Installation Manual

INTEGRATED ACCESS CONTROLLER

KZ-500-U/H

KaDe

VERSION 1.0

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1. Introduction

KZ-500-U/H Integrated access controller

The KZ-500-U/H is fully waterproof stand alone Proximity access Reader, which uses advanced microprocessor, equipped with large capacity Flash memory, supports up to10000 cards. It can read both 125KHZ HID card and 125KHZ EM card. It is so easy to add or delete card users by using the master card; besides, with infrared remote control programmer, the user can set the reader by themselves.

The KZ-500-U/H not only has the features of low power consumption, automatic selection of lock ,anti vandal alarm and exit button, but also has the protective functions against input over voltage and outputs short-circuit. The block enrollment function makes it can enroll maximum 10,000pcs HID cards or EM cards at a time within 10 minutes.

These features make the KZ-500-U/H easy in operation, safe and reliable; it is an idea choice for door access.

Features

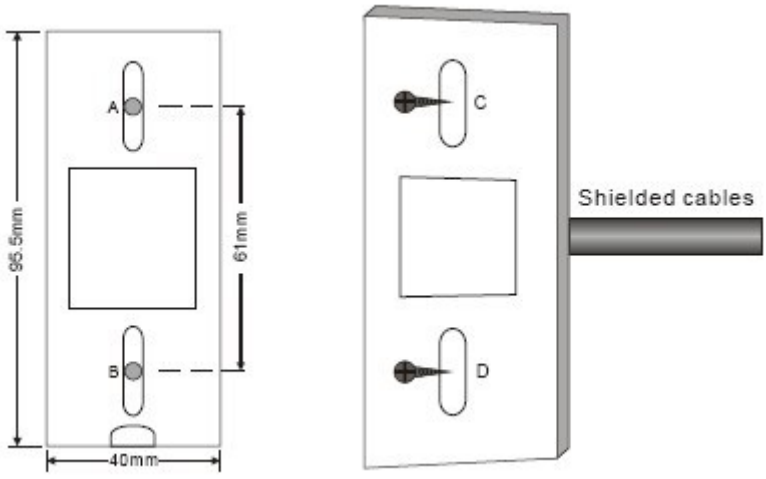
- Standalone controller with built in Card Reader
- Waterproof, confirm to IP68
- Use capacity: 10,000
- Card interface: HID&EM 125KHZ card/tag
- Remote control for programming
- With Manager cards for fast add and delete users
- Card block enrollment
- Can enroll maximum 10,000pcs cards at a time within 10 minutes
- Wiegand 26 input/output
- Can be used as salve reader
- 2 pcs of KZ-500 can be interconnected
- Can be used as controller by connection Wiegand reader
- Anti-passback function
- Alarm signal output, Door open detection
- LED display
- Full of 10000 users, recognizing speed <15ms.

Specifications

Supply Voltage	DC12V±10%
User capacity	10,000
Sleeping Current	<15mA
Card type	HID&EM 125khz Card/Tag
Card Reading Distance	4～8cm
Wiegand interface	Wiegand 26
Operating Temperature	-25～60℃
Operating Humidity	20%～98%
Environment	Confirm to IP68
Lock output load	Max20A
Alarm output load	Max20A
Adjustable Door Relay Time	00-99 seconds
Adjustable Alarm Time	0- 3 minutes
Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm
Manager card	Two
Dimensions	103*48*23mm

Installation

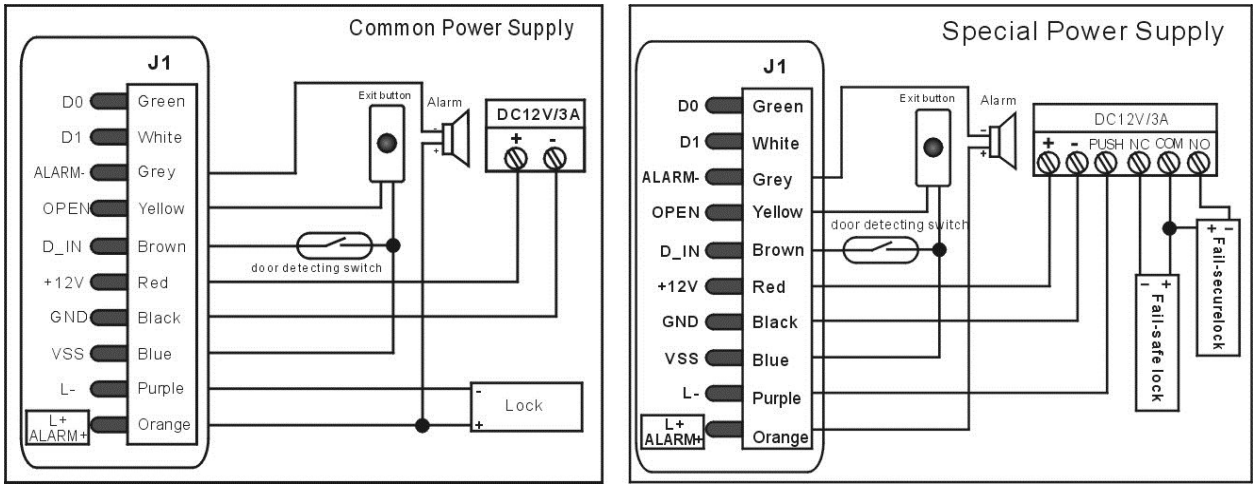
- Drill holes on the wall or prepare the cassette.
- Wire through the hole, and blanket the unused cable in case of short circuit.
- Fix the back cover firmly on the cassette or the wall.
- Attach the reader to the back cover.



Wiring

No	Color	Function	Description
1	Green	D0	Wiegand output, input signal wire D0
2	White	D1	Wiegand output, input signal wire D1
3	Grey	ALARM+	connecting to the negative pole of the alarm equipment
4	Yel-low	OPEN	To connect to one part of Exit Button
5	Brown	D_IN	Door Contact input,
6	Red	12V	(+) 12Vdc Positive Regulated Power Input
7	Black	GND	(-) Negative Regulated Power Input
8	Blue	VSS	the negative pole of the controller, connect to the other part of Exit button and door contact
9	Pur-ple	L-	Connect to the negative pole of the Lock
10	Or-ange	L+/ Alarm+	Connect to the positive pole of the lock and alarm equipment

Connection Diagram



Note: Do not power on until all wiring has been completed

To Reset to Factory Default

Power off, use the supplied Contact Pin to short out the 2P socket on the main board, then power on, if successful, the beeper will beep twice, the LED shines in orange, remove the Short Pin, then read the Two Manager cards (Manager add card firstly, Manager delete card secondly), after that the LED turns in red, means reset to factory default setting successfully.

Remarks: Reset to factory default setting, the users' information enrolled is still retained. When
Re-set to Factory setting, the two Manager cards must be re-enrolled.

Sound and Light indication

Operation status	LED	Buzzer
Reset to factory default setting	Orange	Two short ring
Sleeping mode	Red shines slow	
Operation successful		Short ring
Enter into programming mode	Red shines	Short ring
Enter into setting	Orange shines	Short ring
Exist from programming mode	Red shines slow	Short ring
Operation failed		Three short ring
Open the door	Green shines	Short ring
Alarm	Red shines fast	Alarm

Detailed Programming Guide

User settings

There are 2 ways to add and delete users: A - By manager card; B - By remote control	
A - By Manager card (The most convenient way)	
To Add user by Manager Add Card	Manager add card Read card Manager add card Cards can be added continuously.
To Delete User by Manager Delete Card	Manager delete card Read Card Manager delete card Cards can be deleted continuously.
B- By Remote control	
Enter into the programming mode firstly	
To Enter the programming mode	* Manager Password # 888888 is the default factory master code
Remarks: All the steps below must be done after enter into programming mode	
To change the master code	0 New Password # Repeat New Password # The master code must be 6～8 digit number.
To add a card user (Method 1) This is the faster way to enter cards using ID number auto generation. The card can be either be presented or input the 8 digit card number from the card can be manually entered	1 Read Card # or 1 Input Card number (8 digit) # Card can be added continuously without exiting programming mode. The card number is the last 8 digits of the number printing on the card.
To add a card user (Method 2) This is the alternative way to enter cards using User ID Allocation. In this method a User ID is allocated to a card. Only one user ID can be allocated to a single card.	1 ID number # Read Card # or 1 ID number # the Card number (8 digits) #
To add a **series cards** users – **Block Enrollment** (It can enroll maximum 10,000pcs cards at a time within 10 minutes.)	8 ID number # 8 digits Card number # Card quantity # Card quantity is between 1-10,000. Of the 8 digits card number, for HID card, they are the 3 digits of a facility code and 5 digits of a serial number; for EM card, they are the last 8 digits on the card.
To delete a **card** user. Note users can be deleted continuously without exiting programming mode	2 Read Card # or 2 Card number #
To delete **ALL users.** (Note: This option will delete all users but Manager Cards. Be careful with use)	2 0000 #

Door setting

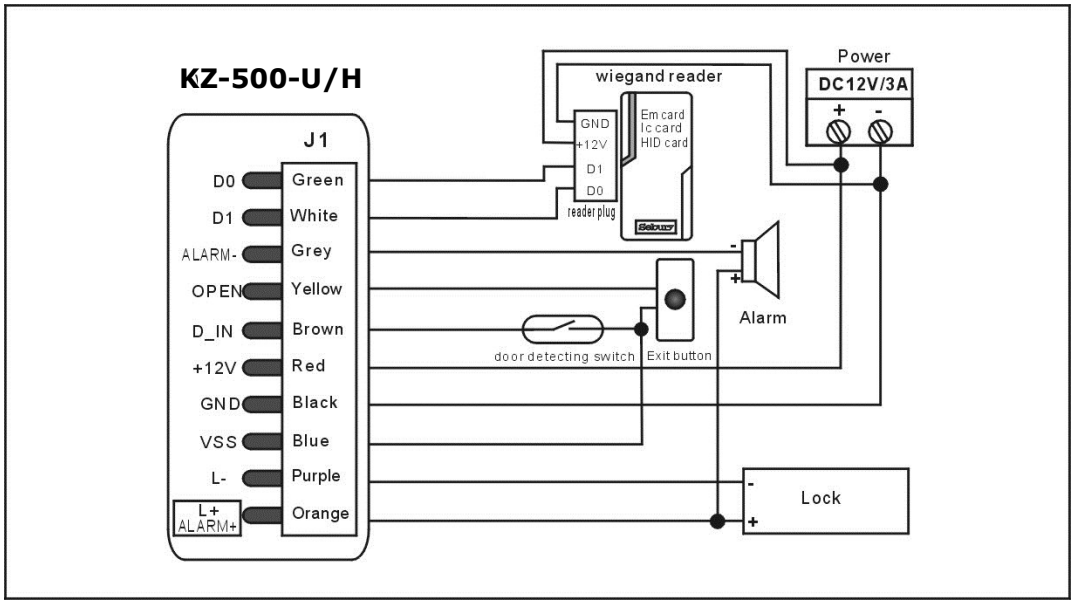
Lock power setting	
Fail secure (Unlocked when power on) This is the factory default, 3 seconds.	4 0～99 # 0-99 is to set the door relay time 0-99 seconds.
Fail safe (unlocked when power is off)	5 0～99 # 0-99 is to set the door relay time 0-99 seconds.
Anti-submarine Settings	
Anti-submarine Disabled (Factory default) Anti-submarine Master Mode: Anti-submarine Auxiliary Machinery Mode (Note: the detailed wiring diagram and illus-trate ,please refer to “Advanced application”	 3 0 # 3 1 # 3 2 #
Door open detection 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 forced open, or if the door is opened after 120 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate.	
To disable door open detection. (Factory default)	6 0 #
To enable door open detection	6 1 #
Security Mode Setting	
Reader Lockout & Alarm Output options. If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period either the reader will lockout for 10 minutes or the alarm will operate for 10 minutes, depending on the option selected below.	
Normal status (No lockout or Alarm)	7 0 # (Factory default setting)
Keypad Lockout	7 1 #
Alarm Output	7 2 #
LED Control	
LED disabled	7 3 #
LED enabled	7 4 #
Alarm output time	
To set the alarm output time (0-3 minutes) Factory default is 1 minute	9 0～3 #
To remove the alarm	
To remove the Door Forced Open warning	Read valid card or Master Code#
To remove the Door Open Too Long warning	Close the door or Read valid card or Master Code #

To Unlock the door	
To Unlock the door	Read User card (Note that Manager Card can’t be used as User Card to unlock the door.)

Advanced Application

KZ-500 operating as a Controller

In this mode the KZ-500 supports a Wiegand 26 bit input so an external Wiegand device with a 26 bit output can be connected to the Wiegand input terminals. Cards are required to be added at the external reader, except where an external ID reader is used, in this case cards can be added at either reader or controller. See figure 1.



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Two KZ-500 units interconnected for a single door

In this mode two KZ-500 units are used for a single door, one for entry and the other for exit. Either device acts as the controller and reader at the same time. Users can be enrolled on either of the devices. In this mode the user capacity for one door can be up to 20000. The setting of the two KZ-500 units must be the same including the master code. See figure 2.

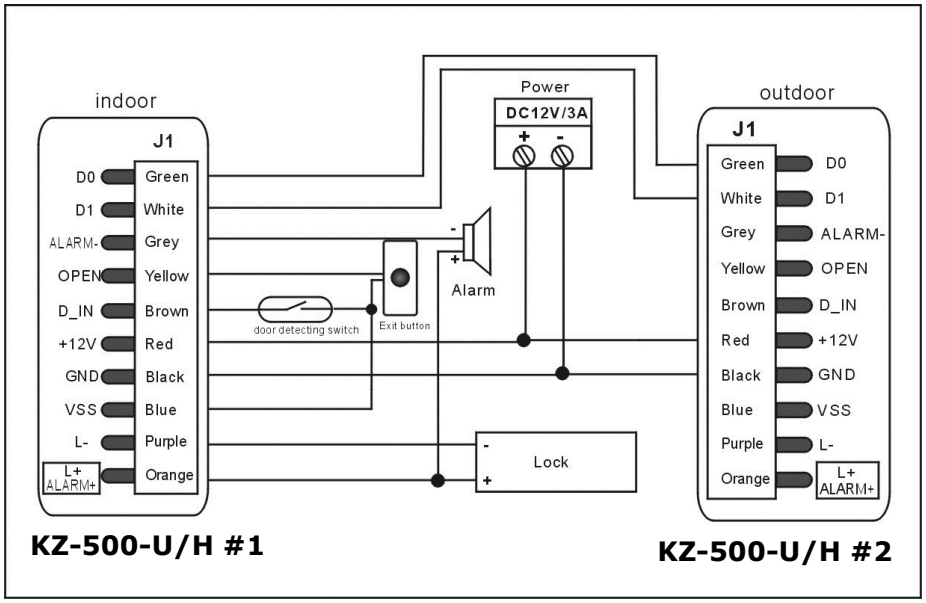

Figure 2.

Anti-passback function for single door (3 1 #)

The connection diagram is as figure 1. Install one Wiegand reader (or a KZ-500 without user information as reader) outside the door, connecting to one KZ-500 Controller inside the door, which acts as the Anti-passback Master unit. Of the two devices, they build up an anti-passback system for single door. The operation and function is as below:

4.1 Set the needed function and enroll the User Cards on the inside KZ-500 Anti-passback Master unit.

4.2 With the valid user card, the user can only enter the door from the outside reader, and exit from the inside KZ-500 Controller. On the other hand, without entering record from the reader, the user can't exit from the controller inside, also, the user can't enter in and exit twice continuously.

Anti-passback function for 2 doors

The connection diagram is as Figure 3. Door 1 with one KZ-500 , and Door 2 with one KZ-500, set one KZ-500 on Door 1 as the Anti-passback Auxiliary unit (3 2 #), and set the other KZ-500 on Door 2 as the Anti-passback Master unit (3 1 #). Then they build up a two doors anti-passback system, which is normally used for parking lot…etc

The operation and function is as below:

5.1 Set the needed function and enroll the User Cards from KZ-500 - Anti-passback Master unit on Door 2.

5.2 With the valid user card, the user can only enter in from Door 1, and exit from Door 2. On the other hand, without entering record from the Auxiliary unit, the user can't exit from the Master unit or Auxiliary unit, also, the user can't enter in and exit twice continuously.

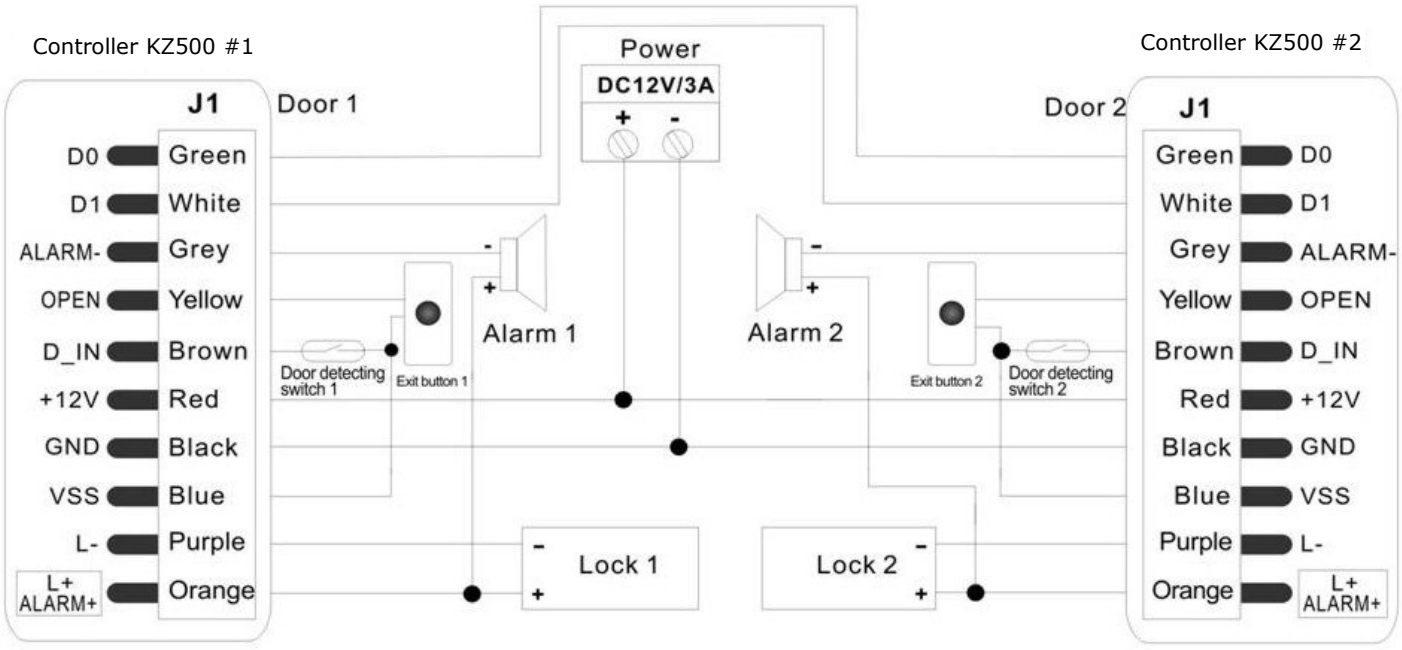

Figure 3.

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