

AC-R2L-MD Access Controller Operating Manual

Device Model	AC-R2L-MD	Document Version	V1.0
Document Type	Operating Manual	Release Date	April 11, 2025
Management Method	WeChat Mini Program / Keypad	Scope of Application	Installation, commissioning, operation and maintenance personnel
Programming Password (Factory Default)	123456	Unlock Methods	IC/ID card / Password / Mobile phone

1 Purpose and Scope of Application

1.1 Purpose

This specification defines the standard procedures for the access controller, covering its technical parameters, installation and wiring, binding configuration, programming operations, initialization, and standalone use, with the aim of ensuring correct installation, standardized operation, and stable performance.

1.2 Scope of Application

This specification applies to the installation and commissioning personnel, system administrators, and daily users of the AC-R2L-MD access controller.

2 Terms and Definitions

Term	Definition
Experience Mode	The factory default mode of the device, in which any card, password, or fingerprint can unlock the door directly. It automatically exits this mode once the first user is added, and automatically re-enters it when all users are cleared.
System Administrator	The first user who binds the WeChat Mini Program to the access controller and holds the highest management authority for the device.
Operator User	A user authorized by the system administrator to perform programming operations on the device via the keypad.
Programming Password	The password used to enter the device programming mode, with a factory default value of 123456; it can be changed by the system administrator after binding to the Mini Program.
OPEN Wire / GND Wire	OPEN is the yellow unlock control wire and GND is the black ground wire; these two wires must be short-circuited during initialization.

3 Technical Specifications

The main technical parameters of the device are shown in the following table.

Item	Specification	Item	Specification
Operating Voltage	DC 12V $\pm$ 10%	Ambient Temperature	0°C — 60°C
Card Type	ID + IC dual-frequency cards	User Capacity	Cards: 1000; Fingerprints: 100
Dimensions	117 $\times$ 70 $\times$ 20 mm	Unlock Methods	Fingerprint, IC card, password or mobile phone
Management Method	WeChat Mini Program	Card Reading Distance	1 — 10 cm

Table 1 Technical Specifications of the Device

4 Installation and Wiring Specifications

4.1 Wiring Instructions

Wiring of the device must be carried out strictly in accordance with the wiring diagram. The core connections include the power supply positive and negative terminals (DC 12V), the unlock signal wire (OPEN, yellow), and the ground wire (GND, black). Refer to Figure 1 for the wiring diagram.

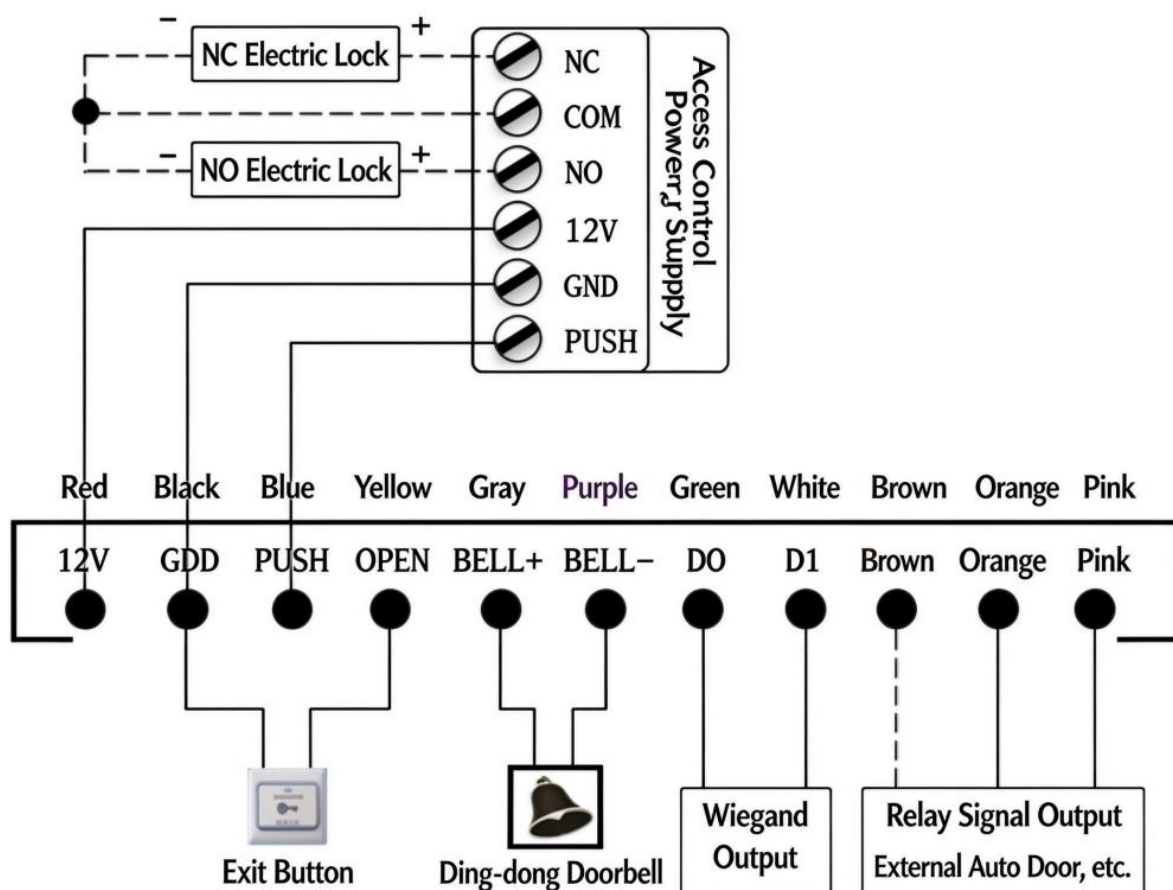


Figure 1 Device Wiring Diagram

4.2 Installation Requirements

- (1) The device should be installed in a dry, well-ventilated environment free of strong electromagnetic interference.
- (2) The operating voltage must be DC 12V $\pm 10\%$; connecting a power supply outside this range is prohibited.
- (3) The ambient temperature of the installation environment should be kept within the range of 0°C to 60°C.
- (4) After wiring is completed, check that all connections are secure, and confirm there is no short circuit before powering on the device.

5 Working Modes

5.1 Experience Mode

Experience Mode is the factory default working state of the device. In this mode, any card, password, or fingerprint can unlock the door directly, allowing users to quickly experience the device functions.

- (1) The device enters Experience Mode by default at the factory.
- (2) After the first user is added, the device automatically exits Experience Mode and enters the normal working mode.
- (3) After all user information is cleared, the device automatically re-enters Experience Mode.

6 Mini Program Binding and Management

6.1 System Administrator

The first user who binds the WeChat Mini Program to the access controller becomes the system administrator of the device. The system administrator holds the highest management authority over the device, including user management, device settings, and permission assignment.

6.2 Preparations Before Binding

- (1) Turn on the phone's Bluetooth.
- (2) Turn on the phone's location services.
- (3) The effective Bluetooth search range is about 10 meters; the closer the phone is to the access controller, the stronger the signal.
- (4) Confirm that the factory programming password of the device is 123456.

6.3 Binding Steps

- (1) Scan the device QR code, or search for the Mini Program "Anan Open Door" in WeChat and enter it.
- (2) Tap the "+" in the upper left corner and select "Add Bluetooth Access Controller".
- (3) In the list of devices found by the system, select the corresponding access controller.
- (4) Follow the prompts in the Mini Program to complete the binding.
- (5) After successful binding, tap the access controller to enter the Mini Program management interface.



Figure 2 QR Code for Mini Program Binding

7 Programming Operation Specifications

Once an operator user has been added in the WeChat Mini Program, the operator user can perform programming operations on the device via the keypad. To enter the programming mode, the operator's "unlock password", "valid card", or "fingerprint" must be used for verification.

The main programming operations and their corresponding functions are shown in Figure 5.

Programming Function	Keypad Sequence Operation	Remarks
Add User Card	# Programming Password # 11 Read Card #	To add multiple user cards at once, simply read cards consecutively.
Add Fingerprint	# Programming Password # 12 Press the same fingerprint 5 times	Press the same fingerprint 5 times in a row.
Add / Modify Public Password	# Programming Password # 21 6-digit password # Re-enter 6-digit password #	The password must be 6 digits.
Delete Single User	# Programming Password # 41 Read Card / Press Fingerprint #	To delete multiple user cards at once, simply read cards consecutively.
Delete All Users	# Programming Password # 40 0000 #	This operation deletes ALL users, including operator users.
Modify Relay Unlock Time	# Programming Password # 5 xx #	"xx" can be a number from 01 to 99.
Restore Factory Settings	# Programming Password # 8 99 #	All device parameters will be restored to factory defaults.

8 Initialization and Factory Reset

8.1 Initialization Steps

Step 1: Disconnect the device power, short-circuit the OPEN (yellow) wire and the GND (black) wire, then power on the device again. At this point, the green indicator light flashes and a continuous beep sounds.

Step 2: Disconnect the power again, remove the short-circuit connection between OPEN and GND, then power on the device once more. The device initialization is now complete.

8.2 Status After Initialization

- (1) The bound WeChat Mini Program is cleared, and the device returns to the pending-binding state.
- (2) The programming password is restored to the factory default value of 123456.
- (3) The existing user information stored in the device (cards, fingerprints, passwords) will not be cleared.

9 Standalone Operation Specifications

The device can also be used independently without binding to the WeChat Mini Program. The main operations in standalone mode are as follows.

9.1 Changing the Programming Password

Operation command: # Programming Password # 0 New Programming Password # Repeat New Password #

9.2 Other Programming Operations

Other programming operations follow the provisions in Chapter 7 "Programming Operation Specifications".

9.3 Changing a User Card

- (1) After unlocking the door with a valid card, press and hold the "#" key for about 5 seconds.
- (2) When the device green light flashes rapidly, press the number "1".
- (3) Swipe the new card to complete the user card change.

9.4 Changing a User Fingerprint

- (1) After unlocking the door with a valid fingerprint, press and hold the "#" key for about 5 seconds.
- (2) When the device green light flashes rapidly, press the number "2".
- (3) Press the same new fingerprint 5 times consecutively to complete fingerprint enrollment.

9.5 Changing a User Password

- (1) After unlocking the door with a valid password, press and hold the "#" key for about 5 seconds.
- (2) When the device green light flashes rapidly, press the number "4".
- (3) Enter a new 6-digit password, re-enter the 6-digit password, then press "#" to confirm.

10 Safety Precautions

- (1) Before powering on the device, make sure the wiring is correct and the power supply voltage meets the DC 12V $\pm 10\%$ requirement.
- (2) Initialization requires short-circuiting the OPEN and GND wires; be sure to disconnect the power before operation to ensure safety.
- (3) The system administrator account has the highest authority over the device; keep it properly and do not grant it to unrelated personnel.
- (4) The factory programming password is 123456; change it promptly after the device is officially put into use.
- (5) Keep the device clean and prevent water or dust from entering the interior of the device.
- (6) The card reading distance is about 1—10 cm; a distance too far may cause card reading failure.