SOYAL®
ACCESS & INDUSTRIAL CONTROL

AR-888(H/K/U)

V221226

(**Note:** AR-888-U in this manual is intended only for AR-888-UB and AR-888-UD)
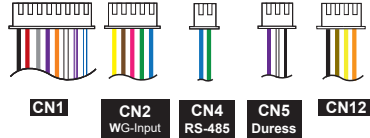
Contents

AR-888-H: Flush-Mount Backlight Multi-Function Controller - LED Ring (Green/Red Only)
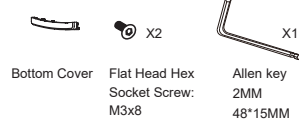
1 Product (US/EU)

2 Terminal Cables

CN1 | CN2 WG-Input | CN4 RS-485 | CN5 Duress | CN12

3 Tools

Bottom Cover | Flat Head Hex Socket Screw: M3x8 X2 | Allen key 2MM 48*15MM X1

4 Easy Install Kit (By Order)

A.

MPLA-888XA18/19 (US / EU)

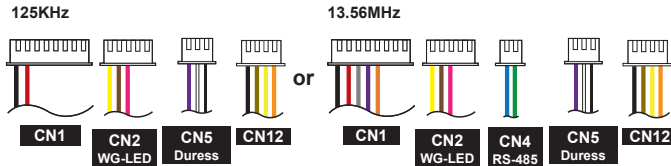### AR-888-K/U: Flush Mount Illuminated Access Reader - LED Ring (Green/Red Only)

1 Product (US/EU)

AR-888-K

AR-888-U

2 Terminal Cables

125KHz

CN1 | CN2 WG-LED | CN5 Duress | CN12

or

13.56MHz

CN1 | CN2 WG-LED | CN4 RS-485 | CN5 Duress | CN12

3 Tools

Bottom Cover | Flat Head Hex Socket Screw: M3x8 X2 | Allen key 2MM 48*15MM X1

4 Easy Install Kit (By Order)

A.

MPLA-888XA18/19 (US / EU)

Connector Table

AR-888 (H)

CN12 4 3 2 1
CN2 1 2 3 4 5
CN4 CN1 CN5 2 1 8 7 6 5 4 3 3 2 1

AR-888 (K/U) 125kHz

(default) WG OO RST CN12 4 3 2 1
CN2 1 2 3 4 5
CN1 8 7 6 5 4 3 2 1 CN5 3 2 1

AR-888 (K/U) 13.56MHz

CN12 4 3 2 1
CN2 1 2 3 4 5
CN4 2 1 CN1 8 7 6 5 4 3 2 1 CN5 3 2 1
SET2 (Format)
SET1(Format)

888-H Cable : CN1

Wire Application	Pin	Color	Description
Lock 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	Low output; Max 12V/100mA (Open Collector)
Power	7	Thick Red	DC Power 12V
	8	Thick Black	DC Power 0V

888-K/U Cable : CN1

Wire Application	Pin	Color	125kHz Description	13.56MHz Description
——	1	——	——	——
——	2	——	——	——
——	3	——	——	——
Output Selection	4	Orange	——	SET2
	5	Purple	——	SET1
Card Present	6	Gray	——	Reading card Active Low
Power	7	Thick Red	DC Power 12V	DC Power 12V
	8	Thick Black	DC Power 0V	DC Power 0V

Cable : CN2

Wire Application	Pin	Color	888-H Description	888-K/U (125kHz , 13.56MHz) Description
Wiegand	1	Thin Blue	Wiegand DAT:1 Input	——
	2	Thin Green	Wiegand DAT:0 Input	——
Beeper	3	Pink	Beeper Output 5V/100mA, Low	Beeper Output 5V/100mA, Low
LED	4	Brown	LED Green Output 5V/20mA, Max	LED Green Output 5V/20mA, Max
	5	Yellow	LED Red Output 5V/20mA, Max	LED Red Output 5V/20mA, Max

Cable : CN4

Wire Application	Pin	Color	888-H Description	888-K/U (13.56MHz) Description
RS-485 Port	1	Green	RS-485(B-)	RS-485(B-)
	2	Blue	RS-485(A+)	RS-485(A+)

888-H Cable : CN5

Wire Application	Pin	Color	Description
3-PIN Connector	1	Black	GND.
	2	White	Duress
	3	Purple	Arming/ Security trigger signal

888-K/U (125kHz , 13.56MHz) Cable : CN5

Wire Application	Pin	Color	Description
GND.	1	Black	GND.
WG Output	2	White	WG 0 Output
	3	Purple	WG 1 Output

Cable : CN12

Wire Application	Pin	Color	888-H Description	888-K/U (125kHz , 13.56MHz) Description
GND.	1	Black	GND.	GND.
LED	2	Brown	GLED Input (Active High)	GLED Input (Active High)
	3	Yellow	RLED Input (Active High)	RLED Input (Active High)
Tamper	4	Orange	Tamper Switch(Active Low)	Tamper Switch(Active Low)

AR-888 (K/U)
125kHz WG/ABA/RS232 Format
(By order or changable by shorted on PCB)

Format	WG	RST/Bits
WG 26	Open	Open
WG 34(default)	Open	Short
ABA-8	Short	Short
ABA-10	Short	Open

AR-888 (K/U)
13.56MHz WG/ABA Format
(Change by wires connection)

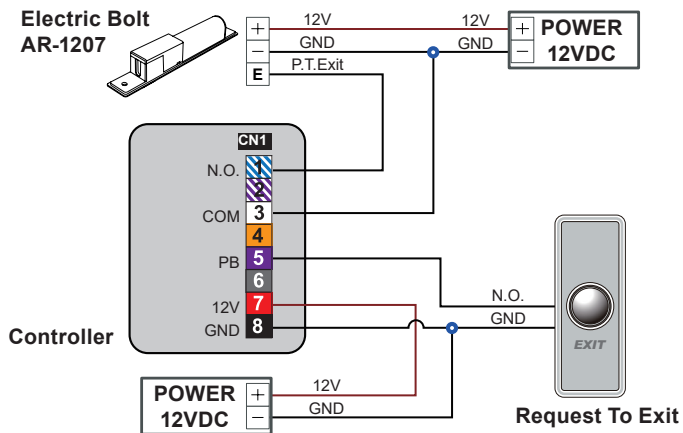| Format	SET 1	SET 2	Note
WG 26	Open	Open	HEX
WG 34	Open	To GND	HEX
ABA-10	To GND	Open	BCD10
ABA-5-5	To GND	To GND	BCD

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Installation

- Pull the cables from the square holes of the eva foam gasket and mounting plate.
- Use a screwdriver to screw the mounting plate **B** onto the wall with Flat Head Cap Philips Tapping Screws (Excluded, the Installer should prepare before installation.
- Connect the cables to the backside of body **C** and attach **C** to **B** at lower position of **B**. Push **C** up to make the cogging hooked completely.
- Use the Allen key and screws to assemble the body C onto the mounting plate **B**. Attach the Back Cover **D** to **C**.
- **Hands-off and clear any objects around the 888-H/K**. Turn on the power and LED will light-up and beep will sound. Wait the Touch IC start for 10 sec. to operate.
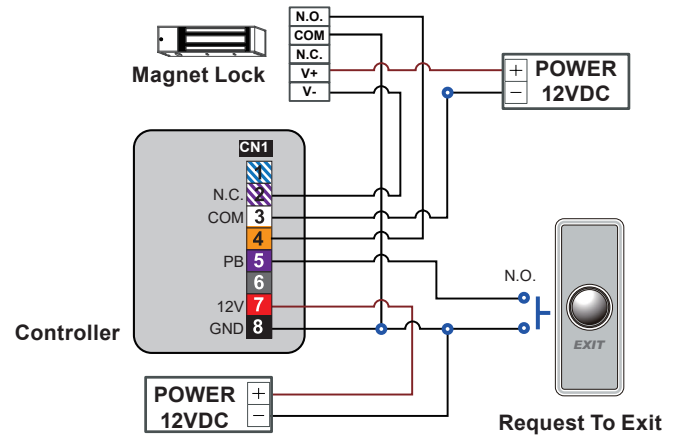
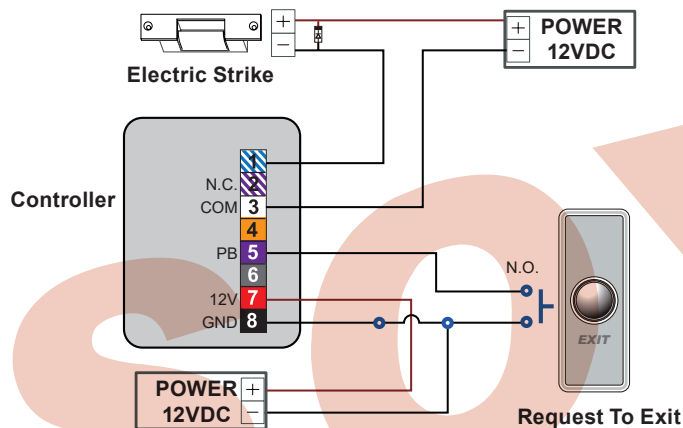**C.** **B.** **A.** By order

In-wall Depth 28mm ~35mm ③

② (Excluded)

① ③ (Excluded)

④ ⑤

D.

Cable selection: Use AWG 22-24 Shielded Twist Pair to avoid star wiring.
Use CAT5 for TCP/IP connection.

Proportion 1:1 Unit: mm

81
24
15
Ø3.3
84
118
51
20
23
75
Ø3.3

Indicators:		
AR-888 (H/K/U)	1*Bi-Color ☐	Green-Red
	3*One Color LED	Green (Optional)
		White (Stand-By)
		Red (Optional)
AR-888-PBI	1*Bi-Color ☐	Green-Red (Exchangeable)

- US Mounting Hole: 73x48x40mm(HxWxD) / Screw hole pitch : 84mm Suitable for 70X118 1-module flush-mounting box.(Australian, Italy, USA(501E) Standard)
- EU Mounting Hole: 57x53x40mm(HxWxD) / Screw hole pitch: 60mm Suitable for 86X86 flush-mounting box. (UK, Continental Europe, Germany Standard)

Proportion 1:1 Unit: mm

86
10
16
51
66
88
52
13
13
Ø3.3
12
18
60

SOYAL MORE DETAILS

Wiring Diagram

Connect to Electric Bolt

Electric Bolt AR-1207
Controller
POWER 12VDC
Request To Exit

Connect to Magnetic Lock

Magnet Lock
Controller
POWER 12VDC
Request To Exit

Connect to Electric Strike

Electric Strike
Controller
POWER 12VDC
Request To Exit

Connect to Reader

Reader AR-888-K/U
Controller

Connect to Door Sensor
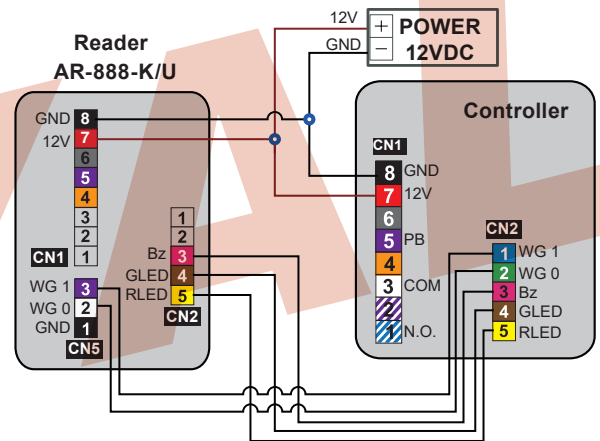
POWER 12VDC
Alarm
Controller
Relay Outpot Module
Door Sensor
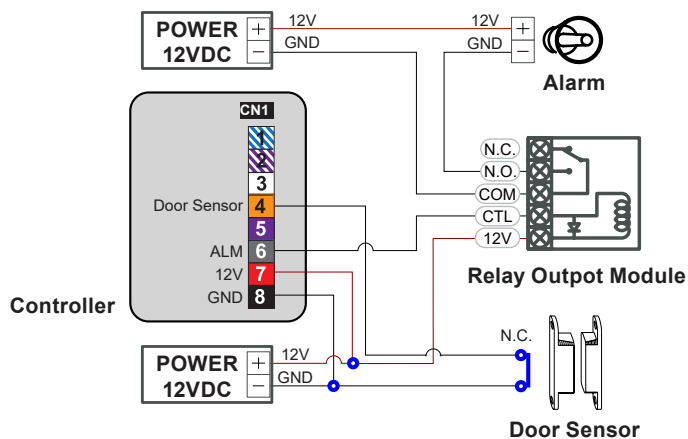
Strengthen security with AR-721RB

Electric Bolt AR-1207
Controller
AR-721RB
Push Button AR-888-PBI
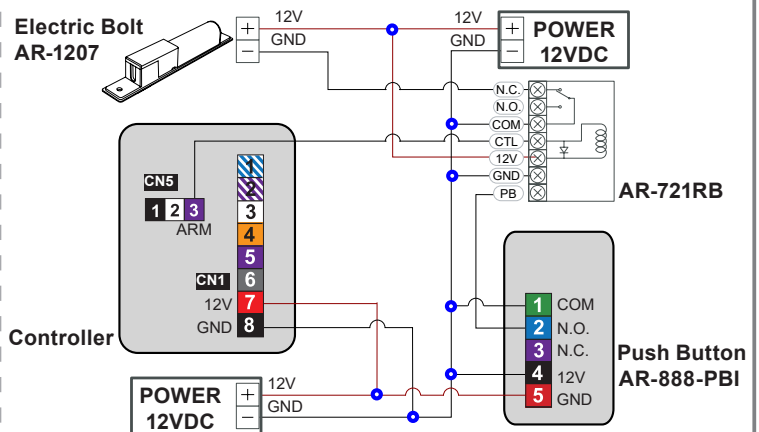
Alarm Output - WG Dual Door Control Wiring

POWER 12VDC
Lock
N.C. N.O. COM CTL 12V
12V GND Exit Switch E
Electric Bolt AR-1207

CN1
1 N.C.
3 COM
4
5 PB
6
7 12V
8 GND
Controller

Occupied Alarm Output to support:

28 * 064 # (Enable)
28 * 128 # (Disable)
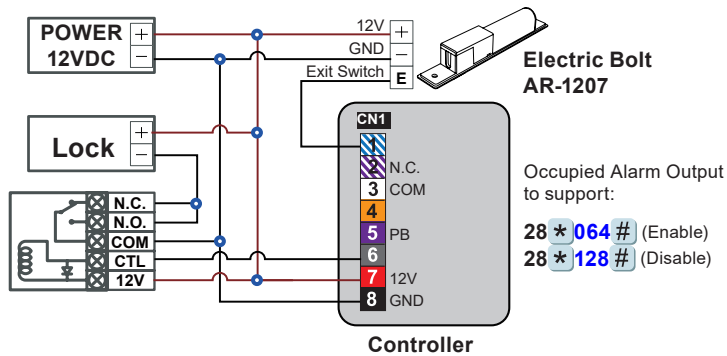
Alarm Output - Lift Control Wiring

AR-401-IO-0016R
Node ID 001
Host B- A+
Lift Controller
Converter B- A+ + - RX
POWER 12VDC

CN1
1 N.C.
3 COM
4
5 PB
6
7 12V
8 GND
Controller

Ex. Assign user address 1 to access to 1, 3, 5, 7 floor
21*00001*0*01010101#

SET	Floor/ Stop							
	F	F	F	F	F	F	F	F
0	8	7	6	5	4	3	2	1
1	16	15	14	13	12	11	10	9
2	24	23	22	21	20	19	18	17
3	32	31	30	29	28	27	26	25
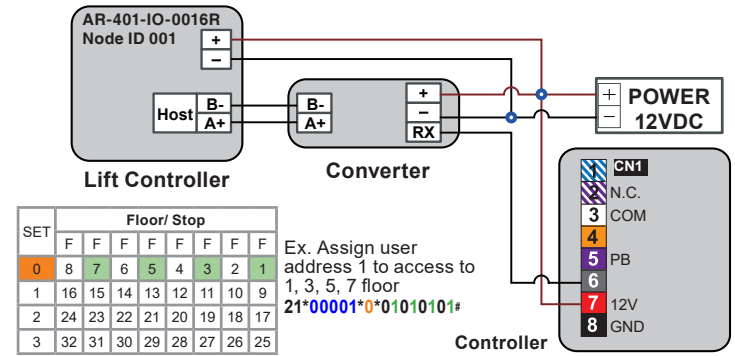
Traditional Electronic Door Lock wiring diagram adopted with controller power supply

(Controller power supply)
POWER DC12~24V
− +

Controller
N.O.
COM 3
PB 4 5
6
V+ 7
V-(GND) 8

AR-821RB
N.C. N.O. COM CTL V+

EL AC PT
Traditional Electronic Door Lock
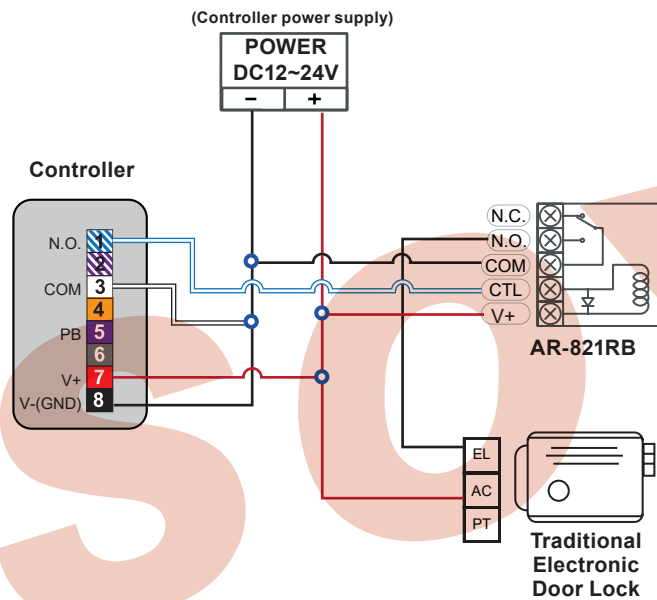
Traditional Electronic Door Lock wiring diagram adopted with interphone power supply

(Controller power supply)
POWER DC12~24V
− +

(Interphone power supply)
POWER AC18V
~ ~

Controller
N.O.
COM 3
PB 4 5
6
V+ 7
V-(GND) 8

AR-821RB
N.C. N.O. COM CTL V+

EL AC PT
Traditional Electronic Door Lock
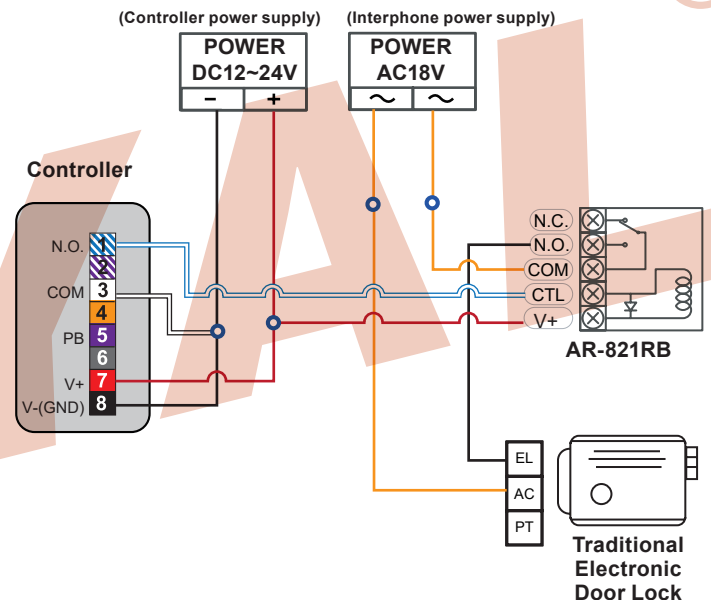
※ This wiring diagram function is required to setup Door Relay Time in 1 sec, please refer to 02 * TTT # command.

Connect to Networking

PC
Converter A+ B-
GND 12V
POWER 12VDC − +

Node ID 001 AR-716E
+ −
Host B- A+
CH1 B- A+
CH2 B- A+

Node ID 254
Controller B- A+ 1 2

Node 1 ...... Node 8
Controller B- A+ 1 2
Controller B- A+ 1 2

Node 9 ...... Node 16
Controller B- A+ 1 2
Controller B- A+ 1 2
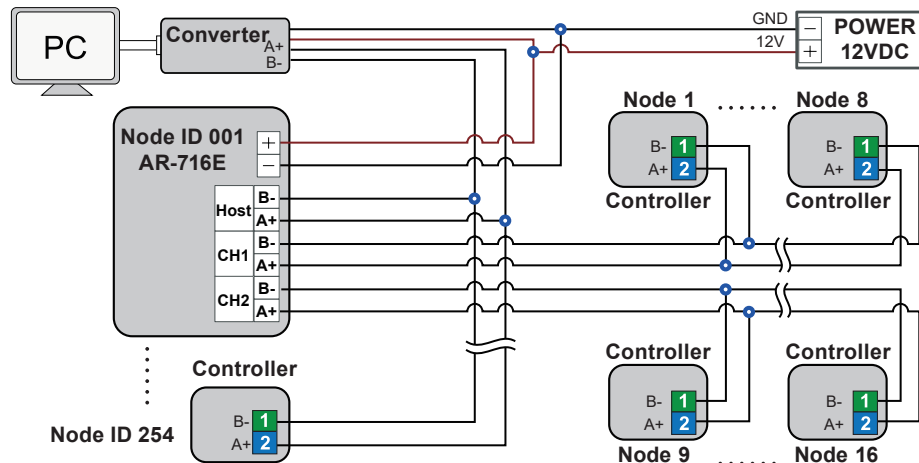
Set up Node ID

Ex. Node 32 connected to PC
00 * 032 * 032 * 032 #
Ex. Node 9 conected to 716E
00 * 009 #

032=Node ID of Access Controller
032=Virtual 716E Node ID
032=Door number
(All Range:001~254)
009=Node ID of Access Controller
Range: 001~254)

Notice:
- At every **32 units** or at **every300M** connection to add a **RS485 Booster**.
- Suggest to connect up to **32 units** for **each CH** of AR-727CM

Master Code modification / Change the Node ID of Controller

A. Enter / Exit Program Mode

● **Enter the program mode**

Input * 123456 # or * PPPPPP #

[e.g.] The Default Value= 123456, if the Master Code is already changed= 876112, input * 876112 # → program mode entered

● **Exit the program mode**

Input * #

● **Master Code modification**

Enter program mode → 09 * PPPPPPRRRRRR # [Input the 6-digit new master code twice.]

[e.g.] Set the Master code to be 876112, input * 123456 # → 09 * 876112876112 #

B. Change the Node ID of Controller

Enter program mode → 00 * NNN # [Node ID: 001~254; if the access controller is connected to AR-716E, its Node ID will be 001~016.]

M4 / M6 / M8 (AR-888-H)

Mode	Networking/ Standalone	User Capacity	Access Mode	Auto-show Duty time	Event log Capacity	120 Holidays	Duress Function	Time Zone	Lift Control	Anti-pass-back
M4	Networking/ Standalone	3,000	1.Card only 2.Card and PIN (4-digit PIN)+ # 3.User Address (5-digit) + PIN (4-digit Private PIN) + #	Yes	1,500	Yes	Yes	11	32	Yes
M6	Standalone	65,535	1.Card only (using 17* command to set Arming PWD as 0000) 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 (Default Value)	Networking/ Standalone	3,000	1.Card only 2.Card and PIN (4-digit Private PIN)+ # 3.Card or PIN (4-digit Private PIN)	Yes	1,500	Yes	Yes	11	32	Yes

※ Confirm the access mode by assessing the beep sounds while entering the Program Mode(**M4**-4 beeps/**M6**-6 beeps/**M8**-8 beeps)

※ **M6**: the user capacity can be 65535 because it only reads 5-digits **CARD CODE**, while in **M4/M8** it reads both **SITE CODE** and **CARD CODE**(10 digits).

※ Default Card UID Length is 4 (Could not change by command and only be able to change by customized firmware)

C.Set up M4/M6/M8

Enter program mode → 04 * N # [N=4/6/8]

(Note : The modification of controller mode between M4/M8(networking) and M6(standalone) will reset the data, user data will be required to rebuild.)

Adding and Deleting Tag

M4/M8

Add New Tags

● **Add by Presenting Tags (apply to Single Tag or a Batch of Tags)**

※**Important Notice:** Please remember the last user address being added to make sure the old user data is not being over written with the new card in the future.

Add Non-consecutive Tags:

[Add single tag] Add a new tag for selected user address 100:

Enter program mode → 19 * 00100 * 00001 # → Present the tag → Successfully added tag of user 100

[Add 2 additional tags] Add new tags to the following user address 101-102:

Enter program mode → 19 * 00101 * 00001 # → Present (User 101) card → Present (User 102) card

→ Successfully added tags of user 101-102

[Add 10 additional tags] Add new tags to the following user address 103-112

Enter program mode → 19 * 00103 * 00001 # → Present (User 103) card → Present (User 104) card → Present (...) card

→Present (User 111) card →Present (User 112) card →Successfully added tags of user 103-112
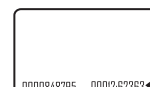
Add Consecutive Tags:

[Add 50 consecutive tags] Add 50 new tags with consecutive card number following user address 00050-00150:

Enter program mode → 19 * 00050 * 001001 # →Successfully added tags of user 50-150

Tag Information (125kHz) ※ For Mifare tags, the separator between Site Code & Card Code is comma ",".

0000848795
00012.62363 ←— CARD CODE
—— SITE CODE

0000848795 00012.62363 ←— CARD CODE
—— SITE CODE

Suspend Tags

● **Suspend Single Tag or a Batch of Tags (by Card Code in Sequence)**

Input [*] 123456 [#] (or Master Code) → 10 [*] SSSSS [*] EEEEE [#]

[e.g.] Suspend by Card Code: 00058
    Enter program mode → 10 [*] 00058 [*] 00058 [#]

[e.g.] Suspend by Card Code: 00058~00063
    Enter program mode → 10 [*] 00058 [*] 00063 [#]

Delete Tags

● **Delete Single Tag or a Batch of Tags (by Card Code)**

Input [*] 123456 [#] (or Master Code) → 10 [*] SSSSS [9] EEEEE [#]

[e.g.] Delete by Card Code: 00058
    Enter program mode → 10 [*] 00058 [9] 00058 [#]

[e.g.] Delete by Card Code: 00058~00063
    Enter program mode → 10 [*] 00058 [9] 00063 [#]

● **Delete All Tags**

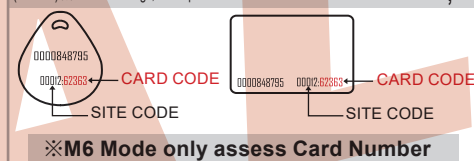Input [*] 123456 [#] (or Master Code) → 29 [*] 29 [*] [#]

M6

The default value of access function of M6 is Card and PIN, it will have 3 beeps for hinting you input PIN number after card presentation. Access function modification please refer the table below:

Access Mode	Command		Description
Card and PIN	17 [*] ???? [#]	15 [*] 0000 [#]	????=4-digit PIN(0001~9999 ; default value=1234)
Card only	17 [*] 0000 [#]	15 [*] 0000 [#]	
Card or PIN	17 [*] 0000 [#]	15 [*] ???? [#]	????=4-digit PIN(0001~9999 ; default value=4321)

Tag Information

(125kHz) ※ For Mifare tags, the separator between Site Code & Card Code is comma ",".

0000848795 · 00012.62363 ← CARD CODE
SITE CODE

0000848795 · 00012.62363 ← CARD CODE
SITE CODE

※M6 Mode only assess Card Number

Add New Tags

● **Add a Single Tag (by Presenting the Tag) :**

Input [*] 123456 [#] (or Master Code) → 22 [*] 1 [#]

[e.g.] Add single tag :
    Enter program mode → 22 [*] 1 [#]
    → Present the tag to Access Controller → OK

● **Add a Batch of Tags (by Presenting the Tags):**

Input [*] 123456 [#] (or Master Code) → 22 [*] 1 [#]

[e.g.] There are 20 tags to add:
    Enter program mode → 22 [*] 1 [#]
    →Present 20 tags one by one →OK

● **Add Single Tag(by Card Code) ※Card Code should not be repeated**

Input [*] 123456 [#] (or Master Code) → 11 [*] SSSSS [*] EEEEE [#] → OK

[e.g.] Add one card with Card Code 61632
    Enter program mode → 11 [*] 61632 [*] 61632 [#] → OK

● **Add a Batch of Tags(by Card Code) ※Card Code should not be repeated**
    ※by Card Code in Sequence

Input [*] 123456 [#] (or Master Code) → 11 [*] SSSSS [*] EEEEE [#] → OK

[e.g.] Add a batch of user with sequential Card Number of user address 12058
    until 12559 (total 500 tags)
    Enter program mode → 11 [*] 12058 [*] 12599 [#] → OK

Delete Tags

● **Delete Tag (by Presenting the Tag) :**

Input [*] 123456 [#] (or Master Code) → 22 [*] 0 [#]

[e.g.] Delet single tag :
    Enter program mode → 22 [*] 0 [#] → Present the tag to Access Controller → OK

● **Delete Tags (by Card Code) :**

Input [*] 123456 [#] (or Master Code) → 10 [*] SSSSS [9] EEEEE [#] → OK

[e.g.] Delete a tag with card code 62362
    Enter program mode → 10 [*] 62362 [9] 62362 [#] → OK

● **Delete All Tags:**

Input [*] 123456 [#] (or Master Code) → 29 [*] 29 [*] [#]

Operation process

D. Set up the password

- **M4/M8: Private PIN**
  Card or PIN: Enter program mode → 12 * UUUUU * PPPP # [e.g. User Address: 00001 and pass code: 1234, input 12 * 00001 * 1234 #]
  Card and PIN: Enter program mode → 13 * UUUUU * PPPP # [e.g. User Address: 00001 and pass code: 1234, input 13 * 00001 * 1234 #]

- **M6: Public PIN**
  Card or PIN: Enter program mode → 15 * PPPP # [Input 4-digit PIN, default value: 4321; PPPP=0000: cancel the function of simply inputting PIN to get access]
  Card and PIN: Enter program mode → 17 * PPPP # [Input 4-digit PIN, default value: 1234; PPPP=0000: access mode will be "Card Only"]

E. Double Door Control (M4/M8)

Controller with a reader to perform the "Double Door Control".
Enter program mode → 28 * 064 # [064= Double Door Control]

F. Anti-pass-back (M4/M8)

Usually, anti-pass-back is commonly applied to parking areas in order to prevent from multi-entry with one card at a time, or to locations that need entry and exit control.

- **Enable controller**
  Enter program mode → 20 * DDD # [128= Anti-pass-back(0=Disable; 1=Enable)/ 064=Entrance/Exit(0=Exit; 1=Entrance).]
  [e.g.] Enable Anti-pass-back, and set to Exit door= (128 x 1) + (064 x 0) = 128
       Enter program mode → 20 * 128 # (Please refer to function default value for details.)

- **Enable card**
  Enter program mode → 26 * SSSSS * EEEEE * N #
  [SSSSS= Starting User Address; EEEEE= Ending User Address; N=0(control)/ 1(Not control)/ 2(reset)]

  [e.g.] Enable the anti-pass-back function of User Address from 00152 to 00684: 26 * 00152 * 00684 * 0 #

  [e.g.] The anti-pass-back function of User Address 00154 has been enabled. After presenting the card to get in, the user doesn't present the card to leave. When s/he tries to present the card to get in again, since the in-in sequence violates the anti-pass-back rule, s/he will be rejected. To solve this problem, you can reset it as follows. Enter program mode → 26 * 00154 * 00154 * 2 # → Reset

G. Auto-Open Time Zone

Door will remain open after flashing one valid card. There are 2 time zones supported when Standalone, and 63 time zones when connected to AR-716-E. Please refer to paragraph Function Default Value below to ensure command 20 * DDD # / 24 * DDD # will not reset the functions that already had been changed.

- **Enable/Disable auto-open time zone**
  Enter program mode → 20 * 004 # [004= enable Auto-Open Time Zone; 000= disable Auto-Open Time Zone]

- **Enable/Disable auto open door without presenting one valid card**
  Enter program mode → 24 * 001 # [001=enable auto-open door without presenting one valid card；000=disable auto-open door without presenting one valid card]

- **Set up auto-open time zone**
  Enter program mode → 08 * N * HHMMhhmm * 7123456H #
  N: 2 sets of auto-open zone (N=0=1st set; N=1=2nd set)
  HHMMhhmm=Staring time to ending time (e.g. 08301200=08:30 to 12:00)
  7123456H= 7 days of a week (Sun/Mon/Tue/Wed/Thu/Fri/Sat) + Holiday (H= 0: disable; 1: enable); Holidays can be set via 701Client software.
  [e.g.] To set the second time zone as 9:30 AM to 4:20 PM, Monday, Wednesday and Friday: 08 * 1 * 09301620 * 01010100 # → Done

H. Lift control

Connect with **AR-401-RO16** to control access floors of users.

● **Enable**

Enter program mode → 24 `*` 002 `#` [002= enable lift control]

● **Single floor**

Enter program mode → 27 `*` UUUUU `*` FF `#`

UUUU=User Address FF=Floor number (01~32 floor)

[e.g.] User Address NO. 45, allowed to access the 24th floor: 27 `*` 00045 `*` 24 `#`

● **Multi floors**

Enter program mode → 21 `*` UUUUU `*` S `*` FFFFFFFF `#`

[UUUUU=User Address S: 4 sets of lift control (Input: 0~3) FFFFFFFF: 8 floors setting (F=0: Disable, F=1: Enable)

[e.g.] User Address NO. 168, only to the 6th and the 20th floor:

Enter program mode → 21 `*` 00168 `*` 0 `*` 00100000 `#` → 21 `*` 00168 `*` 2 `*` 00001000 `#`

Please refer to below floor chart

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

I. Setting Up the Arming

In the security management of access control system, the controller or reader status is divided into Standby Mode or Disarming Mode and Arming Mode. The conditions for triggering the alarm in these two modes is different, as shown in the following comparison:

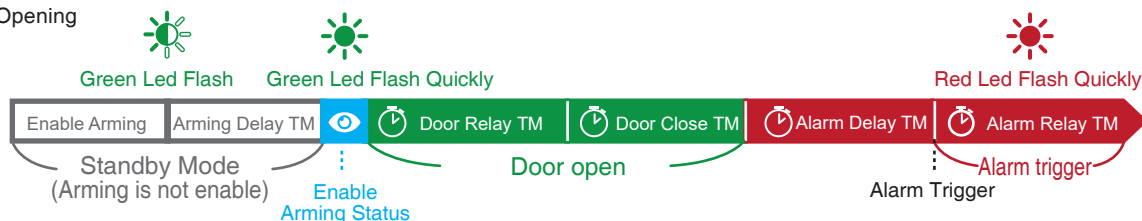● **Alarm conditions:**

1. Door is forced open

● **Application:**

1. Door open too long: 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: Arming is enabled and the power is suddenly off then on.
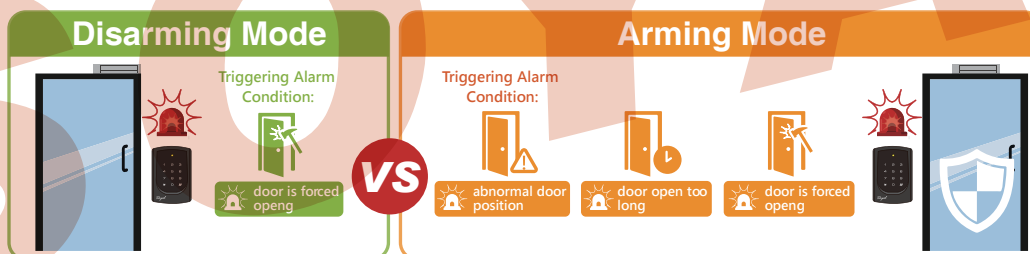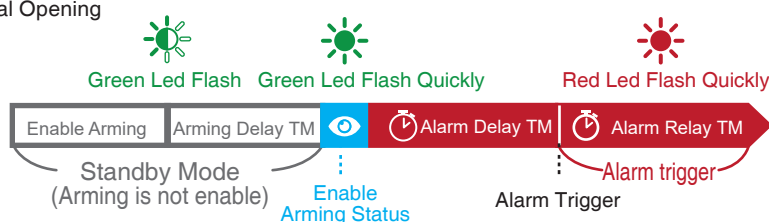

● **Arming Setting and Alarm Trigger Procedure :**

1.Normal Opening

2.Abnormal Opening

- **Enable/Disable Arming status (for M4/M8):**

Enter Programming Mode	Without Enter Programming Mode (Standby Mode): Enter Arming Code （default value of arming PWD is: 1234）
Enable: Enter program mode → * * #	**After door open :** The normal procedure to open door → **Input 4-digit arming PWD** → #
Disable: Enter program mode → * #	**Do not open the door :** * →**Input 4-digit arming PWD** → **Present a valid card**

※ **[The normal procedure to open door] can refer to [Access Mode].**

※ Read the **[Command List-Arming /Duress Function Setting]** below to modify arming PWD.

※ **M6 is Standalone Mode, the mode is without Arming /Duress Function.**

More Details:

- SOYAL Security Related Function

Function Default Value

AR-888-H

20 * DDD # ※Default Value

Function	Selection		Value	Application
Time Attendance	※0: Yes	1: No	001	Networking
Auto Relock	※0: Disable	1: Enable	002	Networking/Standalone
Auto Open	※0: Disable	1: Enable	004	Networking/Standalone
Exit by RTE Button	0: Disable	※1: Enable	016	Networking/Standalone
Master Controller of Network	※0: Slave	1: Mater	032	Networking
Entrance/Exit	※0: Exit	1: Entrance	064	Networking
Anti-pass-back	※0: Disable	1: Enable	128	Networking

Select the desired function, Weighted Value = Selection Index (0 or 1) x Value.
[e.g.] DDD (total weighted value of all functions): Enable "Auto Open" + "Exit by RTE Button" + "Anti-pass-back"=1*004 + 1*016 + 1*128=148; As a result of that, the command will be 20 * 148 #.

28 * DDD # ※Default Value

Function	Selection		Value	Application
Double Door Control	※0: Disable	1: Enable	064	Networking/Standalone
Force Open Alarm Output	0: Disable	※1: Enable	128	Networking/Standalone

24 * DDD # ※Default Value

Function	Selection		Value	Application
Auto Open without Presenting in Auto-open Time Zone	※0: Disable	1: Enable	001	Networking/Standalone
Alarm Output/ Lift Control	※0: Alarm Output	1: Lift Control	002	Networking/Standalone
Stop Alarm by pressing RTE Button or Closing the Door	0: None	※ 1: Yes	064	Networking/Standalone
Doorbell	※0: Disable	1: Enable	128	Networking/Standalone

34 * DDD # ※Default Value

Function	Selection		Value	Application
Enable the RF after door sensor closed to GND	※0: Deactivate	1: Activate	001	Networking/Standalone
Invalid card to activate alarm relay	※0: Deactivate	1: Activate	002	Networking/Standalone
Turn off all sounds of beeper	※0: Deactivate	1: Activate	003	Networking/Standalone
Mute the sounds of egress button (RTE)	※0: Deactivate	1: Activate	004	Networking/Standalone
Reserved	※0: Deactivate	1: Activate	016	Networking/Standalone
Keep beeing while arming is enabled	※0: Deactivate	1: Activate	032	Networking/Standalone
Door relay connected to AR-721RB (suited to models without relay built-in)	※0: Deactivate	1: Activate	064	Networking/Standalone
Arm relay connected to AR-721RB (suited to models with relay built-in)	※0: Deactivate	1: Activate	128	Networking/Standalone

Factory Reset by its commands

Reset User Data	Reset User Data &Controller Parameter (incl. Master Code)	Reset User Data &Controller Parameter (incl. Master Code) & Reset Parameter Setting- SOR
Enter program mode →29 * 29 * # → Exit the programming mode	Enter program mode →29 * 20 * # → Exit the programming mode	Enter program mode →29 * 21 * # → Exit the programming mode

※If forgotten the current Master Code, Reset through software tools is required. Please refer to the FAQ for more detail：
How to change or reset different kinds of Controller Settings, including Master Code, Parameter Setting and User Data?

Flush-Mounted Series

Flush-Mount Backlight Multi-Function Controller / Flush Mount Illuminated Access Reader

RoHS Compliant EOR FC CE NCC

V221226

Command List

	Function	Command	Description
Master Code Setting	Enter program mode	＊ PPPPP #	PPPPPP=Master Code, default value=**123456**
	Master code setting	09 ＊ PPPPPPRRRRRR #	PPPPPP=6-digit new master code RRRRRR=Reconfirm the new master code
Card Setting Commands	Suspend tag	10 ＊ SSSSS ＊ EEEEE #	＊=Suspend **9** =Delete;
	Delete tag	10 ＊ SSSSS 9 EEEEE #	SSSSS=Starting User Address；EEEEE=Ending User Address
	Add a batch of sequential cards by inputting card number (M6)	11 ＊ SSSSS ＊ EEEEE #	SSSSS=Starting card number EEEEE=Ending card number
	Recover the suspended cards(M4/M8)	11 ＊ SSSSS ＊ EEEEE #	SSSSS=Starting card number ； EEEEE=Ending card number
	Card number modification(M4/M8)	16 ＊ UUUUU ＊ SSSSSCCCCC #	UUUUU= User Address; SSSSS=5-digit site code; CCCCC= 5-digit card code
	Add card by presenting(M4/M8)	19 ＊ UUUUU ＊ QQQQQ #	UUUUU=User Address; QQQQQ=Card quantity (00001: for adding a single card or a batch of random numbering cards)
	Add/Delete tag by presenting(M6)	22 ＊ N #	N=0(Delete tag); N=1(Add tag)
	Delete all tags	29 ＊ 29 ＊ #	
	Enable/Disable Door open for any Tag	0 #	After enabling Door Open For Any Tag, all cards in same frequency as controller can pass directly.
Additional Card Function Setting	Mifare tag / card format (Optional) (M4/M8)	01 ＊ N #	N:0=ISO14443A；1=ISO14443B 2=ISO15693；3=I Code1；4=I Code2 PS.1. Please select the transmission standard first. 2. Ensure both reader and card using the same transmission standard.
	Administrator Card setting (M4/M8)	07 ＊ SSSSS ＊ EEEEE # (07 ＊ Starting User Address ＊ Ending User Address #)	SSSSS-EEEEE=00000-00255 (Administrator Card can enter the program mode after present the card and press # in 3 seconds, also can exit program mode by present the card.)
	Enable the security trigger signal (with AR-721RB)	34 ＊ DDD #	Change the "Arming" to the security trigger signal, when controller is connected with AR-721RB. **Please refer to function default value for details.**
Access Mode Setting	Control mode setting	04 ＊ N #	N=4: M4; N=6: M6; N=8: M8
	Card or PIN (M4/M8) Modify the PIN with user address, change the pass mode into Card or PIN	12 ＊ UUUUU ＊ PPPP #	Pass by Card or PIN; UUUUU=User Address;PPPP=4-digit PIN (0001~9999); 0000=Set as card only
	Card and PIN (M4/M8) Modify the PIN with user address, change the pass mode into Card and PIN	13 ＊ UUUUU ＊ PPPP #	Pass by Card and PIN; UUUUU=User Address; PPPP=4-digit PIN (0000~9999)
	Card or PIN(M6) Set up the mutual PIN in Card or PIN mode	15 ＊ PPPP #	PPPP=4-digit PIN(0001~9999 ; default value4321)
	Card and PIN(M6) Set up the mutual PIN in Card and PIN mode	17 ＊ PPPP #	PPPP=4-digit PIN(0001~9999 ; default value1234) 0000= Set as card only
Arming /Duress Function Setting (M4/M8 applicable, but not M6)	Setting duress PWD(M4/M8)	15 ＊ PPPP #	PPPP=4-digit PIN(0001~9999 ; default value4321) ※The Duress Code 0000 means that disable Duress Function and the default value is set as 0000 already.
	Setting arming PWD(M4/M8)	17 ＊ PPPP #	PPPP=4-digit PIN(0001~9999 ; default value1234)
Node ID Setting	Node ID setting (Connected to 716E)(M4/M8)	00 ＊ NNN #	NNN=Node ID of Access Controller (range: 001~016)
	Node ID setting (Connected to the PC directly without 716E) (M4/M8)	00 ＊ NNN ＊ VVV ＊ nnn #	NNN=Node ID of Access Controller (range: 001~254) VVV=Virtual 716E Node ID, nnn=Door number (range:001~254)

Time /Delay Setting	Door Relay Time setting	02 ＊ TTT #	TTT=Door relay time 000= Output continuously
			    001~600=1~600 sec.
			    601~609=0.1~0.9 sec.

	Alarm Relay Time setting	03 ＊ TTT #	TTT=Alarm relay time 000= Output continuously 001~600=1~600 sec.
	Arming Delay Time setting	05 ＊ TTT #	TTT=the buffer time before entering arming mode 001~600=1~600 sec.
	Alarm Delay Time setting	06 ＊ TTT #	TTT=the buffer time before the alarm is activated 001~600=1~600 sec.
	Arming Pulse Time setting	14 ＊ TTT #	TTT=Arming output time; 000=output continuously 001~250=0.1~2.5 sec.
	Door Close Time	18 ＊ TTT #	TTT=Door Close Time: 001~600=1~600 sec.; default value: 15 sec.
	Controller time clock setting	25 ＊ YYMMDDHHmmss #	YYMMDDHHmmss=Year/ Month/ Day/ Hour/ Min./ Sec.
	Same tag reading interval time	31 ＊ TTTT #	TTTT=10~6000 (Base on 10ms, range from 10 to 6000; default value: 1 sec. : 0100)

	Function	Command	Description
Controller Additional Function Setting	Reader additional setting	20 * DDD #	Please refer to function default value for details.
	Controller parameter setting	24 * DDD #	
	Double Door Control / Force Open Alarm	28 * DDD #	
	Auto-open time zone setting	08 * N * HHMMhhmm * 7123456H #	**N**= 0 (1st time zone) / 1 (2nd time zone) **HHMM**= Starting time; **hhmm**= ending time (i.e.: 08301600=08:30 to 16:00) **7123456H**= 7 days of week (Sun/Mon/Tue/Wed/Thu/Fri/Sat)+ Holiday(H= 0: disable; 1: enable); Holidays can be set by 701Client software.
	Anti-pass-back (Enable user)	26 * SSSSS * EEEEE * N #	**SSSSS**=Starting User Address; **EEEEE**=Ending User Address; **N**=0: Enable; **N**=1: Disable; **N**=2: Reset
	Enable/Disable keypad lock	* # (simultaneously)	After enabling keypad lock function, press any button will only has two beeps and no reaction. Disable the keypad lock function will bring controller keypad function back to normal. (only Keypad Controllers have this function ex. AR-721-H; Touch Keypad Controllers do not have this function ex. AR-725-H)
Lift Control Setting	Controller parameter setting	24 * 002 #	
	Lift control setting: multi-floor(M4/M8)	21 * UUUUU * S * FFFFFFFF #	**UUUUU**=User Address, **S**=4 sets of lift control (0~3); **FFFFFFFF**=8 assigned floor(F=0: Disable, 1: Enable)
	AR-401RO16 Lift Relay Activated TM (M4/M8)	23 * NNN * TTT #	**NNN**=site number, **TTT**= relay time: 000~600=1~600 sec.
	Lift control setting: single floor(M4/M8)	27 * UUUUU * FF #	**UUUUU**=User Address; **FF**=Floor (01~32 floor)
Exit Program Mode	Exit program mode	* #	
	Exit program mode and enter arming mode(M4/M8)	* * #	

※**More Details：Introduction of New Function Commands for Enterprise E Controller and Home H Controller**