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DELTA ATLO-KRMD-520 Code Lock User Manual

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DELTA ATLO-KRMD-520 Code Lock



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Description

The unit is single door multifunctional standalone access controller or a Wiegand output keypad or card reader. It is suitable for mounting either indoor or outdoor in harsh environments. It is housed in a strong, sturdy and vandal proof Zinc Alloy electroplated case which is available in either a bright silver or matt silver finish. The electronics are fully potted so the unit is waterproof and conforms to IP68. This unit supports up to 2000users in either a Card, 4 digit PIN, or a Card + PIN option. The inbuilt card reader supports 125KHZ EM cards,13.56MHz MI fare cards. The unit has many extra features including lock output current short circuit protection, Wiegand output , and a backlit keypad. These features make the unit an ideal choice for door access not only for small shops and domestic households but also for commercial and industrial applications such as factories, warehouses, laboratories, banks and prisons.

Features

- Waterproof, conforms to IP65/IP68
- Strong Zinc Alloy Electroplated anti-vandal case
 Full programming from the keypad
- 2000 users, supports Card, PIN, Card + PIN
- · Can be used as a stand alone keypad
- · Backlight keys
- Wiegand 26 input for connection to external reader
- · Wiegand 26 output for connection to a controller
- Adjustable Door Output time, Alarm time, Door Open time
- Very low power consumption (30mA)
- Fast operating speed, <20ms with 2000 users
- · Lock output current short circuit protection
- · Easy to install and programme
- Built in buzzer

· Red, Yellow and Green LEDS display the working status

Specification

Input Voltage AC/DC 12V
Idle Current <25mA
Lock output load <1A
Alarm output load <1A
Ring bell load <1A

Card reading distance 40mm Max

Card Frequency: 125KHz for EM and HID 13.56MHz for MI fare

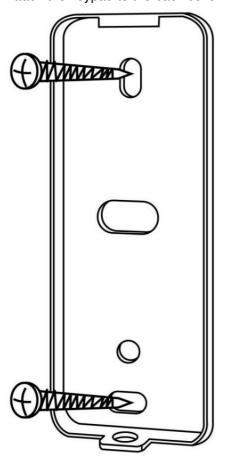
Card transmission format 26-37 bit Wiegand

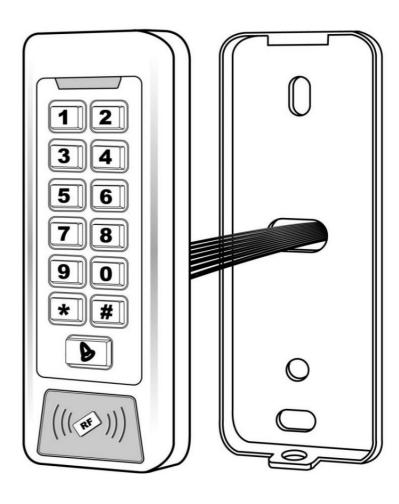
Keypad transmission format: 4bit,8bit and Virtual card number

Operating Temperature:-45°C 55° C **Operating Humidity:** 0% 95%

Installation

- Remove the back cover from the keypad using the supplied special screw driver
- Drill 2 holes on the wall for the Self tapping screws and I hole for the cable
- Put the supplied rubber bungs to into the two holes
- Fix the back cover firmly on the wall with 2 Self tapping screws
- Thread the cable through the cable hole
 Attach the keypad to the back cover.





Wiring

ZONE1				ZONE2		
No.	Marks	Color	Description	Marks	Color	Description
1	BELL_A	pink	Doorbell butto	D0	green	Wiegand output D0
2	BELL_B	pink	Doorbell butto	D1	white	Wiegand output D1
3	ALARM+	red	Alarm anode	AC1	red	AC1 (+12V)
4	AC2	black	AC input	GND	black	GND
5	OPEN2	yellow	Exit button	OPEN1(LED)	yellow	Exit button (for green LED)
6	D_IN2	brown	Door contact	D_IN1(BZ)	brown	Door contact(for buzzer)
7	ALARM2-	gray	Alarm 2	ALARM1-	gray	Alarm 1
8	NO2	Blue	Relay 2 NO e	NO1	Blue	Relay 1 NO end
9	COM2	purple	Relay2Com	COM1	Purple	Relay1 Com
10	NC2	orange	Relay2 NC en d	NC1	Orange	Relay1 NC end

Sound and Light Indication

Operation	LED Color	Buzzer
Standby	Red flash	
Press key		Di
Read card	Green	Di-
Door 1 Open	Green	Di-
Door 2 Open	Green Flash	Di-
Operation Successful	Green	Di-
Operation Failed		Di Di Di
PIN Inputting	Red	
Card & PIN Reading	Red	
Multi Card Reading	Red	
Under Menu	Red	
Under Setting	Orange	
Manager Card Enter	Orange	Di Di
Manager Card Exit	Red Flash	Di-
Alarm	Red Quick Flash	Alarm

Quick Programming Guide

Administrator Setting

Stan d by	Mast er Co de	Menu	Setting	Remarks	Functions
Red Flash	Red	Red	Orange		
		00	New master code# Repeat new master co de # (Note: Code length:6-8 digits)	Factory default: 999999	Change the master cod e
		01	Read Manager Add Card	Default: Zone 1	Set Manager Add Card
	Mast er co de#	02	Read Manager Delete Card		Set Manager Delete Ca
		03	Read Anti-duress card (Zone 1)		Set Zone1 Anti-duress card
*		04	Read Anti-duress card (Zone 2)		Set Zone2 Anti-duress Card
		05	Anti-duress PIN# (Zone 1)		Set Zone1 Anti-duress PIN
		06	Anti-duress PIN# (Zone 2)		Set Zone2 Anti-duress PIN
		07	0000#		Delete All Users
		51			Master open Lock 1
		52			Master open Lock 2

User setting for Zone 1

Stand by	Maste r Cod e	Menu	Setting	Remarks	Functions
Red F lash	Red	Red	Orange		
			Read card		
			User ID number# read card		To add and ware
		11	Card number#	Users can be added continuously without exiting programming mode	To add card users
			ID number # card number#	ogramming mode	
			User ID number # PIN#		To add PIN users
		code	Read card		
	Maste		User ID number#	Users can be deleted continuously without exiting programming mode	To delete users
			Card number#	ng programming mode	
*	r code #		0#		Entry by Card
			1#	Default 2	Entry by card + PIN
			2#		Entry by either Card or PIN
		14 0-9	0-99#	Default 5	Set door relay time
		15	0#	Default 0	Relay Setting-Pulse mode
		15	1#	Delault	Relay Setting-Toggle mode
		16	1-10#	Default 1	To set open door by multi c ards
		17	User ID number#, card nu mber#, card quantity#		To add a series cards users

System Setting

Stand by	Master Code	Menu	Setting	Remarks	Functions
Red Fl ash	Red	red	orange		
		30	0-15#	Default 0	To set facility code
			0#		Wiegand reader
	Master code #	code	1#	When device res et to factory default ,the setti ng is still valid	Standalone for single door (Fact ory default setting
			2#		Standalone for two doors
*			3#		With external reader for two doo
			4#		Two units interlocked for two do ors
			5#		Anti-pass back for single door
			6#		Anti-pass back for two door
			1#		Safe mode 1
			2#	1	Safe mode 2

User optional setting

Stand by	Mast er Co de	Men u	Setting	Remarks	Functions	
Red Flash	Red	red	orange			
	Mast er co de #	41	0#		Buzzer will be be in silence except enter the programming mode	
			1#	Default 1	Buzzer will sound when press the key	
		er co 42	0#		Disable keypad backlight	
*			1#		Enable keypad backlight	
		de #		2#	Default 2	Automatic mode, Normally it is off(sleeping mode) but wake up with human approach
		43	0#		LED Light Disable when stand-by status	
			1#	Default 1	LED flash when stand-by status	

Instruction:

- 1. Master code must be 6-8 digits, Anti-duress PIN must be 8 digits, user PIN is 4-6 digits, The 1st digit of user PIN and Anti-duress PIN in Zone1 must be 1; The 1st digit of user PIN and Anti-duress PIN in Zone 2 must be 2.
- 2. the user ID number is any number among 1-2000, Invalid 0 can be omitted; card number must be 8 or 10 digits,

if the card number is less than 8 or 10 digits, input 0 before the card number.

- 3. Door open time is 0-99 second,0=50mS
- 4. when register one card user into the device, the device will automatically generate a PIN 1234, this PIN cant open the door door.
- 5. when an invalid master pin is pressed the device will go back to the standby status after 5 seconds, when a valid PIN is entered it will go back to standby status after 30 seconds.
- 6. in operating the keypad, pressing # means to confirm the input digits ,In operation of a cycle adding or deleting cards, pressing # means to end the cycle operation and back the up operation; pressing * means to exit the operation.
- 7. When add a series cards, this unit will make the ID number and card number initial value; after adding one user, then it will increase the ID number and card number automatically ,Until the specified number of card is added. the card number must be consecutive card quantity is between 1-2000.
- 8. Working mode and keypad transmission format have been set before shipping, customer can change according to requirement, but when device reset to factory default, the setting is still valid.
- 9. when users of Zone 1 is registered successfully, LED will turn green; when users of Zone 2 is registered successfully, LED will be green flash.

Administrator setting

Administrator setting on keypad

Press * Master code # factory default: 999999,

Change the master code

Press | 00 | new code # | repeat new master code# | Note: Master Code | length: 6~8 digits

Set Manager card

Set manager add card

Press 0 1 read manager add card

Set manager delete card

Press 0 2 read manager delete card

Note: when add the new manager card, the new one will automatically cover the old card, only one manager card for one device.

Set Anti-duress card

Set Anti-duress card for Zone 1

Press 03 read anti-duress card (Zone 1)

Set Anti-duress card for Zone 2

Press 04 read anti-duress card (Zone 2)

Note: when add the new anti-duress card, the new one will automatically cover the old card, only one anti-duress card for one device.

Set Anti-duress PIN

Set Anti-duress PIN for Zone 1

Press 05 8-digit duress PIN#(Zone 1)

Set Anti-duress card for Zone 2

Press 06 8-digit duress PIN#(Zone 2)

Note:

- 1. the 1st digit must be 1 for Zone 1
- 2. the 1st digit must be 2 for Zone 2
- when set the new anti-duress PIN, the new one will automatically cover the old anti-duress PIN, only one antiduress PIN for one device.

Delete all users

Press 07 0000 #

Note: both zone 1 and zone 2 will be deleted. This is a dangerous option, so use with care.

Set administer open lock

Set administer open Lock 1

Press 51

Set administer open Lock 2

Press 52

<u>Users setting for Zone 1</u>

1. read card to add user

Press 11 read card # read card ... #

2. use ID Number and read card to add user

Press | 11 | ID number # | read card ... | ID number # read card ... | #

3. use card number

Press 11 card number # ... card number# ... #

Note:

- 1. Card number must be 8 or 10 digits, if the card number is less than 8 or 10 digits, input 0 before the card number
- Automatically increases, the user ID will be generated by the machine automatically, the range is 1 ~
 2000, and

automatically search from 1 to 2000

4. Use ID number and card number to add user

Press | 11 | ID number # | 8-digits card number # ... | ID number # 8-digits card number # ... | #

Note:

- 1. ID number is 1~4 digits, the range is 1~2000, 1,01,001,0001, all these mean ID number 1.
- 2. add card user will generate one "1234 "PIN, this PIN cant open door, only for user modify PIN

5. use ID number and PIN to add user

Press | 11 | ID number# PIN # ... | ID number# PIN# ... #

Note: this fit PIN user, pin is irrelevant with card, the PIN is any 4-6 digits,1st digits must be 1 for Zone 1 with

the exception of 1234 which is reserved.

Delete user

1. read card to delete user

Press 12 read card read card ... #

2. use ID number to delete user

Press | 12 | ID number # | ID number # ... #

3. use card number to delete user

Press 12 card number # card number # ... #

4. delete all users

Press 07 0000 #

Note: both zone 1 and zone 2 will be deleted.

Set opening door mode:

1. Entry is by card only

Press 13 0 #

2. Entry is by card and PIN together

Press 13 1 #

3. Entry is by card or PIN (factory default)

Press 13 2 #

set door relay time

Press 14 0~99 #

Note: 0~99 is to set the door delay time 0-99 seconds, factory default is 5 seconds

Set Relay mode

Relay setting -pulse mode

Press 15 0 #

Every time a valid card/tag read or PIN input, the relay will operate, for the pre-set relay pulse time. (Factory default setting)

Relay setting-Toggle mode

Press 15 1 #

Every time a valid card/tag read or PIN input, the relay changes state, which will not turn back until read card/tag or input PIN again

Set opening door by multi cards

Press 16 card quantity #

Note: the door will be opened only after reading all the valid multi cards up to the card quantity setting. It is only for card entry mode (Factory default setting :1)

Add a series consecutive cards users

Press | 17 | ID number # | card number # | card quantity #

Note: the card number must be consecutive card quantity is between 1~20000; card number is 10 digits or 8 digits

User setting for Zone 2

The method is the same with Zone 1, corresponding menu should be 21,22,23,24,25,26,27

system setting

1. To set facility code

Press 30 0~15 #

Note: code should be 0~15, factory default setting :0

2. Winging Reader

Press 31 0 #

3. standalone for single door(Factory default setting)

Press 31 1 #

4. Standalone for two doors

Press 31 2 #

5. With external reader for two doors

Press 31 3 #

6. Two units interlocked for two doors

Press 31 4 #

7. Anti-pass back for Single door

Press 31 5 #

8. Anti-pass back for two doors

Press 31 6 #

To set wigging format

Press 32 26 34 37 #

Note: factory default setting:26

setting keypad transmission format

Press 33 0~2 #

Note: keypad transmission format is 0 1 2, factory default is 0; when device reset to factory default, the setting is still valid.

Setting alarm time

Press 34 1~3 #

Note:

- 1. factory default is 1 minute
- 2. when device reset to factory default, the setting is still valid.

setting safe mode

1. normal mode (factory default)

Press 35 0 #

2. dead mode

Press 35 1 #

If read invalid card or input wrong PIN 10 times in 10 minutes, system will be dead for 10 mins

3. alarm mode

Press 35 2 #

if read invalid card or input wrong PIN 10 times in 10 minutes, external alarm and built-in buzzer will work.

user optional setting

user optional setting

1. setting keypad tone OFF or ON

Press 41 0 #

The device will be in silence except enter the programming mode

Press 41 1 #

The device will give the voice when press the keys (Factory default setting)

2. setting keypad backlight

Disable keypad backlight

Press 42 0 #

Enable keypad backlight

Press 42 1 #

Automatic mode (factory default setting)

Press 42 2 #

Normally it is off(sleeping mode) but wake up with human approach

3. setting LED light (stand-by status)

Disable LED light

Press 43 0 #

Flash LED light (factory default setting)

Press 43 1 #

Manager card operation

add user for Zone1

Read Manager Add Card, read user cards continuously, read Manager Add card again.

delete user for Zone 1

Read Manager Delete Card, read user cards continuously, read Manager Delete card again.

User Operation

Entry by card mode, Set multi cards to open door when card quantity is 1
 Read user card, lock will be unlocked

Entry by card mode, Set multi cards to open door when card quantity is 2-10
 Read these cards one by one, present each card in 5 seconds, lock will be unlocked

3. Entry by card and PIN

Present card, then press PIN(4 to 6 digits), #, lock will be unlocked

4. Entry by card or PIN mode

Present card, lock will be unlocked Or Press PIN(4 to 6 digits), #, lock will be unlocked

5. Relay mode

Relay setting -pulse mode

every time a valid card/tag read or PIN input, the relay will operate, for the pre-set relay pulse time.

Relay setting-Toggle mode

Every time a valid card/tag read or PIN input, the relay changes state, which will not turn back until read card/tag or input PIN again

6. Modify user PIN (no need enter programming mode)

*, read user card, press old PIN, #, new PIN # new PIN # Or *, press ID number # old PIN# new PIN # new PIN #

Notice: user who don't have user card must get ID number and origin PIN from Admin, Zone 1 users PIN must start with 1, Zone 2 users PIN must start with 2.

Alarm function

- 1. Anti-tamper alarm if the device is disassembled illegally, the buzzer and the external alarm will operate.
- 2. Door contact alarm When connect with door contact, if the door is opened illegally, the buzzer and the external alarm will operate.
- 3. The Anti-duress alarm When read zone 1 anti-duress card/input 8-digit anti duress PIN or zone 2 anti-duress card/input 8-digit anti duress PIN, then press #, The corresponding lock will open, at the same time, the external alarm will operate, but the device buzzer will not operate.
- 4. remove alarm read valid user card, manager card or input master code, then alarm will be removed. If no any operation, alarm will be removed automatically after 1 min.

Multi working mode

There are 7 working mode with this device.1. Wiegand Reader, 2. Standalone for single door, 3. standalone for two doors, 4. with external reader for two doors 5. two units interlocked for two doors, 6. Anti-passback for single door, 7. Anti-passback for two door. The factory default is Standalone for single door (we can change the default model according to customer order). User can modify the working mode, when the device reset to factory default, the setting is still valid.

Wiegand Reader mode

In this mode, the access control works as reader, connected with the common access controller, it has following function. Modify master pin Set facility code Set the card transmission format Set the keypad transmission format Set optional setting Anti-Tamper alarm.

When LED level is low, indicator light(LED) will turn into green, after 30 seconds or LED level rising, LED will back to normal.

When BZ level is low, the buzzer will beep, after 30 seconds or BZ level rising, the buzzer will back to normal. When it used as the reader, both card number and keypad transmits in Winging format, the output data are shown

by the low level of DO&D1 wire: **D0:** low level means 0,green wire **D1:** Low level means 1,white wire

The Pulse width of low level is 100uS, bit period is 1.6mS.

The digits of card number can be set to 26-37 bit, should be matched with the controller. (Factory default is 26Bit). Keypad transmission can be set in the following 3 modes (modes can be set by user).

Model 0: Virtual card number

The reader will transmit the PIN data when it receives the last key(#) press after PIN code

Format: Decimal card number with 10 digits, Facility code(1st~4th digit)+PIN Code(5th-10th digit)

Facility code is any digits between 0~15,PIN code is 4~6 digits

Example: facility code :15

PIN code: 9999

Press 9999 #, then output format will be: 0015009999

PIN code: 999999

Press 999999#,then output format will be 0015999999

Model 1: 4 Bit

The output data is provided in following format after every key is pressed:

key	Output in hex	Output in Binary
0	0	0000
1	1	0001
2	2	0010
3	3	0011
4	4	0100
5	5	0101
6	6	0110
7	7	0111
8	8	1000
9	9	1001
*	А	1010
#	В	1011

Model 2: 8 Bit

The output data is transmitted in following format after every key is pressed:

key	Output in hex	Output in Binary
0	0	11110000
1	1	11100001
2	2	11010010
3	3	11000011
4	4	10110100
5	5	10100101
6	6	10010110
7	7	10000111
8	8	01111000
9	9	01101001
*	А	01011010
#	В	01001011

Standalone for single door

In this mode, the device supports connecting external card reader for exiting door.

The users of Zone 1 or external can open the door by valid card or PIN.

Standalone for two doors

In this mode, users are for controlling two doors. Read valid card or input PIN of Zone 1 on this unit, door 1 will be opened; reading valid card or input PIN of Zone 2 on this unit, door 2 will be opened.

Remark: the common card for Zone 1 and Zone 2 can only open door 1.

With external reader for two doors

In this mode, this unit is for entering door 1, and external reader is for entering door 2.

Read valid card or input of Zone 1 on the machine, door 1 will open; read valid card or input PIN of Zone 2 on external reader, door 2 will open.

Remark: the common card for Zone 1 and Zone 2 can open door 1 on this unit, and open door 2 on external reader.

Two units interlocked for two doors

The interlock function is mainly used in banks ,prisons, and other places where a higher level security is required. When and only door 2 closed, read valid card / input PIN on this machine, door 1 will open; when and only door 1 closed, read valid card/input PIN on external reader, door 2 will open.

Remark: The valid card /PIN is only for users of Zone 1, users of zone 2 are invalid.

Anti-pass back for Single door

In this mode, this unit install outside is for entering door, external reader inside for exiting door, the users can only

enter door when read valid card on the machine, and exit from the inside external reader. If without the entering record from the machine, the users can not exit from the inside reader, also the Users can't enter in twice without the first exit record.

Remark: this is only for card users of Zone 1,PIN users of Zone 1 an all users of Zone 1 are invalid.

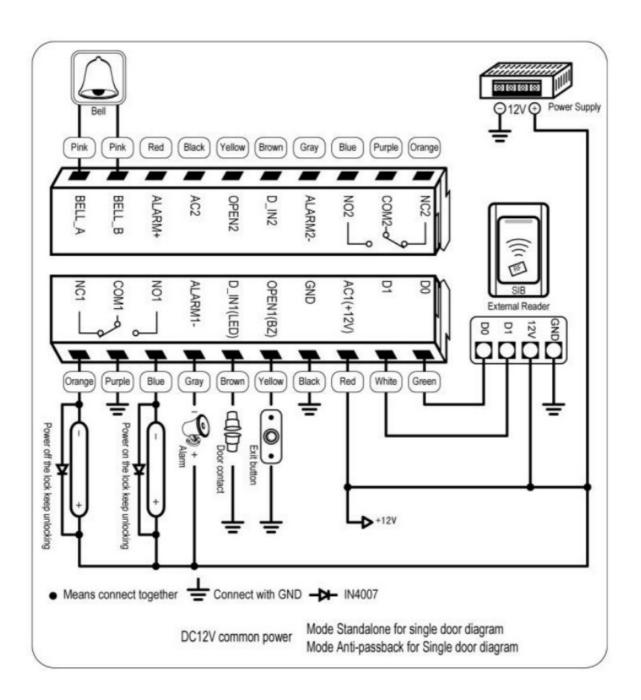
Anti-pass back for two doors

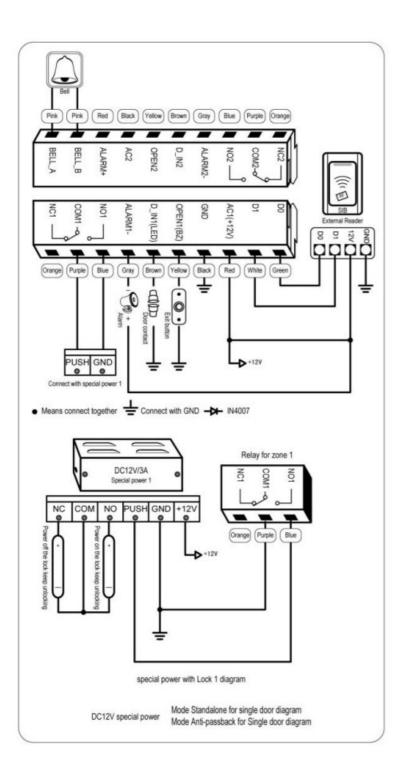
In this mode, this unit on door 1 is anti-pass back master unit, and external reader on door 2 aa the anti-pass back auxiliary unit. then they build up a two doors anti-pass back system, which is normally used for parking lot. The users can only enter door 1 when read valid card on this unit, and exit from door 2 when read valid card on external reader. If without the entering record from door 1, the users can not exit from the door 2, also the users can't enter in twice without the first exit record.

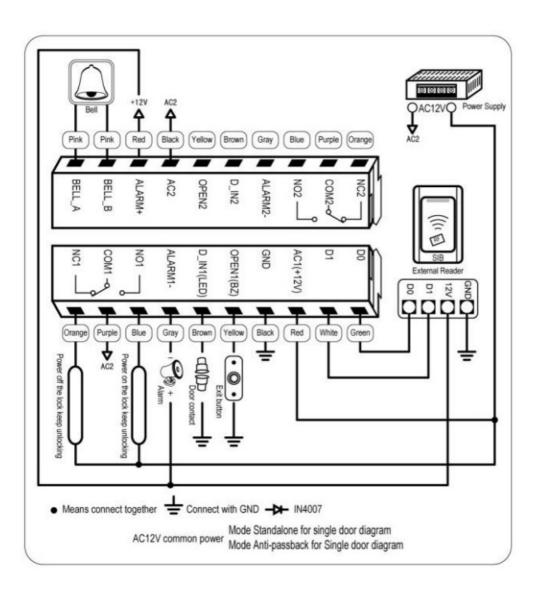
Remark, this is only for card users of Zone 1,PIN users of Zone 1 and all users of Zone 2 are invalid.

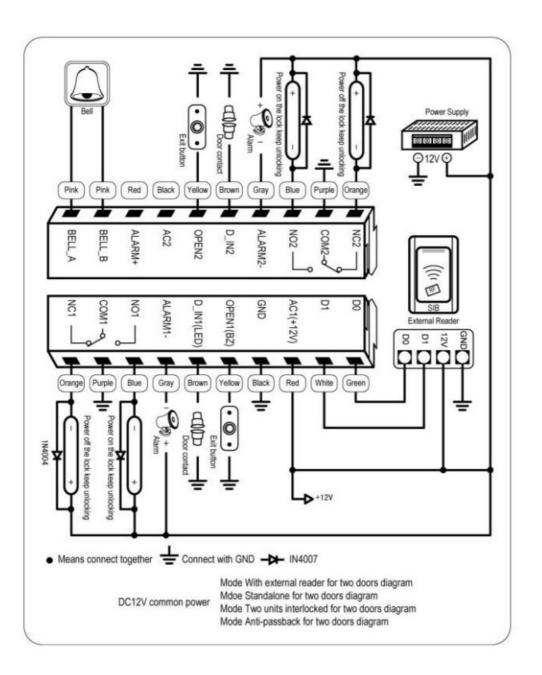
diagram for 7 working mode

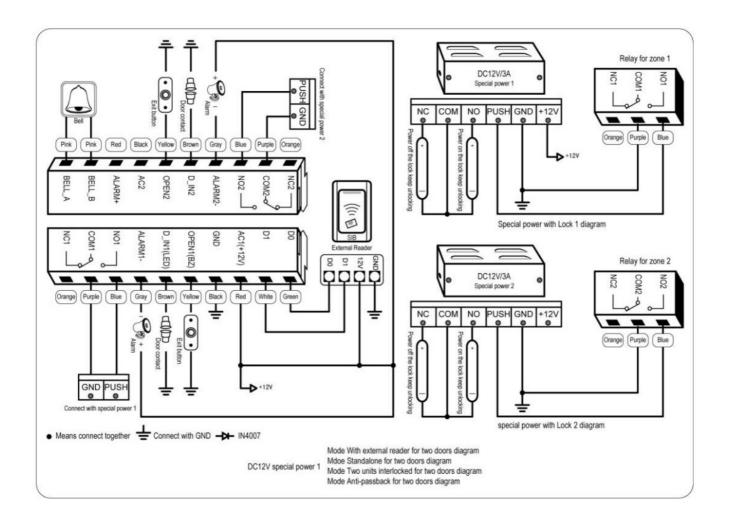
- 1. Wiegand Reader mode
- 2. Standalone for single door
- 3. Standalone for two doors
- 4. With external reader for two doors
- 5. Two units interlocked for two doors
- 6. Anti-pass back for Single door
- 7. Anti-pass back for two doors

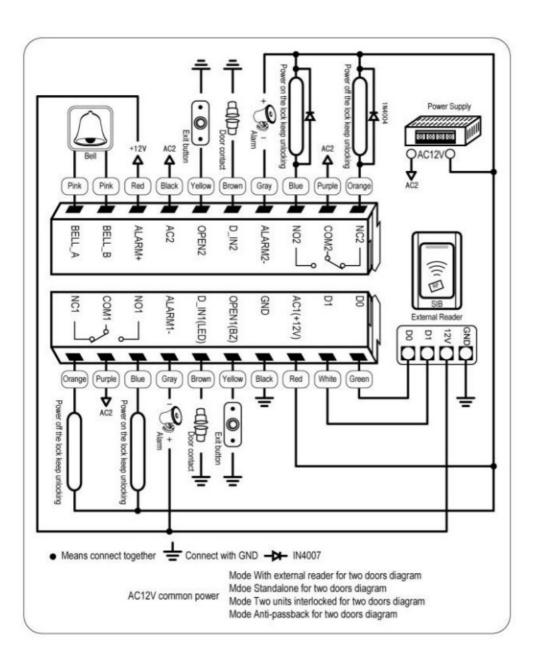


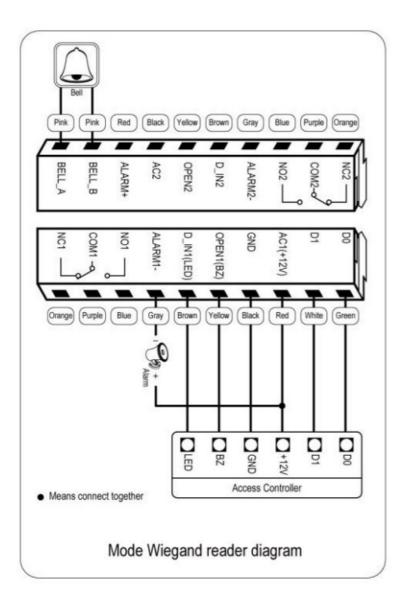












Instance Operations

1. Modify master code as 201200

press * 999999 # 0 0 201100 # 201100 # .

2. Set Anti-duress PIN of Zone 1 as 12012000

press * 201100 # 0 5 12012000 # .

3. add last 8 digit card number as 00967865 and 86998736 user of Zone 1
Press | 201100 | 1 | 00967865 | 86998736 | .

4. add first 10 digit card number as 0098786500 and 8699873600 user of Zone2

Press 201 | 100 # 2 1 0098786500 # 8699873600 # .

5. add ID user 006, PIN 201200, Zone 2 user press | 201100 # 2 1 6 # 201200 # .

6. set open mode of Zone 1 as card + PIN press * 201100 # 1 3 1 # .

- 7. rapid increase consecutive numbers 1000 cards (start with 00987865 ID is 005 press |* |201100 # |1 7 05 # |00987865 # |1000 # |.
- 8. set working mode as reader mode press * 201100 # 3 1 0 # .
- 9. set card output format as WG34

10. set master open lock 1

press * 201100 # 5 1.

Simple Troubleshooting

Code	Fault	Fault Cause	Solutions
1	Close Read ra	Quality of card	Use original card
2	Problem in PI N setting	PIN is not standard Set Password at reader mode	 first number of PIN should be 1 or 2 match with Area number PIN shouldn't be 1234 PIN is 4 to 6 digits don't set PIN at reader mode
3	PIN can't open door	use PIN 1234 entry mode setting	 1. 1234 is original PIN, can't open the door, should be modified as other PIN 2. set open mode as entry by card or PIN.
4	Alarms at nor mal condition	While installation, light leak under bottom	While installation, device should closed to the wall
5			
6	No responds a fter card reading	Units are not in ready mode	Press * key, light flash, units back to ready mode
7	Keypad light is not bright	Mode of keypad light setting is wrong	 set keypad light as shine or auto under auto mode, light shine after press keypad, del ay 30 seconds
8	Can't enter ma ster mode	Forget master code	Reset to Factory Default, master code will be 999999 only installer data is restored, user data will not be affected

To Reset to Factory Default

- a. Disconnect power from the unit.
- **b.** Press and hold # key whilst powering the unit back up.
- **c.** On hearing two "Di" release # key, system is now back factory settings.

Please note only installer data is restored, user data will not be affected.

Packing List

Name	Model/size	Quantity	Remarks
Keypad	CC1/CC2	1	
User manual	CC1/CC2	1	
Self tapping screws	Φ4mm×27 mm	2	Used in fixing
Rubber plug	Ф6mm×30 mm	2	Used in fixing
Star screw driver	Φ20mm×60mm	1	Special for Keypad
two-electrode valve	1N4007	1	

Customer Support

Manufactured in China for:

DELTA-OPTI Monika Matysiak, 60-713 Poznan, 10 Graniczna St., Poland www.shopdelta.eu

Documents / Resources



DELTA ATLO-KRMD-520 Code Lock [pdf] User Manual ATLO-KRMD-520, ATLO-KRMD-510, ATLO-KRMD-520 Code Lock, Code Lock, Lock

References

- ▲ AHD, HD-CVI, HD-TVI, HD-SDI, CCTV Delta
- ▲ AHD, HD-CVI, HD-TVI, HD-SDI, CCTV Delta
- User Manual

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