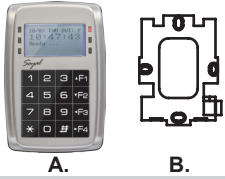## Contents

AR-327(H):Touch-panel Metal Case
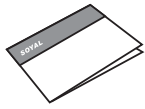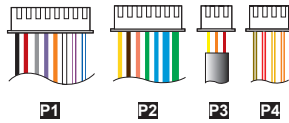
❶ Products   **❷ User Guide**   **❸ Terminal Cables**   **❹ Tools**   **❺ Water proof Strip**

P1   P2   P3   P4

A.   B.

AR-727 (H)

❶ Products   **❷ User Guide**   **❸ Terminal Cables**   **❹ Tools**   **❺ Water proof Strip**
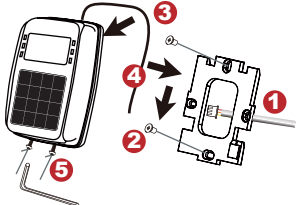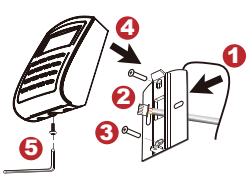
P1   P2   P3   P4

A.   B.
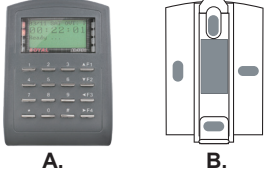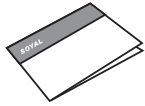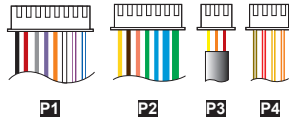
Installation

AR-327 (H)

- Pull the cables from the square hole of the mounting plate.
- Use a screw to the mounting plate onto the wall.
- Attach the water proof strip to the body, then connect the terminal cables to the body and attach the body to the mounting plate.
- Use the Allen key and screws (accessories supplied) to assemble the body onto the mounting plate.
- Turn on the power, the LED will light and hear the beep sound, you will see "Ready"" on LCD board.

AR-727 (H)

- Attach the water proof strip to the mounting plate.
- Pull the cables from the square hole of the mounting plate.
- Use a screwdriver to screw the base onto the wall.
- Connect the terminal cables to the body and attach the body to the mounting plate.
- Assemble the covers with the Allen key and screws (accessories supplied).
- Turn on the power, the LED will light and hear the beep sound, you will see "Ready"" on LCD board.

AR-327(H) 13.56MHz Notice

Do not cover all the sensing area
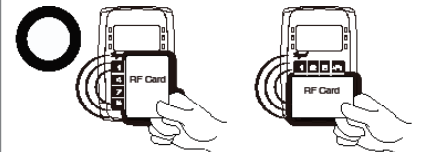
Revealing a row of number keys can make better sense results

Sensing range of metal controller is small, the proposed sensing card should step aside, do not fully cover number keys.

Notice

1.Tubing: The communication wires and power line should NOT be bound in the same conduit or tubing.

2.Wire selection: Use AWG 22-24 Shielded Twist Pair it sould avoid star wiring.

3.Power supply: Don't equip reader and lock with the same power supply. The power for reader may be unstable when the lock is activating, that may make the reader malfunction.

The standard installation: Lock relay and lock use the same power supply, and reader use independent power supply.

4.F4: At first time use, if appears no screen and green LED flashes, please press [F4] for 2 seconds.

Connector Table

AR-327 (H)

AR-727 (H)
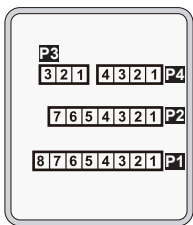
Cable: P1

Wire Application	Pin	Color	Description
Door Relay	1	Blue White	(N.O.)DC24V1Amp
	2	Purple White	(N.C.)DC24V1Amp
Common-COM-Point	3	White	(COM)DC24V1Amp
Door contact	4	Orange	Negative Trigger Input
Exit Switch	5	Purple	Negative Trigger Input
Alarm Relay	6	Gray	N.O./N.C. Options (by jumper)
Power	7	Thick Red	DC 12V
	8	Thick Black	DC 0V

Cable: P2

Wire Application	Pin	Color	Description
Networking	1	Thick Green	RS-485 (B-)
	2	Thick Blue	RS-485 (A+)
Wiegand	3	Blue	WG DAT: 1 Inpu ABA Data Input
	4	Green	WG DAT: 0 Input ABA Clock Input
Buzzer	5	Pink	Buzzer Output 5V/100mA, MAX
LED	6	Brown	LED Green Output 5V/20mA, MAX
	7	Yellow	LED Red Output 5V/20mA, MAX
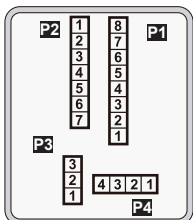
Cable: P3

Wire Application	Pin	Color	Description
Tamper Switch	1	Red	N.C.
	2	Orange	COM
	3	Yellow	N.O.

Cable: P4

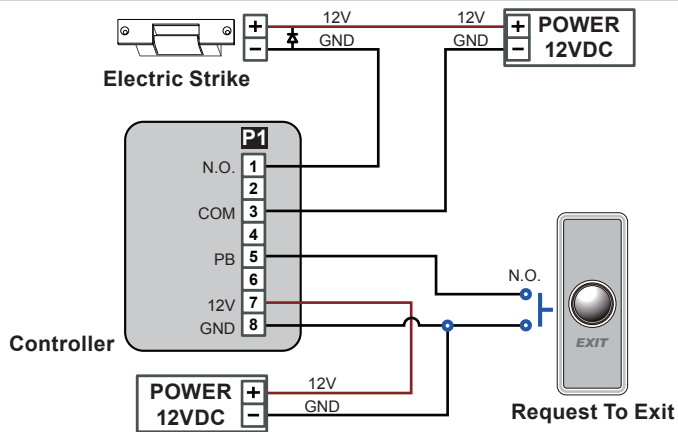| Wire Application	Pin	Color	Description
Arming Setting Input	1	Orange White	ON —— OFF Latch type
Serial Port	2	Yellow White	Serial output (Transistor open collector) (4800, N,8,1)
Arming Status indication (light)	3	Red White	Arming output (Active low)/ Security trigger signal Output
Card existing indication	4	Brown White	Output LOW when card present

Wiring Diagram

Connect to Electric Bolt or Magnet Lock

Magnetic Lock
Electric Bolt

12V / GND → 12V / GND → POWER 12VDC

P1
1
N.C. 2
COM 3
4
PB 5
6
12V 7
GND 8

Controller

N.O.

EXIT

Request To Exit

POWER 12VDC — 12V / GND
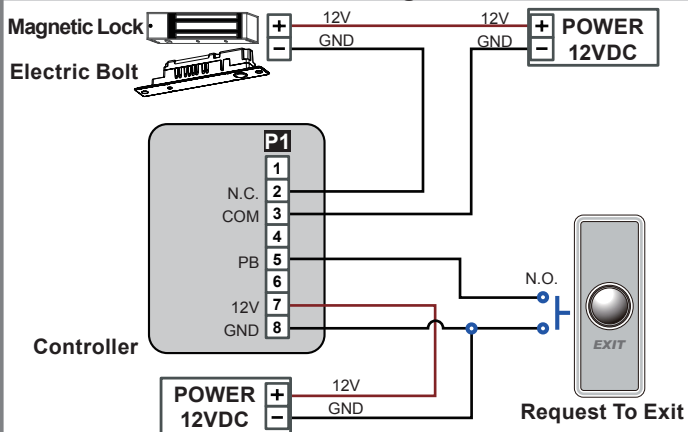
Connect to Electric Strike

Electric Strike

12V / GND → 12V / GND → POWER 12VDC

P1
N.O. 1
2
COM 3
4
PB 5
6
12V 7
GND 8

Controller

N.O.

EXIT

Request To Exit

POWER 12VDC — 12V / GND

Connect to strengthen security with AR-721RB

Electric Bolt

12V / GND → POWER 12VDC

N.C.
N.O.
COM
CTL
12V
GND
PB

P4
4 3 2 1
ARM

P1
1
2
3
4
5
6
12V 7
GND 8

Controller

N.O.

EXIT

Request To Exit

POWER 12VDC
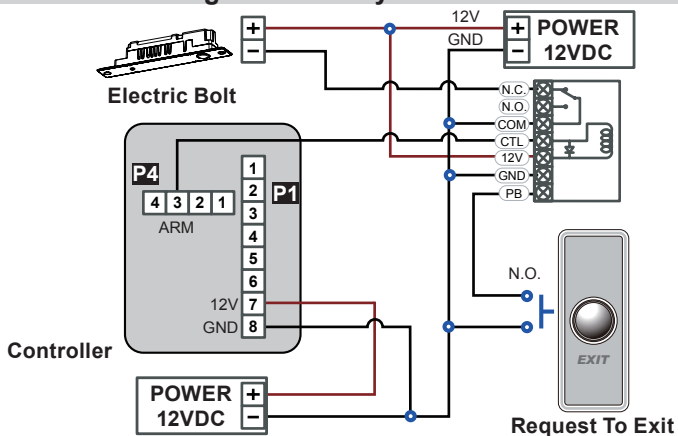
※ **Security trigger signal: Please refer to the "Operation".**

Connect to Door Contact

POWER 12VDC — 12V / GND → 12V / GND → Alarm

P1
1
2
COM 3
Door contact 4
5
ALM 6
12V 7
GND 8

Controller

Door Contact

N.C.

POWER 12VDC — 12V / GND

Connect to Reader

Reader

WG 1
WG 0
BZ
GLED
RLED
12V
GND

Controller

1
2
3 WG 1
4 WG 0
5 BZ
6 GLED
7 RLED
P2

1
2
3
4
5
6
7 12V
8 GND
P1

POWER 12VDC — GND / 12V

Connect to Networking

PC — Converter A+ / B-

GND / 12V → POWER 12VDC

Node ID 001 AR-716E + / −
Host B- / A+

Node ID 254 AR-716E + / −
Host B- / A+
CH1 B- / A+
CH2 B- / A+

Controller Door No. 1 ...... Controller Door No. 8

B- / A+
P2
1
2
3
4
5
6
7

B- / A+
P2
1
2
3
4
5
6
7

Controller Door No. 9 ...... Controller Door No. 16

Front Panel & Indicator

AR-327 (H)

18/02 FRI Duty:0
10:49:34
Ready.......

Data
Week
Work Status
Arming Setting Input Indicator (Green)
Card Present (Green)
Error / OK
Up
Down
Left
Right
Enter/OK

Arming(Green)
Alarm(Red)
RX / TX
Esc/Quit

1 2 3 F1
4 5 6 F2
7 8 9 F3
* 0 # F4

AR-727 (H)

18/02 FRI Duty:0
10:49:34
Ready.......

Data
Week
Work Shift Status
Arming Setting Input Indicator (Red)
Card Present (Green)
Operate Correct/Stand-by(Green)
Operate Error (Red)
Up
Down
Left
Right
Enter/OK

Arming (Green)
Alarm (Red)
Host Receive (Green)
Host Transmit (Red)
Esc/Quit

Attendance		
	Press 1 time	Press 2 time
F1	Duty on	Break out
F2	Duty off	Break RTN
F3	Overtime on	Out
F4	Overtime off	Return

Adding and Deleting Card

Mode4/Mode8

- **Adding Card by Card ID**

  Enter program mode → [1] Add/Delete → [1] Add Card > ID → **Input 5-digit user address** → **Input Site Code** → **Input Card Code**

- **Adding Card RF Induction**

  Enter program mode → [1] Add/Delete → [2] Add > RF Learn → **Input 5-digit user address** →

  Input Tag Units(pcs) → **Close Tag into RF Area to induct.**

  ※ For block **Sequential cards**, present the **lowest card code** card to the controller reader; for block random cards, present all the cards one by one to the controller reader.

Tag Information

CARD CODE — SITE CODE (left tag), CARD CODE — SITE CODE (right card)

- **Deleteing User Address**
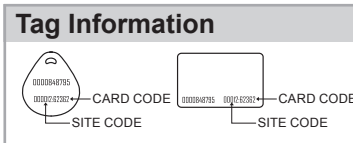
  Enter program mode → [1] Add/Delete → [5] Delete > Address → **Input Start address** → **Input End address**

- **Setting up the password**

  Enter program mode → [2] User Setting → [1] Password → **Input 5-digit user address** → **Key in 4-digit PIN**

- **Setting up the access mode**

  Enter program mode → [2] User Setting → [2] Access Mode → **Input 5-digit user address** → **1: Card; 2: or PIN; 3: & PIN; 4: Pause;**

Mode6

※In Mode6, user address is card code. Only suspend or recover to add or delete the cards.

- **Adding Card**

  Enter program mode → [1] Add/Delete → [7] Recover > Address → **Input Start address** → **Input End address**

  ※ For block **Sequential cards**, input the **lowest card code** as starting user address and input the hightest card code as ending user address; for block random cards, input all the card codes one by one to the controller reader.

- **Deleting Card**

  Enter program mode → [1] Add/Delete → [3] Suspend > Address → **Input Start address** → **Input End address**

※ M6 access mode setting procedure is the same as the arming password/duress code setting procedure in M4.

- **Card Only**

  Enter program mode → [3] Parameters[1] → [8] Arming PWD → **Input: 0000**

- **Card and PIN**

  Enter program mode → [3] Parameters[1] → [8] Arming PWD → **Key in 4-digit PIN [0001~9999, default value: 1234]**

- **Card or PIN**

  Enter program mode → [4] Parameters[2] → [8] Duress Code → **Key in 4-digit PIN [0001~9999, default value: 0000]**

Operation

A. Keyboard Lock/ Unlock

- **Lock/ Unlock**

  Hold down [*] and [#] buttons in simultaneously to lock/unlock the keyboard.

B. Enter/Escape Program Mode

- **Enter program mode**

  Input [*]123456[#] or [*]PPPPPP[#] (PPPPPP= modified Master Code; Default= 123456)

  [e.g.] If the Master Code= 876112, input [*]876112[#] → Enter program mode

  ※ If without any operation for 30 seconds access controller will escape program mode.

- **Escape program mode**   ● **Changing the Master Code**

  Press [*] continuously → [6] Quit   Enter program mode → [5] Tools → [2] Master Code → Input the 6-digit new master code → Succeeded

C. Initial Setup

- **Restoring Factory Settings**

  Enter program mode → [4] Parameters[2] → [9] Factory Reset → **select [1: Yes]** → Succeeded...

- **Changing the Language**

  Enter program mode → [5] Tools → [1] Language → [1] EN → Succeeded...

- **Review the old events**

  Enter program mode → [5] Tools → [0] View Events → the display will show the history events.

- **Changing the Node ID of Reader**

  Enter program mode → [3] Parameters[1] → [1] Node ID → **Input New Node ID:1~254**(default value: 001)

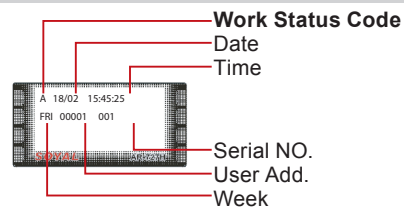 → **Input: 1~4 to Show Card ID format?** (1.No, 2.WG, 3.ABA, 4.HEX) → **Input Door number H: 1~254(door No. of its controllen)** → **Input Door number L: 1~254(door No. of reader)** → Succeeded

  [e.g.] AR-327H is the 8th slave reader under the 16th AR-716E.

  Door-H input [1][6] (door NO. of controller); **Door-L** input [8] (door No. of the reader).

  [e.g.] AR-727H is a controller and its Node ID is 8.

  Door-H input [8] ; **Door-L** input [8]

Work Status Code
Date
Time

A 18/02 15:45:25
FRI 00001   001

Serial NO.
User Add.
Week

Work Status Code:

A: Duty On	01: PWD/PIN Error
B: Duty Off	03: Invalid Card
C: Overtime On	04: Time-zone Error
D: Overtime Off	11: Normal Access
E: Break Out	16: Egress (Request to exit)
F: Break RTN	17: Alarm
G: Out	31: Anti-pass back Error
H: Return	

D. Security Trigger Signal   ※ First Update the Firware to 7v4_T2 later

- **Enable the Security Trigger signal**

  Enter program mode → [3] Parameters[1] → [9] Arming Pulse → **Input [10]**(default value:1000) → become the Security Trigger signal Output

  ※ If Request To Exit connect to **[AR-721RB]**, the Request To Exit can control the lock immediate.

E. Control Mode (M4/M6/M8)

Enter program mode → 5 Tools → 9 Control Mode → **1:M4, 2:M6, 3:M8** (refer to following table) → Succeeded

Mode	Networking/ Standalone	User Capacity	Access Mode	Auto-show Duty time	Event log Capacity	120 Holidays	Anti force	Time Zone	Lift Control	Anti-pass back
M4	Networking/ Standalone	1,024(727H) 3,000(327H)	1.Card only 2.Card and PIN (4-digit PIN) 3.Card or User address (5-digit) + Individual PIN (4-digit individual PIN)	Yes	1,200(727H) 1,500(327H)	Yes	Yes	11	32	Yes
M6	Standalone	65,535	1.Card only 2.Card and PIN (4-digit public PIN= Arming PWD) 3.Card or PIN (4-digit public PIN= Duress code)	No	No	No	No	No	No	No
M8	Networking/ Standalone	1,024(727H) 3,000(327H)	1.Card only 2.Card and PIN (4-digit individual PIN) 3.Card or PIN (4-digit individual PIN)	Yes	1,200(727H) 1,500(327H)	Yes	Yes	11	32	Yes

※ The users up to 65,535 in **Mode 6**, since it reads **CARD CODE**(5 digits) only, unlike that Mode4/Mode8 read **SITE CODE** and **CARD CODE**(10 digits).

F. Anti-Pass Back(M4/M8 only)

Usually, anti-pass back is commonly applied to parking lots in order to prevent from multi-entry with one card, requires to set bith card and device as the flowings:

- **Device set-up**

  Enter program mode → 4 Parameters[2] → 7 Anti-pass back → **1: Yes; 2: No;(select one)** → **1: In; 2: Out;(select one)**

- **Card set-up**

  Enter program mode → 1 Add/Delete → 9 Antipass Group → **Input Start address** → **Input End address** → **1: Yes; 2: No;(select one)**

G. Lift Control

Connect with **AR-401RO16B** to control which floors the user will be able to access.

- **Setting Lift control**

  Enter program mode → 5 Tools → 4 Termingal Port → **1 : AR-401RO16**

- **Single floor set-up**

  Enter program mode → 2 User Setting → 4 Single Floor → **Input 5-digit user address** → **Input single floor number: 1~32**

- **Multi floors set-up**

  Enter program mode → 2 User Setting → 5 Single Floor → **Input 5-digit user address** → **Select range: 1 or 2** → **Input 16 digits multi floors number [0:disable, 1: enable]**

  [e.g.] Set NO. 114, to access the 8th and the 16th floors.

  Enter program mode → 2 User Setting → 5 Single Floor → **114 #** → **1 #** → **0000000100000001 #**

Set	Floor															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

H. Arming Mode

- **Conditions:**
  1. Arming is enabled
  2. Alarm system connected

- **Application:**
  1. **Door left open warnings**: these are generated when the door is held open for longer than the lock relay time and door open time.
  2. **Force open** (Unauthorized access alarms): these are generated when a door is opened without a valid card being presented or a request to exit signal being received.
  3. **Door contact error**: when the controller in arming status and power failure, reset power may activate alarm system.

- **Enable/Disable Arming Mode:**

Enable Arming Mode	Disable Arming Mode
Program Mode	
Enter program mode → 7 Quit & Arming	Enter program mode → 6 Quit
Door Open	
Access Mode → **Input 4 digit arming code** → #	Access Mode → **Input 4 digit arming code** → #
Door Close	
* → **Input 4 digit arming code** → **Present the card to the controller reader**	* → **Input 4 digit arming code** → **Present the card to the controller reader**

Manu Tree

1. Add/ Delete
1. Add Card >ID
2. Add > RF Learn
3. Suspend > Address
4. Suspend > ID #
5. Delete > Address
6. Delete > ID #
7. Recover > Address
8. Recover > ID #
9. Antipass Group

2. User Settings
1. Password
2. Access Mode
3. Extend Options
4. Single Floor
5. Multi Floor

3. Parameters[1]
1. Node ID
2. Auto open Zone
3. Door Relay Tm
4. Door Close Tm
5. Alarm Relay Tm
6. Alarm Delay Tm
7. Arming Delay Tm
8. Arming PWD
9. Arming Pulse
0. Auto Alarm Tm

4. Parameters[2]
1. Auto Relock
2. Egress(R.T.E)
3. Attendance
4. Master Node
5. Force Open
6. Close & Stop
7. Anti-pass-back
8. Duress Code
9. Factory Reset
0. Key (#) is Bell

5. Tools
1. Language
2. Master Code
3. Master Range
4. Terminal Port
5. AR401RO16 Node
6. Open Time Zone
7. Information
8. Clock Setting
9. Control Mode
0. View Events

6. Quit

7. Quit & Arming