

## 1. Product Introduction, Features & Technical Parameters

1.1 Introduction:  
PA240402 controls single door, can drive electric lock directly and connect external exit button. It can be used as Reader and connect to other controllers. User capacity is 1000. All function set and user management can be done by infrared remote control or Master's fingerprint. Adopt leading fingerprint identification technology, secure and reliable. It is ideal choice for different places with high security requirement. Widely used for office, villa, household etc.

### 1.2 Features:

- > Metal shell, Simple & fashion design, using biometric fingerprint recognition to open the door, secure and reliable.
- > Adopt the dark background fingerprint imaging technique, with stronger adaptability.
- > Fingerprints capacity:1000, suitable for office, villa, household etc.
- > Multi-usage, all kinds of functions integrated to one, controller & reader, operation is very simple.
- > Touch the luminous button unlock the function of fingerprint; manually or automatically enter a dormant state.
- > Infrared remote control and Master's fingerprint to add or delete users
- > Wiring is very simple, can be done by user without professional knowledge, it can connect to all kinds of electric lock
- > Effective fingerprint can be transformed into machine number and ID number, and output virtual card number .
- > It can be used with all kinds of controller.
- > It can be used with all kinds of electric lock, no need to change external wiring
- > Anti tamper alarm function

### 1.3 Technical Parameters:

- > Input voltage: DC12~24V
- > Idle current: <10mA
- > Active Current: <80mA
- > Resolution: 450 DPI
- > Fingerprint press time: <1S
- > Fingerprint identification time: <1S
- > FAR: <0.000256%
- > FRR: <0.0198%
- > Output format: Wiegand26
- > Dimensions: 120mm×72mm×25mm
- > Operating Temperature: -20~50° C
- > Operating Humidity: 20~95%(non-condensing)

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## 2. Installation and Wiring Diagram

- 2.1.1 Following the figure 1 and draw the installation and cable hole on the wall.
- 2.1.2 Insert rubber bungs to installation hole,fix the back shell of controller on the wall.
- 2.1.3 Pull cable through the cable hole and back shell, and connect them to the binding post on PCB board of controller.
- 2.1.4 Fasten the front cover on the back shell with anti-vandal screw as in Figure 1.

- Note: 1. After connected all the wires, please double check whether the connection is correct before power on.  
2. The device is adopted optical fingerprint technology, so can't be installed in direct sunlight, otherwise the fingerprint identification will be abnormal.

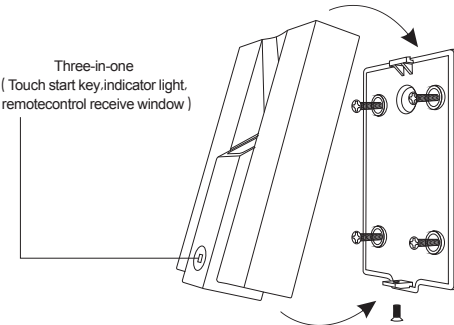


Figure 1 Installation diagram

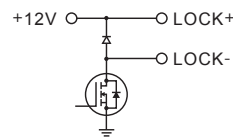


Figure 2 Principle of Electric Lock

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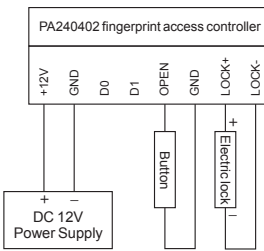


Figure 3 Access controller wiring diagram (common DC power supply)

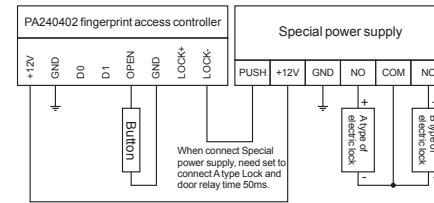


Figure 4 Access controller wiring diagram (Special power supply)

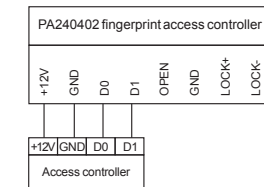


Figure 5 Reader mode wiring diagram

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## 3. Master Setting By Infrared Remote Control

Note that all the following programming should be under Master programming mode.  
When master's PIN is wrong and the time is over 5s before you enter PIN again, it will return to standby mode. After enter right master's PIN, it will also return to standby mode if there is no valid operation in 30 seconds. Press '#' to confirm the input number, return to previous menu by press '\*', the indicator light will indicate the operation mode.

To enter the Master programming mode

Red	Red Flash	Functions	Remark
*	6-8 digits Master's PIN #	To enter the programming mode	Factory default 888888

Access controller setting

Red Flash	Orange	Functions	Remark
0	6-8 digits new PIN, #, repeat 6-8 digits new PIN, #	To change the Master's PIN	
1	1(ID)#, Press a Master's fingerprint twice	Add 1 Master add fingerprint	Rotate Operation②
	2(ID)#, Press another Master's fingerprint twice	Add 1 Master delete fingerprint	
2	Press user's fingerprint twice	Add 1 user's fingerprint①	Rotate Operation
	3-1000(ID)#, Press user's fingerprint twice		
2	Press user's fingerprint once	Delete 1 user's fingerprint	Rotate Operation
	1-1000(ID)#	Delete 1 user's fingerprint	
2	0000,# (Note: This is a dangerous option, so use with care)	Delete all fingerprint	
3	0-255, #	Facility code	Factory default 0
4	0, #	To set door relay time 50mS	Factory default 5
	1-99, #	To set door relay time 1-99S	
	99, #	Toggle mode	
5	0, #	Connect to A type of lock③	Factory default 1
	1, #	Connect to B type of lock④	

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### Note :

- ① ID No. 1: Master add fingerprint, used to add user fingerprint.
- ID No. 2: Master delete fingerprint, used to delete user fingerprint. User fingerprint ID No. is 3-1000.
- ② After a user fingerprint is added, you can continue to add user fingerprint without exiting current setting mode and start over.
- ③ A type of lock refers to those lock that normally under standby status, there is no current for lock, when there is current the door will open, such as electrified lock, electric strike.
- ④ B type of lock refers to those lock that normally under standby status, there is current for lock, when there is no current the door will open, such as electromagnetic lock, electric drop bolt.

## 4. Master Fingerprint Operation

- 4.1 To add user fingerprint  
Press Master Add Fingerprint once, Press 1<sup>st</sup> user fingerprint twice, Press 2<sup>nd</sup> user fingerprint twice, ... Press Master Add Fingerprint once
- 4.2 To delete user fingerprint  
Press Master Delete Fingerprint once, Press 1<sup>st</sup> user fingerprint once, Press 2<sup>nd</sup> user fingerprint once, ... Press Master Delete Fingerprint once

## 5. User Operation

When the light of fingerprint sensor is on, press a valid fingerprint once, the electronic lock will unlock.  
When the device is in standby, light of fingerprint sensor will be off, touch the luminous button, the light on, again, the light off.  
From the last time fingerprint operation on, if there is no operation in 15 seconds, the light of fingerprint sensor will be off automatically.

## 6. Alarm

- 6.1 Anti-vandal alarm  
When the device is disassembled illegally, the built-in buzzer will sound alarm for 1 minute.
- 6.2 Remove the alarm  
Press valid fingerprint or Master's PIN can remove alarm, if there is no operation, the alarm will stop automatically after 1 minute.

## 7. Reset To Factory Default

PA240402 reset to factory default need connect with exit button, power off, press exit button and power on, and the LED turns into ORANGE in 1s, release button until hear "beep beep", and then you hear "bee-eep" and LED turns into RED, means reset to factory default successfully, but it won't delete all user information.

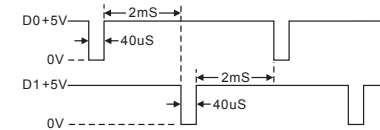
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## 8. Sound And Light Indication

Operation	Status	Color of LED	Buzzer
Stand by		Red	
Pressing keypad			Beep
Unlocking		Green	Bee-eep
Successful		Green	Bee-eep
Fail			Beep Beep Beep
Enter programming mode		RED flash slow	
Enter Setting		Orange	
Alarming		Red flash quick	Alarm sound

## 9. Use As Fingerprint Reader

When it used as a fingerprint reader, you need to add users' fingerprints in the device and set door relay time and facility code in advance. When press a user fingerprint, device will output a wiegand 26 format data. It is a virtual card number which consists of facility code (0-255) and fingerprint ID (3-1000) .  
For example: facility code is set 255, fingerprint ID is 3, then output a virtual card number 255, 00003. It's convenient to manage fingerprint.  
Fingerprint output in Wiegand format, output data is transmitted by the Low Level of D0 & D1 wire:  
D0: Low level means 0, green wire  
D1: Low level means 1, white wire  
The Pulse width for low level is 40uS; and the time interval is 2mS.



## 10. Packing List

Name	Model No	Qty.	Remark
Access controller	PA240402	1	
Infrared remote control		1	
User manual	PA240402	1	
Special screwdriver		1	Special tool of security screw
Rubber Bung		4	Used for fixing installation
Self-tapping Screw	Φ4mm×25mm	4	Used for fixing installation

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PA240402

## PA240402 Fingerprint Standalone Access Controller

User Manual