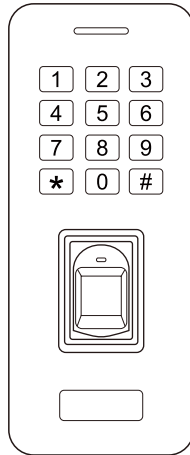




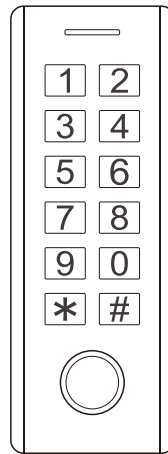
S4A Industrial Co., Limited



SF5 SF6 - Waterproof Fingerprint & RFID Access Control



SF5



SF6

User Manual

INTRODUCTION

The device is a metal case standalone fingerprint access control with keypad. IP66 waterproof version is very suitable for outdoor use.

The device supports up to 100 fingerprint users and 900 PIN users, it can be easily operated through the keypad and master fingerprint.

The device supports fingerprint access and PIN access; with external alarm, door contact, exit button.

Two Versions Optional:

- 1) Indoor, Non-waterproof
- 2) Outdoor, Waterproof (IP66)

Main Features:

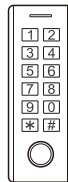
- > Waterproof, conforms to IP66 (Waterproof Version)
- > Metal case, anti-vandal
- > One programming relay output
- > Multi-color LED Status Display
- > 1000 Users (100Fingerprint Users + 890 PIN Users + 10 Visitor Users)
- > Latch Mode to hold door or gate open
- > Integrated alarm & buzzer output

Specifications:

User Capacity Fingerprint Users PIN Users Visitor Users	1000 100 890 10
Operating Voltage Idle Current Active Current	12V DC ±10% ≤30mA ≤100mA
Fingerprint Reader Resolution Identification Time FAR FRR	Capacitive Fingerprint Module 500DPI ≤1S ≤0.01% ≤0.1%
PIN Length	4~6 digits
Wiring Connections	Relay Output, Exit Button, DOTL, Alarm (Non-waterproof version without DOTL and Alarm)

Relay Adjustable Relay Output Time Adjustable Alarm Output Time Lock Output Load Alarm Output Load	One (NO, NC, Common) 0-99 Seconds (default: 5 seconds) 0-3 Minutes (default: 1 minute) 2 Amp Maximum 5 Amp Maximum
Environment Operating Temperature Operating Humidity	Meets IP66 (Waterproof Version) -30°C~60°C (-22°F~140°F) - Default -40°C~60°C (-40°F~140°F) - Optional 20%RH-90%RH
Physical Surface Finish Dimensions Waterproof Version Unit Weight Shipping Weight Non-waterproof Version Unit Weight Shipping Weight	Zinc-alloy Enclosure Powder Coat L135×W55×D25(Wide) L130×W50×D25(Slim) 232g(Wide) 207g(Slim) 269g(Wide) 244g(Slim) 177g(Wide) 136g(Slim) 214g(Wide) 189g(Slim)

Carton Inventory



Diode 1N4004 (For relay circuit protection)



Wall Anchors

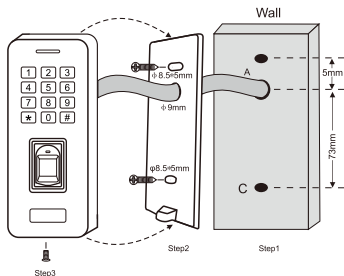


Self Tapping Screws: Φ4*25mm



Screw Driver

INSTALLATION



Wiring

Wire Color	Function	Notes
Basic Stand Alone Wiring		
Red	12V DC	12V DC Regulated Power Input
Black	GND	Ground
Blue	Relay NO	Normally Open Relay Output (Install diode provided)
White	Relay Common	Common Connection for Relay Output
Green	Relay NC	Normally Closed Relay Output (Install diode provided)
Yellow	OPEN	Request to Exit (REX) Input
Advanced Input and Output Features		
Grey	Alarm Output	Negative contact for Alarm
Brown	Contact Input	Door/Gate Contact Input (Normally Closed)

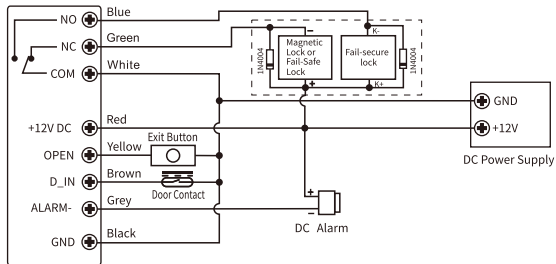
(Non-waterproof version without Alarm Output and Contact Input)

Sound and Light Indication

Operation Status	LED	Finger Sensor Light	Buzzer
Stand by	Red light bright	Off	-
Enter into programming mode	Red light shines	Off	One beep
In the programming mode	Orange light bright	-	One beep
Operation error	-	-	Three beeps
Exit from the programming mode	Red light bright	-	One beep
Open lock	Green light bright	Off	One beep
Alarm	Red light shines quickly	Off	Beeps

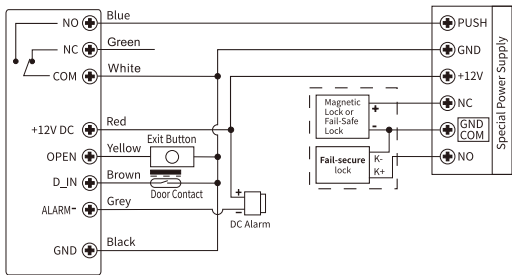
Connection Diagram

Common Power Supply



Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4004 is included in the packing)
(Non-waterproof version without Alarm Output and Contact Input)

Access Control Power Supply



(Non-waterproof version without Alarm Output and Contact Input)

PROGRAMMING

GENERAL PROGRAMMING INFORMATION

>**User ID Number:** Assign a user ID number in order to keep track of the users of access fingerprints, or PIN. The user ID number can be any number from 1~1000. **IMPORTANT:** User IDs do not have to be proceeded with any leading zeros. Recording of User ID is critical. Modifications to the user require the User ID be available.

Remark: Fingerprint User ID: 0~98
 Master Fingerprint User ID: 99
 PIN User ID: 100~989
 Visitor User ID: 990~999

>**PIN:** Any 4~6 digits number from 0000 ~ 999999.

Set Master Code

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) # (Factory default is 123456)
2. Update Master Code	0 (New Master Code) # (Repeat New Master Code) # (Master code is any 6 digits)
3. Exit Program Mode	*

Add Master Fingerprint by Specific ID (ID Number: 99)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Master Fingerprint	1 (99) # (Fingerprint)(Repeat Fingerprint)(Repeat Fingerprint again)
3. Exit	*

Add Fingerprint Users by Auto ID

(Allows the device to assign Fingerprint to next available User ID, ID number is 0~98)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Fingerprint	1 (Fingerprint) (Repeat Fingerprint) (Repeat Fingerprint again) Fingerprints can be added continuously
3. Exit	*

Add Fingerprint Users by Specific ID

(Allows Master to define a specific ID to the fingerprint, ID number is 0~98)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Fingerprint	1 (User ID) # (Fingerprint) (Repeat Fingerprint) (Repeat Fingerprint again) Fingerprints can be added continuously
3. Exit	*

Add PIN Users by Auto ID

(Allows Master to define a specific ID to the PIN, ID number is 100~989)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add PIN :	1 (PIN) #
3. Exit	*

Add PIN Users by Specified ID

(Allows Master to define a specific ID to the PIN, ID number is 100~989)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add PIN : by user ID	1 (User ID) # (PIN) # PIN can be any 4~6 digits
3. Exit	*

Delete Users

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Delete Fingerprint: by Fingerprint OR	2 (Input Fingerprint) Fingerprints can be deleted continuously
2. Delete PIN or Fingerprint : by ID number OR 2. Delete PIN : by PIN OR	2 (User ID) # 2 (PIN) #
2. Delete ALL Users	2 (0000) # (Master Fingerprint User will be Deleted when Delete All Users)
3. Exit	*

Master Fingerprints Usage

Using Master Fingerprints to add and delete users	
Add PIN or Fingerprint User	1. Input (Master Fingerprint) 2. Input (User ID) # (PIN) # or Fingerprint Three Times (Repeat Step 2 for additional users) 3. Input (Master Fingerprint) Again
Delete PIN or Fingerprint User	1. Input (Master Fingerprint Twice within 5s) 2. Input (User ID) # or Fingerprint Once (Repeat Step 2 for additional users) 3. Input (Master Fingerprint) Again

Visitor User Setting (For PIN user only)

There are 10 groups Visitor PIN available, the users can be specified up to 10 times of usage, after a certain number of times, i.e. 5 times, the PIN become invalid automatically.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add Visitor PIN User	8 (0~9 #) (User ID #) (PIN #) PIN is any 4~6 digits number
2. Delete Visitor User by ID Number OR 2. Delete Visitor User by PIN	2 (User ID #) 2 (PIN) #
3 Exit	*
Note: Number of time is 0~9, 0=10 times User ID number must be any number between 990~999 Visitor PIN must be unique, should be distinguished from common PIN	

Set Access Mode

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. PIN or Fingerprint Access OR 2. Fingerprint Only OR 2. PIN Only	3 0 # (Factory Default) 3 1 # 3 2 #
3. Exit	*

Set Relay Configuration

The relay configuration sets the behavior of the output relay on activation.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Pulse Mode OR 2. Latch Mode	4 (1-99) # (Factory default) The relay time is 1-99 seconds (1 is 100 ms) (Factory default: 5 seconds) 40 # Sets the relay to ON/OFF latch mode
3. Exit	*

Set Alarm

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Set alarm time	5 (0-3) # Factory default is 1 minute
3. Exit	*

Set Strike-out Alarm - For Waterproof Version

The strike-out alarm will engage after 10 failed PIN/Fingerprint attempts, factory default is OFF, it can be set to deny access for 10 minutes or enable alarm after engaging.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Strike-out OFF OR 2. Strike-out ON	6 0 # (factory default) 6 1 # Access will be denied for 10 minutes
OR 2. Strike-out ON	6 2 # Enable alarm, need enter Valid PIN/Fingerprint to silence
3. Exit	*

Set Door Open Detection - For Waterproof Version

Door Open Too Long (DOTL) Detection

When use with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door. The beep can be stopped by closing the door, master users or valid users, or else, it will continue to beep the same time with the alarm time set.

Door Forced Open Detection

When use with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened by force, the inside buzzer and external alarm (if there is) will both operate, they can be stopped by master users or valid users, or else, it will continue to sound the same time with the alarm time set.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Disable Door Open Detection OR 2. Enable Door Open Detection	6 3 # (factory default) 6 4 #
3. Exit	*

OTHERS

Users Operation & Reset to Factory Default

> **Open the door** : Input valid fingerprint or input valid PIN

> **Remove Alarm** :

Input valid PIN or input valid fingerprint or input Master Code # or Master Fingerprint

> **To reset to factory default** :

1. Power off
2. Press the exit button, hold it and power on
3. There will be two beeps, still hold it at least 10s, then will have one long beep.
The device reset to factory default successfully.

Remark: Reset to factory default, the users information is still retained.