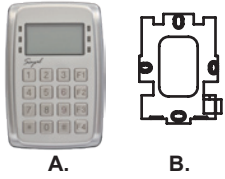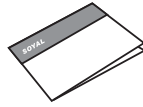## Contents

AR-327H [Metal Case]
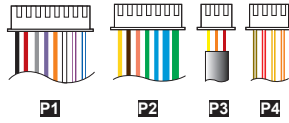
❶ Products　　　❷ User Guide　　　❸ Terminal Cables　　　❹ Tools　　　❺ Water proof Strip

A.　　B.　　　　　　　　　　　　P1　P2　P3　P4
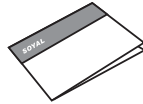
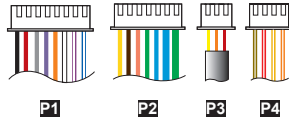### AR-727H

❶ Products　　　❷ User Guide　　　❸ Terminal Cables　　　❹ Tools　　　❺ Water proof Strip

A.　　B.　　　　　　　　　　　　P1　P2　P3　P4
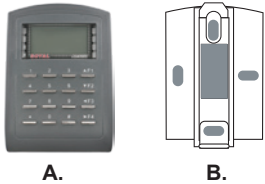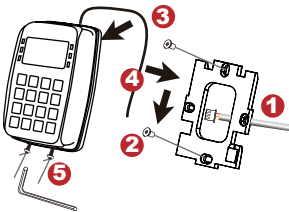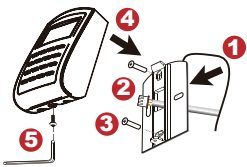
Installation

AR-327H

- Pull the cables from the square hole of the mounting plate.
- Use a screwdriver to screw 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-727H

- 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.

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: Door relay and lock use the same power supply, and reader use independent power supply.

Connector Table

AR-327H

AR-727H
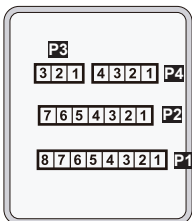
Cable: P1

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 Sensor	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 Clock Input
	4	Green	WG DAT: 0 Input ABA Data 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
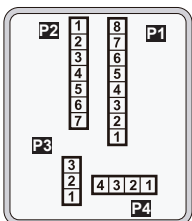
Cable: P3

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)
Card existing indication	4	Brown White	Output LOW when card present

LCD Access Controller

Metal Case / Standard

FC CE MA SOR

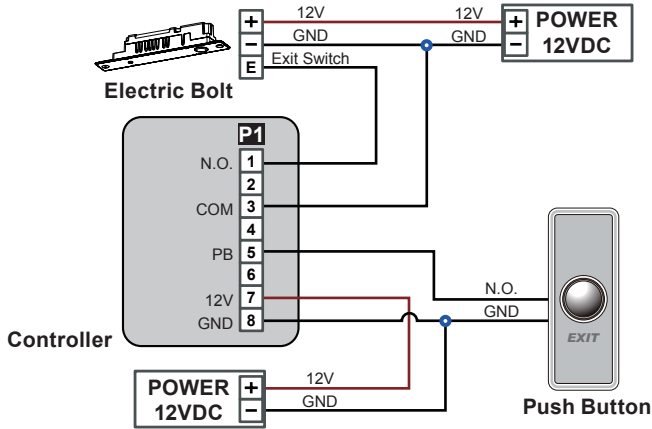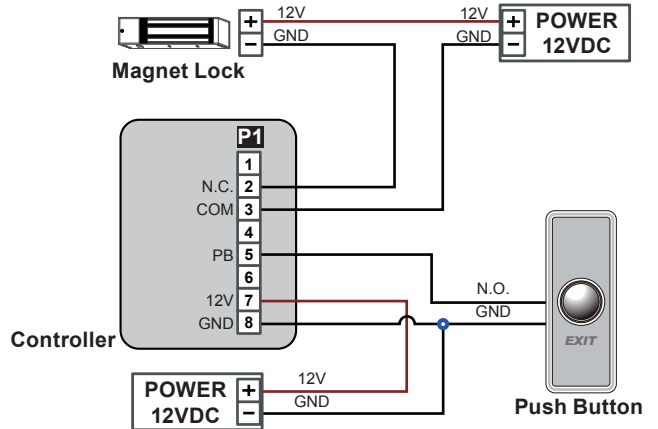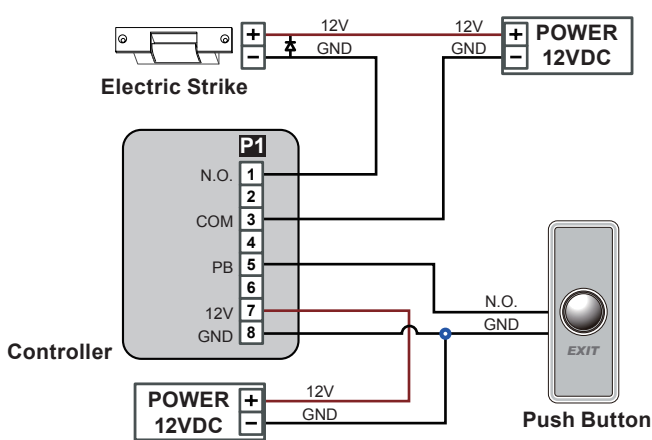## Wiring Diagram

Connect to Electric Bolt

Electric Bolt
Controller

+ 12V / − GND / E Exit Switch
POWER 12VDC: + 12V / − GND

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

POWER 12VDC: + 12V / − GND

Push Button — N.O. / GND — EXIT

Connect to Magnet Lock

Magnet Lock
Controller

+ 12V / − GND
POWER 12VDC: + 12V / − GND

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

POWER 12VDC: + 12V / − GND

Push Button — N.O. / GND — EXIT

Connect to Electric Strike

Electric Strike
Controller

+ 12V / − GND
POWER 12VDC: + 12V / − GND

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

POWER 12VDC: + 12V / − GND

Push Button — N.O. / GND — EXIT

Connect to Door Sensor

POWER 12VDC: + 12V / − GND
12V / GND — Alarm

Controller

P1:
- 1
- 2
- COM — 3
- Door Sensor — 4
- 5
- ALM — 6
- 12V — 7
- GND — 8

POWER 12VDC: + 12V / − GND

Door Sensor

Connect to Reader

Reader

- WG 1
- WG 0
- BZ
- GLED
- RLED
- 12V
- GND

Controller

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

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

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

P2 (Door No. 1): B− / A+
- 1
- 2
- 3
- 4
- 5
- 6
- 7

P2 (Door No. 8): B− / A+
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Controller Door No. 9 ...... Controller Door No. 16
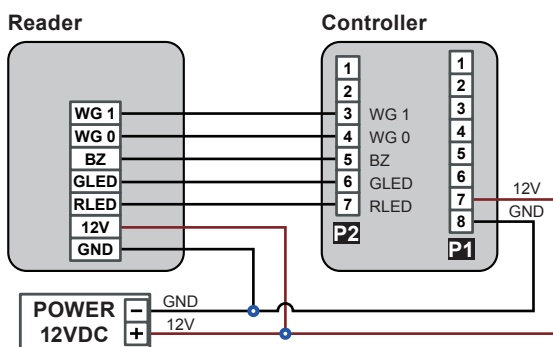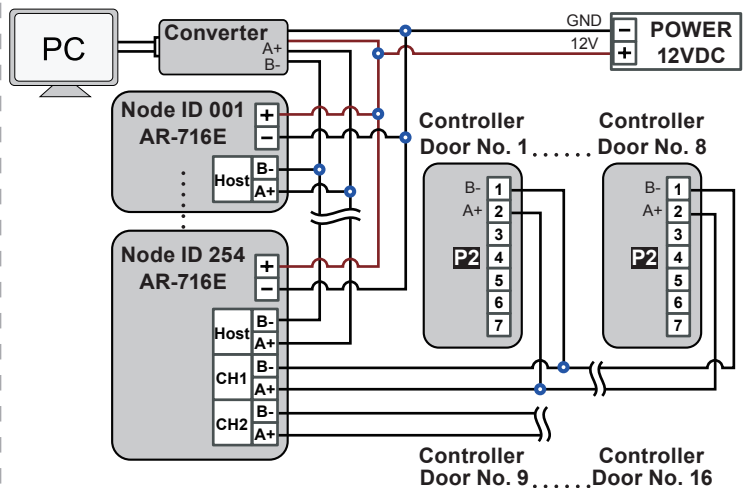
Front Panel & Indicator

AR-327H

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

- Arming(Green)
- Alarm(Red)
- RX / TX
- Data
- Week
- Work Status
- Arming Setting Input Indicator (Green)
- Card Present (Green)
- Error / OK

Keypad:
- 1 2 3 F1 — Up
- 4 5 6 F2 — Down
- 7 8 9 F3 — Left
- * 0 # F4 — Right
- Esc/Quit
- Enter/OK

AR-727H

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

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

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 Tag

Mode4/Mode8

- **Adding Tag by Tag ID**

  Access programming mode → ①Add/Delete → ①Add Card > ID → **Input 5-digit user address** → **Input Site Code** → **Input Card Code**

- **Adding Tag RF Iduction**

  Access programming mode → ①Add/Delete → ②Add > RF Learn → **Input 5-digit user address**

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

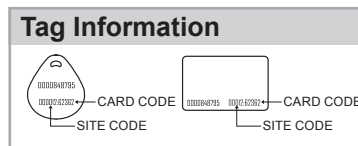 ※ For a batch of **Sequential tags**, present the tag of the **lowest number** to the controller; for a batch of non-sequential tags, present all the tags one by one to the controller.

- **Deleteing User Address**

  Access programming mode → ①Add/Delete → ⑤Delete > Address → **Input Start address** → **Input End address**

- **Setting up the password**

  Access programming mode → ②User Setting → ①Password → **Input 5-digit user address** → **Key in 4-digit PIN**

- **Setting up the access mode**

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

Tag Information

CARD CODE — SITE CODE — CARD CODE — SITE CODE

Mode6

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

- **Adding Tag**

  Access programming mode → ①Add/Delete → ⑦Recover > Address → **Input Start address** → **Input End address**

  ※ For a batch of **Sequential tags**, present the tag of the **lowest number** to the controller; for a batch of non-sequential tags, present all the tags one by one to the controller.

- **Deleting Tag**

  Access programming mode → ①Add/Delete → ③Suspend > Address → **Input Start address** → **Input End address**

※In this mode, the access controlled by the Arming PWD and Duress Code.

- **Card Only**

  Access programming mode → ③Parameters[1] → ⑧Arming PWD → **Input: 0000**

- **Card and PIN**

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

- **Card or PIN**

  Access programming mode → ④Parameters[2] → ⑧Duress Code → **Key in 4-digit PIN [0001~9999, default value: 4321]**

Operation

A. Keyboard Lock/ Unlock

- **Lock/ Unlock**

  Push both * and # buttons at same time to lock the keyboard. Push both * and # at same time again to unlock the keyboard.

B. Enter/Exit Programming Mode

- **Entering**

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

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

  ※ It leaves the programming mode **30** seconds without pushing any button.

- **Exiting**

  Press * repeatedly → ⑥Quit

- **Changing the Master Code**

  Access programming mode → ⑤Tools → ②Master Code → Input the 6-digit new master code → Succeeded

C. Initial setup

- **Restoring Factory Settings**

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

- **Changing the Language**

  Access programming mode → ⑤Tools → ①Language → ①EN → Succeeded...

- **Review the old events**

  Access programming mode → ⑤Tools → ⓪View Events → the display will show the history events.

- **Changing the Node ID of Reader**

  Access programming mode → ③Parameters[1] → ①Node ID → **Input New Node ID:1~254**(default value: 001) → **Input: 1~4 to Show Card ID format?** (1.No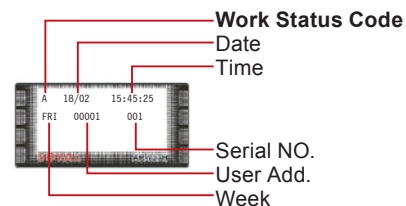, 2.WG, 3.ABA, 4.HEX) → **Input Door number H: 1~254(door No. of its controllen)** → **Input Door number L: 1~254(door No. of reader)** → Succeeded

  [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. Setting up the control mode (M4/M6/M8)

Access programming mode → 5 Tools → 9 Control Mode → **1:M4, 2:M6, 3:M8**(refer to below chart) → Succeeded

Mode	Networking/ Stand-Alone	User Capacity	Access Mode	Auto-show Duty time	Event log Capacity	120 Holidays	Anti force	Time Zone	Lift Control	Anti-pass-back
M4	Networking/ Stand-Alone	1,024 (0~1,023)	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	Yes	Yes	11	32	Yes
M6	Stand-Alone	65,535 (1~65,535)	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/ Stand-Alone	1,024 (0~1,023)	1.Card only 2.Card and PIN (4-digit individual PIN) 3.Card or PIN (4-digit individual PIN)	Yes	1,200	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).

E. 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**

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

- **Card set-up**

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

F. Lift control

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

- **Setting Lift control**

  Access programming mode → 5 Tools → 4 Termingal Port → **1 : AR-401RO16**

- **Single floor set-up**

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

- **Multi floors set-up**

  Access programming 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.

  　　　Access programming 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

G. Setting Up the Arming

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

- **Application:**
  1. **Door open over time**: Door is open longer than door relay time plus door close time.
  2. **Force open** (Opened without a valid user card): Access by force or illegal procedure.
  3. **Door position abnormal**: When power is off and turn back on, reader on arming bfore power off.

- **Enable/Disable Arming status:**

Standby Mode			
Card only		Card or Passcode	Card and Passcode
After door open	Door is not open	Input 5 digit user address →	Induct valid card → Input 4 digit
Induct valid card → Input 4 digit arming code → #	*** → Input 4 digit arming code → Induct valid card**	**Input 4 digit pass code → # → Input 4 digits arming code → #**	**pass code → # → Input 4 digits arming code → #**
Enter Program Mode			
Enable: Access programming mode → 7 Quit & Arming		**Disable:** Access programming mode → 6 Quit	

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