



EXPERT4HOUSE HD1 Access Controller Reader User Manual

[Home](#) » [EXPERT4HOUSE](#) » EXPERT4HOUSE HD1 Access Controller Reader User Manual 

EXPERT

Access Controller/Reader



Card /PIN
Card/ PIN/ Fingerprint
User Manual

Contents

- 1 INTRODUCTION
- 2 INSTALLATION
- 3 CONNECTION DIAGRAM
- 4 PROGRAMMING
- 5 ADVANCED APPLICATION
- 6 SOUND AND LIGHT INDICATION
- 7 Documents / Resources
 - 7.1 References

INTRODUCTION

The device is a single door multifunction standalone access controller or Wiegand output reader with OLED display. It uses Atmel MCU assuring stable performance. The operation is very user-friendly, and low-power circuit makes it long service.

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. 10,000 card/ PIN users + 500 fingerprint users (standard version)
2. 10,000 card PIN users + 100 fingerprint users.
3. 10,000 card/ PIN users + 880 fingerprint users

Features

- OLED display, touch keypad
- 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

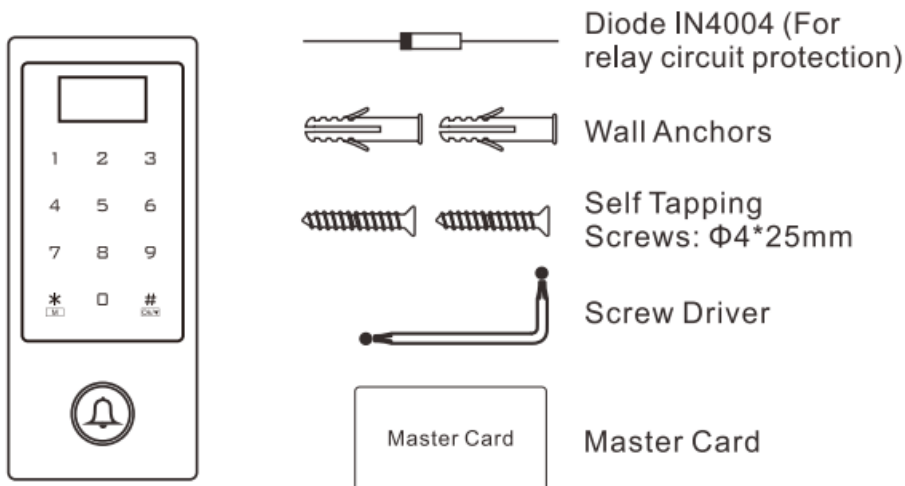
Specifications

User Capacity	Card/ PIN	Card/ PIN/ Fingerprint
Common Card/ PIN User Common Fingerprint User Panic User Visitor User	9988 / 2 10	9988 500 (100,880 optional) 2 10
Operating Voltage Working Current Idle Current	12~28V AC/DC ≤150mA ≤60mA	
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 bfts(ASCII), 10 digits Virtual Number (Factory Default:4 bits)	
Environment Operating Temperature Operating Humidity	Meets IP66 -40°C ~ 60°C (-40°F~ 140°F) 0 %RH-98%RH	
Physical Colour Dimensions Unit Weight Shipping Weight	Zinc-Alloy Silver & Black L145 x W68 x D25 (mm) 500g 615g	

Wiring

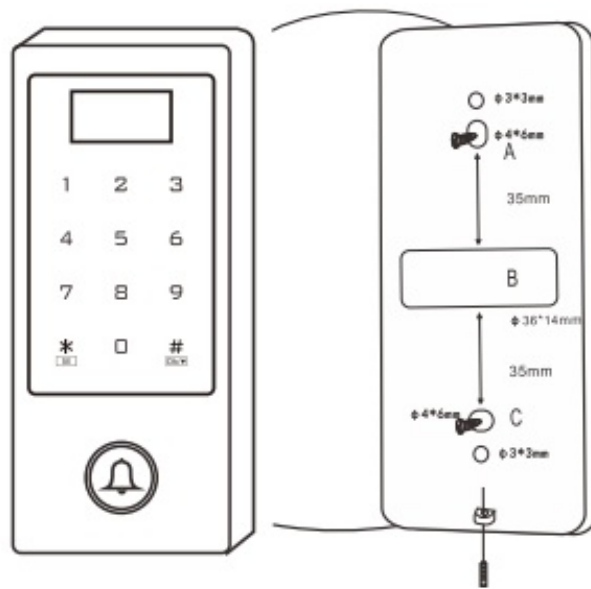
Wire Color	Function	Notes
Basic Standalone Wiring		
Red	AC&DC	12-28V AC/DC Regulated Power Input
Black	AC&DC	12-28V AC/DC Regulated Power Input
Grey&Black	GND	Negative Pole
Blue & Black	Relay NO	Normally Open Relay Output (install diode provided)
White & Black	Relay Common	Common Connection for Relay 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 on 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

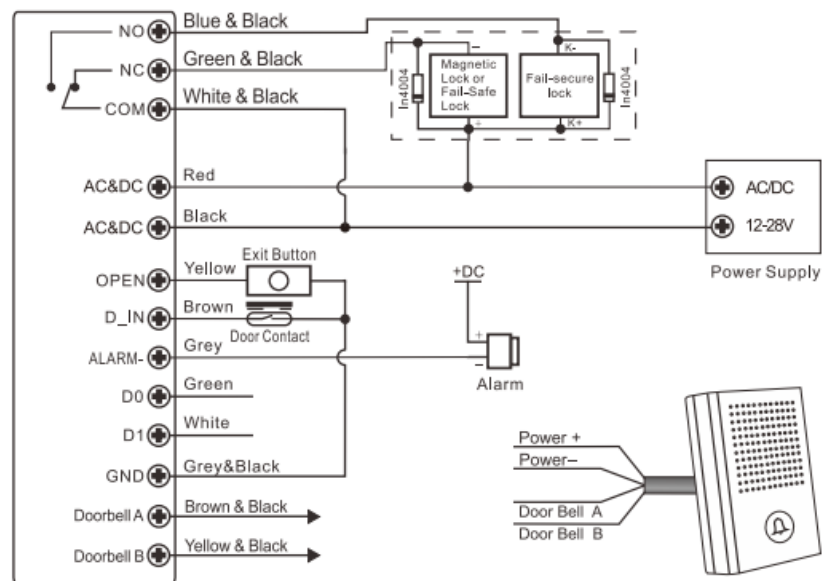
Standalone Mode

The device can work as Standalone Access Control for single door.

(Factory default mode)

Connection Diagram

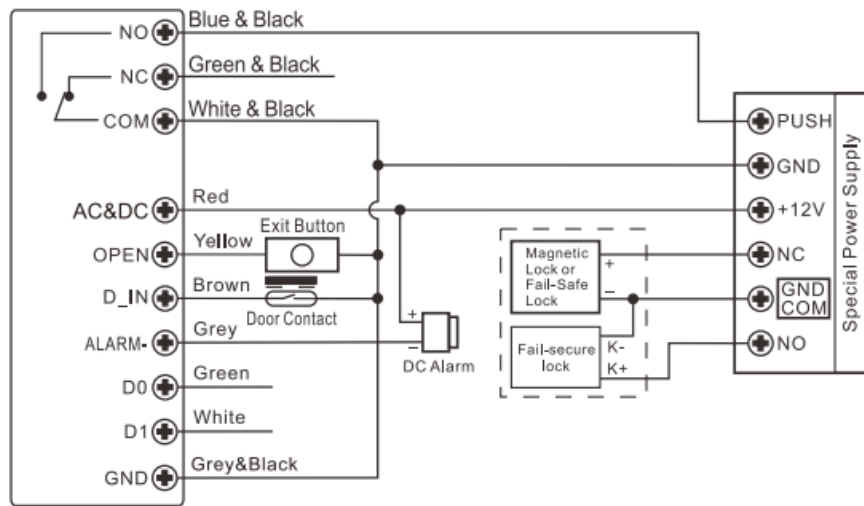
Common Power Supply



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)

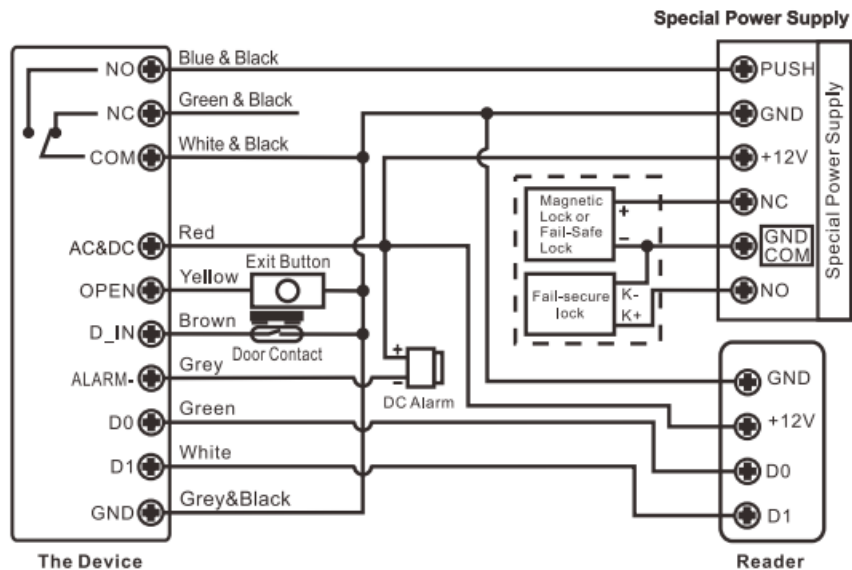
Access Control Power Supply



Controller Mode

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

Connection Diagram

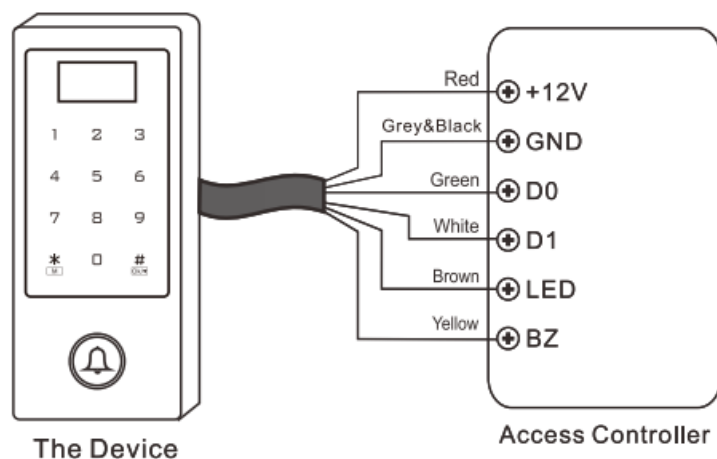


Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4004 is included in the packing)

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) 10001-10100 or 10001-10500 or 10001-10880

- 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 10001-10100 or 10001-10500 or 10001-10880.
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)# 1-9 means times of usage.
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/PVV/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 DeadThe device will become 'access deny' for 10 minutes after 10 failed entry attempts. Restart the device to back to normal.

		<p>– 3 Alarm Mode</p> <p>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.</p>
6	Interlock	<p>-1 OFF (Factory default)</p> <p>– 2 ON</p> <p><i>Connection Diagram please refer to page 12</i></p>
7	Collect Card	<p>-1 OFF (Factory default)</p> <p>– 2 ON</p> <p>After this function is turned ON, all cards can open the lock, at the same time, the card is added to the device.</p>
8	WG FMT	<p>– 1 Check OFF</p> <p>– 2 Check ON (Factory default)</p> <p>Check means Parity Bit</p> <p>– 3 4bits (Factory default)</p> <p>– 4 8bits</p> <p>– 5 10bits (VirNum)</p> <p>-6 ID: 26</p> <p>Wiegand format for EM card can be set to 26-44.</p> <p>– 7 IC: 34</p> <p>Wiegand format for Mifare card can be set to 26-58.</p>
9	Working Mode	<p>– 1 Controller (Factory default)</p> <p>– 2 Reader</p> <p>In Controller mode, the device can be also used as standalone.</p> <p>Connection diagram please refer to Page 4-6</p>

4. Other Setting

Press '4' to enter Other Setting.

Press ▼ to select and long press # to confirm.

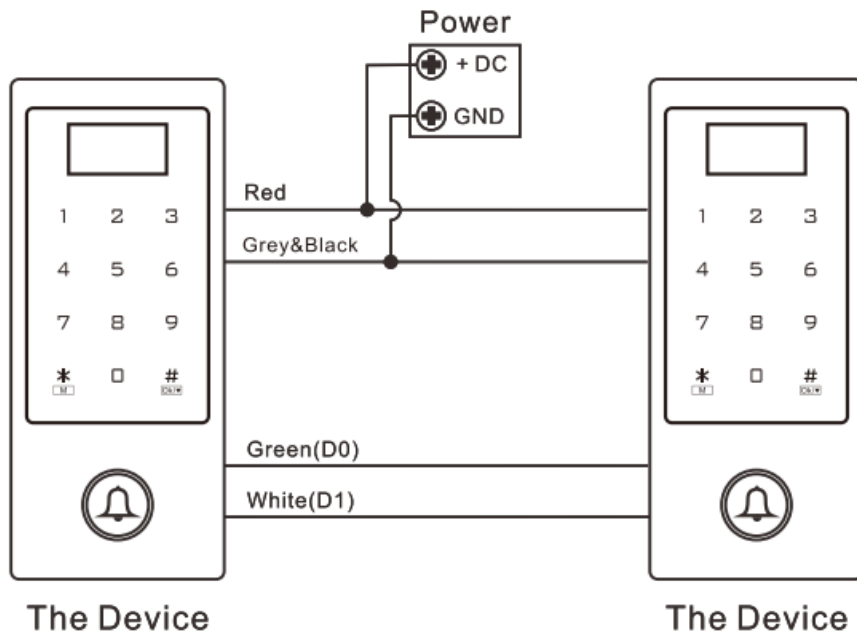
Menu No.	Setting	Note
1	Sound	-1 OFF – 2 ON (Factory default)
2	Red Led	-1 OFF – 2 ON (Factory default)
3	Keys Backlight	-1 OFF – 2 ON – 3 Auto (Factory default) Automatic OFF after 20 seconds, it will go ON by pressing any key (this key isn't taken into considerations).
4	OLED Backlight	– 1 ON – 2 5S – 3 10S – 4 30S (Factory default) – 5 1min
5	Unbind Machine	– Unbind the device with Bluetooth. – Long press # to confirm Unbind, the device will back to main interface after unbinding successfully.
6	Copy Users	<i>Connection diagram please refer to page 11</i>
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:

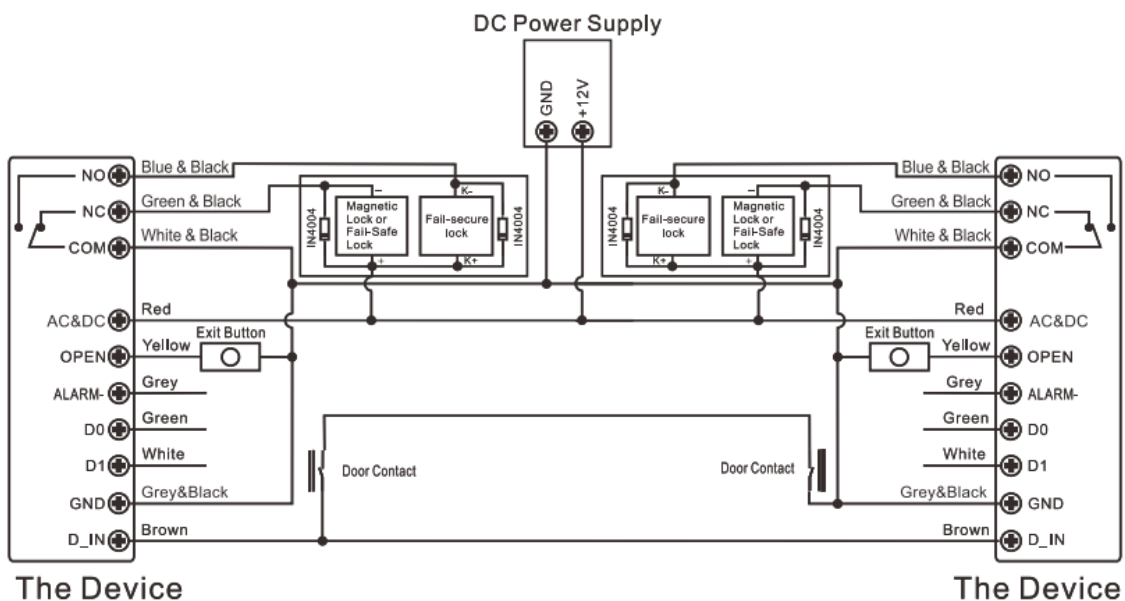
- The Master units and Accept units must be same series devices.
- The Master Code of the Master Unit and the Accept Unit must be set to the same.
- Program the transfer operation on Master Unit only.
- If the Accept Unit is already with the users enrolled, it will be covered after transferring.
- For 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'

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

EXPERT

Documents / Resources

	EXPERT4HOUSE HD1 Access Controller Reader [pdf] User Manual HD1, HD1 Access Controller Reader, Access Controller Reader, Controller Reader, Reader
---	---

References

- [User Manual](#)