Metal Waterproof Standalone Access Control/Reader
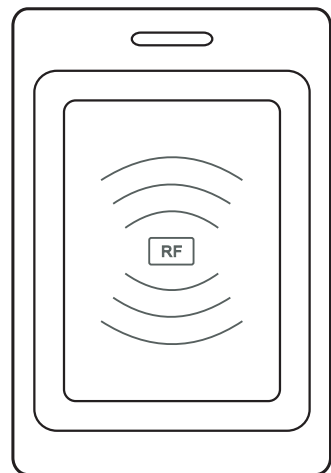
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WM1-EM

INTRODUCTION

This product is designed only supporting proximity card. It works as standalone access control, supporting up to 10,000 ID card holders. With wiegand 26 bits input & output, it can be also used as controller or external reader.

It is operated by remote control. Also, the Manager Card make it convenient and faster to add/delete users.

It adopts the Atmel MCU, however, the User Data stored in independent chip. Once the device is damaged deliberately, the User Data chip can be disassembled quickly and installed in the same model product.

Features and Benefits

> Stand-alone access control or Wiegand reader
> Metal case, anti-vandal
> Waterproof, conforms to IP67
> Operated by remote control and manger cards
> Large user capacity: 10,000 card holders
> Independent user data chip, make it safe and convenient
> Can be install on 86 type box
> Wiegand 26 bits input & output
  can also work as controller and reader
> Can make it in & out by card, high-level of security
> 125KHz EM card
> Interlock, anti-passback

Specifications

Power supply	12-24V DC
Standby current	≤30 mA
Working current	≤60 mA
Waterproof	IP67
User capacity	10,000 card holders
Card type	125KHz EM card
Wiegand format	26 bits input & output

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Operating temperature	-40 ~ + 70 ℃
Operating Humidity	0% ~ +98%RH
Dimension	110 x 76 x22(mm)
Net weight	435g
Gross weight	505g

Packing List

Number	Name	Quantity	Note
1	Access control	1	
2	User manual	1	
3	Rubber stopper	2	6*25mm
4	Screw	2	KA4*25mm
5	Safety screw driver	1	
6	Protective diode	2	1N4004
7	Master Card	2	Add Card/ Delete Card
8	Infrared remote keyboard	1	

Master Cards Usage

| Using Master cards to add and delete card users	
Add a user	1. (Read Master Add Card) 2. (Read user card) Repeat step 2 for additional user cards 3. (Read Master Add Card)
Delete a user	1. (Read Master Delete Card) 2. (Read user card) Repeat step 2 for additional use cards 3. (Read Master Delete Card)

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Factory Default Settings

Power off, press and hold the "exit button", power on. There will be two "beep", release the button to read "Master Add Card" and "Master Delete Card". There will be one long "beep". Enter into standby mode. Factory default Settings and add master cards successfully.

Note: Factory default is cannot delete the user data. If you do not want to add master cards, power on, press the exit button for 10 second and then release.

INSTALLATION

1. Remove the back cover from the unit.
2. Drill holes on the wall for the screw and one hole for the cable.
3. Knock the supply rubber bungs to the screw holes.
4. Fix the back cover firmly on the wall with 4 flat head screws.
5. Tread the cable through the cable hole.
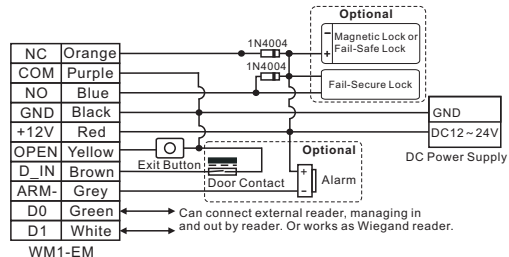6. Attach the unit to the back cover.
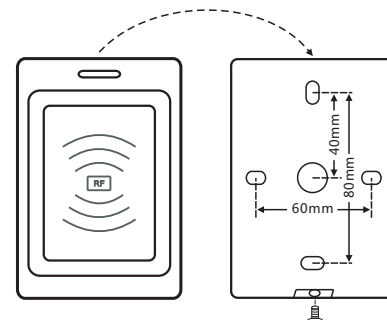
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Simplified Instruction

Function Description	Operation
Enter the Programming Mode	∗ (Admin Code) # then you can do the programming (777777 is the factory default master code)
Change the Master Code	0 - New Code - # - Repeat the New Code - # (code:6-8 digits)
Add Card User	1 - Read - # (can add Cards continuously)
Delete User	2 - Read Card - # for Card User
Exit from the Programming Mode	∗
How to release the door	
Card User	Read Card

Wiring

Number	Wire Color	Definition	Function
1	Orange	NC	Normally Closed Relay Output
2	Purple	COM	Common Connection for Relay Output
3	Blue	NO	Normally Open Relay Output
4	Black	GND	Negative Power
5	Red	+12V	Positive power
6	Yellow	OPEN	Request to Exit (REX) Input
7	Brown	D_IN	Door/Gate Contact Input
8	Grey	ARM-	Negative contact for alarm
9	Green	D0	Wiegand Input/ Output Data 0
10	White	D1	Wiegand Input/ Output Data 1

Connection Diagram
Access Control Power Supply

WM1-EM

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Common Power Supply

WM1-EM

Power +   →   1N4004   →   Lock

Fail-Safe Lock: NC
Fail-Secure Lock: NO

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)

Sound and Light Indication

Operation Status	LED	Buzzer
Stand By	Red light bright	– –
Enter into master model	Red light shines	– –
In the programming mode	Yellow light bright	– –
Open lock	Green light bright	One beep
Operation error	– –	Three beeps

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OPERATION

Enter and Exit Program mode

Programming Step	Keystroke Combination
Enter Program Mode	∗ (Master Code) # (Factory default is777777)
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 6-8 digits)
3.Exit Program Mode	∗

Add Users

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Add users: by Card OR	1 (Read Card) #
2.Add users: by Card Number	1 (Input 8/10 digits card number) #
3.Exit Program Mode	∗

Delete Users

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2. Delete Card - By Card OR	2 (Read Card) #
2. Delete Card - By Card number	2 (Input 8/10 digits Card number) #
2. Delete All User	2 0000 #
3.Exit Program Mode	∗

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Set Anti-pass Back Mode (Factory default disabled the function)

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2. Deny anti-passback OR	3 0 #
2.Set as main machine OR	3 1 #
2.Set as sub-machine	3 2 #
3.Exit Program Mode	∗

Instruction

① Anti-pass back for single door: Install an external Wiegand 26 card reader outside door, and the machine is installed inside door. Then in/out by swiping cards.

② Anti-pass back for two doors: install machine A at the door 1, setting it vice machine. Install machine B at door 2, setting it main machine. And then connect the Wiegand wires(D0 to D0, D1 to D1). Finally, you can only enter from door 1, out from door 2.

Set Relay Configuration

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Toggle Mode OR	4 0 # Set the relay to ON/OFF Toggle Mode
2. Pulse Mode	5 (0~255) 0 means 50ms.
3.Exit Program Mode	∗

Note: 1. Factory default is **Pulse Mode** and the access time is 5 seconds.
2. **Pulse Mode:** The door will be closed automatically after opening the door for a while. 0 means 50ms, and it only used for Electric Control Lock
3. **Toggle Mode:** Under this mode, after opening the door, the door won't be closed automatically until next valid user input. That is to say, whether open or close the door, you must swipe valid card.

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Door status detection Setting (factory default is closed)

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Close the setting of magnetic OR	6 0 #
2.Open the detection setting	6 1 #
3.Exit Program Mode	∗

When you activate the door status detection
> If you forgot to close the door 1 min, the buzzer will alarm. When the door closed or swipe valid card, the buzzer will be release.
> If the door opened by force, the buzzer and external alarm will activated at the same time.

Safe Mode setting (factory default is off)

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Common Mode OR	7 0 # (factory default)
2.Lockout Mode OR	7 1 # Access will be defined for 10 minutes
2.Alarm Mode	7 2 #
3.Exit Program Mode	∗

Note: ① Lockout Mode: Read invalid card for ten times continuously in ten minutes, the machine lockout for 10 minutes.
② Alarm mode: read the invalid card 10 times in 10 minutes. Machine alarm.

Set Alarm Time

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Set the mode of relay	9 (0-3) # (factory default is 1 minute)
3.Exit Program Mode	∗

Note: "0" means no alarm. Read valid card (or master code #/ Master card) can stop alarm or reminder.
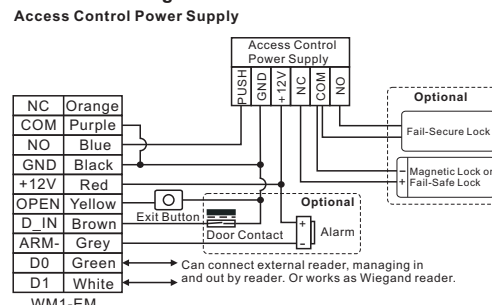
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Interlock and Indicator Light

Programming Step	Keystroke Combination
1.Enter Program Mode	∗ (Master Code) #
2.Interlocked-OFF OR	8 0 # (factory default)
2.Interlocked-ON	8 1 #
Light	
2. Red light-ON OR	8 3 #; (factory default)
2. Red light-OFF	8 4 #
3.Exit Program Mode	∗

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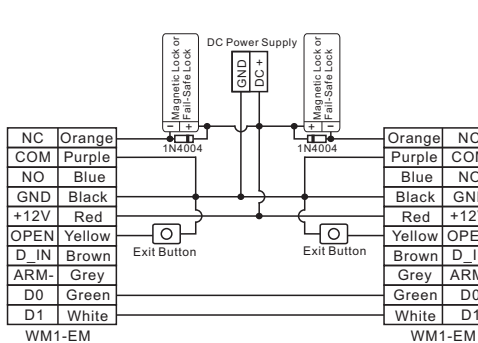
Note: install machine A at the door 1, install machine B at door 2, setting them interlock. And then connect the Wiegand wires (D0 to D0, D1 to D1). And then, you can only open one of the both door, cannot open two door simultaneously.

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