Access Controller/ Reader



Card/ PIN (Wide) | Card/ PIN (Slim) | Card/ PIN/ Fingerprint (Slim)

User Manual

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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 can be made with Bluetooth function or with WIFI function.

Card/ PIN device:
It supports 10,000 users (9988 common + 2 panic + 10 visitor)

Card/ PIN/ Fingerprint device:
Three user capacities are available:
1) It supports 10,000 card/ PIN users + 100 fingerprint users
2) It supports 10,000 card/ PIN users + 500 fingerprint users
3) It supports 10,000 card/ PIN users + 880 fingerprint users

Features
> OLED display, touch keypad
> Wide: ABS, Slim: metal case, anti-vandal
> Waterproof, conforms to IP66
> One relay
> PIN length: 4~6 digits
> EM card, EM+ MIfare card 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	Card/ PIN	Card/ PIN/ Fingerprint
Common Card/ PIN User	9988	9988
Common Fingerprint User		500 (100, 880 optional)
Panic User	2	2
Visitor User	10	10
Operating Voltage	**12V DC (Wide device) 12~18V DC (Slim device)**	
Working Current Idle Current	<150mA <30mA	
Proximity Card Reader Radio Technology Read Range	**EM or EM+MIfare** 125KHz or 125KHz+ 13.56MHz 2~6 cm	
PIN Length	**4~6 digits**	
Wiring Connections	**Relay Output, Exit Button, Alarm, Door Contact, Wiegand Input, Wiegand Output**	
Relay Adjustable Relay Output Time Lock Output Load	**One (NO, NC, Common)** 0~99 Seconds (5 seconds default) 2 Amp Maximum	
Wiegand Interface PIN Output	**EM card version: Wiegand 26~44 bits input & output** (Factory Default: Wiegand 26bits) **MIfare card version: Wiegand 26~44bits, 56bits, 58bits input & output** (Factory Default: Wiegand 34bits) **4 bits, 8 bits(ASCII), 10 digits Virtual Number** (Factory Default: 4 bits)	
Environment Operating Temperature Operating Humidity	**Meets IP66** Card/ PIN device: -40°C ~ 60°C (-40°F ~ 140°F) Card/ PIN/ Fingerprint device: -30°C ~ 60°C (-22°F ~ 140°F) 0%RH~98%RH	
Physical Colour Dimensions Unit Weight Shipping Weight	**Wide: ABS** Wide: Black Wide: L116 x W76 x D24 (mm) Slim: L148 x W43.5 x D22 (mm) Wide: 160g Wide: 185g	**Slim: Zinc-Alloy** Slim: Silver & Black Slim: 330g Slim: 405g

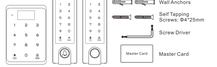
Wiring (for Wide device)

Color	Function	Notes
Red	+12V	12V DC Power Input
Black	GND	Negative Pole of DC Power Input
Blue	NO	Normally Open Relay Output
Purple	COM	Common Connection for Relay Output
Orange	NC	Normally Closed Relay Output
Yellow	OPEN	Request to Exit (REX) Input
White	D1	Wiegand Output /Input Data 1
Green	D0	Wiegand Output /Input Data 0
Grey	Alarm Output	Negative contact for Alarm
Brown	Contact Output	Door/Gate Contact Input (Normally Closed)
Light Blue	Doorbell A	Contact for Doorbell
Light Blue	Doorbell B	Contact for Doorbell

Wiring (for Slim device)

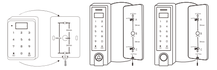
Wire Color	Function	Notes
Basic Standalone Wiring		
Red	DC+	12~18V DC Power Input
Black	GND	Negative Pole of DC Power Input
Blue & Black	Relay NO	Normally Open Relay Output (install diode provided)
White & Black	Relay Common	Common Connection for Relay Output
Green & Black	Relay NC	Normally Closed Relay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

Carton Inventory



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

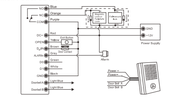


CONNECTION DIAGRAM

Standalone Mode

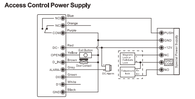
The device can work as Standalone Access Control for single door. (Factory default mode)

Connection Diagram (for Wide device)
Common Power Supply

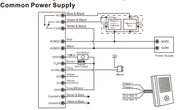


Attention:
Install a 1N4004 or equivalent diode is needed when use a common power supply, or the keypad might be damaged. (1N4004 is included in the packing)

Access Control Power Supply

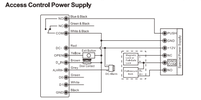


Connection Diagram (for Slim device)
Common Power Supply



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)

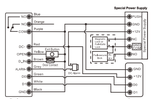
Access Control Power Supply



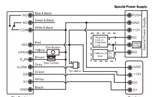
Controller Mode

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

Connection Diagram (for Wide device)



Connection Diagram (for Slim device)

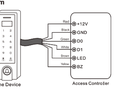


Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4004 is included in the packing)

WIEGAND READER MODE

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

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.

PROGRAMMING

Keys & Functions

0~9: Enter value, menu number

#: # Ok means confirm
▼ means down to select

Means doorbell

*: M means menu
Short press * means back to the previous menu
Long press * means back to main interface

System Menu

> Please input * (Master Code) # to enter system menu.
(Factory default master code is 123456)

> User ID number:
The Common Card/PIN User ID: 1~9988
Panic User ID: 9989~9990
Visitor User ID: 9991~10000
Fingerprint User ID (Only apply to card/PIN/ Fingerprint device)
1001~10100 or 1001~10500 or 1001~10880
> PIN: Can be any 4~6 digits
> Proximity Card: 125KHz EM card or 13.56MHz Mifare card

1- Change Admin

Press '1' to enter Change Admin.

Menu No.	Setting	Note
1	Change Admin	New Admin can be any 6 digits

2- User Setting
Press '2' to enter User Setting.
Press ▼ to select and long press # to confirm.

Menu No.	Setting	Note
1	Add Directly	Add users directly by inputting PIN/ card
2	Add by ID	Add users by user ID. The common user ID is between 1~9988, panic User ID is 9989~9990 Fingerprint User ID (Only apply to card/PIN/ Fingerprint device) is 1001~10100 or 1001~10500 or 1001~10880
3	Add Visitor	- Visitor user ID is between 9991~10000 - Add visitor card: ID# (1~9)# (read card) - Add visitor PIN: ID# (1~9)# (PIN)#
4	Block Enrol	Choose the 1st ID--Set Card Number (can set 1~200)-- Read the 1st number card

5	Del Directly	- Enter PIN or card to delete user directly
6	Del by ID	- Delete users by inputting user ID
7	Del All User	- Delete ALL users

3- Door Setting
Press '3' to enter Door Setting.
Press ▼ to select and long press # to confirm.

Menu No.	Setting	Note
1	Open Time	- Open time can be set to 0~100s Input 0~100, long press # to confirm. - Factory default is 5s
2	Access Mode	Access Modes can be set to: Card/ PIN device: 1 Card, 2 PW, 3 Card/PW, 4 Multi User (max.9) Card/ PIN/ Fingerprint device: 1 Card, 2 PW, 3 Fingerprint, 4 Card/PW/Fp, 5 Multi User (max.9)
3	Alarm Time	- 1 OFF (Factory default) - 2 1min - 3 2min - 4 3min
4	Door Contact	- 1 OFF (Factory default) - 2 ON
5	Security Mode	- 1 OFF (Factory default) - 2 LOCK Dead The device will become 'access deny' for 10 minutes after 10 failed entry attempts. Restart the device to back to normal.

		- 3 Alarm Mode The device will alarm after 10 failed entry attempts. Alarm time depends on the device alarm time (refer to Door Setting Menu No. 3 Alarm Time) ,enter Master Code # or valid user card/PIN to silence.
6	Interlock	- 1 OFF (Factory default) - 2 ON *Connection Diagram please refer to page 12*
7	Collect Card	- 1 OFF (Factory default) - 2 ON After this function is turned ON, all cards can open the lock, at the same time, the card is added to the device.
8	WG FMT	- 1 Check OFF - 2 Check ON (Factory default) Check means Parity Bit - 3 4bits (Factory default) - 4 8bits - 5 10bits (VirtNum) - 6 (0: 26 Wiegand format for EM card can be set to 26~44. - 7 IC: 34 Wiegand format for MIfare card can be set to 26~58.
9	Working Mode	- 1 Controller (Factory default) - 2 Reader In Controller mode, the device can be also used as standalone. *Connection diagram please refer to Page 4~6*

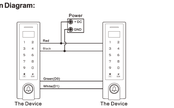
4- Other Setting
Press '4' to enter Other Setting.
Press ▼ to select and long press # to confirm.

Menu No.	Setting	Note
1	Sound	- 1 OFF - 2 ON (Factory default)
2	Red Led	- 1 OFF - 2 ON (Factory default)
3	Keys Backlight	- 1 OFF - 2 ON - 3 Auto (Factory default) Automatic OFF after 20 seconds, it will go ON by pressing any key (this key isn't taken into considerations).
4	OLED Backlight	- 1 ON - 2 5S - 3 10S - 4 30S (Factory default) - 5 1min
5	Unbind Machine	- Unbind the device - Long press # to confirm Unbind, the device will back to main interface after unbinding successfully.
6	Copy Users	*Connection diagram please refer to page 11*
7	Factory Reset	Reset to factory default, the user's information is still retained.

ADVANCED APPLICATION

User Information Transfer (Valid for Card/ PIN device)
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:

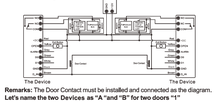


Remarks:
> The Master units and Accept units must be same series devices.
> The Master Code of the Master Unit and the Accept Unit must be set to the same.
> Program the transfer operation on Master Unit only.
> If the Accept Unit is already with the users enrolled, it will be covered after transferring.
> For full 10000 users enrolled, the transfer takes about 5 minutes.

Set Transferring on Master Unit: Menu 4 Other Setting— 6 Copy User

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 (Page 111)

Step 2:
Set both of the two Devices (A and B) to Interlock function
Menu 3 Door Setting --- 6 Interlock

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.

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