

## DINB100-SA Standalone Biometric Reader

# User Manual

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## 1.0 INTRODUCTION

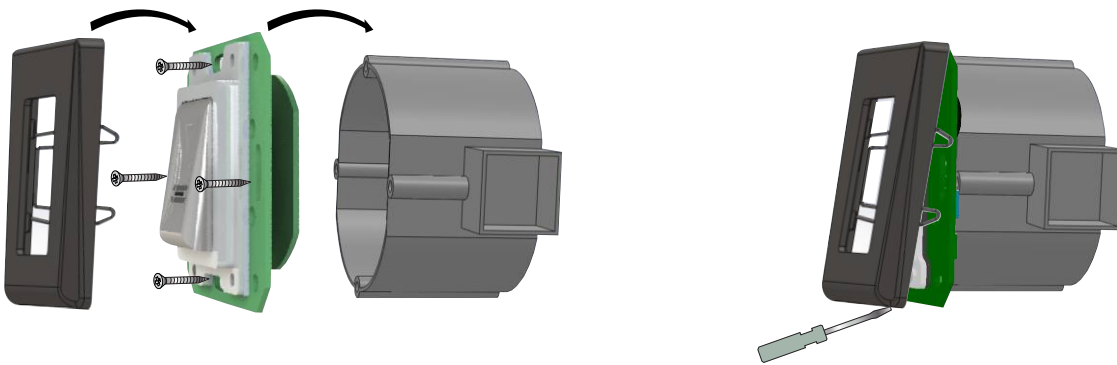
DINB100-SA is a simple one-door standalone biometric system. The reader can store up to 97 finger templates, it has one relay output and one exit button input. If secure installation is needed, the reader can be connected to remote relay unit at secured area, which also plays the role of exit push button. Proximity reader or keypad can be added for additional entry mode (Card or/and Finger, PIN Code or/and Finger, Finger on Card). Complete setup and programming can be done by scrolling and tapping on the sensor or by keypad menu if keypad is connected.

The sensor incorporates dedicated sensing hardware to facilitate the detection of “spoofing” attacks based on fake fingers. This data is embedded into the image data stream, and is processed on the processor. The system is capable of detecting and defeating well-known fake finger mechanisms, such as molded “gummy” fingers.

The coating on the surface of the TouchChip sensor provides protection from scratching and abrasion due to normal contact with fingertips and any incidental contact with fingernails.

The reader is capable of working in so called “Finger on Card” mode, where the authentication is done by verifying that the biometric data stored on the card matches the finger being placed on the reader.

## 2.0 MOUNTING AND DISMOUNTING



Do not install the device and cabling close to a source of strong electro-magnetic fields like radio-transmitting antenna.

Do not place the device near or above heating equipments.

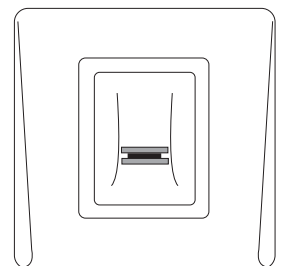
If cleaning, do not spray or splash water or other cleaning liquids but wipe it out with smooth cloth or towel.

Do not let children touch the device without supervision.

Note that if the sensor is cleaned by detergent, benzene or thinner, the surface will be damaged and the fingerprint can't be entered.

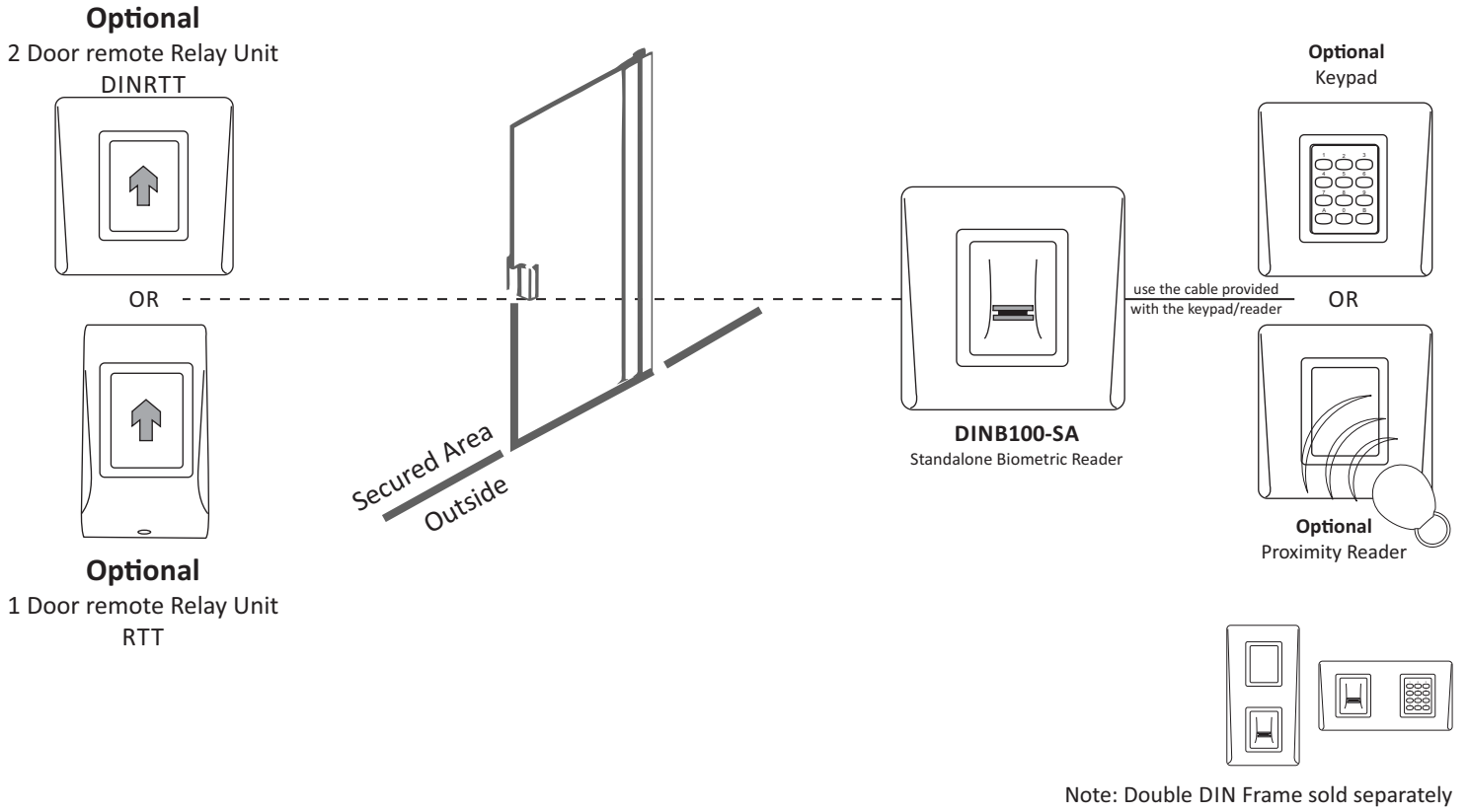
## 3.0 SPECIFICATIONS

Fingerprint Capacity:	97 templates
Output:	1 x Relay (3A/250VAC)
Push Button Input:	Yes
Door Open Time:	Pulse (1, 3, 5, 10, 20, 30, 60sec) or Toggle(ON/OFF)
Entry Mode:	Finger (Basic installation) Finger or/and Card (when used with card reader DIN Card reader) Finger or/and PIN code (when used with keypad DINPAD-M) Finger on Card (when used with mifare reader DINMTPX-MF)
Programming:	By scrolling and tapping on the sensor or by keypad
Master/Admin Fingers:	1 Master and 2 Admin Fingers
Image resolution:	Up to 508 DPI
Backlight ON/OFF:	Yes
Buzzer ON/OFF:	Yes
Firmware upgrade:	via RS485 converter and windows application
Current Consumption:	170 mA max.
Power Supply:	9-14 V DC
Indication:	Tricolor Indication LED and 4 x Programming LEDs
Mounting:	Flush mount
IP Factor:	IP40
Storage/Operating Temperature:	-20°C to +50°C
Storage/Operating Humidity:	5% to 93% RH without condensation
Dimensions(mm):	80 x 80 x 9

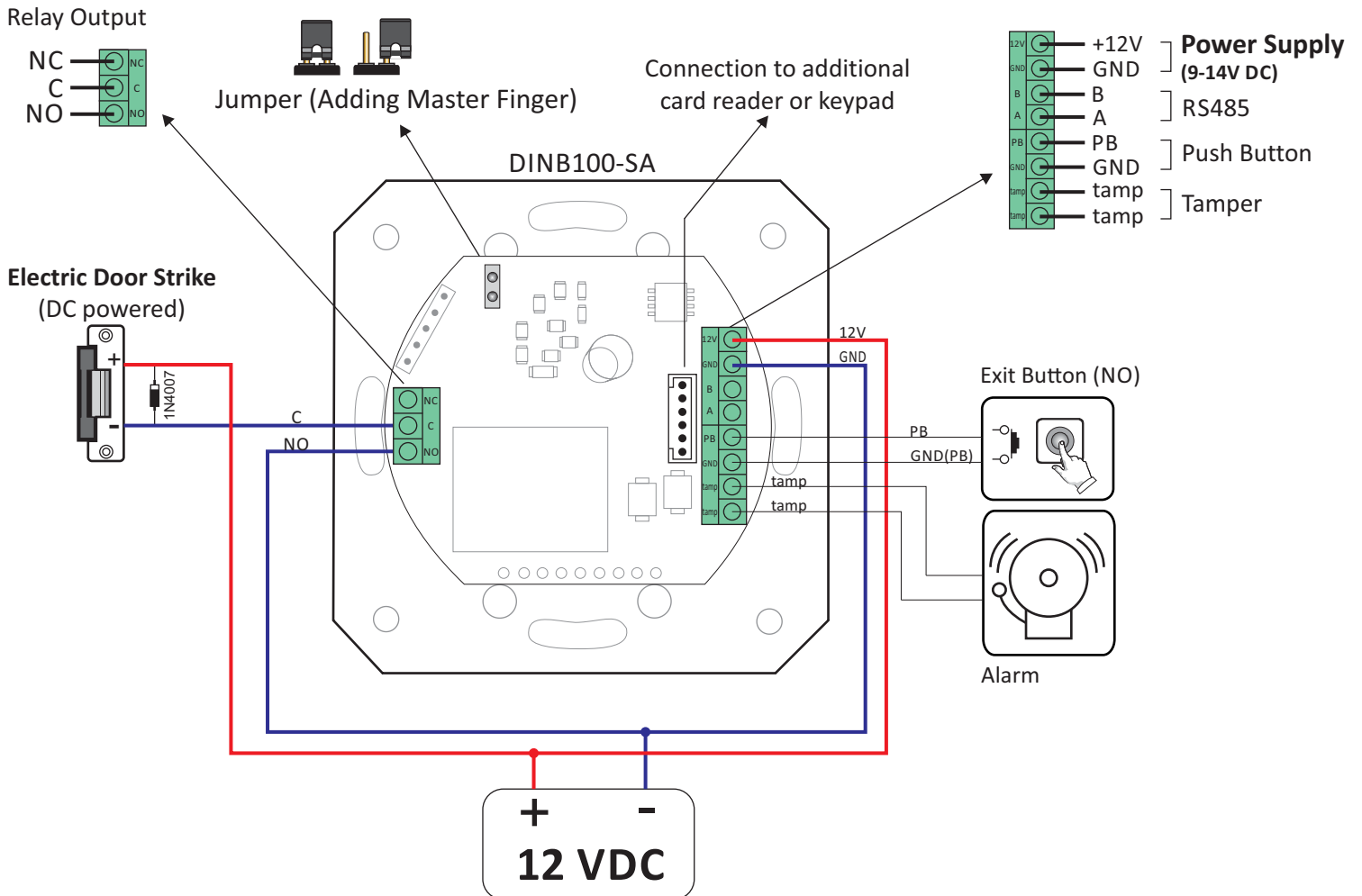


DINB100-SA

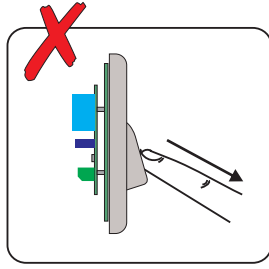
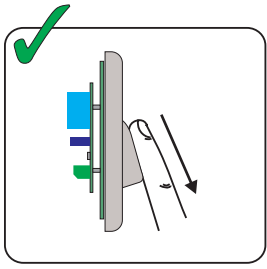
# 4.0 APPLICATION DIAGRAM



# 5.0 WIRING



## 6.0 RECOMMENDED SWIPING TECHNIQUE



Follow the below instructions for correct finger swiping  
Starting from the first finger joint, place the selected finger on the swipe sensor and move it evenly towards oneself in one steady movement.

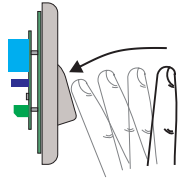
### Result:

**For a valid swipe:** Tricolour Indication LED turns green + OK Beep(short + long beep)

**For an invalid or misread swipe:** Tricolour Indication LED turns red + Error Beep ( 3 short beeps)

### 6.1 Taping the sensor

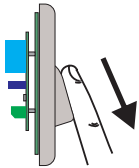
Tap the sensor to enter Submenu or to confirm a command



Enter and confirm

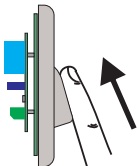
### 6.2 Scrolling the sensor up and down

Scroll the sensor DOWN to navigate the programming menu



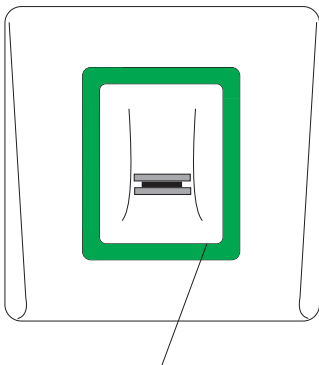
Navigate the Programming Menu

Scroll the sensor UP to exit the programming menu

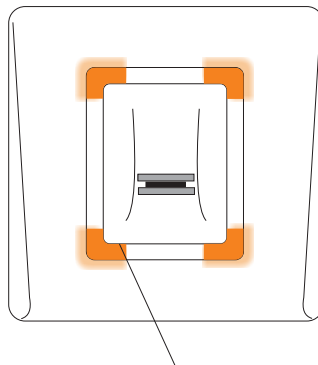


Exit the Programming Menu

## 7.0 INDICATION



**Tricolor Indication LED**  
Green - Access Granted  
Red - Access denied  
Orange - Idle Mode



**4 x Tricolor Programming LEDs**  
(red, green, orange)


OK Beep - short + long beep

Error Beep - 3 short beeps

Swipe Again - 2 short beeps

## 8.0 QUICK PROGRAMMING

### 8.1 Adding Master Finger and delete all users

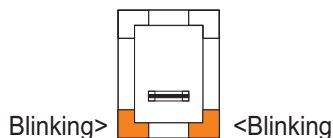
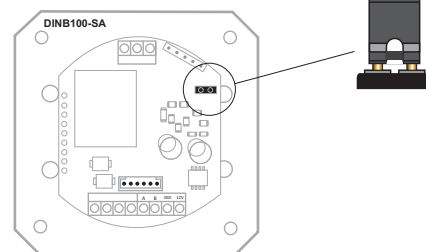
1. Close the jumper on the back of the device. 

2. Reset the Power of the device.

3. Wait for One long + multiple short beeps

4. Open the jumper. (short beeps will stop) 

5. Wait for the bottom row LEDs to blink in Orange.



6. Swipe the Master finger min.6 times. (Until Ok Beep)



**Note:** After enrolling the Master finger the device will auto-Reset (wait for 7 seconds and the OK beep).

**Note:** This procedure also deletes all the users and administrators previously enrolled.

1. There is 1 Master Finger. The master finger can enroll/delete user and all the other settings. The Master finger can be changed ONLY with the jumper.
2. There are 2 Administrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.
3. The User can be assigned to one of the 8 available User Groups. With the Quick programming feature, the Users are assigned in Group 1 or Group 2. For most of the installations 2 groups are enough and can be used as: Group 1 for permanent residents, Group 2 for guest and visitors.
4. The user can be deleted by swiping its user finger or by deleting the group in which that user is enrolled. Once the Group of users is deleted, all the users within that group will be deleted.
5. The Groups are not limited by the number of users. (ex. Group 1 can contain 20 users, Group 2 can contain 70 users, but the total number must remain below 97...)

## 8.2 Add User In Group 1

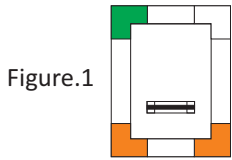
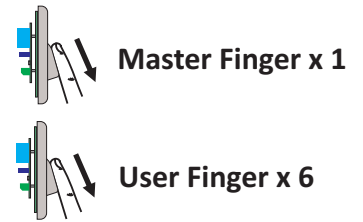


Figure.1

1. Swipe the Master or Admin Finger
2. Swipe the user finger min. **6 times** (until Ok Beep)



## 8.3 Add User In Group 2

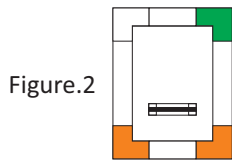
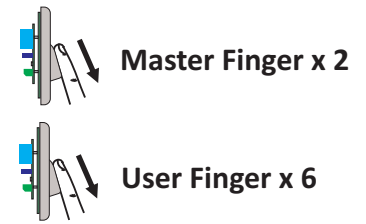


Figure.2

1. Swipe the Master or Admin Finger **twice**
2. Swipe the user finger min. **6 times** (until Ok Beep)



## 8.4 Delete User

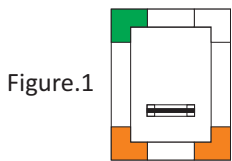
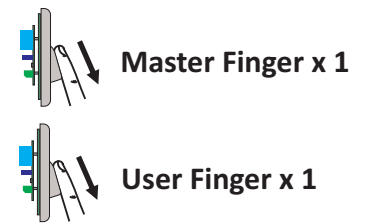
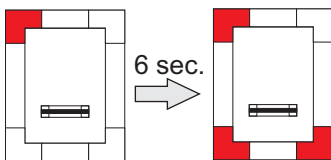


Figure.1

1. Swipe the Master or Admin Finger
2. Swipe the user finger (already enrolled)



## 8.5 Delete All Users in Group 1

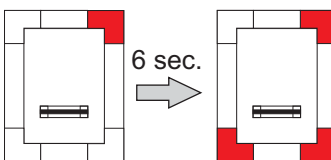


1. Swipe the Master or Admin finger **3 times**,
2. Wait **6 seconds** for the light pattern on figure.4
3. Swipe the Master or Admin finger **once more**

**Note:** All fingers that are enrolled in Group 1 will be deleted.

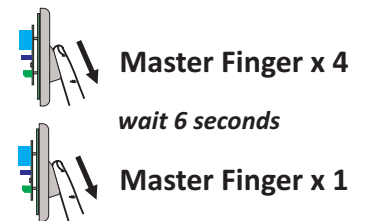


## 8.6 Delete All Users in Group 2



1. Swipe the Master or Admin finger **4 times**,
2. Wait **6 seconds** for the light pattern on figure.6
3. Swipe the Master or Admin finger **once more**

**Note:** All fingers that are enrolled in Group 2 will be deleted.



If you make any mistake or you just simply want to **exit** Quick Programming, wait for the timeout of **10 seconds**.

With this, the quick programming is completed. The system is now operational with default value for Door Open Time of **3 seconds**.

For more comprehensive programming, refer to the “**DINB100-SA Programming**” section.

### **Important:**

When using proximity reader for **Finger Or/and Card Mode**, first present the Card then swipe the finger min. **6 times**.

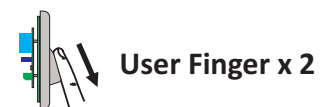
When using keypad for **Finger Or/And Pin Code mode** first enter the PIN Code, then swipe the finger min. **6 times**.

When using mifare card reader for **Finger On Card Mode** first swipe the finger min. **6 times**, then present a Card.

For Fast Deleting a user in **Finger On Card mode** swipe the Master or Admin finger then present an existing user card

## 9.0 KEEP THE DOOR UNLOCKED

Swipe ANY enrolled finger twice and the Door will stay unlocked, until valid finger is swiped.



While the door is unlocked the tricolor indication LED stays green.

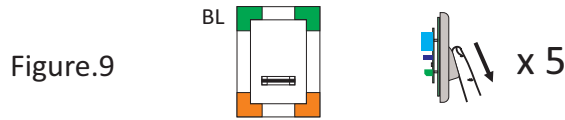


# 10.0 DINB100-SA PROGRAMMING MENU



## 10.1 Adding Users

Swipe the Master/Admin finger **5 times** until the light pattern on figure.9 is shown

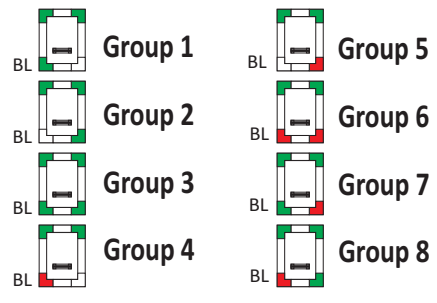


Tap sensor

BL

Select User Group

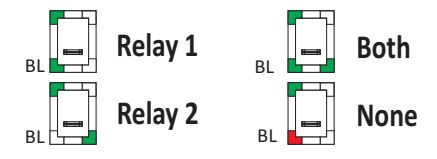
Swipe the finger to select:



Tap sensor

Assign Relay Output

Swipe the finger to select:



Tap sensor



Swipe the user finger for **Finger mode min.6 times.**

When using proximity reader for **Finger Or/and Card Mode**, first present the Card then swipe the finger min. **6 times**.  
When using keypad for **Finger Or/And Pin Code** mode first enter the PIN Code, then swipe the finger min. **6 times**.

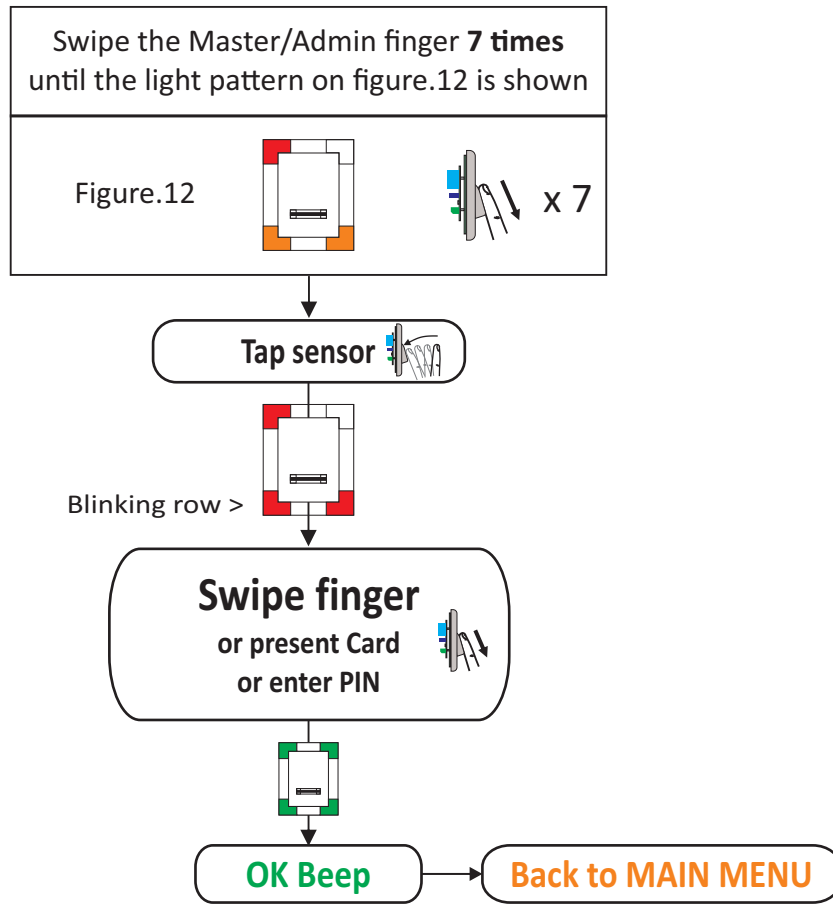
**NOTE:**  
Swipe **UPWARDS**  
to exit the **MENU**



# 10.0 DINB100-SA PROGRAMMING MENU

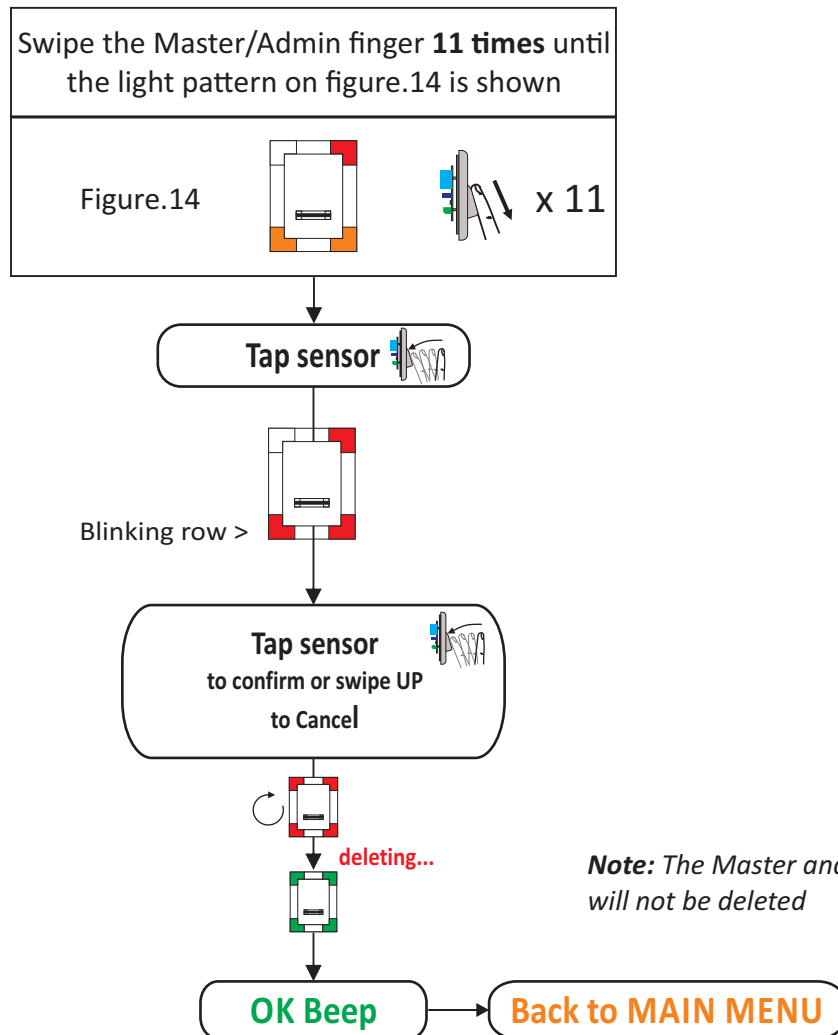


## 10.2 Delete User



**NOTE:**  
Swipe UPWARDS  
to exit the MENU

## 10.3 Delete All Users



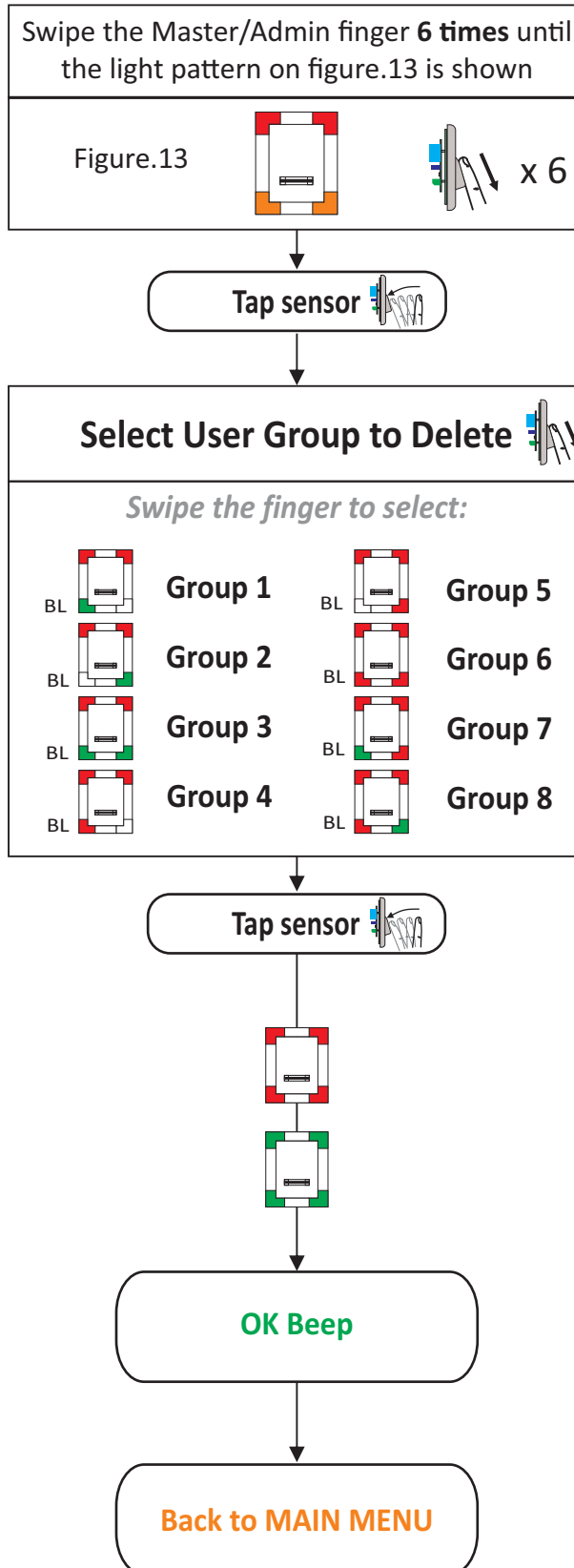
**Note:** The Master and the Administrators  
will not be deleted

**NOTE:**  
Swipe UPWARDS  
to exit the MENU

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.4 Delete Group of Users



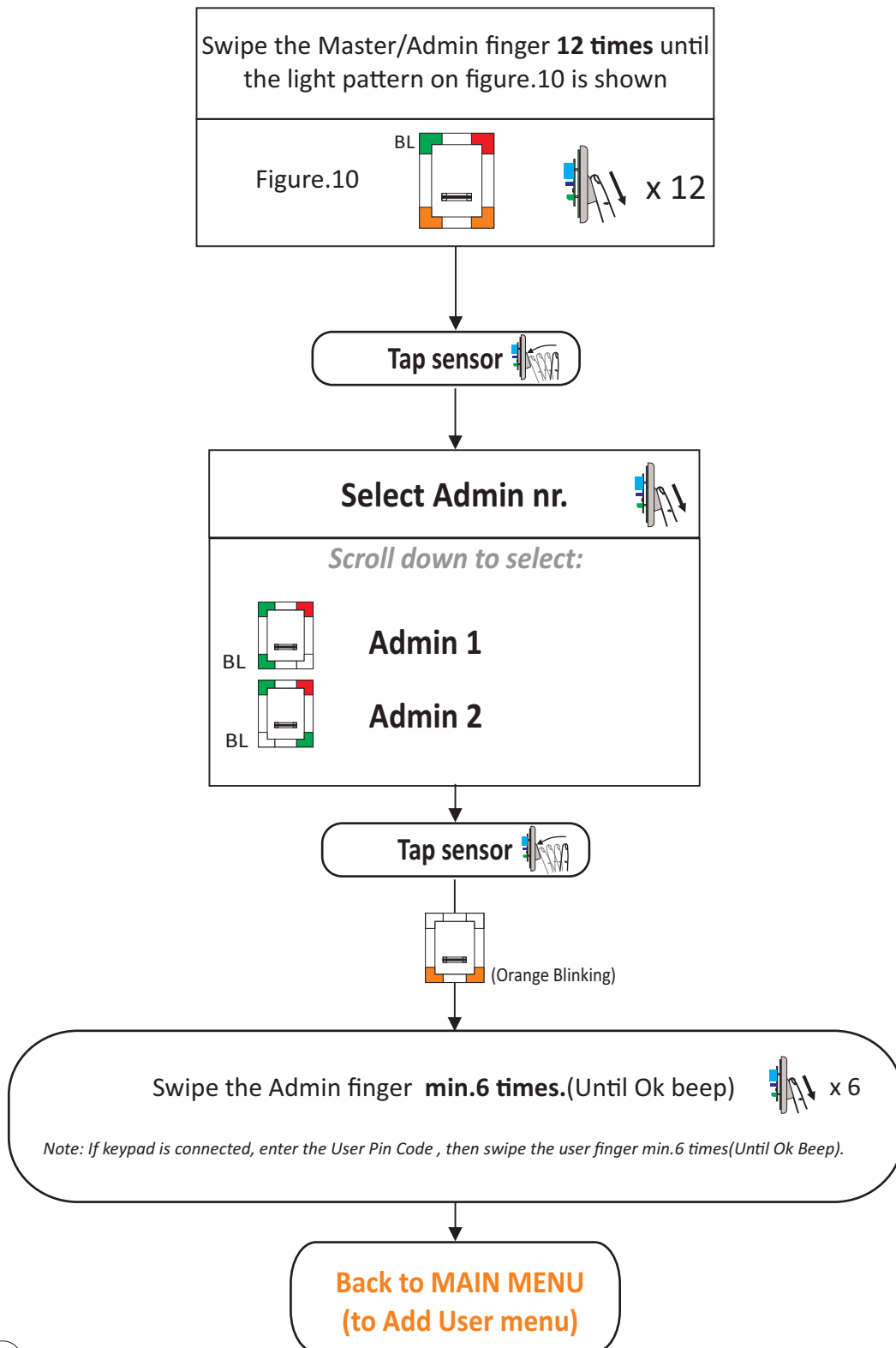
**NOTE:**  
Swipe UPWARDS  
to exit the MENU

**Note:** All fingers that are enrolled in the Group will be deleted.

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.5 Add Administrator



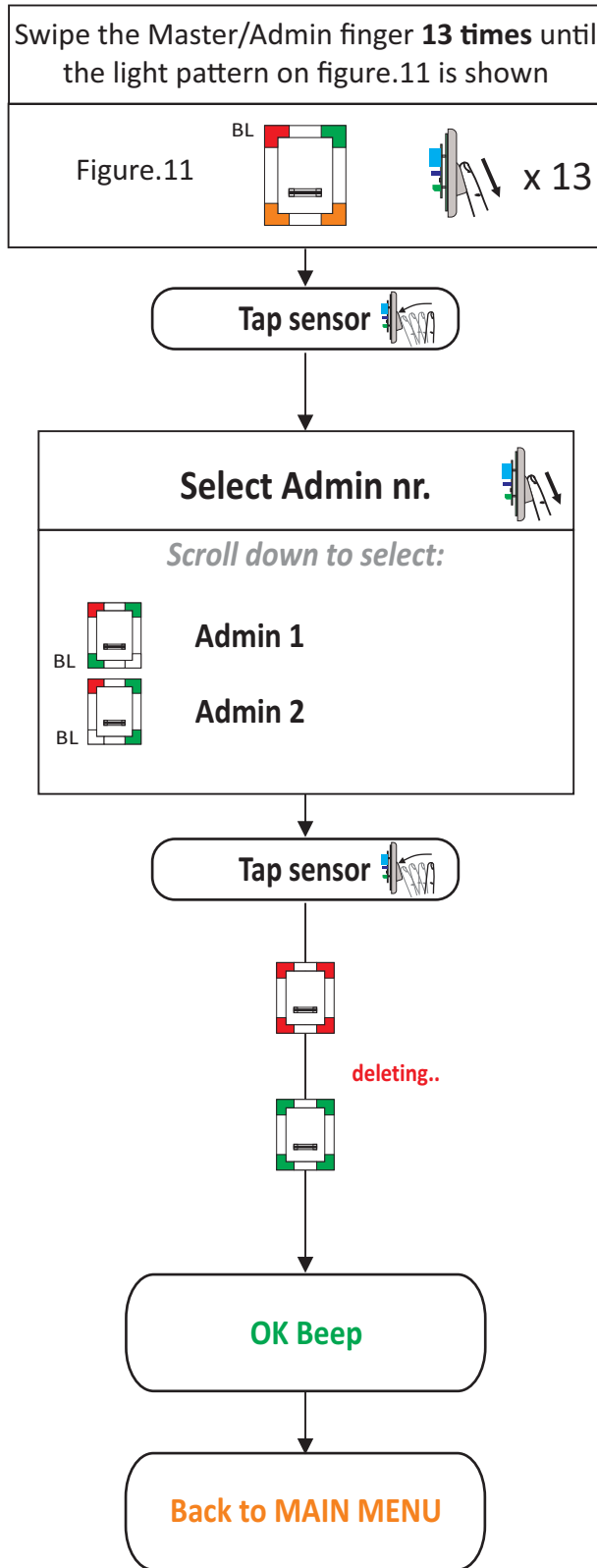
**NOTE:**  
Swipe UPWARDS  
to exit the MENU

- There is 1 Master Finger. The master finger can enroll/delete user and all the other settings.
- The Master finger can be changed ONLY with the jumper.
- There are 2 Administrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.6 Delete Administrator



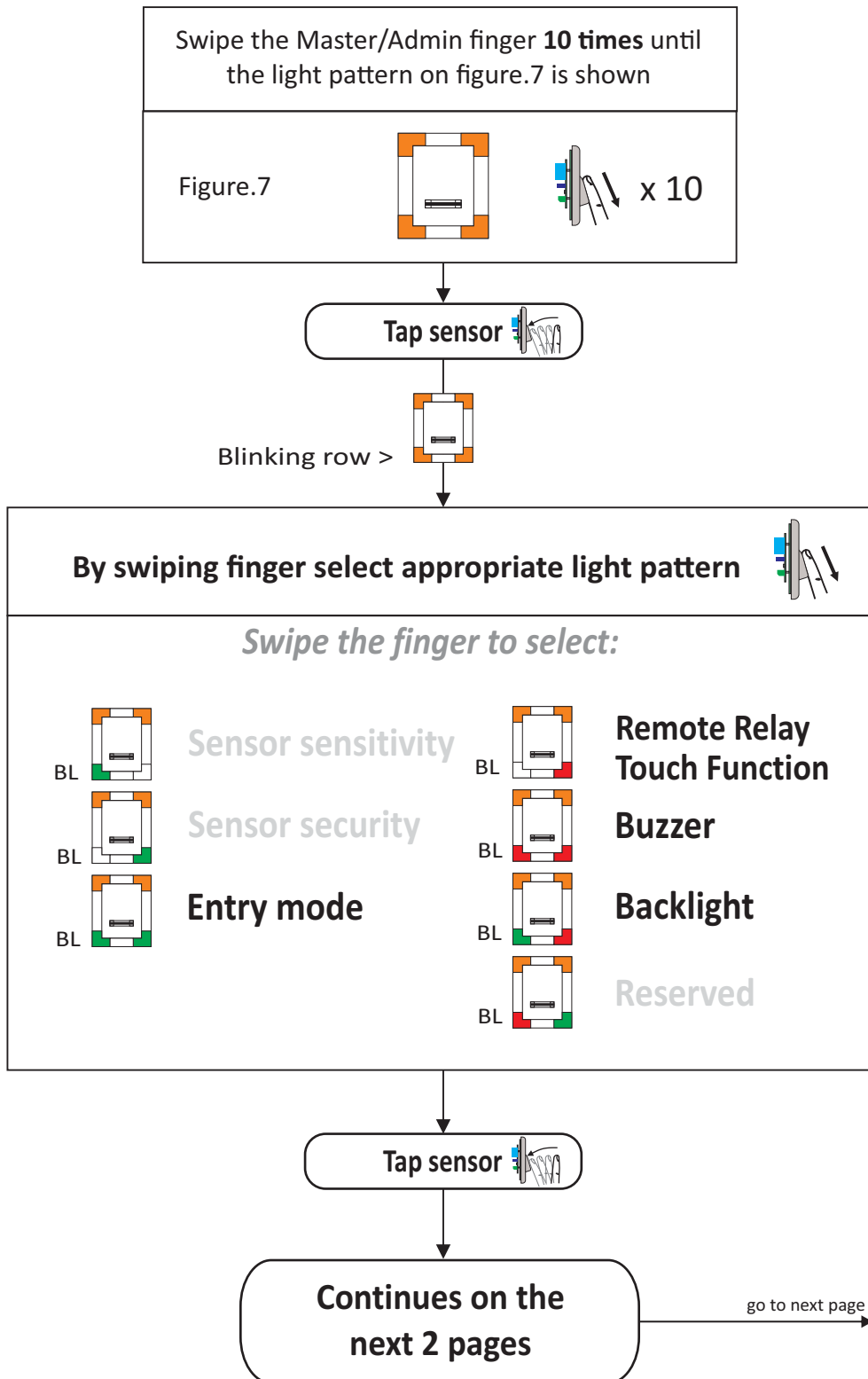
**NOTE:**  
Swipe UPWARDS  
to exit the MENU

- There is 1 Master Finger. The master finger can enroll/delete user and all the other settings.
- The Master finger can be changed ONLY with the jumper.
- There are 2 Administrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.7 Settings



**NOTE:**  
Swipe **UPWARDS**  
to exit the MENU

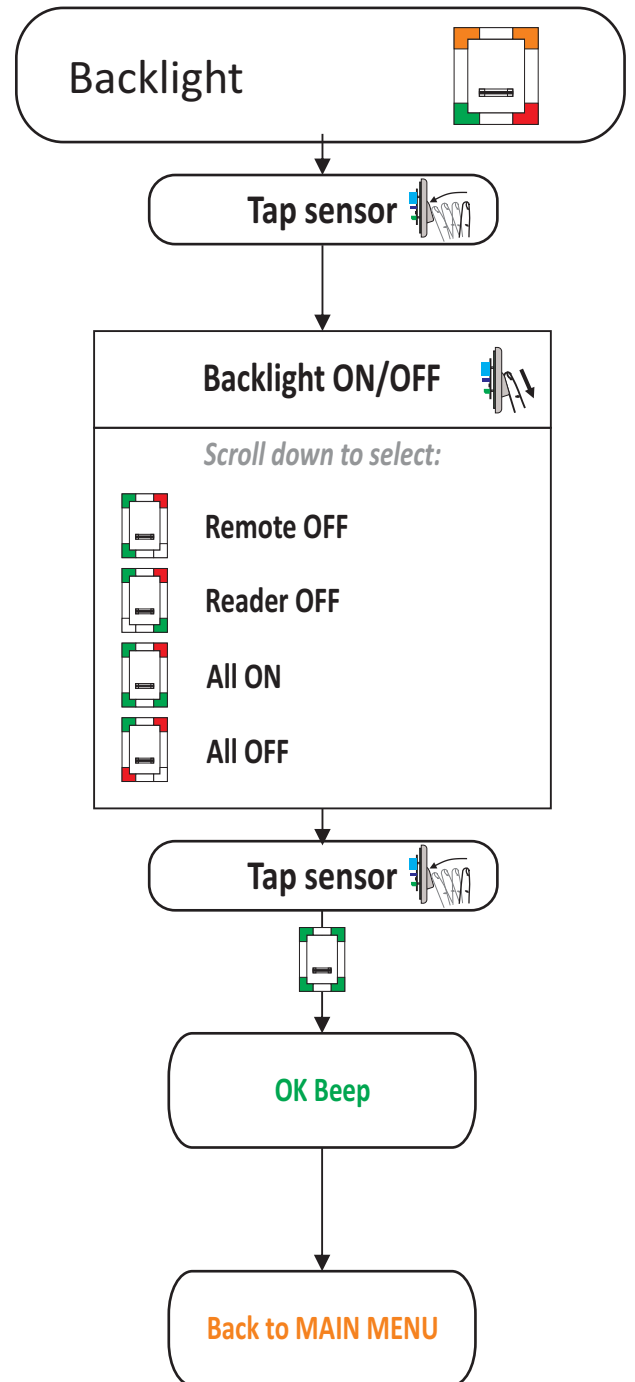
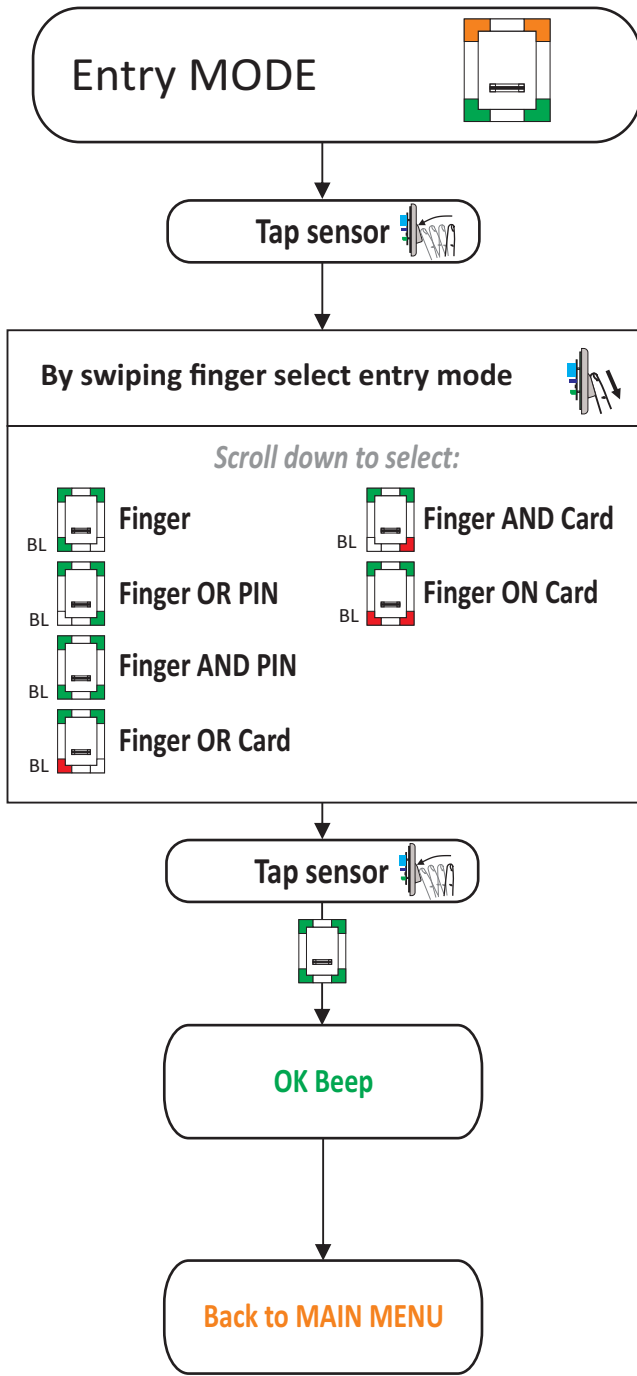
- Entry Mode** - used when additional proximity or keypad reader is connected
- Remote Relay Touch Function** - Enabling/Disabling the Touch Button Function in the remote relay Unit
- Buzzer** - Enabling/Disabling the Buzzer
- Backlight** - Enabling/Disabling the Backlight

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.7 Settings

### 10.7.1 Entry Mode and Backlight



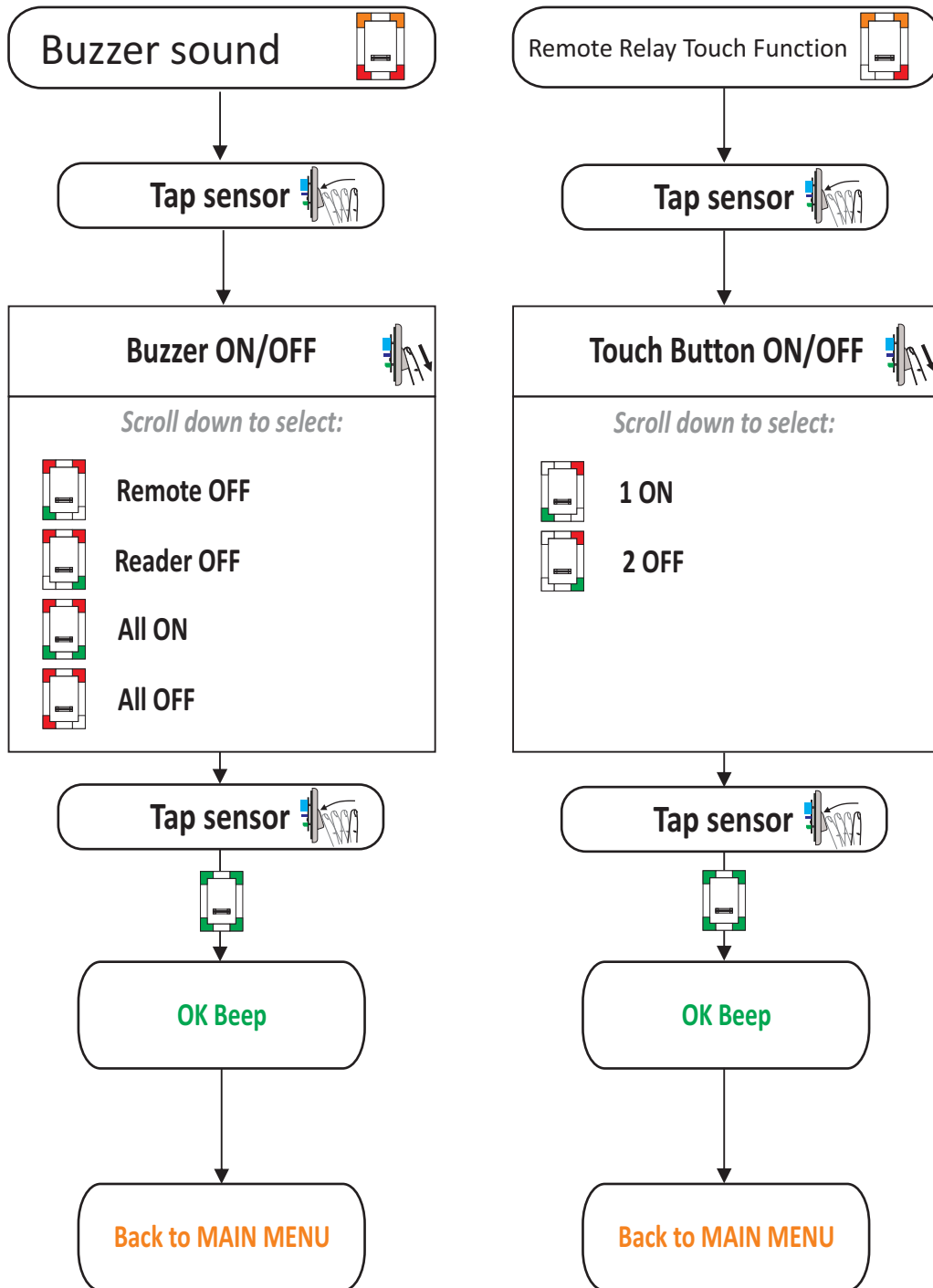
**NOTE:**  
Swipe UPWARDS  
to exit the MENU

# 10.0 DINB100-SA PROGRAMMING MENU



## 10.7 Settings

### 10.7.2 Buzzer Sound and Remote Relay Touch Function



**NOTE:**  
Swipe UPWARDS  
to exit the MENU

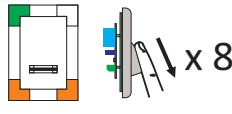
# 10.0 DINB100-SA PROGRAMMING MENU



## 10.8 Set Door Relay Time

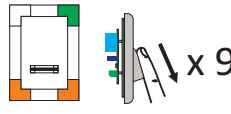
**Relay1 time**  
(for Relay1 in DINB100-SA, RTT and DINRTT )

Swipe the Master/Admin finger **8 times**



**Relay2 time**  
(for Relay 2 in DINRTT Remote Relay Unit)


Swipe the Master/Admin finger **9 times**



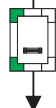
Tap sensor



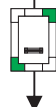
Tap sensor



Blinking row >











Blinking row >











Select relay open time

Scroll down to select:


BL  1 sec	BL  20 sec
BL  3 sec	BL  30 sec
BL  5 sec	BL  60 sec
BL  10 sec	BL  Toggle

Select relay open time

Scroll down to select:

BL  1 sec	BL  20 sec
BL  3 sec	BL  30 sec
BL  5 sec	BL  60 sec
BL  10 sec	BL  Toggle

Tap sensor



Tap sensor



OK Beep

OK Beep

Back to MAIN MENU

Back to MAIN MENU

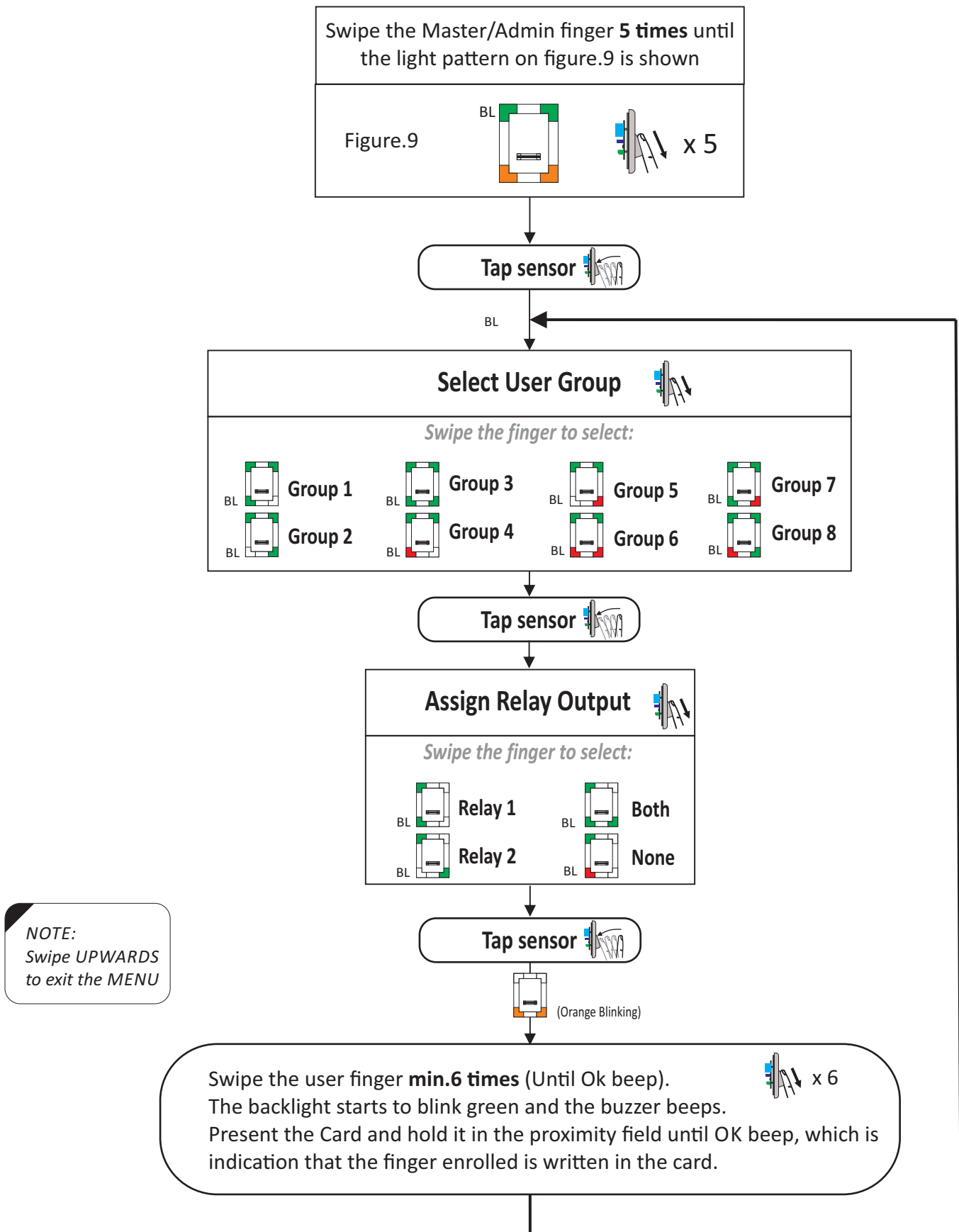
**NOTE:**  
Swipe UPWARDS  
to exit the MENU



## 10.0 DINB100-SA PROGRAMMING MENU

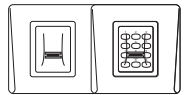


### 10.9 Adding Users In Finger On Card Mode (when Mifare Reader is connected)

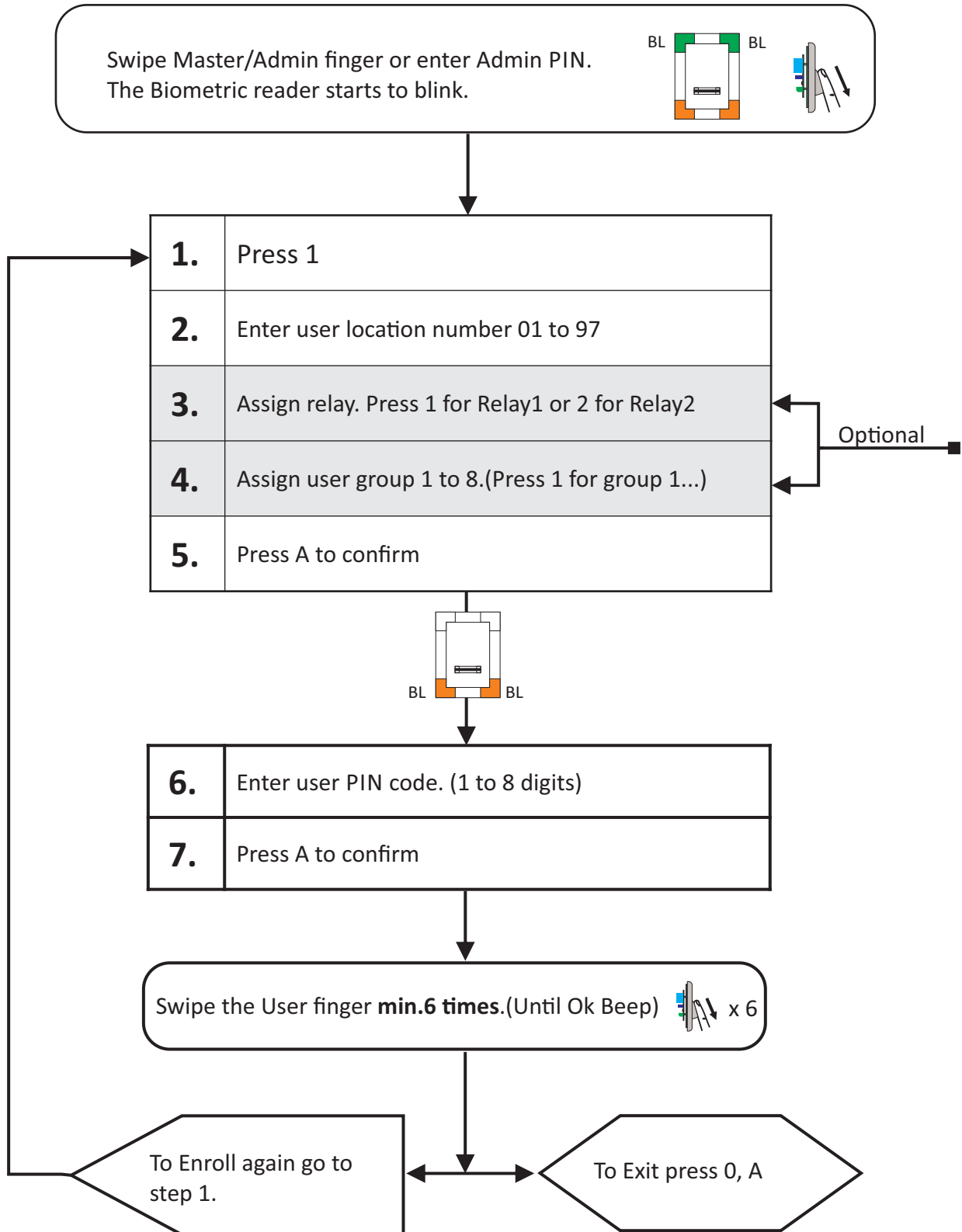


In Finger on Card" mode, the fingerprint is stored only into the Mifare card (Mifare Classic 1K/4K or DesFire) and not in the reader. The matching is done by first presenting the card, then swiping the finger. According to this, the system in "finger on Card" mode does not have capacity limit. Furthermore, the fingerprint is not stored in the reader's memory, which disables any misuse of the stored fingerprint templates

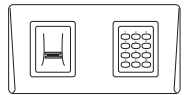
# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



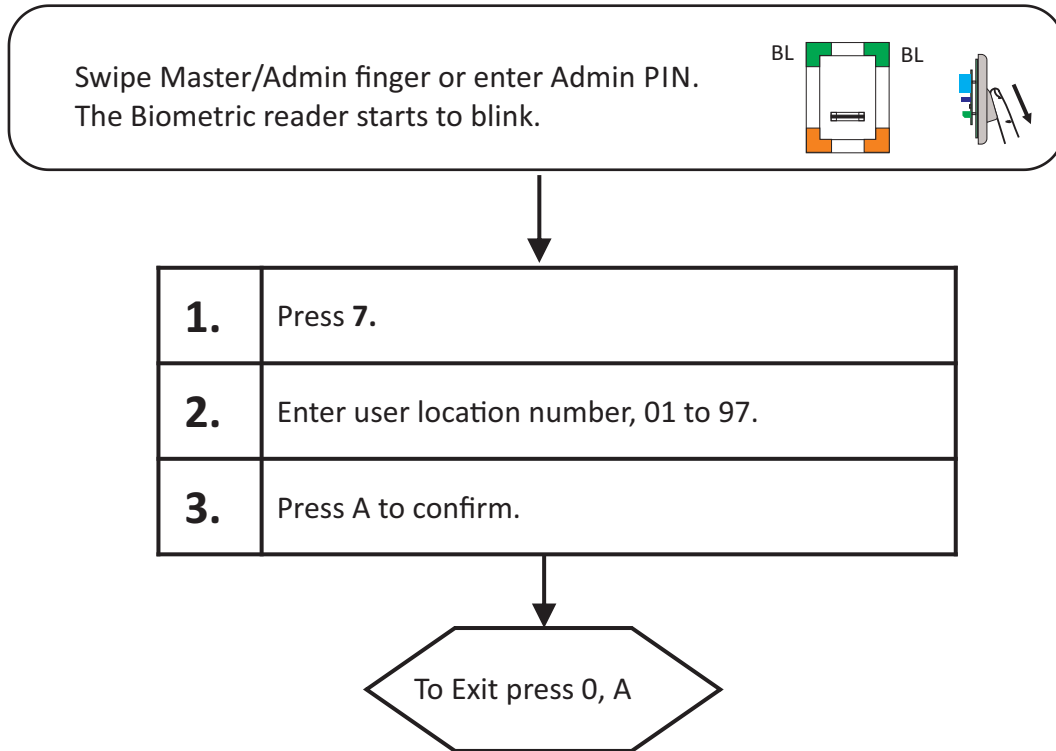
## 11.1 Adding Users



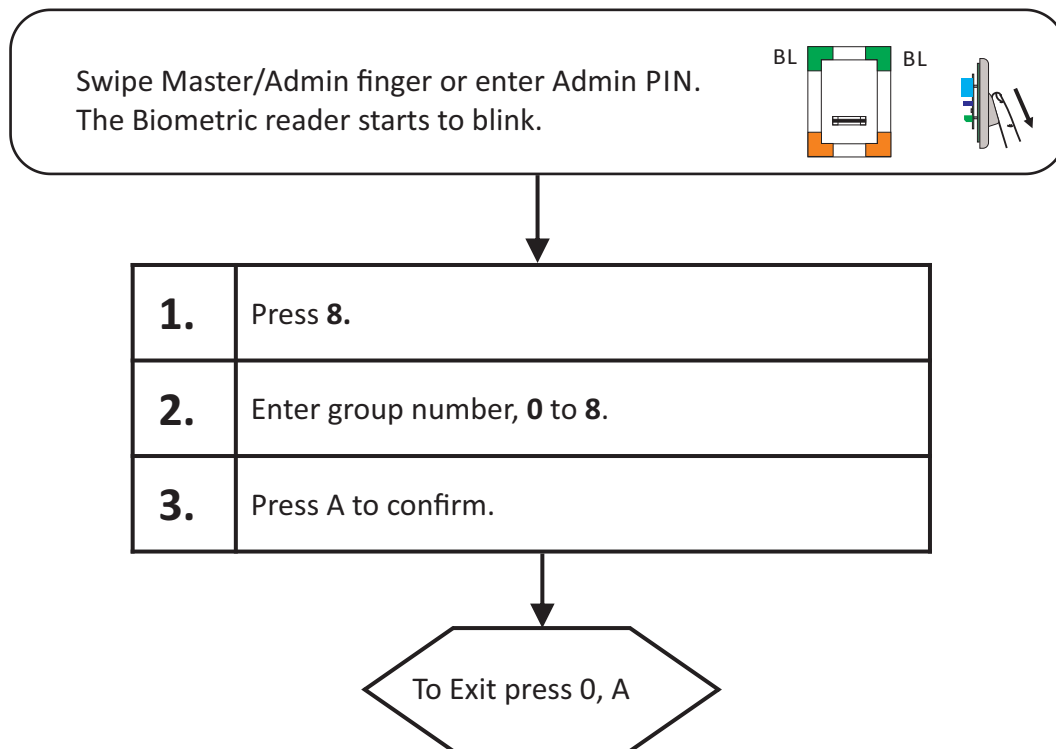
# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



## 11.2 Delete User By User Location Number

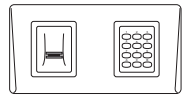


## 11.3 Delete User Group

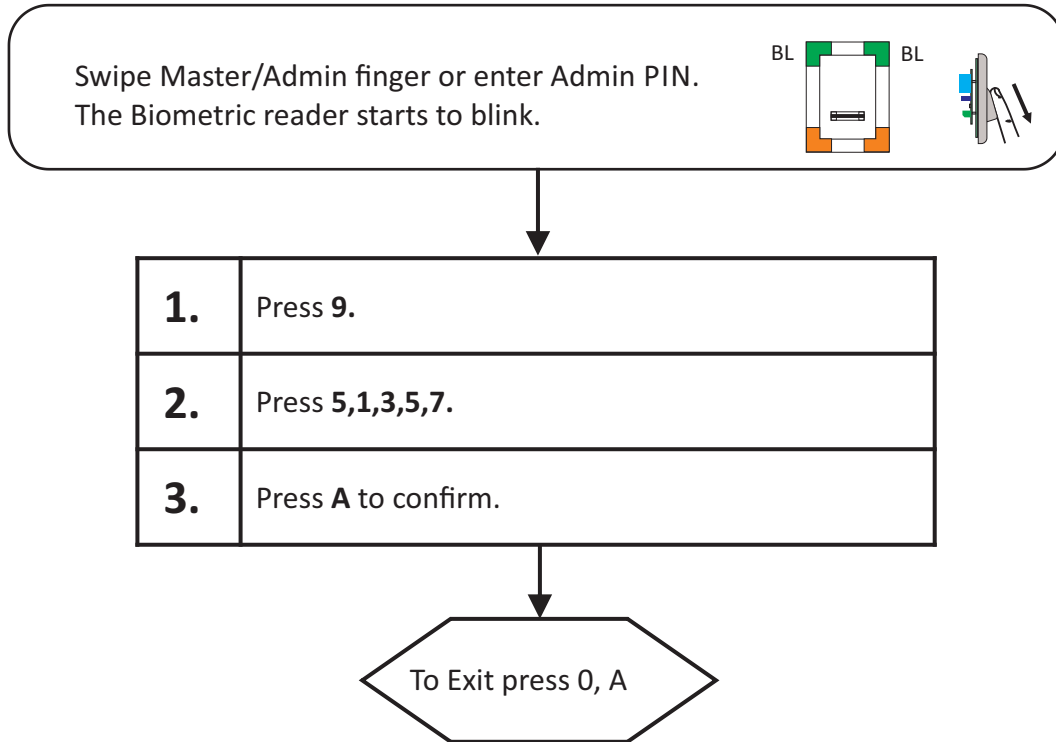


**Note:** All fingers that are enrolled in the Group will be deleted.

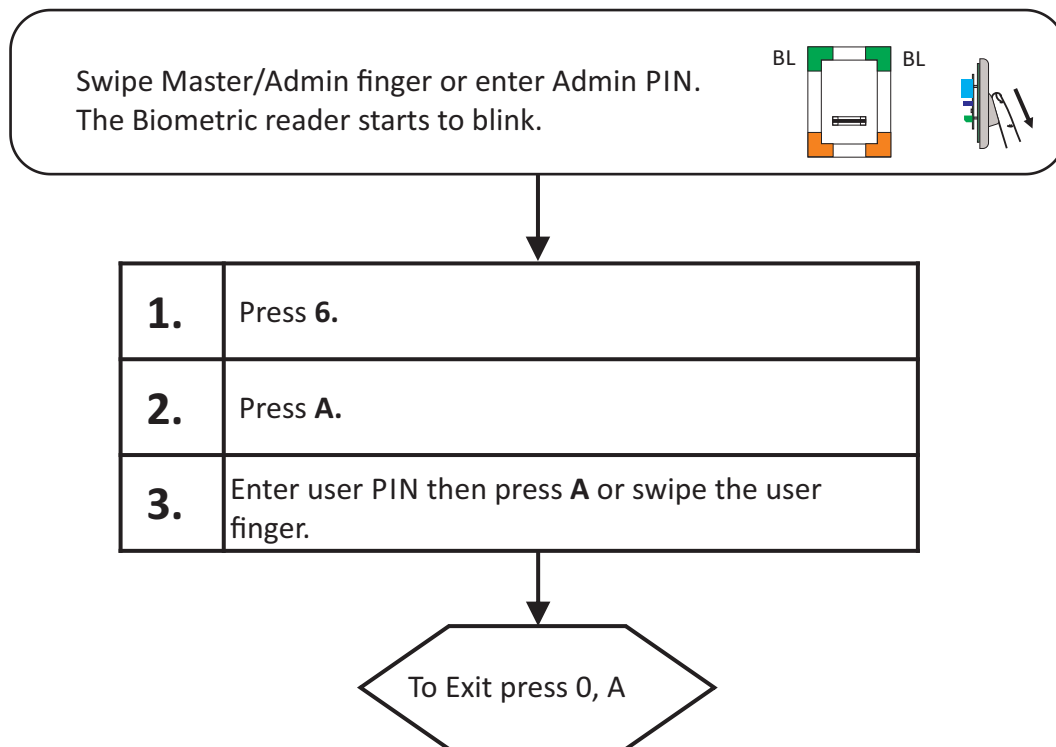
# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



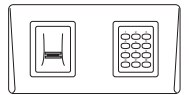
## 11.4 Delete All Users



## 11.5 Delete User by User Finger

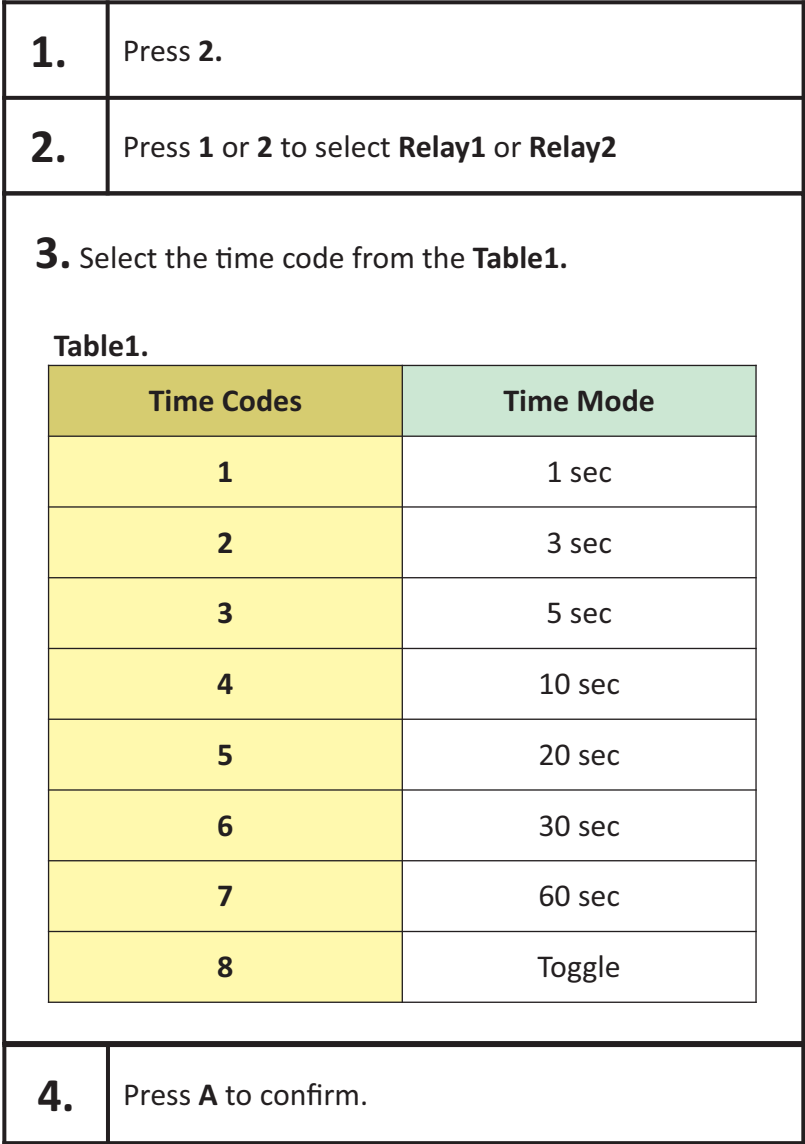


# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



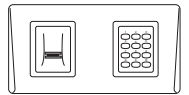
## 11.6 Set Door Relay Time

Swipe Master/Admin finger or enter Admin PIN.  
The Biometric reader starts to blink.

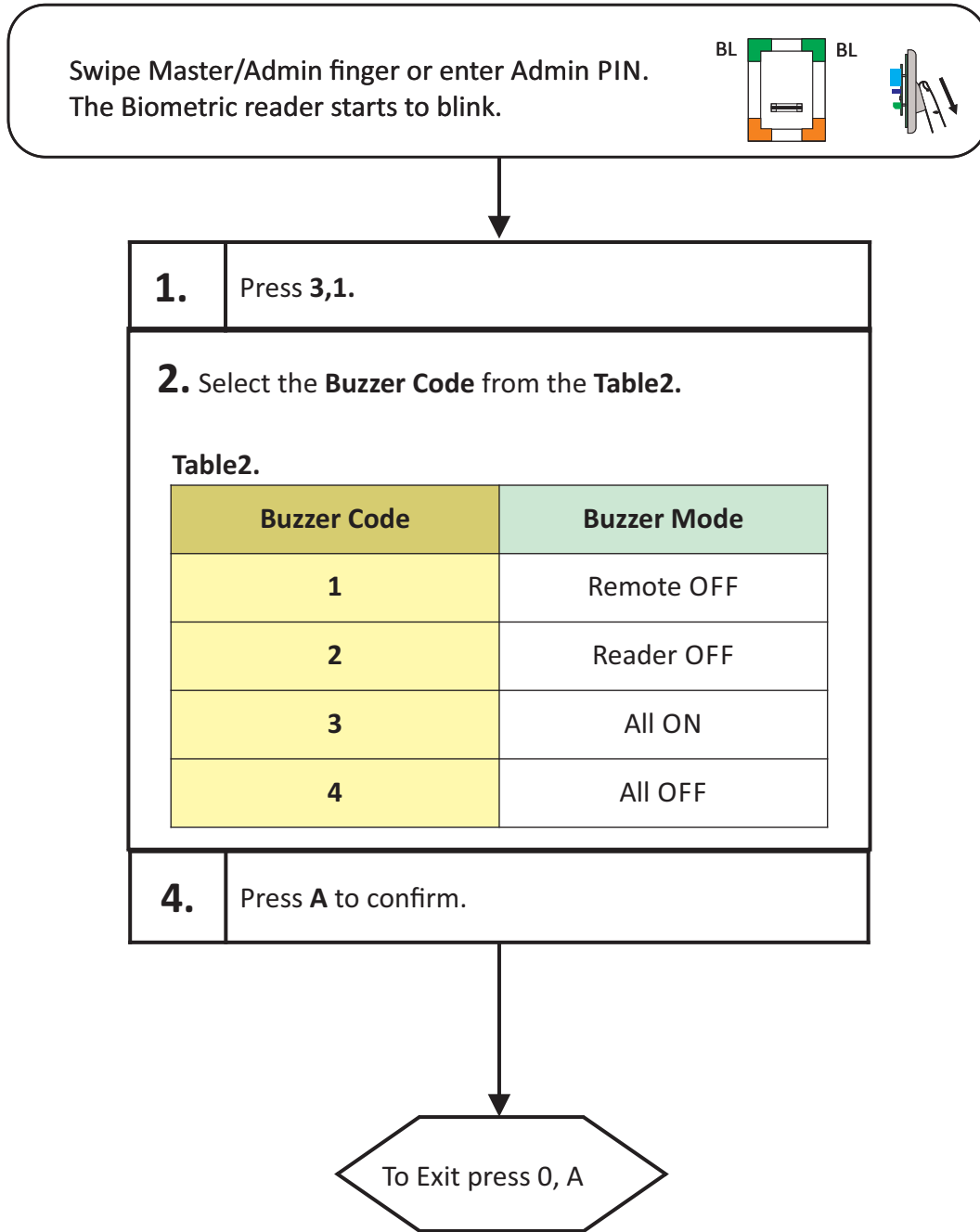


To Exit press 0, A

# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



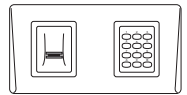
## 11.7 Buzzer Settings



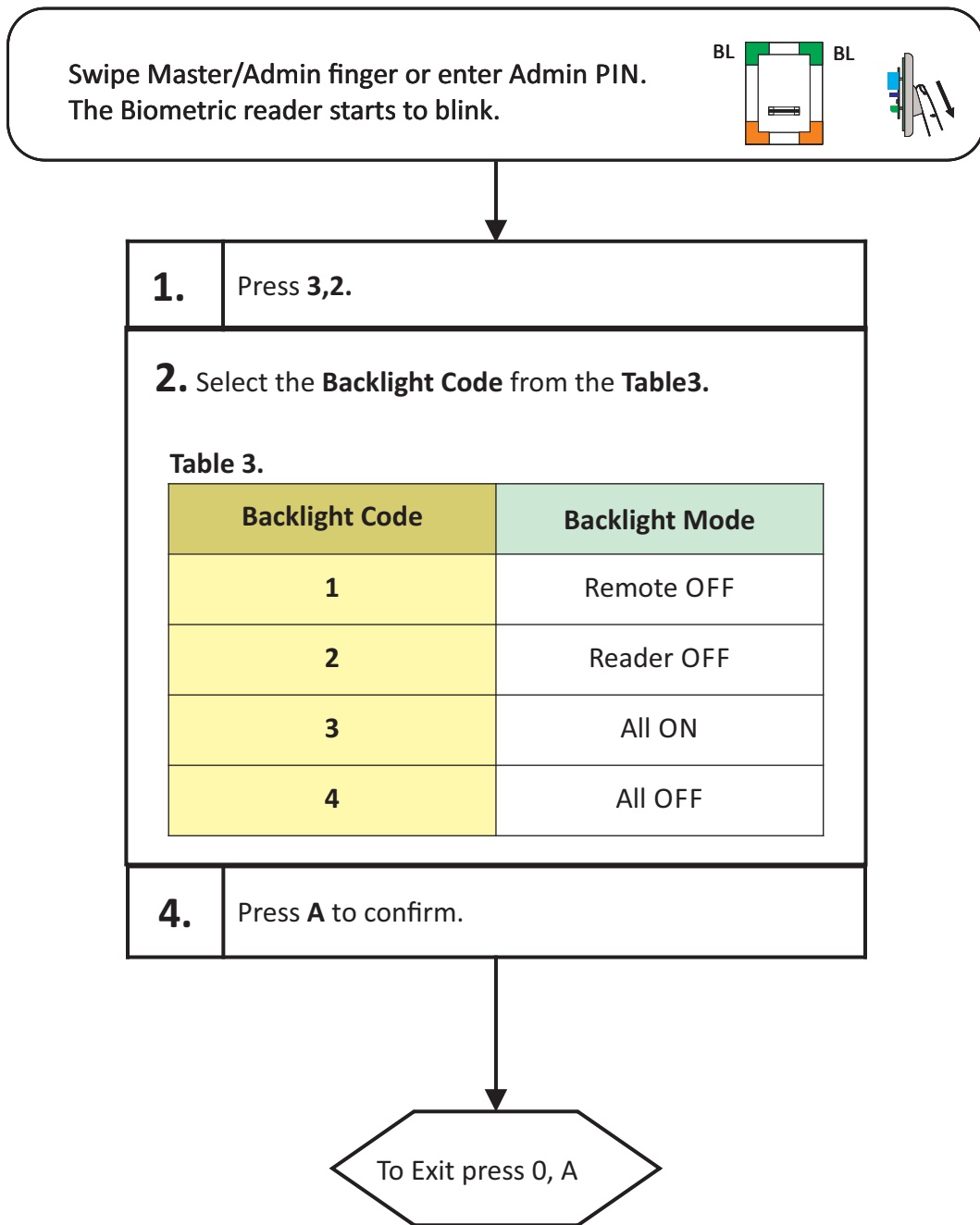
**Note 1:** When “Remote OFF” is selected, the buzzer is OFF in the remote relay unit. In the biometric reader and in the keypad the buzzer is ON.

**Note 2:** When “Reader OFF” is selected, the buzzer is ON in the remote relay unit. In the biometric reader and in the keypad the buzzer is OFF.

# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



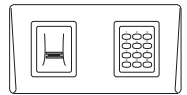
## 11.8 Backlight Settings



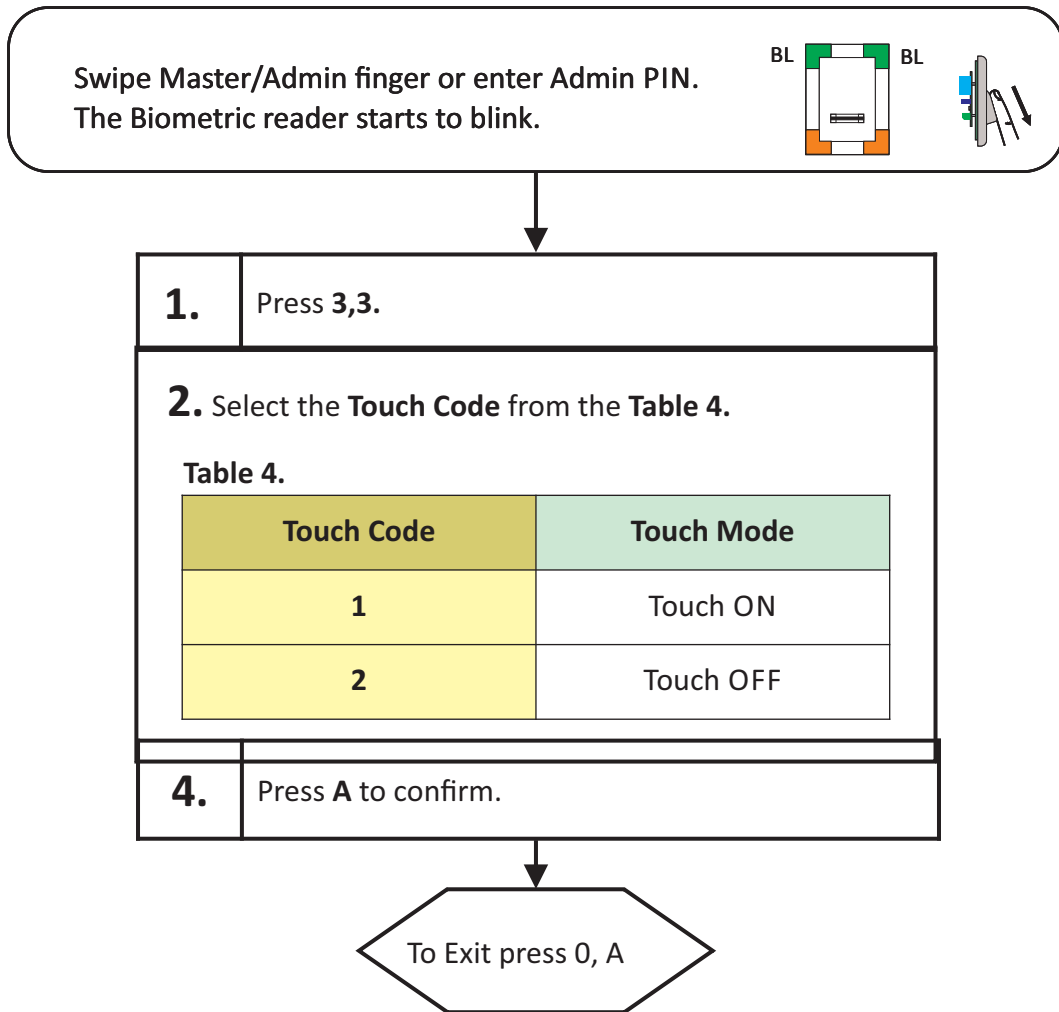
**Note 1:** When "Remote OFF" is selected, the backlight is OFF in the remote relay unit. In the biometric reader and in the keypad the backlight is ON.

**Note 2:** When "Reader OFF" is selected, the backlight is ON in the remote relay unit. In the biometric reader and in the keypad the backlight is OFF.

# 11.0 PROGRAMING DINB100-SA WITH KEYPAD

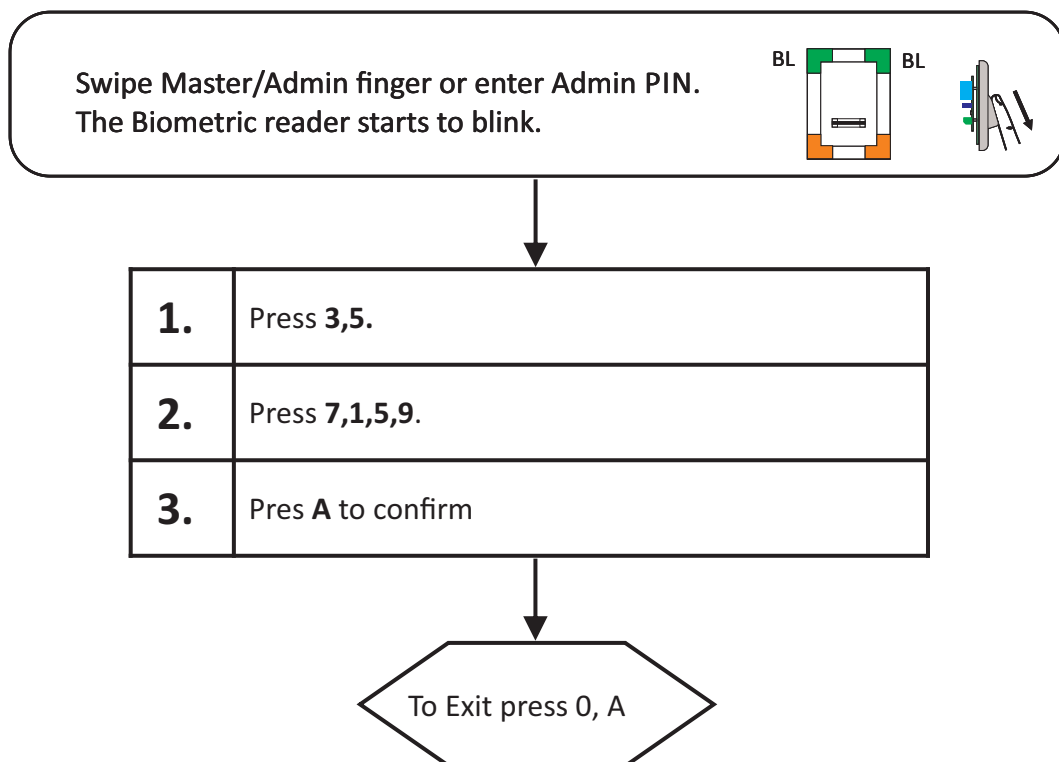


## 11.9 Set the Touch Button Function



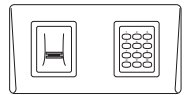
*Remote Relay Touch Function - Enabling/Disabling the Touch Button Function in the remote relay Unit*

## 11.10 Unpair Remote Relay



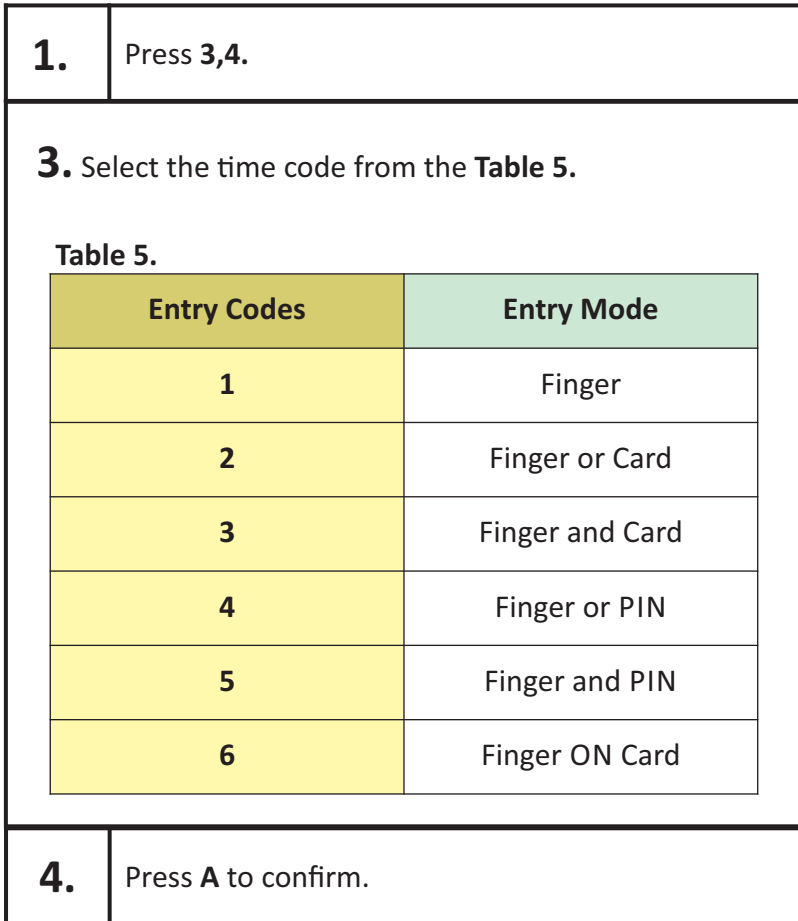
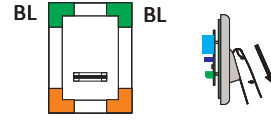


# 11.0 PROGRAMING DINB100-SA WITH KEYPAD



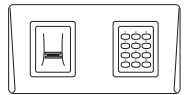
## 11.11 Entry Mode Settings

Swipe Master/Admin finger or enter Admin PIN.  
The Biometric reader starts to blink.

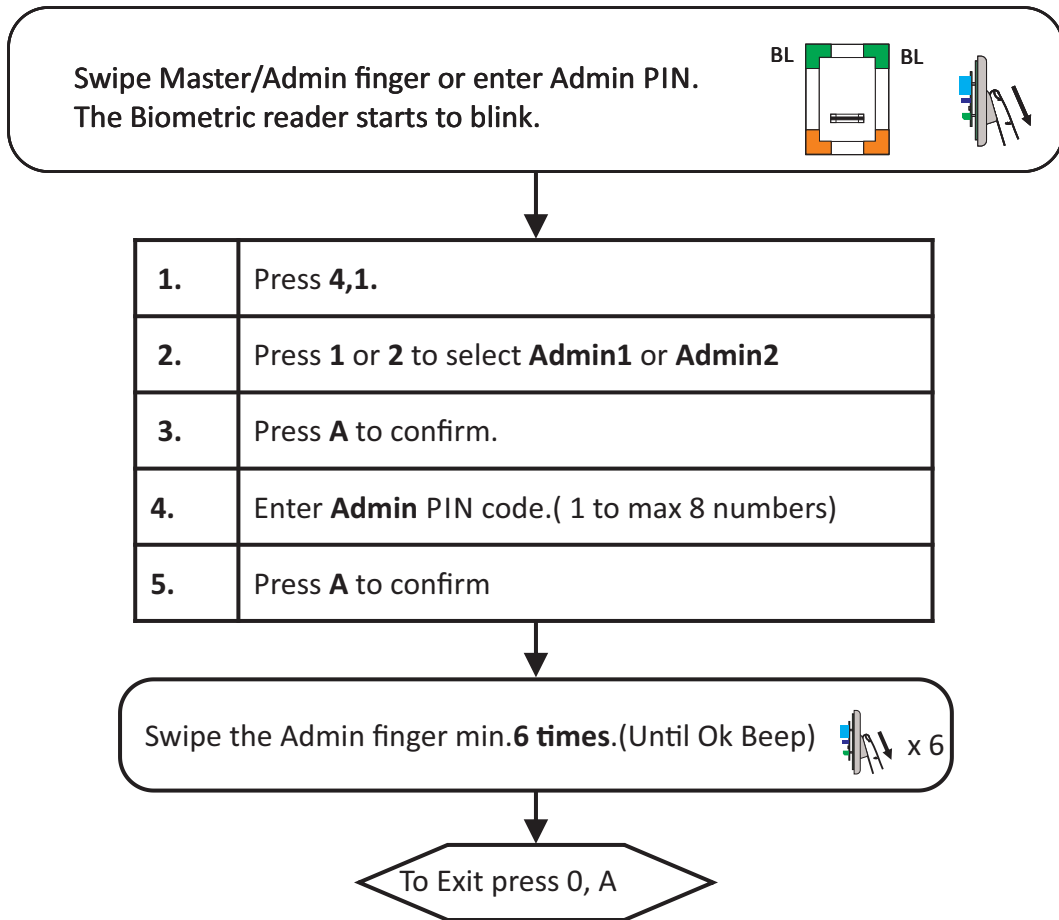


To Exit press 0, A

# 11.0 PROGRAMING DINB100-SA WITH KEYPAD

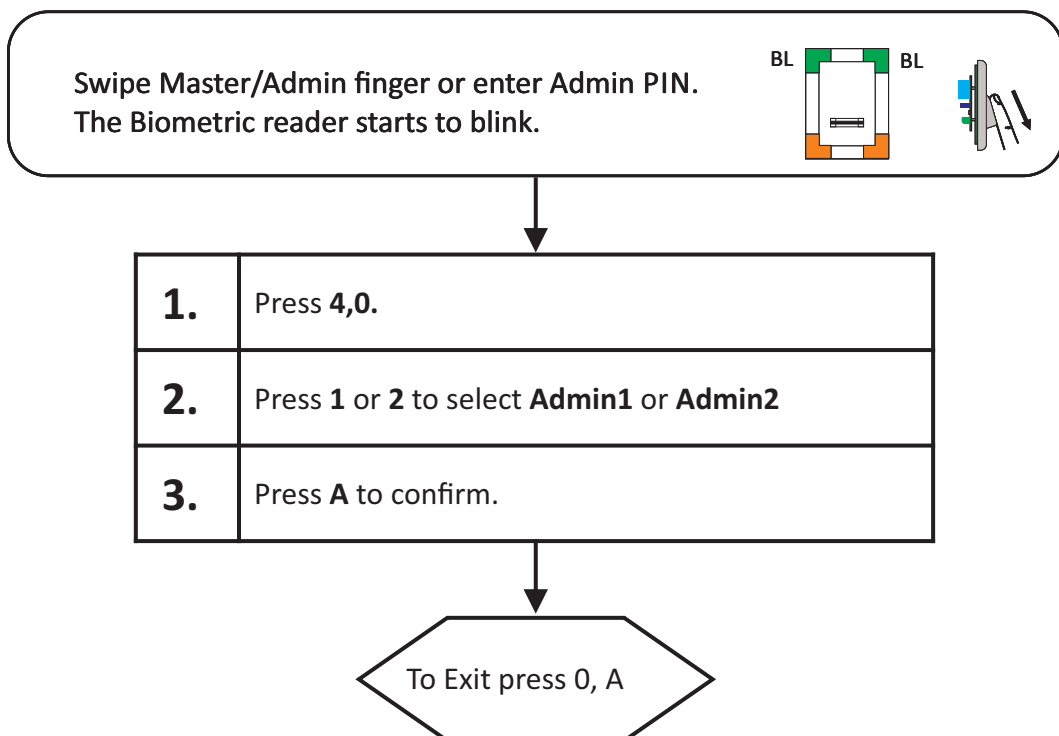


## 11.12 Add Administrator



- There is 1 Master Finger. The master finger can enroll/delete user and all the other settings.
- The Master finger can be changed ONLY with the jumper.
- There are 2 Administrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

## 11.13 Delete Administrator





This product herewith complies with requirements of EMC directive 2014/30/EU. In addition it complies with RoHS directive EN50581:2012



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