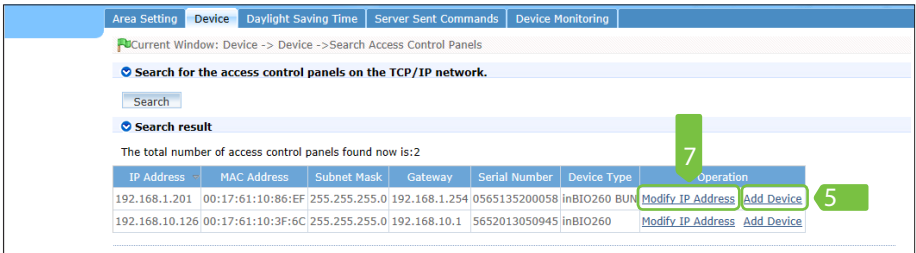
4. After searching, the list of all access control panels on the network will be displayed.

5. Click Add Device on the right side of the listed device, and a dialog box will open.

6. Enter self-defined device name, and click OK to complete the process.

The default IP address of the access control panel may conflict with the IP of another device on the network.

7. You can modify the IP address: Click Modify IP Address to the right of the device and a dialog box will open. Enter the new IP address and other parameters.

Note: Must configure the gateway and IP address in the same network segment.
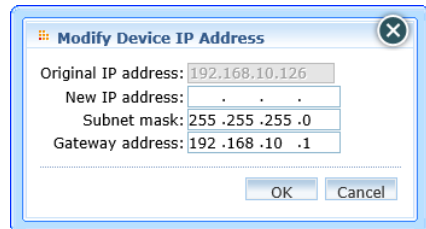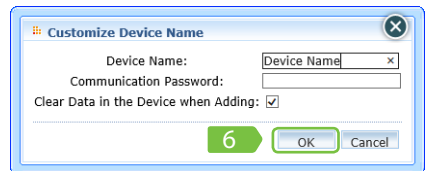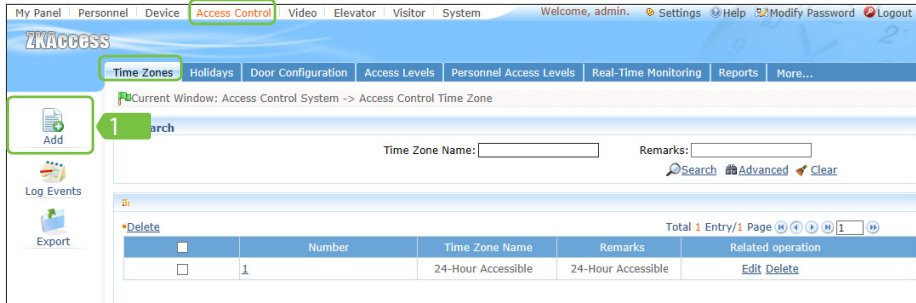
1. Click Access Control > Time zones > Add to access the time zone setting interface
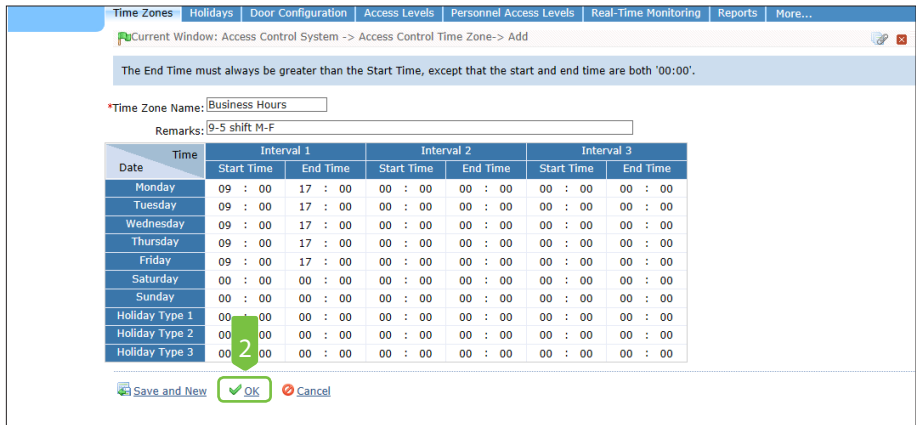
2. After setting the time zone, click OK to save, and the time zone will appear in the list.
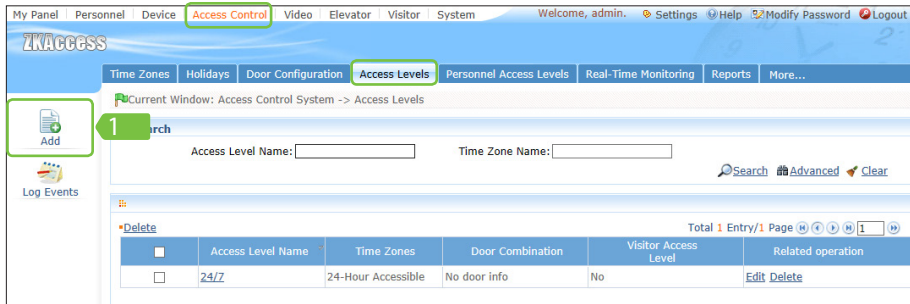
1. Click **Access Control** > **Access levels** > **Add** to add an access level.
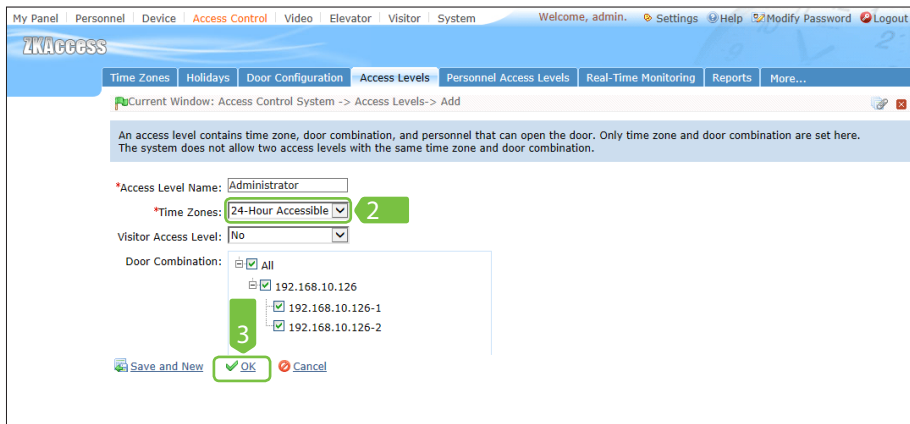
2. Set parameters: access level name (no repetition), access control time zone, door combination

3. Click **OK** to complete setting and quit, and added access levels will appear in the list.

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

2. **Personnel No.:** By default, the length can not exceed 9 digits A number with a length of less than 9 digits will be preceded with 0 automatically to complete 9 digits. *Numbers can not be duplicated.*

3. **Card number:** You can add a card number through manual entry or a card issuer. In Actual Card Number mode (by default), you must enter both the actual card number and the site code, then the software converts the numbers to the internal card number for access control system verification. In Internal Card Number mode, enter the numbers directly.

4. **Password:** Set personnel password to use on a keypad reader. Password must be 4 to 6 numbers long.

5. **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.
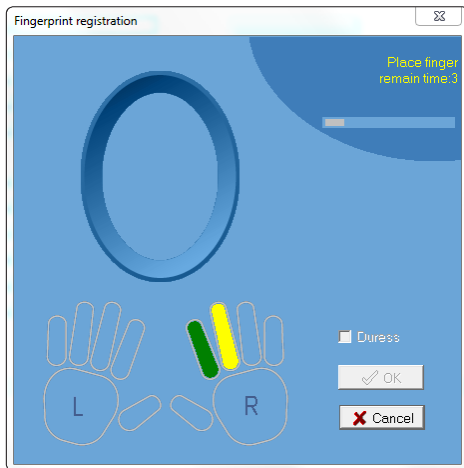
6. **Register Fingerprint:** Enroll the Personnel Fingerprint or Duress Fingerprint. If the person presses the Duress Fingerprint, it will trigger the alarm and send the signal to the system.

7. **Access Level:** Click the box next to the access level you would like to add the personnel to. (Optional)

1. Click Access Control > Personnel Access Levels to show current access levels and personnel. Click Add personnel to open the add personnel interface.

2. Select personnel to create the list on the right, and click OK to complete adding, and added personnel will appear in the list on the right.

3. To delete personnel, select personnel and click Delete from access level .

1. Click (Access Control) > (Real-Time Monitoring) to watch a live log of device transactions.

2. Click the (Filters) to limit which device transactions show up or view all devices at once.

3. Hover over a (Door Icon) to open pop up menu and click (Remote Close), (Remote Open), or (Cancel Alarm).

1. Click (Access Control) > (Reports) to see a report of transactions from devices.

2. Filter by time, date, personnel, or device.

3. Click (Export Report) to open export menu.

4. Choose a file type and click (Export).
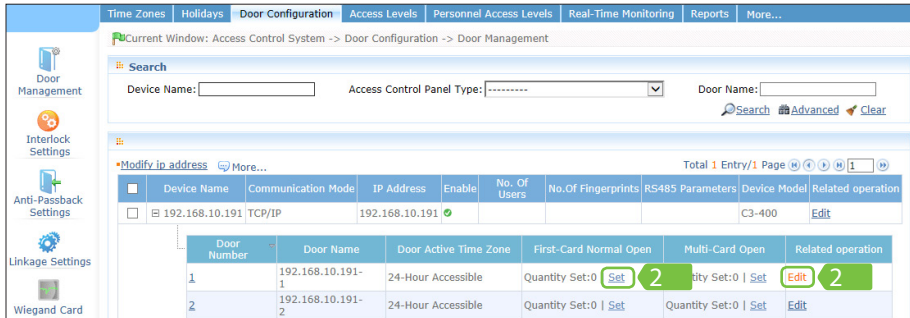
The Passage Mode feature will keep a door unlocked during a specified time zone. It will automatically unlock at the beginning of the time zone and will lock automatically at the end of the specified time zone.

1. Create a new time zone with the hours you want the door to be unlocked.

2. In Door Configuration, Click **Edit** to the right of the door you want to change settings on.

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

The First Card Normal Open feature will keep a door unlocked during a specified time zone when triggered by specified personnel. After a specified personnel swipe 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 Configuration, under First-Card Normal Open, click **Set**.

3. Under First-Card Normal Open Settings, click **Add**.

4. Click the drop down menu titled Time Zones and choose your new time zone. Click **OK**

5. To add the personnel that will trigger the door to stay normal open, click **Add an opening person**

6. Click the check box next to the personnel and they will be added to the Selected Personnel list. Click **OK**

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