Manuals+ — User Manuals Simplified.

XPR Group B100PAD-SA v2 Standalone Biometric Reader Instruction Manual

Contents

XPR Group B100PAD-SA v2 Standalone Biometric Reader

Product Information

- Product Name: B100PAD-SA v2
- Product Type: Standalone Biometric Reader
- Manufacturer: XPR Group
- Website: **www.xprgroup.com**
- Revision: 1.01 – 06.04.2022

Product Usage Instructions

Mounting

To mount the device, follow these steps:

1. Choose a suitable location away from strong electromagnetic fields and heating equipment.
2. Clean the device using a soft cloth or towel. Do not spray or splash water or cleaning liquids on the device.
3. Ensure that children do not touch the device without supervision.

Specifications

- Fingerprint Capacity: [Provide the fingerprint capacity]
- PIN Code Capacity: [Provide the PIN code capacity]
- Output: [Provide the output specifications]
- Panel Connection: [Provide the panel connection specifications]
- Push Button Input: [Provide the push button input specifications]
- Door Open Time: [Provide the door open time specifications]
- Entry Mode: [Provide the entry mode specifications]
- Programming: [Provide the programming specifications]
- Master/Admin Fingers: [Provide the master/admin fingers specifications]
- Backlight ON/OFF: [Provide the backlight ON/OFF specifications]
- Buzzer ON/OFF: [Provide the buzzer ON/OFF specifications]
- Firmware Upgrade: [Provide the firmware upgrade specifications]

- Current Consumption: [Provide the current consumption specifications]
- Power Supply: [Provide the power supply specifications]
- Indication: [Provide the indication specifications]
- IP Factor: [Provide the IP factor specifications]
- Operating Temperature: [Provide the operating temperature specifications]
- Operating Humidity: [Provide the operating humidity specifications]
- Dimensions(mm): [Provide the dimensions specifications]

Note: Please refer to the complete user manual for detailed instructions on wiring, pairing with remote relay units, administrator programming, installer programming, and usage of keypad.

INTRODUCTION

B100PAD-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 minimum the need to repeat finger swiping at the sensor.
The reader can store up to 99 finger templates. One template is reserved for User manager (Administrator), one template is reserved for Reader configuration (Installer) and up to 97 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 physical roughness of the fingerprint to scan the finger. Some of the users may have very flat fingertips, making 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 user's fingers to find the "best" finger.
2. Check with the installer other models of the reader with added card reader or keypad for other 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 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 damages and paint. If reader is to be dismounted or relocated, call authorized installer for the job. Disposal of this product must be handled according to all national laws and regulations.

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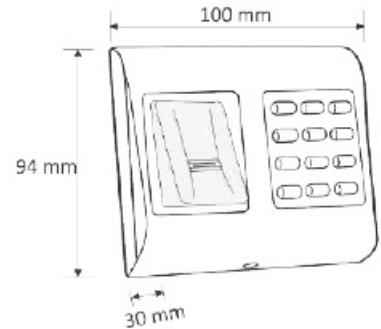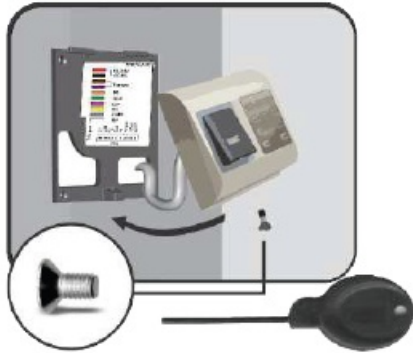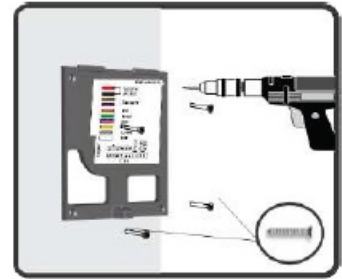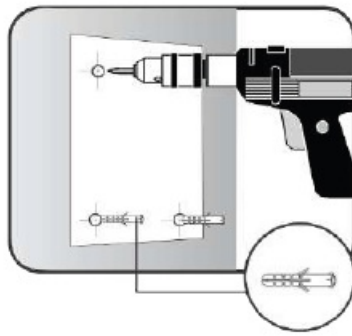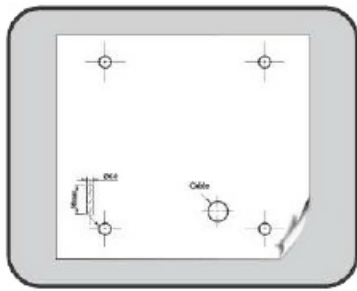
Do not install the device and cabling close to a source of strong electro-magnetic fields like radio-transmitting antenna.

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.
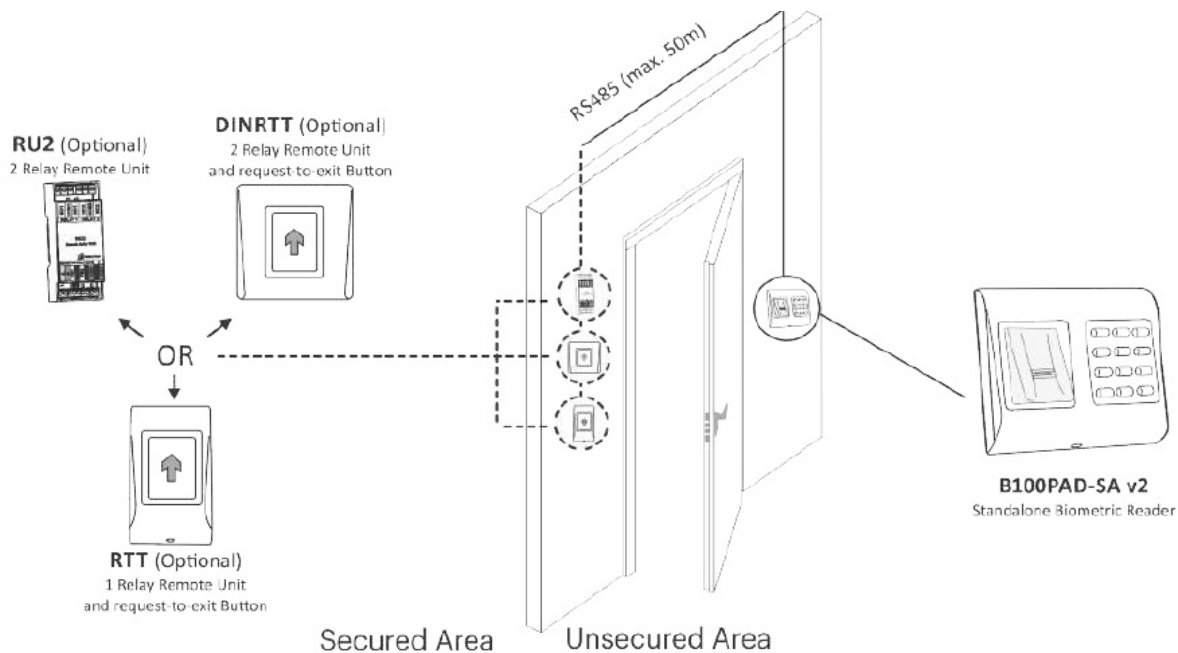
The operating temperature of the product is between 0ºC – + 50ºC. XPR™ cannot guarantee the functionality of the product if measures and advice before are not followed.
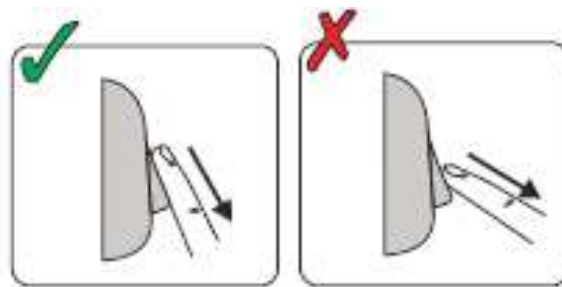
SPECIFICATIONS

- Fingerprint Capacity: 97 templates
- PIN Code Capacity: 97 PIN Codes (1 to 8 digits)
- Output: 1 x Relay (2A/24V AC/DC)
- Panel Connection: Cable, 0.5 m
- Push Button Input: Yes
- Door Open Time: Pulse (1 to 30 seconds) or Toggle(ON/OFF)
- Entry Mode: Finger or Access Code
- Programming: By swiping or by keypad
- Master/Admin 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: 150 mA max.
- Power Supply: 9-14 V DC
- Indication: Tricolor Status LED
- IP Factor: IP54 (internal use only)
- Operating Temperature : 0ºC to 50ºC

- Operating Humidity: 5% to 95% RH without condensation
- Dimensions(mm): 100 x 94 x 30

APPLICATION DIAGRAM

RU2 (Optional)
2 Relay Remote Unit

DINRTT (Optional)
2 Relay Remote Unit
and request-to-exit Button

OR

RTT (Optional)
1 Relay Remote Unit
and request-to-exit Button

RS485 (max. 50m)

B100PAD-SA v2
Standalone Biometric Reader

Secured Area   Unsecured Area

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
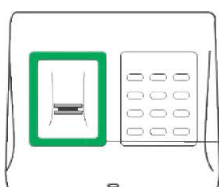
Tricolor Status LED
Green - Access Granted
Red - Access denied
Orange - Idle Mode

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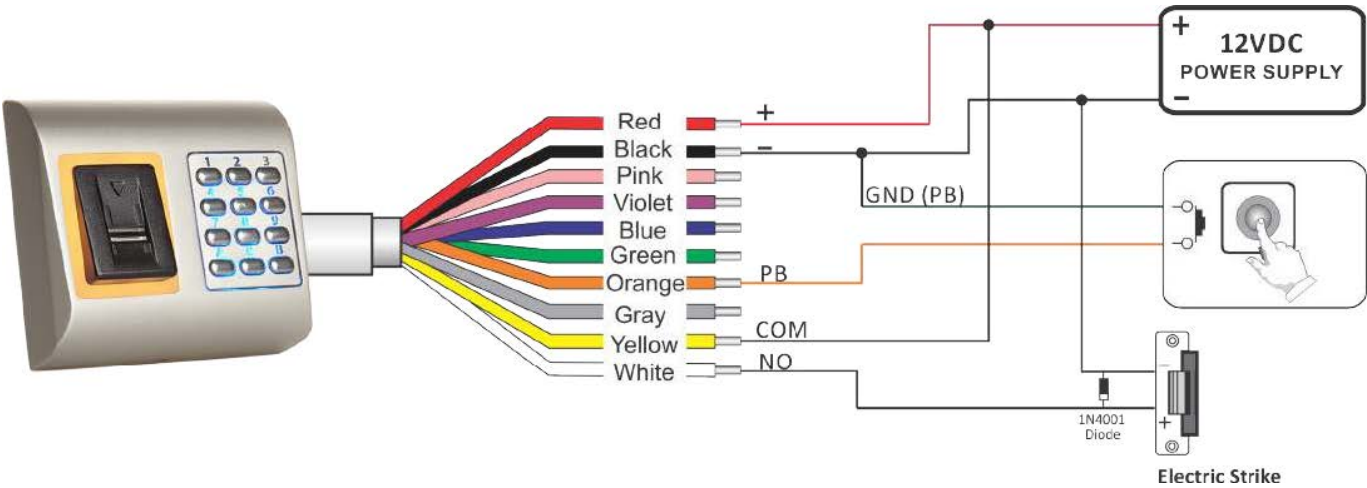Error Beep - 3 short beeps
Swipe Finger - 2 short beeps

WIRING

Colour	Connection
Red	12V DC
Black	GND
Green	Tamper
Blue	Tamper
Orange	Push Button
Pink	A (RS485)
Viclet	B (RS485)
Grey	NC
Yellow	COM
White	NO
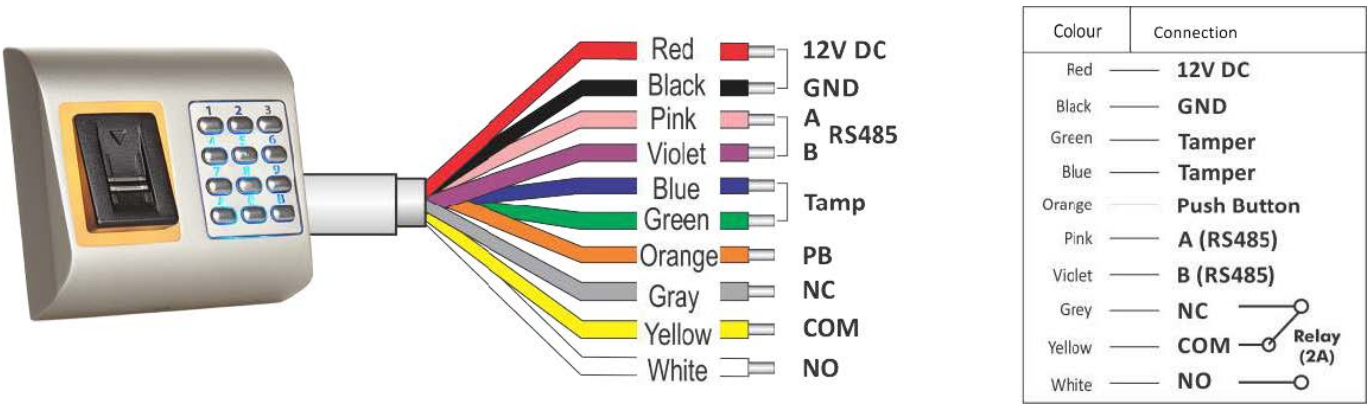
Wiring B100PAD-SA v2 with magnetic lock
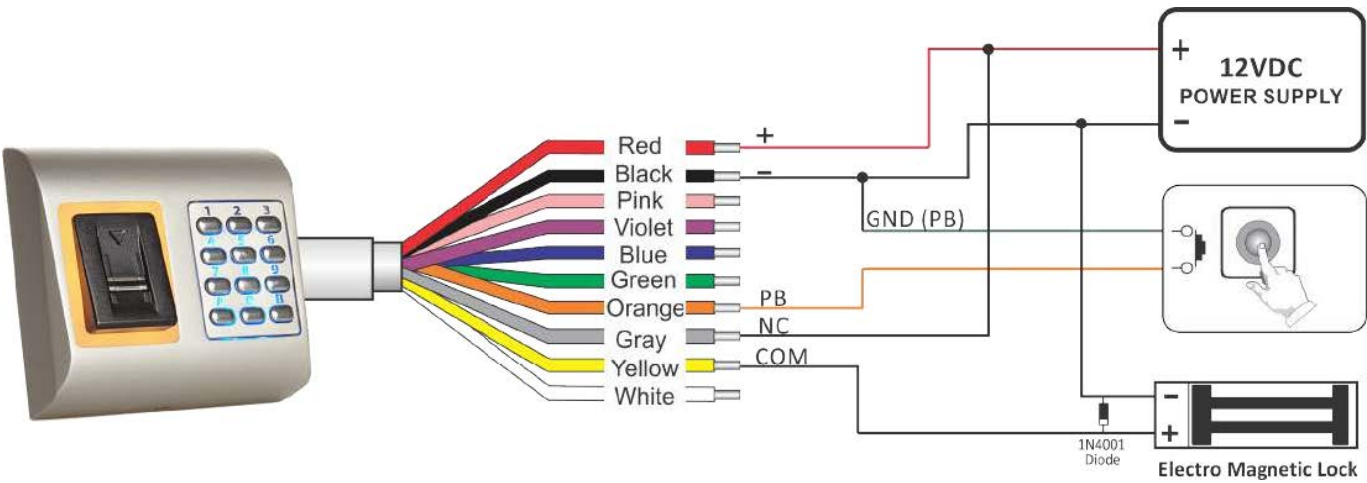
Wiring B100PAD-SA v2 with electric strike

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)

Warning: This procedure also deletes all the users, the installer's finger, installer's PIN Code and admin's PIN Code.
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 B100PAD-SA v2 with DINRTT

B100PAD-SA v2

Black	GND
Red	+12V
Pink	B (RS485)
Violet	A (RS485)

max. 50 meters
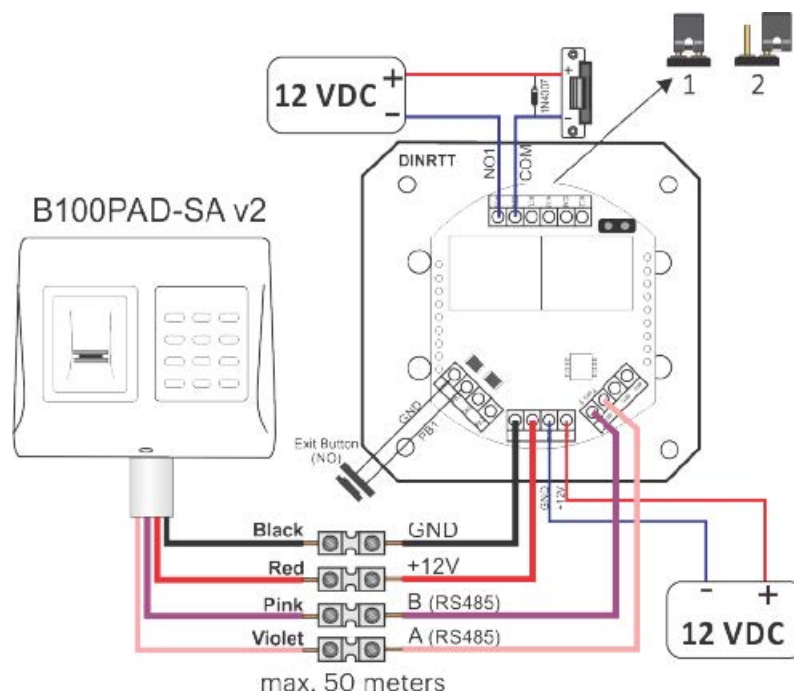
1. Close the Jumper. DINRTT beeps continuously and the red led blinks.
2. Open the Jumper
3. Wait for Beep + OK Beep (short + short + long beep)
   After the OK beep, the coupling is done.
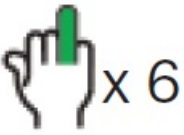
Pairing B100PAD-SA v2 with RTT

B100PAD-SA v2

max. 50 meters

RTT
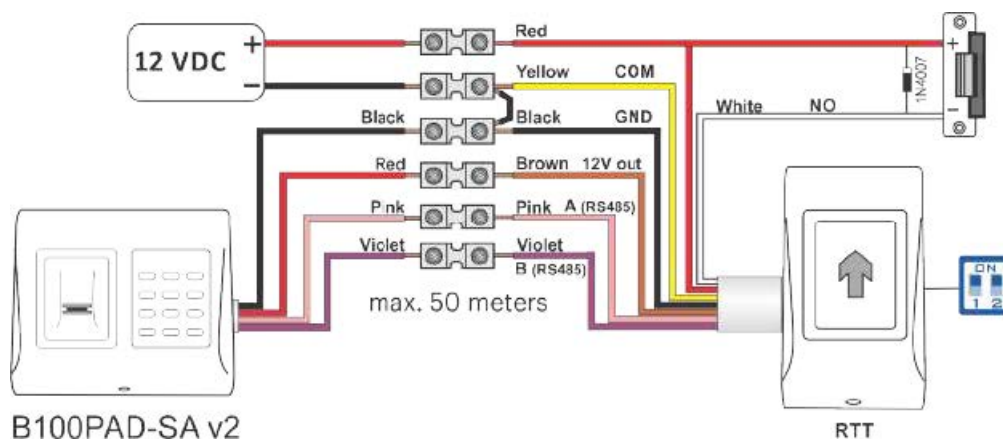
1. Put Dipswitch No.1 to position ON. RTT beeps continuously and the red led blinks.
2. Put Dipswitch No.1 to position OFF.
3. Wait for Beep + OK Beep (short + short + long beep)
   After the OK beep, the coupling is done.

Pairing B100PAD-SA v2 with RU2
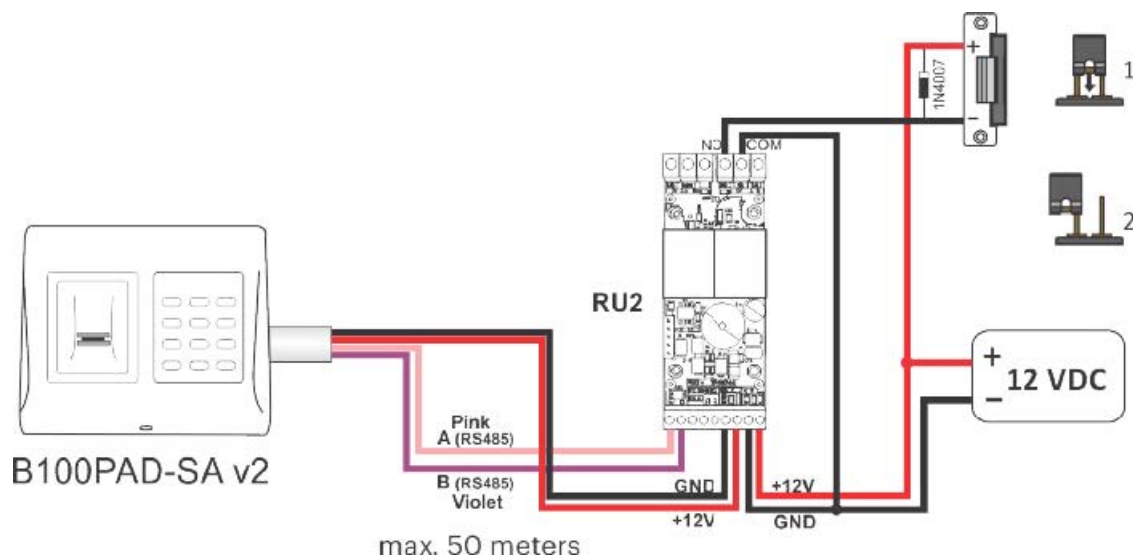
1. Put the Jumper to closed position. RU2 beeps continuously and the red led blinks.
2. Put the Jumper to open position.
3. Wait for Beep + OK Beep (short + short + long beep)

   Warning: Changing the ADMIN finger will also unpair the remote relay unit.
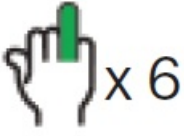
ADMINISTRATOR PROGRAMMING BY FINGER

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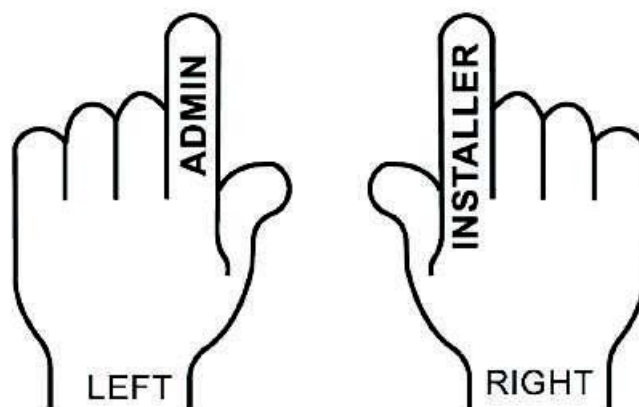
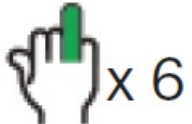**ADD Finger Relay 1 (Finger that will activate relay 1)**
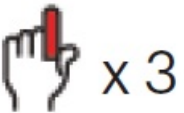
Action	Finger	Backlight	Buzzer Sound
Swipe Admin Finger 1 time	x 1	slow blinking	short beep
Wait 5 seconds (until fast blinking)			short beep
Swipe User Finger min. 6 times (until short + long beep)	x 6	fast blinking	short + long beep

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	x6	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

1 swipe — ADD Finger Relay 1 (on board) → Wait 5 seconds (until fast blinking) → SWIPE new finger min. 6 times → END

2 swipes — ADD Finger Relay 2 (remote) → Wait 5 seconds (until fast blinking) → SWIPE new finger min. 6 times → END

3 swipes — ADD Finger Relay 1&2 → Wait 5 seconds (until fast blinking) → SWIPE new finger min. 6 times → END

4 swipes — DELETE FINGER → Wait 5 seconds (until fast blinking) → SWIPE already enrolled finger 1 time → END / Wait 5 seconds (until fast blinking) → SWIPE ADMIN finger 2 times to DELETE ALL → END

5 swipes — Change ADMIN Finger → Wait 5 seconds (until fast blinking) → SWIPE new ADMIN FINGER min. 6 times → END

6 swipes — Change/Enroll INSTALLER Finger → Wait 5 seconds (until fast blinking) → SWIPE new INSTALLER FINGER min. 6 times → END

Only in combination with DINRTT and RU2

INSTALLER PROGRAMMING BY FINGER
Set Relay 1 Time (on board)

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

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	x 4	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
Swipe the Installer Finger 1 to 4 times depending of the desired menu

1 swipe	2 swipes	3 swipes	4 swipes
Set **RELAY 1** Time (on board)	Set **RELAY 2** Time (remote)	**BUZZER** ON/OFF	**BACKLIGHT** ON/OFF
Wait **5 seconds** (until fast blinking)	Wait **5 seconds** (until fast blinking)	Wait **5 seconds** (until fast blinking)	Wait **5 seconds** (until fast blinking)
Swipe the Installer Finger and start counting seconds	Swipe the Installer Finger and start counting seconds	Swipe the Installer Finger to put the Buzzer ON/OFF	Swipe the Installer Finger to put the Backlight ON/OFF
Swipe the Installer Finger to stop or wait **30 seconds** to put the relay in toggle **ON/OFF** mode	Swipe the Installer Finger to stop or wait **30 seconds** to put the relay in toggle **ON/OFF** mode		
END	END	END	END

Only in combination with DINRTT and RU2

ADMINISTRATOR PROGRAMMING BY KEYPAD

Note: Entering this menu is done by admin PIN Code. You can not enter with Admin Finger
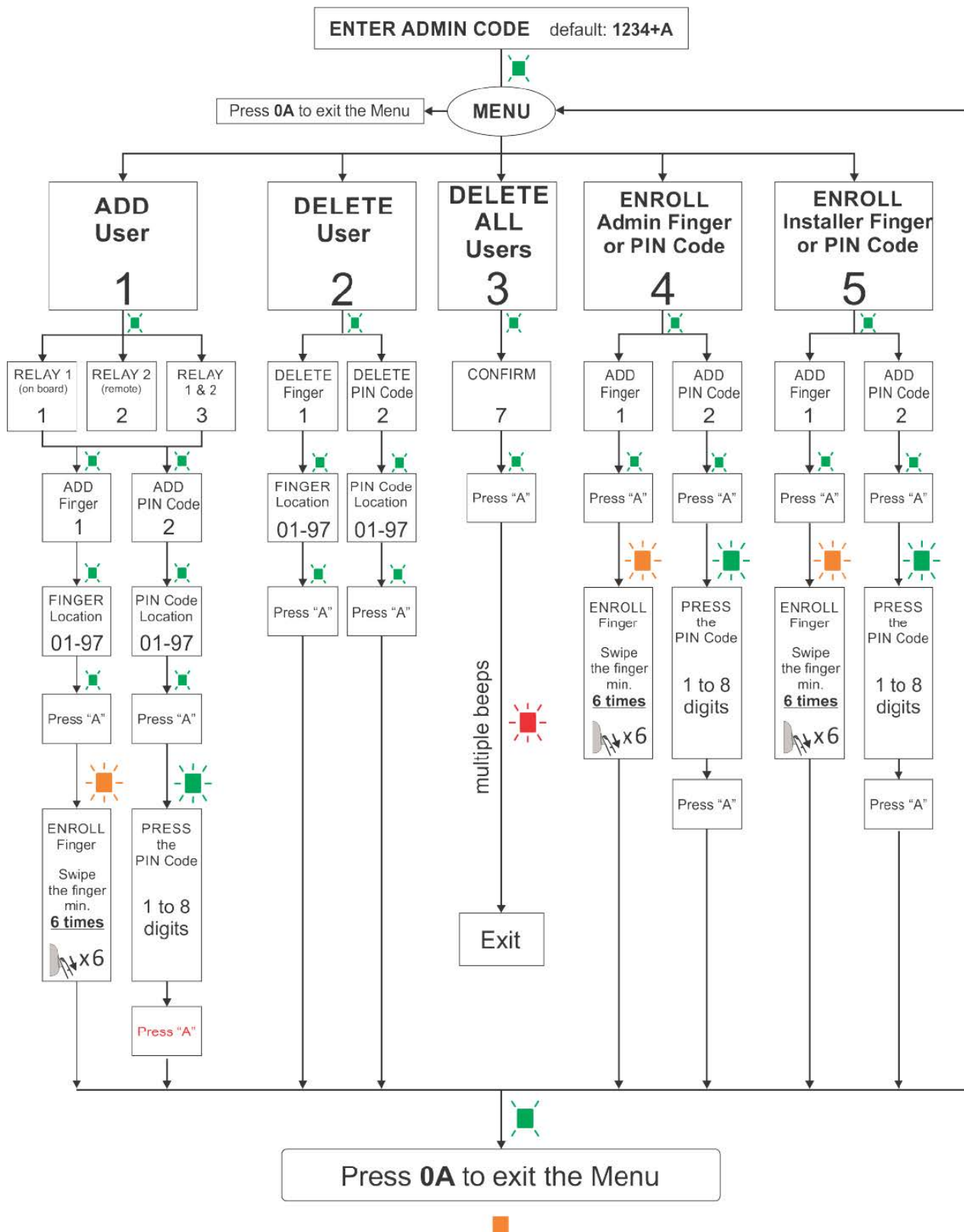
Note: The Fingerprint can be deleted by keypad, only if it is enrolled with keypad.

Example 1: Add user finger to Relay1 – Press 1234 + A + 1 + 1 + 1 + 01 + A + Enroll finger 6 times. 0A to exit.
Example 2: Add user PIN 147 to Relay2 – Press 1234 + A + 1 + 2 + 2 + 02 + A + 147 + A. 0A to exit.

ENTER INSTALLER CODE

default: 5678+A

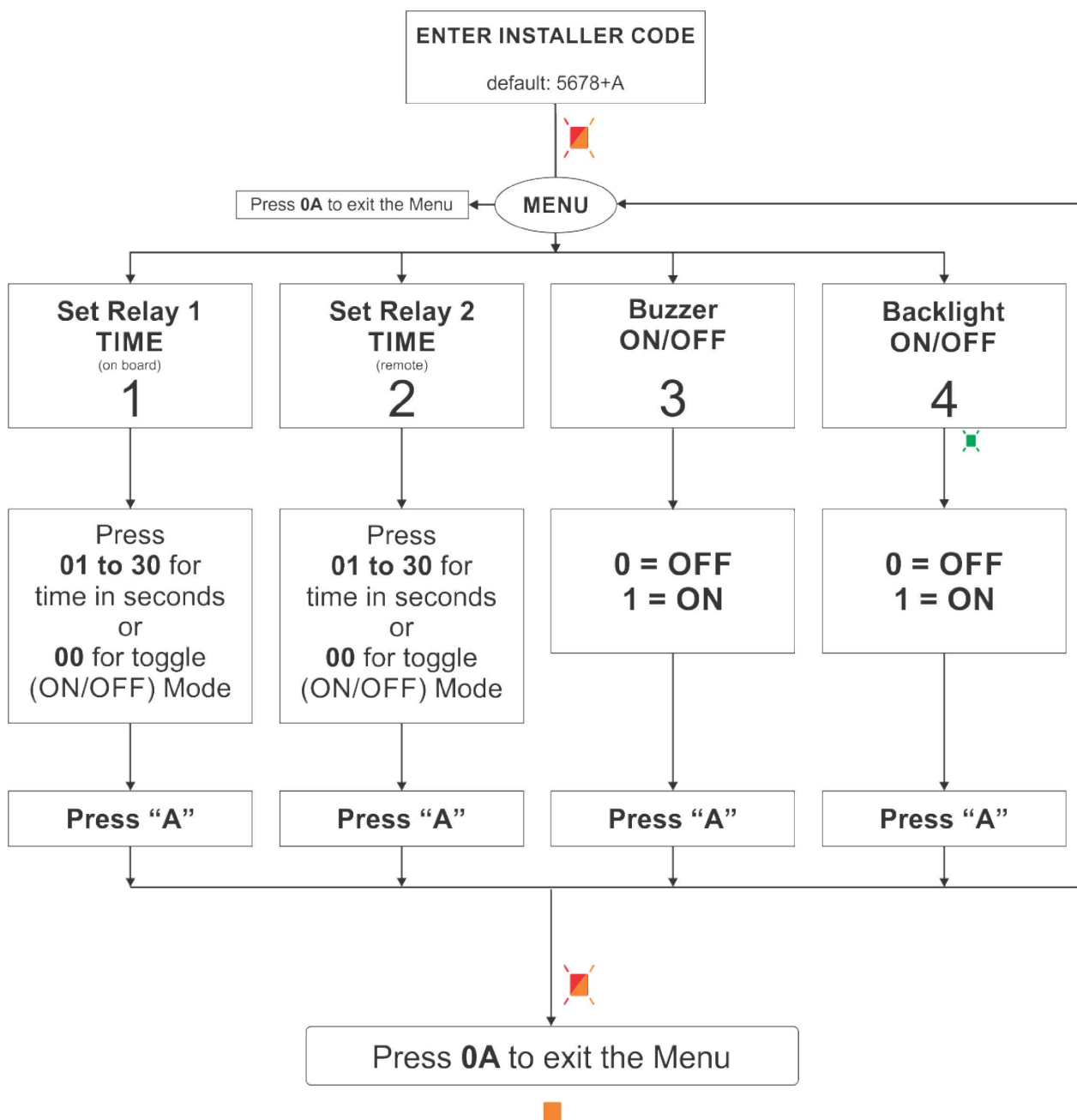**MENU** — Press **0A** to exit the Menu

Set Relay 1 TIME (on board) **1**	Set Relay 2 TIME (remote) **2**	Buzzer ON/OFF **3**	Backlight ON/OFF **4**
Press **01 to 30** for time in seconds or **00** for toggle (ON/OFF) Mode	Press **01 to 30** for time in seconds or **00** for toggle (ON/OFF) Mode	**0 = OFF** **1 = ON**	**0 = OFF** **1 = ON**
Press "A"	Press "A"	Press "A"	Press "A"

Press **0A** to exit the Menu

INSTALLER PROGRAMMING BY KEYPAD

Note: Entering this menu is done by installer PIN Code. You can not enter with Installer Finger.

Example: Change relay1 time to 2 seconds – 5678 + A + 1 + 02 + A.

This product herewith complies with requirements of EMC directive 2014/30/EU. In addition it complies with RoHS2 directive EN50581:2012 and RoHS3 Directive 2015/863/EU.

www.xprgroup.com

Documents / Resources

XPR Group B100PAD-SA v2 Standalone Biometric Reader [pdf] Instruction Manual
B100PAD-SA v2 Standalone Biometric Reader, B100PAD-SA v2, Standalone Biometric Reader,
Biometric Reader, Reader

References

- **Ҳ XPR Group - Safe access systems provider**