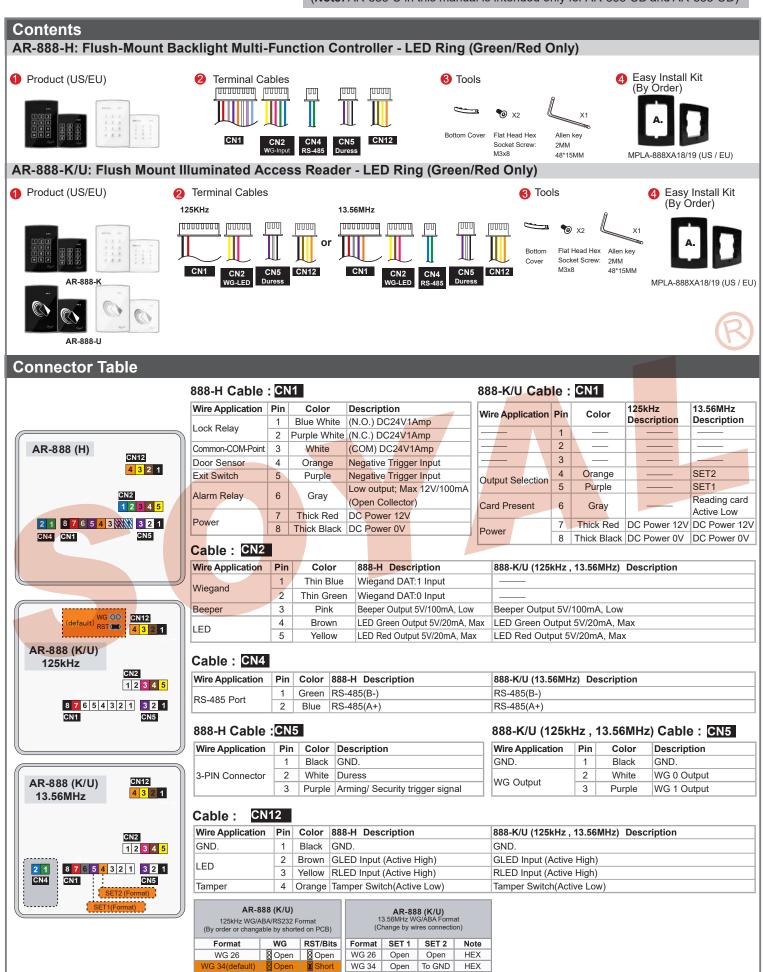


AR-888(H/K/U)

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



To GND

ABA-5-5 To GND To GND

Open

BCD10

ABA-10

Short

Short

Short Open

ABA-8

ABA-10

Installation

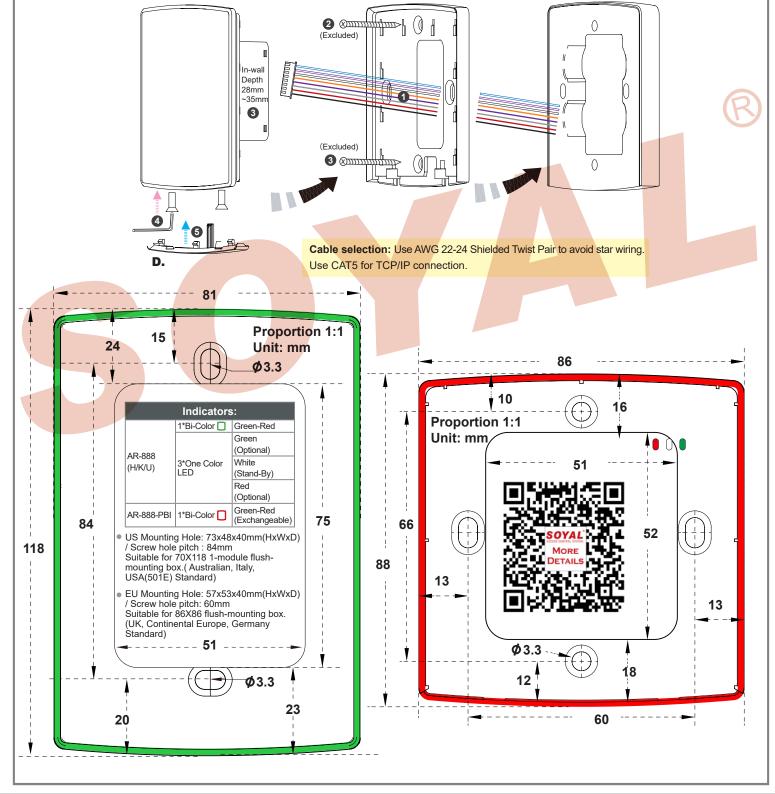
C.

- 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.

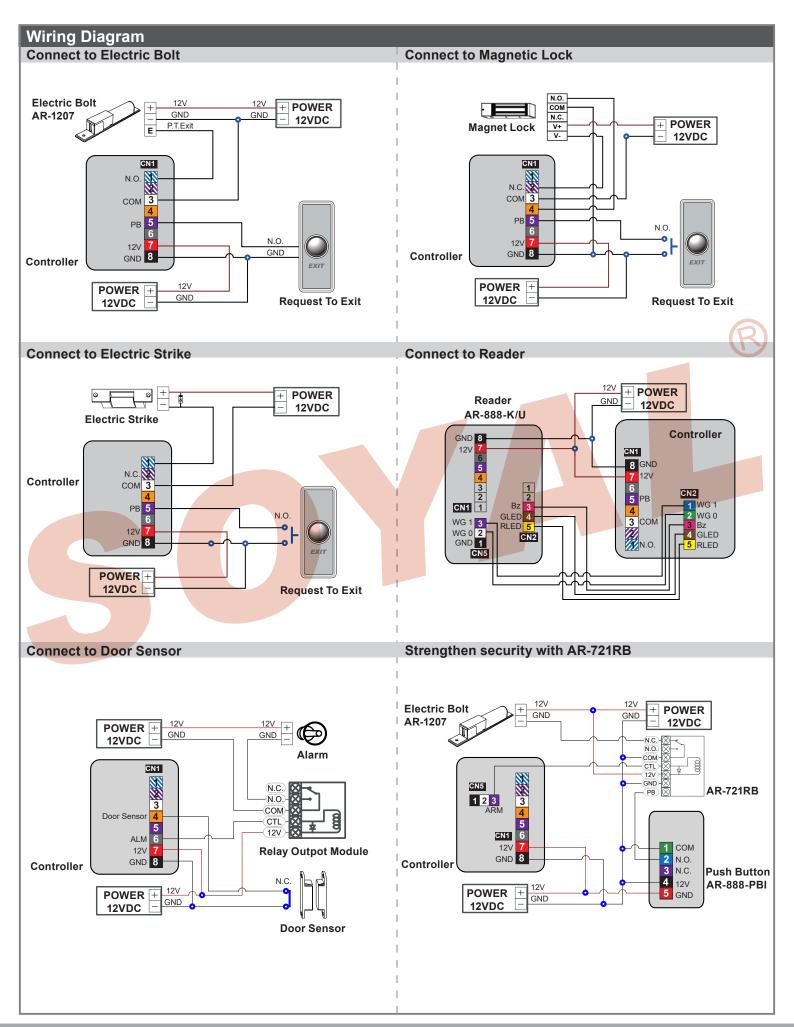
В.

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.

A. By order

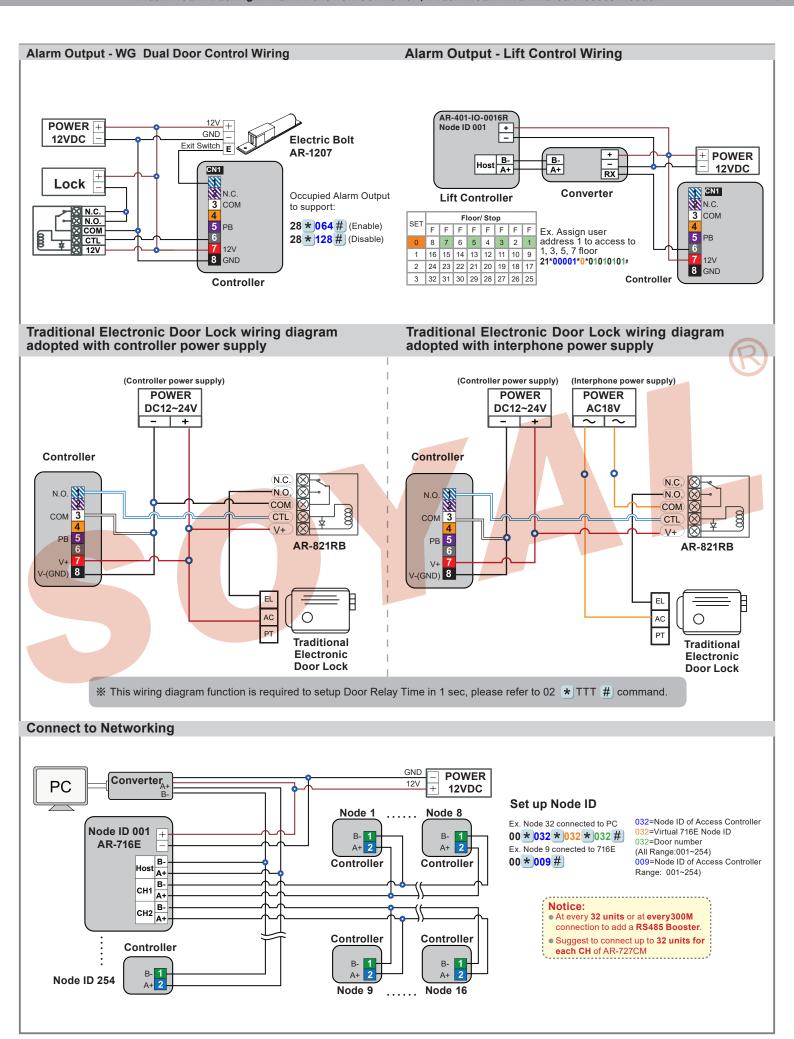






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Flush-Mount Backlight Multi-Function Controller / Flush Mount Illuminated Access Reader



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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 ★PPPPPRRRRRR # [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	,	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).
- X 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



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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: $00058 \sim 00063$ Enter program mode $\rightarrow 10 \times 00058 \times 00063 \#$

Delete Tags

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

Input * 123456 # (or Master Code) \rightarrow 10 * SSSSS 9 EEEEE # [e.g.] Delete by Card Code: 00058 Enter program mode \rightarrow 10 * 00058 9 00058 #

[e.g.] Delete by Card Code: 00058~00063

Enter program mode $\rightarrow 10 \times 00058900063 \#$

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)



Add New Tags

Add a Single Tag (by Presenting the Tag) :

Input \star 123456 # (or Master Code) \rightarrow 22 \star 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 #

 \rightarrow Present 20 tags one by one \rightarrow 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 \bigstar 123456 # (or Master Code) \to 11 \bigstar SSSSS \bigstar EEEEE # \to 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 \star 123456 # (or Master Code) \rightarrow 22 \star 0 #

[e.g.] Delet single tag:

Enter program mode \rightarrow 22 \bigstar 0 # \rightarrow Present the tag to Access Controller \rightarrow OK

• Delete Tags (by Card Code) :

Input * 123456 # (or Master Code) \rightarrow 10 * SSSSS 9 EEEEE # \rightarrow OK [e.g.] Delete a tag with card code 62362

Enter program mode \rightarrow 10 \bigstar 62362 9 62362 # \rightarrow OK

Delete All Tags:

Input **★** 123456 **#** (or Master Code) → 29 **★** 29 **★ #**

Flush-Mounted Series



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

Operation process

D. Set up the password

M4/M8: Private PIN

Card or PIN: Enter program mode → 12 * JUUUUU * 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

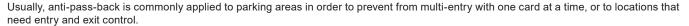
Card or PIN: Enter program mode → 15 * PPPP # [Input 4-digit PIN, default value: 4321; PPPP=0000: cancel the function of simply inputting PIN to get access] Card and PIN: Enter program mode → 17 * PPPP#] [Input 4-digit PIN, default value: 1234; PPPP=0000: access mode will be "Card Only"]

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)



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= $(128 \times 1) + (064 \times 0) = 128$ 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 cardl

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.

Fnable

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 * FFFFFFF #

[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 \rightarrow 21 * 00168 * 0 * 00100000 # \rightarrow 21 * 00168 * 2 * 00001000 #

Please refer to below floor chart

Floor/ Stop								
Set	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

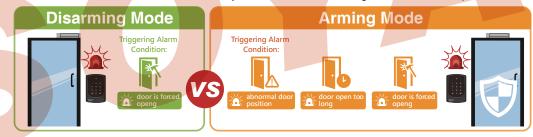


I. Setting Up the Arming

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:

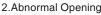
- Alarm conditions:
 - 1. Door is forced open

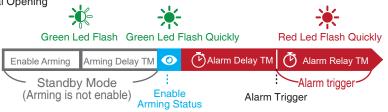
- Application
 - 1. Door open too long: Door is open longer than door relay time plus door close time.
 - 2. Force open (Opened without a valid user card): Access by force or illegal procedure.
 - 3. Door position abnormal: Arming is enabled and the power is suddenly off then on.



• Arming Setting and Alarm Trigger Procedure :







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

Enter Programming Mode Enable: Enter program mode → ★ ★ # Disable: Enter program mode → ★

Without Enter Programming Mode (Standby Mode): Enter Arming Code (default value of arming PWD is: 1234)

After door open : The normal procedure to open door → Input 4-digit arming PWD → #

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

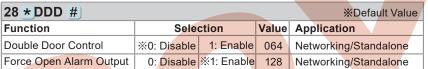
AR-888-H

20 * DDD # %Default Value									
Function	Sele	ction	Value	Application					
Time Attendance		1: No	001	Networking					
Auto Relock		1: Enable	002	Networking/Standalone					
Auto Open		1: Enable	004	Networking/Standalone					
Exit by RTE Button	0: Disable	%1: Enable	016	Networking/Standalone					
Master Controller of Network		1: Mater	032	Networking					
Entrance/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" + "Antipass-back"=1*004 + 1*016 + 1*128=148; As a result of that, the command will be 20 *148 #.



24 * DDD #								*Default Value
Function			Sele	ctic	n		Value	Application
Auto Open without Presenting in Auto-o	pen Time Zone	<u></u> %0	: Disable		1: [Enable	001	Networking/Standalone
Alarm Output/ Lift Control		※ 0	: Alarm Output		1: l	_ift Control	002	Networking/Standalone
Stop Alarm by pressing RTE Button or	Closing the Doo	r 0	: None	*	1: \	Yes	064	Networking/Standalone
Doorbell		::0	: Disable		1: E	Enable	128	Networking/Standalone

34 * DDD #				*Default Value
Function	Selection	on	Value	Application
Enable the RF after door sensor closed to GND	%0: Deactivate	1: Activate	001	Networking/Standalone
Invalid card to activate alarm relay		1: Activate	002	Networking/Standalone
Turn off all sounds of beeper		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		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?

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	and List					
	Function	Command	Description			
Master Code	Enter program mode	* PPPPPP #	PPPPP=Master Code, default value=123456			
Setting	Master code setting	09 * PPPPPPRRRRRR #	PPPPP=6-digit new master code RRRRR=Reconfirm the new master code			
	Suspend tag	10 * SSSSS * EEEEE #	*=Suspend 9 =Delete;			
	Delete tag	10 * SSSSS 9 EEEEE #	SSSS=Starting User Address; EEEEE=Ending User Addres			
	Add a batch of sequential cards by	11 * SSSSS * EEEEE #	SSSS=Starting card number			
	inputting card number (M6)		EEEEE=Ending card number			
Card	Recover the suspended cards(M4/M8)	11 * SSSSS * EEEEE #	SSSS=Starting card number ; EEEEE=Ending card numb			
Setting commands	Card number modification(M4/M8)	16 *JUUUUU *SSSSSCCCCC #J	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 (000) for adding a single card or a batch of random numbering card			
	Add/Delete tag by presenting(M6)	22 * N #	N=0(Delete tag); N=1(Add tag)			
	Delete all tags	29 * 29 * #				
			After enabling Door Open For Any Tag, all cards in sar			
	Enable/Disable Door open for any Tag	0 #)	frequency as controller can pass directly.			
	Miforo tog / oard format (Ortional)		N:0=ISO14443A ; 1=ISO14443B			
	Mifare tag / card format (Optional)	01 * N #)	2=ISO15693;3=I Code1;4=I Code2			
Additional	(M4/M8)	v	PS.1. Please select the transmission standard first. 2. Ensure both reader and card using the same transmission standard.			
Card Function			SSSS-EEEE=00000-00255			
Setting	Administrator Card setting	07 + 000000 + 55555 #	(Administrator Card can e#er the program mode af			
	(M4/M8)	07 * SSSSS * EEEEE #	present the card and press in 3 seconds,			
		(07 * Starting User Address * Ending User Address #)	also can exit program mode by present the card.)			
	Enable the security trigger signal		Change the "Arming" to the security trigger signal,			
	(with AR-721RB)	34 * DDD #	when controller is connected with AR-721RB.			
		22 22 (0)	Please refer to function default value for details.			
	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 (0001~999 0000=Set as card only			
ccess Mode	Card and PIN (M4/M8)		Pass by Card and PIN;			
Setting	Modify the PIN with user address, change	13 * UUUUU * PPPP #	UUUUU=User Address;			
	the pass mode into Card and PIN		PPPP=4-digit PIN (0000~9999)			
	Card or PIN(M6) Set up the mutual PIN in Card or PIN mode	15 <u>*</u> PPPP <u>#</u>	PPPP=4-digit PIN(0001~9999; default value=4321)			
	Card and PIN(M6) Set up the mutual PIN in Card and PIN mode	17 * PPPP #	PPPP=4-digit PIN(0001~9999; default value=1234) 0000= Set as card only			
Arming /Duress	·		PPPP=4-digit PIN(0001~9999; default value=4321)			
Function Setting	Setting duress PWD(M4/M8)	15 * PPPP #	*The Duress Code 0000 means that disable Dure Function and the default value is set as 0000 already.			
M4/M8 applicable , but not M6)	Setting arming PWD(M4/M8)	17 *PPPP #	PPPP=4-digit PIN(0001~9999 ; default value=1234)			
Node ID	Node ID setting (Connected to 716E)(M4/M8)	00 * NNN #	NNN=Node ID of Access Controller (range: 001~016)			
Setting	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:001~25			
	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.			
ima /Dala	Arming Delay Time setting	05 * TTT #	TTT=the buffer time before entering arming mode 001~600=1~600 sec.			
ime /Delay Setting	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.;			
	Controller time clock setting	25 * YYMMDDHHmmss #	default value: 15 sec. YYMMDDHHmmss=Year/ Month/ Day/ Hour/ Min./ Sec.			
	-	31 * TTTT #	TTTT=10~6000 (Base on 10ms, range from 10 to 600			



	Function	Command	Description			
	Reader additional setting	20 *)DDD #)				
	Controller parameter setting	24 * DDD #	Please refer to function default value for details.			
	Double Door Control / Force Open Alarm	28 * DDD #				
Controller Additional Function Setting	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)			
	Controller parameter setting	24 * 002 #				
Lift	Lift control setting: multi-floor(M4/M8)	21 *UUUUU *S *FFFFFFF #	UUUUU=User Address, S=4 sets of lift control (0~3); FFFFFFF=8 assigned floor(F=0: Disable, 1: Enable)			
Control Setting	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	Exit program mode	* #				
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**