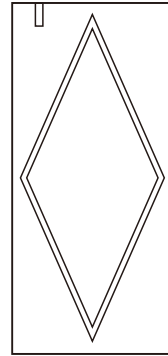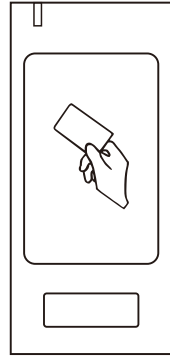# Metal Proximity Access Control

User Manual

S5-EM   S6-EM

INTRODUCTION

S5/S6-EM is a compact, waterproof stand-alone programmable access control system that provides proximity entry for up to 2000 users. It uses Atmel microcontroller assures maximum performance in any environment, and the low-power circuit makes its service life prolonged. The product unique feature is simple in design, easy to operation, and high reliability.

Features:

- Waterproof, conform to IP66
- Vandal resistant metal enclosure
- Read 125KHz EM card or tag
- One programmable relay operation
- Pulse mode, Latch mode
- Card block enrolment
- Built in light dependent resistor (LDR) for anti tamper
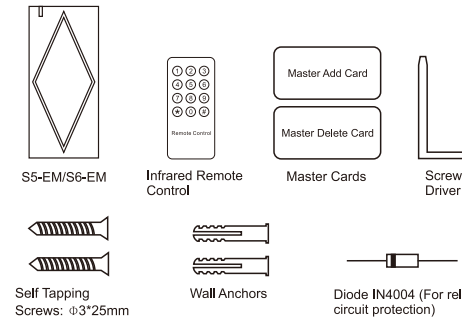- Buzzer for audible or silent mode
- Low temperature resistance(-40℃)

Specifications:

User Capacity	2000
Operating Voltage Idle Current	12-24V DC <40mA
Proximity Card Reader Radio Technology Read Range	EM 125KHz Proximity Card 3-6cm
Wiring Connections	Relay Output, Exit Button
Relay Adjustable Relay Output Time Lock Output Load	One (NO, NC, Common) 0-99 Seconds 2 Amp Maximum
Environment Operating Temperature Operating Humidity	Meets IP66 -40℃～60℃ 0%RH～98%RH

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Physical	Zinc-Alloy Enclosure
Surface Finish	Powder Coat
Dimensions	L103*W48*H19(mm)
Unit Weight	260g
Shipping Weight	320g

Carton Inventory:

S5-EM/S6-EM   Infrared Remote Control   Master Cards   Screw Driver

Master Add Card   Master Delete Card

Self Tapping Screws: Φ3*25mm   Wall Anchors   Diode IN4004 (For relay circuit protection)
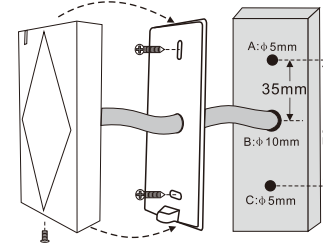
INSTALLATION

- 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 2 flat head screws
- Thread the cable through the cable hole(B)
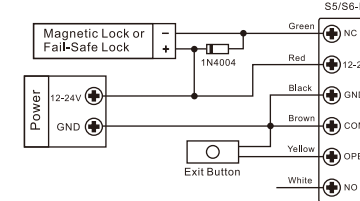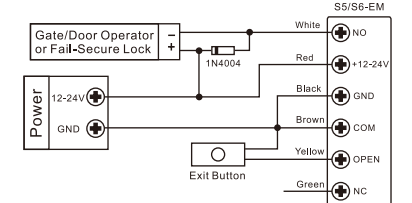- Attach the unit to the back cover

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A:Φ5mm
B:Φ10mm
C:Φ5mm
35mm
70mm

Wiring

Colour	Function	Notes
Red	Power +	12-24 Votes DC Regulated Power Input
Black	GND	Ground
White	NO	Normally Open Relay Output
Brown	COM	Common Connection for Relay Output
Green	NC	Normally Closed Relay Output
Yellow	OPEN	Request to Exit Input(REX)

Connection Diagram
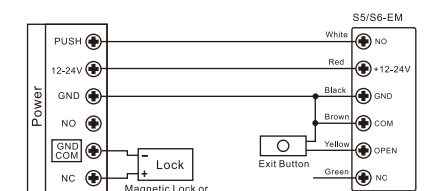**Common power supply:**

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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)

Access Control Power Supply:

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PROGRAMMING

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

General Programming Information

- **Remote Control:** Please use the Infrared Remote Control to program the Reader. <u>The infrared receiver head is near LED, so when program the reader, please direct the Remote Control to the LED.</u>
- **User ID number:** Assign a user ID to the access card in order to track it. The user ID number can be any number from 1~2000. 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:** Any 125KHz industry standard 26 bit EM Proximity card or Tag.

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)#
3. Exit Program Mode	✱

Add User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	✱ (Master Code) #
2. Add Card: Using Auto ID (Allows S5-EM/S6-EM to assign Card to next available User ID number) OR	1 (Read Card) # Repeat Step 2 for additional user cards

S5/S6-EM- Simplified Instruction

Function Description	Operation
Enter the Programming Mode	✱ (Master Code) # (123456 is the default factory master code)
Change the Master Code	0 (New Master Code) # (Repeat New Master Code)# (code: 6 digits)
Add Card User	1 (Read Card) # (can add cards continuously)
Delete Card User	2 (Read Card) # (can delete cards continuously)
Exit from the programming mode	✱
How to be granted access	
Card User	Read card

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	1 (User ID) # (Read Card) #
2. Add Card: Select Specific ID (Allows manager to define a specific User ID to associate the card to) OR	The user ID is any number from 1-2000
2. Add Card: By Card Number OR	1 (Input 8/10 digits Card number) #
2.Add Card: Block Learn (Allows manager to add up to 2000 cards to the Reader in a single step.) Takes 3 minutes to program.	1 (User ID number) # (Card quantity) #(The first card number) # Cards' number must be consecutive; Card quantity = number of card to be enrolled.
3. Exit	✱

Delete User Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	✱ (Master Code) #
2. Delete Card: By read card OR	2 (Read Card) # Repeat Step 2 for additional user cards
2. Delete Card: Select Specific ID OR	2 (User ID) # The user ID is any number from 1-2000.
2. Delete Card: By Card Number	2 (Input 8/10 digits card number) #

Set Relay Configuration
The relay configuration sets the behaviour of the output relay on activation.

Programming Step	Keystroke Combination
1. Enter Program Mode	✱ (Master Code) #
2. Pulse Mode OR	3 (1-99) # The relay time is 1-99 seconds. (1 is 50mS). Default is 5 seconds.

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2. Latch Mode	3 0 # Sets the relay to ON/OFF Latch mode
3. Exit	✱

Set Strike-out Alarm
The strike-out alarm will engage after 10 failed card attempts. Factory is OFF. The strike-out alarm can be set to deny access for 10 minutes after engaging or it can be set disengage only after entering a valid card or Master code

Programming Step	Keystroke Combination
1. Enter Program Mode	✱ (Master Code) #
2. Strike-Out OFF OR	4 0 # (factory default)
2. Strike-Out ON OR	4 1 # Access will be denied for 10 minutes
2. Strike-Out ON (Alarm)	4 2 #
Set alarm time	5 (0 ~ 3) # Factory default is 1 minute Enter Master code # or valid user card to silence
3. Exit	✱

Set Audible and Visual Response

Programming Step	Keystroke Combination	
1. Enter Program Mode	✱ (Master Code) #	
2. Control LED OR	OFF = 6 1 #	ON = 6 2 #
2. Control Sounds	OFF = 6 3 #	ON = 6 4 # (Factory defaults are ON)
3. Exit	✱	

OTHERS

Users Operation:
Open the door: Read the valiad user card, <u>the door will open.</u>
Remove Alarm: Read valid user card, or Input Master code #

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Reset to Factory Default:
To reset to factory default, power off, press the Exit Button, hold it and power on, there will be two beeps, and the LED light turns into yellow, release the exit button, then read any two 125KHz EM card, the LED will turn into red, means reset to factory default successfully. Of the two cards reading, the 1st one is Master Add Card, the 2nd one is the Master Delete Card.

Remarks: Reset to factory default, the user's information is still retained.

Erase all Cards

✱ Master Code # 2 Master code # ✱

This will delete ALL User data, but all configuration data is retained.

Master Cards Using

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

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	Yellow 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

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