

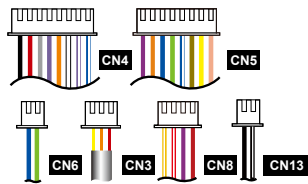
Contents

AR-837-EA-T: Face recognition(with Temperature Module)

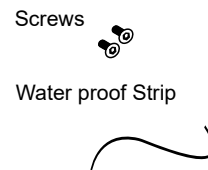
1 Products



2 Terminal Cables



3 Tools



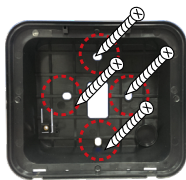
4 Optional

- Ethernet : DMOD-NETMA10 (TCP/IP Module included RJ45 Connector) or DMOD-NETMA11 (TCP/IP Module with POE function)
- Any Wiegand Output Module (CN10)
- AR-MDL-721V (Voice Module)
- AR-321L485-5V (TTL to RS-485 Converter)

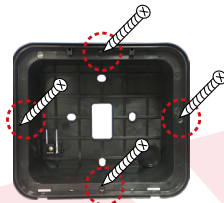
Installation

Installation Method

A-1.Surface Mounted



A-2.Embedded

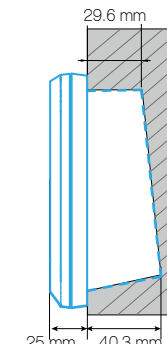
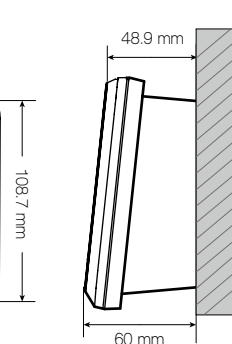
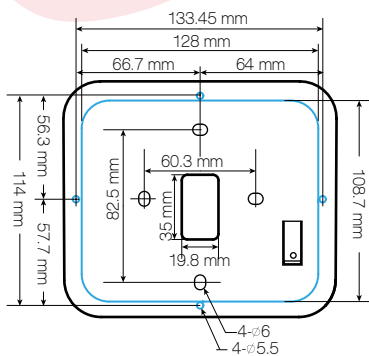


B.



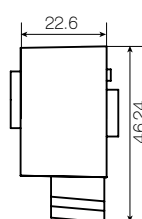
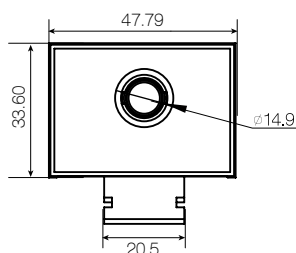
- A-1.Surface Mounted: Use a screwdriver to screw the mounting plate to the wall.
- A-2.Embedded: To dig a hole for 128mmx109mm; and then, use a screwdriver to screw the mounting plate to the wall.
- Pull cable ends through the access hole in the mounting plate.
- Attach AR-837-EA-T to the mounting plate and install screws (supplied) into the holes at the bottom with the allen key.
- Apply power. LED (green) will light up with one beep.

Dimension (mm)



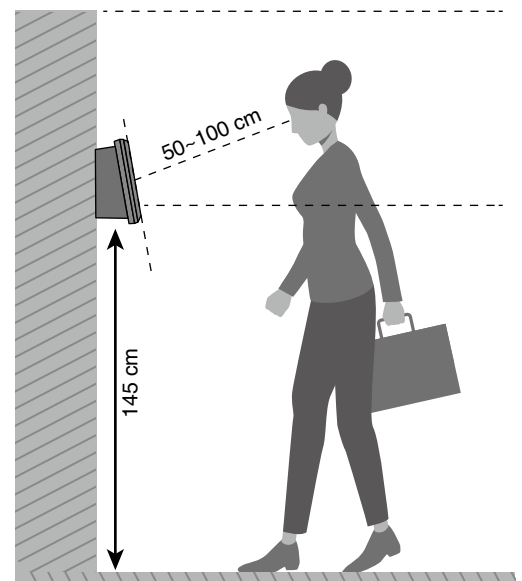
(Digging depth)

- Surface mounting hole(Front View)
- Surface mounting hole (Side view)
- Flush mounting hole (Side view)



- Body Temperature Measurement Module (Front View)
- Body Temperature Measurement Module (Side view)

Installation Guide



Graphic Display Multi-Function Proximity Controller (with Temperature Module)

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 to avoid star wiring, CAT 5 cable for TCP/IP connection
- 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 cause a malfunction in the reader.
The standard installation: Door relay and lock use the same power supply, and reader should use another independent power supply.

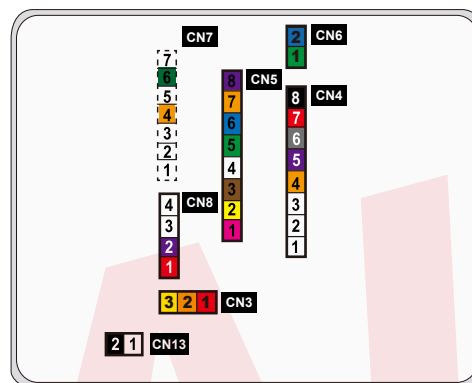
Connector Table (1)

Cable: CN3

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

Cable: CN4 Main Port

Wire Application	Wire	Color	Description
Lock Relay	1	Blue White	(N.O.)DC24V1Amp
	2	Purple White	(N.C.)DC24V1Amp
Lock Relay COM	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. Optional (by jumper)
Power	7	Thick Red	DC 12V
	8	Thick Black	DC 0V



Cable: CN6

Wire Application	Wire	Color	Description
RS-485 for Lift Controller	1	Thick Green	RS-485(B-)
	2	Thick Blue	RS-485(A+)

Connector Table (1)

Cable: CN5 WG Port

Wire Application	Wire	Color	Description
Beeper	1	Pink	Beeper Output 5V/100mA, Low
LED	2	Yellow	Red LED Output 5V/20mA, Max
	3	Brown	Green LED Output 5V/20mA, Max
Door Output	4	Blue White	Transistor Output Max. 12V/100mA (Open Collector Active Low)
Wiegand	5	Thin Green	Wiegand DAT: 0 Input
	6	Thin Blue	Wiegand DAT: 1 Input
WG Door Sensor	7	Orange	Negative Trigger Input
WG Exit Switch	8	Purple	Negative Trigger Input

Cable: CN8

Wire Application	Wire	Color	Description
Reserved	1	Red	--
Security trigger signal	2	Purple	Security trigger signal Output
Arming	3	Red White	Arming Output
Duress	4	Yellow White	Duress Output

Cable: CN13

Wire Application	Wire	Color	Description
Door Bell	1	Black White	Transistor Output Max. 12V/100mA (Open Collector Active Low)
	2	Black	DC 0V

Connector Table (2): Optional

Cable: CN7

Wire Application	Wire	Color	Description
TCP/IP Output	1	---	---
	2	---	---
	3	Orange White	Net - TX+
	4	Orange	Net - TX-
	5	Green White	Net - RX+
	6	Green	Net - RX-
	7	---	---

Cable: CN9

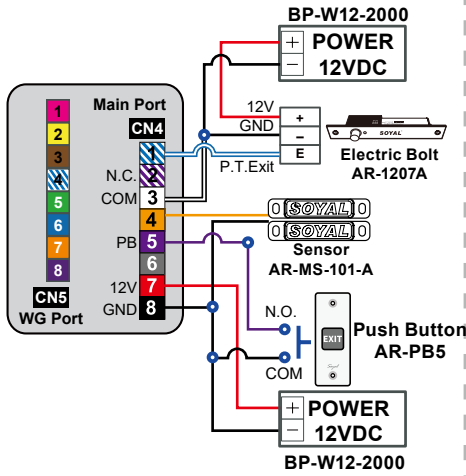
Wire Application	Wire	Color	Description
Voice Module (*Required speaker 8Ω / 1.5W (Max. 2W)	1	Black	DC 0V
	2	Yellow	TX
	3	White	TE
	4	Orange	RX
	5	Red	DC 5V
	6	Blue	--

Cable: CN10

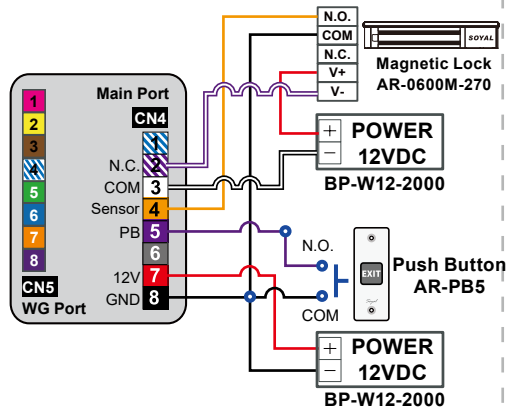
Wire Application	Wire	Color	Description
HID RF Module	1	Orange	ANT 1
	2	Purple	ANT 2
	3	Black	DC 0V
	4	Red	DC 5V
	5	Blue	Wiegand DAT: 1 Input
	6	Green	Wiegand DAT: 0 Input
	7	White	--

Wiring Diagram

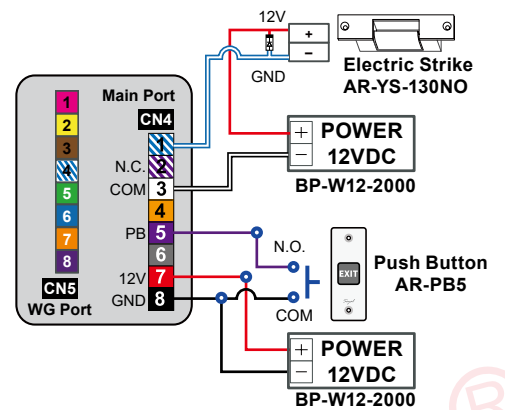
Connect to Electric Bolt



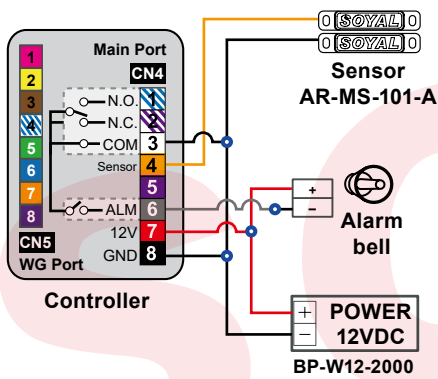
Connect to Magnetic Lock



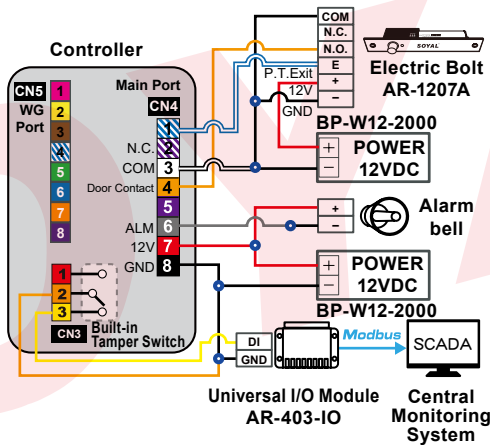
Connect to Electric Strike



Door Open Too Long Alarm Wiring Method (External Sensor)

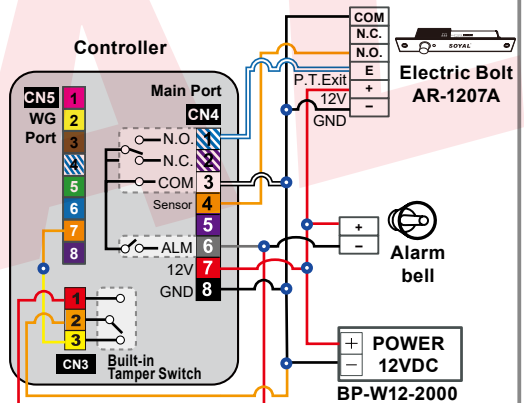


Tamper-Switch Alarm Wiring Method (Connect to Central Monitoring System through Modbus via Universal I/O Module)



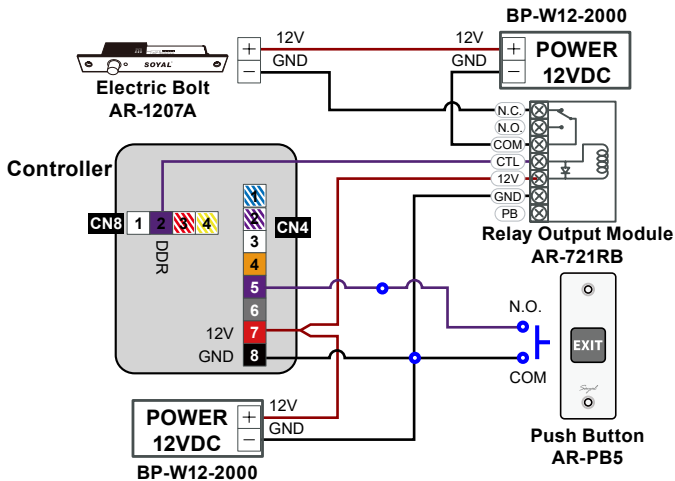
※ Enable WG Port option [Enable Force Alarm] via Parameter Setting of 701Server Software

Tamper-Switch Alarm Wiring Method (WG Port Sensor Wiring Method)



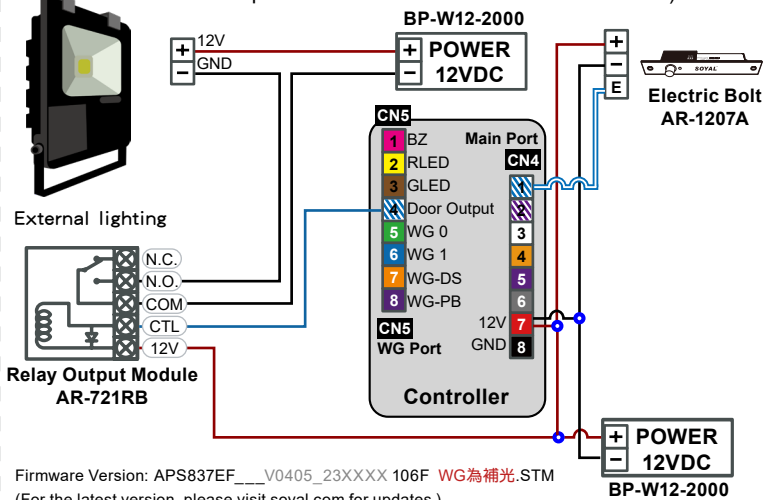
※ Enable [Share Door Relay] & WG Port option [Enable Force Alarm] via Parameter Setting of 701Server Software

Strengthen security with AR-721RB



Connect to Reader

(Connecting the external LED as backlight requires a special firmware update and WG Slave Mode will be disabled.)

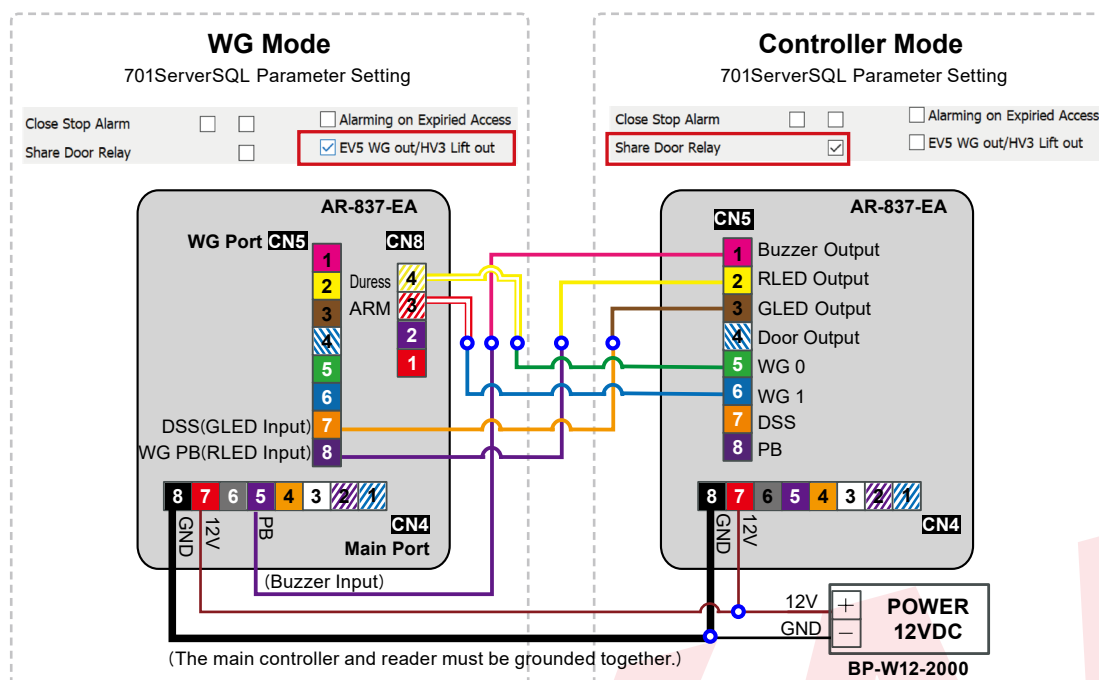


Firmware Version: APS837EF__V0405_23XXXX 106F WG為補光.STM
(For the latest version, please visit soyal.com for updates.)

Enable "Share Door Relay" to open the same electronic lock regardless of whether it is triggered by the main controller or the Wiegand reader. This is achieved by using the NO contact of the blue-white wire in CN4, suitable for systems where the controller and the reader control the same lock.
Disable "Share Door Relay" for card swiping on the main controller, triggering the NO contact of the blue-white wire in CN4. For card swiping on the Wiegand reader, triggering the NO contact of the blue-white wire Door Output in CN5 WG Port. This allows the main controller and the reader to independently control two electronic locks.

Graphic Display Multi-Function Proximity Controller (with Temperature Module)

WG Mode / Controller Mode Setting Method



1. AR-837-EA can be set up as WG26/WG34/WG64 while the Controller is in WG Mode. These Controller can also be paired with the Controller that has WG input function.
2. Networking Setting: Select E Series Controller Parameter Edit in 701Server,tick up the function "Ev5 WG out/Hv3 Lift out"
3. Please restart the controller after pressing "Write to Controller".

※Please refer to the FAQ for software configuration instructions: [How to set the E Series card reader to Wiegand output mode?](#)

Programming

A. Keyboard Lock/ Unlock

• Lock/ Unlock

Press ***** and **#** simultaneously to lock keyboard. Press simultaneously again to unlock.

B. Entering and Exiting Programming Mode

• Entering

Input ***123456#** or ***PPPPPP#**

[e.g.] The Default Value= 123456. If already changed the Master Code= 876112, input ***876112#** → Access programming mode
P.S.If no instruction is entered within **30 sec.**, it will automatically leave the programming mode.

• Exiting

Press the ***** repeatedly → **6** Quit or **7** Quit and Arming (Please refer to alarm / arming setting)

• Changing the Master Code

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

C. Initial setup

• Language Setting

Access programming mode → **5** Tools → **1** Language → **0** EN → Succeeded → Initial system...

• Node ID of Reader Setting

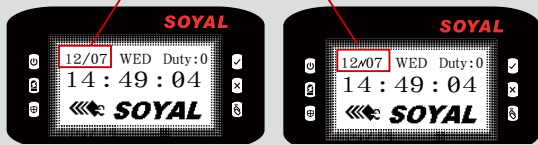
Access programming mode → **3** Parameters[1] → **1** Node ID → Input New Node ID : **1~254** (default value:001) → Main Door Number : **0~255**
→ WG1 Door Number : **0~255** → Show UID (0=No, 1=WG, 2=ABA, 3=HEX) → Enable DHCP(0=No, 1=En, 2=Exit) → Succeeded

Function Description of Front Panel & Indicator



Attendance/Duty Functions			
(F1) Up	Press "1 time"	Press "2 times"	
(F2) Down	Duty on	Break out	
(F3) Left	Duty off	Break RTN	
(F4) Right	Overtime on	Go	
	Overtime off	Return	
(*) Esc / Quit	(#) Enter / OK		

- System will automatically exit Programming Mode when inactivating for 30 seconds.
 - LED status indicates controller's mode and status.
 - OK (green) – blinking constantly when operating in Programming Mode
 - or flashing an existed card in card learn mode, it comes 2 beeps warning and LCD panel displays "Same Card: user address / card number"
 - Error (red) – invalid card with 2 beeps warning and LCD panel displays "Card Number Err!"
 - or in anti-pass-back mode, when violates the access, it comes one beep warning and LCD panel displays "Anti-pass Error!"
 - Arming (green) – arming on status
 - Alarm (red) – any abnormal condition occurs
- Keypad will be locked up 30 sec. when incorrect pin code or master code is constantly entered.
- Maximum error input of pin code and master code can be changed via the software 701Server (default: 5 times)



Networking : / and \ interactively flash between the Month and DAY.
[e.g.] 12/07 ↔ 12\07

Stand-alone : No flashing [e.g.] 12/07

(←Reference to picture)

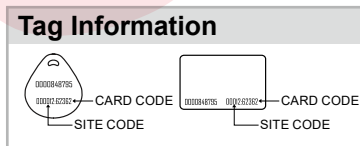
Manu Tree

※ The full screen menu setting is on [page11 - Full Function Command Menu Table](#)

1. Add/ Delete - Add > Card ID - Add > RF Learn - Suspend > Address - Suspend > ID # - Delete > Address - Delete > ID # - Recover > Address - Recover > ID # - Antipass Group	2. User Setting - Password - Access Mode - Extend Options - Single Floor - Multi Floor - Enroll Face - Delete Face	3. Parameters[1] - Node ID - OnOff OpenZone - Door Relay Tm - Door Close Tm - Alarm Relay Tm - Alarm Delay Tm - Arming Delay Tm - Arming PWD	4. Parameters[2] - Auto Relock - Egress(R.T.E) - Miscellaneous - Force Open - Close & Stop - Anti-pass-back - Duress Code - Password Mode - Factory Reset	5. Tools - Language - Master Code - Master Range - Terminal RS-485 - Ext.Comm CN11 - Open Time Zone - Informations - Clock Setting - Daily Alarm	6. Quit - UART Port CN9 - Event Logs
7. Quit & Arming					

D. Adding and Deleting Tag

※ User capacity: 16384 (00000~16383)



- Adding Tag by Tag ID**
Access programming mode → 1 Add/Delete → 1 Add → Card ID → Input 5-digit user address → Input Site Code → Input Card Code
- Adding Tag by RF Learn Function**
Access programming mode → 1 Add/Delete → 2 Add → RF-Learn → Input 5-digit user address
→ Input Tag Units(pcs) → Close Tag into RF Area
※If the batch of tags are **Sequential**, input Tag Units(pcs) in the quantity of the tags and present the tag with the **lowest number** to the controller for adding all the tag data; otherwise, the tags must be presented to the controller individually
- Suspend User Address**
Access programming mode → 1 Add/Delete → 3 Suspend → Addr → Input Start address → Input End address
- Suspend Tag by Tag ID**
Access programming mode → 1 Add/Delete → 4 Suspend → ID # → Input Site Code → Input Card Code
- Recover User Address**
Access programming mode → 1 Add/Delete → 7 Delete → Addr → Input Start address → Input End address
- Recover Tag by Tag ID**
Access programming mode → 1 Add/Delete → 8 Delete → ID # → Input Site Code → Input Card Code
- Deleting User Address**
Access programming mode → 1 Add/Delete → 5 Delete → Addr → Input Start address → Input End address

Graphic Display Multi-Function Proximity Controller (with Temperature Module)

• Deleting Tag by Tag ID

Access programming mode → 1 Add/Delete → 6 Delete → ID # → Input Site Code → Input Card Code

• Setting up the access mode

Access programming mode → 2 User Setting → 2 Access Mode → Input User Address → 0: Invalid; 1: Card ; 2: Card or PIN; 3: Card & PIN

E. PIN Code

Access programming mode → 2 User Setting → 1 Enroll Face → Input 5-digit user address → Input 4-digit PIN (0001~9999) → Succeeded
Or via 701Client set it on Users screen

F. Enroll/Delete Face

• Adding

Access programming mode → 2 User Setting → 6 Delete Face → Key in 5-digit user address → Follow the instruction on LCD Screen to enroll face → Succeeded

• Deleting

Access programming mode → 2 User Setting → 7 Delete FP → Key in 5-digit user address → Succeeded

P.S. If want to delete all users' face data' FP, key in 99999 #

G. Access Mode

Access programming mode → 2

User Setting → 2 Access Mode

→ Key in 5-digit user address

(00000~08999)

→ 0: Invalid; 1:Card; 2: Card or PIN; 3: Card and PIN

(837EA-T: → Finger Identify: 0: Must ; 1: Ignore)→ Succeeded

※ If you select the access mode with PIN, please ensure the parameters in

4 Parameters [2] → 3

Miscellaneous →

Main Controller Skip PIN

Check, select 0 to disable WG1

Port Skip PIN Check, select

0 to disable; It will mistake

Controller and cannot get access

if you select different access

mode in 2 Access mode and 3

Miscellaneous

Access Mode		Finger Identify (837EA-T Only)		Result (837EA-T Only)
Hardware	701Client	Hardware	701Client	
0:Invalid		0: Must	☐ Just card ☐ Just Face / FP	Invalid User
		1: Ignore	☒ Just card ☒ Just Face / FP	
1:Card / Card only		0: Must	☐ Just card ☐ Just Face / FP	Finger+Card
		1: Ignore	☒ Just card ☒ Just Face / FP	Card first, then fingerprint. Special firmware version (For requirements, contact SOYAL). APS837EF___V0405_230512 先卡片再按指紋.STM
2:Card or PIN		0: Must	☐ Just card ☐ Just Face / FP	1. Finger+Card 2. Finger+PIN 3. Card+Finger+PIN 4. Card+Finger+Card 5. PIN+Finger+PIN 6. PIN+Finger+Card
		1: Ignore	☒ Just card ☒ Just Face / FP	Card first, then fingerprint. Special firmware version (For requirements, contact SOYAL). APS837EF___V0405_230512 先卡片再按指紋.STM
3:Card and PIN		0: Must	☐ Just card ☐ Just Face / FP	1. Card Only 2. PIN Only 3. Finger Only
		1: Ignore	☒ Just card ☒ Just Face / FP	Finger+Card+PIN

H. Arming Password

Access programming mode → 3 Parameters[1] → 8 Arming PWD → Input 4-digit PIN (0001~9999; Default: 1234) → Succeeded

Or via 701Server and set it on AR-837-EA screen

I. Arming Delay Time

Access programming mode → 3 Parameters[1] → 7 ArmingDelayTm → Enter armed sta. Delay time(Sec), Range:000~255 ;

Armed pulse out-put time (10ms) ,Range : 000~255 → Succeeded

J. PIN & UID Length setting

Access programming mode → 3 Parameters[1] → 9 PIN & UID format → User PIN Length Range:4~8(4 is default value) ;

Card PIN Length Range:2~8(4 is default value)

K. Duress Code

Access programming mode → 4 Parameters[2] → 7 Duress Code → 4 sets (select one) → Input 4-digit PIN (0001~9999) → Succeeded

Or via 701Server to set it on AR-837-EA screen

※Duress Code is only available in networking mode. It will substitute a personal pin code and send the message of Duress to computer as a warning signal.

※The Duress Code 0000 means that disable Duress Function and the default value is set as 0000 already.

L. Terminal Port

Access programming mode → 5 Tools → 4 Terminal Port → 0:Lift ; 1:Host ; 2:LED ; 3:PRN (default value:1) → Baud Selection

(default value:9600) → Succeeded

M. Setting up the alarm / arming

• Conditions:

1. Arming enabled
2. Alarm system connected

• Situations:

1. **Door is open overtime:** 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 is abnormal:** Happening when power is off and then on again, besides, reader was on arming before power went off.

Graphic Display Multi-Function Proximity Controller (with Temperature Module)

• Enable/Disable the arming status:

Standby Mode			
Card only		Card or PIN	Card and PIN
Open the door	No open the door	Input user address → Input	Present the tag to reader → Input
Present the tag to reader → Input	* → Input 4-digit arming PWD	4-digit individual PWD → # →	4-digit individual PWD → # →
4-digit arming PWD → #	→ Present the tag to reader	Input 4-digit arming PWD → #	Input 4-digit arming PWD → #
Access Programming mode			
Enable: Access programming mode → 7 Quit & Arming		Disable: Access programming mode → 6 Quit	

※ [Use FP] can substitute for [Induct valid card].

N. Anti-pass-back

While connecting with AR-723-U(WG mode) and AR-661-U for anti-pass-back function, the access mode must be "Card" only.

• Device enable

Access programming mode → 4 Parameters[2] → 6 Anti-pass-back → master controller select [1: Yes] → WG select [1: Yes]

• Card user enable

Access programming mode → 1 Add/ Delete → 9 Antipass Group → Input 5-digit starting user address → Input 5-digit ending user address → must select [1: Yes]

O. Lift control

[e.g.] Connect with AR-401-IO-0016R to control which floor the user will be able to access. (BAUD9600)

• Setting Lift control

Access programming mode → 5 Tools → 4 Terminal Port → 0 : Lift Controller → Baud Selection 0 : 9600

Access programming mode → 5 Tools → 5 Terminal Port → 1 : Lift Controller

(need to use AR-321L485-5V)

Set	Floor/ Stop															
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
2	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

• Single floor

Access programming mode → 2 User Setting → 4 Single Floor →

Input 5-digit user address → Input single floor number: 1~64

• Multi floors

Access programming mode → 2 User Setting → 5 Multi Floor → Input 5-digit user address → Select range: 1 or 2 or 3 or 4 → Input 16 digits multi floors number [0:disable, 1: enable]

[e.g.] Set NO. 114, can use it through the 8 F and 16F:

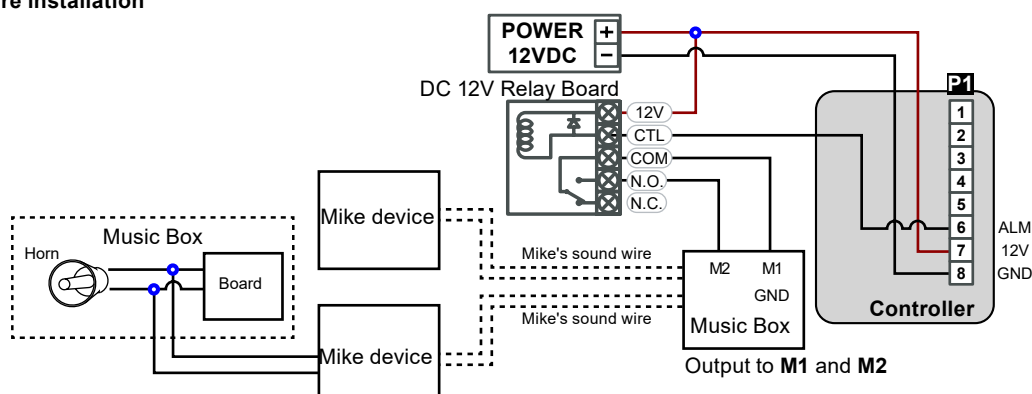
Access programming mode → 2 User Setting → 5 Multi Floor → 114 # → 1 # → 0000000100000001 #

P. Alarm Clock (for Factory)

Access programming mode → 5 Tools → 9 Daily Alarm → Set (00~15) → Set Start Tm (24 Hours) ; Set Effect Sec.

(Seconds as the bell time, Range:1~255) → Set Weekday (0:disable, 1: enable) → Succeeded

• Hardware installation



Graphic Display Multi-Function Proximity Controller (with Temperature Module)

Q. OpenZone

Access programming mode → 3 Parameters[1] → 2 OnOff OpenZone → Main Controller Auto Open Zone (0:disable, 1:enable) → Open Door Imm. During Open Zone (0:No, 1:Yes) → WG1 Port Auto Open Zone(0:disable,1:enable) → Open Door Imm.During Open Zone(0:No, 1:Yes) → Succeeded

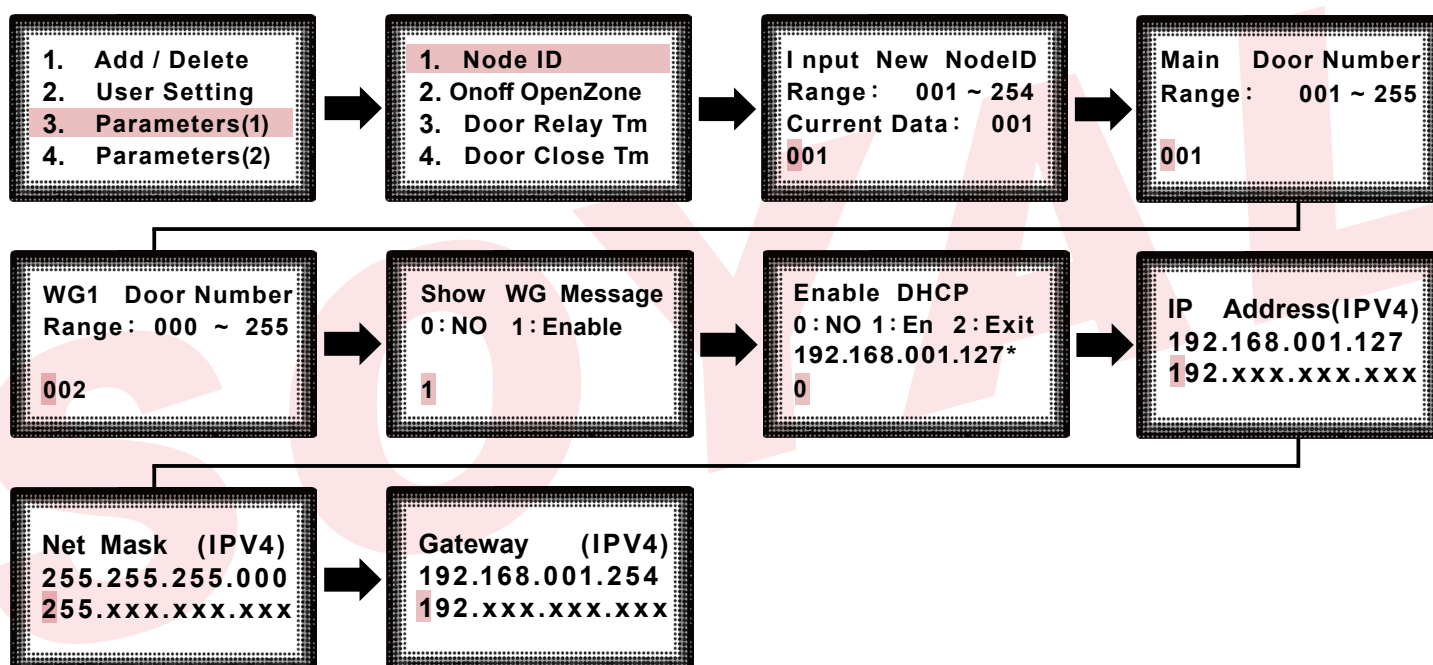
R. Open TimeZone

Access programming mode → 5 Tools → 6 Open TimeZone → Set (00~15) → Time (24 Hours) → Main Port(0:disable,1:enable) ; WG Port(0:disable,1:enable) → Weekday(0:disable,1:enable) → Succeeded

Parameter Setting Menu

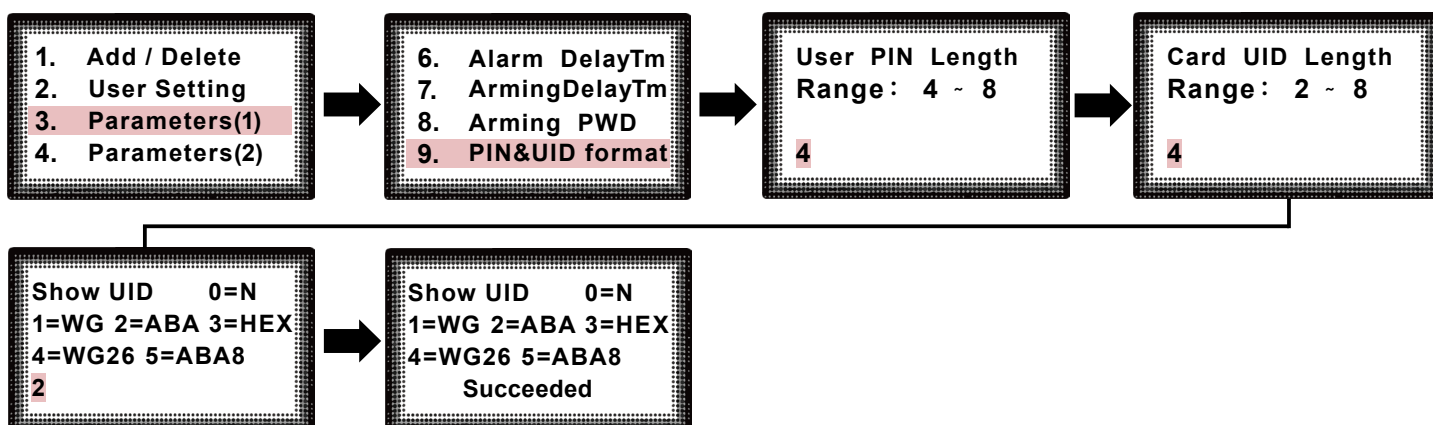
IP Address Config

Access programming mode → 3 Parameters[1] → 1 Node ID → Enter New Node ID → Main Door Number Range → WG1 Door Number Range → Show WG Message → Enable DHCP → please enter IP Address(IPV4) → please enter Net Mask(IPV4) → please enter Gateway(IPV4) → Succeeded



Set card display mode

Access programming mode → 3 Parameters[1] → 9 PIN&UID format → User PIN Length → Card UID Length → Show UID → Succeeded

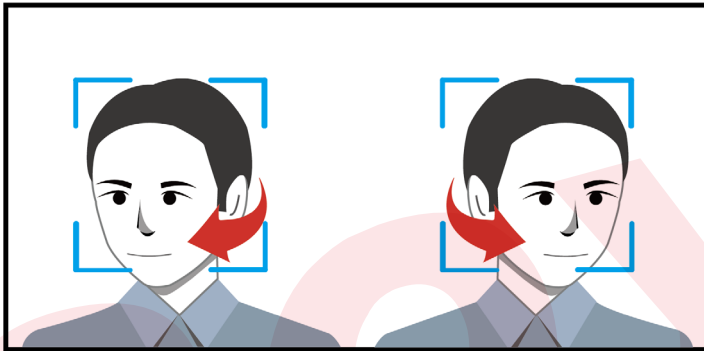


Face Enrollment Tips

- When registering for facial recognition, it is recommended to place the face close to the camera and try to fill the frame as much as possible by moving the face forward. This can increase the chances of a successful registration.
- When there is a situation of duplicate identification, such as with twins, wearing masks, or wearing glasses, after facial registration, the following solutions should be considered:
 - 1.Repeat the registration process in a well-lit environment.
 - 2.Remove masks and glasses and interchange the registration order between individuals.
 - 3.Repeat the registration process and capture their facial landmarks until successful registration is achieved.

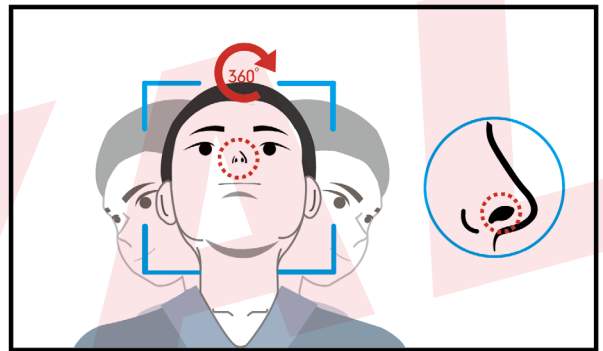
STEP 01

When starting to register, turn your head to left and then to right



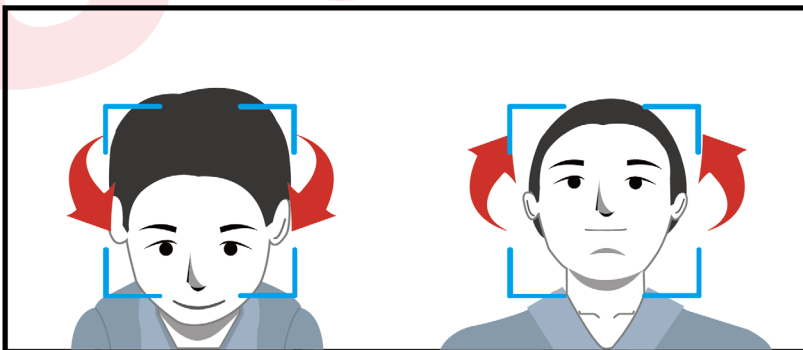
STEP 02

Rotate your head in a circle (Make your nostrils toward the screen)



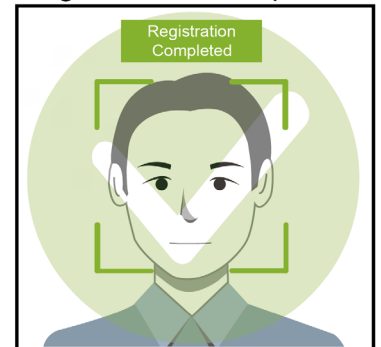
STEP 03

Move your upper body forward and then back

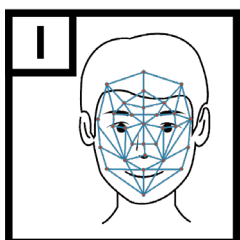


STEP 04

Until the frame turns green, the registration is completed



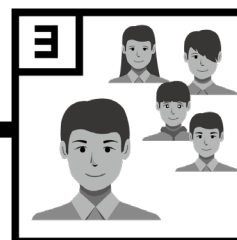
● Face Enrollment Procedure



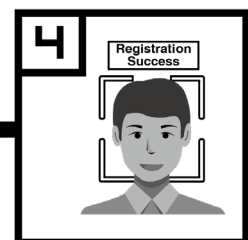
Capture facial data and analyze



Controller extract data



Data Comparison

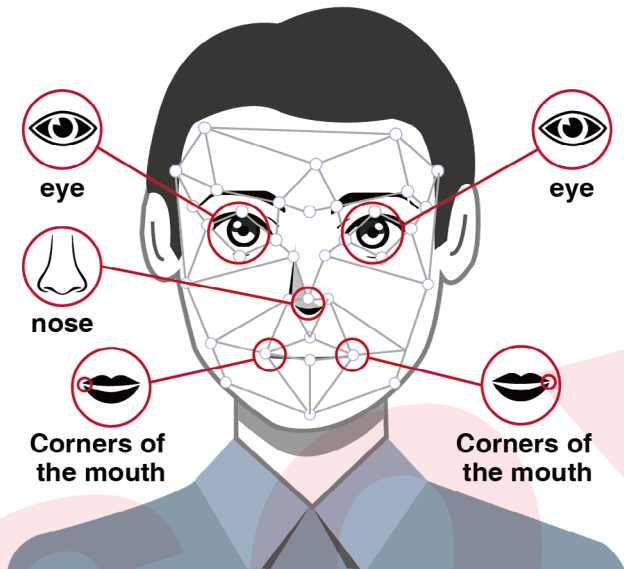


Verified successfully

Notes and Tips for Registration and Recognition of Wearing Face Mask Detection Mode

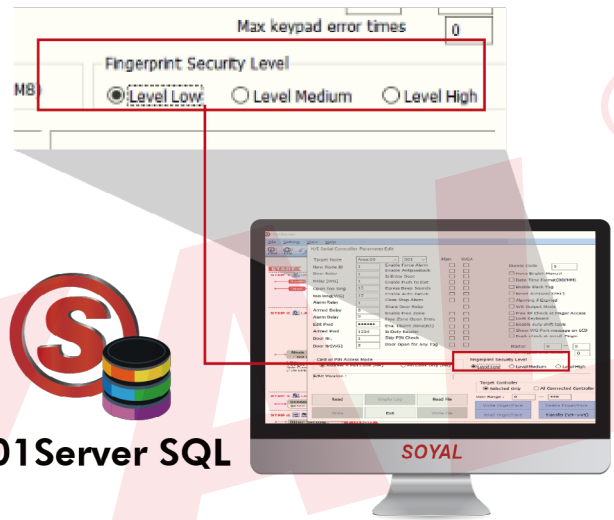
(一) When registering a face data, the face mask could not be wearing.

Collecting facial features



(二) Setting the security level of the face controller to [Level Low] will enable the face mask detection mode

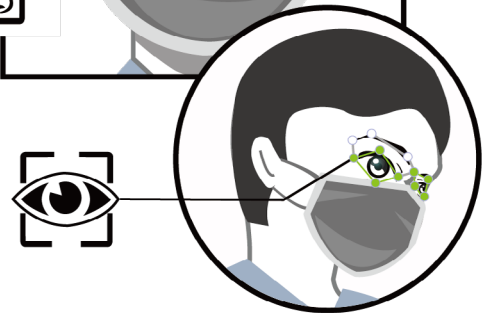
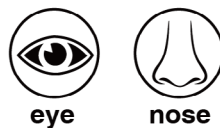
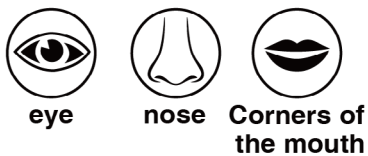
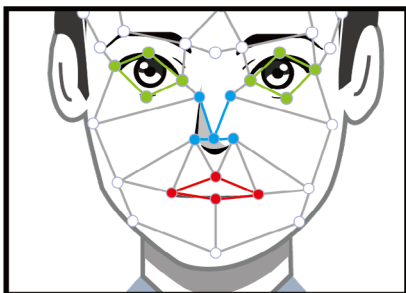
(The level can be set in the controller parameter setting window of 701Server Software)



(三) Emphasizing 3D model recognition and trying to collect more images around the eyes when registering a face data.

Without Wearing Face Mask

Exposing the nose bridge as possible can largely increase the successful recognition rate and speed.



Face recognition requires three parts: eyes, nose and mouth. After the mask detection mode is enabled, the recognition parts will be remained only eyes and nose.

If the nose is completely wrapped when recognizing the face, please try to make the front and side of the eyes clearer when registering the face.

Temperature Module Functionality, Operation, and Common Issues

Operation and Instructions

• Features:

1. Temperature module AR-MDL-IA03605 used for AR-837-EE, AR-837-EA, AR-837-EL, AR-837-EF9DO.
2. Identity verification completed within 2-3 seconds.
3. Real-time temperature detection with high accuracy, displaying temperature with an accuracy of ± 0.5 degrees Celsius.
4. Standard temperature limit can be set (e.g., setting temperature to 37.8 degrees Celsius). Access will be denied if the temperature exceeds the standard limit.
5. User's temperature displayed on 701ClientSQL.
6. Suitable for installation in ambient temperatures ranging from 10 to 35 degrees Celsius.

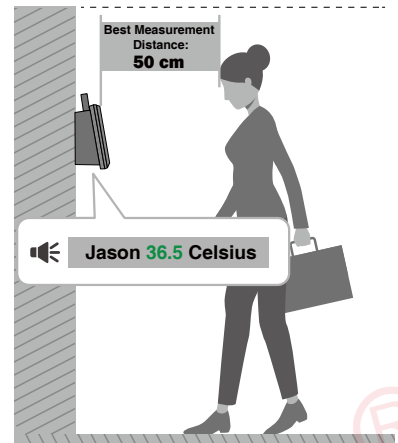
• Operating Instructions:

The multi-function facial recognition controller supports RFID card sensing, facial recognition, and password access functions, and can also display user's temperature records.

The recommended optimal distance between the user and the multi-function facial recognition controller is 50cm.

1. If the temperature module detects a high temperature, access will not be granted even if the recognition is valid.
2. If the temperature module detects a normal body temperature and the user's access is valid, the controller will allow access and display the temperature on the LCD controller.

At the same time, 701ClientSQL will display the user's temperature and entry/exit records.



Common Issues with Face Recognition AR-837-EA

• Issue (1):

1. When using the face recognition with temperature module, some people have temperature displayed during face recognition, but it does not show in the entrance/exit records in 701ClientSQL.
2. When someone is standing behind during card swiping, will the temperature of the person behind be recorded in the card holder's records? After testing, it was found that the temperature data of the person behind also appears in the card swiping records.

Solution for Temperature Recording:

1. The normal firmware version only restricts access for high temperatures and ignores low temperatures (undetected temperatures). If you want to ensure that everyone's valid temperature is measured before granting access, it is recommended for customers to update the firmware of the face recognition device to a version that does not grant access for both high and low temperatures.
2. The optimal collection distance for the controller's temperature sensor is within a range of 10cm in front and behind, with a stay time of approximately 3 seconds. When someone is undergoing recognition, make sure that only one person is in front of the device, and try to avoid having people directly behind. When queuing, please wait in a horizontal line on the left or right side.
3. When there is a valid card swiping or face recognition for access, the temperature recorded at that moment will be considered as the person's body temperature.
4. The default valid temperature range is 35.5 to 38.5 degrees Celsius. If it is below 35.5 degrees Celsius, it will be treated as an invalid temperature and will not be recorded. If it exceeds the set high temperature alarm threshold, it will trigger an alarm output.

Firmware Version: APS837EF___V0405_23XXXX 106F 高溫擋低溫檔 確保通行記錄帶有體溫.STM (For the latest version, please visit soyal.com for updates.)

• Issue (2):

When using face recognition with mask wearing, does wearing colorful or dark-colored masks (such as deep blue or pink) or having a dense beard affect the recognition speed?

Solution:

According to customer feedback, for the recognition of dark-colored or complex-patterned masks and long beards, improving the recognition effect can be achieved by enhancing the ambient brightness. Usually, a brightness level of 1700 lumens or above shows significant improvement (a firmware version with WG Port's supplemental lighting option can be selected to enhance the recognition).

Firmware Version: APS837EF___V0405_23XXXX 106F WG為補光.STM (For the latest version, please visit soyal.com for updates.)

Special Firmware (For the latest version, please visit soyal.com for updates.)

Ref no.	Functionality	Firmware Version
Ref 1.	Mask wearing is required for recognition. Access will be denied and an alert will be triggered if not wearing a mask.	APS837EF___V0404_21XXXX 106F 體溫 FACEMASK_MUSTBE.STM
Ref 2.	Both card swiping and face recognition are required for access. Access will only be granted after dual recognition, and entry will be prohibited for high or low body temperatures (temperature limits can be set through the software).	APS837EF___V0404_22XXXX 106F 先刷卡後人臉_BEFORE_FP 體溫高禁低禁.STM
Ref 3.	Both card swiping and face recognition are required for access. Access will only be granted after dual recognition, and entry will be prohibited for high body temperatures (temperature limits can be set through the software).	APS837EF___V0404_22XXXX 106F 先刷卡後人臉_BEFORE_FP 體溫高禁低通.STM
Ref 4.	Entry will be prohibited for both high and low body temperatures (temperature limits can be set through the software).	APS837EF___V0405_23XXXX 106F 高溫擋低溫檔 確保通行記錄帶有體溫.STM
Ref 5.	Entry is allowed for both high and low body temperatures (temperature limits can be set through the software).	APS837EF___V0404_23XXXX 106F 高溫通低溫通 純記錄.STM
Ref 6.	Entry will be denied and a WG-DO alarm will be triggered for individuals with abnormal body temperatures or without wearing a mask (no unlocking will occur).	APS837EF___V0404_21XXXX 106F 高溫警報WG1 FACEMASK_MUSTBE.STM
Ref 7.	Entry will be denied and an alert will be triggered for individuals with abnormal body temperatures or without wearing a mask.	APS837EF___V0404_21XXXX 106F 高溫警報ALM FACEMASK_MUSTBE.STM
Ref 8.	Entry will be denied, a WG-DO alarm will be triggered, and the lock will not be released for individuals with abnormal body temperatures.	APS837EF___V0404_21XXXX 106F 高溫警報WGA.STM

Full Function Command Menu Table

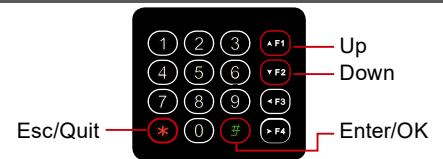
• Entering

Input *123456# or *PPPPPP#

[e.g.] The Default Value= 123456. If already changed the Master Code= 876112, input *876112#

→ Access programming mode

P.S.If no instruction is entered within **30 sec.**, it will automatically leave the programming mode.



1. Add/ Delete

1-1. Add -> Card ID

1-1-1

User Address:
00000 XXXXX
Range: (0-16383)

1-1-2

Set (User Address) Code:
00000 XXXXX
(1-10 Digital)

1-1-3

Set (User Address) Code:
00000:XXXX
Range: (0-65535)

1-2. Add -> RF-learn

1-2-1

User Address:
F3: Prev F4: Next
Range: (0-016383)

1-2-2

Tag Uints (pcs)
Must be Sequence
Range: (1-016378)

1-2-3

Close Tag
Into RF Area

1-3. Suspend -> Address

1-3-1

Input Start Address
Range: (0-16383)

1-3-2

Input End Address
Range: (0-16383)

1-4. Suspend > ID

1-4-1

Set Site:
00000:XXXXX
Range: (0-65535)

1-4-2

Set Code:
00000:XXXXX
Range: (0-65535)

1-5. Delete > Address

1-5-1

Input Start Address
Range: (0-16383)

1-5-2

Input End Address
Range: (0-16383)

1-6. Delete > ID

1-6-1

Set Site:
00000:XXXXX
Range: (0-65535)

1-6-2

Set Code:
00000:XXXXX
Range: (0-65535)

1-7. Recover > Address

1-7-1

Input Start Address
Range: (0-16383)

1-7-2

Input End Address
Range: (0-16383)

1-8. Recover > ID

1-8-1

Set Site:
00000:XXXXX
Range: (0-65535)

1-8-2

Set Code:
00000:XXXXX
Range: (0-65535)

1-9. Antipass Group

1-9-1

Input Start Address
Range: (0-16383)

1-9-2

Input End Address
Range: (0-16383)

1-9-3

Enable Antipass
0: NO 1: YES
Data: 0

2. User Setting

2-1. Password

2-1-1

User Address:
F3: Prev F4: Next
Range (0-016383)

2-1-2

Input PIN Code
Range: 0000~9999

2-2. Access Mode

2-2-1

User Address:
F3: Prev F4: Next
Range (0-163833)

2-2-2

0: Invalid 1: Card
2: Card or PIN
3: Card & Pin

2-2-3

Finger / Face
0: Must 1: Ignore
000000=0

2-3. Extend Options

2-3-1

User Address:
F3: Prev F4: Next
Range (0-16383)

2-3-2

Is Guard User
0: NO 1: YES

2-3-3

Enable Antipass
0: NO 1: YES
Data: 1

2-4. Single Floor

2-4-1

User Address:
F3: Prev F4: Next
Range (0-016383)

2-4-2

Set Single Floor
(Range: 01~64)
Clear the Others

2-5. Multi Floors

2-5-1

User Address:
F3: Prev F4: Next
Range: (0-016383)

2-5-2

Select Range:
1: 01-16 2: 17-32
3: 33-48 4: 49-64

2-5-3

0->NO 1->YES
Current Setting:
1000000000000000

2-6. Enroll Face

2-6-1

User Address:
F3: Prev F4: Next
Range: (0-002998)

2-6-2

Closer: Rotating
Center Image Pls

2-7. Delete Face

2-7-1

User Address:
F3: Prev F4: Next
Range: (0-099999)
000000

Full Function Command Menu Table

3. Parameters [1]

3-1. Node ID

3-1-1

Input New NodeID
Range: 001~254
Current Data: 001



3-1-2

Main Door Number
Range: 000~255

3-1-3



WG1 Door Number
Range: 000~255



3-1-4

Show WG Message
0: NO 1:Enable
1

3-1-5



Enable DHCP
0: No 1: En 2: Exit
192.168.001.127*
0



3-1-6

IP Address (IPv4)
192.168.001.127
192.xxx.xxx.xxx

3-1-7



Net Mask (IPv4)
255.255.255.000
255.xxx.xxx.xxx



3-1-8

Gateway (IPv4)
192.168.001.254
192.xxx.xxx.xxx

3-2. OnOff OpenZone

3-2-1

Main Controller
Auto Open Zone
Dis/Enable (0/1)
0



3-2-2

WG1 Port Auto Open
Zone Dis/Enable (0/1)
0

3-3. Door Relay Tm

3-3-1

Main Door OpenTm
Range: 000~609
601~609=0.1~0.9
007



3-3-2

WG1 Door OpenTm
Range: 000~609
601~609=0.1~0.9
007

3-4. Door Close Tm

3-4-1

Main Door Close
delay time (Sec)
Range: 000~255
015



3-4-2

WG1 Door Close
delay time (Sec)
Range: 000~255
015

3-5. Alarm Relay Tm

3-5-1

Alarm Relay Time
Range: 000~609
601~609=0.1~0.9
015

3-6. Alarm Delay Tm

3-6-1

Alarm Output
Delay time (Sec)
Range: 000~255

3-7. Arming Delay Tm

3-7-1

Enter armed sta.
Delay time (Sec)
Range: 000~255
001



3-7-2

Armed Pulse out-
put time. (10ms)
Range:000~255
000

3-8. Arming PWD.

3-8-1

Input PIN Code
Range: 0000~9999
1234

3-9. PIN&UID format

3-9-1

User PIN Length
Range: 4~8
4



3-9-2

Card UID Length
Range: 2~8
4

3-9-3

Show UID :0=No
1=WG 2=ABA
3=HEX 4=WG26
5=ABA8
1



3-9-4

NFC 13.56MHz RF
0: Disable
1: Enable
1

3-9-5

RFID 125KHz RF
0: Disable
1: Enable
1



3-9-6

'#' is Door Bell
0: Disable
1: Enable
0

3-9-7

User Capacity:
0: 16384 1: 32768
2: 65536 (0~2)
0



3-9-8

Enable Buzzer
0: NO 1: YES
1

※User PIN Length Range:4~8(4 is default value); Card PIN Length Range:2~8(4 is default value)

4. Parameters [2]

4-1. Auto Relock

4-1-1

Main Controller
Auto Relock Door
0: NO 1:YES
0



4-1-2

WG Prot
Auto Relock Door
0: NO 1:YES
0

4-2. Egress(R.T.E)

4-2-1

Main Controller
Request To Exit
0: Dis 1:Enable
0



4-2-2

WG1 Port
Request To Exit
0: Dis 1:Enable
0

4-3. Miscellaneous

4-3-1

Main Controller
TimeAttendance
0: YES 1: NO
0



4-3-2

WG1 Port
TimeAttendance
0: YES 1: NO
0



4-3-3

Main Controller
Skip PIN Check
0: NO 1: YES
0

4-3-4



WG1 Port
Skip PIN Check
0: NO 1: YES
0



4-3-5

Main Controller
Pass any Tags
0: NO 1: YES
0



4-3-6

WG1 Port
Pass any Tags
0: NO 1: YES
0

4-3-7



WG1 Port
Share Main Relay
0: NO 1: YES
0



4-3-8

Tag Second time
interval (10ms)
Range: 0000~9999
0100



4-3-9

Max error times
for lock keypad
Range: (0~9)
5

Full Function Command Menu Table

4. Parameters [2]

4-3. Miscellaneous

4-3-10 ↓
Main Controller
On Egress Beeps
0: NO 1: Bi 2: Bibb
2

4-3-12 ↓
Lock Door Relay
0: NO 1: YES
0

4-3-14 (837EF) ↓
Main Controller
Free Tag Always
0:NO 1:YES
0

4-4. Force Open ..

4-4-1
Main Controller
Force Open Alarm
0: NO 1: YES
0

4-5. Close & Stop

4-5-1
Main Controller
Close Door Stop
Alarm 0: NO 1:YES
0

4-6. Anti-passback

4-6-1
Main Controller
Anti-passback
0: NO 1: YES
0

4-3-11 ↓
WG1 Port
On Egress Beeps
0: NO 1: Bi 2: Bibb
2

4-3-13 ↓
Interlock to WG ?
0:NO 1:YES
0

4-4-2 ↓
WG1 Port
Force Open Alarm
0: NO 1: YES
0

4-5-2 ↓
WG1 Port
Close Door Stop
Alarm 0: NO 1:YES
0

4-6-2 ↓
WG1 Port
Anti-passback
0: NO 1: YES
0

4-7. Duress Code

4-7-1
Input PIN Code
Range: 0000~9999

4-8. Password Mode

4-8-1
Password Mode
0: Addr. & PIN(M4)
1: PIN(M8) 2:M6
1

4-9. Factory Reset

4-9-1
0: System Param.
1: User Setting
2: System & User
2

5. Tools

5-1. Language

5-1-1
0: English (USA)
1: Chinese (TW)
0

5-3. Master Range

5-3-1
Input Start Addr
Range: (0-16383)
000000

5-4. Terminal RS485

5-4-1
0: Lift 1: Host
2:LED 3: PRN
1

5-5. Ext.Comm CN11

5-5-1
0: FP-Type 1: Lift
2: Vein2000 3:
FP9000 4:.....
2

5-2. Master Code

5-2-1
Input MasterCode
000001~999999
123456

5-3-2

↓
Input End Addr
Range: (0-16383)
000000

5-4-2
Baud Selection
0: 9600 1: 19200
2: 38400 3: 57600

5-6. Open Time Zone

5-6-1
Set <F1~F4,#>: 01
00:00~00:00 ..
SuMoTuWeThFrSaHo
0 0 0 0 0 0 0

5-7. Informations

5-7-1
F/w Ver: 4.4T
Users: 00000
Messages: 00000
Press any Key ...

5-9. Daily Alarm

5-9-1
Set <F1~F4,#>: 01
00:00 Sec.=000
SuMoTuWeThFrSaHo
0 0 0 0 0 0 0

5-0. UART Port CN9

5-0-1
0: Lift9600 1: PRN
2: LED 3: Voice
0

5-A. Event Logs

5-A-1
20'06/04 2359:26

(M24)Controller
Power On 00000

5-6-2 ↓
Time=00:00~00:00
Main Port (0/1):0
WG Port (0/1):0

5-8. Clock Setting

5-8-1
YY: XXXX MM: XX
Day: XX Hour: XX
Min: XX Sec: XX

5-9-2 ↓
Start Tm=00:00
Effect Sec.=000

5-0-2 ↓
Elevator floor
button available
Range: (1~600)
015

5-6-3 ↓
Weekday: (0/1)
SuMoTuWeThFrSaHo
X X X X X X X X
0 0 0 0 0 0 0

5-8-2 ↓
Month/Day Format
0: DD/MM 1: MM/
DD

5-9-3 ↓
Weekday: (0/1)
SuMoTuWeThFrSaHo
X X X X X X X X
0 0 0 0 0 0 0

※ More Details : [Introduction of New Function Commands for Enterprise E Controller and Home H Controller](#)

6. Quit

7. Quit & Arming