Installation Manual

INTEGRATED ACCESS CONTROLLER

KDH-KZ330U/H/M-BLACK
KDH-KZ330U/H/M-IVORY

::KaDe

VERSION 3.0 16.10.2020

Contents

1. Introduction

KDH-KZ330U/H/M-BLACK
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Integrated access controller/reader

The KDH-KZ330U/H/M is a single door multifunction standalone access controller. It uses Atmel MCU assuring stable performance, packed with small Infrared Remote Control, the operation is very user-friendly, low-power circuit makes it long service life.
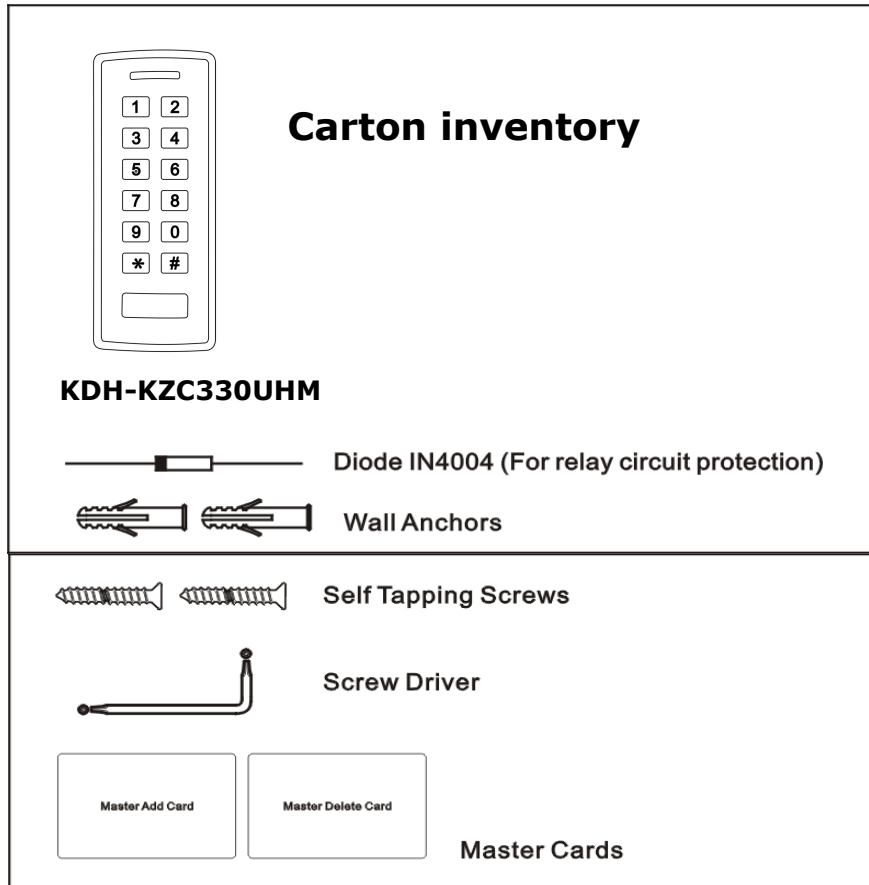
The KDH-KZ330U/H/M supports 600 users (598 common users + 2 panic users). It supports multi access modes in either card access, PIN access, Card + PIN access, or multi cards/PINs access. It has extra features including block enrollment, interlocked, Wiegand 26~37 bits interface…etc.

Features

- Waterproof, conforms to IP66
- One relay, keyboard programmer
- 600 users
- PIN length: 4~6 digits
- Card type: 125KHz EM card,125KHz HID card, and 13.56MHz Mifare Card
- Wiegand 26~37 bits input & output
- Can be used as Wiegand reader with LED & Buzzer output
- Card block enrolment
- Tri-colour LED status display
- Integrated alarm & buzzer output
- Pulse mode, Toggle mode
- 2 devices can be interlocked for 2 doors
- Built in light dependent resistor (LDR) for anti tamper
- Backlit keypad
- Low temperature resistance (-40°C)

Technical specifications

User Capacity 　　Common User 　　Panic User	**600** 598 2
Operating Voltage 　　Idle Current	**12 VDC** <35mA
Proximity Card Reader 　　Radio Technology 　　Read Range	**EM&HID&MF** 125KHz / 13,56 MHz Proximity Card 2~6 cm
Wiring Connections	Relay Output, Exit Button
Relay 　　Adjustable Relay Output Time 　　Lock Output Load	**One (NO, NC, Common)** 1~99 Seconds (5 seconds default) 2 Amp Maximum
Environment 　　Operating Temperature 　　Operating Humidity	**Meets IP66** -40°C ~ + 60°C 0%RH~98%RH
Physical 　　Colour 　　Dimensions 　　Unit Weight 　　Shipping Weight	**ABS Shell** Black, Ivory 12.2L x 5.0W x 2.1H (cm) 165g 225g

Carton inventory

KDH-KZC330UHM

Diode IN4004 (For relay circuit protection)

Wall Anchors

Self Tapping Screws

Screw Driver

Master Add Card   Master Delete Card

Master Cards

UNIT 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

Wall

Φ3.2mm

5*4mm

Φ9mm

9.5mm

A

41.5mm

83mm

B

C

9.5mm

Step3   Step2   Step1
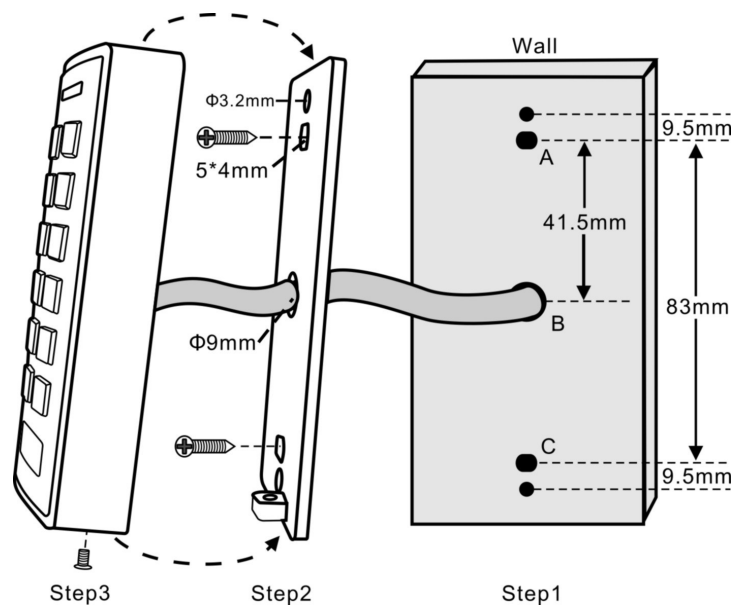
Wiring diagram

Wire Color	Function	Notes
Basic Standalone Wiring		
Red	+ DC	12V DC Power Input
Black	GND	Negative Pole of DC Power Input
Blue	Relay NO	Normally Open Relay Output (install diode provided)
Purple	Relay Common	Common Connection for Relay Output
Orange	Relay NC	Normally Closed Relay Output (Install diode provided)
Yellow	OPEN	Request to Exit (REX) Input or BUZZER
Pass-Through Wiring (Wiegand 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) or LED

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

Please use the keypad to program controller.

Enter and Exit Program mode

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

Set Master Code

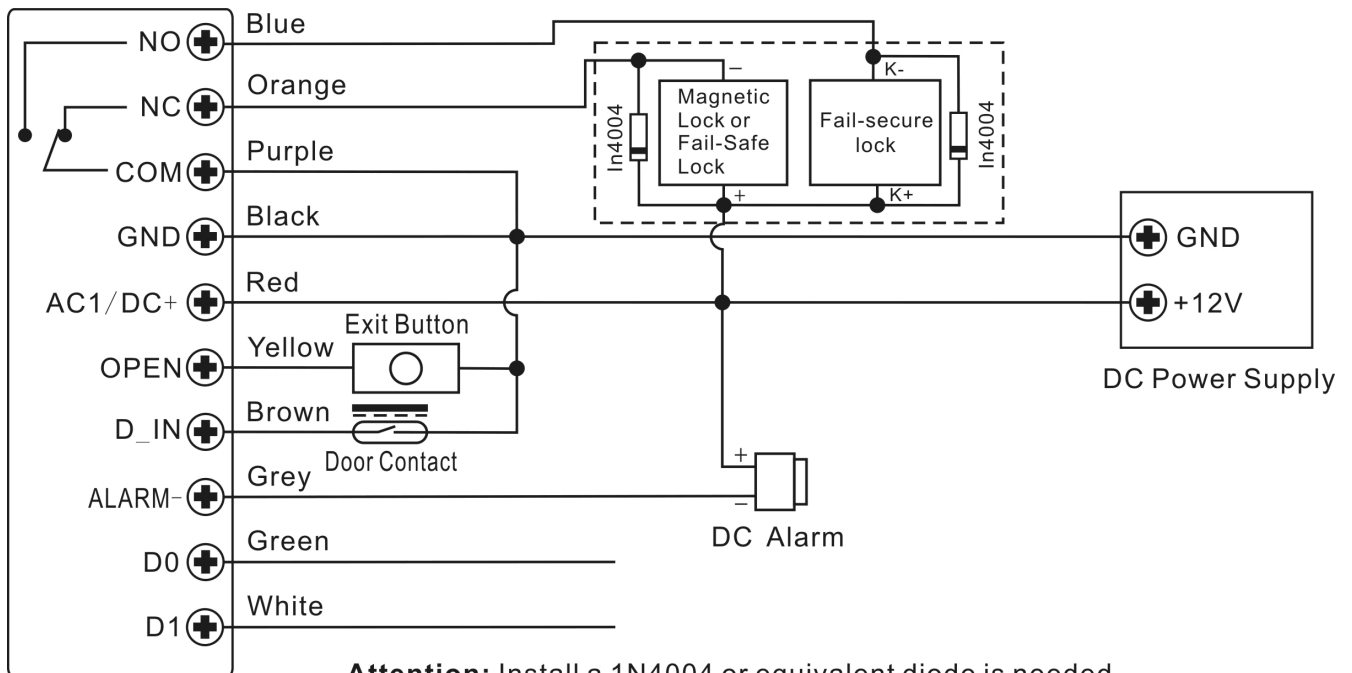| Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Update Master Code	**0（New Master Code）#（Repeat New Master Code）#** *(Master code is any 6 digits)*
3. Exit Program Mode	*

Set the Working mode

Notes: KDH-KZ330 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) #**
2. Standalone/Controller Mode **OR** 2. Wiegand Reader Mode	**8 0 #** *(Factory default)* **8 1 #**
3. Exit	*

Access standalone mode

In this mode unit works as standalone controller. This is factory default mode (command **8 0 #**). To change unit for Wiegand reader mode please use command: **8 1 #** (this mode is describe on next pages) .

KDH-KZ330U/H/M

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)

Add Common Users

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
Add Card User	

2. Add Card: Using Auto ID
   (Allows controller to assign Card to next available User ID number)
OR
2. Add Card: Select Specific ID
   (Allows Master to define a specific User ID to associate the card to)
OR
2. Add Card: by Card Number
OR
2. Add Card: Block Enrolment
   (Allows Master to add up to 598 cards to the Reader in a single step.)
   Takes 2 minutes to program.
	1 (Read Card) #
	The cards can be added continuously.
	
	1 (User ID) # (Read Card) #
	(User ID is any number from 1-598)
	
	1 (Input 8/10 digits Card number) #
	
	1 (User ID) # (Card quantity) # (The first card number) #
	Cards' number must be consecutive;
	Card quantity = number of cards to be enrolled.
	Default PIN - **8888** is assigned to each new card.

Add PIN User	
2. Add PIN: Using Auto ID (Allows controller to assign PIN to next available User ID number)	**1 (PIN) #** The PINs can be added continuously. *(PIN: 4~6digits)*
2. Add PIN: Select Specific ID (Allows manager to define a specific User ID to associate the PIN to)	**1 (User ID) # (PIN) #** The user ID is any number from 1-598.
3. Exit	*

Change PIN Users

Programming Step	Keystroke Combination
Note: Below is done outside programming mode, users can undertake this themselves	
2. Change PIN: By Card (There will auto allocate PIN(8888) to cards when adding)	* **(Read Card) (Old PIN) # (New PIN) # (Repeat New PIN) #**
2. Change PIN: By PIN	* **(User ID) # (Old PIN) # (New PIN) # (Repeat New PIN) #**
3. Exit	*

Add Panic Users

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Add Card: **OR** 2. Add PIN:	**1 (User ID) # (Read Card / Input 8/10 digits Card number) #** **1 (User ID) # (PIN) #** *(User ID is any number from 599-600)*
3. Exit	*

Delete Users

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
Delete Card User - Common	
2. Delete Card - By Card **OR** 2. Delete Card - By ID number **OR** 2. Delete User - By Card number	**2 (Read Card) #** The cards can be deleted continuously. **2 (User ID) #** **2 (Input 8/10 digits Card number) #**
Delete PIN User - Common	
2. Delete PIN – by PIN **OR** 2. Delete PIN – By ID number	**2 (Input PIN) #** **2 (User ID) #**
Delete Panic User	
2. Delete Panic Card User **OR** 2. Delete Panic PIN User	**2 (User ID) #** **2 (User ID) #**
Delete All Users	
Delete All User	**2 (Master Code) #**
3. Exit	*

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** 2. Toggle Mode	**3 (1-99) #** *(factory default)* The relay time is 1-99 seconds. (1 is 50mS.) *(Default is 5 seconds)* **3 0 #** Sets the relay to ON/OFF Toggle mode
3. Exit	*

Set Access Mode

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Card access **OR** 2. Card + PIN access **OR** 2. Card or PIN access **OR** 2. Multi-Cards (or PINs) access	**4 0 #** **4 1 #** **4 2 #** **4 3 (2~9) #** (Only after reading 2~9 cards or inputting 2~9 PINs, the door can be opened)
3. Exit	*

Door Detecting

Door Open Too Long (DOTL) warning. When used 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 and continue for 1 minute before switching off automatically.

Door Forced Open warning. When used with an optional magnetic contact or built -in magnetic contact of the lock, if the door is opened by force, or if the door is opened after 60 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate. Enter Master code # or valid user card /PIN to silence

Programming Step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. To disable door open detection **OR** 2. To enable door open detection	**5 0 #** *(factory default)* **5 1 #**

Set Strike-out Alarm

The strike-out alarm will engage after 10 failed card attempts (Factory is OFF). It can be set to deny access for 10 minutes (61#) or engaging or disengage only after entering a valid card/PIN or Master code (62#).

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Strike-Out OFF **OR** 2. Strike-Out ON **OR** 2. Strike-Out ON (Alarm)	**6 0 #** *(factory default)* **6 1 #** Access will be denied for 10 minutes **6 2 #** Silence alarm
3. Exit	*

Set Audible and Visual Response

Programming Step	Keystroke Combination	
1. Enter Program Mode	* **(Master Code) #**	
2. Control Sounds **OR** 2. Control LED **OR** 2. Control Keypad Backlit	OFF = **7 0 #** OFF = **7 2#** OFF = **7 4 #**	ON = **7 1 #** ON = **7 3 #** ON = **7 5 #** *(factory defaults are ON)*
3. Exit	*	

Master Cards Usage

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

Users Operation & Reset to Factory Default

♦ Open the door: Read the valid user card/Input the valid PIN on the keypad, the door will open.

♦ Remove Alarm: Read the valid user card/Input the valid PIN on the keypad or Input Master Code #

♦

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 or HID 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:

- If no Master Cards added, must press the Exit Button for at least 10 seconds before release

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

Access controller mode

In this mode unit works as controller. This is factory default mode (command **8 0 #**). It's possible to connect additional reader for two way control. To change unit for Wiegand reader mode please use command: **8 1 #** (this mode is describe on next pages) .

KDH-KZ330U/H/M
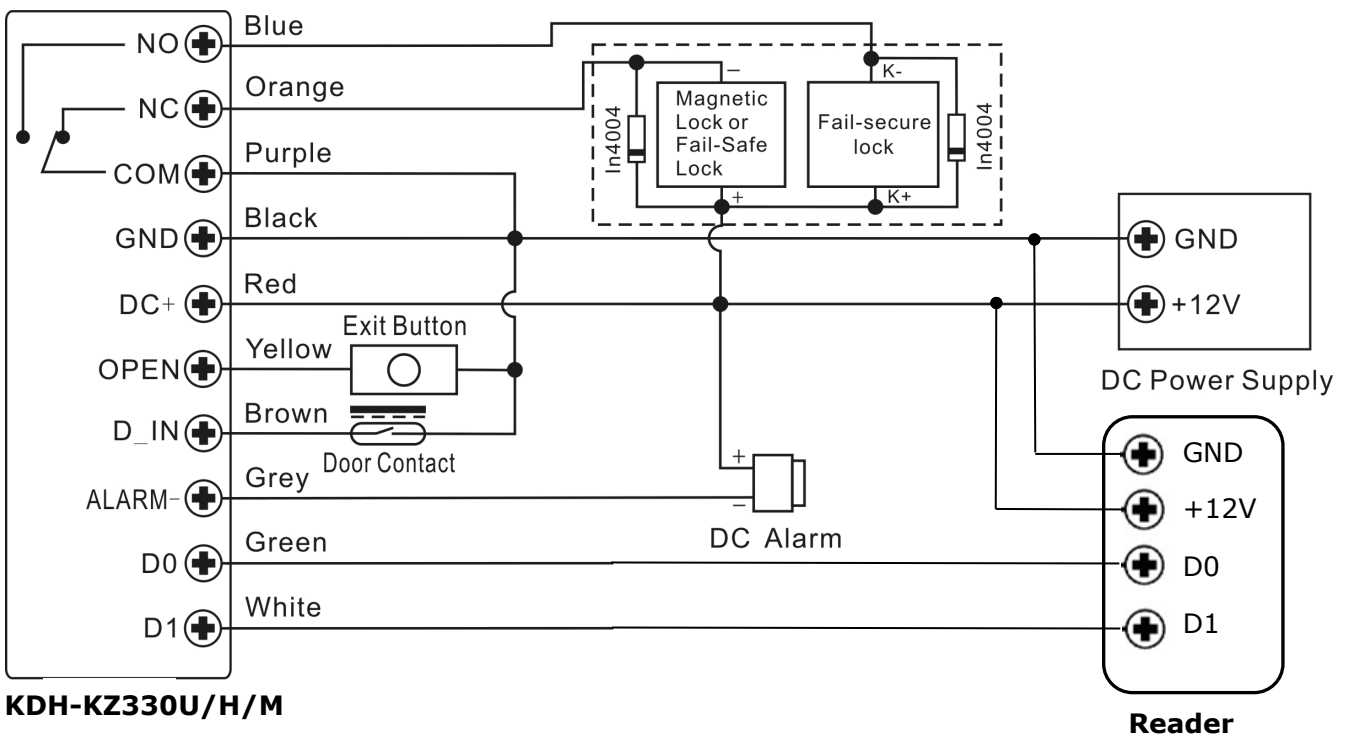
Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4004 is included in the packing)

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 bits	**8 (26~37) #** *(factory default is 26bits)*
3. Exit	*

Programming
- Basic Programming is the same as Standalone Mode
- There are some exceptions for your attention:

KDH-KZ330 connected with External Card Reader:
If EM card reader or HID card reader: users can be added/deleted on either controller or external reader.

KDH-KZ330 connected with Keypad Reader:
The keypad reader can be 4 Bits, 8 Bits (ASCII), or 10 Bits output format.
Choose below operation according to the PIN output format of your reader.

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. PIN Input format	**8 (4 or 8 or 10) #** *(factory default is 4 bits)*
3. Exit	*

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

Add PIN Users:
To add PIN users, after entering into the program mode, PIN(s) can be input/added on either controller or the external Keypad Reader, except when the Keypad Reader is 10Bits virtual card number output, the PIN(s) can only be input/added through the Keypad Reader.
**Delete PIN Users:** the same way as add users**.**

Notes:
User ID number: Assign a user ID to the access card in order to track it. The common user ID number can be any number from 1~598, the panic user ID is from 599~600. IMPORTANT: User IDs do not have to be proceeded with any leading zeroes. 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, HID and Mifare Proximity card or Tag.
PIN: Can be any 4~6 digits except 8888 which is reserved.

WIEGAND READER MODE

KDH-KZ330 can work as Standard Wiegand Reader, connected to the third party Controller, command **8 1 #**

KDH-KZ330 as reader   Controller

Red — +12V
Black — GND
Green — D0
White — D1
Brown — LED
Yellow — BZ
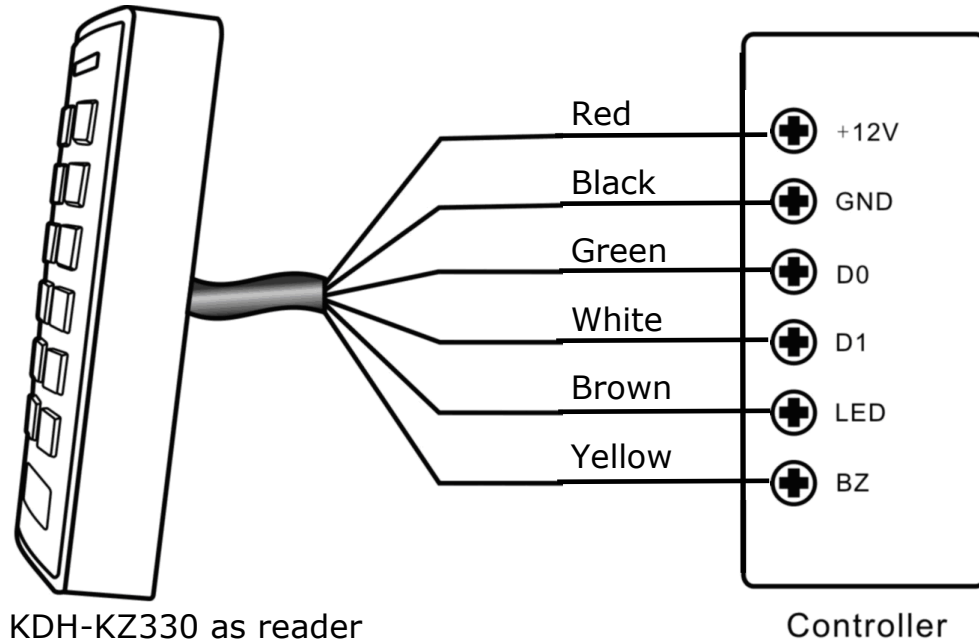
Notes:
When set into Wiegand Reader mode, nearly all settings in Controller Model will become invalid. And Brown & Yellow wires will be redefined as below:
-Brown wire: Green LED light control
-Yellow wire: Buzzer control
If you need to connect Brown/Yellow wires:
When the input voltage for LED is low, 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	**8 (26~37) #** *(factory default is 26bits)*
PIN output bits	**8 (4 or 8 or 10) #** *(Factory default is 4bits)*
3. Exit	*

Remarks: 4 means that reader send to the controller 4 bits after press each key on keypad, 8 means 8 bits, 10 means 10 digits virtual number.

Interlock

The KDH-KZ330 supports the Interlock function. It is of two readers for two doors, and mainly used for banks, prisons, and other places where a higher level security is required.

Connection Diagram:
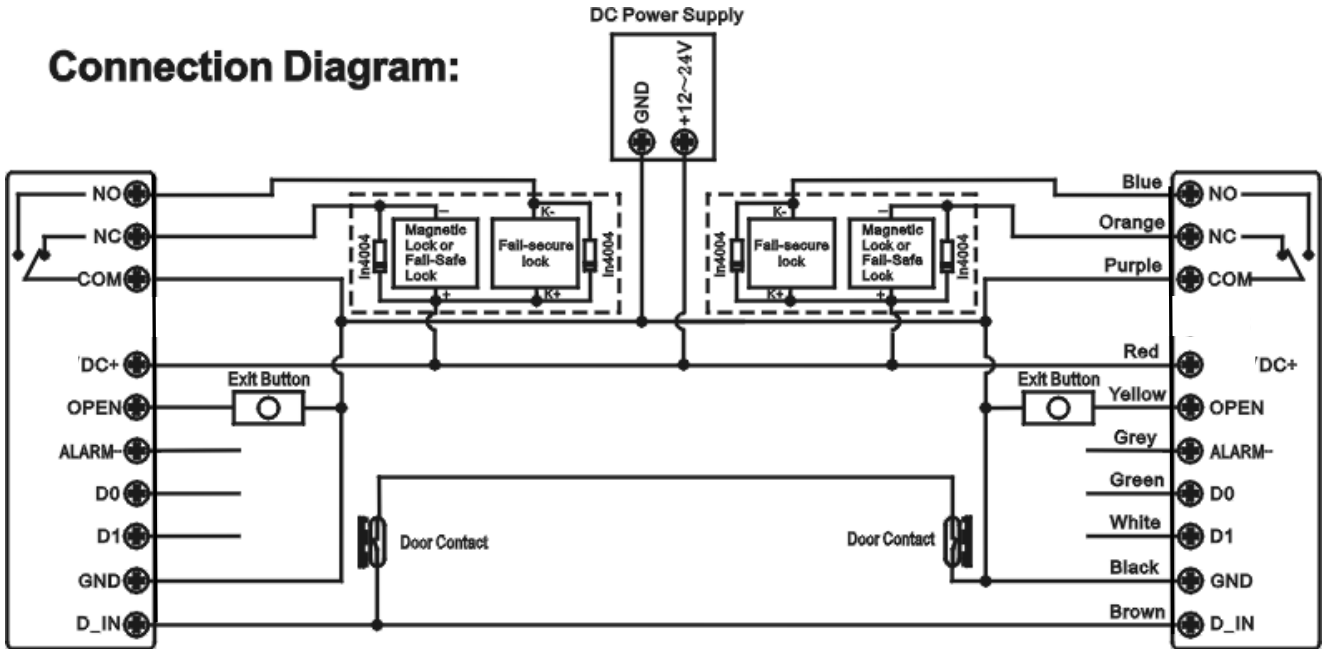
KDH-KZ330U/H/M   **KDH-KZ330U/H/M**

Remarks: The Door Contact must be installed and connected as the diagram.

Let's name the two readers A and B for two doors 1 and 2
Step 1:
Enrol the users on Reader A, then transfer the users' information to Reader B by "User Information Transfer" function.
Step 2:
Set both of the two readers (A and B) to Interlock function

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Interlocked-OFF **OR** 2. Interlocked-ON	**9 0 #** *(factory default)* **9 1 #**
3. Exit	*

The interlock operation is finished,
When and only door 2 is closed, the user can read the valid card (or input PIN) on Reader A, door 1 will open; then when and only door 1 closed, read valid card (or input PIN) on Reader B, door 2 will open.

NOTES