



# ULtraAC2602/2604 Access Controller

**User Manual**



# ULtraAC 26XX Series Main Board Description

## 3.1 Single-Door Access Controller Main Board Description

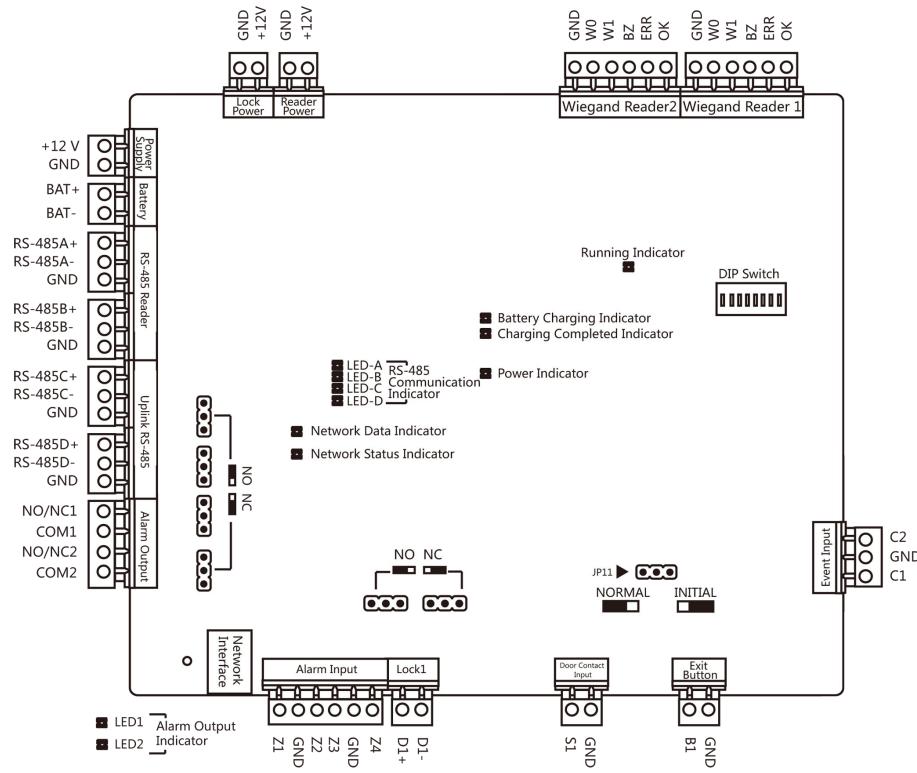
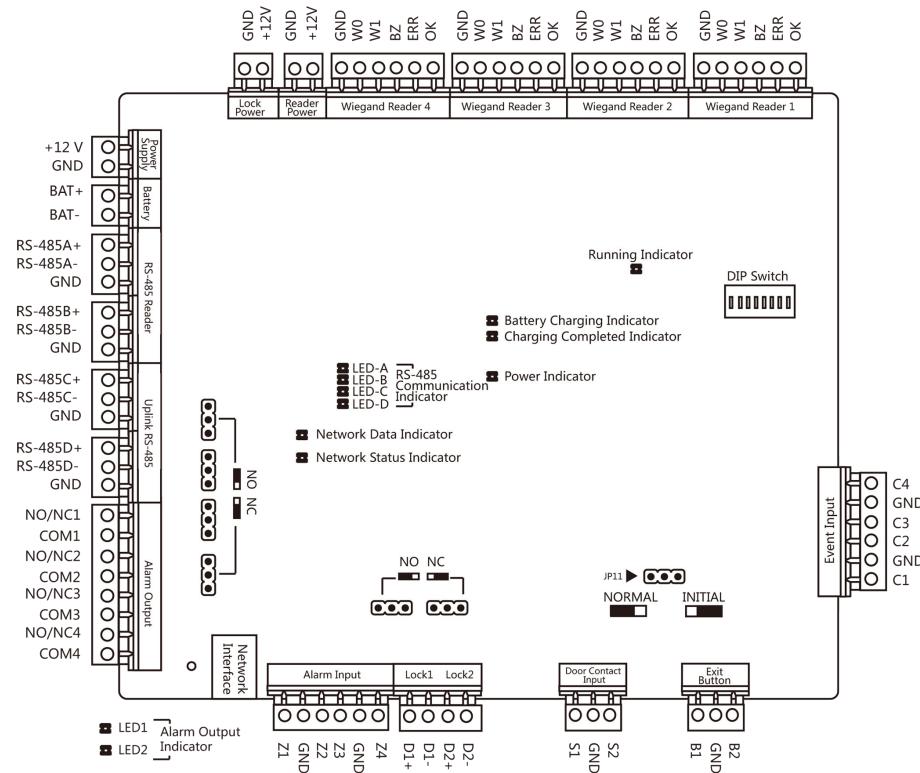


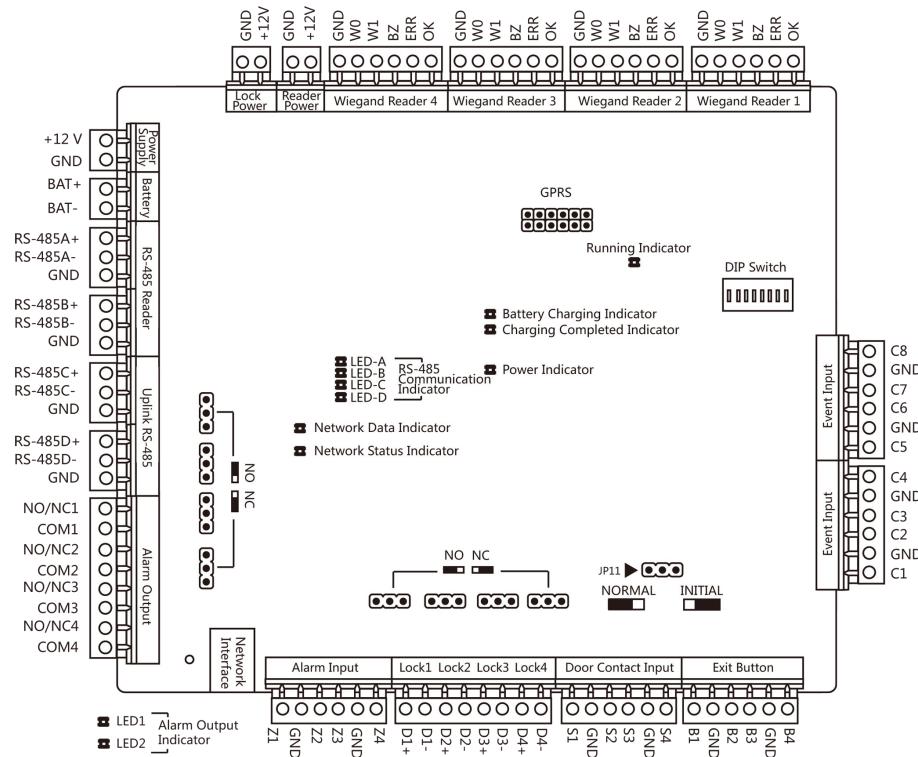
Figure 3-1 Single-Door Access Controller Main Board

### 3.2 Two-Door Access Controller Main Board Description



**Figure 3-2 Two-Door Access Controller Main Board**

### 3.3 Four-Door Access Controller Main Board Description



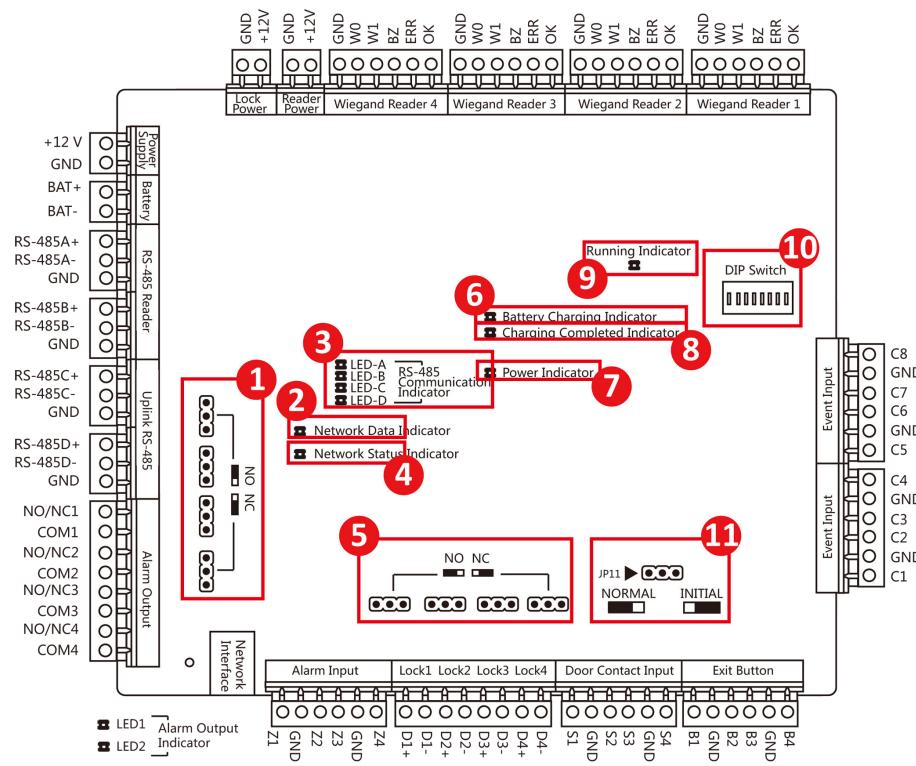
**Figure 3-3 Four-Door Access Controller Main Board**

### 3.4 Component Description

You can view the device's components and their descriptions.

Take four-door access controller as an example, the component diagram is shown below.

## Access Controller User Manual



**Figure 3-4 Four-Door Access Controller Component Diagram**

**Table 3-1 Four-Door Access Controller Component Description**

No.	Component Description		
	Single-Door Access Controller	Two-Door Access Controller	Four-Door Access Controller
1	Alarm Relay Output Status (NC/NO)		
2	Network Data Indicator		
3	RS-485 Communication Indicator		
4	Network Status Indicator		
5	Door Relay Output Status (NC/NO) Choice		
6	Battery Charging Indicator		
7	Power Indicator		
8	Charging Completing Indicator		
9	Running Indicator		
10	Main Board DIP Switch Set the DIP address for the access controller. Available range: 1 to 63.		

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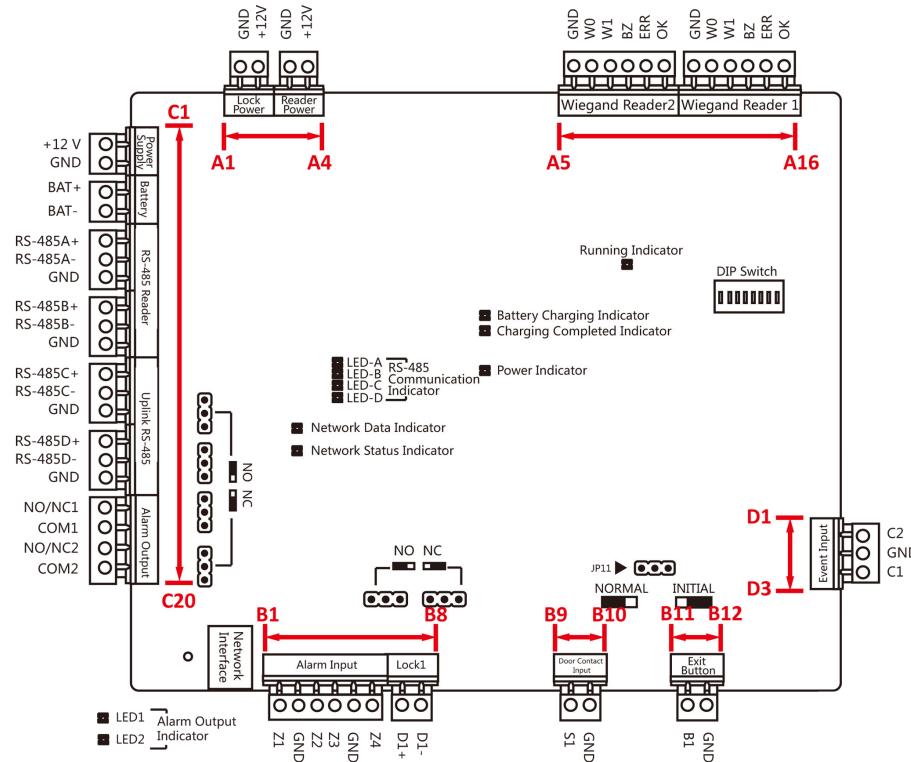
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	<p>Example: If the DIP address is 24, switch Bit 4 and Bit 5 to ON.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"><li>• The settings will be valid after the device reboot.</li><li>• For details about the DIP settings, see <i>Appendix A DIP Switch Description</i>.</li></ul>
11	Hardware Initialization and Normal Working Choice

## Chapter 4 Terminal Description

### 4.1 Single-Door Access Controller Terminal Description

You can view the single-door access controller's terminal description.



**Figure 4-1 Single-Door Access Controller Main Board**

**Table 4-1 Single-Door Access Controller Terminal Description**

No.	Single-Door Access Controller		
A1	Power Supply of E-Lock	GND	Grounding
A2		+12 V	Power Supply of E-Lock Output
A3	Power Supply of Card Reader	GND	Grounding
A4		+12 V	Power Supply of Card Reader Output
A5	Wiegand Card Reader 2	GND	Grounding

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No.	Single-Door Access Controller		
A6	Wiegand Card Reader 1	W0	Wiegand Card Reader Data Input Data0
A7		W1	Wiegand Card Reader Data Input Data1
A8		BZ	Card Reader Buzzer Control Output
A9		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A10		OK	Indicator of Card Reader Control Output (Valid Card Output)
A11		GND	Grounding
A12		W0	Wiegand Card Reader Data Input Data0
A13		W1	Wiegand Card Reader Data Input Data1
A14		BZ	Card Reader Buzzer Control Output
A15		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A16		OK	Indicator of Card Reader Control Output (Valid Card Output)
B1	Arming Region Input	Z1	Arming Region Access Terminal 1
B2		GND	Grounding
B3		Z2	Arming Region Access Terminal 2
B4		Z3	Arming Region Access Terminal 3
B5		GND	Grounding

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No.	Single-Door Access Controller		
B6		Z4	Arming Region Access Terminal 4
B7	E-Lock	D1+	Door 1 Door Relay Input (Dry Contact)
B8		D1-	
B9	Door Contact Input	S1	Door 1 Door Contact Detector Input
B10		GND	Grounding
B11	Door Open Button	B1	Door 1 Door Open Button Input
B12		GND	Grounding
C1	Power	+12 V	12 VDC Cathode
C2		GND	Grounding
C3	Battery	BAT+	12 VDC Battery Cathode
C4		BAT-	12 VDC Battery Anode
C5	RS-485 Card Reader Interface	RS485A+	Card Reader RS485A+ Access
C6		RS485A-	Card Reader RS485A- Access
C7		GND	Grounding
C8		RS485B+	Card Reader RS485B+ Access
C9		RS485B-	Card Reader RS485B- Access
C10		GND	Grounding
C11	Access Controller RS485 Interface	RS485C+	Uplink RS485+Communication
C12		RS485C-	Uplink RS485- Communication
C13		GND	Grounding
C14		RS 485D+	Reserved
C15		RS 485D-	
C16		GND	

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No.	Single-Door Access Controller		
C17	Alarm Output	NO/NC1	Alarm Relay 1 Output (Dry Contact)
C18		COM1	
C19		NO/NC2	Alarm Relay 2 Output (Dry Contact)
C20		COM2	
D1	Event Input	C2	Event Alarm Input 2
D2		GND	Grounding
D3		C1	Event Alarm Input 1



- The Alarm input hardware interface is normally open by default. Only the normally open signal is allowed. It can be linked to the buzzer of the card reader and access controller, the alarm relay output, and door relay open and close.
- Arming region alarm input linkage is only for the alarm relay output linkage.
- RS-485 card reader ID should be set as 1to 2. The table displayed below shows the relationship between the door No. and the ID.

Door No.	RS-485 Card Reader ID	Description
Door 1	1	Enter
	2	Exit

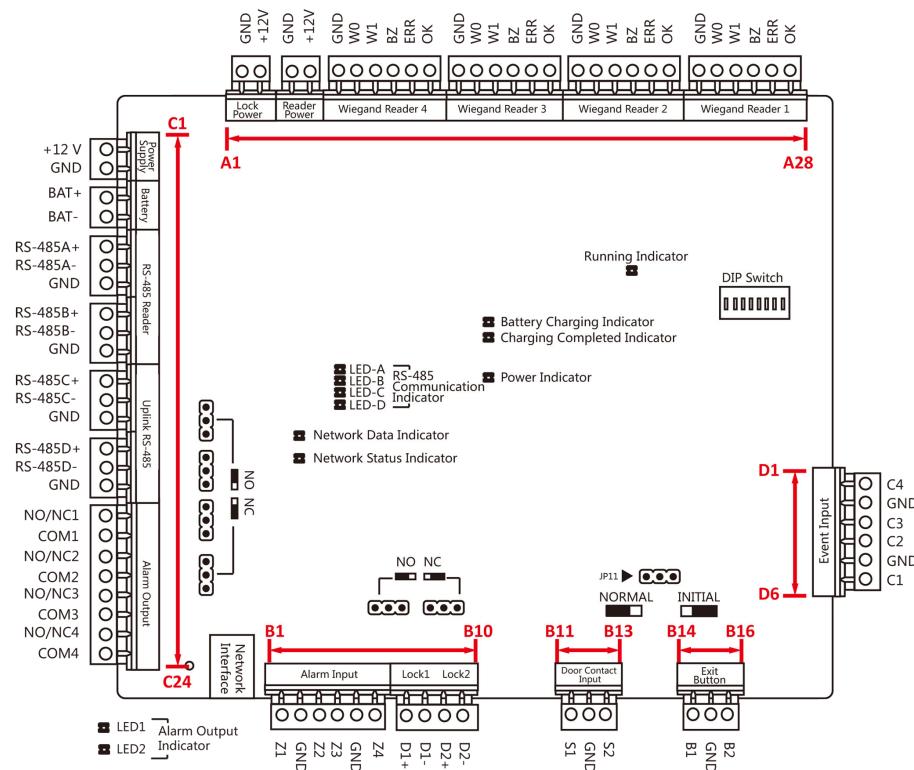
- For single-door access controller, the Wiegand card reader and door's relationship is as follows.

Door No.	Wiegand Card Reader	Description
Door 1	1	Enter
	2	Exit

## 4.2 Two-Door Access Controller Terminal Description

You can view the two-door access controller's terminal description.

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**Figure 4-2 Two-Door Access Controller Main Board**

**Table 4-2 Two-Door Access Controller Terminal Description**

No.	Two-Door Access Controller		
A1	Power Supply of E-Lock	GND	Grounding
A2		+12 V	Power Supply of E-Lock Output
A3	Power Supply of Card Reader	GND	Grounding
A4		+12 V	Power Supply of Card Reader Output
A5	Wiegand Card Reader 4	GND	Grounding
A6		W0	Wiegand Card Reader Data Input Data0
A7		W1	Wiegand Card Reader Data Input Data1
A8		BZ	Card Reader Buzzer Control Output

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No.	Two-Door Access Controller		
A9		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A10		OK	Indicator of Card Reader Control Output (Valid Card Output)
A11	Wiegand Card Reader 3	GND	Grounding
A12		W0	Wiegand Card Reader Data Input Data0
A13		W1	Wiegand Card Reader Data Input Data1
A14		BZ	Card Reader Buzzer Control Output
A15		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A16		OK	Indicator of Card Reader Control Output (Valid Card Output)
A17	Wiegand Card Reader 2	GND	Grounding
A18		W0	Wiegand Card Reader Data Input Data0
A19		W1	Wiegand Card Reader Data Input Data1
A20		BZ	Card Reader Buzzer Control Output
A21		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A22		OK	Indicator of Card Reader Control Output (Valid Card Output)
A23	Wiegand Card Reader 1	GND	Grounding
A24		W0	Wiegand Card Reader Data Input Data0

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No.	Two-Door Access Controller		
A25		W1	Wiegand Card Reader Data Input Data1
A26		BZ	Card Reader Buzzer Control Output
A27		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A28		OK	Indicator of Card Reader Control Output (Valid Card Output)
B1	Arming Region Input	Z1	Arming Region Access Terminal 1
B2		GND	Grounding
B3		Z2	Arming Region Access Terminal 2
B4		Z3	Arming Region Access Terminal 3
B5		GND	Grounding
B6		Z4	Arming Region Access Terminal 4
B7	E-Lock1	D1+	Door 1 Door Relay Input (Dry Contact)
B8		D1-	
B9	E-Lock2	D2+	Door 2 Door Relay Input (Dry Contact)
B10		D2-	
B11	Door Magnetic Detector	S1	Door 1 Magnetic Detector Input
B12		GND	Grounding
B13		S2	Door 2 Magnetic Detector Input
B14	Door Button	B1	Door 1 Door Button Input
B15		GND	Grounding

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No.	Two-Door Access Controller		
B16		B2	Door 2 Door Button Input
C1	Power	+12 V	12 VDC Cathode
C2		GND	Grounding
C3	Battery	BAT+	12 VDC Battery Cathode
C4		BAT-	12 VDC Battery Anode
C5	RS485 Card Reader Interface	RS485A+	Card Reader RS485A+ Access
C6		RS485A-	Card Reader RS485A- Access
C7		GND	Grounding
C8		RS485B+	Card Reader RS485B+ Access
C9		RS485B-	Card Reader RS485B- Access
C10		GND	Grounding
C11		RS485C+	Uplink RS485+Communication
C12		RS485C-	Uplink RS485- Communication
C13		GND	Grounding
C14		RS 485D+	Reserved
C15	Access Controller RS485 Interface	RS 485D-	
C16		GND	
C17		NO/NC1	Alarm Relay 1 Output (Dry Contact)
C18		COM1	
C19		NO/NC2	Alarm Relay 2 Output (Dry Contact)
C20		COM2	
C21	Alarm Output	NO/NC3	Alarm Relay 3 Output (Dry Contact)
C22		COM3	
C23		NO/NC4	Alarm Relay 4 Output (Dry Contact)
C24		COM4	

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No.	Two-Door Access Controller		
D1	Event Input	C4	Event Alarm Input 4
D2		GND	Grounding
D3		C3	Event Alarm Input 3
D4		C2	Event Alarm Input 2
D5		GND	Grounding
D6		C1	Event Alarm Input 1



- Note**
- The alarm input hardware interface is normally open by default. So only the normally open signal is allowed. It can be linked to the buzzer of the card reader and access controller, the alarm relay output, and door relay open and close.
  - Arming region alarm input linkage is only for the alarm relay output linkage.
  - RS-485 card reader ID should be set as 1 to 8.

Door No.	RS-485 Card Reader ID	Description
Door 1	1	Enter
	2	Exit
Door 2	3	Enter
	4	Exit

- For two-door access controller, the Wiegand card reader and door's relationship is as follows.

Door No.	Wiegand Card Reader	Description
Door 1	1	Enter
	2	Exit
Door 2	3	Enter
	4	Exit

### 4.3 Four-Door Access Controller Terminal Description

You can view the four-door access controller's terminal description.

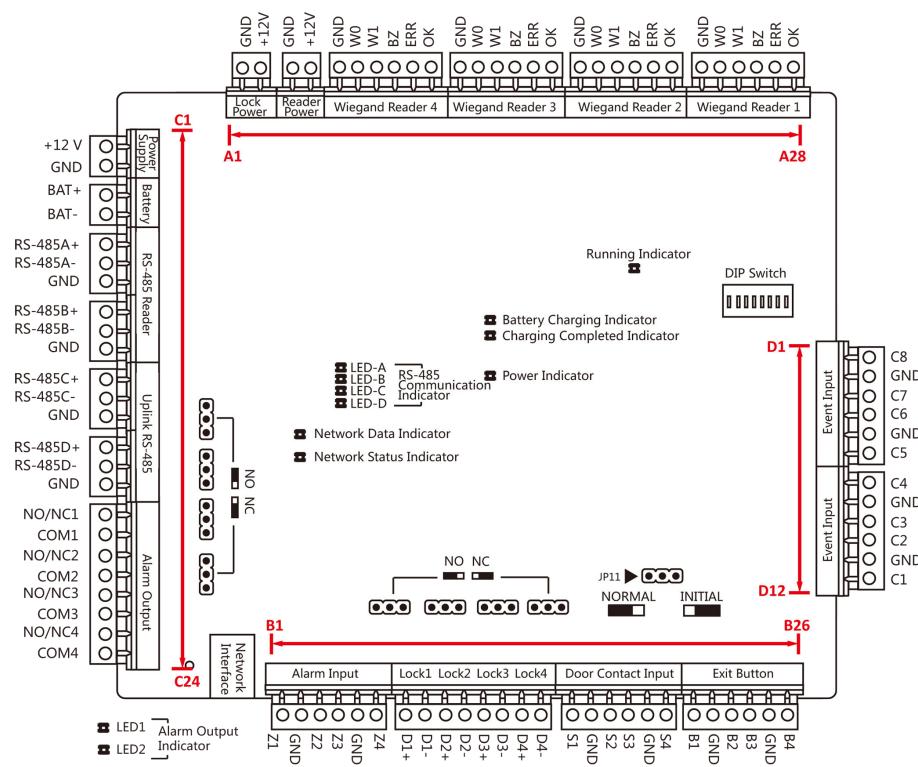


Figure 4-3 Four-Door Access Controller Main Board

Table 4-3 Four-Door Access Controller Terminal Description

No.	Four-Door Access Controller		
A1	Power Supply of E-Lock	GND	Grounding
A2		+12 V	Power Supply of E-Lock Output
A3	Power Supply of Card Reader	GND	Grounding
A4		+12 V	Power Supply of Card Reader Output
A5	Wiegand Card Reader 4	GND	Grounding
A6		W0	Wiegand Card Reader Data Input Data0
A7		W1	Wiegand Card Reader Data Input Data1
A8		BZ	Card Reader Buzzer Control Output

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No.	Four-Door Access Controller		
A9		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A10		OK	Indicator of Card Reader Control Output (Valid Card Output)
A11	Wiegand Card Reader 3	GND	Grounding
A12		W0	Wiegand Card Reader Data Input Data0
A13		W1	Wiegand Card Reader Data Input Data1
A14		BZ	Card Reader Buzzer Control Output
A15		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A16		OK	Indicator of Card Reader Control Output (Valid Card Output)
A17	Wiegand Card Reader 2	GND	Grounding
A18		W0	Wiegand Card Reader Data Input Data0
A19		W1	Wiegand Card Reader Data Input Data1
A20		BZ	Card Reader Buzzer Control Output
A21		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A22		OK	Indicator of Card Reader Control Output (Valid Card Output)
A23	Wiegand Card Reader 1	GND	Grounding
A24		W0	Wiegand Card Reader Data Input Data0

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No.	Four-Door Access Controller		
A25		W1	Wiegand Card Reader Data Input Data1
A26		BZ	Card Reader Buzzer Control Output
A27		ERR	Indicator of Card Reader Control Output (Invalid Card Output)
A28		OK	Indicator of Card Reader Control Output (Valid Card Output)
B1	Arming Region Input	Z1	Arming Region Access Terminal 1
B2		GND	Grounding
B3		Z2	Arming Region Access Terminal 2
B4		Z3	Arming Region Access Terminal 3
B5		GND	Grounding
B6		Z4	Arming Region Access Terminal 4
B7	E-Lock1	D1+	Door 1 Door Relay Input (Dry Contact)
B8		D1-	
B9	E-Lock2	D2+	Door 2 Door Relay Input (Dry Contact)
B10		D2-	
B11	E-Lock3	D3+	Door 3 Door Relay Input (Dry Contact)
B12		D3-	
B13	E-Lock4	D4+	Door 4 Door Relay Input (Dry Contact)
B14		D4-	
B15	Door Magnetic Detector	S1	Door 1 Magnetic Detector Input
B16		GND	Grounding

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No.	Four-Door Access Controller		
B17		S2	Door 2 Magnetic Detector Input
B18		S3	Door 3 Magnetic Detector Input
B19		GND	Grounding
B20		S4	Door 4 Magnetic Detector Input
B21	Door Button	B1	Door 1 Door Button Input
B22		GND	Grounding
B23		B2	Door 2 Door Button Input
B24		B3	Door 3 Door Button Input
B25		GND	Grounding
B26		B4	Door 4 Door Button Input
C1	Power	+12 V	12 VDC Cathode
C2		GND	Grounding
C3	Battery	BAT+	12 VDC Battery Cathode
C4		BAT-	12 VDC Battery Anode
C5	RS485 Card Reader Interface	RS485A+	Card Reader RS485A+ Access
C6		RS485A-	Card Reader RS485A- Access
C7		GND	Grounding
C8		RS485B+	Card Reader RS485B+ Access
C9		RS485B-	Card Reader RS485B- Access
C10		GND	Grounding
C11	Access Controller RS485 Interface	RS485C+	Uplink RS485+Communication

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No.	Four-Door Access Controller		
C12		RS485C-	Uplink RS485-Communication
C13		GND	Grounding
C14		RS 485D+	Reserved
C15		RS 485D-	
C16		GND	
C17	Alarm Output	NO/NC1	Alarm Relay 1 Output (Dry Contact)
C18		COM1	
C19		NO/NC2	Alarm Relay 2 Output (Dry Contact)
C20		COM2	
C21		NO/NC3	Alarm Relay 3 Output (Dry Contact)
C22		COM3	
C23		NO/NC4	Alarm Relay 4 Output (Dry Contact)
C24		COM4	
D1	Event Input	C8	Event Alarm Input 8
D2		GND	Grounding
D3		C7	Event Alarm Input 7
D4		C6	Event Alarm Input 6
D5		GND	Grounding
D6		C5	Event Alarm Input 5
D7		C4	Event Alarm Input 4
D8		GND	Grounding
D9		C3	Event Alarm Input 3
D10		C2	Event Alarm Input 2
D11		GND	Grounding
D12		C1	Event Alarm Input 1

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- The Alarm input hardware interface is normally open by default. So only the normally open signal is allowed. It can be linked to the buzzer of the card reader and access controller, and the alarm relay output and door relay open and close.
- Arming region alarm input linkage is only for the alarm relay output linkage.
- RS-485 card ID should be set as 1to 8.

Door No.	RS-485 Card Reader ID	Description
Door 1	1	Enter
	2	Exit
Door 2	3	Enter
	4	Exit
Door 3	5	Enter
	6	Exit
Door4	7	Enter
	8	Exit

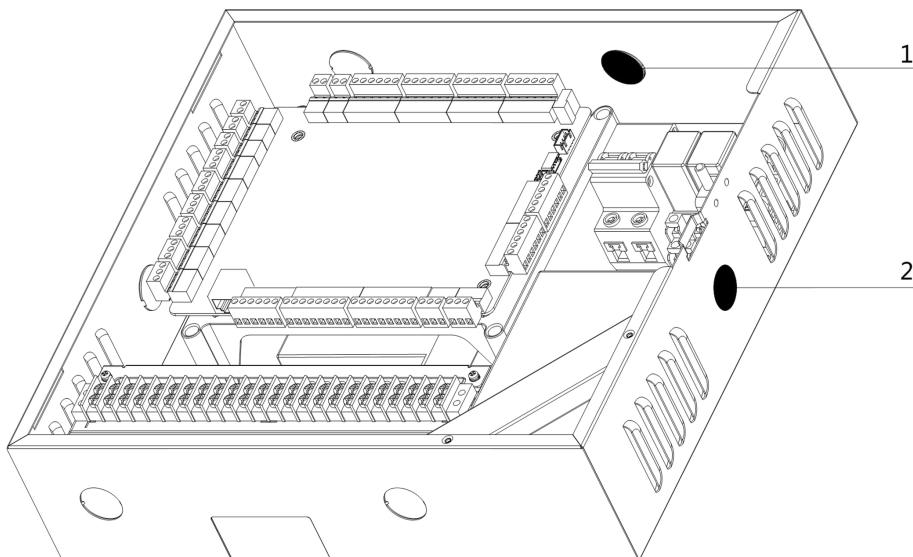
- For four-door access controller, the Wiegand card reader and door's relationship is as follows.

Door No.	Wiegand Card Reader	Description
Door 1	1	Enter
	/	Exit
Door 2	2	Enter
	/	Exit
Door 3	3	Enter
	/	Exit
Door 4	4	Enter
	/	Exit

## Terminal Wiring

**!** **Warning**

The high voltage cable should be threaded through the Hole 1 and Hole 2. The Hole 1 and Hole 2 should be installed with rubber ring to avoid the sharp edge cutting the cable and avoid electric shock.



### 5.1 External Terminal

#### 5.1.1 Single-Door Access Controller Terminal Description

You can view the single-door access controller's terminals diagram.

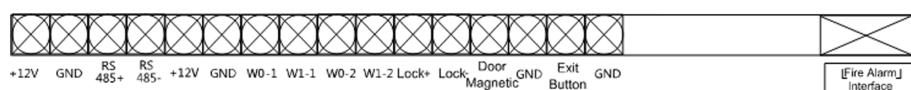


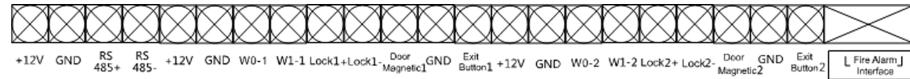
Figure 5-1 Single-Door Access Controller Terminals

#### 5.1.2 Two-Door Access Controller Terminal Description

You can view the two-door access controller's terminals diagram.

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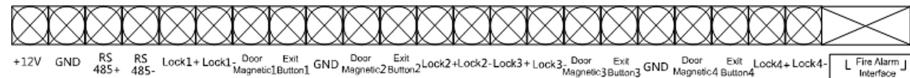
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**Figure 5-2 Two-Door Access Controller Terminals**

### 5.1.3 Four-Door Access Controller Terminal Description

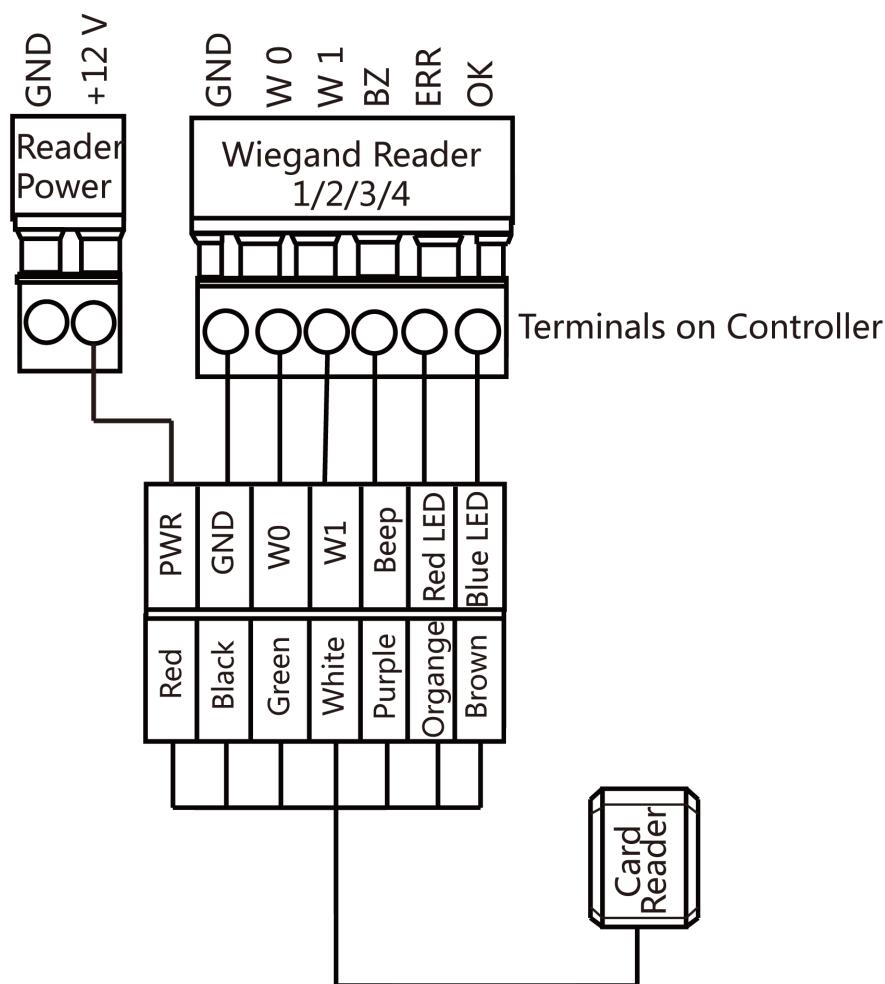
You can view the four-door access controller's terminals diagram.



**Figure 5-3 Four-Door Access Controller Terminal**

## 5.2 Wiegand Card Reader Wiring

You can view the Wiegand card reader wiring diagram.



**Figure 5-4 Wiegand Card Reader Wiring Diagram**



You must connect the OK/ERR/BZ, if using access controller to control the LED and buzzer of the Wiegand card reader.

### 5.3 RS-485 Card Reader Wiring

You can view the RS-485 card reader wiring diagram.

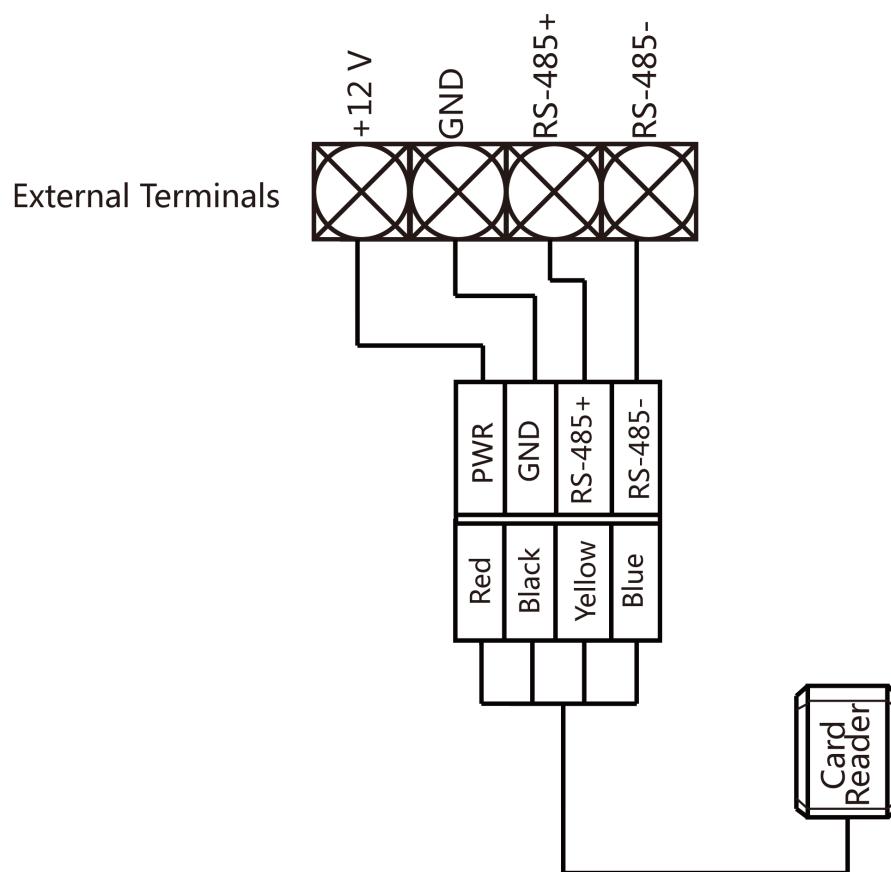


Figure 5-5 RS-485 Card Reader Wiring Diagram



If the card reader is installed too far away from the access controller, you can use an external power supply.

## 5.4 Cathode Lock Wiring

You can view the cathode lock wiring diagram.

Relay (NO)

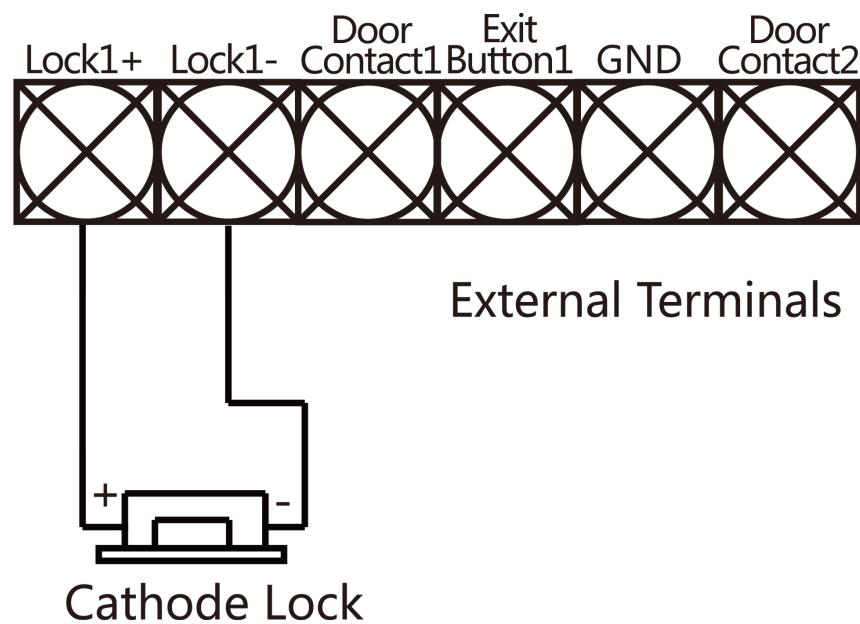


Figure 5-6 Wiring Diagram of Cathode Lock

## 5.5 Anode Lock Wiring

You can view the anode lock wiring diagram.

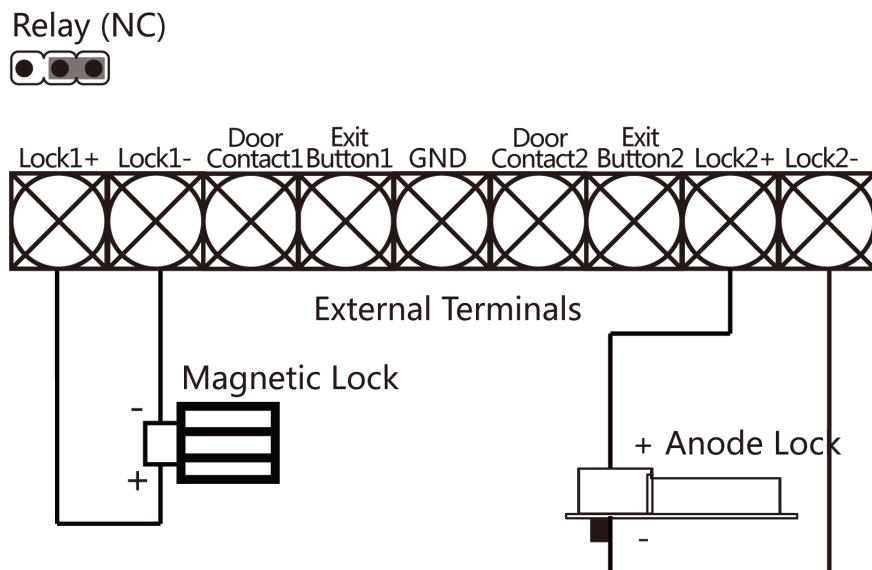


Figure 5-7 Wiring Diagram of Anode Lock

## 5.6 External Alarm Device Wiring

You can view the external alarm device wiring diagram.

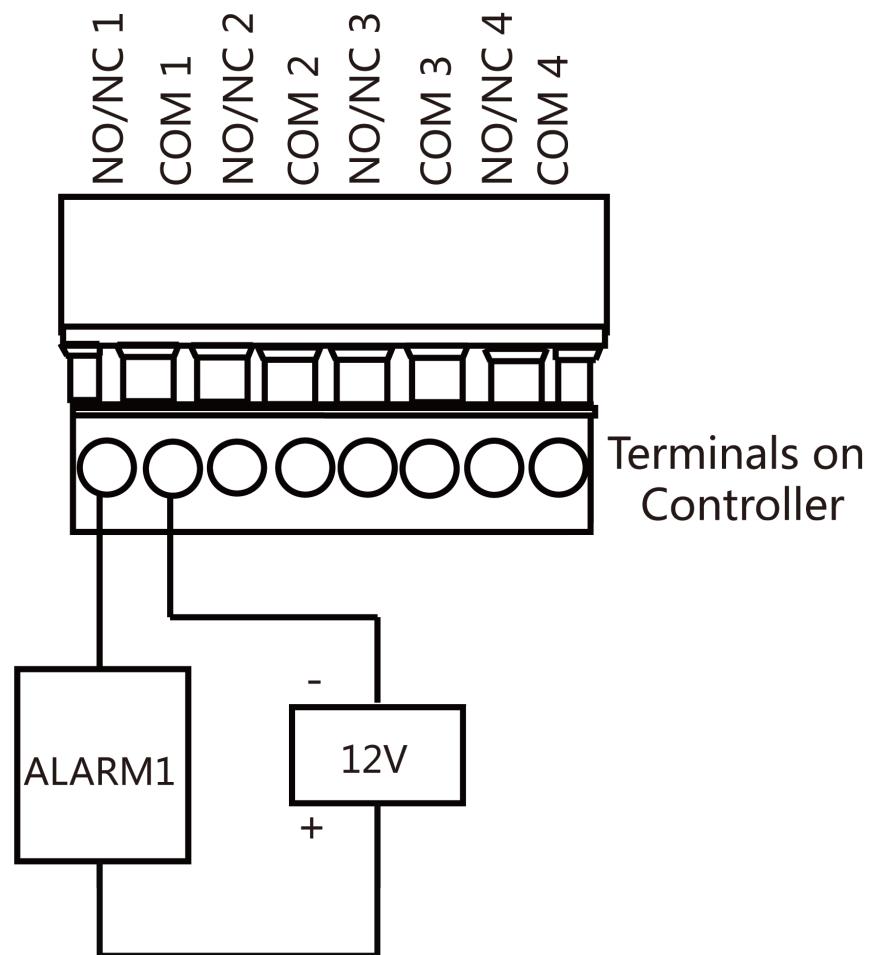


Figure 5-8 External Alarm Device Wiring

## 5.7 Exit Button Wiring

You can view the exit button wiring diagram

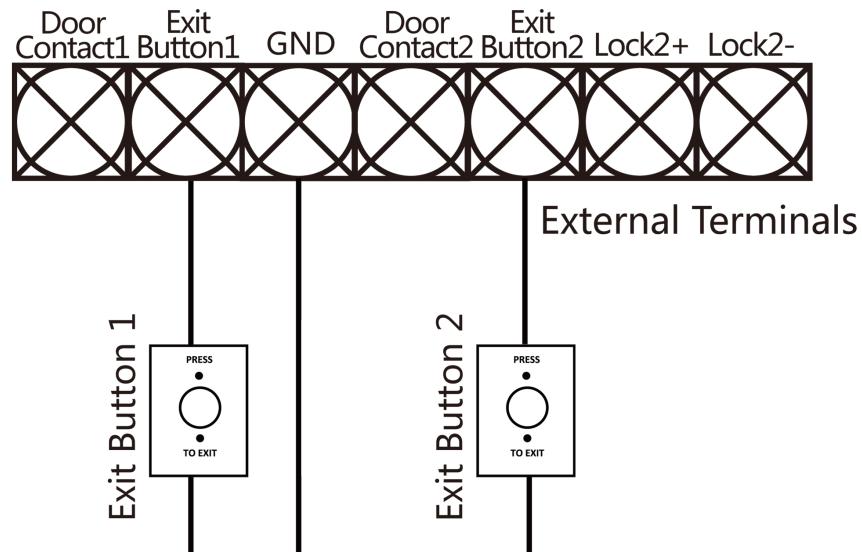


Figure 5-9 Exit Button Wiring

## 5.8 Door Contact Wiring

You can view the door contact wiring diagram.

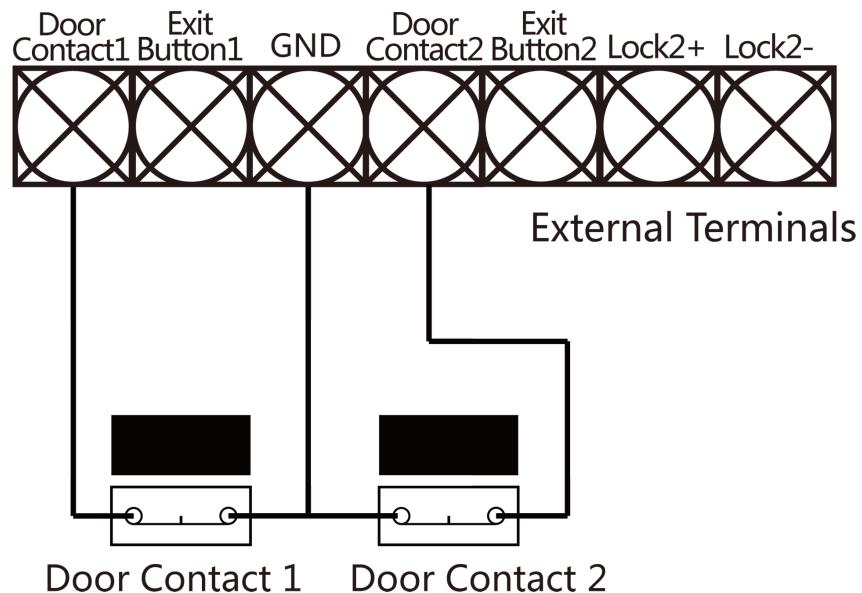


Figure 5-10 Door Contact Wiring

## 5.9 Power Supply Wiring

You can view the power supply wiring diagram.

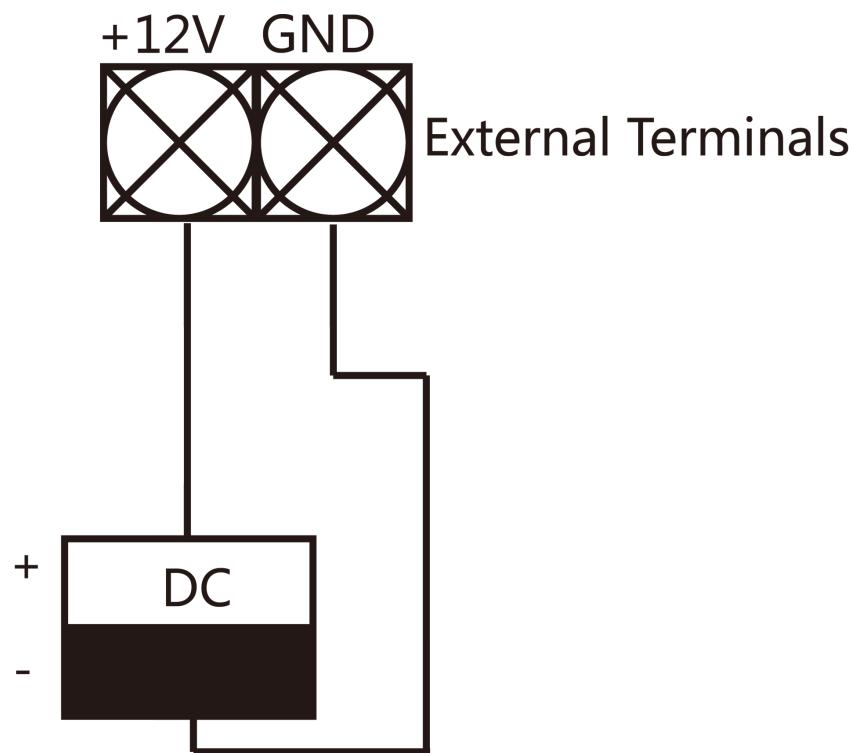


Figure 5-11 Power Supply Wiring

## 5.10 Arming Region Input Wiring

### 5.10.1 NO Wiring of Arming Region Input

You can view the arming region input of NO wiring.

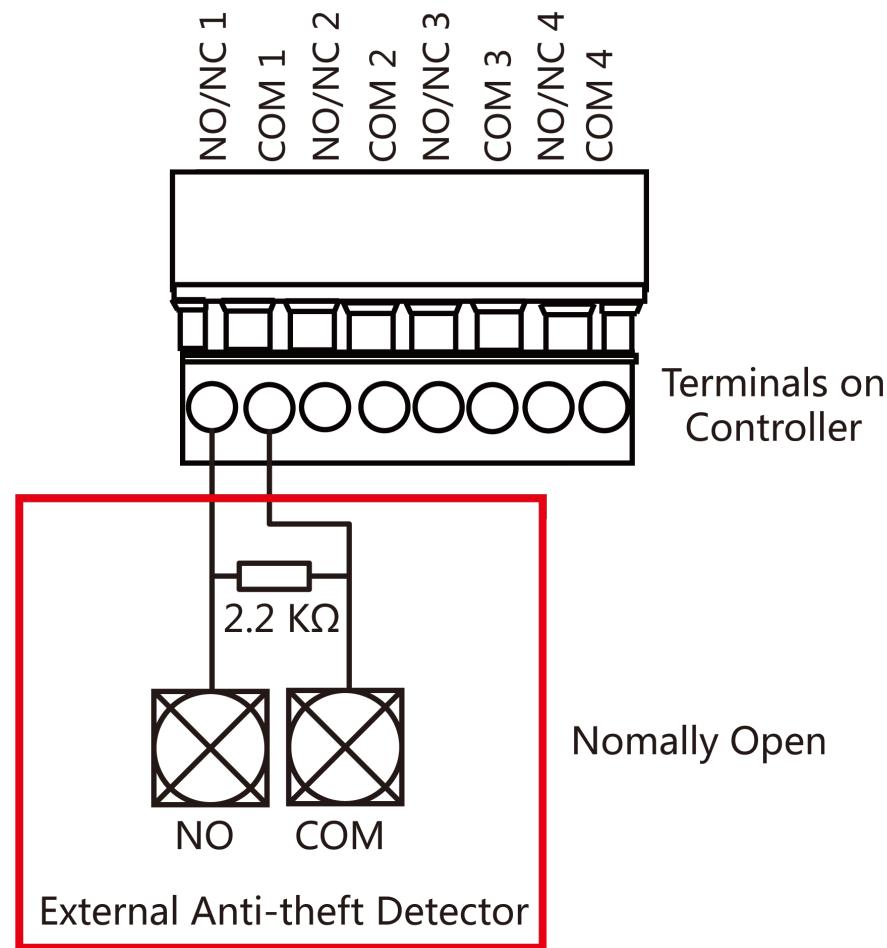


Figure 5-12 NO Wiring

### 5.10.2 NC Wiring of Arming Region Input

You can view the arming region input of NC wiring.

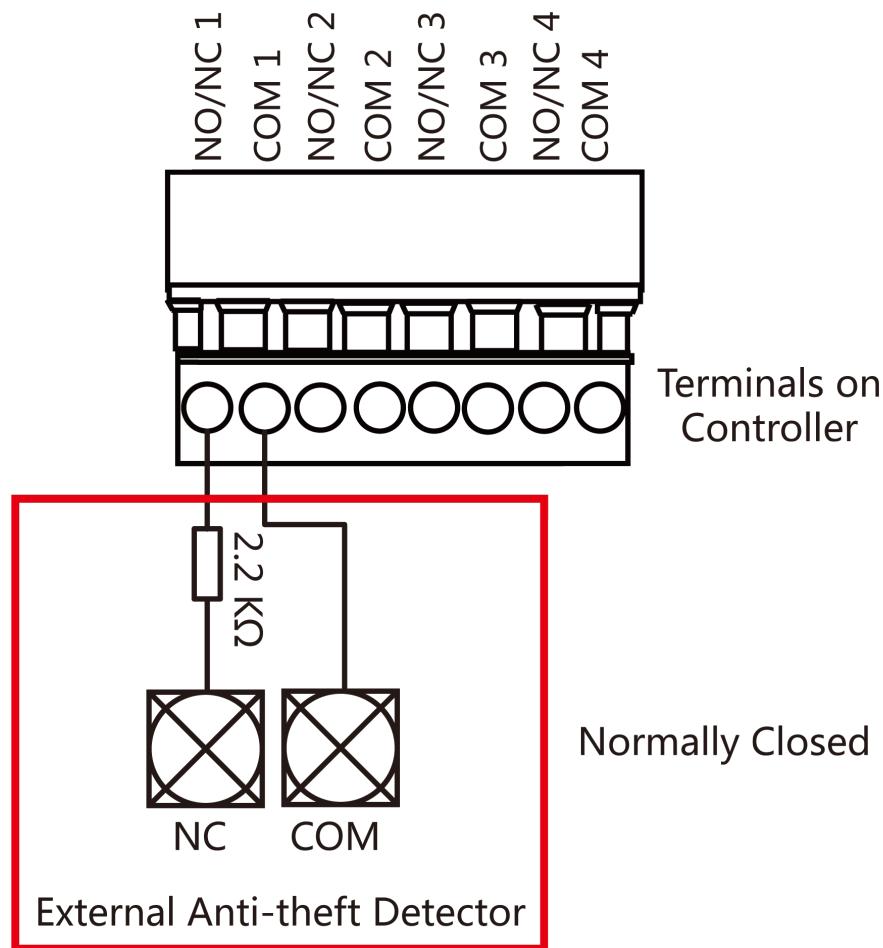


Figure 5-13 Normally Closed Wiring

## 5.11 Fire Alarm Module Wiring

You can view the fire alarm module wiring diagram.

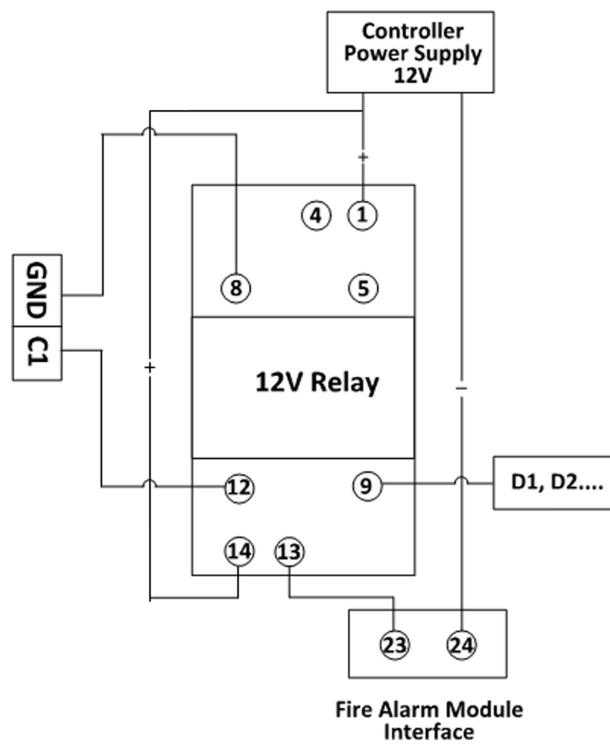


Figure 5-14 Fire Alarm Module Wiring

## Chapter 6 Settings

### 6.1 Initialization (Option 1)

You can initialize the device with the jumper cap.

#### Steps

1. Remove the jumper cap from the Normal terminal.
2. Cut off the power and restart the access controller.  
The controller buzzer buzzes a long beep.
3. When the beep stopped, plug the jumper cap back to Normal.
4. Cut off the power and restart the access controller.

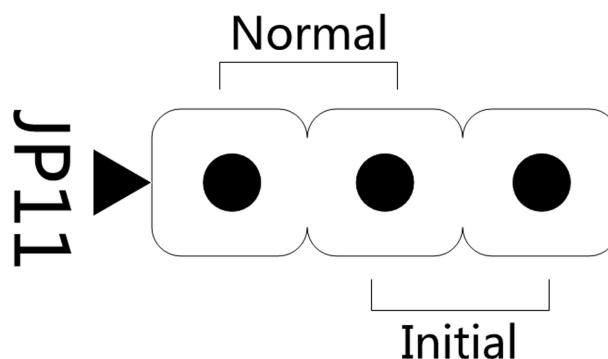


Figure 6-1 Initialization Jumper



The device initialization will restore all the parameters to the default settings and all the device event logs will be deleted.

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### 6.2 Initialization (Option 2)

You can initialize the device with the jumper cap.

#### Steps

1. Move the jumper cap from Normal to Initial.  
The controller buzzer buzzes a long beep.
2. Cut off the power and restart the access controller.
3. When the beep stopped, move the jumper cap back to Normal.
4. Cut off the power and restart the access controller.

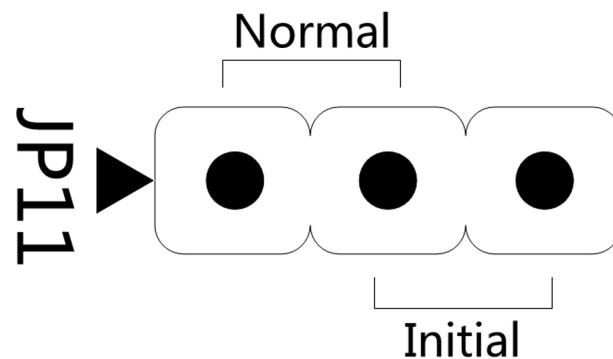


Figure 6-2 Initialization Jumper



**Note**  
The device initialization will restore all the parameters to the default settings and all the device event logs will be deleted.

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## 6.3 Relay Output NO/NC Settings

### 6.3.1 Lock Relay Output Settings

You can view the NO/NC status of the lock relay.

#### Lock Relay NO Status

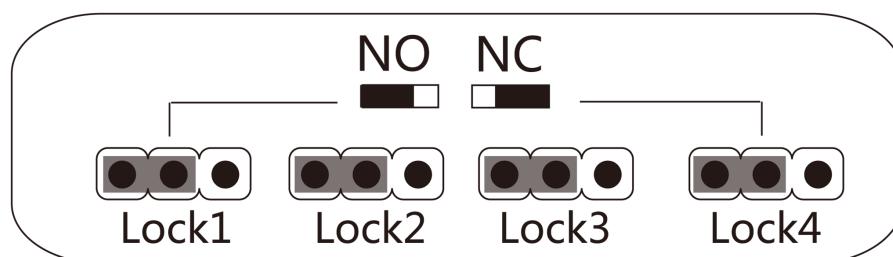


Figure 6-3 NO Status

### Lock Relay NC Status

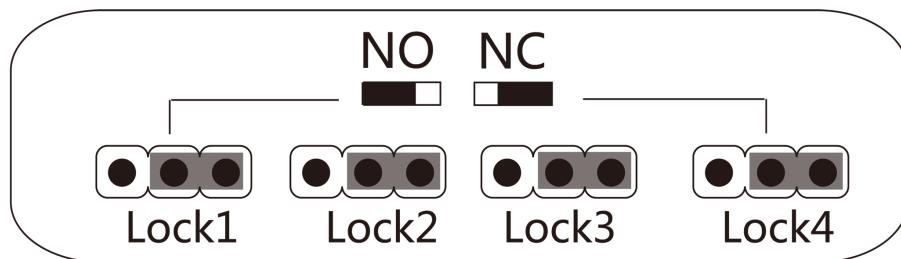


Figure 6-4 NC Status

### 6.3.2 Alarm Relay Output Settings

You can view the NO/NC status of the alarm relay.

#### Alarm Relay Output NO Status

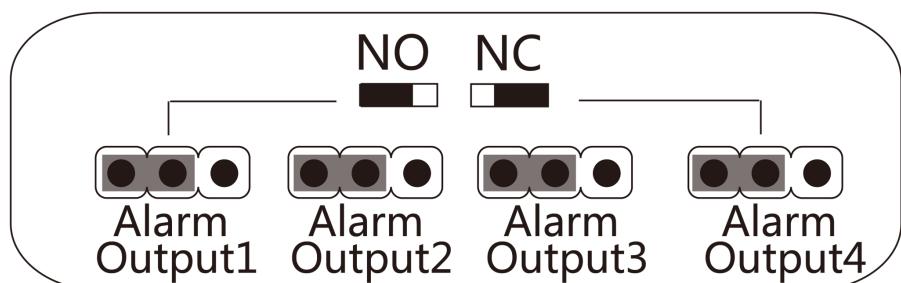


Figure 6-5 NO Status

#### Alarm Relay Output NC Status

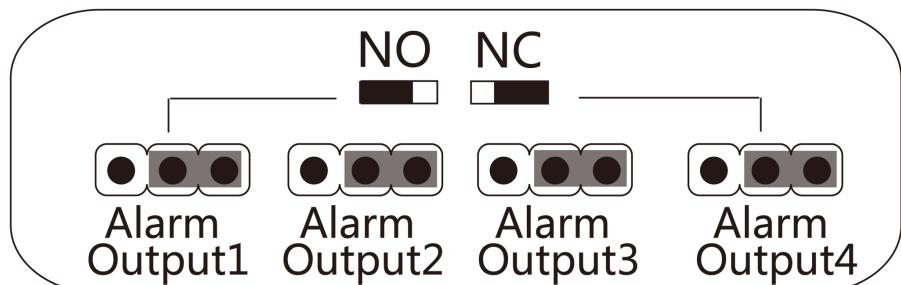


Figure 6-6 NC Status

## Access Controller User Manual

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You should activate the device before the first login. After powering on the device, the system will switch to Device Activation page.

Activation via the device, SADP tool and the client software are supported.

The default values of the device are as follows:

- The default IP address: 192.0.0.64
- The default port No.: 8000
- The default user name: admin

## 7.1 Activate Device via Tams9.5 Software

For some devices, you are required to create the password to activate them before they can be added to the software and work properly.

### Steps

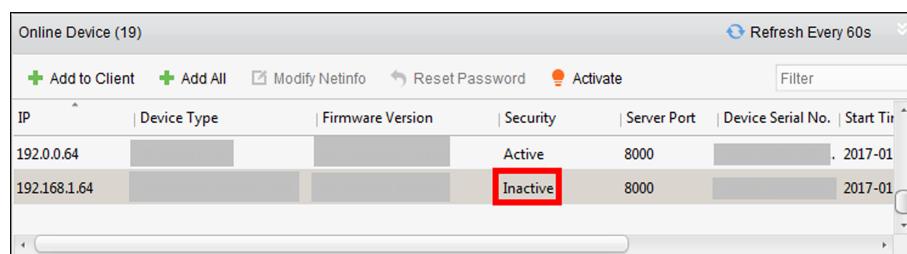
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This function should be supported by the device.

---

1. Enter the Device Management page.
2. Check the device status (shown on **Security** column) and select an inactive device on the **Device for Management** or **Online Device** area.



Online Device (19)							Refresh Every 60s
IP	Device Type	Firmware Version	Security	Server Port	Device Serial No.	Start Time	Filter
192.0.0.64	[redacted]	[redacted]	Active	8000	[redacted]	2017-01	
192.168.1.64	[redacted]	[redacted]	Inactive	8000	[redacted]	2017-01	

**Figure 7-1 Online Device**

3. Click **Activate** to open the Activation dialog.
4. Create a password in the password field, and confirm the password.



### Caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

- 
5. Click **OK** to activate the device.

### Result

A "The device is activated." window pops up when the password is set successfully.

## Tams 9.5AC Software Configuration

### 8.1 Operation on Tams 9.5AC Software

The Access Control module provides multiple functionalities, including person and card management, permission configuration, and other advanced functions.



For the user with access control module permissions, the user can enter the Access Control module and configure the access control settings. For setting the user permission of Access Control module, refer to *Account Management* in *User Manual of Tams9.5 Software* .

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