



# xpr B100-SA Standalone Biometric Reader Installation Guide

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**xpr B100-SA Standalone Biometric Reader**



## Product Information

- **Product Name:** B100-SA v2
- **Type:** Standalone Biometric Reader
- **Manufacturer:** XPR Group
- **Website:** [www.xprgroup.com](http://www.xprgroup.com).
- **Revision:** 1.01 – 31.03.2022

## Introduction

The B100-SA v2 is a standalone biometric reader that offers secure access control. It is designed to scan fingerprints and grant access based on authorized fingerprints enrolled in the system. This installer's manual provides detailed instructions on mounting, wiring, programming, and usage of the B100-SA v2.

## Mounting

The user manual does not provide specific mounting instructions. Please refer to the manufacturer's guidelines or consult with an authorized installer for proper mounting of the B100-SA v2.

## Specifications

- **Fingerprint Capacity:** [specification not provided]
- **Output:** [specification not provided]
- **Push Button Input:** [specification not provided]
- **Panel Connection:** [specification not provided]
- **Door Open Time:** [specification not provided]

- **Entry Mode:** [specification not provided]
- **Programming:** [specification not provided]
- **Admin/Installer Fingers:** [specification not provided]
- **Backlight ON/OFF:** [specification not provided]
- **Buzzer ON/OFF:** [specification not provided]
- **Firmware Upgrade:** [specification not provided]
- **Current Consumption:** [specification not provided]
- **Power Supply:** [specification not provided]
- **Indication:** [specification not provided]
- **IP Factor:** [specification not provided]
- **Operating Temperature:** [specification not provided]
- **Operating Humidity:** [specification not provided]
- **Dimensions(mm):** [specification not provided]

## Application Diagram

The user manual does not provide an application diagram. Please refer to the manufacturer's guidelines or consult with an authorized installer for proper application of the B100-SA v2.

## Recommended Swiping Technique

To ensure a valid fingerprint swipe, follow these instructions:

1. Start from the first finger joint.
2. Place the selected finger on the swipe sensor.
3. Move the finger evenly towards oneself in one steady movement.

### Result:

- For a valid swipe: Tricolour Status LED turns green + OK Beep (short + long beep).
- For an invalid or misread swipe: Tricolour Status LED turns red + Error Beep (3 short beeps).

## Indication

The user manual does not provide specific information about the indication. Please refer to the manufacturer's guidelines or consult with an authorized installer for proper understanding of the indication on the B100-SA v2.

## Wiring

The user manual does not provide specific wiring instructions. Please refer to the manufacturer's guidelines or consult with an authorized installer for proper wiring of the B100-SA v2.

## Adding Admin Finger

1. Push dip switch no.2 in position ON.
2. Reset the power of the device.

3. Wait for One long + multiple short beeps.
4. Put the dip switch in position OFF (short beeps will stop).
5. Wait for about 15 seconds for the LED to blink in Orange.
6. Swipe the Master finger min. 6 times (Until OK Beep).

## INTRODUCTION

B100-SA v2 is access control fingerprint reader designed for easy management of the users and configuration. The scanner is made with advanced capacitive sensing technology that provides some advantages over optical solutions like:

- making almost impossible to make fake copy of the users fingers
- same performance in the different light conditions
- good reading of fingers with stains from daily jobs

Built-in strong scanning and matching algorithm provides excellent tolerance in the way finger is swiped over the sensor reducing to a minimum the need to repeat finger swiping at the sensor. The reader can store up to 100 finger templates. One template is reserved for User manager (Administrator), one template is reserved for the Reader configuration (Installer) and up to 98 templates are for Users.

## RECOMMENDATIONS

Consult with installer about safety level of the installation. There are devices with relays compatible with this reader that can increase the security of the system if needed. One or two enrolled fingers are enough for one user. Ask the installer before he leaves the site to enroll your finger as administrator.

**NOTES:** The Reader is using the physical roughness of the fingerprint to scan the finger. Some of the users may have very flat fingertips, making it difficult for the sensor to recognize correctly the fingerprint. In most cases, these are children and older persons. To solve this problem, do the following:

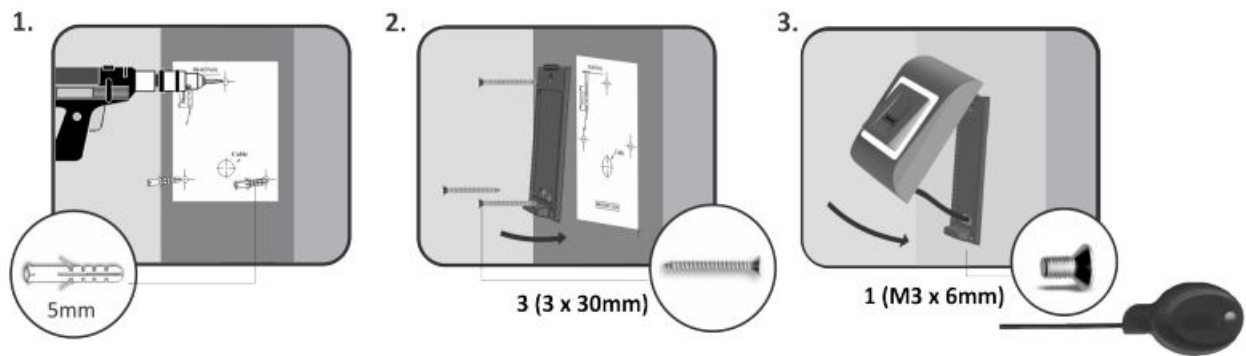
1. Try with different users' fingers to find the "best" finger.
2. Check with the installer for other models of the reader with an added card reader or keypad for another type of access.

## MAINTENANCE

No special or periodic maintenance is required. If cleaning is needed, use soft wet cloth and wipe gently the dirt. Do not use chemicals and materials that can scratch the sensor

**WARNING!** Do not touch the sensor with other objects than your finger. Do not pour or splash with water or other liquids. When painting or construction work is ongoing in the area around the reader, protect the reader sensor area from possible damage and paint. If the reader is to be dismantled or relocated, call an authorized installer for the job. Disposal of this product must be handled according to all national laws and regulations.

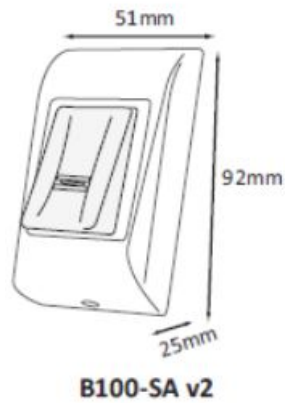
## MOUNTING



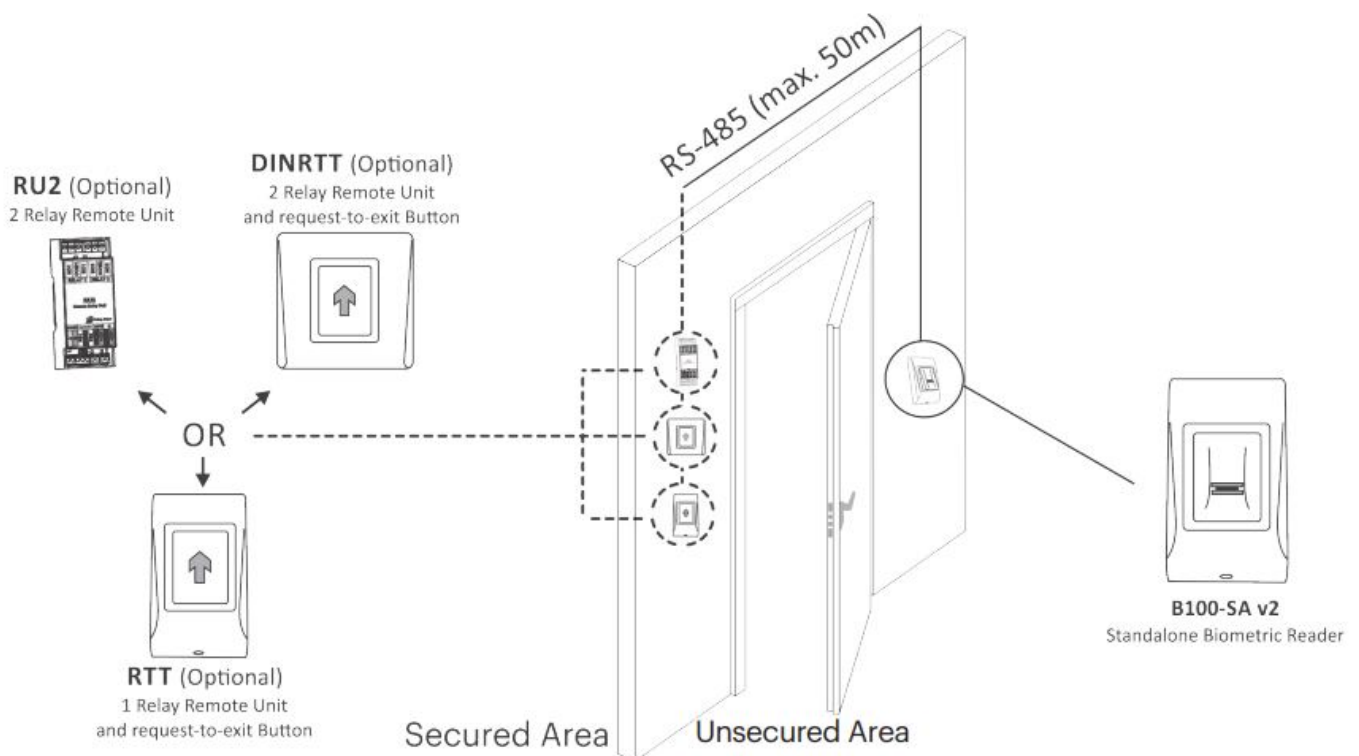
- Do not install the device and cabling close to a source of strong electromagnetic fields like a radio-transmitting antenna.
- Do not place the device near or above the heating equipment.
- If cleaning, do not spray or splash water or other cleaning liquids but wipe it out with a smooth cloth or towel.
- 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.
- The operating temperature of the product is between 0°C – + 50°C. XPR™ cannot guarantee the functionality of the product if measures and advice before are not followed.

## SPECIFICATIONS

- **Fingerprint Capacity:** 98 templates
- **Output:** 1 x Relay (2 A /24V AC/DC)
- **Push Button Input:** Yes
- **Panel Connection:** Cable, 0.5 m
- **Door Open Time:** Pulse (1 to 30 seconds) or Toggle (ON/OFF)
- **Entry Mode:** Finger
- **Programming:** By swiping
- **Admin/Installer Fingers:** 1 Administrator and 1 Installer Finger
- **Backlight ON/OFF:** Yes
- **Buzzer ON/OFF:** Yes
- **Firmware Upgrade:** via RS-485 converter and Windows application
- **Current Consumption:** 100 mA max.
- **Power Supply:** 9-14 V DC
- **Indication:** Tricolor Status LED
- **IP Factor:** IP54 (internal use only)
- **Operating Temperature:** 0°C to +50°C
- **Operating Humidity:** 5% to 95% RH without condensation
- **Dimensions(mm):** 92 x 51 x 25 (metal); 92 x 51 x 27 (ABS)



## APPLICATION DIAGRAM

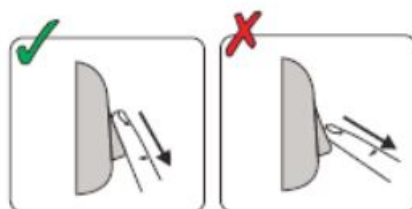


## RECOMMENDED SWIPING TECHNIQUE

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 Status LED turns green + OK Beep(short + long beep)
- **For an invalid or misread swipe:** Tricolour Status LED turns red + Error Beep ( 3 short beeps)

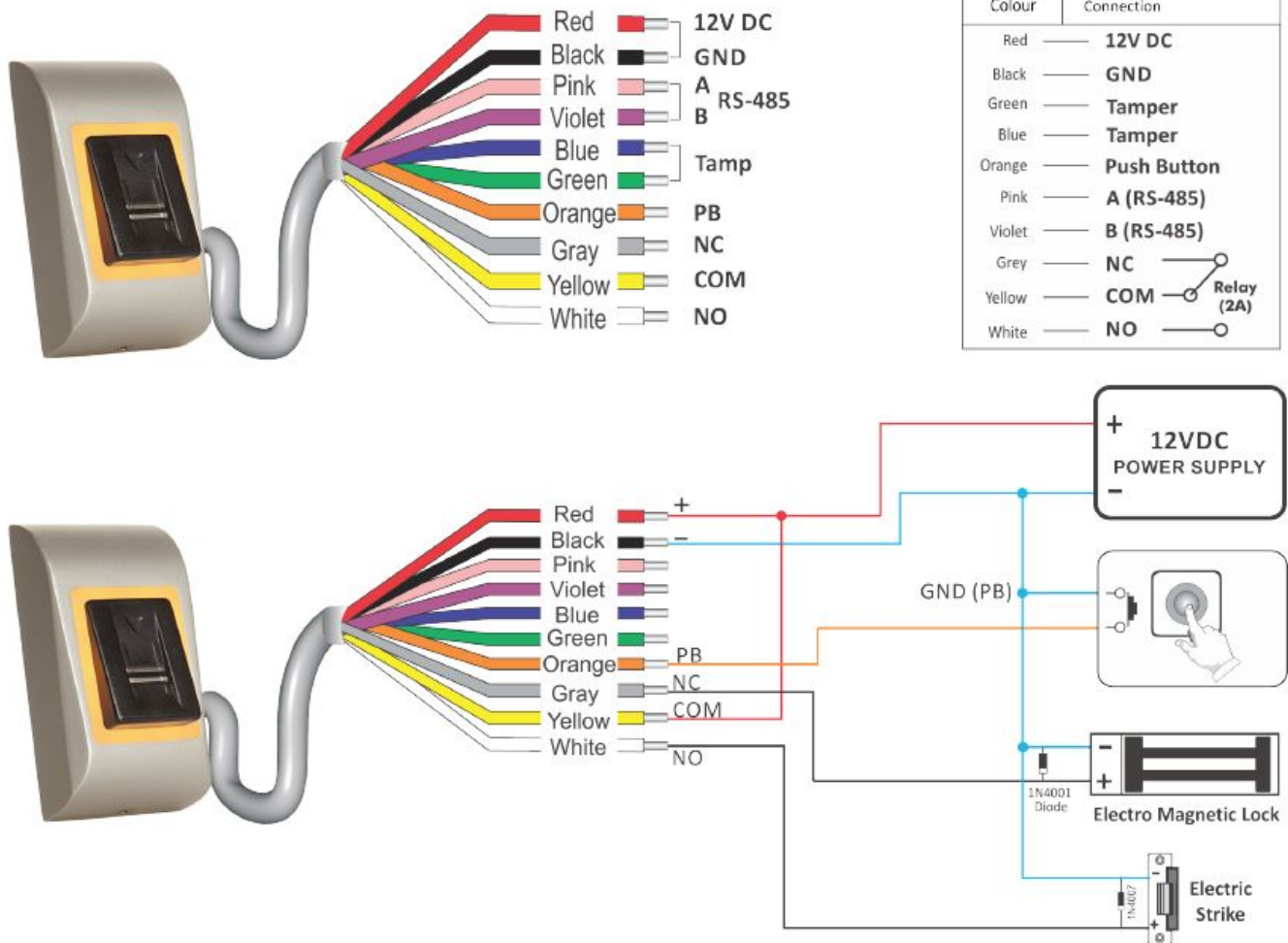


## INDICATION







- **OK Beep** – short + long beep
- **Error Beep** – 3 short beeps
- **Swipe Finger** – 2 short beeps

## WIRING



## ADDING ADMIN FINGER

1. Push dip switch no.2 in position ON.  **No.2**
2. Reset the Power of the device. 
3. Wait for One long + multiple short beeps
4. Put the dip switch in position OFF. (short beeps will stop)  **No.2** 

5. Wait for about 15 seconds for the LED to blink in Orange.



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

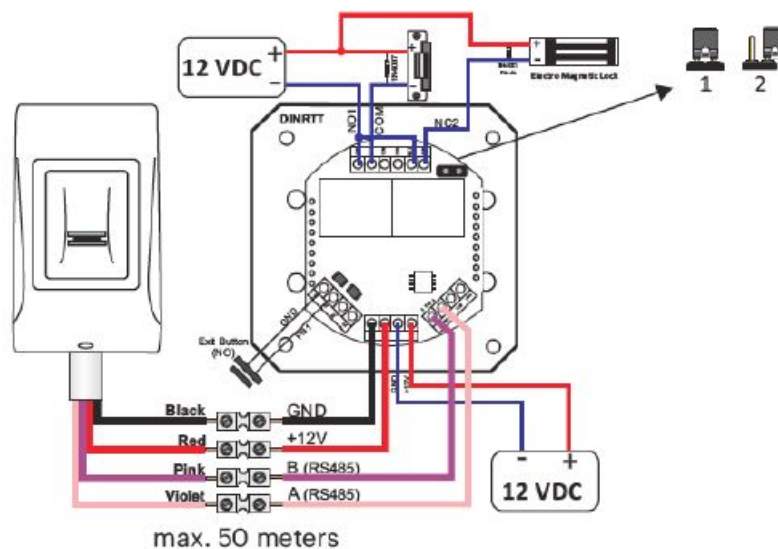


- **Warning:** This procedure also deletes all the users and the installer finger.
- **Warning:** This procedure will unpair the connected relay unit (RTT, DINRTT or RU2)

## PAIRING – BIOMETRIC READER AND REMOTE RELAY UNIT

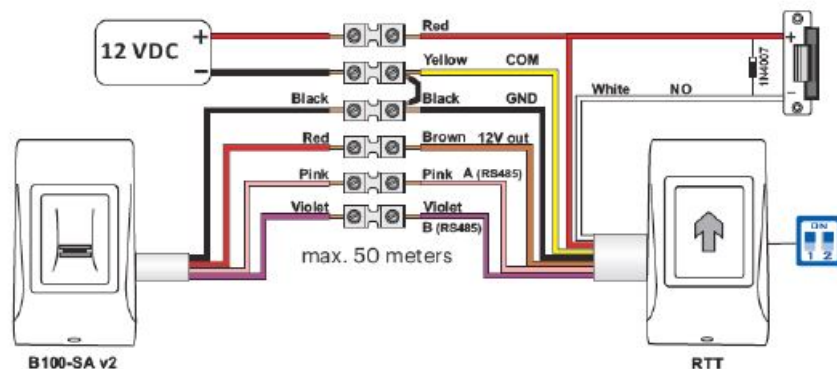
If secure installation is needed, the reader can be connected to remote relay unit at secured area, which also can play the role of request-to-exit push button. Follow the instructions bellow to pair (couple) both devices or refer to the Remote Relay's Manual.

### Pairing B100-SA v2 with DINRTT



1. Close the Jumper. DINRTT beeps continuously and the red led blinks.
2. Open the Jumper
3. Wait for Beep + OK Beep (short + short + long beep) After the OK beep, the coupling is done.

### Pairing B100-SA v2 with RTT

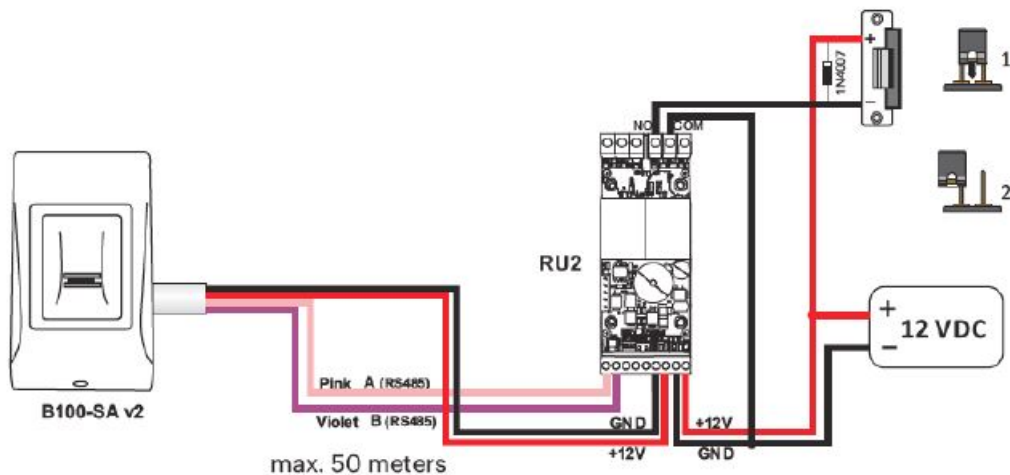


1. Put Dipswitch No.1 to position ON. RTT beeps continuously and the red led blinks.
2. Put Dipswitch No.1 to position OFF.



3. Wait for Beep + OK Beep (short + short + long beep) After the OK beep, the coupling is done.

### Pairing DINB100-SA with RU2

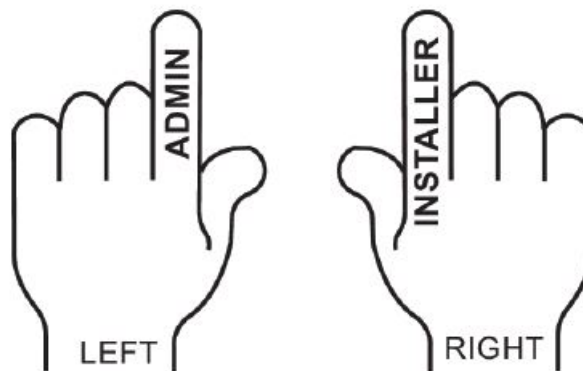


1. Put the Jumper to closed position. RU2 beeps continuously and the red led blinks.
2. Put the Jumper to open position.
3. Wait for Beep + OK Beep (short + short + long beep) After the OK beep, the coupling is done.





**Warning:** Changing the ADMIN finger will also unpair the remote relay unit.

### ADMINISTRATOR PROGRAMMING





Use point fingers as Administrator and Installer. You can use the other fingers as access fingers. Administrator finger is enrolled at the end of the system installation. Initial enrollment of the Admin finger is described in installer manual.



### ADD Finger Relay 1 (Finger that will activate relay 1)





Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 1 time	x 1 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe User Finger min. 6 times (until short + long beep)	x 6 	 fast blinking	short + long beep

### ADD Finger Relay 2 (Finger that will activate relay 2)

Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 2 times	x 2 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe User Finger min. 6 times (until short + long beep)	x 6 	 fast blinking	short + long beep





Relay 2 is available if the reader is used with remote relay unit with 2 relays (DINRTT and RU2). Consult the installer if Relay 2 is available in your system.

### ADD Finger Relay 1&2 (Finger that will activate relay 1&2)






Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 3 times	x 3 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe User Finger min. 6 times (until short + long beep)	x 6 	 fast blinking	short + long beep

Relay 2 is available if the reader is used with remote relay unit with 2 relays (DINRTT and RU2). Consult the installer if Relay 2 is available in your system.






### DELETE Finger

Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 4 times	x 4 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe User Finger	x1 	 fast blinking	short + long beep






### DELETE ALL Fingers

Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 4 times	x 4 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)		 slow blinking	short beep
Swipe Admin Finger 2 times	x2 	 fast blinking	multiple beeps

### CHANGE ADMIN Finger

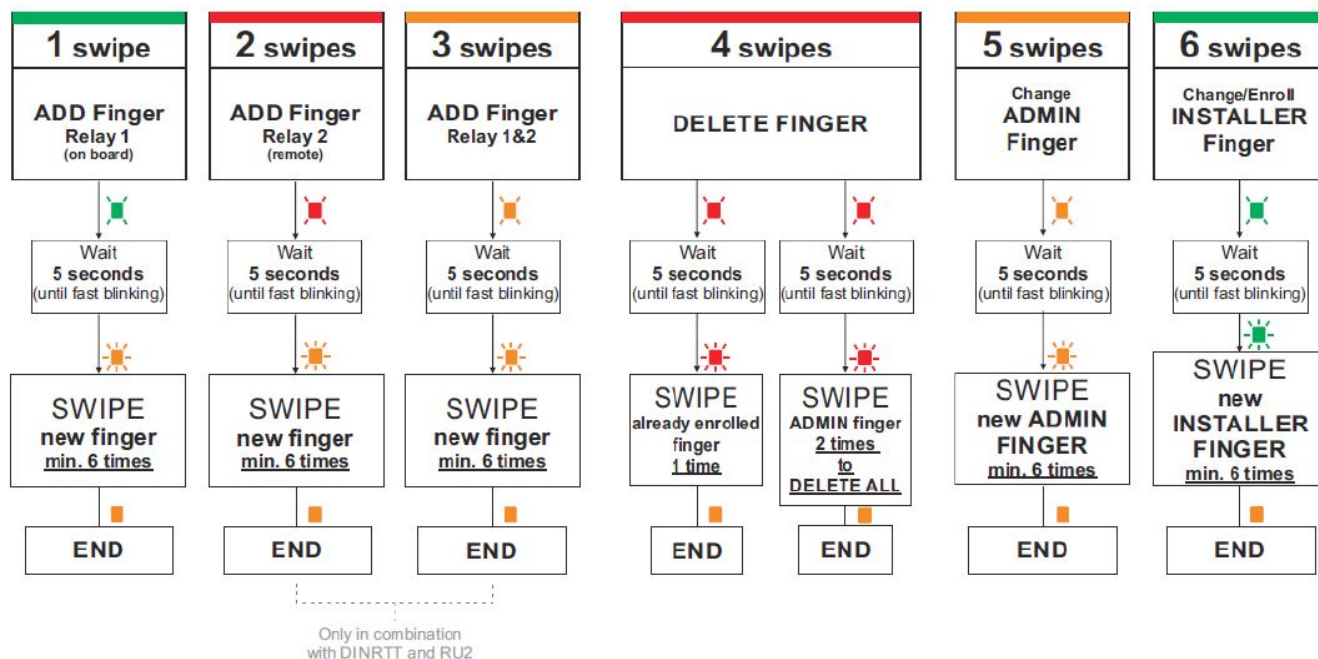
Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 5 times	x 5 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)		 slow blinking	short beep
Swipe NEW Admin Finger min. 6 times	x6 	 fast blinking	short + long beep

### CHANGE/Enroll INSTALLER Finger

Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 6 times	x 6 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)		 slow blinking	short + long beep
Swipe NEW Installer Finger min. 6 times	x6 	 fast blinking	3 short beeps







## Administrator Programming block diagram

Swipe the ADMIN Finger 1 to 6 times depending of the desired menu









## INSTALLER PROGRAMMING

### Set Relay 1 Time (onboard)





Action	Finger	Backlight	Buzzer Sound
Swipe Installer Finger 1 time	x1 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe the INSTALLER Finger and start counting seconds	x1 	 fast blinking	beeps on 1 second
Swipe the INSTALLER Finger to stop or wait 30 seconds to put the relay in toggle mode	x1 	 fast blinking	short + long beep

### Set Relay 2 Time (remote)





Action	Finger	Backlight	Buzzer Sound
Swipe Installer Finger 2 times	x2 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe the INSTALLER Finger and start counting seconds	x1 	 fast blinking	beeps on 1 second
Swipe the INSTALLER Finger to stop or wait 30 seconds to put the relay in toggle mode	x1 	 fast blinking	short + long beep

Relay 2 is available if the reader is used with remote relay unit with 2 relays (DINRTT and RU2). Consult the installer if Relay 2 is available in your system.

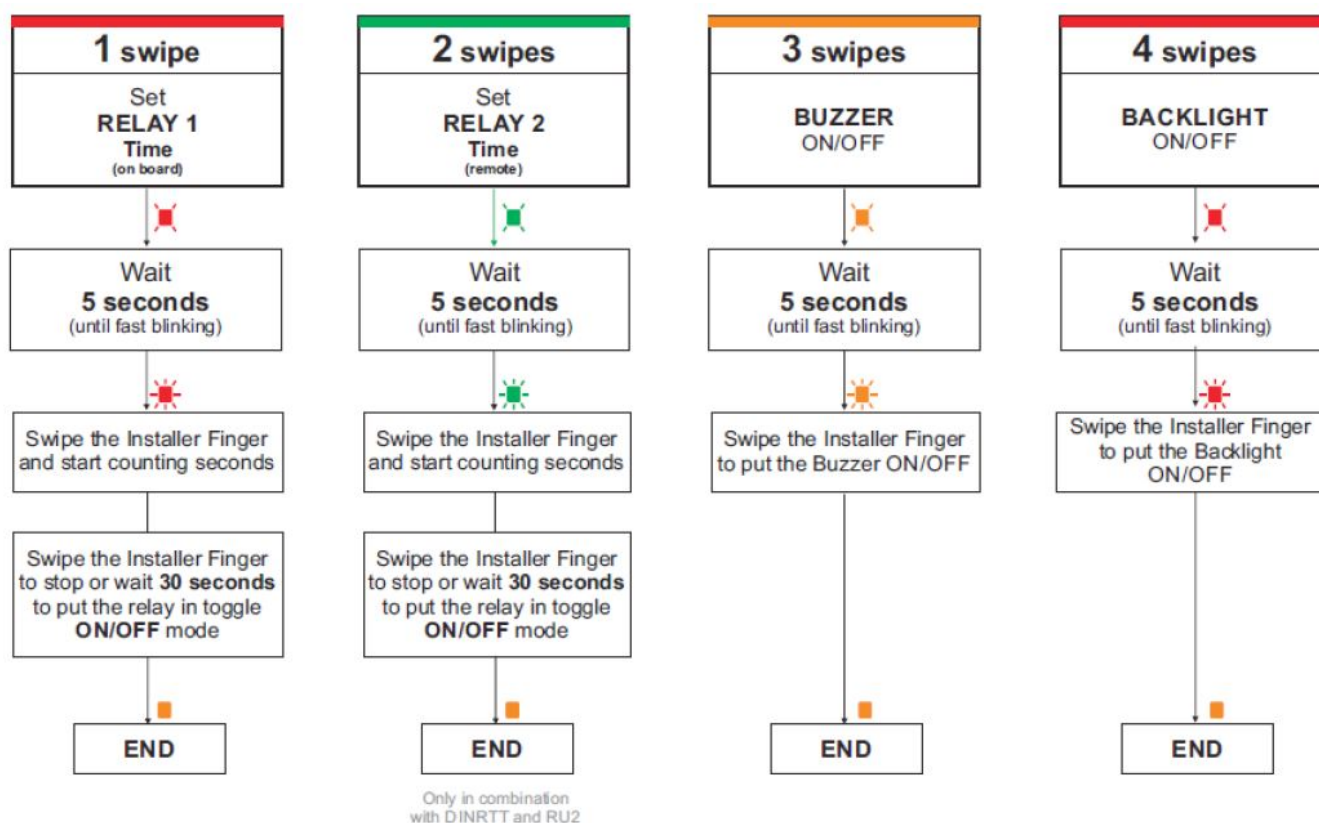
### BUZZER ON/OFF

Action	Finger	Backlight	Buzzer Sound
Swipe Installer Finger 3 times	x3 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe Installer Finger	x1 	 fast blinking	short + long beep


## BACKLIGHT ON/OFF

Action	Finger	Backlight	Buzzer Sound
Swipe Installer Finger 4 times	x4 	 slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe Installer Finger	x1 	 fast blinking	short + long beep

## Installer Programming block diagram



## Documents / Resources

	<p><a href="#">xpr B100-SA Standalone Biometric Reader</a> [pdf] Installation Guide B100-SA Standalone Biometric Reader, B100-SA, Standalone Biometric Reader, Biometric Reader, Reader</p>
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## References

- [XPR Group - Safe access systems provider](#)

Manuals+.