



Fingerprint Digital Doorlock

# Installation and Operation Manual

User's Guide

### BDS-M100

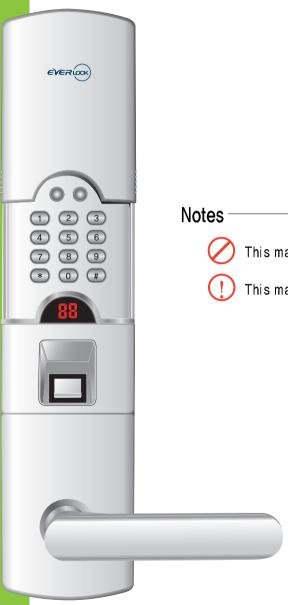
- Product features
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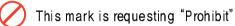
# BNB Solutions Co.,Ltd.



Please read this manual carefully before starting installation/operation
L's strongly recommended that you keep this manual for future reference







This mark is requesting "Caution"







# Cautions before use

This is to keep safety and to prevent damage of property and any inconvenience due to accident. Please read carefully and use correctly.

- Product installation must be performed by a sales agent and/or authorized installation technician.
- Please listen substantially about how to use this product from installing personnel.
- Understand substantially about main functions.
- This product is designed not to be operated against electrical shock of 30,000 [V].







#### Do not disassemble the product

- The inside of this product is composed precisely and complicatedly,
- If this product is disassembled or assembled at will, it may cause fault or not working.





### Do not have the fingerprint sensor strained with dirt.

Keep the sensor surface clean and dry. Wipe gently with clean, soft, dry cloth to remove any dirt, residues, strains or moisture.





### Neverapply impact

▶ It may cause fault and non-operational.





# Do not spray water on doorlock, and do not Install this product at place with a lot of moisture.

➤ This doorlock is not made waterproof, dustproof, it may cause fault due to short circuit of the product.





# Any hole on the door such as the hole through which to accept milk should be completely blocked.

➤ The door lock may be operated through the hole for illegal intrusion



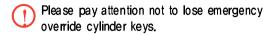


### Pay attention to keep the pin code confidentially.

▶ The pin code should be set and shall be changed periodically.

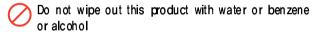






- At least one of the keys should be kept outside or carry it always with you.
- ▶ Do not mark any address or contact points, etc.





The electronic parts may cause fault therefore use Soft fabrics when you're doing cleaning.



Please be careful not to have your fingers trapped during opening or closing the keypad cover.



- In order to make this product full functioning, please read this manual carefully.
  - Without reading this manual, it may cause fault or abnormal operation.



Do not put any inflammable materials near the

It may cause fault and abnormal operation.



Specific fingerprint or children fingerprint may not be well recognized, or the recognition rate may vary according to environments or seasons.





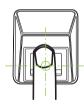
# Correct Fingerprint Placement

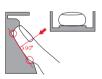
Fingerprint is placed on the center of fingerprint sensor in a consistent way, your finger should be flat, motionless and held with firm pressure in the same way.





 Put the finger on the center of the fingerprint sensor to enter correctly.





 Put the finger flat on the sensor and the position of the finger on the sensor must be as shown in the left pictures.

# ①

#### Caution

- Dirty finger is not recommended to apply not only generating obscure fingerprint image, but also possible scatching the fingerprint sensor. Make your finger clean before use.
- If you have thin finger, please use thumb finger. (especially, woman and children)
- Failure to place finger as shown in the "incorrect fingerprint placement" will be able to result in improper registration.

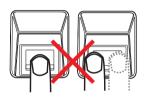




# Incorrect Fingerprint Placement



 The finger must not move until the fingerprint authentication is completed.



 Don't place the finger on the edge of the fingerprint sensor.



 In case you place the finger to side, The error rate rises.



Fingerprint should not be dropped in the fingerprint sensor.



- Don't place your fingertip in the fingerprint sensor.



 Don't drag the finger on the surface of the fingerprint sensor.



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# 1. Product features

#### Opening the door with fingerprints

No more keys, cards or remotes. The ultimate convenience of nothing to carry, forget, pass on, be duplicated or to have stolen. Plus, very easy and quick to enroll and to verify fingerprints.

#### Highest security level

Fingerprint-based identification is the oldest and the most reliable among all the biometric technologies because your fingerprints are unique and invariable through your lifetime.

#### Emergency override cylinder Key

The door can be opened without destroying the doorlock by using emergency key when a breakdown occurred by external influence.

### Various door opening sound for each user

It provides special function who enters only by the own melody that is specified peculiar melody when opening the door.

# Voice guidance

When registering user's fingerprint or pin code, it supports announcement coming out by voice guidance so that user can use more convenient and easy.





#### Etiquette mode

It supports etiquette mode considering circumstance causing discomfort to other person because of some kinds of sounds when using door lock in late night. It can be opened quietly by removing various sounds produced while using doorlock(except alarm sound)

#### ♦ Anti-Panic (The door can be opened only by handle from inside)

If the user is required to escape urgently toward outside due to emergency case such as fire or any other emergency case, even though it is set a dual lock, user can easily escape by turning the handle.

#### Auto locking

The door is automatically locked when the door's dosed, therefore you may not pay attention about locking, and it prevents your neglect to lock the door.

#### Dual lock function

If dual lock function is set indoors, then the door can not be opened by even correct fingerprint or pin code from outside. This function is more safety when all family members are at home.

#### ◆ Impulsive intrusion alarm

If the door is forced to be opened from outside at the time of the door locked, or if someone tries to destroy the lock, then the intrusion alarm sensor is operated and gives very strong alarm to inform an intrusion.





# 2. Specifications and package contents

# Specifications

Category	у	Contents	
Bt	Inside(mm)	272(H)×78(W)×40(D)	
Dimension	Outside(mm)	272(H)×78(W)×35(D)	
Mat eria I		Aluminum	
Color		Silver, Gold and Option (Black, Blue, Red)	
User capacity		Up to 99 users	
Authentication Time		Less than 1 sec.	
Operating temperature		-15°C ∼ 50°C	
Usage voltage		DC 6V	
Battery		1.5V AA × 8EA Alkaline battery	
Battery life		About 1 year (10 time use per day)	
Emergency power source		DC 9V battery	
Emergency override Key		Cylinder key (3 EA)	

<sup>\*\*</sup> Battery life may vary depending on the installation conditions such as temperature, humidity and quality of battery.







# Package contents



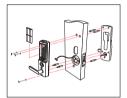
Front Body (Outside)



User's guide



Installation template



Installation sheet



Emergency Keys (3EA)



Mortise



'AA' Alkaline batteries (8EA)

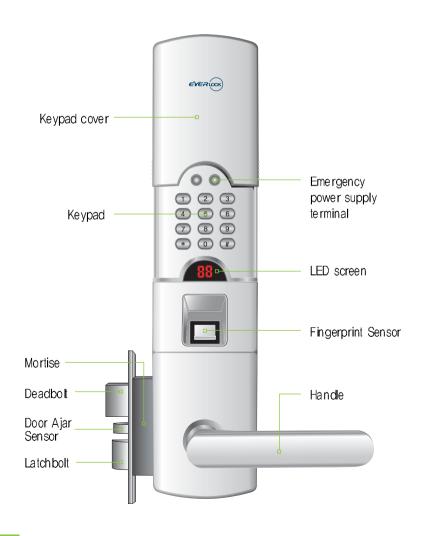


Screws



# 3. Description of components

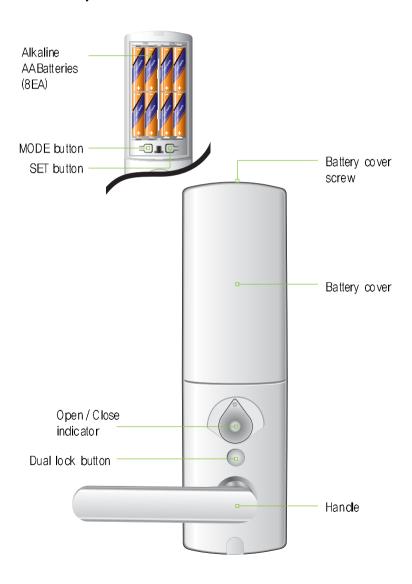
Front body(installed outside of the door)







# Back body(installed inside of the door)





# 4. How to use

# (1) Definition of LED Display

LED screen will be displayed as follows, for user's convenience on operation.

Display	Meaning	Description
8P	OPEN	When door's unlocked
RL	ALL DELETE	Delete all Fingerprints
FU	FULL	Registration capacity is full
<u>up</u>	UP	Pu∥ up a keypad cover
F	FUNCTION 1	Fingerprint registration mode
F2	FUNCTION 2	Pin code change mode
F3	FUNCTION 3	Fingerprint delete mode
FY	FUNCTION 4	Volume level control mode
F5	FUNCTION 5	Door opning sound mode
Lo	LOW BATTERY	Change all batteries
	CLOSE	When door's closed
LB	SYSTEM LOCK	Authentication failure in 5 consecutive
Er	Error	When failed in programming
0 (02 99	ID	Fingerprint registration ID
E 1E5	<b>E</b> RROR <b>1</b> 5	When failed to enter a fingerprint or pin code
	Proceeding	3 steps of fingerprint authenticntion



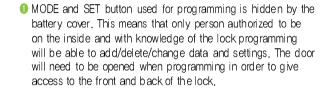


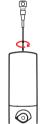


#### (2) How to use

# Helpful hints for programming







MODE and SET buttons are located in the inside of battery cover. You can press the button by removing the battery cover (use a coin or ' - 'driver)





Pull up outdoor keypad cover certainly. In case of did not pull up, the "UP" is displayed on LED screen, only keypad cover is pulled up certainly it progresses in next step.



User can select the menu by using number 2(UP) or 8(DOWN) button. Whenever moving to selected menu, user can hear a voice guidance.



If user press the '#' button, the menu displayed on LED screen in present is selected

#### Reference

If you want to cancel to work during programming, you just press the MODE or SET button, then return to the door opened state(LED displays 'OP'). At this point, If you press the MODE or SET button again, you can restart programming.



# 1) How to register fingerprint



- Press the SET(fingerprint registration) button
  - Open the battery cover and then press the SET button
  - ※ You can also register fingerprint as follows, Pressing MODE button → LED displays 'F1' → Pressing '#' button



- Select a melody(ID) you want
  - ID which is not presently registered is displayed on LED screen, then select desired melody(ID) by using number 2 or 8 button.



- 8 Enter your fingerprint
  - Do not move absolutely until registration is completed after put finger on fingerprint sensor when wanted melody is sounded.



- Onfirmation of authentication steps
  - 3 steps of fingerprint authentication are displayed in order on LED screen and then registration is completed when voice announces "registered".
- 6 After completed fingerprint registrations, please check whether the door is opened normally with the registered fingerprint.



#### Caution

- SET or MODE buttons operate only with the door opened.
- ▶ Please, see "Correct fingerprint placement".
- When you register fingerprint first time or change it, the door can be locked by mistake, therefore the registration should be done only with the door opened.
- A very firm pressure when placing the finger gives the best image, but the finger must not move during scanning.
- Moist fingers give better images than dry ones, if on cold or dry days, you have difficulty. For example, try moistening your finger with your breath or a little moisture.
- Very dirty or unclear fingers are obviously not recommended, not only for obscuring the fingerprint but also for the risk of scratching the window.





# 2) How to delete fingerprints



- Press the MODE button
  - Open the battery cover and then press the MODE button.



- Select a fingerprint delete mode(F3)
  - When 'F3' is displayed on LED screen by using number 2 or 8 button, press the '#' button.



- 8 Delete a fingerprint
  - Select ID to be deleted by pressing number 2 or 8 button and then press '#' button then the fingerprint is deleted.



When ID to be deleted is selected and 'AL' is displayed on LED screen, if '#' button is pressed then all registered fing entrints are deleted.





# 3) How to change the pin code



- Press the MODE button
  - Open the battery cover and then press the MODE button.



- Select a pin code change mode(F2)
  - When 'F2' is displayed on LED screen by using number 2 or 8 button, press the '#' button.



- 8 Enter a new pin code
  - Enter a pin code you want and then press the '#' button.
     (you can enter 4 digits to 12 digits)



When pin code has been changed, then you must check whether the door is opened normally with the new pin code.

# Cautions

- It is consumer's responsibility when leaked out a pin code and damage occurred, so please keep in mind in management.
- Remember the pin code only one person among family and use only in emergency.
- ► For your own security it is strongly recommended that you immediately change new pin code that you've selected(4 to 12 digit number). You can change a new pin code at any time.
- ▶ Default pin code is set to '1111'
- \* '\* and '#' can not be used as a pin code.





# 4) Volume level control



- Press the MODE button
  - Open the battery cover and then press the MODE button.



- Select a volume control mode (F4)
  - When 'F4' is displayed on LED screen by using number 2 or 8 button, press the '#' button.



- Setup a volume level
  - Select desired volume level by pressing number 2 or 8 button and then press the '#' button, setting is completed. (Default volume is fixed as a 'level 03')

#### Reference

- Door opening, door closing, cover opening, button, failure sounds are able to control a volume level.
- Voiœ quidance volume is fixed as a default volume level(03)
- Compulsive intrusion alarm sound is fixed as the most loudest sound and system lock, Dual lock, Iow battery alarm sounds are set much louder than controlled volume.
- ▶ Etiquette mode: If the volume is set to '00', any sound is not heard except alarm sounds.
  - (Alarm sound : Compulsive intrusion, System lock, Dual lock, Low battery)



# 5) Door opening sound selection



- Press the MODE button
  - Open the battery cover and then press the MODE button.



- Select a door opening sound mode (F5)
  - When 'F5' is displayed on LED screen by using number 2 or 8 button, press the '#' button.



- 8 Select a desired door opening sound
  - Select a desired door opening sound by using 2 or 8 button, and press the '#' button then setting is completed

Selection	When door's opened	When door's closed
Buzzer sound (01)	ding dong dang~	dang dong ding~
Buzzer and Voice sound (02)	ding dong dang~+door's opened	dang dong ding~
Voice only (03)	do ar's aprened	dang dang ding~
User ID melody (04)	registered melody for each user ID	dang dong ding~
Silent mode (05)	no sound	no sound

<sup>\*\*</sup> Button sound and cover opening sound will be still heard in silent mode.





# (2) Unlocking the door

### 1) With fingerprint from outside



1 Enter the registered fingerprint on fingerprint sensor.



Authentication steps are displayed in order on LED screen.
\* you can leave your fingerprint when reaching 2 steps.

#### ding dong dang



If authentication is succeeded, 'OP' is displayed on LED screen and the door will be opened along with door opening sound. (ding dong dang~)

#### D~Ring~



If authentication is failed, 'E1' is displayed on LED screen along with failure sound. (D~Ring~)



If authentication is succeeded, you can open the door by turning the handle.

#### dang dong ding~



The door's automatically locked after the door's dosed and 'CL' will be displayed on LED screen along with door closing sound. (dang dong ding~)

# (1) Cautions

- ▶ Please remove any dirt on fingerprint sensor.
- ▶ Please, see "Correct fingerprint placement".
- If finger is dry, recognition rate may fall.
- Try moistening your finger with your breath or a little moisture.
- ▶ Upon 5 consecutive authentication failures, it will not work for 2 minutes.
- ▶ If you do not open the door within 7 seconds after authentication, then the door is automatically locked.



# 2) With the pin code from outside



• Pull up the keypad cover in the front body which turns on the keypad backlighting and then Enter the registered pin code.



Press the '#' button or pull down the keypad cover in the front body.

ding dong dang∼



If authentication is succeeded, 'OP' is displayed on LED screen and the door will be opened along with door opening sound. (ding dong dang~)

D~Ring~



If authentication is failed, 'E1' is displayed on LED screen along with failure sound(D~Ring~) and then enter the correct pin code again.



If authentication is succeeded, you can open the door by turning the handle.

dang dong ding~



The door's automatically locked after the door's dosed and 'CL' will be displayed on LED screen along with door closing sound. (dang dong ding~)

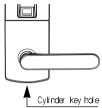
#### Cautions

- ▶ Upon 5 consecutive authentication failures, it will not work for 2 minutes.
- ▶ If you do not open the door within 7 seconds after authentication then the door is automatically locked.

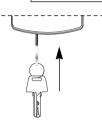




# 3) With emergency cylinder key from outside



The emergency keyhole is located at the lower portion of the front body.

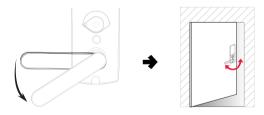


To open the door, "push the key upward a little bit and then turn the key clockwise, so you can open the door by turning the handle.

# 4) To open the door from inside

Just turn the lever handle on the back body to approx. 45 degrees clockwise (right handled) or 45 degrees counterclockwise(left handled) and then open the door.

The door will be automatically locked again after you close the door.



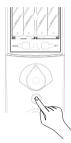
# ( ) Cautions

- Make sure to carry or store on the outside one or more keys all the time.
- If the batteries are completely discharged or if it does not work in some other reasons, you can open the door with emergency override cylinder keys.



# (3) Security functions

### 1) Dual lock function



Press slightly the round button located at upper handle of inside lock with the door closed and then Dual lock is activated

Beep~ Beep~ ((())



If dual lock button is pressed and if anybody tries to open the door from outside by entering fingerprint or pin code, then It sounds "Beep~ Beep~" and also it does not work outside.



If you want to deactivate the dual lock, you just turn the inside handle, then the setting will be automatically deactivated.

# (1) Caution

▶ When dual lock button is pressed with the door opened then if the door's closed, it doesn't work outside. So, Please be careful when you go outside.





# 2) compulsive intrusion alarm

If anybody tries to intrude into inside in abnormal way, then it gives a strong alarm sound to let surrounding people know.

#### Example)

- · If someone tries to disassemble main body by force from outside.
- · If the strong impact is applied to the main body.



### How to reset the alarm sound



- After you enter the registered pin code, you can release the alarm sound if authentication is succeeded.



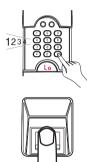
 After you enter the registered fingerprint, you can release the alarm sound if authentication is succeeded.

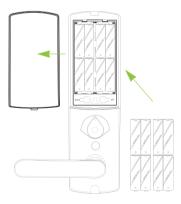


# 5. Battery replacement

When the door is opened or closed by using pin code or fingerprints, the system gives alarm sound and voice message with displayed 'Lo' on LED screen to replace the batteries at the time of opening or dosing the door. If it gives alarm sound of replacement batteries, then it should be immediately replaced.

Beep~ Beep~ ((()) Voice say "Please change the battery."





### ♦ How to replace batteries

- Remove the battery cover by loosing its screw.
- Replace all batteries (8 pieces) with new ones
- \* Even though batteries are replaced, the registered pin code or fingerprints will not be deleted.

# (1) Cautions

- You must use alkaline batteries.
- ▶ Never use general manganese battery or rechargeable battery.
- ▶ Insert batteries as per indicated polarity (+,-)
- If batteries are leaking then it will damage the product, therefore check the battery periodically.(in 6 month)





# 6. How to open the door with emergency battery

if the batteries are not replaced when necessary, the door cannot be opened via pin code or fingerprint. Even the emergency cylinder key has been lost or otherwise not available. A 9V battery can be used to restore operational power. You can open the door temporarily by supplying emergency power source with the emergency battery.





Pull up the keypad cover in the front body, and connect the rectangular 9V battery to the terminals located at the upper of the keypad and then the door can be opened with pin code or fingerprints at the time of the emergency battery connected.

\* You can connect the battery to the terminals without considering the polarity.

Note

You can buy this emergency battery(9V) from related shops.



# 7. Basic troubleshooting

Problem	Possible reason and check	Salution
· If the lock does not recognize a fingerprint	· Was the fingerprint properly placed(in the centre of the sensor)?	· Try again by putting the fingerprint in the centre of the sensor.
If the sensor light does not come on     If keypad does not work,	· Batteries may not be installed correctly or may be run down.	· Use 9V square battery held against terminals upper of the keypad to gain access.
If the sensor light does not come on with double beep sound.  If keypad does not work with double beep sound.	· Dual lock button may be pressed in the "LOCK" position.	Dual lock button has to be moved to the "UNLOCK" position by someone on the inside.     Use emergency cylinder key to unlock the door







# MEMO (User List)

ID	Name	Remark



ID	Name	Remark
-		





ID	Name	Remark



ID	Name	Remark





ID	Name	Remark
	I .	I



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