

# SOYAL<sup>®</sup>

Slim Series

# AR-331-H

## Slim Design Proximity Controller

Slim and elegant design, supporting 125kHz or 13.56MHz  
Suitable for various control modes and cascade structure



### Slim Design

Suitable for installation in narrow place

### Support SOYAL Cascade Structure

Built-in multiple control modes:

1. One door
2. Two door (with WG reader)

### Invisible Keypad

Keypad function still available without numerical number. Activate keypad when doing programming of the controller and back to no keypad function once finished.

### Various Control Modes

Flexible use, can be standalone and networking

### Anti-Vandalism

Choose your housing material either made in Zinc Alloy material for metal housing or ABS for plastic housing. Metal housing is designed to prevent damage and destruction on controller when force open or breaking the controller is occurring, it will remain at its place.

### As RS485 Reader

Not only a controller, but an encrypted RS485 reader if utilized with other brand's controller

## Features



Invisible Keypad



Uniform Design



Dust and Waterproof



Dual Indicator



Metal VS ABS



Slim Design



Web



Youtube

- 125kHz or 13.56MHz Access Controller Built-in Hardware Watchdog & Real Time Clock Function
- Standalone / Networking / Support Cascade Structure
- Support RS485 communication encryption, SSC (Soyal Security Communcation)
- In-Field Firmware Upgrade
- Arming / Force Alarm / Unclose Alarm
- Use '#' as a replacement of doorbell button
- Duress Code & Output
- Multi Operation Mode
- Multi Output: Door lock output (0.1-600 sec. and toggle mode) & alarm output (1-600 sec.)
- Silent Operation Mode: Push Button and All Mute
- Support One and Half Door, and One and Half Door Anti-Passback
- Auto Open Time Zone: Built in 2 time zones, with Control Panel up to 63 time zones.
- Assign user for Door Group (up to 254) and Time Zone (up to 11, with control panel up to 63)
- Holiday Edit Up to 120 days a year
- Auto Relock for Anti-Trailing and Sneaking
- Access control, lift control, time attendance, payroll, and SCADA: graphic monitoring & remote control function
- Support DESFire tags (Crypto comply with EAL4+)

## SPECIFICATION

Communication interface	Host	RS485/9600 bps (N, 8, 1)
	Serial	UART PORT (Output only)/4800 bps (N, 8, 1) SSC (Soyal Security Communication)
Frequency	125kHz	13.56MHz
Supported Tags	ISO18000-2: EM4001 and EM4095 compatible	ISO 14443 Mifare Ultralight, Classic, DESFire NFC (card simulation)
	Crypto	CC Certification: 3DES Crypto comply with EAL4+
RFID Reading Range	3-7 CM	1-3 CM
	*Reading range will be shorter in metal surface installation. The solution is to add 2CM distance or layer between the wall and the controller.	
UID Bits	24-32 (Adjustable)	
DI/DO	DI	Egress / Door State
	RO	Door Lock Relay
	DO	Door Lock Output / Duress Output / Alarm Output Arming Output (share same terminal with Security trigger signal Output)
Doors/Floors Number	1.5 Doors / 32 Floors	
User Capacity	3000	
Event Log	1500	
Indicator	LED	2 Bi-Color LED(Blue/Yellow : Green/ Red)
	Buzzer	1
TAMPER	Limit switch (1 Form C/ 1000mA / 30VDC)	
Dimension (mm)	158(H)X55(W)X30(D)	
Housing Material	Housing	Zinc Alloy / PC
	Keypad	Illuminated Keypad / Invisible Keypad function*
Color	Chrome	
Weight (g)	Zinc Alloy: approx. 245 / PC: approx. 140	
Power Consumption	<3W	
Power Voltage	9-24VDC	
Ingress Protection	IP56	
Enviroment	Operating Temperature	-20°C ~ +70°C
	Storage Temperature	-40°C ~ +75°C
	Operating Humidity	0%~90% (non-condensing)
	Storage Humidity	0%~95% (non-condensing)

## KEYPAD FEATURES

### 1. Illuminated Touch Keypad

All-in-One: Have access by either swiping valid tags or entering PIN. Configuration setting can also directly proceed via its keypad.



### 2. Keypad-less

RFID Only: Have access by swiping valid tags. Numerical keypad is unavailable and quick keyless editing via Authorization Card /Master Card



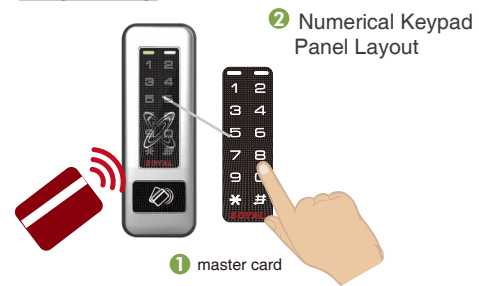
### 3. Illuminated Touch Keypad Invisible

Keypadless Controller of Slim Series built-in invisible touch keypad function for non numerical keypad panel, in which after enabling the function, press keypad for keypad command configuration setting.

Operational method:

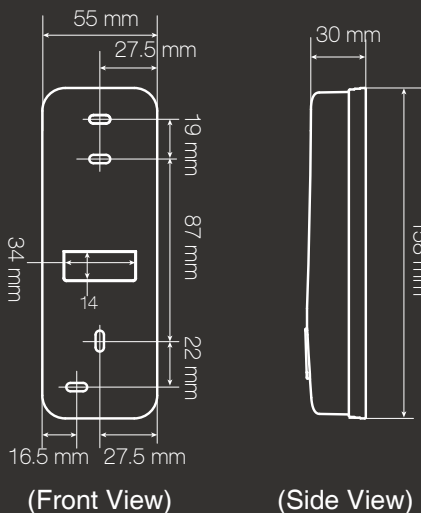
1. Swipe authorization card or master card to enable the keypad function
2. Cover original panel with Numerical Keypad Panel Layout (layout available for download and please print it)
3. Operate configuration setting according to the numerical keypad position. After done with configuration, remove the Numerical Keypad Panel Layout

#### Programming



Numerical Keypad  
Panel Layout  
Download

## INSTALLATION(mm)



## HOW TO ORDER

AR-331-HXR1111XX

**Frequency**  
B=125kHz / D=13.56MHz

**RTC**  
R=Built-in RTC

**Communication**  
1=RS485

**Waterproof**  
1=Weatherproof

**Housing Material**  
M=Metal Housing (Zinc Alloy)  
P=Plastic Housing (ABS)

**Keypad Selection**  
T=Keypad Touch Panel  
S=Keypadless  
(no keypad function)  
S=Keypadless  
Invisible Keypad w/ MPLA-331EB01 (+)

**Type**  
1=Standard

**Color**  
1=Silver(Chrome)

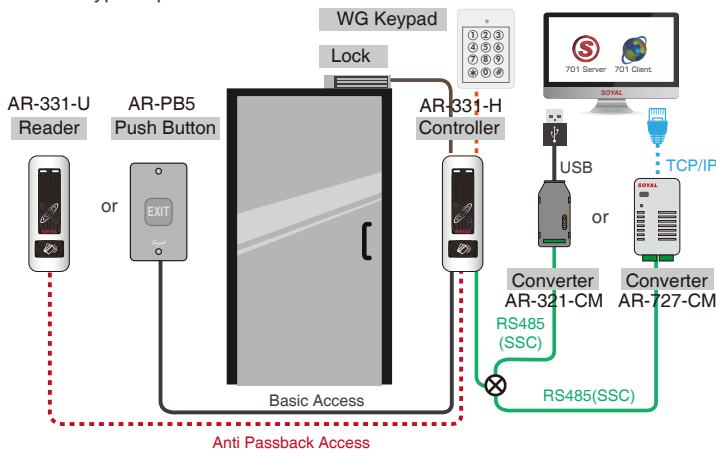
## APPLICATION & STRUCTURE DIAGRAM

### ● STANDALONE & NETWORKING ACCESS CONTROL

**Basic Access:** the most basic access, exiting venue is only by pressing a push button

**Anti Passback:** restrict user to re-enter before exiting venue or increase security level by having access reader at the other side of the door. Both entering and exiting will required swipe card or keyfob for access.

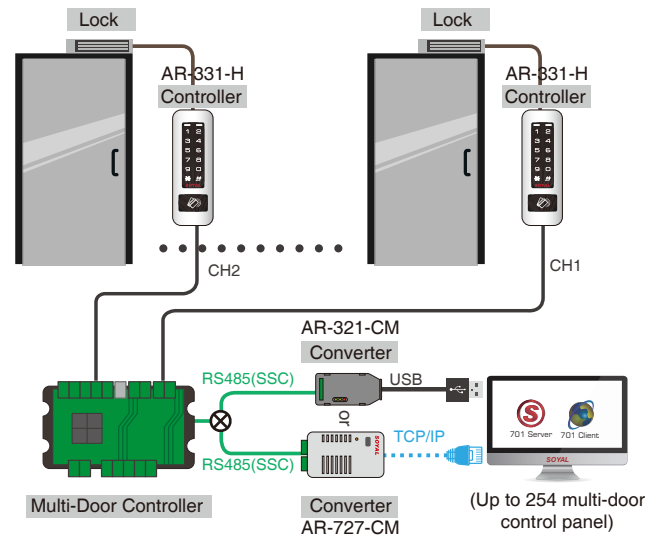
**Networking:** beside configuration through Wiegand Keyboard and Master Card, you can also link AR-331-H with Soyal converter to PC for configuration via SOYAL Software or for anti-cloning and encryption process.



--3000 User, 11 Timezone--

### ● CASCADE STRUCTURE

Upgrade user capacity without replacing AR-331-H installed with additional hardware of SOYAL Multi-Door Control Series. Under Multi-Door Control Panel, when RS485 communication is working normally, AR-331-H will be a Slave Reader of Control Panel. Once its communication is cut off, AR-331-H will automatically be Access Control and have control on its user and parameter setting.



--16000 User, 63 Timezone--

### ● SOYAL DESFire

Accomplices with crypto AEL4+, SOYAL DESFire provide even better service for distributor and user who required highest level of security without hustle, no supported tools and programming needed.

Step 1 Select your controllers



Step 2 Select DESFire tags type (cards, round keyfob, square keyfob)



Step 3 Select tags quantity



Step 4 Soyal will paired selected controllers and tags to be formatted as SOYAL DESFire



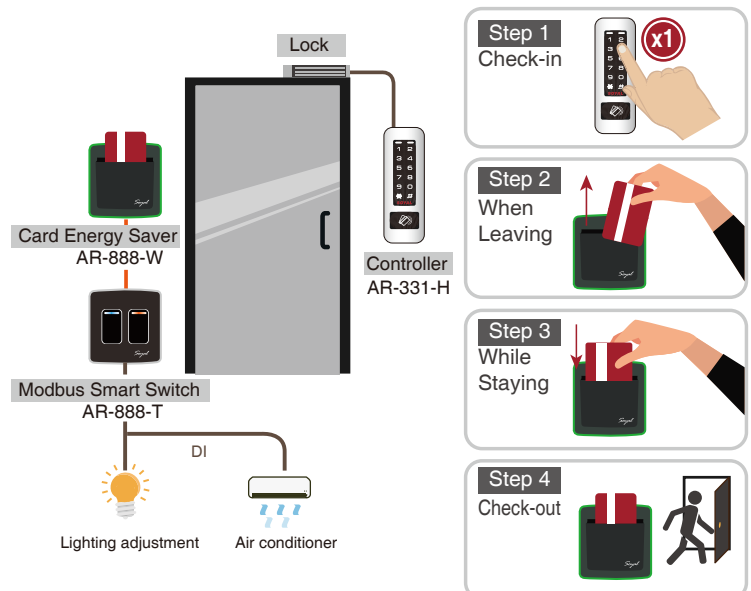
Step 5 Once customer received the orders, it is ready to use and feel safe with none anti-cloning cases and controller will only read paired tags only.



### ● BED & BREAKFAST: FIRST ACCESS WITH ONE TIME PIN

SOYAL offer variations of access like access by card, card or PIN, and card + PIN. On the next level of access variations, you can also set up first access by one time PIN feature and the next access will be access by card.

- Step 1. Check-in: Enter room by entering PIN provided by the management
- Step 2. When Leaving: Take out room card from AR-888-W when leaving the room
- Step 3. While Staying: Put in room card into AR-888-W for access to lamp, air-conditioner, and all I/O in the room
- Step 4. Check-out: Leaving the room by put back room card into energy saver for the next guest



# PERIPHERALS / ACCESSORIES

## HIGH LEVEL SECURITY

- Anti-Cloning Kits



### Mifare Encryption

Encoder: AR-725-P  
w/Authorization Tags  
Software: Mifare Key



### Desfire Encryption

Encoder: AR-837-P  
w/Authorization Tags  
Software: 323D Master

- Expansion I/O Control



### I/O Modules

AR-401 Series:  
Multiple Channel I/O Module  
AR-403 Series: Tiny Digital I/O Module

## STANDALONE

- Input/Output



### Locks

Magnetic Lock  
AR-0600M  
Electric Bolt Lock  
AR-1207 Series  
Cabinet Lock  
AR-1211-P/AR-1213-P  
Electric Strike  
AR-YS-130NO/AR-YS-131NO



### Door Sensor / Alarm/Siren / Burglary Security System



AR-331-H

- Slim Series



### Slim Design Multi-Function Controller / Proximity Reader

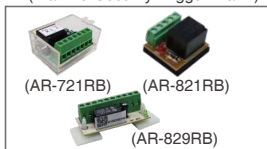
AR-331-E / AR-331-K/U  
Fingerprint Access Controller  
AR-331-EF



### Stainless Steel Push Button

AR-PB5 Series

- External Relay Output (Alarm & Security Trigger Alarm)



### 1 Form C relay with time delay

AR-721RB  
1 Form C relay  
AR-821RB  
2 Form C relay  
AR-829RB

- Programming



### External Wiegand Keyboard

AR-WG-KEYBOARD-V2 (DMOD-WGKBA05)

### Keyless Editing

Self programmed master card

- Necessary



### Power Supply

BP-W12-1500 (1.5A)  
BP-W15-2400 (2.4A)

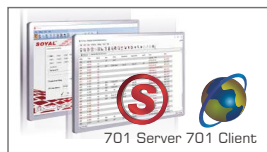


### Proximity Tags

125kHz: EM  
13.56MHz: Mifare Classic, Mifare Desfire, UltraLight  
Tags Selection: Thin Card, Thick Card, Round Keyfob, Square

## NETWORKING

- Software



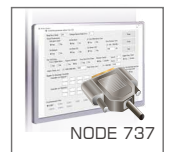
### File Based & Data Based Interchangeable Software for Access Control, Time Attendance, Status Monitoring and Configuration

701 Server & 701 Client



### Firmware Upgrade

ISP Tools



### Parameter Setting

Node 737

- Signal/Interface Converter



### Isolated USB to RS-485

AR-321-CM

### Isolated RS232 to RS485

AR-321-CM-485232



### Ethernet to RS485

AR-727-CM  
AR-727-CM-IO-0804M (with I/O for Fire Alarm to open all doors)



### TTL to RS-485

For external module converter

- Large User Capacity & Multi-Door AntiPassback



### Multi-Door Control Series

AR-716-E16: 16 Doors IP Control Panel  
AR-716-E18: 18 Doors Networking Control Panel

## FAQ

**Q:** How to Integrate SOYAL with Face & License Plate Recognition?

**A:** As Face Recognition is more and more in demand, SOYAL provide resources and two integration method. The integration will grant access via face recognition by sending converting face data to UID to Soyal system (software/hardware) that later will resulting in access granted or denied, based on the availability user data on Soyal database system. As the integration method is various, we offer flexibility of integration based on what customer preferred.

**Q:** What is the difference between SOYAL Home Series and Enterprise Series Controller?

**A:** SOYAL access controller classified into two categories in term of specification; Home Series and Enterprise Series. SOYAL Home Series controller has already include all basic standalone and networking access controller that you need. But E series controller provide what Home Series controller has already have, and more advanced features like built in more user capacity, UART Port for extension module, and extension interface like Ethernet and POE.



More FAQ