S4A H3 Access Controller Reader With Doorbell User Manual

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102 Red light bright
103 Enter into programming mode
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105 One beep
106 In the programming mode
107 Orange light bright
108 One beep
109 Operation error
110 Three beeps
111 Exit from the Programming mode
112 Red light bright
113 One beep
114 Open lock
115 Green light bright
116 One beep
117 Alarm
118 Red light Shines quickly
119 Beeps
120 Basic Configure
121 Enter and Exit Program Mode
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Keystroke Combination
Enter Program Mode
* (Master Code) # (Factory default is 123456
Exit Program Mode
*
Set Master Code
Programming Step
Keystroke Combination
1. Enter Program Mode
* (Master Code) #
2. Update Master Code
0 (New Master Code) # (Repeat New Master Code) #(Master code is any 6 digits)
3. Exit Program Mode
*
Set the Working Mode
Notes: The device has 3 working modes: Standalone Mode, Controller Mode, Wiegand Reader Mode, choose the mode you use. (Factory default is Standalone Mode / Controller Mode)
Programming Step
Keystroke Combination
1. Enter Program Mode
* (Master Code) #
Standalone/Controller Mode OR 2. Wiegand Reader Mode
77 # (Factory default) 78#
3. Exit
*
STANDALONE MODE
The device can work as Standalone Access Control for single door. (Factory default mode) — 77#
Connection Diagram
Common Power Supply
Attention:
Install a 1N4004 or equivalent diode is needed when use a common power supply, or the keypad might be damaged. (1N4004 is included in the packing)
Access Control Power Supply
Programming
Programming will be varied depending on access configuration. Follow the instructions according to your access configuration.
Notes:
User ID number: Assign a user ID to the access card/ PIN in order to track it.
The Common User ID: 0~987
Panic User ID: 988~989
Visitor User ID: 990~999
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.
Proximity Card: Proximity Card: EM card/ EM+ Mifare cards
PIN: Can be any 4-6 digits except 8888 which is reserved. Add Common Users
PIN/ Card user ID: 0~987; PIN length: 4-6 digits except 8888
Add Common Users
PIN/ Card user ID: 0~987; PIN length: 4~6 digits except 8888
Programming Step
Keystroke Combination
1. Enter Program Mode
* (Master Code) #
Add Card User
Using Auto ID(Allows the device to assign Card to next available User ID number)
OR2. Select Specific ID(Allows Master to define a specific User ID to associate the card to)2.
Add Card: Block Enrollment (Allows Master to add up to 988 cards to the Reader in a single step) Takes minutes to program.
Card Number) # The cards can be added continuously. (User ID) # (Read Card) / (Input 8/10/17 Digits Card Number) #1 (User ID) # (Card Quantity) # (The First Card 8/10/17 Digits Number) # Cards' number must be consecutive; Card quantity= numbers of cards to be enrolled
Add PIN User

(Allows the device to assign PIN to next available User ID number)OR2. Select Specific ID(Allows manager to define a specific User ID to associate the PIN to)
1 (PIN) #The PINs can be added continuously1 (User ID) # (PIN) #
. Exit
*
Tips for PIN Security (Only valid for 6 digits PIN):
For higher security we allow you to hide your correct PIN with other numbers up to a max of 10 digits.
Example PIN: 123434 You could use **(123434) ** or ** (123434) (“*” can be any numbers from 0~9)
Add Panic Users
(User ID number is 988, 989; PIN length: 4~6 digits except 8888)
Programming Step
Keystroke Combination
1. Enter Program Mode
* (Master Code) #
2. Add CardOR2. Add PIN1
1 (User ID) # (Read Card/Input 8/10 /17 Digits Card number) #1 (User ID) # (PIN) #
3. Exit
*
Add Visitor Users
(User ID number is 990~999; PIN length: 4~6 digits except 8888) There are 10 groups Visitor PIN/card available, the users can be specified up to 10 times of usage, after a certain number of times, i.e. 5 times, the PIN/card become invalid automatically.
Programming Step
Keystroke Combination
1. Enter Program Mode
*(Master Code) #
2. Add CardOR2. Add PIN
1 (User ID) # (0~9) # (Read Card)/ (Input 8/10/17 Digits Card Number) #1 (User ID) # (0~9) # (PIN) #
3. Exit
*
Change PIN Users (PIN length: 4-6 digits except 8888)
(Note: WiFi versions don’t support change PIN)
Programming Step
Keystroke Combination
Note: Below is done outside programming mode, users can undertake this
Change PIN
* (User ID) # (Old PIN) # (New PIN) # (Repeat New PIN) #
Change PIN of Card + PIN access mode (There will auto allocate PIN (8888) to cards when adding
Read Card) (Old PIN) # (New PIN) # (Repeat New PIN) #
Delete Users
Programming Step
Keystroke Combination*
1. Enter Program Mode
* (Master Code) #
OR2. Delete User – By ID numberOR2. Delete User – By Card numberOR2. Delete ALL Users
2 (User ID)#2 (input 8/10/17 Digits Card Number) #2 (Master Code) #
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 ModeOR2. Toggle Mode
3 (1~99) # (factory default) The relay time is 1-99 seconds. (Default is 5 seconds)30#
3. Exit
*
Set Access Mode
For Multi user access mode, the interval time of reading can not exceed 5 seconds, or else, the

233 For Multi user access mode, the interval time of reading can not exceed 5 seconds, or else, the device will exit to standby automatically.
234 Programming Step
235 Keystroke Combination
236 1. Enter Program Mode
237 * (Master Code) #
238 2 Card AccessOR2 PIN AccessOR2 Card + PIN AccessOR2 Card or PIN AccessOR2 Multi User Access
239 * (Master Code) #40#41#42 # (WiFi versions don’t support this function)43 # (factory default)43 (2~9) # (Only after 2-9 valid users, the door can be opened)
240 3. Exit
241 *
242 Set Strike-out Alarm
243 The strike-out alarm will engage after 10 failed entry attempts (Factory is OFF). It can be set to deny access for 10 minutes after engaging or disengage only after entering a valid card/PIN or Master code / card.
244 Simplified Instruction
245 Function Description
246 Operation
247 Enter the Programming Mode
248 * – Master Code – #then you can do the programming (123456 is the factory default master code)
249 Change the Master Code
250 0 – New Code -# – Repeat the New Code – #(code: 6 digits)
251 Add Card User
252 1 – Read Card – #(can add cards continuously)
253 Add PIN User
254 1 – PIN -#(The PIN is any 4-6 digits except 8888 which is reserved)
255 Delete User
256 2 – Read Card – #2 – PIN – #
257 Exit from the Programming Mode
258 *
259 How to release the door
260 Card User
261 Read Card
262 PIN User
263 Input PIN #
264 Programming Step
265 Keystroke Combination
266 1. Enter Program Mode
267 * (Master Code) #
268 2. Strike-Out OFF OR2. Strike-Out ONOR2. Strike-Out ON (Alarm)Set Alarm Time
269 6 0 # (factory default)61 # Access will be denied for 10 minutes (Exit button is still workable)6 2 #5 (0 – 3) # (factory default is 1 minute) Enter Master Code # or Master Card or valid user card/ PIN to silence
270 3. Exit
271 *
272 Set Door Open Detection
273 Door Open Too Long (DOTL) Detection
274 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.
275 Door Forced Open Detection
276 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.
277 Programming Step
278 Keystroke Combination
279 1. Enter Program Mode
280 * (Master Code) #
281 2. Disable Door Open Detection OR2. Enable Door Open DetectionSet Alarm Time
282 6 3 # (factory default)6 4 #5 (0 — 3) # (factory default is 1 minute)
283 3. Exit

284 *
285 The function of Set Alarm Time also apply for anti-tamper alarm
286 Set Audible and Visual Response
287 Programming Step
288 Keystroke Combination
289 Enter Program Mode
290 * (Master Code) #
291 2. Disable Sound Enable SoundOR2. LED Always OFFLED Always ONOR2. Keypad Backlit Always OFFKeypad Backlit Always ONKeypad Backlit Automatic OFF
292 70#71# (factory default)72#73 # (factory default)74#75#76 # (factory default)Automatic OFF after 20 seconds, it will go ON by pressing any key (this key isn't taken into consideration)
293 3. Exit
294 *
295 Master Card Usage
296 Using Master Card to add and delete users
297 Add Card/ PIN Users
298 1. Input (Master Card)
299 2. Input (Card) or (PIN #)
300 Repeat step 2 for additional users
301 3. Input (Master Card) again
302 Delete Card/ PIN Users
303 1. Input (Master Card Twice within 5s)2. Input (Card) or (PIN #) Repeat step 2 for additional users3. Input (Master Card) again
304 Users Operation & Reset to Factory Default
305 Open the door: Read valid user card or input valid user PIN #
306 Remove Alarm: Enter Master Code # or Master Card or valid user card / PIN
307 To reset to factory default & Add Master Card: Power off, press the Exit Button, hold it and power on, there will be two beeps, then release the exit button, the LED light turns into yellow, then read any 125KHz EM card/ 13.56MHz Mifare card, the LED will turn into red, means reset to factory default successfully. Of the card reading, it is the Master Card.
308 Remarks
309 If no Master Card added, must press the Exit Button for at least 5 seconds before release. (this will make the previous registered Master Card invalid)
310 Reset to factory default, the user's information is still retained.
311 CONTROLLER MODE
312 The device can work as Controller, connected with the external Wiegand reader. (Factory default mode) — 77 #
313 Connection Diagram 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)
314 Set Wiegand Input Formats
315 Please set the Wiegand input formats according to the Wiegand output format of the external Reader.
316 Programming Step
317 Keystroke Combination
318 1. Enter Program Mode
319 * (Master Code) #
320 2. Wiegand Input Bit
321 For EM Card : 8 (26- 44) #(factory default is 26bits)For Mifare Card: 8 0 (26-44, 56, 58) #(factory default is 34bits)
322 3. Disable Parity BitEnable Parity Bit
323 8 0 #81 # (factory default)
324 4. Exit
325 *
326 Note: For connecting Wiegand readers with 32, 40, 56 bits output, need disable parity bits.
327 Programming
328 Basic Programming is the same as Standalone Mode
329 There are some exceptions for your attention:
330 The device Connected with External Card Reader
331 If EM/Mifare card reader: users can be added/deleted on either the device or external reader.
332 If HID card reader: users can only be added/deleted on extemal reader.
333 The device Connected with Fingerprint Reader

INTRODUCTION

The device is a single door multifunction standalone access controller or a Wiegand output reader. It uses Atmel MCU assuring stable performance. The operation is very user-friendly, and low-power circuit makes it long service life.The device supports 1,000 users (988 common users + 2 panic users + 10 visitor users), all user data can be transferred from one to another. It supports multi access modes in card access, PIN access, card + PIN access, or multi cards/PINs access. It has extra features including block enrollment, interlock, Wiegand input & output interface…etc.Three Versions Optional: The device with Bluetooth function is optional The device with big user capacity is optional The device with WiFi function is optional

Features

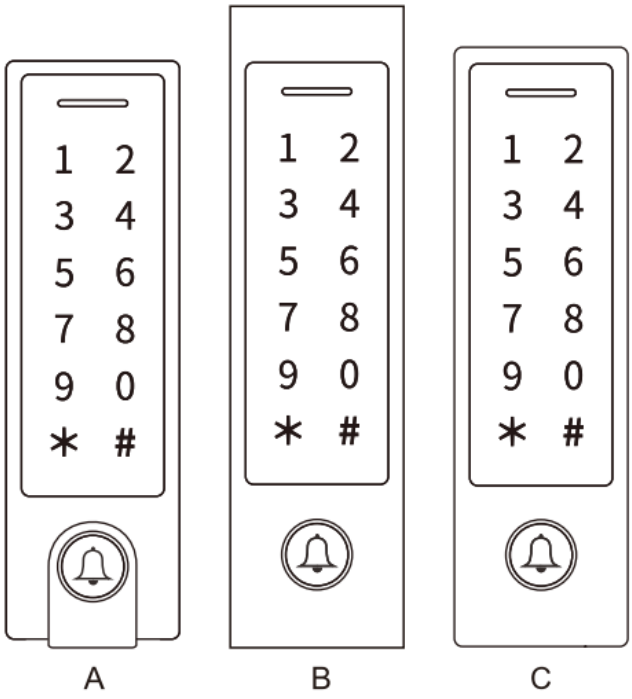
- **Touch key**
- **Metal case, anti-vandal**
- **Waterproof, conforms to IP66**

- **One relay, 1,000 users (988 common + 2 panic + 10 visitor)**
- **PIN length: 4~6 digits**
- **EM card, EM+ Mifare cards optional**
- **EM card: Wiegand 26-44 bits input & output Mifare card: Wiegand 26-44bits, 56bits, 58bits input & output**
- **Can be used as Wiegand reader with LED & buzzer output**
- **Card block enrollment > Tri-color LED status display**
- **Integrated alarm & buzzer output**
- **Pulse mode, Toggle mode**
- **User data can be transferred**
- **2 devices can be interlocked for 2 doors**
- **Built-in light dependent resistor (LDR) for anti tamper > Backlit keypad, can set automatic OFF after 20 seconds**

Specifications

User Capacity Common User Panic UserVisitor User	**1000 9 88210**
Operating Voltage Working Current Idle Current	**12-18V DC<150mA<60mA**
Proximity Card Reader Radio Technolo gyRead Range	**EM / EM + Mifare125KHz/ 125KHz + 13.56MHz 2-6 cm**
PIN Length	**4-6 digits**
Wiring Connections	**Relay Output, Exit Button, Alarm, Door Contact, Wie gand Input, Wiegand Output**
RelayAdjustable Relay Output Time Lock Output Load	**One (NO, NC, Common)0-99 Seconds (5 seconds def ault) 2 Amp Maximum**
Wiegand InterfacePIN Output	**EM card: Wiegand 26-44 bits input & output.Mifare ca rd: Wiegand 26-44bits56bits, 58bits input & output.(F actory default: Wiegand 26bits for EM card, Wiegand 34bits for Mifare card)4 bits, 8 bits(ASCII), 10 digits V irtual Number(Factory Default: 4 bits)**
EnvironmentOperating Temperature Operating Humidity	**Meets IP66-40°C – 60°C (-40°F – 140°F) 0%RH-98%RH**
PhysicalColourDimensionsUnit Weig ht Shipping Weight	**Zinc-Alloy (A/B) ABS(C)Silver & Black (A/B) Black(C)L148 x W43.5 x D22 (mm) –A /C L165 x W44 x D22 (mm)– B330g–A 415g — B 190g — C405g — A 500g — B 280g — C**

Carton Inventory



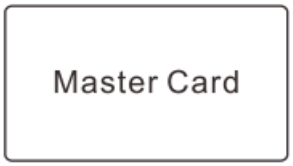
- **Diode IN4004 (For relay circuit protection)**

- **Wall Anchors**

- **Self Tapping Screws: 4*25mm**

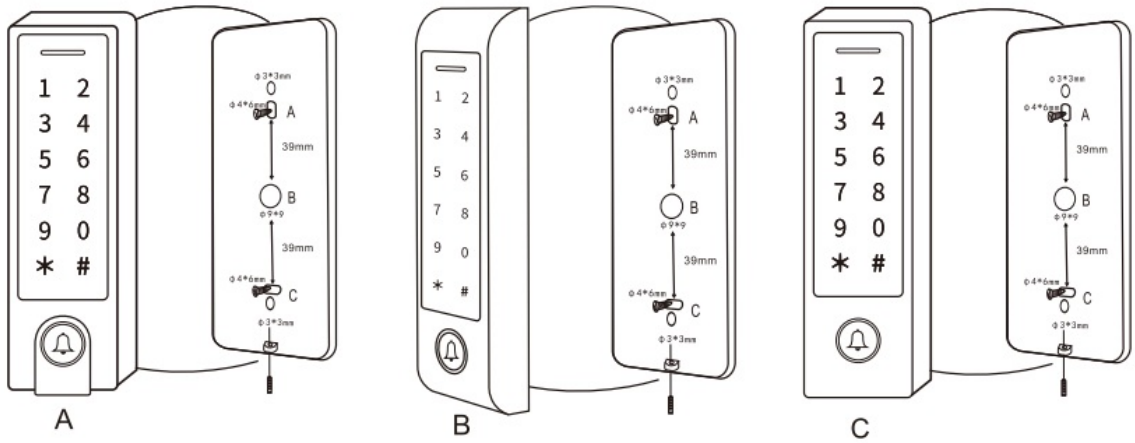
- **Screw Driver**

- **Master Card**



INSTALLATION

- **Remove the back cover from the unit > Drill 2 holes(A,C) on the wall for the screws and one hole for the cable**
- **Knock the supplied rubber bungs to the screw holes(A,C)**
- **Fix the back cover firmly on the wall with 4 flat head screws**
- **Thread the cable through the cable hole(B)**
- **Attach the unit to the back cover**



Wiring

Wire Color	Function	Notes
Basic Standalone Wiring		
Red	**DC +**	**12-18V DC Power Input**
Black	**GND**	**Negative Pole of DC Power Input**
Blue & Black	**Relay NO**	**Normally Open Relay Output (install diode provided)**
White & Black	**Relay Common**	**Common Connection for Relay Output**

Green & Black	**Relay NC**	**Normally Closed Relay Output (Install diode provided)**
Yellow	**OPEN**	**Request to Exit(REX) Input**
Pass-Through Wiring (Wiegand		**Reader or Controller)**
Green	**Data 0**	**Wiegand Output (Pass-through) Data 0**
White	**Data 1**	**Wiegand Output (Pass-through) Data 1**
Advanced Input and Output Features		
Grey	**Alarm Output**	**Negative contact for Alarm**
Brown	**Contact Input**	**Door/Gate Contact Input (Normally Closed)**
Brown & Black	**Doorbell A**	**Contact for Doorbell**
Yellow & Black	**Doorbell B**	**Contact for Doorbell**

Sound and Light Indication

Operation Status	LED	Buzzer
Stand by	Red light bright	
Enter into programming mode	Red light shines	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	One beep
Alarm	Red light Shines quickly	Beeps

Basic Configure

Enter and Exit Program Mode

Programming Step	Keystroke Combination
Enter Program Mode	* (Master Code) # (Factory default is 123456
Exit Program Mode	*

Set Master Code

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

Set the Working Mode

Notes: The device has 3 working modes: Standalone Mode, Controller Mode, Wiegand Reader Mode, choose the mode you use. (Factory default is Standalone Mode / Controller Mode)

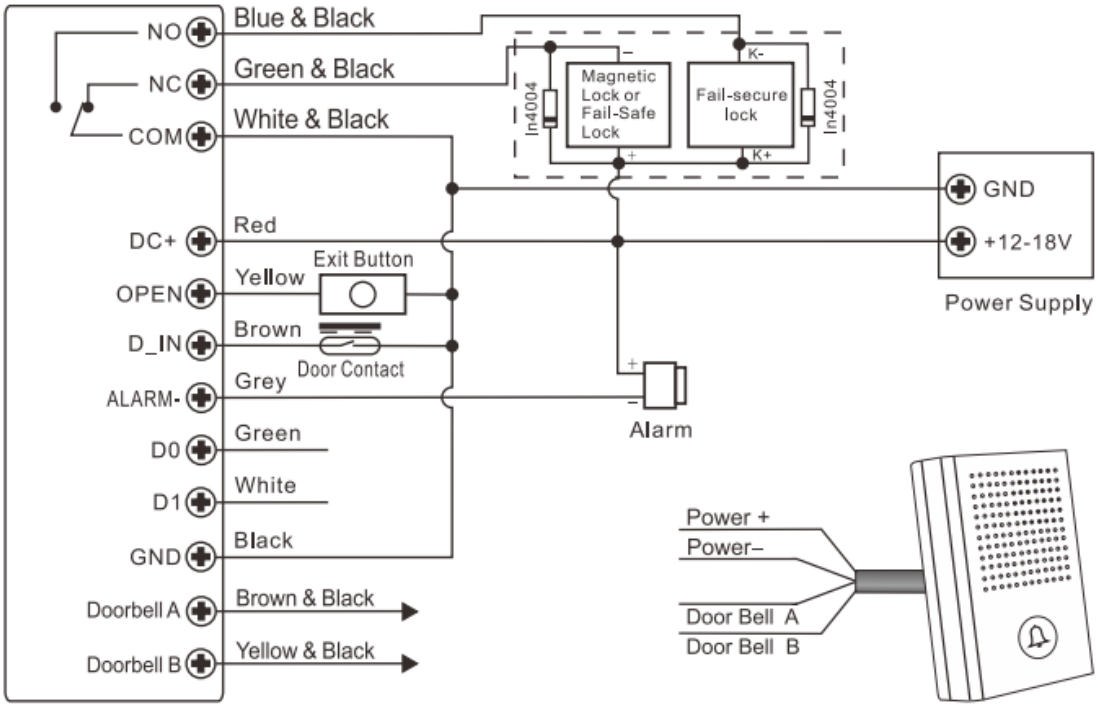
Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
Standalone/Controller Mode OR 2. Wiegand Reader Mode	77 # (Factory default) 78#
3. Exit	*

STANDALONE MODE

The device can work as Standalone Access Control for single door. (Factory default mode) — 77#

Connection Diagram

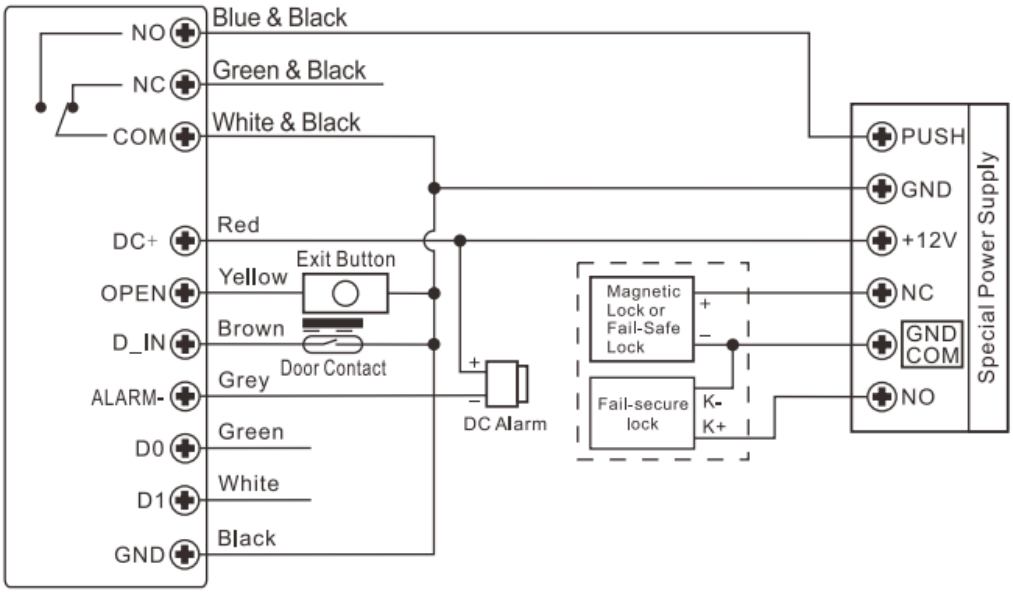
Common Power Supply



Attention:

Install a 1N4004 or equivalent diode is needed when use a common power supply, or the keypad might be damaged. (1N4004 is included in the packing)

Access Control Power Supply



Programming

Programming will be varied depending on access configuration. Follow the instructions according to your access configuration.

Notes:

- **User ID number: Assign a user ID to the access card/ PIN in order to track it.**

The Common User ID: 0~987

Panic User ID: 988~989

Visitor User ID: 990~999

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.

Proximity Card:
Proximity Card: EM card/ EM+ Mifare cards

PIN: Can be any 4-6 digits except 8888 which is reserved. Add Common Users

PIN/ Card user ID: 0~987; PIN length: 4-6 digits except 8888

Add Common Users

PIN/ Card user ID: 0~987; PIN length: 4~6 digits except 8888

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
Add Card User	
Using Auto ID(Allows the device to assign Card to next available User ID number) OR2. Select Specific ID(Allows Master to define a specific User ID to associate the card to)2. Add Card: Block Enrollment (Allows Master to add up to 988 cards to the Reader in a single step) Takes minutes to program.	Card Number) # The cards can be added continuously. (User ID) # (Read Card) / (Input 8/10/17 Digits Card Number) #1 (User ID) # (Card Quantity) # (The First Card 8/10/17 Digits Number) # Cards' number must be consecutive; Card quantity= numbers of cards to be enrolled

Add PIN User	
(Allows the device to assign PIN to next avai lable User ID number)OR2. Select Specific ID (Allows manager to define a specific User ID to associate the PIN to)	1 (PIN) #The PINs can be added continuously 1 (User ID) # (PIN) #
. Exit	*

Tips for PIN Security (Only valid for 6 digits PIN):

For higher security we allow you to hide your correct PIN with other numbers up to a max of 10 digits.

Example PIN: 123434
You could use **(123434) ** or ** (123434)
("*" can be any numbers from 0~9)

Add Panic Users

(User ID number is 988, 989; PIN length: 4~6 digits except 8888)

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Add CardOR2. Add PIN1	1 (User ID) # (Read Card/Input 8/10 /17 Digits Card number) #1 (User ID) # (PIN) #
3. Exit	*

Add Visitor Users

(User ID number is 990~999; PIN length: 4~6 digits except 8888) There are 10 groups Visitor PIN/card available, the users can be specified up to 10 times of usage, after a certain number of times, i.e. 5 times, the PIN/card become invalid automatically.

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Add CardOR2. Add PIN	1 (User ID) # (0~9) # (Read Card)/ (Input 8/10/ 17 Digits Card Number) #1 (User ID) # (0~9) # (PIN) #
3. Exit	*

Change PIN Users (PIN length: 4-6 digits except 8888)

(Note: WiFi versions don't support change PIN)

Programming Step	Keystroke Combination
Note: Below is done outside programming mode, users can undertake this	
Change PIN	* (User ID) # (Old PIN) # (New PIN) # (Repeat New PIN) #
Change PIN of Card + PIN access mode (The re will auto allocate PIN (8888) to cards when adding	Read Card) (Old PIN) # (New PIN) # (Repeat New PIN) #

Delete Users

Programming Step	Keystroke Combination*
1. Enter Program Mode	* (Master Code) #
OR2. Delete User – By ID numberOR2. Delete User – By Card numberOR2. Delete ALL Users	2 (User ID)#2 (input 8/10/17 Digits Card Number) #2 (Master Code) #
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 ModeOR2. Toggle Mode	3 (1~99) # (factory default) The relay time is 1-99 seconds. (Default is 5 seconds)30#
3. Exit	*

Set Access Mode

For Multi user access mode, the interval time of reading can not exceed 5 seconds, or else, the device will exit to standby automatically.

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2 Card AccessOR2 PIN AccessOR2 Card + PIN AccessOR2 Card or PIN AccessOR2 Multi User Access	* (Master Code) #40#41#42 # (WiFi versions don't support this function)43 # (factory default)43 (2~9) #(Only after 2-9 valid users, the door can be opened)
3. Exit	*

Set Strike-out Alarm

The strike-out alarm will engage after 10 failed entry attempts (Factory is OFF). It can be set to deny access for 10 minutes after engaging or disengage only after entering a valid card/PIN or Master code / card.

Simplified Instruction	
Function Description	**Operation**
Enter the Programming Mode	*** – Master Code – #then you can do the programming (123456 is the factory default master code)**
Change the Master Code	**0 – New Code -# – Repeat the New Code – #(code: 6 digits)**
Add Card User	**1 – Read Card – #(can add cards continuously)**
Add PIN User	**1 – PIN -#(The PIN is any 4-6 digits except 8888 which is reserved)**
Delete User	**2 – Read Card – #2 – PIN – #**
Exit from the Programming Mode	*****
How to release the door	
Card User	**Read Card**
PIN User	**Input PIN #**

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Strike-Out OFF OR2. Strike-Out ONOR2. Strike-Out ON (Alarm)Set Alarm Time	6 0 # (factory default)61 # Access will be denied for 10 minutes (Exit button is still workable)6 2 #5 (0 – 3) # (factory default is 1 minute) Enter Master Code # or Master Card or valid user card/ PIN to silence
3. Exit	*

Set Door Open Detection

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 OR2. Enable Door Open DetectionSet Alarm Time	6 3 # (factory default)6 4 #5 (0 — 3) # (factory default is 1 minute)
3. Exit	*

The function of Set Alarm Time also apply for anti-tamper alarm

Set Audible and Visual Response

Programming Step	Keystroke Combination
Enter Program Mode	* (Master Code) #
2. Disable Sound Enable SoundOR2. LED Always OFFLED Always ONOR2. Keypad Backlit Always OFFKeypad Backlit Always ONKeypad Backlit Automatic OFF	70#71# (factory default)72#73 # (factory default)74#75#76 # (factory default)Automatic OFF after 20 seconds, it will go ON by pressing any key (this key isn't taken into consideration)
3. Exit	*

Master Card Usage

Using Master Card to add and delete users	
Add Card/ PIN Users	1. Input (Master Card) 2. Input (Card) or (PIN #) Repeat step 2 for additional users 3. Input (Master Card) again
Delete Card/ PIN Users	1. Input (Master Card Twice within 5s)2. Input (Card) or (PIN #) Repeat step 2 for additional users3. Input (Master Card) again

Users Operation & Reset to Factory Default

- **Open the door: Read valid user card or input valid user PIN #**

- **Remove Alarm: Enter Master Code # or Master Card or valid user card / PIN**

- **To reset to factory default & Add Master Card: Power off, press the Exit Button, hold it and power on, there will be two beeps, then release the exit button, the LED light turns into yellow, then read any 125KHz EM card/ 13.56MHz Mifare card, the LED will turn into red, means reset to factory default successfully. Of the card reading, it is the Master Card.**

Remarks

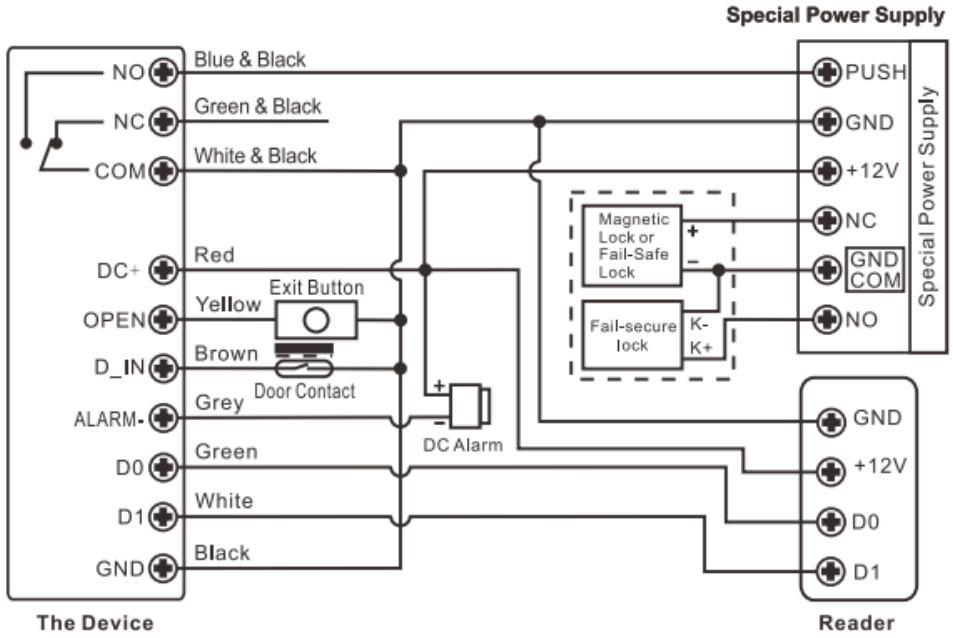
1. **If no Master Card added, must press the Exit Button for at least 5 seconds before release. (this will make the previous registered Master Card invalid)**

2. **Reset to factory default, the user's information is still retained.**

CONTROLLER MODE

The device can work as Controller, connected with the external Wiegand reader. (Factory default mode) — 77 #

Connection Diagram



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)

Set Wiegand Input Formats

Please set the Wiegand input formats according to the Wiegand output format of the external Reader.

Programming Step	Keystroke Combination
1. Enter Program Mode	*** (Master Code) #**
2. Wiegand Input Bit	**For EM Card : 8 (26- 44) #(factory default is 26bits)For Mifare Card: 8 0 (26-44, 56, 58) #(factory default is 34bits)**
3. Disable Parity BitEnable Parity Bit	**8 0 #81 # (factory default)**
4. Exit	*****

Note: For connecting Wiegand readers with 32, 40, 56 bits output, need disable parity bits.

Programming

- **Basic Programming is the same as Standalone Mode**
- **There are some exceptions for your attention:**
  - **The device Connected with External Card Reader**

    If EM/Mifare card reader: users can be added/deleted on either the device or external reader.
  - **If HID card reader: users can only be added/deleted on extemal reader.**

The device Connected with Fingerprint Reader

Connect SF1 as the fingerprint reader to the device. For example:

Step 1: Add the Fingerprint (A) on SF1 (Please refer to SF1 manual)

Step 2: Add the same Fingerprint(A) on the device:

1	Enter Program Mode: * (Master Code) #
1 (Press Fingerprint A once on SF1) # (ID auto allocated)1 (User ID) # (Press Fingerprint A on SF1) # (Select specific ID)	
3	Exit: *

The device Connected with Keypad Reader

The keypad reader can be 4 Bits, 8 Bits (ASCII), or 10 Bits output format. Choose the below operation according to the PIN output format of your reader.

Programming Step	Keystroke Combination
Enter Program Mode	* (Master Code) #
PIN input bits	8 (4 or 8 or 10) # (factory default is 4 bits)
Exit	*

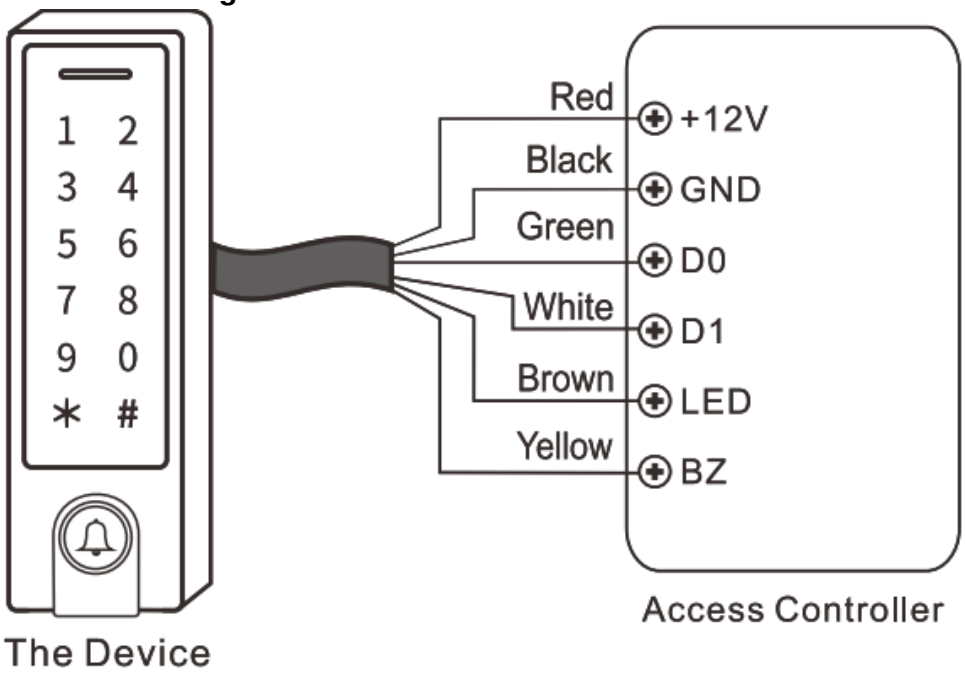
Remarks: 4 means 4 bits, 8 means 8 bits, 10 means 10 digits virtual number

- **Add PIN Users: To add PIN users, after enter into programming mode on the device, PIN(s) can be input/ added on either thedevice or the external Keypad Reader.**
- **Delete PIN Users: the same way as add users.**

WIEGAND READER MODE

The device can work as Standard Wiegand Reader, connected to the third party Controller-78#

Connection Diagram



Notes:

- **When set into Wiegand Reader mode, nearly all settings in Controller Mode will become invalid, and Brown & Yellow wires will be redefined as below**
  - **Brown wire: Green LED light control**
  - **Yellow wire: Buzzer control**

- **> If you need to connect Brown/Yellow wires: When the input voltage for LED is low, the LED will turn into Green; and when the input voltage for Buzzer is low, it will sound.**

Set Wiegand Output Formats

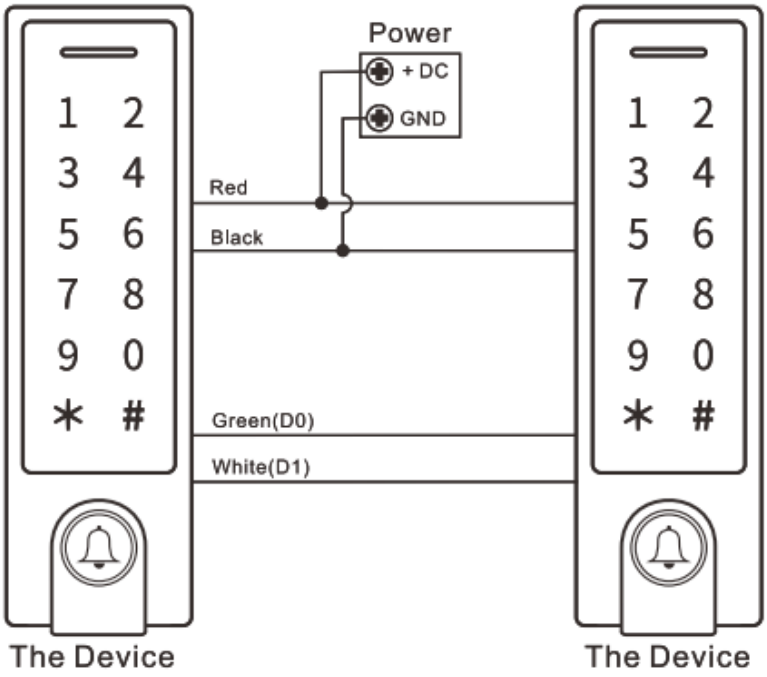
Please set the Wiegand output formats of Reader according to the Wiegand input formats of the Controller.

Programming Step	**Keystroke Combination**
1. Enter Program Mode	* **(Master Code) #**
2. Wiegand output bits **PIN** output bits	**For EM Card: 8 (26- 44) #** (factory default is 26bits)**For Mif are Card: 8 0 (26-44, 56, 58) #** (factory default is 34bits)**8 (4 or 8 or 10) #** (factory default is **4** bits)
3. Disable Parity Bit Enable Parity Bit	**8 0 #81 #** (factory default)
4. Exit	

User Information Transfer

The device supports the User Information Transfer function, and the enrolled user (cards, PINs) can be transferred from one (let's name it Master Unit) to another (let's name it Accept Unit).

Connection Diagram:



Remarks:

- **The Master units and Accept units must be same series devices.**
- **The Master Code of the Master Unit and the Accept Unit must be set to the same.**

- **Program the transfer operation on Master Unit only.**
- **If the Accept Unit is already with the users enrolled, it will be covered after transferring.**
- **For full 1000 users enrolled, the transfer takes about 30 seconds.**

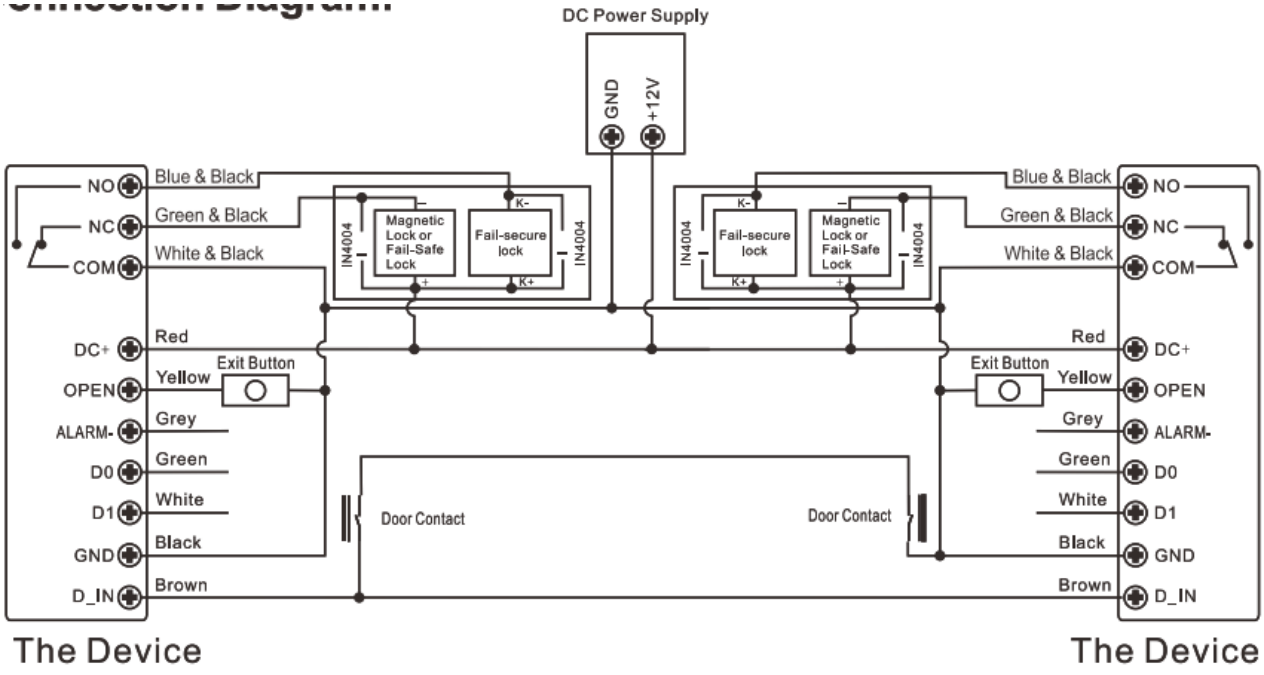
Set Transferring on Master Unit:

Programming Step	Keystroke Combination
1. Enter the programming mode	* (Master Code) #
2. Set transferring	98
Within 30 seconds, Green LED shines, after one beep, the LED will turn into Red, which means the users' information has been transferred successfully	
Exit	*

Interlock

The device supports the Interlock Function. It is of two Devices for two doors, and mainly used for banks, prisons, and other places where a higher level security is required.

Connection Diagram:



Remarks: The Door Contact must be installed and connected as the diagram. Let's name the two Devices as "A "and "B" for two doors "1" and "2"

Step 1:
Enroll the users on Device A, then transfer the users' information to Device B by "User Information Transfer" function.

Step 2:

Set both of the two Devices (A and B) to Interlock function

Programming Step	Keystroke Combination
1. Enter the programming mode	* (Master Code) #
2. Set transferring	98
Within 30 seconds, Green LED shines, after one beep, the LED will turn into Red, which means the users' information has been transferred successfully	
3. Exit	*

If enable interlock, when and only door 2 is closed, the user can read the valid fingerprint/card or input PIN on Reader A, door 1 will open; then when and only door 1 closed, read valid fingerprint/card or input PIN on Reader B, door 2 will open.

Documents / Resources

	S4A H3 Access Controller Reader With Doorbell [pdf] User Manual H3, H3 Access Controller Reader With Doorbell, Access Controller Reader With Doorbell, Controller Reader With Doorbell, Reader With Doorbell, Doorbell

References

- User Manual